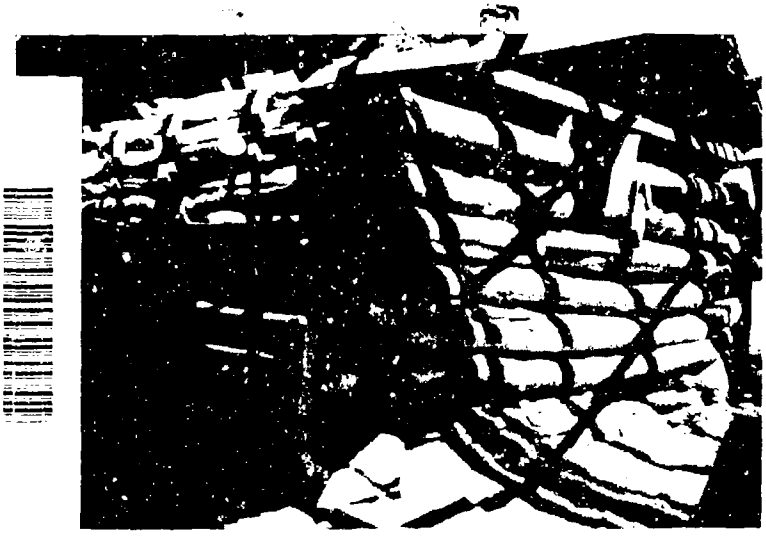
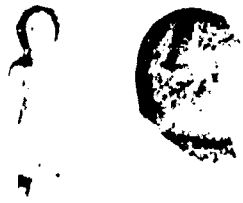
ARCHAEOLOGY AND HISTORY OF THE RAY ROBERTS LAKE AREA OF NORTHCENTRAL TEXAS, 1850-1950

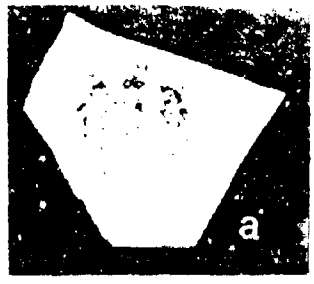
Edited by

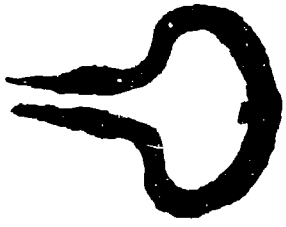
Susan A. Lebo

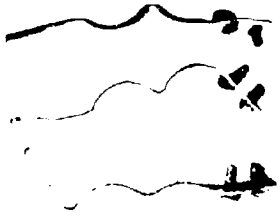
AD-A286 843

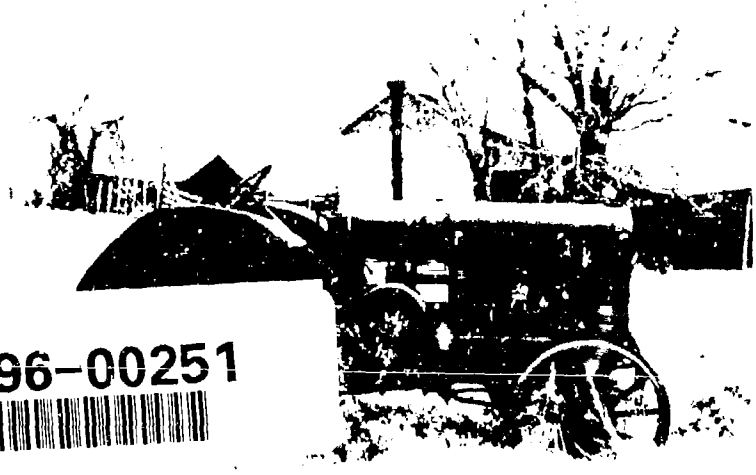












96-00251

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution unlimited

DTIC QUALITY INSPECTED 5

U.S. Army Corps of Engineers
Fort Worth District

Institute of Applied Sciences
University of North Texas

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION: Unclassified

1b. RESTRICTIVE MARKINGS:

2a. SECURITY CLASSIFICATION AUTHORITY:

3. DISTRIBUTION/AVAILABILITY OF REPORT: Approved for public release

2b. DECLASSIFICATION/DOWNGRADING SCHEDULE:

4. PERFORMING ORGANIZATION REPORT NUMBER(S): Archaeology adn History of the Ray Roberts Lake Area of Northcentral Texas, 1850-1950

5. MONITORING ORGANIZATION REPORT NUMBER(S):

6a. NAME OF PERFORMING ORGANIZATION: University of North Texas Institute of Applied Sciences

6b. OFFICE SYMBOL (If applicable):

7a. NAME OF MONITORING ORGANIZATION: U.S. Army Corp of Engineers, Ft. Worth District

6c. ADDRESS (City, State, and ZIP Code): P.O. Box 13078 Denton, TX 76203

7b. ADDRESS (City, State, and ZIP Code): P.O. Box 17300 Fort Worth, Texas 76102-0300

8a. NAME OF FUNDING/SPONSORING ORGANIZATION: US Army Corp of Engineers Ft. Worth District

8b. OFFICE SYMBOL (If applicable): CESWF-PL-RC

9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER: DACW63-86-C-06098

8c. ADDRESS (City, State, and ZIP Code): P.O. Box 17300 Fort Worth, Texas 76102-0300

10. SOURCE OF FUNDING NUMBERS

PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification): Archaeology and History of the Ray Roberts Lake Area of Northcentral Texas, 1850-1950

12. PERSONAL AUTHOR(S): Susan A. Lebo

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT
Final	FROM 1986 TO 1987	July 1995	560 +

16. SUPPLEMENTARY NOTATION:

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	
05	06		Archaeology and History of the Ray Roberts Lake Area of Northcentral Texas, 1850-1950

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

Archaeological investigations of historic resources at Ray Roberts Lake were conducted by personnel from the Institute of Applied Sciences, University of North Texas in 1986 and 1987. These investigations involved the documentation of ten farmsteads in previously unsurveyed areas (Chapter 6), test excavations of 23 farmsteads (Chapter 7), and intensive excavations at 20 farmsteads (Chapter 8). Among the research conducted at these farmsteads were archival, oral history, and architectural documentation, dendrochronology of log structures, and excavation. Archival and oral-history research provided data on farm ownership, farm size, dates of occupation, and family life. Architectural documentation yielded information on building construction methods, materials, age, and function, while dendrochronological data provided information about possible cutting-construction relationships, building re-use, and available building materials. Survey and testing data were obtained to determine eligibility to the National Register of Historic Places for all historic farmsteads scheduled for limited testing, testing, or which were identified during the 1986-1987 survey. Following testing, all farmsteads determined eligible for the National Register received intensive excavations. These excavations included recovery of data from sheet refuse and feature deposits. Farmsteads occupied during the historic period in the Ray Roberts Lake area date from the late 1840s or early 1850s to the present, offering data necessary to investigate changes in rural lifeways and adaptations over the last 140 years.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT: ☐ UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT ☐ DTIC USERS

21. ABSTRACT SECURITY CLASSIFICATION: Unclassified

22a NAME OF RESPONSIBLE INDIVIDUAL: Jay R. Newman

22b TELEPHONE (Include Area Code): 817-885-6388

22c. OFFICE SYMBOL: CESWF-PL-RC

DD Form 1473, JUN 86 — Previous editions are obsolete. — SECURITY CLASSIFICATION OF THIS PAGE

ARCHAEOLOGY AND HISTORY OF THE RAY ROBERTS LAKE AREA OF NORTHCENTRAL TEXAS, 1850-1950

Edited by

Susan A. Lebo

Principal Investigator
C. Reid Ferring

Prepared for:
Fort Worth District
U.S. Army Corps of Engineers
Fort Worth, Texas

Contract No. DACW63-86-C-0098

by

Institute of Applied Sciences
University of North Texas
Denton, Texas 76203

June 1995

TABLE OF CONTENTS

List of Figures v
List of Tables xiii
Abstract xix
Management Summary xxi
Acknowledgements xxiii

1. Project Overview 1

2. Historic Environmental Setting 5

3. Historical Setting 13

4. Previous Archaeological and Historical Investigations in the Ray Roberts Lake Project Area 37

5. Research Design and Methods: Archaeology, Architecture, Laboratory, Archival, Oral History, and Cemetery Research by Susan A. Lebo, Stephen A. Lohse, Tom Nelson, Paula Sutton, and Bonnie C. Yates 47

6. 1986-1987 Historic Survey of Unsurveyed Areas of the Ray Roberts Project Area, with contributions by Randy Nathan 69

7. Results of Historic Limited Testing, Testing, and Documentation Phase by Susan A. Lebo, with Geology by C. Reid Ferring, Faunal Analysis by Bonnie C. Yates, Architectural Documentation by Randy Korgel, and contributions by Carl Freuden and Debbie Marcaurelle 113

8. Results of Historic Mitigation: Sheet-Refuse and Intensive Excavations by Susan A. Lebo, with Geology by C. Reid Ferring, Faunal Analysis by Bonnie C. Yates, Architectural Documentation by Randy Korgel, and contributions by Carl Freuden and Debbie Marcaurelle 229

9. Nineteenth Century Foodways by Bonnie C. Yates and Susan A. Lebo 493

10. Ray Roberts Lake Oral History Program by Stephen A. Lohse 505

11. Dendrochronology and Applications to Archaeology and Paleoclimatology in Texas by Malcolm Cleaveland 517

12. Intersite Comparison and Summary 523

References 569

Appendices
(on diskette attached to the back cover of report)

A. Archival Research at Historic Sites in the Project Area

B. Historic Artifact Classification

C. Ray Roberts Oral Informant Questionnaire

D. Inventory of Faunal Remains at Selected Historic Sites, by Bonnie C. Yates

E. Inventory of Faunal Remains at Mulitcomponent Sites, 41DN79 and 41DN81, by Bonnie C. Yates

F. 41CO135: Osburn Cemetery, by Stephen A. Lohse, Susan A. Lebo, and Clark Moses

G. Dendrochronological Inventory and Analysis for the Ray Roberts Lake Project, by Malcolm Cleaveland

H. Population Census Data for Cooke, Denton, and Grayson Counties

I. Butchery Data from Gainesville, Texas: 1881-1882

J. Inventory and Overview of Historic Collections Recovered by ECI in the Project Area

K. Historic Site Inventory for the Ray Roberts Project Area

List of Figures

1-1 Location of the Ray Roberts Lake project area in southeastern Cooke, southwestern Grayson, and northeastern Denton counties 2

2-1 Physiographic location of the Ray Roberts Lake project area in the Grand Prairie, Eastern Cross Timbers and Blackland Prairie. 6

3-1 Location of the Ray Roberts Lake project area relative to the four contracts negotiated by the Peters Colony, 1841-1843 15

3-2 Communities in the Ray Roberts Lake area. 18

3-3 Location of the Ray Roberts Lake project area in Region III, 32 northcentral prairie counties. 20

3-4 Map of the Hemming Community in Southeastern Cooke County about 1907 29

6-1 Location of the approximately 8,800 acres that remained unsurveyed, or in question, in 1986. 76

6-2 Location of unsurveyed lands in southweastern Cooke County and southwestern Grayson County selected for survey in 1986. 78

6-3 Location of unsurveyed lands in Cooke and Denton counties selected for survey in 1986. 79

6-4 Location of unsurveyed lands in northeastern Denton County selected for survey in 1986. 80

6-5 Location of of unsurveyed lands in southwestern Grayson County selected for survey in 1986. . . . 81

6-6 Location of historic sites identified and recorded during the 1986-1987 survey of 4,400 selected acres of previously unsurveyed acreage in the Ray Roberts Lake project area. 95

7-1 Locations of the historic limited testing and testing sites. 115

7-2 Site map of 41CO33. 116

7-3 Field architectural drawings of the dwelling at 41CO33 (a) floorplan, (b) east elevation, (c) door detail 118

7-4 Site map for 41CO38. 121

7-5 Site map for the western dwelling area at 41CO39. 123

7-6 Site map for the eastern dwelling area at 41CO39. 124

7-7 Field architectural floorplan for the standing dwelling at 41CO39. 126

7-8 Field architectural drawings of the standing dwelling at 41CO39 (a) east elevation, (b) south elevation 127

7-9 Field architectural drawings of the standing barn at 41CO39 (a) east elevation, (b) west elevation. 128

7-10 Field architectural floorplan for the standing barn at 41CO39. 129

7-11 Site map for 41CO103. 133

7-12 Site map for 41CO118. 136

7-13 Field architectural drawings of the standing barn at 41CO118 (a) north elevation, (b) east elevation. 137

7-14 Field architectural drawings of the south crib at 41CO118 (a) east elevation, (b) south elevation. 138

7-15 Field architectural drawings of the double-pen outbuilding at 41CO118 (a) south elevation, (b) west elevation. 139

7-16 Site map for 41CO119 144

7-17 Site map for 41CO120. 146

7-18 Field architectural drawings of double-pen outbuilding at 41CO120 (a) south elevation, (b) west elevation. 148

7-19 Field architectural floorplan of double-pen outbuilding at 41CO120 149

7-20 Site map for Osburn Cemetery, 41CO135 152

7-21 Site map for 41CO136 153

7-22 Field architectural drawings of grain elevator at 41CO136 (a) north elevation, (b) south elevation. 155

7-23 Field architectural floorplans of grain elevator at 41CO136 (a) first floor, (b) second floor. 156

7-24 Field architectural sketches of the iron-beam bridge at 41CO138 made by ECI personnel when the bridge was recorded. 158

7-25 Site map for 41CO143 160

7-26 Field architectural drawings of the dwelling at 41CO143 (a) north elevation, (b) south elevation . 161

7-27 Field architectural floorplan of the dwelling at 41CO143 162

7-28 Field architectural drawings of the Building # 2, large grain barn, at 41CO143 (a) north elevation, (b) west elevation. 163

7-29 Site map of 41DN92 showing the locations of the backhoe scraped areas 166

7-30 Site map of 41DN106 168

7-31 Field architectural drawings of the log and plan outbuilding at 41DN106 (a) west elevation, (b) east elevation. 170

7-32 Site map of 41DN107 173

7-33 Field architectural drawings of the log crib at 41DN107 (a) west elevation, (b) east elevation. . . 174

7-34 Site map of 41DN165 178

7-35 Field architectural floorplan of the porch to the dwelling at 41DN165 179

7-36 Field architectural floorplan of the log barn at 41DN165 180

7-37 Field architectural floorplan of the log crib at 41DN165 181

7-38 Field architrectural drawing of the east elevation of the log crib at 41DN165 182

7-39 Site map of 41DN172 185

7-40 Field architectural drawings of log crib at 41DN172 186

7-41 Field architectural floorplan of log crib at 41DN172 187

7-42 Site map of 41DN174 190

7-43 Site map of 41DN190 193

7-44 Site map of 41DN191 196

7-45 Field architectural floorplan of the dwelling at 41DN191 197

7-46 Field architectural drawing of the east elevation of the barn at 41DN191 198

7-47 Site map of 41DN193 201

7-48 Site map of 41DN232 (a) field sketch of site made by ECI in 1981, (b) map of same site area made in 1986 when the site was revisited 204

7-49 Site map of 41DN248 205

7-50 Site map of 41DN273 211

7-51 Site map of 41DN275 215

7-52 Site map of 41DN349 220

7-53 Field architectural floorplan of the burned dwelling at 41DN349 221

7-54 Site map of 41GS46 224

7-55 Site map of 41GS59 226

8-1 Locations of the historic intensive testing and mitigation sites. 230

8-2 Soil associations of the historic mitigation sites 232

8-3 Site map of 41CO36 234

8-4 Site map of 41CO83 241

8-5 Field architectural floorplan of the dwelling at 41CO83 242

8-6 Field architectural drawings of the dwelling at 41CO83 (a) east elevation, (b) north elevation. . . 243

8-7 Site map of the Cumberland House area at 41CO111 248

8-8 Site map of 41CO121 251

8-9 Field architectural drawings of the dwelling at 41CO121 (a) east elevation, (b) west elevation . . . 252

8-10 Field architectural floorplan of the dwelling at 41CO121 253

8-11 Field architectural planview (a) and the east elevation (b) and west elevation (c) of the blacksmith shop at 41CO121 255

8-12 Field architectural planview and elevation drawings of the log structure in the barn at 41CO121 256

8-13 Locations of postmold features 3, 4, 5, and 6 in the Blacksmith shop at 41CO121 260

8-14 Artifact frequency comparisons for the 50x50-cm units excavated within the sheet-refuse deposit and the 50x50-cm units and 1x1-m units excavated in the blacksmith shop at 41CO121 263

8-15 Artifact density plot of total artifacts for the sheet-refuse deposit at 41CO121 265

8-16 Artifact frequency distributions for the blacksmith shop at 41CO121 267

8-17 Site map of 41DN77 274

8-18 Artifact frequency distributions for the sheet-refuse deposit at 41DN77 277

8-19 Site map for 41DN79 281

8-20 Profile of BHT 2 at 41DN79 284

8-21 Profile of East Wall of Block 4 at 41DN79 287

8-22 Locations of the subsurface features exposed during excavations at 41DN79 288

8-23 West Profile of Feature 18 at 41DN79 291

8-24 Planviews of Levels 2-5 of Feature 18 in Block 2 at 41DN79 292

8-25 Comparison of artifact categories from Features 2,8, 17, and 18 at 41DN79 295

8-26 Locations of the hand excavated 1x1-m units, slot trenches, shovel-scraped areas, and Feature 18 in Block 2 at 41DN79 298

8-27 Comparison of historic artifact frequencies by artifact category for Block 2 units (excluding Feature 18) and Feature 18. 299

8-28 Comparison of refined earthenware frequencies for the 50x50-cm units in the sheet-refuse deposit, the 1x1-m units in Block 2, Feature 18 in Block 2, and the historic assemblage recovered by ECI 300

8-29 Comparison of decorative refined earthenware frequencies for the 50x50-cm units in the sheet-refuse deposit, the 1x1-m units in Block 2, Feature 18 in Block 2, and the historic assemblage recovered by ECI 301

8-30 Comparison of major historic artifact category frequencies for Block 2 with the combined collection from Blocks 3, 4, and 5 at 41DN79 304

8-31 Historic artifact counts by artifact category for Block 2 (excluding Feature 18) at 41DN79 305

8-32 Comparison of major historic artifact category frequencies for Block 2 and the 50x50-cm units at 41DN79 306

8-33 Map of the excavations at 41DN81 315

8-34 Locations of subsurface features exposed during prehistoric excavations at 41DN81 316

8-35 West wall profile of BHT 1 at 41DN81 317

8-36 Site map of 41DN91 329

8-37 Comparison of major artifact category frequencies for the 50x50-cm units in the sheet-refuse deposit and the combined counts for hand-excavated Trenches 1, 2, 3 and 41DN91 334

8-38 Comparison of architectural artifact category frequencies for hand-excavated Trenches 1, 2, 3 and 4 at 41DN91 335

8-39 Comparison of ceramic category frequencies for the 50x50-cm units in the sheet-refuse deposit and for hand-excavated Trenches 1, 2, 3 and 4 at 41DN91 337

8-40 Artifact frequency distributions at 41DN91 339

8-41 Refined earthenware counts for hand-excavated Trenches 1-4 at 41DN91 341

8-42 Stoneware counts for hand-excavated Trenches 1-4 at 41DN91 342

8-43 Window glass counts for hand-excavated Trenches 1-4 at 41DN91 343

8-44 Machine-cut nail counts for hand-excavated Trenches 1-4 at 41DN91 344

8-45 Wire nail counts for hand-excavated Trenches 1-4 at 41DN91 345

8-46 Handmade brick counts for hand-excavated Trenches 1-4 at 41DN91 346

8-47 Personal item counts for hand-excavated Trenches 1-4 at 41DN91 347

8-48 Site map for 41DN97 351
8-49 Magnetometer survey map of the positive magnetometer values for 41DN97 352
8-50 Artifact count distributions for Block 1 at 41DN91 356
8-51 Site map for 41DN118 359
8-52 Site map for 41DN146 364
8-53 Site map for 41DN157 367
8-54 Field architectural drawings of the south elevation of the main dwelling at 41DN157 369
8-55 Field architectural floorplan of the first floor of the main dwelling at 41DN157 370
8-56 Field architectural drawings of the east elevation of the small house at 41DN157 373
8-57 Field architectural drawings of the large barn at 41DN157 374
8-58 Field architectural drawing of the east elevation of the log crib at 41DN157 376
8-59 Magnetometer survey map of the positive magnetometer values for 41DN157 377
8-60 Site map of 41DN166 385
8-61 Magnetometer survey map of the positive magnetometer values for 41DN166 386
8-62 Planview of Feature 1 at the base of excavation 10 cm below surface at 41DN166 391
8-63 Artifact frequencies for the west half of Feature 1 392
8-64 Planviews of Feature 2 (east cellar) and Feature (3) west cellar at 41DN166 396
8-65 Artifact density map of total artifacts for 41DN166 400
8-66 Artifact frequency distributions at 41DN166 402
8-67 Site map of 41DN167 407
8-68 Field architectural drawings of the dwelling at 41DN167 408
8-69 Magnetometer survey map of the positive magnetometer values at 41DN167 410
8-70 Artifact density distributions under the dwelling (Block 1) at 41DN167 419
8-71 Site map of 41DN198 424
8-72 Reconstructed floorplan of the log dogtrot at 41DN198 426
8-73 Site map of 41DN224 432

8-74 Site map showing the older component at 41DN224 433

8-75 Architectural drawing of the log hewn sills and the sandstone chimney base of the 1850/60s dwelling at 41DN224 435

8-76 Field architectural drawing of the north elevation of the ca. 1909 dwelling at 41DN224 436

8-77 Field architectural drawing of the south elevation of the ca. 1909 dwelling at 41DN224 437

8-78 Architectural floorplan of the ca. 1909 dwelling at 41DN224 438

8-79 Magnetometer survey map of the negative and positive magnetometer values in the older component at 41DN224 440

8-80 Site map of 41DN233 450

8-81 Site map of 41DN234 454

8-82 Artifact density distributions in the 4x4-m surface collection units at 41DN234 457

8-83 Artifact density distributions in the 1x1-m units excavated in Block 1 (dwelling area) at 41DN234 459

8-84 Site map of 41DN466 464

8-85 Magnetometer survey map of the postive magnetometer values at 41DN466 465

8-86 Planview of Feature 1 in Block 1 467

8-87 Artifact density distributions in the 1x1-m units excavated in Block 1 (dwelling area) at 41DN466 469

8-88 Planview of Feature 2, buried earthen cellar south of Feature 1 (buried brick cellar) and the dwelling 473

8-89 Artifact density plots for major artifact categories based on artifact counts per 50x50-cm unit at 41DN466 475

8-90 Site map of 41GS79 480

8-91 Field architectural drawing of the east elevation of the barn at 41GS79 481

8-92 Field architectural floorplan of the barn at 41GS79 482

8-93 Artifact density distributions for major artifact categories based on artifact counts per 50x50-cm unit at 41GS79 487

8-94 Artifact counts for major artifact categories in the hand-excavated trenches (Trenches 1 and 2) within the house mound at 41GS79 489

9-1 Butchered cattle and swine elements from 41CO121 and 41DN157 500

10-1 Areas of the project area discussed by oral informants during the 1986-1987 oral history program 508

12-1 Immigration routes used by families immigrating from Upper and Lower South states 525

12-2 Drawing of the Hemming Community in Southeastern Cooke County about 1807 526

12-3 The percentage of butchered bones at ten farmsteads in the Ray Roberts Lake area. 532

12-4 Log corner notching styles documented for dwellings in northcentral Texas 537

12-5 Log dwelling types documented in the Eastern Cross Timbers 539

12-6 Log dwelling floorplans documented in the Eastern Cross Timbers 540

12-7 Log outbuilding floorplans and building types documented in the Eastern Cross Timbers 545

12-8 Ceramic percentages for farmsteads in the Central Area (a) and the Crosgrove's Bottom Area (b) of the Ray Roberts Lake project area 547

12-9 Major refined earthenware types (a) and the relativepercentage of blue-tinted ironstone (Type 8) and blue-tinted whitewares (Type 13) at farmsteads in the Central Area of the Ray Roberts Lake project area 548

12-10 Major refined earthenware types in the Crosgrove's Bottom Area (a) and the Northeast Area (b) of the Ray Roberts Lake project area 550

12-11 The percentage of decorated refined earthenwares and the number of decoration combinations for farmsteads in the Central Area (a) and the Crosgrove's Bottom Area (b) of the Ray Roberts Lake project area 552

12-12 Vessel glass/ceramic ration for farmsteads in the Central Area (a) and the Crosgrove's Bottom Area (b) of the Ray Roberts Lake project area 553

12-13 Machine-cut nail/wire nail ratios for farmsteads in the Central Area (a) and the Crosgrove's BottomArea (b) of the Ray Roberts Lake project area 555

12-14 The percentage of farmsteads investigated in 1986-1987 with specific extant outbuildings 558

12-15 The percentage of Grand Prairie farmsteads (a) Eastern Cross Timber farmsteads (b), and Blackland Prairie farmsteads (c) in the Ray Roberts Lake project area with specific extant outbuildings 560

12-16 The percentage of farmsteads in the Ray Roberts Lake area (a), Joe Pool Lake area (b), and the Richland-Chambers Creek area (c) with specific extant outbuildings. 561

12-17 (a) An idealized model of yard area and farm structures at a small landowner farmstead, and (b) a proxemic model of a traditional farmstead in the Richland-Chambers Creek project area 563

12-18 Artifact percentages for major artifact categories at farmstead in the Crosgrove's Bottom Area (a) and the Central Area (b) of the Ray Roberts Lake project area 565

List of Tables

3-1 Agricultural Property and Production for Region III of Texas, 1850 and 1860 20

3-2 Agricultural Produce for Cooke, Denton, and Grayson Counties in 1870 21

3-3 Number of Farms by Size for Cooke, Denton, and Grayson Counties 1870 22

3-4 Livestock in Denton County Based on Figures from the County Tax Assessor's Office 22

3-5 Industrial Development and Investment in Cooke, Denton, and Grayson Counties in 1860 24

3-6 Major Industries in Denton County in 1860 24

3-7 Slave and Non=Slave Populations in Region II in Antebellum Texas, 1850 and 1860 25

3-8 Towns in Six-County Area with a Population Over 500 in 1880 26

3-9 Cotton Production in 1880 and 1890 for Three-County area 30

3-10 Numbers of Farms in Denton County Between 1870 and 1900 31

3-11 Farm Tenancy in Denton County Between 1880 and 1900 31

3-12 Numbers of Head of Cattle in Texas Cattle Drives between 1866 and 1880 32

3-13 Major Industries in Three-County Area in 1870 32

3-14 Milling and Ginning Occupations Recorded in the 1860 and 1870 Censuses 34

3-15 Statistical Data of Texas Agriculture, 1880-1970 35

4-1 Recommendations for Historic Resources 38

4-2 Summary of Recommendations for Prehistoric and Historic Sites Based on ECI 1980-1981 Survey Results 39

4-3 Summary of Recommendations for Architectural Resources Based on ECI 1980-1981 Survey Results 39

4-4 Recommendations for Historic, Prehistoric, and Architectural Resources Evaluated by ECI in the Dam Construction Area 40

4-5 Testing Conducted by ECI at Historic Sites in 1981 42

4-6 Sites Determined National Register Eligible in 1982 43

4-7 Site Recommendations Made by UNT Based on the 1985-1986 Survey 44

5-1 Historic Sites Scheduled for Investigation during the 1986-1987 Season 53

5-2 The Grid Spacing in Meters and the Number of Units by Unit Type Excavated during the 1986-1987 Testing 56

5-3 Grid Interval in Meters and the Number of Units Excavated by Unit Type during the 1986-1987 Mitigation 57

5-4 Grid Interval in Meters and the Number of Units Excavated by Unit Type at Sites Recommended for Additional Testing or Mitigative Efforts during 1986-1987 58

6-1 Land Tracts within the Unsurveyed 8,800 Acres in the Project Area 71

6-2 Overview of Historic Resources on Historical Maps Including the Project Area by Map 82

7-1 Artifact Assemblage form 41CO33 119

7-2 Artifact Assemblage from 41CO38 122

7-3 Comparison of Artifact Categories by Component at 41CO39 131

7-4 Artifact Assemblage from 431CO103 134

7-5 Artifact Assemblage from 41CO118 141

7-6 Artifact Assemblage from 41CO119 145

7-7 Artifact Assemblage from 41CO120 150

7-8 Artifact Assemblage from 41CO136 157

7-9 Artifact Assemblage from 41CO143 164

7-10 Artifact Assemblage from 41DN106 171

7-11 Artifact Assemblage from 41DN107 176

7-12 Mean Beginning Dates for the Sheet Refuse, Feature 1, and Surface Collection Samples at 41DN107 176

7-13 Artifact Assemblage from 41DN172 188

7-14 Artifact Assemblage from 41DN174 192

7-15 Artifact Assemblage from 41DN190 194

7-16 Artifact Assemblage from 41DN191 199

7-17 Artifact Assemblage from Features 1-7 and the Sheet-Refuse Deposit at 41DN248 207

7-18 Artifact Assemblage from 41DN273 212

7-19 Artifact Assemblage from 41DN275 217

7-20 Artifact Assemblage from 41DN349 222
7-21 Artifact Assemblage from 41GS46 225
7-22 Artifact Assemblage from 41GS59 227
8-1 Soil Profiles Description for BHT 2 at 41CO36 235
8-2 Artifact Assemblage by Artifact Category and Unit Type from41CO36 236
8-3 Artifact Assemblage from 41CO83 244
8-4 Artifact Assemblage from 41CO111 249
8-5 Soil Profile Description for Trench 1 at 41CO121 259
8-6 Artifacts from 41CO121 by Collection Area 261
8-7 MBD Values Obtained for Refined Earthenwares, Stonewares, and Bottle Glass Sherds by Collection Area at 41CO121 264
8-8 Artifact Assemblage from 41DN77 275
8-9 Soil Profile Description for the Southern Portion of BHT 2 at 41DN79 285
8-10 Features Found at 41DN79 286
8-11 Artifact Assemblages from Features at 41DN79 294
8-12 MBD Dates By Collection Area for 41DN79 294
8-13 MBD Dates By Collection Area for 41DN79 (sample size), Excluding Post-Occupational Material 296
8-14 Artifact Assemblages from the 50x50-cm Units, Blocks 2-5, and the Slot Trenches at 41DN79 . . 302
8-15 Stoneware Types by Collection Unit at 41DN79 302
8-16 Personal Items Found at 41DN79 308
8-17 Ammunition Found at 41DN79 310
8-18 Features Found at 41DN81 318
8-19 Historic Artifacts Found at 41DN81 323
8-20 Mean Beginning Dates Obtained for the Historic Material at 41DN81 324
8-21 Soil Profile Description for BHT 1 at 41DN91 330
8-22 Artifacts from Feature 3 at 41DN91 331

8-23 Artifacts from 41DN91 by Collection Area 333

8-24 Comparison of the Relative Percentage of Architectural Items by Collection Area at 41DN91 . . . 333

8-25 MBD Values Obtained for Refined Earthenwares, Stonewares, and Bottle Glass Sherds by Collection Area at 41DN91 336

8-26 Artifact Assemblage from 41DN97 by Collection Area 354

8-27 Artifact Assemblage from 41DN118 361

8-28 Artifact Assemblage from 41DN146 365

8-29 MBD Values for 41DN157 379

8-30 Artifacts Recovered from 41DN157 379

8-31 Soil Profile Description for BHT 4 at 41DN166 388

8-32 Soil Profile Description for BHT 1 at 41DN166 389

8-33 Artifacts Collected from Feature 1 at 41DN166 394

8-34 MBD Values Obtained for Feature 1 at 41DN166 394

8-35 Artifact Totals for Units in the West Half of Block 1 (Feature 1) at 41DN166 395

8-36 Artifacts Collected from Feature 2 at 41DN166 397

8-37 Artifacts Collected form Feature 2 at 41DN166 398

8-38 Artifacts from 50x50-cm Units, Judgmentally-Placed 1z1-m Units, and Backhoe Trenches/Surface Grab Samples at 41DN166 399

8-39 MBD Values for the Sheet-Refuse Deposit (50x50-cm Units and Judgmentally-Placed 1x1-m Units), Feature 1, and the Backhoe Trenches at 41DN166 400

8-40 Artifacts Collected from Feature 1 by Level at 41DN167 412

8-41 MBD Values Obtained for Feature 1 (Unit S82 E72.5) at 41DN167 413

8-42 Artifacts from 50x50-cm Units, Block 1, Judgmentally-Placed 1x1-m Units, and Feature 1 at 41DN167 414

8-43 Artifacts from Backhoe Trenches 1 through 4 and the Surface Grab Sample from the House Area at 41DN167 415

8-44 MBD Values for Collection Areas at 41DN167 416

8-45 Twentieth-Century Ceramic and Bottle Glass Frequencies by Collection Area at 41DN167 417

8-46 Artifact Assemblage from 41DN198 427

8-47 Features Identified at 41DN224 441

8-48 Artifacts Found in Features 1, 2, 3 and 5 at 41DN224 442

8-49 Artifact Summary for the North and South Dwelling Areas at 41DN224 by Collection Area 444

8-50 MBD Values for the North and south Dwelling areas at 41DN224 445

8-51 Artifact Assemblage from 41DN233 451

8-52 Soil Profile Description for BHT 1 at 41DN234 455

8-53 Artifact Assemblage from 41DN234 456

8-54 Soil Profile Description for BHT 1 at 41DN466 466

8-55 Artifacts Recovered from Block 1 at 41DN466 468

8-56 MBD Values for Block 1 and the Backhoe Trenches at 41DN466 471

8-57 Artifacts from Feature 2 at 41DN466 472

8-58 MBD Values for 50x50-cm Units at 41DN466 472

8-59 Artifact Assemblage from the 50x50-cm Units at 41DN466, Excluding Features and Units in Block 1 474

8-60 Artifacts from the 50x50-cm Units and the 1x1-m Units at 41GS79 485

8-61 MBD Values for Ceramics and Bottle Glass by Collection Area for 41GS79 485

9-1 Selected Taxa from ten historic sites at Ray Roberts Lake 495

9-2 Cattle and Swine at selected North Texas sites 497

9-3 Summary of historic faunal remains and cut marked elements 501

10-2 Ray Roberts Oral Informants 509

12-1 Comparative summary of structures at the historic farmsteads investigated in Cooke County in 1986-1987 533

12-2 Comparative summary of structures at the historic farmsteads documented and/or tested in Denton County in 1986-1987 534

12-3 Comparative summary of structures at the historic farmsteads intensively investigated in Denton County in 1986-1987 535

12-4 Comparative summary of structures at the historic farmsteads investigated in Grayson County in 1986-1987 536

12-5 Floorplan, number of stories, notching style, and wood type for log-core dwellings 542

12-6 Wells, cisterns, and cellars at the historic farmsteads investigated in 1986-1987 543

12-7 Worked bone artifacts from historic farmsteads 556

ABSTRACT

Archaeological investigations of historic resources at Ray Roberts Lake were conducted by personnel from the Institute of Applied Sciences, University of North Texas in 1986 and 1987. These investigations involved the documentation of ten farmsteads in previously unsurveyed areas (Chapter 6), test excavations of 23 farmsteads (Chapter 7), and intensive excavations at 20 farmsteads (Chapter 8). Among the research conducted at these farmsteads were archival, oral history, and architectural documentation, dendrochronology of log structures, and excavation. Archival and oral-history research provided data on farm ownership, farm size, dates of occupation, and family life. Architectural documentation yielded information on building construction methods, materials, age, and function, while dendrochronological data provided information about possible cutting-construction relationships, building re-use, and available building materials. Survey and testing data were obtained to determine eligibility to the National Register of Historic Places for all historic farmsteads scheduled for limited testing, testing, or which were identified during the 1986-1987 survey. Following testing, all farmsteads determined eligible for the National Register received intensive excavations. These excavations included recovery of data from sheet refuse and feature deposits. Farmsteads occupied during the historic period in the Ray Roberts Lake area date from the late 1840s or early 1850s to the present, offering data necessary to investigate changes in rural lifeways and adaptations over the last 140 years.

MANAGEMENT SUMMARY

This report presents the results of historical archaeology investigations in the Ray Roberts Lake project area of northcentral Texas. Ray Roberts Lake is located in southeastern Cooke, northeastern Denton, and southwestern Grayson counties. This work was undertaken in order to mitigate adverse project impacts identified for 41 historic farmsteads dating from the mid-nineteenth and early twentieth centuries that had been previously determined eligible or potentially eligible for nomination to the National Register of Historic Places. Twenty-three sites received limited testing or testing (41CO33, 41CO38, 41CO39, 41CO83, 41CO103, 41CO118, 41CO119, 41CO120, 41CO136, 41CO143, 41DN106, 41DN107, 41DN172, 41DN174, 41DN190, 41DN191, 41DN232, 41DN248, 41DN273, 41DN275, 41DN349, 41GS46, and 41GS59). The results of these investigations are presented in Chapter 7. Also included in this chapter are the architectural results for 41DN193, which did not receive testing. Twenty farmsteads (Chapter 8) received sheet-refuse excavations (41CO83, 41CO111, 41DN77, 41DN91, 41DN97, 41DN118, 41DN146, 41DN157, 41DN198, and 41DN233) or intensive excavations (41CO36, 41CO121, 41DN79, 41DN81, 41DN166, 41DN167, 41DN224, 41DN234, 41DN466, and 41GS79). Of these, access was denied to 41CO111, and the scheduled excavations were not conducted at this site.

Investigations examined the archaeological features, sheet refuse, architecture, archival records, and oral information related to these farmsteads. An interdisciplinary approach was utilized to obtain detailed information on local settlement and lifeways. Archaeological investigations provided data on farm structure, building types, function, size, and distribution of features, artifact types, frequencies, and sheet-refuse density. Architectural documentation was conducted at all farmsteads scheduled for limited testing, testing, or excavation and those farmsteads which contained extant architecture. Dendrochronology was implemented at a small sample of sites designated in the Scope of Work. Archival and oral-history data were obtained to augment the archaeological and architectural data. Information obtained from these varied sources was used to obtain a more complete reconstruction of local settlement and lifeways. Archival data are presented by farmstead and for the reservoir area as a whole. An explicit research design was formulated to focus all of these studies and to provide a necessary framework for analyzing and interpreting the results.

The farmsteads included in the historical investigations conducted by the Institute of Applied Sciences include both landowners and tenant farmers, Euro- and African-Americans, and farmers and ranchers. By far, the majority of the farmsteads studied were operated by farmers involved in diversified farming. Corn, wheat, oats, barley, and cotton were grown. Hogs, goats, sheep, cattle, milk cows, turkeys, and chickens were raised by many farmers, and most had family gardens and orchards. Evidence of these activities were uncovered during excavations at many of these farmsteads. Among this evidence are faunal and floral remains and architectural remnants. Cellars were common throughout the reservoir, along with cribs for storing grains and cotton, small animal sheds, animal pens, corrals, and chicken coops. Both log and frame technology was utilized in the construction of these structures.

The archaeological and architectural resources of Ray Roberts Lake contain information on the rural lifeways of this region over the past 140 years. This region was primarily rural with several large communities outside the perimeter of the lake project area. Small communities with several stores, churches, schools, and a gin, blacksmith shop, and a small number of residents dot the interior of what is now the reservoir. This area remained agrarian during this 140-year period, and along the fringes of the lake, it is largely rural today.

ACKNOWLEDGEMENTS

The historical investigations at Ray Roberts Lake benefitted from the dedication and support of many people. We owe a tremendous debt of gratitude to all of the individuals whose interest and research efforts enhanced this project. Among these individuals are the field personnel, analysts, writers, consultants, and support staff. We also benefitted greatly from and enjoyed the continued deep interest and support of the general public. Most particularly, we would like to thank the numerous individuals who graciously gave of themselves, agreeing to share with us their family, home, and memories about living in the Ray Roberts Lake area. Among these individuals are Jane Armstrong, Otis Cason, Eunice Gray, C. E. Hudspeth, Clifton Irick, Odessa Isbell, Roy Jones, Mrs. C. C. Myers, Nell Renfro, and Ely and William Sledge. Additional thanks are given to all of the public who attended the several "Archaeology Open Houses" we conducted during the duration of the project.

Special thanks go to the U.S. Army Corps of Engineers, Fort Worth District, and all of its staff who contributed their time, expertise, and dedication to this project. In particular, we would like to thank Mr. Jay Newman and Ms. Karen Scott. Mr. Jay Newman deserves particular thanks for his thorough review of the final draft and his constructive comments during the duration of this project.

We would also like to extend our appreciation to the staff of the Texas Parks and Wildlife Department (TPW) who provided field assistance in several of the park areas. Particular thanks go to Mr. Ken Pollard and Mr. Lynn Salmon of the Lewisville Lake office. Special recognition goes to Dr. Malcolm Cleaveland for his research and analysis of the dendrochronology data, and Dr Ronald Marcello of the Oral History Collections at the Willis Library, UNT for accepting and agreeing to edit and curate the oral-history tapes generated by this project.

Considerable appreciation goes to the field and laboratory crews who worked long hours and endured a variety of less than ideal conditions, including bad weather and a prairie fire. Special thanks are also extended to all of the field and laboratory supervisory personnel who put in many hours working on field maps, notes, and forms. Field supervisors include Carl Freuden and Debbie Marcaurelle, Randy Korgel (architecture), and assistant supervisors Herb Beamer, Kenneth (Stony) VanderSteen, Georgia Panos, and Sylvia Kooren. Randy Nathan was the supervisor of the survey, Paula Sutton and George Brown served as artifact laboratory supervisors, and Bonnie C. Yates supervised the bone laboratory. Field and laboratory crew members include Chris Brown, Wanda Cast, Ellen Clark, Kim Coberly, Ronald Collins, Chad Dickson, Clifford Dorsett, Brian Ham, Carin Horn, Dierdra Hungerford, Stephen Lohse, Cathy Lundoff, Carole Medlar, Bruce Mergele, James Morris, Clark Moses, Robert Perales, Cathy Peterson, Leon Price, Jim Ross, LeeAnna Schniebs, Brian Shaffer, T. W. Tunnell, Randy Webb, Mark White, Ed Williams, Craig Young.

Many thanks also go to the University of North Texas support personnel which include Tom Nelson (computer), Supaporn Thaipakdee (data entry); Wanda Cast, Gina Gallup, and Denise Sellars (secretarial-office staff); Pamella Carmichael, Brian Ham, and Tammie Green (graphics); and the work-study students who devoted hours between classes to aid us in our research efforts. Among these students are Homi Eslami, Jane Fry, Gil Griffin, Layne Hedrick, Juanita Landrum, and Robin Wright. Additional thanks go to Dr. Kenneth Dickson, Director of the Institute of Applied Sciences, Dr. C. Reid Ferring, Principal Investigator of the Ray Roberts Lake Project, Bonnie C. Yates, Project Manager, Stephen Lohse for conducting the oral-history interviews, James Morris and Paula Sutton for their metal conservation endeavors.

1992

CHAPTER 1

PROJECT OVERVIEW

by

Susan A. Lebo

This volume contains the report of the historic archaeological, architectural, oral history, and archival investigations undertaken by the Institute of Applied Sciences (IAS) of the University of North Texas (UNT), in the Ray Roberts Lake project area in southeast Cooke, southwest Grayson, and northern Denton County (Figure 1-1). This work was conducted by the IAS as part of contract DACW63-86-C-0098, with the Fort Worth District, U.S. Army Corps of Engineers (Corps). The purpose of this report is to summarize the character and significance of the archaeological sites that were test excavated and/or mitigated during 1986 and 1987 by UNT. The report of the prehistoric investigations conducted by the IAS, UNT during this period is reported in Ferring, Yates, and Brown (1992).

Project Location

Ray Roberts Lake is being considered by the U. S. Army Corps of Engineers, Fort Worth District, for purposes of water supply, recreation, and flood control. T. archaeological investigations were conducted to mitigate the impact of reservoir and park construction, inundation of the lake area, and maintenance of the shoreline and park areas. Ray Roberts dam has been constructed approximately 1/4 mile south of the confluence of the Elm Fork and Isle du Bois Creek in Denton County. The floodplains and large portions of the lower terraces of these streams and their tributaries will be inundated. These tributaries include Spring Creek and Pond Creek on the Elm Fork, Indian Creek, Walnut Branch, Sand Branch, Johnson Branch, Wolf Creek, Buck Creek, and Range Creek on the Isle du Bois.

The dam is compacted earth-filled type, 15,250 feet in length, 139 feet in height above the stream, with a crown width of 46 feet. Approximate stream bed elevation above mean sea level (AMSL) at the dam is 526 feet. Elevations in the project area range from 850 feet AMSL in the northwest to 550 feet AMSL in the southeast, a 300 foot drop in release. The conservation pool will have an elevation of 632.5 feet AMSL, a capacity of 29,350 acres. Above this, the flood-control pool will have an elevation of 640.5 feet AMSL, an additional capacity of 260,800-acre feet and a surface area of 36,900 acres. Total land purchases for the project is approximately 48,348 acres in Cooke, Denton, and Grayson counties, extending the acquisition line above 500 feet AMSL in many places.

The lake lies immediately east of Interstate 35 midway between Denton and Gainesville. Clockwise from due west of the dam, the lake is surrounded by the towns of Sanger, Valley View to the northwest, Collinsville to the northeast, Tioga and Pilot Point to the east, and Aubrey south of the dam.

Project Objectives and Methods

The Ray Roberts Lake archaeological project was conducted to recover information from historical properties deemed significant according to criteria of the National Register of Historic Places. In addition, work was conducted to locate, identify, and record sites in previously unsurveyed areas, to test sites for National Register eligibility, excavate, and mitigate sites determined National Register eligible, and to document this research and to disseminate the results through reports, papers, and publications.

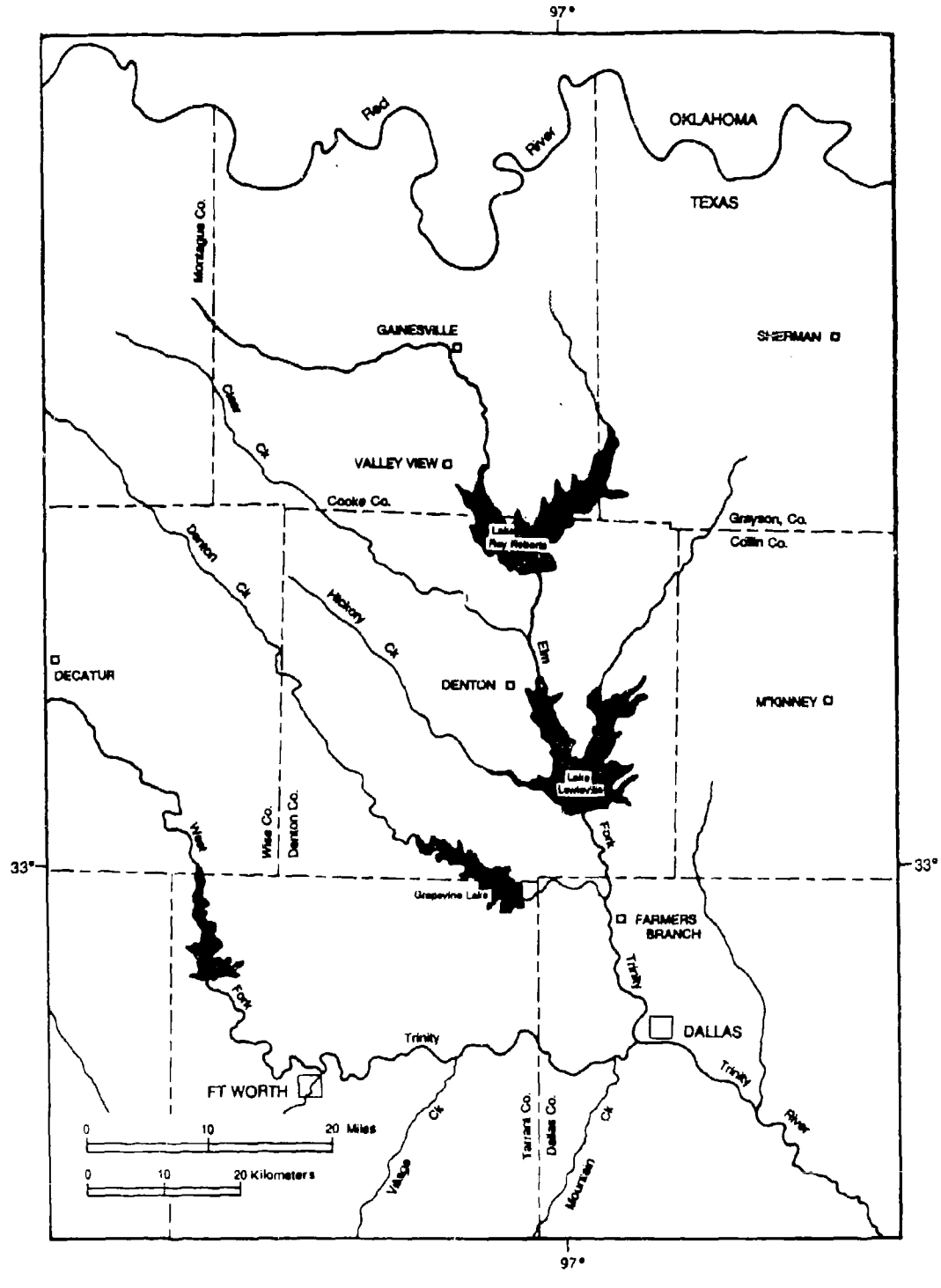


Figure 1-1. Location of the Ray Roberts Lake project area in southeastern Cooke, southwestern

All historic properties in the project area previously determined eligible or potentially eligible for the National Register were scheduled for investigation in 1986. The research design which structured the 1986-1987 investigations of the historic sites presents an ecological and economic perspective that allows an examination of the interrelationship of nineteenth-century settlement, landuse, and lifeways, and changes in these during the early twentieth century. It was hoped that the modeling of the interaction of these aspects of the historic record through time would provide an understanding of the cultural changes that occurred in this area during the last century. Such a research perspective requires a data base that will provide for the reconstruction of the environment, identification and calculation of any behavioral variability, access to and utilization of specific types of goods and services, types of activities carried out, and the socioeconomic status, ethnicity, and landuse patterns of residents in the study area. A multidisciplinary approach involving archaeological, geological, archival, oral history, and faunal studies was developed. The research design developed for the project (Ferring and Lebo 1988) is presented in Chapter 3.

The Scope of Work specified a series of tasks to be completed at each site. These tasks include limited testing, testing, sheet-refuse mitigation, architectural documentation, archival research, mapping, and dendrochronology. The tasks scheduled for each site in the Scope are discussed in Chapter 3. Changes were made to the Scope during the course of the project. These changes were required as new information was obtained and site status was reassessed. Several sites were dropped because they were determined to be outside the project boundaries, had been destroyed or severely impacted, no longer contained significant deposits, and reevaluation indicated they were not National Register eligible. Changes to the Scope were made in consultation with the Corps. A detailed discussion of these changes is provided in Chapter 5.

A pedestrian survey was conducted of 4,400 acres in the project area that remained unsurveyed or their survey status was in question in 1986. Ten historic sites were identified during this survey, and the results are presented in Chapter 6. Each of these ten sites were recorded, mapped, and recommendations were made about their potential National Register eligibility, and mitigation was recommended at some of these sites, to offset the adverse impacts and to recover signficant archaeological data.

Volume Organization

This volume is organized into four parts. Part One presents a brief project overview (Chapter 1), the environmental background (Chapter 2), the historical setting, including the historical background (Chapter 3) and previous investigations (Chapter 4), and the research design containing the theoretical framework, research questions, and methods (Chapter 5). Part Two consists of three chapters which present the results of the survey (Chapter 6), testing (Chapter 7), and mitigation (Chapter 8) phases of the project. The site descriptions in these chapters include data on previous investigations, archival research, magnetometer survey data, geological information, oral history data, artifact descriptions, feature descriptions, horizontal and vertical patterning, and interpretive summaries. Part Three contains the results of specialized studies. Specialized studies conducted during the Ray Roberts Lake project include faunal remains and foodways (Chapter 9), oral history interviews (Chapter 10), and dendrochronology (Chapter 11). Part Four (Chapter 12) provides an overview of the project from three perspectives: (1) reservoir specific, (2) an evaluation of the research questions, and (3) a regional or national overview.

Eleven appendices are included in this volume. Appendix A contains the chain of title for each historic testing or mitigation site, while Appendix B is the historic artifact classification system. Appendix C is the oral-history questionnaire. An inventory of the faunal remains from each historic site investigated in 1986-1987 is presented in Appendix D, with faunal data for multicomponent sites 41DN79 and 41DN81 in Appendix E. The Osburn Cemetery data are presented in Appendix F. The dendrochronology inventory for samples and sites discussed in the site descriptions are provided in Appendix G, while the population census data compiled for Chapter 3 is given in Appendix H. Butchery data compiled for the early 1880s for Gainesville are presented in Appendix I. An artifact inventory of the historic artifacts recovered by ECI is presented in Appendix J, while a complete inventory of historic sites is presented in Appendix K.

CHAPTER 2

HISTORIC ENVIRONMENTAL SETTING

by

Susan A. Lebo

Introduction

This chapter provides descriptions of the environmental setting of the Upper Trinity River Basin, the biotic resources (vegetation and fauna), the streams and hydrology of north-central Texas, followed by the climate, and the environmental setting during the nineteenth century. The projected environmental and cultural impacts on the construction of Ray Roberts Lake are presented based on data from Fitzpatrick (1982), Institute of Applied Sciences (1988), U.S. Army Corps of Engineers (1974), and Yates and Ferring (1986). For more detailed discussions of these impacts and environmental resources within the region, the reader is directed to these references.

Project Setting

Ray Roberts Lake, formerly called Aubrey Lake, is situated in the Upper Trinity Basin in the southern part of Cooke County, the northern part of Denton County, and southwest Grayson County (see Figure 1-1). The major portion of the reservoir is along the Elm Fork of the Trinity River and its tributaries, and along Isle du Bois Creek and its tributaries. The impoundment will extend along the Elm Fork to the west, and Isle du Bois, Indian, Buck, Wolf, and Range Creek valleys to the east.

The Ray Roberts Lake project area defined by this study includes all lands within the flood pool elevation of 640.5 ft above mean sea level (MSL). The dam is situated on the Elm Fork of the Trinity River, approximately 4 miles northwest of Aubrey, Texas, 5 miles south of the Cooke County-Denton County line, and 10 miles north of Denton, Texas. It is located at river mile 60.0 (96.6 km) on the Elm Fork, 30 miles upstream from Lewisville Dam. The Ray Roberts Lake project lands total 45,500 ac, the surface area of the flood pool is 46,000 ac, and the conservation pool is 29,850 ac.

Physiographic Setting

The project watershed is located in the West Gulf Coastal Plain physiographic province, a broad belt of sands, clays, and limestones encompassing four main physiographic subdivisions, the Western Cross Timbers, the Grand Prairie, the Eastern Cross Timbers, and the Blackland Prairie (Figure 2-1). These subdivisions are based on the physical character of the underlying geologic formations that occur in this area. The Eastern Cross Timbers and Grand Prairie are part of an approximately 320-km wide transition zone between the Southeastern deciduous forests and the grassy Southern Plains (Prikryl and Yates 1987:4).

The western part of the Elm Fork watershed occurs in the Western Cross Timbers and will not be inundated by Ray Roberts Lake. This physiographic region, characterized by rolling to hilly topography with a thin and sandy soil cover and stunted post oak and blackjack timber, is an outcrop of the Trinity sand formation. The Western Cross Timbers, also called the Upper Cross Timbers (Hill 1887, 1901), extend from Oklahoma south through some 18 counties in northcentral Texas (Galloway 1962).

The western portion of the Ray Roberts Lake reservoir is located in the Grand Prairie, in the central portion of Cooke and Denton counties, and is characterized by flat to gently rolling upland prairie with small escarpments and benches of alternating beds of shales and limestone stratigraphically situated between the Antlers Formation at

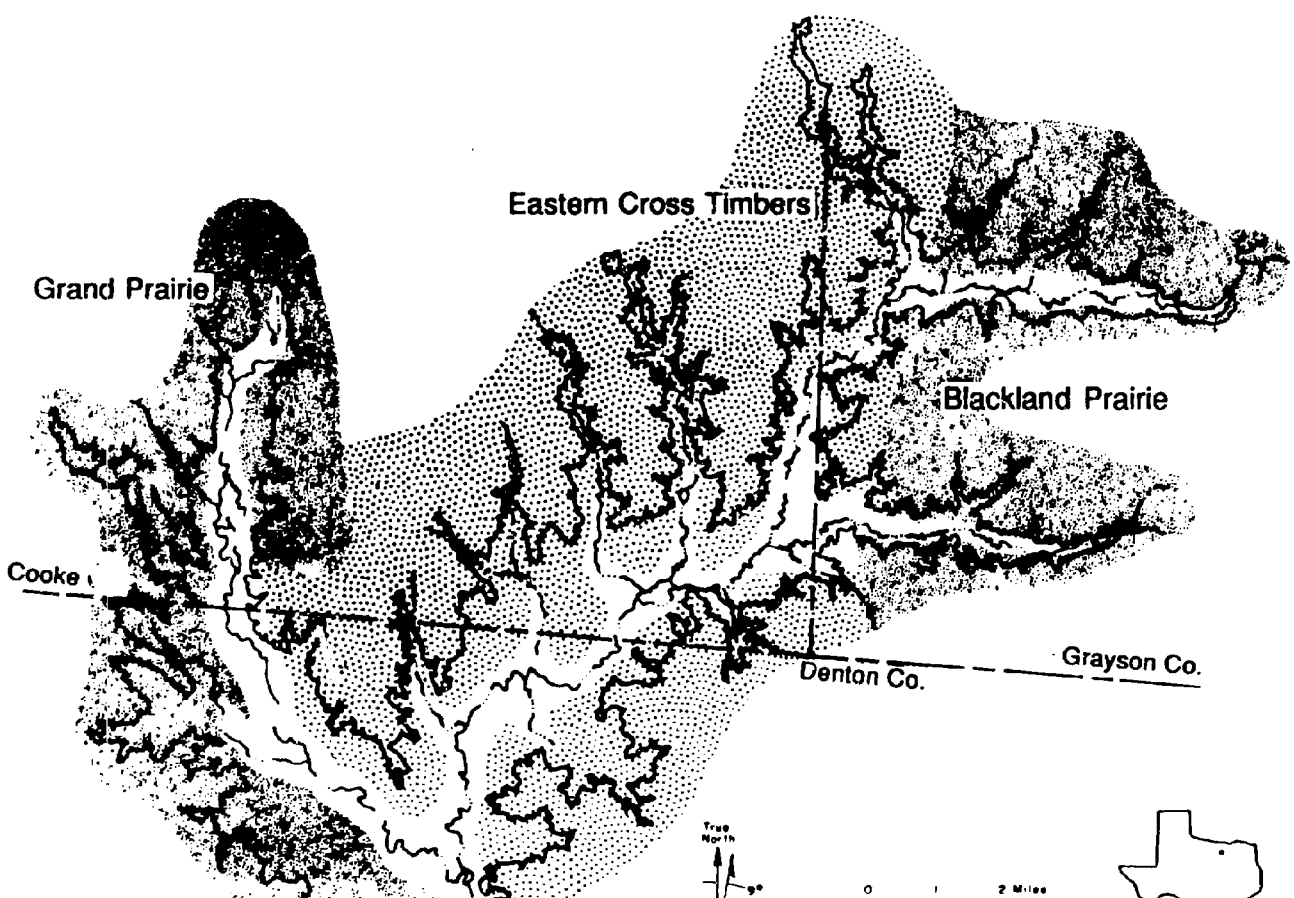


Figure 2-1. Physiographic location of the Ray Roberts Lake project area in the Grand Prairie, Eastern Cross Timbers and Blackland Prairie.

the base and the Woodbine Formation at the top. According to Hill (1901:71-2),

> Although often confounded with the Black Prairie, the Grand Prairie differs from it in many minor physical features. In general the surfaces are flat rather than undulating, and the valley slopes are angular (scraped or terraced) rather than rounded. The residual soils an regolith are shallow in comparison with those of the Black Prairie belts, and are of chocolate or brown colors instead of black.... Owing to the more shallow soil and the decreased rainfall many of the upland areas of the western part of the Grand Prairie are not so well adapted to agriculture, other than grazing, as are those of the Black Prairie, but the valley lands are very fertile and are extensively utilized.
>
> The chief difference between the two regions is that the Grand Prairie is established upon firm, persistent bands of limestone, which are harder than the underlying clay substructure of the Black Prairie region, and which, under erosion, result in more extensive stratum plains and more angular cliffs and slopes.

The Grand Prairie south of the Red River dips gently east and north of the Trinity River, as far south as the Colorado River, and consists of comparatively flat and unbroken dip plains. West and south of the Trinity River, the surfaces of the dip plains are more scraped and dissected into low buttes and mesas (Hill 1901:75).

The central and eastern boundary of the Elm Fork watershed occurs in the Lower or Eastern Cross Timbers, which is topographically similar to the Western Cross Timbers, except it is more rugged and hilly. The Eastern Cross Timbers are underlain by the Woodbine Formation of slightly acidic sands, clays, and sandstones. Historically, the Eastern Cross Timbers was characterized by a dense timber growth of primarily post oak and blackjack oak (Hill 1901).

The soil in the Eastern Cross Timbers is ferruginous and more fertile than the Western Cross Timbers, averaging less than 90% insoluble silica, while the soils of the Western Cross Timbers are more than 97% insoluble silica (Hill 1887:293).

The Blackland Prairie, also called "black waxy," or "white rock" prairie (Hill 1887:297), is primarily east of Ray Roberts Lake, occurring only in the extreme eastern part of the reservoir east of Isle du Bois Creek. The Missouri, Kansas and Texas Railroad from Denison to Austin marks approximately the western boundary of the Blackland Prairie (Hill 1901:65). The Blackland Prairie is named for the regolith of black calcareous soils weathered from the underlying Eagle Ford shales and the Austin chalk deposits rich in lime. According to Hill (1901:66), the region is the richest and largest body of agricultural land in the state. The region is a slightly tilted plain sloping towards the coast and except for streams with their headwaters to the west, the Blackland Prairie has few rivers (Hill 1901:66).

Vegetation

The Western Cross Timbers are characterized by a dense growth of stunted trees and bushes, primarily post oak (Quercus stellata) and blackjack (Quercus marilandica),along with elm, hackberry, and numerous annuals and perrenials (Hill 1887:292).

Based on a study of relict grassland vegetation, the little bluestem (Andropogon scoparius) is the dominant grass in undisturbed areas of the Fort Worth Prairie of the northern Grand Prairie, accounting for about two-thirds of the total ground surface (Dyksterhuis 1946). The prairie was not destitute of timber, which occurred in patches where the soil and geologic conditions were favorable (Hill 1887). Present-day dominants, Texas stipa (Stipa leucotricha) and silver bluestem (Andropogon saccharoides), may have been present as minor species in the pre-settlement period before 1840. They represent a grazing disclimax or degeneration of the pre-settlement vegetation community not present before extensive grazing activity between 1840 and 1880. S. leucotricha increases in relative

abundance with increased grazing intensity, while A. saccharoides is a primary perennial invader of formerly cultivated fields and is one of the first species to become established on uncultivated barren areas (Dyksterhuis 1946:27). Riparian zones are confined to narrow belts along streams, and the most common trees are elm (Ulmus spp.), hackberry (Celtis occidentalis), pecan (Carya illinoiensis), and oak (Quercus spp.).

Upland vegetation in the Eastern Cross Timbers is predominately post oak and blackjack oak, while the bottomlands include these trees along with cedar elm (Ulmus crassifolia), pecan, hackberry, and an understory of coral berry (Symphroicarpos orbiculatus), greenbrier (Smilax sp.), frutescents such as haws (Ilex spp.), hog plum (Prunus spp.), and dewberries (Rubus spp.) (Yates and Ferring 1986:18). Climax understory grasses include little bluestem, big bluestem (Andropogon gerardii), Indian grass (Sorghastrum nutans), switchgrass (Panicum virgatum), Canada wild-rye (Elymus canadensis), and sideoats grama (Bouteloua curtipendula) (Institute of Applied Sciences 1988:7). Prior to Anglo settlement, little bluestem was the dominant grass (McCormick et al. 1975:4). According to Hill (1887:293), the increased fertility of the soils in the Eastern Cross Timbers compared with the Western Cross Timbers explains the greater varietal difference in the flora, including both the number of species present and their size.

Dominant climax vegetation in the Blackland Prairie is little bluestem. Other important grasses are big bluestem, Indian grass, switchgrass, sideoats grama, hairy grama (Bouteloua hirsuta), tall dropseed (Sporobolus asper),and Texas wintergrass (S. leucotricha), smutgrass (Sporobolus indicus), buffalo grass (Buchloe dactyloides), and dallisgrass (Paspalum dilatatum). Dominant tree species are oaks, pecan, cedar elm, bois d'arc (Maclura pomifera), and mesquite (Prosopis spp.) (Institute of Applied Sciences 1988:9-10; Yates and Ferring 1986:17). Along streams, overstory species include hackberry, oaks, elms, cottonwood (Populus spp.), ash (Fraxinus spp.), and willow (Salix spp.). Understory species are grapes (Vitis spp.), berries, peppervine (Ampelopsis arborea), honeysuckle (Lonicera spp.), hawthorne (Crataegus spp.), trumpetvine (Bignonia radicans), along with sedges, wildrye, and paspalum in wet areas. Prairie grasses occupy drier areas (Yates and Ferring 1986:17).

Fauna

The Ray Roberts Lake reservoir is located within Blair's (1950:100-102) Texan biotic province. Dyksterhuis (1948) argues that the Cross Timbers are a true woodland extension of the East Texas Austroriparian. Many species in this province are also found in surrounding provinces. According to Prikryl and Yates (1987:6), 49 species of mammals, 39 species of snakes, 16 species of lizards, 5 species of salamanders, and 14 species of frogs have been documented in the Texas province in recent times. Among the more common mammals are white-tailed deer (Odocoileus virginianus), cottontail rabbit (Sylvilagus floridanus), raccoon (Procyon lotor), opossum (Didelphis virginiana), and fox squirrel (Sciurus niger). Among the significant species eliminated from the area during the historic period are black bear (Ursus americanus) and wild turkey (Meleagris gallopavo), which were numerous in the Eastern Cross Timbers, and bison (Bison bison) and antelope (Antilocapra americana), which were found on the Grand Prairie (Prikryl and Yates 1987:6). Other species include the gray fox (Urocyon cinereargenteus), mountain lion (Felis concolor), pronghorn antelope, passenger pigeon (Ectopistes migratorius), and Carolina parakeet (Conuropsis carolinensis). Cattle grazing, conversion of woodland and prairie areas to cultivation, and hunting pressures have pushed these species out of the northcentral Texas area or to their extinction (Yates and Ferring 1986).

Raccoon, striped skunk (Mephitis mephitis), eastern cottontail rabbit, opossum, armadillo (Dasypus novemcinctus), coyote (Canis latrans), gray fox, and bobcat (Lynx rufus), reported by Davis (1978) to be within the northcentral Texas region, were observed in the project area. In a recent environmental study of the Ray Roberts Lake project area (Institute of Applied Sciences 1988), 116 avian species were observed, including 42 species that are permanent residents of the area. Nine rodent species, and 24 species of forage and game fish were observed. In addition, it was reported that

> The region is depauperate in mammals that are typically considered of economic importance.

> Those species generally considered of economic value include white-tailed deer, raccoons, fox squirrels, and beaver. White-tailed deer are uncommon in this area of north-central Texas. Reservoir construction and resultant loss of [and] disturbance of the surrounding area will probably improve white-tailed deer habitat availability. While considered a game species, fox squirrels are hunted infrequently in the region. Raccoons and beaver, while once valued for their pelts, are no longer trapped in large numbers. Both occur along the Trinity River, Isle du Bois Creek, and other regional streams. Most will be displaced to areas above the water, and should maintain their present numbers and raccoons may eventually increase along the shore of the reservoir (Institute of Applied Sciences 1988:101).

Streams and Hydrology

Ray Roberts Lake is situated in the northern portion of the Trinity River Basin, which is bounded on the north by the Red River Basin, on the east by the Sabine and Neches River Basin, and on the west and south by the Brazos and San Jacinto River Basins. The Trinity River Basin has a maximum length of approximately 360 miles and a maximum width of about 100 miles and encompasses all or part of 38 counties. It is located within two physiographic provinces; the northwestern section is in the central lowland province of the Interior Coastal Plain, and the remainder is in the Western Gulf Coastal Plain.

The Upper Trinity River has three major tributaries, the East Fork, West Fork, and the Elm Fork. The Elm Fork originates in eastern Montague County and flows southeast to south to its confluence with the West Fork of the Trinity River in Dallas, Texas. The Elm Fork drains an area totalling 2,577 square miles. Its maximum width is 60 miles, and its length along the axis of drainage is 80 miles. The watershed is situated in parts of Montague, Wise, Cooke, Denton, Grayson, Collin, Tarrant, and Dallas counties (U.S. Army Corps of Engineers 1974:ii-18).

Climate

The climate in the project area is humid subtropical with hot, humid summers, mild to cold winters, and windy springs. "Tropical Maritime air masses from the Gulf of Mexico play a dominant role in the climate of the area during the spring, summer, and fall, and modified polar air masses contribute significantly to winter climate" (Orton 1980:1). Rainfall is relatively uniform throughout the year with a slight peak in the spring and about 60% falling between April and September. Snowfall is infrequent.

Average humidity in mid-afternoon is between 50% and 60%, is higher at night, with an average at dawn of 80%. Winter average temperatures for the three county area is 40°F in Cooke and Grayson and 59°F in Denton, and the daily minimum for all three is 31-33°F. Summer average temperature is 82°F with a daily minimum between 93-94°F. Highs are between 110 and 112°F (Orton 1980; Putnam et al. 1979; Cochran et al. 1980). Prevailing winds for the area are from the south. Tornados and severe thunderstorms occur primarily in the spring and are local and of short duration.

Environmental Setting During the Nineteenth Century

Descriptions of the land and vegetation recorded by members of trading, military, and geological expeditions exist for the study area prior to settlement. Early accounts mentioned by Dyksterhuis (1946, 1948) include De Mezieres' report to the Baron De Ripperda on his expedition of 1772 (Bolton 1914), Vial and Fragosa's expedition in 1788 (Bolton 1915), Col. Stiff's journey in 1840, Josiah Gregg's trip in 1840, Kendall (1845), and Marcy (1849). Post-settlement descriptions include Marcy (1866) and Hill (1887). These descriptions are conflicting about the amount of woody vegetation, but indicate that scrubby oaks characterized the Cross Timbers before Anglo

settlement. According to Kendall,

> We were now fairly within the limits of the Cross Timbers, a singular strip of wooded country.... The immense western prairies are bordered, for hundreds of miles on their eastern side, by a narrow belt of forest land.... The growth of timber is principally small gnarled, post oaks and black jacks, and in many places the traveller will find an almost impenetrable undergrowth of brier and other thorny bushes. Here and there he will also find a small valley where the timber is large and the land rich and fertile, and occasionally a small prairie intervenes; but the general face of the country is broken and hilly, and the soil thin. On the eastern side of the Cross Timbers the country is varied by small prairies and clumps of woodland, while on the western all is a perfect ocean of prairie....In the Cross Timbers, we found the face of the country broken, and full of deep and almost impassable gullies. These, in the rainy season, carry off the waters from the hills to the larger streams outside the woods, but in July we found them all dry.... Bear and deer are found in the Cross Timbers and the vicinity, and small gangs of buffalo take shelter in them when scattered and driven from the prairies by Indians....In many trees swarms of wild bees are found....(Kendall 1845:115-119).

Josiah Gregg (1840) provided a similar description of the Cross Timbers in his diary. In 1849, Marcy wrote that the Upper or Western Cross Timbers contained few "mezquite" trees and gramma grasses but other varieties of grasses were abundant. Whiting (1850) described the Grand Prairie as,

> ...The Trinity, a rapid stream, is subject to very sudden rises. Unlike the rivers to the southwest, its valley is a level flat, between which and the Great Prairie this is but one descent. From two to three miles wide and covered with a dense growth of trees and underwood...The timber which exists at all westward of the 'Cross Timbers' is only found in these valleys and the streams, and there it is impossible to live...(Dyksterhuis 1946:5).

According to Dyksterhuis (1948:333), Marcy's diary (1849) indicates that the dominant grasses of the Western Cross Timbers were originally different from the area to the farther west, and that mesquite (P. juliflora) had not yet invaded the Western Cross Timbers.

In the early 1840s, settlements were established in southeastern Denton County. Peters Colonists began homesteading land along major waterways (such as the Elm Fork of the Trinity) in the Blackland Prairie and around the edge of the Cross Timbers in the Grand Prairie. These early settlers were overwhelmingly farmers who settled on good agricultural land. After 1845 or 1850, cattle ranchers from the Blackland Prairies of Northeast Texas and from the East Texas Piney Woods spread west into the "Cross Timbers-Heart of Texas" (Jordan 1981:134-139).

By 1860, the western frontier of the ranching industry had reached the edge of the Fort Worth Prairie, the northern portion of the Grand Prairie, including the Lewisville Lake and Ray Roberts Lake areas. According to Dyksterhuis (1946:5), "cattle grazing became overwhelmingly the dominant influence upon the vegetation" in the Grand Prairies during the 1860s. Farmers were slower in settling this area, but by 1870, the western farming frontier in Texas extended from the Montague-Cooke County line to the vicinity of Bandera and on to the coast a few miles south of Corpus Christi (Richardson, Wallace, Anderson 1988:293).

After 1870, cattlemen from the Cross Timbers-Texas Heartland provided the main westward and northward movement of ranching into the Texas South Plains and Panhandle (Jordan 1981:141). The western line of farms was in Clay County in 1877 and extended to Haskell County by 1880 (Richardson, Wallace, Anderson 1988:294). Within the Grand Prairie, "...The years of 1887, 1888, and 1889 are generally reported as bad years with ranges overstocked, grass scarce, prices low and prairie fires a constant threat. The best prairie land had only recently been plowed up for cotton production. Thus, the evidence indicates that the prairie generally was subjected to its first severe overstocking in the late 1880's" (Dyksterhuis 1946:5).

Cattle grazing, cultivation, cessation of extensive prairie fires, and great droughts influenced the variety and distribution of floral and faunal species in the Cross Timbers and Grand Prairie. Prior to the 1880s, large coarse grass was abundant in the bottoms and medium height grass on the slopes and ridges. Both were replaced by shorter grasses and weeds by 1886 and 1887 (Dyksterhuis 1948:333).

Early settlers in Denton County reported that wild game was plentiful, including prairie chickens (Tympanuchus spp.), quail (Colinus), turkey, ducks, geese, deer, and antelope. Less numerous, if ever seen, were "ground hogs," beaver (Castor canadensis), and prairie dogs (Cynomys ludovicianus) (Bridges 1978). Buffalo (bison) were also hunted. They were numerous in the 1830s but were gone before the mid-1840s (Bridges 1978:36). Bears, large cats (mountain lions or cougars), wolves (Canis rufus), coyotes, foxes, opossum, raccoons, hawks, eagles, and rattlesnakes (Viperidae) lived in the area. Smaller game included rabbits, fish, and squirrels.

CHAPTER 3

HISTORICAL SETTING

by

Susan A. Lebo

Exploration and Settlement: 1500s to 1860

Explorers

Spanish explorers crossed northcentral Texas centuries before the Moses S. Austin Colony was established in southern Texas. The Hernando de Soto expedition, led by Luis de Moscosco de Alvorado after de Soto's death, purportedly passed through Pilot Point in 1542 on the way back to Mexico. The exact course followed by Moscosco's group is still a matter of historical debate (Reese et al. 1988; Skinner et al. 1982a). This course may have taken the group through the southeast corner of Cooke County (Smith 1955) in the Ray Roberts Lake area. Other early explorers passed through northcentral Texas. These explorers include Cabeza de Vaca (1529-1536), Coronado (1540-1542), La Harpe (ca. 1701), De Mezieres (1770-1771), Pedro Vial (1788-1789), and Philip Nolan (ca. 1801) (Bridges 1978; Skinner et al. 1982a, b). Smith (1955:2) reports that Coronado was the "first white man to set foot on Cooke County soil, in 1540 or 1541."

While both Spanish and French explorers traveled through northcentral Texas, no settlements were established. According to Richner and Bagot (1978:77), the Spanish claimed East Texas in the late 1500s, but they did not attempt to control it until 1685 when the French moved from Louisiana into Spanish Territory. The Spanish were primarily interested in locating precious metals, and because gold and silver were not found in East Texas, the Spanish were not active there. But in 1685, they established missions to convert the indigenous population to serve as a buffer to stop French encroachment. In contrast, French exploration in northcentral Texas was more extensive than that of the Spanish. The French were interested in establishing trade relations with regional Native American groups.

Historic Native American Groups

Smith (1955) reports that Native American groups living in Cooke County prior to major Euro-American settlement include the Keechees, Ionies, and Tonkawas. These groups lived in the headwaters of the Trinity River and the Red River breaks. Plains groups frequenting the area included the Pawnees, Wichitas, Arikaras, Hidatsas, Mandans, Kiowas, Kiowa-Apaches, and Commanches.

Major Native American groups that lived in Denton County and the surrounding counties included the Wichitas, Wacos, Tawakoni (Tehuacana), Delawares, Ioni or Ionies, and Keechees (Bridges 1978). Delaware, Kickapoo, Kichai, and Shawnee are also reported as residing in these area (Skinner et al. 1982a, b). Several of these groups, including the Wichitas, had entered the region from other parts of the United States in the 1700s (Newcomb 1961).

Bridges (1978) reports that the tribes in northeast Texas in 1880 were probably the same tribes reported by Spanish and French explorers before 1700. "No great disruption and scattering of the main groups had taken place" (Bridges 1978:6). However, as Euro-American expansion west increased with the Louisiana Purchase in 1803, Native American groups were increasingly displaced. Non-native groups moved into Texas displacing some native groups, while others were displaced by Euro-American settlements. This trend continued throughout the nineteenth century.

By 1830, the Wichitas had almost entirely been removed from Denton County. Remnants of the Wichitas,

Ionies, Keechees, Delawares, and Tonkawas remained in the region in the early 1840s. Delegates from these groups along with the Wacos, Anadarcos, Tow-e-ashes, Caddos, Bedais, and Boluxies attended Indian conferences at Bird's Fort (Birdville, Tarrant County) in August and September, 1843 (Bridges 1978:7). Depravation and the loss of their lands by encroachment and Euro-American settlement took their toll, and few Native Americans remained in Denton County after the early 1840s (Bridges 1978).

Euro-American Settlers

Euro-American settlers were in the Denton area as early as the 1830s, and a military outpost was situated three miles southwest of there. Permanent Euro-American settlements were relatively sparse before the 1840s. The area was far enough removed from the main centers of early settlement (South and East Texas) not to receive many emigrants from those settlements. Native American groups still claimed the region, and this also slowed the rate of permanent Euro-American settlement. In contrast, the establishment of the Texas Emigration and Land Company along with major transportation routes, spurred permanent settlement in the 1840s.

Several overland routes crossed the area, including the California Trail which ran east-west through Cooke County. A second trail, the Chihuahua Trail, was used primarily in 1839 and 1840 (Skinner et al. 1982a, b). This trail was blazed by trader Dr. Henry Connelly and associates as they passed through this area on their way to present-day Clarksville (Reese et al. 1988; Smith 1955). In 1838, the Texas Congress authorized establishment of a military road, the Central National Road (now called Preston Road). It ran from Dallas to the Red River at Preston's Bend. It followed the north-south ridge between the Elm Fork and East Fork of the Trinity River near the Collin-Denton County line, about one mile east of Denton County. It provided new immigrants with an improved transportation route through northcentral Texas (Bridges 1978; Odom and Lowry 1975).

Colonists began homesteading along major waterways, like the Elm Fork of the Trinity, in the Blackland Prairie, and around the southern edge of the Cross Timbers in the 1840s. This settlement was initiated when the government of the new Republic of Texas began searching for a way to alleviate the financial strain brought on by their fight for independence. A variety of measures were initiated to encourage immigration (Ferring and Reese 1982; Reese et al. 1988).

Colonization in Denton County occurred after W. S. Peters of St. Louis and 19 other men petitioned the Congress of the Republic of Texas for a land grant on February 4, 1841. Their company, the Texas Emigration and Land Company, became known as the Peters Colony (Connor 1959). The Peters Colony established an office in southeast Denton County in 1843 (Odom and Lowry 1975). Although chiefly motivated by financial concerns, they were directly responsible for promoting much of the immigration to the area (Ferring and Reese 1982). Four separate contracts were negotiated with the Texas Government by the Texas Emigration and Land Company (Figure 3-1). The first contract, made in 1841, is in the Cross Timbers and includes the area from the present day southern boundary of Denton County to the Red River, the eastern half of Denton and Cooke counties, the western third of Grayson County, and a small portion of Collin County (Connor 1959; Ferring and Reese 1982). The second contract was signed on November 9, 1841, extending the colony lands westward to encompass the three forks of the Trinity, and the third, signed July 26, 1842, extended the colony farther west and east. The fourth contract was signed on January 16, 1843, and contained over 10 million acres of land for colonization. The Ray Roberts Lake area is situated entirely within the boundaries of the first contract.

The Texas Emigration and Land Company was responsible for surveying the sites and providing assistance in house construction. In return, they could retain up to half a settler's land. The land titles were issued to the company agents rather than to the settlers themselves (Ferring and Reese 1982). This led to hostility between the company and the settlers which culminated in the "Hedgcoxe War" in 1852. Following protests, the law granting the Texas Emigration and Land Company half of the settler's land was repealed, and the company was compensated with 1,088,000 acres of vacant land within the colony (Lowry 1980). This angered the settlers, and during the summer of 1852, the office of Henry O. Hedgcoxe, agent for the land company, was raided and burned.

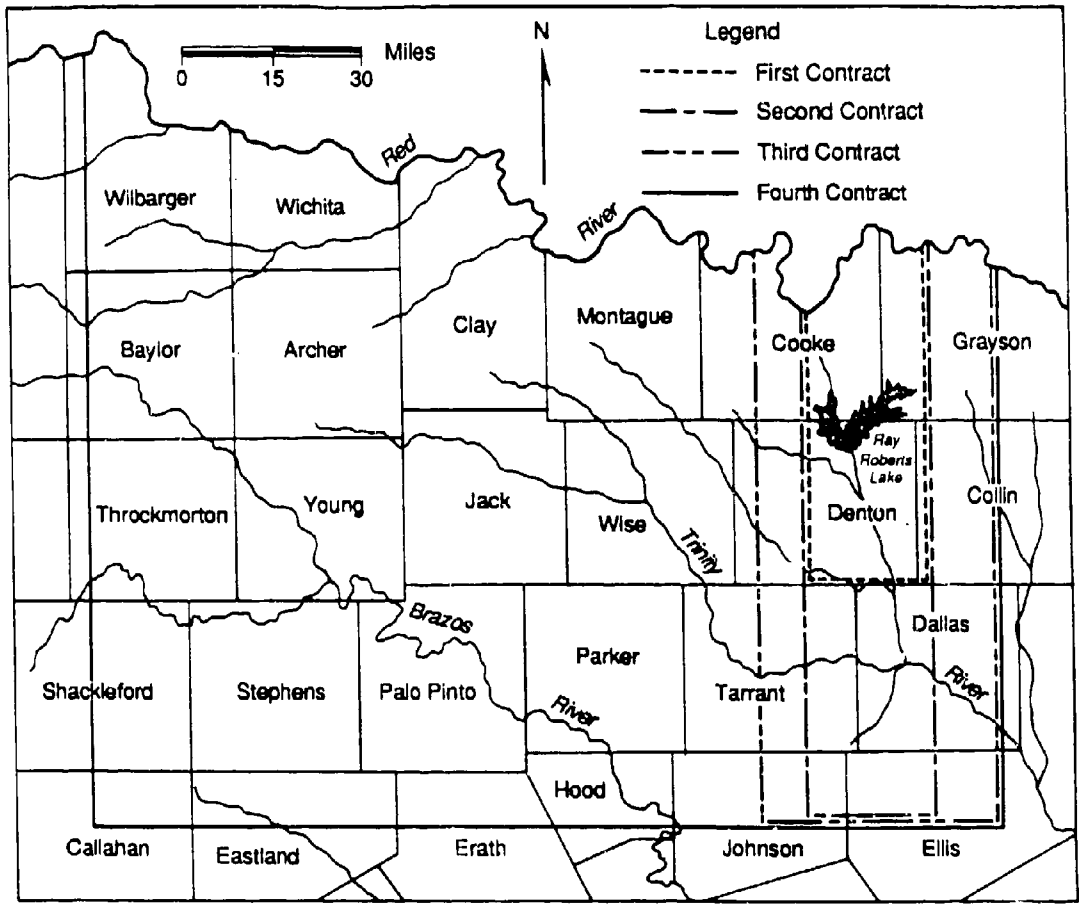


Figure 3-1. Location of the Ray Roberts Lake project area relative to the four contracts negotiated by the Peters Colony, 1841-1843.

Numerous families and single individuals immigrated to North Texas during the nineteenth century. Many immigrants came as part of a "cluster" of related families. This "clustering" of immigrants by state groups was encouraged both by family and community ties and available immigration routes (Bridges 1978; Jordan 1969).

> For example, many Missourians found that the easiest route to Texas lay around the western side of the Ozark-Ouachita highlands, roughly approximating the route of present-day U.S. Highway 69 through eastern Oklahoma, and this road directed the flow of settlers from Missouri to north central Texas... The main route used from Tennessee and Arkansas skirted the eastern side of the Ozark-Ouachita highlands and entered the area between the Missourians on the west and the Lower Southerners on the south and east. (Jordan 1969)

Richardson (1963:118), also elaborating on immigration routes, states:

> Immigrants came to northern and central Texas in the 1850's by various modes of travel and several different routes. A few single men and small families traveled by steamer, generally to Shreveport, Louisiana, or to Jefferson, Texas, and made their way westward over different roads. A far greater number came through Arkansas by wagon and passed through Clarksville, or Mount Pleasant.... A third major route... was through Arkansas and the Indian Territory, crossing the Red River at the village of Preston, north of Sherman, and proceeding southward into the Texas Blacklands, or southwestward along the Marcy route to the Grand Prairie or the Cross Timbers.

In addition, "Most immigrants approached the frontier by stages, spending one or more years in settled regions before taking the final step into the raw, wild border" (Richardson 1963:120). Many families in the Ray Roberts Lake area settled in East Texas before uprooting again and resettling in northcentral Texas.

The majority of the settlers in Cooke, Denton, and Grayson counties during the nineteenth century were from the Upper South states of Missouri, Tennessee, Kentucky, and Arkansas. The second largest group was from the Lower South, including Alabama, North and South Carolina, Mississippi, and Georgia. Missourians represented the largest group of settlers in Cooke, Denton, and Grayson counties in the 1850 census, and this pattern continued through the 1880 census (Jordan 1969; Kerr 1953). These early settlers chose their land according to the availability of water, wood, and arable farmland (Bridges 1978; Williams 1969). The settlers were overwhelmingly farmers from central and western Missouri, including the northern Ozarks, southcentral Kentucky, and middle Tennessee. In general, they settled east of the Balcones Fault, which passes through the western edge of present-day Fort Worth in Tarrant County and extends north through Denton and Cooke counties. The Balcones Fault marks the boundary between two regions. East of the fault, the area was suitable for farming, while west of the fault, the soil and climate combined to create an area more suited to ranching (Skinner et al. 1982a; Williams 1969). Data available in the 1850 Population Census (U.S. Bureau of Census, 1850:population) indicates that 94 of the 101 individuals who listed their occupations in Denton County were farmers, while 49 of 50 in Cooke County and 182 of 224 in Grayson County were farmers.

In the six-county area including Collin, Cooke, Dallas, Denton, Grayson, and Tarrant counties, the first land settled by the Peters Colonists was in Grayson, Collin, and Dallas counties. About 25% of the land in Grayson County was claimed by veterans and other citizens of Texas before the arrival of the Peters Colonists. Collin County had 12% of its land claimed before 1840, while 3.2% of the land in Dallas County was claimed or occupied. Settlers migrated to the first available farmland they found, in this case Dallas County (Williams 1969). As immigration increased and less land was available for new settlements, immigrants began farming in the more northern and western counties. As colonization spread westward, land holdings were larger because of the ecological and agricultural factors mentioned earlier (Williams 1969). Good tillable land was available in Cooke, Denton, and Tarrant counties, but immigration routes into these areas were poor, hindering settlement.

Settlement expanded westward in Texas during the 1840s. New counties were organized, including Cooke, Denton, and Grayson counties. Establishment of new trails, a line of defensive forts, establishment of the Peters Colony and immigration advertising encouraged settlement. Important trails during this period include the Central National Road (Preston Road), the California Trail, a north-south running Indian trail east of Gainesville, and the Chihuahua Trail. A Mormen trail also crossed this region in 1846. A series of forts were established by the Federal Government to provide colonists protection against Indians. These forts extended in a line from Preston to the Rio Grande. Fort Belknap in Young County was the most westerly fort protecting this area, and Fitzhugh's Fort, 3.5 miles southeast of Gainesville was the second in the line of stations extending southwest from Preston (Richardson et al. 1988; Smith 1955). In 1847, the Peters Colony administrators resumed national advertising in an effort to keep their commitments to the settlers and attract new homesteaders. Between 1847 and 1848, almost 1,300 settlers arrived, including the return of 60% to 70% of the colonists who had left two years earlier (Connor 1959).

Southeast Cooke County Settlement

Cooke County was organized from Fannin County in 1848. Numerous initial settlers were "Forty-Niners" who were travelling the California Trail, which crossed east to west across the county. "Settlement of Cooke County began late in 1845. Martin Neely, who with Jim Martin settled on Spring Creek, half a mile west of Valley View, claimed to be the first to take up his abode in the county" (Smith 1955:6). Gainesville was selected as the county seat, and the first courthouse was completed in 1851. A second courthouse was completed on the east side of the square in 1853 (Smith 1955).

Gainesville

Early businesses in Gainesville include the post office (1852), blacksmith shop (1852), a Masonic hall/church/schoolhouse (1856), and the East Hill cemetery, now the Fairview Cemetery, in 1854 (Smith 1955:19). An African-American Methodist Episcopal church was established in Gainesville in 1873. The community was also a station on the Southern Overland Mail Line (Butterfield Overland Stage Line), which provided semi-weekly mail service between St. Louis and San Francisco between 1858 and 1861 (Smith 1955:233). The first coach reached Gainesville on September 20, 1858 (Smith 1955:26). A branch of the Chisholm Trail also passed through Gainesville to Sivells Bend, and a second one passed through Gainesville to Preston on the Red River (Smith 1955:50).

Other Communities

Early communities established in southeastern Cooke County in or near the Ray Roberts Lake project area include Mountain Springs, Indian Creek, Union, Sandy Creek, Mt. Pleasant, St. James, Tipton, Mt. Olive, and Breedlove (Figure 3-2).

The original location of Mountain Springs was 11 miles southeast of Gainesville, a mile north of the present-day Burns City and about 3 miles north of present-day Mountain Springs (Smith 1955:8). This community is among the oldest in the county and was established on Wolf Creek. The earliest school in Cooke County reportedly opened in a dwelling in this community in 1847 (Smith 1955:8).

> The founder of the Mountain Springs community was Joe R. Burch, who was born at Montgomery, Alabama, August 3, 1824, and came to Texas with his brother, Tom, in the early 50's. He married Mary Strickland, whose family had come to Cooke County from Missouri and had settled in what is now the Bloomfield community. About 1856 or 1857, he erected a log cabin on a hill eleven miles southeast of Gainesville, and 100 yards from Wolf Creek (Smith 1955:73).

Early residents in Mountain Springs include the families of George Burns, founder of Burns City, George Peden, William Wade, John Law, and Martin Neely (Smith 1955:73). Neely is reported by Bridges (1978) as the first resident of Valley View.

A post office was established at the second Mountain Springs location in 1878. A store opened here in 1880. The Mountain Springs school district in 1884 was number 35 in the county. This community reached its peak in the early 1890s when a store, mill, blacksmith, and cotton gin operated here, and about one hundred people lived in the community (Gainesville Daily Register, June 18, 1986; Smith 1955).

Indian Creek, Union, and Sandy Creek were established by 1855. Methodist churches from these communities were represented in the 1855 associational meeting. Families in Indian Creek and Union received their mail at Pilot Point, while Sandy Creek families received theirs in Gainesville. Seventy-one members were in the Union congregation, forty-eight at Indian Creek, and nine at Sandy Creek (Smith 1955).

East Denton County Settlement

While settlers were in the Denton area as early as the 1830s, Peters Colonists began settling in the area by 1843.

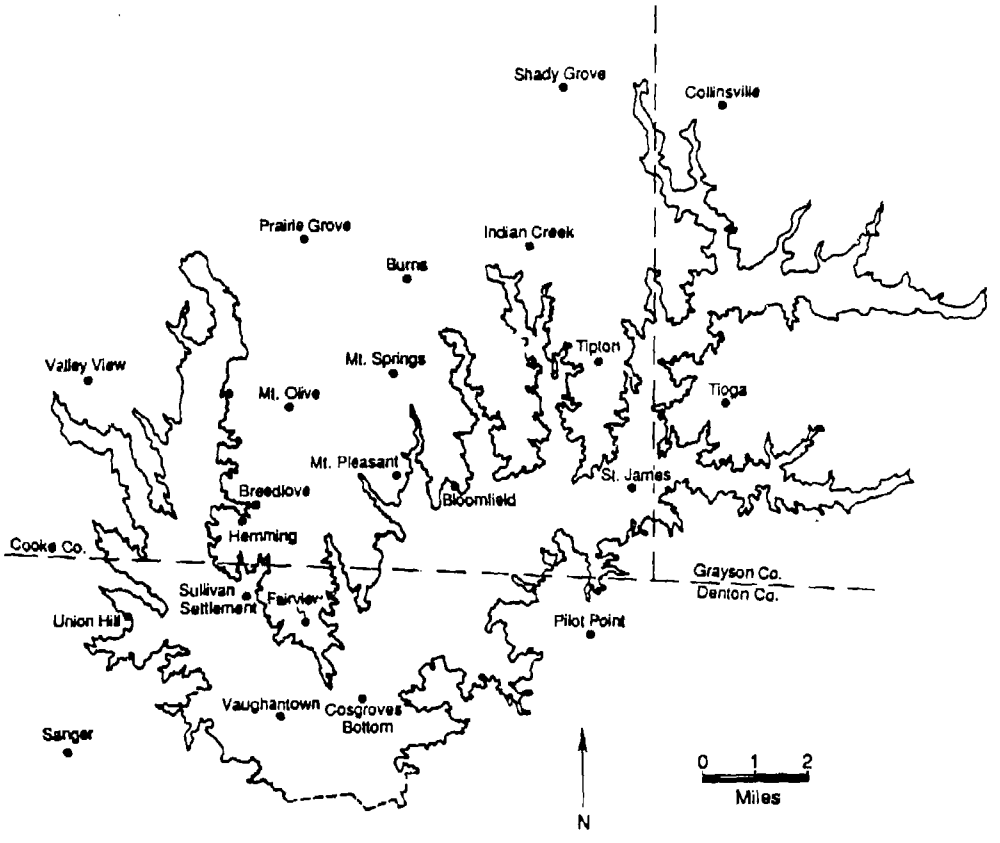


Figure 3-2. Communities in the Ray Roberts Lake area.

Denton County was incorporated in 1837 as a section of Fannin County, but was made a separate county in 1846 (Skinner et al. 1982a). The first settlement in Denton County was Bridge's Settlement, later Hebronville, which was established in 1843 (Bates 1918; Odom and Lowry 1975). "This settlement was partly in Denton County, partly in Collin County, and partly in Dallas County" (Bates 1918:27). The Peters Colony land office was located here, along with a settler's store. Bridge's Settlement expanded, and its western edge became Holford Prairie in 1844, located on the headright grants of John and Augustus King, who came to the area in 1843. In 1855, it was sold to Basdeal Lewis, the town was laid out, and it was called "Lewisville" (Reese et al. 1988).

The first county seat of Denton County was established in 1846 at Pinckneyville near Pecan Creek. It was abandoned because of its distance from the bulk of the population in the southeast corner of the county. The county seat was moved 4 miles south to Alton in 1848, but this site was abandoned because of water shortages. The third site chosen was on Hickory Creek 5 miles south of present-day Denton. The first courthouse in the county was built there in 1851, and it was given the name of Old Alton. It was moved for the last time in 1857 to Denton (Bridges 1978; Odom and Lowry 1975).

Early settlements were concentrated in the southeast part of Denton County. Among these settlements are Stewarts Creek, Little Elm, and Ritters Lake established in 1844 (Bates 1918; Odom and Lowry 1975; Bridges 1978). Settlements established in Denton County during the 1850s include Teel (1850), Hawkins (1853), Rue (1854), Denton Creek (now called Stony) in 1854, Ballew in 1856 (also called Ballew's School House Settlement), Denton (1857), Keys Community in 1858 (also called Key's School House Settlement), and Bolivar in 1859 (Bridges 1978). In 1856, agents of the Peters Colony also moved their main office from near Farmer's Branch to Office Creek north of Hebron (Bridges 1978).

Early settlements in the northern part of Denton County in and near the Lake Ray Roberts project area include Pilots Point, later changed to Pilot Point, Sullivan Settlement, Gribble Springs, Green Valley, and Fairview. Pilot Point was established in 1845 (Bates 1918) or 1846 (Bridges 1978). Pilot Point is situated east of the Ray Roberts Lake project area. Gribble Springs and Green Valley (also called Toll Town) were established in the 1850s and are situated south of the lake. Sullivan Settlement is within the Ray Roberts Lake project area and was established in 1847. It was named after the Sullivans who settled here in 1850 (Bates 1918).

Western Grayson County Settlement

Some of the earliest settlements occurred in Grayson County. Daniel Dugan and others formed the first town there, called Abel's Trading Post, in 1836 near present-day Pilot Grove. Two forts were established in the county by the Republic of Texas in 1840. The Peters Colony, which included the western edge of Grayson County, brought settlers to the area in 1842. Grayson County was formed from Fannin County in 1846, and Sherman was selected as the county seat (Skinner et al. 1982a). The first courthouse in Grayson County was erected in 1847, but few communities of any size or influence existed in the county at that time. No communities in Grayson County were frequented by settlers in the Johnson Branch Park area of the Ray Roberts Lake project area. Instead, when these families traveled "to town" they went to Pilot Point, Sanger, or Valley View. The closest community in Grayson County to the project area is Tioga.

Farming and Ranching: Food Production and Lifeways, 1840s to 1860

While this region of Texas was capable of producing vast quantities of cotton and wheat, commercial agriculture was relatively unimportant before the Civil War (Lowe and Campbell 1987). Table 3-1 shows agricultural property and production for Region III, 32 northern and central prairie counties in 1850 and 1860 (Figure 3-3). The northcentral plains, Region III (including the Ray Roberts Lake project area) grew more rapidly in number of farms than any of the other areas of Texas during the 1850s. This region became the state's second-leading cattle, hog, and corn producer and remained the largest wheat-growing area in the state (Lowe and Campbell 1987:30,34).

While over half of the state's wheat was grown in this area, cattle, hogs, and corn were raised primarily for home consumption. Wild game was plentiful, including prairie chickens, quail, turkey, ducks, geese, deer, and antelope. Buffalo were hunted in the 1830s but were pushed farther west as the frontier moved westward. "Until the early 1870's, hunting parties from Denton and the surrounding area went into the buffalo regions of West Texas and returned with hides, meat and thrilling stories of their experiences" (Bridges 1978:36).

Smaller game included rabbits, fish, and squirrels. Farm animals included pigs, hogs, chickens, turkeys, goats, cows, sheep, and horses. Wild plants supplemented farm gardens and orchards. Wild plums, grapes, persimmons, nuts, berries, and honey were foraged. Pecans were the most common nuts, and less important types included black walnuts and hickory nuts. Blackberries and dewberries were common, while strawberries, elderberries, and mulberries were less abundant. Staple farm crops included wheat, corn, sorghum, cabbage, turnips, sweet potatoes, beets, mustard, peppers, beans, and onions. Pumpkins, cushaws, watermelons, cucumbers, citrons (pie melons),

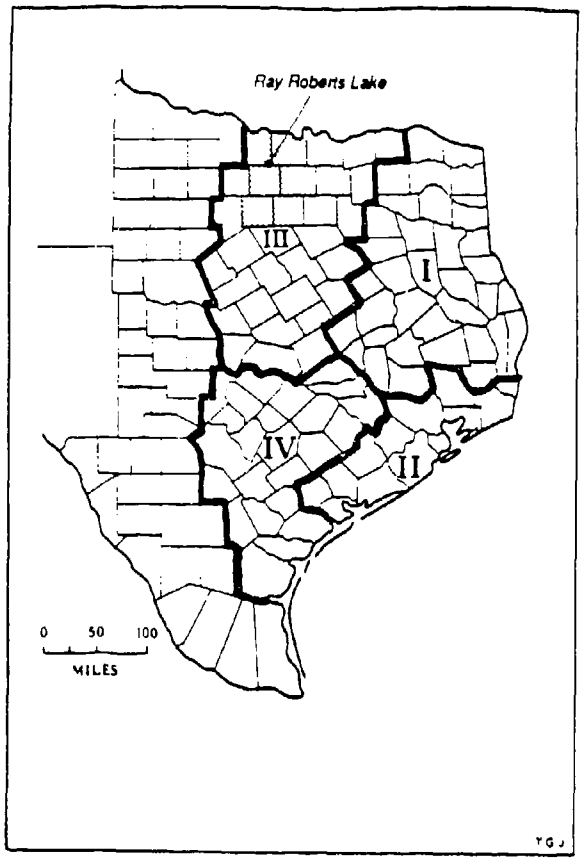


Figure 3-3. Location of the Ray Roberts Lake project area in Region III, 32 northcentral prairie counties (adapted from Lowe and Campbell 1987; original drawn by Prof. Terry Jordan, Department of Geography, University of Texas at Austin).

Table 3-1
Agricultural Property and Production for
Region III of Texas, 1850 and 1860[1]

	1850	1860	Total
Number of Farms	2,440	9,337	11,777
Number of Improved Acres	84,019	503,315	587,334
Dollar Value of Farms and Implements	2,284,295	24,272,613	26,556,908
Number of Cattle	105,500	683,132	788,632
Number of Hogs	118,500	312,159	430,659
Dollar Value of Livestock[2]	---	15,422,742	15,422,742
Bushels of Wheat	26,806	1,078,096	1,104,902
Bushels of Corn	557,175	2,965,304	3,522,479

Bushels of Irish and Sweet Potatoes	91,637	173,988	265,625
400-lb. Cotton Bales	2,095	18,438	20,533
Dollar Value of Slaughtered Animals	145,944	1,264,893	1,410,837

[1] Location of geographical regions is shown in Figure 3-3; From Lowe and Campbell (1987:Tables 1,2).
[2] Not available in the published census returns for 1850.

and beans were planted among the corn. Common plants utilized by settlers include Lamb's quarters, dandelions, sheep sorrel, volunteer mustard, poke weed, and wild onions (Bridges 1978). Gourds were also cultivated. Few foods were imported, the most common was probably coffee.

> A family garden was about one-quarter acre in size... The family flock of hens ranged from twenty to one hundred, depending on family size and income. Dairy cows, usually one or two per family, provided milk and, of course, butter. Pork came from hogs raised at home; families killed and butchered about four to eight hogs per year.... Some farmers took wheat and corn to a local mill for grinding. The miller's share was usually half, a practice that reduced the need for cash. Women put fruit and vegetables in jars and stored them in a cellar or storeroom. Potatoes were usually spread out in a dry spot on top of straw. Dry areas underneath the house were popular for potato storage (Brown 1986:17).

An overview of the major crops for the three-county area (Cooke, Denton, Grayson) in 1870 is provided in Table 3-2. Corn and oats were important in the three counties. The highest percentage of wheat was grown in Grayson County. Cane was grown in Grayson County, while sorghum was important in both Denton and Grayson counties. Several sorghum mills were found at farmsteads in southeast Cooke County (e.g., 41CO11), and northeast Denton County (e.g., 41DN130).

Table 3-2
Agricultural Produce for Cooke, Denton, and Grayson Counties in 1870[1]

Bushels	Cooke	Denton	Grayson
Spring Wheat	3,509	8,741	4,234
Winter Wheat	12,724	9,475	35,534
Rye	19	406	719
Indian Corn	211,939	173,510	577,540
Oats	51,743	41,060	113,241
Barley	510	190	983
Cane			9,301
Sorghum	4,785	35,152	10,044

[1] Compiled from U.S. Bureau of Census, 1870: Agriculture.

Considerable variability in farm production occurred among counties in northcentral Texas, which reflects factors other than when each county was initially settled. In the six-county area surrounding Ray Roberts Lake (Cooke, Denton, Tarrant, Grayson, Collin, Dallas), orchards were most common in Grayson and Dallas counties, but were least common in Collin County. Forest products probably reflect environmental differences, with the highest production occuring in the Eastern Cross Timbers. Home manufacturing and animals slaughtered ranked highest

in Collin, Tarrant, and Grayson counties, while the total value of farm products and market gardens ranked highest in Collin, Dallas, and Grayson counties. Interestingly, with the exception of the value of orchards and farm equipment, Collin County ranked highest in all production categories among the six counties.

Data on farm size is provided in Table 3-3 for Cooke, Denton, and Grayson counties in 1870. While the median farm size in each county was 20 to 49 acres, variability among counties partially reflects when each county was settled. Grayson, Collin, and Dallas counties, the three counties settled first, have lower mean farm size, ranging from 51 to 66 acres. In contrast, mean farm size in Cooke, Denton, and Tarrant counties is between 73 and 80 acres in 1870.

Table 3-3
Number of Farms by Size for Cooke, Denton, and Grayson Counties in 1870[1]

Acres	Cooke	Denton	Grayson
Under 3		13	1
3 to 9	51	34	9
10 to 19	121	129	70
20 to 49	282	255	345
50 to 99	89	117	268
100 to 499	25	18	133
All Farms	568	566	826

[1] Compiled from U.S. Bureau of Census, 1870: Agriculture; No farms larger than 499 acres were recorded in these counties. One farm each containing 500 to 999 acres occurred in Collin and Tarrant counties in 1870.

Cotton and cattle were introduced to northcentral Texas before 1860, but remained relatively unimportant relative to self-sufficient farming. Production figures for cotton in Cooke, Denton, Tarrant, Grayson, Collin, and Dallas counties indicate cotton was more prevalent in the Blackland Prairies of Grayson County in 1860. The number of 400-lb. bales produced in these counties ranged from none in Dallas and Tarrant counties to 220 in Grayson County. A total of two bales are reported for Denton County and 58 for Cooke County (Kerr 1953; U.S. Bureau of Census, 1860: Agriculture).

By 1860, two cattle-ranching clusters had developed in the state, including the Cross Timbers region of northcentral Texas (Jordan 1981:126). "After the War with Mexico, the range cattle industry spread into the vast prairie region marked today by such cities as Dallas, Fort Worth, and Denton. John Chisum... owned a herd in Denton County during this period" (Richardson et al. 1988:284). The population to cattle ratio for Cooke County was between 1:6 and 1:9, and between 1:2 and 1:5 for Denton and Grayson counties, indicating that by 1860, Cooke County was a major cattle raising county in the Cross Timbers area. Figures available for Denton County between 1857 and 1861 show the importance of livestock in this area (Table 3-4).

Table 3-4
Livestock in Denton County Based on Figures from County Tax Assessor's Office (Bridges 1978:86)

Year	Cattle	Horses	Sheep	Total
1857	16,774	1,568		18,342
1860	36,000	4,222	11,633	51,855
1861	48,628	5,807	20,886	75,321

Industrial Development: 1840s to 1860

Early settlers were largely self-sufficient, and industries were operated often on a seasonal basis by individuals whose primarily occupation was farming. During the 1850s, the population of the Peters Colony doubled, and small commercial enterprises were established in both rural and urban settings. Among these were grain and flour milling, cotton ginning, blacksmithing, brick making, and wagon and carriage making. The establishment and importance of these enterprises is visible in the population census records for Denton, Cooke, and Grayson counties in 1850 and 1860.

By 1860, 41 types of manufacturing establishments existed in Texas. Among these were local manufacturers of agricultural implements, beer, bread, brick, firearms, furniture, patent medicines, pottery, saddles, steam engines, cotton gins, and whiskey (Dugas 1955). Mills and gins were established up and down the Trinity River and its tributaries, including Denton, Holford Prairie (Lewisville), and Pilot Point.

An early gin was located near the south end of Bernard Street on the outskirts of Denton in 1869. It was built by W. C. Baines and was operated by jennets and a whimp or capstan device that supplied the power for running the machinery. The gin was replaced by a larger and faster gin around 1870 by Captain C. C. Scruggs who built a gin on the bank of Pecan Creek on the north side of McKinney Street about a block east of the railroad crossing. Soon after, a corn mill was added to the gin operation. It was powered by animals and later changed to steam power. The mill operated for 14 or 15 years (Bridges 1978).

The first grist mill in Pilot Point was built by Nick Wilson and Jefferson Elmore one block south of the town square in 1854 (Pilot Point Chamber of Commerce 1978:3). The Rankin Mill, located south of town was built around 1856. It was bought by J. C. Thomas and John Graham and moved to the south side of the square in town. It was used as a sawmill, cotton gin, and grist mill, grinding corn and flour, and was ox-tread. A steam grist mill was built in 1866 (Pilot Point Chamber of Commerce 1978:3).

Sawmills were frequently combined with a grist mill or general store. Mills located in the Texas interior, including the Ray Roberts Lake area, did not have easy access to gulf ports and served mostly local needs since transportation costs were prohibitive (Dugas 1955; Maxwell 1964, 1982). Lumber was "as high as sixty and seventy dollars per thousand feet and was often hauled hundreds of miles by ox team" (Dugas 1955). No grist, cotton, or sawmill keepers or workers are listed in the 1850 population censuses for Cooke, Denton, or Grayson counties. By 1860, a small number of individuals listed their primary occupation as miller or millwright. Data on manufacturing from the 1860 censuses indicate that flour and grist milling was the largest industry in Cooke County, third largest in Denton County, and fifth largest in Grayson County. Lumber milling was the third largest industry in Cooke County in 1860, and eighth largest in Grayson County (U.S. Bureau of Census, 1860: Manufacturing).

A stoneware pottery industry was established in Denton County in the early 1850s. Early potteries were located near Alton and Corinth where suitable clays were available. Among these early potteries are the Cranston-Donaldson, Wilson-Donaldson, Serran, and Lambert potteries. Additional potteries were established in Lloyd in the 1870s and the town of Denton in the 1880s. This industry continued in Denton County into the 1930s.

An overview of the industrial development and investments in Cooke, Denton, and Grayson counties in the 1850s is shown in Table 3-5. The largest development and investments occur in Grayson County, which probably reflects the earlier settlement of this county than Cooke and Denton counties. The five major industries in Denton County during this period included the production of agricultural implements, boots and shoes, flour and meal, furniture and cabinets, and saddles and harnesses (Table 3-6).

Table 3-5
Industrial Development and Investments in Cooke, Denton, and Grayson Counties in 1860[1]

	Cooke	Denton	Grayson
# Establishments	7	10	37
Capital Invested	17,975	22,500	66,000
Raw Material Costs	38,670	79,653	137,156
# Hand Employed	20	21	86
Annual Labor Costs	4,980	5,340	27,072
Annual Product Value	59,465	97,890	201,813

[1] Compiled from U.S. Bureau of Census, 1860: Manufacturing.

Table 3-6
Major Industries in Denton County in 1860[1]

	Agr. Imple.	Boot Shoe	Flour Meal	Furn. Cabinet	Saddle Harness
# Establishments	3	1	4	1	1
Capital Invested	1,800	800	13,400	6,000	500
Raw Material Costs	1,330	568	76,000	1,380	375
# Hands Employed	8	2	8	2	1
Annual Labor Costs	1,920	600	1,920	600	300
Annual Product Value	3,250	1,700	89,340	2,350	1,250

[1] From U.S. Bureau of Census, 1860: Manufacturing.

Slavery and the Civil War

An overview of slave and nonslaveholding populations in Region III (northcentral Texas) is shown in Table 3-7 (see Figure 3-3). Less than 18% of the population in the region owned slaves in 1850, and about 20% in 1860. Slavery was not a burning issue in Denton County. "The slightly more than 5,000 population in the county in 1860 included only about 250 slaves. Still, most of the pioneers had come from southern or border states, and the sympathy of the county went reflexively to the Secessionists" (Odom and Lowry 1975:5). Many supported the Confederacy not because of the slavery issue, but because of a strong belief in the right to seceed. The decision to seceed passed in Denton County with 331 for and 256 against (Odom and Lowry 1975:5). Although, Cooke County had a higher percentage of slaves and slaveholders, citizens in this county predominately voted against seceding. Discovery of a plot against the military and the conscription law led to the arrest of a number of suspected conspirators and the Great Hanging in Gainesville in 1862. A total of 40 men were hanged in Gainesville during October 1862; two were shot to death trying to escape (Smith 1955:37). Killings also occurred in other counties. "Five were said to have been hanged in Wise County. Denton had several arrests but the only man killed died at the hands of an infuriated citizen, who was tried after the war and sentenced to imprisonment. There were arrests in Grayson County, three physicians being among the accused; but if there were executions, there is no record of them" (Smith 1955:38).

Table 3-7
Slave and Nonslave Populations in Region III
in Antebellum Texas, 1850 and 1860[1]

	1850		1860	
	N	%	N	%
Slaveholding Farmers w/Farms	136	16.5	233	16.8
Slaveholding Farmers w/o Farms	3	0.4	20	1.4
Nonslaveholding Farmers w/Farms	517	62.6	614	44.2
Nonslaveholding Farmers w/o Farms	99	12.0	274	19.7
Slaveholding Nonfarmers	6	0.7	23	1.7
Nonslaveholding Nonfarmers	65	7.9	226	16.3
Total	826	100.1	1,390	100.1

[1] Location of geographical regions is shown in Figure 3-3; From Lowe and Campbell (1987:Table 3).

Eight companies were formed, and a thousand men enlisted from Denton County (Bates 1918:98). According to Bridges (1978:97), Denton County troops entered the Confederate Calvary and served in the Indian Territory, the Missouri-Arkansas campaigns, and the Tenneessee-Mississippi campaigns. Home guards were organized of boys under military age and old men. They served as the basic law enforcement in the county between 1861 and 1868.

Transportation, industrial development, food production, and access to goods and services were severely affected during the Civil War. In Texas, cotton production decreased from 345,170 bales in 1860 to only 280,502 bales in 1869. It was not until the early 1870s that many industries regained prewar levels of production.

> The last years of the war were years of depression and prostration, so desolating were the effects of the long struggle. Occasionally a Confederate trading vessel was able to "run the blockade," but at Denton the markets were nearly destroyed, and some desirable items such as coffee and sugar were almost completely unobtainable. Laborers--farmers, cowboys, and other workers--were drawn into the military forces, and home businesses, services, and industries were left unmanned. Many fields, ranches, and farms were abandoned (Bridges 1978:97).

Settlement and Community Growth After the Civil War: 1870-1900

Settlement

Anglo- and African-Americans from the Lower South immigrated to the area after the Civil War. Early African-American settlers bought or rented farms or established homes and businesses in communities throughout the region. Many of the African-American farms that dot the southeastern portion of the Ray Roberts Lake area were settled during this period. Freedmanstown and Quakertown in the town of Denton were also established at this time. Freedmanstown (also called Freedman Town) dates to about 1875, when a group from Dallas County moved and founded the community a few miles from the county courthouse (Jordan 1977). This community was bounded by Wilson Street, Morse Street, Bushby Street, and Newton Street (Denton County Historical Commission 1991:2). Quakertown was located north of the courthouse, and most of the families from Freedmanstown moved to Quakertown to be near stores and a school by the 1880s (Denton County Historical Commission 1991:2). "Quakertown was on the original survey of the Buffalo Bayou, Brazos, and Colorado Railroad. The area was bounded on the north by Withers Street, south by McKinney Street, east by Vine Street and west by Oakland Avenue" (Denton County Historical Commission 1991:1).

Midwestern Anglo-Americans, principally from Illinois and Indiana, and European-born groups who had resided a decade or more in the Midwest or in settlements in southcentral Texas, immigrated to Cooke, Denton, and Grayson counties in the 1870s to early 1900s. German, French, and Czech settlements were established. German colonies in the Ray Roberts Lake area include a colony south of Valley View (1900), and near Pilot Point (1892), while Czechs settled among the Germans near Pilot Point (Jordan 1977).

While by 1870 most of the land in Denton County was patented, some land was still available through homesteading or outright purchase. A boom occurred in this region, including the establishment of new communities supported by military aid and the coming of the railroads. The railroads created new markets for crops and other goods produced in the region. The economic crisis of 1873 slowed railroad completion and stunted agricultural expansion temporarily (Skinner et al. 1982a). Towns in the six-county area with a population over 500 in 1880 are listed in Table 3-8.

Table 3-8
Towns in Six-County Area with a Population Over 500 in 1880[1]

Town	County	Population
Dallas	Dallas	10,358
Denison	Grayson	4,500
Denton	Denton	4,335
Ft. Worth	Tarrant	6,668
Gainesville	Cooke	5,785
McKinney	Collin	1,578
Pilot Point	Denton	964
Sherman	Grayson	9,246
Whitesboro	Grayson	800

[1] From 1882 Burke's Texas Almanac:132-133.

Settlements in the Ray Roberts Lake Area

Several communities located in the Ray Roberts Lake area in southeast Cooke County were established after the Civil War. Families had settled in these areas before the war, but post offices and schools were not built until after the war. These communities include Valley View (1872), Bloomfield (1875), Burns City (1881), and Hemming (1887). Schools include the Ussery School in 1868 on the A. J. Johnson survey, A-536, on the northwestern fringe of Ray Roberts Lake (Cooke County Deed Record 6:341). A church/school was established in 1878 on the J. O. Longston survey on Indian Creek 13 miles southeast of Gainesville and near the northeastern fringe of the lake in Cooke County (Cooke County Deed Record 17:577). The Bloomfield School, on two acres of the D. C. Robinson (Robison) survey, A-855, was established in 1880 (Cooke County Deed Record 22:277).

Valley View

The first permanent citizen in Cooke County is reported as being Martin Neely, who settled on Spring Creek near Valley View in 1845 (Bridges 1978:48). In contrast, Smith (1955) reports that Mr. and Mrs. L. W. Lee were the first citizens of Valley view. "...on February 1, 1870, they drove their ox team to the double log cabin on land that was later the C. A. Myers farm, at Valley View" (Smith 1955:55). This land is in the northwestern reaches of Ray Roberts Lake. The grain elevator on this farm is within an easement of the reservoir, while the house and other buildings are preserved above the floodpool.

The Lee family was from Missouri, and in 1870, five additional families from Missouri arrived and settled here. They include the A. D. Jones, Gilbert French, Richard McCubbin, Andrew Hill, and Joseph Reavis families. R. Obuch's family settled a short time later (Smith 1955). Because of their proximity to the prairies, ideal for cattle ranching, cattle raising was important to these early families. They drove their first herd of cattle to Missouri in July 1870 (Smith 1955).

Before the post office was established in 1872, these families received their mail in Gainesville. When the town was laid out in 1872, eleven families built homes on whole blocks, and seven on individual lots. A post office, store, and blacksmith shop were established. The town continued to grow, and a boom occurred in 1903 when six brick business buildings were erected and rural free mail delivery began at the post office. The Citizens Bank was started in 1903, and a newspaper, The News, in 1904 (Smith 1955).

The Gulf, Colorado, and Santa Fe railroad was built from the north through Gainesville, Valley View, Sanger, and on to Fort Worth in 1887. It missed Denton on the west by 7 or 8 miles (Bridges 1978:170). Completion of this railroad provided additional business and growth to Valley View and the other towns along its route.

Bloomfield

A post office and store was established in Bloomfield in 1875 and was operated by Crockett Robison, a son of Alfred Robison, "who came to Texas from Tennessee before the Civil War, [and] was probably Bloomfield's first settler" (Smith 1955:67). Claud Robison, another son, operated the first cotton gin at Bloomfield. Before the post office was established in 1875, mail was delivered by horseback from McKinney to Gainesville via Pilot Point, Bloomfield, and Mountain Springs twice a week. The post office was discontinued in 1908 when Bloomfield was added to the Pilot Point Rural Route No. 1 (Smith 1955).

Early settlers in the Bloomfield area include Perry Pierce, Jeff Montgomery, Reece [probably Reason] Jones, Louis Jordan, Robert Jones, Pat and Steve Saunders, Parson Boling, and Alex Davis (Smith 1955:67).

> The town, which is one and one-half miles from the Denton County line on the south, and three miles from Grayson County line on the east, reached its highest development about 1882. There were five stores then, including Ballew and Williams, who had groceries and drugs in two buildings; C. E. Blackburn, dry goods and groceries; Andy Boling, dry goods and groceries; O. C. Brewer, blacksmith; and Claud and Crocket Robison, cotton gin. A flour mill and corn mill were operated in connection with the gin. At one time Alex Giliam had a picture gallery in the community.
>
> The gin was moved to Burns City about 1902, and the flour mill was discontinued in 1890. Last operators of the gin were D. W. Robison, C. B. Callahan, and Mrs. Fannie Robison.
>
> E. E. Runion taught the first school, established in the community in 1879. Some years later the community became split over the location of a school building, and two structures were built, one in the east and one in the west side of the school district. Both structures were blown away by a tornado about 1888. Thereafter, the citizens got together and rebuilt the school on the west side of town.... Methodists of Bloomfield organized in 1880, meeting in the school building.... No churches were built in Bloomfield. (Smith 1955:68)

The earliest physician in Bloomfield, Dr. John S. Riley, settled 2 miles west of town in 1871. Other physicians who served the community were Drs. Orsburn, F. U. Painter, J. J. Shipley, Sam Hodge, Carl Ledbetter and Murphy (Smith 1955:69).

Burns City

Burns City was established in 1881 with the discovery of the healing properties of mineral water from a well dug on the George Burns' property 12 miles southeast of Gainesville. A 16-room hotel was built, and by the late 1880s, when the town was at its height of development, between 300 and 500 people lived in Burns City. Stores lined the north, west, and south sides of the square, and the Burns City Masonic Lodge No. 600 was formed in 1882. The town began to decline about 1892 or 1893 when the high price of building lots discouraged continued growth and development (Smith 1955).

Hemming

Hemming was established in 1887 (Smith 1955), and in 1899, C. C. Hemming, president of the Gainesville National Bank, donated 4 acres in Hemming for a school. The first teacher was a daughter of Dr. John S. Riley, a doctor in Bloomfield. Early families in Hemming include John Alexander, R. M. McKinney, S. D. Bevers, J. P. Knudsen, W. J. Pipkin, and Jim Thomas (Smith 1955:110). A cotton gin and store were built by Mr. Knudsen in 1894, and a post office was established in the store. A star mail route was established between Hemming and Bloomfield. At its height, Hemming had two stores, a gin, a school, three churches, and a population of about 125 people (Smith 1955). The town also had a grist mill, which was operated by Gardiner Boydston.

Figure 3-4 shows the layout of the Hemming community before the town was destroyed. A tornado swept through the community on Saturday, April 27, 1907, and destroyed all but one building. Seven people were killed, including Dr. John C. Riley, a son of Dr. John S. Riley who settled about 2 miles west of Bloomfield, practiced at Mountain Springs and Hemming. Many of the people killed in this tornado are buried at the Tyson Cemetery.

Tioga

Tioga is located in southwest Grayson County. Tioga is an Indian word meaning "swift current." The Grayson County, Texas, Geneological Society (1980:51) reports that Tioga was settled in 1879 when a half-acre block of land was deeded for a school by Welcome Adams. Four residences date to this period. A post office opened in 1881, and Dr. Nichols, who also had a drugstore, served as postmaster. The town was incorporated in 1896. The Texas and Pacific Railroad established a station in Tioga, and the first business, a general store, was established by L. Kyle and Welcome Adams. More stores sprang up and the town square was dedicated in 1898. Matt Rains, a blacksmith, discovered the "curative powers" of the Tioga water in 1884. Mineral water bath houses were established and the town flourished. Churches of several different denominations were built during the 1880s and 1890s. A cemetery was established in the early 1900s.

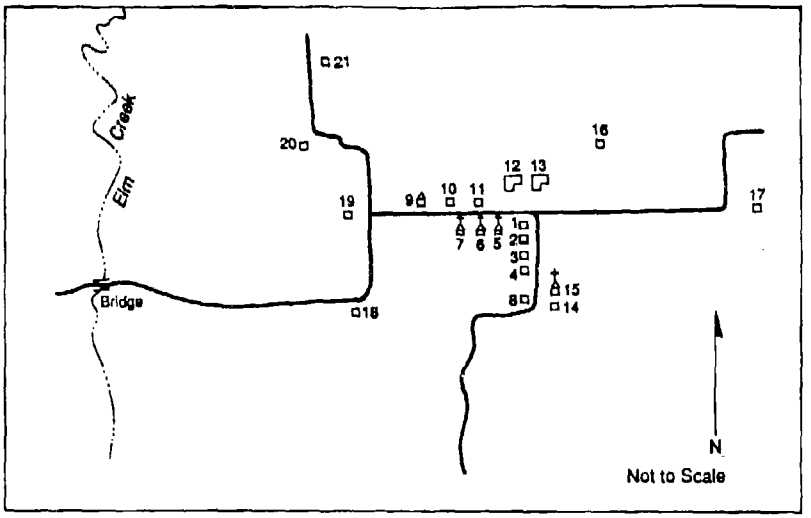
> Bath houses, hotels and boarding houses went up at a rapid pace. There were three cotton gins and two wagon yards. Several newspapers were published in Tioga from 1895 to 1954. A bank was built and also a one room jail which has been restored and is standing today in its original state. (Grayson County, Texas, Geneological Society 1980:52)

Vaughantown

Vaughantown was settled in the 1870s and remained a small, viable community into the 1940s. The community included a Baptist church, a grocery store, a blacksmith shop, and a grist mill. It also had a post office and a dry goods store (Billie Barker, personal communication; Skinner et al. 1985). The school associated with this community was Prairie Chapel. Skinner et al. (1985:8-7) report that:

> Vaughantown provided many services so that people in the community would not have to make frequent trips to the larger, more distant urban centers... The items stocked in the grocery store were for everyday use: flour, cornmeal, beans, sugar, small hardware items, and dry goods (Mattie Vaughan McKinney,

personal communication). Some farm equipment was also stocked. Often people in the community would trade their fruit or crops for goods and other food stuffs at the store.



Legend:

1. Gin - Knudsen 1894
2. Wilkins - Blacksmith and House
3. House
4. House
5. Methodist Church 1908
6. Church of Christ 1905
7. Baptist Church 1904
8. Alexander House (Only House Standing After 1907 Storm)
9. School
10. Riley House
11. Nail House
12. Gardner Boydston - Blacksmith Shop and Mill
13. Ben Newton - Store and P.O. 1900
14. Dr. Shipley (After Storm)
15. Methodist Church (After Storm 1909)
16. Tillery House
17. House
18. House
19. House
20. Bevers House
21. Thomas House

Figure 3-4. Map of the Henming Community in Southeastern Cooke County about 1907 (Adapted from map by Odessa Morrow Isbell for the 1976 BiCentennial Sullivan Reunion; see Genealogy of the True and Bevers (Beavers) Families, 1983, p.216).

Kelso

Kelso "centered around Kelso black school and Kelso white school...All of the blacks in the area, whether on the north side of 455 or the west side of the Isle du Bois, attended the Kelso black school, east of sites 41DN201 and 41DN202 (and also known as the Dry school)" (Skinner et al. 1985:8-5). No businesses were situated in Kelso.

Crosgrove's Bottom

A. P. Crosgrove was a large landowner and prominent land dealer and Pilot Point businessman. He owned hundreds of acres in northeastern Denton County. Numerous families lived and worked on this land as tenants or sharecroppers. Crosgrove's Bottom was a black sharecropping community south of Highway 455 and east of Cosner or Vaughantown and Kelso. This community was also called "out on Sanger Highway" (Skinner et al. 1985). Some of the families in this community later purchased their farms. No schools or businesses are reported for this community.

Farming and Ranching: 1870-1900

Farming

Prior to the Civil War, cotton production was concentrated in the Brazos River Valley, and to a lesser extent, in northcentral and East Texas. The Brazos River Valley was considered an ideal location because it was similar in physical conditions to the parts of the Lower South from which the planters had originally immigrated. These were areas suited to the use of slaves, and cotton was the chief cash crop (Boehm 1975:21). After the Civil War, new immigrants settled in areas that were still sparsely populated. Among these areas was the Blackland Prairie, which extends westward into the eastern portion of the Ray Roberts Lake area. Cotton plantation owners in East Texas and the Brazos and Colorado Rivers had lost their slaves during the war and were forced to change their economic base. As a result, cotton production declined in these areas as it increased in the Blackland Prairie. By 1880, 35% of the cotton production in Texas was in the Blackland Prairie (Boehm 1975:21). Production figures for the three-county area are given in Table 3-9.

Table 3-9
Cotton Production in 1880 and 1890 for Three-County Area

	1880[1]	1890[1]
Cooke County	11,547	11,905
Denton County	11,568	20,381
Grayson County	19,166	40,371

[1] Compiled from Kerr (1953:Table 10); U.S. Bureau of Census, 1880:Agriculture; 475 lb. bales.
[2] Compiled from U.S. Bureau of Census, 1890:Agriculture; 500 lb. bales; figures reported by gin ers.

Major market centers for cotton processing also changed during this post-war period. In the early 1870s, Dallas became a major compress point, along with Denison and Sherman. Cotton produced in the Blackland Prairie was shipped to these cities and then on to northern markets through St. Louis, and southern markets through Galveston and New Orleans (Ellis 1970:502). The Blackland Prairie was the dominant cotton producing region in the state by 1899. By 1909, it was replaced in importance by West Texas. One factor affecting this shift was the boll weevil (Boehm 1975).

One major change in agricultural practices between 1850 and 1880 was the introduction of barbed wire, patented in 1874 and sold in Gainesville, Denton, and other nearby towns in 1875 (Bridges 1978). Barbed wire made it practical to fence in cattle rather than fencing crops to keep livestock out and had the effect of vastly decreasing the amount of open range.

The majority of tillable homesteading land in the area was claimed by 1875, and settlement had spread across the study area. The western edge of the farming frontier is described as extending from "the common border of Montague and Cook[e] counties irregularly to the vicinity of Bandera and thence to the coast a few miles below Corpus Christi" (Richardson et al. 1988:293).

Tenant farming became a common practice during this post-war period. The principal cash crops continued to be cotton, corn, and wheat. Almost 40% of all farmers in Texas were tenants during the 1880s (Green 1977:135). Two types of tenancy were common, cash and share. Cash tenants rented the property, equipment, and seed, while share tenants paid the owner with one third of the grain and one fourth of the cotton [or other cash crops] grown during the season. This arrangement intensified during a depression in the 1890s (Ferring and Reese 1982). Many small farm owners were forced into tenancy, while others were forced off of their farms and into the cities.

Table 3-10 indicates that farm sizes increased in the 1870s and 1880s in Denton County. Median farm size rose from 50 to 99 acres in the 1860s to between 100 and 499 acres in the 1870s. It began to decrease after 1890, but figures for 1935 (Texas Almanac 1939-1940:173-176) reveal that farm size did not decrease substantially and averaged 141 acres in Denton County.

Table 3-10
Numbers of Farms in Denton County by Size Between 1870 and 1900[1]

Farm Size	1870	1880	1890[2]	1900
Under 3 acres	13			29
3 to 9 acres	34	27	30	162
10 to 19 acres	129	211	97	300
20 to 49 acres	255	619	702	1,681
50 to 99 acres	117	527	638	1,917
100 to 499 acres	18	901	1,154	1,613
500 to 999 acres	52	79	39	
1000+ acres	19	52	21	
Total	566	2,356	2,752	5,762
Average acres	127	168	143	

[1] Compiled from U.S. Bureau of Census 1870, 1880, 1890, 1900: Agriculture.
[2] All farms under 10 acres were recorded together.

Tenancy increased steadily in Denton County after the Civil War (Table 3-11). In 1880, a third of the farmers were tenants, but by 1900, one half were. This increase continued into the early 1900s. Sixty-one percent were tenants in 1910 (Texas Almanac 1914:201-206), 66% in 1925 (Texas Almanac 1929:114-117), and a slight decrease was recorded in 1935, with 60% of the farmers being tenant farmers (Texas Almanac 1939-1940:173-176).

Table 3-11
Farm Tenancy in Denton County Between 1880 and 1900[1]

Tenancy	1880		1890		1900	
	N	%	N	%	N	%
Owner	1,454	61.71	1,541	56.00	1,848	49.96
Rent	114	4.84	162	5.89	223	6.03
Share	788	33.45	1,049	38.11	1,628	44.01

[1] Compiled from U.S. Bureau of Census 1870, 1880, 1890, 1900: Agriculture.
[2] Owners, part owners, owners/tenants, and managers were grouped under owners.

As new markets became accessible by rail, increasingly more land was put into cash crop production between 1875 and 1900. Cattle and stock production was more intensive west of the Ray Roberts Lake area, and within the lake area, it was more intensive in the western and northwestern portions. Cattle and stock production were intensive in the Grand Prairie, while farming was the primary occupation in the Eastern Cross Timbers and the Blackland Prairie.

Ranching

During the early 1870s, Fort Worth, located along the Chisholm Trail, became an outfitting point for cattle drives and a shipping point for cowmen wanting to transport their cattle by rail. The Fort Worth Stockyards opened in 1890 (Hooks 1979). Cattle drives were important to the Texas economy after the Civil War (Table 3-12). Gainesville profited by being situated between the Chisholm Trail to the west and the Sedalia Trail to the east. When the railroad reached Gainesville in 1879, it became a cattle boom town. Both Fort Worth and Gainesville...

> ...stood in the path of the north-bound cattle trail, and after railroads reached them, the cattle driver could ship his cattle from these points or drive on as he chose. Denton was on the edge of the trail, but it had no railroad in 1881. By that time, Denton had little or no advantage as a shipping point over a dozen or more other nearby towns. (Bridges 1978:169)

Table 3-12
Numbers of Head of Cattle in Texas Cattle Drives between 1866 and 1880[1]

1866	260,000	1871	600,000	1876	321,928
1867	35,000	1872	349,275	1877	201,000
1868	75,000	1873	404,000	1878	265,649
1869	350,000	1874	66,000	1879	250,927
1870	350,000	1875	151,618	1880	394,784

[1] From A. G. Dawson (1904:117-123).

Industrial Development: 1870-1900

Railroad lines in northcentral and East Texas tripled between 1870 and 1880. The Houston and Texas Central reached Dallas in 1872 (Acheson 1977), and by 1877 was part of a completed track from Galveston to Chicago. In an effort to ensure an east-west line of the Texas and Pacific, Dallas secured state legislation and offered land and bonds (Reese et al. 1988). This line reached Dallas in 1873 but was not completed to Fort Worth until 1876. The population and economy of Fort Worth declined during the three-year delay in completing the railroad.

Table 3-13 lists the major industries, in order of importance, for the three-county area in 1870, based on the number of establishments and annual value of the products.

Table 3-13
Major Industries in Three-County Area in 1870[1]

Cooke County:	Sawn lumber, flour and meal, furniture and cabinets, wagons and carts
Denton County:	Flour and meal, agricultural implements, furniture and cabinets, boots and shoes, saddlery and harnesses
Grayson County:	Sawn lumber, wool carding

[1] Compiled from U.S. Government Printing Office 1872: Statistics of Wealth and Industry: Table XI.

Towns that developed between Dallas and Denton along the Houston and Texas Central are Letot, Farmers Branch, Carrollton, Trinity Mills, and Lewisville. Towns between Dallas and Fort Worth on the Texas and Pacific line are Eagle Ford and Grand Prairie (Reese et al. 1988). Denton was on the line of the Southwestern Branch of the Missouri, Kansas and Texas Railroad and the Texas and Pacific Railroad. Pilot Point had a railroad station, and

Gainesville in Cooke County was on the western terminus of the Missouri, Kansas and Texas Railroad (Burke's Texas Almanac 1882). The Gulf, Colorado, and Santa Fe Railroad reached Gainesville in 1887 missing Denton by seven or eight miles (Bridges 1978:170).

The establishment and path of the railroads greatly impacted towns and communities in Denton County. Bridges (1978:171) reports:

> The older towns in Denton County through which the railroads passed continued to grow, such as Denton, Pilot Point, and Lewisville. Many other places were missed by the railroads and were moved or abandoned, such as Elizabethtown (Bugtown), Waynetown, Medlin or Garden Valley, Green Valley (Tolltown), and Gribble Springs. A few other places such as Bolivar, Little Elm, and Stony were settlements before they were by-passed by the railroads, and still exist as small villages, although they have made little or no progress since then.

In the 1870s, Dallas and Fort Worth began taking on something of the character they have today. Dallas is located in the Blackland Prairie, a major farming area, while Fort Worth lies in the Grand Prairie, and was originally established as a military post because of its desired defensive potential (Hooks 1979). Further, the agricultural potential near Dallas gave that town the opportunity to develop through trade with farmers and the production of finished goods. In contrast, the location of Fort Worth along a major cattle trail, as well as its proximity to ranches of West Texas, gave Fort Worth the edge in the cattle trade (Hooks 1979:143).

Dallas developed into a mercantile center and served as the chief distributing center for buffalo hides and cotton (Bennett et al. 1981; Reese et al. 1988). "The annual shipments of cotton from Dallas amount to 50,000 bales, and it is the largest grain shippping point in the State of Texas. Large quantities of hides are shipped from here, besides large amounts of general farm produce" (Burke's Texas Almanac 1882:49).

The first cotton compress was built in Dallas in 1874, and the number grew to three in 1882. The first cottonseed oil mill began operation in 1877 and reportedly was the only one in the north half of the state. Five cotton gin manufacturing firms were established in the 1880s and six were operating in 1896. By 1910, two of the largest cotton gin factories in the world were located in Dallas, and the first was established in Fort Worth in 1877 (Hooks 1979:148-149).

Two cotton compresses were built in Fort Worth in 1877 and 1878, but only one remained in operation by 1882. A cotton seed mill was built in 1891, but no cotton gins or factories were established during this period. While Fort Worth could not compete with Dallas in the production of cotton gins, cotton compresses, gins, and seed mills, it became a major distribution point for cotton farmers in West Texas.

This same pattern occurred in the grain industry. Dallas became a major grain processing center and producer of grain mills. The first flour mill was built in 1872, and six were in operation in 1878, along with several grain elevators, and companies producing mills. The first flour mill was established in Fort Worth in 1876, and four flour/grist mills were operating by 1890. The growth of the industry in Fort Worth never rivaled that of Dallas, but the city was able to compete as a major distribution center for grain from West Texas (Hooks 1979:151-152).

Flour and meal milling and cotton ginning occupations first appear in the census records for Cooke, Denton, and Grayson counties in 1860. Data for these counties from the 1860 population census and for four communities in Denton County from the 1870 population census are provided in Table 3-14. These data indicate that milling was a more important industry during this period than cotton ginning, and that some towns had mills or gins, while others did not. Further, these industries were more important in Grayson County, which was settled earlier.

Table 3-14
Milling and Ginning Occupations Recorded in the 1860 and 1870 Censuses[1]

1860:

	Cooke	Denton	Grayson
Miller	4	6	13
Millwright	1	2	3

1870:

	Denton	Lewisville	Pilot Point
Miller	1	3	
Millwright			1
(retired)			1
Cotton Ginner			1
Grist Mill Worker	1		

[1] Compiled from U.S. Bureau of Census: 1860 Population; 1870 Population.

A New Century: 1900 to World War II

Economic turbulence in the United States early in the twentieth century was partially caused by the unstable cotton economy nationwide. By 1910, over 50% of all farmers in Texas were tenants (Green 1977:135) and over 60% in Denton County. Rising land values caused many landowners to demand cash payments in addition to the usual thirds and fourths crop payments. This, coupled with exorbitant interest rates, made it almost impossible for the average renter to get ahead (Ferring and Reese 1982). This pattern continued through the 1920s when the availability of cheap farm labor increased the percentage of tenant farmers, including both cash cropping and sharecropping.

In 1920, 37.6% of the farms in Texas were operated by tenants. In 1925, the percentage had increased to 40.8%, declined to 39.6% in 1930, and increased to 41.8% in 1935 (Sanderson 1937:5). These figures indicate that the rate of increase in the percentage of tenant-operated farms was greater in the 1920s than the increase that occurred during the Depression. However, this trend varied considerably between counties. Between 1910 and 1925, the percentage increase of tenant-operated farms in the six-county area (Collin, Cooke, Dallas, Denton, Grayson, Tarrant) ranged from a low of 1.8% in Tarrant County to a high of 6.9% in Cooke County. Unlike the trend indicated by the total percentage increases between 1920 and 1935 indicated by Sanderson (1937), only one of the six counties, Cooke County, exhibited an increase in tenant-operated farms between 1925 and 1935. Five counties showed decreases ranging between 4.9% and 12.6%, with the highest occurring in Dallas County (Texas Almanac 1914:201-206, Table 2.18; Texas Almanac 1929:114-117; Texas Almanac 1939-1940:173-176).

Farm size and mechanization increased, while land prices decreased between 1880 and 1970. Data for the state (Fite 1984:Table A1 through Table A6) indicate that while the average number of acres harvested per farm increased steadily between 1880 and 1970 (period shown), farm population and the number of farms increased until the Depression, when they began to decline (Table 3-15). Data available by county illustrates that these changes occurred at variable rates between counties. The number of farms decreased slowly but steadily in the six-county area between 1910 and 1935 (based on the data for the years 1910, 1925, and 1935), except in Dallas County (peak in 1925), and Tarrant County where the number of farms increased 0.9% between 1925 and 1935 (Texas Almanac 1914:201-206, Table 2.18; Texas Almanac 1929:114-117; Texas Almanac 1939-1940:173-176).

Table 3-15
Statistical Data of Texas Agriculture, 1880-1970[1]

	Farm Pop.	Number of Farms	Avg. Acres Harvested Per Farm	Value Per Farm	Value of Products Per Farm[2]
1880	174,184	30.8	979	374	
1890	228,126	36.8	1,753	516	
1900	352,190	42.9	1,964	681	
1910	417,770	44.0	4,412	1,029	
1920	2,314	436,033	57.4	8,486	3,140
1930	2,359	495,489	61.8	7,260	1,598
1940	2,160	418,002	62.3	6,196	1,128
1950	1,292	331,567	84.8	20,263	5,672
1960	806	227,071	140.1	51,787	9,287
1970	471	213,550	154.5	99,133	23,077

[1] Compiled from Fite (1984:Table A1 through A6).
[2] Figures are from decennial agricultural censuses.

Smith (1955:186) reports that the Federal farm census data for Cooke County in 1925 indicated a decline in farms and farm production. Cattle had declined to 26,287, horses and mules to 14,359, hogs to 7,231, cotton was down to 15,128 bales, and wheat, oats, and corn production were also down.

Examination of the percentage of white and black farm owners in the six-county area in 1925 indicates that the highest percentage of black owners occurred in the three eastern counties (Grayson, Collin, Dallas), which were not only settled, first but also had the highest percentage of prairie acreage. The Blackland Prairie soils in these counties are more conducive for cotton growing than in the Cross Timbers in Cooke and Denton counties. Denton County had the highest percentage of black farm owners in the three western counties at 5.8% (Texas Almanac 1914:201-206, Table 2.18; Texas Almanac 1929:114-117; Texas Almanac 1939-1940:173-176).

Cotton gradually began losing importance as a cash crop in Cooke, Denton, and Grayson counties during the twentieth century. The peak ginning year in Cooke County was 1916. In Denton and Grayson counties, the peak ginning year was 1924. Considerable variability in the number of bales ginned occurred between counties and years.

During the twentieth century, other crops replaced cotton in importance. Smith (1955) reports that in Cooke County, wheat, corn, fruits and vegetables declined, but sorghum and peanuts became important farm products. The dairy and poultry industry also grew during this period. Several factors account for this trend, including:

> ...Mechanization of transportation and the introduction of farm machinery reduced the number of horses and mules from 15,691 in 1910 to 3,878 in 1948, and was a contributing factor in the decline of corn raising.
>
> Commercial production of peanuts had skyrocketed in a few years. Peanuts were grown principally in the Cross Timbers... which previously had been devoted to truck farming and some cotton raising. The 1945 production was... four times the 1940 output.
>
> Sorghum growing had nearly quadrupled in ten y [between 1935 and 1945]... [In contrast]... Vegetable growing and fruit raising, which centered prin y in the Cross Timbers sandy land, had declined in recent years because of soil depreciation, better profits in peanuts, lack of market, and other factors (Smith 1955:214-215).

In Denton County, cotton, cattle, and grains were the main cash crops. The change from cotton-wheat-corn farming to grasses as the major cash crops occurred in the 1960s. This change occurred because growing grasses was less work and required fewer laborers (Carl Sadau, personal communication).

> It must be remembered that the agricultural pattern of the area has always shown diversity. The change from cotton as the main money crop to cattle was slow. It was not until the 1940s that cattle became the cash crop. The cattle were taken to the Fort Worth stockyards. However, cotton then became the second cash crop.... In the period from 1900 to the 1930s, some people planted cane and sorghum for making syrup. At site 41DN116 in the 1910 to 1920s, two black families had a sorghum syrup mill (Doc Newton, personal communication)" (Skinner et al. 1985:8-5, 8-6).

Most families continued to grow their own garden. Garden crops included onions, cabbage, tomatoes, potatoes, squash, lettuce, cabbage, and okra. Families also had orchards, collected wild fruits and berries, and hunted. Several families had dairies. Turkeys, chickens, sheep, goats, horses, mules, and cattle continued to be raised on many farms. The change from cotton-corn-wheat farming to grasses as the major cash crop occurred in the late 1960s.l. Milk cows were raised both for home milk needs and for sale for producing dairy products. The Sadau family in the south-central portion of the Ray Roberts Lake area had a dairy.

War-related jobs and the oil industry provided temporary relief from the economic hardships of falling farm crop prices. Employment in the cities was an economic alternative chosen by many people in the area. The rural population dropped as farmers converted to large-scale ranging or agribusiness, or left their farms because small farms were no longer economically viable (Skinner et al. 1982a, b, 1985). In the late 1960s to early 1970s, however, some long-time farmers in the Ray Roberts Lake area bought additional land and equipment in an effort to increase farm size and become more mechanized. This occurred at a time when crop and land prices were such that this kind of investment was viewed as viable (Carl Sadau, personal communication).

Many communities largely disappeared from the landscape during the early twentieth century. Among the factors affecting community longevity include the introduction of the automobile and the consolidation of schools. Many communities were established around a school, and when the schools closed, these communities often died. The automobile also affected small communities. For example, "The advent of the automobile brought an end to the prosperity of small communities such as Vaughantown (Cosner) since it opened up the way to newer and larger markets and made people more mobile and have wider social interaction... Cars displaced the horse as transportation and increased mobility (Skinner et al. 1985:8-4).

CHAPTER 4

PREVIOUS ARCHAEOLOGICAL AND HISTORICAL INVESTIGATIONS IN THE RAY ROBERTS LAKE PROJECT AREA

by

Susan A. Lebo

Cultural resource evaluations have been conducted at Ray Roberts Lake to identify and document cultural resources in the project area and to make recommendations regarding their possible historical, archaeological, or architectural significance. This survey and test work was performed in several phases under contracts with the U.S. Army Corps of Engineers, Fort Worth District. Archeological investigations were begun at Ray Roberts Lake in 1972 when Southern Methodist University recorded 25 prehistoric sites and one historic site. Survey work was begun in 1980 by Environment Consultants, Inc. (ECI) in the area to be impacted by dam construction. The remaining lake area was partially surveyed by ECI in 1981 and 1982, working around difficulties encountered in obtaining land access from some owners. Following a survey status review in 1985 by archaeologists at the Institute of Applied Sciences (IAS), North Texas State University (NTSU; now called University of North Texas), it was determined that approximately 8,800 acres had not been surveyed or had been surveyed with ambiguous results. Discussions of these surveys are presented in detail in Skinner et al. (1982a, 1982b, 1985) and Ferring (1986). An overview of these efforts and the results are presented below, followed by a discussion of the results of the 1987 survey by IAS of a representative sample (4,400 acres) of the unsurveyed 8,800 acres. National Register recommendations are presented for sites identified during this 1987 survey.

Environment Consultants, Inc.:
1980-1981

An intensive survey of the reservoir conducted by ECI in 1980 and 1981 resulted in the recording of 355 sites representing 382 components. Of this total, 90 sites contained prehistoric components only, 238 contained historic components only, and 27 sites contained evidence of both prehistoric and historic occupations.

The survey was conducted to locate and record cultural resources within the proposed Ray Roberts Lake project area, to recover information about site types, frequency, age, function, content, and integrity that would then be used for making archaeological assessments about research potential and National Register eligibility. Because of landowner access problems, an estimated 1,983 acres of the project area was not surveyed. These unsurveyed areas were scattered across the reservoir.

Of the 265 sites with historic remains, 142 were completely archaeological in nature, 102 were sites with standing structures and potential archaeological remains, five were bridges, 16 were cemeteries, and two were combination structure and cemetery sites. These sites were divided into four time periods: 1800-1850, 1850-1875, 1875-1935, and 1935-1980. Many sites contained components from two or more time periods. The historic sites were grouped into eight site types (Skinner et al. 1982a:Table A2-2). These include farmsteads (188), outbuildings only (7), dumps (42), bridges (5), cemeteries (16), schools/churches (3), townsites (1), and wells (3).

Recommendations for the historic resources are shown in Table 4-1. No further work was recommended at 189 sites (including five bridges) that exhibited little or no research potential. Thirteen of the remaining historic sites were recommended for mitigation, 47 for testing, and documentation was recommended for the 16 cemeteries (Skinner et al. 1982a:Table A5-2).

Based on the survey results (Table 4-1), 230 of the 382 components were assessed as being ineligible for National Register nomination, and no further work was recommended. Twenty-four components were recommended as eligible for the National Register, including 11 prehistoric components and 13 historic components. Sixteen

cemeteries were recommended for documentation but not inclusion on the National Register, and the remaining 112 were recommended for further investigations to determine National Register eligibility (compiled from Skinner et al. 1982a). In addition, 13 sites with standing architecture were recommended for further work to determine architectural significance, and 34 were assessed as potentially significant, and architectural mitigation was recommended (Table 4-2 and Table 4-3).

Table 4-1
Recommendations for Historic Resources[1]

Not Eligible/ No Further Work				Eligibility Undetermined		More Work	Cemetery Documentation		
CO10	CO77	DN76	DN131	DN214	GS60	CO31	DN120	DN77	CO69
CO12	CO78	DN81	DN132	DN216	GS61	CO32	DN166	DN78	CO75
CO13	CO80	DN83	DN133	DN218	GS63	CO39	DN167	DN79	CO102
CO15	CO81	DN84	DN134	DN220	GS65	CO41	DN168	DN87	CO104
CO16	CO82	DN86	DN135	DN221	GS68	CO42	DN174	DN91	CO107
CO18	CO83	DN88	DN136	DN222	GS70	CO46	DN181	DN93	CO135
CO21	CO84	DN90	DN137	DN223	GS71	DN183	DN108	DN97	
CO22	CO86	DN92	DN138	DN224	GS72	DN184	DN110	DN117	
CO25	CO88	DN94	DN139	DN225	GS74	DN185	DN111	DN154	
CO27	CO92	DN95	DN140	DN226	GS75	DN186	DN116	DN215	
CO30	CO96	DN96	DN141	DN227	GS76	DN190	DN194	DN225	
CO33	CO98	DN100	DN142	DN229	GS77	DN212	DN198	DN232	
CO34	CO103	DN104	DN143	DN231	GS79	DN228	DN202	GS66	
CO36	CO104	DN105	DN144	DN234	GS82	DN230		GS78	
CO37	CO108	DN106	DN145	GS39	GS84	DN233		GS86	
CO38	CO109	DN107	DN146	GS40	GS87			GS104	
CO40	CO110	DN109	DN147	GS41	GS91				
CO43	CO111	DN112	DN150	GS43	GS98				
CO44	CO112	DN113	DN151	GS44	GS101				
CO47	CO116	DN118	DN153	GS45	GS103				
CO51	CO118	DN119	DN155	GS47					
CO55	CO119	DN121	DN157	GS49					
CO58	CO120	DN122	DN158	GS50					
CO59	CO122	DN123	DN164	GS51					
CO61	CO126	DN124	DN165	GS52					
CO62	CO127	DN125	DN203	GS53					
CO64	CO130	DN126	DN204	GS54					
CO65	CO132	DN127	DN205	GS55					
CO66	CO133	DN128	DN206	GS56					
CO73	CO137	DN129	DN209	GS58					
		CO138	DN130	DN213					

[1] Skinner et al. 1982a: compiled from Table A5-2 and text; all site numbers are preceded by 41 (e.g., 41CO10).

In 1981, following the survey, ECI conducted test excavations at 60 sites within the dam construction area. Work was accomplished during two phases allowing initial testing results to be used in making recommendations for more extensive testing at sites that exhibited potential. Some sites that could not be examined during initial testing because access was denied by the landowner were examined during Phase II. Some historic sites were selected for historic archival research but were not tested, while others received both. Testing included auger test pits, surface collecting, test pit excavations, and at several prehistoric sites, magnetometer surveys.

Table 4-2
Summary of Recommendations for Prehistoric and Historic Sites Based on ECI 1980-1981 Survey Results[1]

	Historic	Prehistoric
Not eligible-no further work	189	41
Eligible--nominate to NR--mitigate	13	11 (5 single, 6 multicomponent)
Eligibility not known--test	47	65 (26 single, 9 multi, 30 undated)
Cemetery Docum.	16	
	265	117

[1] Compiled from Skinner et al. 1982a.

Table 4-3
Summary of Recommendations for Architectural Resources Based on ECI 1980-1981 Survey Results[1]

Not eligible-no further work	Site numbers not given
Recommended for National Register--Mitigate (n=34)	CO21, 33, 36, 38, 42, 51, 83, 103 105, 110, 111, 112, 118, 120, 121, 136 DN83, 87, 106, 107, 118, 143, 146, 157 165, 167, 172, 191, 196, 198, 223, 224, 226, GS75
Eligibility not known--test (n=13)	CO10, 32, 81, 82, 115 DN 133, 138, 151, 174, 176, 193 GS46, 79

[1] Compiled from Skinner et al. 1982a:Table 8-7; all site numbers are preceded by 41 (e.g., 41CO21).

Of the 60 sites tested, 15 were prehistoric, 22 were historic with no standing structures, 16 were historic with standing structures, and six were mixed prehistoric/historic (Skinner et al. 1982b:v-vi; note that only six mixed sites were identified). The designation "mixed" was reserved for sites with dual components (41DN79, 41DN81, 41DN87, 41DN96, 41DN112, 41DN201), sites containing isolated prehistoric or historic items being excluded.

A total of 63 sites contained historic remains and were evaluated for National Register eligibility (Table 4-4). Of these, 50 were recommended as requiring no further work because they did not meet National Register criteria. Thirteen historic sites were recommended and included five designated "potentially eligible" and eight identified as "eligible for inclusion" to the National Register (Skinner et al. 1982b:5-7, 5-11, 5-12). Ten historic sites were

recommended for inclusion to the National Register on the basis of historical and architectural significance (Skinner et al. 1982b:Table 5-4). These sites are presented in Table 4-4.

Table 4-4
Recommendations for Historic, Prehistoric, and Architectural Resources Evaluated by ECI in the Dam Construction Area[1]

Prehistoric Site[2]	Testing Phase[3]	Recommend-ation[4]	Historic Site	Testing Phase[3]	Recommend-dation[4]
DN79*	1,2	NR	DN76	1,2	NFW
DN80	1,2	NFW	DN77	1,2	Exc., PE
DN81*	1,2	NR	DN78	1,2	Coll., NR
DN82	1	NFW	DN79*	1,2	NR
DN84*	1,2	NFW	DN81*	1,2	NFW
DN85	1,2	NR	DN83	2	NFW; Arch. (NR)
DN87*	1,2	NFW	DN84*	1,2	NFW
DN89	1	NFW	DN86	2	NFW
DN96*	1	NFW	DN87*	1,2	Coll., NR Arch. (NR)
DN98	1	NFW	DN88	2	NFW
DN99	1,2	NR	DN91	1,2	Exc., NR
DN101	1,2	NR	DN92	2	NFW
DN102	1,2	NR	DN94	1,2	NFW
DN103	1,2	NR	DN95	1	NFW
DN112*	1,2	NR	DN96*	1,2	NFW
DN114	1	NFW	DN97	1,2	Exc., NR
DN115	1,2	NFW	DN100	1	NFW
DN197	2	NFW	DN104	1	NFW
DN199	2	NFW	DN105	1	NFW
DN201*	2	NFW	DN106	2	NFW; Arch. (NR)
DN217	2	NFW	DN107	2	NFW; Arch. (NR)
DN219	2	NFW	DN108	1,2	Coll., NR
			DN109	2	NFW
			DN110	1,2	Exc., NR
			DN111	1,2	Exc., NR
			DN112*	1,2	NFW
			DN113	1	NFW
			DN116	1,2	Exc., NR
			DN119	2	NFW
			DN125	2	NFW
			DN126	2	NFW
			DN128	2	NFW
			DN132	2	NFW
			DN139	2	NFW
			DN143	2	NFW; Arch. (NR)
			DN146	2	NFW

DN194	2	Exc., PE
DN195	2	NFW
DN196	2	NFW; Arch. (NR)
DN198	2	Exc., NR Arch. (NR)
DN200	2	NFW
DN201	2	NFW
DN202	2	Exc., NR
DN223	?	NFW; Arch., (NR)

Historic sites determined not eligible based on survey data:
DN118, DN121, DN123, DN124, DN131, DN133, DN136, DN137, DN140, DN141, DN142, DN213, DN214, DN216, DN218, DN220, DN221, DN222

[1] Compiled from Skinner et al. 1985.
[2] *Sites with prehistoric and historic components.
[3] 1=initial testing phase, 2=intensive testing phase.
[4] Arch=architecture; Coll.=surface collect; Exc.=excavate; NFW=no further work; NR=nominate to National Register; PE=potentially eligible for National Register.

Environment Consultants, Inc.:
1982 Excavations

Excavations were conducted by ECI in 1982 to mitigate the adverse impacts of dam construction at six prehistoric and 31 historic sites in the dam construction area. The prehistoric sites included 41DN79, 41DN81, 41DN85, 41DN101, 41DN102, and 41DN103 (Skinner et al. 1985). Historic investigations consisted of the excavation of six sites, recording oral histories at 17 sites, and documentation of 13 standing structures (Table 4-5). Historic American Building Survey like (HABS-like) story sheets were produced for seven sites in the dam construction area and for one dwelling in Cooke County before it was moved to Old City Park in Dallas. These architectural drawings are on file at IAS, UNT. Graves were documented at 13 cemeteries in the reservoir prior to relocation by the Corps (Skinner et al. 1985).

While no further work was recommended at the six historic sites excavated during 1982, they were each still identified as significant and National Register eligible. In addition, Skinner et al. (1985) noted that because of time and budget constraints, the excavation results were inadequate to fully assess and investigate the subsurface deposits, including many features.

Six historic sites recommended for additional fieldwork based on the testing data (see Table 4-4) were not revisited, and no work was undertaken to mitigate the adverse impacts. Five of these sites (41DN78, 41DN87, 41DN97, 41DN108, 41DN198) were recommended for nomination to the National Register. The final site, 41DN111 was identified as potentially eligible but required additional fieldwork to further assess eligibility. These recommendations remained unchanged at the end of the mitigation phase (Skinner et al. .985:Appendix 7).

Table 4-5
Testing Conducted by ECI at Historic Sites in 1982[1]

Site Number	Test Excavations	Oral History Interviews	Architectural Story Sheets	Grave Documentation
41CO69				X
41CO75				X
41CO102				X
41CO104				X
41CO107				X
41CO118			X	
41DN77	X	X		
41DN83		X	X	
41DN87		X	X	
41DN91	X	X		
41DN93				X
41DN104		X		
41DN110	X	X		
41DN116	X	X		
41DN117				X
41DN118		X	X	
41DN125		X		
41DN126		X		
41DN143		X	X	
41DN146		X	X	
41DN154				X
41DN194	X	X		
41DN198		X	X	
41DN202	X	X		
41DN215				X
41DN221		X		
41DN223		X	X	
41DN225				X
41GS66				X
41GS86				X
41GS104				X

[1] From Skinner et al. (1985:Table 6-1).

The architectural documentation at three sites that were recommended for nomination to the National Register based on architectural significance was not conducted although this work was recommended based on the testing results (41DN106, 41DN107, 41DN196). On the other hand, architectural documentation was conducted at 41DN118, determined not to be National Register eligible based on survey data, and at 41DN146 based on testing data. No further work was recommended for 41DN118 and 41DN146 following architectural documentation in 1982 (Skinner et al. 1985). The recommendations for the other three sites remained unchanged.

ECI conducted eleven oral history interviews, with long time project area residents in the dam construction area, providing both site-specific and general folklife information. Archival research included chain of time, state, and

federal census records, probate records, land records, tax records, mortgage liens, original copies of local newspapers, and historic photographs and maps. HABs-like architectural story sheets were completed for selected historic sites in the dam construction area. Copies of the taped interviews and the architectural story sheets are on file at IAS, UNT. Reel-to-reel tapes and written transcripts of the interviews are also available in the Oral History Collection at the Willis Library, UNT.

Based on National Register nominations made by ECI, 28 sites were determined eligible by the State Historic Preservation Office (SHPO) and the Secretary of the Interior in March 1982 (Table 4-6). These sites include eight prehistoric components and 20 historic components.

Table 4-6
Sites Determined National Register
Eligible in 1982[1]

Site	Site Type	Site	Site Type
DN77	H	DN107	H
DN79	P (H not recommended)	DN110	H
DN81	P (H not recommended)	DN111	H
DN83[3]	H	DN112	P (H not recommened)
DN85	P	DN116	H
DN87[3]	H (P not recommended)	DN118[2]	H
DN91	H	DN125[2]	H
DN97	H	DN126[2]	H
DN99	P	DN143[3]	H
DN101	P	DN146[2]	H
DN102	P	DN194[2]	H
DN103	P	DN198[3]	H
DN106[3]	H	DN202	H
DN107[3]	H	DN223[3]	H
		DN224[2]	H

[1] These sites were determined archaeologically eligible for the National Register based on official Determination of Eligibility Notification form from the Keeper.
[2] Based on survey and/or testing results, ECI did not recommend these sites as National Register eligible (Skinner et al. 1982a, 198b, 1985).
[3] These sites were determined architecturally eligible for the National Register based on official Determination of Eligibility Notification form from the Keeper.

University of North Texas:
1985-1986

In 1985, UNT (Ferring et al. 1986) conducted a survey at Ray Roberts Lake to revisit and rerecord all sites in the project area recommended for further work by previous investigators, the Corps, or the SHPO. This work was undertaken as part of two delivery orders; the first included 143 sites (Table 4-7), and the second listed 92 additional sites to be investigated.

The Scope of Work also required UNT to recompile a site survey map of the reservoir on USGS topographic sheets indicating which tracts were actually surveyed by the previous contractor, ECI, using data from field forms furnished by the Corps. Based on these data, approximately 8,800 acres were not surveyed or insufficient data

existed to verify they had been surveyed.

Based on the results of this work, the 235 revisited or newly recorded sites were grouped based on their integrity, research potential, and National Register eligibility. Recommendations for the prehistoric sites included (0) outside the project area, (1) excavate, (2) test, (2a) surface collect, (3) no further work at this time. The recommendations for the historic sites included (1) already declared National Register eligible, mitigation recommended; (2) National Register eligible, further testing recommended; (3) high priority sites, test to determine eligibility; (4) sites with low priority, test to determine eligibility; and (5) no further work at this time (Table 4-7). No recommendations were made for sites that were either not relocated or no access was obtained.

Table 4-7
Site Recommendations Made by UNT Based on the 1985-1986 Survey[1]

Prehistoric						Historic					
Site	Rec.	Site	Rec.	Site	Rec.	Site	Rec.	Site	Rec.	Site	Rec.
CO11	2a	DN17	2b	GS48	3	CO10	5	DN77	1	GS42	5
CO14	3	DN79	1	GS64[2]		CO13	5	DN78	5	GS46	4
CO17	3	DN80	3	GS65[2]		CO15	4	DN79	5	GS57	5
CO18	3	DN81	1	GS67	2a	CO16	5	DN81	5	GS59	4
CO19	3	DN82	3	GS68	2a	CO21	5	DN83	5	GS60	5
CO20	3	DN84	3	GS69	3	CO22	5	DN84	5	GS69	5
CO23	3	DN98	3	GS71	3	CO31	5	DN87	5	GS72	5
CO24	3	DN101	1	GS73[2]		CO32	3	DN91	1	GS75	5
CO26	3	DN102	1	GS85	3	CO33	3	DN97	1	GS79	2
CO28	3	DN103	1	GS88	3	CO36	3	DN104	5	GS80[2]	
C029	3	DN112	3	GS93	2a	CO38	5	DN106	1	GS83[2]	
CO35	2b	DN114	3	GS102	3	CO39	4	DN107	1	GS89	5
CO45	3	DN115	3			CO40	5	DN108	5	GS95	5
CO48	3	DN148	3			CO41	5	DN110	5	GS99	5
CO50	0	DN149	3			CO42	5	DN111	5	GS100	5
CO52	3	DN159	3			CO43	5	DN112	5	GS101	5
CO53	3	DN169	2b,2c			CO44	5	DN116	5		
CO54	-	DN173	3			CO46	5	DN118	5		
CO55	2a	DN175	3			CO49	5	DN120	5		
CO56	3	DN178	3			CO51	5	DN125	5		
CO57	3	DN187	3			CO58	-	DN132	5		
CO67	3	DN188	3			CO61	5	DN133	5		
CO70	3	DN197	2b,2c			CO62	5	DN134	5		
CO71	-	DN206	3			CO63	5	DN135	5		
CO72	-	DN207	3			CO65	5	DN136	5		
CO76	2b,2c	DN208	0			CO68	5	DN137	5		
CO79	3	DN210	2a			CO69	5	DN138	5		
CO85	3	DN217	3			CO77	5	DN141	5		
CO91	0	DN346	2b,2c			CO78	5	DN142	5		
CO93	3	DN347	2b,2c			CO81	-	DN144	5		
CO94	3	DN350	2a			CO82	4	DN145	5		
CO95	2a,2b,2c					CO83	2	DN146	5		
CO97	2b,2c					CO84	5	DN147	5		
C099	3					CO86	5	DN150	5		

Table 4-7 cont.

CO106	3
CO124	3
CO125	3
CO126	3
CO134	2b,2c
CO139	3
CO140	3
CO141	2b,2c
CO142	2b
CO144	2b,2c

CO87	5
CO96	4
CO101	5
CO103	5
CO105	5
CO108	3
CO110	5
CO111	2
CO112	4
CO113	5
CO114	5
CO115	4
CO117	5
CO118	3
CO119	5
CO120	4
CO121	3
CO122	5
CO127	5
CO128	5
CO129	5
CO131	5
CO135	5
CO136	2
CO137	5
CO138	2
CO143	4
CO147	5
CO148	5
CO149	5

DN151	5
DN155	5
DN157	2
DN158	5
DN164	5
DN165	5
DN166	4
DN167	2
DN168	5
DN169	5
DN171	5
DN172	4
DN174	5
DN176	2
DN177	5
DN181	5
DN183	5
DN184	5
DN185	5
DN186	4
DN191	2
DN193	-
DN194	5
DN195	5
DN196	5
DN198	1
DN202	1
DN203	5
DN206	5
DN212	5
DN222	5
DN223	5
DN224	1
DN226	5
DN228	5
DN230	5
DN232	5
DN233	3
DN234	4
DN237	5
DN238	5
DN239	3
DN246	5
DN247	5
DN248	5
DN249	5
DN250	2
DN264	5
DN271	5

Table 4-7 cont

DN272	3
DN273	3
DN275	2
DN348	3
DN349	3

[1] Compiled from Ferring (1986); Site number is preceded by 41 (e.g., 41CO11); Recommendations (Rec.) include: 1=excavate; 2=test; 2a=surface collect; 2b=excavate test pits; 2c=excavate backhoe trenches; 3=no further work; 4=low priority, test to determine National Register eligibility; 5=no further work; -=site not relocated or access was denied and no recommendation for further work was possible.

University of North Texas:
1986 Test Excavations

In 1986, UNT conducted test excavations at 41CO141, a stratified prehistoric site containing Late Archaic components. The site was exposed by bridge construction activity and was partially removed. Excavations were conducted to determine site integrity, age, size, and National Register eligibility. Based on the testing results, the site was recommended for inclusion on the National Register and implementation of preservation or mitigative efforts to offset further adverse impacts (Prikryl and Yates 1987).

Summary

In summary, many of the historic sites recorded in the Ray Roberts Lake area were previously assessed and determined not eligible for nomination to the National Register. Those sites whose National Register status remained unclear or undetermined in 1985 were revisited and new assessments and recommendations were made by personnel from UNT. Following this work, the Corps in consultation with the SHPO reviewed these recommendations, and a Scope of Work was produced detailing which sites contained National Register potential. These sites were scheduled for archaeological, architectural, and historic research in the Scope of Work. The work scheduled at these sites, along with the research design and methods that directed these investigations are discussed in Chapter 5.

CHAPTER 5

RESEARCH DESIGN AND METHODS: ARCHAEOLOGY, ARCHITECTURE, LABORATORY, ARCHIVAL, ORAL HISTORY, AND CEMETERY RESEARCH

by
Susan A. Lebo, Stephen A. Lohse, Tom Nelson, and Paula Sutton

A multidisciplinary approach was used to recover archaeological, architectural, archival, and oral history data from 51 historic properties recommended for limited testing, testing, and/or mitigation. Our investigations focused on obtaining both a broad understanding of the subsistence-settlement strategies of families within the study area between the 1850s and 1940, and intrasite patterning. Major research questions focused on historic settlement, development, and decline of communities within the study area; market systems; subsistence systems; intra- and intersite characteristics of age, size, function, assemblage diversity, and layout; ethnic and community associations; and architecture, including dendrochronological information.

The purpose of this chapter is to outline briefly the general issues, research questions, and data requirements that guided the Ray Roberts Lake cultural resources project, and the research methods used to gather the archival, archaeological, architectural, oral history, and laboratory data collection. The previous investigations are summarized in Chapter 4, providing an overview of the project prior to the beginning of the 1986-1987 survey, testing, and mitigation phases presented in Chapters 6 through 8 in this volume.

The survey conducted by the University of North Texas in 1986 and 1987 was intended to recover data on the type and frequency of cultural resources in 4,400 acres of the unsurveyed 8,800 acres at Ray Roberts Lake. The survey was also undertaken to provide an initial assessment of the research potential or significance of cultural resources within the unsurveyed project areas based on field investigations, archival, and historical research. A total of ten historic components were recorded. A discussion of each of these components is provided in Chapter 6.

The results of the archival, architectural, and/or archaeological investigations at sites recommended for limited testing, testing, or archival or architectural documentation only are presented in Chapter 7. Chapter 8 describes the results of the sheet-refuse and mitigative excavations.

General Issues

The Ray Roberts Lake cultural resources project, like other cultural resource management (CRM) projects, provided an opportunity to investigate a record of human cultural dynamics within a defined region. Such investigations must be conducted within explicitly defined theoretical frameworks stating the hypotheses, data requirements, and research methods. The research design (Ferring and Lebo 1988) was developed to define the research directions of the Ray Roberts Lake - Lewisville Lake cultural resources project. These research directions are part of a broader attempt to mitigate known and potential impacts associated with Federal landuse. Fundamental is the goal of assessing National Register significance and recovering data from those sites that meet National Register eligibility but cannot be avoided or preserved. Under these circumstances, the research design was developed to encompass theoretical issues and research methods that consider the region and the discipline.

During the historic period, the Ray Roberts Lake area was sequentially occupied until the present by populations that adapted to the still-changing landscape used by prehistoric populations. It is clear that the ways the new populations distributed themselves and used the land changed through time (Skinner et al. 1982a, 1982b). These settlers were constrained by factors including land prices, agricultural and livestock potentials, markets for farm and ranch produce, the availability of wage-earning positions, as well as regional and national economies.

When compared with the prehistoric period, there are process changes that condition the way certain archaeological and historical problems must be addressed. For example, tool manufacture during the historic period is replaced by tool purchase, and food is increasingly bought rather than produced. These changes influence how site function is evaluated but not the basic focus on site function relative to landscape position, major economic activities on landuse potential, and so forth.

Geographical references include not only landform and climate, important at prehistoric sites, but also historical modifications, including roads, bridges, and distance to markets, which must be considered in developing models of site location and site-use history. Archival and oral informant data provide qualitative data unavailable for prehistoric sites. These enable better determination of ethnic affiliation, economic activities, duration and character of occupations, lifeways, and sociocultural relations among project area settlers.

National Register Criteria and Assessments

Each historic site recorded during the survey and all test-excavated sites were evaluated for potential eligibility for nomination to the National Register of Historic Places (NRHP) at the end of the testing phase. Sites recommended for sheet-refuse investigations were reevaluated after test excavations were completed. Based on these data, some survey and/or testing sites were recommended for mitigation (see later discussion in this chapter). These sites were determined to exhibit National Register eligibility and were located within the impact area. The four evaluation criteria, A-D, are presented below.

A. Association with events that have made a significant contribution to the broad patterns of our history; or

B. Association with the lives of persons significant to our past; or

C. Embodiment of distinctive characteristics of a type, period, or method of construction or representative of the work of a master, or possessing high artistic values, or representing a significant distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield information important to prehistory or history.

Criterion D was most applicable to sites recorded in the project area. Three aspects of this criterion were used in assessing eligibility: (1) integrity and content, (2) ability to yield significant new information, and (3) ability to address major research questions. It is important to recognize that assessments are made using survey and/or testing data.

Integrity is the condition of the archaeological deposits and includes information on whether the deposit is undisturbed, partially disturbed, or has been destroyed, as well as, the vertical and horizontal relationship of the site contents, including both natural and cultural stratigraphy. Content refers to the types of site elements present, including artifacts, features (e.g., discrete artifact clusters, burials, hearths, trash pits, etc.), and structural remains.

Data recovered during survey along with results obtained from previous studies (see Chapter 4) indicate that past archaeological research at Ray Roberts Lake predominately focused on the dam construction area. Less detailed research, including oral history, archival, and testing was conducted in lake areas outside the dam construction area. This has serious implications for archaeological assessments of National Register eligibility. Site types or sites dating to particular periods known to have occurred in the study area may no longer be represented. Many sites identified as National Register eligible in 1982 were adversely impacted before they were adequately investigated. Some of these sites remained when personnel from the University of North Texas (then called North Texas State University) revisited and reassessed sites in the project area in 1985 (Ferring 1986). Others were inadequately evaluated when they were recorded during the 1980-1981 seasons. As a result, when sites were reevaluated in 1985 and again after fieldwork began in 1986, some sites no longer exhibited National Register potential and other sites with reduced

integrity were recommended for investigation because they were the best remaining sites dating to a particular time period, ethnic group, and so on, in the reservoir. As a result, ability to yield significant new information was assessed by comparing these aspects (integrity, content, context, frequency) of historic sites in the study area with other recorded sites in the region.

Research Issues

The primary reason for archaeological study of historic cultural resources is their ability to provide information about settlement, landuse, and lifeways not available in historical documents. Farmstead archaeology has become an integral part of historic archaeology in the last 20 years and is important for several reasons. According to Cliff and Moir (1985:5),

> First, until the second decade of the twentieth century, a majority of households in America were located in rural settings and were agrarian (Eldridge and Thomas 1964). In many parts of Texas, over half the rural population was made up of farming households until after World War II (Lee 1982). Consequently, the archaeology of farmsteads and traditional lifeways of agrarian households is of great interest because it relates directly to the roots of many Americans.... Despite these facts, nineteenth and early twentieth century farmsteads in Texas have received very little archaeological attention (Fox 1983).... [Secondly, farmsteads exhibit] unique potential for measuring certain elements of household consumption and change.

Necessary data sets for studying nineteenth and early twentieth century settlement, landuse, and lifeways include: (1) cultural assemblages or content, (2) context, (3) subsistence, and (4) structural remains. A multidisciplinary approach involving archaeological, geological, archival, oral history, and faunal studies was developed for the Ray Roberts Lake cultural resources project.

Cultural assemblages provide information on the access to and utilization of specific types of goods, types of activities carried out, and the socioeconomic status, ethnicity, and landuse patterns of residents at sites in the study area (e.g., Miller 1980; Moir 1982, 1987a, 1987b, 1988a, 1988b; Saunders 1982). These data can be compared with information from other sites and with historical records to study social, economic, and settlement changes within the region.

Site context refers to the spatial distribution or relationship of artifacts, features, structures or structural remains, and activity areas. Site planning studies, including yard proxemics (see Moir 1987a, 1987b, 1988a), indicate relationships among socioeconomic status, ethnicity, farm size, functional or landuse considerations, length of occupation, and the type of and placement of features and structures.

Subsistence studies involve identification of faunal and floral remains that may reveal diet, husbandry, butchering, consumption, and refuse disposal patterns. These patterns are useful for examining changes in adaptation strategies and for comparing site-specific and regional historical documentation of ethnicity, socioeconomic status, landuse, and productivity.

Architectural studies involve changes in the frequency and distribution of building styles and the relationships between environmental and cultural factors, including surface geology and ethnic or geographic origin. These data can be used in conjunction with documentary sources to reconstruct the structural landscape of the study area.

Research Questions

The historic research was directed by, but not limited to, the eight research questions developed prior to the 1986-1987 testing phase (Ferring and Lebo 1988). These questions (Q) are given below with the test implications (I) for each, followed by a discussion of the data requirements:

Q1. The distance to source areas for goods and services for families in the Ray Roberts Lake project area is reflected in the distribution (i.e., dispersal or compactness) of settlements.

I1. Areas with easier access to goods and services settled first and exhibited greater compactness than those with more difficult access.

I2. Establishment of settlements and communities was in direct proportion to market access.

I3. Establishment of new markets, goods, and services such as sawmills, grist mills, and cotton gins occurred in areas with low market access and high demand.

Q2. The distance to source areas for goods and services differed among areas within northcentral Texas before 1870, and this variability is reflected in the establishment of industrial sites (e.g., sawmills, grist mills, cotton gins, pottery kilns), site dispersal, and artifact diversity. Sites located near major sources, such as pottery kilns, reflect lower artifact diversity for those resources than sites located farther from source areas.

I1. Artifact diversity indices for specific resources will vary among sites in different areas of northcentral Texas relative to differences in access, transportation costs, and availability.

I2. Greater artifact diversity indices will occur for sites located near major industries or communities (e.g., Dallas, Denton, Pilot Point) than those located farther away.

I3. Artifact diversity indices for specific resources reflected at sites in the Ray Roberts Lake area will differ from sites in other reservoir areas in northcentral Texas because of natural and cultural differences (e.g., environmental zones, ethnicity, place of origin).

Q3. Variability in the artifact and architecture assemblages from farmsteads in the Ray Roberts Lake area will reflect differences in site size, complexity, socioeconomic status, ethnic affiliation, date of initial occupation, length of occupation, and the rate of occupation turnover. Diachrony in the interaction of these factors and farmstead assemblages can be quantitatively measured.

I1. The factor(s) that may be used to explain the variability between farmsteads exhibit diachronic change. In other words, the type of variability evident between farmsteads is not static, nor are the factors that explain the variability. For example, landownership versus tenant status may explain the variability between farmsteads occupied during the Depression, but not the variability between sites at other periods.

I2. Given a representative sample of the farmsteads in the project area, the measurement of variability between sites will vary over time. In other words, during certain periods the variability among sites will be small, and at other periods it will be great as the diversity of farmsteads change. It is expected that at certain periods there will be a wide range of farmstead types (e.g., sharecropper; tenant; small, medium and large landowner; plantation), while during other periods the relative proportion of each type will differ.

I3. There are minimum threshold limits within each factor that must be reached before variability is exhibited in the archaeological record. In other words, no variability will be evident among farmsteads until a threshold limit is reached (e.g., landownership).

Q4. The distribution of farmsteads in the Ray Roberts Lake area reflects the productivity of the local environment, including market demands. Major environmental factors that affected the location of early farmsteads, industries, and settlements include soil type, topography, availability of water, and vegetation. These factors will affect the survival potential of farmsteads, industries, and settlements as well.

I1. Major environmental variables can be used to explain landuse patterns in the project area.

I2. The importance of local environment may be perceived rather than actual, but it is nonetheless an important controlling factor. This situation has perpetuated the adage, "areas with environments similar (e.g., soil type, topography, vegetation) to those where individuals immigrated from were settled first."

I.3 These factors affect the role of farms in the project area, resulting in a shift from largely self-sufficient farms to specialized farm production and the replacement of family farms by agribusiness enterprises.

Q5. Site function and/or activity areas will be reflected in the artifact assemblage and architecture of domestic and industrial sites.

I1. In the absence of standing architecture, site function can be determined by examining the archaeological record.

I2. The assemblages (artifact and architecture) from domestic sites will exhibit greater similarity in the types and frequencies of artifactual and architectural remains than with industrial sites, as well as the reverse.

Q6. The introduction, assimilation, dispersal, and duration of different architectural styles and technologies identified on the rural landscape at Ray Roberts Lake reflects sociocultural, economic, and political factors and changes.

I1. Specific styles and/or technologies have their roots in the traditional culture brought by settlers to the project area when they immigrated here.

I2. The distribution of different sociocultural, economic, political, or ethnic groups will be reflected in the differential distribution of traditional architectural styles and technologies.

Q7. Access to goods and services (economic variables) is the most important factor affecting the material record. This factor is less important at early sites where access is limited regardless of economic status. However, as geographical and cultural barriers are reduced, variability between sites will reflect economic access not cultural heritage. In other words, the assemblages at early sites will reflect many of the artifact and architecture styles and technologies brought by new immigrants. Later, these styles and technologies will be replaced by goods and services produced locally or regionally, and differences between sites will reflect differential access to these products and not differences in cultural heritage.

I1. Changes in access to goods and services will be reflected in the material record and greater diversity will be evident when access is significantly unequal among socio-economic, ethnic, or political groups.

I2. Economic access is the most important factor for explaining variability among farmsteads occupied during the same period.

Q8. Cultural stratigraphy will occur in the material remains at farmsteads in the project area. Statistically similar material culture patterns will occur at sites of similar age occupied by only one family. Greater diversity will be evident for serially occupied sites, or sites occupied for longer periods.

I1. The frequency, type, and spatial distribution of the material culture remains at farmsteads in the project area will be evident in both the vertical and horizontal stratigraphy of sites. These patterns will reflect diachronic change in activity areas during the lifespan of a farmstead, whether it was occupied by a single family or several. However, sites that were serially occupied, particularly if the location of the dwelling changed, will exhibit a greater overlapping and mixing of components.

I2. Material culture remains (including architectural items) associated with specific structures will vary as building function, size, and/or location changes as a result of modifications, recycling, or removal.

I3. Sheet refuse represents the deposition of material culture remains that results from initial occupation through abandonment, including post-occupational deposition. This "artifact rain" may include cultural remains that differentially reflect cumulative occupations. Frequency and recovery of remains will be biased towards those deposits near the end of occupation or after abandonment.

Historic Data Requirements

Development of explicit data requirements is essential for testing the research questions. An examination of diachronic culture change during the mid-nineteenth to mid-twentieth centuries in the Ray Roberts Lake area and other locations in northcentral Texas requires delineation of specific variables to be investigated. These variables are (1) environmental and cultural diversity, compactness, and density, (2) economic access, mode of transportation, and market-distribution systems, (3) site types and diversity, (4) artifact and sheet-refuse diversity and architectural diversity, (5) site size, (6) site complexity, (7) socioeconomic status, (8) ethnic affiliation, (9) duration of site use, and (10) cultural stratigraphy. Each of these variables is discussed below.

Environmental and Cultural Diversity

Major environmental zones in the Ray Roberts Lake area include the Grand Prairie, the Eastern Cross Timbers, and the Blackland Prairie (see Chapter 2). Their distribution is plotted and the location of specific site types, including farmsteads, industrial sites, political, social, and public buildings, and communities were identified. Bridges, road systems, and markets were recorded. Such distribution maps will allow us to determine the relationships of the site types with temporal and spatial changes.

Economic Access and Market Distributions

The size and distribution of market centers changed dramatically in the Ray Roberts Lake area during the mid-nineteenth to mid-twentieth centuries. Early settlements were isolated from large markets before the 1870s when railroads reached Dallas, Denton, and Sherman. Prior to this time, ferries and wagons served as the primary transportation modes for goods and services, and people. After 1870, railroad service was established, and new markets for importing and exporting opened. By examining market distributions, transportation systems, and where the goods and services purchased by families in the area were produced, it will be possible to reconstruct market access.

Site Type and Diversity

As mentioned above, several site types occur in the lake area. The frequency and distribution of these site types will be determined to obtain a diversity index for the project area. The artifact assemblages from lake sites will be compared to determine if significant differences occur in the frequency and distribution of major artifact categories between major site types. The distribution of each site type will be determined and compared with distributions obtained for a variety of environmental and cultural variables (e.g., environmental zones, topography, soil type, ethnic affiliation).

Artifact and Architecture Diversity

These data sets will be obtained using the same methods mentioned above. Diversity indices will also be calculated for major artifact categories within sites. This will allow us to examine differences in the frequency and distribution of specific artifact categories within major yard areas.

Site Size and Complexity

Site size will be determined by the spatial distribution of architectural remains, features, and sheet-refuse deposits at historic sites rather than total land holdings. Site complexity will include the types, frequencies, and distributions

of architectural remains (e.g., cellars, dwellings, fences, outbuildings) and archaeological components. Site formation processes and soil dynamics may also affect site complexity.

Socioeconomic Status and Ethnicity

Maps, deed/title records, historical accounts, and local histories should provide data on socioeconomic and ethnicity patterns in the Ray Roberts Lake area. Major socioeconomic groups include sharecroppers, tenants, and small, medium, and large landowners. Ethnic groups include Euro-Americans, African-Americans, and Hispanics. Historic Native American groups also utilized this area, largely for trading. Both foreign-born and American-born immigrants, and descendents of local settlers occupy the perimeter of the lake or reside in surrounding towns.

Duration of Site Occupation

Duration of site occupation will be estimated using both archival and archaeological data. Mean beginning dates will be calculated for ceramic and bottle glass assemblages. Architectural data and oral history information will be used when available.

Cultural Stratigraphy

Both horizontal and vertical stratigraphy will be examined to reconstruct the distribution of major artifactual and architectural categories.

Research Methods

The research methods and techniques developed and used on the project were designed to maximize data recovery for addressing the research questions discussed above and assessing National Register eligibility. This was accomplished using a multidisciplinary approach incorporating geology, archaeology, biology, environmental and geographical data, architecture, and history. The methods used to conduct the archaeological, architectural, dendrochronological, archival, oral history, laboratory, and geological research for the Ray Roberts Lake project are discussed in this section. This discussion is divided into four subsections (1) overview of the specifications of the Scope of Work, (2) archaeological data recovery, (3) architectural data recovery, (4) dendrochronology data recovery, (5) laboratory methods, (6) archival research, (7) oral-history research, and (8) cemetery research.

Table 5-1
Historic Sites Scheduled for Investigation During the 1986-1987 Season

Site	NHRP Status[1]	Adverse Impacts[2]	Investigative Measures[3]									
			LT	T	SR	AD	AR	M	R	SC	P	D
CO33	I	SE	X			+	X					X
CO36	I	SE	X			+	X		X			+
CO38	I	SE	X			X	X					
CO39	I	I	X			+	+			X		
CO42	I	SE					X					
CO82	I	SE					X					
CO83	I	SE			X	X	+	X			+	
CO103	I	I	X				+					
CO111	I	SE			d	d	d	d				
CO112	I	I										d
CO118	I	I,SE		X		+	X	X			+	+

Table 5-1, cont.

CO119	NE	SE	+					d				
CO120	I	I	X			+	X				+	
CO121	I	I		X		X	X			+		
CO136	I	SE	X			X	X					
CO138	NE	R				D	X					
CO143	I	I	X			+	X	X				
DN77	E	SE,P			X		+					
DN79	E	I			X							
DN81	E	I			X							
DN87	E	I			d							
DN91	E	I			X		+					
DN97	E	SE			X		+					
DN106	E	I	+		d	X	+				X	
DN107	E	SE,P	+			X	+				X	
DN118	E	I			X	o	+					
DN146	E	I			X	o	+				d	
DN157	E	SE			X	X	+	X		+	+	
DN165	I	SE				X	X					
DN166	I	SE	X		+		+					
DN167	I	SE,P	X		+	+	X				X	
DN171	I	SE					X					
DN172	I	I	X			+	X	X			X	
DN174	I	I	X			+	+					
DN190	I	I,P		X			+					
DN191	I	I,P		X	d	+	X					
DN193	I	SE				X	X					
DN198	E	I			X	o	+				X	
DN212	I	SE						X				
DN224	E	SE,P			X	X	+					
DN232	I	I		X								
DN233	I	SE	X		+		+					
DN234	I	SE,P	X		+		+					
DN248	I	P		+			+					
DN250	E	P					+	+		+		
DN273	I	P	X				+		d		d	
DN275	I	I		X		X	X	X	+		+	
DN349	I	I	X			+	X					
GS46	I	SE	X			+	X	X				
GS59	I	SE	X				X	X				
GS79	I	SE	X			X	+					

[1] Status at the time the Scope of Work was prepared; Sites with insufficient data were included because they exhibited National Register potential but additional data was needed. These sites were generally recommended for limited testing or testing in the Scope of Work; E=determined eligible; I=insufficient data; NE=not eligible.

[2] I=inundation; P=park; R=removed; SE=shoreline erosion.

[3] LT=limited testing; T=testing; SR=sheet refuse; AD=architecture documentation; AR=archival research; M=map; R=record; SC=surface collection; P=preservation; D=dendro; X=scheduled work completed; d=scheduled work dropped; o=work completed by ECI, Inc.; +=work added and completed.

The Scope of Work developed for the project outlined four levels of investigation to be conducted at historic sites within the reservoir; survey, limited testing, testing, and mitigation. A detailed list of all historic sites and structures scheduled for archaeological investigation is presented in Table 5-1.

Survey, limited testing, and testing were conducted simultaneously, and recommendations were made for additional investigations, including mitigative efforts at these sites. These recommendations were based on (1) potential eligibility for nomination to the National Register, (2) adverse impacts, (3) archaeological and/or architectural integrity, (4) ability to address major research questions, (5) representativeness, and (6) ability to yield significant new information.

Sites that exhibited poor integrity, were not eligible for nomination to the National Register, or were not going to be adversely impacted were not recommended for mitigative efforts following consultation with the Corps. In addition, those sites that met these criteria did not exhibit potential for yielding significant new information, and represented additional examples of site types already adequately addressed by the existing sample were not recommended. In other words, additional farmsteads were identified during the survey and testing that reflected late nineteenth century, single occupation sites with good integrity. However, this site type was well represented in the sample schedule for mitigative efforts. Therefore, these new sites were not recommended for mitigation unless they exhibited greater potential than one or more sites already scheduled for mitigation, in which case, they were recommended as replacement sites. For example, site 41DN466 was identified during survey and was recommended for mitigative efforts, replacing site 41DN87, which had been destroyed by construction activities. This decision was made following consultation with the Corps.

In addition, as the status of specific sites was updated through field reconnaissance, each site was re-evaluated for its potential to address the research questions presented in Chapter 3 and the level of investigation requested. This information was presented to the Corps, and modifications were made on a site by site basis where warranted, including expansion of the preservation (41DN250-- Jones Farm), architecture documentation, and archival research efforts to increase data recovery of previously unrecognized significant resources that would be adversely impacted, or as replacements for resources already impacted. These changes are discussed in the appropriate sections within the text.

Archaeological Data Recovery

Survey

A detailed discussion of the survey phase is presented in Chapter 6. A total of 4,400 acres of an estimated 8,800 acres that remained unsurveyed, or for which documentation was inadequate, was selected for survey. Historic maps, soil and USGS maps, and aerial photographs were recommended to help locate historic sites.

A pedestrian survey, including the excavation of auger holes and shovel test pits was conducted to locate and evaluate site age, size, function, integrity, and potential National Register eligibility. Ten historic sites were recorded, and one, 41DN466, was recommended for mitigative efforts.

Limited Testing and Testing

Limited testing was recommended at sites that exhibited potential but had not been previously tested, and testing was recommended for sites that had been tested by ECI, but insufficient data were obtained to substantiate eligibility. Limited testing focused on the excavation of 10 to 30 shovel test pits or 50x50-cm units on a systematic

grid across the site, while testing involved the excavation of 20 to 50 units. This approach was used to recover information on site age, function, size, integrity, and potential NRHP eligibility. The number of units was also affected by site size. This strategy was designed to maximize data recovery while minimizing overall labor efforts. Systematic excavation on a 4, 8, 12, or 16-m grid allowed for rapid site coverage and the recovery of a representative sample of all buried deposits. In addition, this approach did not require a priori information about the location of specific activity areas or subsurface features.

Table 5-2
The Grid Spacing in Meters and the Number of Units
by Unit Type Excavated During 1986-1987 Testing

Site	Grid Size	STP	.5x.5m	1x.5m[1]	1x1m[2]	Surf. Coll.[3]	BHT	Other Units[4]
CO33	8		30					
CO36	4		127				15	ms
CO38	8		22					
CO39	8		45			49		
CO103	8		19					
CO118	8		57					
CO119	8		21					
CO120	8		30					
CO121	8		39		64	G	5	ms
CO136	8		13					
CO143	8		34					
DN107	-		16			G	2	
DN166	4		123		37		7	mg
DN167	4		129		46	G	4	mg,ms
DN172	8		26					
DN174	8		31					
DN190	8		29					
DN232	-		2					
DN233	4		62			160		
DN234	4		151		49	153	6	
DN248	8		40		14	13		
DN273	8		30					
DN275	8		65			187	2	
DN349	8		37					
DN466	4,8	7	172		49		4	mg,ms
GS46	8		25					
GS59	8		43					
GS79	4,8		117		27		3	ms

[1] 1x.5-m units were dug in hand-excavated trenches.
[2] 1x1-m units were generally excavated as a block.
[3] Surface collections were obtained using systematic 4x4-m blocks; G=grab sample only.
[4] mg=magnetometer survey; ms=machine scraping; p=prehistoric excavations.

Testing focused on two types of archaeological phenomena -- sheet-refuse deposits and discrete features. Primary emphasis was placed on investigation of sheet refuse, including data on horizontal and vertical distribution, content, and integrity. A small number of buried features were encountered in test units, and in some instances, units were

expanded to recover additional information. In addition, a backhoe was used to cross-cut major structural features (e.g., collapsed storm cellars) where rapid data recovery was indicated, and extensive hand-excavation was not feasible. An overview of limited testing and testing by site is presented in Table 5-2.

Mitigation

Sites selected for mitigation (Table 5-3) in the Scope of Work (DACW63-86-C-0098) had been determined eligible to the NRHP and were recommended for additional investigation because of the adverse impacts expected to affect these resources as a result of dam construction, inundation, wave action and shoreline erosion, park development, land clearance, or vandalism. Twelve sites had been determined eligible, and the remaining three required additional information to substantiate eligibility (see Table 5-1). Additional investigations at these fifteen sites were recommended by the State historic Preservation Officer to complete mitigative efforts. Primary adverse impacts identified for specific historic sites are presented in Table 5-1.

Table 5-3
Grid Interval in Meters and the Number of Units Excavated by Unit Type During 1986-1987 Mitigation

Site	Grid Size	STP	.5x.5m	1x.5m[1]	.1m[2]	Surf. Coll.[3]	BHT	Other Units[4]
CO111,								
DN77	4		90				3	ms
DN79	8		33		66		7	p
DN81								p
DN87[5]								
DN91	8		53	102		G	2	
DN97	8		34		44		3	mg,ms
DN106	8		39					
DN118	8		27				3	
DN146	4,8		81			4		
DN157	4,8		169	7	8		6	mg
DN191	8		42					
DN198	8		43		19		1	
DN224	8		79	49	3		7	mg

[1] 1x.5-m units were dug in hand-excavated trenches.
[2] 1x1-m units were generally excavated as a block.
[3] Surface collections were obtained using systematic 4x4-m blocks; G=grab sample only.
[4] mg=magnetometer survey; ms=machine scraping; p=prehistoric excavations.
[5] Site was dropped after consultation with Corps.

Mitigative measures specified in the Scope of Work included an interdisciplinary approach involving sheet refuse study, architecture documentation, dendrochronology, archival research, and preservation (41DN250). Sheet refuse investigations were defined as the excavation of 50x50-cm units on a systematic grid designed to recover artifacts from all yard areas, and information about site size, age, function, and to determine yard patterns. Architecture documentation focused on significant standing and collapsed structures which required documentation to insure data recovery before loss from natural causes, vandalism, or adverse impact from construction activities. Detailed scaled floorplans and elevations were drawn, and photographs were taken. Tree-ring data were recovered for selected

structures, and land/tract information was recorded for each site. Preservation measures were implemented at several sites, allowing significant structures to be removed and restored at another location.

Mitigative efforts focused on both sheet refuse deposits and features. Six sites recommended for mitigation (see Table 5-3) in the Scope of Work had not been tested, two received minimal shovel testing, and seven received systematic surface and subsurface investigation. NRHP recommendations were based primarily on archival, architecture, or oral history information. An overview of the testing methods and artifact assemblage recovered from these sites by ECI, Inc. is presented in Appendix B, and is briefly discussed within the site descriptions in Chapters 6 and 7.

Sites recommended for limited testing or testing in the Scope of Work that were later recommended for mitigative efforts are presented in Table 5-4. These sites are discussed in detail in Chapter 7.

Table 5-4
Grid Interval in Meters and the Number of Units Excavated by Unit Type at Sites Recommended for Additional Testing or Mitigative Efforts During 1986-1987

Site	Grid Size	STP	.5x.5m	1x.5m[1]	1x1m[2]	Surf. Coll.[3]	BHT	Other Units[4]
CO36	4		127				15	ms
CO121	8		39		64	G	5	ms
DN166	4		123		37		7	mg
DN167	4		129		46	G	4	mg,ms
DN233	4		62			160		
DN234	4		151		49	153	6	
DN248	8	40		14	13			
DN466	4,8	7	172		49		4	mg,ms
GS79	4,8		117		27		3	ms

[1] 1x.5-m units were dug in hand-excavated trenches.
[2] 1x1-m units were generally excavated as a block.
[3] Surface collections were obtained using systematic 4x4-m blocks; G=grab sample only.
[4] mg=magnetometer survey; ms=machine scraping.

A multiphase excavation strategy was implemented at each site. Systematic excavations of 50x50-cm units on a grid was utilized to augment the sheet refuse samples recovered during testing, or to obtain a representative sample at sites that were not tested. This approach provided a comparative data base for conducting intra- and inter-site sheet refuse analyses. Judgmental excavation required prior information about the location and content of sheet refuse deposits, structures, or buried features (e.g., storm cellars, cooking areas). This level of information was obtained using several strategies. Magnetometer surveys were conducted to identify anomalies that could be correlated with cultural activities (e.g., hearths, pits); and the locations of features encountered in test units, and surface structures and features were mapped, providing information that could be used for directing further excavations. Judgmental units were hand-excavated within magnetic anomalies, under structures, within house mounds, and within collapsed cellars. Small 50x50-cm units containing features were expanded to recover a larger sample of artifacts and to discern the size and function of specific features.

General Field Methods

Hand-excavated systematic and judgmental units were dry screened through 1/4 inch hardware cloth. All cultural material was collected, recorded, labeled, analyzed, and curated, with the exception of undiagnostic architectural, metal, and miscellaneous remains. This material was recorded and analyzed, and then rebagged by unit level for bulk storage or reburial. This material included undiagnostic tin cans, thin metal, and heavy metal fragments; recent debris deposited after the site was abandoned, including plastic; undiagnostic architectural items, such as concrete, mortar, shingles, asbestos siding, floor tile, and brick fragments. A sample of each architectural category was saved and curated by site.

A field form was filled out for each unit level, including information on unit size, provenience, depth below surface, soil type, soil color, disturbances, features, and artifact content. All units were dug using arbitrary 5 or 10-cm levels, except in features, where both arbitrary and natural levels were used. Feature forms were completed for all features providing information on location, size, function, contents, disturbances, and sampling methods.

Systematic units included shovel test pits, 50x50-cm units, and 100x50-cm units excavated on a grid; 50x50-cm units were most common. Judgmental units varied considerably, including 25x50 cm, 50x50 cm, 100x50 cm, 100x100 cm, 200x200 cm, or backhoe trenches. Small units (25x50 cm and 50x50 cm) were used to recover column samples from an exposed profile. This approach was most commonly used within collapsed storm cellars that had been bisected using a backhoe. Units measuring 100x50 cm were judgmentally placed to locate wall lines or foundations, and to provide a continuous sample extending from under structures through the main sheet refuse deposit. For example, four trenches composed of 100x50-cm units were excavated at 41DN91. Three trenches were oriented north-south, and one east-west, sampling deposits under the former dwelling and the sheet refuse west of the house, and north, in the backyard. Large units measuring 100x100-cm or 200x200-cm in size were utilized in block excavations. Blocks were used as a mitigative measure at a small sample of sites to recover data on buried features (e.g., outdoor cooking area at 41DN166), and the location, construction, and assemblage associated with former structures (e.g., dwellings). Backhoe trenches were excavated to rapidly recover information about specific magnetometer anomalies, buried features, and soil stratigraphy.

Magnetometer surveys were conducted at six sites (41DN97, 41DN157, 41DN166, 41DN167, 41DN224, and 41DN466) to identify subsurface anomalies that could be identified as archaeologically significant. Surveys were conducted by personnel from the Department of Geology, University of Texas at Arlington, under the direction of Dr. Brooks Ellwood. A specially designed dual-bottle proton magnetometer was used to measure the total magnetic intensity present at each recording station. Data were recorded at 1 m intervals within 20 by 20 m blocks. The number and placement of the blocks were judgmentally determined by surface features and data recovered during limited testing or testing.

Prior to surveying, a surface reconnaissance was conducted to locate, record, and remove all surface metal. Blocks were laid out utilizing the grid established for testing. The size and location of the blocks were varied to optimize data recovery. For example, at 41DN224 four blocks were surveyed, including two measuring 20x20m (Blocks 2 and 4) and two measuring 20 m north-south by 10 m east-west (Blocks 1 and 3). This arrangement allowed us to identify magnetic anomalies within the sheet refuse deposit, including the backyard and one side yard; anomalies associated with an earlier dwelling and a possible outbuilding; a collapsed storm cellar; and part of the foundation of a second dwelling.

The magnetic intensity at each recording station was plotted and a contour map was produced to identify the distribution of high positive and high negative anomalies. Signatures were identified for some specific types of features, but not for all. Buried features such as hearths, trash pits, and metal exhibited high positive characteristics, while collapsed storm cellars have both negative and positive characteristic (Ellwood, personal communication 1988).

This information was used to help direct the placement of judgmental units to examine specific anomalies. Emphasis was placed on examining dipolar anomalies (having both positive and negative characteristics), and high positive anomalies. Application of this method greatly reduced the time, labor, and expense of locating subsurface features. In addition, it allowed us to recover data on the spatial distribution of features, from which a sample could be selected for study.

Modern disturbances and buried metal masked the data, reducing the usefulness of this technique at several historic sites that had been occupied until fairly recent. Farmsteads that were abandoned before 1940, and that were not disturbed, provided an excellent data set for this technique. For example, 41DN166 was abandoned in the 1930s, and the magnetometer survey revealed information on the location of the former dwelling (also marked by a mound), two collapsed root cellars, an outdoor cooking area, and a possible outbuilding. Isolated metal was also recorded, but did not adversely affect the survey results.

Contour maps showing the magnetic value at each mapping station were produced for each site by Dr. Brooks Ellwood. The contour intervals were varied depending on the range of positive and negative values, and evidence of background noise. These data were then entered into the computer, and three-dimensional maps were produced. Several stages of data manipulation were performed, and final maps were produced showing only positive values. All cultural features identified at each site were represented by positive values (including dipolar anomalies), and by removing negative values, background noise was reduced, and the intensity or clarity of the anomalies was increased. Examples of both techniques are illustrated in the site descriptions in Chapters 6 and 7.

In summary, the archaeological data recovery program was directed at obtaining a representative sample of sheet refuse deposits and discrete features at sites recommended for mitigative efforts. Primary focus was placed on sheet refuse deposits at limited testing and testing sites, with minimal feature exploration. A systematic excavation strategy was used at all sites to recover a representative sample of the sheet refuse, and to obtain information on site age, function, size, integrity, and potential eligibility for NRHP nomination. Judgmental units were placed within discrete features and magnetometer anomalies, and magnetometer surveys were conducted to augment feature exploration, and sample recovery. This approach allowed us to recover significant data from a sample of historic sites within the Lake Ray Roberts project area.

Architectural Data Recovery

Architecture documentation of standing and collapsed structures comprised the second major emphasis of field investigation. Documentation was specified for fifteen sites in the Scope of Work, including three sites (41DN106, 41DN157, 41DN224) determined NRHP eligible, and recommended for mitigative efforts; two scheduled for mitigative efforts, but with insufficient eligibility data (41CO83, 41CO111); three for limited testing (41CO38, 41CO136, 41DN172); four for testing (41CO118, 41CO121, 41DN275, 41GS79), and three scheduled for architecture and archival only (41CO138, 41DN107, 41DN193).

Architecture was documented by ECI at four sites scheduled for mitigative efforts (41DN87, 41DN118, 41DN146, 41DN198); no extant structures occurred at five (41DN77, 41DN79, 41DN81, 41DN91, 41DN97); no documentation was recommended for one (41DN191).

Architecture documentation focused on the production of scaled elevations, floorplans, and interior and exterior details, photographs, special material collections, and dendrochronology. The results of the architecture documentation of structures at each site are presented in Chapters 6 and 7. A discussion of dendrochronology studies in northcentral Texas is provided in Chapter 6, and the dendrochronology results are in Appendix J.

Documentation focused on pre-1930 buildings, but all structures were recorded at each site. A tape recorder was used to record field observations, and each tape was transcribed providing a permanent record of the materials, construction techniques, and modifications for each structure. These tapes are on file at IAS, UNT. Scaled

drawings, floorplans, and photographs were made for all extant structures designated in the Scope of Work, and field descriptions were made for non-significant buildings.

Building attrition was tremendous within the study area, and eight significant structures scheduled for architecture documentation had collapsed (41CO38, 41DN106), burned (41DN107, 41DN172), or had been removed (41CO118 (house), 41CO138, 41DN275). Access was denied to one site (41CO111). In order to mitigate this loss, documentation was conducted at other limited testing and test sites recommended for mitigative efforts; 41CO36, 41CO121, 41DN167, and 41DN191. Site 41DN191, previously not recommended for documentation by ECI (see above), was recommended during the 1986-1987 testing phase because of its association with the Jones Farm (41DN250), and the excellent condition of the extant buildings, which were typical of the period. Further, efforts were conducted during the 1986-1987 season to possibly preserve the dwelling from this site by donating it to a historic park. However, these efforts failed, increasing the importance of recording these structures.

With the exception of 41DN118, all of the structures previously documented by ECI had been destroyed by construction, vandalism, or were removed. Field notes, photographs and story sheets (Skinner and Baird 1985) were examined and compared with the archaeological data recovered during the testing and/or mitigation phases.

The Scope of Work also called for preservation of artifacts and implements (primarily farm machinery) at 41DN250. Additional efforts conducted after consultation with the Corps focused on removing and relocating significant log and frame structures. A log dwelling from 41CO121, three log outbuildings from 41CO118, a frame dogtrot house from 41DN157, and a log dwelling from 41CO83 were relocated. The Bloomfield School/Church was relocated by ECI, Inc. to the UNT campus. Farm machinery from several sites were also relocated, including part of a grist mill from 41CO120, and several rakes from the Coxy Farm. This equipment was moved to 41DN250 (Jones Farm).

Dendrochronology Data Recovery

Tree-ring dating of structures was utilized to assess the chronological significance of specific buildings, and was a secondary focus of the architecture study. Tree-ring dating was recommended for nine sites in the Scope of Work, however, the log structures were removed from four sites (41CO112, 41DN146, 41DN198, 41DN273) before fieldwork began. Several appeared to have been moved by private individuals, others were lost during construction activities.

Tree-ring samples were collected from the remaining sites, but only two sites yielded absolute dendrochronology cutting dates; 41CO33 and 41DN167. Cutting dates were obtained for a small log crib at 41CO33 and the log dwelling at 41DN167. No dates were obtained for 41DN106, 41DN107, or 41DN172 (see Appendix J for discussion).

Replacement sites were selected to mitigate the loss of significant structures impacted before field work began, including three log outbuildings at 41CO118, one double crib barn at 41CO120, a log crib at 41CO36, and a single room log dwelling at 41CO83. Dates were obtained for the structures at 41CO118 and 41CO120, but not for 41CO36 and 41CO83, both of which contained pecan (see Appendix J). In addition, several significant structures that had been impacted, but contained some intact members were selected, including the dogtrot dwelling at 41DN157, and a single room log dwelling at 41DN275. No date was obtained for 41DN275, and poor provenience information was available on the log members from 41DN157. The logs sampled from 41DN157 were from one of the porches left behind when the house was moved.

A chain saw was used to cut sections from each structure, and field forms were completed for each site, including information on specimen number, sampling method, provenience, and architectural association. The samples and provenience information were sent to Dr. Malcolm Cleaveland at the University of Arkansas, Fayetteville, Arkansas

where they were processed, the rings were plotted, analyzed, and correlated with existing chronologies (see Chapter 9 and Appendix J).

Laboratory Methods

The laboratory was established at the Nike Missile Base, a University of North Texas facility situated about six miles north of Denton. Material (e.g., artifacts, flotation samples) recovered during excavation was sent to the laboratory where it was inventoried, processed, analyzed, and curated. Data management was accomplished by laboratory personnel and computer staff and was aimed at providing a rapid, reliable, and cost-effective means of processing, manipulating, and curating a wide range of materials. Artifacts, field notes, photographs, architecture and tree-ring samples, maps, and laboratory forms were processed, analyzed, and temporarily stored at the laboratory. Computer data entry, manipulation, and output were generated at facilities available within the Institute of Applied Sciences, at UNT. This material, along with all field notes, photographs, field maps, archival data, oral history tapes and transcripts, and architecture tapes and transcripts are permanently curated at IAS, UNT.

Several editing approaches were implemented to monitor identifications during analysis, recording errors, and data entry errors. A reference library and a type collection of nineteenth and twentieth century materials were developed for the project, and were expanded as new material was found. They served as teaching collections, and a standard for monitoring identifications and analysis replicability. In addition, data sheets were checked: (1) after each level of analysis, prior to data entry, and (2) before data manipulation. Editing before data entry served to identify identification and/or recording errors made by the analysts. This process allowed the data to be "cleaned" or verified before it was entered on the computer and data manipulation occurred. The second editing step was conducted to identify typing errors. The data were compared with the coding sheets, and then the computer files were resorted by selected variables (e.g., unit number, provenience, level).

Computer Entry and Data Management

The laboratory analysis forms were entered into the MUSIC (Multi User System for Interactive Computing) computing system at UNT where they were checked for errors and stored on large scale data storage disks. Analysis of the data involved many different procedures. The primary statistical package used was SAS (Statistical Analysis Systems). SPSS (Statistical Package for the Social Sciences) was also available and used occasionally. With these systems the data were organized and analyzed with respect to site, artifact type, and the vertical and horizonal distribution of artifacts across the site. For the historic sites, a more definite date could be assigned to some of the artifacts based on diagnostic attributes (e.g., glaze type, manufacturing technology, and maker's marks). This information, where applicable, was used to sort the data. In addition to information based on artifacts, data concerning the physical environment, such as surface geology, general soil type, dominant vegetation, elevation, slope, and any magnetic anomalies as measured by a proton magnetometer were also entered and used to help describe either the individual site, site distributions, or the region as a whole. The distribution of artifacts as well as physical characteristics could be displayed on several mapping packages. At IAS, the available mapping packages are Plotworks which produces iso-line and mesh surface diagrams, and ERDAS (Earth Resources Data Analysis System), a high powered geographic information system that can use information from LANDSAT images, digital elevation data files, or manually digitized point, line, or polygon data. These packages produce maps that can show the relationship of many different types of variables on a regional as well as a site specific scale.

Computer data management for the Ray Roberts Archaeological Project dealt with many types of data on site specific, project wide, or regional scales. The computer systems utilized were both main frame and PC based. The large scale statistical packages (SAS and SPSS) are main frame (MUSIC) systems. ERDAS is accessible from either the main frame (VAX) or PCs. Plotworks is purely a PC based package. With these computer resources, large volumes of data can be stored, displayed, and analyzed to aid in reconstructing the archaeological history of the area.

Faunal Analysis

The following is a brief description of the methods employed in the faunal analysis. Presentation of the results of species identification and quantification of faunal remains is given within each site description, along with a discussion of the spatial distribution of the remains. A commentary on nineteenth century foodways based on these observations is provided in Chapter 9. Appendix D is an inventory of all identified bones listed by taxon, giving the element recovered and its provenience. Appendix E is an inventory of the fauna from sites 41DN79 and 41DN81 which contained multiple prehistoric/historic components. All faunal material, coding forms, and analysis documentation are presently curated at the Zooarchaeology Laboratory at the University of North Texas (UNT).

Standard zooarchaeological methods have been used. The animal bone was washed and sorted in the field lab and submitted for identification and quantification. Provenience was rigorously maintained. Unidentified fragments were divided into unburned and burned categories and counted. Attributes of identified elements were recorded as taxon, body part, side of body, element portion, age, condition (burning) modification, and taphonomic appearance.

Quantification of faunal assemblages is summarized as minimum number of identified specimens per taxon (NISP) and as minimum number of individuals (MNI) for identified elements. MNI estimates were calculated according to the most frequent element, based on symmetry and element portion (Munzel 1986) and then determined by adapting Grayson's (1978) minimum distinction method. Other considerations in determining MNI include age (based on dental eruption/occlusal wear) and/or epiphyseal fusion, and also on the relative sizes of otherwise analogous specimens in the comparative collection.

The faunal data tables in this report are standard species lists, providing for each specified archaeological component a count of elements attributed to each taxonomic category and the minimum number of individuals represented by those elements. Animal bone recovered from test pits, backhoe trenches, units outside main excavation blocks, and surface collections were recorded and tabulated; however, faunal data from these proveniences are generally omitted from total bone counts and the species lists for each site. All faunal data will be curated with the collections.

Species identifications were made at the Zooarchaeology Lab in the Institute of Applied Sciences (UNT), with occasional recourse to conventional osteological keys such as Olsen (1960, 1964, 1968), Hillson (1986), and Sisson and Grossman (1953). Only positive identifications resulted in assigning elements to genus or species.

Elements of nondiagnostic skeletal value (e.g., ribs, long bone shafts; see Olsen 1961) are tabulated in what is called a "indeterminate" category by class and size range. For example, specimens counted as "indeterminate mammal, large" are probably derived from pig, deer, cattle, bison, or horse. Recording these bones in a size category allows as fine a level of observation as the specimen permits; otherwise, the specimen would be considered unidentifiable. In small samples such as these from the historic sites at Ray Roberts Lake, taking note of the size categories of nondiagnostic elements broadens the utility of the bone assemblage.

Soils Analysis

Soils analysis was undertaken on the historic sites to construct a representative picture of the soil development, either at a particular archaeological site or for a selected part of the project area. This work was conducted by Dr. C. Reid Ferring, IAS, UNT. Soils analysis of profiles, primarily within backhoe trenches, began by delineating the general horizonation of the solum. The general horizons were then subdivided into smaller more precise units based on subtle changes in texture, structure, color and chemical components. Extensive field notes were recorded, documenting the description and depth of each observation. After the description was completed samples were taken from each of the described units, numbered and carried to the soils lab for continued chemical and physical analysis.

At the lab the samples were allowed to dry before processing continued. When the samples were air dried they were weighed, any clods were broken and the gravels were removed by sieving through a 2-mm sieve. The gravels were weighed and recorded. The remaining sample was split into smaller fractions for separate analysis. This was done using a riffle splitter to assure random representative samples. The chemical analysis consisted of measuring the soil moisture, Ph, organic carbon, and inorganic carbon (carbonates). The physical analysis was primarily measuring the proportion and diversity of the different sizes of particles.

Chemical Analysis

Soil moisture was measured as percent change in weight from air dried to oven dried at 105 degrees C. The oven dried weight was subtracted for the air dried weight. The difference was divided by the air dried weight and multiplied by 100. Soil Ph was measured by suspending 10 grams of sediment in 10 grams of filtered deionized water and measured by a Ph meter. The percentage of organic carbon was measured by the Wakley-Black titrametric method. Percent carbonates were measured by a Chittic device using a method developed by Dr. Aleksis Dreimanis and published in the Journal of Sedimentary Petrology in September 1962. This method is based on the amount of CO2 gas generated when a known amount of soil is subjected to 20 ml of 20% HCL.

Physical Properties

The physical properties of the soil samples were determined by a combination of sieving the sands for a 1 phi breakdown of sands by weight; the hydrometer method as developed by Bouyoucos for determining the percent clay in the sample. This method works on Stokes law concerning the rate that different sized particles sink. A Coulter Multisizer was used for determining the size and percent of particles in the silt range.

For the hydrometer work, between 35 and 45 grams of sediment were physically disaggregated and treated for any carbonates or organic carbon if needed, and deflocculated by soaking in a 5% solution sodium hexametaphosphate overnight. In the morning, the sample was blended for 2 minutes in a Hamilton Beach Blender and introduced into the settling tube where it was agitated and allowed to stand in a constant temperature bath. In 8 hours the first reading was taken. The final reading was taken at 24 hours. The percentage of clay (particles smaller than 2um in diameter) in the sample was interpolated between the 8 and 24 hour readings. The sample was then washed through a 63um sieve and the sediment which remains in the sieve is the sand fraction of the sample. This was oven dried and weighed. The sand fraction was then put in a stack of sieves and separated into 1 phi increments. For a break down of particle distribution in the silt range (2-63 um) a 10-12 gram sample was treated for organics and carbonates and washed through a 63um sieve to remove all the sand. The remainder of the sample was suspended in approximately 400 ml of 5% sodium hexametaphosphate. 1.5 - 2.5 ml of this suspension was introduced into the Multisizer for analysis of the silt. The total particle size distribution could then be calculated for the clay, silt, and sand fractions of a soil sample. For further information on the methods used in the physical and chemical analysis of soils refer to parts 1 and 2 of **METHODS OF SOIL ANALYSIS** published by the American Society of Agronomy, Inc. and the Soil Science Society of America, Inc.

Metal Stabilization

Several conservation methods were used to stabilize and preserve a sample of the diagnostic, exhibit-quality ferrous metal artifacts. These materials underwent electrolytic reduction at the IAS, UNT. Briefly, they were

cleaned by reducing corrosion compounds (e.g., chlorides) back into a metallic state. Artifacts were wired to a Model D-612T filtered D.C. Power Supply and immersed for several days in a de-ionized water and 5 to 10% $NaCO_3$ sodium carbonate electrolyte solution. They were then rinsed in alternating hot and cold water bathes to flush chlorides from the pores. Finally, artifacts were placed in hot micro-crystalline wax to replace water in the pores with a wax sealant.

A larger sample of metal was treated at the field lab by using a diluted acid solution consisting of an approximately one to three ratio of white distilled vinegar and water. Artifacts were emersed in the solution between two days to three weeks to remove corrosion. Corrosion removal was assisted periodically by using soft and wire bristle brushes, steel wool scouring pads, pliers and a dental pick. Artifacts were then rinsed in tap water, air-dried, and coated with an acrylic spray or wax sealant to prevent further corrosion.

Archival Research

Archival research is a vital part of historic archaeology, and was conducted to recover information on specific aspects of the historic past. Historical maps, documents, photographs, diaries and journals, as well as tax, land, and census records were used to obtain information about early settlers, settlement patterns, and past lifeways. They were also used to locate and interpret archaeological sites in the study area.

Research was conducted at libraries, courthouses, historical societies, and private homes in Cooke, Denton, and Grayson counties, and at major repositories in Austin, Dallas, and Fort Worth. Our work was aided by local histories compiled by amateur and professional historians, and societies A detailed discussion of the archival research is presented in Chapter 2, site specific information is provided by site in Chapters 6 and 7, with chain of titles presented in Appendix A.

Oral History Research

Interviews provide an excellent source of historical information often not found in history books. Several different types of interviews were obtained for the project area: (1) personal interviews with long time residents, (2) walking or driving tours of a family's farmstead, (3) interviews with knowledgeable historians, and (4) interviews with local business people. Each provided a different, and often personal perspective, and when combined, resulted in a broader understanding of the people who lived in the project area, and changes in their lifeways during the last hundred years or more. An attempt was made to interview landowners, tenants, and sharecroppers, as well as people who lived "in town."

Each interview was taped, transcribed, and edited providing an invaluable oral history record for the public and serious researchers. They include interviews with Jane Armstrong, Otis Cason, Mrs. Eunice Gray, C. E. Hudspeth, Clifton Irick, Roy Jones, Mrs. C. C. Myers, Mrs. Nell Renfro, and Ely and William Sledge. Efforts were made to interview individuals from each area of the reservoir. These interviews are on file at IAS, UNT.

Interviews with long time residents provided a wealth of data on the location of abandoned farmsteads, cemeteries, and industrial sites (e.g., sorghum mills). They also yielded information on early settlers, family and community relationships, family histories, and day-to-day farm or ranch activities. Interviews with local historians and business people provided a different, and often less romantic view of how the economy, population, and lifeways of the area changed.

Videotapes were made of four walking tours within the study area, including three farmsteads (41CO10, 41CO111, 41DN250), and the Massey Gin in Pilot Point. The farm at 41CO10 originally belonged to Richard

Isreal, an African-American landowner who purchased several land tracts between ca. 1893 and 1901. Ely and William Sledge (step-grandchildren) were interviewed during a walking tour of the farmstead, which included a sorghum mill, and a number of horse-drawn farm machinery. The Jones Farm (41DN250) and the Reason Jones Farm (41CO111) were occupied by early Anglo-American families in the study area. A standing log dogtrot house occurs at 41CO111, and the 1898 to 1984 buildings at 41DN250 remain. Mr. Roy Jones was interviewed during the tour at 41DN250, which included a discussion of each standing structure, family history, and a large collection of farm machinery owned and used at the site. Mrs. Jane Armstrong (descendent of Reason Jones) was interviewed during the tour of 41CO111, which included many of the structures built at the farm between the 1850s and 1980s.

The oral history project conducted by ECI focused on interviewing long time residents within the initial construction area. Eleven informants were interviewed (Billie Simpson Barker, Arthur Harmon, Steve Hester, Virgle James, May Phillips, Mattie Vaughan McKinney, Doc Newton, Pennie Schertz, Adolf Sadau, Carl Sadau, and G. W. Vaughan), and tapes of eight interviews have been curated at IAS, UNT. Interviews focused on site-specific, neighborhood, and folklike information (Skinner and Baird 1985:7-12,13).

Oral history information from each of these sources were utilized in the overview of the historic lifeways in the project area presented in Chapter 12. Information pertinent to specific historic sites investigated as part of the Scope of Work is provided by site within Chapters 7 and 8.

Cemetery Studies

Sixteen historic graveyards ranging from small family plots to community cemeteries were recorded in the project area (Figure 5-2). Thirteen located within the impact area of the proposed reservoir were moved. Documentation was conducted by ECI, and according to Skinner and Baird (1985),

> Graves in four of the thirteen cemeteries in the Project Area (Figure 10-1) were relocated to other cemeteries prior to the mitigation phase of the Lake Ray Roberts cultural resources work. Therefore, only minimal information could be gathered from graves originally contained in these cemeteries, sites 41DN93, 41DN117, 41DN154, and 41DN215 (Skinner and Baird 1985:10-3).

Each cemetery was mapped, photographed, and data about cemetery customs was gathered. Grave markers, their locations, orientation, and inscriptions were documented. Birth and death dates, season of death, age, sex, and name were recorded for each grave. This information was used to study family and community relationships, changes in cemetery architecture and customs, and population. Major epidemics and disasters such as destruction of Hemming by a tornado are documented in these cemeteries.

A single cemetery, 41CO135, located on the edge of the project area, southwest of Valley View, was recorded during the 1987 season. The cemetery was mapped, photographed, and each grave was recorded. This information is presented in Appendix F.

Summary

A multi-disciplinary approach was utilized on the historic portion of the project to provide a more complete understanding of the cultural changes that occurred within the region over the past 150 years. Archaeological data recovery focused on both intra- and inter-site studies of sheet refuse, discrete features, and site formation processes. Architecture documentation provided information on specific significant structures, and combined with data recovered by ECI during earlier phases of work yielded data on stylistic, functional, and technological changes in building architecture within the reservoir. Dendrochronological studies augmented the architecture documentation, providing tree-ring dates for specific significant structures. The laboratory program focused on the processing and

analysis of artifacts, and special samples (e.g., soil, flotation) from historic sites; data processing and the generation of output that could be used to direct on-going fieldwork, and interpreting the archaeological record for sites within the study area. The archival, oral history, and cemetery studies provided a rich comparative data base for understanding the archaeological record.

CHAPTER 6

1986-1987 HISTORIC SURVEY OF UNSURVEYED AREAS OF THE RAY ROBERTS PROJECT AREA

by

Susan A. Lebo
with contributions by Randy Nathan

Introduction

This chapter describes the results of the archaeological survey conducted by the Institute of Applied Sciences, University of North Texas, under contract with the Ft. Worth District Corps of Engineers for the Ray Roberts Lake project area. The archaeological resources of this proposed project area have been previously studied (Bousman and Verrett 1973; Skinner et al. 1982a, 1982b; Skinner and Baird 1985). This chapter focuses on a pedestrian survey of approximately 4,400 acres within the Ray Roberts Lake project area during the 1986-1987 seasons. The research design, field and laboratory methods, and results of the historic phase of the survey are presented.

This survey was requested as part of a larger contract (DACW63-86-C-0098) between the U. S. Army Corps of Engineers (Corps), and the Institute of Applied Sciences, University of North Texas (IAS, UNT). The need for this survey focused on completing the initial survey work begun by Environmental Consultants, Inc. (ECI) in 1980. ECI was contracted by the Corps to evaluate cultural resources in the proposed Ray Roberts reservoir located in the Upper Trinity River Basin of northern Denton, southeastern Cooke, and southwestern Grayson counties of northcentral Texas. Difficulties were encountered in obtaining land access in certain parts of the proposed reservoir, and these areas were left unsurveyed by ECI. In addition, ambiguities were discovered when the survey status was reviewed by archaeologists at UNT in 1985. At that time, UNT was granted a small contract (DACW63-85-D-0066, Work Orders #5, and #7) to reassess a large number of prehistoric and historic sites in the project area.

Sites were reevaluated through a program of site visits, limited testing, records searches, informant interviews, and literature review. The goal was to provide a relatively uniform basis for evaluating the condition, character, and research potential of archaeological sites within the reservoir, allowing recommendations to be made for additional testing and mitigation. Based on these efforts, including a thorough review of all available site notes, field journals, and maps generated by ECI, it was evident that approximately 8,800 acres could not be verified as having been surveyed, or had been surveyed but lacked sufficient detailed results to allow sites to be adequately addressed. However, "fully surveying the areas not covered by ECI would constitute a major task: one that would consume a significant proportion of ... [available] funds (Ferring 1986:88).

To address these 8,800 acres, the State Historic Preservation Officer (SHPO) proposed that a 100% survey was not required if certain criteria were met. First, the acreage was halved, and 4,400 acres were selected for surveying (Scope of Work). This process would result in a representative sample of the unsurveyed (or questionable survey) areas while defraying the time and budget constraints imposed in reviewing and surveying the entire 8,800 acres. The 4,400 acres to be surveyed were selected by the Corps and were included in the Scope of Work for the 1986-1987 season.

Research Design

The historic period in the Ray Roberts Lake area was addressed within an interdisciplinary approach focused on archaeological assemblages and standing architecture. A detailed research design (Ferring and Lebo 1988) was developed for the project area, and is excerpted here. The goal of the historic research design is to recover data on diachronic changes in subsistence-settlement strategies, socioeconomic and ethnic patterns, interactions and levels

of assimilation, economic and marketing patterns, industrial development, and the establishment and development of social networks, communities, and community identities.

An examination of diachronic cultural change during the late nineteenth century and early twentieth century in rural areas of northcentral Texas requires the delineation of specific variables for investigation. These variables are discussed in detail in Chapter 5 and include (1) environmental and cultural diversity, compactness, and density, (2) economic access, mode of transportation and market distribution systems, (3) site types and diversity, (4) artifact and architectural diversity, (5) site size, (6) site complexity, (7) socioeconomic status, (8) ethnic affiliation, (9) duration of site use, and (10) cultural stratigraphy. Each historic site recorded during the survey was to be examined in light of these variables, and recommendations were to be made accordingly, allowing site significance to be addressed, and appropriate sites recommended for consideration for nomination to the National Register of Historic Places.

All historic resources recorded during the survey were added to the existing data base for the project area. Sites that did not meet National Register criteria still provided valuable data concerning site and activity diversity and distributions that can be correlated with information on environmental and geographical diversity. Additional studies were recommended for sites that could yield potentially significant deposits, but for which insufficient data were recovered from the survey. Such studies included oral informant interviews, archival research, and architectural documentation, and were undertaken after consultation with the Corps.

Historical resources recorded in the surveyed portions of the reservoir represent both private and public activities, including farmsteads, industrial enterprises (e.g., sawmills, sorghum mills), stores, schools, churches, cemeteries, and transportation routes. It was expected that similar cultural resources would be located in the unsurveyed areas, and that the primary site type would be domestic farmsteads.

Survey Methods

The archaeological survey conducted by UNT in the project area was conducted following the specifications in the Scope of Work, which required a pedestrian survey of the approximately 4,400 acres that would be added by utilizing (1) soil and USGS maps and aerial photographs to locate historic properties, and (2) focusing the prehistoric investigations within high probability areas based on cultural and geological data. All cultural resources within the scheduled survey areas would be recorded, evaluated, and site significance would be determined along with future impacts resulting from construction and management of the dam and reservoir.

The survey methodology was specified in the Scope of Work, including (1) utilization of crews of two or more people spaced no more than 25 m apart, (2) use of shovel or auger test pits placed in regular intervals in all high site probability areas with vegetation cover, and (3) limited shovel testing. Where appropriate, backhoe testing could be used as a means of locating and evaluating buried prehistoric deposits and to help determine the extent, location, stratigraphy, features, and cultural age of each site.

The areas to be surveyed were selected by the Corps. The approximately 8,800 acres that remained unsurveyed, or in question, were coded. Areas coded orange would be included in the survey, and those in yellow would not. Areas were designated orange or yellow before the field work began. However, because some of the land selected for surveying were still privately owned, some areas were later added or deleted from the survey by the Corps. In addition, the size and shape of some survey areas were changed. Areas outlined in red were included in the survey, while those outside the red, but still within the orange portions of a survey area were now excluded (Figure 6-1). These changes were outlined by Corps, and the original maps showing these designations is on file at the Institute of Applied Sciences, University of North Texas. However, because some of these changes were made after the field season began, several areas (e.g., Area D3) outside the final required survey areas were surveyed. These occurrences are noted in the discussion for specific survey areas below.

In addition, some areas that were included in the required survey areas were not surveyed because access was denied to lands still in private ownership. All areas within the 4,400 acres (Figure 6-1) were evaluated before the survey began, including determination of land ownership. Where necessary, efforts focused on obtaining permission for access and carefully checking access routes. Additionally, the predetermined survey areas were ranked based on the probability of locating unrecorded historic or prehistoric resources; historical maps and geological maps were used for these assessments prior to conducting ground-truth surveys. Table 6-1 provides a list of the land tracts included in the 4,400 acres selected, and information pertaining to whether the tract was surveyed or not, and if it remained unsurveyed, why. Areas that were surveyed, but were not required when the final survey boundaries were determined are also presented.

Table 6-1

Land Tracts Within the Unsurveyed 8,800 Acres
in the Project Area

	Surveyed		Not Surveyed		
Area	Acres	Tract	Acres	Tract	Why Not Surveyed
A1	111.23	902**	0.12	902E	Outside required area
	50.86	906	93.20	903**	No access/Part outside required area
			40.24	904	Outside required area
			41.54	905	No access
			43.81	905E-1	Outside required area
			41.51	907	Outside required area
			36.81	908	Outside required area
			387.76	909	Outside required area
			55.89	909E-1	Outside required area
			41.19	909E-2	Outside required area
			12.62	911	Outside required area
			81.24	911E	Outside required area
			80.29	912	Outside required area
			9.84	913	Outside required area
			1.51	913E	Outside required area
B	8.05	900E	7.04	901E-1	No access
	0.13	900E-2	25.26	921E	No access
	25.26	901			
C	17.70	602	227.47	615**	No access/Part outside required area
			172.22	617-1	No access/Part outside required area
D	24.60	640	3.44	617-2	Outside required area
	16.13	652*	16.11	618E-1	No access
	14.99	653*	0.58	659E	No access
	6.86	654	15.08	663E	No access
	8.06	658			
	4.04	660E			
	5.06	664			
	6.05	665			

Table 6-1, cont.

	4.04	666			
D1			20.74	600E-1	No access
			17.70	601E	No access
D2			172.22	617-1**	No access/Part outside required area
D3	20.77	621*			
	49.99	622*			
	94.57	623*			
	20.77	633*			
	22.26	634*			
	20.99	635*			
	20.77	636*			
	20.77	637*			
D4			8.96	626	No access
			31.17	626E-1	No access
			0.67	626E-2	No access
E1	263.51	604**			Part outside required area
E2	213.16	606			
F	262.46	516*	4.25	520E	No access
	33.50	518			
	206.50	519			
	85.45	517**			
	4.89	530-1			
	4.78	530-2			
	99.65	531			
	40.52	532**			
	98.04	533**			
	81.87	534**			
	31.69	542**			
	1.00	545			
	1.00	546			
	1.00	547			
	1.00	548			
G	27.13	524	5.92	520-3	No access
	5.19	525	9.43	524E	No access
	88.56	526	37.45	525E	No access
	85.45	527**	3.47	539E	No access
	3.59	528	0.21	539E	No access
	5.17	529			
	4.78	530-2			
	4.86	537			
	3.79	538			

Table 6-i, cont.

H	52.53	1101	3.31	1102E	No access
	49.95	1132	4.88	1145	No access
	2.42	1143			
	4.62	1146E			
	2.48	1148			
	2.16	1149			
	3.32	1151E-1			
	4.80	1152			
	6.59	1153			
I	86.81	413	16.99	418E	No access
	84.25	417	3.06	419E	No access
	28.93	418-1			
	9.50	418-2			
J	123.53	304	18.00	1200	No access
	80.29	305-1	160.33	1206-2**	No access/part outside required area
	51.01	1203**			Part outside required area
	163.95	1204			
	108.72	1206-1			
J1			54.19	1400-1	Outside required area
J2			18.71	1209	Outside required area
			250.72	1211-3	Outside required area
			21.31	1222	Outside required area
			26.91	1223	Outside required area
			1.26	1224	Outside required area
			26.35	1225	Outside required area
			52.50	1226	Outside required area
			54.92	1229	Outside required area
			126.38	1230	Outside required area
			11.72	1231E	Outside required area
			13.08	1232E	Outside required area
			15.00	1233	Outside required area
			19.21	1235-1	Outside required area
			98.16	1235-2	Outside required area
			22.25	1237	Outside required area
			1.89	1237E-1	Outside required area
			7.82	1237E-2	Outside required area
			2.61	1238	Outside required area
			14.59	1238E	Outside required area
			1.15	1239	Outside required area
			12.02	1239E	Outside required area
			4.90	1240E	Outside required area
			18.25	1241	Outside required area
			15.28	1242	Outside required area
			10.10	1243	Outside required area
			9.59	1244	Outside required area
			7.20	1245	Outside required area

Table 6-1, cont.

			51.60	1246	Outside required area
			31.06	1248	Outside required area
			3.42	1249E	Outside required area
			25.00	1251	Outside required area
			0.83	1252	Outside required area
			10.15	1253	Outside required area
K	98.06	1412**			No access to western part
			158.85	1328	No access
K2			18.83	1308	No access
K3			239.86	1500-2**	No access/Part outside required area
L	59.36	1919	0.65	1920E	No access
	23.28	1920	39.67	1921E	No access
	39.01	1922	4.34	1926E	No access
M	121.69	1533**			
	33.05	1535**			
	7.55	1536**			
N	129.70	1425	3.91	1425E	No access
			53.51	1426	No access
			13.25	1426E	No access
O	29.32	1702			
	9.31	1755			
P			162.43	1609	No access
Q	17.51	1720	43.66	1718-1	No access
	73.21	1724			
R	32.02	1917	24.41	1924E	No access
	106.58	1918			
	12.33	1925			
S	96.30	2100**			
	122.00	2102**			
T	81.50	2021			
	79.02	2023			
Tx	70.00	1622			
U	110 46	2118			
V	218.50	1807**			
	94.95	1808			

Table 6-1, cont.

W	39.48	2006			
X			4.39	2124E	No access
			10.21	2121E	No access
Z			179.52	2105-1**	No access/Part outside required area
ZZ1			172.59	701**	Outside required area
			162.14	802**	Outside required area
ZZ2			21.60	806	Outside required area
			36.02	807	Outside required area
			2.72	807E	Outside required area
			8.84	808	Outside required area
			12.83	808E-1-3	Outside required area
			0.52	809E-1	Outside required area
			0.03	809E-2	Outside required area
			3.34	810	Outside required area
			0.03	810E-2	Outside required area
ZZ3			500.06	817**	Outside required area
			21.57	818	Outside required area
ZZ4			53.89	815	Outside required area
			2.72	826	Outside required area
AA			40.63	2106**	Outside required area
			35.63	2107**	Outside required area
			35.79	2108**	Outside required area
			120.69	2103-2	No access
BB	114.38	1800-2	2.51	1800E-2	No access
			4.62	1800E-3	No access
XX	42.23	2114			
	44.28	2116			
	21.34	2117			
	110.46	2118**			

* Area was located outside required survey area but was surveyed prior to final boundaries being defined by the Corps.

** Only part of this acreage was located within the required survey area.

Field Methods

All historic resources identified during the survey were recorded on Texas State Site Survey Forms. This work was aided by reexamining previous investigations in the project area, and contacting known collectors, amateur and professional archaeologists, and local individuals who could provide information about site locations, collections, or local history. In addition, all previous publications, monographs, reports, and collections were examined in an

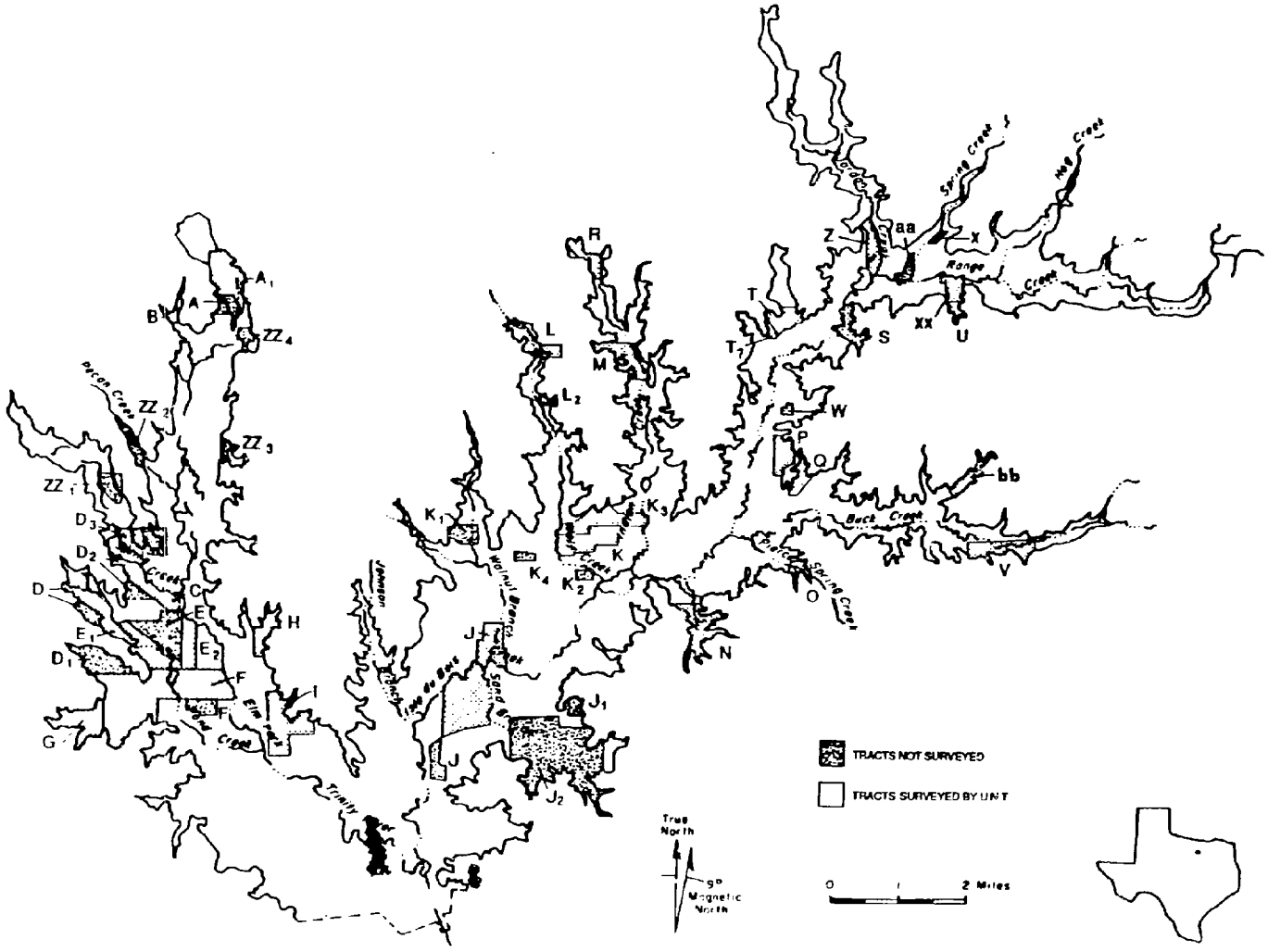


Figure 6-1. Location of the approximately 8,800 acres that remained unsurveyed, or in question, in 1986. A 4,400 acre sample of these lands were selected for survey or resurvey in 1986. Each survey area was assigned a letter designation (A - ZZ_4).

effort to recover a systematic overview of the unsurveyed areas that could be correlated with information obtained for the remainder of the project area.

The potential for identifying historic resources within each unsurveyed area was assessed using historic documents and maps containing information on the location of pre-1930 farmsteads, and industrial and public architecture. Fieldwork then focused on locating and recording these sites, and recovering samples of the cultural remains that would allow us to make recommendations for further work and potential National Register eligibility.

The field survey consisted of a pedestrian inspection of the exposed ground surface within the designated survey areas. The survey crews were composed of five archaeologists, including a crew chief. The crews were given a tour of several previously recorded historic sites within the project area before the survey phase began. This introduction was designed to provide them background information on the cultural resources previously recorded in the reservoir, including surface features they may encounter (e.g., buried wells, collapsed cellars), architectural styles and building types, and diagnostic artifacts associated with specific historic periods and activities.

Teams of at least two people walked parallel transects, following the contour of the survey area or drainage, respectively. All crew members were provided with photocopies of the survey areas to assist them in field recording and to maintain accuracy. The crew chief kept a daily journal that contained data on the areas surveyed each day, crew members, field methods, site data, and cultural assessments. Copies of all field notes were sent to the Corps on a weekly basis.

The location of each previously unrecorded site was recorded on the USGS topographic maps provided by the Corps that showed the required survey areas. A metal site tag was placed at each site, and a temporary site designation was assigned which consisted of the prefix RRRN (Ray Roberts/Randy Nathan) [Randy Nathan was the crew chief for the survey phase.]. This prefix was followed by the site number. These temporary designations were sequentially numbered as encountered (e.g., RRRN1, RRRN2, and so on). A survey form was filled out for each, along with a site map showing the location of all surface features, shovel test pits, and surface collection areas.

Surface and/or subsurface collections were obtained in order to make initial assessments and recommendations. Surface collections were recovered from all historic sites containing surface scatters unless the material all dated post 1930. When appropriate, material identified on the surface was noted, but not collected. When collected, a representative sample of the material was recovered. No complete surface collections were made. Subsurface collections were obtained by shovel testing. The placement of these pits was judgmental, based on the presence or absence of standing architecture, evidence of surface features, and site location and size. Shovel test pits were excavated in order to assess site function, spatial distribution, age, and integrity. All sediment was screened using 1/4-inch hardware cloth. Unless features were encountered, no soil or flotation samples were recovered. The depth of the cultural deposits and site size were the major factors used in determining the number of shovel test pits excavated. Each pit was marked with a 7-inch gutter spike and flagging tape to facilitate the relocation of these units should additional fieldwork be conducted at these sites.

Each site was visited by the Historic Director, and recommendations were made by the director in consultation with the crew chief. The artifacts were processed and analyzed using the same methods developed for the remainder of the project, and the material is curated at the Institute of Applied Sciences, University of North Texas (IAS, UNT). In addition, color slides were taken in each survey area, and of all previously unrecorded sites identified during the survey. These records along with field notes, maps, and copies of the survey forms are also curated at IAS, UNT.

Historical Maps

Historical maps showed the location of private and public structures and communities within the project area. Among these were maps that provided data for 1909, 1918, and 1936. Cooke County was represented by a General

Highway Map (1909) that included the western portion of Grayson County (Figure 6-2), and a General Highway Map for 1936 (Figure 6-3). Denton County was represented on a 1918 Denton County Soil Map completed by the Texas Agricultural Experimental Station (Figure 6-4), and a 1936 General Highway Map (Figure 6-3). Data for Grayson County is available from a 1909 USGS map for Grayson County (Figure 6-5) and a 1909 General Highway Map for Cooke County (see Figure 6-2).

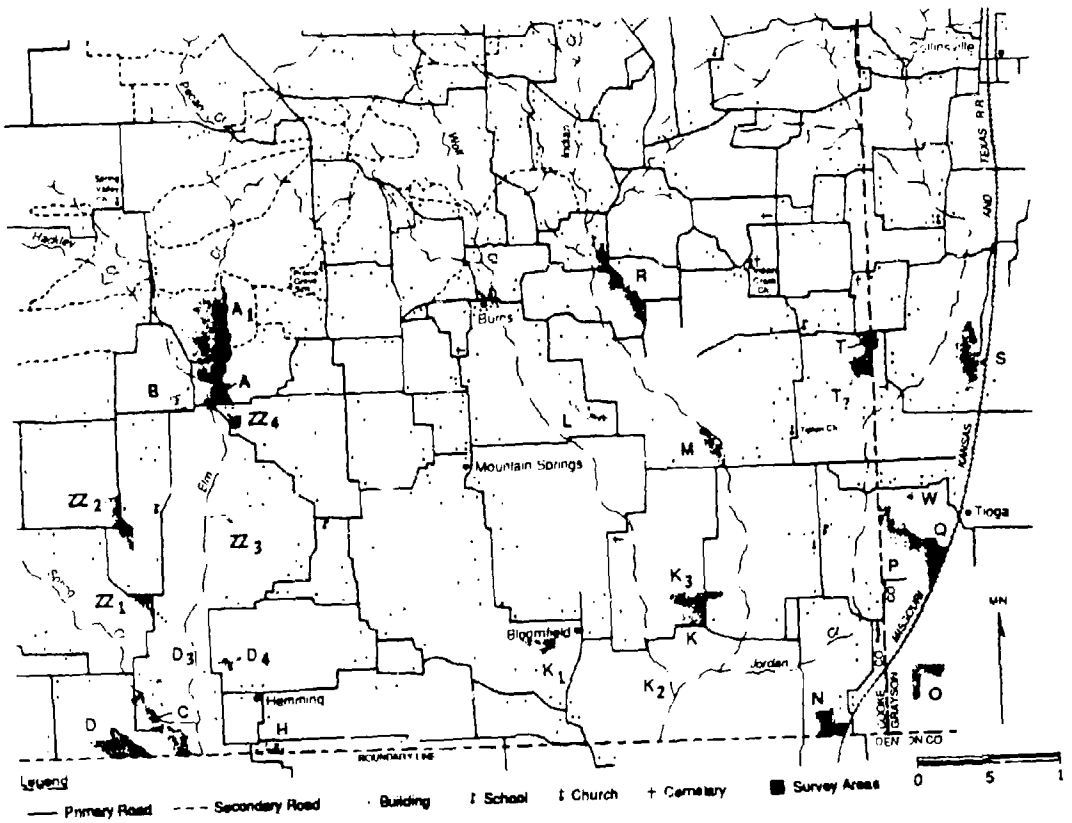


Figure 6-2. Location of unsurveyed lands in southweastern Cooke County and southwestern Grayson County selected for survey in 1986. These survey areas are plotted on a 1909 General Highway map for this area. The unsurveyed areas (see Figures 6-1 through 6-5) were plotted on each map, and all structures recorded within

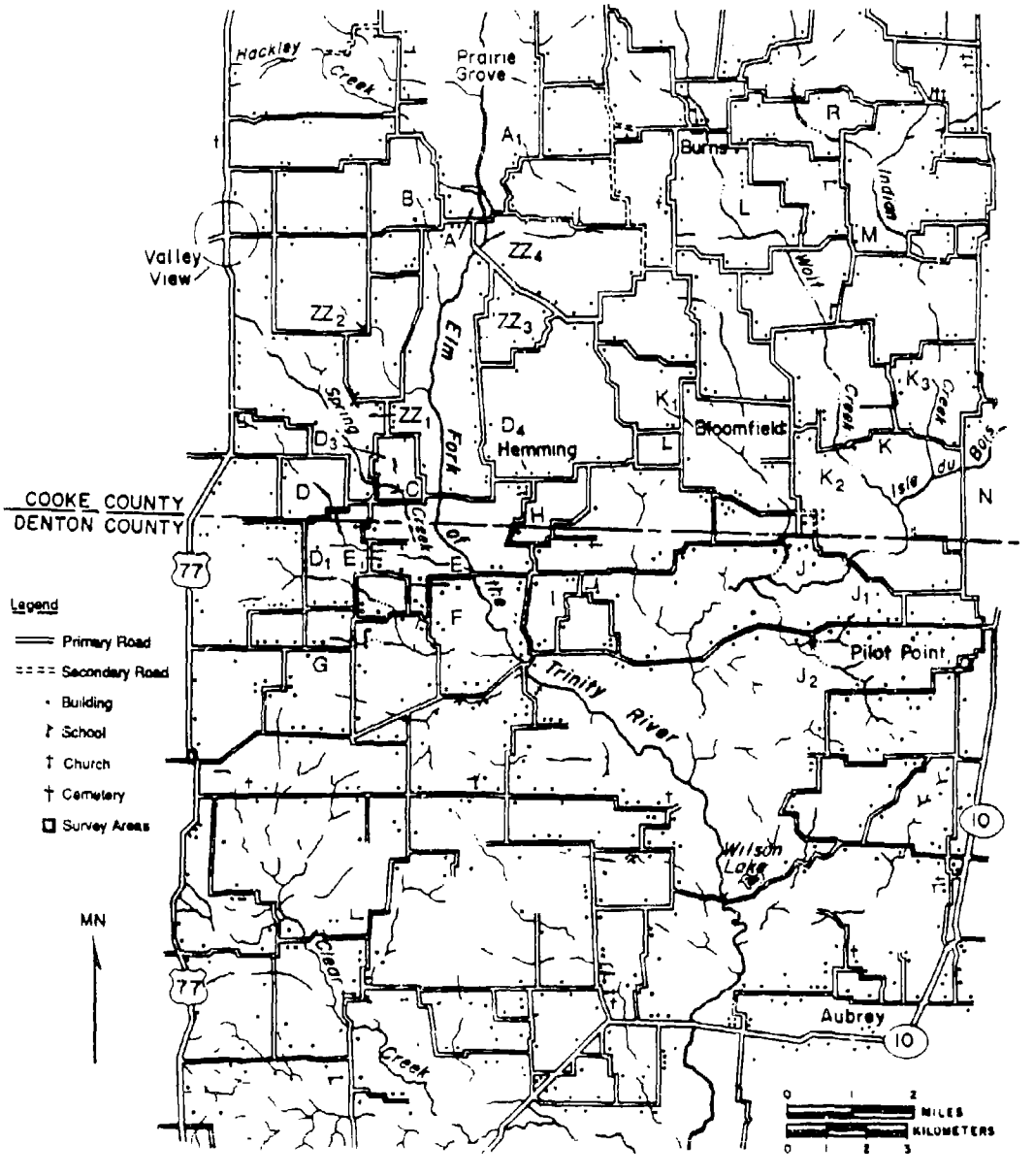


Figure 6-3. Location of unsurveyed lands in Cooke and Denton counties selected for survey in 1986. These survey areas are plotted on a 1936 General Highway map for this area.

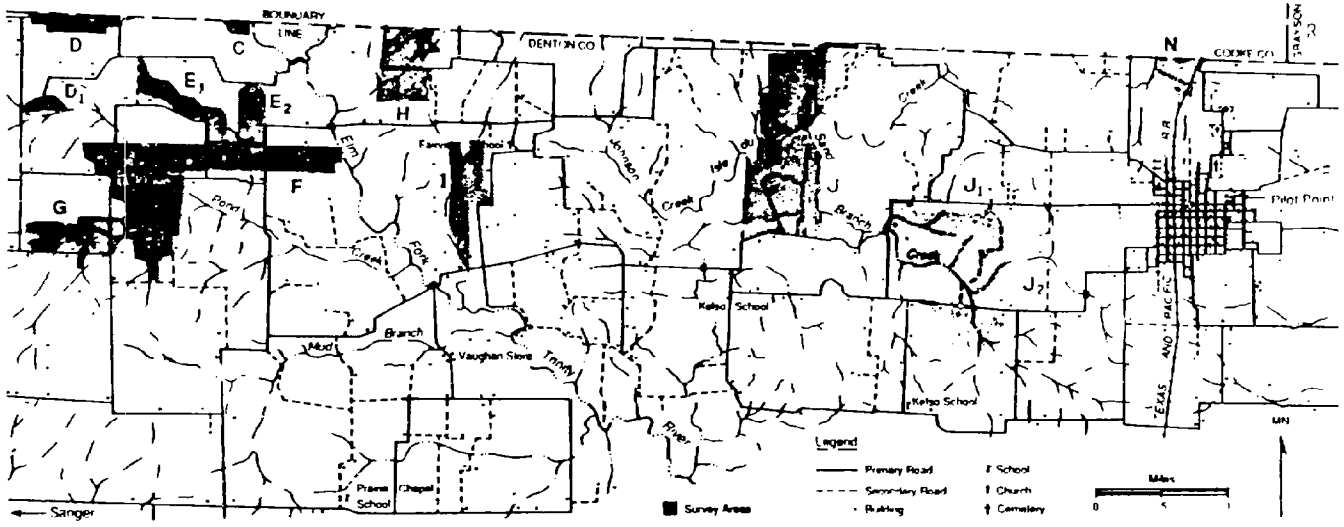


Figure 6-4. Location of unsurveyed lands in northeastern Denton County selected for survey in 1986. These survey areas are plotted on a 1918 Denton County Soils Map.

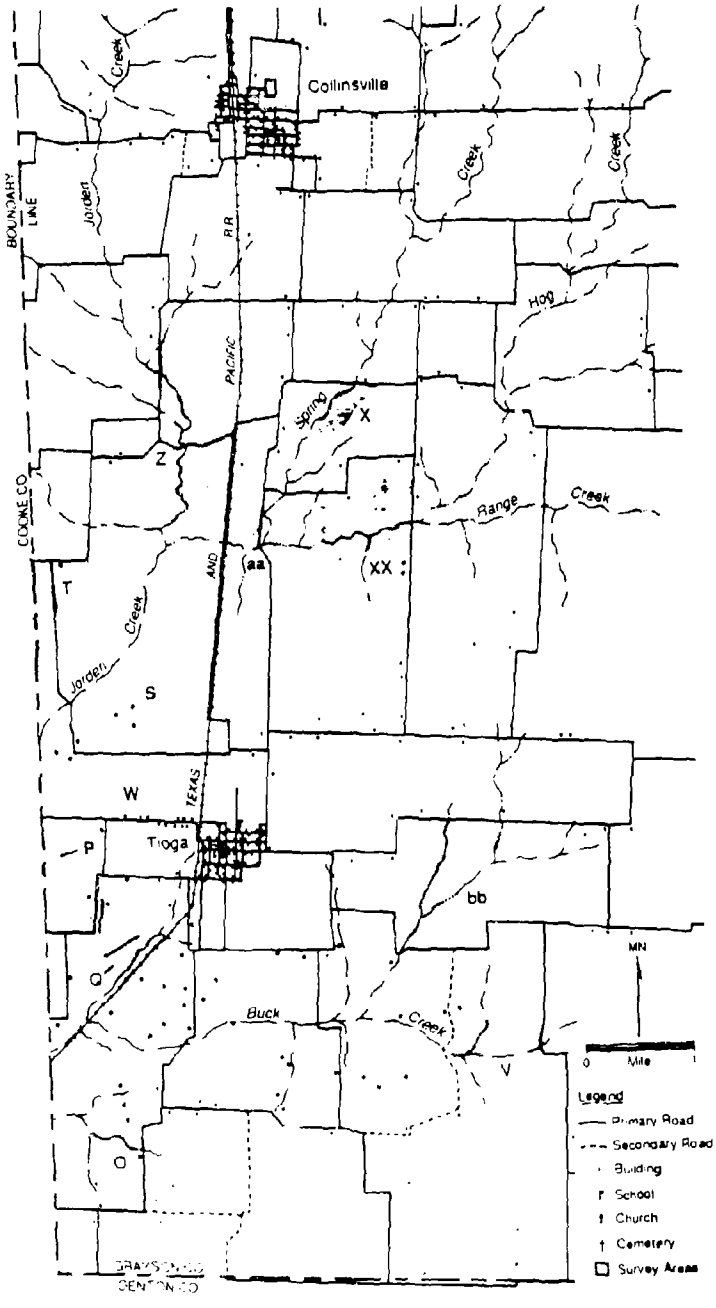


Figure 6-5. Location of of unsurveyed lands in southwestern Grayson County selected for survey in 1986. These survey areas are plotted on a 1909 USGS map for Grayson County.

these areas were noted. Where possible, the type of structure present was also recorded, and included dwellings, outbuildings, and public structures. They were also plotted on a series of land tract maps provided by the Corps (showing current land acquisition by the Corps for inclusion in the project area), and recent USGS topographic maps. The following topographic maps were used:

Cooke County:
Valley View 1961, revised 1978
Mountain Springs 1961, revised 1978
Woodbine 1960, revised 1978

Denton County:
Green Valley 1960, revised 1978
Mountain Springs 1961, revised 1978
Pilot Point 1961
Valley View 1961, revised 1978

Grayson County:
Collinsville 1982
Pilot Point 1961
Whitesboro 1958

The historical maps were used to provide an assessment of the potential of historic sites occurring in each survey area. Table 6-2 provides a summary of the number of farmsteads occurring on each map for each survey area. Blanks designate survey areas not present on these maps.

Table 6-2

Overview of Historic Resources on Historical Maps Including the Project Area By Map
(Values are number of farmsteads)

Area*	Cooke 1909	Cooke 1936	Cooke Topos	Denton 1918	Denton 1936	Denton Topos	Grayson 1909	Grayson Topos
A1	1	0	0					
B	0	1	0					
C	0	0	0	0	0			
D	0	0	0	1	1	3		
D1				0	0	0		
D2			0					
D3	2	0	3					
D4	1		0					
E1				2	2	0		
E2				1	0	0		
F				11	10	5 (new sites:DN466, DN470)		
G				2	2	0		
H	2			1	1	0		
I				2	0	1		
J				8	3	3 (new sites:DN468, DN469)		
J1				1	0	0		
J2				8	7	5		
K	1		0					
K1	0	0	0					

Table 6-2, cont.

K2	0	0	0				
K3	1	0	0				
L	0	1	1				
M	0	0	0				
N	1	0	0	1	0 (new site: DN467)		
O	0					0	0
P	0					1	1
Q	0			(new site: GS111)	0	0	
R	1	0	0				
S			(new sites: GS109, GS110)		0	0	
T	1	0	1			2	1
Tx	0	0	1	(new site: CO172)			
U							0
V						0	0
W	0					0	0
X						0	0
Z						0	1
ZZ1	3	3	1				
ZZ2	1	0	0				
ZZ3	0	0	0				
ZZ4	0		0				
AA						0	0
BB						0	0
XX				(new site: GS112)	0	0	

* Blanks indicate survey area is not represented on map.

Using the information presented in Table 6-1, the survey areas were divided into four groups; (1) unsurveyed areas with no sites represented on maps, (2) surveyed areas with no sites represented on maps, (3) unsurveyed areas with sites represented on maps, (4) surveyed areas with sites represented, but not found during the survey, and (5) areas represented by sites on the maps, and sites were found during the survey. Each of these groups will be discussed separately below.

Group 1 (historic resources)

No historic sites were recorded on the above maps for 18 of the survey areas (Groups 1 and 2). Based on these data it was possible to predict that if historic sites occurred in these areas, they were abandoned prior to 1918, and were not represented by extant architecture. Eight of these areas were not surveyed by UNT as a result of access problems or because they were not included in the required survey areas (see Table 6-1). These areas include D1, D2, K1, K2, ZZ1, ZZ3, ZZ4, and AA (Group 1). They are not discussed further in the text.

Group 2 (surveyed areas without historic resources)

The remaining ten areas were surveyed (C, M, O, Q, S, U, V, W, BB, and XX), allowing a representative sample (56%) of these areas to be covered. Historic sites were located in three of these areas: Q, S, and XX. Site 41GS111 was located in the northern portion of Area Q, and sites 41GS109 and 41GS110 were located

in the northeastern section of Area S. Site 41GS112 was located in Area XX. These sites are discussed in detail in the section entitled Site Descriptions.

No historic sites were found in seven areas that were surveyed and did not have sites represented on the historic maps. A brief overview of each of these 10 areas is presented below.

Area C

No shovel test pits were excavated in Area C. No sites were recorded.

Area M

No sites were recorded. A single historic isolated find was found. Two ceramics were recorded on an exposed surface, including one stoneware and one whiteware fragment. Two shovel test pits were excavated, but did not produce any cultural material. Photographs were taken of the material and area.

Area O

A previously recorded site (41GS50) was relocated and revisited. No shovel test pits were excavated at the site, and no material was collected. The site was assigned a date range of 1935 to recent. Several modern trash dumps were also found, but not recorded.

Area Q

Site 41GS111 was recorded in Area Q. No other historic or prehistoric sites were found in this survey area. No previously recorded sites occurred in this area, and no shovel test pits were excavated outside 41GS111. A description of this site is provided in the section entitled Site Descriptions.

Area S

Sites 41GS109 and 41GS110 were recorded in Area S. No other sites were found, and no shovel test pits were excavated outside these sites. No previously recorded sites occurred in survey area. Description of these sites are provided in the section entitled Site Descriptions.

Area U

No shovel test pits were dug in Area U, which was primarily boggy and wet. No cultural material was found on the surface.

Area V

Three shovel test pits were excavated in Area V. No material was recovered. These units were placed on a low terrace on the north side of Buck Creek. A single prehistoric site was on the edge of the survey and was located: 41GS97. Four shovel test pits were excavated by the crew. No cultural material was found. A single piece of quartzite was found on the surface and collected. This site is discussed in the Ray Roberts Lake prehistoric volume (see Ferring, Yates, and Brown 1992).

Area W

Five shovel test pits were excavated in high probability areas for containing prehistoric sites. No material was found. A single recent historic farmstead was found, but not recorded.

Area BB

A recent site was recorded in Area BB, and designated HM5 (Historic Modern; post-1930). Two structures were present on the Pilot Point Quad (1961). Field identification includes a barn and a railroad box car, both used for hay storage. A large stockpond was located 30 m south of the outbuildings. No evidence of a house was found associated with these structures. The site was not assigned a TARL number.

Area XX

Area XX is dissected by Range Creek. A single historic site (41GS112) was recorded during the survey and is discussed in the section entitled Site Descriptions. Four shovel test pits were excavated in the northern portion of the area, north of the creek, and two south of the creek. They were placed in areas with a high probability of yielding prehistoric sites. They were located on terraces above the creek. No additional sites were found, and all the test pits were sterile.

Group 3

Eight areas were not surveyed even though historic sites were represented on the maps mentioned above. These included D4, J1, J2, K3, P, Z, ZZ1, and ZZ2. Each of these areas are briefly discussed below using the available map information only.

Area D4

A single farmstead was present in Area D4 on the 1909 map, but was not present on the 1936. This area is located in Johnson Branch Park, and is just northwest of the Town of Hemming. Hemming was destroyed in 1909, and was not rebuilt. No other historic sites were recorded in this general area.

Area J1

A farmstead was present on an east-west road to Pilot Point, on the 1918 map in Area J1. A second farmstead was present just outside the boundary on the northeast side. No sites were recorded in this vicinity during the previous surveys within the reservoir. This area was impacted by the clearing crew prior to our survey. In addition, the location of the site on the 1918 map indicates that it was situated along Highway 455, and was most probably removed by either highway construction or clearing activity.

Area J2

The western third of Area J2 is located on the Mountain Springs Quad (1978), and the eastern portion is on the Pilot Point Quad (1961). No sites were recorded by ECI (Skinner et al. 1982a, 1982b; Skinner and Baird 1985) in J2. Eight sites were represented on the 1918 map for Denton County, including five in the Mountain Springs area. Three are located in the northwestern corner of Area J2, and the other two occur in the southwest corner. The northern three continued to be occupied until present and appear on the 1978 map. The southern two were abandoned early. The westernmost of the two did not appear on the 1936 map, the other did, but was abandoned before 1961. A recent farmstead was also evident on the Mountain Springs Quad (1978) in the western portion of Area J. It was represented by a dwelling. No outbuildings were shown. The sites in the eastern part of the survey area included a mixture of early and late farmsteads. Two farmsteads appeared on the 1918 map and were absent from later maps. One was located in the central portion and the other in the southwest corner. All the other sites first appeared on the 1936 map, indicating their recent age.

This area was not included within the 4,400 acres selected for survey. Only three farmsteads were recorded by UNT near Area J2, including 41DN165, 41DN183, and 41DN185. All of these dated from the 1875 to 1935 period, indicating that the early sites abandoned in survey Area J2 most probably dated to this period. No pre-1875 sites were found in this portion of the reservoir.

Area K3

Area K3 is represented on both the 1909 and 1936 maps for Cooke County. A farmstead is present on both maps. A previously recorded site, 41CO40, is shown in this location. The site was characterized by a moderate artifact scatter, a stone-lined well, house mound, stone foundation, and a cellar depression. The site was assigned a date range of late nineteenth century to early twentieth century. The site was revisited by the survey crew. Three shovel test pits were excavated at 41CO40, but were sterile. No surface collection was made.

Area P

A single farmstead appeared in Area P on the 1909 map for Grayson County. A farmstead was also located in this general area on the Pilot Point Quad (1961). It was difficult tc correlate the two maps because of the absence of a scale for the 1909 map, but the two sites appear to correspond. No sites were previously recorded in Area P. Site 41GS40 was located off the southeast corner of Area P, and was assigned a date range of 1875 to recent. It also appeared on the 1961 map.

Area Z

No farmsteads were shown on the 1909 map in Area Z. The first indication of historic activity in this area occurred on the 1958 map (Whitesboro Quad). A farmstead is shown in the far southeast corner of the survey area, approximately 0.60 km west of the Texas and Pacific Railroad. No other domestic sites were recorded on the map. However, site 41GS81 was recorded by ECI, Inc., in the far southwestern corner of Area Z. This site was characterized by a collapsed dwelling, a brick well, cellar, a brick mound, corral, and a sparse surface scatter. It was assigned a date range of 1875 to 1935. It was not revisited by the survey crew.

Recent activity documented in the survey area included gravel operations. Several gravel quarries occur along the eastern extent of the area, east of Jordan Creek. These were not visited.

Area ZZ1

Two farmsteads were recorded on the 1909 map, and a third was located just east of the area boundary. A third site is present in Area ZZ1 on the 1936 map. Site 1, which appeared on the western edge of the area (1909 map) may be represented on the 1936 map. The lack of scales on both maps makes it difficult to correlate the two. Three outbuildings are shown in the location on the 1978 Valley View Quad. The second site is shown on the east boundary of the area on the 1936 map, and also appears on the 1978 map. It is represented by a dwelling and three outbuildings. These data indicate that both sites were occupied during most of the twentieth century. The third site (1936 map) may also have been present in 1909. Arrows were indicated on this earlier map to show road directions, and it was difficult to discern whether a possible dot in this area represented a farmstead. Based on the difficult correlation of the two maps, this interpretation cannot be confirmed. The farmstead is not visible on the 1978 map.

No farmsteads were shown that were abandoned prior to 1936. No earlier historic sites were recorded by ECI in the vicinity of Area ZZ1, indicating a low probability of early sites having occurred in this area.

Area ZZ2

A single farmstead was shown on the 1909 map, but did not appear on the 1936 map. This information suggests that the site was abandoned by 1936. No recent occupations were evident in this area either (1978 Valley View Quad). A recent farmstead occurred just west of the survey area and above the 650' elevation. It was represented by a dwelling and two outbuildings (1978 map). Based on these data, a single potentially pre-1900 farmstead was represented on the historic maps.

Group 4

Fourteen areas were surveyed that had sites represented on the historic maps, but no sites were found during the survey phase. Among these survey areas were A1, B, D, D3, E1, E2, G, H, I, K, L, R, T, and Tx. Each of these will be discussed separately below.

Area A1

A single historic site was present on the 1909 Cooke County Map in Area A1. This site was recorded by ECI, Inc. (Skinner et al. 1982a, 1982b; Skinner and Baird 1985) as 41CO138. It was the location of the Elm Creek Bridge. The road leading to the bridge marks the southern boundary of the survey area. The site was revisited by the survey crew. The concrete supports were the only members of the bridge remaining. The metal trestle spanning the supports, which was present in 1986 had been removed.

Site 41CO135, which was located off the northwestern corner of the survey was relocated. No collections were made. The site was photographed and represents a historic cemetery dating from ca. 1858 to 1920. Additional information on this site is provided in Chapter 7.

A single historic isolated find was recorded (Area A-Isolated Find 1) in a disturbed context. The material was located in a gravel quarry. A sample of surface artifacts was collected, and four shovel test pits were excavated. No material was found in the subsurface matrix. The sample was comprised of 6 refined earthenware sherds, 6 bottle glass sherds, 1 lamp glass sherd, and 1 unidentifiable glass sherd. The assemblage dated to the twentieth century.

A historic site was located outside the southern edge of the survey area. It was not recorded by the survey crew. It is located at the 650' elevation. A windmill was the only standing structure present. Material visible on the surface included two brick scatters comprised of machine made bricks stamped FERRIS and STANDARD; stoneware sherds, refined earthenware sherds, glass, and several sandstone slabs. Two small depressions were also noted. No material was collected. No sites were recorded in this area on the 1909 or 1936 maps. A single dwelling is shown in this location on the 1978 Mountain Springs Quad.

Area B

A single farmstead was shown on the 1936 map in Area B. It was abandoned before 1961 (1978 Mountain Springs Quad; revised from 1961). Six shovel test pits were excavated in Area B, with four located near the location of this site. This area was characterized by a small depression and several large trees. No material was recovered. No historic sites were located.

Area D

A farmstead was located in the northeast corner of Area D on both the 1918 and 1936 maps for Denton County. No sites were shown in Cooke County. This farmstead also appeared on the 1978 Valley View Quad where it was represented by a dwelling and outbuilding. These data indicate that the site was occupied until

recently. Two additional farmsteads are shown on the 1978 map. They are shown in purple, indicating that they represent revisions, and did not appear on the base map, which dated 1961. These farmsteads were not recorded by the survey crew.

No other historic sites were recorded in the survey area. Four shovel test pits were excavated along the terrace above Pond Creek, where a high potential for prehistoric occupations existed. No cultural material was recovered, and no sites were recorded in Area D.

Area D3

Two farmsteads were located on the west and southern boundaries of Area D3 on the 1909 Cooke County Map. They were not represented on the 1936 or 1978 (Mountain Springs Quad) maps. However, three sites appear on the 1978 map in the northern portion of the survey area. Two sites were represented by post-1961 dwellings. The third was also recent, including a dwelling, outbuilding, and stockpond. These recent sites were not recorded, and no other sites were located by the survey crew.

Area E1

Two farms are shown on the 1918 and 1936 maps for Denton County. They were abandoned before 1961 and are not present on the 1978 Mountain Springs Quad. The more western site was recorded by ECI, Inc. (Skinner et al. 1982a, 1982b; Skinner and Baird 1985), and was designated 41DN153. The survey crew relocated 41DN153. It had been disturbed by farming activities and was represented primarily by a moderately dense surface scatter. The site was assigned a date range of mid-nineteenth century to 1935. A surface grab sample was collected.

Artifacts collected from 41DN153:

Surface:
11 refined earthenware sherds
4 stoneware sherds
9 bottle glass sherds
3 table glass sherds
1 electrical part
6 misc. other

The second farmstead was not located during the survey. A single prehistoric site [RRRN6] was found and is discussed in detail in the Ray Roberts Lake prehistoric volume (see Ferring, Yates, and Brown 1992).

Area E2

A farmstead was located near the southern boundary of Area E2 on the 1918 map. It was not shown on the 1936 or 1978 maps, indicating that it was abandoned by 1936. The site was not represented by any extant architecture and was not located on the ground by the survey crew. Six shovel test pits were excavated in the southwestern portion of the survey area. The area is primarily floodplain. No material was found in any of the test pits.

Area G

Two farmsteads were visible on both the 1918 and 1936 maps. Recent structures were shown in both of these areas on the 1978 Valley View Quad, indicating that they were occupied until recently. Several structures dated after 1961. These farmsteads were not mapped, and no collections were made.

Three shovel test pits were placed in areas of high probability for prehistoric sites along a tributary of Pond Creek. No material was found. No sites were recorded in Area G.

Area H

This area was located partially in Denton County, and partially in Cooke. One farmstead is recorded on the 1909 map for Cooke County. It is not present on any of the later maps and appears to have been associated with Hemming, which was destroyed by a tornado in 1909. This farmstead was probably destroyed before the map was printed. All but a couple of buildings associated with the town were completely flattened by the tornado. This site was not relocated by the survey crew.

A single farmstead in Denton County also appeared on the 1909 map for Cooke County. Several family names appear close to this site: Tyson and Sullivan. It is unknown if one of these families lived at this site. The site also appears on the 1918 and 1936 maps for Denton County. It was abandoned prior to 1961 (1978 Mountain Springs Quad). Seven shovel test pits were placed in this area. No material was found, and no depressions or architectural features were noted.

Seven shovel test pits were also excavated along the terraces above a small creek that drains into the Elm Fork of the Trinity River. These areas were predicted as high probability sites for prehistoric occupation. No cultural material was found. No sites were recorded in Area H.

Area I

A single farmstead was indicated in Area I on the 1918 map for Denton County. It was located in the southcentral portion of the area. It did not appear on the 1936 or 1978 maps, indicating it was abandoned prior to 1936. Two farmsteads located on the eastern edge of the survey area on the 1918 and 1936 maps also appeared on the 1978 map. They were previously recorded by ECI, Inc. and were designated 41DN140 and 41DN141. Other sites recorded by ECI, Inc. included 41DN138, 41DN150, 41DN155, and 41DN231. The current status of these sites was recorded. No surface collections or shovel test pits were placed at these sites.

Site 41DN155 corresponded with the northern farmstead shown on the 1918 map. It was characterized by a moderate artifact scatter, a cellar depression, and several possible trash pits. It was assigned a date range of 1875 to recent (Skinner et al. 1982a, 1982b; Skinner and Baird 1985). However, based on the above data it most probably dated 1875 to 1930s.

Site 41DN140 was assigned a date range of post-1900 to recent, and was represented on the 1978 map by a recent dwelling. Site 41DN141 was represented by a dwelling, a recent structure, and an outbuilding. It was dated post-1900 to recent. Site 41DN138 was dated 1875 to present, and no intact deposits associated with the early component were identified (Skinner et al. 1982a). Site 41DN155 was assigned a similar date range, and 41DN150 was dated 1850 to 1935. However, it was disturbed. It also contained a prehistoric component. See Appendix A for a more complete description of these sites (also Skinner et al. 1982a).

Fifteen shovel test pits were excavated in high probability areas in an effort to locate prehistoric occupations in Area I. No cultural material was recovered. No new sites were recorded.

Area K

A single historic farmstead was shown on the 1909 map for Cooke County in Area K. It did not appear on the 1936 map, but two outbuildings were represented at this location on the 1961 Pilot Point Quad map. This site was previously recorded as 41CO37. It was revisited by the survey crew. A date range of post-1900 to recent was assigned to the site (Skinner et al. 1982a, 1982b; Skinner and Baird 1985). A standing barn and

foundations or other buildings were present. No shovel test pits were excavated, and no surface collection was made.

A second historic site was recorded on the northeastern edge of Area K: 41CO40. It was also revisited. It dated ca. 1875 to 1935. It was not shown on the 1936 map for Cooke County.

Four shovel test pits were excavated by the survey crew along the western side of Indian Creek in an effort to locate prehistoric sites. No material was found. A historic site was located by the survey crew in the western portion of Area K, but the landowner refused permission for the crew to record the site. The crew did not have an opportunity to take photographs or prepare field drawings and notes.

Area L

A farmstead is shown on the 1978 Mountain Springs Quad. No earlier historic sites were indicated on the 1909 or 1936 maps. No historic sites were recorded in this area by the survey crew, and none were recorded by ECI. Three shovel test pits were excavated by the crew within Area L, but no material was found. The majority of the area was in pasture or cropland.

Area R

A single farmstead is shown on the 1909 map for Cooke County in Area R. It did not appear on the 1936 map or the 1978 Woodbine Quad map. No sites were previously recorded in this area. Four shovel test pits were excavated along the terraces. They were all sterile. No sites were found.

Area T

Area T is located partially in Cooke County, and partially in Grayson County. A single farmstead is shown on the 1909 map for Cooke County, with the farmsteads located in Grayson County. The 1909 map for Grayson County shows two farmsteads in this area. Thus, one farmstead is represented on both maps, while the second appears only on the Grayson map. Neither appear on the Whitesboro Quad (1958), indicating that they were abandoned prior to then, and they were not located by the survey crew.

Area Tx

No early historic farmsteads were indicated in Area Tx on the available maps (1909, 1936). A single farmstead was shown in this area on the Pilot Point Quad (1961). It was represented by a dwelling and two outbuildings. Two possible sites were located by the field crew. The first was a historic farmstead with two standing structures. The second was a possible prehistoric site represented by a square outline of rock. This latter find is discussed in the Ray Roberts Lake prehistoric volume (see Ferring, Yates, and Brown 1992).

The historic site was designated 41CO172, and corresponds to the farmstead shown on the 1961 map. A surface collection was obtained and six shovel test pits were excavated. A detailed description of this site is provided in the section entitled Site Descriptions.

Group 5 Survey Areas

Three survey areas are included in Group 5, and represent those areas where historic sites were indicated on the 1909, 1918, and 1936 maps available for the project area, and where new sites were recorded by the survey crew. Among the areas included here are F, J, and N. Each of these will be discussed separately below.

Area F

A total of 11 farmsteads were visible on the 1918 map for Denton County. Only one was no longer present in 1936. It was located in the southcentral portion of Area F. In 1936, 8 farmsteads were located in the western portion of Area F, including 2 that were not present in 1918. All but 2 (the westernmost) were abandoned prior to 1961. Only one site (41DN470) was located and recorded during the survey. The site is shown on the 1936 and 1978 maps. Three shovel test pits were excavated west of the dwelling foundation. They were placed in and near a small depression. Two pits contained subsurface material.

In the eastern portion of the survey area, five farmsteads were recorded, all of which were present on the 1918 and 1936 maps, as well as the Valley View Quad (1978). They were recorded as HM (historic modern) farmsteads, with the remaining artifact and architectural assemblages reflecting primarily post-1930 occupations. None of these sites were assigned TARL numbers. Instead, they were designated HM1 through HM4, and RRRN8. Following further investigation, RRRN8 was redesignated HM6 because it was determined that it was initially occupied after 1930. HM1 was recorded in Area F, but it actually is located along Pond Creek in an area between the two northern arms of Area F. A brief overview of these farmsteads is provided below.

HM1

Site HM1 was located on a terrace overlooking Pond Creek, and was represented by four structures on the 1978 Mountain Springs Quad. No road to the site was shown on the map. The site was characterized by several structures, including remains of the house, which was situated in the northeastern corner of the site. A small shed, a concrete cellar, a concrete well, a collapsed barn or shed, a corral, three concrete water troughs, a standing shed, a number of fence lines, and remains of windmill were present. Few surface artifacts were noted due to dense vegetation cover. No artifacts were collected.

HM2

Site HM2 is situated on the west side of a north-south road east of Pond Creek. The site is represented by three structures on the 1978 Mountain Springs Quad. The house was still standing and was located in the northeastern corner of the site. A well is situated off the southwest corner of the dwelling and has been capped by cinderblocks. A collapsed shed, standing chicken coop, and a second shed are located in the southwest corner of the site. The dwelling roof has been removed and is located on the ground in the southeast corner of the farmstead. A fence surrounds most of the site on the south, east, and north. No artifacts were collected.

HM3

Site HM3 is located in the eastern portion of Area F. It is situated at the east end of an east-west road, and is represented by four structures on the 1978 Mountain Springs Quad. Although the site appears on the 1918 map, none of the extant architecture appeared to date that old. The dwelling, a large barn, and a cellar remain. The foundations of the house and barn are poured concrete, and the cellar is also concrete. Several concrete rubble piles were also evident, and a set of concrete steps were located north of the dwelling. They were in a disturbed context. A date of 1939 was scratched in the steps. A telephone pole was situated north of the cellar and just west of the dwelling. The house was located on the eastern side of the site, and the barn on the west. The cellar was situated between the two. No fence was present. No trash dumps were recorded, and no artifacts were collected.

HM4

HM4 was represented by three structures on the 1978 Mountain Springs Quad. The site was characterized by modern architecture, including several collapsed structures. The dwelling, barn, and at least one shed have collapsed. In addition, a burned shed was also present. Only one structure remained standing: a small shed with asphalt siding. The dwelling was supported by cement-filled concrete blocks, limestone blocks, and wooden posts. The porch area was still present and had tongue and groove flooring. The barn had collapsed and still has an attached animal corral and loading chute. The barn was board and batten. The fence posts were railroad ties, and an outhouse was located in the northwest corner of the farm. A fence remains visible on the north side of the site. Trash dumps covered much of the site, including an abandoned car. No shovel test pits were excavated, and no surface artifacts were collected.

HM6

This site is shown on the Mountain Springs Quad (1978) and is represented by two standing structures. The dwelling is covered with clapboard, and the barn is board and batten. In addition, a corral, loading chute, and a collapsed shed are also present. Modern trash dumps dot the site. A well and windmill supports are located just southeast of the dwelling. No shovel test pits were excavated, but a small surface collection was made.

Artifacts collected from HM6:

1 machine made brick with maker's mark [COFYVLE VIT B & T Co]
(Vitreous Brick & Tile Co)
3 bottle glass sherds
1 stoneware sherd
1 rectangular metal lid
1 ceramic horse figurine head
2 window glass sherds

An additional historic site was identified by the survey crew in Area F. It is located on a terrace situated on the west side of Pond Creek. The site was not recorded on any of the historic maps, and was located during the pedestrian survey. Historic artifacts were found eroding out under an isolated bois d'arc tree. Seven shovel test pits were excavated in an effort to determine if subsurface deposits were present, assess site integrity, age, and composition. No surface features were identified, and no subsurface features were encountered. Several undulations or depressions were apparent but did not appear to be cultural. This site was designated 41DN466, and is discussed in detail in the section entitled Site Descriptions.

No other historic or prehistoric sites were found in Area F. No shovel test pits were excavated at any of the HM sites, or along the terrace ridges except within sites 41DN466 and 41DN470. No previously recorded sites occurred in Area F. Sites located on the edge of the area included 41DN147, 41DN149, 41DN151, and 41DN203. They were not revisited by the survey crew.

Area J

Eight farmsteads were shown in Area J on the 1918 map for Denton County. Two sites were located along the northern boundary. The westernmost of the two was not present on the 1936 map or the 1978 Mountain Springs Quad. It was located by the survey crew and designated 41DN469. It is discussed in detail in the section entitled Site Descriptions. The second was located in the northeast corner of Survey Area J and was present on the 1936 and 1978 maps. It was not shown on the 1918 map. It was represented by four structures on the 1978 map, including one recent building, a dwelling, and two unspecified buildings. This site was recorded by the crew and designated 41DN468. It is discussed in detail in the Site Descriptions section.

Three farmsteads were located in the central portion of Area J on the 1918 map. Only the center site was still present in the 1930s and was shown on the 1936 and 1978 maps. In 1978 it was represented by three structures. Another farmstead was established in this area after 1936 and is first visible on the 1978 map, where it was represented by three new buildings shown in purple, and one outbuilding. The two recent farmsteads were not recorded by the survey crew because of their recent age. They were not given TARL numbers. The other farmstead in this area were not located by the crew.

Three farmsteads were located along Highway 455, on the southern boundary of Area J. One occurred in the southeast corner and appeared on the 1918 map. It was not visible on later maps and was not located by the survey crew. This area was disturbed, and the site may have been removed by the clearing crew or construction of Highway 455. The center site also appeared on the 1918 map and was visible on the 1978 map. It was previously recorded as 41DN229. It was revisited, but not rerecorded. No collections were made. The site had been characterized by a standing dwelling, a garage, several sheds, a cellar, animal pens, a privy, and a sparse artifact scatter (Skinner et al. 1982a, 1982b; Skinner and Baird 1985). It was assigned a date range of 1900 to present. The last site was located in the southwest corner and appeared on the 1936 map. Again, it was not recorded or assigned a TARL number because of its recent age.

Other previously recorded sites in Area J included 41DN346, which was a prehistoric site. An additional prehistoric site was located by the survey crew and was designated 41DN475. Both sites are discussed in the Ray Roberts Lake prehistoric volume (see Ferring, Yates, and Brown 1992). No shovel test pits were excavated in Area J outside the sites mentioned above.

Area N

Area N is located in Denton and Cooke counties. A single farmstead was shown in the Cooke County portion of the survey area on the 1909 map. It was not represented on any of the later maps (1936, 1961). Another farmstead was located in Denton County on the 1918 map. Again it was absent on the Pilot Point Quad (1961), indicating that both sites were abandoned before 1960. The second farmstead was located in the southcentral portion of Area N. A third farmstead was located (1918) on the western boundary in the southwest corner.

The site found by the survey crew is located west of the Texas and Pacific Railroad and appears to correlate with the second farmstead mentioned above (1918 map). It was designated 41DN467 and is discussed in detail in the section entitled Site Descriptions. No other sites were found in Area N.

Site Descriptions

The following section focuses on providing an overview description of each historic site recorded during the 1987 historic survey within the Ray Roberts Lake project area. The sites are presented below in alphanumeric order based on TARL numbers. Sites that were previously recorded, or which were located and designated HM (historic modern) are not included here. For a brief discussion of these sites, see the previous section.

The historic survey was conducted to locate unrecorded historic sites in areas that had not been surveyed by ECI. Following this, a program of shovel test pits, collection of surface artifacts, and preliminary architectural documentation was conducted to determine site age, integrity, function, and National Register eligibility. Recommendations for further work were based on three criteria: (1) National Register eligibility (2) potential for addressing research questions outlined in the research design, and (3) potential for providing significant new data not available from other National Register-eligible historic sites in the project area.

These criteria, particularly criteria 3, were used in making recommendations because of several important factors. First, over 95% of the reservoir had already been surveyed, and several phases of testing or intensive investigation had been conducted, or were underway when this survey was undertaken. As a result, time and budgetary constraints existed that precluded all potentially eligible sites from being investigated fully. Secondly, while taken separately, some sites may exhibit good potential, when compared with other sites that had already been recommended for testing and/or mitigation, such sites may exhibit less potential. As a result, all sites recorded during the survey phase were ranked based on the above criteria, and only those that exhibited potential for yielding new information not available from the sites already selected for investigation, were recommended for additional work. This process resulted in fewer sites being recommended for further investigation than would have been if they had been recorded when the original survey of the project area was conducted.

Ten sites were discovered and recorded during the historic survey and were assigned TARL numbers. A brief site description is provided for each. The sites are presented in alphanumeric order by TARL number: 41CO172, 41DN466, 41DN467, 41DN468, 41DN469, 41DN470, 41GS109, 41GS110, 41GS111, and 41GS112.

41CO172

Map Quad	Pilot Point 7.5'(1961), #3396-233
Elevation above MSL	650'
Vegetation	Hackberry, oak, mixed grasses, sage, ornamental trees
Cultural Affiliation	Historic American (Twentieth Century)
Recommendations	No further work

Description:

The site is located on a terrace between two unnamed tributaries of Isle du Bois Creek (Figure 6-6) in Area Tx. The site area is relatively flat, with a 5 to 10 degree slope. It is situated near the edge of the terrace. Sites 41CO32 and 41CO33 are situated 0.3 miles east of the site; 41CO32 is located within Area T, and 41CO33 is just south of it.

The site is not shown on the 1909 or 1936 Cooke County maps. It first appears on the 1961 topographic map, where it was represented by a dwelling and two outbuildings. A two-track dirt road provided access to the site from the south. No other sites were recorded in the vicinity.

Site 41CO172 was occupied until recently and represents a farmstead that was probably initially occupied in the 1930s. Two structures were still present when the site was recorded by the survey crew, including a vertical planked shed with a small corn crib and a vertical picket fence that forms a small corral. This structure was located on the northeastern margin of the site. A metal shed with a single slope roof was present on the southern portion of the site. A gas stove was located outside the shed on the northwest side. The former dwelling location was indicated by a mounded area, numerous bricks, metal, and piers. A well capped by a ceramic culvert pipe was located east of the house. Ornamental vegetation was visible near the house, as well as south of it, between the house and the metal shed. A two-track road parallels the eastern edge of the site, and an old, overgrown wagon road bisects the site east-west between the frame shed and the dwelling. A recent trash pile containing corrugated metal, household appliances, machine-made bricks, asphalt shingles, and other metal items was located in a small gully northwest of the dwelling. A stock pond was situated west of the main site area, and an abandoned automobile was present at the northern edge of the site. Good subsurface integrity was indicated in the six shovel test pits excavated at the site.

Figure 6-6. Location of historic sites identified and recorded during the 1986-1987 survey of 4,400 selected acres of previously unsurveyed acreage in the Ray Roberts Lake project area.

Previous and Current Research:

The site was recorded in February, 1987. It was not previously recorded by ECI, Inc. Historic maps that were examined to determine the location, age, and function of this site included the general map of Cooke County (1909), the Cooke County General Highway Map (1936), and the Pilot Point Quad (1961). Work focused on a surface reconnaissance, excavation of six shovel test pits, and the recovery of a representative sample of diagnostic surface artifacts. Two areas with overgrown vegetation were identified, and shovel test pits were excavated near them to determine if structures were associated with the vegetation change. One pit was placed inside the vegetation and the other was placed outside it. Two additional pits were placed near the collapsed structure. A summary of the artifacts recovered from 41CO172 is presented below.

Artifacts collected from 41CO172:

STP 1:
1 bottle glass sherd

STP 2:
sterile

STP 3:
4 bottle glass sherds
5 lamp glass sherds
9 window glass sherds
7 wire nails
1 machine made brick fragment
3 pieces of building material (shingles, plaster)
1 personal item (metal button)

STP 4:
1 bottle glass sherd

STP 5:
3 bottle glass sherds

STP 6:
sterile

Surface:
2 refined earthenware sherds
1 stoneware sherd
7 bottle glass sherds
2 table glass sherds
1 window glass sherd
1 handmade brick fragment
1 personal item

Site Integrity:

The absence of any evidence of subsurface disturbances indicates a good probability the archaeological assemblage is still intact. However, the continued occupation of this site until recently, and the presence of considerable recent trash on the surface indicates that the assemblage is probably mixed, and isolation of an earlier component is not possible.

Adverse Impacts:

Limited erosion was visible on the edge of the terrace where the site is located. No major impacts were noted in the central portion of the site beyond the recent activity mentioned above. The site will be located on the edge of the reservoir and will be subject to erosion through wave action.

Potential Significance:

Current information indicates that this site was occupied until recently and was probably not initially occupied until the 1930s. No pre-1930 deposits were identified on the historic maps or within the archaeological deposits at the site. As such, this site has little archaeological potential for addressing major research questions outlined in the research design. It does not meet National Register eligibility criteria or exhibit potential for adding significant new information to the data base presently existing for the project area and this region.

Recommendations:

No further work is recommended.

41DN466

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation above MSL	620' - 630'
Vegetation	Bois d'arc, sage, thistle, mixed grasses
Cultural Affiliation	Historic American (pre-1900)
Recommendations	Intensive Investigation

Description:

The site is located in Area F (Figure 6-6) on a small knoll overlooking Pond Creek, which is east of the site. It is located on the north side of a two-track dirt road. A lone bois d'arc tree is situated in the center of the knoll, and corresponds to the center of the site. The site was identified when material was found in an eroded area around the bois d'arc tree. Few artifacts were visible on the surface elsewhere on the site. The site surface has a 10 degree slope to the east.

Site 41DN466 contained the highest potential of the 10 historic sites recorded during the survey for addressing major research questions and is National Register eligible. This site is a pre-1900 farmstead that was abandoned at the turn-of-the-century. The site was not recorded on the 1909 or 1936 Cooke County maps. No standing structures were present, and no evidence of previous structure locations were visible. No surface features were recorded, with the exception that the ground surface was undulating near the center. The artifact scatter associated with the main portion of the site yielded domestic remains, including stonewares produced at nineteenth century potteries in the Denton area, blue ironstone tableware, nineteenth century bottle glass, window glass, and horse and stable gear. No evidence of twentieth century occupation or disturbances were noted. The site was located in an area that had been used as open grazing and pastureland. No evidence of crop cultivation was noted within the site area.

Previous and Current Research:

The site was recorded in February, 1987 during our pedestrian survey. Work focused on a surface reconnaissance, excavation of seven shovel test pits, and the recovery of a representative sample of diagnostic surface artifacts. The shovel test pits were placed in the main site area, and four pits yielded material. The general surface collection was also recovered from this area.

Artifacts collected from 41DN466:

STP 1:
6 refined earthenware sherds
3 bottle glass sherds
2 window glass sherds
1 bone fragment
1 thin metal fragment
1 metal machine part
2 misc. other (charred wood)
4 prehistoric (flakes)

STP 2:
sterile

STP 3:
sterile

STP 4:
1 refined earthenware sherd
1 bottle glass sherd

STP 5:
sterile

STP 6:
2 handmade brick fragments
1 faunal fragment
1 thin metal fragment

STP 7:
1 window glass sherd
1 handmade brick fragment

Surface:
4 refined earthenware sherds
3 stoneware sherds
5 bottle glass sherds
2 machine cut nails
3 personal items
1 metal tool

Site Integrity:

The preservation of faunal material, and the absence of surface or subsurface disturbances indicated that site 41DN466 exhibited excellent potential for containing intact archaeological deposits. The material recovered on the surface and subsurface reflected a single, pre-1900 component indicating that the site was probably not serially occupied. In addition, the material reflected a relatively short time span, ca. 1870s to 1900, not often found at historic farmsteads in the project area.

A potential feature was indicated in shovel test pit 1 which contained charcoal and a denser artifact concentration. No definable subsurface features were noted. The potential for such features appears to be high based on the short occupation duration, and good subsurface preservation and integrity. Some slope erosion was evident on the eastern extent of the site, downslope from the main site area.

Adverse Impacts:

The site is located near the edge of the reservoir, within an area that will be affected by clearing activity and erosion.

Potential Significance:

No post-1900 remains were identified during the survey phase, and evidence of good subsurface archaeological deposits indicate that this site has excellent potential for yielding information about pre-1900 historic occupation in the project area. Few sites have been recorded and recommended for investigation within the reservoir that exhibit a short occupation span similar to 41DN466. The majority of the sites dating to this period were occupied much longer, and include post-1900 occupations.

Site 41DN466 is one of the older, best preserved historic farmsteads recorded in the reservoir. It is relatively small, and may represent a small landowner occupation. The site was originally assigned a date range of ca. pre-Civil War to 1900. It is difficult to assess whether or not this site was occupied before 1870 without further archaeological investigation. The site is National Register eligible and contains significant deposits for answering research questions developed for this project.

In addition, this site will provide an excellent addition to the small sample of known sites initially occupied before 1880 and abandoned by the early 1900s. Among these are 41DN77, 41DN166, 41DN224 (old component), and 41DN248.

Recommendations:

Intensive archaeological investigations are recommended to recover intact deposits from an early historic occupation in the project area. Further archaeological investigations should include a multi-level approach incorporating small excavation units, large test units, block excavations, trenches, and feature exploration. A magnetometer survey of the main site area is recommended to aid in locating subsurface features. Archival research is recommended to augment the archaeological investigations.

41DN467

Map Quad	Pilot Point 7.5'(1961), #3396-233
Elevation above MSL	650'
Vegetation	Mixed grasses
Cultural Affiliation	Historic American (ca. 1920 to 1940)
Recommendations	No further work

Description:

Site 41DN467 is located in Area N, in an open pasture area west of the Texas and Pacific Railroad line (Figure 6-6). Site 41DN467 is located between two intermittent streams in the southcentral portion of the survey area. It is situated 0.6 miles north of the Pilot Point city limits. No evidence of an old road was found providing access to the farmstead. The site is represented on the 1918 Denton County map but was abandoned prior to 1961 (Pilot Point Quad).

This site reflects an early to mid-twentieth century farmstead with no standing architecture. Surface features include a collapsed cellar, a filled brick-lined well, and a possible collapsed pole barn. The site w: not

mapped, and no shovel test pits were excavated. Also, no surface collection was made because no early deposits were found and the late date of abandonment.

Artifacts were present in the stream bed south of the site, and within the main site area. These deposits included twentieth century bottle glass and ceramics, machine-made bricks, sandstone piers, and telephone insulators. No evidence of nineteenth century artifacts or architecture was recorded, supporting the recent age suggested by the historic maps. A single prehistoric lithic was also found, but not collected.

Previous and Current Research:
The site was recorded during our pedestrian survey of Area N in February, 1987. Work focused on a surface reconnaissance. No collections were made, and no shovel test pits were excavated.

Site Integrity:
Surface integrity indicated no standing architecture, and no evidence of post-occupation activity that has seriously impacted the site. Dumping was evident in the streambed, and recent trash was noted within the site area. No data were collected on subsurface integrity because of the recent age of the site.

Adverse Impacts:
The site is located near the edge of the project area and will be impacted by clearing activity and erosion.

Potential Significance:
The recent age of site 41DN467 indicates that it does not meet National Register eligibility. This farm was not occupied before 1918 (not shown on 1918 map) and was abandoned late. No early deposits were found.

Recommendations:
No further work is recommended at 41DN467.

41DN468

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation above MSL	605'
Vegetation	Hackberry, locust, pine, sage, grasses
Cultural Affiliation	Historic American (ca. 1930 to present)
Recommendations	No further work

Description:
Site 41DN468 is located in Area J and was recorded on the 1936 and 1978 maps. It was not shown on the 1918 Denton County Soils map. It was represented by four structures on the 1978 Mountain Springs Quad, including one recent building, a dwelling, and two outbuildings. It is located on the northern edge of Denton County, just southwest of Jones Cemetery, and 300 to 350 m northwest of a gravel pit area. The site is situated on a terrace that overlooks Isle du Bois Creek to the south and Walnut Branch to the east.

This site represents a ca. 1930s to recent farm that contains possible dairy(?) barns, evidence of a concrete house foundation, a machine shed, a well, septic tank, and a concrete windmill pad. The house has been removed, and surface artifacts indicate that the site was occupied until recently, and that post-occupation disturbance has occurred.

Previous and Current Research:

Site 41DN468 was recorded during our pedestrian survey in January, 1987. Work focused on a surface reconnaissance and collection of a representative sample of surface artifacts. Because of the recent age of the site and evidence of post-occupation disturbance, no shovel test pits were excavated. Recent trash is scattered across the site.

Artifacts collected from 41DN468:

Surface:

Artifacts were recovered from the surface only, including 12 refined earthenware sherds, 4 stoneware and 1 porcelain sherd, 9 bottle glass, 2 table glass sherds, 1 machine made brick fragment, 2 personal items, 1 bone fragment, and 2 metal machine parts.

Site Integrity:

Surface integrity at 41DN468 was poor. Subsurface integrity was not tested because of the recent age of the site, and the evidence of post-occupation disturbance at the site.

Adverse Impacts:

The site has begun eroding, particularly on the east side where a stream gully is present. In addition, gravel pit operations associated with the pits located southeast of the site has impacted 41DN468. Other impacts include evidence of bulldozer activity. This site will be inundated when the reservoir is completed, and probably will also be impacted by clearing activity.

Potential Significance:

The recent age and lack of cultural integrity of 41DN468 indicates that this site exhibits little potential for yielding significant information. The site does not meet the criteria for eligibility to the National Register.

Recommendations:

No further work is recommended.

41DN469

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation above MSL	595'- 605'
Vegetation	Oak, locust, sage, grasses
Cultural Affiliation	Historic American (1880-1930)
Recommendations	No further work

Description:

Site 41DN469 is located in Area J (Figure 6-6), and appeared on the 1918 map but was absent on both the 1936 map and the 1978 Mountain Springs Quad. The site is located in the northwestern corner of the survey area, just south of the Cooke County line. It is situated on a terrace, just west of 41DN468, and approximately 400 m northwest of a gravel pit.

No architectural or surface features associated with the former house area were visible. Two depressions were noted, but their functions were not determined. A two-track road occurred east of the site. An artifact scatter was visible in the road, and yielded similar remains as those found in the shovel test pits excavated at

the site. These items included primarily stonewares, refined earthenwares, bottle glass, charcoal, metal, and window glass. Recent gravel-related activity has disturbed part of the site, but no other post-occupational disturbances were noted. No trash dumping was reported.

Previous and Current Research:

The site was recorded during our pedestrian survey in January, 1987. Work focused on a surface reconnaissance, excavation of shovel test pits, and collection of a representative sample of surface artifacts. Six shovel test pits were placed between the depressions present at the site.

Artifacts collected from 41DN469:

STP 1:
sterile

STP 2:
sterile

STP 3:
1 refined earthenware sherd
2 stoneware sherds
1 window glass sherd
2 thin metal fragments
1 misc. other

STP 4:
sterile

STP 5:
sterile

STP 6:
sterile

Surface:
2 refined earthenware sherds
5 stoneware sherds
1 porcelain sherd
3 bottle glass sherds
2 table glass sherds

Site Integrity:

Good subsurface integrity was indicated in the shovel test pits. With the exception of the disturbances noted above, surface integrity was good.

Adverse Impacts:

Erosion and gravel-related activity have impacted the site. However, considerable subsurface deposits remain. The site will be further impacted by clearing activity, some of which has already affected the site. In addition, 41DN469 will be inundated when the reservoir is completed.

Potential Significance:

This site represents a ca. 1880 to 1930 farmstead that had possible potential for National Register eligibility. However, the site has been impacted by recent activities, and insufficient site area remains unaffected precluding the recovery of significant deposits. In addition, the data collected thus far does not indicate that excavation at 41DN469 would provide new information not obtainable from other sites already recommended for investigation. This time period is well represented in the project area, including a number of sites with extant architecture.

Recommendations:

No further work is recommended.

41DN470

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation above MSL	650'
Vegetation	Locust, cedar, hackberry, sage, grasses
Cultural Affiliation	Historic American (early twentieth century to recent
Recommendations	No further work

Description:

Site 41DN470 is located in Area F (Figure 6-6) and is shown on the 1936 and 1978 Denton maps. It was not present on the 1918, suggesting that it was not initially occupied until after 1920. However, some evidence of nineteenth century artifact types were recorded at the site, indicating the farmstead may have been occupied closer to the turn-of-the-century. Originally, the site was assigned a date range of 1880 to recent, but reexamination of these data, suggest an early 1900 to recent date is more accurate.

The site is situated on a terrace overlooking Pond Creek, and the terrace drops sharply to the north. A stockpond is located south of the site. Remains of several structures are present at 41DN470, including a poured concrete house foundation that encases an earlier limestone pier foundation. Several modifications and additions had been made to the dwelling, which burned in recent years. It was constructed with wire nails, and no machine-cut nails were found. Machine-made brick associated with a hanging chimney(ies) was also present. A large shed is located north of the house and is constructed of commercial lumber, wire nails, and has a small corral associated with it. Iron supports for a windmill and a cellar are located north of the dwelling. A depression (function unknown) located west of the house is filled with recent trash, and a septic tank is also present in this area. Recent trash is visible across the site, including discarded appliances, lumber, metal, clothing, and other remains. At least two concentrations of limestone rocks occur at 41DN470, but it was not possible to determine if these belonged to an earlier structure associated with the site. Piles of barbed wire fencing, trash, and household debris occur on the slopes north of the site. In addition, a cave or possible dug-out type cellar is located north of the dwelling, and it is unknown if it was associated with the site occupation.

Previous and Current Research:

The site was recorded during our pedestrian survey in February, 1987. Work focused on a surface reconnaissance, excavation of three shovel test pits, and collection of a representative sample of surface artifacts from two areas of the site.

Artifacts collected from 41DN470:

STP 1:
4 bottle glass sherds
1 building material

STP 2:
sterile

STP 3:
sterile

Surface (dump area):
1 semi-coarse earthenware sherd
6 refined earthenware sherds
2 stoneware sherds
1 porcelain sherd
8 bottle glass sherds
7 table glass sherds
1 bone fragment
1 metal machine fragment

Surface (near foundations):
2 stoneware sherds
7 bottle glass sherds
1 window glass sherd
1 machine cut nail
1 household item
1 horse & stable item

Site Integrity:
No evidence of disturbance was recorded in the shovel test pits. However, areas of the site with the greatest potential of yielding good subsurface deposits were selected. The site area has been seriously impacted by post-occupational activity. As noted earlier, the house burned, but the amount of burned material present at the site suggests that it may have been partially dismantled or moved before the remainder was burned. Recent dumping activity is visible across the site, as well as in the gully north of the site. The piles of limestone mentioned earlier also suggest that earlier structures have been removed or significantly altered.

Adverse Impacts:
An additional impact noted at 41DN470 is erosion primarily on the northern extent of the site. Continued erosion is expected.

Potential Significance:
Site 41DN470 does not exhibit potential for nomination to the NRHP. No pre-1930 deposits or features were identified, and extensive disturbance of the surface, and possibly subsurface deposits indicate that further work is not warranted.

Recommendations:
No further work is recommended.

41GS109

Map Quad	Pilot Point 7.5'(1961), #3396-233
Elevation above MSL	650'
Vegetation	Oak, cedar, locust, hackberry, sage, mixed grasses
Cultural Affiliation	Historic American (late 19th c. to 1940s)
Recommendations	No further work

Description:
Site 41GS109 is located in Area S, 700 feet west of the Texas and Pacific Railroad line, and 1000 feet northeast of Tioga Cemetery. The site is situated in an overgrown pasture that overlooks Isle du Bois Creek at an elevation of 650'. A two-track road provided access to the site. Surface visibility was poor because of dense grass cover, except within the road where at least 40% of the ground surface was clear of vegetation.

The site is a single-component historic farmstead that appears to date between ca. 1880 or 1890 and the 1940s based on the standing architecture and historic artifact scatter. Extant architecture includes a small board and batten shed constructed of milled wood and corrugated tin. Extending west from the shed is a corral or fenced pen made with railroad ties and barbed wire. The road extends north-south on the eastern margin of the site. A number of artifacts were found in exposed areas within the road, as well as near it. This material included refined earthenwares, bottle glass, brick, window glass, and buttons, and dated primarily to the twentieth century. Several depressions were noted south of the shed, but no discernable house area, well, or cellar were found. It is probable that one of the depressions may represent a collapsed cellar.

Previous and Current Research:
The site was recorded during our pedestrian survey in January, 1987. Work focused on a surface reconnaissance, excavation of five shovel test pits, and recovery of a representative sample of surface artifacts from the roadbed. The shovel test pits were located south of the shed and animal pen area, in the probable house area, and near several depressions.

Artifacts collected from 41GS109:

STP 1:
1 refined earthenware sherd
1 machine-made brick fragment

STP 2:
sterile

STP 3:
sterile

STP 4:
sterile

STP 5:
sterile

Surface:
22 refined earthenware sherds
5 stoneware sherds
53 bottle glass sherds

12 window glass sherds
2 machine-made brick fragments
1 building material
1 personal item
1 bone fragment

Site Integrity:
This site exhibited good archaeological integrity, with subsurface deposits extending to 20 cm below surface. No evidence of subsurface disturbance was recorded in any of the shovel test pits. No recent trash deposits or other evidence of disturbance were evident on the surface, with the exception of erosion within the roadbed.

Adverse Impacts:
Site 41GS109 will be impacted by erosion and dam construction activities.

Potential Significance:
The site has fair to good potential National Register eligibility based on site age (ca. 1880 to 1940), site function, and integrity. However, other sites in the project area dating to this period exhibit greater potential for contributing to our research goals based on the following criteria: (1) duration of occupation, (2) extant architecture, (3) identifiable surface and subsurface features, and (4) known subsurface deposits. This time period is well represented in the reservoir, and site 41GS109 does not exhibit the potential for adding significant new data.

Recommendations:
Site 41GS109 is not recommended for additional work.

41GS110

Map Quad	Pilot Point 7.5'(1961), #3396-233
Elevation above MSL	640'
Vegetation	Oak, locust, greenbriar, sage, mixed grasses
Cultural Affiliation	Historic American (ca. 1880 to 1930)
Recommendations	No further work

Description:
Site 41GS110 is located in survey Area S, 800 m west of the Texas and Pacific Railroad line, and about 300 m north of 41GS109 (Figure 6-6). The site is located in a pasture on a terrace overlooking Isle du Bois Creek.

Site 41GS110 is a historic farmstead that dates ca. 1880 to 1930 based on a small artifact assemblage recovered during the survey. The site was not visible on the 1909 Grayson County map or the 1961 Pilot Point Quad. No extant architecture was present, but several surface features were evident, including two roads, and six depressions. Both roads were dirt, two-track roads. The southern road provided access to 41GS110 from 41GS109. The other extended south into the northwestern corner of the site. Initially, it appeared that they were part of the same road, with a gap in between, but the main site area is located within the gap, including a possible cellar. The cellar has collapsed. The remaining five depressions may be related to the former dwelling location and other small domestic outbuildings. Several large sandstone rocks, which may have served

as piers were visible in the area between several depressions. None of the rocks appear to have been cut. A small number of handmade brick fragments were also evident in this area.

A fence extends along the western margin of the site and on the east side of the northern roadbed. A small scatter of artifacts were noted in this area, which included a small cluster of oak trees that extended along the fence. A second artifact cluster occurred within the main portion of the site that was associated with the depressions and several clusters of trees on the west and south side of the site.

Previous and Current Research:

Site 41GS110 was recorded during our pedestrian survey in January, 1987. Work focused on examining historic maps for possible early historic occupations in this area, surface reconnaissance, and the excavation of a small number of shovel test pits. Four pits were excavated near the depressions, and between the two roadbeds. In addition, a general surface sample was recovered from the exposed road area on the western edge of the site. No historic dumping or evidence of recent trash was noted, indicating that the site was probably abandoned before 1940.

Artifacts collected from 41GS110:

STP 1:
1 refined earthenware sherd

STP 2:
sterile

STP 3:
sterile

STP 4:
1 building material
1 metal machine part

STP 5:
sterile

Surface:
2 refined earthenware sherds
3 stoneware sherds
1 [illegible] sherd
2 bottle glass sherds
3 handmade brick fragments
1 machine-made brick fragments

Site Integrity:

The site exhibited good surface and subsurface integrity. As noted above, no evidence of recent trash dumping was evident. The subsurface deposits extended to 20 cm below surface and contained a low density assemblage reflecting a single component. The surface and subsurface material dated to the same temporal period, indicating no evidence of disturbance. The site area appears to have been used primarily as pasture since it was abandoned. No plowing was evident in the profiles of the shovel test pits.

Adverse Impacts:

Site 41GS110 has been impacted by ant and rodent burrowing, cattle grazing, and limited erosion. Further impacts will include continued erosion and clearing activity associated with the development of the reservoir.

Potential Significance:

Site 41GS110 exhibited potential for National Register eligibility, representing a ca. 1880 to 1930 farmstead. Good surface and subsurface integrity was recorded, and several identifiable features, including two roadbeds, a possible collapsed cellar, and former building locations indicated that this site exhibits potential for yielding archaeological information that can be used to address major research questions developed for this project. However, this site does not appear to exhibit significant new information that cannot be obtained from the sites already recommended for archaeological investigation.

Recommendations:

No further work is recommended.

41GS111

Map Quad	Pilot Point 7.5'(1961), #3396-233
Elevation above MSL	640'
Vegetation	Oak, mixed grasses
Cultural Affiliation	Historic American (1880 to 1920)
Recommendations	No further work

Description:

Site 41GS111 is located in Area Q (Figure 6-6) and was not present on the 1909 Grayson County map. This suggests that the site was abandoned by 1909, and a short occupation beginning in the late nineteenth century is supported by the artifact assemblage. No extant structures were evident at 41GS111, and no cultural features were noted. A medium to dense artifact scatter was identified within the main site area that contained an assortment of domestic items, including stonewares, bottle glass, porcelain doll fragments, as well as machine-cut nails, window glass, metal tools, tin cans, and horse and stable gear.

A modern fence bisects the site on the north, with grazing land located north of the fence. Standing water was present in this area, greatly reducing visibility. A small depression was noted, but could not be investigated because of the water. Within the main site area, cow trails criss-cross the area where the artifact concentration was evident. Several large trees were also located here, and surface erosion was evident.

Previous and Current Research:

The site was recorded during our pedestrian survey in February, 1987. Work focused on a surface reconnaissance, excavation of five shovel test pits, and recovery of a representative sample of surface artifacts. The shovel test pits were placed within the main site area as determined by the surface artifact concentration.

Artifacts collected from 41GS111:

STP 1:
3 refined earthenware sherds
1 bottle glass sherd

STP 2:
1 refined earthenware sherd

8 bottle glass sherds
1 table glass sherd
2 window glass sherds
1 wire nail
1 building material

STP 3:
1 building material

STP 4:
sterile

STP 5:
sterile

Surface:
1 refined earthenware sherd
4 stoneware sherds
5 bottle glass sherds
1 table glass sherd
1 window glass sherd
1 personal item
1 horse & stable item

Site Integrity:
The artifacts recovered from the shovel test pits dated to the same time period and were similar to those found on the surface. The site surface is heavily deflated and cow trails cross this area. Surface artifacts are visible only in the deflated areas or cow trails. No evidence of subsurface disturbances were noted in the shovel test pits.

Adverse Impacts:
In addition to the cow trails and erosion mentioned above, the site has been impacted by recent farming activity. Drainage contours occur in the northern site area. Because of standing water, it was not possible to determine if this disturbance is located outside the site or has significantly impacted any cultural deposits. Future impacts will include shoreline erosion.

Potential Significance:
This site exhibits potential for yielding significant deposits. However, because of the current impacts and constraints mentioned earlier, no further work is recommend. This site appears to reflect a short-term occupation extending from ca. 1880 to 1920. However, other sites dating to this period with extant architecture, and/or better archaeological integrity have already been investigated or are currently slated for investigation. This site does not exhibit evidence that it should be recommended for further work over these other sites.

Recommendations:
No further work is recommended.

41GS112

Map Quad	Collinsville 15' (1982)
Elevation above MSL	650-660'
Vegetation	Hackberry, oak, locust, bois d'arc, sage, grasses
Cultural Affiliation	Historic American (20th c. to recent)
Recommendations	No further work

Description:

Site 41GS112 (Figure 6-6) is located in Area XX (Figure 6-1), and is shown on the 1909 Grayson County Map (Figure 6-5). It was designated by an outbuilding on the Collinsville Quad (1982), indicating that the domestic occupation had ceased prior to then. Extant structures at the site included a collapsed dwelling of clapboard over vertical planking and wire nails. The roof was constructed of wood shingles. Corrugated tin and asphalt shingles were among the recent trash at the site, and may have been intended for the house before the site was abandoned. A well or cistern was located northwest of the dwelling and was brick-lined. A small water tank was located southwest of the house. A porch or small shed was attached to the dwelling on the south side, and a cellar may have been located to the northwest. Remnants of a shed were visible on the terrace west of the house.

A considerable amount of recent trash was present in the vicinity of the dwelling, and it appeared the site had been used as a major dumping area in recent years. This debris accounted for the majority of the material recovered from the site. Little occupational material was visible on the surface or in the subsurface deposits.

Previous and Current Research:

The site was recorded during our pedestrian survey in February, 1987. Work focused on a surface reconnaissance, excavation of six shovel test pits, and collection of a representative sample of surface artifacts.

Artifacts collected from 41GS112:

STP 1:
1 window glass sherd
3 wire nails

STP 2:
sterile

STP 3:
1 bottle glass sherd
1 wire nail

STP 4:
1 bottle glass sherd
2 window glass sherds
2 wire nails
1 personal item

STP 5:
1 thin metal fragment

Surface:
2 refined earthenware sherds

4 stoneware sherds
10 bottle glass sherds
1 table glass sherd
2 window glass sherds

Site Integrity:

The subsurface deposits contained twentieth century material. No earlier artifacts were found, and because the site was occupied until recently, it was not possible to determine if this material reflected occupational remains or post-occupational trash. The site has been seriously impacted by recent dumping activity and possible salvaging.

Adverse Impacts:

Trash dumping, possible salvaging, cattle grazing, and erosion have already impacted, and will probably continue to impact this site.

Potential Significance:

No significant archaeological deposits were found at 41GS112, and the site does not meet the criteria for nomination to the NRHP.

Recommendations:

No further work is recommended.

Summary and Recommendations

The focus of this chapter has been on the historic survey conducted by IAS, UNT in the Ray Roberts project area in 1987. This work was undertaken because it had been determined that approximately 8,800 acres had not been surveyed, or could not be verified as having been surveyed by ECI, Inc. Also included in this acreage were areas that may have been surveyed, but sufficient detailed results were non-available to determine if sites had been adequately evaluated. Because of time and budget constraints, only 4,400 acres were recommended, and selected for surveying (Scope of Work). This process resulted in a representative sample of the unsurveyed areas being included in this survey.

Historic maps were utilized to aid in locating early historic sites within the unsurveyed areas. Maps dating to 1909, 1918, and 1936 were used along with recent topographic maps. A total of 43 survey areas were identified, with 26 areas being included in the survey. Unrecorded historic sites were identified in seven areas, including F, J, N, Q, S, Tx, and XX. A detailed site description was provided for each of these sites, and a brief overview was presented for all survey areas.

Ten historic sites were recorded during the survey, all of which reflected domestic farmsteads. Initial occupation at these sites ranged from ca. 1870 to post-1900. Sites dating after 1930 were recorded as HM (historic modern) and a short site description was provided. Isolated finds were not included here.

A program of shovel test pits, collection of surface artifacts, and preliminary architectural documentation was conducted to determine site age, integrity, function, and potential for nomination to the National Register of Historic Places (NRHP). Recommendations for further work were based on three criteria (1) potential for nomination to NRHP, (2) potential for addressing research questions outlined in the research design, and (3)

potential for providing significant new data not available from other historic sites already determined eligible for NRHP and/or archaeological investigation.

Based on these criteria, only site 41DN466 was recommended for further work. Intensive excavation was conducted at the site, and a detailed site description of the results is presented in Chapter 8.

CHAPTER 7

RESULTS OF HISTORIC LIMITED TESTING, TESTING, AND DOCUMENTATION PHASE

by

Susan A. Lebo
with Geology by C. Reid Ferring, Faunal Analysis by Bonnie C. Yates,
and contributions by Carl Freuden, Randy Korgel,and Debbie Marcaurelle

This chapter describes the historic sites that received documentation, limited testing, or testing-level investigations only during the 1986-1987 season of the Ray Roberts Lake archaeological project. They are presented in sequential order by Texas Archeology Research Laboratory (TARL) number, and their locations are shown in Figure 7-1. The work scheduled at each site in the Scope of Work is presented in Chapter 5 (see Table 5-1) and is not reiterated here.

Eleven sites were scheduled for historical research (architectural, archival, artifact inventory, burial relocation, survey documentation) but no archaeological testing (see Table 5-1). Archival research only was requested for 41CO42, 41CO82, and 41DN171, and these sites are discussed in Appendix C. Architectural documentation was requested at 41CO138, 41DN165, and 41DN193 (including archival), and the results are presented in this chapter. Dendrochronology only was scheduled for 41CO112 but the site was destroyed before it could be documented. Site 41DN87, also destroyed, was scheduled for sheet refuse investigations. Both have been dropped from the research design and are not discussed further here. Investigative efforts to locate a reported burial at 41DN92 is discussed in this chapter. The Osburn Cemetery, site 41CO135, was revisited, re-recorded, and is presented in Appendix F. The artifact inventory requested for 41DN250 is presented in a separate report on the Johnson (41DN248) and Jones (41DN250) farms (Lebo 1992).

Twenty-one historic sites received limited testing or testing-level investigations only. Limited testing focused on the excavation of 10 to 30 shovel test pits or 50x50-cm units on a systematic grid, while testing involved the excavation of 20 to 50 units to recover information about site size, age, function, integrity, and potential National Register of Historic Places (National Register) eligibility. The number of units dug at each site was determined by site size and integrity.

Each site description is structured to provide both a rapid overview of the site, as well as detailed site information. General site data are encapsulated in a table format at the beginning of each description, including information about USGS map quad, elevation, soils, scheduled investigations, additional investigations, site type and age, and recommendations for further work. Following this, a detailed discussion is presented that provides information on site location, surface and subsurface features, site size, site age, previous and current research, site integrity, adverse impacts, potential research significance, and finally recommendations based on potential National Register eligibility.

Site locations and descriptions are based on USGS and historical maps, and field observations. Historic maps used during the testing phase include a 1909 map of Cooke County, including the western edge of Grayson County (Figure 6-2); a 1909 U.S. Geological Survey map of Grayson County (Figure 6-5); a 1918 Denton County Soils map (Figure 6-4); a 1936 Cooke County highway map (partially revised to 1947) (Figure 6-3); a 1936 Denton County highway map (Figure 6-3); and six USGS topographic map quads (Collinsville, Gainesville South, Green Valley, Mountain Springs, Pilot Point, and Valley View). These maps were used to help locate sites and determine when identified sites were occupied.

Elevation above mean sea level (amsl), and topography are determined from the USGS maps and survey observations. Soil association is generalized, based on information provided in Soil Survey of Cooke County, Texas (Putnam et al. 1979), Soil Survey of Denton County, Texas (Ford and Pauls 1980), and Soil Survey of Grayson

County, Texas (Cochran et al. 1980). Cultural affiliation is based on archival, architectural, and artifact data. Recommendations are based on site age, integrity, research potential, and potential eligibility to the NRHP (see Site Significance Section for criteria).

Scheduled investigations include all tasks requested for each site in the Scope of Work. In contrast, additional investigations include all tasks added during the 1986-1987 field season after consultation with the Corps. These additional tasks included primarily archival (deed/title chain) and architectural documentation, which were conducted to aid in interpreting the archaeological record. These tasks were particularly important at sites that had been impacted by construction or vandals before fieldwork began, and where portions of the archaeological or architectural remains had been severely disturbed or lost.

The field methods and results are presented by task, including archival research, architectural documentation, dendrochronology, and archaeological excavation. Site integrity and adverse impacts were determined by field observations. Impacts include shoreline erosion, wave action, inundation, erosion, and removal.

Archival research primarily focused on reconstructing the deed/title chain for each site, while architectural documentation included both verbal descriptions of all structures at a site, and detailed floorplans and elevational drawings for significant structures. The architectural drawings included in this chapter are field drawings. Only a sample of the drawings produced for each site is included. The original architectural fieldnotes and drawings are on file at the IAS, UNT.

Dendrochronology involved obtaining samples from log buildings, which could be used to determine cutting dates based on tree rings. Samples were tagged, cut, and sent to Dr. Malcolm Cleaveland at the University of Arkansas for analysis. The dendrochronology results are presented in Appendix G and discussed in Chapter 11.

Archaeological investigations included a variety of methods designed to maximize data recovery. These methods included: (1) excavation of shovel test pits, (2) excavation of 50x50-cm units on a systematic 4-, 8-, or 16-m grid, (3) isolated 1x1-m units, (4) backhoe trenches, and (5) magnetometer surveys. The specific method(s) used at each site is presented in each site description.

Feature and artifact descriptions are based on field observations and/or laboratory analysis. Mean beginning dates (MBD) were obtained for each historic site based on three artifact categories, including refined earthenwares, stonewares, and bottle glass. Separate MBD values were obtained for each category, as well as a combined value. MBD values were obtained by summing the beginning date (popularity date) for each diagnostic artifact (by category) and dividing by the number of artifacts in that category. The formula used is:

$$\text{MBD} = \frac{\text{SUM } (xi \ldots xn)}{N}$$

Mean beginning dates were calculated instead of median dates because they are not influenced by how long a type was popular or available. The beginning dates assigned to each type are popularity dates based on Moir (1982), rather than manufacturing dates. The combined MBD values were used as reasonable estimates for initial occupation and were correlated with archival and architectural data. Variability occurred among the MBD values obtained for different artifact categories. This variability is the result of differences in the accuracy with which we currently are able to date specific artifact types.

Determination of potential research significance was based on three aspects of the National Register criteria: (1) historic context (e.g., site age, function, and integrity), (2) ability to yield significant new information, and (3) ability to address major research questions (see Chapter 5). Sites that exhibited potential were ranked from low to good, and were recommended for more intensive investigation. Sites that did not meet National Register eligibility were not recommended for further work.

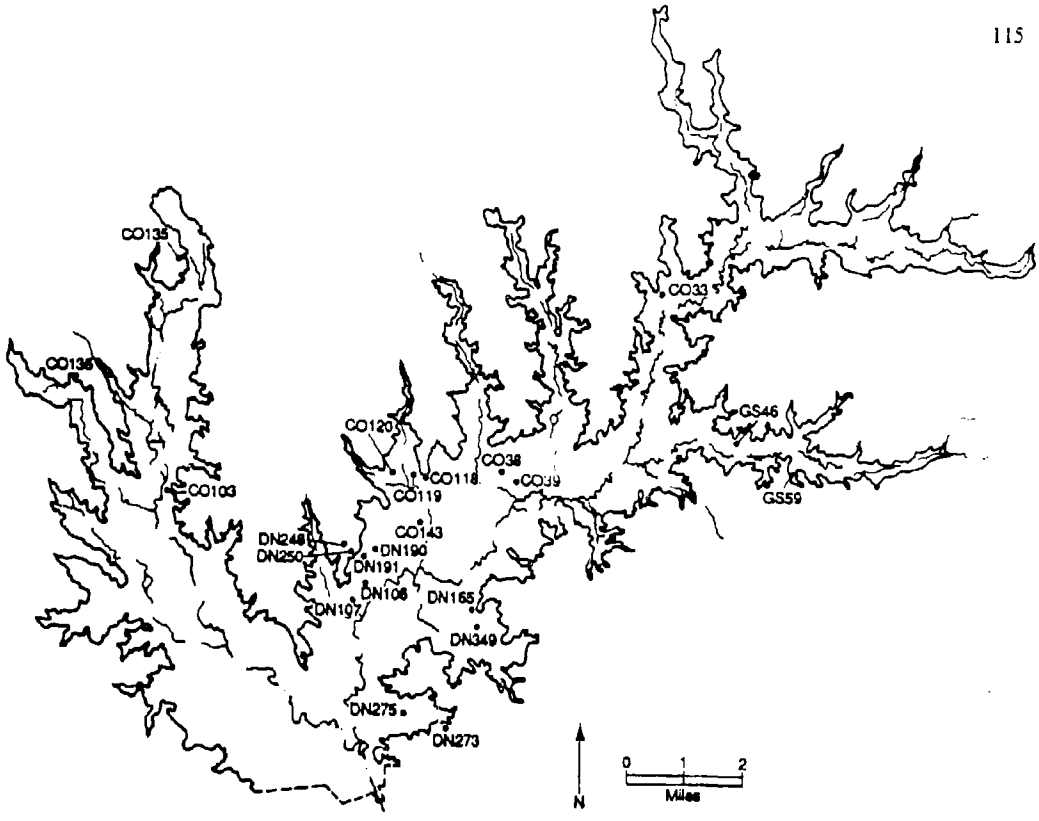


Figure 7-1. Locations of the historic limited testing and testing sites.

41CO33

Map Quad	Pilot Point 7.5''(1961), #3396-233
Elevation	643' amsl
Scheduled Investigations	Limited testing, archival, dendrochronology
Additional Investigations	Architecture
Soil Association	Aubrey fine sandy loam
Cultural Affiliation	Historic (20th c. to recent)

Description: The site is characterized by a partially collapsed board and batten dwelling, a collapsed cellar, a well, a log outbuilding, and a mobile home trailer (Figure 7-2). The dwelling is currently being used for hay storage. The cellar depression is 3x2 m and is situated in the backyard, 8.5 m west of the house. The well has been capped, and the log outbuilding is largely collapsed. The mobile home trailer, recently removed, was located about 20 m southwest of the house.

The current site area measures approximately 80 m east-west by 80 m north-south based on surface features and the sheet refuse deposits. Recent debris, including items from the mobile home trailer were found in the area

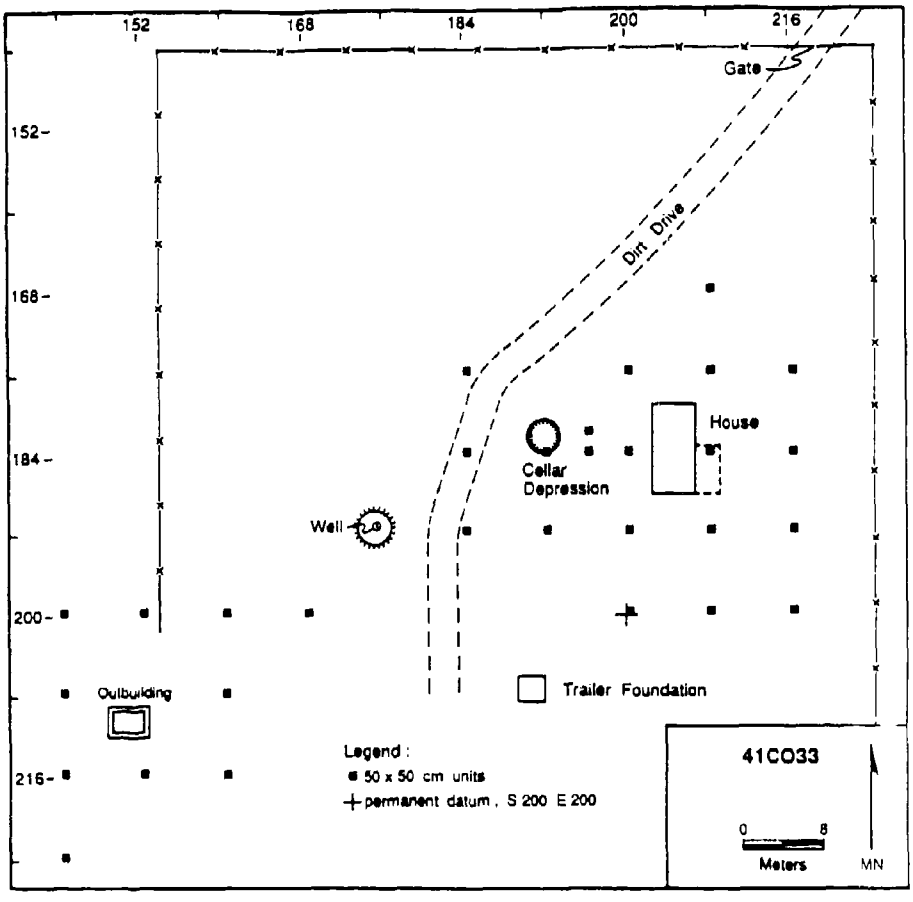


Figure 7-2. Site map of 41CO33.

southwest of the house. No major surface or subsurface disturbances were found in any of the areas tested.

Previous Investigations: The site was recorded in 1981 and revisited in 1985. No shovel test pits were excavated, and no surface collection was made although surface artifacts were noted. The site was recommended for mitigation (Skinner et al. 1982a:8-40) because it contained a log component, and because of the folk architecture represented by the house. Further research was recommended to determine site age, and the original function of each building, including documentary photographs and site-specific investigations.

Archival Investigations: 41CO33 is located on a 50 acre parcel of the John Frizer survey and was initially occupied in 1905 and serially occupied until 1984. An overview of the chain of title is provided in Table A-1.

Architectural Investigations: Architectural descriptions were made for the dwelling and log outbuilding. The floorplan, east elevation drawing, and the front door details for the dwelling are provided in Figure 7-3.

Dwelling: The dwelling is a single-room log house with a board and batten exterior and assigned a date of 1880-1920 (Skinner et al. 1982a). It sits on sandstone piers and has a porch on the east side. A board and batten shed was added to the north side, probably after 1930, changing the floorplan to a double pen. No piers or foundation occur under the addition.

The floor and ceiling of the original room were 0.5x3-inch tongue and groove hardwood running north-south. The walls were painted aqua green over an earlier fuchsia color. The base boards were 0.75x6-inch boards painted to match the walls. The door frames were set out from the wall 7 cm into the room. The floor of the addition was tongue and groove 0.5x6.0-inch hardwood. The ceiling was 0.5x10-inch planking, and both the floor and ceiling boards ran east-west. The walls were covered with wallpaper.

Outbuilding: The log crib was constructed with "V" notching and described as a "log room", with no chinking or roof. Nine logs remained on the south wall, and eight on the east, west, and north walls. The building was set directly on the ground, and no evidence of former piers were noted. Wire nails were evident within the doorway, and included 6, 8, and 10 penny sizes. The structure was extremely deteriorated, the logs had dried and cracked, and the roof was no longer present. It was not possible to determine the original height of the crib or if it had a floor at one time. The original function of the structure could not be determined, but based on its size, location, and construction, it was probably a small outbuilding.

Dating: The original dwelling was probably constructed near the turn of the century, and the addition was built sometime in the 1920s or 1930s. The log outbuilding yielded a dendro cutting date in the 1890s, but may have been built after 1905 when the property was conveyed to J. M. Tipton.

Significance: Not significant.

Recommendation: No further documentation.

Dendrochronological Investigations: Three logs from the outbuilding had a complete terminal ring, and two logs provided a probable cutting date in the mid-1890s (see Table J-5). This date is about 10 years earlier than the date suggested by the archival data for when the Tiptons conveyed this property to their son. This suggests that he may have lived here for awhile before the land was transferred into his name. The Tiptons acquired the property in 1886.

Testing Method: Thirty 50x50-cm units were excavated using an 8-m grid in the dwelling area, with a second 8-m grid around the log outbuilding. Three units were judgmentally placed behind the house to examine a possible trash deposit near the cellar.

Testing Results: An overview of the assemblage recovered during the testing phase is presented by artifact category in Table 7-1. These data indicate a low-density sheet refuse midden was present in the house area. Artifact counts averaged under 10 items per unit. High-density units contained building material, window glass fragments, and tin can fragments (Units 9, 18, 19, 21, 26, and 30), and were located 4 to 10 m from the dwelling. Two units, 18 and 30, were located near the cellar. The ceramics and bottle glass yielded a mean beginning date of 1917. No handmade brick was found, the chimney was entirely machine-made brick, and only two of the 85 nails found in the excavation units were machine cut. Few ceramics were found, and all were located within the house area. Bottle glass sherds were common in the house area, but occurred in only one unit in the outbuilding area. Architectural remains were common in both areas.

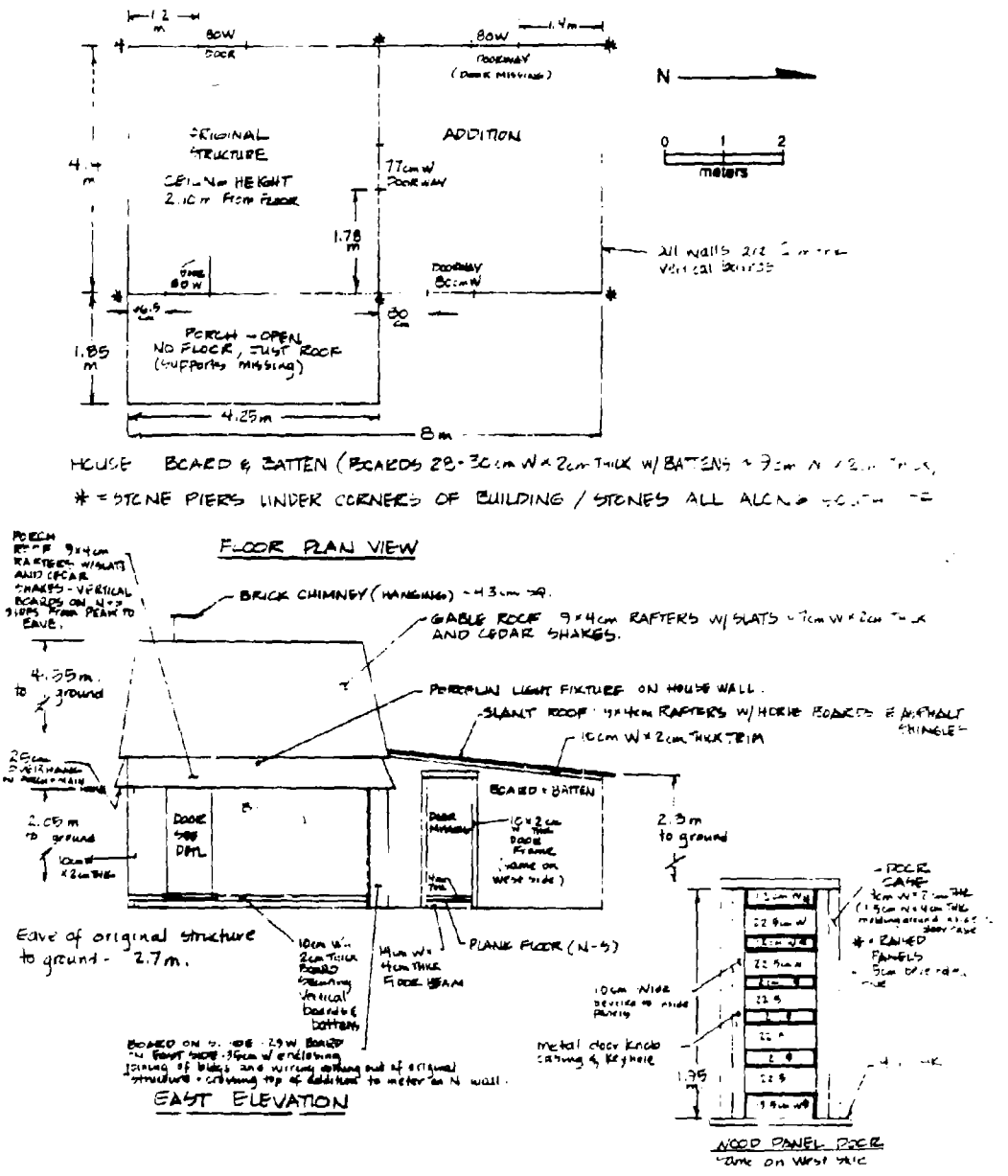


Figure 7-3. Field architectural drawings of the dwelling at 41CO33. (a) floorplan, (b) east elevation, (c) door detail.

Faunal Remains:

TOTAL BONE = 2

Identified fauna (n=2)
Sylvilagus floridanus (cottontail) - 1
Sus scrofa (pig) - 1

An unburned mandible fragment of a yearling pig and an ilium fragment of a cottontail are the only faunal remains recorded from this investigation. The young pig mandible suggests that hog raising and/or home butchering occurred on the premises. The cottontail bone suggests supplementation of the meat diet with wild game.

Table 7-1
Artifact Assemblage from 41CO33

Artifact Category	N	%
Semi & Coarse Earthenware	4	0.86
Refined Earthenware	1	0.22
Bottle Glass	84	18.10
Table Glass	33	7.11
Unid. Glass	5	1.08
Window Glass	25	5.39
Machine-Cut Nails	2	0.43
Wire Nails	83	17.89
Building Material	128	27.59
Personal Items	1	0.22
Thin & Heavy Metal	85	18.32
Household Items	4	0.86
Machine & Wagon	1	0.22
Tools	1	0.22
Misc. Other	7	1.51
Total	464	

Summary: This site was originally recommended for testing/mitigation because the architectural component was identified as potentially significant (Skinner et al. 1982a:8-40). On the other hand, the archaeological integrity was recorded as poor and research significance was designated as none (Skinner et al. 1982a:A5-18). The results of the test excavations and architectural documentation indicate that this site does not contain significant architectural or archaeological information. The farmstead was initially occupied near the turn of the century, contains a low density sheet refuse deposit associated with several occupations (house and mobile home trailer), and was occupied until recently. Disturbed deposits occur near the cellar and the mobile home trailer area.

41CO38

Map Quad	Pilot Point 7.5' (1961), #3396-233
Elevation	625' amsl
Scheduled Investigations	Limited testing, archival, architecture
Soil Association	Callisburg fine sandy loam
Cultural Affiliation	Historic (1880-1920)

Description: Site 41CO38 was characterized by a standing board and batten, one-and-a-half story, double pen dwelling with a central chimney, and two collapsed log outbuildings (Figure 7-4). The outbuildings were situated 50 m and 55 m southwest of the house, respectively. No well or cellar was found associated with the site.

Previous Investigations: The site was recorded in 1981 and revisited in 1985. It was recommended for mitigation, including measured drawings, HABS photographs, and site-specific historic research (Skinner et al. 1982a:8-42). The site description was incorrect, and included data from another site, which stated that "...on the site are the ruins of a log cabin, a stone cellar, and a stone-lined well....The collapsed cabin was constructed of roughly-hewn square logs with various notch types....Mitigation is recommended for this site as part of the log culture complex and multi-story house investigations" (Skinner et al. 1982a:8-42). With the exception of the one-and-a-half story house, none of these structures occurred at 41CO38. The house was also recommended because it was the only one-and-a-half story house in the project area that was not finished in clapboard, which suggested that it may be older than similar dwellings in the reservoir. In addition, it exhibited several non-traditional construction features, including the close spacing of the front doors, and the placement of the chimney in a rear, central position.

Archival Investigations: The site is located on a 100.33-acre parcel, including part of the W. A. J. Finch and Daniel Oxford surveys. An overview of the chain of title is provided in Table A-3. The site was serially occupied ca. 1892 to 1941, at which time the site was probably abandoned. No evidence of electricity or other post-1940s improvements or activities (e.g., trash dumping) were visible.

Architectural Investigations: An architectural description was made for the dwelling. The location of the collapsed dwelling is shown in Figure 7-4.

Dwelling: Because of poor integrity, only approximate measurements were obtained. The original floorplan was a double pen. An addition was later added to the west side. The foundation of the house, and the addition consisted of 12-cm square, hewn oak logs set on sandstone piers. The dwelling had a board and batten exterior, and a gabled roof of corrugated metal placed over the original roof of cedar shingles. The addition was also board and batten, with a gable roof that began under the eave of the main house, and probably sloped to 2.4-m above the ground on the west side. The original roof was cedar shingles, which were still visible under a more recent, asphalt shingle roof. A single, hanging chimney was present and was located 3.55-m south of the north wall on the west side of the main house. It had collapsed and was scattered among the house debris. It was constructed of machine-made bricks, with mortar in between. No makers' marks were found on any of the bricks. The floor boards ran north-south and were 5.75-inch tongue and groove. The joists were pre-1930 6-inch boards, with at least one of the joists in the center being supported by a wooden post. The side boards were 2-cm thick, and they alternated between 24 and 32-cm wide. The flooring appears to have replaced the original flooring and was put in after 1930. The sills on the main house were hewn, rectangular 14x10-inch boards.

Dating: The architecture correlates with the archival and archaeological data that indicate that 41CO38 was initially occupied near the end of the nineteenth century and was abandoned by the 1940s. The dwelling appears to have undergone at least one episode of modification in the 1930s.

Significance: Not significant.

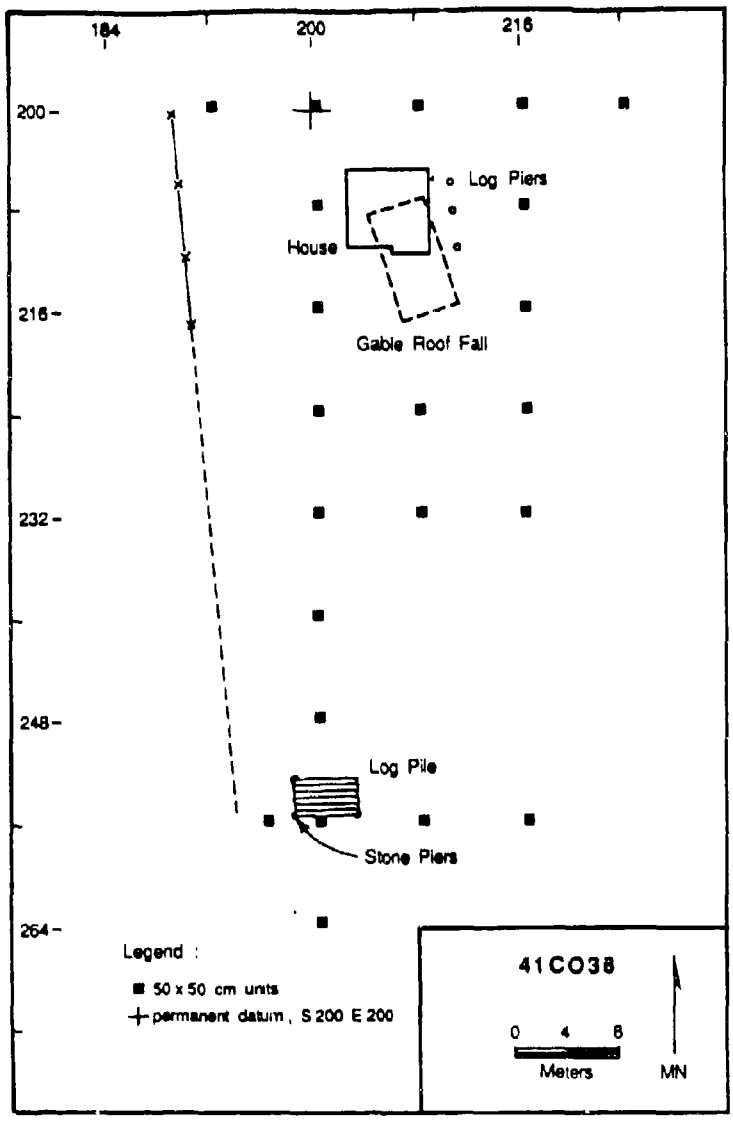


Figure 7-4. Site map for 41CO38.

Recommendation: No further documentation.

Testing Method: Twenty-two 50x50-cm units were excavated on an 8-m grid. Six units were dug near the collapsed outbuildings, while the remainder were placed in the dwelling area. Little cultural material was visible on the ground surface, and no surface collection was made.

Testing Results: An overview of the assemblage recovered during testing is presented by artifact category in Table 7-2. Half of the testing units dug were sterile. Artifact counts averaged under five items per 50x50-cm unit, and high-density units, with greater than 10 items, contained primarily architectural items and tin can fragments. No definable sheet refuse midden was identified.

Table 7-2
Artifact Assemblage from 41CO38

Artifact Category	N	%
Refined Earthenware	1	0.45
Bottle Glass	14	6.36
Table Glass	1	0.45
Lamp Glass	2	0.91
Machine-Cut Nails	1	0.45
Wire Nails	23	10.45
Building Material	86	39.09
Personal Items	1	0.45
Thin & Heavy Metal	62	28.18
Household Items	18	8.18
Machine & Wagon	1	0.45
Misc. Other	10	4.55
Total	220	

Architectural items and tin can fragments accounted for 77% of the assemblage (see Table 7-2). A single refined earthenware, light blue-tinted whiteware, dating ca. 1880 to 1930 was found. Fourteen non-diagnostic bottle glass sherds were found, including 12 clear, one aqua, and one cobalt blue. No diagnostic bottle glass or stoneware sherds were recovered. The architectural material, excluding one machine-cut nail, dated to the twentieth century and included asbestos shingles and siding, and wire nails. Personal items included one button, and household remains included 18 fruit-jar zinc cap fragments.

Wire nails and tin can fragments were the only artifacts found in the outbuilding area, while both domestic items and architectural remains were found in the house area. Tin cans and architectural items exhibited the broadest distribution.

The cultural deposits were extremely shallow, averaging less than 10 cm below ground surface. Planking from the outbuilding was found in several units (Units 4 and 7). No subsurface features were identified.

Summary: Skinner et al. (1982a:A5-18) recorded the archaeological integrity of 41CO38 as poor, and research significance as none. This assessment is further supported by the testing data. The architectural component, recommended for further investigation, was largely gone before fieldwork began. The results of the test excavations and architectural documentation indicate that this site does not contain significant architectural or archaeological information. The farmstead was occupied between the 1890s and 1940s, and contains a very low density artifact deposit.

41CO39

Map Quad	Pilot Point 7.5' (1961), #3396-233
Elevation	610' amsl
Scheduled Investigations	Limited testing
Additional Investigations	Archival, architecture
Soil Association	Callisburg fine sandy loam
Cultural Affiliation	Historic (Late 19th c. to present)

Description: The site was represented by two occupations, with one dating to the late nineteenth century, and the other from the early twentieth century to recent (Figure 7-5 and Figure 7-6). Remains of eighteen structures were present, including a house, house mound, cellar, cellar depression, ten sheds, a pumphouse, chicken coop, barn, and a small mound that probably supported a shed. In addition, two wells and a number of fencelines were present.

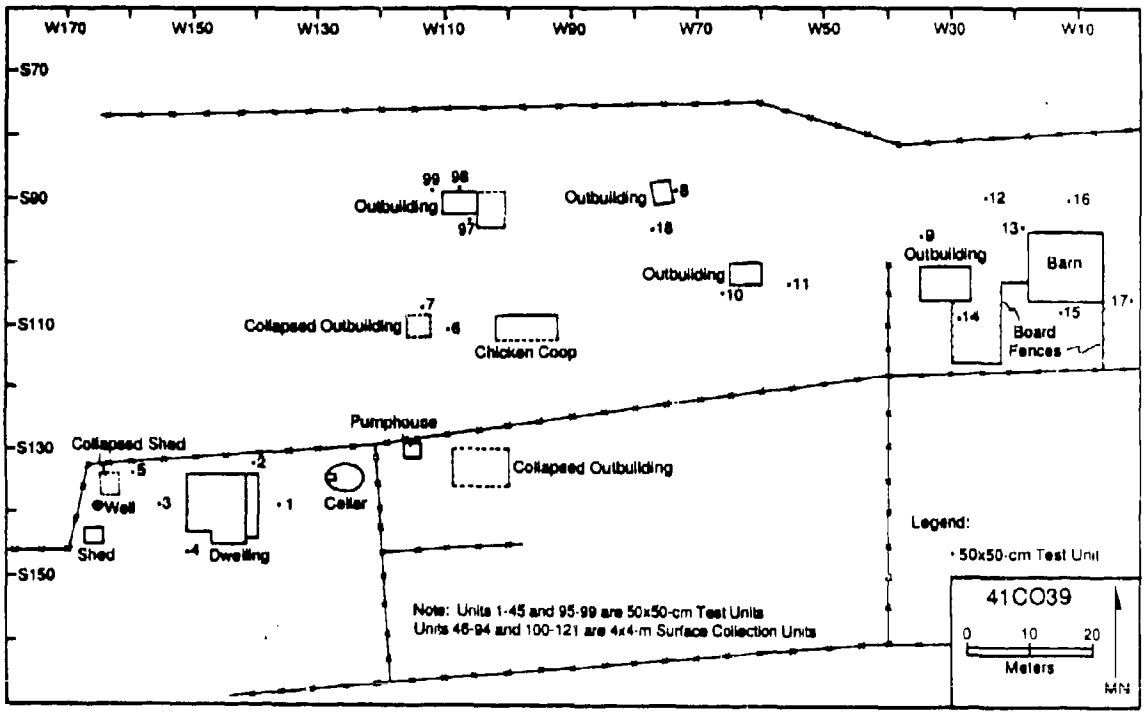


Figure 7-5. Site map for the western dwelling area at 41CO39.

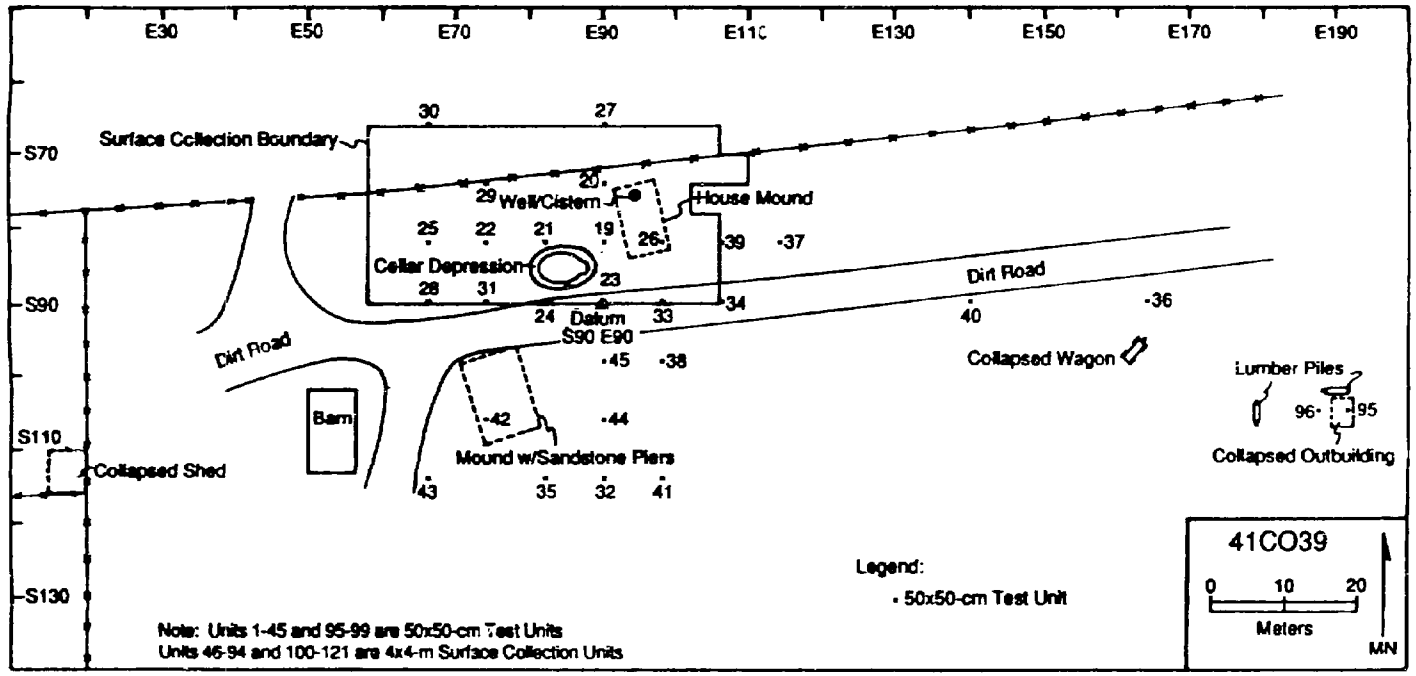


Figure 7-6. Site map for the eastern dwelling area at 41CO39.

The different occupation c· ·nts spatially overlap, and buildings associated with each still remain. The older component is located primarily on the eastern half of the site, but several outbuildings associated with this occupation occur in the western part and were probably used until recently.

Previous Investigations: The site was recorded in 1981. While architectural integrity had been lost, archaeological research potential was recorded as good. The site was recommended for testing (Skinner et al. 1982a:A5-18) to determine National Register eligibility. The site was revisited in 1985, and testing was again recommended to determine eligibility (Ferring 1986).

Archival Investigations: The site is located on a 436.45-acre tract of the William H. Watson (A-1154) survey sold to the Corps by R. H. Dunaway in 1984. Several other farmsteads were also located on this tract (e.g., 41CO132). No archival work was conducted.

Architectural Investigations: Detailed architectural descriptions were recorded for the standing dwelling and large barn. Limited descriptions were made for recent outbuildings, collapsed structures, and insignificant outbuildings. An overview of the major architectural elements of the dwelling is provided in Figure 7-7 and Figure 7-8 and for the barn in Figure 7-9 and Figure 7-10. Floorplans, elevational drawings, photographs, and fieldnotes for all structures are on file at IAS, UNT.

Dwelling: The dwelling was originally built as a Cumberland with two rooms, double doors, and a porch on the east side. The west side has been added to, but appears to also have had double doors, one to each room. The location of the original chimney was not identified. The house dates to the twentieth century. The floors and ceilings were 3-inch tongue and groove, and the walls were horizontal planking. Pine plank (7.0 inch high) base boards were present in both rooms, and the walls were originally covered with wallpaper and newspaper. Newspaper dates of 1920 (south room) and 1929 (north room) were recovered. The ceilings were painted blue.

Additions were made to the house around 1950, at which time a bedroom was added north of the original two rooms, a second bedroom was added to the northwest, and a kitchen west of the original north room. The original south room was divided into two smaller rooms, with the west room being converted into a bathroom. A screened-in porch was added south of the kitchen and west of the original south room. Newspaper dates from the kitchen and northwest room dated 1951. No dates were recovered for the northeast bedroom.

Each of these rooms were finished with sheetrock walls, and linoleum flooring. These modifications were also made to the original rooms. The exterior of the original house was board and batten with a cedar shingle gabled roof. Asbestos siding and asphalt shingles were added to the dwelling when it was modified, and the board and batten walls and cedar shingles of the original dwelling were also covered. A single chimney was identified in the interior wall of the original south room. It was a hanging chimney constructed of machine-made brick and was probably added when the house was modified.

Outbuildings: Buildings #2 (collapsed shed) and #3 (cinderblock shed) were constructed after 1930, and reflect outbuildings associated with the later occupation. Building #4 was a cellar also associated with the more recent occupation. It was constructed with sandstone that was capped with cement and earth-covered. It is vented, and the entry was located on the west, facing the house.

Building #5 is a pumphouse. Building #6 was demolished and its location was determined based on data provided from the survey forms. It was probably a large shed. Both dated to the more recent occupation. Building #7 was a demolished shed. Building #8 was a double pen chicken coop with a shed addition. It dated to the recent component.

Building #9 was a large, collapsed shed constructed with hewn log sills set on sandstone piers. The logs were notched with half lap and pegged in the corners. The floor was tongue and groove, and the original roof was cedar

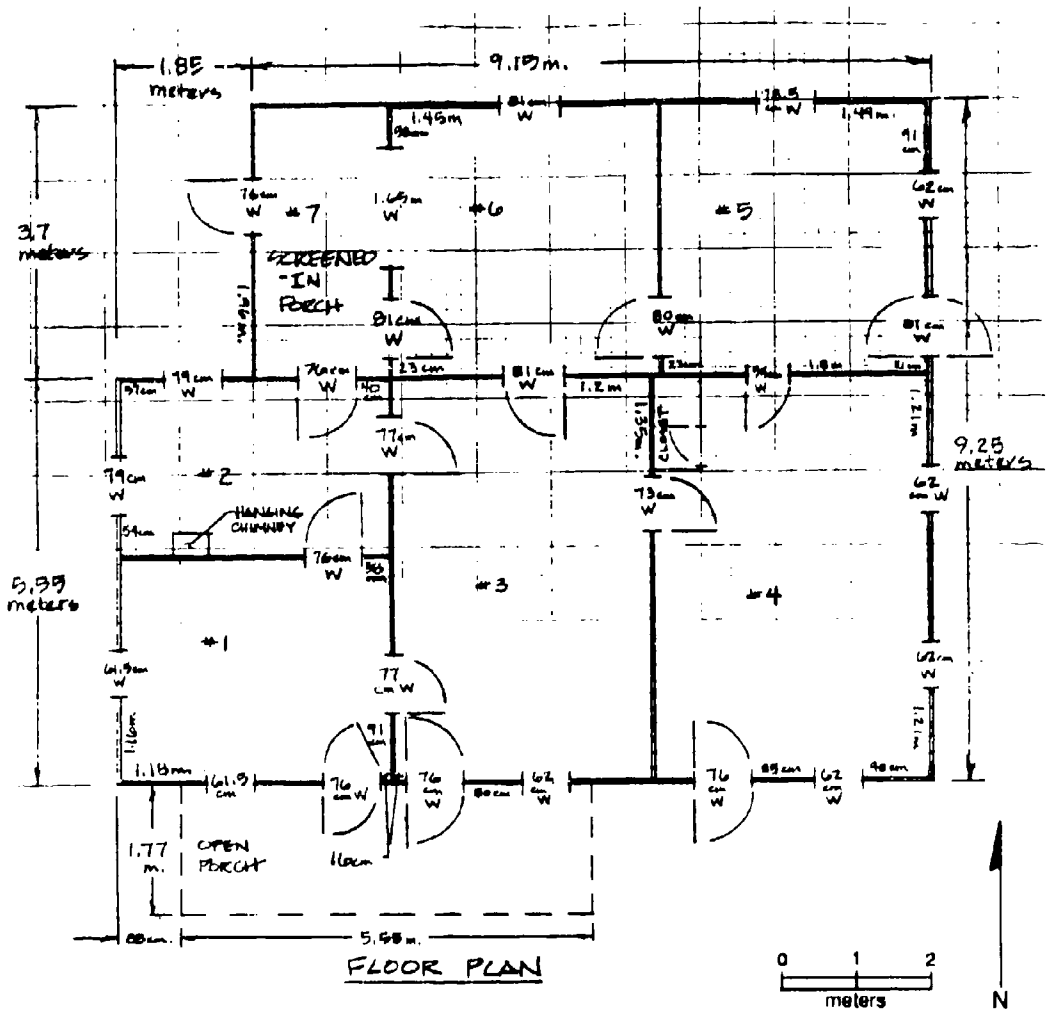


Figure 7-7. Field architectural floorplan for the standing dwelling at 41CO39.

shakes that were later covered with asphalt shingles, and finally with corrugated metal. The walls were board and batten. The lumber used in the siding and rafters pre-date 1930, and the logs and 90%+ frequency of machine-cut nails indicate this structure was probably built in the late nineteenth century, and was associated with the original occupation. An addition was built on the east side and may actually have been a separate building. It was also a shed with log support poles in the corners, vertical board walls, and gable roof.

Building #10 was a garage, which was constructed of post-1930s lumber. Building #11 was a double pen shed with tongue and groove flooring and horizontal tongue and groove framing. The building was set on sandstone piers, and had a gabled roof. All the lumber dates post-1930, and the end gables are probably post-World War II. They are constructed of plywood. This structure was probably used for grain storage based on the presence of elevated wood flooring.

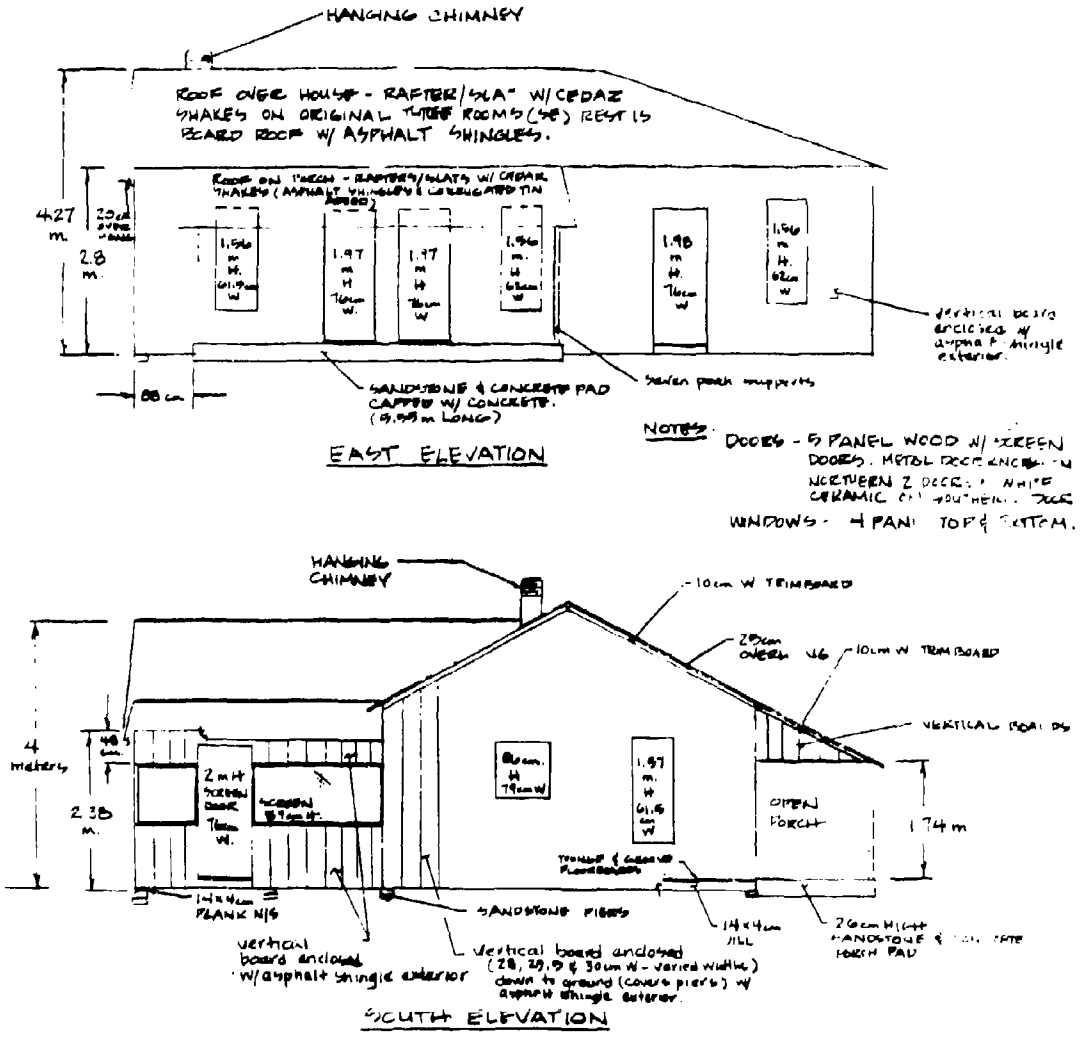


Figure 7-8. Field architectural drawings of the standing dwelling at 41CO39. (a) east elevation, (b) south elevation.

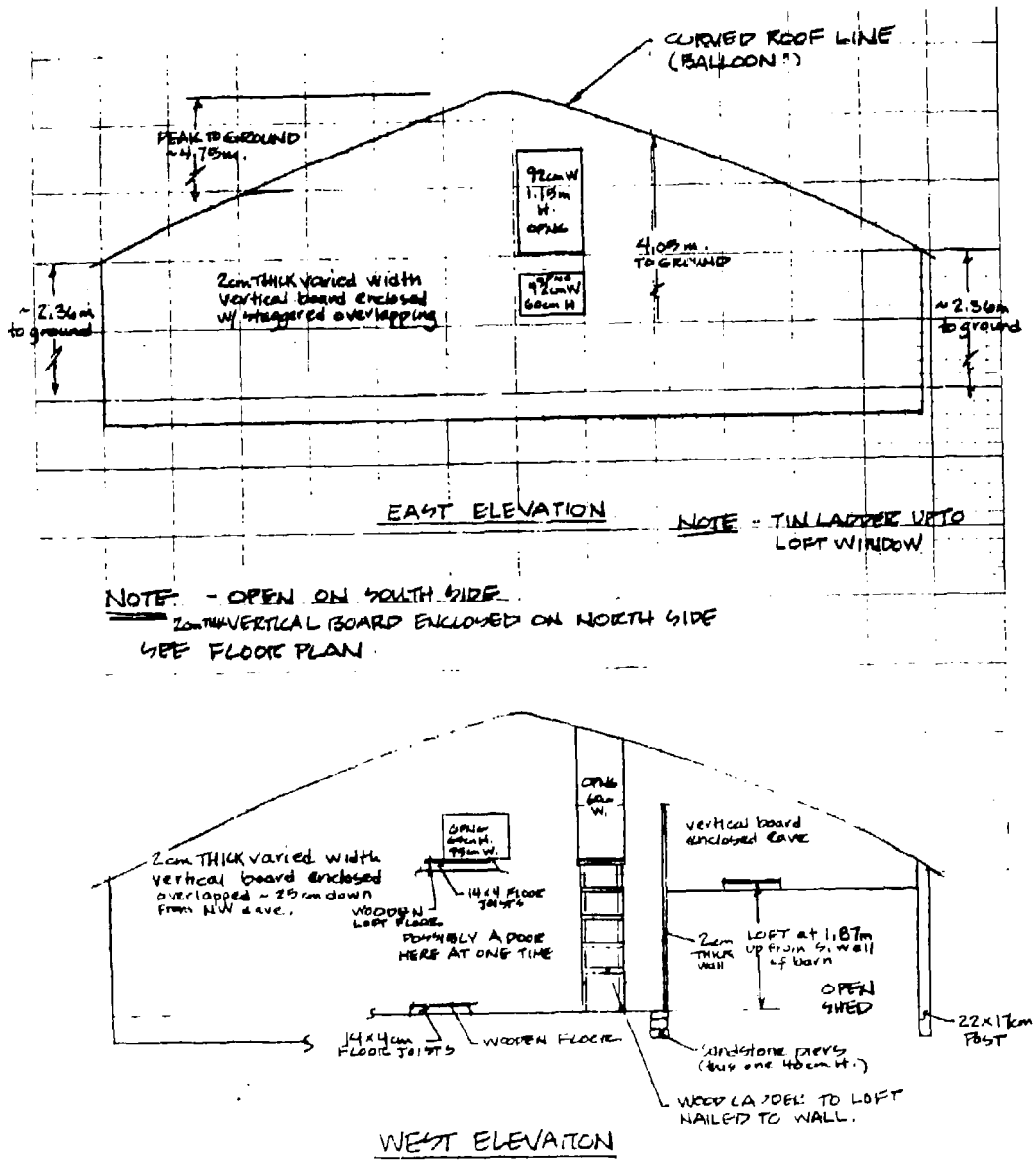


Figure 7-9. Field architectural drawings of the standing barn at 41CO39. (a) east elevation, (b) west elevation.

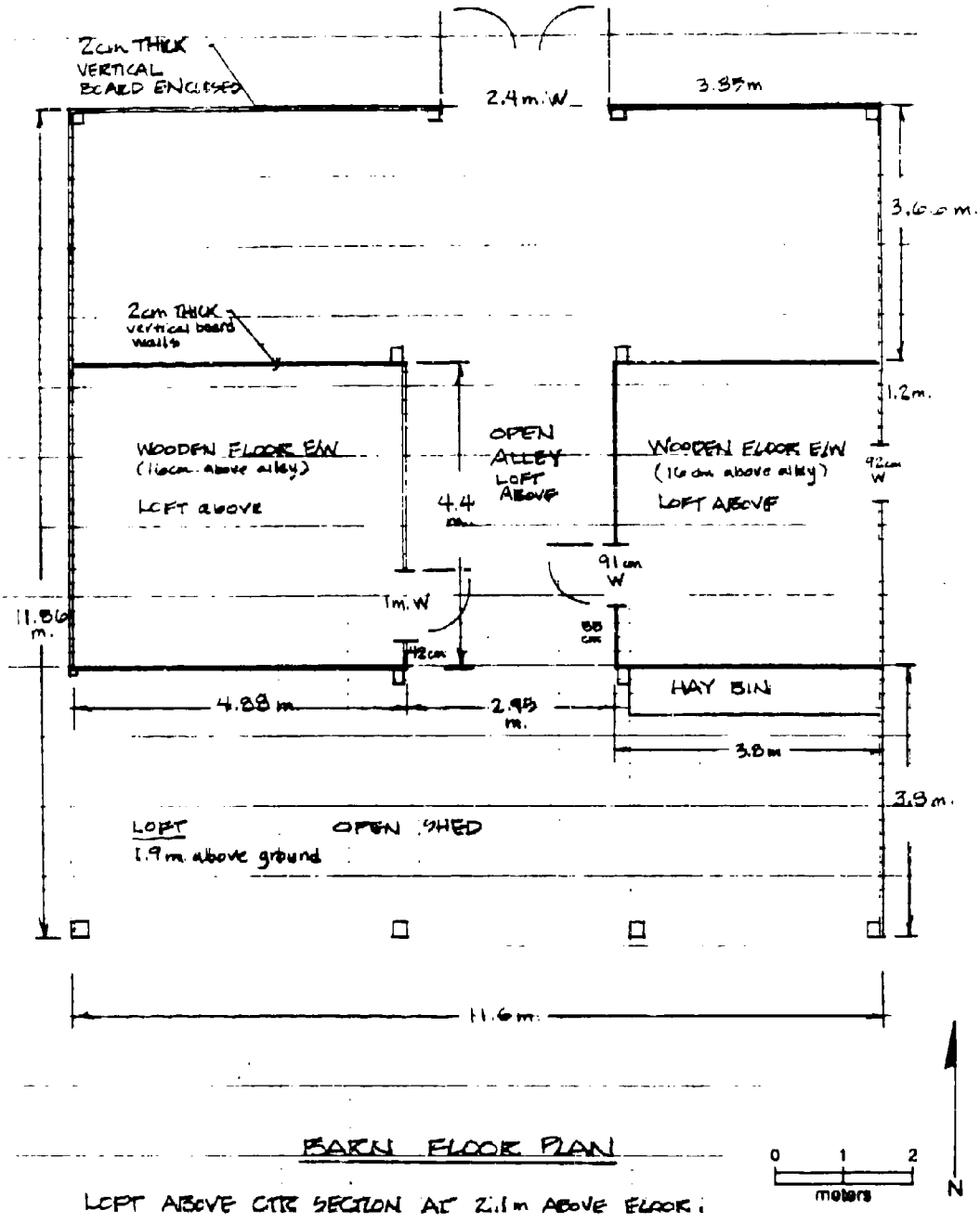


Figure 7-10. Field architectural floorplan for the standing barn at 41CO39.

Building #12 was a shed that was constructed in two building episodes. The original shed was a single pen with a dirt floor, and closed on all four sides. The southern pen was added and was open on the south. Both sections were set on sandstone piers, and log support posts were present on the south wall. The walls were vertical planks, and the north roof was cedar shakes, and both are currently covered with corrugated metal sheeting. The south pen dates after 1930, and the north probably dates earlier, but still twentieth century.

Building #13 was a balloon frame barn that appeared to have been constructed in three sections: two sections on the north and south are shed additions. The north wall consisted of four unhewn posts. Square oak posts were used on the other three exterior walls. The north pen was enclosed, the middle had a double pen floorplan with a loft above each pen and a breezeway through the center. These rooms had wooden floors and were used for grain storage. The southern section was an open shed. A hay bin was located on the north wall of the southern section. No machine-cut nails or hewn logs were present. The barn was built after 1900, and much of the roofing indicated post-1930s materials.

Building #14 was a collapsed shed with a corrugated metal roof, 2x4-inch framing, wire nails, and post-1930s sawn lumber. Building #15 was a collapsed cellar associated with the older house. Building #16 was the house mound associated with the older component. Sandstone piers were still evident in this feature. Building #17 was a small mound with sandstone piers that appeared to represent the former location of a small outbuilding. Building #18 was constructed using unhewn logs with half lap notching sandstone piers. Only three logs from the sills remain.

Dating: The original dwelling was located on the eastern extent of the site and was probably built in the late nineteenth century. It was represented by a house mound and scattered piers. The second house was constructed early in the twentieth century, ca. 1920, and was modified around 1950. It continued to be occupied until recently.

Most of the outbuildings were built during the early twentieth century and were modified after 1930. They were associated with the more recent occupation. Only buildings #9 and #18 appear to definitely date to the earlier component. The collapsed cellar and well on the eastern portion of the site also date to this period.

Significance: The older component has been largely removed or disturbed by the more recent component, which is not significant.

Recommendation: No further documentation.

Dendrochronological Investigations: None.

Testing Method: Fifty-eight 50x50-cm units were dug during testing. Units were judgmentally placed near structures and surface features in the western site area (see Figure 7-5), and on a systematic 8-m grid in the eastern portion (see Figure 7-6). Seventy-four contiguous 4x4-m units were systematically surface collected in the eastern house area.

Testing Results: An overview of the assemblage is presented by artifact category in Table 7-3. Four units contained non-sheet refuse deposits (see Figures 7-5 and 7-6), including two 50x50-cm units (26 and 44) and two 4x4-m units (55 and 94). Units 26 and 55 yielded bottle glass counts of 253 and 266, respectively, while Unit 44 contained 459 thin metal/tin can fragments, and Unit 94 contained 87 miscellaneous recent items/fragments.

Excluding these aberrant units, the artifact density within the sheet refuse midden associated with both house areas was low. Eleven units were sterile (19%), while the mean number of artifacts found in units containing materials was 13 items. Fourteen of the 4x4-m surface collection units were sterile (19%), and the mean number of artifacts from units with material was seven items.

Table 7-3
Comparison of Artifact Categories by Component at 41CO39

Artifact Category	East Area w/ Abberant Units N	%	East Area w/o Abberent Units N	%	West Units N	%	Total N	%
Refined Earthenware	63	2.77	42	5.00	4	3.31	67	2.79
Stoneware	28	3.31	24	1.05	4	3.31	28	1.17
Porcelain	5	0.22	4	0.48			5	0.21
Bottle Glass	738	32.40	193	22.95	21	17.36	759	31.64
Table Glass	11	0.48	6	0.71			11	0.46
Lamp/unid. Glass	45	1.98	10	1.19	1	0.83	46	1.92
Window Glass	105	4.61	84	9.99	4	3.31	109	4.54
Machine-Cut Nails	3	0.13	3	0.36			3	0.13
Wire Nails	156	6.85	61	7.25	16	13.22	172	7.17
Handmade Brick							0	0.00
Machine-Made Brick	108	4.74	47	5.59			108	4.50
Building Material	55	2.41	44	5.23	5	4.13	60	2.50
Personal Items	8	0.35	7	0.83			8	0.33
Thin & Heavy Metal	652	28.62	113	13.44	19	15.70	671	27.97
Household Items	15	0.66	12	1.43			15	0.63
Machine & Wagon	33	1.45	27	3.21			33	1.38
Horse & Stable Gear	9	0.40	9	1.07			9	0.38
Ammunition	5	0.22	3	0.36			5	0.21
Electrical Items	1	0.04	1	0.12			1	0.04
Misc. Other	242	10.62	154	18.31	47	38.84	289	12.05
Total	2278		841		121		2399	

A comparison of the two house areas indicates that the mean number of artifacts in 50x50-cm units in the eastern, older dwelling area was 16, while it was only eight in the western house area. These differences reflect the larger number of units excavated in the older house area relative to outbuildings, and the reverse in the western house area. Artifact densities were lowest near outbuildings in both areas.

Bottle glass was the most frequent artifact category recovered, accounting for 34.98% (see Tables 6-3). However, 68.46% of the bottle glass came from Units 26 and 55, which contained modern, nonsheet refuse bottle glass deposits. Thin metal, predominately tin can fragments, accounted for 31.01% of all artifacts recovered from the site, while architectural items totalled 21.37%. The remaining categories, including ceramics, personal items, household-related and farm-related items comprised only 12.64% of the total recovered assemblage.

A comparison of the eastern (older) house area and the west, more recent house area is shown in Table 7-3. These data indicate that a wider range of material was found in the older house area, but three artifact categories, bottle glass, thin metal/tin can fragments, and miscellaneous items (e.g., recent trash), predominated both components.

The refined earthenwares yielded a mean beginning date of 1877, while the stonewares yielded a date of 1882. The diagnostic bottle glass provided a date of 1904, and the architectural material also dated primarily to the twentieth century. Nineteenth century architectural items were found associated with several outbuildings (see architectural description), but machine-made brick and wire nails were used in both dwellings.

No subsurface features were identified, and the cellar was not tested. The cultural deposits were extremely shallow, averaging less than 10 cm below ground surface. Ten units contained deposits to 15 cm, two extended to between 20 and 30 cm, and one, Unit 44, had material in level 4 (40 to 50 cm). Unit 44 was located 8 m east of the small mound with sandstone piers situated directly south of the old house and cellar. Two units with material in level 2 (10-20 cm) were located in the newer house area, including one located off the southwest corner of the house and one at the northwest corner of the barn; and one was situated on the west side of the collapsed outbuilding in the east site area. The remaining units (n=10) containing material in level 2 were clustered along the S90 line and the north edge of the dirt road in the older house area.

Erosion has severely impacted the site, particularly in the older house area and north of the barn. Cattle grazing, ground slope, and roads have intensified this erosion. The systematic surface collection was located in a large exposed area in the older house area.

Faunal Remains:

TOTAL BONE = 11

Unidentified bone (n=11) all unburned

These bones all appear to be from a large mammal and may represent a dead cow or pig.

Summary: The results of the test excavations and architectural documentation indicate that this site does not contain significant architectural or archaeological resources eligible for the NRHP. The farmstead was serially occupied, and based on the artifact assemblage and extant architecture, the site was occupied from the ca. 1880s to present. The oldest structures include several outbuildings in the western site area and the outbuilding in the southeastern site area. Low density sheet refuse deposits occur in the older dwelling area, but are largely absent in the newer house area. They are shallow in both areas and have been affected by erosion, particularly in the older house area.

41CO103

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	600' amsl
Scheduled Investigations	Limited testing
Soil Association	Aubrey fine sandy loam
Cultural Affiliation	Historic (post-1900 to recent)

Description: Structures at the site included a house, barn, garage, two outbuildings, and a well (Skinner et al. 1982a:8-43). The house had burned and was partially removed before testing began. All of the outbuildings had collapsed, and the site was severely impacted by recent dumping activity. No architectural or surface integrity remained (Figure 7-11).

Previous Investigations: The site was recorded in 1981 (Skinner et al. 1982a) and was revisited in 1985 (Ferring 1986). No surface or subsurface testing was conducted.

Archival Investigations: None.

Architectural Investigations: None. Data collected by ECI (1982a:8-43) indicated that the dwelling was an Elizabethan Revival planbook style dwelling in a basic "T" formation. The barn was board and batten. The other

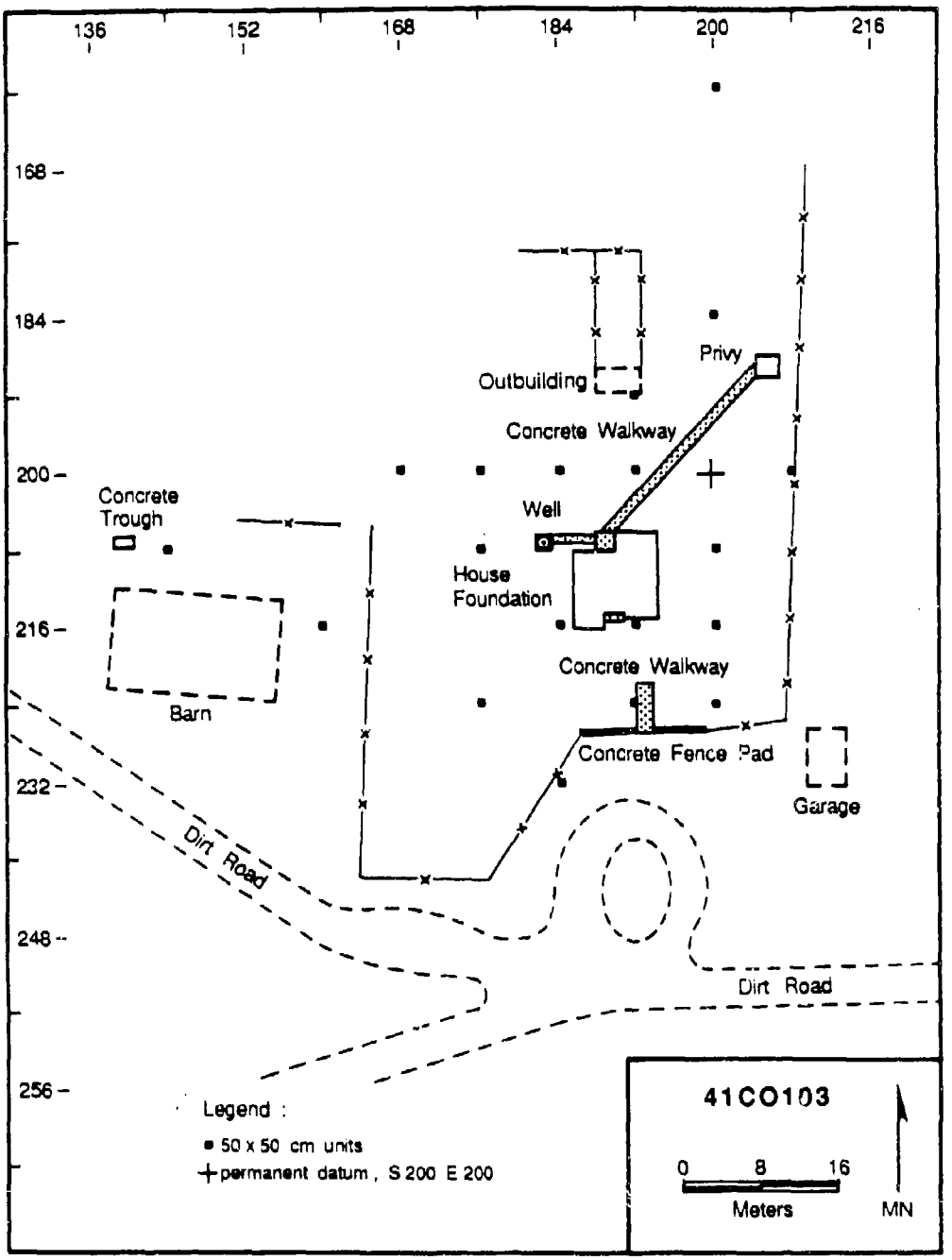


Figure 7-11. Site map for 41CO103.

outbuildings included an outhouse (privy), a garage, and a shed. A concrete water trough was located north of the barn, and a concrete walkway ran from the house to the outhouse, and from the front of the house to the front drive.

Dating: Early twentieth century to recent.

Significance: Not significant.

Recommendation: No further documentation.

Dendrochronological Investigations: None.

Testing Method: Nineteen 50x50-cm units were excavated on an 8-m grid near the dwelling and a 16-m or 24-m grid in the outbuilding areas.

Testing Results: The cultural deposit is bac disturbed, containing material associated with occupation of the site and recent debris (Table 7-4). The deposit was moderate, generally extending between 10- and 20-cm below the surface. No subsurface features were found.

Table 7-4
Artifact Assemblage from 41CO103

Artifact Category	N	%
Refined Earthenware	9	3.20
Stoneware	1	0.36
Porcelain	5	1.78
Bottle Glass	74	26.33
Table Glass	6	2.14
Unid. Glass	2	0.71
Window Glass	41	14.59
Machine-Cut Nails	13	4.63
Wire Nails	75	26.69
Handmade Brick	1	0.36
Machine-Made Brick	1	0.36
Building Material	24	8.54
Personal Items	6	2.14
Thin & Heavy Metal	12	4.27
Household Items	4	1.42
Machine & Wagon	1	0.36
Ammunition	2	0.71
Electrical Items	1	0.36
Misc. Other	3	1.07
Total	281	

Architectural remains associated with the burned dwelling and collapsed outbuildings accounted for 55.17% of the assemblage and was scattered across the site. High-density units, Units 8 and 9, were located at S192 E192 and S216 E192, respectively. Both contained a high percentage of architectural items, and Unit 9 contained 32% of the bottle glass from the site (Table 6-6).

Because of the disturbed context, the assemblage cannot be reliably dated, and spatial analysis is not warranted. The refined earthenwares included sherds that pre-dated the original occupation, while the single stoneware sherd, and the five diagnostic bottle glass sherds dated to the twentieth century.

Faunal Remains:

TOTAL BONE = 7

Identified fauna (n=1)
Sus scrofa (domestic pig) - 1

Unidentified bone (n=6) all unburned

The single identified element is a lumbar vertebra fragment from a young adult pig. Evidence of saw marks through the body of the centrum suggests one of the loin cuts, such as pork tenderloin, sirloin roast, or loin chops.

Summary: No archaeological or architectural integrity remains. The site does not meet the criteria for NRHP eligibility.

41CO118

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	630' amsl
Scheduled Investigations	Testing, architecture, archival, mapping
Additional Investigations	Dendrochronology
Soil Association	Crockett fine sandy loam
Cultural Affiliation	Historic (ca. 1880s to present)

Description: Extant structures include a log crib, a double pen log barn, a small, single pen log crib, a large frame barn, well, and cellar (Figure 7-12). The dwelling, which has been moved, was reported as the oldest log structure on the site (Skinner et al. 1982a:8-48). The notch styles varied with half-dovetail and full-dovetailing on the dwelling, and saddle notching on the outbuildings. A well pump is located in northern portion of the site. It sits on an oval concrete pad dated 7-16-36. A recent trash pit and remains of a previous structure were also recorded.

Previous Investigations: The site was recorded in 1981. The site was revisited in 1985. No surface or subsurface testing was conducted.

Archival Investigations: An overview of the chain of title is provided in Table A-7. The site is located on the Robert Jones survey (A-542), which was granted to Jones in 1859. Initial occupation dated to the 1880s. It was conveyed to R. J. Jones, a son of Reason Jones in 1883. He died in 1883, and his heirs owned the property until 1900. No definitive evidence was found indicating that the site was occupied by Robert Jones during the 1860s and 1870s. Primary occupation dates between the 1880s and present.

Architectural Investigations: Preliminary architectural descriptions and floorplans, photographs, and fieldnotes for the dwelling were compiled by ECI, and are on file at IAS, UNT. Descriptions and drawings for the other structures were made by personnel from UNT and are also on file. Field architectural drawings of the barn (Figure 7-13), south crib (Figure 7-14), and the double-pen outbuilding (Figure 7-15) provide information on the floorplan and at least two elevations for each structure.

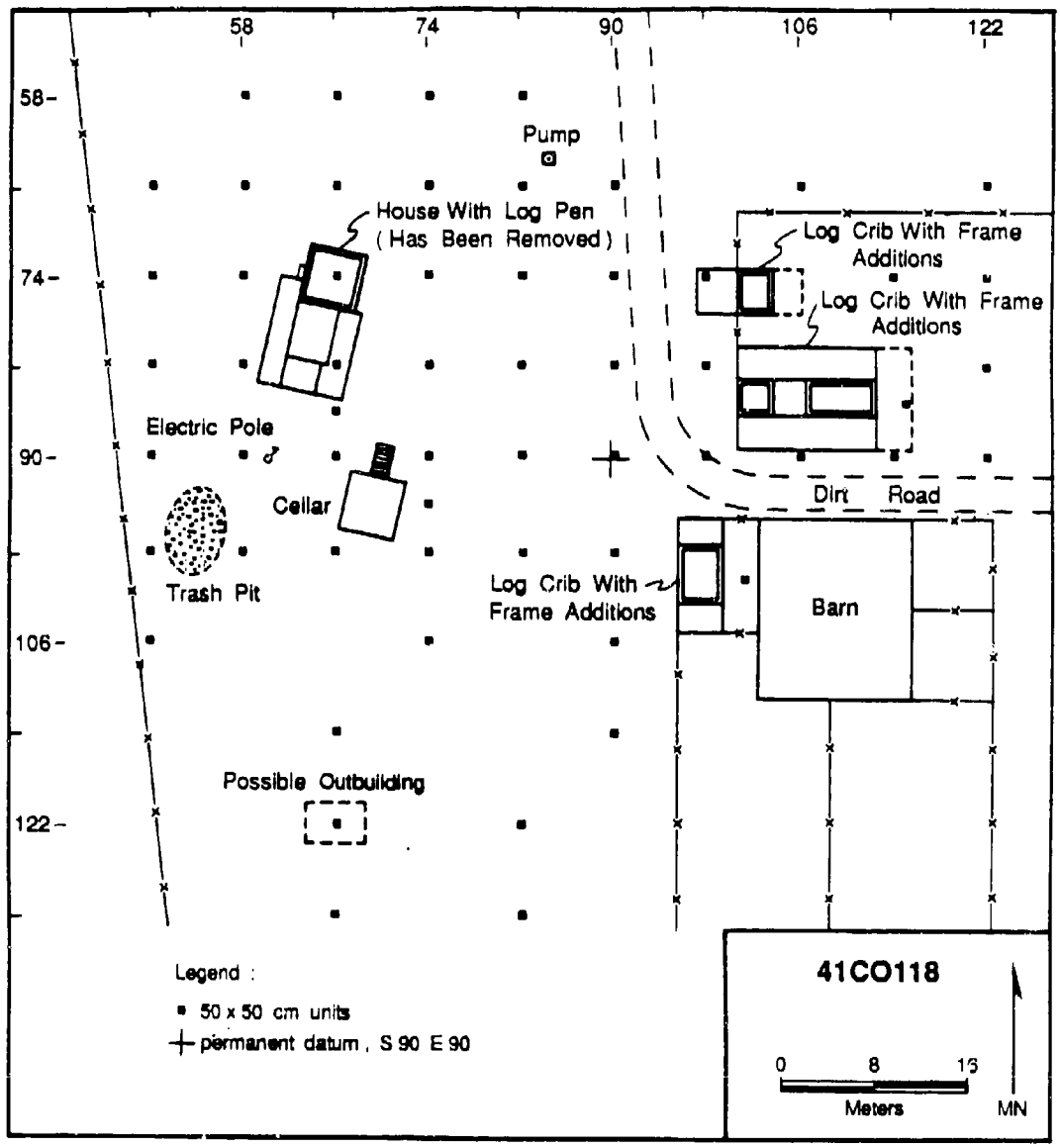


Figure 7-12. Site map for 41CO118.

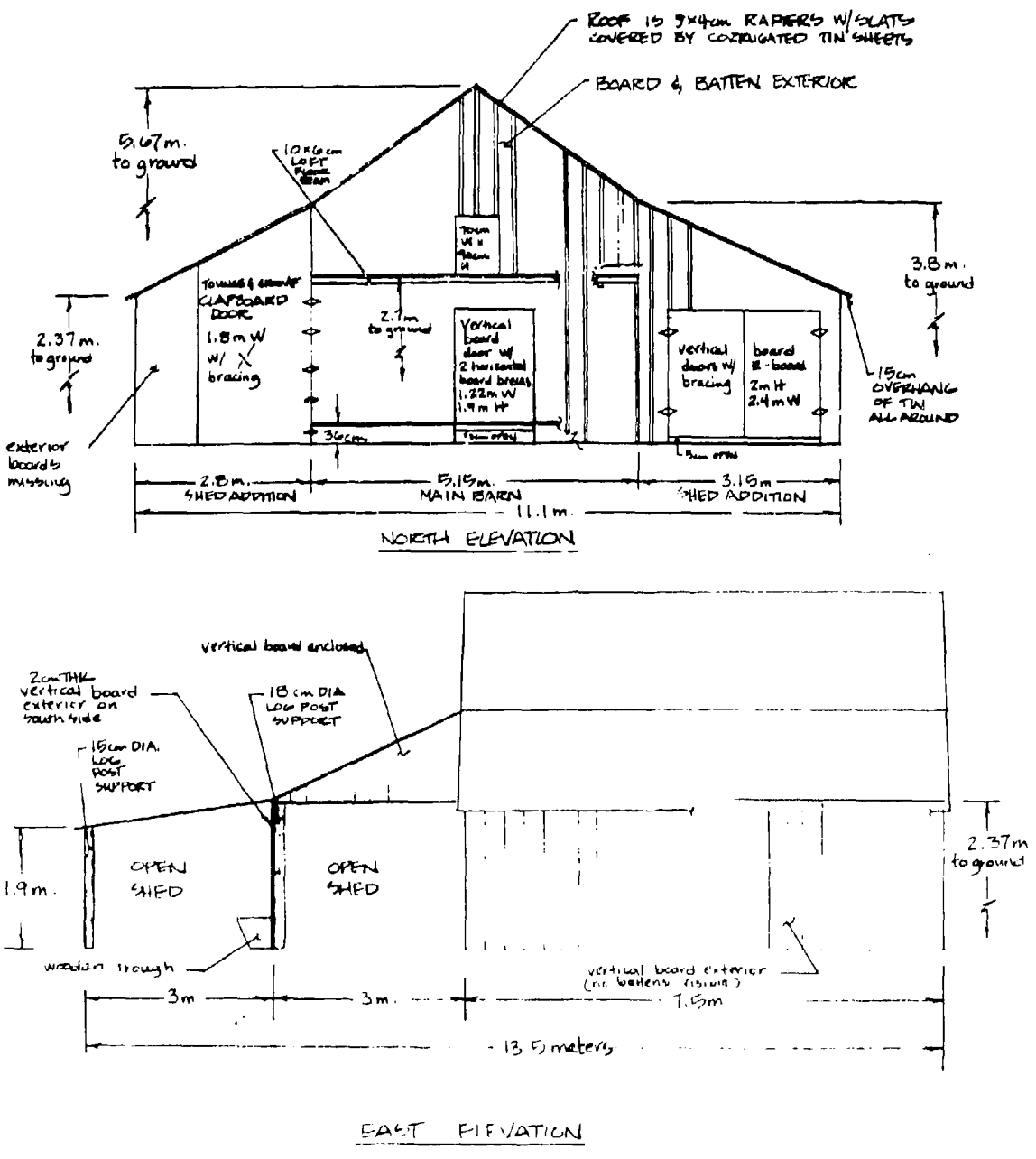


Figure 7-13. Field architectural drawings of the standing barn at 41CO118. (a) north elevation, (b) east elevation.

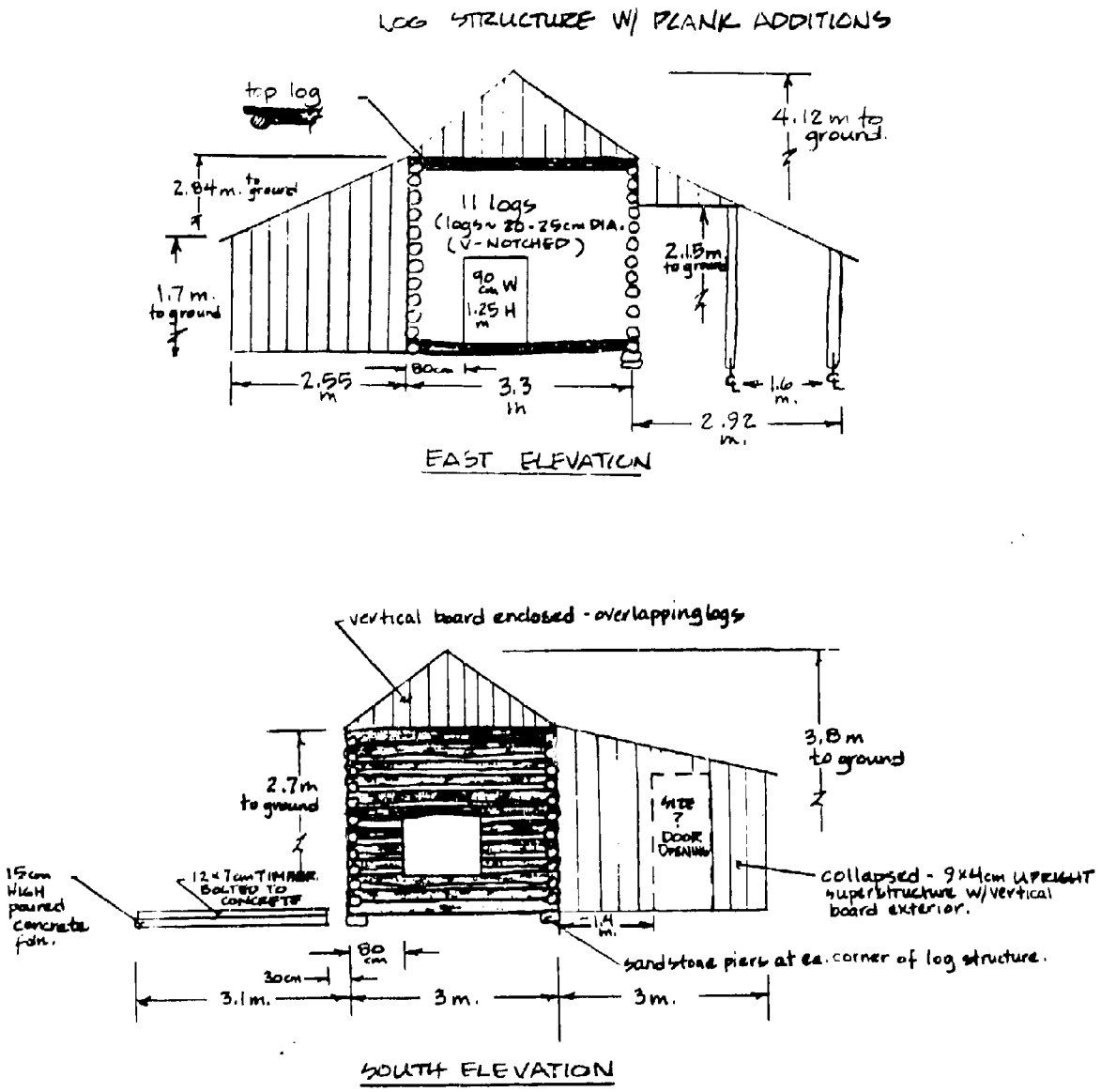


Figure 7-14. Field architectural drawings of the south crib at 41CO118. (a) east elevation, (b) south elevation.

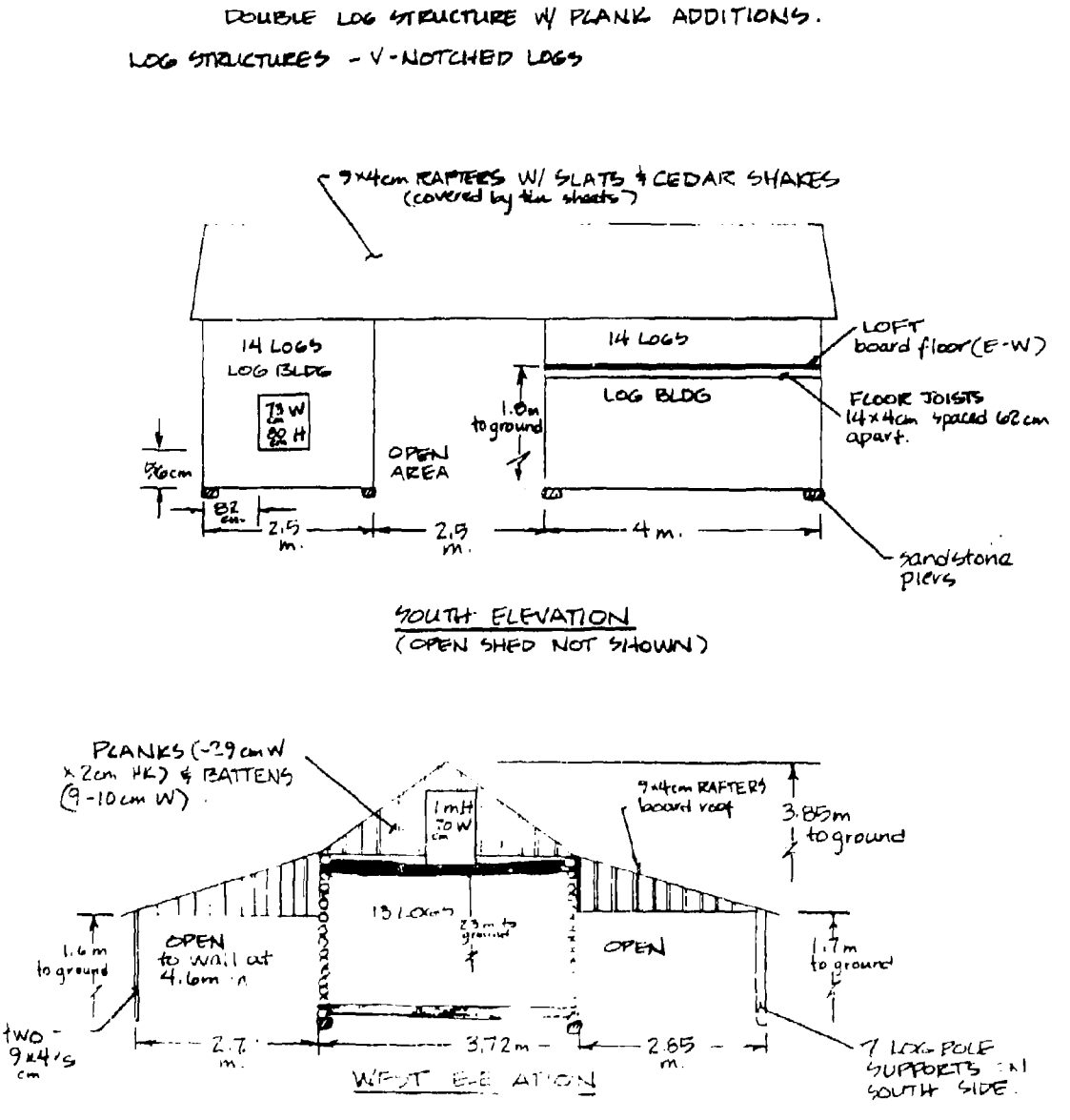


Figure 7-15. Field architectural drawings of the double-pen outbuilding at 41CO118. (a) south elevation, (b) west elevation.

Dwelling: The house was recorded as a single pen log dwelling with both half and full-dovetail notching. The logs were hewn, and the house was set on sandstone piers. A sandstone chimney was on the west elevation, a door and two windows were present on the north. According to Skinner et al. (1982a:8-48), two rooms were added in shotgun-fashion to the south side with vertical board exteriors. Porches were added to both the east and west elevations. The original room has an asphalt shingle east-west gable roof. The additions have an intersecting gable.

According to Skinner et al. (1982a:9-124), further documentation of the dwelling was recommended, but the house was purchased by Old City Park in Dallas, Texas. HABS documentation, including the preparation of a site plan map, plan sheets for the interior and exterior of the original pen, and all four elevations were prepared. A detailed plan of the fireplace, doors, and windows, and photographs and notes were made. This documentation could not be located.

North Crib: This corn crib had two open shed additions, one on the west, and the other on the east. The crib has hewn saddle-notched logs set on sandstone piers. The west addition has a cement foundation and half-lap sills. The east is badly deteriorated. The crib had a wood floor and wood chinking. The gable roof over the original and the shed roofs were covered by cedar shingles.

Double Pen: According to Skinner et al. (1982a:8-51), this double pen outbuilding was originally built as two smaller log structures that were joined together at a later date. Based on the construction technology and materials, this occurred prior to 1930. The logs are saddle-notched, with some V-notched logs in the upper half-story of the west pen. Sheds were added to the north, south and east sides. The west pen has a log floor and was used as a granary. The east pen and additions had dirt floors. The pens were set on sandstone piers, and the south addition was supported by a poured concrete foundation and log support posts. The north and east additions were set on the ground, and the walls were board and batten. They were painted red. The gable roof over the two pens and the shed roofs over the additions were covered by cedar shingles that were later replaced by corrugated metal.

South Crib: This was reported as the oldest outbuilding (Skinner et al. 1982a), with partially hewn round logs and saddle-notching. Shed additions were added to the north and south sides. A gable roof covered the original crib, and shed roofs covered the additions. It was set on piers, and all of the pens had dirt floors.

Barn: This was the most recently built outbuilding dating to the early twentieth century. It was entirely frame with shed additions on the east, west, and south. It had wood floors and a loft. It had a board and batten exterior that was painted red.

Dating: No dendro date was obtained for the log dwelling, but based on the archival data and similar half-dovetailed dwellings in the reservoir, it was probably built about the same time as the east crib (in the double pen outbuilding; dendro cutting date 1882). The West crib yielded cutting dates of 1892 to 1894, and the north crib, cutting dates of 1897 to 1898. This information supported the interpretation that the east and west cribs were built at different periods. In addition, a building sequence was obtained indicating that the house was built followed by the east crib, west crib, north crib, south, and finally, the frame barn.

Significance: Site 41CO118 was determined eligible for the National Register of Historic Places, and the standing architecture was also determined significant. As mentioned above, the dwelling was salvaged and moved to Old City Park in Dallas, Dallas County. The three log outbuildings were also salvaged and moved to Farmers Branch Historical Park in Farmers Branch, Denton County.

Recommendation: No further work.

Dendrochronological Investigations: Five samples each from the north crib and the west and east cribs of the double pen outbuilding were sent for analysis. The results are presented in Table J-2, and the dates for each are summarized above.

Testing Method: Fifty-seven 50x50-cm units were dug on an 8-m grid. Several units were judgmentally placed to recover information under the original log dwelling and the additions.

Testing Results: The cultural deposits indicate the site was occupied from the late nineteenth century until recently. A trash dump occurs southwest of the house and cellar, and recent debris is scattered across the west half of the site. The subsurface artifact assemblage is mixed, containing ceramics dating between 1850 and 1930, most with end dates of 1910 (Table 7-5). Bottle glass is mixed, while architectural remains, tin cans, metal (tools, machine and wagon, ammunition, electrical) remains, and miscellaneous items are generally twentieth century.

Table 7-5
Artifact Assemblage from 41CO118

Artifact Category	N	%
Refined Earthenware	14	0.98
Stoneware	6	0.42
Bottle Glass	182	12.71
Table Glass	4	0.28
Lamp Glass	6	0.42
Unid. Glass	1	0.07
Window Glass	89	6.22
Machine-Cut Nails	44	3.07
Wire Nails	240	16.76
Handmade Brick	3	0.21
Machine-Made Brick	7	0.49
Building Material	170	11.87
Personal Items	11	0.77
Thin & Heavy Metal	488	34.08
Household Items	8	0.56
Machine & Wagon	27	1.89
Tools	7	0.49
Horse & Stable Gear	1	0.07
Ammunition	3	0.21
Electrical Items	5	0.35
Misc. Other	116	8.10
Total	1432	

A moderate-density sheet refuse deposit was identified, and artifacts were recovered from 10 to 25-cm below the surface. Artifact counts per unit ranged from zero to 243, with an average density (excluding Units 5 and 7) of 19 artifacts.

Architectural items are dispersed across the site, but when broken down by type, distinct patterns are visible. Window glass sherds are located only within the dwelling area, and units containing over five sherds occur under the dwelling or within 4 m of the house. Wire nails occur in both the dwelling and outbuilding areas where they are most common near collapsed frame additions.

Thin metal/tin can fragments are distributed across the site, with units containing over 10 fragments located primarily south of the house. The highest density occurred in Unit 5 (S90 E74) which contained 226 tin can fragments. The average was less than 10 fragments per unit.

Refined earthenwares are concentrated in the dwelling area, with the highest frequencies occurring within 8 m of the house. A single sherd occurred in the outbuilding area. The refined earthenwares yielded a mean beginning date of 1870. Stonewares were poorly represented, and exhibited a more dispersed distribution than refined earthenwares. They yielded a date of 1872, while bottle glass dated 1898. Bottle glass sherds occurred in all areas of the site, with units containing over ten sherds concentrated near the house, within the main sheet refuse deposit.

The sheet refuse deposit exhibited fair to good integrity. Bioturbation, slope (to the south) erosion, and modern activities have affected the integrity of the southwestern part of the site. Plowing has impacted the area northeast of the outbuildings as well as the area outside the barbed wire fences.

Faunal Remains:

TOTAL BONE = 48

Identified fauna (n=17)
- Terrapene sp. (box turtle) - 2
- Gallus gallus (domestic chicken) - 1
- Sus scrofa (domestic pig) - 11
- large mammal - 2

Unidentified bone (n=31)

Chicken and pig remains were recovered from seven units at this site. The presence of pig teeth suggests that pigs were slaughtered on site. Several elements exhibited saw cut marks, including the scapula, ulna, astragalus, vertebra, and a rib. The chicken leg bone had been extensively gnawed, probably by dogs. Many of the pig bones were likewise chewed. The turtle remains are probably incidental to the occupation.

Summary: The archival, architectural and archaeological information indicates this farmstead was occupied from the 1880s until recent. The earliest structure, a single room log dwelling, has been moved, restored, and is on display at Old City Park, Dallas. Three of the log outbuildings have also been moved, and will be restored and displayed at Farmers Branch Historical Park, Farmers Branch.

No architecturally significant structures remain at 41CO118. Testing revealed a moderate sheet refuse deposit with fair to good integrity, which has been impacted by continued occupation over 60 years, including modern activities. No subsurface features were identified, and no evidence was found indicating that additional excavations would yield significant new data.

41CO119

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	630' amsl
Scheduled Investigations	Surface collection (amended to limited testing); Archival research
Soil Association	Callisburg fine sandy loam
Cultural Affiliation	Historic (Late 19th c. to present)

Description: The site was characterized by an extant concrete cellar and a rectangular depression representing the former location of the Bloomfield School (Figure 7-16). A well was located and recorded in the southeast corner of the site in 1985. In addition, several disturbed sandstone piers and surface artifacts, including handmade brick and machine-made brick piles, stove parts, glass, and personal items were noted.

Previous Investigations: The site was recorded in 1981, and revisited in 1985. No testing was conducted.

Archival Investigations: The school was built ca. 1882 in the form of two buildings, one on the east side and one on the west side of the Bloomfield Community (Smith 1984). The western school was located at 41CO119. The eastern school was situated on the D. C. Robinson survey (A-855), being located in the southwest corner of the survey. It was situated on 2 acres conveyed by D. C. Robinson and his wife Francis to the Citizens of Bloomfield School Community in 1880 (DR 22/277). The location of this building was not identified during the survey conducted by ECI.

According to Smith (1984), both schools were destroyed by a tornado in 1888. The second school was located at 41CO119 (see Table A-8) on the Robert Jones survey (A-542) and was represented by a church building on the Cooke County Soil Survey (Skinner et al. 1982a). Land was conveyed by R. Jones to the Cooke County Judge for a school in 1882 (DR 23/423). A new school building was built after the tornado in 1889. It was used as a school and church until 1929, when the Bloomfield School District was consolidated as the Union Grove School District (Smith 1984). The school was vacant for years and then later used as a meeting place for the community.

This school building was moved in 1977 as part of a preservation project of the University of North Texas' Historical Collection (then called North Texas State University) and the Bloomfield School Committee (Tate 1984). It was moved as part of the Bicentennial and was set at its present site on the UNT campus in 1982.

Architectural Investigations: None. The second school at 41CO119 was built in a "prairie church style" of architecture, complete with steeple to hold the bell (Smith 1984). It was a single-room frame building with sandstone piers, horizontal board walls, and cedar shingle roof. It was painted white.

Dendrochronological Investigations: None.

Testing Method: The site was scheduled for surface collection only. However, because of extensive ground cover, and the absence of a discernable surface scatter, twenty-one 50x50-cm units were dug on an 8-m grid across the site.

Testing Results: An overview of the artifact assemblage is provided in Table 7-6. Architectural items represented 74% of the artifacts found during excavation, including window glass, which accounted for 63.6% of the assemblage. This material is concentrated in the area where the school/church building was located. No refined earthenwares or stonewares were found.

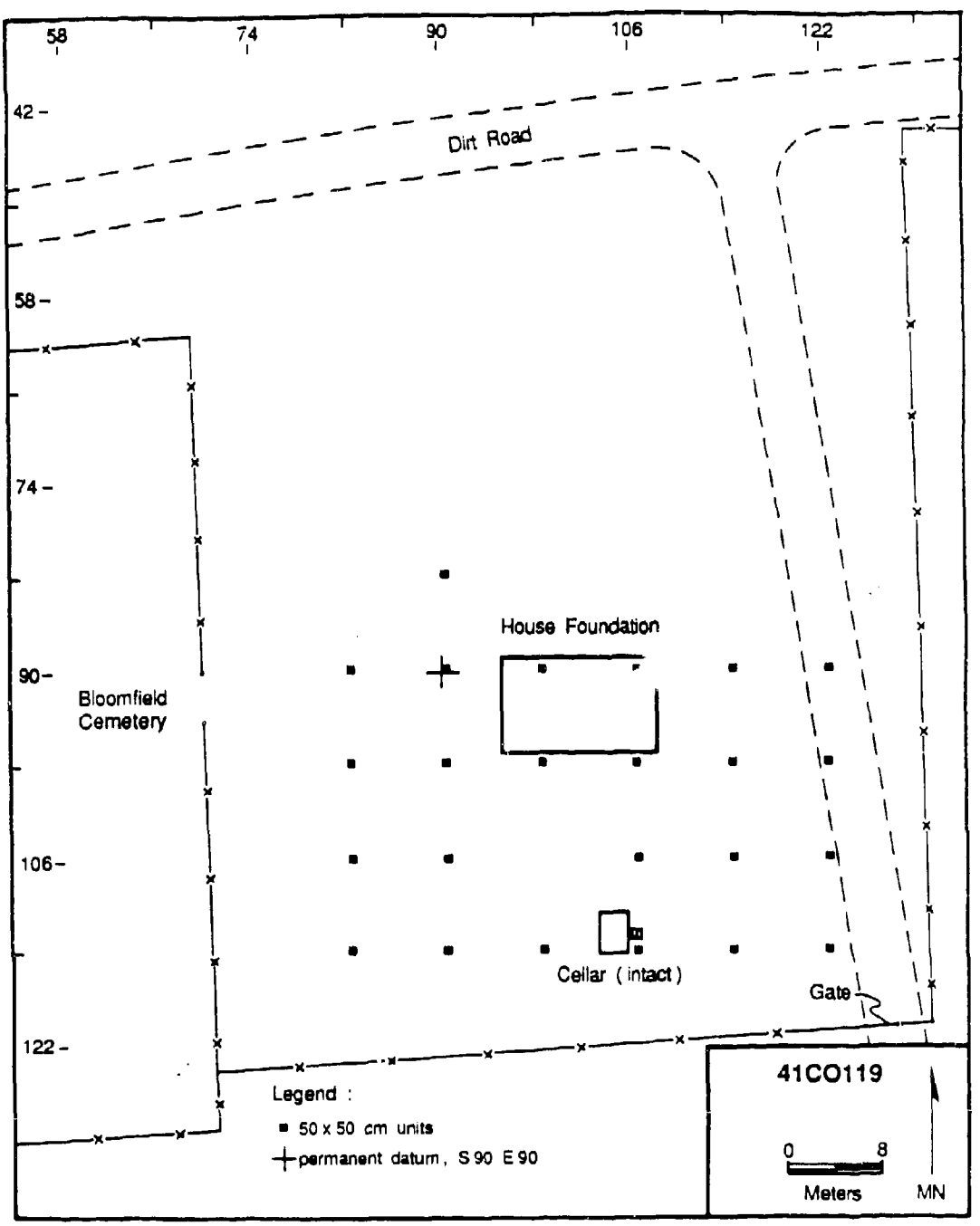


Figure 7-16. Site map for 41CO119.

No subsurface features were encountered. A low-density artifact deposit was identified, and artifacts were recovered from 10 to 25-cm below the surface. Because of the limited extent of our field investigations, and the low density of the deposit, no statistically significant distribution data were obtained.

Table 7-6
Artifact Assemblage from 41CO119

Artifact Category	N	%
Porcelain	4	0.82
Bottle Glass	99	20.25
Window Glass	311	63.60
Machine-Cut Nails	24	4.91
Wire Nails	23	4.70
Building Material	4	0.82
Personal Items	6	1.23
Thin & Heavy Metal	4	0.82
Machine & Wagon	2	0.41
Ammunition	11	2.25
Misc. Other	1	0.20
Total	489	

Summary: The archival, architectural, and archaeological information indicates this site was the location of the Bloomfield School/Church from the 1880s to recently. The structure has been moved, and no significant archaeological deposits were identified.

41CO120

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	630' amsl
Scheduled Investigations	Limited testing, archival
Additional Investigations	Architecture, dendrochronology
Soil Association	Gasil fine sandy loam
Cultural Affiliation	Historic (Late 19th c. to recent)

Description: The site was characterized by a twentieth-century house, a double pen log barn, three collapsed outbuildings, a collapsed log structure, a standing outbuilding, and a concrete cellar (Skinner et al. 1982a:8-51). In addition, a well, water tower, and concrete water trough were present. Two collapsed outbuildings recorded by the survey crew were no longer present when testing began, including a shed northwest of the double pen barn, and a second one located on the western margin of the site near S208 E100. A collapsed outbuilding was also present in the southwestern corner of the site that was not previously reported (Figure 7-17). A small barn was located some distance from the main site area to the southwest.

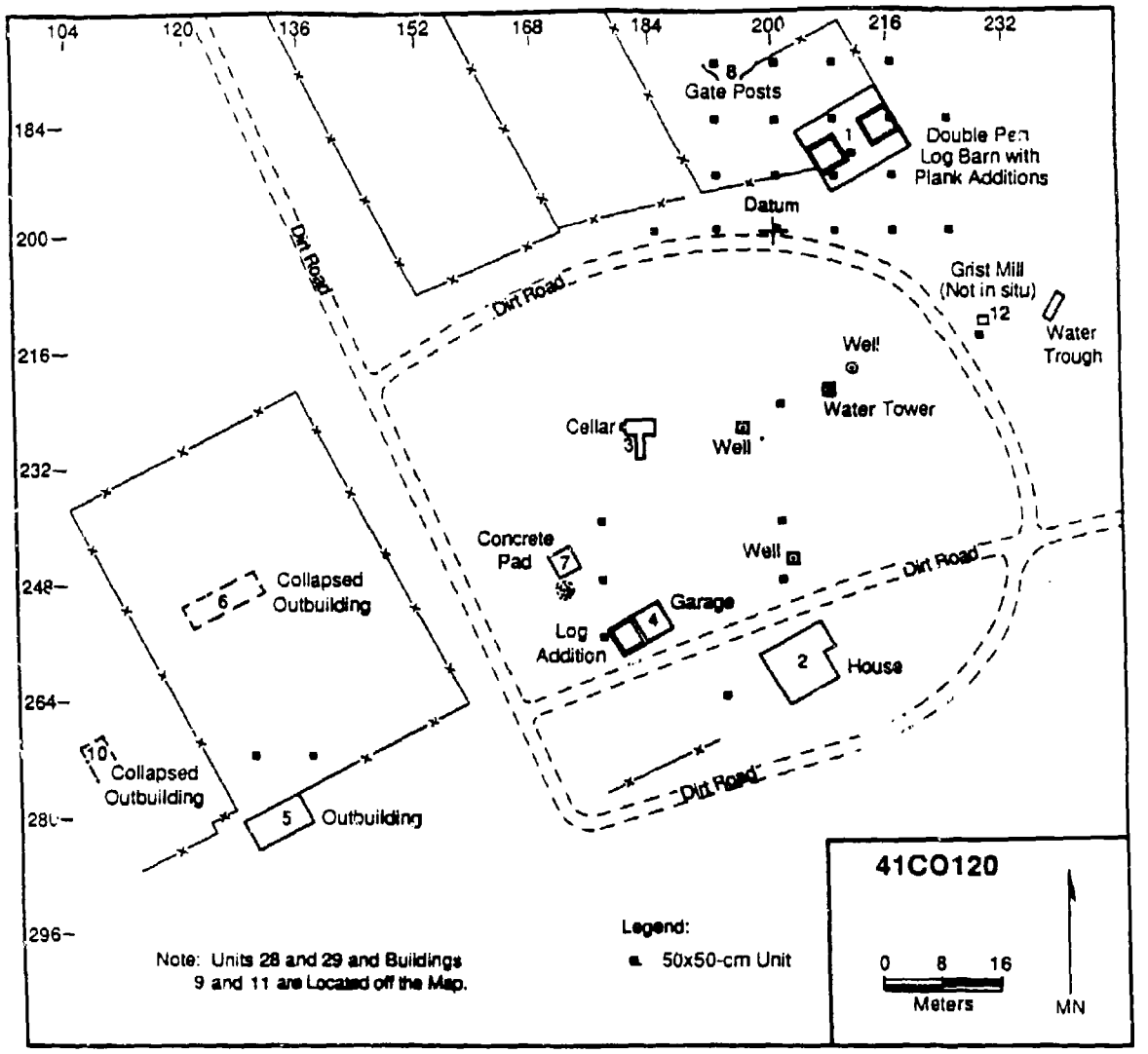


Figure 7-17. Site map for 41CO120.

Remains of a small grist mill was reported south of the double pen barn (Ferring 1986). The grist mill was moved to the Jones Farm (41DN250) for preservation. Farm machinery, including an abandoned tractor, was also noted in 1985 but not salvaged.

Previous Investigations: The site was recorded in 1981 and revisited in 1985. No testing was conducted.

Archival Investigations: The site is located on the Stephen Sanders (A-932) survey, and was occupied by several generations of the Sanders family. The family acquired the property in 1859 (Table A-9), but many of the structures probably date to the partitioning of the survey in 1915 (e.g., house, cellars, modern outbuildings).

Architectural Investigations: Architectural descriptions were made for the dwelling and outbuildings. An overview of the major architectural elements of the dwelling and outbuildings is provided below. Floorplans, elevational drawings, photographs, and field notes are on file at IAS, UNT.

Dwelling: The dwelling was a twentieth-century modular design with two rooms on the north and three on the south. The gable ran east-west, and the original roof was cedar shakes that were then covered with corrugated metal. The porch was set on sandstone piers and was located on the northeast corner, with the front door facing east. A separate gable roof covered the porch. The house sat on poured concrete piers, and a date of 1921 was set in the back porch steps on the west side. The exterior walls were horizonal boards, and the interior walls and ceilings were sheetrock. Linoleum flooring was present throughout the house. A hanging, machine-made brick chimney was located in the center of the house in the southeast corner of the kitchen.

Outbuildings: Building #1 was a double pen barn with a breezeway between the pens (Figure 7-18). The two pens formed the core of the structure, with primarily open shed additions on the north and south. The original pens were constructed at different times and represent different building techniques. The east crib was older and was comprised of half-hewn mortise and tenon logs in the lower story, and half dovetail, half-hewn logs in the upper half-story. A loft was constructed over the breezeway between the two pens and above the first story of the east pen. The demarcation in log technology evident in the east crib occurred at the juncture of the crib and the loft. The floor was dirt, and a doorway was present on the south side. The west crib was constructed later and was comprised entirely of V-notched, half-hewn logs. The walls extended one-and-a-half stories to the roof. Doors were present on the north and south wall, and a former window on the east had been boarded over. The floor was dirt, and vertical planking covered the logs on the west wall of the upper one-half story. The north and south sheds were supported by log posts on the north and south walls. The north shed was closed on the west side and open on the north and east. Horizontal pine planking formed the west wall, which had a door and shuttered window that provided entry to a small feed room located within the shed in the northwest corner. The remainder of the shed was open. The south shed was open on the west and south, with a horizontal plank wall on the east side. Log posts supported the roof of both sheds, and the floors of both were dirt. A gable roof extended over the core and both sheds, covering cedar shakes on the north shed and core, but not on the south.

Building #3 was a concrete cellar. Building #4 was a board and batten garage with a east-west gabled roof. It was corrugated metal. Abutting the garage on the west side were the remains of unhewn log sills to an earlier structure. The function of this single pen structure is unknown.

Building #5 was a small single pen granary with a single opening on the north side. The sills were constructed of hewn logs with half lap notching that were set on sandstone piers. It had half lapped horizontal pine plank walls and floors, and a north south gable. The roof was comprised of corrugated metal with wire lead head nails and gable flashing. A C-shaped addition was added to this structure. The north-south gable of the original pen extended over the south addition, and east-west gables covered the east and west additions. The additions were supported by wood posts, and no piers were present. The walls were vertical pine planks, and the floor was dirt.

Buildings #6, #8, #9, and #10 were either gone when testing started, or were too badly deteriorated to recover any diagnostic information. No description was made. Building #7 was also gone, but appears to have been the location of a capped well. It was represented by a concrete slab and metal piping. Other wells and a pumphouse were located in the yard north of the house. In all, at least four wells were identified, along with a pumphouse and a water tank. A water trough with a date of 1949 in the concrete was located on the eastern extent of the site.

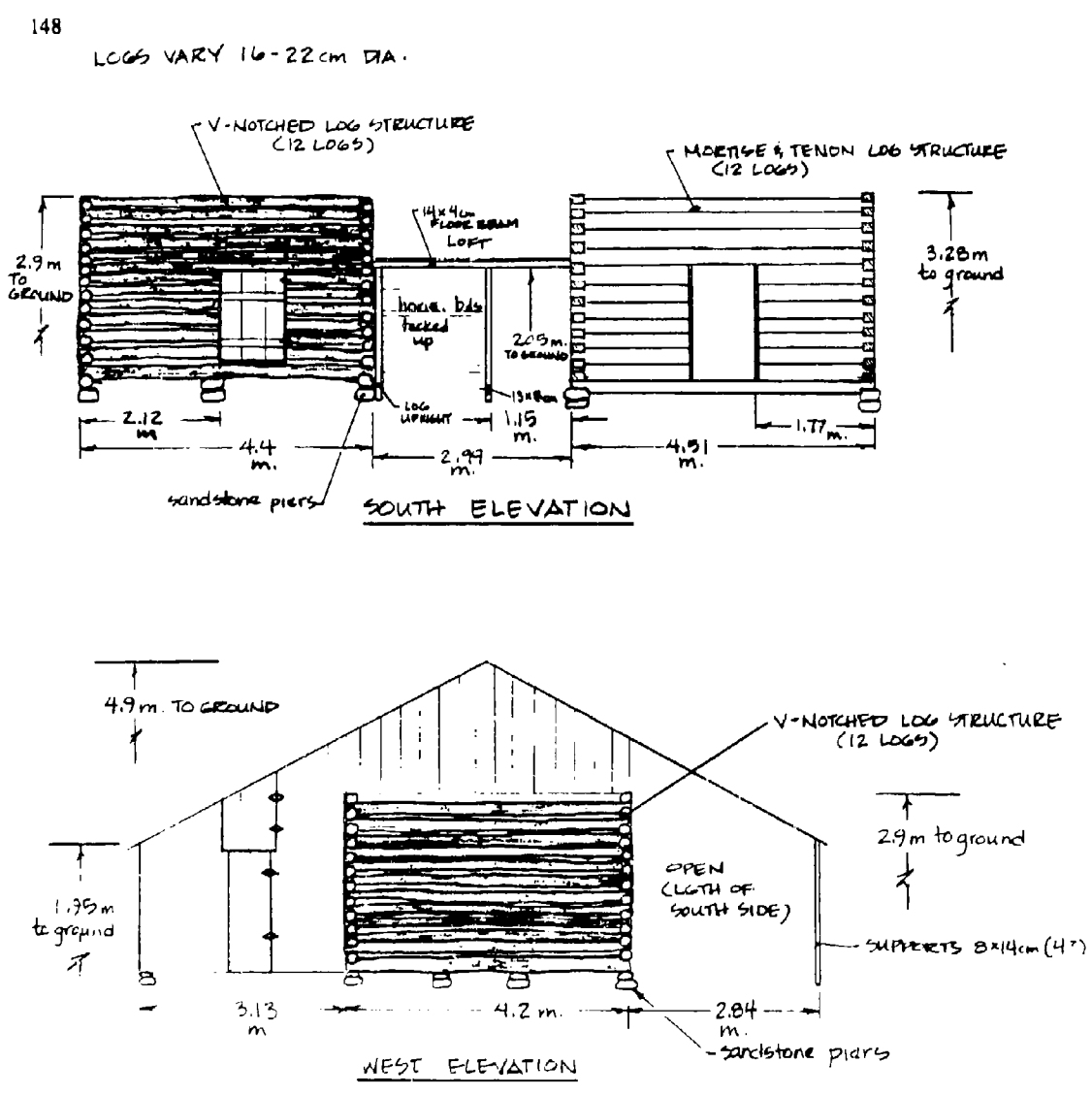


Figure 7-18. Field architectural drawings of double-pen outbuilding at 41CO120. (a) south elevation, (b) west elevation.

Building #11 was a small single pen hay barn with shuttered windows on the north and west elevations and an open shed addition on the south. The original pen was set on sandstone piers and unhewn post oak logs. The barn was one-and-a-half stories with a east-west gable. The walls were unplaned planking set at a 45-degree angle and were originally painted red. The flooring, roofing, and sills indicate that it was built after 1930. Galvanized wire nails were used throughout. The open shed addition was one story, with a shed roof that sloped to the south. It was open on the east and south, and the west wall was unplaned planking, matching the exterior of the original pen. The addition was set directly on the ground; no evidence of piers were found. Hogwire fencing was present along the lower half of the south elevation.

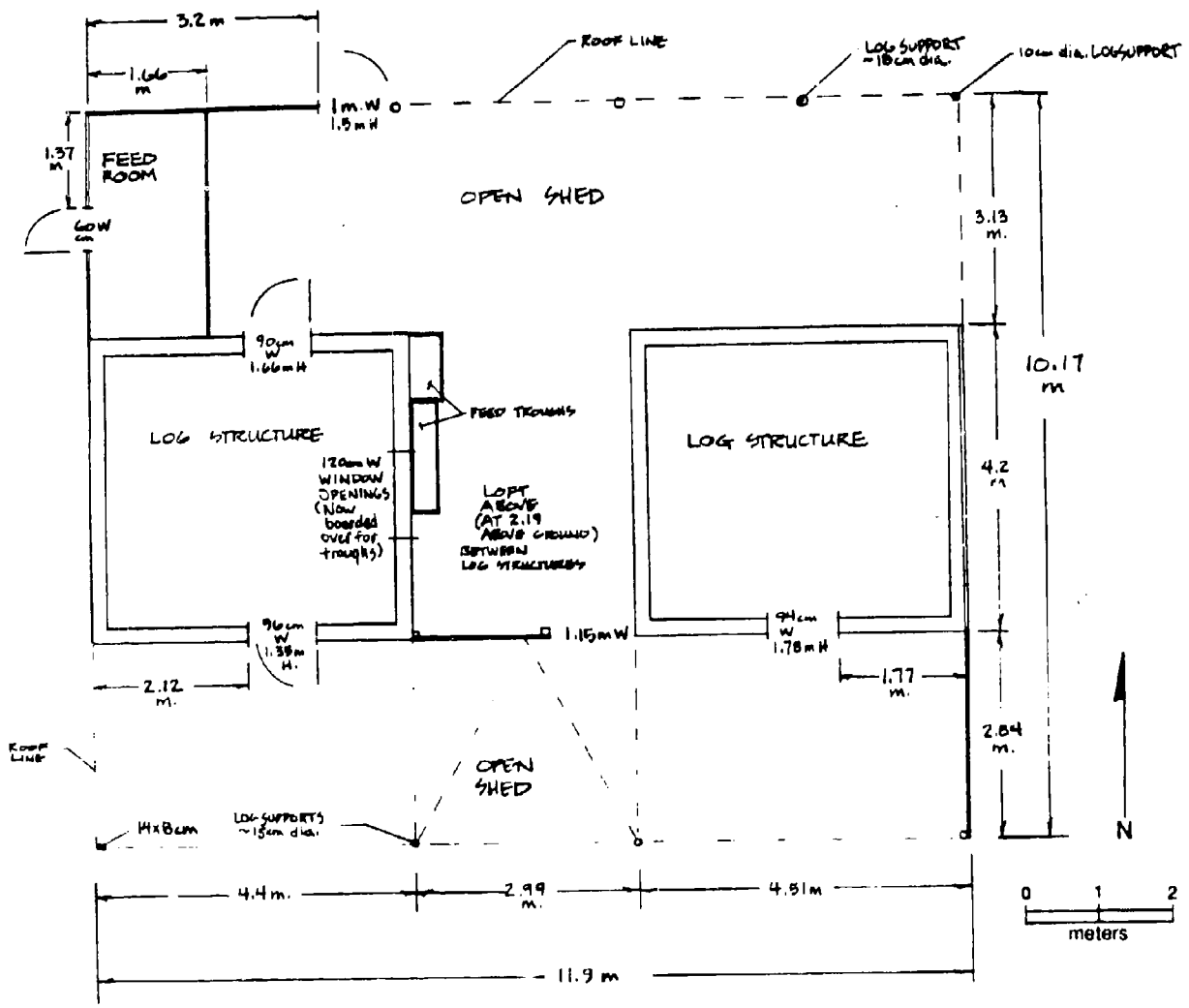


Figure 7-19. Field architectural floorplan of double-pen outbuilding at 41CO120.

Building #12 is the remaining portion of a small engine-driven grist mill. It was no longer in situ, occurring in the northeastern part of the site, between the house and the large double pen barn (see Figure 7-17). A planview drawing was made, and the machinery was salvaged and moved to 41DN250 for preservation and possible future display.

Dating: No machine-cut nails were found in any of the structures. Wire nails occurred in all frame buildings. The double pen barn (Building #1) was the only extant pre-1900 structure on the site. Buildings #6, #8, #9, and #10 were too badly deteriorated to date. Buildings #3 (cellar), #4 (garage), and #5 (granary) all dated after 1930. The house was probably built around 1920, with some construction after 1930.

Significance: The double pen barn represented the only architecturally significant structure on the site. It was originally built as a single pen barn (east crib), with the second crib being added 20 years later. The north and south additions were twentieth century. It is also interesting because the two cribs reflect different log technologies.

Recommendation: No further documentation.

Dendrochronological Investigations: Ten logs from the double crib barn were sent for dendro analysis, including four from the west crib, and six from the east (Table J-7). Cutting dates of 1877-1878 were obtained for the east crib, and 1896 or 1897 for the west crib.

Testing Method: Thirty 50x50-cm units were dug on an 8-m grid around the double pen log barn, while units were judgmentally placed in the main house area, the southwestern site area, and three units dug near Building #11, 200 m southwest of the dwelling.

Testing Results: The artifact assemblage contained predominately thin metal/tin can fragments, architectural items, and bottle glass. A low- to moderate-density sheet refuse midden was identified. Three high-density units occurred in the northeastern site area, including Unit 5 (S184 E216), Unit 12 (S192 E192), and Unit 16 (S200 E184). Unit 5 contained 60 wire nails and no other material, while Unit 16 contained 46% of the thin metal/tin can fragments (n=149) found at the site. Unit 12 yielded 29% of all the artifacts found, including high concentrations of bottle glass, wire nails, and thin metal/tin can fragments (Table 7-7).

Table 7-7
Artifact Assemblage from 41CO120

Artifact Category	N	%
Refined Earthenware	17	2.23
Stoneware	6	0.79
Bottle Glass	113	14.81
Table Glass	9	1.18
Lamp Glass	2	0.26
Unid. Glass	2	0.26
Window Glass	14	1.83
Machine-Cut Nails	6	0.79
Wire Nails	155	20.31
Machine-Made Brick	1	0.13
Building Material	35	4.59
Personal Items	8	1.05
Thin & Heavy Metal	323	42.33
Household Items	1	0.13
Machine & Wagon	9	1.18
Tools	4	0.52
Horse & Stable Gear	2	0.26
Ammunition	4	0.52
Electrical Items	2	0.26
Misc. Other	50	6.55
Total	763	

Older materials were concentrated in the northeast site area, forming a low-density sheet refuse deposit around the double pen barn. Refined earthenwares yielded a mean beginning date of 1890, while stonewares dated 1869. Architectural items, bottle glass, and other remains were mixed nineteenth and twentieth century, with possible dumping activity occurring near the dirt road (see Unit 16).

Continued occupation until recently has adversely affected the integrity of the site south of the double pen barn and the northern dirt road. Many of the structures in this area are modern and have collapsed. Little subsurface testing was undertaken in this area because of the recent age of the occupation.

Faunal Remains:

TOTAL BONE = 7

All seven are unidentified large mammal bones. One fragment exhibits a saw cut mark. One other fragment is burned.

Summary: The site dates from the late nineteenth century to recent times (Skinner et al. 1982a). The oldest extant structure is the log double pen barn, which was constructed in two phases between ca. 1878 and 1895. The frequency and spatial distribution of domestic materials (e.g., ceramics and bottle glass) around the log barn suggest that the original dwelling may have been located in this area. However, this could not be clearly discerned. The remaining structures date to the twentieth century and probably reflect occupation after the property was divided in 1915.

41CO135

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	650' amsl
Scheduled Investigations	None (recorded as part of historical research)
Soil Association	Wilson/Lewisville clay loam
Cultural Affiliation	Historic (1858 to 1920)

Description: The cemetery is a late nineteenth to early twentieth-century graveyard in a wooded area south of a quarry in the far northwestern corner of the project area. It is located within a partially fenced area measuring 100x170 m. Death dates were recorded ranging from 1858 to ca. 1920. The number of graves was not determined.

Previous Investigations: The site was recorded in 1981 and revisited in 1985. No additional work was done.

Archival Investigations: The cemetery is located on the James Chaffin (A-230) survey conveyed to John T. Hill by Chaffin's estate in 1855. The earliest graves were members of the Hill family. Additional information is provided in Appendix C.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Field Method: The cemetery was not originally scheduled for investigation. However, because it was not included in the cemetery study conducted by ECI (Skinner and Baird 1985), limited research was undertaken. This work focused on mapping the cemetery and recording headstone inscriptions. All recording was accomplished using a

hand-held tape recorder. Rubbings were also made of several stones. Black and white photographs were taken of all stones.

Field Results: The tape recordings were transcribed, and along with the rubbings, photographs, and cemetery map, are on file at IAS, UNT. A cemetery map is provided in Figure 7-20.

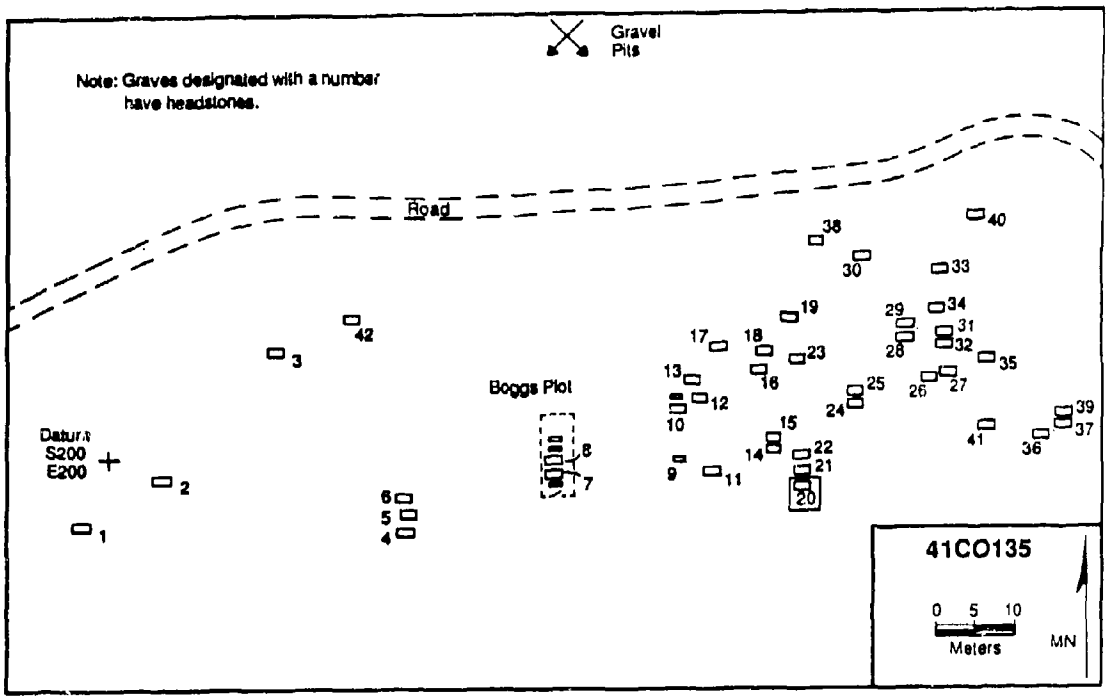


Figure 7-20. Site map for Osburn Cemetery, 41CO135.

41CO136

Map Quad	Valley View 7.5' (1961, rv. 1978), #3397-143
Elevation	645' amsl
Scheduled Investigations	Limited testing, archival, architecture
Soil Association	Maloterre-Aledo complex, gravelly clay loam
Cultural Affiliation	Historic (ca. 1880 to recent)

Description: The only structure on the farmstead owned by the C. C. Myers family located in the project area is a grain elevator (Figure 7-21). This structure was recorded as a grist mill (Skinner et al. 1982a), but was identified

as a grain elevator by Mrs. Myers (personal communication, 1987). It is located within an easement, while the other extant structures, including a cellar, barn, garage, and a dwelling with cypress log elements are located above the impact area.

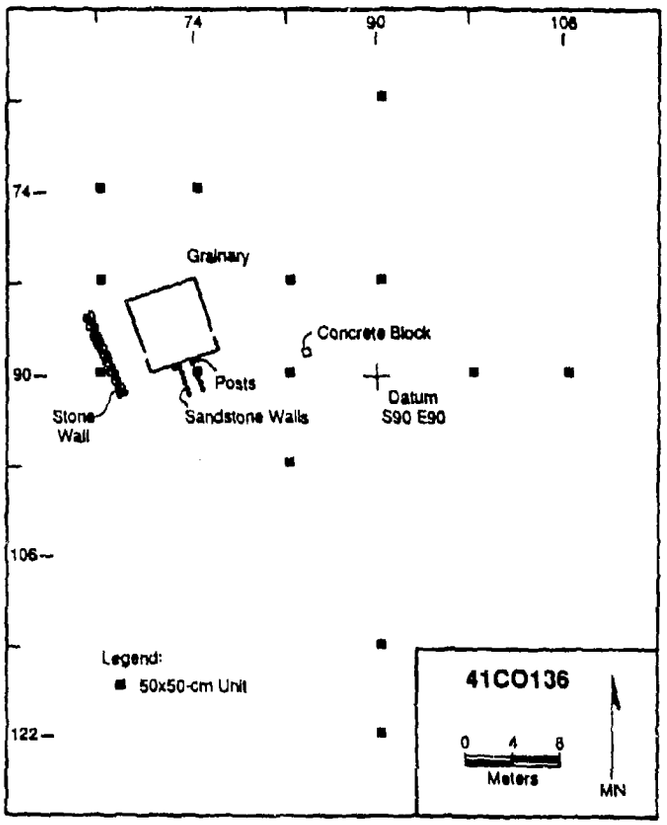


Figure 7-21. Site map for 41CO136.

Previous Investigations: The site was recorded in 1981, but access to the interior of the grain elevator was denied (Skinner et al. 1982a). Mitigation was recommended to offset potential adverse impacts. The site was revisited in 1985, and additional work was recommended.

Archival Investigations; Archival research was conducted to augment the archaeological and architectural data. In addition, an oral interview with Mrs. C. C. Myers was made in August, 1987. Mrs. Myers (personal communication, 1987) stated that the structure was used as a grain elevator, not a grist mill.

> ...It is a grain elevator. You used to put grain in those bins; four of them. And then they were elevated upstairs ... later on we quit that because we had those things that gathered the grain and cleaned it before you put it in there so we didn't have to do all that .... We did use the bins ... between 1870 an 1907. [That] is when my grandfather acquired the land .... It originally had wood siding and it was run by a water wheel. It was on the south side ....

Mrs. Myers' grandfather William Obuch and Captain Goodnight owned this area prior to 1870. They continued to own land on the north and west sides of site 41CO136 until the early twentieth century. However, 41CO136 is located on a 63.25-acre tract that was conveyed to several different families beginning in 1877 (Table A-11).

Architectural Investigations: An architectural description, floorplans, elevation drawings, photographs, and field notes were made for the grain elevator and are on file at IAS, UNT.

Grain Elevator: The structure sits on sandstone piers on a creekbank that slopes to the west. It is two-and-a-half stories with a north-south gable (Figures 7-22 and 7-23). The interior and exterior walls are cedar board and batten and have been covered recently with corrugated metal. The foundation is limestone, gravel, and mortar. The floors are tongue and groove planks running north-south. The first floor is divided into four grain bins with a central corridor between the two northern bins. The loft is a single room. A conveyor housing is located in the center and is connected to a pulley and conveyor system situated outside the south wall. Stones and scrap wood associated with this system remain. A small square hole was located in the loft floor above the northeast bin allowing grain to be fed down to the bin below. Two doors are located on the north elevation providing access to the north bins, and a single door is located on the east and west walls providing access to the two south bins. A third door on the north side provided access to a corridor between the north bins. No interior doors opened into the bins from this corridor. A loft window was present on the north and two on the south. None were present on the east or west walls.

Above the housing for the conveyor, the belts emptied into a spout, which ends about 6-ft above the loft floor. It is wood, and different-sized detachable spouts could be used. This system allowed the seed to be fed into bags in the loft bins. Four bins are located within the loft with a bin in each quadrant. The filled sacks were placed on the conveyor and loaded onto a wagon or truck outside the south wall.

The rock wall is located west of the elevator (creek side), and remains of a small building occur to the southeast. Stone piers indicate the structure was approximately 5 m north-south by 4 m east-west, had a concrete base, and metal mounting for a motor. This building probably housed a gas engine used to operate the conveyor.

Dating: According to Mrs. Myers (personal communication, 1987), it operated from the 1870s and was water-powered by an artesian well until 1919. After that, a windmill was put in; a gas engine followed, then a tractor, and finally in 1968, the elevator was generated by electricity. It was operated by the Myers family until 1984. It is located on an easement.

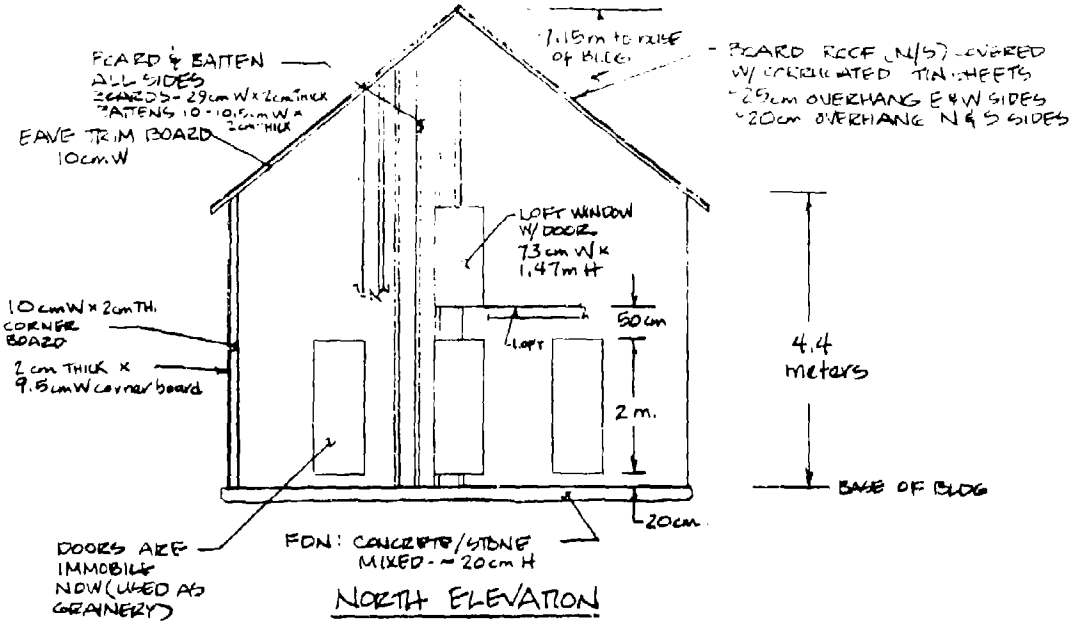
Significance: This structure represents the only extant grain elevator in the project area and reflects the reliance on cattle and grain production in the northwestern region of the reservoir. In addition, this site is associated with several important individuals in local history, including Captain Goodnight.

Recommendation: Preservation/avoidance.

Dendrochronological Investigations: None.

Testing Method: Fourteen 50x50-cm units were excavated on an 8-m grid around the grain elevator.

Testing Results: No midden or domestic component was found in this portion of the site (Table 7-8). Ten of the units (71%) were sterile. Material was found in three units within 8 m of the structure (S82E66, S90E74, S90E82) and one unit about 16 m east (S82E90). No subsurface features were found.



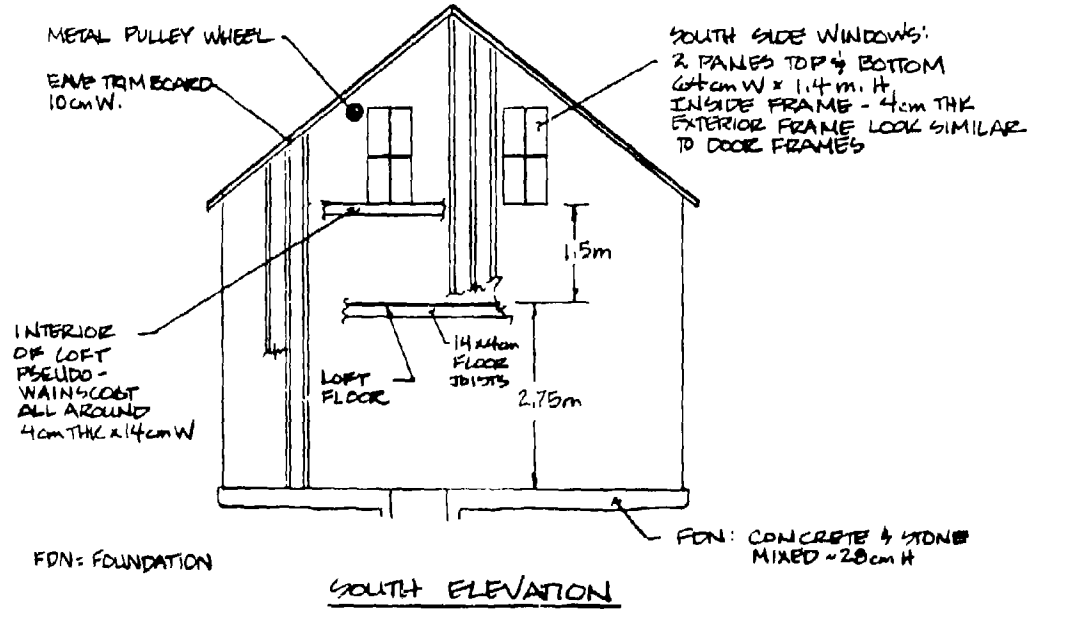


Figure 7-22. Field architectural drawings of grain elevator at 41CO136. (a) north elevation, (b) south elevation.

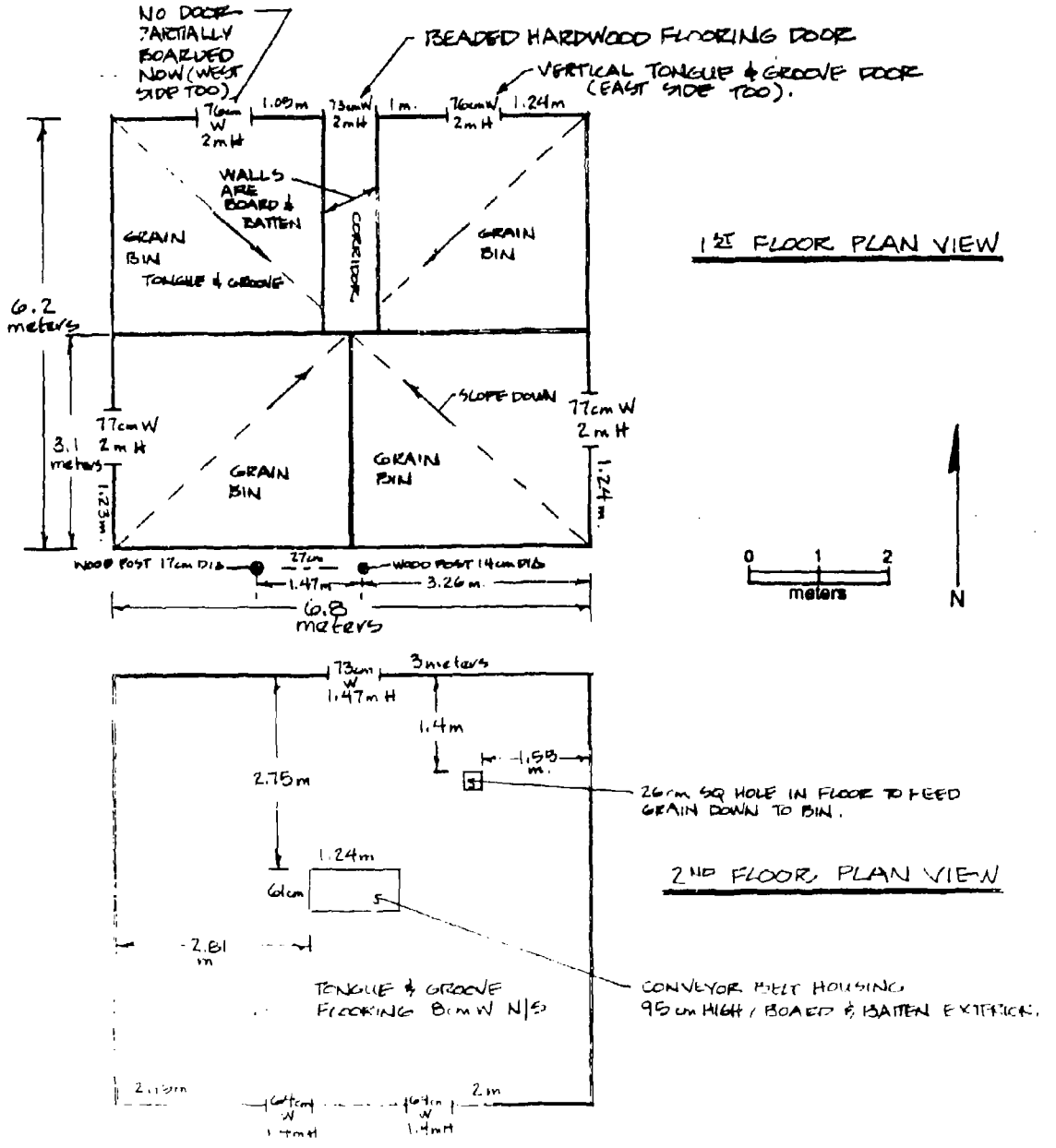


Figure 7-23. Field architectural floorplans of grain elevator at 41CO136. (a) first floor, (b) second floor.

Table 7-8
Artifact Assemblage from 41CO136

Artifact Category	N	%
Stoneware	1	0.50
Bottle Glass	2	1.01
Window Glass	140	70.35
Wire Nails	29	14.57
Building Material	16	8.04
Thin & Heavy Metal	7	3.52
Ammunition	4	2.01
Total	199	

Faunal Remains:

TOTAL BONE = 7

Identified fauna (n=5)
Sylvilagus floridanus (cottontail) - 3
Mephitis mephitis (striped skunk) - 2

Unidentified bone (n=2)

All of these remains were found within the first 10 cm of a single unit. There are no cut marks, and none of the bones are burned. Association with the historic occupation cannot be ascertained.

Summary: The structure is architecturally significant (see above). It is the only grain elevator remaining in the area. The C. C. Myers farmstead, including the early dwelling, is still extant outside the project boundary and will not be affected by Ray Roberts Lake.

41CO138

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	630' amsl
Scheduled Investigations	Architecture, archival
Soil Association	Tinn soils
Cultural Affiliation	Historic bridge (post-1900)

Description: An iron beam bridge was recorded with four concrete supports (Figure 7-24). It spanned the Elm Fork of the Trinity River. No flooring was present, and the western section was missing. The bridge length was about 50 m, and abutment to abutment was about 100m. The flooring was wood planking.

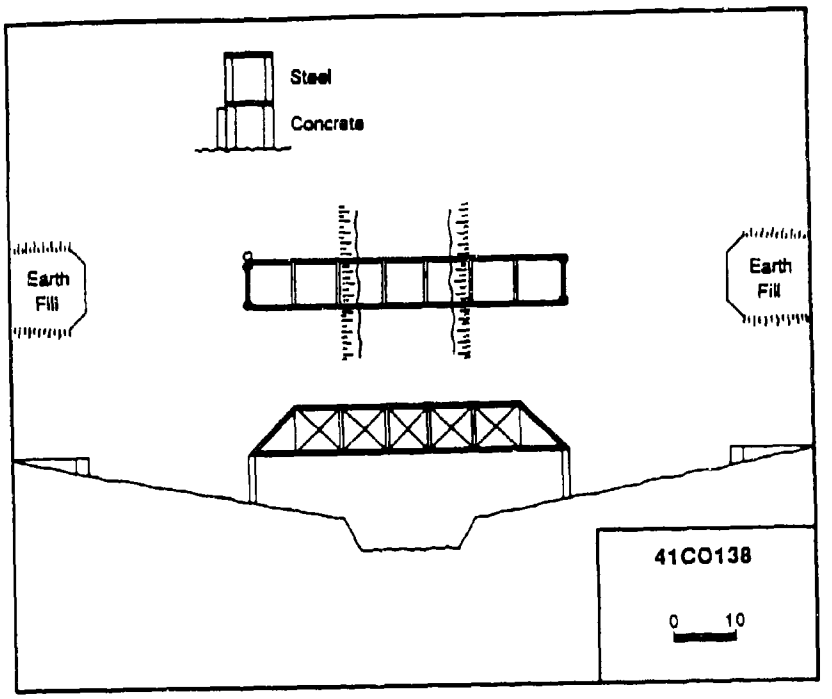


Figure 7-24. Field architectural sketches of the iron-beam bridge at 41CO138 made by ECI personnel when the bridge was recorded.

Previous Investigations: The site was recorded in 1981 and revisited in 1985. The bridge was removed by the county in 1987 before we began our work. Piers for a smaller bridge located 50 to 100 m due east were recorded.

Archival Investigations: It was not mentioned in the deed records (Table A-12). It appeared on the 1909 Cooke County Map, where it was identified as the "Elm Creek Bridge." The initial construction of iron beam bridges coincided with the construction of railroads (Zucker 1941), and this bridge may date to the late nineteenth century. It may have been built to replace the smaller bridge mentioned above.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Testing Method: None.

Testing Results: None.

Summary: The bridge was destroyed or removed before it could be more fully documented.

41CO143

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	580' amsl
Scheduled Investigations	Limited testing, mapping, archival
Cultural Affiliation	Historic (19th c. to recent)

Description: The site is a twentieth-century farmstead with standing structures, including the dwelling, a large barn, a cellar, windmill, water tower, garage, two shed-type outbuildings, a corral, chicken coop, and the foundation to a stock feeding area (Figure 7-25). A trash dump including an old truck was located in the northwest corner of the farm. Evidence of a late nineteenth century component was identified west of the house.

Previous Investigations: The site was recorded by UNT in 1985.

Archival Investigations: The site is located on the John Strickland survey (A-929) and was serially occupied by the Strickland, Jones, and Montgomery families (Table A-13). It was probably initially occupied in 1862 and was sold to the Sanders family in 1905. It was occupied until recently.

Architectural Investigations: Architectural descriptions were made for the dwelling and outbuildings. Floorplans, elevational drawings, photographs, and field notes are on file at IAS, UNT.

Dwelling: The house (Building #1) was a bungalow with a jerkinhead roof at the north side, and a former jerkinhead on the south that is now a hipped gable (Figures 7-26 and 7-27). The entire roof has been replaced. The house is frame, was set on piers, and was built after 1930 with numerous recycled elements. Several additions and modifications were present. The south porch, bathroom, and southeast room were added. The roof was asphalt shingles, and the exterior walls were siding. The original floors were hardwood that were later covered with linoleum. A single-machine made brick hanging chimney was located on the north wall of the kitchen and was later removed, and the space was converted into a pantry.

Outbuildings: Building #2 was a large grain barn with cross-gabled roof (Figure 7-28). The main gable ran east-west and the shorter gables north-south. The foundation was poured concrete on the west, post and stone on the north, sandstone on the east, and post only on the south. The interior was divided into five storage cribs with wood floors and horizontal plank walls. A central breezeway ran north-south, and the southern third of the structure was an open shed. Double doors provided access to the breezeway on the north.

Building #3 was a concrete cellar. Building #4 was recorded as a garage with four support posts placed down the center of the building and vertical board walls. The roof was an offset gable of corrugated metal sheeting. Sheeting was also present on the west and north walls. Double swinging doors were present on the west and east walls.

Building #5 was a large shed or animal pen. It had a dirt floor, no foundation, and was post construction with horizontal plank walls. Double doors were located on the east elevation. The gable roof was galvanized metal, and similar sheeting was present on the south and east walls. Openings were cut into the lower half of the north wall. They did not have doors but appeared to have provided access for small farm animals. Chicken wire was nailed up on the bottom half of the south wall. Building 6 was similar, with a galvanized gable roof, no foundation, and horizontal tongue and groove walls. The floor was also tongue and groove, and a 20-cm high corrugated metal skirt was tacked around the bottom portion of the building. This structure was probably used for hay or grain storage.

Building #7 was a chicken coop and shed with a poured concrete foundation, wood plank floor, and a galvanized metal gable roof. The coop had collapsed, and only the foundation remained.

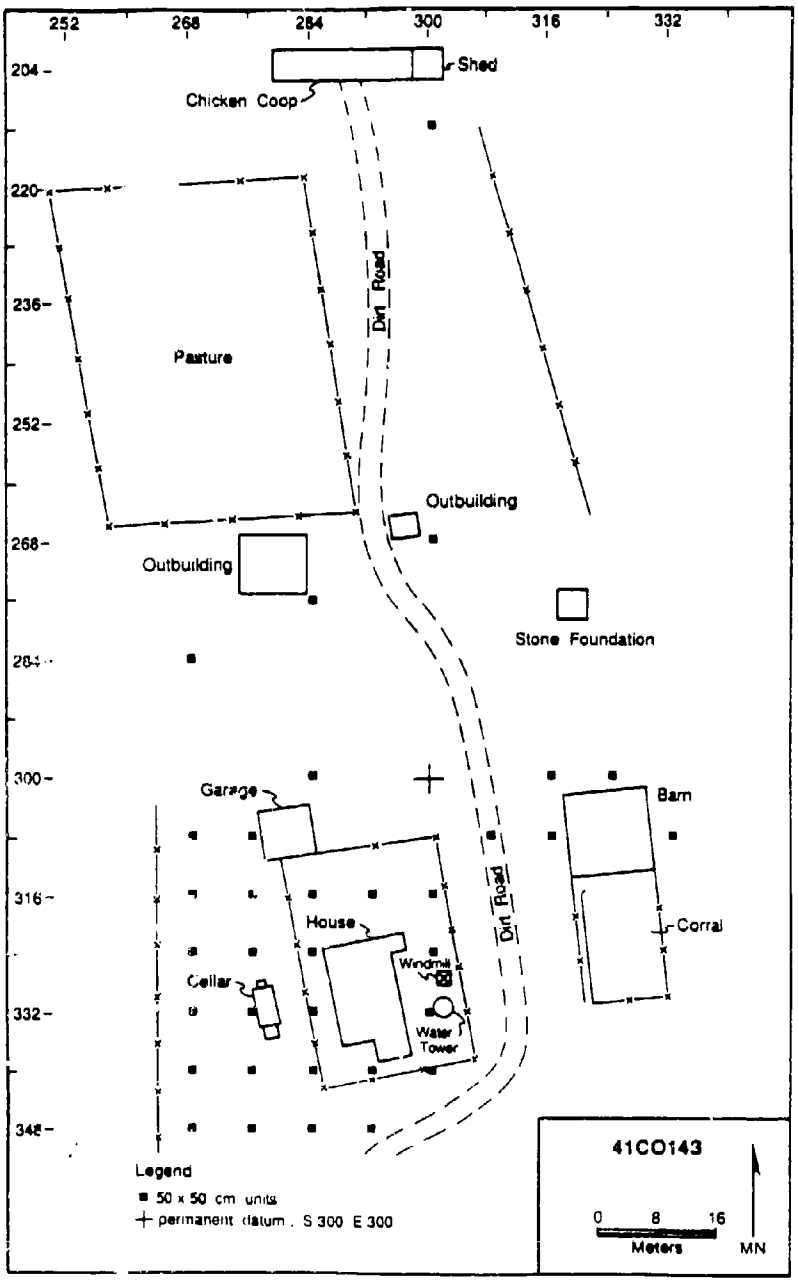


Figure 7-25. Site map for 41CO143.

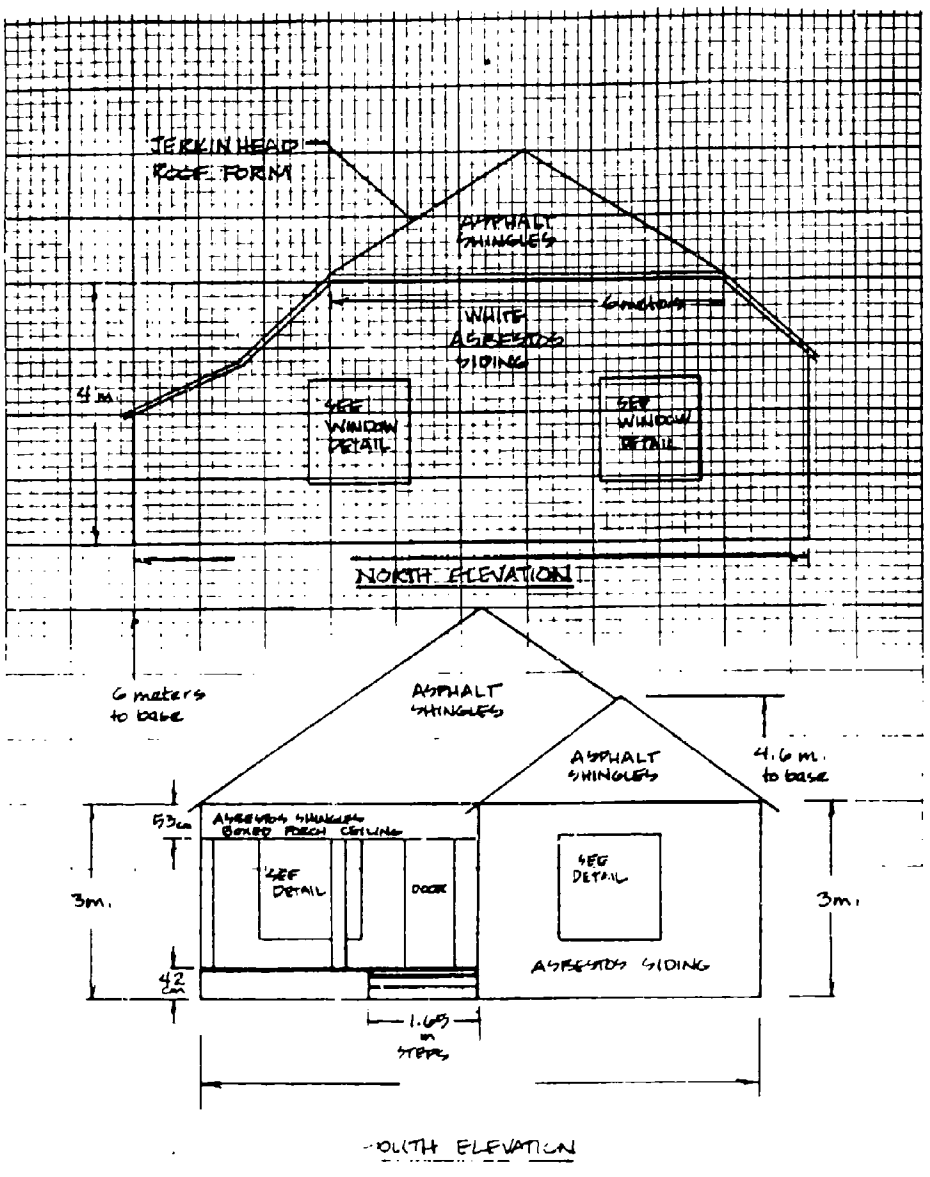


Figure 7-26. Field architectural drawings of the dwelling at 41CO143. (a) north elevation, (b) south elevation. Note: the window details are on file at IAS, UNT and are not shown here.

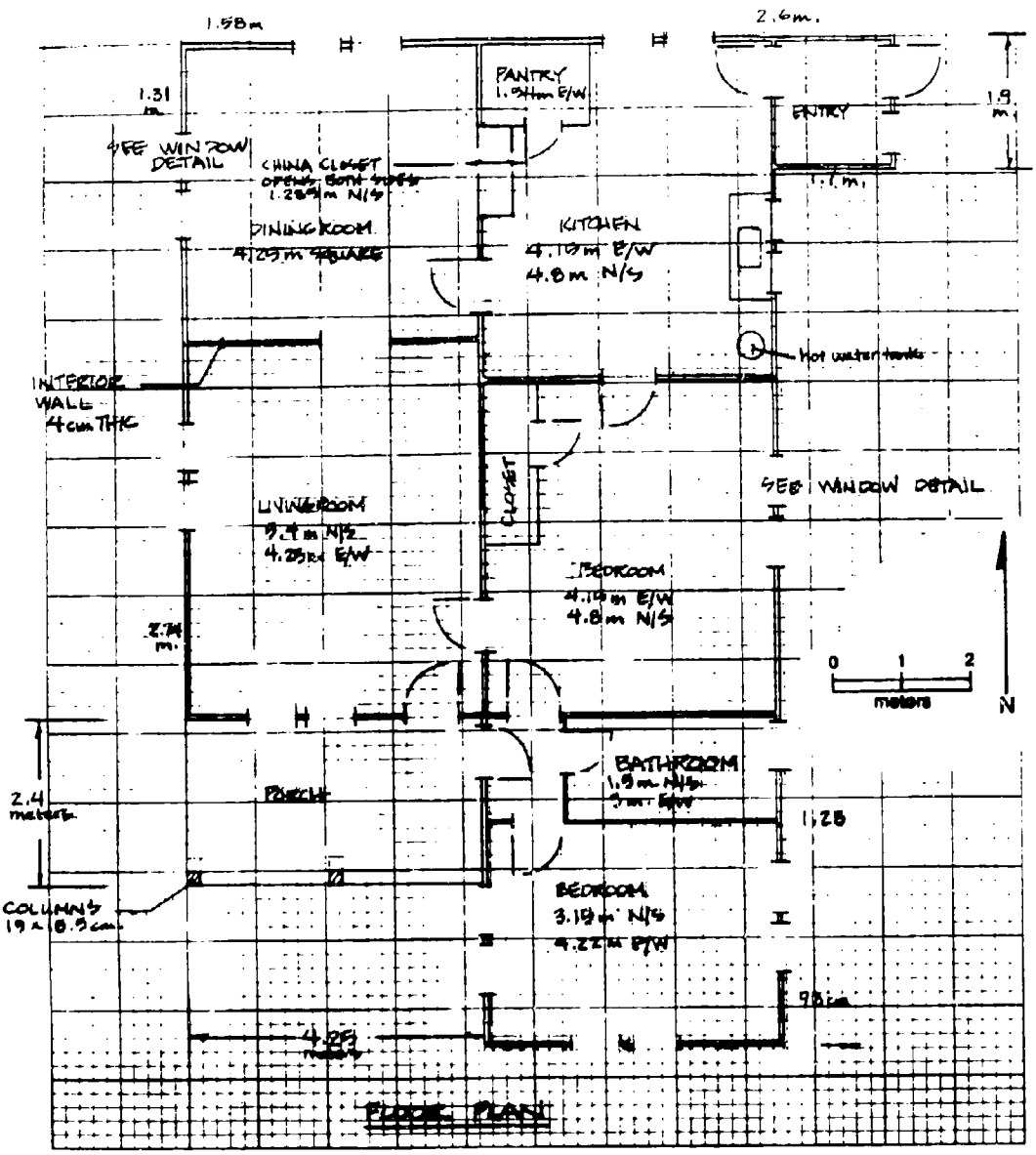
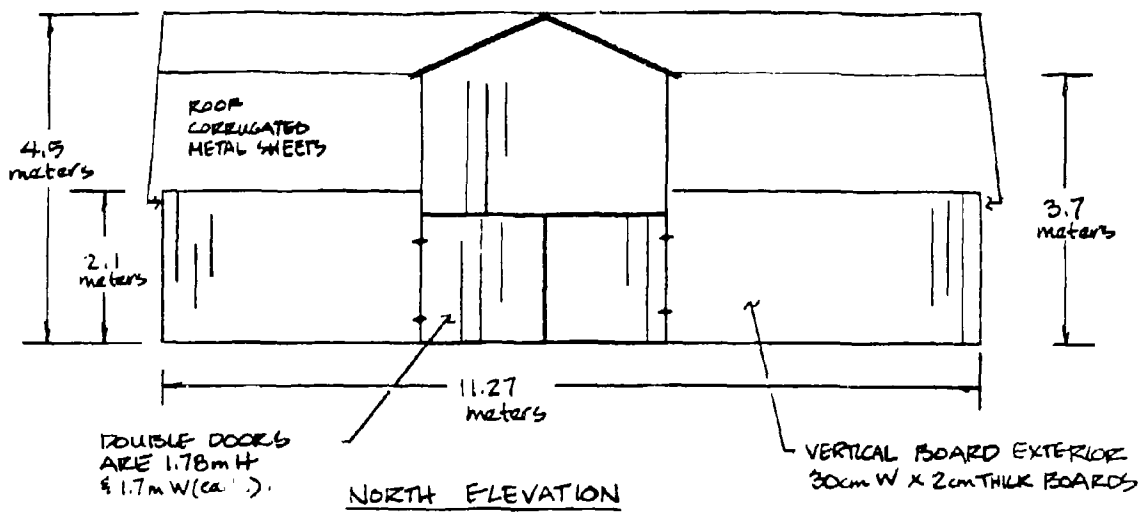


Figure 7-27. Field architectural floorplan of the dwelling at 41CO143. Note: the window details are on file at IAS, UNT and are not shown here.



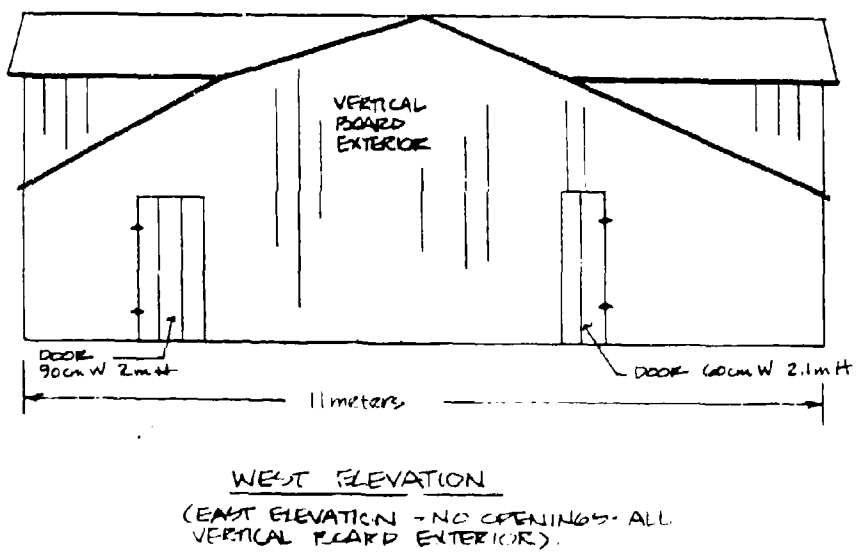


Figure 7-28. Field architectural drawings of the Building # 2, large grain barn, at 41CO143. (a) north elevation, (b) west elevation.

Dating: All of the structures dated to the twentieth century and appear to have been built after 1930, with some modifications dating after World War II.

Significance: Not significant.

Recommendation: No further work.

Dendrochronological Investigations: None.

Testing Method: Thirty-four 50x50-cm units were excavated on a 8-m grid in the main house area and judgmentally placed near outbuildings.

Testing Results: The cultural deposits indicate the site was occupied from the late nineteenth century until recently (Table 7-9). The low-density sheet refuse deposit is mixed. The older material, pre-1900, is concentrated west of the dwelling, and forms a band around the house. The refined earthenwares yielded a mean beginning date of 1862, while the stonewares dated 1874. The bottle glass yielded a date of 1874, and together with the ceramics indicates the site was initially occupied in the 1860s to 1870s. Machine-cut nails were found in the dwelling area, while wire nails overlapped but also occurred in outbuilding areas.

Table 7-9
Artifact Assemblage from 41CO143

Artifact Category	N	%
Semi & Coarse Earthenware	1	0.24
Refined Earthenware	36	8.63
Stoneware	5	1.20
Porcelain	1	0.24
Bottle Glass	59	14.15
Window Glass	17	4.08
Machine-Cut Nails	51	12.23
Wire Nails	85	20.38
Handmade Brick	3	0.72
Building Material	61	14.63
Personal Items	7	1.68
Thin & Heavy Metal	56	13.43
Household Items	19	4.56
Machine & Wagon	2	0.48
Horse & Stable Gear	1	0.24
Misc. Other	13	3.12
Total	417	

Artifacts were recovered from 5 to 15-cm below the surface. Artifact counts per unit ranged from zero to 53, with a mean density of 12 artifacts. No subsurface features were found

The sheet refuse deposit exhibited fair to good integrity. Bioturbation, erosion, and modern activities have affected the integrity of the older component. The early dwelling has been removed and probably was located under the modern house. Construction of the cellar about 1909 has disturbed the sheet refuse deposit in this area.

Faunal Remains:

TOTAL BONE = 20

Identified fauna (n=2)
Sus scrofa (domestic pig) - 1
Bos taurus (domestic cattle) - 1

Unidentified bone (n=18)

The identified elements from these two domestic animals are both foot bones. Neither is burned, which contrasts with the unidentified material from this site. Thirteen fragments of large mammalian bone are burned, but none exhibit cut marks. A small piece of eggshell was also recovered. Other than establishing the fact that domestic animals are represented at the site, the sample is too small to make cultural inferences.

Summary: The site was initially occupied in the middle nineteenth century. No buildings or features associated with this occupation remain. The low-density sheet refuse midden contains mixed deposits, with evidence of earlier material in a sheet refuse band concentrated west of the modern house.

41DN92

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	630' amsl
Scheduled Investigations	Machine scrape for burials
Soil Association	Justin fine sandy loam
Cultural Affiliation	Historic (1875 to recent)

Description: Site 41DN92 is located on the edge of a T_1 terrace east of the Elm Fork of the Trinity River. It consisted of two collapsed structures, a low mound, a burned brick and limestone concentration, a cellar, and a historic artifact scatter (Figure 7-29). The site area was estimated to be 63 m north-south by 80 m east-west (Skinner et al. 1982b).

Previous Investigations: Limited testing conducted by ECI in 1982 involved the excavation of six shovel test pits. STP 1 was placed on the edge of the burned brick and limestone concentration. It was sterile. STPs 2 and 5 were excavated within the cellar, STP3 was dug inside a fallen outbuilding, and STP4 was placed within the house mound. STP 6 was located near the northwestern edge of the site. All of the shovel test pits except STP 1 contained material (see Appendix J).

Based on the limited assemblage recovered, and the recent age of the material, no additional testing was recommended. In addition, the site was recorded as having been disturbed by recent activity, and no evidence of an early occupation was found (Skinner et al. 1982b:4-47).

Archival Investigations: Research was conducted by ECI (Skinner et al. 1982b:4-40), indicating that the site was located on the James Matthews survey, which was patented in 1859. The property was acquired by J. R. Sullivan in 1883 from John and Christine Downard. No information was found indicating whether or not the Downards had lived there. The Sullivans owned vast holdings and did not sell the property until 1912. They did not live here.

According to Skinner et al. (1982b:4-41), "references in the tract description indicate that the 223-ac tract had been divided more than once, with parcels sold to James Vandever and a member of the Cates family. Sullivan sold

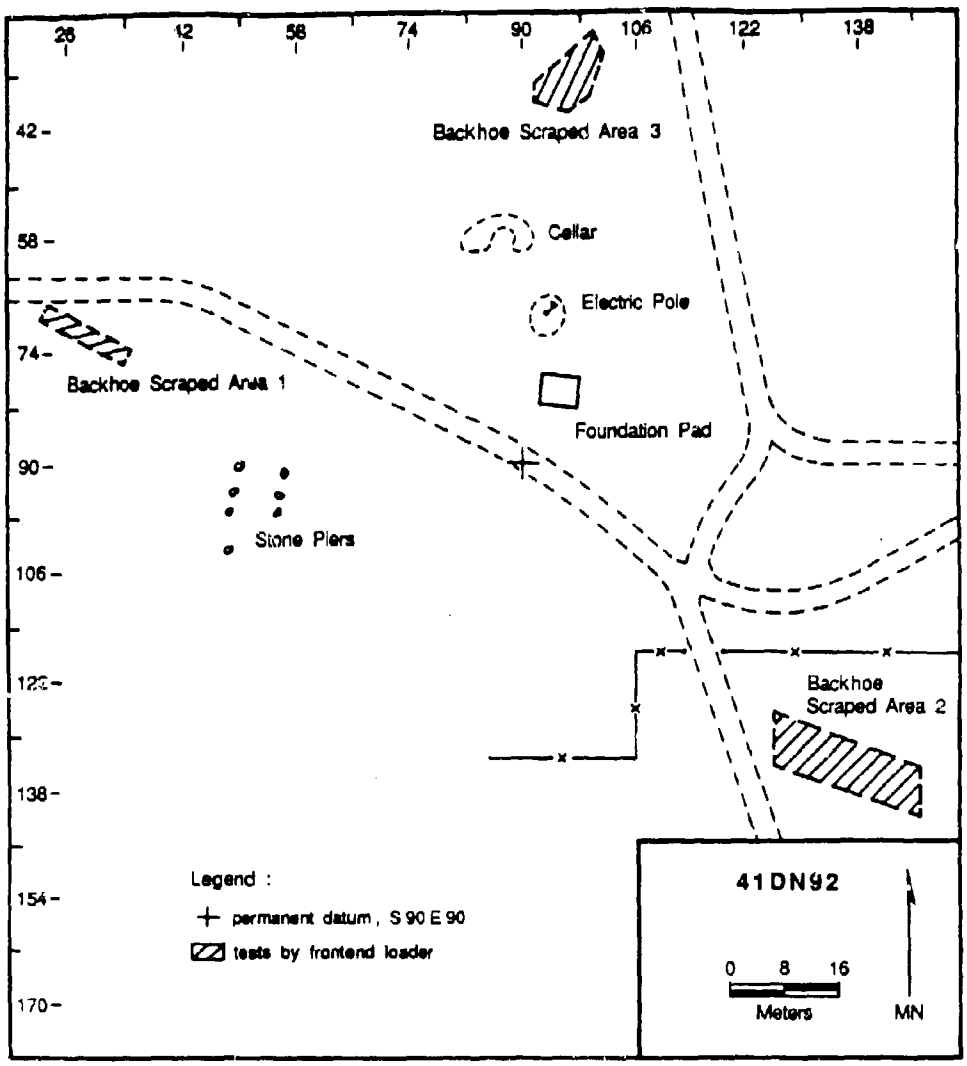


Figure 7-2? Site map of 41DN?2 showing the locations of the backhoe scraped areas. Details of the collapsed fences and buildings are not shown.

the property (two tracts totaling 88.3 ac) to L. G. Harris for $2,384. Harris sold it to A. E. Peters in 1919 for $6,262 (Warranty Deed 170:162). According to Elsie Morrow (1-18-81), Peters owned the land but lived in town and rented the land to area farmers."

The Peters' place contained two rental farmsteads, and the one located at 41DN92 was rented by Buck Hammons sometime in the 1940s. It was sold to W. R. Chatfield in 1952.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Testing Methodology: Burial exploration. The site was not originally included in the Scope of Work, but later, work at the site was requested by the Corps as a follow-up on information provided by a local informant that an infant had been buried at the farmstead.

Work was conducted over a three day period and focused on scraping several areas using heavy machinery. The first day was spent conducting a surface reconnaissance. Soil probing was undertaken to determine if the A and B-horizons were sufficiently distinct in color and texture to allow visual identification of areas where the B-horizon had been disturbed by subsurface intrusion. In addition, a north-south and east-west baseline system was established, allowing all field efforts and features to be mapped; particularly the areas scraped.

Three areas were selected for scraping that represented high probability areas for an isolated grave or small family plot. Two areas were located on small promontories that overlooked the floodplain (see Figure 7-29: Areas 1 and 2). Both were located on relatively flat ground with several large oak trees. They were situated outside the main house area, but within a short distance of the dwelling. The third area (Area 3) was situated north of the dwelling, and outside the main house area. Several large oak trees were present, and evidence of soil disturbance was indicated by a difference in the vegetation cover when compared with surrounding areas.

The second day was spent using a backhoe with a bulldozer blade to scrape each of the selected areas. The A-horizon was slowly peeled away to a depth of 20 to 30 cm below surface. In addition, the upper portion of the B-horizon was slowly scraped to provide a clean surface. The work was conducted with one person operating the backhoe, and a second monitoring the area as it was exposed. No evidence of subsurface disturbances related to a possible grave were identified in any of the areas. A possible rock-lined hearth was found in Area 3.

The site was mapped on the third day, including the location of all surface features, and the location, size, and orientation of each scraped area. In consultation with the Corps, no additional work was recommended.

Testing Results: Negative. No evidence of a grave was found.

41DN106

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	620' amsl
Scheduled Investigations	Architecture, dendrochronology
Additional Investigations	Archival
Soil Association	Callisburg fine sandy loam
Cultural Affiliation	Historic (l. 19th c.-1940s)

Description: The site is located in Johnson Branch Park and covers an area approximately 30x30 m. It consists of a house foundation, a collapsed log and plank outbuilding, and a standing board and batten shed. The house was standing when the site was recorded in 1980, and appeared as a L-shaped board and batten dwelling set on wood piers. A concrete water trough was also present that had a date of 1946 scrawled into it (Figure 7-30). A sparse surface scatter was noted.

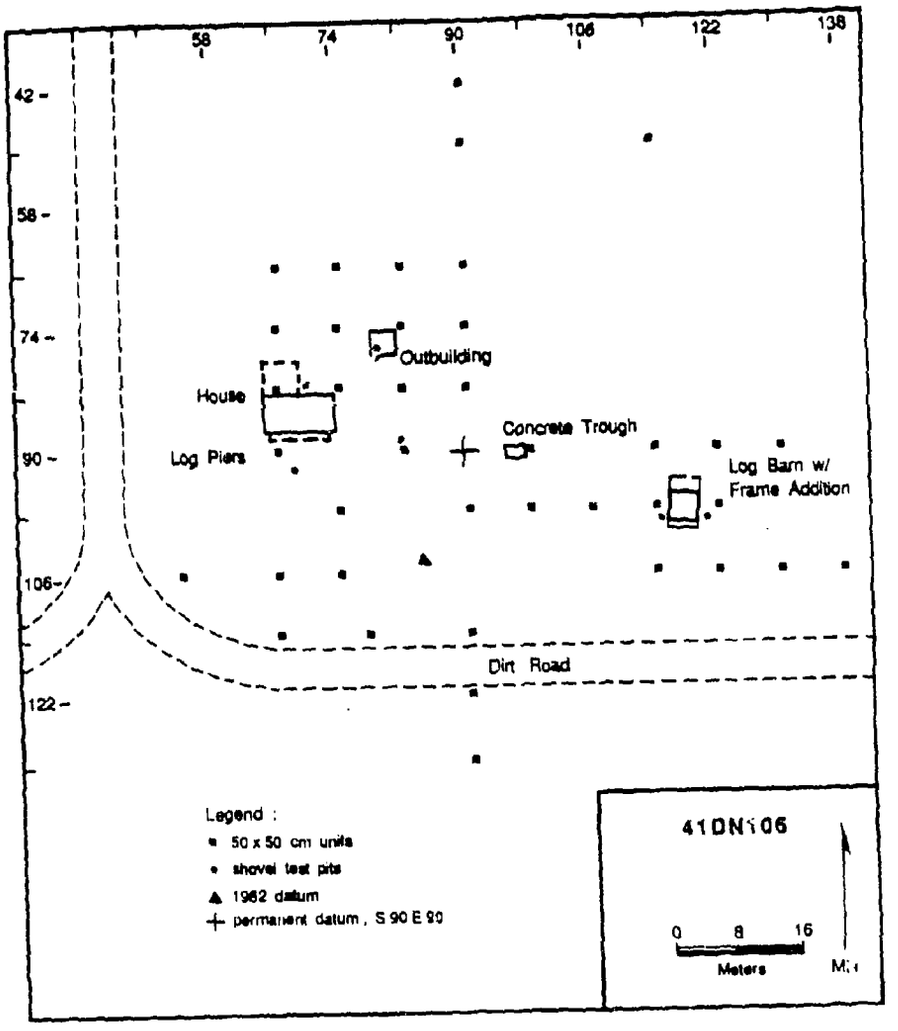


Figure 7-30. Site map of 41DN106.

Previous Investigations: Testing conducted by ECI in 1982 involved excavating six shovel test pits. Five shovel test pits were dug near walls of structures or inside buildings. STP 5 was dug placed in the sheet refuse midden east of the dwelling. No material was found in STP 1 or STP 6. Nineteen artifacts were found in the remaining shovel test pits (see Appendix J). The assemblage reflected a twentieth century occupation and no additional testing was recommended (Skinner et al. 1982b:4-67). However, the small outbuilding was recommended for limited documentation, including measured plans, photographs, and site-specific historical research.

The site was revisited by personnel from UNT in 1985. The house was recorded as having collapsed, and the outbuildings were badly deteriorated. Controlled testing was recommended to determine if the site was occupied by landowners or tenants and to recover spatial and functional information. Architectural documentation of standing structures and dendrochronology of the log crib was recommended.

Archival Investigations: The farmstead is located on the John Jones survey (A-669) granted to Jones in 1859. The entire survey remained in the Jones family until 1950. The site is located on Tract 2 (152 acres), 41DN224 is situated on Tract 1 (92.5 acres), and 41DN107 is on Tract 3 (92.5 acres). The entire survey was 320 acres. Site 41DN224 is the John Jones homestead (see 41DN224 description).

Site 41DN106 dates to the twentieth century, and according to Roy Jones (personal communication, 1987), it was occupied by tenant farmers. It was abandoned in the 1940s and sold in 1950. The house at 41DN106 was built by Roy Jones' uncle who lived at 41DN224.

Architectural Investigations: The log outbuilding was documented and limited information was obtained on the collapsed dwelling and a small shed. An overview of each is provided below.

Dwelling: The dwelling was described as having an L-shaped floorplan with an open porch on the south side (Skinner et al. 1982b). It had completely collapsed and was partially salvaged. The debris was examined when testing was conducted in 1987 and indicated that the dwelling had sat on unhewn log posts, with log sills. The exterior walls were horizontal planking, and all the nails were wire. The original roof was cedar shake and had been replaced later with asphalt shingles.

Shed: This building was northeast of the house and was frame with a north-south gable. The sills sat directly on the ground, and it had a dirt floor. A door was located on the south wall, and the original roof was cedar shakes that were later covered with asphalt shingles. Wire nails were used throughout.

Outbuilding: The log and plank outbuilding was originally built as a single crib granary (Figure 7-31). It was being used for hay storage. A plank shed addition was located on the north side. The original crib was constructed with V-notched logs. The sills were placed directly on the ground, and a wood plank floor was present. The boards ran east-west, and a door was located on the west elevation. The original roof was removed when the shed addition was built. The present roof is a witch's hat style with a high gable over the crib, with shed extensions on the north and south side. A built-in trough is located on the south, and the roof overhang extends beyond it. The addition has plank walls and floor and a door on the north side. The roof of the crib was raised to one-and-a-half stories when the addition was built. The present roof is corrugated sheet metal.

Dating: The dwelling and shed were built in the early twentieth century, possibly after 1920. The site was built as a tenant farmstead. The log outbuilding could not be accurately dated. It is similar in size and construction with other outbuildings built during the early twentieth century in the study area. The shed addition dates to this period and was probably built at the same time as the house and shed.

Significance: The house and shed are too recent. While the log crib may be significant, the archival and dendrochronology research did not yield information about this structure.

Dendrochronological Investigations: Five dendro samples were sent to Dr. Malcolm Cleaveland at the University of Arkansas for analysis. Three logs were sampled, and a duplicate sample from two of these logs were included because of poor preservation. The samples were determined to be too short and erratic. As a result, no dates were obtained. All of the logs were oak.

Testing Method: Thirty-nine 50x50-cm units were dug on a 8-m grid across the site to recover information on site function, size, integrity, and age.

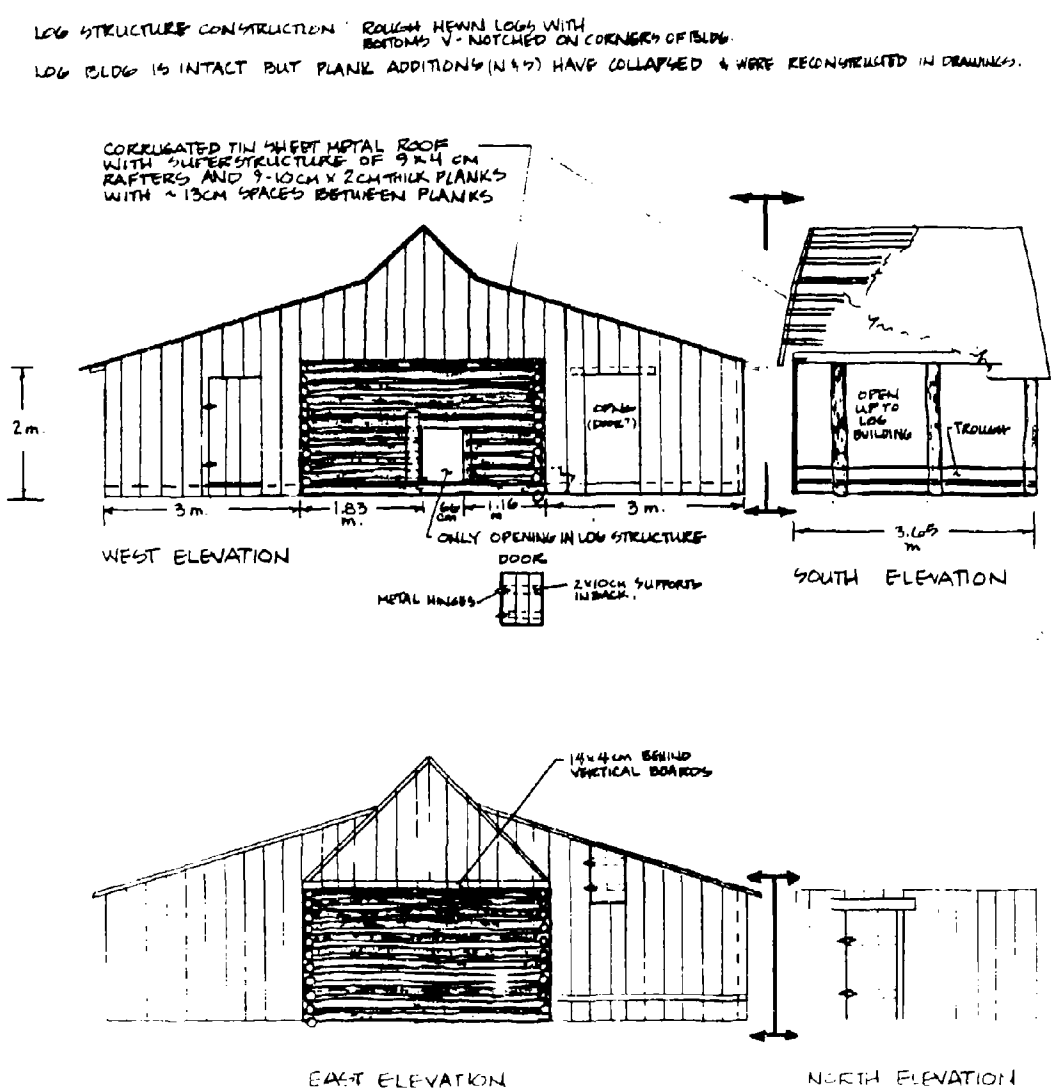


Figure 7-31. Field architectural drawings of the log and plan outbuilding at 41DN106. (a) west elevation, (b) east elevation.

Testing Results: An overview of the assemblage recovered during testing is presented by artifact category in Table 7-10. These data indicate a low to moderate sheet refuse midden. Artifact counts ranged from zero (sterile) to 246 items per unit. High-density units contained non-sheet refuse material, including Unit 19 located at S82 E74 (n=229) and Unit 33 located at S114 E77.5 (n=246). Unit 19, at the northeast corner of the dwelling, contained 136 window glass fragments, while one unit located along a dirt road, contained 109 bottle glass sherds.

Table 7-10
Artifact Assemblage from 41DN106

Artifact Category	N	%
Semi & Coarse Earthenware	3	0.35
Refined Earthenware	18	2.11
Stoneware	15	1.76
Porcelain	7	0.82
Bottle Glass	262	30.68
Table Glass	10	1.17
Lamp Glass	8	0.94
Unid. Glass	3	0.35
Window Glass	184	21.55
Machine-Cut Nails	4	0.47
Wire Nails	94	11.01
Handmade Brick	1	0.12
Machine-Made Brick	4	0.47
Building Material	68	7.96
Personal Items	5	0.59
Thin & Heavy Metal	114	13.35
Household Items	7	0.82
Machine & Wagon	14	1.64
Tools	2	0.23
Horse & Stable Gear	1	0.12
Ammunition	7	0.82
Electrical Items	5	0.59
Misc. Other	18	2.11
Total	854	

Artifact counts in the remaining units yielded a mean of 10.8 items per 50x50-cm unit. Architectural items accounted for 41.58% of the total recovered assemblage, followed by bottle glass (30.68%), and thin/heavy metal and tin cans (13.35%). The architectural items were largely associated with the collapsed dwelling and dated to the twentieth century. A single handmade brick fragment and four machine-cut nails were found. Window glass fragments were concentrated around the dwelling, and none were found east of Line E98. Wire nails were more widely distributed with one cluster around the dwelling and a small, second cluster near the outbuilding.

Refined earthenwares were found east of the dwelling (E74 to E90), but not in the outbuilding area. Stonewares exhibit a broader distribution, occurring in both the dwelling and outbuilding areas. Bottle glass occurs across the site, but only six units contain more than five fragments.

The refined earthenwares produced a mean beginning date of 1881, while the stonewares and bottle glass dated 1894 and 1915, respectively. When combined with the architectural data, the site was initially occupied near the turn-of-the-century. No discernable pre-1900 deposits were found.

Faunal Remains:

TOTAL BONE = 3

Identified fauna (n=3)
Lepus californicus (jack rabbit) - 1

Sciurus niger (fox squirrel) - 1
Gallus gallus (domestic chicken) - 1

No unidentified bone

Jack rabbit and squirrel are known game animals even today. Their association with the occupation debris suggests that they may have supplemented the occupant's diet, but this is inconclusive.

Summary: The site was originally assigned a date range of 1875 to 1935, which was not supported by the testing results, and no further archaeological investigations were recommended (Skinner et al. 1982b:4-67). Architectural research, including measured drawings and photographs, was recommended.

The current testing results support the original recommendations. This site reflects a turn-of-the-century to ca. 1940s tenant occupation and does not contain significant architectural or archaeological deposits. The dwelling was built in the twentieth century, while the outbuilding could not be accurately dated but may also date to the same construction period. The sheet refuse deposit is low density, and no subsurface features were found.

41DN107

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	625' amsl
Scheduled Investigations	Architecture, dendrochronology
Additional Investigations	Limited testing, archival
Soil Association	Bastrop fine sandy loam
Cultural Affiliation	Historic (1875 to 1950s)

Description: Site 41DN107 is located in Johnson Branch Park and is approximately 130 m north-south by 100 m east-west. Several standing structures were located at the site when it was recorded in 1980, including a dwelling, a chicken coop, outhouse, barn, collapsed garage, and two frame outbuildings. A collapsed cellar was located at the southern extent of the site near a small stockpond. A second cellar depression was located off the northeast corner of the house. A well was located just east of this second cellar (Figure 7-32). When the site was revisited in 1986, the house had burned.

Previous Investigations: Six shovel test pits were dug by ECI in 1982. They were concentrated around the dwelling and outbuildings located on the western portion of the site. Shovel test pits 2 and 4 were sterile. A total of twenty-two artifacts were recovered from the other pits (see Appendix J). No additional testing was recommended (Skinner et al. 1982b:4-70). The only potentially significant structure was the log and plank barn located northeast of the house, and it was recommended for limited architectural documentation (Skinner et al. 1982a:8-25).

The site was revisited in 1986 by personnel from UNT. Test excavations were recommended to supplement existing data on site age, function, and ethnicity. Architectural documentation of extant structures and dendrochronology of the log barn were also recommended, along with recovery of information about the landowner-tenant farmer occupations at the site.

Archival Investigations: The site was located on the John Jones survey (A-669) granted to Jones in 1859. The entire survey remained in the Jones family until 1959. Site 41DN107 is located on Tract 3, 41DN106 on Tract 2, and 41DN224 on Tract 1. The entire survey was 320 acres. Site 41DN224 represents the original homestead (see 41DN224 description). The second homestead, probably by T. Jones, was located at 41DN107.

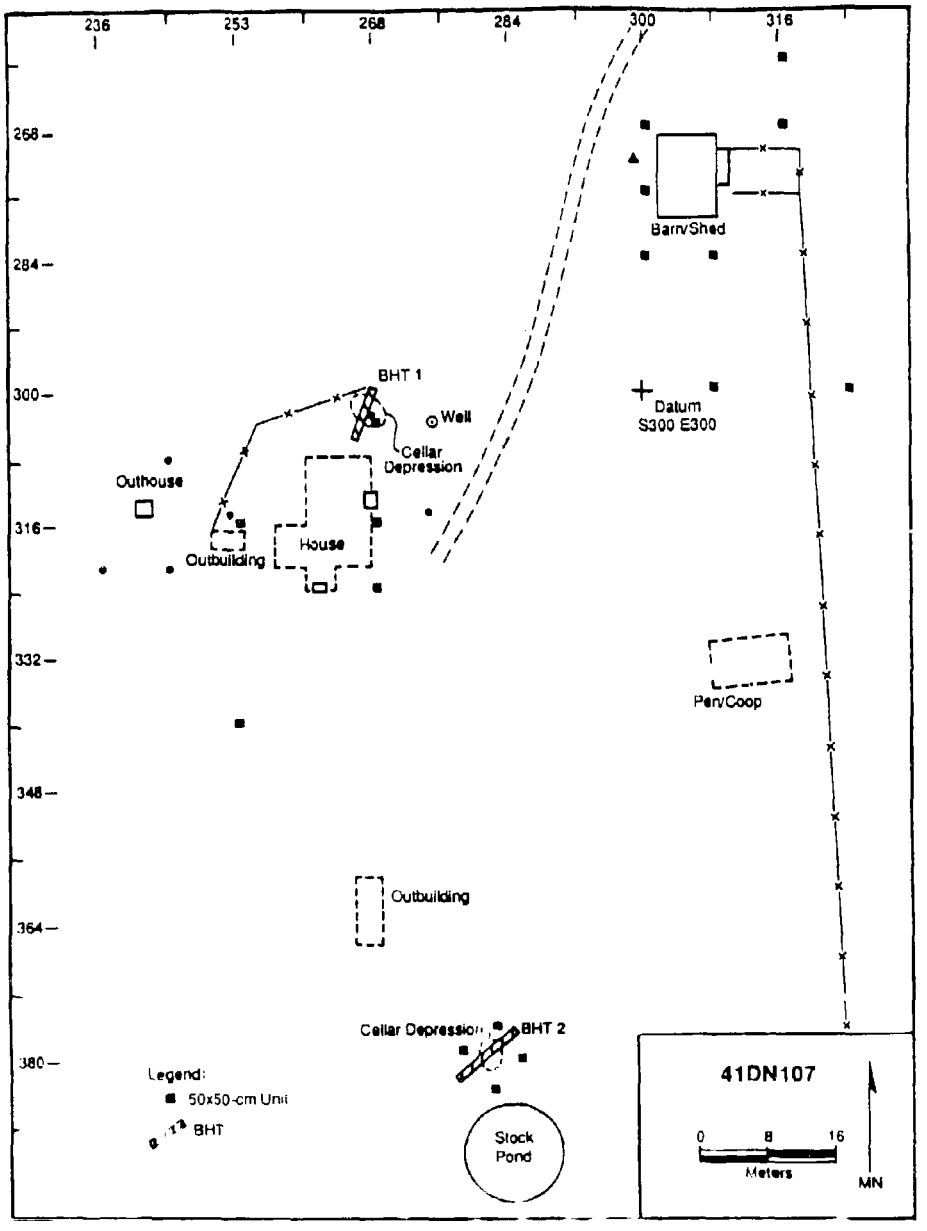


Figure 7-32. Site map of 41DN107. The survey datum is shown as a black triangle in the northeastern site area.

The farmstead was originally occupied in the late nineteenth century, and according to Roy Jones (personal communication, 1987), it was occupied by tenant farmers during the early to mid-twentieth century. It was abandoned in the 1950s, and sold in 1959. He did not know who built the house or lived in it prior to the 1900s.

Architectural Investigations: The only significant structure remaining was a log crib with frame additions. It was located at the northeastern extent of the site (Figure 7-33). The original crib was set on log piers and had a dirt floor. The logs were unhewn and had V-notching. The original roof was removed when additions were built onto the north, south, and east sides. The roof was raised to create a one-and-a-half story crib with shed roofs on three sides. The center roof was a high gable. The north addition was set on sandstone piers, and both it and the log crib were covered with vertical planking on the north and west elevations. The north addition was divided into two pens, each with a board and batten floor. The south and east additions were open sheds supported by log posts. The entire structure was roofed with corrugated sheet metal.

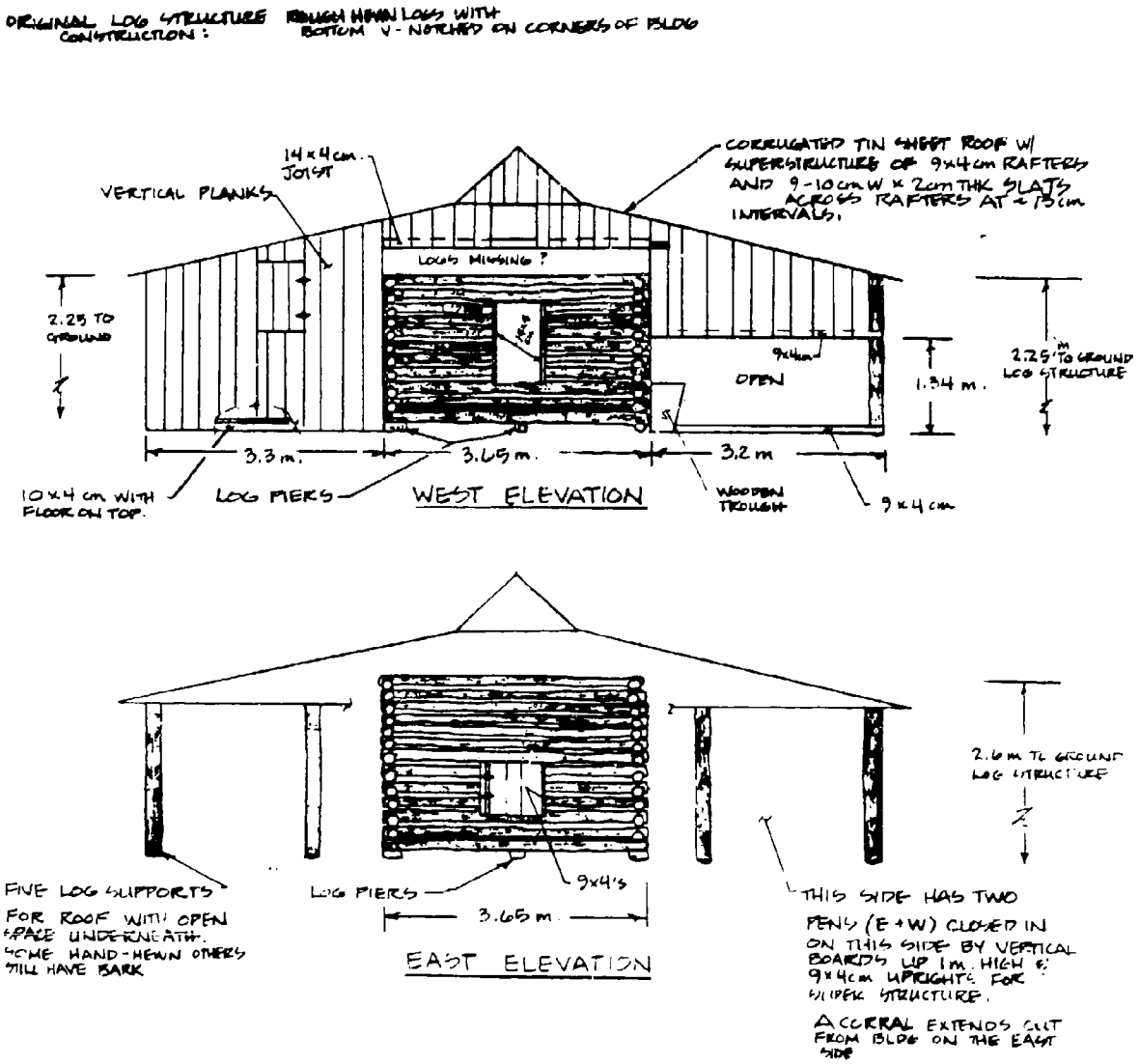


Figure 7-33. Field architectural drawings of the log crib at 41DN107. (a) west elevation, (b) east elevation.

Sandstone piers and several chimney falls associated with the dwelling remained. The floorplan was recorded as a "T"-shaped house in 1980 with a porch on the east side. It was not documented before it burned. No data were recovered on the original floorplan. However, it appears that it was probably two or three rooms, comprising the top part of the Tee. The base of the "T" was added later. The northern chimney was constructed of machine-made brick (ATLAS and DIAMOND), while the southern was transitional handmade brick (ca. 1890s). The concrete steps to the east porch dated 1939.

Dating: The house was probably built in the late nineteenth century based on the southern chimney. It was added onto during the twentieth, with some additions occurring as late as 1939. The log crib may have dated to the early occupation, but the other structures are all twentieth century (chicken coop, garage, outhouse, cellars).

Significance: The log crib was determined potentially significant (Skinner et al. 1982a), but no construction date was obtained.

Dendrochronological Investigations: Five dendro samples were sent to Dr. Malcolm Cleaveland at the University of Arkansas for analysis. The samples were determined to be too short and erratic. As result, no dates were obtained. All of the logs were oak.

Testing Method: Seventeen 50x50-cm units were excavated to recover information on site integrity, age, and size. Units were clustered near the house, both cellars, and the log crib. Two backhoe trenches were dug. BHT 1 (Unit 18) was placed at a northeast-southwest diagonal to cross-cut Feature 1 (north cellar). A single 50x50-cm unit (Unit 17) was dug in Feature 1. It was excavated to 50 cm below surface and revealed a trash deposit within the depression. The material dated to the twentieth century. BHT 2 (Unit 19) was oriented the same direction, which cross-cut Feature 2 (south cellar), and was sterile. No additional units were dug.

Testing Results: The cultural deposit was shallow, between 5 to 10-cm below surface, excluding Features 1 and 2 (cellars). The excavation units in the barn area recovered sheet refuse, while units near the dwelling sampled the sheet refuse, Feature 1, and architectural debris from the burned house. The sheet refuse sample in both areas is low density and reflects serial occupation.

An overview of the artifact assemblage is provided in Table 7-11. These results indicate that 54 artifacts were recovered from sheet refuse, 256 from Feature 1 (cellar), and 308 from the surface collection near Feature 2 (cellar). An overview of the mean beginning dates for refined earthenwares, stonewares, and bottle glass from each of these samples is presented in Table 7-12 and indicates no significant difference between them.

These dates, the architectural data, and the archival information support a late nineteenth century date for initial occupation. The sample from Feature 1 indicates that this cellar was abandoned early, with the trash fill within the depression that formed when the cellar collapsed correlating in age with the early occupation. The second cellar (Feature 2) was probably built after the first cellar collapsed. This cellar was still standing when the farmstead was abandoned.

As the data in Table 7-12 indicate, the three samples recovered significantly different aspects of the archaeological record. Few architectural remains were collected in the surface collection sample, while architectural items accounted for approximately 40% of the other two samples. In Feature 1, these items include both house and cellar debris.

Features: Two features were identified and are discussed below.

Feature 1: Feature 1 is the north cellar located north of the dwelling. This cellar had an earthen floor and walls with log support posts, and probably a wood door. The cellar was oriented east-west and was approximately 2 m by 5.5

Table 7-11
Artifact Assemblage from 41DN107

Artifact Category	Sheet Refuse N	Sheet Refuse %	Feature 1 N	Feature 1 %
Semi & Coarse Earthenware			5	1.62
Refined Earthenware	2	0.90	83	26.95
Stoneware	12	3.90		
Porcelain	1	0.45	32	10.39
Bottle Glass	30	13.57	81	26.30
Table Glass	1	0.45	74	24.03
Lamp Glass	1	0.45		
Unid. Glass			5	1.62
Window Glass	2	0.90	6	1.95
Machine-Cut Nails	9	4.07		
Wire Nails	52	23.53		
Handmade Brick	4	1.81		
Machine-Made Brick	2	0.90		
Building Material	54	24.43		
Personal Items	7	3.17		
Thin & Heavy Metal	34	15.38	6	1.95
Household Items	3	1.36		
Machine & Wagon	2	0.90	2	0.65
Tools	1	0.45		
Misc. Other	16	7.24	2	0.65
Total	221		308	

Table 7-12
Mean Beginning Dates for the Sheet Refuse, Feature 1,
and Surface Collection Samples at 41DN107 (n=sample size)

Artifact Category	Sheet Refuse	Surf. Coll.	Feature 1
Refined Earthenware	1880.0 (n=1)	1884.7 (n=77)	1883.3 (n=6)
Stoneware	none	1900.0 (n=16)	1900.0 (n=2)
Bottle Glass	1906.6 (n=3)	1904.0 (n=16)	1913.7 (n=32)

m. The backhoe trench indicated that the trash fill began at 18 cm below surface, and the bottom of the cellar was approximately 1 m below surface (see Figure 7-32).

Feature 2: Feature 2, the south cellar, was located at the southern extent of the site. It was built to replace Feature 1 and was partially collapsed (see Figure 7-32). It had earthen walls and floor and the roof was composed of wire mesh, concrete, and earth, supported by railroad ties. The entry was on the south, and at least one sandstone step was still in situ.

Faunal Remains:

TOTAL BONE = 2

Identified fauna (n=1)
Meleagris gallopavo (turkey) - 1

Unidentified bone (n=1)

The proximal end of a turkey humerus is the only identified animal bone. The only other bone to be recovered appears to be a phalanx, quite possibly from a turkey as well. Distinguishing domestic from wild turkey based on a couple of fragmentary remains is unadvisable.

Summary: The site was initially occupied in the late nineteenth century and was abandoned in the 1950s. Testing near the dwelling and barn revealed a shallow, low-density sheet refuse midden. Units in Feature 1 yielded data on the size, orientation, and construction of the cellar, and a representative sample of the trash fill. The surface collection near Feature 2 provided a larger sample of the artifact assemblage from the site, but not in situ deposits. This material was found on an eroded surface.

The site has been impacted by erosion, particularly in the southern part of the site, north of the stock pond. No additional subsurface features were identified, and no evidence was recovered indicating that additional excavations would yield significant new information.

41DN165

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	640' amsl
Scheduled Investigations	Archival, oral history (oral history replaced by architecture)
Soil Association	Gasil fine sandy loam
Cultural Affiliation	Historic (1875 to present)

Description: Site 41DN165 is located on the north side of FM455 about 2 km south of the Cooke-Denton County line and 0.6 km east of the junction of Highway 372 and FM455. The site is characterized by a dwelling, cellar, shed, pumphouse, two barns, a corral, and three demolished outbuildings (Figure 7-34). The site area is approximately 110 m east-west by 130 m north-south. An older farmstead may have been located here (Skinner and Bai 1985).

Previous Investigations: The site was recorded by ECI in 1981, and it was occupied at the time.

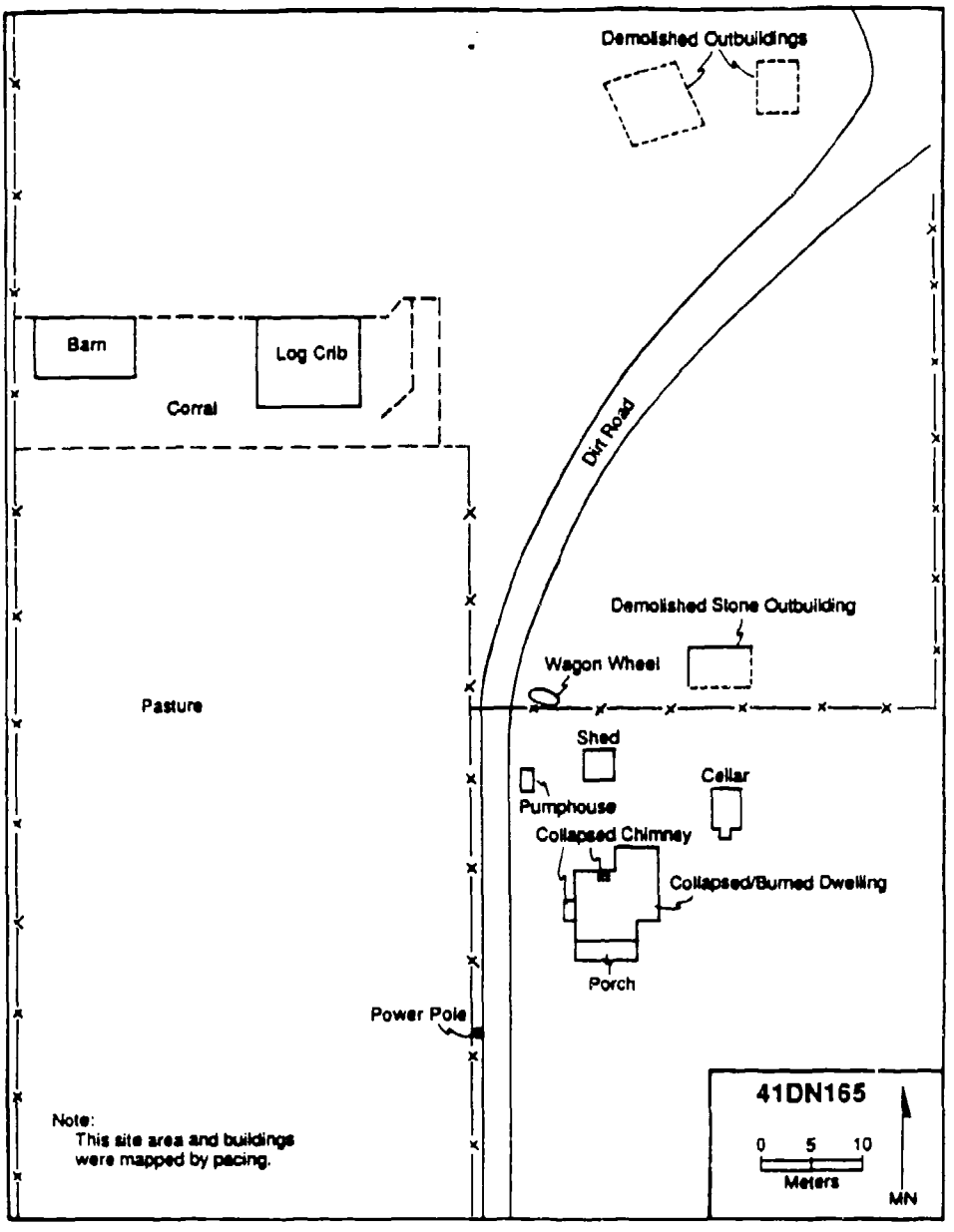


Figure 7-34. Site map of 41DN165.

Archival Investigations: A local informant indicated that the farm was owned by the "Roberts Family," and that they operated the Pilot Point Home for unwed mothers. Reportedly, the dwelling was sandstone, and the house was bulldozed after it burned. The Roberts family occupied this farmstead from 1936 to 1984. The earliest occupation of 41DN165 may date to the Rolls family, which acquired the property in 1870 (see Table A-20).

Architectural Investigations: Architectural descriptions were made for the extant structures. Floorplans of the dwelling (Figure 7-35), the barn (Figure 7-36), and the log crib (Figure 7-37) are presented here. A field drawing of the east elevation of the log crib (Figure 7-38) is also included.

* ONLY PORCH PAD/COLUMNS & FIREPLACE STILL REMAINING - REST OF HOUSE & AREA HAS BEEN BULLDOZED AWAY. (LOCAL PERSON SAYS "ROBERTS FAMILY" OWNED IT -THEN ALSO OPERATED THE PILOT POINT HOME FOR UNWED MOTHERS. IT WAS A SANDSTONE HOUSE & THE STONE WAS BULLDOZED AWAY & BURIED AFTER A FIRE. -FAMILY WAS VERY AFFLUENT).

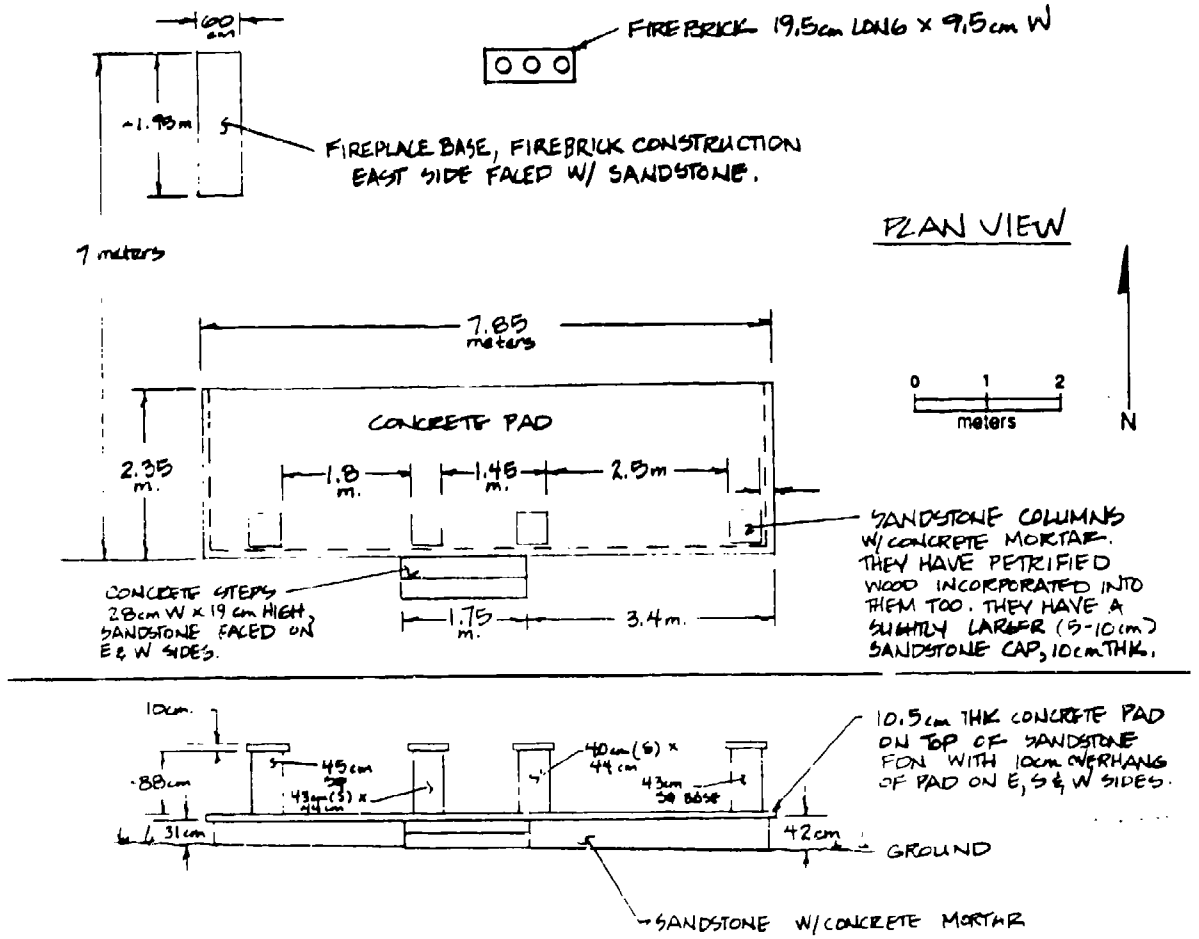
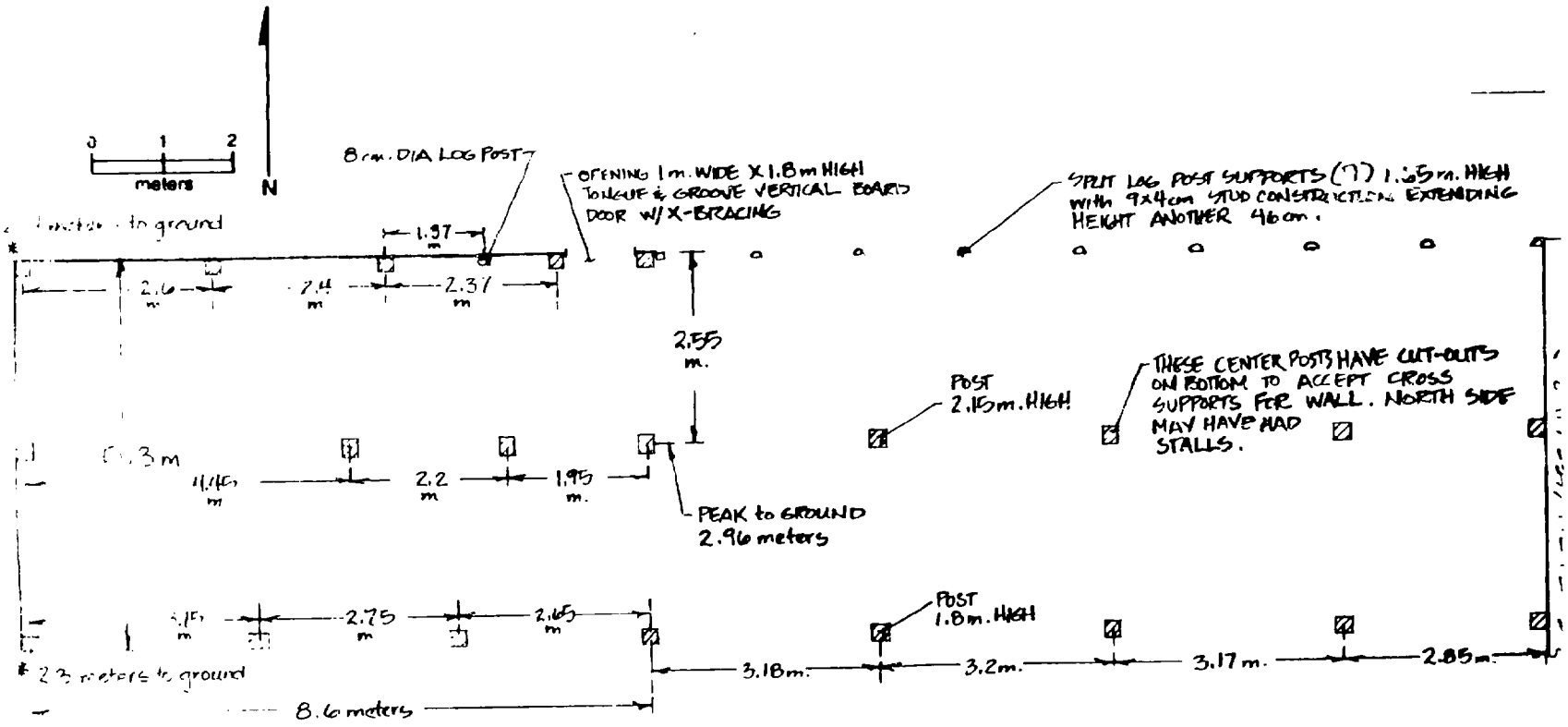


Figure 7-35. Field architectural floorplan of the porch to the dwelling at 41DN165.

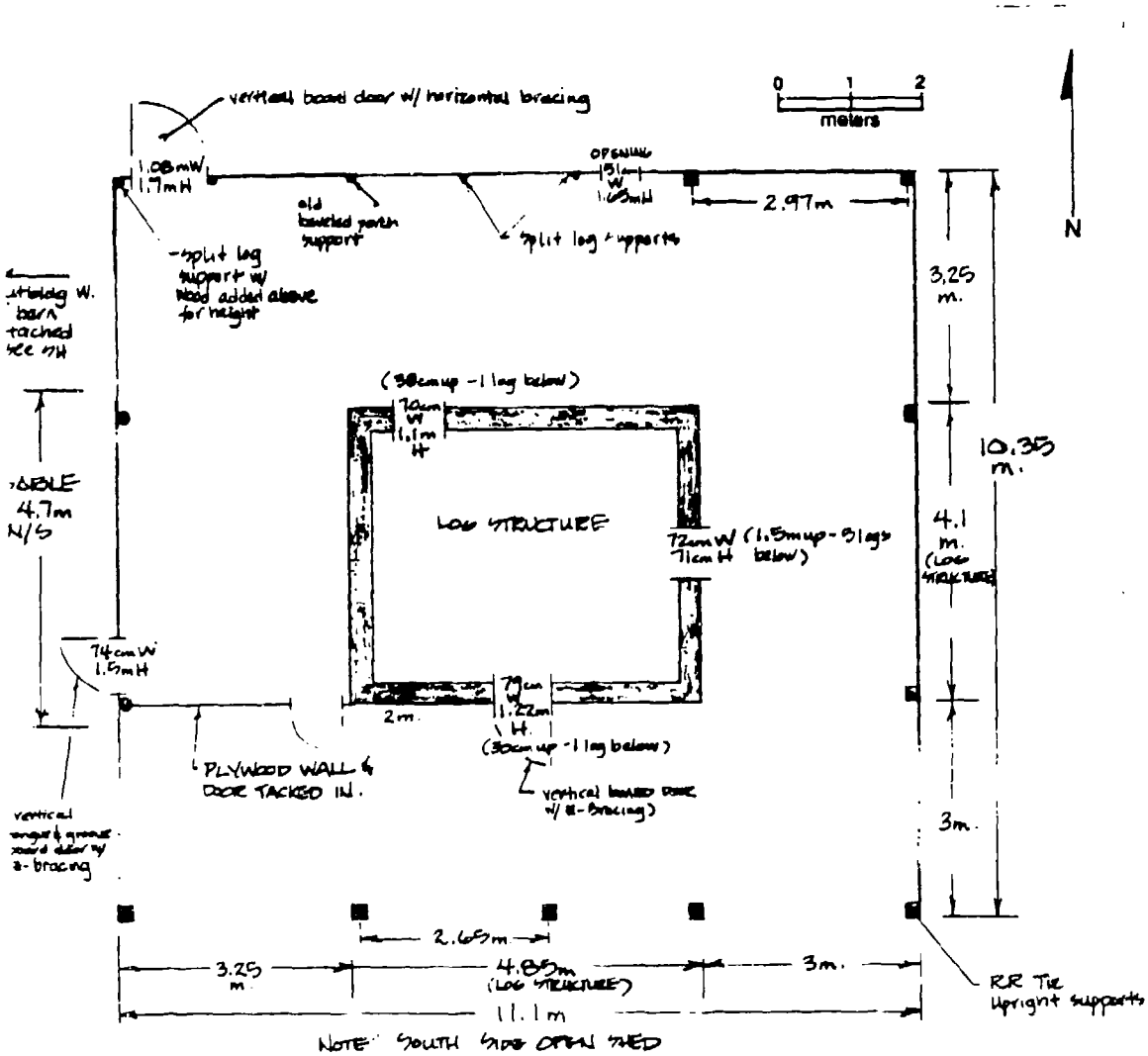


= RAILROAD TIES, CREOSOTE TREATED

[illegible] WEST PORTION OF OUTBUILDING (8.6 meters) IS RAFTER/SLAT & CORRUGATED TIN SHEETS AND NORTH & WEST SIDES ARE ENCLOSED BY CORRUGATED TIN SHEETS. SOUTH & EAST SIDES ARE OPEN.

EXTENSION ON EAST SIDE ATTACHED TO BARN IS COLLAPSED EXCEPT FOR SUPPORTS (RR TIES & SPLIT [illegible]) PROBABLY HAD A TIN ROOF & NORTH WALL WAS PROBABLY ENCLOSED BY TIN SHEETS AS WELL.

Figure 7-36. Field architectural floorplan of the log barn at 41DN165.



LOG STRUCTURE: SADDLE-NOTCHED LOGS (a couple are V-notched) VARY IN SIZE. MOST ARE 30-33cm in DIA. (smallest is 17cm in dia.).

E&W SIDES - 8 LOGS N&S SIDES - 9 LOGS

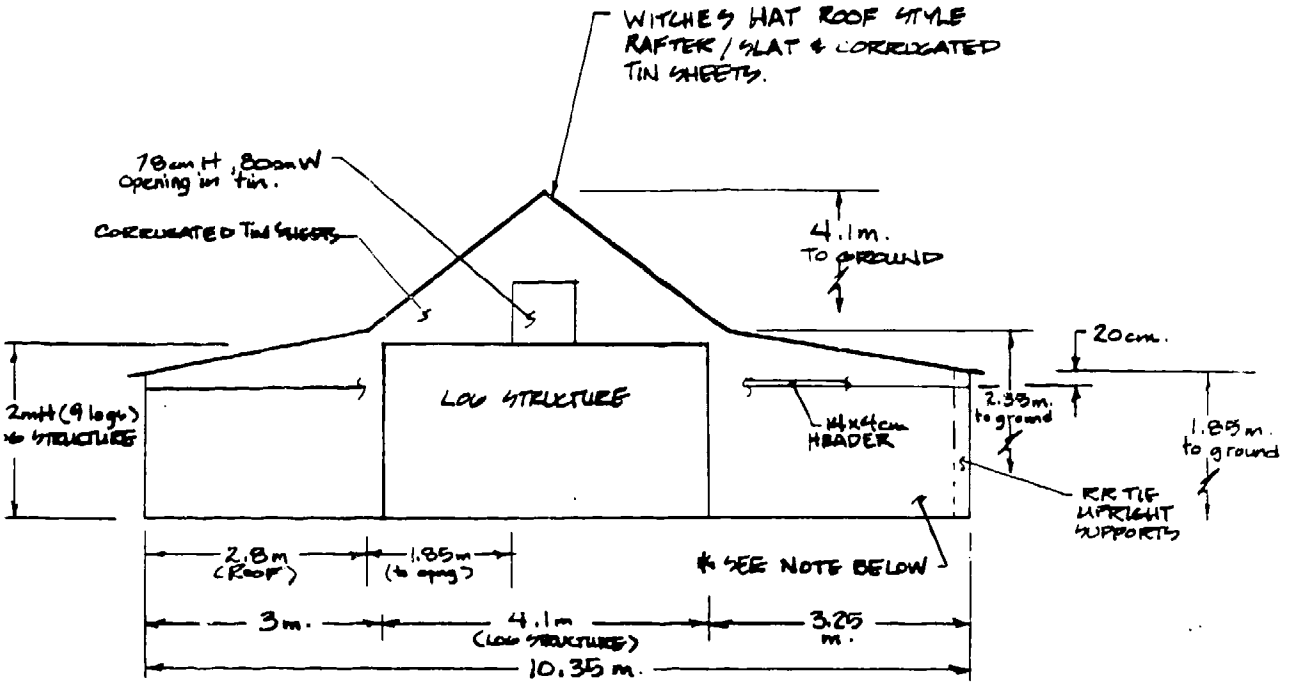
E/W SILL LOGS ON N&S BURIED IN COW DUNG NOW

FIVE N/S FLOOR JOIST LOGS, E/W FLOORBOARDS (TYPE ?-BURIED)

ON TOP OF LOG STRUCTURE ARE 9x14 in. HEADER FOR GABLE ROOF

LOFTALS TO E & SIDE SIDES OF BARN

Figure 7-37. Field architectural floorplan of the log crib at 41DN165.



EAST ELEVATION

* EAST SIDE - CAN'T SAY WHERE OPENINGS WERE, WAS AT LEAST PARTIALLY ENCLOSED W/ VERTICAL BOARDS.

SOUTH SIDE — IS OPEN SHED

WEST SIDE - GABLE ENCLOSED BY VERTICAL BOARDS, 4.7m WIDE GABLE WALL WAS PROBABLY VERTICAL BOARDS TOO, NOW TIN SHEETS & BOARDS TACKED IN.

NORTH SIDE - VERTICAL BOARD ENCLOSED SHED WALL (W/ TIN ALSO ON east end) Headers vary 14x4cm on east end, 9x4cm on west end. BASE BOARDS over vertical bds vary too 14x4 & 9x4.

Figure 7-38. Field architrectural drawing of the east elevation of the log crib at 41DN165.

Dwelling: All that remains of the dwelling is the concrete porch and the chimney. The remainder of the dwelling has burned and was removed by bulldozers (Figure 7-35). The extant porch was located on the south side of the house. It had a stone foundation, which was capped with concrete. There are four sandstone columns on the south side of the porch. The concrete porch pad measures 7.9 m east-west and 2.35 m north-south. The columns are roughly 45 cm^2. Two concrete steps 30 cm wide north-south and 1.7 m east-west are situated on the south side of the porch. The sides of the steps appeared to have stone facings.

Chimney: About 5 m northwest of the porch is the remains of the chimney. The chimney was built with machine-made bricks; no visible stamps were found in the bricks. The chimney is largely collapsed so measurements were not possible.

Cellar: The cellar was constructed of sandstone and mortar. It was later capped with concrete along the exterior walls, and the original roof was removed and replaced by a new concrete gabled roof. The door was on the south side with the roof gable running north-south. A vent was located on the north side. The interior of the cellar was filled with water preventing interior measurements being taken. Exterior measurements indicate the cellar was 2.62 m east-west by 3.77 m north-south. The cellar was approximately 55 cm from the top of the roof corners to the ground surface, with the bulk of the roof peak being another 15 cm above that. The poured concrete sides slope at about a 45° angle. The cellar entrance had four concrete steps on the south side. The door was a sheet of 1/2" plywood hung with two 5" hinges. The plywood was covered with corrugated metal on the interior. A simple pull handle provided access on the exterior.

Pumphouse: The small white outbuilding northwest of the house had a hip roof and measured 2.55 m north-south and 1.3 m east-west. Eave height to ground surface was 2.1 m, and the gable peak ran another 50 cm above that. There wasn't much left of the interior. This outbuilding was painted white, and the interior was insulated. It was built with 2x4's and plywood. There appeared to be an opening in the roof, function unknown. The roof had asphalt shingles. This structure probably served as a well house.

Barn: This structure is located east of the log crib, which is north of the pasture west of the house area. This outbuilding had a gabled roof (Figure 7-36). The gable ran east-west, and the barn was open on the south and east sides. The western half of this barn measured about 8.6 m east-west by 5.4 m north-south. These measurements are approximate because much of the framing is gone. The support posts remain, and these posts range in size from 19 cm^2 to 25 cm^2. The posts were railroad ties, which had been treated with creosote, especially at ground level. The west and north walls were constructed of corrugated metal sheeting 7 cm peak to peak. This same sheeting was used for the roof. Eave height to ground surface was 2.3 m, and gable peak to ground surface was 2.95 m. There was gable flashing on the roof. The one door to this building was located in the northeastern corner of the north wall. This door was made of vertical tongue and groove 3" hardwood flooring. This door was hung with two 8" hinges and it opened to the outside.

Log Crib: This outbuilding measured 10.35 m north-south and 11.1 m east-west. This structure consisted of a log crib and an addition on the west. Around these two components, there was a C-shaped alley on the north, east, and south sides. The log crib and the addition were enclosed by a gabled roof, with shed roofs over the open alleys. The gable ran east-west, and the gable peak height was 4.7 m. The alleys had a width of 3.2 m and the roof on the outside of these alleys were supported by square and rectangular hewn beams. Most of these beams were cured with creosote, some were treated railroad ties.

The addition was made of scrap plywood and metal sheeting. A single door provided access to the addition on the south elevation. This door was a hanging shutter door hung with two 5" hinges. It opened out rather than into the addition.

The log crib measured 3.9 m east-west and 4.2 m north-south. The logs were saddle notched. The rafters were 2x4's on 3-foot centers with 3/4" x 6" purlins on 2-foot centers. The corrugated metal sheeting was nailed directly to the rafters. Log height to ground surface was 2.15 m. There was a window opening on the east wall, and two door openings. One door was located on the north elevation, while the other opening was on the south elevation. No glass had ever been set in the window opening, and no door was associated with the north door opening. A door was found on the south elevation. It was a board and batten door hung with two 7" hinges. It opened out. The floor was wood, although most of it has decomposed. It was constructed of 1/2" x 3" boards oriented east-west. No chinking was found between the wall logs.

Dendrochronological Investigations: None.

Excavation Methods: None.

Excavation Results: None.

Summary: Site 41DN165 may have been occupied as early as the 1870s when the property was acquired by the Rolls family. The extant structures, however, do not date to this period. Instead, these structures date to the twentieth century. The farm was occupied by the Roberts family from 1936 until the Corps purchased the property in 1984. Because of the poor integrity of the architectural remains, only a general discussion of the site's architecture was possible. No archaeological investigations were conducted at this site.

41DN172

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	610' amsl
Scheduled Investigations	Limited testing, dendrochronology, architecture, mapping, archival
Soil Association	Callisburg fine sandy loam
Cultural Affiliation	Historic (1880 to present)

Description: The site consisted of a dwelling, two log cribs, frame shed, garage, cellar, and windmill (Skinner et al. 1982a:8-30). A gravel driveway, well, windmill, water tower, and several fencelines were also present (Figure 7-39). The dwelling burned sometime between 1982 and when the site was revisited late in 1985. The site area was approximately 80m north-south by 80m east-west.

Previous Investigations: The site was recorded in 1981. No testing was conducted, and based on the survey, the site was recommended for architectural documentation, including the house, log crib, and log barn. The site was revisited in 1985 and mapping, architectural documentation of the log structures, limited testing, and archival research were recommended.

Archival Investigations: Site 41DN172 was located on the J. Shipley survey (A-1178) granted to Shipley in 1857. The land was conveyed to T. P. Shipley in 1902, after J. Shipley's death. The property remained in the family until it was purchased by the Corps in 1983. The structure was not documented before it burned. The archaeological record did not yield any evidence of an early house site, indicating that the J. Shipley homestead was probably located elsewhere on the survey. If it was located on this site, it was completely masked by the more recent occupation(s). None of the extant log structures reflected a pre-1880 occupation.

Architectural Investigations: Architectural descriptions were requested for the two log outbuildings and are presented below. Brief descriptions were also recorded for the house foundation, and the cellar. The shed was frame with corrugated metal roofing and dated to the twentieth century.

Dwelling: The dwelling was occupied when the site was recorded, and access to the interior was denied. It was not documented before it burned. It was identified as a Tee-plan dwelling , with the main section running north-south with the extension to the west. Shed porches were present on the north and south sides. The exterior was recently remodeled with white siding and asbestos roof (Skinner et al. 1982a:8-30). The chimney was machine-made brick.

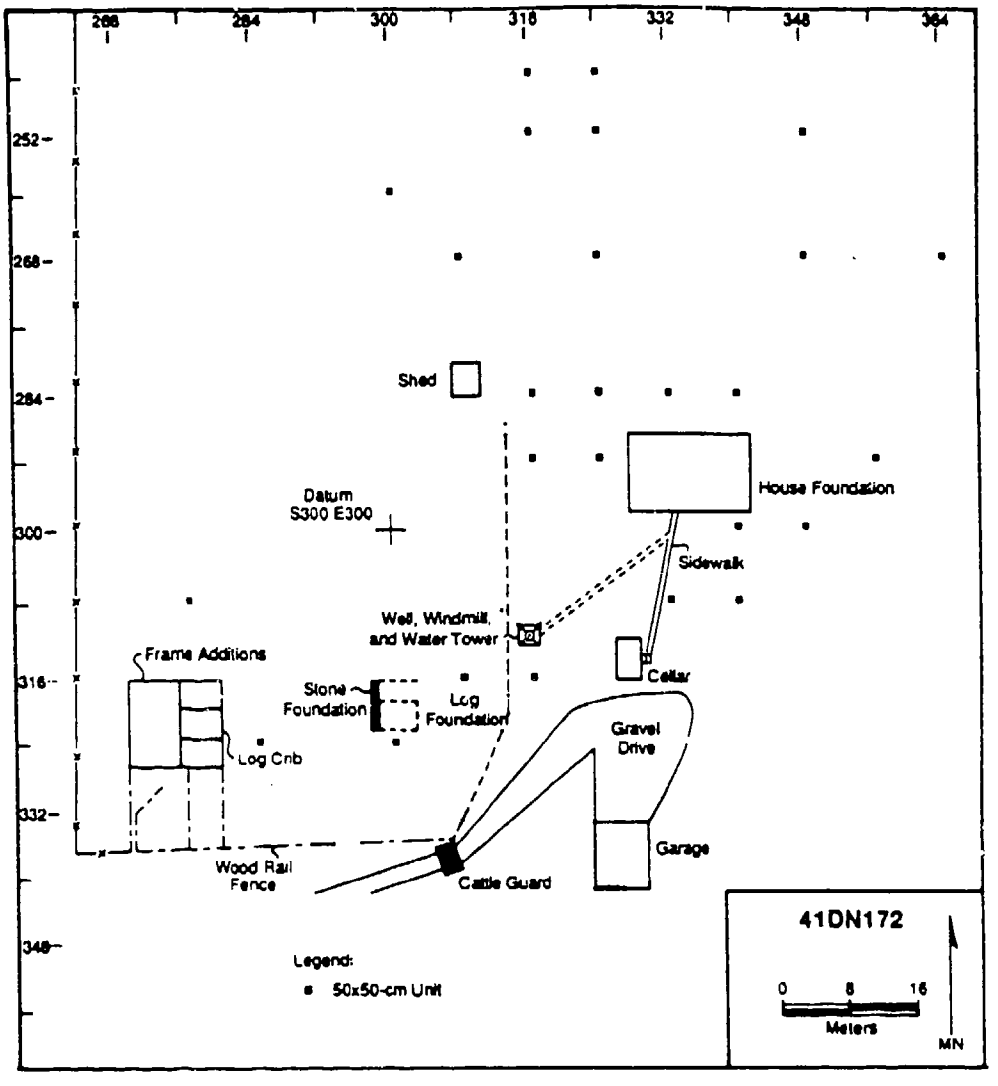


Figure 7-39. Site map of 41DN172.

The foundation was examined and indicated that the house measured 14 m east-west by 9.25 m north-south. Sandstone piers supported the dwelling on the south and west walls, and on the interior north and east, indicating the original floor plan. The outside north and east walls reflect additions that were supported by mortared brick piers.

East Log Crib: This log crib recorded by Skinner et al. (1982a:8-30) had collapsed and was largely removed. The sandstone foundation measured 3.5 m north-south by 4.5 m east-west, and only four logs remained on the west side. The logs were round with V-notching, and the exterior was covered with commercial-cut planking.

West Log Crib: This structure was originally built as a single pen log crib measuring 4.25 m north-south by 4.75 m east-west (Figure 7-40 and Figure 7-41). The logs were unhewn with V-notching and were set on sandstone piers. Some evidence of possible chinking was reported. A window occurred on the west wall of the log crib and a door was centrally placed on the east. The building was one-and-a-half stories with a loft and had plank flooring in the loft and cribs. Shed additions with plank walls were added to the north, west, and south sides. A water trough was located within the north addition and holding pens and a corral were located on the south side of the barn.

Cellar: The cellar was located south of the dwelling and was constructed of poured concrete. It measured 3 m east-west by 5.3 m north-south. Centered on the east wall was a concrete entryway that measured 2.9 m east-west by 1.8 m north-south. The door was plywood covered with tin sheeting. The windows were centered on the north and south walls.

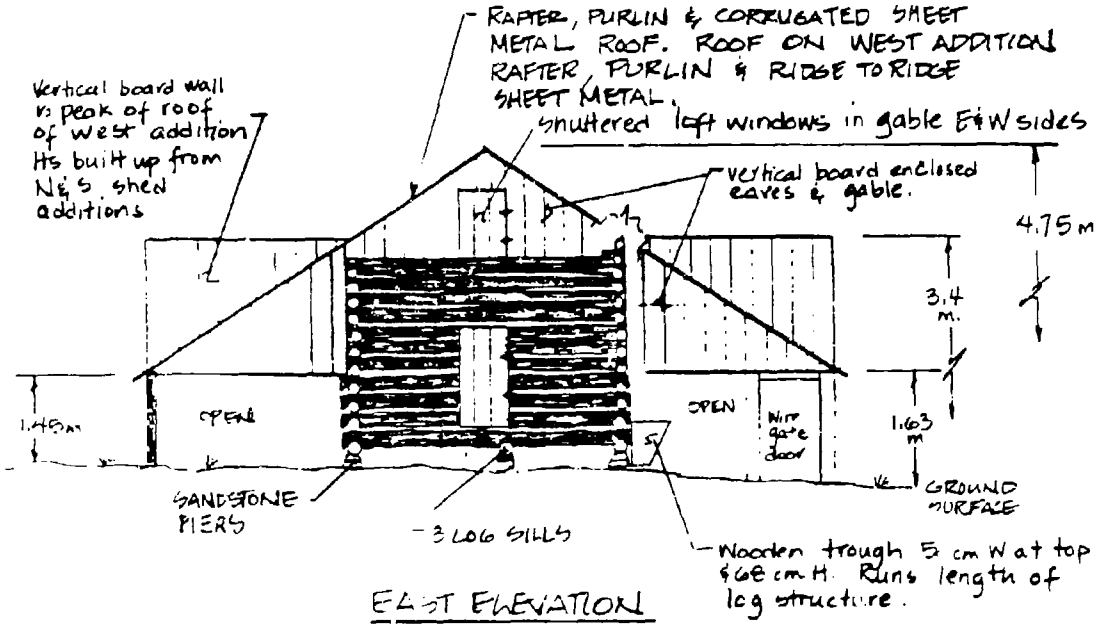
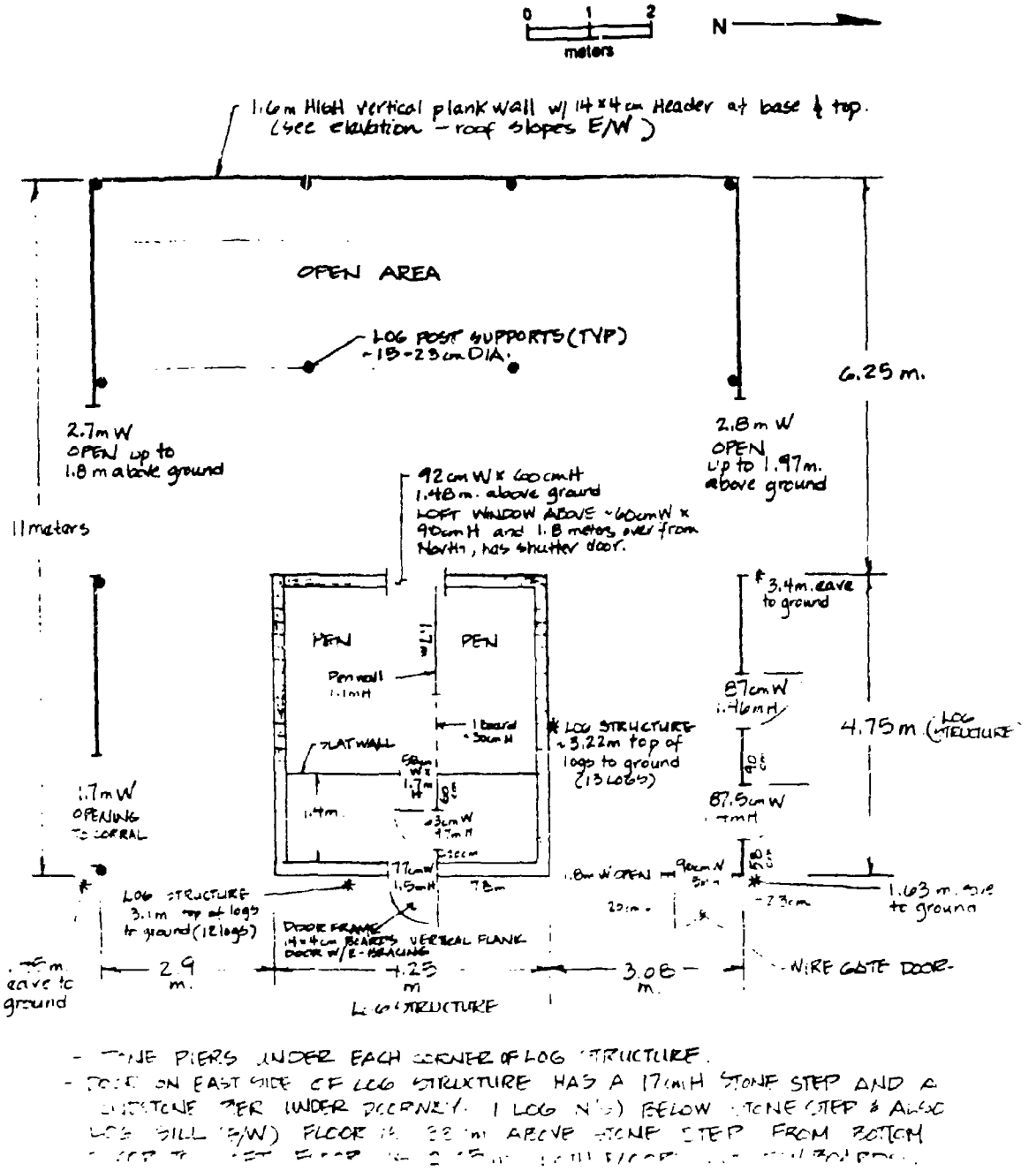


Figure 7-40. Field architectural drawings of log crib at 41DN172.



- STONE PIERS UNDER EACH CORNER OF LOG STRUCTURE.
- DOOR ON EAST SIDE OF LOG STRUCTURE HAS A 17cm H STONE STEP AND A LIMESTONE DOORWAY. 1 LOG N(?) BELOW STONE STEP & ALOG LOG SILL (E/W) FLOOR IS 33cm ABOVE STONE STEP FROM BOTTOM

Figure 7-41. Field architectural floorplan of log crib at 41DN172.

Dating: The original portion of the house probably dated to the late nineteenth century, with later additions dating to the 1900s. The log l arn could not be dated, but appeared to be the oldest remaining structure. The log crib may have been built at the same time and probably correlated with the original house. The other structures were all built during the twentieth century.

Significance: None of the structures were significant. The log crib no longer had any integrity, and the barn, which had the greatest potential, could not be dated.

Dendrochronological Investigations: Five samples from the log barn were sent to Dr. Malcolm Cleaveland at the University of Arkansas for analysis. All of them were too short, erratic, and could not be dated. They were all oak.

Testing Method: Twenty-six 50x50-cm units were judgmentally placed to recover information on site size, age, function, and integrity.

Testing Results: An overview of the assemblage is presented by artifact category in Table 7-13. A dense sheet refuse band was not found around the house, instead the midden was diffuse, with higher densities occurring 24 to 32 m north, or behind the dwelling. Refined earthenwares, porcelains, stonewares, and bottle glass all occurred in this area. Window glass occurred near the dwelling as well as in the diffuse midden north of the house, while nails were clustered near the dwelling and the log barn.

Table 7-13
Artifact Assemblage from 41DN172

Artifact Category	N	%
Refined Earthenware	1	0.58
Stoneware	5	2.89
Porcelain	3	1.73
Bottle Glass	54	31.21
Unid. Glass	1	0.58
Window Glass	8	4.62
Wire Nails	74	42.77
Building Material	4	2.31
Thin & Heavy Metal	13	7.51
Household Items	3	1.73
Machine & Wagon	1	0.58
Ammunition	1	0.58
Electrical Items	1	0.58
Misc. Other	4	2.31
Total	173	

The midden was low density with artifact counts ranging from zero to 29 items per 50x50-cm unit with a mean of 6.7 items. Two high-density units (S292 E324 and S300 E340) were located within 4 m of the dwelling and contained primarily architectural debris. The midden was shallow, and no subsurface features were found.

The artifact sample was too small to date accurately. Refined earthenwares (n=1) yielded a mean beginning date of 1880, stonewares (n=5) dated 1900, and bottle glass (n=10) 1915. No machine-cut nails or handmade brick were found.

Faunal Remains:

TOTAL BONE = 4

Unidentified bone (n=4)

Three of the four bones recovered from this site exhibit saw cut marks. None of the elements are recognizable. All bone was removed from a single unit (Unit 1, level 1).

Summary: The testing results indicate that the site does not contain significant archaeological resources and is not National Register eligible. The site has been serially occupied from the late nineteenth century until recently. The dwelling was lost before it could be documented, and the outbuildings could not be accurately dated. The midden is low density, diffuse, and contains material from over 90 years of occupation. No early component was found.

41DN174

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	610' amsl
Scheduled Investigations	Limited testing
Additional Investigations	Architecture, archival
Soil Association	Callisburg soils
Cultural Affiliation	Historic (1875 to present)

Description: A number of structures were recorded at 41DN174, including a dwelling, two chicken coops, two small sheds, four large outbuildings, a garage, windmill and above-ground water tower, a brick-lined well, and a cellar (Figure 7-42). The house was standing when the site was recorded in 1981, but had been removed before the site was revisited in 1985. The site area was estimated at 112 m north-south by 128 m east-west.

Previous Investigations: Architectural documentation was recommended to determine construction dates for the house and outbuildings. The dwelling was reported to be over a hundred years old. No testing was done, and the site was not recommended for excavation because it had undergone considerable alteration and may have lost its integrity (Skinner et al. 1982a:8-17). A sparse artifact scatter was reported in the former house area in 1985. It was determined that the removal of the dwelling and an outbuilding had further reduced site integrity, and no further work was recommended.

Archival Investigations: The site was determined not eligible for nomination to the National Register of Historic Places. No archival work was requested.

Architectural Investigations: Architectural data were recorded for all extant structures, and elevational drawings and floor plans were recorded for the large chicken coop, garage, and the large and small sheds. These are on file at IAS, UNT. A brief description of each structure is presented below.

Dwelling: The house was reported to be over 100 years old, and a brief description was recorded during survey. The house was one-and-a-half stories, and the original floorplan had a central hall. It had two rooms with a full porch on the south side. A large stone exterior chimney occurred on the east end, and a matching chimney probably

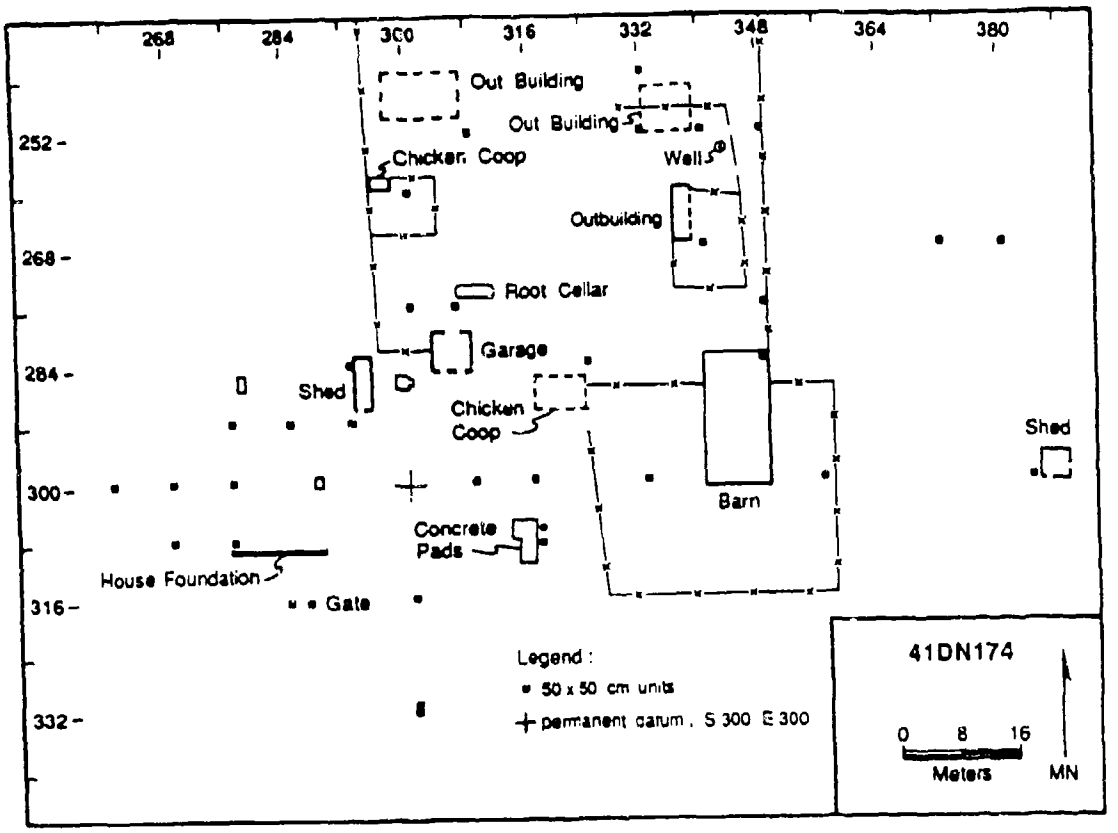


Figure 7-42. Site map of 41DN174.

occurred on the west. Six rooms were added later. The original house had an east-west running gable, the addition had a north-south gable. A hipped roof occurred over the porch, and the roof was asphalt shingles (Skinner et al. 1982a:8-16).

Part of the foundation remained in 1987 and was recorded on the site map. A sketch of the floorplan was drawn in 1981 and is on file at IAS, UNT. No data were obtained verifying when the dwelling was constructed.

Large shed: This structure is located northeast of the dwelling and was originally a single room building that appears to have been a dwelling. It was set on sandstone piers and had a wood floor. The walls were vertical planks that were later covered with horizontal lap siding. A single window occurs on the north and south walls, and a door occurs on the west and south elevations. The interior was covered with wallpaper. The original roof was a north-south gable with cedar shakes. An addition was built onto the south elevation. This large shed had a shed roof, and a dirt floor. A window was present on the east wall, and a door on the south. The roof was asphalt shingles, which had also been placed over the original structure. The structure was built sometime during the twentieth century, and wire nails were used throughout.

Small shed: This shed was located about 80 m east of the house. It had an east-west gable roof with corrugated metal sheeting. Wire nails were used throughout. The walls were board and batten, and a window occurred on the west and north walls. Doors were present on the east and south. The floor was dirt.

Garage: The garage was northeast of the dwelling and had a north-south running gable. It was board and batten with a concrete floor and corrugated metal roof. It was supported by posts and did not have a foundation. Wire nails were used throughout. Two doors occurred on the south wall including a commercial garage door.

Small chicken coop: This coop was totally collapsed in 1987. It was located southeast of the garage. It had a shed roof with corrugated metal sheeting. The entrances and windows faced south. It was set on sandstone piers and had vertical board and board and batten exterior walls. Wire nails were used throughout.

Large chicken coop: This building is about 20 m northwest of the garage and was built with corrugated metal roof and walls. The coop was divided into two rooms. Windows occurred on all walls, and doors on the south only. The floor was dirt, and the structure was set on a concrete foundation with at least one course of machine-made brick underneath. The east room had a machine-made brick hearth in the center that measured approximately 1 m north-south by 80 m east-west. The brick were stamped ATLAS and STANDARD. A stove pipe was present in the roof and was placed so it was flush with the exterior roof line (i.e., it did not extend above the roof line) preventing it from being visible from the outside. Fruit jars were found on the floor suggesting that a still may have been located within this structure. A date of 2/25/1949 was scrawled into the foundation in the east room.

Outbuilding: This structure was located north of the large chicken coop. It was totally collapsed and had a log foundation. The gable appeared to run east-west. The function of this building was not determined.

Cellar: The cellar was made of concrete and had totally collapsed. easured approximately 1.2 m north-south by 3.85 m east-west.

Small sheds: This structure was originally recorded as a barn. It was very small and was located within the northwest corner of a hogwire pen north of the large barn. The walls of this shed are constructured of vertical board, and the roof is a north-south running gable. A second shed to the north was similar except the gable was oriented east-west.

Large barn: This structure was removed but was recorded during the survey as a large frame barn with vertical board walls. The foundation remained in 1987 and indicated that the barn sat on a sandstone foundation. A fenced pen surrounded the structure. A shed addition was built on the north side, and this barn had a corrugated metal hipped roof with a gablet that ran north-south.

Well: A dry-laid sandstone well was located in the northeastern corner of the site. It had been capped with handmade brick, and the top of the well extended 1 m above ground.

Other outbuildings: A stock shelter was reported in 1982, but it was not relocated. It was recorded as a board and batten structure with a corrugated metal roof. It is not shown on the map.

Dating: All of the extant structures were built during the twentieth century. The original dwelling probably dated to the late nineteenth century. The well was probably dug at that time, and the collapsed outbuilding north of the large chicken coop may also date to that period

Significance: No significant structures were recorded.

Dendrochronological Investigations: None.

Testing Method: Thirty-one 50x50-c units were excavated to determine site age, size, and integrity, and to recover a representative sample of the eet refuse deposits.

Testing Results: An overview of the assemblage is presented by artifact category in Table 7-14. Architectural items accounted for 75% of the assemblage. No midden was found. Domestic items including refined earthenwares, stonewares, and vessel glass were extremely uncommon. Bottle glass sherds were recovered primarily from outbuilding areas, including 41% from a single unit. The remaining bottle glass sherds were found largely in the removed dwelling area. The ceramics were also found near the removed dwelling. The artifact sample was too small to date accurately. The building debris and standing structures were twentieth century. No in situ late nineteenth-century farmstead remains were found.

Table 7-14
Artifact Assemblage from 41DN174

Artifact Category	N	%
Semi & Coarse Earthenware	2	0.33
Refined Earthenware	1	0.16
Stoneware	4	0.65
Bottle Glass	72	11.78
Table Glass	1	0.16
Window Glass	37	6.06
Machine-Cut Nails	1	0.16
Wire Nails	146	23.89
Handmade Brick	1	0.16
Machine-Made Brick	116	18.99
Building Material	160	26.19
Personal Items	3	0.49
Thin & Heavy Metal	5	0.82
Household Items	1	0.16
Machine & Wagon	3	0.49
Horse & Stable Gear	7	1.15
Ammunition	2	0.33
Electrical Items	1	0.16
Misc. Other	48	7.86
Total	611	

Faunal Remains:

TOTAL BONE = 6

Identified fauna (n=5)
Didelphis virginiana (opossum) - 5

Unidentified bone (n=1)

Four of the five elements of opossum were recovered from Unit 28, with another recorded from Unit 7. A single individual opossum is indicated, and its carcass appears to have been extensively gnawed by carnivores, suggesting a natural etiology. The only other bone to be recovered is a large mammal long bone shaft that has saw cut marks. It was found in Unit 7 as well.

Summary: The testing results indicate that the site does not contain significant archaeological resources and is not National Register eligible. The site has been serially occupied from the late nineteenth century until recently. The dwelling was lost before it could be documented. No sheet refuse midden was found in the disturbed area surrounding the former dwelling. The assemblage from outbuilding areas contained primarily building remains and bottle glass.

41DN190

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	610' amsl
Scheduled Investigations	Testing
Soil Association	Speck clay loam
Cultural Affiliation	Historic (late 19th c. to recent)

Description: Features present at 41DN190 included four depressions (collapsed cellars?), a house mound, stone piers, a scatter of domestic artifacts and machine-made brick, remains of a small, V-notched log outbuilding, a stone-lined spring or well, a rock-filled oil drum, a burned area, and a large, square mound with an interior depression and an exterior ditch surrounding the ridge (Figure 7-43). This second mound was recorded when the site was revisited by UNT. It was described as a possible petroleum-related platform (e.g., oil pump station). The site is enclosed on the north and west by a barbed wire fence, and the main site area is approximately 90m².

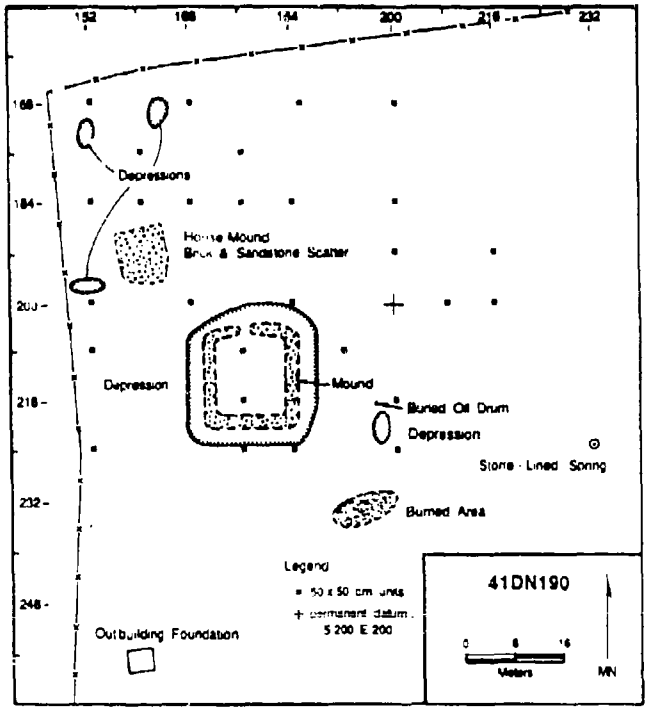


Figure 7-43. Site map of 41DN190.

Previous Investigations: The site was recorded in 1981, and testing was recommended to determine National Register eligibility (Skinner et al. 1982a:A5-15). In 1986, limited testing was recommended to determine the function of the large square mound.

Archival Investigations: No archival research was scheduled in the Scope of Work.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Testing Method: Testing consisted of twenty-nine 50x50-cm units excavated across the site to recover a representative artifact sample and to determine site age, function, size, and integrity. It was determined that the site was disturbed and did not warrant additional work. As a result, trenches were not excavated through the depressions or mound features. The functions of these features were not determined.

Testing Results: The cultural deposits indicate the site was initially occupied in the late nineteenth century. Roy Jones (personal communication, 1987) mentioned tenant farmers living here during the early twentieth century. The Jones family had oil wells in this area of the reservoir during the mid-twentieth century, and this site may contain some oil-related remains dating after the tenant house here was abandoned.

The domestic component (Table 7-15) indicates a high-density sheet refuse deposit. A total of 216 artifacts were recovered from 29 units, yielding a mean of 7.45 artifacts per 50x50-cm unit. A total of 20.7% of the units contained more than 10 artifacts. The midden was shallow, with most of the artifacts being found in the upper 12 cm of sediment.

Table 7-15
Artifact Assemblage from 41DN190

Artifact Category	N	%
Refined Earthenware	18	8.33
Porcelain	1	0.46
Bottle Glass	42	19.44
Table Glass	5	2.31
Lamp Glass	1	0.46
Window Glass	34	15.74
Machine-Cut Nails	1	0.46
Wire Nails	37	17.13
Building Material	14	6.48
Thin & Heavy Metal	53	24.54
Machine & Wagon	5	2.31
Horse & Stable Gear	1	0.46
Ammunition	4	1.85
Total	216	

Architectural items accounted for 40% of the assemblage and contained predominately twentieth century brick, nails, and building material. The refined earthenwares yielded a mean beginning date of 1881 (n=18), no stonewares were found, and the diagnostic bottle glass assemblage was not dated (n=2).

Faunal Remains:

TOTAL BONE = 26

Identified fauna (n=4)
Sylvilagus floridanus (cottontail) - 3
Bos taurus (domestic cattle) - 1

Unidentified bone (n=22)

A carpal from a cow's foot and pieces of a cottontail's mandible are the only bones recovered. No cut marks were noticed. All but one of the unidentified bone are burned, and they were recorded from a single unit (Unit 28, level 1). The identified remains were removed from a single unit (Unit 22). The relationships of these bones to the historic occupation is unknown.

Summary: The site exhibited poor integrity. The recent, oil-related activity at the site has severely disturbed the domestic component. Two of the depressions, in the northwest corner, were tentatively identified as collapsed cellars. The well platform has removed the main domestic area southeast of the dwelling. Refined earthenwares, porcelains, and bottle glass remains were found west of the well platform and northwest of the house. Only two bottle glass sherds occurred east of the well platform. The highest density of domestic material was also found in the northwest corner of the site and west of the well platform directly adjacent to the west barbed-wire fence.

41DN191

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	630' amsl
Scheduled Investigations	Sheet refuse (amended to testing), archival, architecture
Soil Association	Navo clay loam
Cultural Affiliation	Historic (ca. 1880s to recent)

Description: Several extant structures occur, including a board and batten dwelling, two barns, a privy, and a cellar (Figure 7-44). The second barn was used for hay storage, and was mis-identified as a possible garage. No well was found. Farm machinery parts and domestic artifacts were scattered in the exposed yard areas, and 1937 and 1939 license plates were on the interior walls of the house.

Previous Investigations: The site was recorded in 1981 by ECI. The site was recommended as architecturally significant because it reflected a complete farmstead in good condition, and the house plan was typical in this area. Measured drawings, HABS archival photography, and site-specific research were recommended (Skinner et al. 1982a:8-34). The site was revisited by UNT in 1985, and testing was recommended to determine National Register eligibility.

Archival Investigations: The site is on the John Everly survey (A-414) and has been owned by the Jones family since 1884 (Table A-24). Oral history data provided by Roy Jones (personal communication, 1987) indicated that the extant house was built around 1908 or 1909. After 1941, when Mr. Jones and his wife moved back to the main house at 41DN250, the farm at 41DN191 was rented to tenant farmers. The property was sold to the Corps in 1984.

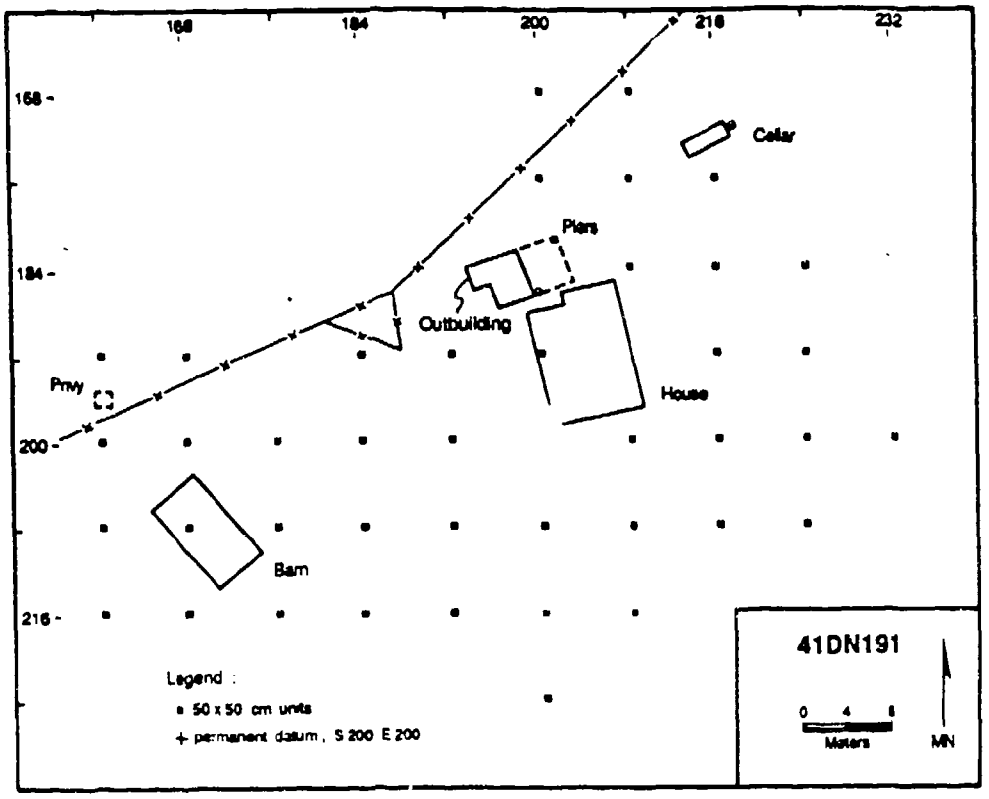


Figure 7-44. Site map of 41DN191.

Architectural Investigations: Field descriptions were recorded for the house, barn, outbuilding, and cellar. Floorplans and elevational drawings were recorded and are on file at IAS, UNT. A brief overview of each structure is presented below. The floorplan of the dwelling is shown in Figure 7-45 and the east elevation of the barn is illustrated in Figure 7-46.

Dwelling: The house was a Tee-plan with two rooms on the south, and a centrally placed room on the north. A full front porch was located on the south side, and smaller side porches were situated on the northwest and northeast corners. The floors and porches were tongue and groove, and the ceilings were beaded. An extension was added to the front porch, changing the original depth. Vertical boards were used for the addition. The dwelling had intersecting gable roofs with shed roofs over the porches. The front porch was roofed with cedar shingles. Corrugated metal covered the remainder of the dwelling. The exterior was board and batten, and the interior walls were covered with flowered wallpaper. The ceilings, doors, and windows were painted turquoise. The dwelling was set on wood piers, and the porches were supported by beveled wood posts. Hanging chimneys were present in the east and north rooms. The chimney in the west room had been removed.

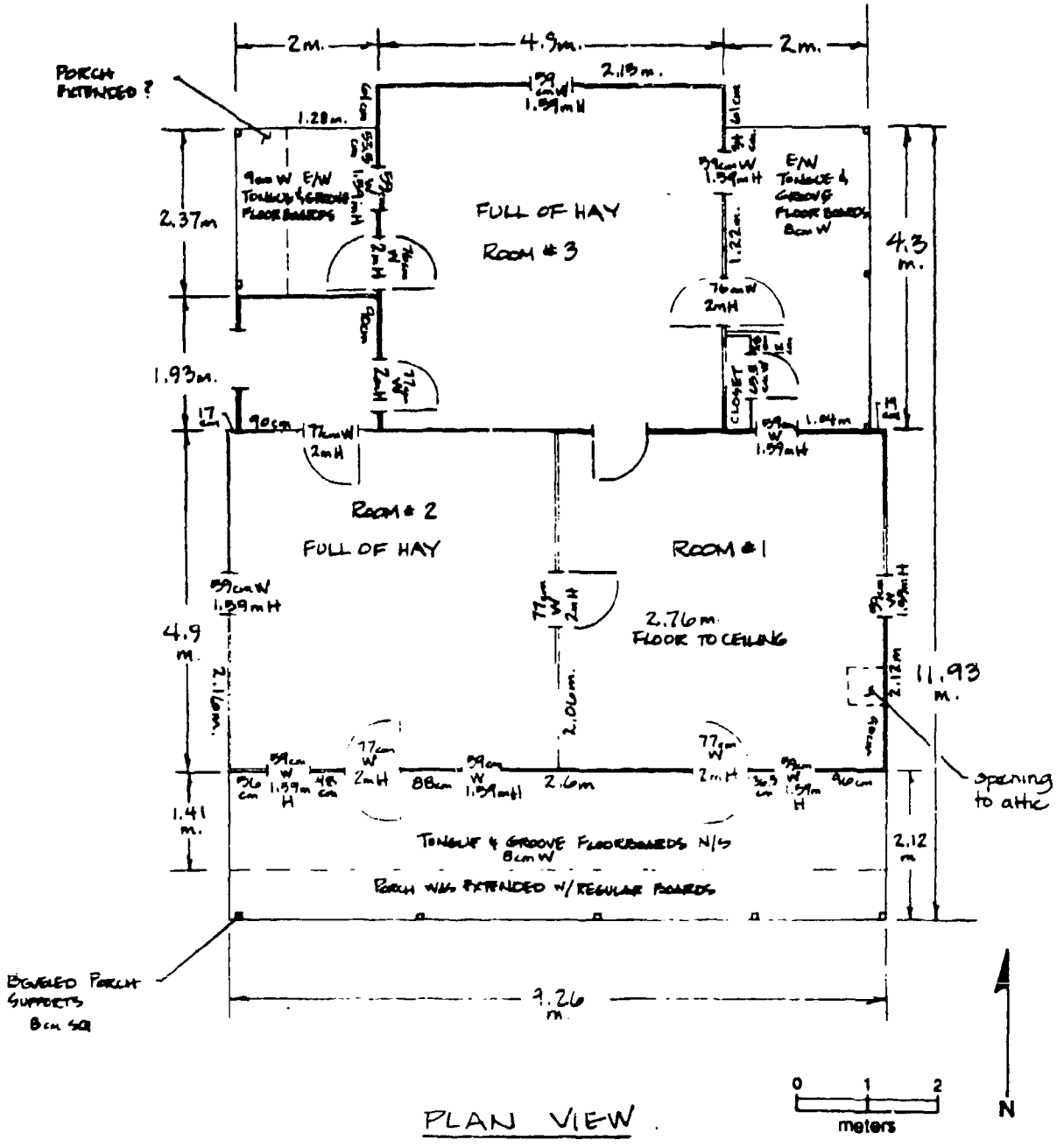


Figure 7-45. Field architectural floorplan of the dwelling at 41DN191.

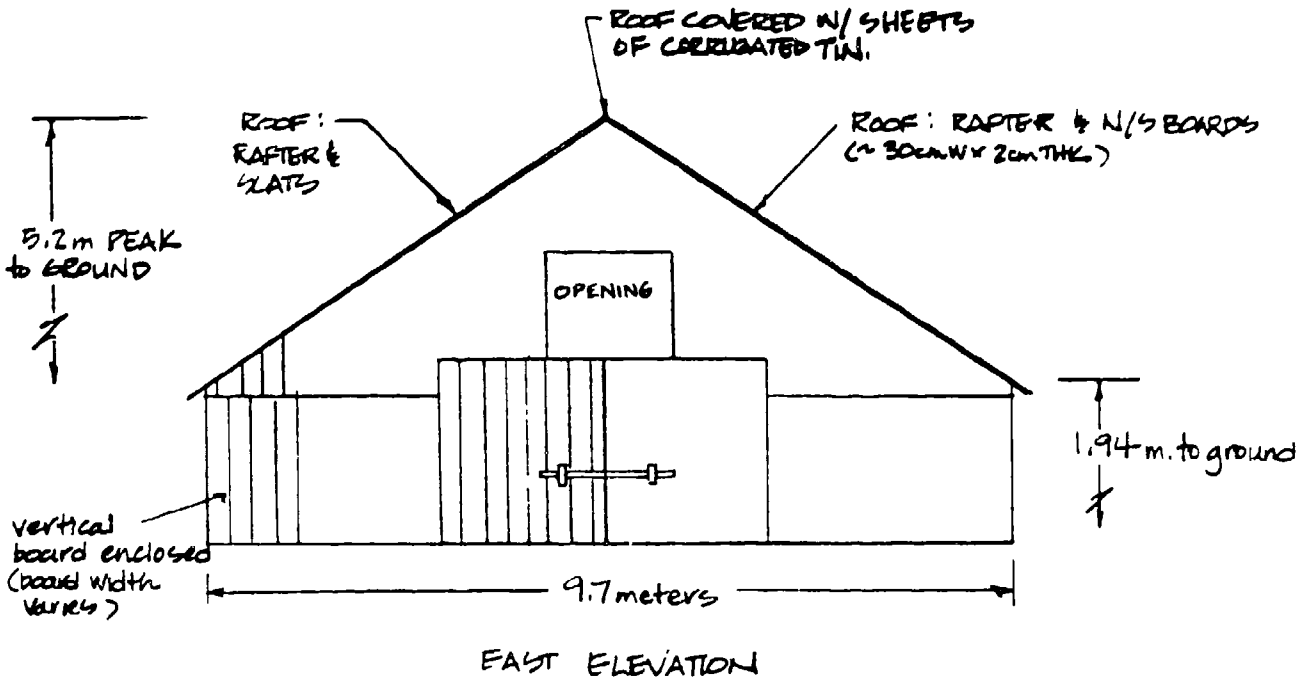


Figure 7-46. Field architectural drawing of the east elevation of the barn at 41DN191.

Barn: The barn showed evidence of recycling, and may actually have been constructed using parts of two earlier buildings. The south portion had been roofed with cedar shakes at one time, and the north half of the roof was different from the south. The north half had 1x6-inch purlins on 3-foot centers that were covered with north-south running planking. The south half had east-west running planking over 12-inch centers. The present roof was an east-west gable constructed of corrugated metal sheeting. The foundation was comprised of upright posts and timber sills set on sandstone piers. Large double doors occurred on the east wall, and smaller doors were present on the south. An opening covered over with chicken wire was recorded on the west wall. The barn was one-and-a-half stories with a loft. A loft opening was present above the double doors on the east wall. The stalls inside the barn had been removed. The floor was dirt. Wire nails were used throughout.

Outbuilding: The function of this structure is unknown. It was collapsed, and largely removed when it was recorded in 1987. It was built in a shed style with a cedar shake roof, and board and batten walls. The floor was dirt, and wire nails were used throughout. The building was set on wood piers.

Cellar: The cellar was constructed of sandstone, including the steps. It was later covered with a concrete roof. The door was wood. The entry was on the east side, and a vent was located on the west. The interior width was 1.9 m and the interior length was 4.15 m.

Dating: All of the structures dated to the twentieth century. The barn showed evidence of post-1930s construction. The house was reportedly built in 1907 (Roy Jones, personal communication, 1987).

Significance: None of the structures were determined to be architecturally significant.

Dendrochronological Investigations: None.

Testing Method: Forty-two small excavation units measuring 50x50-cm in size were dug on an 8-m grid across the site. Units were placed to recover information on site age, function, integrity, and size.

Testing Results: The archaeological deposits supported the archival data and oral information provided by Roy Jones. The refined earthenwares yielded a mean beginning date of 1873 (n=5), the stonewares dated 1880 (n=3), and the bottle glass dated 1895 (n=10), providing a mean beginning date for occupation of 1886 (n=18). No nineteenth century architecture remains were identified, and the twentieth century building debris accounted for 56% of the recovered assemblage.

The sheet refuse deposit was shallow (0-12 cm below surface) and low density (Table 7-16). Unit S192E184, 16 m west of the house, contained the highest artifact density, with 35 architectural items (34 machine-made brick and one wire nail) and one stoneware sherd. The mean artifact density per 50x50-cm unit was 2.76 items.

Table 7-16
Artifact Assemblage from 41DN191

Artifact Category	N	%
Refined Earthenware	7	6.03
Stoneware	2	1.72
Bottle Glass	25	21.55
Unid. Glass	1	0.86
Window Glass	9	7.76
Wire Nail	13	11.21
Machine-Made Brick	34	29.31
Building Material	9	7.76
Personal Items	3	2.59
Thin & Heavy Metal	9	7.76
Ammunition	1	0.86
Electrical Items	1	0.86
Misc. Other	2	1.72
Total	116	

Eighteen units (42.9%) were sterile, with the bulk of the sterile units being located southwest of the dwelling and in the south or front yard. The low density nature of the deposits preclude being able to discern meaningful patterns. Bottle glass and ceramic sherds from units containing domestic debris generally included only one sherd.

Faunal Remains:

TOTAL BONE = 3

Identified fauna (n=1)
Sus scrofa (domestic pig) - 1

Unidentified bone (n=2)

A fragment of incisor enamel has been identified as pig. This suggests that pigs were raised and / or slaughtered on site.

Summary: This farmstead was serially occupied by landowners and tenants. The sheet refuse deposit is shallow, low density, and does not contain significant remains for nomination to the National Register. The extant architecture also does not meet National Register criteria.

41DN193

Map Quad	Valley View 7.5' (1961, rv. 1978), #3397-143
Elevation	650' amsl
Scheduled Investigations	Archival (architecture if archival data indicated potential significance)
Soil Association	Frio silty clay
Cultural Affiliation	Historic (1875 to present)

Description: The site was occupied when it was recorded by ECI in 1982, and when it was revisited by NTSU in 1985. Access to the interior of the dwelling and outbuildings was denied on both visits. Extant structures including a house, cellar, barn, windmill, and two outbuildings were noted, along with a small water trough and several septic tanks (Figure 7-47). Site area and subsurface data were not determined.

Previous Investigations: As noted above, the site was recorded in 1982 and revisited in 1985. No architectural documentation or subsurface testing was conducted. A sketch map was drawn of the site, including the general placement of all structures, and a floorplan of the house. No surface material was noted, and no collection was recovered.

Based on the survey data, Skinner et al. (1982a:8-18) recommended that the dwelling should be documented through archival research and architectural study providing information necessary for determining National Register eligibility. No recommendation was made in 1985 because the tenant denied access, and the site could not be adequately evaluated.

Archival Investigations: Site 41DN193 was located on the J. Morton survey (A-792) granted to Morton in 1853, and his heirs in 1872. The first occupation of the site probably dates ca. 1882 when the land was sold to J. R. Sullivan (Table A-25).

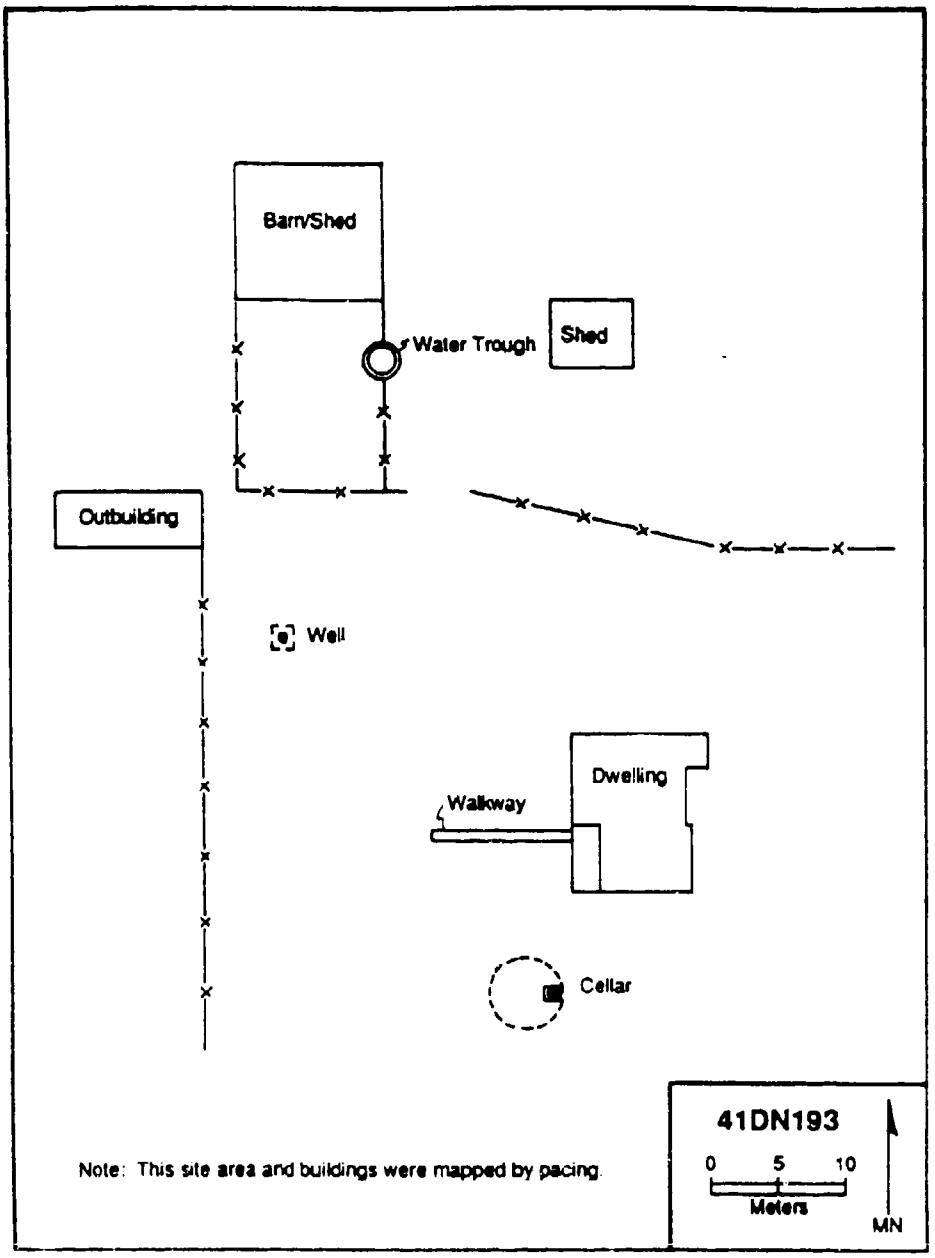


Figure 7-47. Site map of 41DN193.

Architectural Investigations: Architectural documentation was recommended as a research strategy to be implemented if limited archival research suggested that the dwelling was potentially significant. The archival data were insufficient to determine significance, and limited architectural data were recorded. Structural data, including building elements, floorplans, and measurements were recorded for major buildings. No elevational drawings or floorplans were made. An overview of each structure is provided below.

Dwelling: The dwelling was described by Skinner et al. (1982a:8-18) as a Tee-plan with intersecting gables. It was comprised of three main rooms and several additions. A north-south gable occurs over the south-central room, and an east-west gable over two central rooms (east and west). Shed roofs occur over an addition, including a bathroom, kitchen, and a side porch located on the north side, a porch on the southwest corner of the house, and a small enclosed room on the southeast.

The dwelling is set on sandstone piers, and a hanging chimney was located on the interior west wall of the east-central room. The asphalt shingle roof was originally cedar shingles, and the exterior walls were clapboard. The ceilings were beaded, the floors were tongue and groove, and the walls were painted, primarily in pink, but also in white, peach, and lime green. The kitchen floor was linoleum, and carpet occurred in several rooms. The northeast porch was poured concrete, and the house had interior plumbing, electricity, and telephone service.

Barn: The barn was a two-and-a-half story structure with a gambrel east-west gable. It had a central hall. The north pens had wood floors while the southern were dirt. It had a full loft, and a cattle chute occurred on the south wall. A corral was located on the south. The barn was set on sandstone piers and had been painted red at one time. The original roof was cedar shingles, which were now covered with corrugated metal sheets.

Large outbuilding: This structure was probably an animal pen and was partially collapsed when it was recorded. It had a poured concrete floor and foundation. The walls were horizontal planks covered with asbestos shingles. The shed roof was corrugated metal, and the interior of the building was divided into two pens with a central north-south hall. Hog wire occurred on the lower part of the north wall.

Small outbuilding: This structure was located north of the dwelling and appears to have been used as a storage shed. It had a concrete foundation and floor and a corrugated metal shed roof. The walls were shiplap, and windows occurred on the south, with a door on the east.

Cellar: The cellar was constructed of sandstone and mortar. It was oriented east-west with the entry on the east.

Dating: Based on the building technology and materials, the extant structures dated to the twentieth century. The barn was the oldest standing outbuilding and was probably built ca. 1920-1930, while the other two were recent (ca. 1960s). The house was built in the early 1900s (1920-1930s), and the additions were built a short time later (1930s and 1940s).

Significance: No structures associated with the late nineteenth century occupation of 41DN193 were found, and none of the extant structures were significant.

Dendrochronological Investigations: None.

Testing Method: No testing was conducted. Work was limited to architectural documentation and archival research.

Summary: None of the extant structures were constructed during the late nineteenth century occupation of 41DN193, nor were they determined architecturally significant.

41DN232

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	625' amsl
Scheduled Investigations	Limited testing
Soil Association	Navo clay loam
Cultural Affiliation	Historic (20th Century)

Description: The site was originally identified as a possible cemetery. When it was recorded, this site was a small fenced area located on a rise about 670m east of the Elm Fork. It had two gates, one on the northwest corner and one in the southeast. The gates were wood, and the fence was constructed of wood posts with hog wire. Two posts were found intact within the enclosure and were interpreted as possible grave markers. The area may also have represented an animal holding pen (Figure 7-48). The site was initially recorded as a cemetery (Skinner et al. 1982a:7-23), but was later dropped from the list of known cemeteries in the project area (Skinner and Baird 1985).

Previous Investigations: The site was recorded in 1981, but no investigations were undertaken. It was revisited in 1985 by NTSU and was reinterpreted as an animal pen. No surface features, including grave markers or depressions were visible. No further work was recommended.

Archival Investigations: None.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Testing Method: Only two 50x50-cm units were dug at 41DN232. Both units were dug after the site had been almost entirely removed by a gravel operation. One unit was placed inside the northern fence while the second was located near the south fence line. Both were excavated outside the disturbed area (see Figure 7-48).

Testing Results: No cultural material was found.

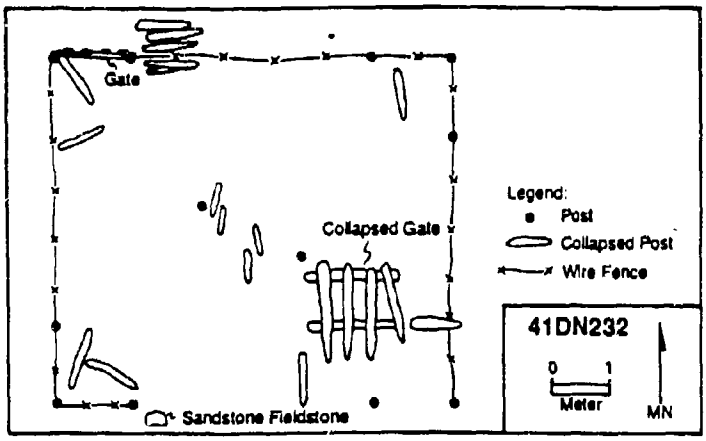
Summary: Site has been totally removed.

41DN248

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	660' amsl
Scheduled Investigations	Limited testing
Additional Investigations	Archival
Soil Association	Navo clay loam
Cultural Affiliation	Historic (1859 to 1915)

Description: Several surface features were recorded, including a stone-lined well, a sandstone foundation of a small shed, stone piers associated with a barn or outbuilding, and a collapsed cellar (Figure 7-49). The well was dug in the 1850s or 1860s. A motor-driven pump and windmill were added by the Jones family when they acquired the property in the early 1900s. Subsurface features (piers, wall-lines, and chimney foundation) associated with the former dwelling were identified during testing. The site area, including the dwelling and associated outbuildings is

approximately 3600 m^2 and the margins have been partially impacted by farming activities after the farm was abandoned.



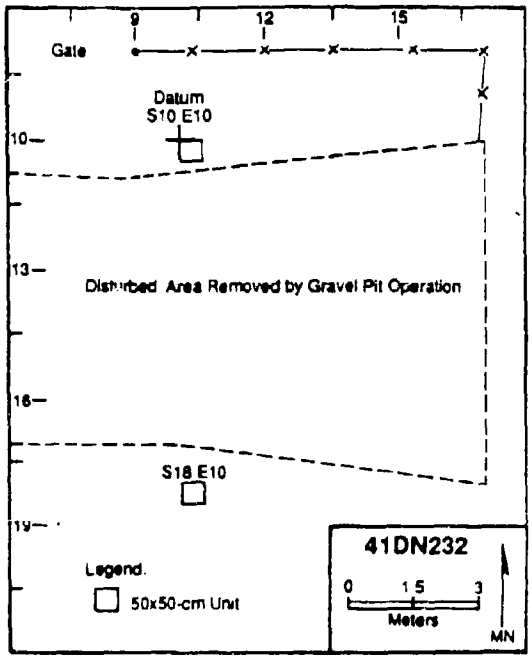


Figure 7-48. Site map of 41DN232. (a) field sketch of site made by ECI in 1981, (b) map of same site area made in 1986 when the site was revisited. Note: the site was destroyed by gravel pit operations before it could be tested in 1986.

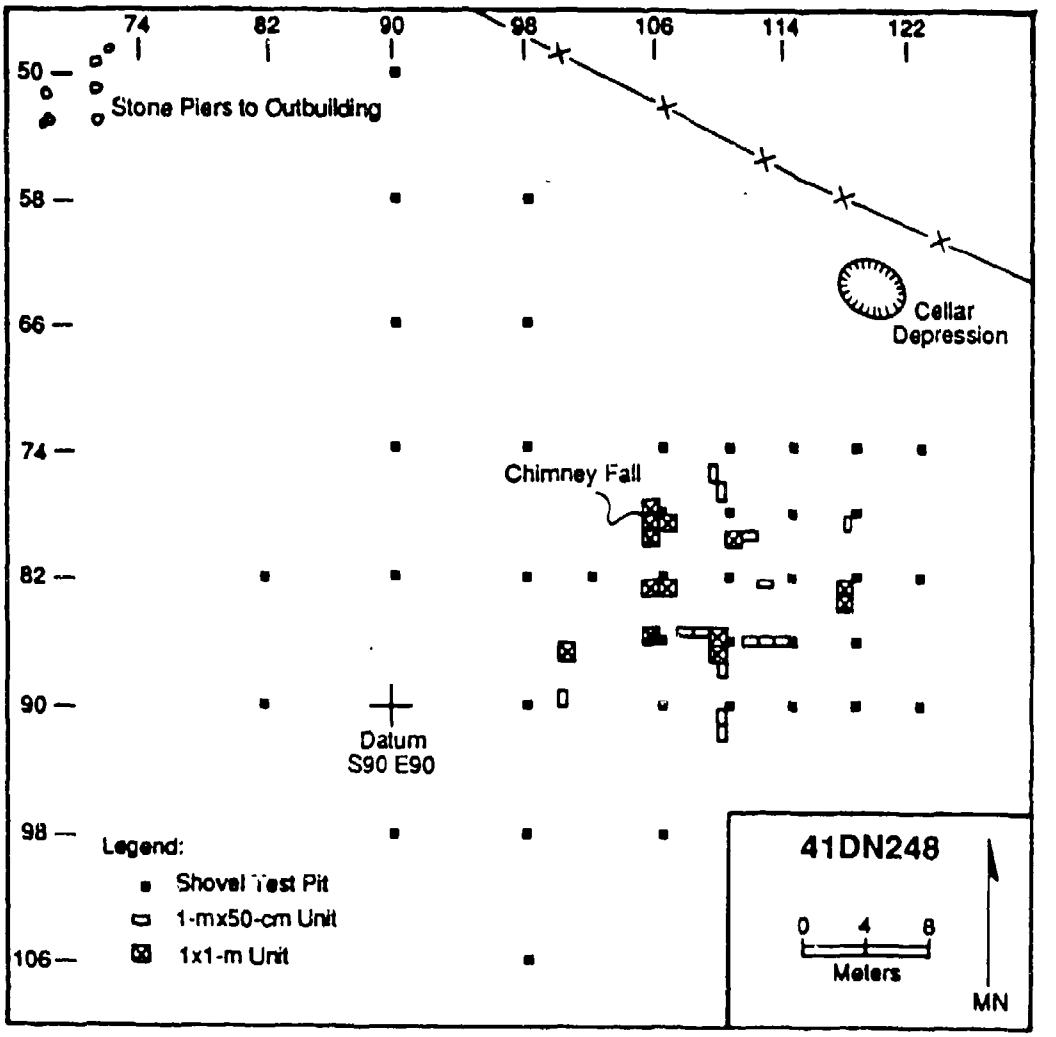


Figure 7-49. Site map of 41DN248.

After consultation with the Corps in the summer of 1987, testing was scheduled for this site. Site 41DN248 was previously not recommended for additional work by ECI, but based on a surface reconnaissance of the site by IAS in 1987 with Mr. Jones, addition of this site to the Scope of Work was recommended. This recommendation was based on the early occupation of this farmstead in the 1850s, surface evidence of intact features (stone foundation

of a small "potato" or food storage shed, piers to a small outbuilding northwest of the dwelling, and piers to the original house and later dwelling additions), and oral-history data provided by Mr. Roy Jones. Testing was approved by the Corps, and a small number of test units were dug in the late fall of 1987 with participation by members of the Dallas Archaeological Society (DAS).

Previous Investigations: Sites 41DN248 and 41DN249 were recorded by ECI in 1982. When they were revisited in 1987 during a driving tour of the reservoir with Roy Jones, it was determined that they were misplotted. In addition, it was determined that the two sites were related. The isolated well recorded at 41DN248 was dug by the Johnson family and was used as a community well by early settlers in the area (Roy Jones, personal communication, 1987). The farmstead at 41DN249 was occupied by the Johnson family. After consultation with Carolyn Spock at the Texas Archaeological Research Laboratory (TARL), both sites were redesignated 41DN248.

Archival Investigations: Site 41DN248 is located on the John Johnson survey (A-670) of 320 acres granted to Johnson in 1859 (Table A-29). The site represents the original homestead of the Johnson family, which they occupied until 1901. Following Johnson's death, the land was sold to M. D. Rayburn. His heirs sold it to Sarah Johnson in 1914, who immediately sold it to D. L. Jones. Sarah Johnson was John Johnson's second wife, and Kelly Johnson, their son, sold his interest in the property to D. L. Jones in 1915. This information indicates that between 1859 and 1915, the land was owned by John Johnson and his heirs. Following 1915, it was owned by the Jones family. The site was not occupied after 1915 (Roy Jones, personal communication, 1987).

Architectural Investigations: None.

Dendrochronological Investigations: None.

Testing Method: Forty shovel test pits, approximately 50 cm^2 were excavated on an 8-m grid across the site to determine site age, function, size, and integrity. Based on information recovered from these units and surface features, judgmentally placed 1x1-m units and 1x.5-m units were excavated. Fourteen 1x.5-m units were excavated primarily to define wall lines associated with the former dwelling. Thirteen 1x1-m units were dug to examine three major features. Based on data from these units, the approximate dimensions and orientation of the dwelling was identified.

Testing Results: Testing revealed a low-density sheet refuse deposit and seven features (Table 7-17). These features included a chimney base and fall (Feature 1), buried ash lens with architectural and domestic debris from when the dwelling burned (Feature 2), a buried trash deposit with kitchen, domestic, and architectural remains (Feature 3), foundation and fill from a small outbuilding (Feature 4), a postmold and wood fence remains (Feature 5), a possible dripline (Feature 6), and a second postmold and wood fence remains (Feature 7). All of these features were identified inside or near the dwelling.

The artifact assemblages recovered from the features and the sheet refuse deposit are presented separately in Table 7-17. The sheet refuse deposit sampled in the shovel test pits revealed a mean of 7.4 items per unit. Architectural items accounted for over 50% of the artifacts found in these units, followed by bottle glass and ceramics. Mixed midden and feature material was found in the judgmental units.

Data from the shovel test pits indicates that the sheet refuse deposit clusters in a 875 m^2 area around the dwelling (approximately 25 m north-south by 35 m east-west) and little material occurs in outbuilding areas. The ceramic sample from these units is too small to examine spatial patterning except at a very gross level. Refined earthenwares are scattered across this area occurring generally 4-8 m from the house, while stonewares occur as frequently under the dwelling as outside it. Bottle glass exhibits a broader scatter across the yard areas and includes outbuilding areas. However, 20 of the 47 bottle glass sherds came from Unit S82E118, which contained Feature 3. Machine-cut nails (n=35) and wire nails (n=38) exhibited similar frequencies (excluding nails from Unit S82E118) and overlapping distributions.

Table 7-17
Artifact Assemblage from Features 1-7 and
the Sheet-Refuse Deposit at 41DN248

Artifact Category	Sheet Refuse N	Sheet Refuse %	Feat. 1 N	Feat. 1 %	Feat. 2 N	Feat. 2 %	Feat. 3 N	Feat. 3 %
Refined Earthenware	14	5.56	4	1.37	4	1.06	28	4.67
Stoneware	6	2.38	1	0.34	1	0.27	7	1.17
Bottle Glass	27	10.71	17	5.82	85	22.61	69	11.52
Table Glass	2	0.79	2	0.68			1	0.17
Lamp Glass	11	4.37	3	1.03	1	0.27	8	1.34
Unid. Glass	4	1.59	89	30.48	28	7.45	149	24.87
Window Glass							14	2.34
Machine-Cut Nails	35	13.89	21	7.19	40	10.64	63	10.52
Wire Nails	38	15.08	5	1.71	23	6.12	82	13.69
Handmade Brick	2	0.79	6	2.05	84	22.34	3	0.50
Building Material	72	28.57	106	36.30	8	2.13	88	14.69
Personal Items	4	1.59			4	1.06	16	2.67
Thin & Heavy Metal	12	4.76	22	7.53	49	13.03	30	5.01
Household Items	9	3.57			1	0.27	7	1.17
Machine & Wagon	1	0.40	1	0.34	6	1.60	2	0.33
Horse & Stable	1	0.40					1	0.17
Ammunition	2	0.79						
Misc. Other	12	4.76	15	5.14	42	11.17	31	5.18
Total	252		292		376		599	

cont.

Artifact Category	Feat. 4 N	Feat. 4 %	Feat. 5 N	Feat. 5 %	Feat. 6 N	Feat. 6 %	Feat. 7 N	Feat. 7 %
Semi & Coarse Earth.	1	0.15						
Refined Earthenware	8	1.19	12	3.81	1	0.38	2	0.80
Stoneware	74	10.98	3	0.95	3	1.15	1	0.40
Bottle Glass	229	33.98	44	13.97	41	15.65	3	1.20
Table Glass	8	1.19	1	0.32	1	0.38	3	1.20
Lamp Glass	6	0.89	1	0.32	1	0.38	55	22.00
Unid. Glass	42	6.23	8	2.54				
Window Glass	2	0.30	3	0.95	3	1.15	48	19.20
Machine-Cut Nails	27	4.01	139	44.13	124	47.33	6	2.40
Wire Nails	18	2.67	51	16.19	50	19.08	42	16.80
Handmade Brick	48	7.12	5	1.59	3	1.15		
Machine-Made Brick	1	0.15						
Building Material	74	10.98	6	1.90	1	0.38	64	25.60
Personal Items	16	2.37	4	1.27	2	0.76	1	0.40
Thin & Heavy Metal	105	15.58	16	5.08	16	6.11	19	7.60
Household Items	2	0.30	2	0.63	2	0.76		
Machine & Wagon	2	0.30						
Ammunition			2	0.63	2	0.76		
Electrical Items	2	0.30						
Misc. Other	9	1.34	18	5.71	12	4.58	6	2.40
Total	674		315		262		250	

Data from the judgmental units indicate several interesting patterns. Artifact counts were corrected for unit size so statistical comparisons could be made. Refined earthenwares clustered in four units, S76E109, S83E105, S83E106, S90E106, occurring most frequently in the west yard near the house. They occurred in each of the yards surrounding the dwelling but were less common in units excavated 4-12 m from the house. Few refined earthenwares were found in Feature 4, and a high concentration was not found in Feature 3 (trash deposit). However, stonewares clustered in Feature 4 and were most common in the west and south yards. While refined earthenwares occurred in all but three judgmental units excavated under or adjacent to the house, stonewares did not occur in eight units, indicating preservation of activity-related spatial patterning.

Bottle glass sherds were found in all judgmental units except S77E109.5 in Feature 1 (chimney fall). The highest concentrations occurred in Feature 4 and the southwest corner of the dwelling. Window glass sherds clustered in the south half of the house, particularly in the southeast corner. A smaller concentration occurred in Unit S83E106 near the southwest corner of the original house. A similar pattern occurred among machine-cut and wire nails. Both nail types overlapped, but machine-cut nails were more common in the north half of the dwelling, while wire nails were more frequent in the south half. Handmade bricks were scattered but clustered in Feature 4 and the southwest corner of the dwelling. These patterns and the distribution of the features discussed below were used to estimate the size and orientation of the house.

Features: Feature 1, chimney base and fall, was exposed in four units: S78E104, S79E105, S79E106, and S80E105. The chimney appears to have been on the west wall of the dwelling. The fireplace and chimney were uncut sandstone and also probably included some handmade brick. Excavation in the four units was between 2 to 5 cm below surface, allowing the feature to be exposed, but not removed. Domestic items found in these units include ceramics, bottle glass, and table glass sherds. Feature 1 was mapped and reburied for protection.

Feature 2 is a buried lens containing burned architectural and domestic artifacts in Unit S86E109. This feature was initially exposed in a shovel test pit dug at S86E110, where it appeared as a moderate artifact concentration. A total of 396 artifacts were found in S86E109, about 1.3 times as many than were recovered from all the shovel test pits. Data from this unit indicated that the west dwelling wall bisected this unit. The artifactual and architectural remains in Feature 2 probably date to when the dwelling burned.

Feature 3 is a kitchen or refuse-related deposit 4-6 meters southeast of the original house. Three units, S82E118, S83E117, and S84E117, were excavated in Feature 3, which was first identified in the shovel test pit at S82E118. Artifacts, including burned glass were found from 10-40 cm below surface and mixed with a dense ash lens from 10 to 25 cm below surface. Based on the assemblage found in this unit, two 1x1-m units were excavated in natural levels to approximately 30 cm below surface to recover a larger sample of this feature. The feature was shallow but broad and included mixed sheet refuse, trash, and building remains.

Feature 4, a small outbuilding identified by Mr. Jones as a "potato shed," was partially excavated in Unit S87E100. This 1 m^2 unit was located inside the sandstone rocks that formed the building foundation. The foundation was 1.5 m^2 and approximately 8 m west of the dwelling. Feature 4 was excavated in arbitrary 10 cm levels and contained predominately vessel glass (42.28%) and architectural items (25.22%) in a dense ash and charcoal lens. Fruit jars were the most common identifiable bottle glass sherds, including five jars found in situ. Artifacts were recovered from Levels 1-4 (0-40 cm below surface) in Feature 4, with the greatest density occurring in Level 1. The base of the feature was irregular and intruded into the B-horizon. Fine-screen samples were obtained from the northeast quad.

Feature 5 was identified in Unit S87E109 as a postmold containing burned fill, charcoal, and artifacts. This unit contained predominately nails (62.39%) and vessel glass (34.03%), most of which were unburned. A charcoal stain was exposed at 10 cm below surface underneath a small pile of sandstone and limestone rubble. Feature 5 was a circular mold 20 cm across at 10 cm below surface and tapered to 10 cm across at 20 cm below surface. It contained charcoal, nails, and rubble. The feature fill was removed as a fine screen sample. Two wood samples

were collected in the fill. Feature 5 is a postmold to a wood fence post from near the southwest corner of the dwelling.

Feature 6, part of the north and east wall lines of the dwelling, was exposed in three units (S77E109.5, 79.5E111, and S80E110). A gravel lens was found in each of these units along with large stone piers and a high density of nails (n=174). Domestic debris and other architectural items were also found. This gravel lens along the east wall of the dwelling may be a dripline. A possible step associated with a door may have been located along this wall line.

A second postmold from a wood pier, Feature 7, was found in Unit S86E112. This feature is on the south wall of the dwelling, and the unit contained both architectural and domestic debris. The pier was exposed at 17 cm below surface and extended to 26 cm below surface. A planview and profile were drawn, and the post was collected.

Faunal Remains:

TOTAL BONE = 363
Identified fauna (n=60)
- Rana catesbiana (bullfrog) - 1
- Bufo woodhousei (Woodhouse's toad) - 6
- Gallus gallus (domestic chicken) - 9
- medium bird - 2
- Sylvilagus floridanus (cottontail) - 2
- Sciurus sp. (squirrel) - 1
- Sigmodon hispidus (cottonrat) - 1
- indet. rodent - 1
- Canidae (dog/coyote) - 1
- medium mammal - 1
- Sus scrofa (domestic pig) - 27
- Bos taurus (domestic cattle) - 1
- large mammal - 7

Unidentified bone (n=303)

Although this sample is small, the same farmstead pattern as shown at other sites in the study area is apparent: pig and chicken bones are the most numerous; cattle is present, but not in large numbers of remains; and small game is represented by rabbit and squirrel. In this assemblage, the frogs and rodents are most likely intrusive to the archaeology.

The pig remains are primarily (48%) broken teeth fragments, but from these, two individual pigs are represented. Unlike the pig remains from other sites in the reservoir, the specimens recovered here are strictly teeth, feet, a vertebra, and rib fragments, no remnants of meaty elements were recognized. Additionally, none of the pig remains exhibited cut marks.
Four of the elements, however, were burned: a maxilla fragment from Feature 3, a metacarpal from Feature 4, and isolated teeth fragments from the yard. Furthermore, the distribution of pig bones was concentrated in Features 3 and 4 and the units between those features. Feature 6 produced only one pig tooth, and a few elements were found in units placed in the northeast area of the excavations.

Likewise, those elements categorized as large mammal were recovered from Features 3 and 4. Three of these exhibit saw cut marks: a charred distal femur and two rib fragments. The femur condyle probably represents a cut from the stifle joint retained with the cut of round, which produces round and swiss steaks, as well as top round

if beef. A dorsal rib fragment with a sawn end was identified as cow, but the cut of meat is undetermined; it was recovered from unit S80E120 in the northeast area of the site as well.

Of the remaining identified faunas, all were found in or around the features, tending to be concentrated southeast of the chimney fall, which together mark the house area. Only one bone was identified within the confines of the chimney fall, and that was a cottonrat femur. No bone was recovered from the cellar depression or the sheet refuse excavations (Fig. 7-49). The paucity of faunal remains outside the above-mentioned concentration suggests a swept yard.

Summary: This site contains buried features and a relatively undisturbed, low-to-high-density sheet refuse deposit. The testing results indicate the dwelling was oriented northwest-southeast and was about 9.5 m by 5 m, with a chimney in the northwest corner. The original dwelling was located on the north, and an addition was built on the south during the early twentieth century. A storage shed(?) was west of the house (Feature 4), a kitchen or refuse-related deposit was east of the house, and a cellar occurred to the northeast. Sandstone piers to a small outbuilding were found about 35 m northwest of the dwelling. Only 0.83% of the site was excavated. The remaining site area, including the house and outbuildings, had not been seriously impacted since it was abandoned. Unavoidable adverse impacts associated with park development led to mitigation excavations by UNT (Lebo in prep).

41DN273

Map Quad	Green Valley 7.5' (1960, rv. 1978), #3397-141
Elevation	662' amsl
Scheduled Investigations	Limited testing, dendrochronology (dropped after dwelling was removed by vandals), surface collection
Additional Investigations	Archival, architecture
Soil Association	Gasil fine sandy loam
Cultural Affiliation	Historic (1875 to 1935)

Description: This farmstead included an early log dwelling with an external sandstone chimney, well, and cellar (Figure 7-50). The dwelling, a farm trailer southwest of the house, and a small surface scatter were visible when the site was recorded (Skinner and Baird 1985). In 1984, a circular depression west of the dwelling was identified as a possible well or cellar (Texas Parks and Wildlife 1984:137). This depression was identified during testing as a collapsed cellar, and a well was also identified during testing south of the house near a recent trash dump. The house remained standing in 1984 (Texas Parks and Wildlife 1984), but it was removed before the site was revisited in 1985. The trailer had also been removed. The site area was estimated at 56 m north-south by 48 m east-west.

Previous Investigations: The site was recorded by ECI, and two shovel test pits were dug south of the house. Additional work was recommended to determine National Register eligibility. A measured floorplan of the dwelling was drawn, and HABS documentation and oral interviews were recommended. Texas Parks and Wildlife (1984:137) suggested in the draft management plan for Isle du Bois Park that the site be preserved and developed as an interpretative site, and that detailed architectural documentation be done, followed by reconstruction of the dwelling.

The house was assigned a date of ca. 1850s or earlier, and it was inferred that it may represent the earliest standing structure in the reservoir. The site was revisited by NTSU in 1985, and testing was recommended to determine National Register eligibility. However, the dwelling was removed by vandals before fieldwork began in 1986 and plans for Isle du Bois Park were finalized by Texas Parks and Wildlife.

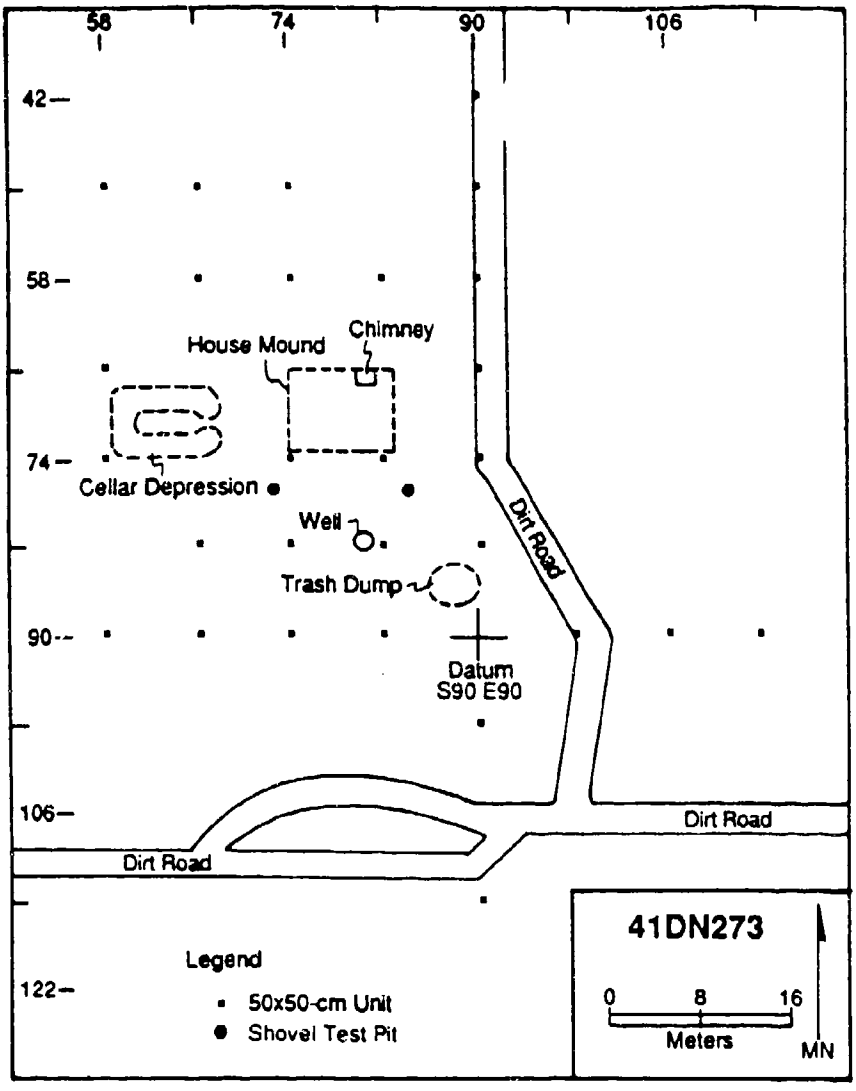


Figure 7-50. Site map of 41DN273.

Archival Investigations: Site 41DN273 is located on the William Stoneham survey (A-1144) and probably was not occupied prior to 1877 (Table A-31). T. J. Belcher acquired the property in 1871 but was listed as living in Grayson County. The first landowner listed in Denton County was E. B. Price who purchased 100 acres of the property in 1877. The site appears to have been occupied by the Halford and Miller families (who were related) from 1882 to 1926. It was owned by the Sparger family until 1949, and it was probably abandoned during this period.

Architectural Investigations: Field documentation during survey indicated that the dwelling was constructed of hewn oak logs with V-notching. The house was set on sandstone piers, had a full, exterior sandstone and mortar chimney on the north elevation, and the roof was missing. The house was a single cell structure with a door on the east and west, and a window on the south. The west door opened onto a porch that extended the full length of the west wall. The dwelling floor was dirt, and the porch was constructed with varying width planks. The house was one story, and no additions had been built. Chinking was present between the logs, and the exterior walls were horizontal beaded siding. Wire nails were noted, along with machine-made brick that capped the sandstone chimney.

Dating: The dwelling was not dated before it was lost. Based on the archival data, it was probably built between the late 1870s and mid-1880s, and this correlates well with the archaeological record. This dwelling is very similar to the one recorded at 41DN275.

Significance: Architectural significance was lost when the dwelling was removed.

Dendrochronological Investigations: None. Dendrochronology was requested in the Scope of Work, but the dwelling was removed by vandals before fieldwork began in 1986.

Testing Method: Thirty 50x50-cm units were excavated on an 8-m grid to recover information on site age, size, and integrity, and to recover a representative sample of the sheet refuse deposits. Surface collection was requested in the Scope of Work but was not feasible. First, the grass and other vegetation was high, and ground visibility was extremely low. Second, no surface artifact scatter was visible.

Testing Results: The cultural deposits indicate the site was occupied from the late nineteenth century until the early twentieth century (Table 7-18). Artifact densities ranged from sterile to 275 items, with 50% of the units containing more than 20 items. Architectural remains accounted for 48% of the artifacts recovered. High-density units, over 75 items, were located on the edge of the house mound (Units S66E74, S74E74, and S74E82) and contained over 50 architectural items each, ranging between 51% and 84% of the assemblage.

Table 7-18
Artifact Assemblage from 41DN273

Artifact Category	N	%
Semi & Coarse Earth.	3	0.28
Refined Earthenware	51	4.72
Stoneware	21	1.94
Porcelain	3	0.28
Bottle Glass	317	29.35
Table Glass	4	0.37
Unid. Glass	4	0.37
Window Glass	143	13.24
Machine-Cut Nails	63	5.83
Wire Nails	146	13.52
Handmade Brick	4	0.37
Machine-Made Brick	4	0.37
Building Material	155	14.35
Personal Items	9	0.83
Thin & Heavy Metal	116	10.74
Household Items	1	0.09
Machine & Wagon	21	1.94
Tools	1	0.09
Horse & Stable	1	0.09
Ammunition	3	0.28
Electrical Items	3	0.28
Misc. Other	7	0.65
Total	1080	

The sheet refuse deposit was moderately dense, with similar artifact densities occurring in the south and north yards. The refined earthenwares yielded a mean beginning date of 1865 (n=28 sherds), while the stonewares (n=21 sherds) dated 1882. The bottle glass yielded a date of 1896 (n=65), and together with the ceramics indicate the site

was initially occupied in the 1880s (MBD of 1886, n=114 sherds). This date is about nine years later than the date indicated for when the land was purchased (1877).

Artifacts were recovered from 5 to 50 cm below surface, with 30% of the units containing material between 30 to 50 cm below surface. These units clustered around the former dwelling. Both the refined earthenwares and stonewares were dispersed across all yards, including the front yard. Refined earthenware densities were greatest on the edge of the house mound, directly associated with the former dwelling walls, while higher stoneware densities occurred away from the house.

Bottle glass sherds exhibited a similar diffuse pattern as the refined earthenwares, but with higher densities occurring farther from the house, except in Unit 27 (S74E82) at the southeast corner of the dwelling (n=47). Unidentifiable thin and heavy metal and tin cans clustered in three units, two on the edge of the house mound (S66E74 and S74E82), and one northwest of the cellar (S66E58). Architectural remains clustered near the dwelling and northwest of the cellar, and in Unit 8 (S98E90), which contained wire fragments.

The sheet refuse deposit exhibited good integrity. The dwelling has been removed, but the collapsed cellar and filled well remain intact. The sandstone chimney and house mound are undisturbed. A trash dump occurs south of the dwelling and contains furniture, tin cans, bottles, architectural debris, and metal. No collections were made in this feature.

Faunal Remains:

TOTAL BONE = 12

Identified fauna (n=3)
Sus scrofa (domestic pig) - 2
Bos taurus (domestic cattle) - 1

Unidentified bone (n=9)

The identified elements from these domestic animals are all foot bones (metacarpals and metatarsals). There are no cut marks or burned elements identified. However, four of the unidentified fragments are burned, and they appear to be from large mammals, probably cow or pig. The sample size is too small to make further inferences.

Summary: This site was initially occupied during the late nineteenth century and was abandoned during the early twentieth century. The moderate-density sheet refuse deposit remains intact, and no evidence of disturbed subsurface deposits was found. The trash was deposited on the surface and did not impact the subsurface sheet refuse midden. This site is similar to other small farmsteads in the project area such as 41DN275, and no further work is recommended.

41DN275

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	615' amsl
Scheduled Investigations	Testing
Additional Investigations	Archival, architecture
Soil Association	Birome fine sandy loam
Cultural Affiliation	Historic (ca. 1870s to 1930s)

Description: Surface features at 41DN275 include a single pen log house, four log outbuildings, two rock-lined wells, a corral, a privy, and a collapsed cellar (Figure 7-51). The dwelling, three outbuildings, and a privy were standing when the site was recorded, but all had collapsed or were removed before testing. A fourth outbuilding was identified in 1985. The site was severely impacted by clearing in late 1986. The main site area is approximately 112 m north-south by 104 m east-west.

Previous Investigations: The site was recorded, five shovel test pits were dug, and a surface collection was conducted by ECI in 1983. Based on these results, architectural documentation, including architectural drawings, and oral history investigations were recommended (Skinner and Baird 1985:A7-11). The site was revisited by NTSU in 1985, and testing was recommended to determine National Register eligibility.

Archival Investigations: The site is located on the Andrew Matthews survey (A-837) of 160 acres. The undivided survey was acquired by A. M. Riddle in 1868, and members of the Riddle family continued to own the property until 1963 (Table A-32). The lack of post-1920s debris (i.e., modern trash or bottle glass) at the site suggests that the farmstead was abandoned while it was owned by the Riddle family. The site was probably occupied by tenant farmers during part of this period.

Architectural Investigations: Architectural documentation was limited by the advanced deterioration and removal of the structures. Identification of notching styles was hindered by the deteriorated condition of the outbuildings. Photographs and floorplans were recorded for the dwelling and three outbuildings. They are on file at IAS, UNT.

Dwelling: The dwelling had square-cut hewn sills with half-lap notching and mortise and tenon joinery. The sills were set on sandstone piers, and a full-mortared sandstone chimney was located on the exterior of the east wall. It stood 6.4 m high and was capped at one time with machine-made brick. A plank addition was built onto the western elevation, and a hanging machine-made brick chimney was located within this room. No roof was present when the dwelling was recorded. Only the sills and chimney remained during testing.

The addition of the west room changed the original floor plan from a single pen dwelling to a double cell house with a closed central passage. Both rooms had a door in the center of the south wall but no doors that opened onto the central passage between the rooms. Scattered debris from the house was evident south of the foundation, including cedar shakes, boards with blue paint, and machine-made brick. Both machine-cut and wire nails were present. Two rows of sandstone were still intact on the north side of the dwelling, forming the border of a walkway.

Outbuildings: Two outbuildings were recorded northwest of the dwelling during survey (see Figure 7-51). The northwest-most outbuilding was identified as a single pen log crib set on sandstone piers. It had a dirt floor, and mixed half dovetail and V- or saddle-notching. This crib was located within a corral and had an enclosed vertical plank addition built onto the west and north elevations. The roof of the addition was corrugated metal. The exterior walls were pine, and wire nails were used throughout.

The roof was missing on the log crib, and a corrugated metal shed roof was still visible over the addition. The west wall of the crib was collapsing, but intact, and was ten logs high. Peg holes were recorded on the west, east, and south exterior walls. Pegs were still intact in two holes. The holes occurred at different heights and distances and appeared to have been associated with shelves or for hanging items.

The more southern outbuilding was recorded as a double pen, possibly dogtrot log outbuilding with a plank addition on the west elevation of the north crib. No roof, porches, or chimneys were present. When these remains were more fully studied during testing it was determined that they represented two structures. The south crib was 3.69 m north-south by 4.29 m east-west, while the north crib was 2.4 m north-south by 4.4 m east-west. No doors opened onto the approximately 3 m wide space between the two cribs.

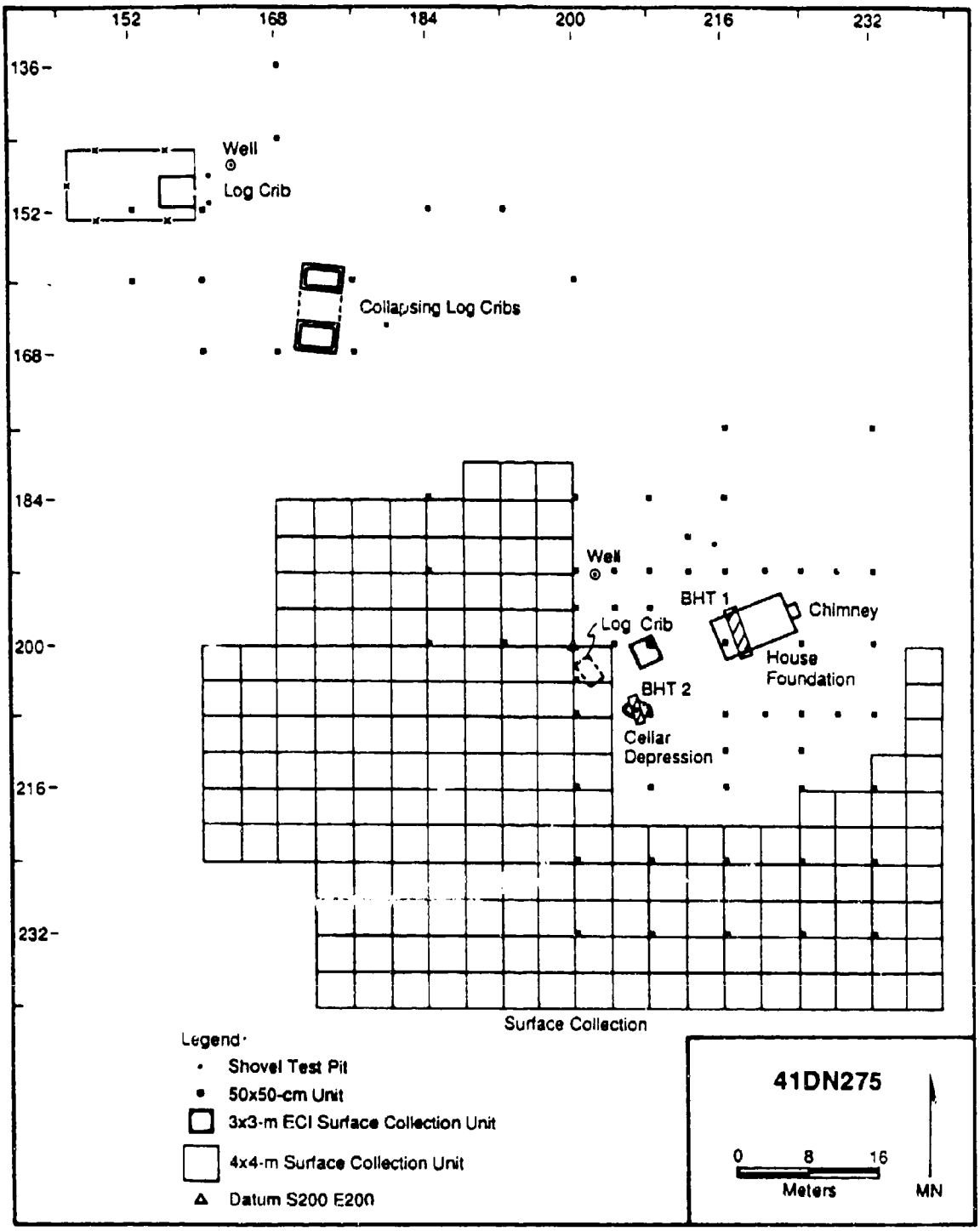


Figure 7-51. Site map of 41DN275.

The south log crib was a single pen with V- or s dle notching and a dirt floor. A door was located on the east and no windows were present. The north crib was also V- or saddle notched, and appears to have had a wood floor. Crossbeams were visible running north-south occurring approximately every 18 inches. A door was located on the east wall.

The fourth log crib was situated about 12 to 13 m west of the dwelling. It measured approximately 2.3 m east-west by 3.1 m north-south. It was represented by four logs with V- or saddle notching and sandstone piers.

Privy: The privy recorded during survey was not relocated. It was located northwest of the cellar and the fourth log crib. This area of the site was largely removed by construction prior to testing.

Cellar: The cellar had collapsed and its location was marked by a large depression. It was bisected northwest to southeast by BHT 2. The entrance was located on the east side, and the cellar was constructed with earthen walls and wooden support posts. No trash deposit was found within the depression.

Dating: The dwelling was constructed during the late nineteenth century, probably when the Riddle family settled there in 1868. No dendrochronology was possible because the only logs remaining during testing were fully hewn. The west addition dated to the early twentieth century. The outbuildings also could not be tightly dated, but probably were built within a short period based on their similar construction technology. Evidence of twentieth century additions were recorded for the two northern cribs.

Significance: The log structures at 41DN275 were determined potentially significant and recommended for HABS documentation (Skinner and Baird 1985:A7-11).

Dendrochronological Investigations: None.

Testing Method: Sixty-five 50x50-cm units were excavated on an 8-m grid to recover a representative sample of sheet refuse deposits and information on site age, size, and subsurface integrity. The areas west and south of the dwelling were impacted by clearing activity within the proposed reservoir. These areas were used as a turn-around zone for heavy equipment. The sod zone had been removed and artifacts were visible on the surface. A systematic surface collection was conducted to recover a representative sample of this material. A total of 187 4x4-m units was collected. Two backhoe trenches were excavated for feature exploration. BHT 1 provided a profile of the house mound, and BHT 2 yielded a profile of the collapsed cellar.

Testing Results: The sheet refuse deposit was shallow extending between 10-15 cm below surface. Several units contained deeper deposits, including S208 E208, located in the cellar depression. The midden was largely undisturbed before the site was damaged by clearing. No evidence of serious erosion or plowing was evident prior to this damage. The clearing removed the A-horizon in a large donut-shaped area that surrounded the dwelling. The area between the house and outbuildings was removed. The artifacts recovered in the surface collection units from these impacted areas contained sheet refuse material. Artifact counts from the excavated units and surface collection units are presented in Table 7-19.

Architectural remains were underrepresented in the surface collection which contained a mean of 5.14 items per 4x4-m unit. Bottle glass sherds were most common in these units, accounting for 40.17% of the surface collection, while architectural items totalled 9.68% and ceramics totalled 15.82% (see Table 7-19). Thin and heavy metal, including tin can fragments, were similarly represented in both the sheet refuse and surface collection assemblages (23.0% and 24.7%, respectively).

The excavated units indicated that the sheet refuse deposit was dense. A mean of 28.03 artifacts were recovered from 50x50 cm units. Six units contained over 100 artifacts, with the highest number of artifacts occurring in Unit S200E224 at the southeast corner of the dwelling. This unit contained 258 artifacts, including 196 window glass

Table 7-19
Artifact Assemblage from 41DN275

Artifact Category	Sheet Refuse N	%	Surface Collection N	%
Refined Earthenware	73	4.01	88	9.16
Stoneware	36	1.98	58	6.04
Porcelain	12	0.66	6	0.62
Bottle Glass	297	16.30	386	40.17
Table Glass	6	0.33	8	0.83
Lamp Glass	2	0.11	2	0.21
Unid. Glass	6	0.33	4	0.42
Window Glass	323	17.73	38	3.95
Machine-Cut Nails	90	4.94	1	0.10
Wire Nails	149	8.18	4	0.42
Handmade Brick	146	8.01	19	1.98
Machine-Made Brick	1	0.05	5	0.52
Building Material	191	10.48	26	2.71
Personal Items	9	0.49	5	0.52
Thin & Heavy Metal	419	23.00	237	24.66
Household Items	4	0.22	9	0.94
Machine & Wagon	4	0.22	17	1.77
Tools	1	0.05	1	0.10
Horse & Stable			1	0.10
Ammunition	6	0.33	5	0.52
Electrical Items	24	1.32	1	0.10
Misc. Other	23	1.26	40	4.16
Total	1822		961	

fragments. High architectural counts occurred in S160E176 (n=106) and S216E216 (n=57), and high thin/heavy metal or tin can counts were found in S152E160 (n=73) and S136E168 (n=106). When architectural items are excluded from the artifact counts the mean number of artifacts per 50x50-cm unit drops to 14.18 items.

The sheet refuse deposit contains architectural items from the original late nineteenth century building episodes at the site, as well as later additions to the house and outbuildings. Wire nails were slightly more common than cut nails, totalling 52% of the nails found in the sheet refuse deposit. The spatial distribution of both nail types overlapped but wire nails predominated in the outbuilding area (n=63) where only seven cut nails were found. In the dwelling area (based on excavated units only), 86 cut nails and 87 wire nails were recovered. Only five nails were found during surface collecting.

Window glass sherds clustered near the dwelling, with 196 fragments being found in Unit S200E220 at the southeast corner of the dwelling and just east of the front door. A single window glass sherd was found in the outbuilding area. A small number were found in a semi-circular pattern in the surface collection units nearer the house. None were found in the southwest surface collection area, and only two were found west of the E188 line.

Refined earthenwares yielded a mean beginning date of 1863 (n=139) and were clustered around the dwelling and up to 30 m away from the house in the northwest, west, southwest, and southeast yards. Few sherds were found in units north (behind) or east of the dwelling. Domestic activities conducted outside near the house were probably

carried out in either the west or south yards. One well, several outbuildings, and the cellar cluster west of the house. Few sherds were found in the outbuilding area although a well occurs here. No data were recovered supporting earlier speculations of a second house area.

Refined earthenware and stoneware sherds exhibited overlapping distributions. Only one stoneware sherd was found in the outbuilding area. Fewer stonewares were found near the house. A mean beginning date of 1882 (n=76) was obtained for the stonewares from the sheet refuse deposit.

The bottle glass assemblage was scattered across the sheet refuse deposit and yielded a mean beginning date of 1904 (n=144). Table glass, lamp glass, and unidentifiable glass sherds were poorly represented. Bottle glass sherds were the most common artifacts found in the surface collection units where they totalled 40.17%, compared to 16.30% in the excavated units.

A combined mean beginning date of 1884 was obtained from the ceramic and bottle glass assemblages (n=359). This date is probably 10 years too late, reflecting the predominance of early twentieth century bottle glass at the site. A combined ceramic date of 1870 (n=215) was obtained, which more closely correlates with the archival and architectural data.

Very few personal items, horse and stable gear, household items, and machine and wagon parts were found. No cultural material was recovered from the backhoe trenches. Sheet refuse artifacts occurred, but no trash deposit was found.

Faunal Remains:

TOTAL BONE = 62

Identified fauna (n=28)
- Gallus gallus (domestic chicken) - 2
- Didelphis virginiana (opossum) - 1
- Sciurus niger (fox squirrel) - 1
- Ovis/Capra sp. (sheep/goat) - 1
- Sus scrofa (domestic pig) - 23

Unidentified bone (n=34)

Compared to the other historic sites, 41DN275 has a sizeable quantity of bone. Closer examination, however, reveals that the majority of the identified remains are pig teeth. Other pig elements include a rib fragment, a lumbar vertebra, and a tibia shaft with a saw cut mark. This is the only site tested that contained remains of sheep or goat. The addition of chicken remains suggests a busy farmyard. The presence of small game (opossum and squirrel) could represent casual hunting in the forested areas near the site.

Summary: Both the archaeological and architectural integrity of this site has been seriously impacted. Extant structures are largely collapsed or have been removed. Clearing has removed in situ cultural deposits in a semi-circular pattern beginning about 12-16 m from the house, including the entire surface collected area. The site was occupied, possibly by several generations of the same family, for 50 to 60 years. No further work is recommended.

41DN349

Map Quad	Mountain Springs (1961, rv. 1978), #3397-144
Elevation	625' amsl
Scheduled Investigations	Limited testing, archival
Additional Investigations	Architecture
Soil Association	Konsil fine sandy loam
Cultural Affiliation	Historic (1890s to recent)

Description: This site contained remains of a board and batten dwelling with some clapboard, a cellar, a collapsed outbuilding, and the sills of a large barn when it was recorded in 1985. The house burned before testing, and a chicken coop, three sheds, several fencelines, a well, and a barn yard with a loading chute were identified during testing (Figure 7-52). A dirt two-track road bisects the farmstead. The site area was determined to be approximately 88 m east-west by 88 m north-south.

Previous Investigations: The site was recorded in 1985 by personnel from NTSU. Architectural documentation and testing were recommended to determine National Register eligibility. No units were excavated, and no material was collected.

Archival Investigations: Site 41DN349 is located on the southern portion of Tract 3 of the Amanda Harris survey. This tract was comprised of 114.01 acres. A gap occurred in the records for this site between 1870 and 1889 (Table A-33). M. K. Bond acquired the property in 1888 (Deed Record 40:357). However, this deed was not located. He sold the property a year later. The site was probably initially occupied in 1889, and may have been occupied up to shortly before it was purchased by the Corps in 1984.

Architectural Investigations: No early structures remained, and only limited documentation was conducted for recent outbuildings. A floorplan of the burned dwelling is provided in Figure 7-53.

Dwelling: The dwelling foundation was made of sandstone piers along with handmade brick. Preliminary recording of the structure before it burned indicated that it had a board and batten exterior with clapboard covering part of the exterior, beaded ceilings, and machine-cut nails throughout.

Barn: Only the sills remained. They were set on sandstone piers, were half-notched, and machine-cut nails were present in the lumber scattered near the sills. This structure did not burn and was probably salvaged for reuse. A foundation associated with possible cattle stalls or feed pens was noted on the north side of the barn.

Cellar: The cellar had earthen walls and floor, and the roof was supported by railroad ties. The gable roof was constructed of wood and corrugated metal. The gable was oriented north-south, and the entrance was on the south.

Dendrochronological Investigations: None.

Testing Method: Thirty-seven 50x50-cm units were excavated to recover a representative sample of the sheet refuse deposits and information on site age, size, and subsurface integrity.

Testing Results: A high-density sheet refuse deposit occurs (Table 7-20), with a mean of 35.41 artifacts per 50x50-cm unit. The midden is shallow, 0-12 cm below the surface, with two units containing deposits between 35 and 50-cm deep (S184E216 and S168E224, respectively). The highest artifact counts occurred at S184E208 (398 items) and S184E216 (129), located along house wall lines. Architectural items accounted for over 80% of the remains from both of these units. Two other units, S168E224 and S200E208, contained high artifact counts (n=94), with bottle glass comprising between 40% and 60% of the remains.

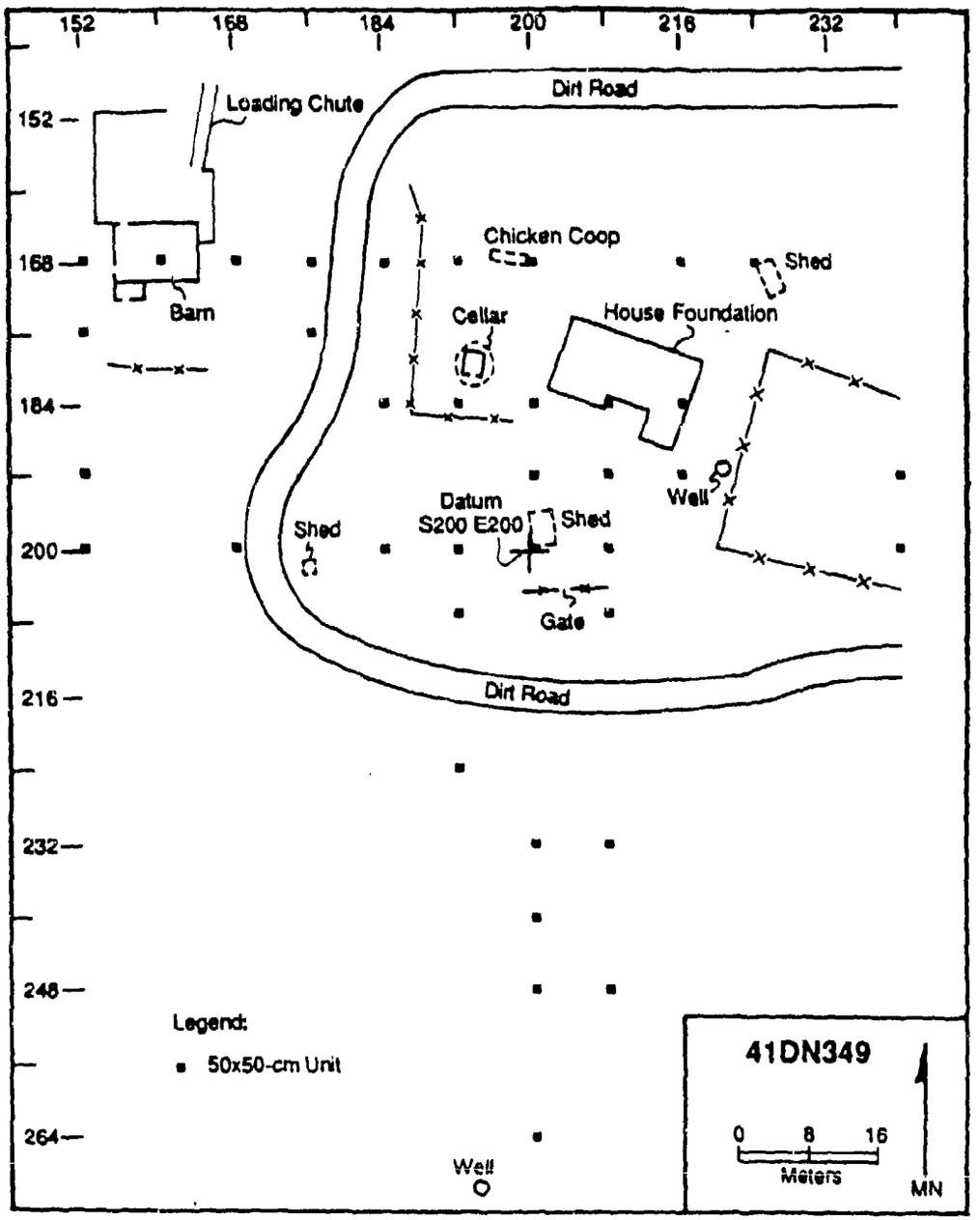


Figure 7-52. Site map of 41DN349.

When architectural items are excluded from the artifact counts, the mean number of artifacts per unit is 15.5 (n=572), indicating that the high artifact density at the site is not directly related to the dwelling having burned in situ, over-inflating the artifact density. Architectural remains from excavated units included primarily wire nails (85%) and a very small sample of handmade brick (n=8). These nails may include nails from the original structure, as well as later modifications including addition of clapboard siding during the twentieth century.

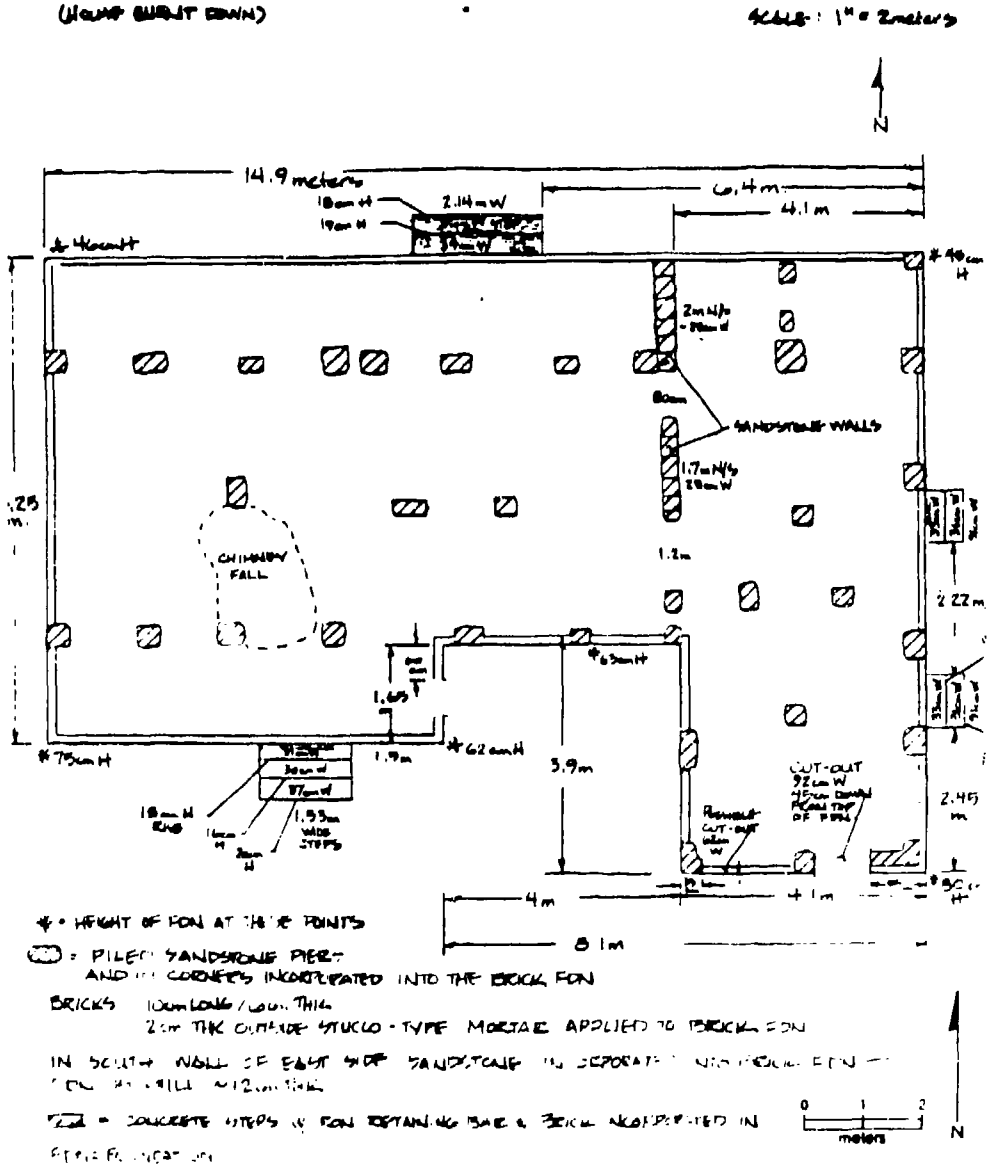


Figure 7-53. Field architectural floorplan of the burned dwelling at 41DN349.

The refined earthenwares yielded a mean beginning date of 1884 (n=28). Stonewares dated 1881 (n=8), and bottle glass dated 1902 (n=24). Together, these remains yielded a combined mean beginning date of 1891 for the site. The distribution of these items reflected the disturbed nature of the site. Refined earthenwares were distributed around the house, occurring in the front, back, and both side yards, with all ceramic types (refined earthenwares, stonewares, porcelains) clustering near the shed south of the dwelling. Refined earthenwares and porcelains also occurred at considerable distances from the house in the northwest barn area, as well as in the road and near the well. Exposed deposits in the road, particularly southeast of the site, suggest that several farmsteads may have been located in this area at one time.

Table 7-20
Artifact Assemblage from 41DN349

Artifact Category	N	%
Refined Earthenware	28	2.14
Stoneware	9	0.69
Porcelain	12	0.92
Bottle Glass	321	24.50
Table Glass	12	0.92
Lamp Glass	5	0.38
Window Glass	80	6.11
Machine-Cut Nails	43	3.28
Wire Nails	253	19.31
Handmade Brick	8	0.61
Machine-Made Brick	1	0.08
Building Material	339	25.88
Personal Items	14	1.07
Thin & Heavy Metal	149	11.37
Household Items	10	0.76
Machine & Wagon	6	0.46
Tools	1	0.08
Horse & Stable Gear	1	0.08
Ammunition	4	0.31
Electrical Items	5	0.38
Misc. Other	9	0.69
Total	1310	

Bottle glass sherds were scattered across the site, with the highest frequencies occurring near structures, including the house, cellar, and both sheds. Bottle glass was also found scattered in the road and areas south of the road.

Faunal Remains:

TOTAL BONE = 5

Identified fauna (n=2)
Terrapene sp. (box turtle) - 2

Unidentified bone (n=3)

Besides two fragments of box turtle shell, three large mammal bones were recovered. All three of these cow-sized fragments exhibit saw cut marks. The sample is too small to make further inferences.

Summary: Both the archaeological and architectural integrity of this site has been seriously impacted. Extant structures are largely collapsed or have been burned. Extensive erosion has removed in situ cultural deposits. The site was serially occupied for about 80 years.

41GS46

Map Quad	Pilot Point 7.5' (1961, rv. 1978), #3396-233
Elevation	640' amsl
Scheduled Investigations	Limited testing, mapping, archival
Additional Investigations	Architecture
Soil Association	Crockett loam
Cultural Affiliation	Historic (ca. 1880s/1890s to recent)

Description: This site is located approximately 500 m north of Buck Creek and includes a standing dwelling, barn, several sheds, barbed wire fences, a gravel road, animal pen, and well (Figure 7-54). The main site area defined by the sheet refuse deposit and extant structures is approximately 90 m east-west by 80 m north-south. The site is disturbed, eroded, and has been used for cattle grazing in recent years.

Previous Investigations: The site was recorded by ECI in 1981, and no additional work was recommended (Skinner et al. 1982a). The NTSU crew revisited the site in 1985 and recommended that a detailed site map and architectural documentation be undertaken to supplement needed limited testing, oral history, and archival research. The dwelling was recorded in good condition, and although having undergone several modifications, it appeared to have been built prior to 1900.

Archival Investigations: The site is on land granted to S. Hatcher in 1852 (Table A-35). The first occupation may have been in 1871 when E. Emberson purchased 415 acres of the survey, but this could not be substantiated by the archaeological or architectural record. Later occupations between the 1890s and 1984 are evident at the site.

Architectural Investigations: When recorded in 1981, the house was described as a two-room central hall with a partial front porch on the west and a gable roof intersecting the main gable. A hanging chimney is located on the south wall of the north room. An addition to the east side of the house has resulted in an asymmetrical tee plan with an intersecting gable roof. A shed addition on the south side has created the present ell form. The house is covered with asbestos shingles and asbestos siding (Skinner et al. 1982a:8-21). The outbuildings are all modern. A newspaper used for wallpaper backing was found in the house dated 1935.

Field notes and drawings of the dwelling and barn are on file at IAS, UNT. It remains unclear, but appears that the two earliest rooms are located on the west side of the house and were either built at the same time or very close together in time. The larger, south room, is 5.9 m north-south by 4.8 m east-west, and the north room is the same width and 4.18 m north-south. The hanging chimney is located on the north wall of the south room, and the exterior door occurs near the northwest corner of this room. Both rooms have 17.5 cm thick horizontal half-lapped boards on the interior walls. The floors were tongue and grooved hardwood, with the boards in the north room running length-wise north-south and east-west in the south room. The floor in the north room is also slightly lower than in the south room. The east walls of both rooms have been altered by later additions or modifications. The placement, size, and style of windows is the same for both rooms. The original roof was a north-south gable with slats and cedar shakes. The later additions are modern.

Dendrochronological Investigations: None.

Testing Method: Twenty-five 50x50-cm units were excavated on an 8-m grid to recover a representative sample of sheet refuse deposits and information on site age, size, and subsurface integrity. A feature characterized by a high artifact density in disturbed matrix was found in Unit 25 (S74 E82), and a second unit, Unit 26, was opened up to the east (S74 E82.5).

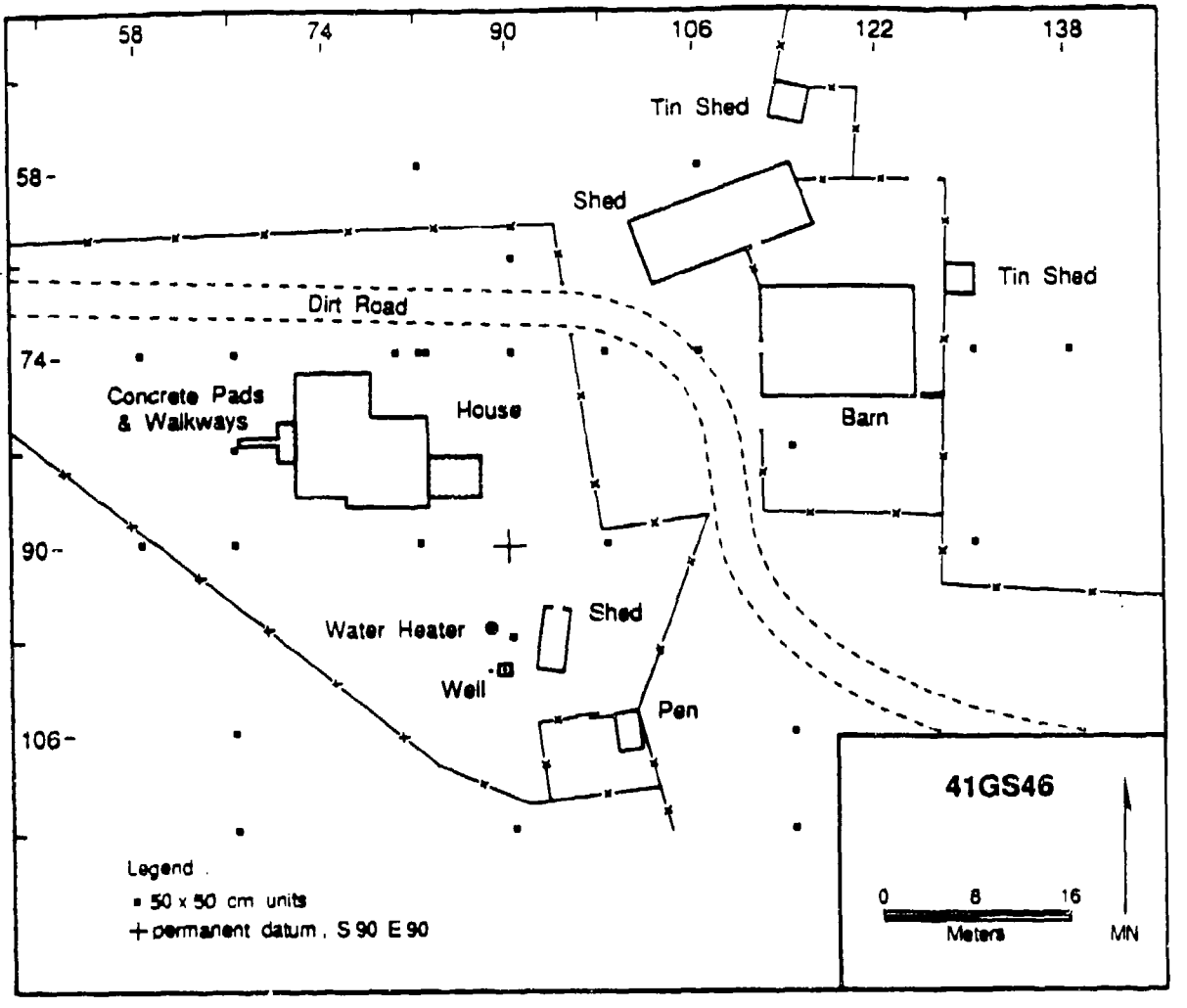


Figure 7-54. Site map of 41GS46.

Testing Results: The site was occupied until recently (Table 7-21), and there is extensive evidence of modern disturbances. The additions to the house mask the original sheet refuse deposit. The best-preserved deposits behind the original dwelling were recovered from Units S74E80, S74E82, and S74E82.5, which contained feature material to a depth of 60 to 80 cm below the surface. Small amounts of charcoal and ash were found within these units, as well as evidence of bioturbation. While artifact frequencies were considerably higher for these units (54, 251, and 143, respectively), the type of material found did not differ significantly from the artifacts found elsewhere on the site. Excluding these units, artifact density was moderate with a mean of 12.96 artifacts per 50x50-cm unit. Feature material from the above units accounted for 60% of the recovered assemblage.

Table 7-21
Artifact Assemblage from 41GS46

Artifact Category	N	%
Semi & Coarse Earthenware	3	0.37
Refined Earthenware	36	4.46
Stoneware	12	1.49
Porcelain	13	1.61
Bottle Glass	178	22.05
Table Glass	27	3.35
Lamp Glass	1	0.12
Unid. Glass	24	2.97
Window Glass	55	6.82
Machine-Cut Nails	15	1.86
Wire Nails	95	11.77
Machine-Made Brick	5	0.62
Building Material	111	13.75
Personal Items	28	3.47
Thin & Heavy Metal	97	12.02
Household Items	12	1.49
Machine & Wagon	67	8.30
Horse & Stable	2	0.25
Ammunition	1	0.12
Misc. Other	25	3.10
Total	807	

The refined earthenwares from all units yielded a mean beginning date of 1870 (n=33 sherds), the stonewares dated 1898 (n=12 sherds), and bottle glass dated 1902 (n=24 sherds). A combined mean beginning date of 1886 (n=69) was obtained for the site. Both nineteenth and twentieth century architectural remains occurred, but the latter predominated. No handmade bricks were found, and machine-cut nails accounted for only 16% of the nail assemblage.

The dirt road contained imported gravels with lithics. The yard areas are eroded, and artifacts are diffusely dispersed across the farm. Excluding the feature, refined earthenwares, stonewares, and porcelains occurred primarily away from the dwelling in outbuilding areas. Bottle glass is also widely dispersed, with the highest frequencies occurring between the northeast corner of the dwelling and the road.

Faunal Remains:

TOTAL BONE = 34

Identified fauna (n=4)
- Gallus gallus (domestic chicken) - 2
- Philohela minor (woodcock) - 1
- Sus scrofa (domestic pig) - 1

Unidentified bone (n=30)
- unburned - 15
- burned - 15

The domestic animals are typical of rural homesteads. Woodcock is an elusive ground-nesting shorebird found as a rare winter visitor in northcentral Texas along river drainages (Pulich 1988). Coues (1890:616) gives them credit as "knowing birds...[whose] successful pursuit calls into action all the better qualities of the true sportsman."

Summary: This site was occupied between the 1880s/1890s until recently. Site 41GS46 no longer has architectural or archaeological integrity. Extant structures include an extensively modified dwelling, a barn, several sheds, barbed wire fences, a gravel road, animal pen, and well. The site was disturbed, eroded, and had been used for cattle grazing in recent years.

41GS59

Map Quad	Pilot Point 7.5' (1961, rv. 1978), #3396-233
Elevation	630' amsl
Scheduled Investigations	Limited testing, archival
Soil Association	Wilson silty clay loam
Cultural Affiliation	Historic (ca. 1890s to recent)

Description: A capped well, a possible cellar depression, a brick walkway, and a small number of fieldstones occur at this site (Figure 7-55). A house mound with the well in the center was reported northwest of the brick walkway. Two artifact scatters occur, one in the vicinity of the well, cellar, and walkway, and a second one to the northeast.

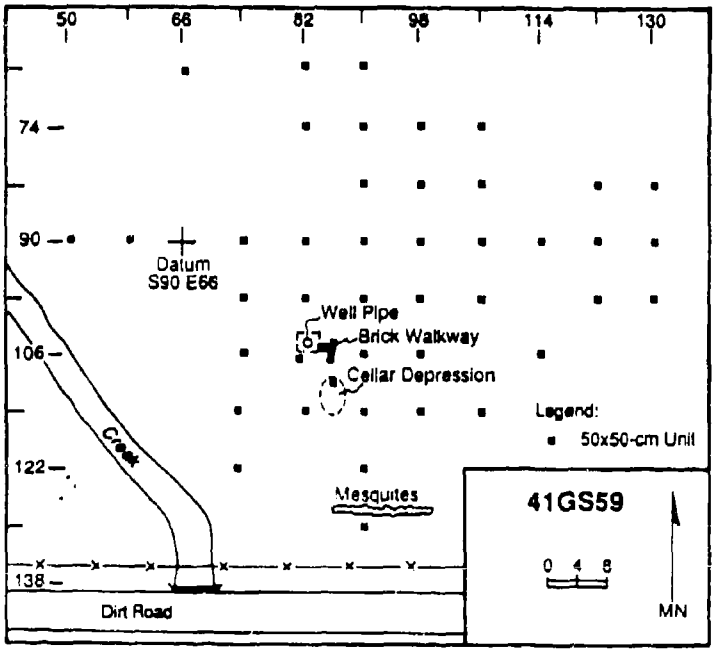


Figure 7-55. Site map of 41GS59.

Previous Investigations: The site was recorded in 1981, but no shovel testing or surface collections were done. The site was revisited in 1985 by NTSU and was evaluated as a low priority site. Limited testing was recommended to determine if a pre-1900 component remained.

Archival Investigations: Site 41GS59 is located on the Thomas King survey (A-683). The entire survey was granted to E. Emberson in 1855, and the family owned it until 1939 (Table A-36). The archaeological record did not provide evidence of a ca. 1855 occupation, and no information was found indicating when the Emberson family homesteaded or where. They also owned the property where 41GS46 was located (see Table A-35). The site may have been abandoned by 1939 when it was acquired by the Western and Southern Life Insurance Company, or leased to tenants.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Testing Method: Forty-three small 50x50-cm units were excavated on an 8-m grid to define site age, function, size, subsurface integrity, and to recover a representative sample of sheet refuse deposits. The site flooded while we were working there, and testing halted after the units filled with water, and no evidence of in situ deposits were found.

Testing Results: The site is subject to repeated flooding and severe erosion is evident across the site, particularly in the northeast where a moderate scatter of artifacts was found. The artifact assemblage contained a high density of material (Table 7-22), with a mean of 20.74 artifacts per 50x50-cm unit. However, much of this is modern trash, tin can fragments, and building material. A total of 892 artifacts were collected and 263 were building material (ceramic tile, mortar, and linoleum fragments).

Table 7-22
Artifact Assemblage from 41GS59

Artifact Category	N	%
Semi & Coarse Earth.	2	0.22
Refined Earthenware	11	1.23
Stoneware	6	0.67
Porcelain	1	0.11
Bottle Glass	202	22.65
Table Glass	5	0.56
Unid. Glass	1	0.11
Window Glass	13	1.46
Machine-Cut Nails	1	0.11
Wire Nails	85	9.53
Handmade Brick	8	0.90
Machine-Made Brick	19	2.13
Building Material	263	29.48
Personal Items	6	0.67
Thin & Heavy Metal	142	15.92
Household Items	26	2.91
Machine & Wagon	9	1.01
Tools	1	0.11
Horse & Stable	2	0.22
Ammunition	16	1.79
Electrical Items	12	1.35
Misc. Other	61	6.84
Total	892	

Modern material also included bottle caps, electrical items (battery parts), and plastic. Building material accounted for 70% of the architectural remains and were extremely diffuse across the site occurring in 44% of the excavated units. Only one machine-cut nail and eight handmade bricks were found. The remaining architectural items indicated a twentieth century dwelling with a ceramic tile sewer or water system.

While no house mound was found, the house was probably located just north of the well and brick pathway. Units in this area were either sterile or contained a small number of window glass or nails. Unit 12 (S110E86), in the cellar, was discontinued because of standing water. No buried deposits were found.

The refined earthenwares (n=10 sherds) yielded a mean beginning date of 1891, the stonewares (all Bristol) dated 1900 (n=6 sherds), and the bottle glass (excluding one sherd dating post-1940) provided a date of 1910 (n=28 sherds).

Summary: The site has been severely impacted by flooding and erosion. The assemblage recovered during limited testing included a predominately twentieth-century domestic component and modern trash. No evidence of a mid to late nineteenth-century farmstead was found in situ.

CHAPTER 8

RESULTS OF HISTORIC MITIGATION: SHEET REFUSE AND INTENSIVE EXCAVATIONS

by

Susan A. Lebo
with Geological Analysis by C. Reid Ferring, Faunal Analysis by
Bonnie C. Yates, Architectural Documentation by Randy Korgel, and
contributions by Carl Freuden and Debbie Marcaurelle

This chapter describes the twenty historic sites that were scheduled or received sheet refuse excavations or mitigation excavations during the 1986-1987 season of the Ray Roberts Lake project. These sites are presented in sequential order by Texas Archeological Research Laboratory (TARL) number, and their locations are shown in Figure 8-1. The work scheduled at each site in the Scope of Work is presented in Chapter 5 (see Table 5-1, 5-2, and 5-3) and is not reiterated here. Each site description is structured in the same fashion as those in Chapter 7.

Mitigation efforts were accomplished using two approaches: (1) sheet refuse investigations, and (2) intensive excavations. Between 50 and 180 50x50-cm units were excavated on a systematic 4- or 8-m grid to recover a representative sample of artifacts from sheet refuse deposits from all yard areas, to obtain information about site size, age, and function, and to determine yard refuse patterns. Fewer units were excavated at several sites that did not warrant mitigation investigations (41CO83 and 41DN118), or where access was denied (41CO111). Sites receiving sheet refuse investigations are 41CO83, 41CO111, 41DN77, 41DN91, 41DN97, 41DN118, 41DN146, 41DN157, 41DN198, and 41DN233. Mitigation of sites 41DN248 and 41DN250 are reported in a separate volume (Lebo in prep).

Sheet refuse investigations were augmented at many sites by intensive excavation, which was accomplished using a number of methods, including hand-excavated trenches, backhoe trenches, magnetometer surveys, block excavations, and isolated, judgmentally placed test units. This approach resulted in the recovery of data from the sheet deposit as well as discrete features, including refuse pits. Between 100 and 500 units were dug at intensively excavated sites, excluding 41CO121 where intensive excavation was limited to recovery of data from a single structure, the blacksmith shop. Sites receiving intensive excavation include 41CO36, 41CO121, 41DN79, 41DN81, 41DN166, 41DN167, 41DN224, 41DN234, 41DN466, and 41GS79.

Each site description is structured to provide both a rapid overview of the site as well as detailed site information. General site data are encapsulated in a table format at the beginning of each description, including information about USGS map quad, elevation, soils, scheduled investigations, additional investigations, site type and age. Following this, a detailed discussion is presented that provides information on site location, surface and subsurface features, site size, site age, previous and current research, site integrity, adverse impacts, potential research significance, and finally recommendations based on potential National Register eligibility.

Site locations and descriptions are based on USGS and historical maps, and field observations. Historical maps used during the 1986-1987 season provided data for 1909, 1918, and 1936. Cooke County was represented by a General Highway Map (1909) that included the western portion of Grayson County (see Figure 6-2), and a General Highway Map for 1936 (see Figure 6-3). Denton County was represented on a 1918 Denton County Soil Map completed by the Texas Agricultural Experimental Station (see Figure 6-4), and a 1936 General Highway Map (see Figure 6-3). Grayson County data is available from a 1909 USGS map (see Figure 6-5) and a 1909 General Highway Map for Cooke County (see Figure 6-2). Current maps available for this area include six 7.5' USGS topographic map quads (Collinsville, Gainesville South, Green Valley, Mountain Springs, Pilot Point, and Valley View).

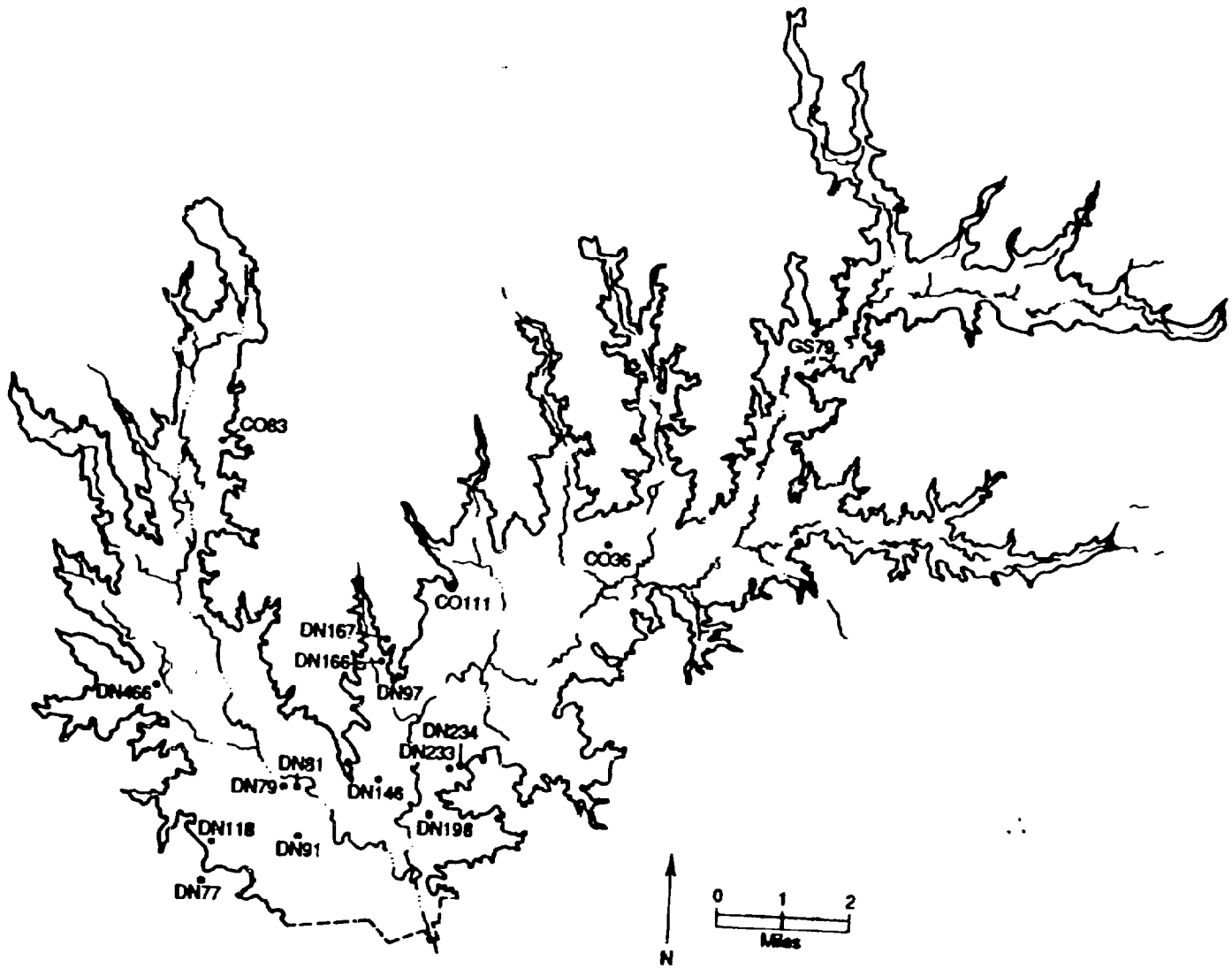


Figure 8-1. Locations of the historic intensive testing and mitigation sites.

Elevation above mean sea level (amsl), and topography are determined from the USGS maps and survey observations. Soil association is generalized, based on information provided in Soil Survey of Cooke County, Texas (Putnam et al. 1979), Soil Survey of Denton County, Texas (Ford and Pauls 1980), and Soil Survey of Grayson County, Texas (Cochran 1980). The distribution of the mitigation sites across soil associations is shown in Figure 8-2. Cultural affiliation is based on archival, architectural, and artifact data. Recommendations are based on site age, integrity, research potential, and potential eligibility to the NRHP (see Site Significance Section for criteria).

Scheduled investigations include all tasks requested for each site in the Scope of Work. In contrast, additional investigations include all tasks added during the 1986-1987 field season after consultation with the Corps. These additional tasks included primarily archival (deed/title chain) and architectural documentation, which were conducted to aid in interpreting the archaeological record. These tasks were particularly important at sites that had been impacted by construction or vandals before fieldwork began and portions of the archaeological or architectural remains had been severely disturbed or lost.

The field methods and results are presented by task, including archival research, architectural documentation, dendrochronology, and archaeological excavation. Site integrity and adverse impacts were determined by field observations. Impacts include shoreline erosion, wave action, inundation, erosion, and removal.

Archival research primarily focused on reconstructing the deed/title chain for each site, while architectural documentation included both verbal descriptions of all structures at a site, and detailed floorplans and elevational drawings for significant structures. The architectural drawings included in this chapter are field drawings. Only a sample of the drawings produced for each site is included. The original architectural fieldnotes and drawings are on file at the IAS, UNT.

Dendrochronology involved obtaining samples from log buildings, which could be used to determine cutting dates based on tree rings. Samples were tagged, cut, and sent to Dr. Malcolm Cleaveland at the University of Arkansas for analysis.

Archaeological investigations included a variety of methods designed to maximize data recovery. These methods included (1) excavation of shovel test pits, (2) excavation of 50x50-cm units on a systematic 4-, 8-, or 16-m grid, (3) isolated 1x1-m units, (4) block excavations, (5) backhoe trenches, and (6) magnetometer surveys. The specific method(s) used at each site is provided in each site description.

Feature and artifact descriptions are based on field observations and/or laboratory analysis. Mean beginning dates (MBD) were obtained for each historic site based on three artifact categories, including refined earthenwares, stonewares, and bottle glass. Separate MBD values were obtained for each category, as well as a combined value. MBD values were obtained by summing the beginning date (popularity date) for each diagnostic artifact (by category) and dividing by the number of artifacts in that category. The formula used is:

$$MBD = \frac{SUM\ (xi...xn)}{N}$$

Mean beginning dates were calculated instead of median dates because they are not influenced by how long a type was popular or available. The beginning dates assigned to each type are popularity dates based on Moir (1982), rather than manufacturing dates. The combined MBD values were used as reasonable estimates for initial occupation and were correlated with archival and architectural data. Variability occurred among the MBD values obtained for different artifact categories. This variability is the result of differences in the accuracy with which we currently are able to date specific artifact types.

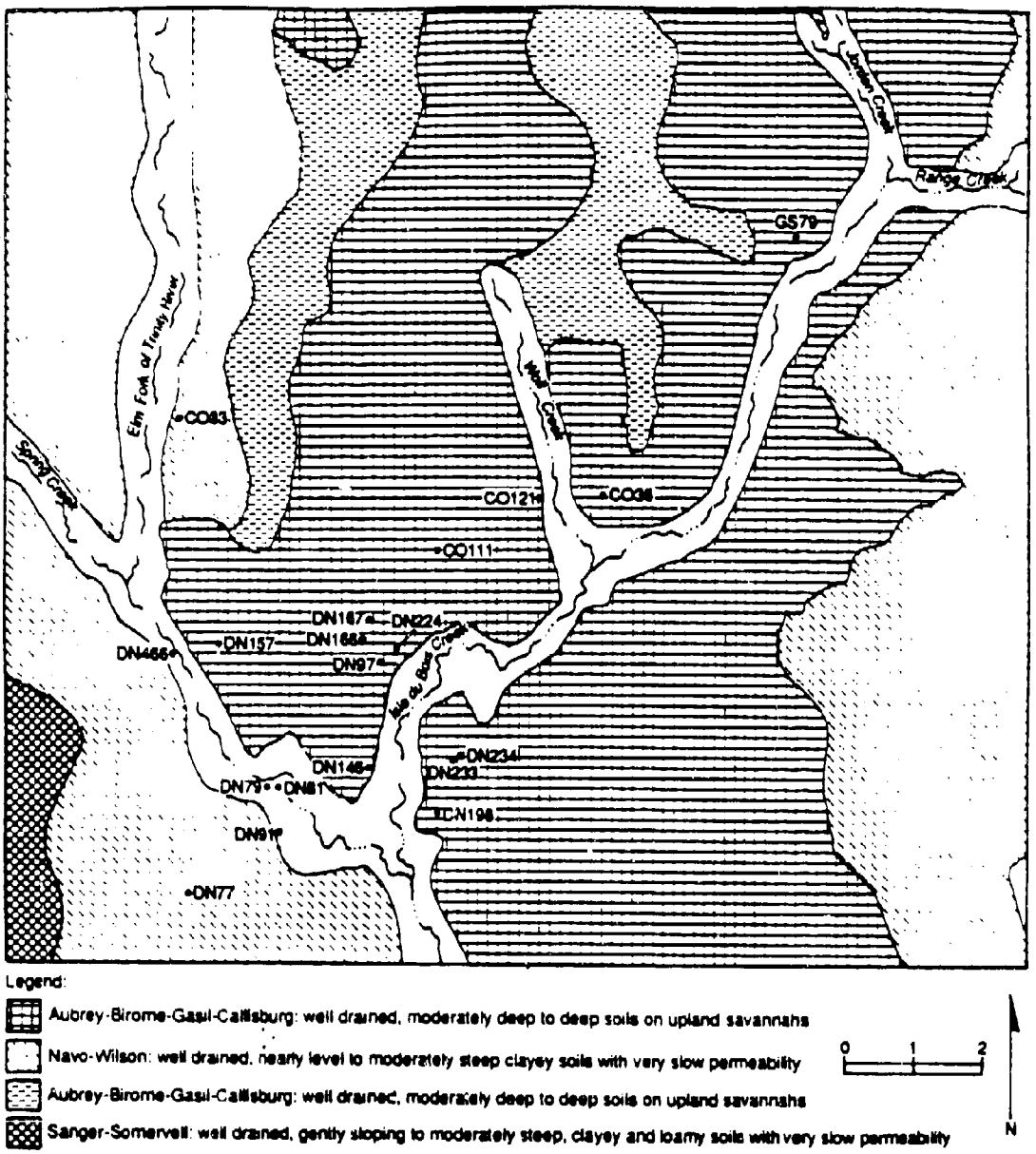


Figure 8-2. Soil associations of the historic mitigation sites.

41CO36

Map Quad	Pilot Point 7.5' (1961), #3396-233
Elevation	620' amsl
Scheduled Investigations	Limited testing
Additional Investigations	Archival, architecture
Soil Association	Callisburg fine sandy loam
Cultural Affiliation	Historic (Late 19th c. to recent)

Description: A stone dwelling foundation, a large double crib barn, three wells, a brick cistern, and three cellar depressions remained at this site (Figure 8-3). The use of a second dwelling as the west pen of the double crib barn suggested that two occupation areas may occur at the site. If so, this component may have included the southern cellar and stone-lined well found during testing. The northern site area included a stone house foundation, a cellar under the dwelling, a machine-made brick cistern, two capped wells, and a northern cellar.

Previous Investigations: The site was recorded in 1981 by ECI and revisited in 1985 by IAS. No testing was conducted.

Archival Investigations: The site was serially occupied by at least three families between 1888 and 1973. The board and batten dwelling associated with one of the earlier occupations was incorporated into the construction of the barn, and formed the west crib. An overview of the chain of title is provided in Table A-2.

Architectural Investigations: Architectural descriptions, floorplans, elevational drawings, photographs, and field notes are on file at IAS, UNT. Descriptions and drawings are provided for the stone house foundation and the barn.

Dwelling: The house was recorded as a 1904 Tee-plan dwelling, and the stonework may have been built by a German farmer (Skinner et al. 1982a:8-40). Only the sandstone foundation remained, revealing that a cellar was located under the northeast room. Access was provided to the cellar by seven sandstone steps on the north. A machine-made brick scatter from the chimney fall was present in all of the rooms, as well as outside the foundation. A machine-made brick cistern was situated off the northwest corner of the house. It was bell-shaped and had a depth of 3.5 m.

Barn: The barn was identified as a possible German house-barn rather than a house later converted to a barn (Skinner et al. 1982a:8-40). It was a double crib barn with a central breezeway between the cribs. Both cribs were set on sandstone piers and were covered by a single gable roof of galvanized metal. The gable ran east-west, and a shed with a shed roof was added to the east side of the barn. A second addition was present on the south. It was an open shed supported by wood posts on the south. The west wall was closed, covered with vertical planking. A similar wall occurred on the east side of the small shed addition.

The west crib was a one-and-a-half story board and batten dwelling. It was a double pen house with two exterior doors in the east room and one in the west. The east, north, and south walls of the east room each had a window. Two windows occurred on the west elevation, including one in the loft. The floors were tongue and groove. The east crib was a small granary with a wood plank floor, V-notched log walls, and log sills on the north and south sides. There was a door on the west that opened into the breezeway. The logs were pecan.

Dating: The house was assigned a 1904 date (Skinner et al. 1982a:8-40). The chimney, two capped wells, and two cellars associated with this house all indicated a twentieth century component. The barn also reflected this, with some modification after 1930 (e.g., gable roof). The board and batten house, and possibly the log crib reflected a late nineteenth occupation prior to the stone house. The Williamson's owned 100 acres of the Watson survey, including this site between 1888 and 1904.

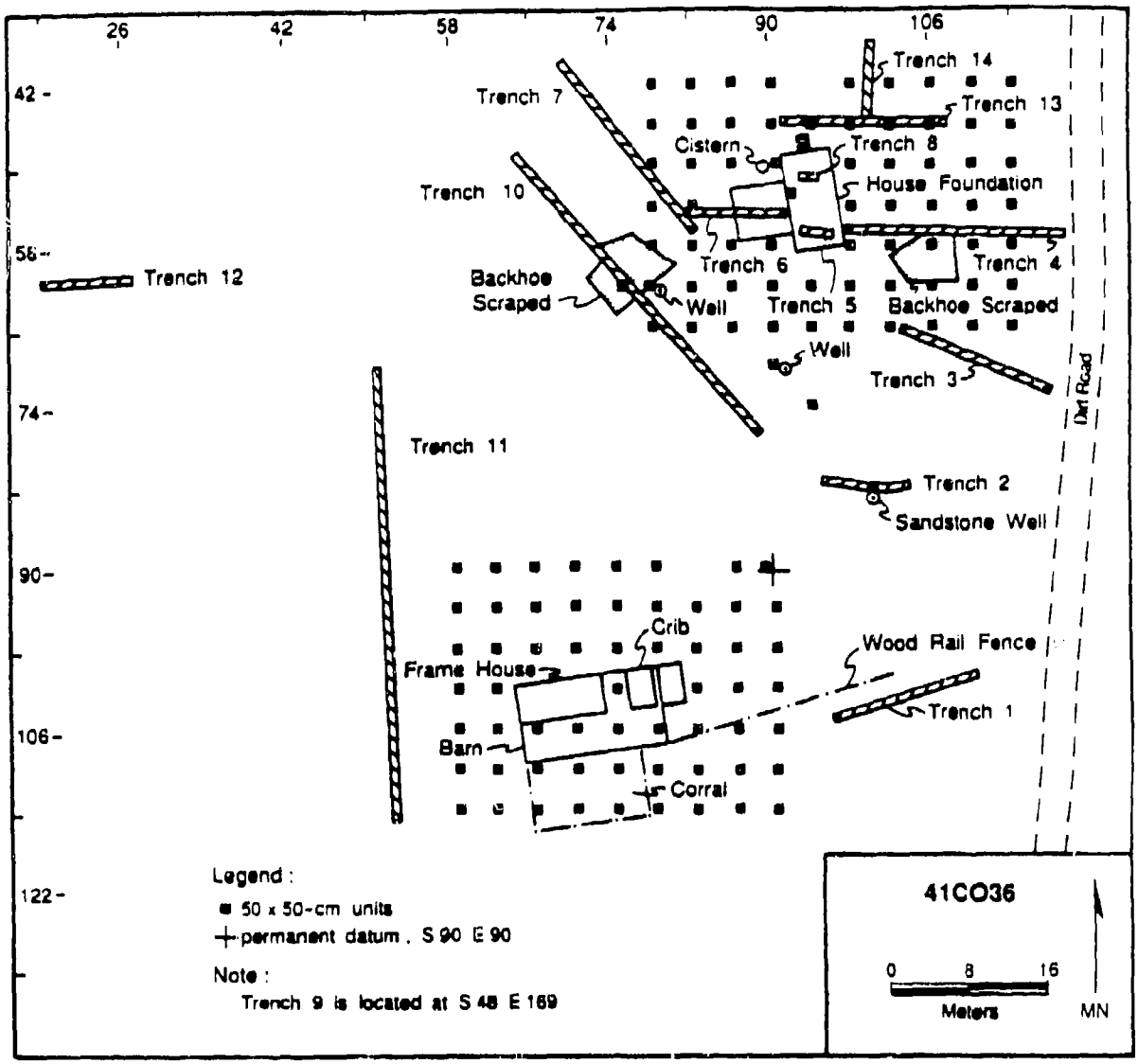


Figure 8-3. Site map of 41CO36.

Significance: The architectural assemblage provides a significant data base for examining the occupation history of 41CO36 and can greatly add to our information about German occupation in the project area.

Recommendation: No further work. Stones from the house foundation were salvaged and used for construction of a chimney for the log house recovered from 41CO121. The structure from 41CO141 was moved to the historical park in Farmers Branch, Texas. It has been restored as a ca. 1840s dwelling.

Dendrochronological Investigations: Five logs from the east crib in the barn were sent for analysis. All of them were pecan. At present no chronology has been worked out for pecan, and no dates were obtained.

Excavation Method: A multi-level approach was utilized. Small excavation units were dug on a 4-m grid in the main house area (recent component), including 68 units, and a second 4-m grid was placed in the barn area (mixed component), including 59 units. Backhoe trenches were dug to provide geological information, and for feature exploration. Trenches 1, 3, 9, and 11 through 14 were dug for geological information. Trench 9 was excavated in a field east of the site and is not shown in Figure 8-3. Trenches 4 through 8 were excavated to yield additional data on house construction and fill episodes, sheet refuse deposits, and geology. A buried sandstone-lined well associated with the original occupation was exposed in BHT 2. Buried cellars were identified in BHT 4 and BHT 10. Machine scraping was utilized to expose the planview of the cellars.

Geology: Site 41CO36 is located on a flat remnant of the Hickory Creek Terrace between Wolf Creek and Indian Creek in the northeastern part of the project area. This dissected part of the terrace, at approximately 625-ft amsl in elevation, is composed of extensive deposits of sandy alluvial fill dating to the middle to late Pleistocene. The site area is extremely flat and exhibits little if any dissection of late Holocene to modern ages.

Stratigraphy: The sediments comprising the fill for the Hickory Creek Terrace in the site area comprise deep loamy sands and silt loams. A profile described in the central portion of BHT 2 revealed 2.6 m of alluvial parent material (Table 8-1). This profile shows a well-developed soil. The argilic B-horizon extends all the way to the base of the trench. The A-horizon in this site area is thin measuring only 10 to 15 cm thick. The A-horizon is composed of loamy sands and is underlain by silty clay loams and silt loams in the B-horizon. No evidence of plowing is discernable in this profile, suggesting that the residential part of the site was established prior to clearing and agricultural use of the site area.

Table 8-1
Soil Profile Description for BHT 2 at 41CO36

Horizon	Depth (cms)	Color Moist	Texture	Structure	Boundary
x	0-10		disturbed		
A	10-14	10YR4/2	LS	1msab	cs
A2	14-21	10YR4/3	LS	2msab	ci
Bt	21-48	2.5YR4/6	SiCL	3msab	cs
Bt2	48-96	5YR4/6	SiCL	3mag	gs
Bt3	96-120	10YR5/2 & 7.5YR5/6	SiL	3msab	gs
Bt4	120-155	10YR6/4	SiL	3cag	cs
Btk	155-182	10YR6/6	SiL	3mag	cs
Btk2	182-220	10YR5/6	SiL	3fag	cs
Btk3	220-260+	10YR5/6	SiL	3msab	base

Key:
Texture: LS=loamy sand, SiCL=silty clay loam, SiL=silt loam.
Structure: grade/class/type; grade: 1=weak, 2=moderate, 3=strong; class: c=coarse, f=fine, m=medium; type: ag=angular blocky, sab=subangular blocky.
Boundary: distinctness/topography; distinctness: c=clear, g=gradual; topography: i=irregular, s=smooth.

A second profile drawn in BHT 3 is northeast of BHT 2. This profile revealed a very different stratigraphic and soils record. Thick sands at this location overlie the site B-horizon. These sands appear to be eolian sands derived from fields in the eastern portion of the site that were mobilized after clearing of the land. Eolian transport of sands

from the east towards the habitation area probably resulted in the accumulation of sand in the vegetated fence rows that surrounded the residential portion of the site.

Overall, site formation processes in the site area were dominated by human activities resulting in vertical and horizontal displacement of artifacts, where thicker accumulations of historic-aged eolian deposition occurred, and historical artifacts were buried.

Excavation Results: Considerable variability exists between the sheet refuse and feature assemblages (Table 8-2). This variability largely reflects the high concentration of architectural remains from the dwelling. Architectural items account for 65% of the sheet refuse material, with ceramics totalling less than 3% and bottle glass totalling just over 9%. On the other hand, the feature material, primarily from Feature 7 (southwest cellar) contains over twice as much thin/heavy metal (38%) than the sheet deposit, while architectural items represent only 23%, and ceramics are three times more common (9%). Bottle glass (13%) is only slightly higher in Feature 7 than in the sheet deposit. Brick is rare in both assemblages. Wire nails represent 60% of the architectural remains from the features, followed by building material (19%), window glass (13%), and machine-cut nails (7%). Window glass (26%) is twice as frequent in the sheet deposit, followed by building material (40%), while wire nails (32%) and cut nails (1%) are less common.

Table 8-2
Artifact Assemblage by Artifact Category and Unit Type from 41CO36

Artifact Category	50x50-cm Units		BHTs & Features	
	N	%	N	%
Semi & Coarse Earthenware	10	0.20	7	0.86
Refined Earthenware	60	1.21	46	5.67
Stoneware	55	1.11	27	3.33
Porcelain	4	0.08	4	0.49
Bottle Glass	460	9.28	102	12.56
Table Glass	14	0.28	32	3.94
Lamp Glass	6	0.12		
Unid. Glass	33	0.67	3	0.37
Window Glass	836	16.87	25	3.08
Machine-Cut Nails	46	0.93	13	1.60
Wire Nails	1042	21.03	112	13.79
Handmade Brick			1	0.12
Machine-made Brick	9	0.18	1	0.12
Building Material	1274	25.71	36	4.43
Personal Items	69	1.39	54	6.65
Thin & Heavy Metal	839	16.93	306	37.68
Household Items	30	0.61	3	0.37
Machine & Wagon	58	1.17	14	1.72
Tools	1	0.02	1	0.12
Horse & Stable Gear	24	0.48	4	0.49
Ammunition	5	0.10		
Electrical Items	5	0.10	3	0.37
Misc. Other (Recent)	75	1.51	18	2.22
Total	4955		812	

Considerable variability is also evident in spatial distribution of architectural items across the site. Of the 57 machine-cut nails from the sheet deposit (excluding 11 from cellars), 58% occur in the main house area. Only seven units south of S74 contain cut nails. On the other hand, 47% of the 50x50-cm units south of S74 contain wire nails and all but three in the main house area. Sixty percent of the wire nails from the sheet deposit occur in units in the main house area, indicating that no significant difference occurs in the ratio of cut to wire nails between the two site areas.

However, significant differences occur in the frequency and distribution of window glass and building material between these areas. Window glass (n=49) in the southern area represented only 6% of the sherds from 50x50-cm units and clustered in 12 units. With the exception of two units, window glass concentrated near the west pen of the barn or northwest of the barn. In the dwelling area, window glass was scattered across the sheet deposit, with the highest densities occurring in units adjacent to the house. Unit S58E90 contained 449 window glass sherds.

No significant difference was found in the type or age of the artifacts from the two areas. The window glass sherds found associated with the west pen of the barn suggest this structure probably contained window panes.

The extremely low density of the sheet refuse deposit, particularly domestic items, suggests this structure was moved here. This dwelling may have been an earlier house associated with the 1880s to the turn-of-the century occupation of the site. Refined earthenwares were extremely poorly represented in this area suggesting that this dwelling was not occupied at this location. A total of six refined earthenwares were found south of S82. They are scattered within this area and do not cluster near the dwelling. These sherds represent 10% of the refined earthenware sherds from the sheet deposit.

Stonewares were more common in this area, representing 36% of the sherds from the sheet deposit. They are scattered across this area, clustering outside the barn and corral. Within the dwelling area they are scattered, like the refined earthenware sherds, across all yard areas. Bottle glass occurs in both site areas but predominate in the sheet deposit around the stone dwelling. Only three personal items were found in the south site area. They are scattered throughout the sheet deposit in the house area, with three concentrations (S58E98, Feature 1, and Feature 6).

The refined earthenwares (n=95 sherds) yielded a mean beginning date of 1868, with little difference between the dates obtained for sherds from 50x50-cm units (1866) and features (1871). Stonewares dates were more variable, ranging from 1877 (n=46 sherds) for sherds from 50x50-cm units to 1895 (n=21 sherds) for sherds from features. A combined mean beginning date of 1883 (n=67 sherds) was obtained for the stonewares. Bottle glass sherds did not vary between assemblages, with sherds from 50x50-cm units (n=54 sherds) and sherds from features (n=19 sherds) both yielding mean beginning dates of 1902. A combined ceramic and bottle glass mean beginning date of 1883 (n=235 sherds) was obtained for the initial occupation of the site. This date is five years earlier than the purchase of the property by J. H. Williamson in 1888. The 1904 date assigned to the stone house foundation by Skinner et al. (1982b) correlates with Williamson's selling of the property to P. Berend.

The property was sold again in 1919 and may have been abandoned then or shortly after. Very few artifacts were recovered during extensive testing and excavation that dated after 1920. All of the diagnostic stoneware and bottle glass sherds were assigned beginning dates prior to 1920 based on stylistic, functional, or manufacturing attributes. Only one fiesta refined earthenware (1930-1960) was found. No other twentieth century styles (e.g., ivory-tinted whitewares) were found, and most of the assemblage was composed of styles that were replaced by new styles in the early twentieth century (e.g., blue-tinted ironstone, blue-tinted whiteware). No modern trash dumps were found, and the architectural remains indicated building episodes during the late nineteenth and early twentieth centuries. No modern structures occur.

Features include a filled sandstone-lined well (Feature 1), several ash lenses (Features 2 and 5), two collapsed cellars (Features 6 and 7), and six postmolds (Features 3-4, 8-11). Feature 1 was exposed in Unit 26 and subsequently by BHT 2. Unit 26 was excavated in a circular depression to 40 cm below surface. Little sheet refuse

occurred in the unit. BHT 2 was oriented roughly east-west to bisect the depression. The exposed well was buried 70 cm below the surface and measured 2 m in diameter and over 3 m deep. The bottom of the well could not be reached with the backhoe. No trash deposit occurred inside the well. Instead, the well was filled with wind-blown sediments.

Feature 2, a buried ash lens, was exposed in BHT 1 east of the double crib barn and outbuilding sheet deposit. The top of the ash lens was about 20 cm below surface. It was approximately 15 cm thick and contained sheet refuse material, evidence of burned earth and some charcoal flecks. The feature was largely removed by BHT 1, and the function was not determined.

A second ash feature, Feature 5, was exposed in BHT 3. It did not appear in any of the 50x50-cm units, and its function was not determined. Feature 5 contained ash, charcoal, wire, and nails. It was extremely small, approximately 30 cm, and was bisected by BHT 3. It is located approximately 5.5 m west of Feature 3, also exposed in BHT 3.

Six features, identified as postmolds based on their size, shape (vertical sides and flat bottom), and placement, were exposed southeast of the stone dwelling foundation. Features 3 and 4 were exposed in BHT 3. They were profiled but not excavated further. Features 9 and 10 were exposed in the backhoe scraped area. The upper extent of each was removed by the backhoe. These features are located outside, but spatially close to, the collapsed cellar southeast of the dwelling, Feature 6.

The distribution of these postmolds suggest that a structure or a fence line was located in this area. Feature 9 is located at S59 E108.5, and Feature 10 is at S59.5 E103. Feature 8 was exposed in Unit S66 E78, and Feature 11 was found in Unit S52 E82. Their relationship to the other postmolds, Features 3, 4, 9, and 10, is not known. They are located near the second collapsed cellar, Feature 7.

The collapsed cellars, Features 6 and 7, were first encountered in 50x50-cm units dug to recover data from the sheet refuse deposit. Both were further exposed by mechanical scraping and bisected by backhoe trenches. Feature 6 is located southeast of the house (see Figure 8-3). The cellar was oriented north-south, with an entry in the southeast corner. The horizontal and vertical dimensions were difficult to discern because of its collapsed nature. It measured approximately 3.75 m north-south, excluding the entry, and 2.5 m east-west.

The second cellar, Feature 7, was similar in size, but was oriented northwest-southeast. The entry was in the northeast corner, and milled lumber was found within the fill. Both cellars were probably constructed with wood supports, earthen walls and floor. Sheet metal was used in Feature 7. A small amount of sheet refuse was found associated with Feature 6. On the other hand, the 50x50-cm unit excavated through Feature 7, Unit S62E75.4, contained mixed building debris and sheet refuse artifacts. A total of 440 artifacts were recovered in this unit, including 236 metal fragments.

Faunal Remains:

TOTAL BONE = 31

Identified fauna (n=12)
- Gallus gallus (domestic chicken) - 1
- Scalopus aquaticus (mole) - 1
- Sylvilagus floridanus (cottontail) - 1
- Bos taurus (domestic cattle) - 1
- Bos/Bison (cattle/bison) - 2
- Sus scrofa (domestic pig) - 2
- Large mammal - 4

Unidentified bone (n=19)
unburned - 9
burned - 10

All of the unspecific large mammal bones exhibit saw marks on the broken ends. These appear to have been made with a hand saw. A tibia was positively identified as domestic cattle, but an unfused metacarpal and a vertebral fragment were either too damaged or undiagnostic to distinguish between bison and cow. Dentition from pig suggests hog raising and/or home butchering on the premises. The presence of domestic pig, cow, and chicken are typical of rural homesteads. The cottontail mandible may or may not be associated with the occupant's subsistence; evidence of gnawing on other bones suggests the presence of dogs at the site, and they may be the agent responsible for the rabbit and mole elements.

Summary: This farmstead was serially occupied between the 1880s and early 1900s. Testing, excavation, and architectural documentation were conducted to offset the adverse impacts to the site. Eolian deposition has buried the sheet refuse deposit and features in the main house area. Farther south, the outbuilding area, which has received less eolian deposition, has also been impacted by surface erosion.

The testing and excavation results indicate that the board and batten dwelling inside the barn was not utilized as a house at its present location. This structure may have been the dwelling occupied at the site during the 1880s to 1904 period before the stone house was built. The original location of this house is not known, but was probably closely associated with the location of the more recent house. This is supported by the number and distribution of features.

Features were exposed during excavation and include two cellars, six postmolds, a stone-lined sandstone well, and two buried ash concentrations. Other features include a brick cistern associated with the stone house, a cellar under the house, and two capped wells. The two collapsed cellars and stone-lined well were probably associated with the earlier dwelling. The cellars were probably replaced when they deteriorated or collapsed. The construction of multiple wells and a cistern suggests that the occupants had difficulty in obtaining a steady, adequate water source.

The logs in the east barn crib could not be dated, but the architectural debris and construction techniques for this building suggest that it was built during the early 1900s. Similar outbuildings dot the landscape within the reservoir.

In summary, the mitigation efforts at 41CO36 included excavation of 50x50-cm units on a systematic grid, backhoe excavation of subsurface features, backhoe scraping of several collapsed cellars to expose planviews, and detailed geological investigations. Architectural documentation was conducted for the dwelling and extant outbuildings. Dendrochronology was conducted on logs from the standing outbuilding, but the results were inconclusive.

Following mitigation, the stone foundation of the dwelling was partially removed, and the recovered stones were sent to Farmers Branch Historical Park in Farmers Branch, Texas. These stones were used in the restoration of the log dwelling moved from site 41CO121. The exterior portion of the chimney to this restored structure was constructed using these stones.

While the stone architecture at 41CO36 reportedly reflects occupation by a German family, the archaeological remains at this site do not differ from those recovered from farmsteads occupied by other ethnic groups. Indeed, the archaeology at this site indicates a serially occupied farmstead similar to numerous other farmsteads in the project area. Evidence of building reuse and modification occurs at 41CO36, and the range and layout of the outbuildings is reflective of a diversified farm economy.

This site was recommended as potentially significant (Skinner et al. 1982a) because it was occupied by a German family and the barn was identified as a "possible German house-barn" rather than a house later converted into a barn (Skinner et al. 1982a). While the stone architecture of the cellar under the house reflects a German tradition, the architectural remains of the barn and the archaeological deposits do not differ from those recovered from farmsteads occupied by other ethnic or racial groups in the region. Indeed, the barn reflects evidence of building use and modification common throughout the area. The range and layout of the farm and outbuildings is reflective of a diversified economy and is not unique.

41CO83

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	640' amsl
Scheduled Investigations	Sheet Refuse
Additional Investigations	Architecture, archival
Soil Association	Sanger stony clay
Cultural Affiliation	Historic (1880 to present)

Description: The site is located in an uneroded pasture. A dwelling with a single pen log component, a large corrugated metal shed, cinderblock dairy, a concrete cellar, animal pen, and a windmill and water tower remain, along with several abandoned cars ((Figure 8-4); the cars are not shown on the map).

Previous Investigations: The site was recorded in 1981 and revisited in 1985. No testing was conducted.

Archival Investigations: The archival data indicates that the site is located on the Aaron Hill survey (A-472) and was owned by the same families as site 41CO82. A 160-acre tract containing the site was conveyed C. Ussery in 1867 (Table A-6). The dwelling was built when the site was owned by the Ussery family, prior to 1891. It was serially occupied by several related families, including the Thomas, Hulen, and Moon families between 1899 and 1952.

Architectural Investigations: The dwelling was being used for hay storage, which hindered the architectural description. Additional details were obtained when the log portion of the dwelling was removed and salvaged. As elements were exposed and new details were revealed, this information was recorded. The remaining outbuildings were modern, and only brief descriptions were made. A floorplan (Figure 8-5) and elevations of the dwelling (Figure 8-6), including the original log house are shown. Architectural drawings, field notes, and photographs of all structures at 41CO83 are on file at IAS, UNT.

Dwelling: The original dwelling was a single pen log house with half-dovetailed notching. It was set on sandstone and limestone piers with a fireplace on the south wall. The original doors were on the west and east. The chimney was later removed (ca. 1930s), and the wall was filled in. The logs were hewn and had mortar chinking. Wood chinking with wire nails were added later.

Three additions were made (see Figure 8-5). The south room was added first, the west rooms second, and the west shed, third. These rooms were added after pipes were installed for gas heat. According to Mr. Euell Mann (personal communication, 1987), the south addition was brought in. This was supported when the house was dismantled and the log room was salvaged. The space holding the chimney between the south room and the original dwelling was part of the south addition, indicating that a room had been attached to the south room before it was moved. When the south room was added, the fireplace was covered, and a vent for a stove was cut in the east wall of the log dwelling.

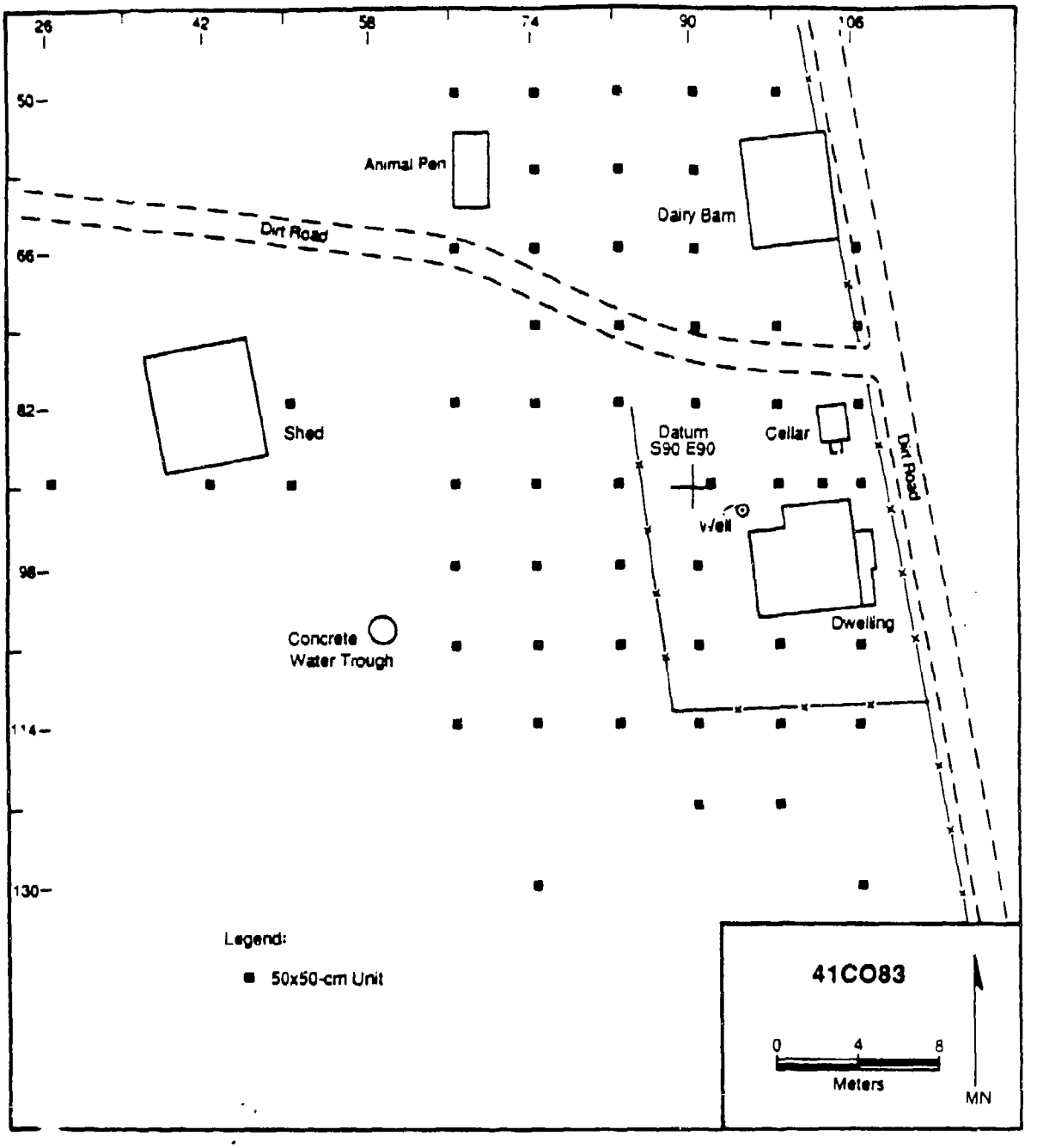


Figure 8-4. Site map of 41CO83.

The roof of the original house and first addition was a north-south gable. The floor was tongue and groove, and the interior walls were horizontal half-lap boards. Cheesecloth wallpaper was found in the log dwelling and the middle west room. The exterior of the dwelling and original additions were vertical boards that were later covered with shiplap siding. The later additions also had shiplap siding. Clapboards occurred over this siding on part of the south room and the west shed. The roof was cedar shingles.

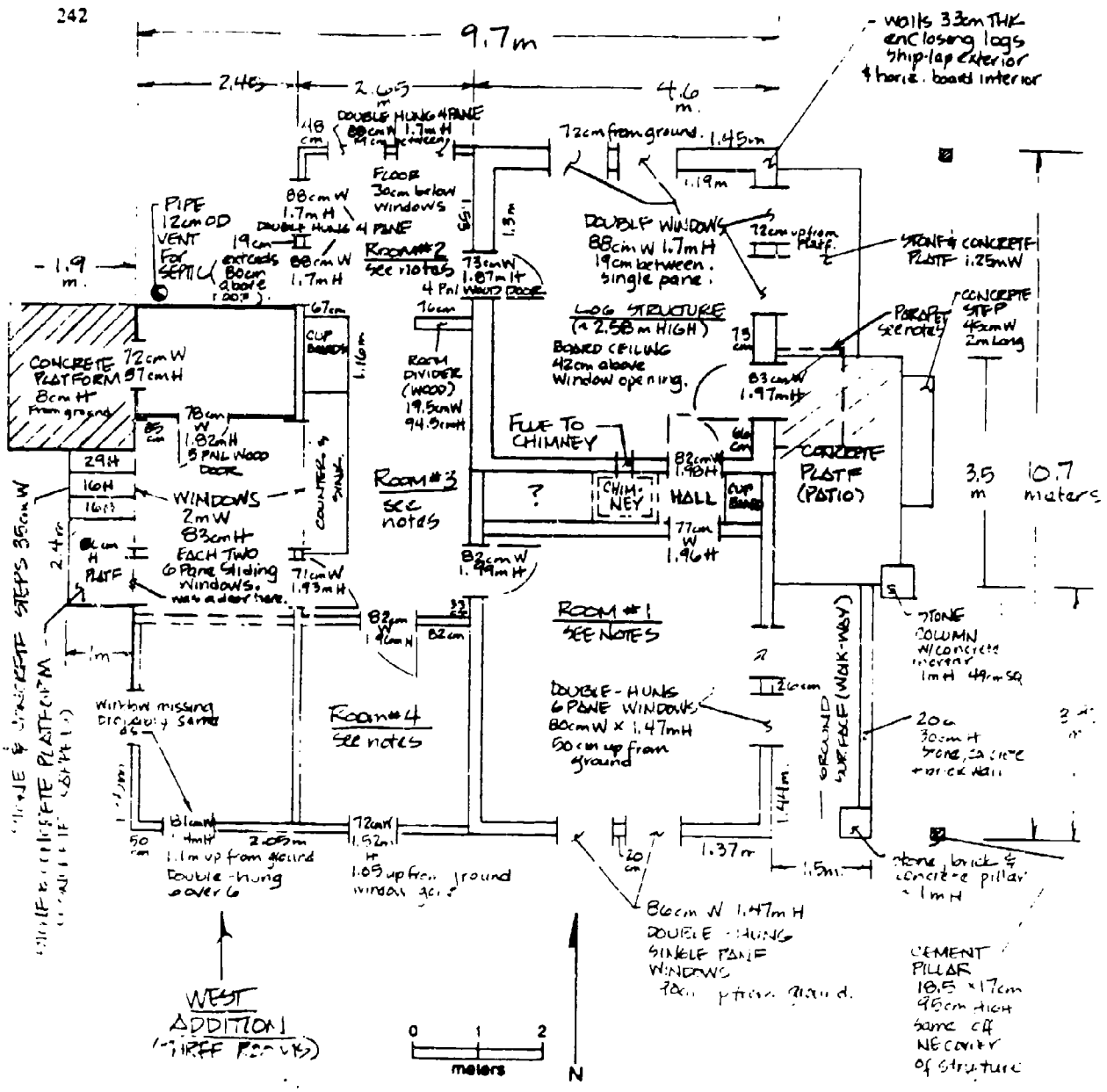


Figure 8-5. Field architectural floorplan of the dwelling at 41CO83.

Outbuildings: The large barn was modern with creosote wood pole support, and corrugated metal walls and roof. The gable roof ran north-south. Sliding doors were present on the north and south walls. The animal pen had three stalls, each with a shuttered window on the east side. No doors were present. The walls were vertical plank boards, and the roof was a shed style. The dairy barn and pen were concrete block construction with numerous windows, concrete foundations, and floors. The roof was a north-south gable of corrugated metal over asphalt shingles.

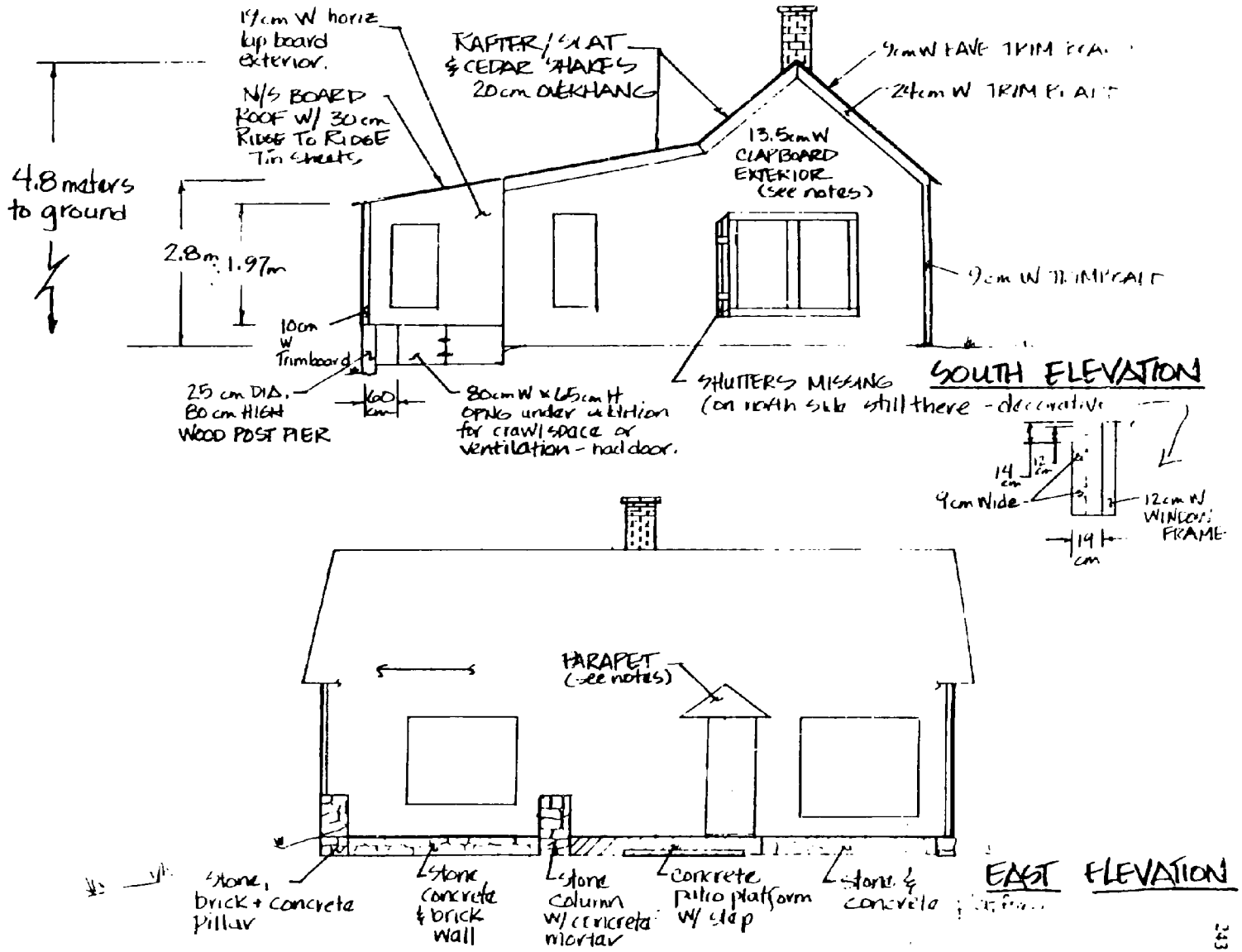


Figure 8-6. Field architectural drawings of the dwelling at 41CO83. (a) east elevation, (b) north elevation.

Dating: The log pen dated to the late nineteenth century, probably to the 1880s. The additions were twentieth century, including the wiring of the rooms for electricity and gas heat. Numerous automobile license plates were recovered in the log dwelling that were placed along the east wall between the original floor and a more recent floor. They dated to the 1930s, with many dating 1932.

Significance: The only significant structure remaining at the site was the log dwelling. It was salvaged and donated to the Collin County Open Space Board who planned to restore it and incorporate it into a permanent historic display for the public. This board withdrew their plans in 1988, and this log structure remains stored outdoors at the Astronomy Observatory north of Denton, Texas.

Dendrochronological Investigations: Five samples were sent for analysis, but no construction date was obtained. Three samples were oak, two were pecan. No chronology has been worked out for pecan, and the oak samples were too short and erratic.

Excavation Method: A total of 54 small excavation units measuring 50x50-cm in size were dug on an 8-m grid across the site.

Excavation Results: An overview of the assemblage is presented by artifact category in Table 8-3. Fiv. units contain over 50 artifacts, including four located on the S106 line (E74, E82, E90, E98), and one at S114 E98. They each contain high bottle glass counts, two contain high window glass counts, two have high wire nails counts, and one has a high thin metal/tin can count. A dense sheet refuse band was not identified around the dwelling, although a low-density sheet deposit was identified. Excluding the five units mentioned above, artifact counts ranged from zero to 47 items per 50x50-cm unit, with a mean of 11 items per unit. Bottle glass was the most frequent artifact category recovered, accounting for 38.84% of the assemblage. It is distributed across the site, occurring in the dwelling area as well as near outbuildings. Units containing greater than 10 bottle glass sherds cluster in the dwelling area and form a band around the dwelling. Architecture totalled 33.05% of the assemblage, followed by thin metal/tin cans (12.06%), and ceramics (10.22%). Refined earthenwares cluster in a band around the dwelling that correlates with the high-density (>10 sherds) bottle-glass band, while stonewares are dispersed, occurring in the dwelling and outbuilding areas.

Table 8-3
Artifact Assemblage from 41C083

Artifact Category	N	%
Semi & Coarse Earthenware	3	0.23
Refined Earthenware	93	7.28
Stoneware	25	1.96
Porcelain	7	0.55
Bottle Glass	496	38.84
Table Glass	18	1.41
Lamp Glass	2	0.16
Window Glass	214	16.76
Machine-Cut Nails	4	0.31
Wire Nails	131	10.26
Handmade Brick	1	0.08
Machine-Made Brick	2	0.16
Building Material	63	4.93
Personal Items	7	0.55
Thin & Heavy Metal	154	12.06
Household Items	13	1.02
Machine & Wagon	17	1.33
Tools	1	0.08
Horse & Stable Gear	3	0.23
Ammunition	2	0.16
Electrical Items	6	0.47
Misc. Other	15	1.17
Total	1277	

The bottle glass yielded a mean beginning date of 1908, which partially reflects the continued occupation of the site until recently. Approximately 40% of the diagnostic bottle glass dated after 1920, some of which probably post-dates occupation. On the other hand, refined earthenwares provided a mean beginning date of 1888, and stonewares dated 1877. These dates more closely correspond with the beginning occupation dates provided by the architectural and archival data.

No subsurface features were identified. The cultural deposits were shallow, ranging from 0 to 25 cm below surface, but predominately extending less than 10 cm deep. Slopewash and erosion have seriously impacted the site. Deeper deposits occurred downslope and in low-lying areas.

Faunal Remains:

TOTAL BONE = 25

Identified fauna (n=18)
- Testudinae (turtles) - 3
- Terrapene sp. (box turtle - 4
- Didelphis virginianus (opossum) - 1
- Dasypus novemcinctus (armadillo) - 7
- Sus scrofa (domestic pig) - 3

Unidentified bone (n=7) all unburned

No bones in this sample are burned. Pig is the only taxon definitely associated with the occupation. Both elements represent cuts from the lower back. The vertebral fragment has been cut with a hand saw.

Summary: This site was determined National Register eligible and recommended for mitigation because "This site has a well preserved log residence and later structures, making it significant for the study of folk-vernacular transitions, as well as site function analysis". This farm, however, continued to be occupied into the 1980s, and the historical integrity of the architecture and archaeology has been seriously impacted by modern alterations and activities.

The original log dwelling was built during the early occupation (ca. 1880s), but the remaining structures are modern. The architectural documentation indicated that the original log dwelling was substantially altered. The windows on the north and east elevations, the chimney, and the floor have all been enlarged, moved, and/or replaced. None of the original integrity of this log dwelling remained. The original porches were removed, but some of the original piers remained; others were replaced when the dwelling was modified and additional rooms were built.

The archaeological deposits were low density and contained mixed sheet refuse remains spanning over 100 years of serial occupation. The older component is largely masked and has been disturbed by erosion, slopewash, and recent occupations. No features associated with the early component were found, and few of the recovered artifacts date to this period.

Based on the architectural and archaeological results discussed above, it was determined that site 41CO83 did not meet National Register eligibility. As a result, in consultation with the Corps, no further investigations were recommended. Therefore, only sheet refuse excavations and architectural documentation were conducted. Because of local interest in the original log dwelling, preservation of this dwelling was recommended. The more recent portions of the dwelling were removed, and the single-room log house was labeled, disassembled and moved. This log house was donated to the Collin County Open Space Board, who planned to restore this house and open it to

the public. However, in early 1988, the Collin County Open Space Board withdrew their plans to restore this dwelling, and the building remains in outdoor storage at the Astronomy Observatory north of Denton, Texas.

41CO111

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	650' amsl
Scheduled Investigations	Sheet refuse, architecture, mapping
Soil Association	Callisburg fine sandy loam
Cultural Affiliation	Historic (ca. 1850s to present)

Description: Extant structures at 41CO111 include a Cumberland dwelling, a log dogtrot house, three sheds, a windmill with capped well, a filled well, a cellar, two chicken coops, and a collapsed log schoolhouse. Other remains include a hand-cranked tractor, a wagon, a baler, a hand-cranked forge-blower, an anvil, miscellaneous farm hardware in one of the barns, and a mechanical screw grain elevator. Dates on the capped well and cement water trough are 1937. Oral-history information indicates that the two-story log dogtrot dwelling was built ca. 1854.

When the site was recorded in 1981, it was situated within the proposed Ray Roberts Lake project area. After continued negotiations with the Corps, however, this site was excluded from the project area. But, when we began our excavations at this site, this farm was listed in the Scope of Work, and we had not been notified of this agreement. As a result, our excavations were halted, many artifacts were reburied, and no site map was prepared.

Previous Investigations: The site was recorded in 1981. The site was revisited in 1985. No surface or subsurface testing was conducted.

Archival Investigations: The site is located on the Reason Jones survey (A-541). No archival research was conducted. Jane Armstrong, a great granddaughter of Reason Jones, who still lives on the site, was interviewed, and a videotape tour was made of the farm. Reason Jones brought his family from Missouri about 1851. They lived a quarter-mile south of the farmstead, near the Strickland survey because they could not find water on their property. They utilized the community well on the Johnson survey, southeast of 41CO248. Several years later, about 1854, they began building the log dogtrot house at 41CO111 and moved there even though they still did not have water. While many neighboring families reached water at 40 to 50 feet below surface, their well was dug to 60 feet before reaching water in 1886. During the interim (ca. 1854 to 1886), they hauled water from the community well.

Architectural Investigations: Preliminary architectural descriptions and floorplans, photographs, and field notes for the dwelling were compiled by ECI and are on file at IAS, UNT. While the Scope of Work requested architectural documentation and archaeological investigations at this site, this work was not conducted because the site was excluded from the project area after the Scope of Work was written. Therefore, no architectural documentation was undertaken by UNT. However, the landowners gave us permission to conduct a videotaped walking tour of this site. This tour includes footage of all major features and structures, with the exception of the interior of the Cumberland dwelling. The Cumberland dwelling was removed in 1988. The other buildings remain standing, and the Armstrong family built a new home on this site in 1988.

Dwelling: The house was recorded as a two-story Cumberland with a one-and-half story wing on the south, forming a Tee-shape floorplan. An addition was attached to the west elevation of the wing and includes a porch in the southwest corner. A second porch extended the length of the east elevation of this wing. The front faces north, and chimneys were centrally located on both sections. A hipped roof covered the front section, while the back section has a gable roof, and the porches have shed roofs (Skinner et al. 1982a:8-47-48). The dwelling was set on sandstone

piers, and Jane Armstrong (personal communication, 1987) reported that the two back rooms were built first. The front rooms and upstairs were completed second. The kitchen and bathroom were added in the 1930s.

Cellar: The original cellar was situated about 20 feet south of the house, just west of the extant cellar built around 1909. The cellar door faced north.

Shed 1/Dogtrot Dwelling: This shed is located east of the dwelling and an early log dogtrot dwelling forms the core. Additions have been made on the north and south sides of the frame barn. The roofs are corrugated metal and the walls are plank. Corrals are located to the east and south of the building.

The dogtrot house was built about 1854. The logs are hewn with dovetail notching. According to Jane Armstrong (personal communication, 1987), the logs were hewn by John Johnson, the original roof was cottonwood, and the front of the house was on the south. No evidence of chimneys or fireplaces were found in either room. The kitchen was added on the east.

Well: The original well, constructed in 1886, is located off the northwest corner of the barn and served as the main source of water for the farm until the 1930s.

Shed 2: The second shed is located southeast of the house, and Skinner et al. (1982a:8-48) reported that it appeared to originally have been a one-room log cabin. However, according to Jane Armstrong (personal communication, 1987), it was a school, originally located three-fourths mile south of farm, and near the community well. It is constructed of hewn logs with dovetail notching. The original roof is gone. A shed addition is located on the south side, and the corrugated metal gable and shed roofs extend east-west. The structure is largely collapsed.

Shed 3: This shed is a transverse crib barn with a shed addition extending the length of the south elevation. It is frame with wide horizontal planks on the interior and wide vertical planks on the exterior. The roof is corrugated metal. The shed was built in the 1930s to store a thrasher. The forge from the blacksmith shop and a grinding wheel are among the farm items stored in this shed.

Blacksmith Shop: A blacksmith shop operated on the farm and was located across the road, north of the Cumberland house. It was situated between the road, and a modern trailer house. The shop was open on the south side. A garage was attached to the shop.

Smokehouse: A smokehouse was located west of the southern extension of the Cumberland dwelling. Only a concrete pad remains from this structure.

Dating: No dendrochronology dates were obtained for the log dogtrot or the schoolhouse. Based on oral historical information the dogtrot was built about 1854 (Jane Armstrong, personal communication, 1987), and the schoolhouse may also date to this time period. The Cumberland dwelling was assigned a construction date range of 1880 to 1920 (Skinner et al. 1982a:A3-3). The frame sheds (1-3), blacksmith shop, and the garage were built during the 1930s and 1940s.

Significance: Site 41CO111 is National Register eligible based on the standing architecture (two mid-nineteenth century log buildings, one of which is in situ), and known in situ features (e.g., original well). The limited subsurface testing conducted in 1986 indicates that intact sheet refuse deposits remain. However, this site is on private land (see discussion below), and no National Register nomination has been made.

Recommendation: No further work.

Dendrochronological Investigations: None.

Testing Method: As noted above, this site was included in the Scope of Work, but UNT was not notified that 41CO111 had subsequently been excluded from the project area until after we began excavations in 1986. The site was excluded from the project area following extended negotiations between the Corps and the landowners. As a result, the landowner notified us of this decision to exclude this site from Corps land, and we were requested to cease our excavations. Figure 8-7 shows the locations of our excavation units in the yard surrounding the Cumberland dwelling.

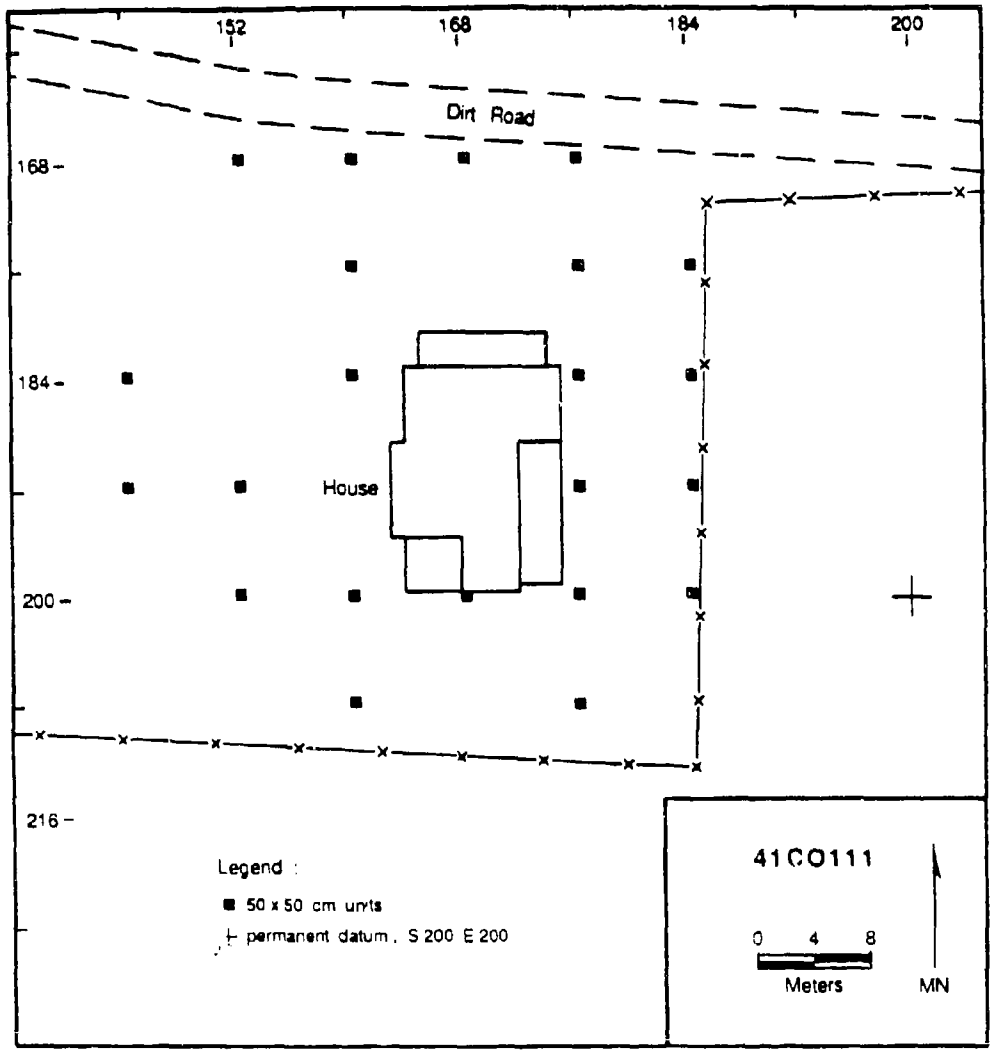


Figure 8-7. Site map of the Cumberland House area at 41CO111. This drawing is from a field sketch made by personnel from ECI in 1981. Our excavation units are shown. Note: all surface features were not mapped (e.g., cellar, fencelines), and we were removed from the site before we could map it.

The landowner requested return or reburial of the excavated materials. The artifacts were reburied in the units they were excavated from. This site is potentially eligible for nomination to the National Register based on the standing architecture (two mid-nineteenth century log buildings, one of which is in situ), and known in situ features (e.g., filled, original well). However, without subsurface testing it is not possible to fully assess archaeological significance.

Excavation of twenty-two 50x50-cm units on an 8-m grid was begun in the Cumberland house area before we were notified that the property was outside the project area. Following confirmation by the Corps, we backfilled all excavation units. No further work was conducted, except for the videotaped tour mentioned above.

Testing Results: Based on the limited artifact collection recovered from the sheet refuse deposit south of the Cumberland house, these deposits date from the 1880s to the mid-twentieth century. An overview of this artifact assemblage is provided in Table 8-4. The refined earthenwares yielded a mean beginning date of 1884, the stonewares dated 1885, and the bottle glass produced a date of 1902.

Table 8-4
Artifact Assemblage from 41CO111

Artifact Category	N	%
Refined Earthenware	22	4.17
Stoneware	4	0.76
Porcelain	2	0.38
Bottle Glass	173	32.83
Table Glass	3	0.57
Lamp Glass	2	0.38
Window Glass	23	4.36
Machine-Cut Nails	5	0.95
Wire Nails	138	26.19
Machine-Made Brick	3	0.57
Building Material	21	3.98
Personal Items	7	1.33
Thin & Heavy Metal	89	16.89
Household Items	2	0.38
Machine & Wagon	20	3.80
Horse & Stable Gear	2	0.38
Ammunition	3	0.57
Misc. Other	8	1.52
Total	527	

No subsurface features were encountered. A moderate density sheet refuse deposit was identified, and artifacts were recovered from 10 to 25-cm below surface. Because of the limited extent of our field investigations, no distribution data were obtained.

Faunal Remains:

A single armadillo scute found in level one is probably an incidental occurrence, unrelated to the occupation.

Summary: The archival, architectural, and archaeological information indicates this farmstead was occupied from the 1850s until recently. The earliest structure, a log dogtrot, remains standing. This house is inside a frame shed built in the 1930s. The dogtrot forms the core of the building and is well protected from the elements. This structure is architecturally significant and National Register eligible. This site is located on private property, and no agreement to nominate 41CO111 has been made at this time.

This structure along with the other extant buildings at the site were recorded on videotape during a walking tour of the property. Ms. Jane Armstrong was interviewed during this tour (see Chapter 11) and provided a wealth of information about the farm and the buildings. This videotape and a cassette recording and written transcript of this interview are on file at the IAS, UNT. A transcript of this interview and a reel-to-reel copy of the interview is on file in the Oral History Collection of the Willis Library on the UNT campus. Since this interview, the ca. 1890s Cumberland house was torn down and a new house was built on the property.

41CO121

Map Quad	Pilot Point 7.5' (1961), #3396-233
Elevation	620' amsl
Scheduled Investigations	Excavations, architecture, archival
Soil Association	Aubrey fine sandy loam
Cultural Affiliation	Historic (Late 19th c. to recent)

Description: Structures at this site included a house, blacksmithing shed, chicken coop, privy, frame barn with a log building forming the core, a well, collapsed cellar, and a pumphouse (Figure 8-8). The farmstead was occupied for over a 100 years, and the house and barn reflect several episodes of modification.

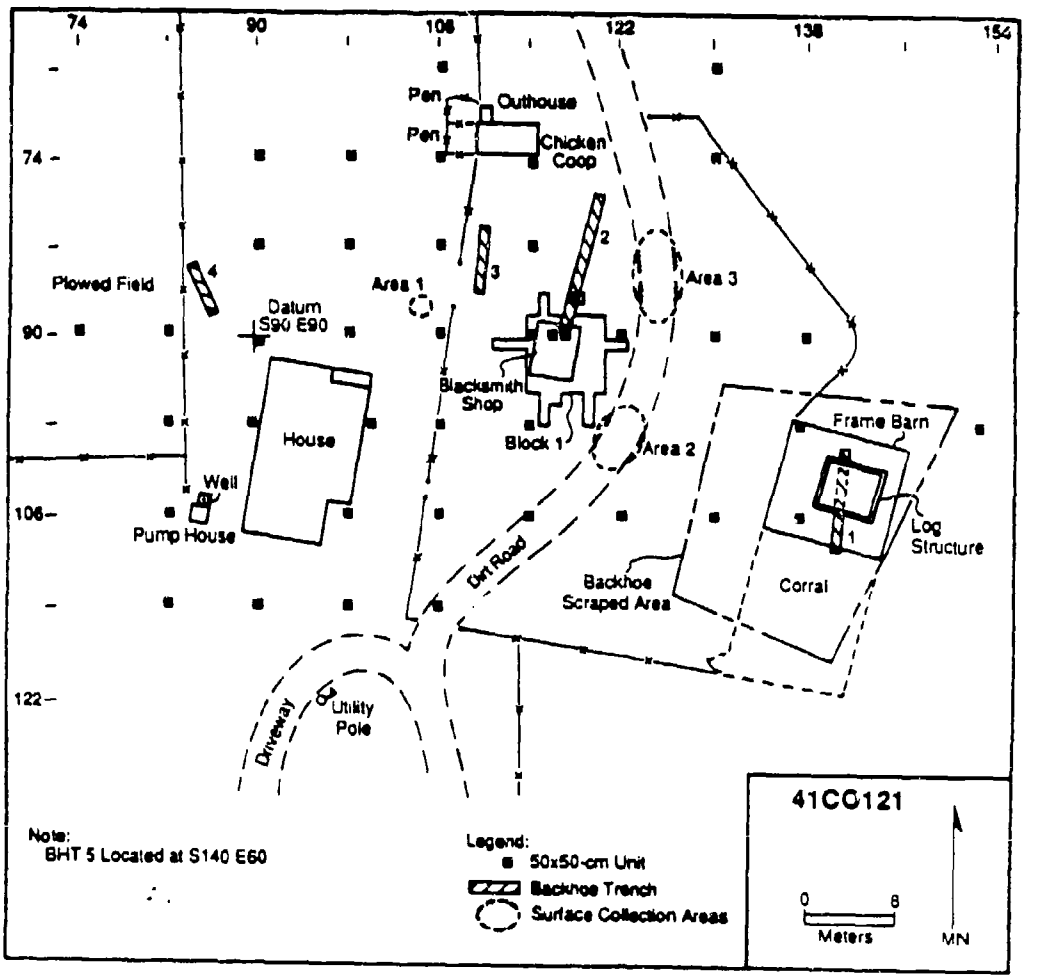


Figure 8-8. Site map of 41CO121.

Previous Investigations: The site was recorded in 1981 and revisited in 1985. A brick-lined well was located in 1985. No testing was conducted. This site was identified as exhibiting National Register potential.

Archival Investigations: The site is located on the Thomas Lemons survey (A-599). The original occupation appears to date to 1868 when it was purchased by M. F. Morton. It was serially occupied until 1985, with most of the structures present at the site dating to the Robinson and Davis occupations. An overview of the chain of title is given in Table A-10.

Architectural Investigations: Architectural descriptions were made for the dwelling and outbuildings. An overview of the major architectural elements of the dwelling and outbuildings is provided below. Floorplans, elevational drawings, photographs, and field notes are on file at IAS, UNT.

Dwelling: The house underwent several additions and modifications, and the original floorplan was not fully discerned (Figures 8-9 and 8-10). The two oldest rooms (2 and 3) were located in the center of the final floorplan. The west room was determined to be older based on the presence of half-lap notched sills, machine-cut nails in the attic, and a cut-out for an earlier fireplace on the west wall. The entire room leaned to the east, and modifications were made to accommodate this problem when the room was modified and enlarged. The original exterior door was on the east elevation, and the exterior walls were shiplap. Rooms 2 and 3 were the only part of the house with shiplap siding. The east room was the same length north-south but was narrower east-west. Based on the sills and headers, it was interpreted that the east room was moved and attached to the west room. A porch was located on the south side when rooms 2 and 3 were combined to form a double pen house. It had a shed roof. It was closed-in on the west side, and the exterior wall had shiplap siding.

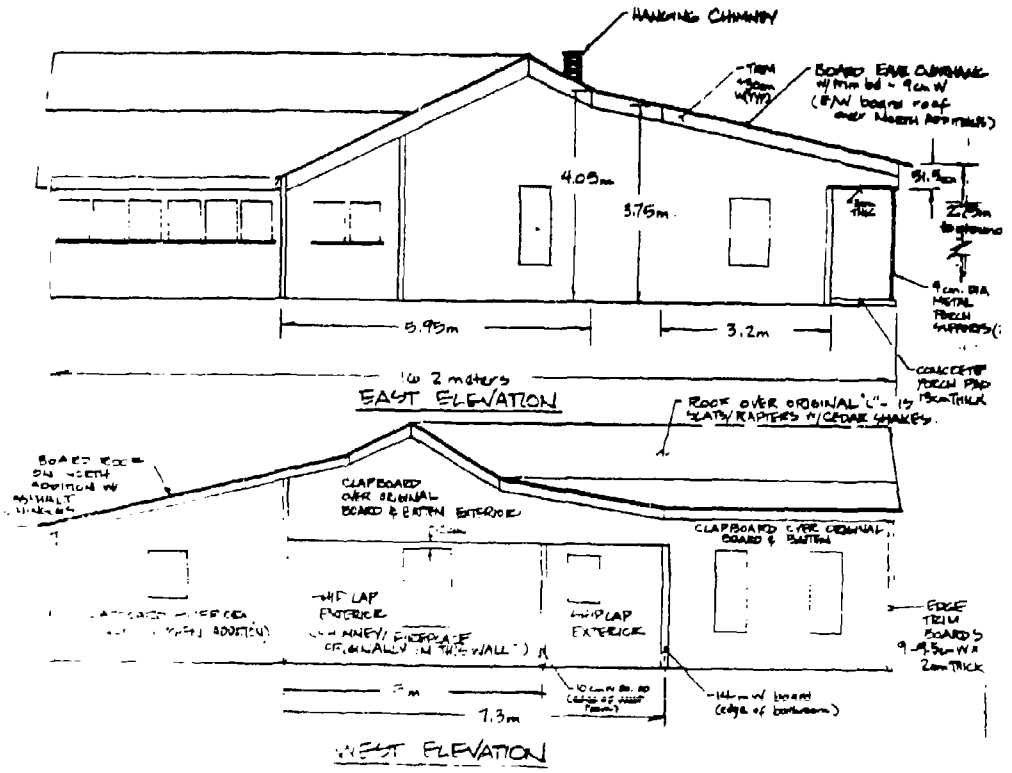


Figure 8-9. Field architectural drawings of the dwelling at 41CO121. (a) east elevation, (b) west elevation. Note: window and door details are not shown; these are on file at IAS, UNT.

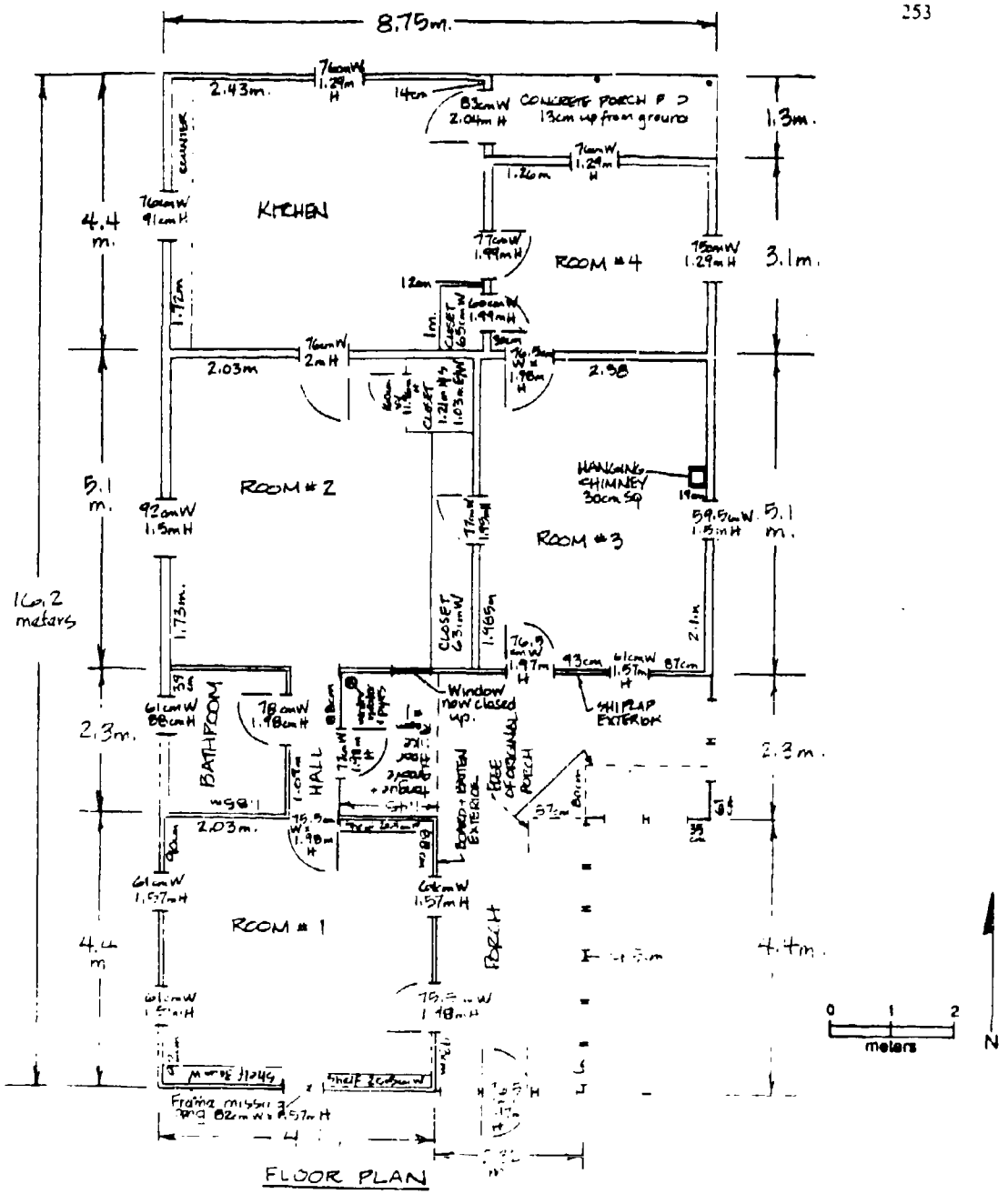


Figure 8-10. Field architectural floorplan of the dwelling at 41CO121.

The next modification resulted in adding a third room to the southwest corner of the house, south of the enclosed portion of the porch. This room was moved in from another location and dated to the early twentieth

century. It appeared to have been constructed as a frame schoolhouse. A porch was added to the east side, forming a Cumberland-style dwelling with two front doors. The west portion of the original porch was used as a hallway with a small shed or storage space between room 2 and the south addition (room 1). The south room had board and batten exteriors, and board and batten was added to the upper portion of the west elevation of room 2.

The last major modification involved the addition of the kitchen and a bedroom on the north side and a concrete porch on the northeast. The additions dated after 1945, and the exteriors were clapboard. Clapboard was also added at this time along the entire west elevation except for room 2 and the west elevation of the early porch.

Other major modifications included covering over a window on the south elevation of room 2, which occurred when room 1 was added. The floors of rooms 1-3 were hardwood, and with the exception of room 1, all the floors had been covered with linoleum. The fireplace in room 2 was removed, and a cut-out was made for a stove. A hanging chimney was added to the east wall of room 3.

Pumphouse: The pumphouse was located west of the house. It was concrete block with a poured concrete slab floor, and a flat, corrugated metal roof. Adjacent to the pumphouse on the north was a brick and stone-lined well. The top course was stone. Below that was approximately 44 cm of machine-made brick with stone to the bottom. It measured 0.95 m across and 10.2 m deep.

Chicken coop and Privy: This building was partitioned in half north-south. The west pen had a wood floor, and the east, a dirt floor. The walls were vertical plank, and the roof was galvanized metal. Two chicken wire pens were located on the west and on the northwest side of the coop. A plank privy with a wood floor and a corrugated metal roof was located on the north. It was a two-seater.

Blacksmithing Shed: The blacksmithing area was probably also used as a shop (Figure 8-11). It was badly deteriorated, with most of the wall planking missing. It was open on the east and had been added on to. The original pen had a gable roof supported by hewn posts set on sandstone piers. A shed addition was tacked onto the south. The floor was dirt, and the support for the anvil was attached to the west wall. No evidence of a stone or brick forge or foundation for supporting a stationary forge was found. It is highly probable that the forge was portable, possibly similar to the portable metal forge found at site 41DN250 (Jones Farm).

Barn: The core of this barn was a log building that originally may have been a dwelling. The frame superstructure had vertical plank walls with hewn log posts. This superstructure represents an addition and includes the construction of sheds, breezeways, and pens that surrounded the log building. The north addition was a breezeway that was open on the east and southwest. Double doors where present on the west wall. The west addition was open on the south. The east contained two pens. Entry to the north pen was on the east elevation. This room was used for grain storage and has a wood floor. The south room was used as an animal pen. A loft extended over these two rooms and the log building. The south addition was an open animal pen with a slat wall on the south. A corral was located south of this addition. Shed roofs were present over each addition forming a hip roof with a high gable over the log building. The roof was corrugated metal. All the nails were wire.

The log core was a double pen (Figure 8-12). Its original floorplan and function is unknown. It was one-and-a-half stories, and the logs were hewn with half and full-dovetail notching. Half-dovetail predominated. The sills were log, half-lapped, and set on sandstone piers. A full sandstone foundation was placed under the center sill running east-west. The original doors included one located on the north elevation and the extant center door on the south. The only original window opening still evident was on the east elevation, in the upper story. Two doors have been cut into the south wall and may have been situated over old window locations. Window openings were later cut on the north and west elevations. A door was also added later to the west elevation and provided access to the north pen. The original fireplace(?) was located on the west side and the cut-out area was present at the time of recording.

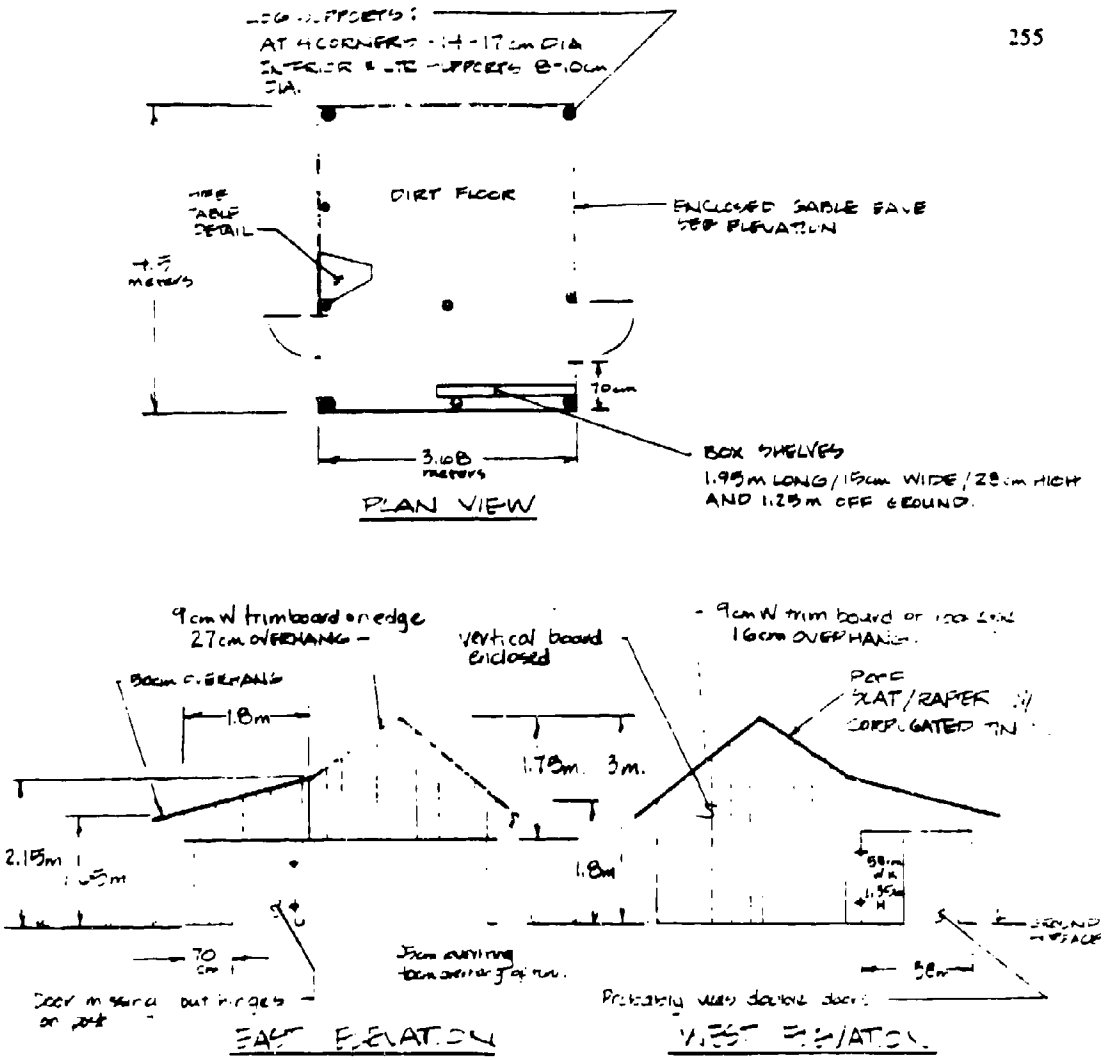


Figure 8-11. Field architectural planview (a) and the east elevation (b) and west elevation (c) of the blacksmith shop at 41CO121.

41CO121 scale 1" = 2 meters
BARN = LOG STRUCTURE (= POSSIBLE HOUSE) & PLANK ADDITIONS

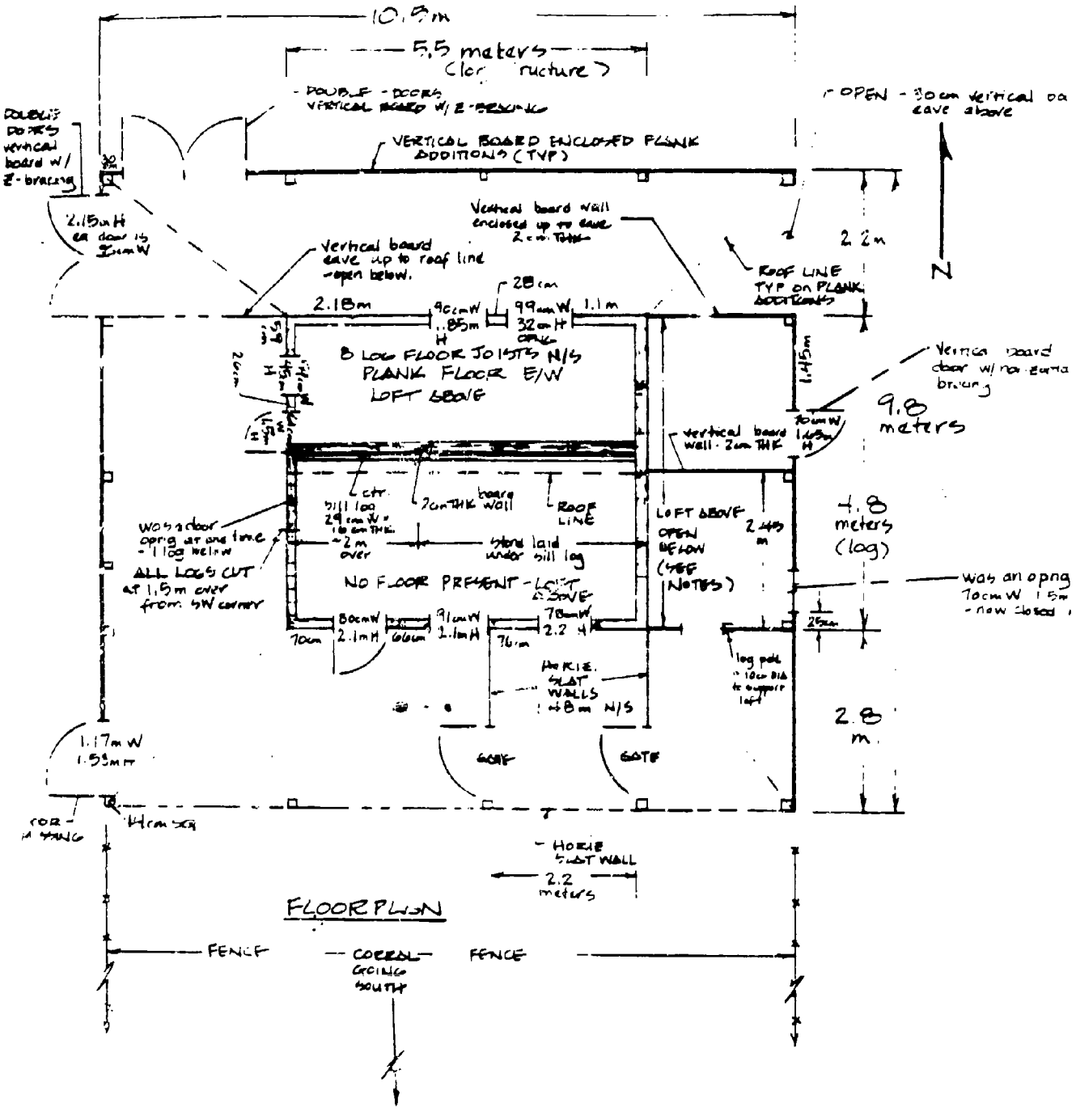


Figure 8-12. Field architectural planview and elevation drawings of the log structure in the barn at 41CO121.

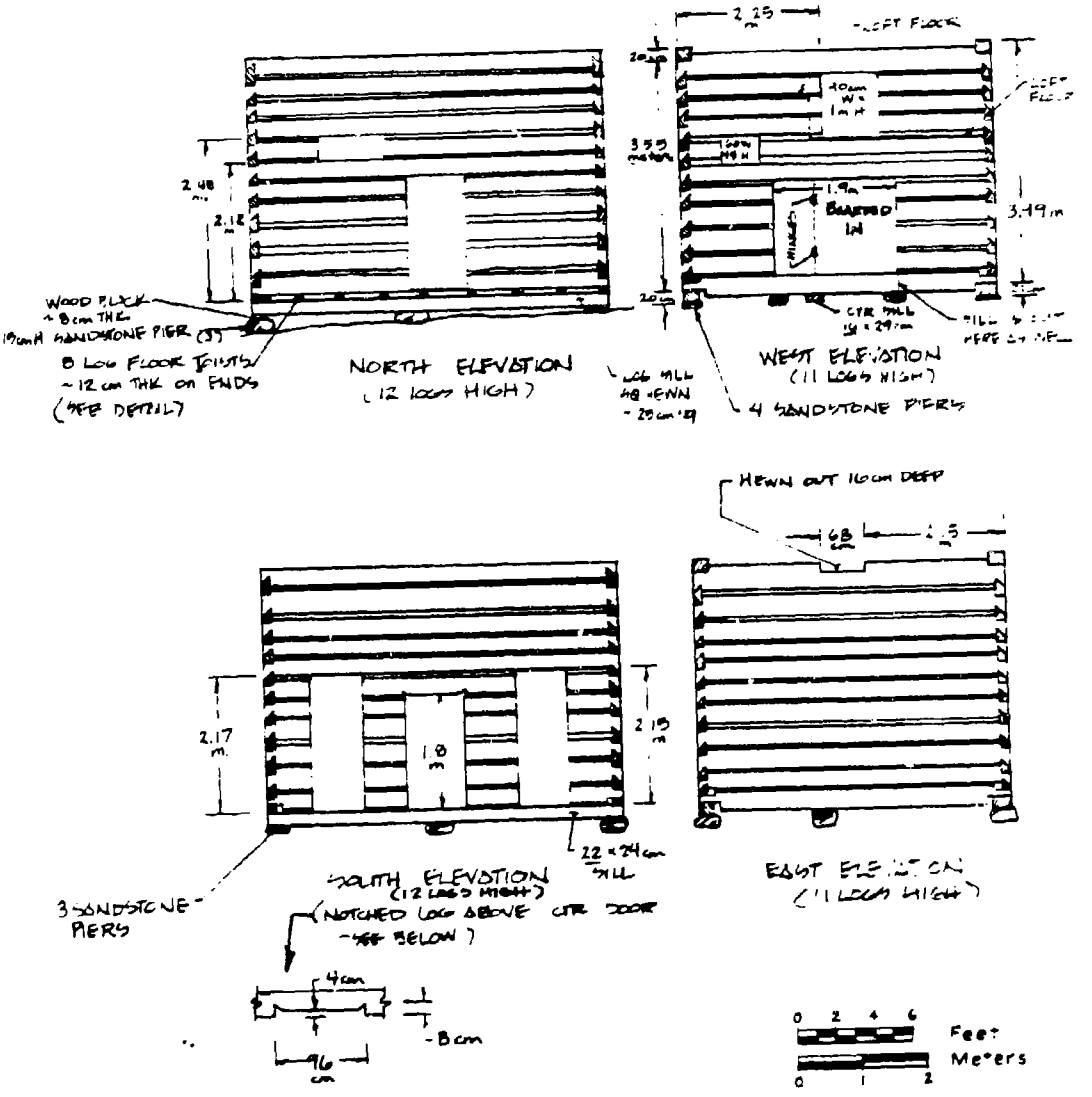


Figure 8-12. (continued) Field architectural planview and elevation drawings of the log structure in the barn at 41CO121.

The north portion of the building was enclosed on the south side and partitioned north-south to form a small granary. The south was opened (i.e., additional doorways were cut). No floor remained in this area, and a wood feeding trough was built onto the north wall of the south pen. The original roof had been replaced, and the notching for the rafters were still evident. The present roof was added when the frame additions were made.

Dating: The log structure in the frame barn was probably built in the 1870s or 1880s. No dendrochronology was done because the structure was selected to be moved and restored. This structure may have been a dwelling that underwent considerable modification. The original room(s) of this structure were built before 1890. The frame barn, blacksmithing area, chicken coop, and other outbuildings all dated to the twentieth century, with many dating to the later occupation. The well dated to the late nineteenth century and had been modified after 1900, including the relatively recent construction of the pumphouse.

Significance: The possible log dwelling inside the frame barn was the only significant structure remaining. It was salvaged and donated to Farmers Branch Historical Park. The blacksmithing area was not architecturally significant, but because these structures were poorly preserved in the project area, it was determined archaeologically significant. It was recommended for intensive excavation, and this work was undertaken as part of our investigations at 41CO121.

Recommendation: No further architectural documentation.

Dendrochronological Investigation: None.

Excavation Method: A multi-level excavation approach was utilized, including excavation of 39 50x50-cm units on an 8-m grid across the main site area. Several units were judgmentally placed to examine features. Grab samples of surface artifacts were recovered from three areas (see Figure 8-8) where numerous artifacts were exposed on eroding or disturbed surfaces. Five backhoe trenches were dug to examine the geology and further expose specific features (e.g., foundation and subsurface deposits associated with the log structure in the frame barn). BHT 5 was located southwest of the main site area and is not shown in Figure 8-8. A block excavation was undertaken in the blacksmithing area in an effort to recover spatial, temporal, and functional information about this activity. A large area, including the frame barn, log building, and corral was scraped using heavy machinery when the log building was salvaged. This effort required removing the frame barn and corral to expose the log building, which badly disturbed this area of the site.

Geology: Site 41CO121 is located on the first terrace above the Wolf Creek floodplain. The site is located near the east edge of the west terrace. This site is essentially in the same geologic setting as site 41CO36 located about one mile east of 41CO121. The topography of the site is generally level, but there is a grade slope to the northeast towards a stock pond and the creek. Overall, the site is generally level, with cultivation occurring west of the barbed-wire fence west of the house.

Stratigraphy: The site is situated on a relatively level landscape which slopes gradually to the east away from the site towards a small intermittent stream. BHT 5, dug southwest of the major site area, revealed approximately 2.54 m of alluvial parent material. This sandy alluvium is fill for the Pleistocene terrace in this area. The profile exposed in BHT 1 (Table 8-5), revealed a plowed A-horizon approximately 18 cm thick. This is underlain by an argillic B-horizon which extends to the base of the trench. This soil profile is characteristic of soils developed on this middle to late Pleistocene terrace.

The loamy sands and sandy loams in the upper part of the profile are underlain by sandy clay loams and clay loams in the B-horizons below. This sandy texture would have promoted bioturbation and plant activity that would have reworked artifacts in the upper part of the profile. Farther to the east and the northeast in the vicinity of the major occupations of the site, the drop in terrain registers erosion of the flat terrace surface. In these areas of the site, the A-horizons are much thinner, and the B-horizons occur much closer to the present surface. In these portions

of the site, particularly between the log structure and the more recent dwelling at the site, there is very little sandy A-horizon material overlying the B-horizon. Because of this, and because of the greater relief in this part of the site, mixture and downslope movement of artifacts should have been more important processes of site formation.

Table 8-5
Soil Profile Description for Trench 1 at 41CO121

Horizon	Depth	Color Moist	Texture	Structure	Boundary
Ap	0-5cm	10YR3/3	LS-SL	m-1fsab	ci
Ap2	5-11	7.5YR4/4	LS	1fsab	cs
Ap3	11-18	7.5YR5/4	SL-LS	1fsab	cs
AB	18-25	7.5YR4/6	SL	1fsab	gs
Bt	25-50	7.75YR4/6	SCL	2msab	gs
Btc	50-86	2.5YR4/6	CL	3csab	gs
Btc2	86-113	5YR5/8	SCL-CL	2msab	cs
Btc3	113-141	7.5YR4/8	CL-SCL	3mag	gs
Btc4	141-180	10YR6/4	SCL	3mag	gs
Btcg	180-245+	5YR5/8 + 10YR6/2	SCL	3msab	base

Key:
Texture: LS=loamy sand; SL=sandy loam; SCL=sandy clay loam; CL=clay loam.
Structure: grade/class/type; grade: 1=weak, 2=moderate, 3=strong. Class: f=fine, m=medium; type: sab=subangular blocky, ag=angular blocky, m=massive.
Boundary: Distinctness/topography; distinctness: c=clear, g=granular; topography: s=smooth, i=irregular.

Excavation Results: The excavation results are presented by feature and collection area. Six features were identified during excavation (Features 1-6). Feature numbers 7-12 were assigned to structures, but the numbers have been dropped. Five types of collections were recovered and include (1) 50x50-cm units, (2) surface grab samples, (3) block excavation, (4) backhoe trenches, and (5) machine-scraping of the barn area. The features are described below, followed by a discussion of the artifact assemblages recovered from these five types of collections.

Features: Six features (1-6) and six structures (feature numbers 7-12) were identified. The structures are described above under architectural investigations and are not discussed further here. The features include a trash-burning area (Feature 1), a collapsed cellar (Feature 2), and possible postmolds (Features 3-6). Each of these are described below.

Feature 1: Feature 1 was a trash dump containing burned artifacts and sediment. This feature was located in Unit S82 E90 about 10 m north of the northwest corner of the dwelling. The feature was identified below the sod layer and continued to the base of Level 2 (20 cm below surface). The feature contained brick, rocks, and plastic,

a dense deposit of burned artifacts, particularly bottle glass, as well as extensive evidence of root and rodent disturbance. The artifacts found in Feature 1 are listed in Table 8-6. The feature is recent, probably dating to near the end of the occupation.

Feature 2: Feature 2 was a collapsed cellar located about 6·8 m northeast of the dwelling, inside the east barbed-wire fence. The cellar was marked by a large depression. A single 50x50-cm unit was excavated in Feature 2 at S90 E106. The unit was dug to 60 cm below surface, but not to the base of the feature. A large sheet of corrugated metal was unearthed in Level 5, which was possibly part of the roof. The fill above the cellar roof (Levels 1-6) contained sheet refuse, and the artifacts from these levels are listed in Table 8-6.

Features 3-6: Features 3-6 were post/postmolds in the blacksmith shop (Figure 8-13). Feature 3 was located in the east wall of the structure and was identified in Level 1. It extended to a depth of 31 cm below surface and is circular, measuring 21 cm in diameter. The fill contained one piece of vessel glass. Feature 3 is located in Units S91 E118 and S92 E118.

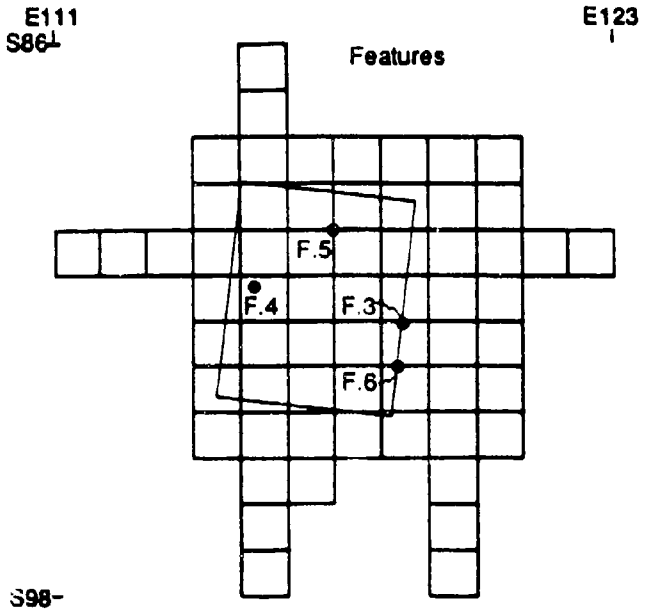


Figure 8-13. Locations of postmold features 3, 4, 5, and 6 in the Blacksmith shop at 41CO121.

Feature 4: Feature 4 was a postmold containing burned sediment and wood fragments from the post. It was located in Unit S92 E115, roughly elliptical, measuring 25x27 cm in diameter. It was identified in Level 1 and extended to a depth of 27 cm below surface. Rodent disturbance was evident in the southeast part of the feature. The post was painted, and artifacts in the feature fill include building materials (bolts, nails, rivets), coal, and glass. Feature 4 was the east post to the work bench which held the anvil.

Feature 5: Feature 5 was identified as a possible postmold, but its exact function remains unknown. The feature was large, measuring about 46x50 cm in diameter, had vertical walls, and extended to a depth of only 13 cm below surface. The sides of the feature were well defined, but the floor was undulating. The fill and possibly the bottom of the feature have been disturbed by rodent activity. In the center of the feature was a concentration of coal, which was originally postulated as the remains of a removed post. However, this does not explain the size of the feature

and the remaining fill. The matrix in Feature 5 contained a dense concentration of coal, burned earth, wood chips, clinkers, and paper fragments. This area was northeast of the anvil and may have been associated with the forge.

Feature 6: Feature 6 was a post and postmold located along the east wall of the blacksmith shop. The feature was located in Units S92 E118 and S93 E118. The postmold was elliptical, measuring 26x40 cm in diameter and extended to 33 cm below surface. Remains of the post were still present during excavation, along with nails, thin metal, vessel glass, and other debris. Approximately 50 pieces of wood were found in Feature 6.

Artifact Assemblage: Five types of collections were recovered and include (1) 50x50-cm units, (2) surface grab samples, (3) block excavation, (4) backhoe trenches, and (5) machine-scraping of the barn area. The artifact assemblages recovered from these five types of collections are discussed separately below.

Comparison of these five collections indicates that significant differences occur between them. These differences include variability in the relative frequency of the artifact categories present in each and evidence of specialized activity areas. The 50x50-cm units provided data on the sheet refuse deposit at the site, while the block excavation yielded data on the blacksmithing and workshop activities. The surface collections were highly biased and were collected from eroded surfaces. The backhoe trenches and the machine-scraped area yielded little artifactual material, and none was collected.

The artifacts recovered in the 50x50-cm units contained sheet refuse, excluding Feature 1 (S82 E90) and Units 26 (S90 E122), 45 (S90 E117), and 54 (S90 E116) located in the blacksmith shop. Unit 28 (S90 E114), a 50x50-cm unit, located in Block 1, but outside the blacksmith shop, was included in the 50x50-cm unit data (Table 8-6).

Table 8-6
Artifacts from 41CO121 by Collection Area

Category	Sheet Refuse		Block 1		Surf. Coll.	Fe.1	Fe.2
Semi & Coarse Earthen.	7	0.36	20	0.15			
Refined Earthenware	23	1.18	100	0.74	8	3	1
Stoneware	10	0.51	85	0.63	5		
Porcelain			15	0.11			
Bottle Glass	868	44.31	2206	16.33	18	214	27
Table Glass	1	0.06	26	0.20			
Lamp Glass	1	0.06	5	0.04			
Unid. Glass	9	0.46	7	0.06			
Window Glass	51	2.61	484	4.59		1	1
Machine-Cut Nails	55	2.81	326	2.42			6
Wire Nails	124	6.33	4021	29.76			7
Handmade Brick	171	8.73	39	0.29	1	4	
Building Material	189	9.65	1087	8.05		44	13
Personal Items	18	0.92	242	1.79		2	1
Thin & Heavy Metal	221	11.29	1224	9.06	2	8	15
Household Items	15	0.77	103	0.77		4	2
Machine & Wagon	24	1.23	2722	20.15	2		
Tools	2	0.11	103	0.77			
Horse & Stable Gear	1	0.06	386	2.86			
Ammunition	11	0.57	25	0.19		1	
Electrical Items	16	0.82	69	0.51			
Misc. Other[1]	142	7.25	219	1.62		12	35
Total	1959		13514		36	294	114

[1] Misc. Other includes primarily recent debris such as paper, plastic, and foil, and items that do not fit into the other categories.

The sheet refuse deposit contained artifacts from the earliest occupation to the most recent, spanning over 100 years of deposition. Bottle glass sherds account for 44.31% of the artifact assemblage, followed by architectural items (30.13%), thin and heavy metal which includes tin can fragments (11.29%), and recent debris (miscellaneous other at 7.25%).

Ceramics are very infrequent and account for a small proportion of the assemblage. Their low density may reflect the length of occupation and that the site was occupied until recently.

Block 1 contained blacksmithing and workshop debris, as well as some sheet refuse material. The artifacts found in the blacksmith shop are summarized in Table 8-6. These data indicate that architectural items total 44.11% of the assemblage, followed by machine, wagon, and hardware which account for 20.15% of the artifacts collected in the blacksmith shop.

A comparison of these two collections is shown in Figure 8-14 and indicates that significant content differences occur between the sheet refuse deposit and the blacksmith shop assemblage (Block 1). Bottle glass is the most frequent artifact category found in the sheet refuse where it is almost three times more frequent than in Block 1. On the other hand, wire nails are more than three times more common in Block 1 than the sheet refuse, and machine, wagon, and hardware are almost twenty times more common in Block 1. Similar frequencies are evident among ceramics, other vessel glass, window glass, machine-cut nails, building material, household items, ammunition, and electrical items.

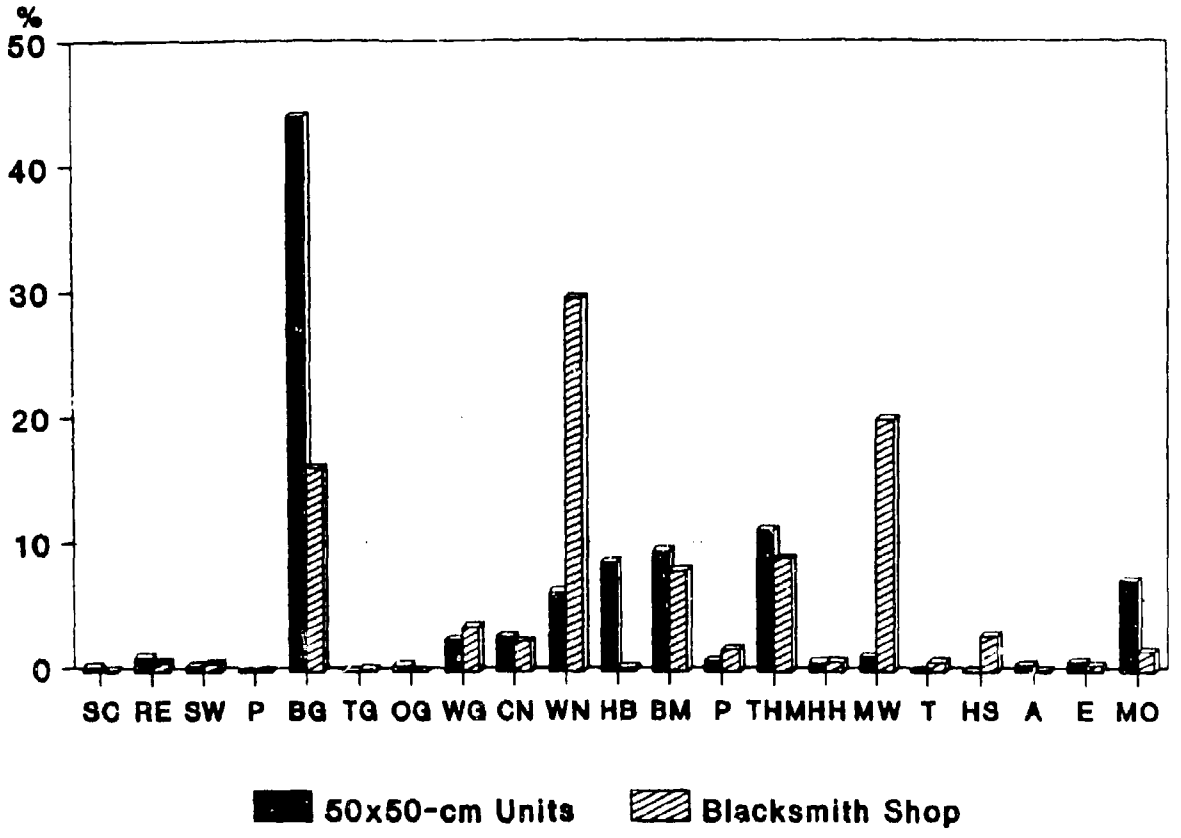
Handmade brick is poorly represented at the site, but is almost nine times more common in the sheet refuse than in the shop assemblage. Thin and heavy metal, including tin can fragments, is similar in both assemblages. However, tools, horse and stable gear, and personal items are more common in the blacksmith shop. The higher percentage of personal items was not expected, but probably reflects the concentration of activity in the blacksmith shop compared to the sheet refuse areas sampled.

The higher percentage of miscellaneous materials shown in Table 8-6 and Figure 8-14 is biased. Items in this category include paper, plastic, charcoal, clinkers, slag, and unidentifiable wood. This material was counted and recorded for all sheet refuse units. However, because of the density of this material in the blacksmith shop, this material was estimated, not counted, and in some instances, simply recorded as present/absent.

Comparison of the MBD values obtained for the different collections indicate considerable similarity between collections (Table 8-7). The sample sizes for Feature 1 and the surface collection were too small to be statistically meaningful. Comparison of the 50x50-cm units and Block 1 indicate similar refined earthenware dates, but between 10 and 15 years difference in the stonewares and bottle glass sherds. A total combined MBD value of 1888.98 (n=452) was obtained for the site collection. The more recent MBD values for Block 1 reflect continued use until recently, while the sheet refuse deposit was replaced by trash dumping, as many as 30-40 years before the site was abandoned. A modern trash dump was found, but not sampled.

The combined MBD value of 1888.98 for the site collection is also 10-20 years more recent than expected based on the archival data. Again, this variability probably reflects the continued occupation of the site until the 1980s.

Other indications of the early occupation of 41CO121 include the architectural assemblage, namely the original rooms of the extant house and the log structure inside the 1930s barn (see above discussion). The entire brick assemblage is handmade brick and includes a brick scatter in Unit S106 E98 located at the southeast corner of the early dwelling. This 50x50-cm unit contained 110 handmade bricks and fragments, accounting for 64.33% of the brick collected in the 50x50-cm units at the site.



Legend:

SC	Semi-Coarse Earthenwares	CN	Machine-Cut Nails	MW	Machine, Wagon, Hardware
RE	Refined Earthenwares	WN	Wire Nails	T	Tools
SW	Stonewares	HB	Handmade Brick	HS	Horse & Stable Gear
P	Porcelains	MB	Machine-made Brick	A	Ammunition
BG	Bottle Glass	BM	Building Material	E	Electrical Items
TG	Table Glass	PI	Personal Items	MO	Misc. Other
LG	Lamp Glass	THM	Thin & Heavy Metal		
WG	Window Glass	HH	Household Metal		

Figure 8-14. Artifact frequency comparisons for the 50x50-cm units excavated within the sheet-refuse deposit and the 50x50-cm units and 1x1-m units excavated in the blacksmith shop at 41CO121.

Table 8-7
MBD Values Obtained for Refined Earthenwares, Stonewares, and Bottle Glass Sherds by Collection Area at 41CO121 (#=sample size)

Category[1]	50x50s	Block 1	Feature 1	Surf. Coll.
RE	1869.5 (20)	1868.0 (97)	1863.3 (3)	1875.6 (8)
SW	1860.0 (7)	1870.1 (84)		1867.1 (7)
BG	1896.1 (24)	1910.5 (197)	1924.7 (3)	1900.0 (2)
Combined	1880.7 (51)	1890.6 (378)	1894.0 (6)	1875.0 (17)

[1] RE=refined earthenwares, SW=stonewares, BG=bottle glass, Combined=all three categories combined.

Artifact Distributions: Distribution maps were prepared for refined earthenwares, stonewares, bottle glass, window glass, machine-cut and wire nails, personal items, thin and heavy metal, and total artifacts. These maps indicate valuable information on the sheet refuse deposit at 41CO121. These maps are discussed by collection area below.

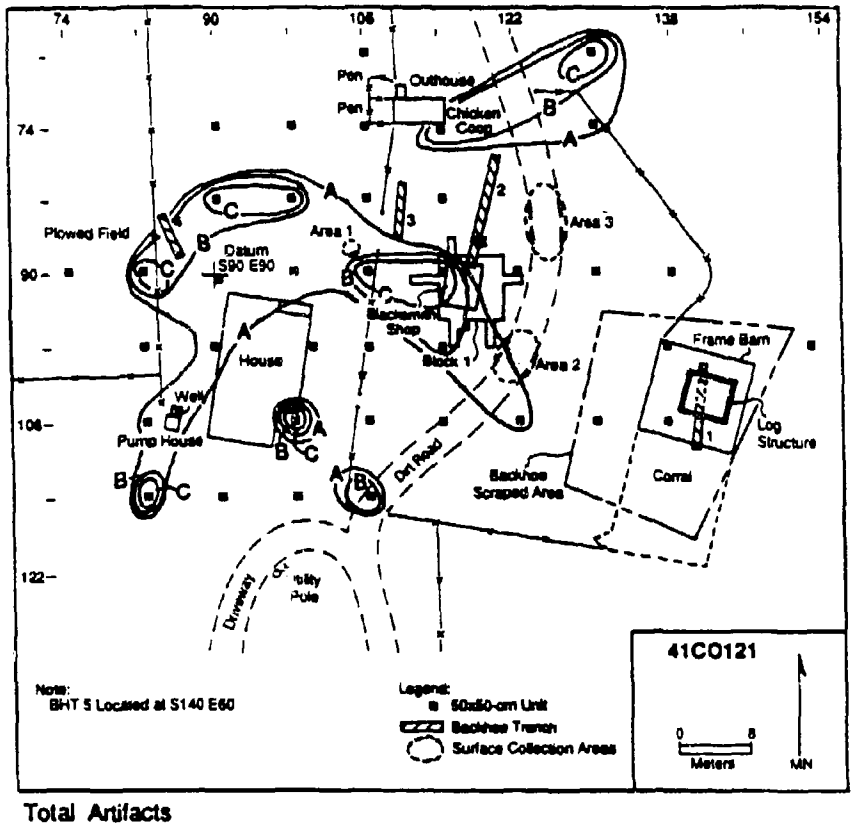
50x50-cm Units: Distribution maps produced from the 50x50-cm unit data indicate a mixed sheet refuse and trash-dumping assemblage (Figure 8-15). High-density units contain predominately building debris (S106 E98, S90 E114), or trash (S82 E90 (Feature 1), S66 E130, S82 E98, S114 E82). Unit S66 E130 is located in a surface trash dump area. Other surface dumps occur near the chicken coop and on the north side of the blacksmith shop.

The refined earthenwares recovered from the sheet refuse are poorly represented. Only nine 50x50-cm units contained refined earthenwares. The highest refined earthenware frequencies (n=3) occurred in Units S82 E90 (Feature 1) and S114 E82. Both units contained modern trash. All of the refined earthenwares, except one, were found in the 50x50-cm units west of the blacksmith shop. One sherd was found in Unit S74 E114 located at the southeast corner of the chicken coop. No sherds were found in the barn area. Surface sherds occurred in eroded areas of the dirt road (see Figure 8-8).

Stonewares were also poorly represented and exhibited a similar pattern as the refined earthenwares. Only ten sherds were found in the 50x50-cm units. Three stoneware sherds were found east of the barbed-wire fence located just east of the house. One occurred in Unit S74 E114, one was in Unit S90 E114 next to the blacksmith shop, and one was found in surface collection area #3. No sherds were found in the outbuilding area.

Bottle glass sherds were scattered across the site west of the dirt road. None were found in the barn area. High-density units include S114 E82, which contained a modern trash deposit, a water pipe and modern trash. This unit (n=103 bottle glass sherds), Feature 1 (S82 E90, n=214), and Unit S90 E114 (n=284) on the west wall of the blacksmith shop, contained the highest bottle glass frequencies. Bottle glass counts in the other units ranged from zero to 38 sherds.

Machine-cut nails and wire nails exhibited overlapping distributions. They were concentrated west of the dirt road. No nails were collected in the backhoe-scraped area or the 50x50-cm units in the barn. Several wire nails were found west of the barn in S105 E130.



Total Artifacts

A 21-40
B 41-60
C 61-322

Figure 8-15. Artifact density plot of total artifacts for the sheet-refuse deposit at 41CO121. Density plot data are based on counts per 50x50-cm unit.

Personal items were uncommon in the 50x50-cm units, occurring west of the dirt road. Three personal items were found in the surface trash deposit in the northeastern site area. Thin and heavy metal exhibited a similar distribution, concentrating west of the road. The highest frequency of thin and heavy metal was collected in the northeast trash deposit. Counts in the house area ranged from zero to 49 metal fragments per 50x50-cm unit.

Block 1 Distributions: Artifact distribution maps for the blacksmith shop were produced for nine artifact categories: refined earthenwares, stonewares, bottle glass, window glass, cut nails, wire nails, personal items, machine and wagon parts, and horse and stable gear (Figure 8-16 a-i). The walls of the shop are shown on these figures and the door was located on the south wall. A metal scrap dump is located along the east wall of the blacksmith shop. This

dump contained scrap metal, both completed and broken items, which were probably stockpiled for later mending, reworking, or as parts/hardware for new pieces.

The artifact distribution maps for the blacksmith shop indicate several interesting patterns. Refined earthenwares cluste ide the shop (Figure 8-16a). A total of 19.6% occur inside or along the walls of the shop. The highest density occurs in the northwest corner of the block outside the shop.

Another pattern is demonstrated in the stoneware distribution. Only 5.8% of the stonewares in Block 1 occur in the blacksmith shop (Figure 8-16b). This frequency is lower than the frequency obtained for refined earthenwares. Stonewares cluster north of the blacksmith shop east of the gate in the barbed-wire fence that separates the dwelling yard and the blacksmith shop and outbuilding area. This area would have received heavy traffic between the house and outbuildings. A second gate is located south of the blacksmith shop and would have provided access between the house and outbuildings. The second cluster of stonewares occurs in the south end of the block outside the blacksmith shop. The door to the shop was located on this side.

Bottle glass sherds were relatively common in Block 1 where they represented 16.33% of the assemblage. They occurred in all the units except one (S90 E122). They are concentrated outside the shop, with the highest densities occurring along the north wall (Figure 8-16c). A small cluster occurs adjacent to the east wall, and one is located S/SE of the anvil. Inside the blacksmith shop, bottle glass sherds cluster in the north half of the shop. Relatively few sherds occur in the south part of Block 1.

Window glass sherds (Figure 8-16d) exhibit three small clusters and include one cluster along the north wall (114 sherds), one on the east wall (91 sherds), and in two units on the south wall by the door (67 and 43 sherds, respectively). Counts in other units in Block 1 range from zero to 22, with most units containing fewer than 5 sherds.

Comparison of the distribution of machine-cut nails (Figure 8-16e) and wire nails (Figure 8-16f) indicate that both are dispersed within Block 1, but exhibit different patterns. Only two units do not contain nails (S86 E118 and S91 E114). Machine-cut nails range from zero to 34 nails per 1x1-m unit, with high density clusters occurring outside the blacksmith shop. On the other hand, wire nails range from zero to 683 nails per 1x1-m unit, with units containing over 50 nails clustering in the northeast portion of the blacksmith shop and the east wall line, both inside and outside the shop.

Personal items (Figure 8-16g) range between zero and 28 items per unit in Block 1, with the highest density occurring in the northeast portion of the blacksmith shop and outside the shop in the northeast corner of the block. The highest density (n=28) occurred in the center of the blacksmith shop. Few personal items occurred elsewhere in the block where frequencies range from zero to five items per unit.

Machine and wagon parts, hardware (Figure 8-16h), and horse and stable gear (Figure 8-16i) cluster in the east portion of the blacksmith shop and outside the east wall where the metal dump was located. Machine and wagon parts range from zero to 603 items per 1x1-m unit, with all units containing over 60 items occurring in this east cluster. Horse and stable gear range from zero to 119 items per 1x1-m unit. Horse and stable gear counts outside this cluster range from zero to 10 items, with most units containing fewer than five items.

Faunal Remains:

TOTAL BONE = 138

Identified fauna (n=92)

Gallus gallus (domestic chicken) - 9 (MNI=2)
Dasypus novemcinctus (armadillo) - 29

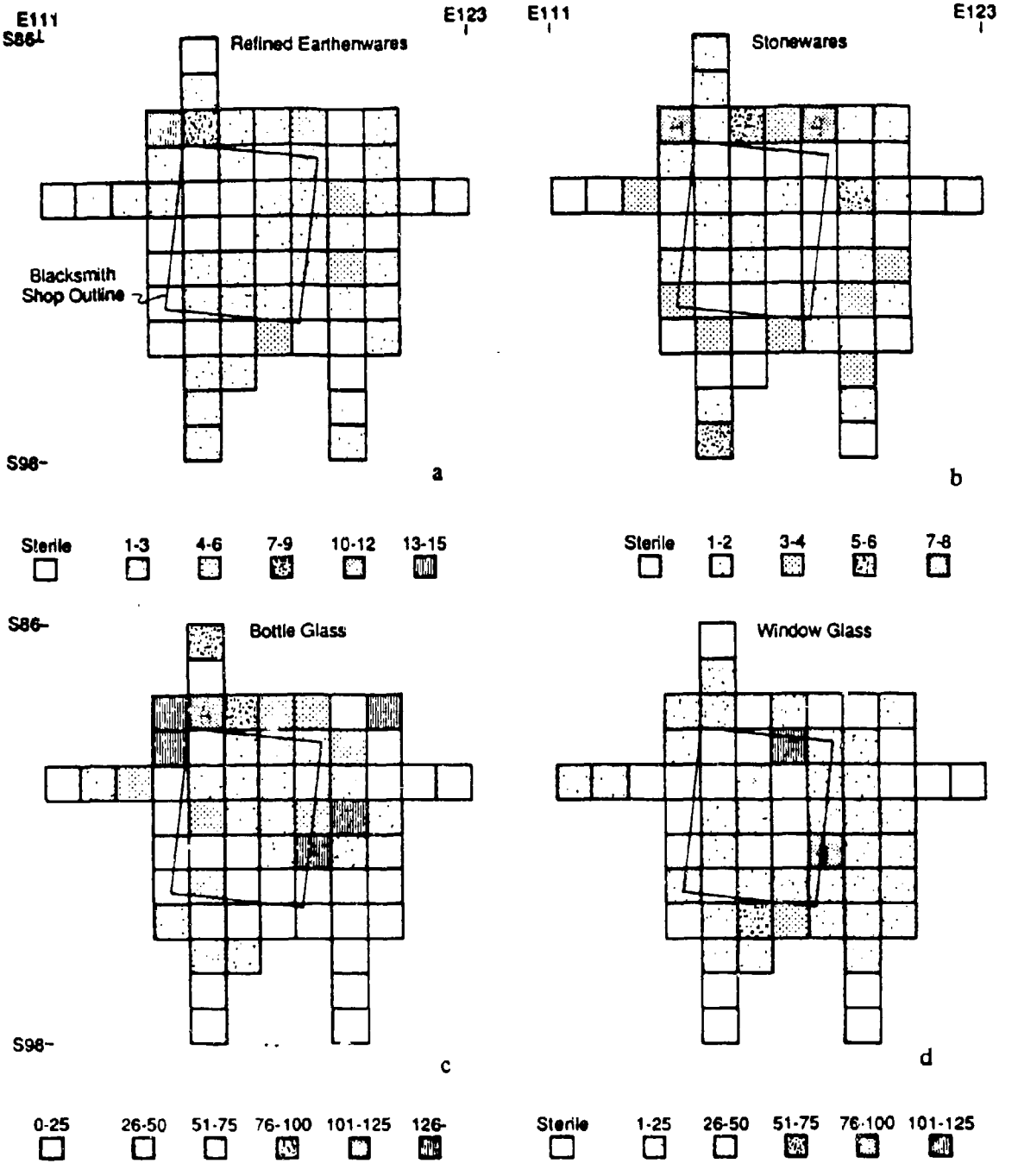


Figure 8-16. Artifact frequency distributions for the blacksmith shop at 41CO121. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) cut nails, (f) wire nails, (g) personal items, (h) machine and wagon parts, and (i) horse and stable gear. Note: considerable variance in total counts occurs between categories and is reflected in the selection of frequency intervals for each category.

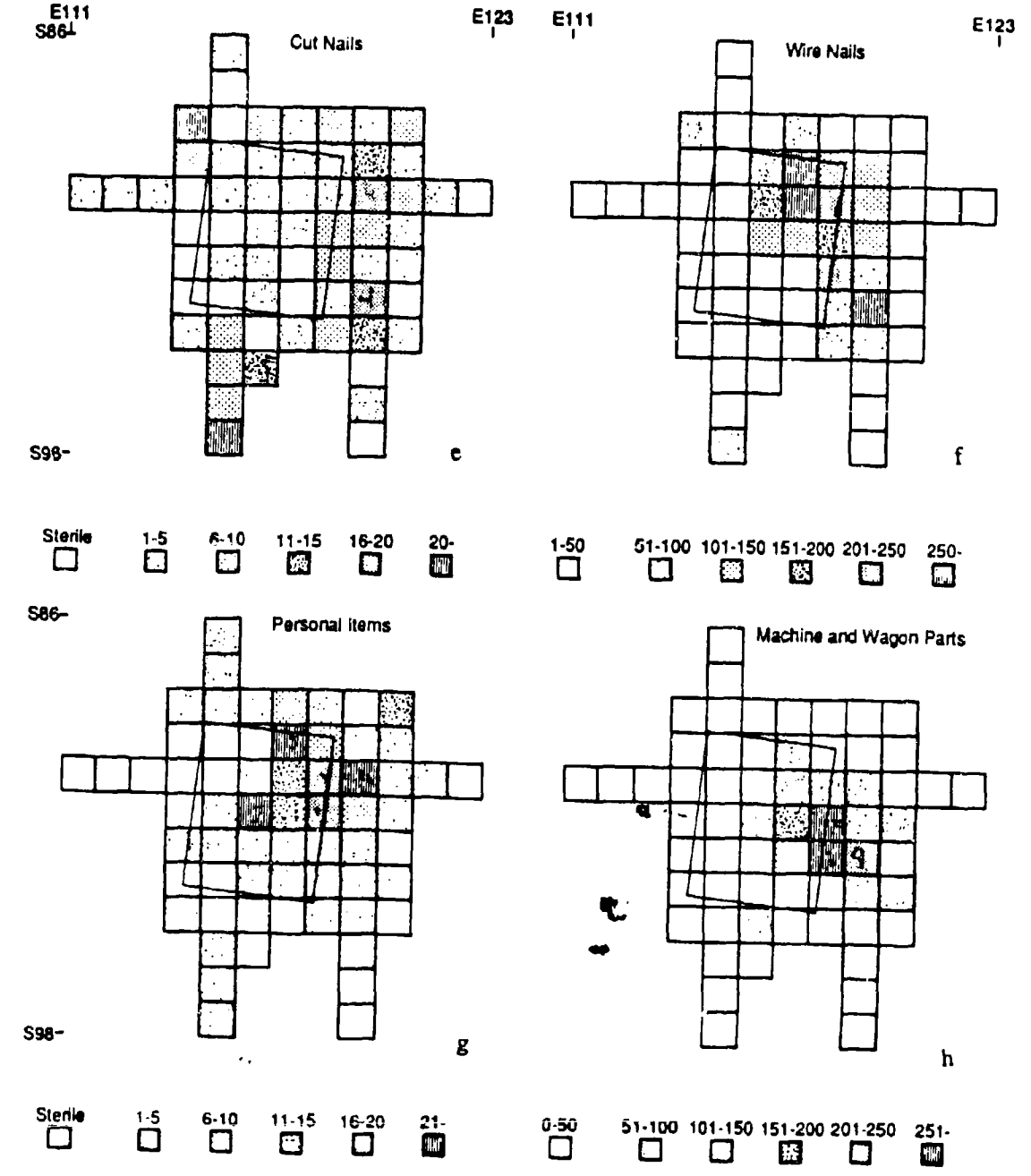


Figure 8-16. (continued) Artifact frequency distributions for the blacksmith shop at 41CO121. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) cut nails, (f) wire nails, (g) personal items, (h) machine and wagon parts, and (i) horse and stable gear. Note: considerable variance in total counts occurs between categories and is reflected in the selection of frequency intervals for each category.

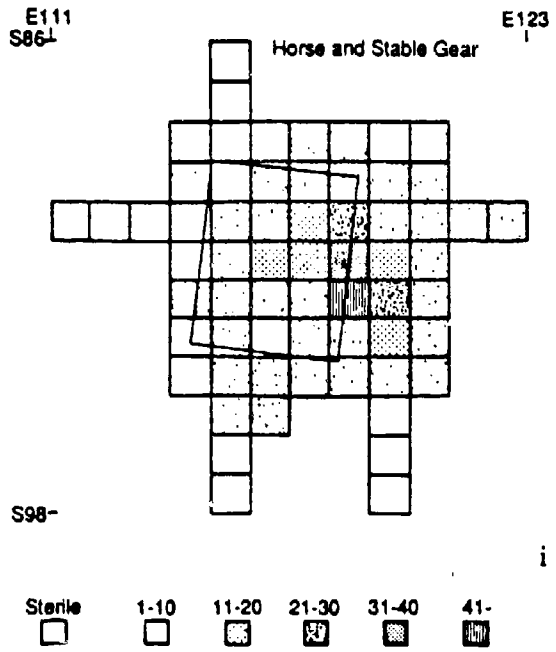


Figure 8-16. (continued) Artifact frequency distributions for the blacksmith shop at 41CO121. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) cut nails, (f) wire nails, (g) personal items, (h) machine and wagon parts, and (i) horse and stable gear. Note: considerable variance in total counts occurs between categories and is reflected in the selection of frequency intervals for each category.

Sylvilagus floridanus (cottontail) - 5
Geomys bursarius (pocket gopher) - 1
Sciurus niger (fox squirrel) - 1
Rattus rattus (roof rat) - 1
Sus scrofa (domestic pig) - 12
Bos taurus (domestic cattle) - 14
large mammal - 20

Unidentified bone (n=46)

From a faunal perspective, the site provided the typical mixture of animals present at nineteenth century farmsteads. Pigs, cattle, and chickens dominate the numbers (ignoring the intrusive armadillo), with a large compliment of saw-cut large mammal remains that could be from either pork or beef. Add a dash of cottontail and fox squirrel as hunted game of the human occupants or their canine companions; and top it off with a couple of ever-present rodents (gopher and roof rat).

The distribution of the faunal remains is concentrated under and around the blacksmith shop (Block 1, Fig. 8-8). Only four identified and 17 unidentified bones were found in the sheet refuse units that extensively covered the large site. The armadillo was found in a unit in the far northeastern part of the site and presents the one atypical item in this assemblage: the armadillo remains are burned, blackened and almost calcined, with that shiny veneer that indicates incineration before the flesh is dried. Either the armadillo was caught in a grass fire or someone dragged a dead one away from the main yard and torched it. Nevertheless, this event is relatively recent and not associated with the yard assemblage.

Over half of the rest of the recovered faunal remains show evidence of butchering. Five of the 12 pig bones had been cut with a saw, presumably a hack saw. These elements include two parts of a scapula, a femur, a tibia, and a rib, indicating cuts from the butt (shoulder), the hams, and the loin of a young pig (less than 2 yrs.). Twelve of the 14 cattle bones had been similarly cut. These include four humeri, two ulnae, a radius, and four ribs, indicating primarily roast cuts from the forequarters (chuck and shank) and dorsal ribs (e.g., standing or rolled rib roasts). Nineteen of the 20 bones recorded as large mammal also had been saw cut. These are nondiagnostic fragments from elements such as vertebrae and the pelvis, but generally representing the loin cuts. One chicken femur exhibited a skinning cut.

Despite all of this butchering evidence, only one individual pig or calf was determined by the paired-element estimation. This seems rather implausible considering the length of occupation at the site; however, from the evidence recovered (conjoining cuts, congruity of ages of individual elements, consistency in degree of preservation), this concentration of faunal materials may have derived from a single or short-term depositional episode. A single episode, such as a holiday feast or community-wide gathering, could certainly consume the amount of meat represented by these individuals (approximately 54 kg of pork, 210 kg of beef, and 1 kg of fowl, based on usable yield per individual). Based on the identified beef cuts alone, 45 lbs (20 kg) was minimally available.

Summary: Site 41CO121 is a ca. 1870s to 1980s farmstead. The sheet refuse deposit was badly disturbed and contained considerable modern trash. This disturbance is evident in the content and distribution of artifacts, as well as the MBD values obtained for the site. Surface collections were recovered in several badly eroded areas of the site. The eastern portion of the farmstead was largely eroded.

Architectural documentation indicated that the dwelling had undergone considerable alteration over its 100+ years, including the addition of rooms, modification of existing rooms, and modification of the original chimney(s) and porches. The original floorplan was not discerned. The outbuildings all date to the twentieth century, and several are modern (e.g., pumphouse). The oldest and only architecturally significant outbuilding is the log structure inside the ca. 1930s frame barn. This log structure was identified as a possible dwelling built in the 1870s or 1880s.

The possible log dwelling inside the frame barn was tagged, disassembled and moved to Farmers Branch Historical Park in Farmers Branch, Texas. It was restored as a ca. 1840s log house with a stone chimney. As noted earlier, the west elevation of this structure had a "cut-out" area that probably was the location of a chimney. During restoration, a chimney was built on this side of the structure using native sandstone blocks from the stone foundation at site 41CO36.

Excavations conducted inside the frame barn inside and/or around this log structure before it was moved failed to reveal any domestic deposits. Backhoe-scraped areas and backhoe trenches excavated under this structure after it was dismantled and moved also were largely sterile and did not contain domestic remains. Based on these results, it appears that if this structure was originally built as a dwelling, then it may well have been moved to this location from elsewhere on the property or from a neighboring farm. The function of this structure at this location at 41CO121 was as a granary and livestock shed. The north half of the structure was used for storing grain, while the south half had been used for holding horses, mules, or several cows.

As noted above, based on the testing results, this site did not meet National Register eligibility. However, one aspect of this farmstead was unique relative to the other farmsteads included in the testing and mitigation phases i.e., extant architectural and archaeological remains of a blacksmith shop. While similar blacksmith shops were not infrequent in the Ray Roberts Lake project area, they were poorly preserved. The blacksmith shop at 41CO121 was built in the twentieth century, probably ca. 1930s based on the architectural, archaeological, and oral-history data.

Because of the paucity of well preserved farm blacksmith shops in the project area, and because few blacksmith shops have been studied in northcentral Texas, mitigation efforts were recommended for this blacksmith shop. This

effort included the excavation of Block 1, which contained 63 1x1-m units. Block 1 contained considerable evidence of variable spatial patterning between artifact categories in the blacksmith shop. Domestic artifacts such as refined earthenwares, stonewares, and bottle glass, were relatively infrequent and clustered primarily outside the shop. Blacksmith/workshop-related categories such as machine, wagon, and hardware items, and horse and stable gear clustered inside the shop and in a dump or storage(?) pile outside the east wall.

The dump or storage(?) pile outside the east wall was similar to several storage piles identified at the Jones Farm (41DN250). These piles predominately contained metal items, many of which were parts of disassembled or broken machines, vehicles, implements, or furniture. Some of these items were broken and others were in good condition. Mr. Roy Jones reported (personal communication, 1987) having done some blacksmithing, which largely involved repairing things or making small items (e.g., building latches), stated that the metal piles at his farm contained parts that he used for his repair work.

The distribution of artifact categories recovered in Block 1 are shown in Figure 8-16(a-i). Domestic sheet refuse occurs in the blacksmith shop as indicated by some of the ceramics, bottle glass, table glass, and household items found in units in Block 1. Also, no significant difference occurs in the type or MBD dates between the domestic items recovered from the sheet refuse deposit outside Block 1 and the units in Block 1 (see Table 8-7).

The higher frequency of domestic sheet refuse in Block 1 units outside the blacksmith shop suggests that either: (1) the interior of the shop was cleaned or swept removing some sheet refuse, which was then deposited around the exterior of the shop, or (2) little domestic-related sheet refuse was deposited in the shop after it was built, while domestic items continued to be deposited outside the shop until the site was abandoned. No evidence was found to indicate that the sheet refuse deposit was removed when the shop was built. Higher frequencies of sheet refuse material outside the shop occur in areas that probably received the highest foot traffic. These areas include the north side (note gate between dwelling yard and outbuilding yard occurs near northwest corner of the blacksmith shop) (see Figure 8-8), and the east gable (double door) entrance to the shop. Fewer sheet refuse artifacts were found in the southwest corner of Block 1, which corresponds with the west door just south of the anvil. This door was on the back side of the shop and probably received less traffic.

Metal items were hand-forged in the blacksmith shop at 41CO121, probably for use on the farm, as well as for families living on neighboring farms. In addition, farm implements, farm machinery, and building hardware were repaired, and horse-shoeing was done. Remains of these activities are evident in the artifacts collected from Block 1.

In summary, site 41CO121 was serially occupied between ca. 1870s and the 1980s. The sheet refuse deposits are disturbed and contain material from over 100 years of occupation. They contain evidence of extensive trash dumping, and erosion has removed much of the A-horizon in the eastern site area.

The dwelling includes several early rooms, at least one of which was moved to this site. It is unknown when the two earliest rooms were attached, what the original porches looked like, or the original floorplan. The original chimney is gone, and the brick was probably reused. The outbuildings reflect the long occupation of the site and include a log structure inside the ca. 1930s frame barn, a collapsed cellar, a chicken coop, privy, several animal pens, a corral, blacksmith shop, and a pump house. The well was probably built about the same time as the original house.

The farm at 41CO121 provides little significant archaeological or architectural data with the exception of the ca. 1930s blacksmith shop. This farm, like many others serially occupied in the region contain mixed architectural and archaeological remains reflecting changes in vernacular architecture and rural lifeways. Unfortunately, the mixture of these remains in the deposits at this site preclude detailed analysis of undisturbed, short-term sheet refuse deposits.

Like other farms in this region, numerous outbuildings occur within the main site area and attest to the diversified farming activities that characterize this region. These buildings along with the dwelling and the log structure in the large frame barn indicate that architectural styles were primarily vernacular and architectural recycling was common. Common farm buildings documented in this region include chicken coops, cribs, sheds, barns, pens, and cellars. Each of these types of structures occur at 41CO121 (see Figure 8-8).

The sheet refuse deposit and the modern trash deposits at this site reflect a pattern recorded throughout this region. Early farmsteads contain low to medium density sheet refuse deposits, which concentrate near the dwelling and drop in frequency between the dwelling and the more distance outbuildings. Little sheet refuse occurs in or near large sheds, barns, or the yard areas beyond these structures. This pattern is evident at 41CO121, except near the smaller outbuildings. Trash dumping activity, more common after the 1940s or 1950s, occurs at this site, and these dumps are concentrated in depressions (e.g., collapsed cellars) and near the smaller outbuildings -- i.e., chicken coops, privies, small sheds, and workshops or blacksmiths. These dumps, as well as the sheet refuse deposit, contain a higher percentage of items that were not recycled (e.g., tin cans and bottle glass).

Undoubtedly early features were associated with this farmstead, but none were located. Among these early features should be remains of outdoor activities such as cooking, washing, and making soap, which were conducted in the yard areas surrounding the dwelling. Other yard activities including hog butchering would have occurred between the dwelling and major outbuildings. None of these activities were evident in the archaeological deposits, with the exception of hog consumption which is indicated by the faunal data.

In summary, the archaeological deposits at 41CO121, had been considerably disturbed. In contrast, the blacksmith shop provided a unique opportunity to examine this type of activity area at a farmstead site. Intensive excavation of the blacksmith shop revealed that this type of activity is difficult to discern in the archaeological record in using the sheet refuse sampling strategy employed on this project. While horse and stable, machine, wagon, or hardware remains may be recovered using this approach, these data are often insufficient to identify this type of activity area. The excavation data from the blacksmith shop indicates that the subsurface evidence of this type of activity was not well defined. The sediment was more compacted than in the sheet refuse deposit, but was similar in compaction to sediments in the large barn or other major outbuildings. Further, artifact counts were not higher in the 50x50-cm units excavated in the blacksmith shop than elsewhere.

Blacksmithing was commonly conducted in rural settings, and most small communities had at least one blacksmith shop. Some farmers conducted blacksmithing on their farms, such as at 41CO121, while others worked as itinerant or traveling smithies. Indeed, the blacksmith shop at 41CO121 may be similar to the blacksmithing done at 41DN250 (Jones Farm), which largely involved repairing broken tools, equipment, and building hardware, and sometimes shoeing animals. Such activities would have been conducted in a blacksmith/workshop area, and would have been carried out on an "as needed basis" rather than as a major occupation.

41DN77

Map Quad	Green Valley 7.5' (1960, rv. 1978), #3397-143
Elevation	680' amsl
Scheduled Investigations	Sheet-refuse excavations
Additional Investigations	Archival
Soil Association	Navo clay loam
Cultural Affiliation	Historic (1870s-1930s)

Description: Features at 41DN77 include a limestone-lined well, a cellar depression, and a large surface scatter of historic artifacts at the highest elevation of the site and on the south side (Skinner et al. 1982b:4-4). Based on the location of these features, it was suggested that the house, which no longer remained, had been located to the north. Site size, based on artifact distributions, is about 3000 m^2, measuring approximately 50 m north-south by 60 m east-west. The land is in pasture, and a road and fence line bisect the southern site edge. Erosion has not seriously impacted the site. A second cellar and a house mound were located during excavation in 1987 (Figure 8-17). The house was situated south, rather than north of the well and cellars. A portion of the sandstone foundation of the dwelling was uncovered. Mr. Sadau (personal communication, 1987) stated that a wood (frame?) house had been located near S98 E84, corresponding with the house mound.

Previous Investigations: An overview of the previous investigations is provided in Appendix J. Testing was conducted by ECI, including 12 auger holes, one 1x1-m excavation unit, sixty five 3x1-m systematic surface collection units, and eight 5x5-m surface collection units. Based on these efforts, the site was recommended for nomination to the National Register. The site was determined eligible in 1982 prior to testing.

The site was revisited by UNT personnel in 1985. The status of the site remained unchanged. It was determined that insufficient data had been recovered on artifact distributions, archaeological features, and site function to permit comparison with similar sites in the reservoir. Controlled testing was recommended.

Archival Investigations: The earliest occupation may date to 1877 when Division 3 containing Tracts 7 and 8 was conveyed to F. M. Ready and W. A. Ready. The first division of the land occurred in 1875, when D. W. Heard and J. L. Trueheart began conveying parcels of the Manchaca survey on behalf of Carmel Manchaca's heirs. A complete chain of title is presented in Table A-14.

The site is located on Tract 8, and appears to have changed ownership at least ten times before it was purchased by the Corps in 1982. The older occupations, dating between 1877 and the mid-1930s, are well represented in the archaeological record at the site. No evidence was found indicating that the site was occupied after the 1940s. This may correlate with evidence that the Jones, Sullivan and Switzer families owned large parcels of land in the area, and may not have lived on this site. According to Skinner and Baird (1985:9-3), the site was occupied by tenant farmers in 1937. Based on the 1937 tax appraisal card, a dwelling and a barn, both built in 1915 were located on the site.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Excavation Method: Ninety 50x50-cm units were excavated on an 8-m grid across the site and a 4-m grid in the main site area. A 1x1-m unit was dug at S66 E86 to provide a detailed soil profile. The cultural material from this unit was not screened. Three backhoe trenches were judgmentally placed to examine subsurface features. BHT 1 (also designated BHT A) extended east-west along the S96 line. It was placed to bisect the house mound, and perpendicular to BHT 2 (B) located to cross-cut an anomaly at S94E80 to E86. Sandstone house piers occurred in

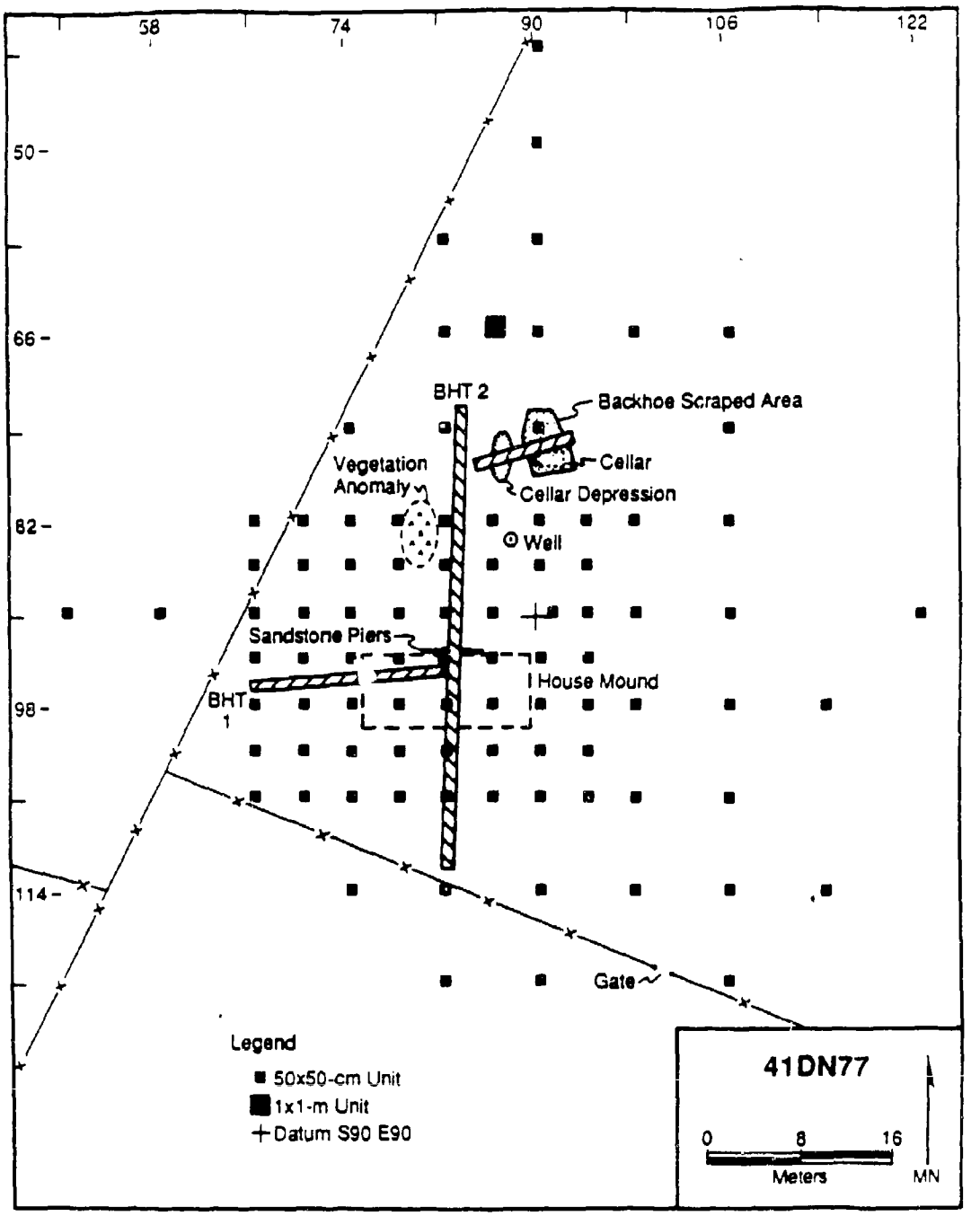


Figure 8-17. Site map of 41DN77.

BHT 2, and a north-south cross-section of the mound was obtained in this trench. BHT 3 was oriented at a diagonal, exposing two cellars. The western cellar was visible during the survey (Feature 2), and the second (Feature 5) was uncovered in the backhoe trench. Mechanical scraping was conducted over Feature 5 after BHT 3 was profiled exposing a planview of the cellar.

Excavation Results: The site exhibited good integrity with a low to moderate density sheet refuse deposit (Table 8-8). The mean number of artifacts from the 50x50-cm units was 18.77 items. Excluding architectural remains, the mean decreased to only 7.39 items per unit. Ceramics were more common than expected, representing 12.79% of the recovered artifacts or 20.91% when architectural remains are not included. Bottle glass accounted for 32.39% of the assemblage and architectural remains totalled 38.84%. A total of 1,108 artifacts were collected from the site in 1982 (Skinner and Baird 1985; Appendix J of this volume).

Table 8-8
Artifact Assemblage from 41DN77

Category	Freq.	%
Semi & Coarse Earthenware	1	0.06
Refined Earthenware	144	8.53
Stoneware	58	3.43
Porcelain	13	0.77
Bottle Glass	547	32.39
Table Glass	33	1.95
Lamp Glass	5	0.30
Unid. Glass	36	2.13
Window Glass	209	12.37
Machine-Cut Nails	213	12.61
Wire Nails	132	7.82
Building Material	77	4.56
Personal Items	20	1.18
Thin & Heavy Metal	109	6.45
Household Metal	8	0.47
Machine & Wagon	19	1.12
Metal Tools	1	0.06
Horse & Stable Gear	17	1.01
Ammunition	4	0.24
Miscellaneous Other	18	1.07
Total	1,689	

Building material was the most commonly recovered item in 1982, accounting for 33.75% of the assemblage, but only 4.56% of the 1987 collection. In both assemblages, machine-cut nails were 1.6 times more common than wire nails and only handmade brick fragments were found. Wire, plain and barbed, accounted for 98% of the

building material from the 1982 collection and 58% of the 1987 collection. Other items include hinges, staples, and screws. No mortar was found during either season.

The ceramics and bottle glass recovered during excavation yielded a combined mean beginning date of 1870 (n=325). Refined earthenwares produced a mean beginning date of 1862 (n=154), stonewares dated 1876 (n=118), and bottle glass yielded a date of 1881 (n=53). These dates are younger than those obtained from the 1982 collection, which produced a mean beginning date of 1899 (n=68) for the refined earthenwares and 1887 (n=39) for the stonewares. Differences in collection methods between the 1982 and 1987 samples may partially account for the more recent dates obtained for the 1982 collection. This earlier collection contains primarily surface artifacts and buried trash fill, while the 1987 collection is from units excavated in the sheet refuse deposit.

The distribution of refined earthenwares is shown in Figure 8-18a and indicates that while they are moderately distributed across all yards, they cluster in the west and northwest yards. The number of refined earthenware sherds ranged from 0 to 20 per 50x50-cm unit. The highest number of sherds (n=20) was found in Unit S94E82 on the north wall of the dwelling. Few refined earthenware sherds were found within the house mound.

Stonewares, found in fewer units than the refined earthenwares, exhibited two clusters; one northwest of the dwelling and one southwest of the house (Figure 8-18b). Both were close to the dwelling but clustered further away than the refined earthenwares. Only one stoneware sherd was found in the dwelling area in Unit S94E82. Stoneware sherds ranged from 0 to 7 sherds per 50x50-cm unit. Few stonewares were found east of the house or near the cellars.

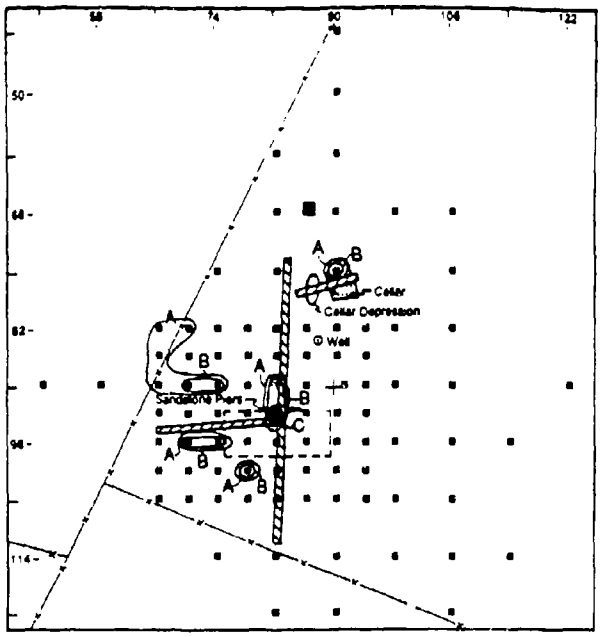
Bottle glass sherds were ubiquitous, occurring across the site but with the majority in units northwest, west, or southwest of the house (Figure 8-18c). Bottle glass ranged from 0 to 61 sherds per 50x50-cm unit. Five units containing more than 35 sherds each occurred within 8 m of the northwest corner of the dwelling, including one unit, Unit S94 E82, adjacent to the north house wall.

Machine-cut nails (ranging from 0 to 19 per unit) and wire nails (0 to 16) exhibited overlapping patterns (Figure 8-18d). Both types of nails were distributed broadly across the site, with a linear cluster through the northwest, west, and southwest yard areas. A small concentration of machine cut nails also occurred near the cellars.

Features: Feature 1 is a limestone-lined well extending to 2.4 m below the surface. Feature 2, a cellar, was located in BHT 3 during testing in 1987. The cellar was similar in construction with Feature 5, and the two overlapped. A profile was drawn of the south wall of BHT 3 illustrating the relationship of the two features (see Figure 8-17). A single 50x50-cm unit was excavated into Feature 2 at S74 E90. A planview of the cellar was drawn after the A-horizon above the feature was removed. It indicated that the cellar was oriented east-west with the entry on the west. A possible vent was identified on the east. The cellar exhibited similar construction as Feature 5, with earthen walls and floor, and post and beam ceiling.

Features 3 and 4 are sandstone piers from the foundation of the dwelling. They were exposed in BHT 2, and dispersed rock fragments associated with the foundation were found in units along the S94 (E78 to E86) and S98 (E78 to E86) lines (see Figure 8-17). The house mound measured approximately 12 m east-west by 6 m north-south.

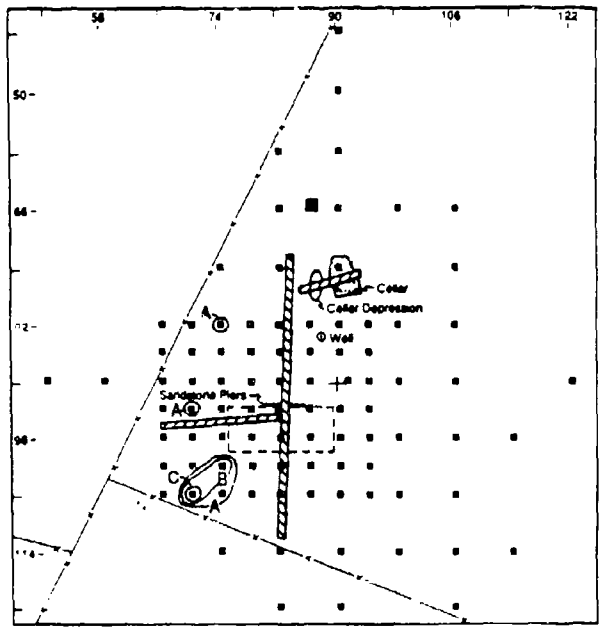
Two units, Auger Hole 1 and Test Unit 1 were excavated in Feature 5 (cellar) during testing by ECI (Skinner et al. 1982b:4-9). The auger hole was dug to 120 cm below the surface, and an overview of the cultural material is provided in Appendix J. Test Unit 1 was placed 10 cm south of the auger hole and yielded artifacts to 105 cm below surface (see Appendix J). Two dense artifact concentrations occurred at 100 cm below the surface, and the profile suggested that much of the fill was the result of roof collapse (Skinner et al. 1982b:4-9). The layer of sandstone and ironstone gravel encountered at 30 to 45 cm below surface probably represents the top of the cellar roof. Material in Levels 1 through 3 reflect ash accumulation after the cellar collapsed.



Refined Earthenwares

A 4-6
B 7-9
C 10-20

a

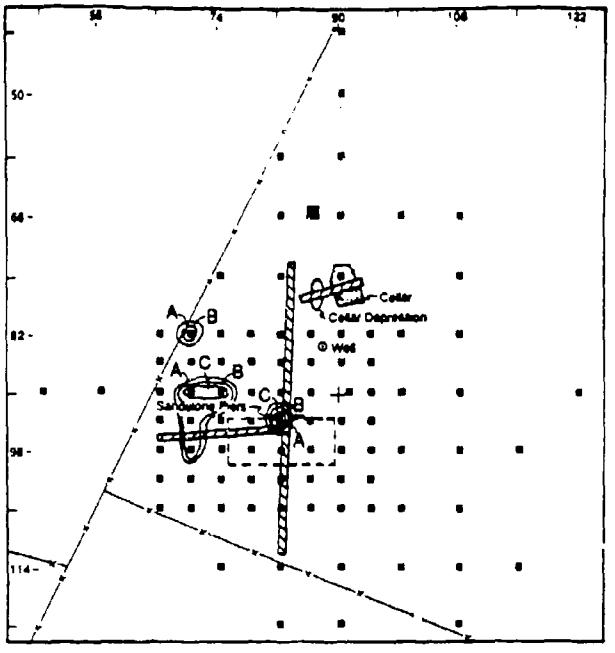


Stonewares

A 3-4
B 5-6
C 7-8

b

Figure 8-18. Artifact frequency distributions for the sheet-refuse deposit at 41DN77. (a) refined earthenwares, (b) stonewares, (c) bottle glass, and (d) machine-cut nails. Data are based on counts per 50x50-cm unit.



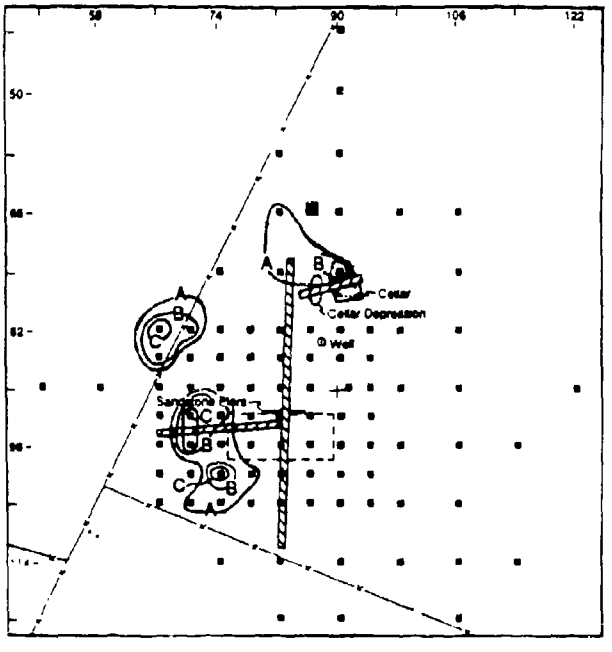


Figure 8-18. (continued) Artifact frequency distributions for the sheet-refuse deposit at 41DN77. (a) refined earthenwares, (b) stonewares, (c) bottle glass, and (d) machine-cut nails. Data are based on counts per 50x50-cm unit.

The cellar probably had an earthen floor and walls with wood post supports and a wood and earthen roof. It was oriented north-south. No additional excavations were conducted in Feature 5 during testing. BHT 3 bisected the feature and the south profile was drawn. It indicated that Features 2 and 5 overlapped.

Faunal Remains:

TOTAL BONE = 72

Identified fauna (n=23)

- Sciurus niger (fox squirrel) - 1
- Sigmodon hispidus (cottonrat) - 4
- Sus scrofa (domestic pig) - 3
- Bos taurus (domestic cattle) - 10
- large mammal - 5

Unidentified bone (n=49)

The small mammals in this sample were retrieved from fine-screened matrix. The cottonrat is probably intrusive, but the squirrel femur could be the remains of hunted game. The large domesticated mammals are represented by butchering waste bone, such as teeth, phalanges, and skull fragments (petrous); a vertebral fragment and bits of tooth enamel were identified only to the large mammal size category. These elements do suggest that the animals were butchered on site. None of the identified specimens exhibited cut marks or burning; however, 39% of the unidentified sample were burned. A fragment of a bone knife handle was recovered from Feature 5.

Summary: This site exhibited good archaeological integrity. The site was serially occupied between the 1870s and 1930s and contains little evidence of modern disturbance. The sheet refuse is moderately dense and several features (well, cellars) are well preserved. No outbuildings were located, although a barn was recorded for this site in the 1937 tax records. These records also identified the dwelling as having been built in 1915. This is not supported by the archaeological data. The architectural remains indicate that the house, set on sandstone piers, was probably built in the third quarter of the nineteenth century with additions made during the early twentieth century. No machine-made bricks were found, and machine-cut nails were 1.6 times more common in the recovered deposits than wire nails.

This farmstead proved significant in providing information on a relatively undisturbed farm occupied from the 1870s to 1930s. Excellent comparisons were possible between 41DN77 and 41DN91, which were settled about the same time near the community of Vaughantown (later called Cosner). Archaeological and architectural comparisons with other farmsteads occupied in the 1870s and abandoned before 1940 in the central portion of the project area -- e.g., 41DN166, 41DN146, 41DN234 and 41DN248 indicate considerable similarity in material culture, with differences occuring between these sites in types of structures and yard layout. Each of these sites had a small log or frame dwelling, but no cellars or wells were identified at 41DN146 or 41DN234. Several small outbuildings occur at 41DN248, and multiple cellars occurred at 41DN166. House mounds were identified at 41DN166 and 41DN77, but were absent at the other sites. Subsurface features related to specific activities or activity areas were identified at 41DN166 and 41DN248, but none were identified at the other sites, including 41DN77. As noted above, no outbuildings were found at 41DN77 although the tax data indicate there was at least one outbuilding at the farm in the 1930s. This discrepancy points up the problem with uncovering architectural remains of outbuildings, particularly small sheds and chicken coops. More substantial outbuildings such as barns, if they had occurred at 41DN77 should have been exposed during excavation. The significant contribution of site 41DN77 is the intact feature and sheet refuse deposits which reflect a short-term occupation between the 1870s and 1930s.

41DN79

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	595' amsl
Scheduled Investigations	Prehistoric excavation
Additional Investigations	Limited sheet refuse excavations, archival
Soil Association	Bastrop fine sandy loam
Cultural Affiliation	Prehistoric; Historic (mid-late 19th c.)

Description: The site is located on a Pleistocene terrace along the Elm Fork of the Trinity River. It was characterized by a moderate surface scatter of lithic debris, fire-cracked rock, and historic artifacts in a cultivated field. The historic component was assigned a ca. 1875 to 1935 date based on the presence of a farmstead at this location on the 1918 soil survey map of Denton County (Skinner et al. 1982b:3-5). No structures were present, and a historic Native American component was also reported (Skinner et al. 1982b, Skinner and Baird 1985). The historic artifact scatter was recorded as 88 m north-south by 67 m east-west.

Site 41DN79 was scheduled for prehistoric excavations in the Scope of Work. After excavations began, however, in situ historic features were identified, and limited sheet refuse excavations were undertaken after consultation with the Corps. The sheet refuse excavations were conducted by the historic field crew, and the results of both excavation efforts are reported here. These results include a detailed discussion of the historic component at 41DN79 and an overview of the prehistoric component(s). A detailed reporting of the prehistoric results is presented in Ferring and Yates (1995).

Previous Investigations: Testing was conducted at 41DN79 by ECI in 1981. During this testing, eight auger holes were excavated to recover information on subsurface geology and to guide the placement of test units. Historic material was found in Auger Hole 1, and possibly in Auger Holes 2 and 6 (data lost). Two 1x1-m units were dug, and Test Unit 2 revealed evidence of possible postmolds. The unit was enlarged using a series of nine 1x1-m units to expose the postmold pattern. These units were labeled Test Units 2b through 2j.

Based on the testing results, the site was interpreted as representing a seasonal camp occupied by a macroband that practice broad-ranged subsistence. It was concluded that the late nineteenth century historic did not appear to be temporally or spatially associated with the Native American component. The site was determined eligible for nomination to the National Register, and excavations were conducted in 1982 (Skinner and Baird 1985:4-5).

Eleven 2x2-m units were dug in the vicinity of Unit 2 to examine further the possibility of house locations in this area. These units were later defined as a block 8x8 m in size. Fourteen 2x2-m units were also excavated to recover a larger sample of artifacts (Figure 8-19). They were randomly placed using a random number table. These units were designated Units 2, 11, 15, 18, 25, 27, 29, 33, 36, 39, 46, 58, 60, and 87. Unit numbers 2 and 11 were duplicated. The original Unit 2 is located northeast of Auger Hole 4. The second (part of the random sample) is northeast of Unit 11 (also part of the random sample). The original Unit 11 is located within the block. Historic artifacts from a shallow sheet refuse deposit were found in these units. This material includes ceramics, bottle glass, architectural items, personal items, and other domestic and farm-related items.

Several postmolds were reported in Block 1 and were interpreted as reflecting the remains of three structures. A prehistoric artifact assemblage comprised primarily of lithic artifacts were recovered. Several historic assemblages were identified, including one reflecting a late nineteenth-century to early twentieth- century farmstead, and a possible eighteenth-century component containing gunflints and a piece of French faience pottery (Skinner and Baird 1985:4-15). It could not be determined if the latter artifacts were associated with a historic Native American occupation. No additional work was recommended.

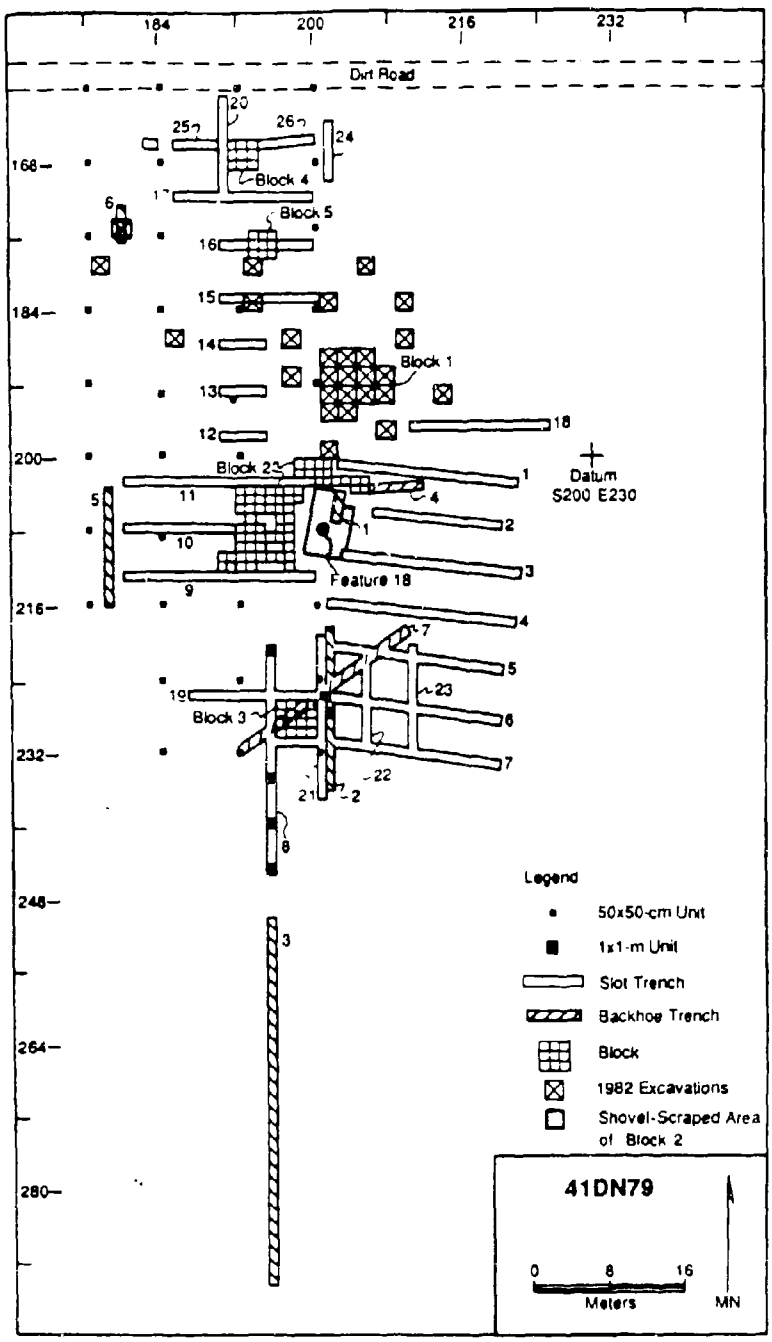


Figure 8-19. Site map for 41DN79. Note the 1982 excavations were conducted by ECI. All other units were excavated during the 1986-1987 field season. The slot trenches and the shovel-scraped area of Block 2 were hand excavated and were not screened.

The site was revisited twice in 1986 by personnel from NTSU, and three shovel test pits and one 1x1-m unit were dug. A diffuse sc: - of lithic debris and historic material was noted. A blue glass mandrel wound bead with a temporal date of AD 1600 to 1836 was collected from the surface. Lithic debris was recovered from two shovel test pits. The 1x1-m unit excavated between Units 29 and 39 yielded lithic debris, historic ceramics, and glass. Based on these results, further excavations of the prehistoric components was recommended. An overview of the historic artifacts collected by ECI are provided in Appendix B.

Archival Investigations: Site 41DN79 is located on the Minor Marsh survey (A-881) patented to William H. Downard, an assignee of Minor Marsh, in 1855 (Patent Record B, p.79). The survey contains 320 acres and is one of two 320-acre surveys granted to Minor Marsh. The second, survey A-880, is located to the south (Patent Record B, p.79).

When William H. Downard's estate was settled, he was listed as residing in Cass County, Missouri. Tax data, however, indicate that he resided on the Marsh surveys, but the location of his dwelling on the 640 acres is unknown. After William H. Downard's death, 480 acres of his estate, including the north 320 acres (A-881) and the west half of the south 320 acres (A-880), were conveyed in 1881 to his son, Washington Downard (Deed Record U, p.487). The property containing sites 41DN79 and 41DN81 was acquired by G. W. Vaughan a short time later and remained in the Vaughan family until 1951.

In the 1859 tax rolls for Denton County, William H. Downard is listed as owning: 640 acres (Minor Marsh surveys) valued at $3,280, 30 horses valued at $1,095, 1,000 head of cattle at $7,000, 62 sheep and hogs at $251., and $310. at interest (1859 Denton County Tax Rolls). This information indicates Downard was a cattle rancher, not a farmer.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Excavation Method: Excavation of the prehistoric component(s) was requested in the Scope of Work and was conducted in 1987. This work included the excavation of three backhoe trenches (BHTs 1-3), 26 hand-dug slot trenches (1-26), four blocks (2-5), and a shovel-scraped area in Block 2. The backhoe trenches were excavated to delimit site boundaries and the depth of cultural deposits. The A-horizon was shallow, and the slot trenches were dug to expose undisturbed deposits below the plowzone. These slot trenches were hand excavated, and the sediment was not screened. Artifacts found during shoveling or in the backdirt were collected. Three blocks (3-5) of contiguous 1x1-m units were dug to acquire a representative sample of cultural material for spatial analysis. Block 2 was excavated in the same fashion as the slot trenches. The plowzone was removed, and undisturbed deposits were exposed. Block 1, excavated by ECI was relocated at the beginning of the season, and was used to establish a grid that was tied into the previous excavations. The shovel-scraped area in Block 2 was hand shoveled to expose subsurface features below the plowzone near Feature 18.

Excavation of slot trenches revealed several features immediately below the plowzone. Two larger soil stains were discerned at the northern and southern extents of the site, respectively. On the basis of Slot Trenches 5, 6, 7, 8, 21, 22, and 23, the irregularly shaped circular stain measured about 17x17 m. Block 3 was established within the western part of the stain and measured 4x4 m. BHT 2 was dug to bisect the stain in a north-south direction. This trench indicated that the dark stain had an irregular basi- shaped bottom that extended to a depth exceeding 2 m. Hand excavation of 1x1-m units adjacent to BHT 2 indicated a very diffuse fire-cracked rock scatter and little other cultural material. Consequently, only the upper levels were excavated in Block 3 (at the south end of the site). This large feature contained several smaller fire-cracked rock concentrations that may have been hearths.

Based on Slot Trenches 17, 20, 24, 25, and 26, the dark stain at the north end of the site was estimated to be approximately 11 m east-west by 13 m north-south. Block 4 was established within the eastern part of the stain. It

measured 3x3 m and was excavated to the B-horizon. The stain contained several stratified hearths of fire-cracked rock. A large quantity of lithic debris was recovered. Block 2 was established between Blocks 1 and 3. The plowzone was manually stripped off, and Feature 18 was exposed. It was a small, oval-shaped pit containing a large quantity of historic domestic debris (e.g., ceramic, glass, personal items) and a small number of prehistoric (e.g., lithic debris and bifaces) artifacts. Block 5, 3x3 m in size, was placed between Blocks 1 and 4.

Based on the results of BHT 1 and Slot Trenches 1, 2, 3, 9, 10, and 11, Block 2 was dug to obtain spatial data on Feature 10, a trash-filled storage pit exposed in BHT 1. Shovel scraping was used to remove the plowzone near Feature 10 and resulted in exposing Features 18 and 19. The fill of Feature 18 was piece-plotted. Feature 19 is an oval-shaped stain, possibly related to hearth-cleaning activity in this area of the site.

Following the prehistoric excavations in 1987, excavations to recover additional information on the historic components at 41DN79 were recommended. This work was undertaken to recover a sample of the sheet refuse associated with the ca. 1875 to 1935 farmstead reported at the site. Thirty-three 50x50-cm units were excavated. In addition, efforts were undertaken to expand Block 2, which contained the only historic feature encountered during previous investigations. A total of 66 1x1-m contiguous units were excavated to a depth of 10 cm below the surface, exposing deposits below the plowzone within Block 2, and the original block area was re-exposed. Because of extensive slumping, BHT 2 was enlarged, removing Slot Trench 21. A diagonal cross-trench (BHT 7) was dug to allow the dimensions of the reported "Wylie Focus pit" to be mapped, and its function determined. BHT 4 and 5 were dug to provide additional information on subsurface deposits within the area near Block 2. BHT 6 was dug to yield information on the northern part of the site, and bisected a unit excavated by ECI in 1982

Geology: Site 41DN79 is on the first terrace above the Elm Fork of the Trinity River floodplain. The site is near the northern edge of the terrace and overlooks a slough that may represent a now-abandoned Holocene channel of the Elm Fork of the Trinity River. This site is essentially in the same geologic position as site 41DN81 located several hundred meters to the east.

The site topography is generally level, but there is a gradual slope to the north from the terrace scarp. Some gullying of the terrace, probably occurring during the Holocene, is evident. West of the site is a large gully which was dammed to form a stock pond. Overall, however, the site surface is generally level up to the northern perimeter near the terrace scarp.

Stratigraphy: The terrace fill is Late Pleistocene sandy alluvium. This alluvium appears to be terrace fill rather than a cut into the higher Hickory Creek terrace which occurs south of the site. A profile drawn at the southern end of BHT 2 (Figure 8-20) is typical of the soil development stratigraphy for most of the site area (Table 8-9). This 2.45 m trench exposed a well-developed soil formed in sandy to loamy alluvial parent materials. The A-horizon here is about 15 cm thick and is underlain by an argillic B-horizon extending to a depth of approximately 1.9 m below the surface. These sandy loam and sandy clay loam sediments contain most of the historic artifacts at the site. Historic artifacts in the B-horizon are intrusive, largely having worked their way down through the sediments.

In the central site area north of the BHT 2 profile is a large eroded depression which has filled with dark organic-rich loamy material. Although, numerous trenches were dug through this deposit, the exact geometry and geologic origin of this geologic feature could not be determined. The best interpretation of this feature is that it is an erosional gully which filled with A-horizon material probably in late Holocene time. The distribution of prehistoric and historic artifacts at this site should comment directly on the age of this geologic feature. Since historic artifacts are distributed evenly across the feature, and prehistoric artifacts are rare across this feature, it is presumed that the gully and the subsequent filling of the gully took place sometime in the late Holocene and prior to the principal historic occupation at the site.

The sandy loam parent material in the A-horizon is of considerable importance in understanding historic site formation processes at 41DN79. Because the A-horizon is underlain by much more clayey D-horizon material, it

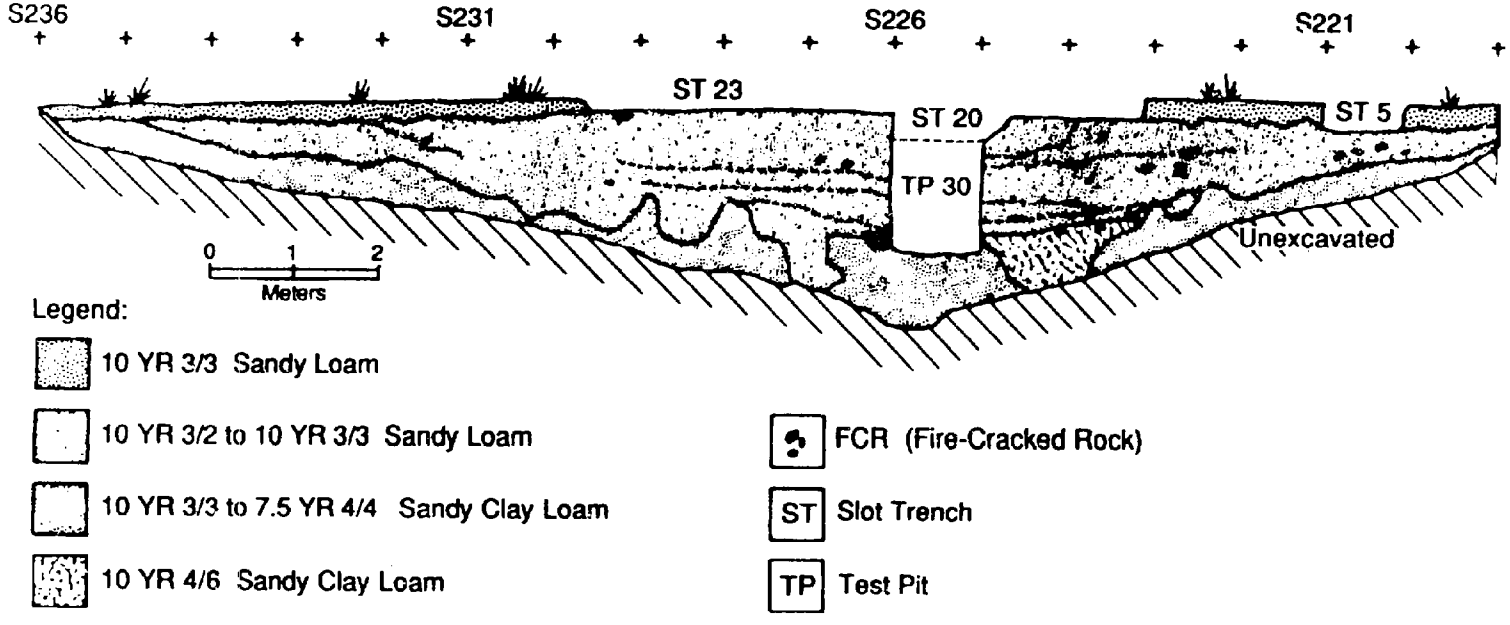


Figure 8-20. Profile of BHT 2 at 41DN79.

Table 8-9
Soil Profile Description for the Southern Portion of BHT 2 at 41DN79

Horizon	Depth (cms)	Color Moist	Texture	Structure	Boundary
Ap	0-8	7.5YR3/4	fSL	1fsab	cs
A1	8-15	8.75YR3/4	SL	2mag	as
Bt	15-28	5YR3/4	fSCL	3msab	cs
Bt2	28-53	5YR3/4	SC	3msab	gs
Bt3	53-88	5YR4/6	SCL	2mpr;3msab	gs
Bt4	88-119	5YR5/7	fSCL	2msab	gs
Bt5	119-187	7.5YR5/8	SCL-SL	2msab	gs
2C1	187-224	7.5YR5/8	SL-SCL	2csab	ai
3C2	224-245+		gravel		

Key:

Texture: SC=sandy clay, SCL=sandy clay loam, SL=sandy loam. Structure: grade/class/type; grade: 1=weak, 2=moderate, 3=strong; class: c=coarse, f=fine, m=medium; type: ag=angular blocky, pr=prismatic, sab=subangular blocky. Boundary: distinctness/topography; distinctness: a=abrupt, c=clear, d=diffuse, g=gradual; topography: i=irregular, s=smooth, w=wavy.

is presumed that bioturbation and possible plowing activity have resulted in a mixture of historic and prehistoric artifacts in the upper 15-cm of the profile. The increased clay content of the B-horizon should retard bioturbation and mixture of artifactual material in this horizon.

Mitigation Results: The mitigation-level excavations at 41DN79 indicate Late Prehistoric I occupation of the site by Native Americans and a mid to late nineteenth-century historic domestic occupation. The historic Anglo domestic component corresponds in age with W. H. Downard's occupation of the Minor Marsh surveys in the 1850-1880 period. This component accounts for over 95% of the historic material recovered from 41DN79. Historic Native American artifacts or trade goods were also recovered and include a small number of worked bone beads and tools, glass beads, gunflints, and worked metal.

Historic Native American groups continued to occupy this region when Anglo settlers immigrated here in the 1840s (see Chapter 3). While their settlements and numbers dwindled over the next three decades, some still occupied this region after the Civil War, and others continued to travel here from Oklahoma well into the 1870s and 1880s. A historic Indian village was located near this site along Wire Road (Old Highway 455) between the Sullivan farms (e.g., 41DN157) and 41DN79 and 41DN81 (see the Genealogy of the True & Bevers (Beavers) Families published by Gainesville Printing, 1983, and on file at the Cooke County Library, Gainesville). While some of the Historic Native American artifacts or trade goods from this site were reported as eighteenth century (Skinner and Baird 1985), some are similar to trade goods recovered from mid to late nineteenth-century Texas forts (e.g., tubular beads). An example from Adobe Walls, an 1874 trading post in Hutchinson County in the Texas Panhandle was identified as "hair pipe" bead, "a name taken from the practice by some Indians of using them as hair ornaments" (Baker and Harrison 1986:255). This example is 3 1/32 inches long, with cut and polished ends and is made from a turkey radius.

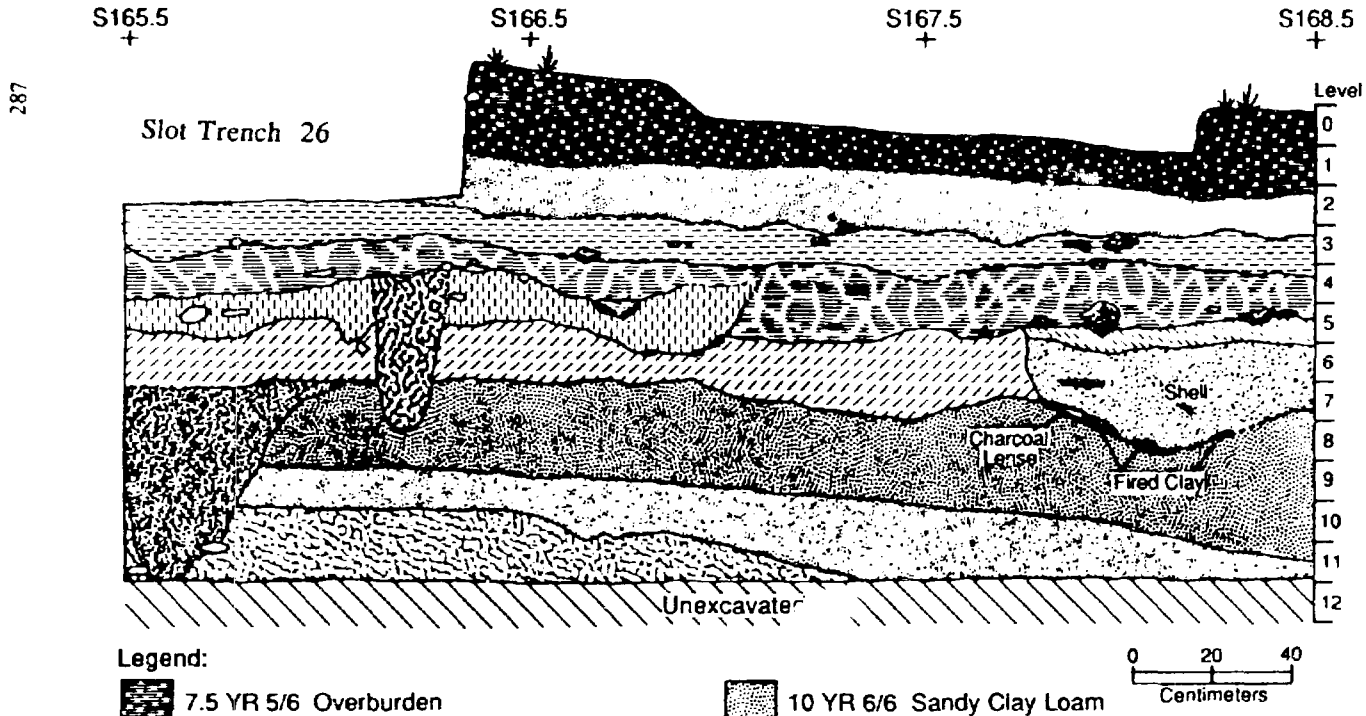
The interpretive results from mitigation are presented in three sections: (1) features, (2) prehistoric results, and (3) historic results. Emphasis is placed on the features and historic results. An overview of the prehistoric results is provided, and a detailed discussion is given in Ferring et al. 1992.

Features: Nineteen features were found during the 1987 excavations. Historic artifacts were found in Features 1, 2, 8, 17 and 18. The 19 features are listed in Table 8-10 and are discussed separately below.

Table 8-10
Features Found at 41DN79

Fe.#	Feature Type	Provenience
1	Filled gully	South site area, incl. Block 3
2	Prehistoric midden	Block 4 is located in Feature 2
3	Postmold?	Block 3, Levels 2-4
4	Postmold?	Block 3, Level 3
5	Postmold?	Block 3, Level 3
6	Rock hearth	Block 4, Levels 3-8
7	Organic stain/ storage pit?	Slot Trench 1 Plowzone-Level 1
8	Organic stain/ storage pit?	Slot Trench 10, Plowzone-Level 1
9	Burned tree stump	Slot Trench 8, Plowzone-Level 1
10	Storage pit	Backhoe Trench 1, Levels 1-4
11	Hearth/rodent den	Slot Trench 23, Plowzone-Level 1
12	Postmold?	Slot Trench 23, Plowzone-Level 1
13	Postmold?	Slot Trench 23, Plowzone-unknown
14	Postmold?	Slot Trench 4, Plowzone-Level 1
15	Postmold?	Slot Trench 4, Plowzone-Level 1
16	Rock hearth	Block 4, Unit 24, Levels 9-10
17	Organic stain/ storage pit?	Slot Trench 16, Block 5, Units 31-39, Plowzone-Level 1
18	Historic filled pit	Block 2, Levels 1-5
19	Organic stain	Block 2, Level 1

Feature 1: This feature was reported as a possible "Wylie Focus pit" (Skinner and Baird 1985). Units in Block 3, and parts of slot trenches 6, 8, 19, 21, and 22, and several 50x50-cm and isolated 1x1-m units were located in Feature 1 (Figure 8-22). Following the excavation of these units, BHT 2 and 7 were dug and profiled to determine the function of Feature 1. The west wall of BHT 2 is shown in Figure 8-20. Based on these results, Feature 1 was



Legend:

0 20 40
Centimeters

- 7.5 YR 5/6 Overburden
- 7.5 YR 5/6 mottled with 10 YR 3/2 Sandy Clay Loam
- 10 YR 3/2 Silt Clay Loam
- 7.5 YR 3/2 Silt Clay Loam
- 10 YR 3/2 Silt Clay
- 7.5 YR 4/6 Sandy Clay with 10 YR 3/2 Sandy Silt Clay Loam
- 10 YR 4/4 mottled with 10 YR 6/6 Sandy Clay Loam
- 10 YR 6/6 Sandy Clay Loam
- 7.5 YR 5/8 Sandy Clay
- 10 YR 5/8 Sandy Clay
- 10 YR 4/3 mottled with 10 YR 4/6 Silt Clay Loam
- 10 YR 4/3 mottled with 10 YR 5/8 Silt Clay Loam
- 7.5 YR 4/4 mottled with 10 YR 4/6 Silt Clay Loam
- Fire-Cracked Rock
- Rock

Figure 8-21. Profile of East Wall of Block 4 at 41DN79.

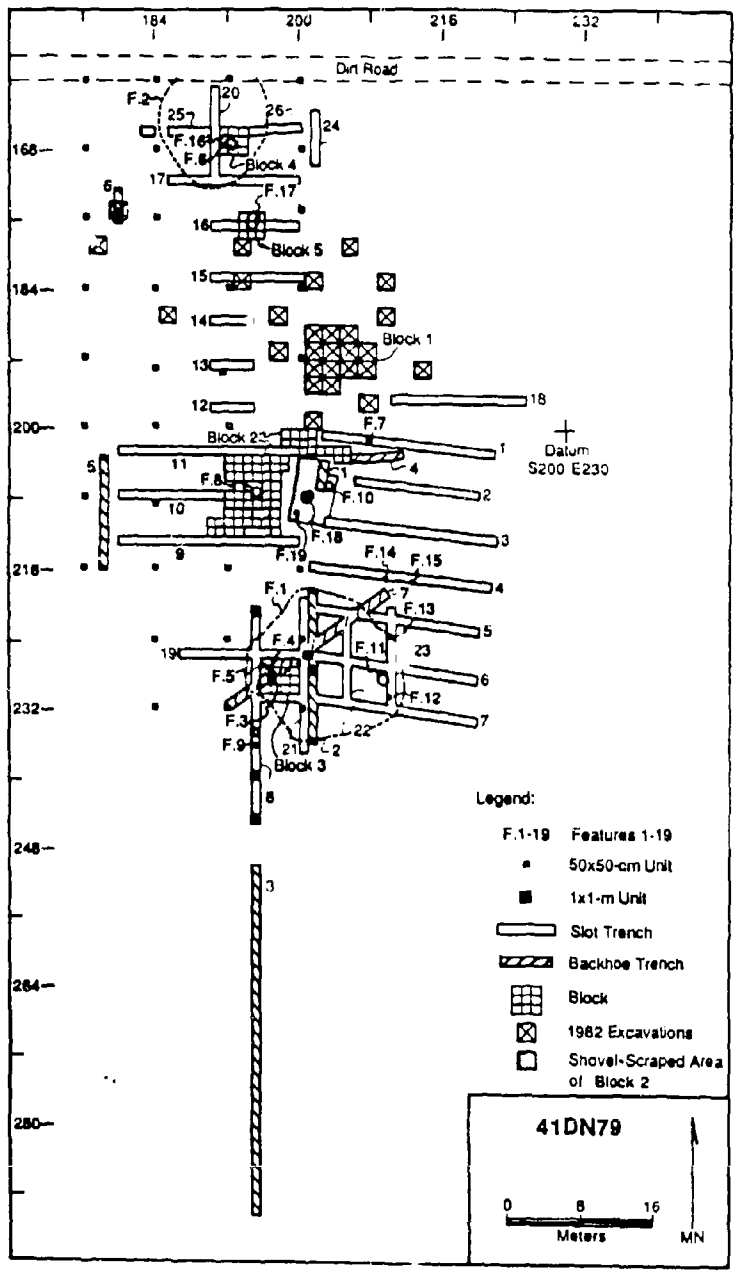


Figure 8-22. Locations of the subsurface features exposed during excavations at 41DN79.

identified as a geological feature, probably a filled gully. Historic artifacts were found in the upper levels of the 50x50-cm units, Block 3, and the backhoe trenches excavated in Feature 1.

Feature 2: Feature 2 was identified as a prehistoric midden containing stratigraphically discrete rock hearths and cultural debris (charcoal, ash, burned clay, bone, lithics, and fire-cracked rock (FCR)). It was located at the north end of the site and is approximately 13 m by 17 m by 1 m deep. The feature was exposed below the plowzone at the base of Level 3. Several plow scars were evident at the contact between the plowzone and the underlying deposits. The feature was excavated in Units 17 and 22-29 in Block 4.

Two discrete features were identified within Feature 2, Feature 6 and Feature 16, as dense fire-cracked rock concentrations (see discussion below). Feature 2 was dug in arbitrary 10-cm levels. With the exception of Unit 25 and Feature 6, the matrix from Feature 2 was water screened through 1/4-inch mesh. Unit 25 was waterscreened through 1/16-inch mesh, and Feature 6 was collected for fine screening.

Historic artifacts were found in Feature 2 and are discussed in the Historic section. These artifacts were from the sheet refuse deposit and occurred in Levels 1-12. The vertical distribution of these artifacts indicates considerable downward movement of artifacts in this portion of the site. A profile of the east wall of Block 4 is shown in Figure 8-21.

Feature 3: Feature 3 was a dark organic stain in Unit 6 (S227.41 E197.42) of Block 3. It was identified in Level 2 and extended into Level 4. It was approximately 21 cm in diameter and contained fire-cracked rock and charcoal. No artifacts were found. The north half was removed for fine screening. The feature was not excavated in levels. A profile was drawn of the north wall. A root stain occurred at the base of Feature 3. It is unknown whether the feature was associated with the historic component(s) or the prehistoric occupations at this site.

Feature 4: Feature 4 was a dark organic stain and possible postmold, in Unit 1 (S226.95 E196.72) of Block 3. It was identified at the base of Level 3 while troweling the floor of Level 3. It was approximately 14 cm north-south by 20 cm east-west. It was not excavated. No data was obtained on the date/association of this feature with the occupations of the site and other features.

Feature 5: Feature 5 was a possibly a postmold identified by a dark stain in Unit 1 (S226.49 E196.14) of Block 3. It was identified at the base of Level 3. It was not excavated. It was approximately 16 cm by 18 cm in diameter. The age and association of this feature is unknown. It occurred in the same area as Features 3 and 4 and may be related to these features.

Feature 6: Feature 6 was identified in Feature 2 and is a hearth. The feature was identified at the base of Level 3 and extended to the top of Level 8. It was excavated in Units 24, 25, 27, and 28 in Block 4. It was a basin-shaped feature containing stained matrix, charcoal, fire-cracked rock, bone, shell, and lithics. The feature was removed by unit level for flotation. The feature was probably used over an extended period of time. No historic artifacts were found in Feature 6.

Charcoal from Level 6 yielded a radiocarbon date of 930±60 BP (Beta-32518), while a date of 1030±80 BP (Beta-32519) was obtained for Level 10 in Block 2. Both dates are from Feature 2 (containing Features 6 and 16). These dates indicate these features were deposited during a short period.

Feature 7: Feature 7 was identified as an organic stain with two pieces of fire-cracked rock and small charcoal flecks at the base of the plowzone in Slot Trench 1 (S201.31 E207.69). The upper portion of the feature was removed by historic plowing. It was approximately 57 cm x 54 cm with a maximum depth of 4 cm. The feature was bisected north-south and the west half was excavated. No artifacts were found. This feature may be related to a burned-rock cluster (about 11 rocks) located 5 m east of this feature, or to food storage(?). This cluster was not given a feature number.

Feature 8: Feature 8 was an organic stain containing fire-cracked rock, daub, bison bone, deer antler, charcoal, and pebbles. It was in Slot Trench 10 and was identified at the base of the plowzone. The upper part of the feature had been removed by historic plowing. The feature was approximately 98 cm by 76 cm and extended to a depth of ca. 10 cm. A single historic refined earthenware sherd was recovered from Feature 8. This feature may have been used as a storage pit.

Feature 9: Feature 9 was a burned tree stump in Slot Trench 8 (S235.88 E196.44).

Feature 10: Feature 10 is identified as a prehistoric storage pit. The maximum dimensions of the feature were 110 cm north-south by 65 cm east-west and 42 cm deep. The feature was exposed in BHT 1 (approximate center of the feature is S206.55 E203.32). This feature was basin-shaped, contains burned rocks, charcoal, prehistoric lithic debitage, bone, a side-notched arrowpoint and shell. The size and depth of Feature 10 suggests that it was used as a storage pit and later for trash disposal. Flotation samples were taken for each level. No historic artifacts were found in Feature 10, although Feature 18, a historic trash-filled pit was located only 2 m southwest of Feature 10 in Block 2. The upper part of Feature 10, however, may also have been removed by historic plowing. Approximately 30-40% of this feature was removed by the backhoe.

Feature 11: Feature 11 was identified as a Y-shaped filled pit in Feature 1 (filled gully). It was in Slot Trench 23 (center of feature is S228.25 E209.75). The feature was 1.5 m north-south by 1.25 m east-west. It was then divided into two features, 11A and 11B. Feature 11A was bisected EW and the north half was removed. The feature was shallow, approximately 8 cm thick, and contained a small amount of fire-cracked rock, charcoal, lithic debitage and bone. Feature 11B was bisected and the north half was excavated. It was identified as a disturbed rodent den impacted by historic plowing.

Feature 12: Feature 12 was a possible postmold in Slot Trench 23 (center: S229.95 E210). It was identified at the base of the plowzone and was probably truncated by historic plowing. The feature was about 13 cm in diameter, circular, only 16 cm in depth, and has a rounded bottom. Feature 12 was bisected north-south and the north half was excavated. No artifacts were found.

Feature 13: Feature 13 was a possible postmold in Slot Trench 23 (center of feature is S223.3 E210) and was probably related to Feature 12. It was about 20 cm in diameter, circular, with a rounded bottom, and 3 cm deep. The north half was excavated, and no artifacts were found. The upper part of the feature was probably removed by historic plowing.

Features 14 and 15: Features 14 (center: S216.92 E210.08) and 15 (center: S217.13 E213.00) were possibly postmolds in Slot Trench 4 and were probably associated with Features 12 and 13. Features 14 and 15 had rounded bottoms and were identified at the base of the plowzone and were probably truncated by historic plowing. Feature 14 was about 14 cm in diameter, circular, and only 5 cm deep. The north half was excavated. No artifacts were found. Feature 15 was about 19 cm in diameter, circular, and the entire feature fill was removed. No artifacts were found.

Feature 16: Feature 16 was a fire-cracked rock hearth in Unit 24 of Block 4. It was oval shaped (center: S167.5 E192.0). It was identified at the base of Level 9 and extended to the base of Level 10. It was approximately 75 x 70 cm in diameter in Level 9 and 1.2 x 1 m in Level 10. Prehistoric artifacts included fire-cracked rock, charcoal, shell, and lithic debitage. No historic artifacts were found in Feature 16.

Charcoal from Level 6 yielded a radiocarbon date of 930±60 BP (Beta-32518), while a date of 1030±80 BP (Beta-32519) was obtained for Level 10 in Block 2. Both dates are from Feature 2 (containing Features 6 and 16). These dates indicate these features were deposited during a short period of time.

Feature 17: Feature 17 was an organic stain that may be from a storage pit. It was in Slot Trench 16 and Units 31-39 in Block 5. It was identified in the plowzone and the upper portion was truncated by historic plowing. The

contents included fire-cracked rock, charcoal, shell, bone, lithic debitage and lithic tools. The feature measured approximately 2.5 m x 1.75 m with a depth of 30 cm.

The feature was first encountered in Slot Trench 16. Block 5 was excavated to expose this feature. The 1x1-m units were dug in arbitrary 10-cm levels. The plowzone was stripped off, and except for Levels 1 and 2 which contained disturbed deposits, the levels were waterscreened through 1/16-inch mesh. The historic artifacts in Levels 1 and 2 of Feature 17 include ceramics, bottle glass, window glass, wire nails, and building material.

Feature 18: Feature 18 was a historic feature. It was the only historic feature uncovered at the site. It was located in Block 2 (center of feature at S207.50 E200.75). Feature 18 was identified at the contact between the plowzone and the underlying sediment. The upper portion of Feature 18 may have been truncated by plowing.

The feature was oval, measuring about 1.32 m x 0.92 m and was oriented southwest-northeast. It was first identified in Level 1 and extended approximately 40 cm deep, into Level 5. Feature 18 was much longer than it was wide, and had steep, almost vertical sides, and a relatively flat bottom. The feature was exposed during removing the plowzone by shovel skimming. It appeared as a mottled charcoal-stained matrix intrusive into the B-horizon.

The feature was drawn in planview when it was exposed and then bisected north-south. The east half was excavated first. It was dug in arbitrary 10-cm levels and all artifacts larger than 2 cm were piece plotted. Beginning with Level 2, all mapped artifacts were assigned unique artifact numbers in the field and detailed artifact list accompanied the planview for each level. A flotation sample was collected from each level. The remaining matrix was waterscreened using 1/16-inch mesh.

A vertical profile was drawn and photographed when the bottom of the east half of the feature was reached. Following this, the west half was excavated in the same manner as the east half. After Feature 18 was completely excavated, photographs were taken and two cross-sections (running east-west) were drawn. A profile of Feature 18 is provided in Figure 8-23 and planviews for Levels 2-5 are shown in Figure 8-24.

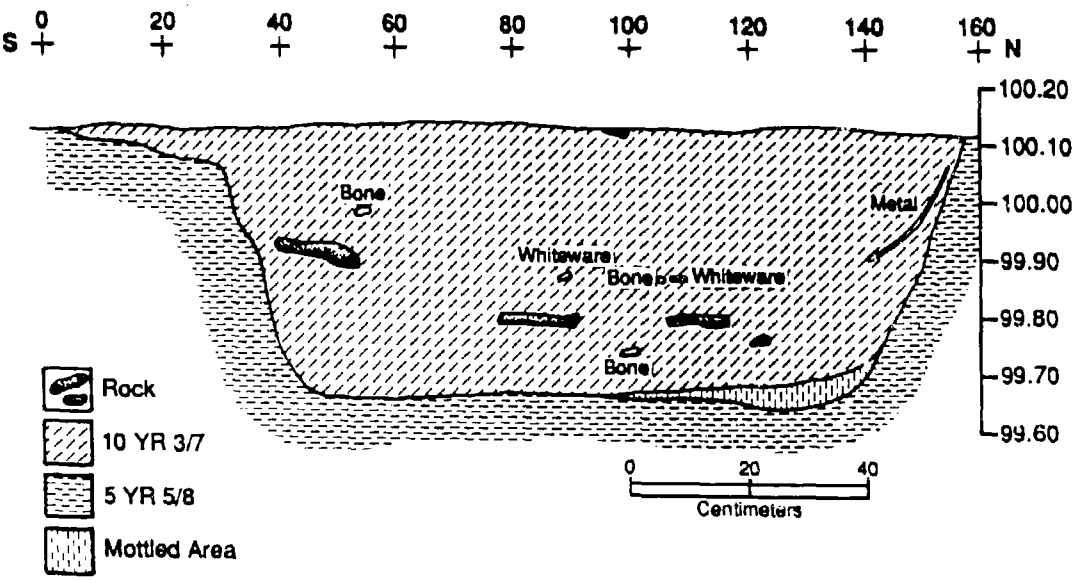


Figure 8-23. West Profile of Feature 18 at 41DN79.

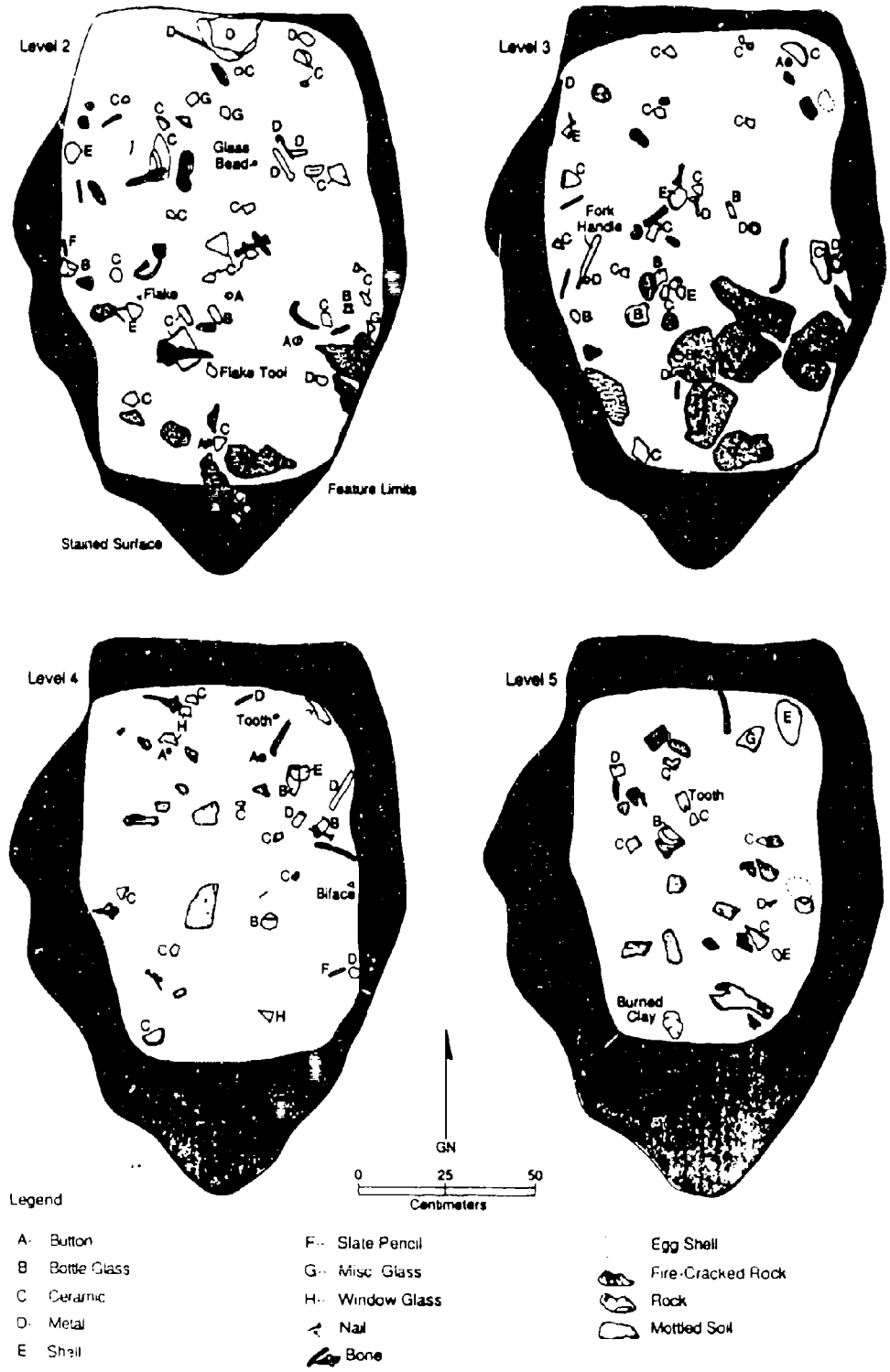


Figure 8-24. Planviews of Levels 2-5 of Feature 18 in Block 2 at 41DN79.

Historic artifacts piece plotted in Feature 18 during excavation included butchered animal bone, burned earth, metal, window glass, bottle glass, buttons, egg shell, machine-cut nails, slate pencil fragments, a stoneware tobacco pipe fragment, a fork handle, and numerous refined earthenware sherds. Prehistoric items included lithic debitage and a chert biface.

During excavation, the size and shape of Feature 18 suggested that it may have been a privy or a trash-filled pit. The original function of this feature is unknown, but it was last used as a trash pit. Its shallow depth, square walls, and large size, suggest it was not a privy. It may have been a storage area under the dwelling or associated with an outbuilding, which was later used for trash disposal.

The prehistoric lithic material may represent bioturbation, material disturbed when the pit was excavated, material in the sediment that was deposited in the pit fill, or material deposited when the site was plowed. The upper part of the feature extended into the plowzone. No discernable fill sequence was evident in Feature 18. This indicates the feature was filled rapidly.

Feature 19: Feature 19 was an organic stain in Block 2 (center: S209 E200.7). It was about 46 cm x 36 cm, oval shaped. It was identified at the base of the plowzone and was largely removed by historic plowing. It was approximately 2 m southwest of Feature 18 and 5 m southwest of Feature 10. No cultural material was found in Feature 19. The stain was bisected north-south, and the east half was excavated. The age and cultural association of this feature is unknown.

Prehistoric Results: A detailed discussion of the prehistoric results for 41DN79 are presented in Ferring et al. (1992). The north end of the site had been destroyed by gravel quarrying activities and a road. It was the removal of deposits overlying the gravels that were piled to the south of the gravel quarry that subsequently protected the prehistoric deposits that were excavated in Block 4. The northern site area was used repeatedly for fire-related activities that resulted in the development of a deposit containing Late Prehistoric I remains. The two radiometric dates from Block 4 indicates the time of occupation during the middle part of the Late Prehistoric I period.

The central portion of the site contained Late Prehistoric I remains that have been disturbed by historic occupation. Isolated features in the slot trenches were truncated by cultivation, and the function and age, particularly contemporaneity, could not be determined for all features.

The two radiometric dates from Block 4, 930±60 BP (Beta-32518) and 1030±80 BP (Beta-32519) indicates the accumulation of the rock within levels 6-10 occurred during the middle part of the Late Prehistoric I period. Using the Stuiver and Becker (1987) correction curve, 930±60 BP correlates with the dates 910, 855, 831, 810, and 799 BP while the date 1030±80 BP correlates with 953 BP. Given the age and standard deviations of these dates, they are essentially contemporaneous and are believed to reflect accurately the time of rock accumulation in the area of Block 4, and more specifically, the large dark stain of Feature 2.

Historic Results: This section provides an overview of the historic assemblages by collection type and distribution. This overview is subdivided into six parts: (1) features, (2) slot trenches, (3) blocks, (4) backhoe trenches, (5) 50x50-cm units, and (6) general site overview.

Features: An overview of the features identified at 41DN79 was presented above. This discussion provides a summary of the historic assemblages from these features. Historic artifacts were found in Features 2, 8, 17, and 18. The artifact frequencies for the artifact categories found in these features are given in Table 8-11 and is illustrated in Figure 8-25.

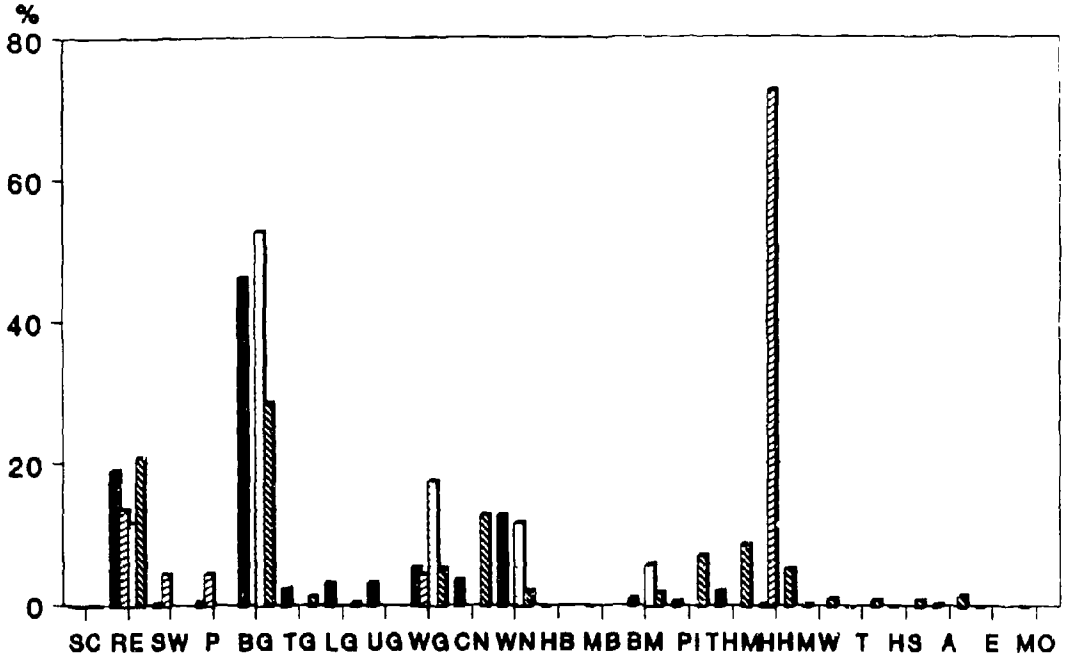
Based on the data in Table 8-12 several discrete patterns are evident. First, the historic artifacts from these features indicate that Feature 18 was deposited much earlier than the historic material in Feature 2, 8, and 17.

Table 8-11
Artifact Assemblages from Features at 41DN79

Category	Feature 2		Feature 8		Feature 17		Feature 18	
Refined Earthenware	52	18.57	3	13.64	2	11.76	143	20.94
Stoneware	1	0.36	1	4.55				
Porcelain	2	0.71	1	4.55				
Bottle Glass	126	45.00			9	52.94	196	28.70
Table Glass	7	2.50					10	1.46
Lamp Glass	9	3.21					4	0.59
Unid. Glass	9	3.21						
Window Glass	15	5.36	1	4.55	3	17.65	37	5.42
Machine-Cut Nails	10	3.57					88	12.88
Wire Nails	35	12.50			2	11.76	15	2.20
Building Material	3	1.07			1	5.88	13	1.90
Personal Items	2	0.71					49	7.17
Thin & Heavy Metal	6	2.14					60	8.78
Household Metal	1	0.36	16	72.73			36	5.27
Machine & Wagon	1	0.36					8	1.17
Tools							6	0.88
Horse & Stable Gear							7	1.02
Ammunition	1	0.36					11	1.61
Total	280		22		17		683	

Table 8-12
MBD Dates By Collection Area for 41DN79 (sample size)

50x50s	Feature 2	Block 2	Feature 18	
Ref. Earth.	1868.5 (46)		1864.6 (272)	1851.9 (124)
Stonewares	1857.5 (4)		1860.9 (28)	
Bottle Glass	1887.5 (8)	1885.0 (8)	1874.6 (13)	1853.1 (18)
Combined	1870.3 (58)	1885.0 (8)	1864.7 (313)	1852.1 (142)



Legend:

Fe. 2 | Fe. 8 | Fe. 17 | Fe. 18

SC	Semi-Coarse Earthenwares	CN	Machine-Cut Nails	MW	Machine, Wagon, Hardware
RE	Refined Earthenwares	WN	Wire Nails	T	Tools
SW	Stonewares	HB	Handmade Brick	HS	Horse & Stable Gear
P	Porcelains	MB	Machine-made Brick	A	Ammunition
BG	Bottle Glass	BM	Building Material	E	Electrical Items
TG	Table Glass	PI	Personal Items	MO	Misc. Other
LG	Lamp Glass	THM	Thin & Heavy Metal		
WG	Window Glass	HH	Household Metal		

Figure 8-25. Comparison of artifact categories from Features 2, 8, 17, and 18 at 41DN79.

Secondly, Feature 18 was filled in rapidly and contains few artifacts. The historic material in Features 8 (stain/prehistoric artifact cluster) and 17 (stain/hearth cleaning?) is intrusive sheet refuse.

Mean beginning dates were calculated for the different historic collection areas at 41DN79 (Table 8-12 and Table 8-13). These dates indicate that Feature 18 filled rapidly and is older than the other historic deposits found at the site. Block 2 dates five years younger than the sheet refuse in the 50x50s, while the sample from Feature 2 is too small to date.

Table 8-13
MBD Dates By Collection Area for 41DN79 (sample size), Excluding Post-Occupational Material

50x50s	Feature 2	Block 2	Feature 18	
Ref. Earth.	1868.5 (46)		1864.6 (272)	1851.9 (124)
Stonwares	1857.5 (4)		1860.9 (28)	
Bottle Glass	1865.0 (4)	1870.0 (5)	1864.0 (10)	1853.1 (18)
Combined	1867.4 (54)	1870.0 (5)	1864.3 (310)	1852.1 (142)

The assemblage from Feature 18 contains no twentieth century artifacts and only one diagnostic bottle glass sherd dated after 1880, which probably is intrusive sheet refuse. The difference in the MBD for Block 2 and the 50x50-cm units is not significant, but does indicate several depositional patterns. The artifacts in Block 2 contain a higher percentage of items deposited during the early occupation, while the 50x50-cm units contain more items dating to the end of occupation or post-occupation deposition.

Based on the data in Table 8-12 and Table 8-13, the site was occupied for a short period, probably between the 1850s and 1890s. The historic Native American material found at 41DN79 and the historic bottle glass and ceramics suggest the site was occupied before 1850. This early occupation, however, is not recorded in the deed/title or tax roll records for this site.

The site is located on the Minor Marsh survey, (A-881) granted to William H. Downard of Cass County, Missouri. W. H. Downard was the assignee of Minor Marsh. The survey contains 320 acres and was granted by the State of Texas in December, 1855 (Patent Record B, p. 79). William Downard promised this survey, along with an adjoining survey, Minor Marsh survey, A-880, to his son Washington Downard. However, he died before doing this, and his wife, Jane Downard, along with other heirs, conveyed this land to Washington in 1881. Several heirs listed their residence in Cooke County, but Jane Downard is listed in Cass County, Missouri (Deed Record U, p. 487). The site was occupied by the Downard family during this period, and William Downard was a cattle rancher.

A gap occurs in the transactions, and the Vaughan family acquired the property between 1881 and 1908, when G. W. Vaughan filed his homestead (Deed Record 107, p. 485). The Vaughan family owned much of the surrounding property, including other tracts in the Marsh surveys (A-880 and A-881) and adjacent surveys. They probably acquired the portion of the Marsh survey containing sites 41DN79 and 41DN81 in the 1880s. Their 1908 homestead was not on the Marsh surveys.

Based on these data, the possible historic Native American occupation probably predates the original 1855 patent granted by the State of Texas. This occupation may include Feature 18. Other features found in the upper levels at the site may also belong to this occupation. These features include postmolds and possibly, shallow storage pits.

The historic material found in the slot trenches, the blocks, and the 50x50-cm units indicate the historic occupation continued after the survey was conveyed in 1855. When the few twentieth-century artifacts, clearly postdating occupation are excluded (Table 8-13), it is clear the site was abandoned before it was acquired by Washington Downard in 1881.

The material in Feature 18 is older, and significant differences occur in artifact types between Feature 18 and other collection units. For example, machine-cut nails are more common in Feature 18 and Block 2 than other collection units at the site. They represent 100% of the nails from Block 2 and 85.44% of the nails in Feature 18. On the other hand, wire nails are most common in Feature 2 (12.92%), where they represent 77.78% of the nails from Feature 2.

The artifact frequencies by major artifact categories for non-feature collection units are shown in Table 8-14. The location of Feature 18 in Block 2 is shown in Figure 8-26 and a series of planviews of Feature 18 is provided in Figure 8-24. A comparison of the artifacts from Block 2 and Feature 18 are shown in Figure 8-27. Refined earthenwares are less common in Feature 18, and both stoneware and porcelain ceramics are absent, while personal items are more common. The abundance of personal items may reflect the use of 1/16-inch mesh for screening Feature 18, while 1/4-inch mesh was used for Block 2.

Comparison of refined earthenware types indicates significant differences between collection units (Figure 8-28). Twentieth-century styles (white whitewares, ivory-tinted whitewares, and Fiesta-colored whitewares) are absent except in the collections made by ECI, where they total less than 2%.

Feature 18 contains predominately older refined earthenware types (4, 5, and 8), and about 38% late nineteenth-century types 10,13 (see Figure 8-28). Early whitewares, type 4, are the most common, followed by blue-tinted whitewares, type 13.

Block 2 contains approximately equal percentages of blue-tinted ironstones (7) and blue-tinted whitewares. Early whitewares (4) and ironstone whitewares (5) are uncommon.

The 50x50-cm units contain primarily blue-tinted whitewares and fewer early types. The collection obtained by ECI contains mostly blue-tinted ironstones and relatively equal percentages of early whitewares and blue-tinted whitewares.

Further, refined earthenware differences occur in the comparison of decoration types between collection units (Figure 8-29). The highest percentage of decorated refined earthenwares in each collection unit are transfer printed. However, sponge/spatter, sponge/transfer, and shell-edge decorated sherds occur in important numbers in Feature 18. They each account for between 8% and 12% of the decorated sherds in the feature. Sponge/transfer-decorated sherds are absent in all other collection units, and sponge/spatter-decorated only occur in Feature 18 and Block 2. Shell edge-decorated sherds occur in all collection units, generally accounting for between 9% and 15% of each collection.

Several types occur only in Block 2 and include luster-decorated and molded-polygon rims. Hand-painted and annular/banded/mocha-decorated sherds occur in low frequencies in all collection units at the site. Other types include sherds with only relief molded or scalloped rims.

A comparison of stonewares from the different collection units indicate that stonewares are absent in Feature 18 (Table 8-15). The total number of stoneware sherds found at 41DN79 is extremely low, and glass fruit jar fragments are uncommon. The mean beginning dates obtained for the 50x50-cm units, Block 2, Feature 18, and the ECI

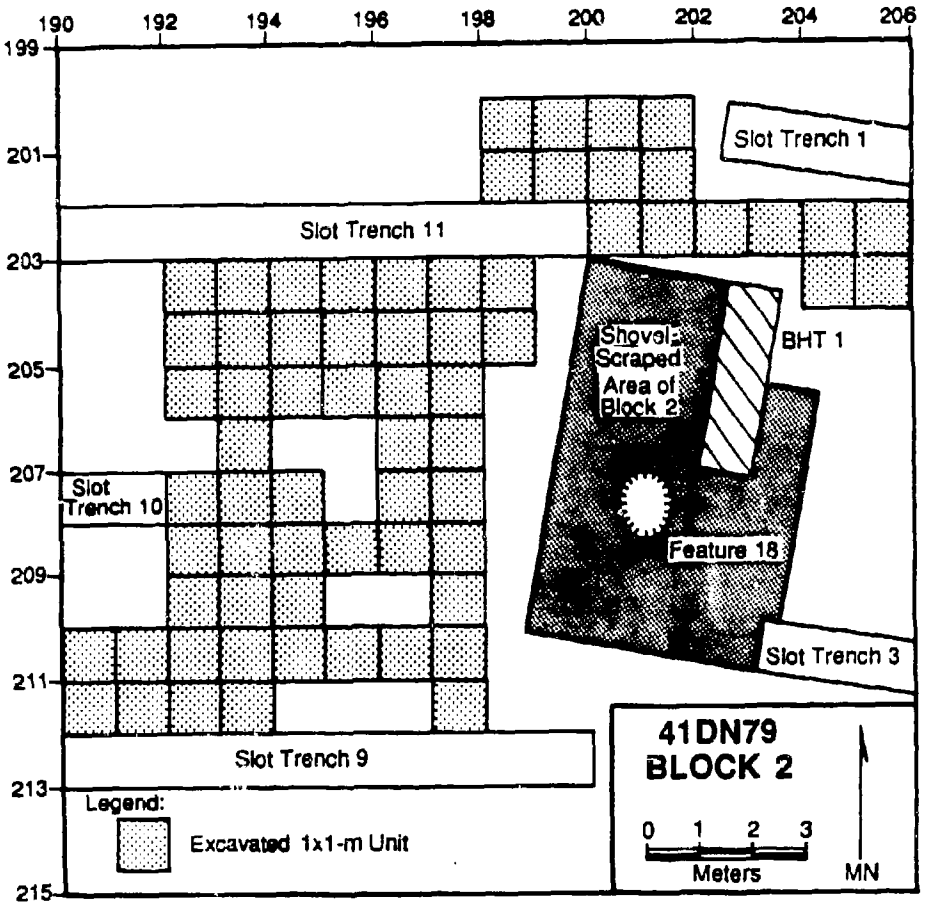


Figure 8-26. Locations of the hand excavated 1x1-m units, slot trenches, shovel-scraped areas, and Feature 18 in Block 2 at 41DN79. The slot trenches and shovel-scraped area were hand excavated but not screened.

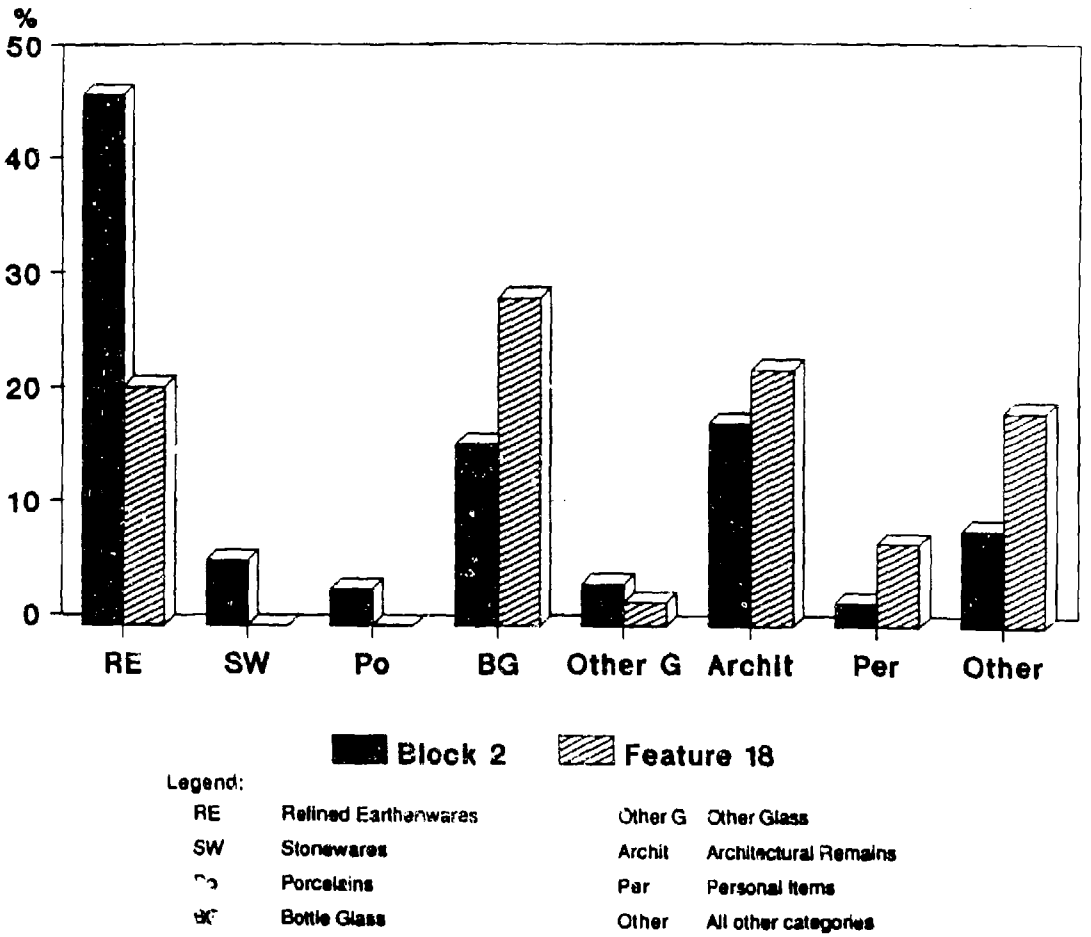


Figure 8-27. Comparison of historic artifact frequencies by artifact category for Block 2 units (excluding Feature 18) and Feature 18. Artifact counts for these categories are provided in Tables 8-11 and 8-14.

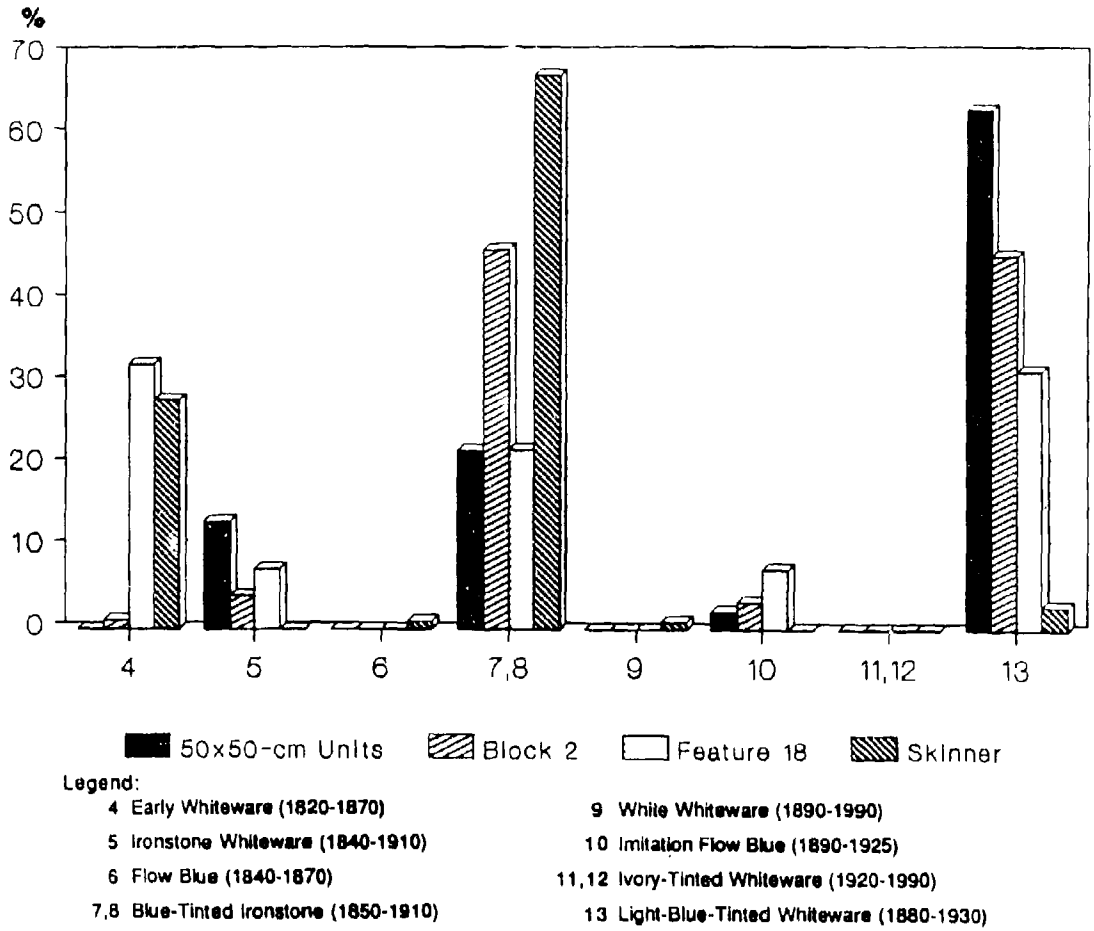
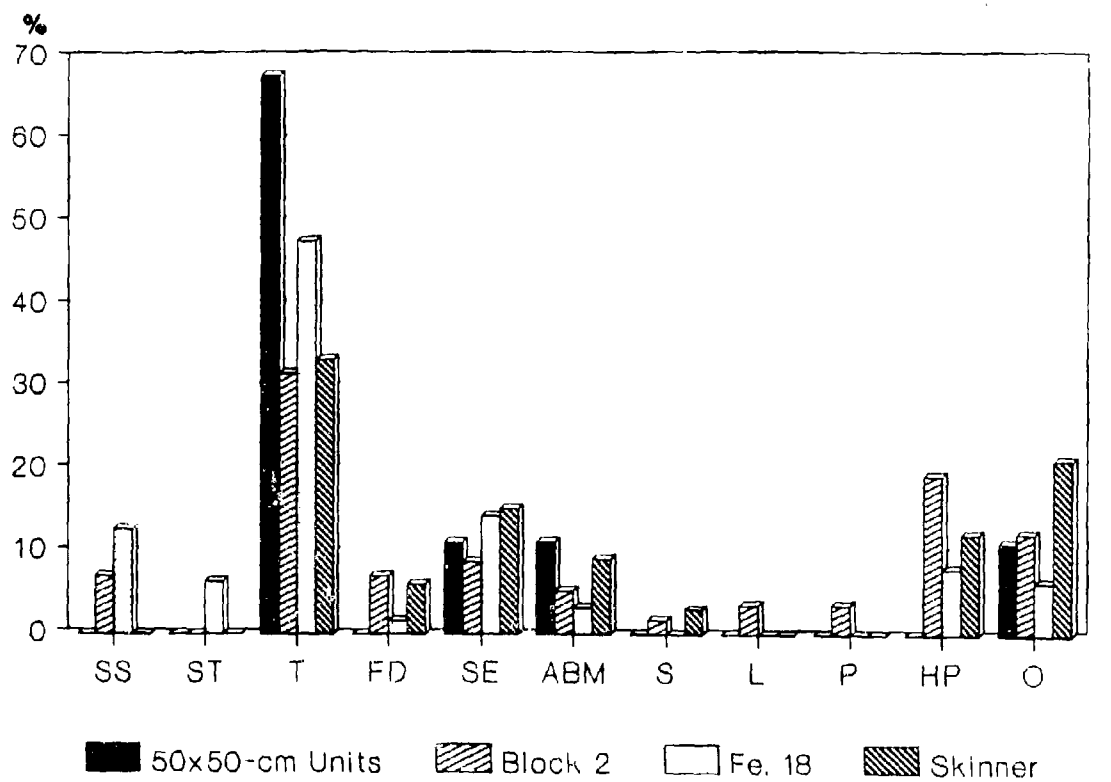


Figure 8-28. Comparison of refined earthenware frequencies for the 50x50-cm units in the sheet-refuse deposit, the 1x1-m units in Block 2, Feature 18 in Block 2, and the historic assemblage recovered by ECI at 41DN79 in 1982 (Appendix J). The numbers (e.g., 4, 5, 6) in the legend refer to the artifact codes used in the historic artifact classification (see Appendix C). Total refined earthenware counts for these collection units are provided in Tables 8-11 amd 8-14 and Appendix J.



Legend:

SS	Sponge/Spatter	S	Stencil
ST	Sponge/Spatter & Transfer Print	L	Luster
T	Transfer Print	P	Polygonal Rim
FD	Floral Decalcomania	HP	Hand Painted
SE	Shell Edge	O	Other

Figure 8-29. Comparison of decorative refined earthenware frequencies for the 50x50-cm units in the sheet-refuse deposit, the 1x1-m units in Block 2, Feature 18 in Block 2, and the historic assemblage recovered by ECI at 41DN79 in 1982 (see Appendix J). Total refined earthenware counts are provided in Tables 8-11 and 8-14 and Appendix J.

excavations (see above) reflect the relative absence of late stoneware types. Only two bristol-glazed sherds were found. A distribution of stoneware types by collection unit is given in Table 8-15.

Slot Trenches: A total of 26 slot trenches were excavated. Historic artifacts were found in 14 trenches (1, 3, 7-13, 15-17, 22-23). The artifact frequencies for the artifact categories found in the slot trenches is given in Table 8-14. These data indicate ceramics and bottle glass predominate. The artifacts found in the slot trenches are sheet refuse.

Table 8-14
Artifact Assemblages from the 50x50-cm Units, Blocks 2-5, and the Slot Trenches at 41DN79

Artifact Category	50x50s		Block 2		Blocks 3-5		Slot Trenches	
Semi & Coarse Earthenware			2	0.32				
Refined Earthenware	45	22.73	292	46.42	12	26.67	28	54.90
Stoneware	5	2.53	36	5.72	2	4.44	2	3.92
Porcelain	8	4.04	20	3.18			3	5.88
Bottle Glass	56	28.28	100	15.90	14	31.11	12	23.53
Table Glass	2	1.01	5	0.79	2	4.44	1	1.96
Lamp Glass	5	2.53	9	1.43				
Unid. Glass	5	2.53	9	1.43				
Window Glass	21	10.61	10	1.59				
Machine-Cut Nails	4	2.02	86	13.67	1	2.22	1	1.96
Wire Nails	24	12.12			1	2.22		
Building Material	9	4.55	3	0.48				
Personal Items	3	1.52	13	2.07	1	2.22	3	5.88
Thin & Heavy Metal	9	4.55	34	5.41	1	2.22	1	1.96
Household Items	1	0.51	6	0.95				
Tools	2	0.32						
Horse & Stable Gear	1	0.51	3	0.48				
Ammunition	1	0.51	2	0.32				
Misc. Other	4	2.02	6	0.95	11	24.44		
Total	198		629		45		51	

Table 8-15
Stoneware Types by Collection Unit at 41DN79

Type	50x50-cm Unit	Block 2	ECI Coll.
Unglazed/Salt	2	1	2
Salt/Salt		4	
Natural Clay/Salt	2	19	5
Alkaline/Alkaline	3	1	
Bristol/Bristol	1	1	
Natural Clay/no exterior			1
Salt/no exterior	1		
No interior/Salt	5	1	
British ale (bristol/two tone)	1	1	

Blocks: The four blocks excavated in 1987 are separated into two groups: (1) Block 2, and (2) Blocks 3-5. Block 2 contains Features 10 (prehistoric storage pit) and 18. The material from these features are not included in these counts. This block was separated from Blocks 3-5 because it contained primarily historic material, while Blocks 3-5 contained prehistoric features and some historic sheet refuse.

The artifact frequencies by major artifact category is shown in Table 8-14. These data indicate that similar sheet refuse deposits occur in Blocks 3-5. Figure 8-30 shows a comparison of several major categories between Block 2 and Blocks 3-5. Block 2 contains a much higher percentage of refined earthenwares, suggesting it was located close to the dwelling. Bottle glass, generally more widely dispersed across historic farmsteads, is more common the Blocks 3, 4, and 5. Architectural remains are higher in Block 2, while farm-related items (thin and heavy metal, tools, wagon and machine parts, ammunition, and modern debris) are more common in the outlying blocks, Blocks 3-5.

Artifact density plots were made for refined earthenwares, stonewares, window glass, and machine-cut nails in Block 2 (Figure 8-31 a-d). These data indicate several interesting patterns. Refined earthenwares range from 0 to 12 sherds per unit, with the highest densities clustering northwest of Feature 18, and a small cluster in the southwest corner of Block 2. Stonewares also cluster close to Feature 18, and 65% of the units in Block 2 did not have stonewares.

Only 10 window glass sherds were found in Block 2. Their distribution in the block is not statistically meaningful. It is important to note that 48.05% of the window glass sherds at the site were found in Feature 18. When combined with the 10 sherds from Block 2, 61.04% occur in this site area.

The distribution of machine-cut nails in Block 2 indicate clustering west of Feature 18. Few occur north of Feature 18. Machine-cut nails are most common in Block 2 (13.67%) and Feature 18 (12.88%). In Block 2, machine-cut nails represent 100% of the nails found, while in Feature 2 they account for 85.44% of the nails.

50x50-cm Units: The artifact frequencies by major artifact categories for the 50x50-cm units is shown in Table 8-14. These data, along with the data from the blocks and slot trenches, indicate the sheet refuse deposit at 41DN79 is dispersed across the site. The artifact deposit is low to moderately dense, and different artifact categories exhibit distinct spatial patterning.

Figure 8-32 showing a comparison of Block 2 and the 50x50-cm units by several major artifact categories indicates several interesting patterns. Refined earthenwares are more than twice as common in Block 2. When compared with the data from Blocks 3-5, it is evident that architectural items are more common in the 50x50-cm units than the blocks, while stonewares, personal items, and farm-related items are more common in the blocks. The highest percentage of personal items occurs in Feature 18.

Density plots for refined earthenwares and stonewares based on the 50x50-cm units indicate low densities, ranging between 0 and 6 refined earthenwares, and between 0 and 2 stonewares. The refined earthenwares cluster southwest of Slot Trench 9, west of Slot Trench 16, and near the dirt road. They occur primarily west of E192. Stonewares are also very low-density items and cluster in Block 2 and between Block 2 and Block 3.

General Site Overview: The historic occupation at 41DN79 was short-term, dating sometime before 1855 up to the 1870s. No 1880s to twentieth-century occupation is indicated in the site collections.

The abundance of highly decorated refined earthenwares, the low frequency of stonewares, and definitive Native American artifacts indicate the historic occupation at 41DN79 was before the 1870s. The occupation was short-term, possibly for less than 15-20 years.

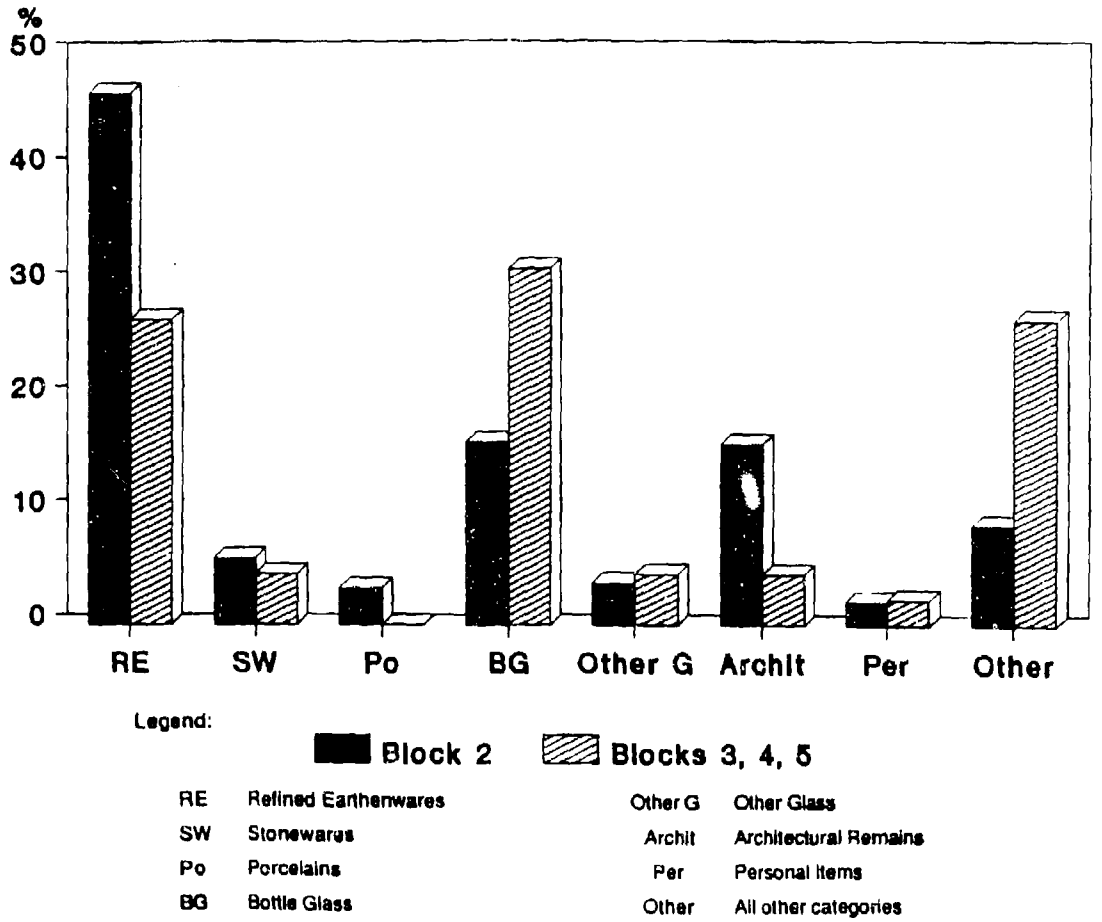


Figure 8-30. Comparison of major historic artifact category frequencies for Block 2 with the combined collection from Blocks 3, 4, and 5 at 41DN79. Total artifact counts by category are provided in Table 8-14.

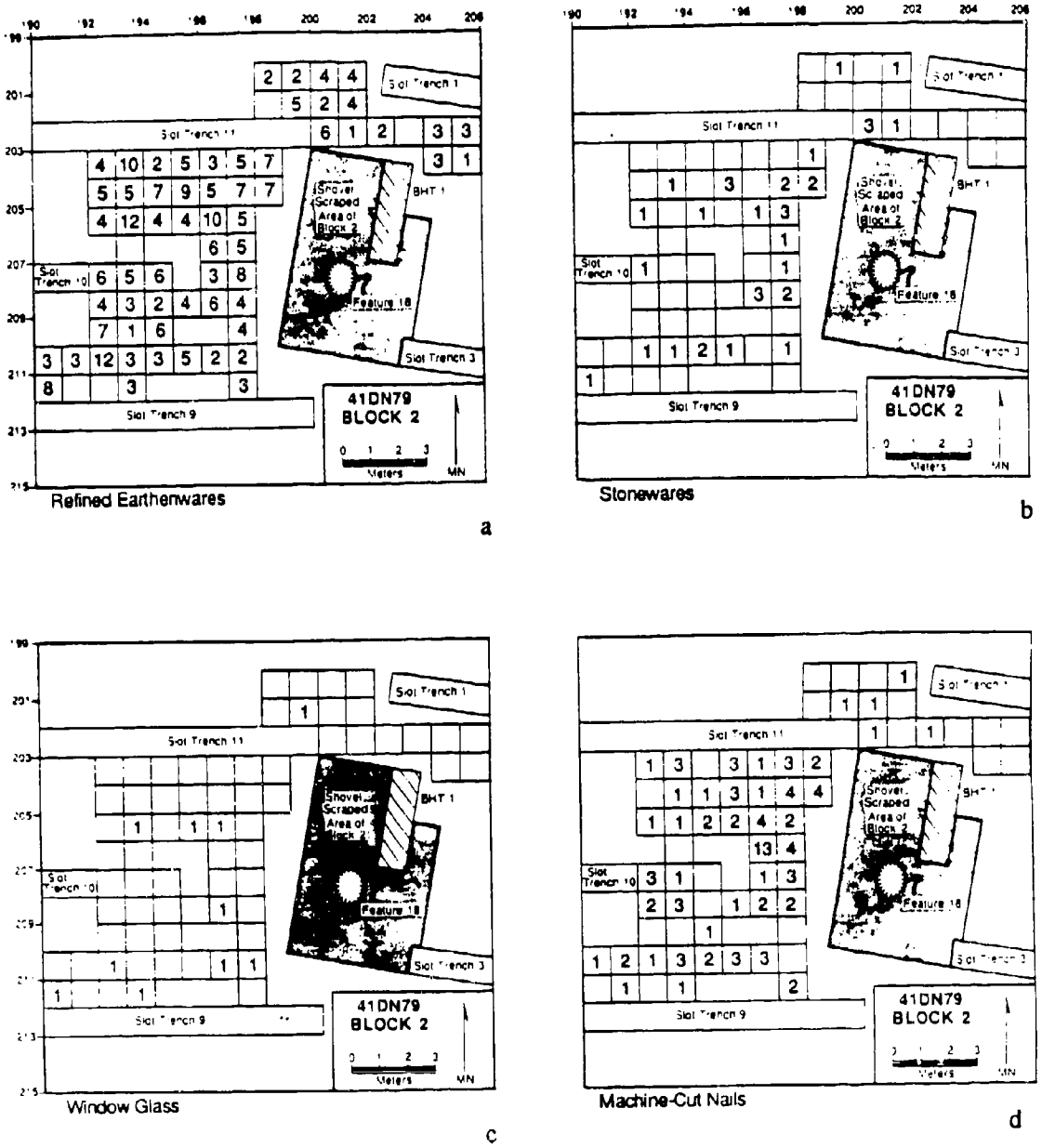


Figure 8-31. Historic artifact counts by artifact category for Block 2 (excluding Feature 18) at 41DN79. (a) refined earthenwares, (b) stonewares, (c) window glass, and (d) machine-cut nails.

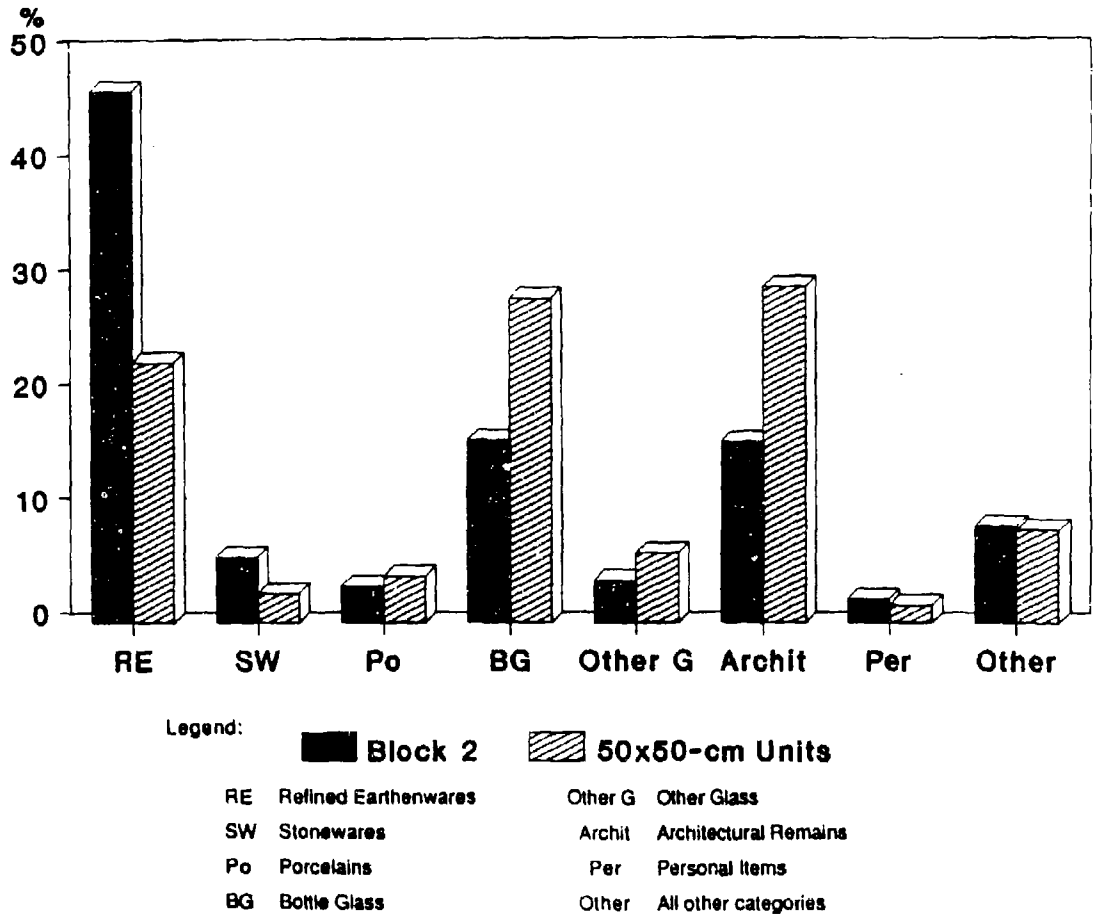


Figure 8-32. Comparison of major historic artifact category frequencies for Block 2 and the 50x50-cm units at 41DN79.

Feature 18 is the only historic feature clearly identified with the possible historic Native American occupation. Other features, including the shallow storage pits(?) and postmolds may also date to this occupation. Data recovered did not support the three house patterns suggested by Turner and Baird (1985).

The sheet refuse deposit is shallow and has been impacted by plowing. However, while artifacts have been displaced by this activity, general distribution patterns reflecting yard activities and trash disposal behavior remain.

Feature 18 is the only definitive historic feature identified at the site. Its original function is unknown, but it was last used for trash disposal. It is located in Block 2 and contains a similar range of artifact categories found elsewhere at the site. However, differences are evident between Feature 18 and other collection units when specific artifact types are studied. A much higher percentage of the refined earthenwares in Feature 18 are decorated, and many have highly decorative motifs.

Stonewares are uncommon at the site, but occur in all major collection units except Feature 18. In addition, most of the stoneware sherds are from vessels produced by local potteries in Denton County during the 1860-1880 period. Other types of storage vessels, such as glass fruit jars, are also rare. This suggests that food storage may have been in pits.

Machine-cut nails account for 71.27% of the nails from the site, and no brick was found. The absence of brick suggests the dwelling chimney was mudcat. Building material was rare, farm-related items were uncommon, and 73.33% of the ammunition was found in Feature 18.

The personal items provide good evidence of Native American ethnicity associated with this site. Native Americans may have live here during the nineteenth century, or they may have frequented this location for trading purposes. A Native American village reportedly was located in this general area during the mid-nineteenth century. The personal items found in Feature 18 are listed in Table 8-16.

The tubular-bone beads found in Block 2, Feature 18 (see above) are the same type reported by Baker and Harrison (1986:255) at the Adobe Walls Trading Post Site in Hutchinson County, Texas. The post dates to the 1870s. The term "tubular" is used to denote an elongated form. The beads from Adobe Walls include copper, bone, glass and shell tubular beads.

Further, Baker and Harrison (1986:256) report, " The one tubular bone bead is the type commonly identified as a 'hair pipe' bead, a name taken from the practice by some Indians of using them as hair ornaments." The example found at Adobe Walls is the same style as the three found at 41DN79.

Other significant historic artifacts found at 41DN79 are percussion caps and lead shot and worked metal. Ammunition found at 41DN79 are listed in Table 8-17.

The worked metal was a small, rectangular piece of lead that had several cut marks. It was found in Level 1 of Block 2, near Feature 18.

Faunal Remains:

Fauna from 41DN79, Feature 18

TOTAL BONE = 685

Identified Fauna (n=181)	
Indeterminate Fish	4
Catfish	1

Table 8-16
Personal Items Found at 41DN79

Prov.	Lv.	Ct.	Item
Blk. 2, Fe. 18	1	1	Four-hole china button fragment
	1	1	Glass, round bead
	1	1	Four/five-hole wood button fragment
	1	1	Slate pencil fragment
	1	1	Potmetal ring
	1	1	Brass hook-and-eye clothing hook
	1	1	Straight pin, whole
	2	1	Four-hole bone bead
	2	2	Glass, round beads
	2	2	Slate pencil fragments
	2	1	Iron safety(?) pin
	2	2	Brass hook-and-eye clothing hook, 1 fragment, 1 whole
	2	1	Clear eyeglass lens
	2	1	Brass-plated suspender clasp
	2	1	Four-hole zinc/white metal button
	2	1	Shank shell button
	2	1	Four-hole china button
	2	1	Four-hole china button, calico print
	2	4	Straight pins, 3 whole
	2	1	Cut-shell button blank
	2	1	Tubular-bone bead
	3	1	Tubular-bone bead
	3	1	1837 Silver U.S. dime
	3	2	Slate pencil fragments
	3	2	Glass, wound, round bead
	3	1	Glass, wound, hexagonal bead
	3	1	Glass, cylindrical bead
	3	2	Four-hole bone buttons
	3	1	Five-hole bone button
	3	2	Four-hole shell buttons
	3	2	Brass suspender(?) clasp
	3	1	Single-hole, cloth-covered shank button
	3	2	Brass hook-and-eye clothing hook
	3	1	Brass jewelry clasp
	3	1	Shank cloth covered button
	3	1	Shank, unplated-copper, cloth-covered button
	3	6	Straight pins, 4 whole
	3	1	Tobacco pipe frag., glazed stoneware
	3	1	Bone lice comb fragment
	4	3	Bone lice comb fragments
	4	1	Brass hook-and-eye clothing eye
	4	1	Glass, wound, round bead
	4	1	Iron writing pen nib
	4	1	Four-hole china button
	4	1	Glass, round bead
	4	1	Four/five-hole bone button fragment
	4	1	Five-hole wood button

		4	1	Four-hole china button, solid brown
		4	2	Slate pencil fragment
		4	1	Slateboard fragment
		4	1	Tobacco pipe, unglazed stoneware
		4	18	Straight pins, most whole
		5	1	Tubular-bone bead
		5	1	Four-hole China button fragment
		5	1	Four-hole bone button
		5	1	Four-hole bone button fragment
		5	1	Single-hole brass-shank button, stamped "Extra Treble London"
		5	18	Straight pins, most whole
		5	1	Sewing/sacking needle
Blk. 2,	U.42	1	1	Glass jewelry fragment
	U.42	1	1	Tobacco pipe frag., glazed stoneware
	U.49	1	1	Brass shank button
	U.50	1	1	Four-hole china button
	U.60	1	1	Slateboard fragment
	U.73	1	1	Tobacco pipe frag., glazed stoneware
	U.79	1	1	Shank bone button
	U.94	1	1	Painted porcelain marble
	U.100	1	1	Slateboard fragment
	U.105	1	1	Brass shank button
	U.105	1	1	Four-hole china button
Blk. 4, U. 27		4	1	Brass-plated jean or suspender rivet, stamped "Union Made"
Blk. 4, U.17		1	1	Two-hole shell button
Slot Trench 1		1	1	Slate pencil fragment
Slot Trench 9		1	1	Slate pencil fragment
Slot Trench 9		1	1	Tobacco pipe frag., glazed stoneware
50x50-cm	U.109	2	1	Brass shank button
	U.126	1	1	Slipcast porcelain doll body frag., AMZ, Early 1800s "PREMIUM ST. LOUIS"
	U.137	2	1	Unplated-copper jean/suspender clasp

Table 8-17
Ammunition Found at 41DN79

Prov.	Lv.	Ct.	Item
Blk. 2	1	4	Percussion caps
	2	1	Percussion cap
	2	1	Lead ball
	4	2	Percussion caps
Blk. 2, Fe.18	5	1	Grape shot
Blk. 4, U.17	1	1	Conical bullet
50x50-cm U.58	1	1	Conical bullet, hollow point, 22.-cal.
U.101	1	1	Conical bullet, FMJ, 22.-cal.
U.126	1	1	Rimfire cartridge, 22.-cal.

Bass/Sunfish	2
Toad	1
Indeterminate Turtle	1
Rat Snake	4
Non-poisonous Snake	1
Indeterminate Snake	1
Duck sp.	1
Wild Turkey	14
Red-tailed Hawk	1
Domestic Chicken	5 (MNI=2)
Meadowlark	1
Woodpecker sp.	1
Cardinal	
Indeterminate Bird, small	7
Indeterminate Bird, medium	12
eggshells	21
Indeterminate Bird, large	4
Cottontail	5
Fox Squirrel	1 (MNI=2)
Pocket Gopher	1
Pocket Mouse	1
Deer Mouse	2
Harvest Mouse	1
Woodrat	6 (MNI=2)
Cottonrat	1
Vole	1
Indeterminate Rodent	7
Raccoon	3
Domestic Pig	9
Deer	6
Domestic Cattle	1
Cow/Bison/Elk	1
Horse	1

Indeterminate Mammal, small	8
Indeterminate Mammal, medium	4
Indeterminate Mammal, large	3

Unidentified bone (n=504)

Feature 18 produced a large quantity of bone, metal, glass and ceramics, presumably the result of filling a refuse pit with debris from a historic occupation at the site. The requisite domestic animals are all represented (chicken, cattle, swine), along with a diverse assortment of wild game, fishes, and rodents. The assemblage is composed of thirty-seven taxonomic categories, comprising two genera of fishes and one amphibian; three reptilian taxa (including one snake identified to species); one avian order (ducks), two avian genera, and four bird species; and mammals were categorized into five genera and nine species, plus the indeterminate categories. With the exception of squirrel, the small, wild rodents are considered accidental to the archaeological component.

In contrast to the other historic sites, there is less burned bone, and the modified bone from this feature differs in species and types of cuts. No identified faunal remains were recorded as burned, and only 12% of the unidentified osteological material was burned. Butchering marks are apparent on pig, cattle, squirrel, and raccoon bones, and three turkey radii have been modified into long, tubular beads similar to what are known in Plains archaeology as "hair pipes," but more akin to the prehistoric variety than to the commercially made trade item.

Ewers (1957:75) comments that before the familiar hair-pipe breastplates of the Plains Indians, many Indian groups used bone beads (as well as shell beads) for ornamentation, and that ear pendants are one of the earliest decorative forms. Usually found as one or two beads associated with the skull in prehistoric burials, they may also represent hair ornaments, hence the name. According to Ewers (ibid), the earliest recorded use of hair-pipe ear ornaments in the Plains was among the Osage in 1806 and also among the Caddoan, Wichita, and Pawnee prior to 1850. Any of these three groups are possible occupants of this site during the late nineteenth century, when the historic Indians were resettling throughout North Texas and Oklahoma.

The presence of tubular bone beads in a historic rubbish pit argues for a historic Indian component. Although only a few pieces of debitage were recovered in Feature 18, the excavators noted extensive mixing of artifacts especially in the plowzone of this site. Additionally, the diversity of the fauna recovered from this feature is reminiscent of prehistoric faunal assemblages except that it also contains remains of domesticated animals and saw-cut bones. Based on faunal remains alone, determination of the origin of this feature is inconclusive. However, it is conceivable that this feature represents an early settler who primarily hunted for subsistence and/or one who also traded with the Indians still in the area.

Summary: Site 41DN79 contains evidence of two prehistoric occupations, one during the Late Archaic and a second during the Late Prehistoric period. The historic occupations include a possible Historic Indian component or at least Native American usage of this site area during the nineteenth century and/or an Anglo farmstead circa the 1850s. The historic and prehistoric materials are mixed in the plowzone. Isolated features uncovered in slot trenches and shovel-scraped areas were truncated by cultivation. The prehistoric component in Block 4 was largely undisturbed by the later historic occupation. Bioturbation, however, is evident based on the frequency and depth of the historic artifacts in Block 4, particularly Feature 2.

Feature 18 is a historic feature containing domestic debris associated with the mid-nineteenth century Anglo and Native American activities. This feature, however, is difficult to interpret. As indicated by the faunal material, Feature 18 does not represent a "typical" faunal assemblage from a nineteenth century farmstead. Further, these faunal remains do not reflect the food remains of a large cattle rancher and his family. The tax roll data indicate that William Downard was a cattle rancher who raised several hundred head of cattle in a year. Instead, as noted above, the faunal assemblage from Feature 18 is reminiscent of an early settler who primarily hunted for subsistence and who may have traded with Native American groups in the area.

The material culture assemblage from Feature 18 also suggests that this trash deposit may be associated with the Downard occupation of the Minor Marsh surveys. The diversity and frequency of decorated refined earthenwares suggest access to more expensive ceramics than an early settler, squatter, or trapper would have owned. This assemblage would not be unexpected for a well-to-do family such as the Downards. But, if this feature is associated with the Downards, then several questions remain unanswered. Why weren't there any stoneware sherds in Feature 18? Stoneware vessels were commonly used by families throughout the region for food preparation, serving, and storage. The Downards, like other early families, would have brought a few stoneware vessels with them when they immigrated to northcentral Texas. Additional vessels were purchased as the necessity arose. If the Downards lived at 41DN79, stoneware sherds should have been found in Feature 18. Stonewares were found in the sheet refuse in Block 2, which contained Feature 18, as well as in the surrounding site area, but not in Feature 18. Some of these stonewares are early varieties produced at potteries in the Alton area of Denton County beginning in the 1850s. The refined earthenwares found in association with these stonewares, however, included types spanning a much broader period of time than the types found in Feature 18. Few of the refined earthenwares outside Feature 18 were decorated and most were more recent types.

The frequency and diversity of personal items from Feature 18 is also unusual. This pattern was not repeated at any of the other farmsteads studied in the project area (see 41DN166 and 41DN248). Metal clothing fasteners, bone and china buttons, glass and bone beads were common in Feature 18, while children's items such as slate pencils and slateboard fragments were infrequent and doll parts were absent. In contrast, children's items were common in early trash deposits at other farmsteads (e.g., 41DN166), while bone buttons, bone beads, glass beads, and straight pins were absent or infrequent elsewhere.

Personal items were uncommon or absent in other features found at 41DN79 and were less frequent in the sheet refuse deposit than in Feature 18. Household items, machine and wagon parts, tools, and ammunition were also more frequent in Feature 18 than elsewhere at the site. Further, Feature 18 represents a short-term event and does not reflect the temporal and material diversity indicative of a farmstead occupied for any period of time such as one would expect for the Downards.

The historic material recovered from the sheet refuse, in contrast to Feature 18, does reflect the temporal and material diversity recorded at other farmsteads in the project area. This assemblage, however, is not contemporaneous with Feature 18 and probably dates to the 1880s. Because of the paucity of architectural remains and the spatial displacement of material in the sheet refuse deposit by plowing, it was not possible to determine accurately the dwelling location. No evidence was found of a well, cellar, or outbuildings. Undoubtedly, one or more small outbuildings were associated with the farmstead at this site. If this site had been occupied by the Downards, it is likely they would have had a well. Oral informants in the project area (see Chapter 10) reported that wells were an indication of wealth.

The absence of a cellar and outbuildings also suggests that the Downard's did not occupy 41DN79. However, their absence would not be unexpected if the site was occupied by a tenant family or ranch hand. If so, how does one explain the frequency of highly decorative refined earthenwares, the absence of stonewares, and the diversity of faunal remains and personal items in Feature 18?

Other features found at the interface between the plowzone and the underlying sediments may be historic. Insufficient data were recovered to determine the age of many of these features. The three possible prehistoric house patterns reported by ECI (Skinner and Baird 1985) were not relocated despite extensive efforts. The reported Wylie Focus pit was determined to be a geological feature, probably a filled gully.

This site is significant as it is the only historic site in the lake area containing evidence of historic Native American activities or trade. It also contains the earliest ceramic assemblage documented in the project area (Feature 18).

41DN81

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	590' amsl
Scheduled Investigations	Prehistoric excavation
Soil Association	Bastrop fine sandy loam
Cultural Affiliation	Prehistoric; Historic (1875-1935)

Description: Site 41DN81 is located on a Pleistocene terrace along the Elm Fork of the Trinity River. Sites 41DN79, 41DN80, 41DN82, and 41DN101 are situated in a linear fashion along the same terrace edge. The site has both prehistoric and historic components. The prehistoric component occurs in two sections separated by a barbed-wire fence and a two-track road. The historic component is north of the two-track road. Both site areas were in cultivation when site 41DN81 was recorded. The cultural remains are shallowly buried within the plowzone, and the site measures approximately 50 m east-west and 40 m north-south.

Previous Investigations: The site was recorded by ECI in 1980. A diffuse surface scatter of fire-cracked rock, lithic debris, historic ceramics, glass, and metal was observed. A grab sample was collected. Initial testing included ten auger test holes (designated 1a, 1b, and 2 through 9) and four 1x1-m test pits. Following this work, 25 shovel test pits were excavated in two areas of the site. Ten were placed in the northern section. While a cultural deposit was identified, no subsurface artifacts were recovered. Fifteen shovel test pits were dug in the southern section. A single bottle glass fragment was found in one unit. Five additional test units were dug. Units 5 and 9 were 2x2-m units, while 6, 7, and 8 were 1x1-m units. Historic material was found in each of these units (see Appendix J). A historic privy pit feature was identified in Unit 6, and a fire-cracked rock hearth was uncovered in Unit 5. Unit 9 revealed a circular pit measuring 110 cm in diameter and extended to 45 cm below the surface. A radiocarbon date of AD 930±100 (Beta-5677) was obtained on charcoal recovered from this feature (Skinner and Baird 1985:4-22). Based on these results, the prehistoric component was assigned to the Neo-American period (Late Prehistoric), and further excavation of the prehistoric component was recommended (Skinner and Baird 1985). The historic material was assigned a late nineteenth-century date, and no further investigation of this component was recommended.

Archival Investigations: The site is located on the Minor Marsh survey (A-881). The survey was granted to William H. Downard, assignee of Minor Marsh, by the State of Texas in 1855 (Patent Record B, p.79). William H. Downard also acquired the Minor Marsh survey (A-880) in 1855. This survey is directly south of the first (Patent Record B, p.79).

William H. Downard promised to convey both surveys to his son, Washington Downard. After William's death, his wife Jane Downard and his other heirs conveyed the 320-acre Minor Marsh survey, A-881 and the west half (160 acres) of the Minor Marsh survey, A-880 (Deed Record U, p.487).

William H. Downard resided in Cass County, Missouri, and never lived on this property. Several heirs lived in Cooke County, but none appear to have resided at 41DN81. The Vaughan family later acquired the property, but when G. W. Vaughan filed for a designated homestead in 1908, his homestead was on parts of three nearby tracts, (120 acres of the B. F. Conser survey, A-254; 113 acres of the B.B.B. & C.R.R. Co. survey, A-139; and 5 acres of the Payton R. Spance survey, A-1217). The property remained in the Vaughan family until 1951 (Deed Record 374, p.161).

Architectural Investigations: None.

Dendrochronological Investigations: None.

Excavation Method: Figure 8-33 illustrates the excavations conducted in 1987 to examine the prehistoric component at 41DN81. This effort included excavation of two backhoe trenches (BHT 1-2), hand-excavating eight slot trenches (1-8), stripping the plowzone in four areas (Areas 1-4), and excavation of three blocks (Blocks 1-3). BHT 1 measured more than 100 m long, was oriented north-south through the center of the site, and was excavated to examine subsurface archaeological features (Figure 8-34) and geological strata and depositional integrity (Figure 8-35). BHT 2 was placed perpendicular to BHT 1 at the south end of the site. It measured more than 50 m in length, and was dug to obtain similar data. Slot trenches were approximately 1 m wide and were sufficiently deep to remove the plowzone and expose undisturbed deposits. The stripped areas were excavated to expose large areas for locating shallowly buried, undisturbed cultural deposits and features. The distribution of features uncovered during excavations at 41DN81 are shown in Figure 8-34.

BHT 1 revealed a thick midden containing large quantities of fire-cracked rock (FCR) and lithic debris. Stripped Area 1 was between Blocks 2 and 3, adjacent to the west edge of Stripped Area 2. Stripped Areas 2 and 3 provide coverage of the west and east site areas adjacent to BHT 1 at the north end of the site (Figure 8-34). Stripped Area 2 was placed to obtain additional information on the FCR concentration and cultural debris exposed in BHT 1. The slot trenches were dug to provide additional coverage between the stripped areas for identifying subsurface features, as well as coverage near the site limits.

Block 1 is north of Stripped Area 3 and west of Stripped Area 4. The west edge of Block 1 extends into the east profile of BHT 1 at the north end of the site. This block is 4x4 m in size. Block 2 is on the west side of Stripped Area 2, and Block 3 is north of Stripped Area 1. Block 2 measures 2.5 m x 5 m. Block 3 was placed to excavate several shallow features uncovered in Slot Trenches 3 and 7. Block 3 measured 2x2 m. Level 1 in Blocks 2 and 3 was removed by scraping in Stripped Areas 1 and 2.

Excavation Results: The site contained shallowly buried prehistoric and historic remains and features. The upper portion of many features were truncated by cultivation. The prehistoric component was disturbed by the historic occupation and recent cultivation. However, in the vicinity of Block 1 is a well-preserved, thick prehistoric midden containing a dense concentration of FCR hearths, used repeatedly over a long period, and a large sample of lithic and faunal debris. The prehistoric component is assigned to the Late Archaic period. The historic component is a domestic farmstead dating to the late nineteenth and early twentieth century.

The features found during excavation are described, followed by a discussion of the prehistoric and historic results. The features were found during the prehistoric excavations. No historic excavations were conducted.

Features: Twenty-three features were identified at 41DN81 during the 1987 excavations. Historic artifacts were found in Features 1, 2, 11, 15, 16, 17, 19, and 20. Feature 18 contained historic building piers. The 23 features are listed in Table 8-18 and are discussed below. The features recorded by Skinner et al. (1982b) and Skinner and Baird (1985) are unnumbered and are given at the bottom of Table 8-18.

Feature 1: Feature 1 was first identified in BHT 1 where it extended from the interface between the plowzone and the underlying matrix to a depth of 80 cm below surface (Figure 8-34). It extended for a distance of approximately 10 m along BHT 1 from S206 E203 to S196 E203. The feature fill contained FCR, bone, shell, charcoal, debitage, and stone tools.

Block 1 was excavated east of BHT 1 to obtain content and spatial data on Feature 1. Block 1 (Units 1-16) is located entirely in Feature 1. Additional units where Feature 1 is mapped are Slot Trenches 6, 7, and 8, and Stripped Areas 2, 3, and 4, and Block 3. This feature was only partially excavated (see Figure 8-34).

Feature 1 was excavated in 10-cm levels to the base of Level 12 in Units 13, and 14; Level 11 in Unit 7; and the base of Level 10 in the rest of Block 1. The bottom of the feature was irregular. The rocks found in Levels 11 and 12 were unburned, and no charcoal, ash, or burned matrix occurred. FCR decreased in frequency by Level 9,

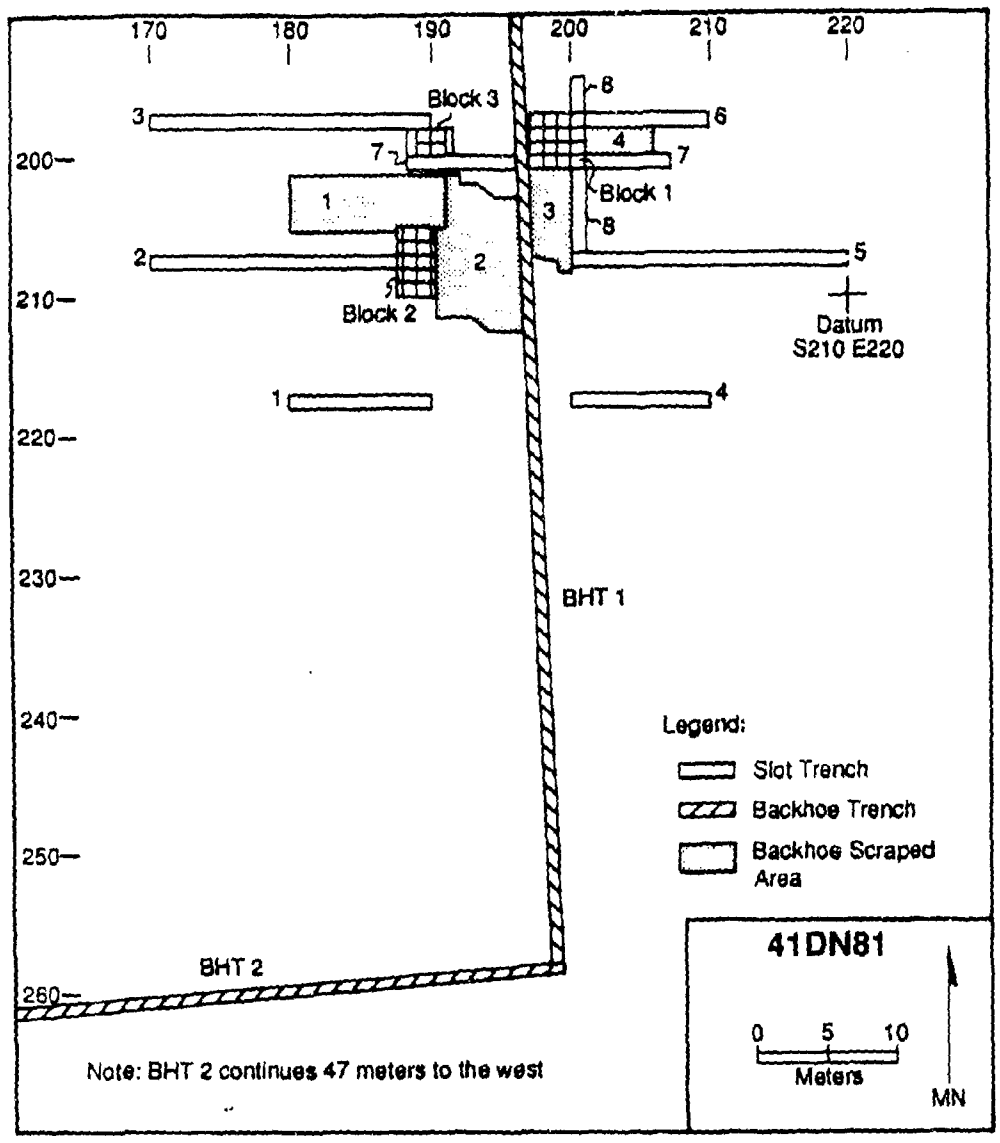


Figure 8-33. Map of the excavations at 41DN81. Note: slot trenches were hand excavated. Sediment from the slot trenches and backhoe excavated and scraped areas was not screened.

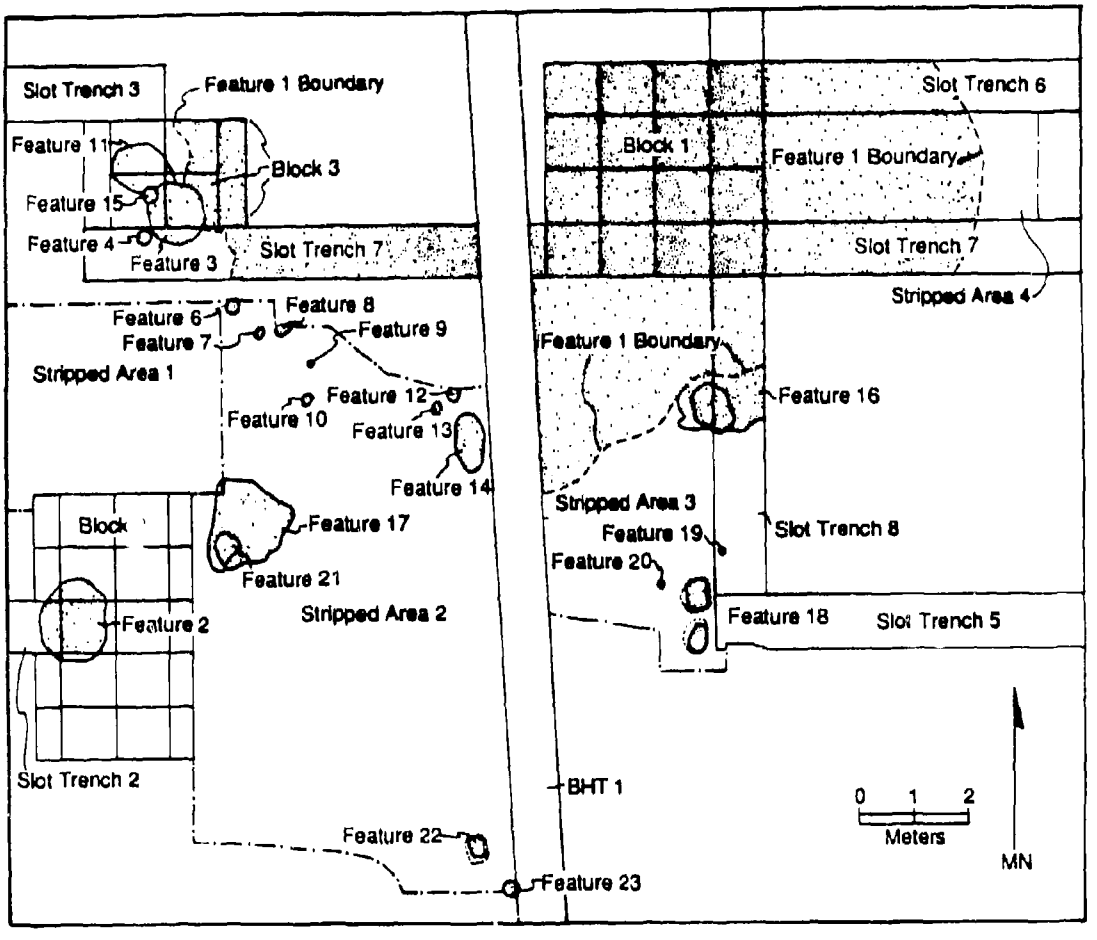


Figure 8-34. Locations of subsurface features exposed during prehistoric excavations at 41DN81. Note: shaded areas denote exposed feature deposits.

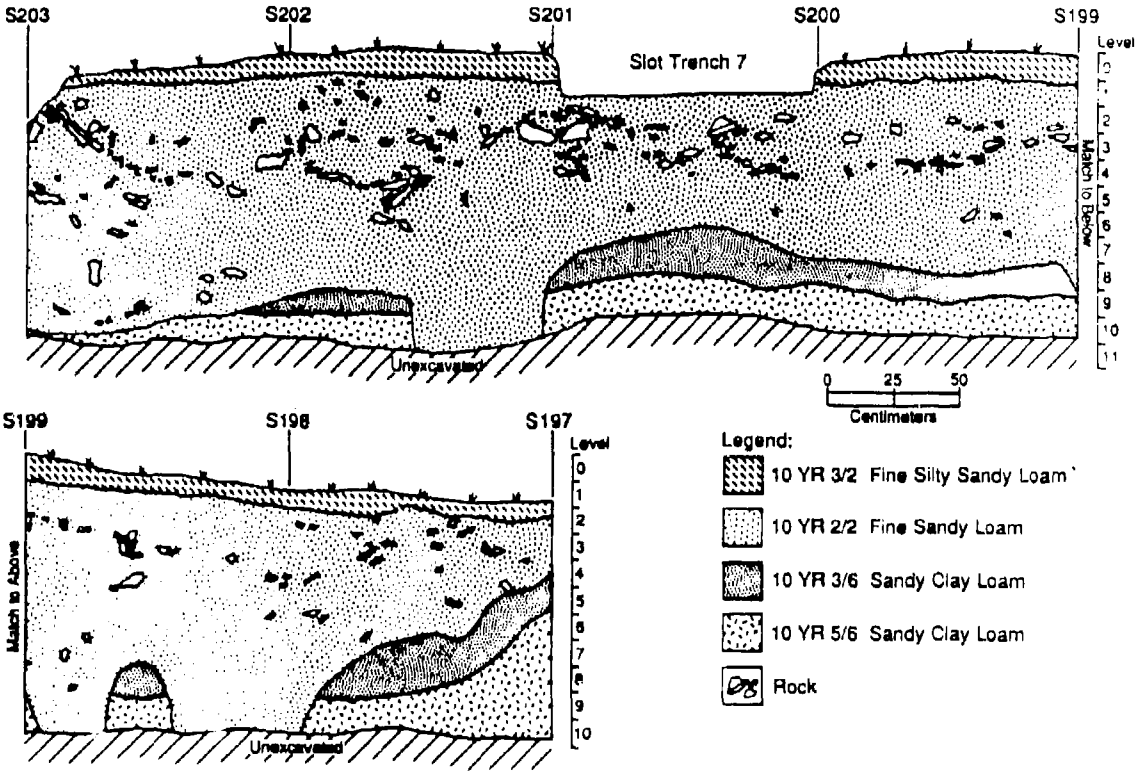


Figure 8-35. West wall profile of BHT 1 at 41DN81.

Table 8-18
Features Found at 41DN81

Fe.	Feature Type	Provenience
1	Midden	Blk 1, U. 1-16, L. 1-12
2	Hearth	Blk 2, ST 2, L. 2-3
3	Storage pit/trash pit	Blk 3, U.17-18, L. 1-4; ST 6
4	Historic(?) postmold	ST 6, L. 1
5	Postmold	Blk 2, (center S208.7 E1880.0)
6	Historic(?) postmold	Stripped Area 2
7	Historic(?) postmold	Stripped Area 2
8	Unknown	Stripped Area 2
9	Unknown	Stripped Area 2
10	Historic(?) postmold	Stripped Area 2
11	Storage pit/trash pit	Blk 3, U. 17-20, L. 2-10
12	Rodent disturbance	Stripped Area 2
13	Historic(?) postmold	Stripped Area 2
14	Hearth/refuse pit	Stripped Area 2
15	Historic(?) postmold	Blk 3, U. 17, L.3
16	Collapsed cellar/ historic trash deposit	Stripped Area 3
17	Hearth/fire-related	Stripped Area 2
18	Historic piers	Stripped Area 2
19	Postmold	Slot Trench 8
20	Noncultural stain	Stripped Area 2
21	Historic postmold	Stripped Area 2
22	Historic pier	Stripped Area 2
23	Historic postmold	Stripped Area 2
Unnumbered Features Recorded by Skinner et al. (1982b, 1985):		
	FCR concentration	Test Units 2 and 3; corresponds with Feature 1
	Historic privy pit	Test Unit 6
	Storage/roasting pit	Test Unit 9 (SE edge of Fe. 1)

and in Level 10, they occurred predominately in rodent-disturbed areas. Rodent burrows are evident throughout the feature and still occur in Level 12.

Feature 1 contained remains from several occupations. The upper four levels in Block 1 are assigned to a Late Prehistoric component, while the lower eight levels date to the Archaic period. The artifacts from Feature 1 are discussed in detail later in this chapter.

Historic artifacts also occurred in Feature 1 and extended from Level 1 to Level 10. These artifacts indicate the extent of historic intrusion, the downward vertical movement of material in Feature 1, and along with the bioturbation data, indicate the impact of post-depositional activities on Feature 1. The historic artifacts in Feature 1 are summarized later in this chapter.

Feature 2: Feature 2 was first identified in Slot Trench 2. In profile, the feature is V-shaped. Feature 2 was exposed below the plowzone and was approximately 1.66 m x 1.67 m with a depth of 32 cm. The bottom diameter was 50 cm. The feature contained FCR, burned bone, burned clay, and charcoal. Feature 2 was bisected north-south, and the west half was excavated first. The entire feature was removed for flotation. Two charcoal samples were collected for radiocarbon dating.

Charcoal from the fill yielded a radiocarbon date of 790±80 BP (Beta-32526). This date indicates the feature was used near the end of the Late Prehistoric I or early Late Prehistoric II periods.

Only four historic artifacts were found in Feature 2, probably from the sheet refuse deposit. These items include one lamp/unid. glass sherd, one window glass fragment, one wire nail, and one personal item.

Feature 3: Feature 3 was identified as a possible storage pit, last used for refuse. It measured approximately 1.15 m x 1.36 m when exposed below the plowzone. The upper portion was removed and the base was 35 cm below the plowzone. The feature appeared as an organic-stained area with sloping walls, a basin-shaped bottom, and contained a diffuse scatter of FCR, shell, bone, and lithics. Feature 3 was dug in arbitrary 10-cm levels. The southwest half was removed for flotation. Level 2 in the northeast half was removed as part of Unit 18 to find the limits of the feature. The remainder of Feature 3 in Unit 18 was removed as part of Feature 11, a second possible storage pit used for refuse. It was not determined which feature was intrusive. All of the material from the northeast half was removed for flotation.

Feature 4: Feature 4 was a historic(?) postmold exposed below the plowzone in Slot Trench 6. It was approximately 18 cm in diameter and 16 cm in depth. The upper portion has been truncated. The walls were well defined, and the bottom was rounded. Historic artifacts reported in the west half of Feature 4 included one metal fragment, one refined earthenware sherd, and one window glass sherd. This material was not collected. The west half was removed, discarded, and the east wall was profiled. The east half was then removed for flotation. No artifacts were found in the east half.

Feature 5: Feature 5 was a postmold identified below the plowzone in Block 2. It was 22 cm x 14 cm in diameter and 10 cm in depth. It was elliptical with a rounded bottom and contained unburned bone and lithics. The north half was removed for flotation. No historic artifacts were found in this feature.

Feature 6: Feature 6 was identified as a postmold exposed below the plowzone in Stripped Area 2. It was 20 cm x 19 cm in diameter with a rounded bottom. Shell was observed in the fill, but no other artifacts were found. The south half was removed and discarded, and the north half was floated. No historic artifacts occurred in the feature fill.

Feature 7: Feature 7 was a basin-shaped postmold exposed below the plowzone in Stripped Area 2. It was approximately 20 cm x 18 cm, circular, and 6 cm deep. The north half of the feature was collected for flotation. The south half was removed first to obtain a profile, but the material was not screened. Feature 7, along with Features 4, 6, 10, 13, and 15, may be postmolds to a historic structure (see descriptions for these other features and Figure 8-34).

Feature 8: Feature 8 was originally identified as a possible postmold. However, after a profile was exposed, this feature remains unclear. It appeared as an amorphous organic-stained area measuring 22 cm in diameter, circular, with indistinct boundaries, and 18 cm deep. It was exposed below the plowzone in Stripped Area 2 and contained a few pieces of FCR and shell. No burned matrix or charcoal occurred. The feature was bisected, and

the south half was removed to expose a profile. The north half was collected for flotation. No historic artifacts were found in Feature 8.

Feature 9: The function of Feature 9, originally identified as a possible postmold, is unknown. The feature was circular, 10 cm x 12 cm in diameter, and did not contain any artifacts. It was located in Stripped Area 2. Based on the mottled fill and the exposed profile, the feature was identified as a possible disturbance/unknown function.

Feature 10: Feature 10 was a basin-shaped postmold exposed below the plowzone in Stripped Area 2. It was approximately 20 cm x 16 cm, circular, and 11 cm deep. The north half of the feature was collected for flotation. The south half was removed first to obtain a profile, but the material was not screened. Feature 10, along with Features 4, 6, 7, 13, and 15, may have been postmolds of a historic structure (see descriptions for these features and Figure 8-34).

Feature 11: Feature 11 (see Feature 3) was a possible storage pit last used for refuse. Features 11 and 3 overlap, and the northeast half of Feature 3 was removed as part of Feature 11. Both features were exposed below the plowzone. Feature 11 measured approximately 95 cm x 115 cm with a depth of 92 cm below the plowzone. It was an organic-stained area with steep sides and a flat bottom, which contained a diffuse scatter of FCR, shell, bone, and lithics. This feature was bisected to correlate with the excavation of Feature 3. Feature 11 was excavated in arbitrary 10 cm levels, with a flotation sample obtained from each level. The remaining fill was waterscreened through 1/16-inch mesh.

Feature 12: Feature 12 was an amorphous organic stain, originally thought to be a possible postmold. It was exposed below the plowzone in Stripped Area 2. It was approximately 20 cm in diameter. The south half was removed and not saved after the feature was identified as non-cultural. It appeared to be the result of rodent disturbance. Some bone and FCR were noted, but not collected.

Feature 13: Feature 13 was a basin-shaped postmold exposed below the plowzone in Stripped Area 2. It was approximately 20 cm x 16 cm, elliptical, and 23 cm deep. The west half of the feature was excavated to obtain a profile, but the material was not screened. The east half was collected for flotation. FCR and some charcoal were noted in the west half, but not collected. Some FCR and charcoal were collected and bagged in the east-half flotation sample. Feature 13, along with Features 4, 6, 7, 10, 13, and 15, may have been postmolds of a historic structure (see descriptions for these features and Figure 8-34).

Feature 14: Feature 14 was identified as a possible hearth later used for refuse. It was exposed at the base of the plowzone in Stripped Area 2 and contained bone, lithics, shell, and FCR. It measured about 2.04 m x 1.96 m in diameter with a depth of 25 cm below the plowzone. The feature had steep-sloping sides and a slightly concave bottom. The upper portion of Feature 14 was truncated by plowing. Feature 14 was bisected north-south, profiled, and all the fill was removed for flotation. No historic artifacts were found in Feature 14.

Feature 15: Feature 15 intruded into Features 3 and 11. It is identified as a possible historic postmold. Feature 15 was exposed below the plowzone as a dark organic stain intruding Feature 3, but was later noted in Feature 11 as well. It measured approximately 17 cm x 15 cm and 32 cm deep. The feature was circular with steep sides and a rounded bottom. Feature 15 was removed for flotation. Historic artifacts found in this feature include four bottle glass sherds and one window glass fragment from the sheet refuse deposit.

Feature 16: Feature 16 was located in Stripped Area 3. It was exposed in Level 1 and extended into Level 9. It measured 1.10 m x 1.60 m in diameter, was oval shaped, and contained both prehistoric and historic artifacts. This feature was identified as a possible collapsed cellar filled with historic trash. The north half was fine screened, and flotation samples were collected from each level in the south half. The fill contained charcoal, ash, few lithics, bone, and shell, and quantities of historic domestic trash. A total of 2,898 historic artifacts were collected from Feature 16.

Feature 17: Feature 17 was a hearth or fire-related deposit. It was exposed below the plowzone in Stripped Area 2. It measured approximately 1.69 m x 1.59 m in diameter with a maximum depth of 26 cm below the plowzone. It was a circular pit with irregular walls and contained numerous lithics, some lithic tools, shell, charcoal, sparse FCR, bone, and burned clay. The east half of the feature was excavated as a single level, and the fill was fine screened through 1/16-inch mesh. One piece of lamp/unid. glass was found in Feature 17.

Feature 18: Feature 18 was identified as piers from a historic structure, possibly the dwelling. The two piers were limestone and appeared to be located in shallow depressions in the B-horizon. These depressions contained stone rubble and were about 10 cm apart. The stones were approximately 25 cm apart. The proximity of Feature 16 and the abundance of historic artifacts in this part of the site suggests these piers supported the house.

Feature 19: Feature 19 was identified as a postmold exposed below the plowzone in Slot Trench 8. It was approximately 15 cm x 15 cm, circular, and 18 cm deep. The fill contained one piece of wood and one bottle glass sherd.

Feature 20: Feature 20, originally identified as a postmold, was later identified as an amorphous organic stain. The bottom was basin shaped, but the sides were indistinct. Three pieces of bottle glass were found in Feature 20.

Feature 21: Feature 21 was a historic, basin-shaped postmold exposed below the plowzone in Stripped Area 2. It intruded into prehistoric Feature 17.

Feature 22: Feature 22 was a pier of the historic structure. It was exposed in the southeast corner of Stripped Area 2 near Feature 23, a historic posthole. The pier was approximately 45 cm x 30 cm in diameter and was set in a shallow depression in the B-horizon. The depression was packed with rubble.

Feature 23: Feature 23 was a historic postmold exposed below the plowzone in the southeast corner of Stripped Area 2. It had a rounded bottom and contained rubble. No historic artifacts were found in this feature.

Prehistoric Results: Because of the small size of the block excavations and the shallowness of the cultural deposits, it is difficult to ascertain the cultural affiliation of many of the features found in or immediately below the plowzone. Also, spatial patterning data is limited by the small excavation blocks. The radiocarbon date of 790±80 BP (Beta-32526) from Feature 2 in Block 2 indicates a late Late Prehistoric I or early Late Prehistoric II occupation. The trash-filled storage pits (Features 3, 11, 14, and 17) in the vicinity of Feature 2 may or may not be attributed to a contemporaneous prehistoric occupation.

Feature 1 has a distinct boundary and seems to represent continued use of that portion of the site for repeated fire-related activities. Storage pits, which were later used for refuse disposal, are located west and south of Feature 1. The trash-filled storage pits, Features 3, 11, and 14, are situated on the outer periphery of Feature 1. No postmold pattern, indicative of prehistoric architecture, was obtained even within the large areas that were shovel scraped (Areas 1, 2, and 3).

The historic occupation of the site has disturbed the prehistoric remains in portions of all areas excavated. Feature 21, a historic postmold, occurred within Feature 17, a prehistoric trash-filled storage pit. The large rocks that may be attributed to being footings to a historic structure, Features 18 and 23, were in the southern portion of the site and have had less impact upon the prehistoric remains. Feature 16, a possible stairway to a historic storm cellar, was dug on the periphery of Feature 1. This large historic excavation has greatly disturbed the prehistoric remains in this portion of the site. The location of the piers (Features 18 and 23) indicates a historic structure, possibly a house, was located in that area.

Results of excavations at 41DN81 indicate multiple occupation of the site with possible Late Archaic (lower part of Feature 1), Late Prehistoric (upper part of Feature 1 and Feature 2), and historic (nineteenth century farmstead) components. The prehistoric components appear to be similar to those at nearby site 41DN79.

Using the correction curve of Stuiver and Becker (1987), the radiocarbon dates of 790±80 from Feature 2 and 1020±100 BP correlate with the dates of 693 and 951 BP, respectively. This places the dated occupations to the middle part of the Late Prehistoric I period and the late Prehistoric I to early Prehistoric II periods. The absence of arrowpoints from the lower levels of Feature 1 suggests a Late Archaic component. However, this inference is based on negative evidence.

The shallowness of prehistoric cultural deposits outside of Feature 1 did not lend themselves to determination of contemporaneity. The nineteenth century historic occupation has greatly disturbed large portions of the site, including Feature 1. Based on possible stone piers, the historic structure was immediately south of Feature 1, and a cellar was north of the structure. The possible cellar stairway greatly disturbed the southeast part Feature 1.

Historic Results: This section provides an overview of the historic assemblage from 41DN81. The artifacts recovered by ECI are inventoried in Appendix J. A summary of the historic assemblage recovered in 1987 is presented in Table 8-19 by collection area and feature. Mean beginning dates were calculated for the ceramic and bottle glass assemblages. These dates are shown in Table 8-20.

Features 4, 10, 13, 15, 16, 18, and 21-23 were identified as historic. Features 4, 10, 13, 15, 21, and 23 are postmolds (see Figure 8-34) and are associated with the historic dwelling. Feature 16 is a collapsed cellar later filled with trash, and Features 18 and 22 are limestone house piers. Historic artifacts were found in BHT 1, Slot Trenches 2-5, and Features 1-2, 11, 15-17, 19-20.

Based on these data, the historic component overlies and intrudes the prehistoric components. The historic features and artifacts indicate a mid-late nineteenth-century farmstead. However, because of the nature of the investigations at the site, the location of the historic dwelling and the density and distribution of the sheet refuse deposit was not discerned. Historic artifacts were not collected in the stripped areas, although they occurred. Their placement and relative density was not recorded. The placement of the piers indicates the dwelling was probably located in or near Stripped Areas 2 and 3. However, the exact location cannot be determined. The historic postmolds are probably from a fence that may have surrounded the house and support buildings, including the cellar and privy reported close to the dwelling by Skinner et al. (1982b) and Skinner and Baird (1985).

Because the integrity of the historic component has been lost, it is difficult to determine site age. This farmstead may have been occupied in the late nineteenth century. The mean beginning dates obtained for the site are extremely variable. The refined earthenwares yielded a date 26 years earlier than the stonewares, and 34 years earlier than the bottle glass. The total absence of twentieth-century refined earthenware styles, including ivory-tinted whitewares, fiesta-glazed whitewares, and the paucity of white granite whitewares (1890-) indicate the farmstead was occupied in the late 1800s. This late nineteenth-century date is further supported by the absence of brick, the paucity of bristol-glazed stonewares (1900-), and the number of nineteenth-century bottle glass fragments. However, the abundance of wire nails, primarily from the trash deposit in the collapsed cellar, suggests that the site continued to be occupied until the early 1900s.

Faunal Remains:

TOTAL BONE = 3920

Feature 1 = 3182 (16% identified, 33% burned)
Feature 16 = 726 (30% identified, 27% burned)
Feature 19 = 12 (see text)

Table 8-19
Historic Artifacts Found at 41DN81

Category	BHT 1	ST 2	ST 3	ST 4	ST5	Surf.
Refined Earthenware	30	4	4	2	10	12
Stoneware	11		2	3	2	
Bottle Glass	81	3	15	17	21	43
Table Glass	9		1		4	6
Lamp/Unid. Glass	6				4	13
Window Glass	31	1		2	5	19
Machine-Cut Nails						4
Wire Nails	4		1		1	41
Building Material	4		1	1	1	22
Personal Items	1					2
Thin & Heavy Metal	1				2	6
Household Metal	1					16
Tools		1				
Horse & Stable						1
Electrical Items						10

Features	1	2	11	15	16	17	19
Semi & Coarse Earth.					2		
Refined Earthenware	47				146		
Stoneware	11				23		
Porcelain	2				26		
Bottle Glass	413		7	4	720		1
Table Glass	11				68		
Lamp/Unid. Glass	41	1			165	1	
Window Glass	84	1	2	1	374		
Machine-Cut Nails	18				20		
Wire Nails	83	1			433		
Building Material	110		4		247		1
Personal Items	19	1			99		
Thin & Heavy Metal	153				461		
Household Metal	9				33		
Machine & Wagon	5				4		
Tools				1			
Horse & Stable Gear	2				2		
Ammunition	2				8		
Electrical Items	6				127		
Misc. Other	1				5		

Table 8-20
Mean Beginning Dates Obtained for the
Historic Material at 41DN81

Refined Earthenwares[1]	1861.94	(n=410)
Stonewares[1]	1888.17	(n=63)
Bottle Glass	1896.25	(n=115)
Combined	1871.46	(n=588)

[1] These counts include the artifacts collected by ECI.

Identified fauna, Feature 1, Levels 1-3

Taxon	Total
Indeterminate Fish	11
Gar	1
Catfish	6
Toad/Frog	1
Slider Turtle	4
Musk Turtle	2
Musk/Mud Turtle	11
Box Turtle	34
Indeterminate Turtle	212
Indeterminate Snake	7
Non-poisonous Snake	7
Viper	1
Indeterminate Lizard	1
Indeterminate Bird, large	1
Indeterminate Bird, medium	4
Cottontail	15
Swamp or Jack Rabbit	2
Jack Rabbit	1
Ground Squirrel sp.	1
Tree Squirrel sp.	1
Pocket Gopher	20
Deer Mouse	2
Cotton Rat	4
Vole	2
Grasshopper Mouse	1
Indeterminate Rodent	13
Dog/Coyote	1
Pig	9
Deer sp.	1

Sheep/Goat	2
Indeterminate Mammal, small	7
Indeterminate Mammal, medium	10
Indeterminate Mammal, large	33
Total Identified	509

The first three levels of Feature 1 were designated by the excavators to represent the historic component of that feature. However, after the entire site had been investigated, it was determined that mixing and disturbance had occurred throughout the upper 20 cm of the deposits. For these reasons, therefore, the large assemblage from this feature is not reliable as an example of a historic midden accumulation.

As a result of the intermixing of components, other aspects of this assemblage create false impressions. For example, based on bone counts alone, this feature appears to contain more bone than any other historic site faunal assemblage, but fully 51% of the entire identified fraction is composed of fragmented turtle shell. Furthermore, the presence of three individual deer in a historic assemblage, in addition to so much turtle shell, is anomalous for historic sites in this study area.

Taphonomically, the bone is extremely weathered and fragmented, with bone surfaces exhibiting exfoliation, cracking, and root etching. Thus, the composition of the identified material, as well as its state of preservation, indicate that the bones have been irretrievably mixed and subjected to destructive agents.

Nevertheless, a few observations can be made about Feature 1 within the context of the historic archaeological investigations. The marker species for historic components are pig and chicken. And while pig is represented in this feature, the remains are primarily teeth fragments, and no chicken bones were identified although three eggshell fragments comparable to chicken were recorded. No cattle bones were positively identified, but two large mammalian fragments exhibited cut marks that appear to have been made with a metal implement. One of them may be the remains of a bone knife handle.

In addition, three turtle plastron fragments are burned and have cut marks on the interior. These marks result from scraping out the meat from a turtle's shell as in preparing turtle soup. Scraped turtle shell has not been exemplified in any of the prehistoric assemblages in the area. So, at least some of the ubiquitous turtle shell is possibly related to the historic subsistence activities. On the other hand, even though domestic animals are represented or suggested, their remains are not abundant. And yet, the historic bone implements and unique turtle processing technique are suggestive of a non-aboriginal faunal assemblage. Therefore, the historic occupation associated with Feature 1 may have been of brief duration and may have occurred early in the historic period when more game animals were consumed in contrast to domesticates.

Likewise, Feature 16 has a large collection of faunal remains. In this case, however, the entire feature is considered historic in origin although some prehistoric remains have become mixed in to an unknown degree. Like Feature 1, the bones from this feature are highly weathered, and many are covered in calcium carbonate, indicating a difference in local groundwater control and thus a higher pH and better bone preservation. In contrast to Feature 1, Feature 16 has more domestic remains with butchering marks, fewer fragmented turtle shell, and less evidence of intrusive taxa such as pocket gopher and vole.

Eight of the identified elements had been modified in some way. One large mammal bone had been fashioned into a knife handle, which still retained a bit of rust where the pin fastened the blade to the handle. The knife handle fragment from Feature 1 was too badly deteriorated to determine if it conjoined with this one from Feature 16. A rib from a large mammal (pig or cow) had an oblique slice in the blade, typical of cut ribs from other historic sites. Three pig bones exhibited cut marks: an axis vertebra had been chopped as in decapitation; a sacrum also had a cleaver chop in the centrum; and a rib had been sawed. This pig rib was recovered deep in level 8 of the feature, suggesting that the historic refuse had been placed in a hole excavated for burying waste. Other cut bone includes

cut limb bones of medium-sized birds, probably chickens, and a squirrel calcaneum that displays a skinning cut made with a metal tool. This squirrel element is the only definitive archaeological evidence for hunting and processing squirrel as game in a historic site context.

Fishing undoubtedly played an important role in subsistence at this site. The delicate bones of fishes do not generally preserve unless conditions are favorable. That both features contained some fish bones suggests that many more remains were lost to taphonomic factors or screening methods. Feature 16 has a slightly higher diversity in fish taxa and abundance of fish remains than does Feature 1, but it is not clear whether this is due to preservation or cultural activities. Similarly, the kinds and numbers of lizards in both features is problematic. Whereas the fishes indicate the exploitation of aquatic habitats that exist in the locale today, they are in a cultural context of a historic midden. The lizards may be intrusive to that context as natural deaths or deposited by nonhuman predators.

41DN81 - Feature 16

Channel Catfish	1
Catfish sp.	6
Bass/Sunfish	11
Indeterminate Fish	14
Toad	6 (MNI=2)
Toad/Frog	19
Indeterminate Turtle	8
Rat Snake	1
Indeterminate Snake	17
Spiny Lizard	1
Spotted Whiptail Lizard	2
Indeterminate Lizard	4
Prairie Chicken	1
Domestic Chicken	3
Indeterminate Bird, large	1
Indeterminate Bird, medium	9
Eggshells	4 (MNI=2)
Cottontail	7
Swamp/Jack Rabbit	1
Fox/Gray Squirrel	3 (MNI=2)
Pocket Gopher	1
Harvest Mouse	1
Woodrat	1
Cotton Rat	2
Indeterminate Rodent	17
Domestic or Feral Pig	8 (MNI=2)
Deer	9
Indeterminate Mammal, large	7
Indeterminate Mammal, medium	2
Indeterminate Mammal, small	6
Total Identified	217

Feature 19, also designated as a historic feature, produced a small sample of 19 bone fragments. Of these, only three were identified: turtle, medium bird (chicken?), and small bird.

Summary: Site 41DN81 is a multicomponent site containing features and artifacts from a Late Archaic (lower part of Feature 1), Late Prehistoric (upper part of Features 1 and 2), and a nineteenth century farmstead. The prehistoric

components are similar to those found at 41DN79, while the historic are more recent and no Historic Native American material was found.

The prehistoric components have been impacted by the historic farmstead occupation, while the latter has been affected by modern cultivation or plowing. The upper 20 or 30 cm of the cultural deposits at this site contain mixed prehistoric and historic material. As such, it is difficult to determine which features are prehistoric Native American and which are historic in origin. This difficulty is also evident within the faunal assemblage as noted above. Further, because of the nature of the investigations, the density and distribution of the sheet refuse deposits, and the location of the farmstead dwelling were not clearly discerned. No well, cellar, or outbuildings were exposed during excavation, although Skinner et al. (1982a) and Skinner and Baird (1985) reported a farmstead at this location; and the sheet refuse material supports this conclusion. The combined mean beginning date for this site is 1871.

41DN91

Map Quad	Green Valley 7.5' (1960, rv. 1978), #3397-141
Elevation	610' amsl
Scheduled Investigations	Sheet refuse excavations
Additional Investigations	Archival
Soil Association	Lewisville clay loam
Cultural Affiliation	Historic (ca. 1870 to 1940)

Description: The site is located on a northeast-facing terrace slope in the center of a pasture. Sandstone and limestone rocks from the foundation of the former dwelling remain along with two wells, a cellar depression, and a surface scatter of domestic artifacts. The area of occupation was estimated at 100 m north-south by 75 m east-west (Figure 8-36).

Previous Investigations: Initial testing by ECI in 1982 involved excavating eight auger holes that were placed to provide a rapid assessment of site age, function, integrity, size, and the depth of cultural deposits. Auger Hole 1 was excavated in the cellar depression, and Auger Hole 6 was dug to recover soil samples. It was placed about 25 m north of the foundation (Skinner et al. 1982b). Two 1x1-m units were judgmentally placed to investigate features. Unit 1 was excavated in the cellar, west of Auger Hole 1. It was dug to a depth of 120 cm below the surface. Unit 2 confirmed the presence of a trash deposit southwest of the house foundation (Skinner and Baird 1985).

Three additional 1x1-m units (3-5) and 27 shovel test pits were dug during the second phase of testing by ECI. Units 3 and 4 were located northeast of the foundation and contained shallow (ca. 30 cm) sheet refuse deposits. Unit 4 also contained evidence of a possible drive or walkway. According to Skinner and Baird (1985:9-31), an outbuilding was probably located south of this unit. It was not located. Unit 5 was dug inside the foundation, 2 m south of the north wall.

The shovel test pits were excavated at a 5-m interval along two transects, one oriented northwest-southeast, and the other northeast-southwest. The spacing along the northwest-southeast transect was adjusted to avoid the cellar. In addition, while Skinner and Baird (1985:9-29) reported that 24 shovel test pits were excavated, 27 were dug and mapped (Skinner and Baird 1985:Figure 9-17). Additional shovel test pits were located approximately 20 m east of the foundation, but the number of pits and their placement were not recorded. These pits were dug to locate a possible barn or outbuilding in this area. No evidence of a structure was found. An overview of the artifact assemblage is provided in Appendix J.

The site was revisited in 1985 by personnel from UNT, and additional test excavations were recommended to identify the location of additional structures and define spatial artifact patterns, as well as recover information that could be used to compare the owner and tenant occupations associated with this farmstead (Ferring 1986a:80).

According to Skinner and Baird (1985:9-29, 9-30), the house and other structures were removed from the site. The foundation of the dwelling was partially intact and measured 6 m north-south by 11 m east-west, including the porch. This foundation was composed of cut sandstone blocks with an additional east-west row of blocks 2.5 m south of the structure. The dwelling faced south, and this row was interpreted as probably demarcating the yard of the house from the surrounding pasture.

Archival Investigations: Site 41DN91 was located on Tract 1 of Buffalo Bayou, Brazos and Colorado Railroad Company survey (A-139) that was conveyed in 1865. A gap occurs in the records between 1865 and 1874. However, it appears that the site was serially occupied between ca. 1865 and the 1940s. In 1947 the property was sold by the heirs of U. Wilson to A. E. Sadau.

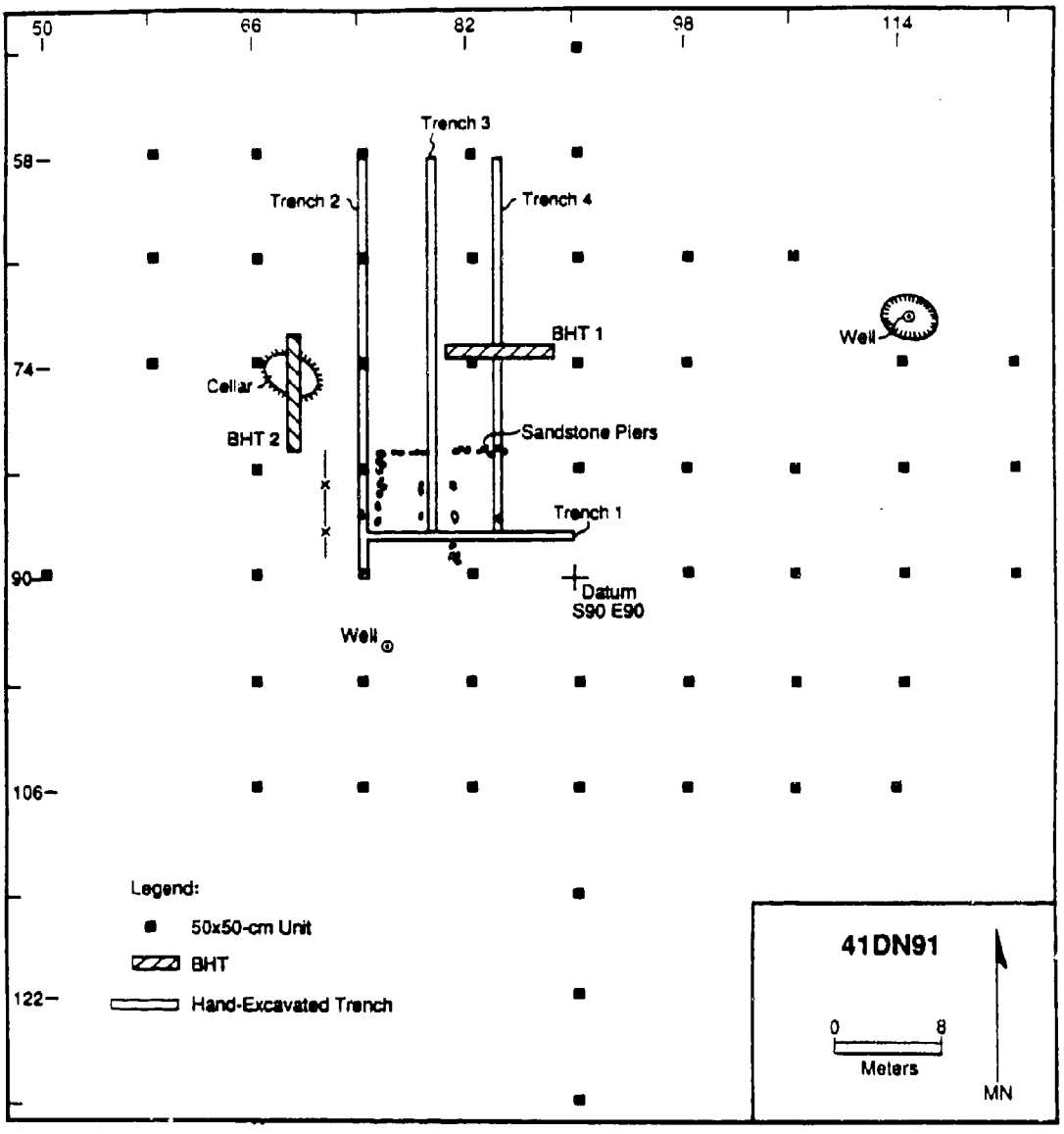


Figure 8-36. Site map of 41DN91.

Chain of title work conducted by ECI (Skinner and Baird 1985:9-28) is incomplete, and contains conflicting information with the information collected by NTSU (see Table A-15). Based on oral history data, U. Wilson purchased 20 acres east of 41DN118 around 1910. Site 41DN91 was then occupied by renters, at least through the 1930s. The 1937 tax appraisal card indicated that the site was tenant occupied, but did not include information on extant structures.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Excavation Method: Excavations were conducted by UNT in 1987 and involved the excavation of 53 50x50-cm units on an 8-m grid (Figure 8-36). These units were dug to provide good spatial coverage of the site area, to define the site limits, and recover a representative sample of the sheet refuse deposit. Four hand-excavated trenches were dug to examine the main house area, including the area under the dwelling and the main activity areas behind the dwelling. Trench 1 was oriented east-west and extended from E74.5 to E89 on the S86.5 line. Trenches 2, 3, and 4 were located 5 m apart and were oriented north-south. Trench 2 extended from S59 to S89.5 m on the E74 line. Trenches 3 and 4 extended from S59 to S86 on the E79 and E84 lines, respectively. Only Trench 2 contained 50x50-cm units that had been previously dug. Two backhoe trenches were also excavated. BHT 1 was oriented east-west and was located within the main midden area behind the house. BHT 2 was oriented north-south and bisected the cellar.

Geology: Site 41DN91 is located on a Pleistocene terrace in the western part of the Elm Fork of the Trinity River Valley. The site is situated approximately 1 km north of the Ray Roberts Lake dam and approximately 1.2 km west of the Elm Fork of the Trinity River channel. The site is at an elevation of 610-ft amsl and is situated on the Hickory Creek terrace (Ferring 1990) near the eastern edge of the terrace. Site topography is level and the eastern part drops off gently to the Elm Fork of the Trinity River floodplain. The area today and probably in the pre-settlement period is dominated by prairie-type vegetation as is common for very fine-grained calcareous alluvial sediments.

Stratigraphy and Soils: A single stratigraphic column in BHT 1 is described in Table 8-21. This 2.7-m profile exposed the well-developed soil characteristic of the soil formed on the Hickory Creek terrace in the Coppell alluvium (Ferring 1990). The entire profile is characterized by silt loam to silty clay loam sediments. The thin AP-horizon is only slightly coarser than the underlying B-horizon materials. Between 77 and 128 cm below the surface, the profile is calcareous and contains carbonate nodules. Evidence of vertical cracking and slick and slides is present throughout the lower portions of the profile.

Table 8-21
Soil Profile Description for BHT 1 at 41DN91

Horizon	Depth (cms)	Color Moist	Texture	Structure	Boundary
Ap	0-12	10YR3/2	SiL-SiCL	3msab	cs
ABw	12-77	10YR3/2	CL-SiC	3msab	cs
ABtk	77-99	10YR3/3	SiL	3msab	cs
Btk	99-128	10YR5/4	SiL-SiCL	1msab	gs
Btc	128-168	10YR5/5	SiCL	3mag	gs
Btc2	168-206	10YR5/5	SiCL	2msab	gs
C	206-270+	7.5YR5/6	SiL	1msab	base

Key:
Texture: CL=clay loam, SiC=silty clay, SiCL=silty clay loam, SiL=silt loam.
Structure: grade/class/type; grade: 1=weak, 2=moderate, 3=strong; class: m=medium; type: ag=angular blocky, sab=subangular blocky.
Boundary: distinctness/topography; distinctness: c=clear, g=gradual; topography: s=smooth.

The very clay character of the alluvial materials is the predominate sediment feature affecting formation processes at this site. This high clay character promotes a high degree of shrink-swell processes corresponding with seasonal variation of soil moisture and promotes rapid churning of artifacts in the profile.

Excavation Results: The sheet refuse deposit provided considerable temporal and spatial data indicating the length of occupation and specific activity areas. Nine features were identified, and the four hand-excavated trenches provided a detailed look at spatial patterning under and near the dwelling, as well as, the major sheet refuse band behind (north) the house. Correlation of the geological and archaeological data indicates greater vertical movement of artifacts associated with the high clay content and vertisolic character of the soil.

The location, function, and contents of the features are summarized, followed by a discussion of the artifact assemblage from the different collection areas. These collection areas include the 50x50-cm units and hand-excavated trenches (1-4).

Features: Nine features were identified and include three possible postmolds, two wells, house foundation stones, a collapsed cellar, an artifact-filled depression, and an ash/charcoal stain or lens. Each of these features is discussed below.

Feature 1: Feature 1 was located on the west fringe of the collapsed cellar (Feature 6). It was exposed at the base of Level 4, where it appeared as an irregular-shaped stain. At 50 cm below the surface, it had vertical walls and continued to a depth of 84 cm. No building or wood debris was found in this stained area. Test Unit 1 dug by ECI (Skinner and Baird 1985) is located in this area, but did not correlate with this feature. This unit measured 1x1 m and was excavated to 120 cm below the surface. The function of Feature 1 is unknown. It was tentatively identified in the field as a postmold(?), with evidence of root and rodent disturbance.

Feature 2: Feature 2 was located in Unit S66 E79 in Trench 3. It was identified at 15 cm below the surface and extended to 30 cm. It was only partially exposed. This feature was identified as a organic stain (possible postmold) with vertical walls, containing bone, machine-cut nails, refined earthenwares, bottle glass, and thin metal.

Feature 3: Feature 3 was located in Unit S81 E79 in Trench 3. It was identified on the north dwelling wall. It was visible at the base of Level 3 (30 cm below the surface) and extended to 46 cm below the surface. The feature was a shallow, basin-shaped depression measuring 34 cm east-west by 22 cm north-south and contained architectural debris and cast-iron stove parts. The feature was first identified based on the concentration of artifacts, rather than a slight change in matrix color. The surrounding, non-feature matrix was sterile. It is unknown if this depression was natural or cultural, but the fill contained a small artifact concentration. The artifacts in Feature 3 are listed in Table 8-22.

Table 8-22
Artifacts From Feature 3 at 41DN91

Category	Count
Refined Earthenware	6
Bottle Glass	20
Lamp/Unid. Glass	3
Window Glass	156
Machine-Cut Nails	26
Wire Nails	6
Building Material	12
Personal Items	2
Thin & Heavy Metal	4
Household Metal	7
Horse & Stable Gear	1
Total	243

Feature 4: Feature 4 was located in Unit S75 E79 in Trench 3. It was identified at the base of Level 4 as a possible postmold. It was 23-24 cm in diameter, contained some charcoal and darker matrix than the surrounding sediment. Artifacts were found in Levels 1-4, but only one window glass sherd was found in Feature 4. The upper portion of the feature may have been truncated, or not identified during excavation.

Feature 5: Feature 5 was a dry-laid sandstone well located about 8 m south of the dwelling. It was 2 m in diameter, was unfilled, and extended an estimated 6 m in depth. The east wall was partially collapsed, and the bottom portion of the well was filled with sediment.

Feature 6: Feature 6 was a collapsed cellar located about 6.5 m northwest of the dwelling. The entrance was on the east, and the walls and roof were earth supported by wooden beams or poles. BHT 2 was excavated north-south through the cellar to obtain a profile.

Feature 7: Feature 7 was the dwelling foundation/piers. These piers were native sandstone. The dwelling was set on a small house mound and measured approximately 6m north-south by 11 m east-west, including the south/front porch. Some of the units in Trenches 1, 3, and 4 are located in the house mound and Feature 7, along with some of the 1x3-m surface collection units (see Skinner and Baird 1985).

Feature 8: Feature 8 was a dry-laid native sandstone well 26 m northeast of the dwelling. It is similar in style and size as the other well, Feature 5, located closer to the dwelling. It measured approximately 2 m in diameter and was filled.

Feature 9: Feature 9 was a large ash and charcoal stain containing a variety of sheet refuse artifacts. It was exposed and recorded in Unit S72 E84 and Unit S73 E84 in Trench 4. Feature 9 was first identified about 16 cm below the surface in Unit S73 E84. This stain or lens was thin, and the spatial extent of Feature 9 was not determined. Units located to the north or the south in Trenches 3 and 4 did not contain evidence of Feature 9. Root disturbance and moderate artifact densities were noted above the feature and in nearby units, and similar artifact densities occurred in Feature 9.

Artifact Assemblage: Comparison of these collection areas indicate that no significant difference occurs among these areas in the relative frequency of the different artifact categories when architectural items and thin and heavy metal (mostly tin can fragments) are excluded. Architectural items account for only 38.28% of the artifacts from the 50x50-cm units, while they total 61.86% of the artifacts from the trenches. This difference reflects the number of units in the trenches located within the house mound, both inside and outside the dwelling. Few 50x50-cm units were located in or near the dwelling. The artifact assemblage from 41DN91 is summarized by collection area in Table 8-23. These artifact frequencies were used to generate Figure 8-37.

Comparison of the 50x50-cm units and the trenches, excluding architectural items and thin and heavy metal, indicate that the relative frequency of the different artifact categories is similar across collection areas (Figure 8-37). Ceramics account for 29.18% of the artifacts in the 50x50-cm units, bottle glass total 62.33%, and the remaining categories total 8.50%. These items total 27.10%, 60.49%, and 12.42%, respectively, for the trenches. Personal items are more frequent in the trenches (5.54%) than in the 50x50-cm units (2.12%), while the reverse is evident for household items (1.90% in the trenches and 3.45% in the 50x50-cm units).

An examination of the architectural items by collection area (Table 8-24 and Figure 8-38) indicates that window glass is most common in Trench 2 and Trench 4, accounting for 1.75 times as much of the architectural assemblage than in the 50x50-cm units. Machine-cut nails are most common in Trench 3 and the 50x50-cm units, while wire nails and building material (primarily plain and barbed wire) are more than twice as common in the 50x50-cm units than in Trenches 1-4.

Table 8-23
Artifacts From 41DN91 by Collection Area

Category	50x50s	Trench 1	Trench 2	Trench 3	Trench 4
Semi & Coarse Earthen.	131	6	8	8	
Refined Earthenware	72	17	113	184	218
Stoneware	35	9	25	46	89
Porcelain	2	1	2	7	4
Bottle Glass	210	168	209	580	544
Table Glass	10	7	7	30	38
Lamp Glass	5	9	8	29	28
Unid. Glass	10	8	10	7	33
Window Glass	177	468	507	962	1888
Machine-Cut Nails	115	267	127	510	346
Wire Nails	62	64	25	109	77
Handmade Brick	7	16	2	13	85
Machine-Made Brick		2		2	
Building Material	62	44	28	105	68
Personal Items	8	11	9	72	65
Thin & Heavy Metal	304	101	24	264	243
Household Metal	13	15	4	23	12
Machine & Wagon	7	17	22	15	23
Tools	2	1	1	3	
Horse & Stable	3	5	4	9	20
Ammunition	1	1	4	3	5
Electrical Items		2		2	2
Misc. Other	1	2	16	11	25
Total	1105	1267	1153	2992	3824

Table 8-24
Comparison of the Relative Percentage of Architectural Items by Collection Area at 41DN91

Category	50x50s	Trench 1	Trench 2	Trench 3	Trench 4
Window Glass	41.84	54.36	73.58	56.55	76.62
Machine-Cut Nails	27.19	38.75	18.43	29.98	14.04
Wire Nails	14.66	7.43	3.63	6.41	3.13
Handmade Brick	1.65	1.86	0.29	0.76	3.45
Machine-Made Brick		0.23		0.12	
Building Material	14.66	5.11	4.06	6.17	2.76

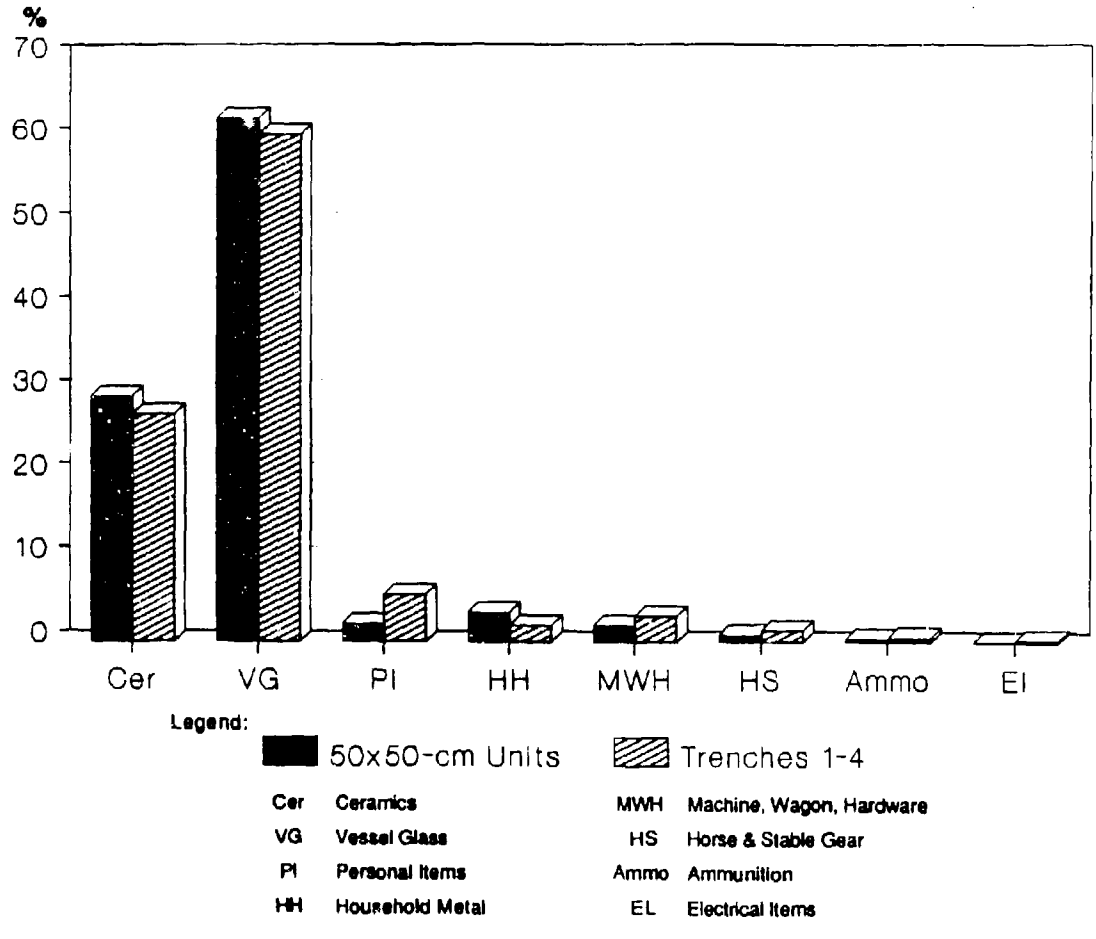


Figure 8-37. Comparison of major artifact cat gory frequencies for the 50x50-cm units in the sheet-refuse deposit and the combined counts for hand-excavated Trenches 1, 2, 3 and 4 at 41DN91. Total artifact counts by category are provided in Table 8-23.

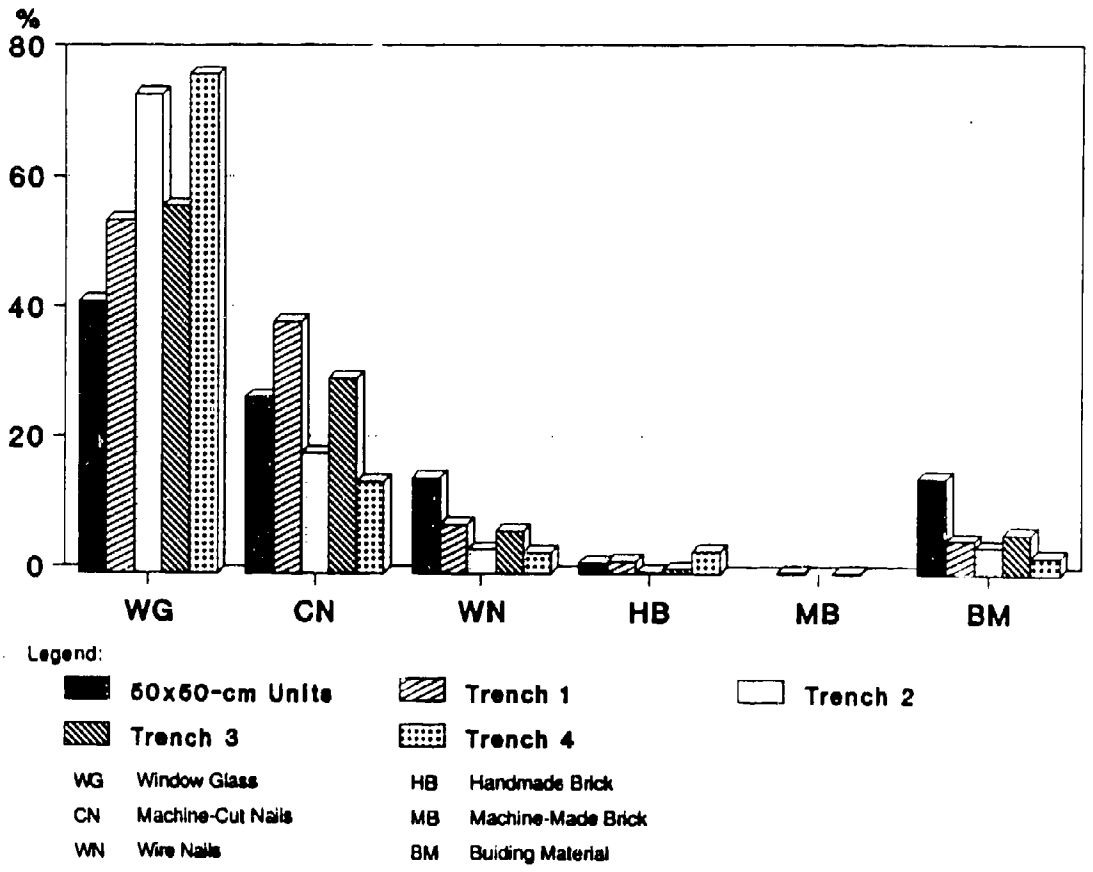


Figure 8-38. Comparison of architectural artifact category frequencies for hand-excavated Trenches 1, 2, 3 and 4 at 41DN91. Total artifact counts by category are provided in Table 8-24.

These data also indicate that machine-cut nails account for 80.20% of the nails from the site and dominate in both the trenches and the 50x50-cm units. Brick were uncommon in the collection areas (n=189), with handmade bricks totalling 94.18% of the bricks found.

Comparison of the ceramic assemblages from the different collection units (Figure 8-39) indicates similar frequencies for semi-coarse and refined earthenwares, stonewares, and porcelains, for trenches 2-4 and the 50x50-cm units. Trench 1 contains a much higher frequency of semi-coarse earthenwares in comparison to the other collection units; all of these semi-coarse earthenware sherds are from a single flowerpot. When these counts are adjusted to reflect this, then no significant difference in semi-coarse earthenware frequencies is evident between collection units. Stonewares are the second most common type of ceramic found, while porcelains are rare.

Vessel glass data indicate several interesting patterns. Similar counts and relative frequencies occur in Trench 3 and Trench 4, while Trench 2, which contains the same relative area, contains less than half as much vessel glass. Trench 1 contains the smallest excavated area of the four trenches and exhibits the smallest relative artifact density. These data also indicate less vessel glass occurs west or south of the dwelling. The highest vessel glass frequencies occur in the trenches north of the house.

Comparison of the MBD values obtained for refined earthenwares, stonewares, and bottle glass sherds for the different collection areas indicate no significant differences among collections (Table 8-25). A combined MBD value of 1871.5 was obtained for the site, indicating 41DN91 was probably initially occupied in the late 1860s to early 1870s period. The archival data indicates the property was still occupied in the late 1930s.

Table 8-25
MBD Values Obtained for Refined Earthenwares, Stonewares, and Bottle Glass Sherds Collection Area at 41DN91 (n=sample size)

Category	50x50s	Trenches	ECI Coll.	Combined
RE	1865.0 (67)	1859.7 (461)	1858.1 (191)	1859.8 (719)
SW	1870.2 (28)	1870.6 (156)	1893.5 (129)	1880.0 (313)
BG	1886.4 (33)	1894.0 (238)	---	1893.0 (271)
Combined	1871.6 (128)	1871.2 (855)	1872.4 (320)	1871.5 (1303)

[1] RE=refined earthenwares, SW=stonewares, BG=bottle glass, Combined=all three categories combined.
[2] The bottle glass assemblage collected by ECI was not analyzed and no MBD values were obtained.

The refined earthenwares produced a MBD value of 1859.8 for the combined collection areas, while stonewares yielded a value of 1880.0 and bottle glass dated 1893. The variability between these values reflects differences in the resolution of the dating information available for artifact categories, and the frequency of twentieth-century bottle glass.

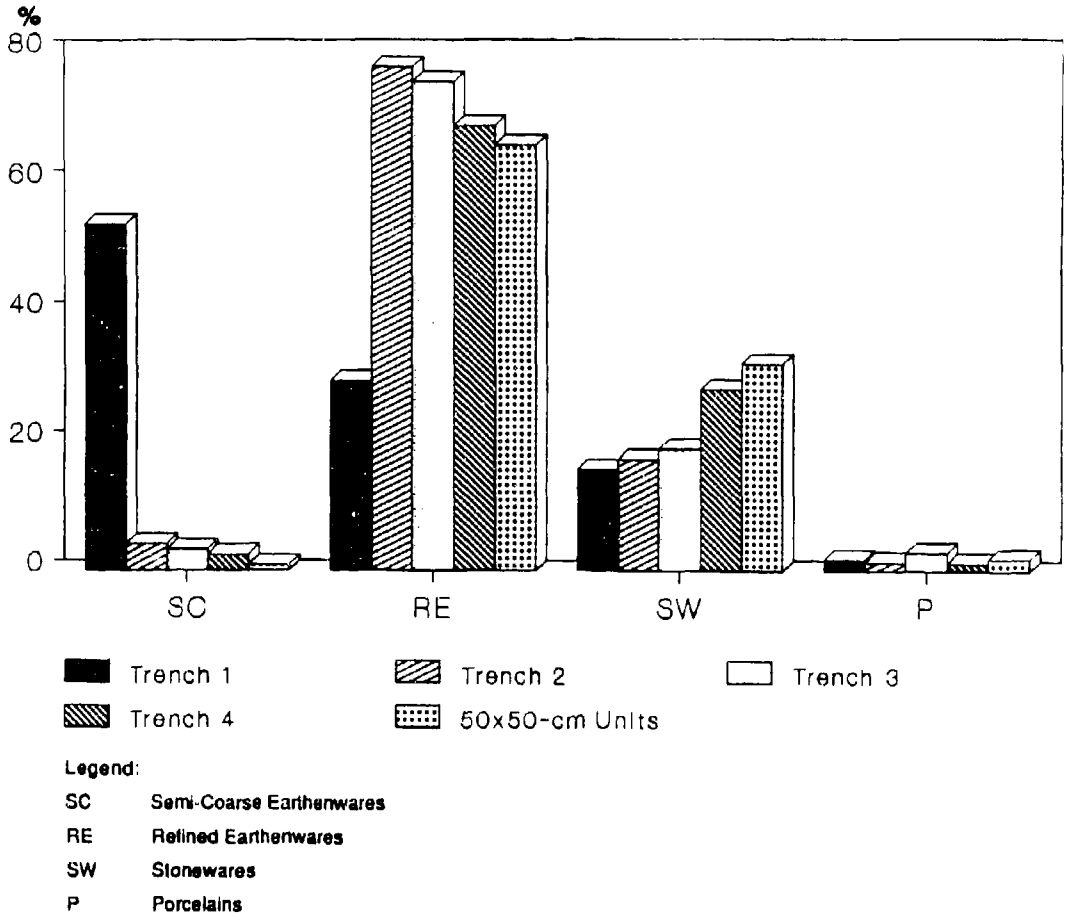


Figure 8-39. Comparison of ceramic category frequencies for the 50x50-cm units in the sheet-refuse deposit and for hand-excavated Trenches 1, 2, 3 and 4 at 41DN91. Total artifact counts by category are provided in Table 8-23.

Artifact Distributions: Distribution maps were prepared for refined earthenwares, stonewares, bottle glass, window glass, machine-cut and wire nails, and personal items. These maps indicate valuable information on the sheet refuse deposit at 41D[illegible] These maps are discussed by collection area below.

50x50-cm Units: Distribution maps for the artifact assemblage from the 50x50-cm units indicate a moderately dense sheet [illegible]e deposit. Refined earthenwares (Figure 8-40a) and stonewares (Figure 8-40b) are scattered across the site, but refined earthenwares cluster in a band around the dwelling. This band occurs in the west and north yards, with the highest densities occurring in units 8 m from the dwelling. Fewer sherds occur in the east and south yards. Stonewares are equally common in the south or front yard as they are behind (north) the dwelling.

Bottle glass sherds (Figure 8-40c) are broadly scattered across the yard, but cluster near the dwelling. The highest frequencies occur 4-8 m from the dwelling in all yards. Window glass sherds (Figure 8-40d) are also broadly scattered, with high frequencies near the dwelling, but also in the outer yard areas. Machine-cut nails (Figure 8-40e) and wire nails (Figure 8-40f) exhibit overlapping distributions, but machine-cut nails are more widely distributed. Wire nails cluster in two units near the house, and in the east yard east of the well. Machine-cut nails occur in all yard areas, with the highest frequencies in units near the dwelling and one unit in the south yard.

Trenches: The artifact distributions maps (Figures 8-41 through 8-47) produced for ceramics, bottle glass, architectural items, and personal items based on the trench data provide a more detailed look at the clustering, as well as, the general distribution of these categories in the north yard and near the dwelling. The location of the dwelling, based on the location of the house mound and foundation/pier stones is shown in each figure (Figures 8-41 through 8-47).

Refined earthenwares (Figure 8-41) cluster in the north yard. They are uncommon in units under the dwelling and along the south or front of the dwelling. They are most frequent in units 4-12 m behind (north) the house. The greatest frequencies occur in Trench 3 and Trench 4, but high densities occur in Trench 2. These high density units in Trench 2 include two near the west wall of the house, and in units between 4-8 m from the northwest corner of the dwelling.

Stonewares (Figure 8-42) are less frequent than refined earthenwares, but also cluster in Tre[illegible] They occur under and near the dwelling in low frequencies, and are scattered across the north yard, occurring all the way to the north-end of Trenches 2-3. The highest frequencies occur 4-12 m north of the house in Trench 4, with a small cluster in Trench 2 and Trench 3. Fewer stonewares were found in Trench 2 than in Trenches 3 and 4, similar to the lower frequencies seen for refined earthenwares in Trench 2.

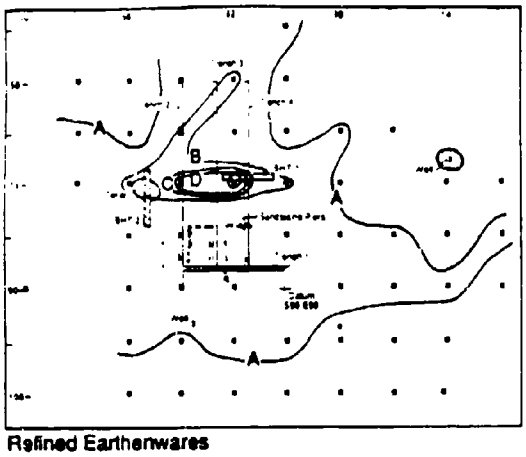
Window glass sherds (Figure 8-43) cluster under the dwelling, along the walls of the house, and 4-10 m behind (north) the house in Trenches 3 and 4. Machine-cut nails (Figure 8-44) and wire nails (Figure 8-45) also cluster in these same areas. However, wire nails are less dispersed than machine-cut nails, occur in lower frequencies, but both cluster under the house and about 3-4 m from the dwelling in Trench 3. Few wire nails occur in Trench 2 except under/adjacent to the house walls.

Handmade bricks (primarily fragments) are uncommon at the site, but cluster in Trench 4, suggesting that the chimney was on the east side of the dwelling (Figure 8-46). Personal items are low density remains at 41DN91 and are uncommon except under the house, along the house walls, and about 6-10 m from the dwelling in Trench 3 and Trench 4 (Figure 8-47).

Faunal Remains:

TOTAL BONE = 219

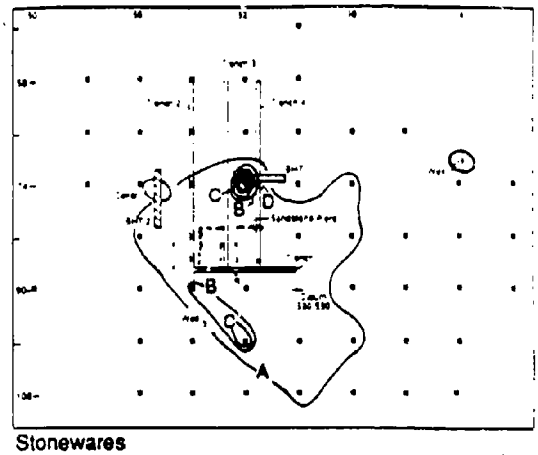
Identified fauna (n=62)



Refined Earthenwares

A 1-3
B 4-6
C 7-9
D 10-12
E 12-15

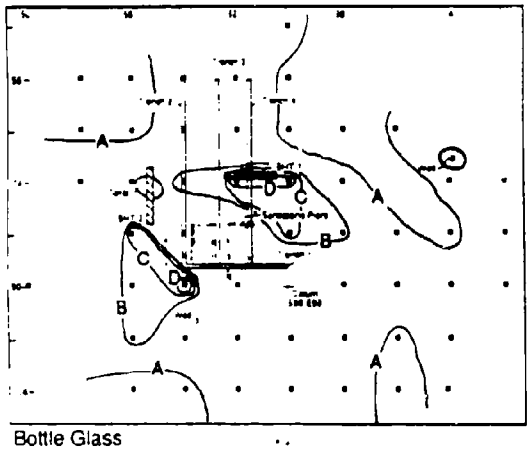
a



Stonewares

A 1-2
B 3-4
C 5-6
D 7+

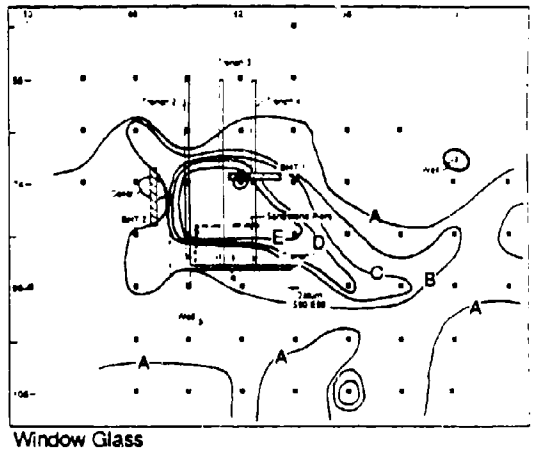
b



Bottle Glass

A 1-5
B 6-10
C 11-15
D 16+

c

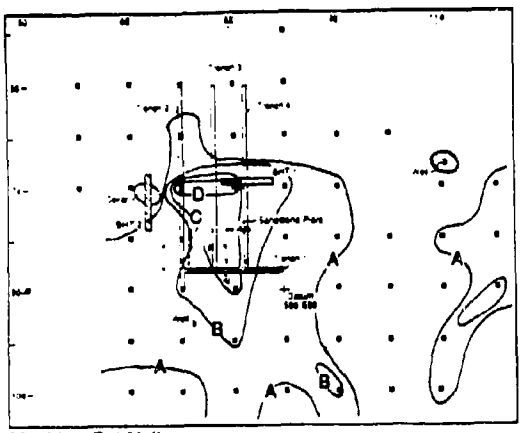


Window Glass

A 1-3
B 4-6
C 7-9
D 10-12
E 13+

d

Figure 8-40. Artifact frequency distributions at 41DW91. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) machine-cut nails, and (f) wire nails. Artifact frequencies are recorded for all 50x50-cm units.



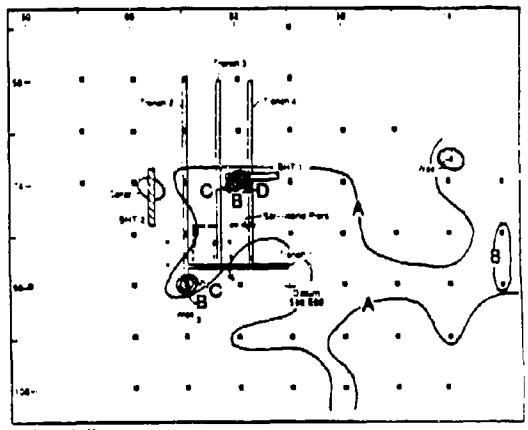


Figure 8-40. (continued) Artifact frequency distributions at 41DN91. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) machine-cut nails, and (f) wire nails. Artifact frequencies are recorded for all 50x50-cm units.

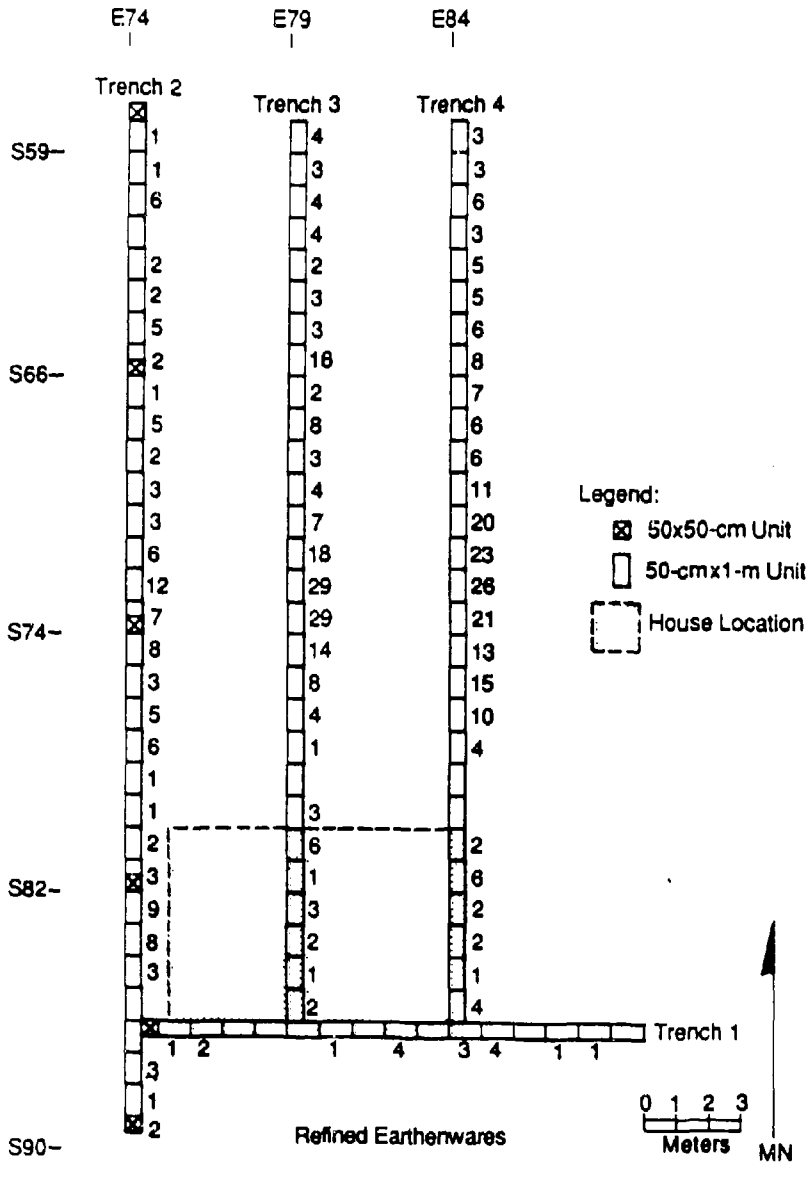


Figure 8-41. Refined earthenware counts for hand-excavated Trenches 1-4 at 41DN91.

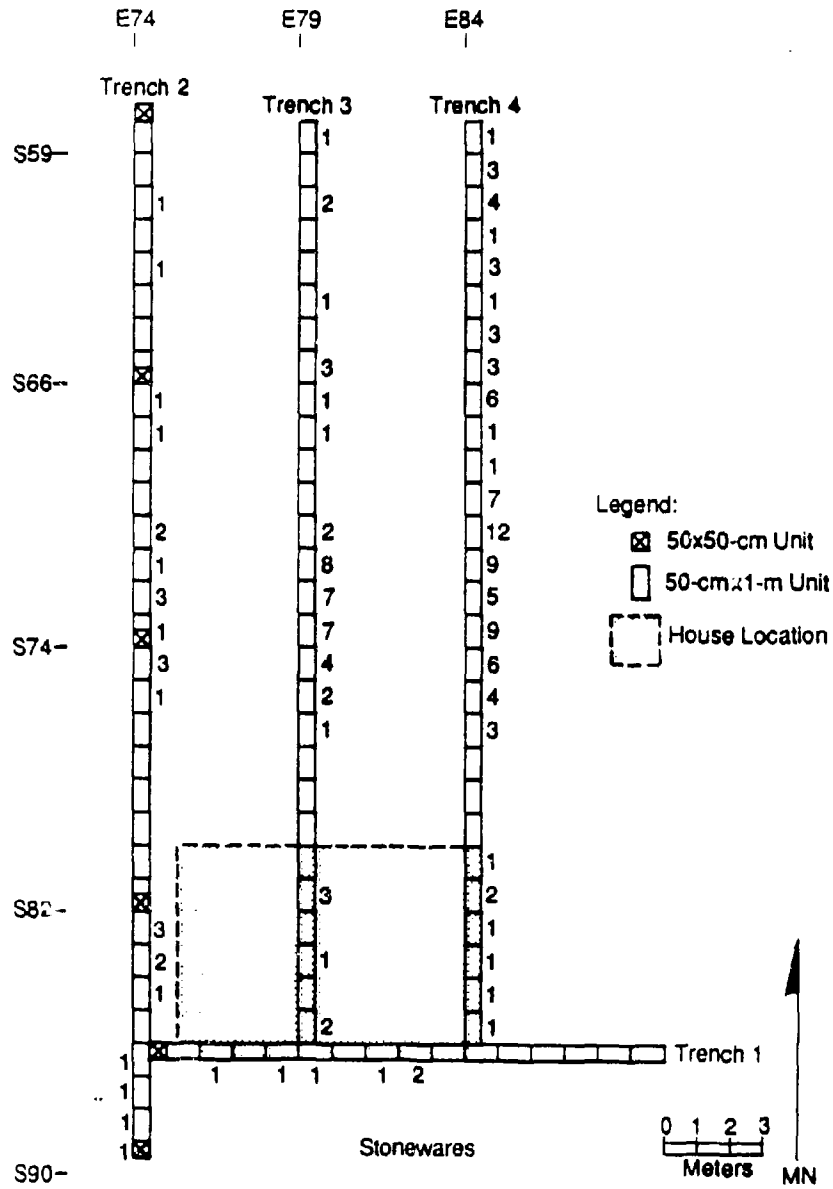


Figure 8-42. Stoneware counts for hand-excavated Trenches 1-4 at 41DN91.

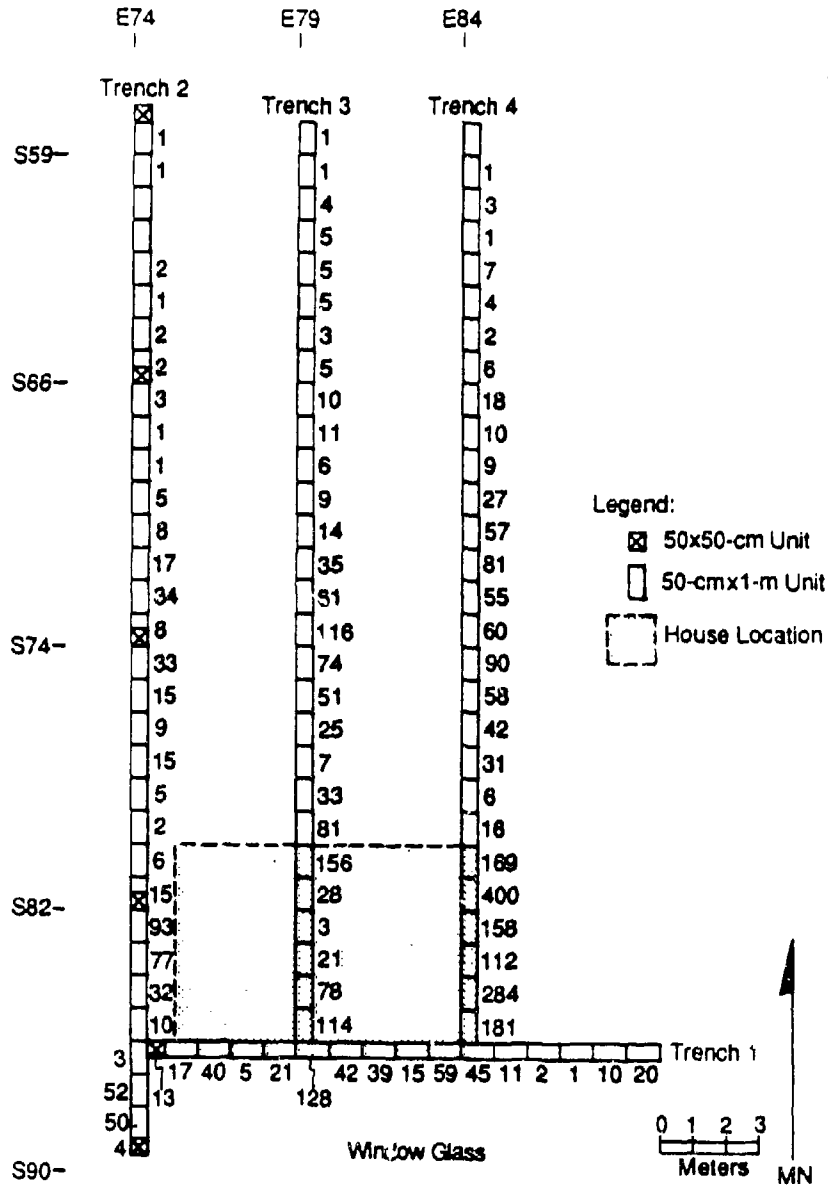


Figure 8-43. Window glass counts for hand-excavated Trenches 1-4 at 41DN91.

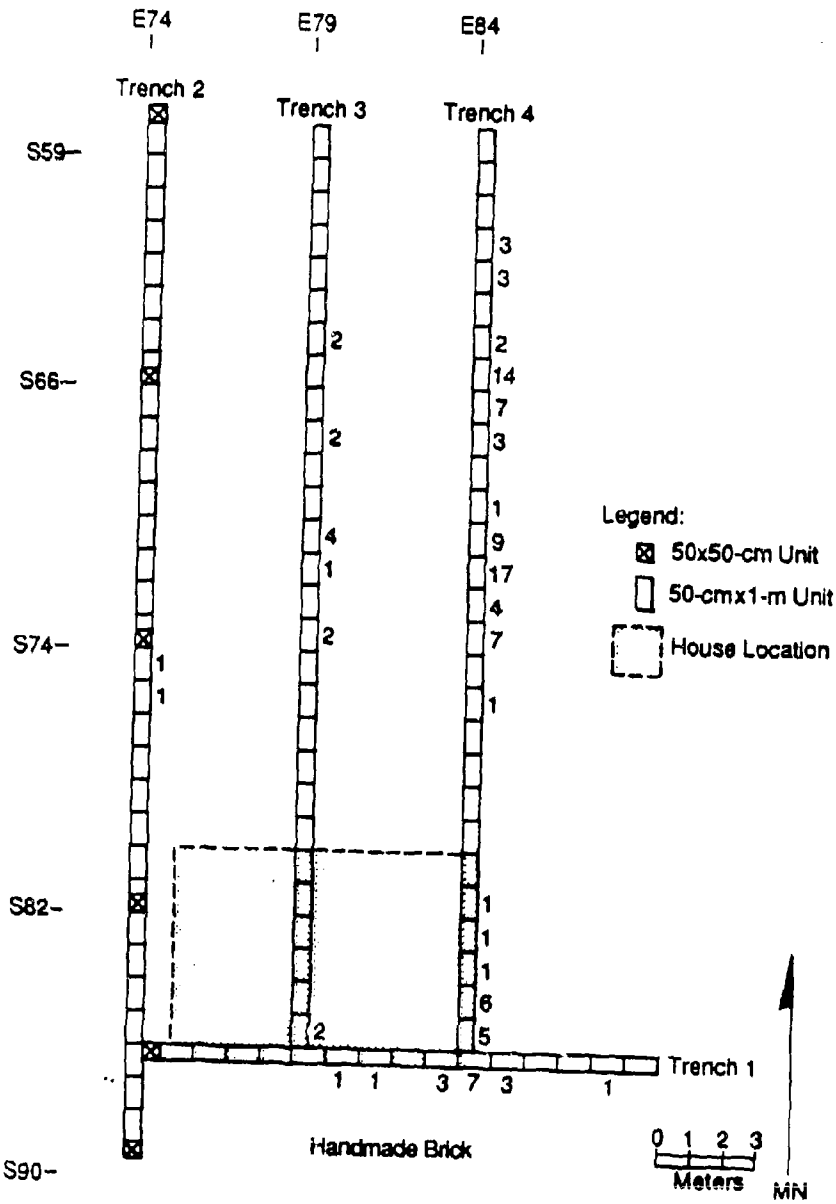


Figure 8-44. Machine-cut nail counts for hand-excavated Trenches 1-4 at 41DN91.

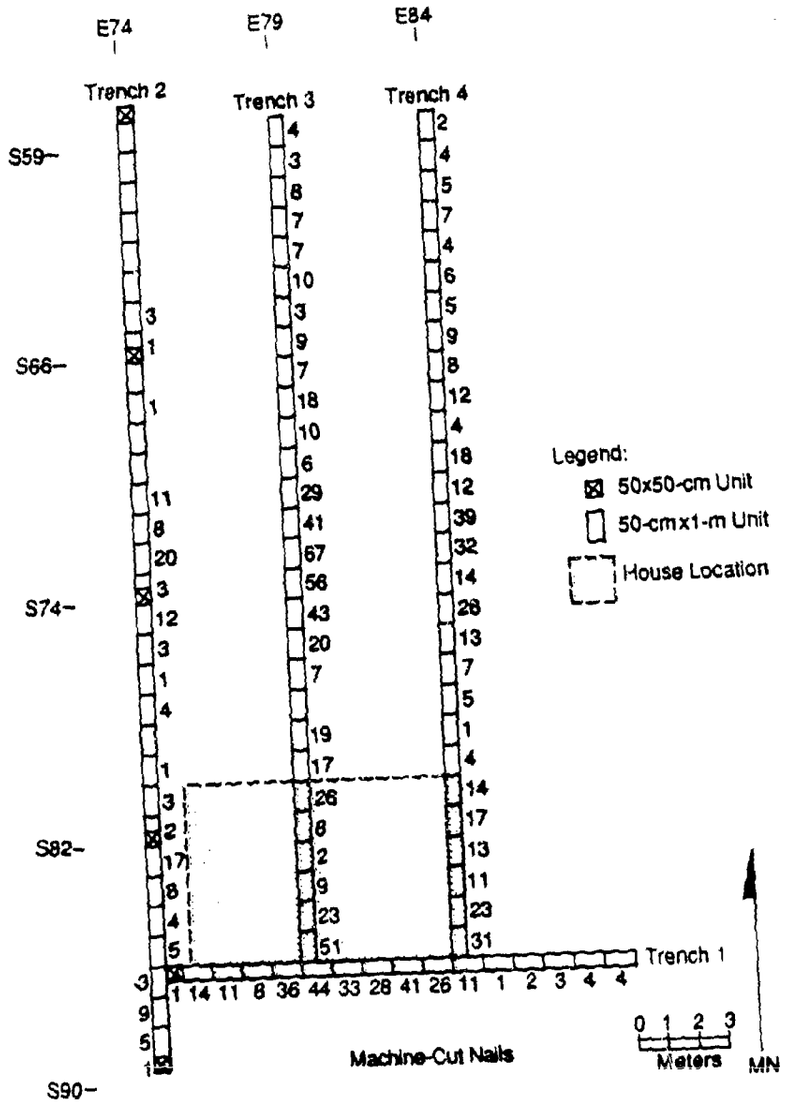


Figure 8-45. *Wire nail counts* for hand-excavated Trenches 1-4 at 41DN91.

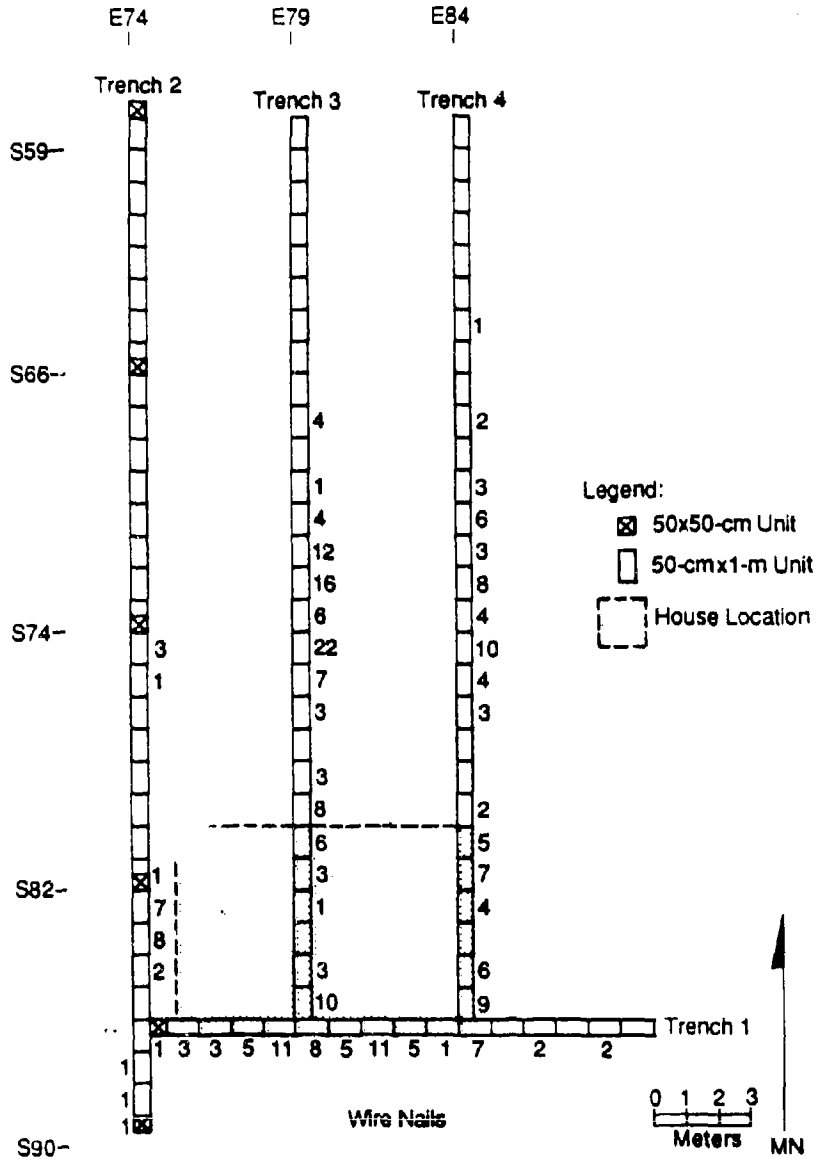


Figure 8-46. Handmade brick counts for hand-excavated Trenches 1-4 at 41DN91.

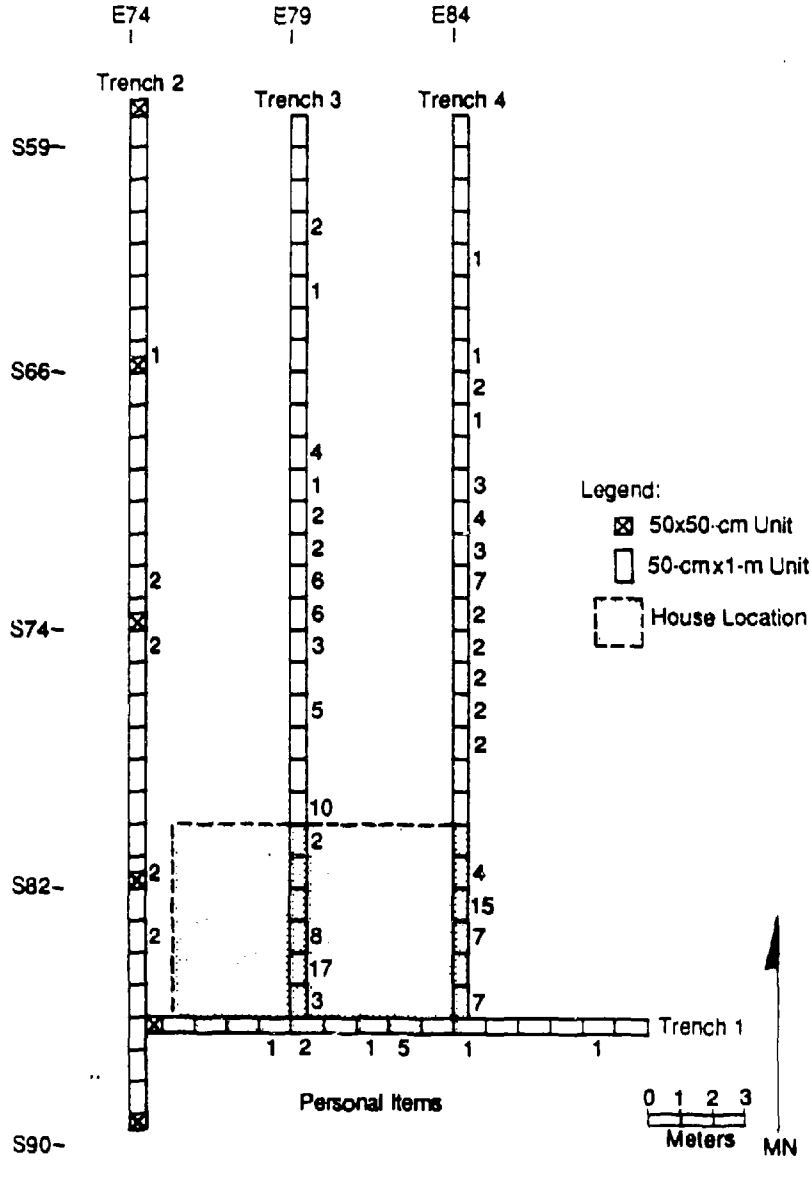


Figure 8-47. Personal item counts for hand-excavated Trenches 1-4 at 41DN91.

Anura (frog)	1
Chrysemys sp. (slider)	1
Terrapene sp. (box turtle)	1
Numida meleagris (guinea-fowl)	1
Bubulcus ibis (cattle egret)	2
Sturnella sp. (meadowlark)	1
Gallus gallus (domestic chicken)	4
Didelphis virginiana (opossum)	2
Dasypus novemcinctus (armadillo)	1
Sylvilagus floridanus (cottontail)	4
Lepus californicus (jack rabbit)	1
Sciurus niger (fox squirrel)	1
Sciurus sp. (squirrel)	2
Canidae (dog/coyote)	6
Sus scrofa (domestic pig)	15
Odocoileus virginianus (wh-tailed deer)	4
Bos taurus (domestic cattle)	3
large mammal	8
medium mammal	2
small mammal	1

Unidentified bone (n = 162)

This somewhat long species list obscures the same pattern of faunal utilization as found at the other farmsteads in the reservoir study area. When scrutinized, the bones of pig, chicken, and cattle stand out as the animals that were processed and consumed with certainty. The typical game species (opossum, squirrels, rabbits, and deer) are well represented, also, in keeping with the established pattern of hunting to supplement the meat diet from domestic animals.

The remainder of the species on the list either add to the site's history or cannot be interpreted with certainty at all. For example, the canid remains are most likely domestic dogs. Two dogs are inferred from the distance separating clusters one element was found in Trench 3 about 9 m north of the line of sandstone piers, and a singular element recovered approximately 4 m southwest of the fenceline parallel to Trench 2 (see Figure 8-36). The former has all the hallmarks of a pet burial, but the single element near the fence is unexplained; the fence is too close to the house to posit that the single element could have been the remnant of a slain coyote hung on the fence to dissuade other "varmints."

The spatial distribution of the faunal remains falls into two concentrations: under the house and north of the house. From underneath the house were recovered chicken, squirrel, cottontail, opossum, deer, and pig's feet. One or two elements of deer, cattle, cottontail, and squirrel occurred in the north yard, but it is there that pig bones were most common.

Unfortunately, 60% of the identified pig remains were teeth fragments, leaving only six post-cranial elements to examine. One individual is estimated from these remains, and from aging characteristics, it is assessed to be between one and two years old at death. A rib fragment identified as pig had been cut by a saw blade, and none of the pig bones had evidence of burning.

One rib fragment exhibiting a slight cut across the blade was identified as bovine, but other cut bones were categorized only as large mammal. Under the scheme employed in this analysis, these large mammalian remains could be cattle, pig, or deer in this case. Interestingly, the cuts made on the large mammal bones were made with a knife or cleaver, with just the one pig rib exhibiting a saw cut.

The above faunal list includes a few intrusive species. Feature 6, for example, contained the remains of a nearly complete armadillo. Of the four bird species identified, the egret and meadowlark are most likely intrusive. This assertion is based on the surface appearance of the bones, which is creamy white, in stark contrast to the light brown color of the bones attributed to chicken and guinea (as well as the other bones associated with the site's occupation). In the case of the egret, the bones also have sharp, fresh breaks; the meadowlark humerus is complete and undamaged, also appearing rather fresh. Cattle egrets first appeared in Denton County in 1963 (Pulich 1988:26), several decades after the abandonment of this site. The frog and turtle remains were probably contemporary with the site (based on bone appearance), but incidental to the occupation. The activity of dogs, furthermore, may account for the absence of these and some of the small game as well, but hunting such species as opossum, rabbits and squirrels cannot be ruled out either.

Summary: Site 41DN91 was determined National Register eligible in 1982. The site is a ca. 1870 to 1940 farmstead exhibiting a moderate density sheet refuse deposit and features. A house mound, foundation stones, two wells, a collapsed cellar, and several possible postmolds occur. The artifact MBD data correlated well with the archival data, and little post-occupation dumping or disturbance was evident when we began our excavations. The site was impacted by heavy equipment before our work was finished, resulting in the removal of most of the sheet refuse deposit.

In general, the farmstead at 41DN91 is typical of other late nineteenth century to early twentieth century farmsteads studied in the reservoir area. The farmstead was serially occupied by both landowning and tenant farming families. The types of buildings, construction techniques, and material culture record is reflective of this region. The 50x50-cm units provided evidence of broad sheet refuse patterns at the site, while the trench data provided a more detailed picture of artifact distributions and densities in the north yard, as well as, under and adjacent to the dwelling. No outbuildings were found within the excavated area. The highest density of artifacts occurred in the north or back yard, with fewer artifacts occurring in the west yard. A broad, low to moderately dense sheet refuse deposit occurs in the east and south yard, and an outbuilding reported by Skinner and Baird (1985) in the east yard was not found. Of the structural data recovered during excavation, the families that resided at 41DN91 had at least one shed or outbuilding located within 20 or 30 meters of the dwelling, a fenced yard, an earthen cellar, a well, and a small dwelling situated on stone piers.

Earthen cellars, fenced yards, a single stone or brick-lined well, and one or two outbuildings were common at many farms during this period. No evidence was found of multiple dwellings or cellars. The sheet refuse midden was concentrated around the dwelling, between the dwelling and support structures (i.e., cellar, well, and outbuilding), and the intact features were largely uncovered in the backyard north of the house. This area, undoubtedly, was the major activity area associated with household chores conducted outdoors.

The structural record and the material culture is similar to those recorded for 41DN77 which is located southwest of 41DN91. These sites were contemporaneous and provide a good record of how farm families lived in this area during the late nineteenth to second-quarter of the twentieth century in this region. Both farms were small, being located on a small number of acres.

41DN97

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	640' amsl
Scheduled Investigations	Sheet refuse excavations
Additional Investigations	Archival, magnetometer survey
Soil Association	Callisburg fine sandy loam
Cultural Affiliation	Historic (1875 to 1935)

Description: Site 41DN97 is located in Johnson Branch Park. Two cellar depressions, a trash pit, limestone piers, and a sparse artifact scatter were exposed. No well was found. The site area was estimated at 40 m north-south by 55 m east-west (Figure 8-48).

Previous Investigations: Testing was conducted in 1982 by ECI, including the excavation of 12 auger holes, three shovel test pits, and two test units. Only Auger Hole 2 in the western cellar and Auger Hole 11 in a trash deposit contained material. The other auger holes and the three shovel test pits were sterile (see Appendix J). Test Unit 1 was placed in the western cellar, and Test Unit 2 was dug to recover additional material from the trash deposit. The recovered assemblage indicated primarily a twentieth century occupation, and the site was recommended for additional investigation.

The site was revisited in 1985, and limited testing was recommended to recover a representative sample of artifacts amenable to comparison with other sites of the same age and functional character. The site was identified as a probable tenant farmstead occupied from the turn of the century to early twentieth century (Ferring 1986:80).

Archival Investigations: The earliest occupation may date to 1881 (Table A-16). The site appears to have been occupied up to 1925 when it was sold in a sheriff's sale. It may have been occupied by renters between 1925 and 1943, when the Jones family purchased the property. The Jones family did not occupy but rented this property, along with adjacent sites 41DN106 and 41DN107.

According to Roy Jones (personal communication, 1987), 41DN97 was the old Laird place, and the last people he remembered living there was the Rutherford family. They did not appear in the deed records and probably were tenants.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Proton Magnetometer Survey: A magnetometer survey was conducted in the main site area to locate anomalies that could be identified as reflecting archaeological significance. The survey was conducted by personnel from the Department of Geology, University of Texas at Arlington, under the direction of Dr. Brooks Ellwood. It was hoped that this survey would provide evidence that could be related to subsurface historic features, including the collapsed cellars, the former house location, outbuildings, and the well.

Three blocks were magnetometer surveyed. Two measured 20x20 m and one measured 22 m north-south by 20 m east-west (Figure 8-49). The northern magnetometer block was placed to include the north part of Feature 1 (eastern cellar). Known features located within the magnetometer survey area included the two cellars, and stone piers associated with the dwelling. The survey area was covered in dense brush and briars, which were cleared before the magnetometer blocks were laid in. An intensive surface reconnaissance was conducted to remove all recent metal present on the surface. These items included tin cans, aluminum cans, and scrap metal.

The values produced by the proton magnetometer ranged from -240 to +999. The negative values ranged primarily between -1 and -39, and are not included in the results shown in Figure 8-49. Four major anomalies were visible, including two that were archaeological. Feature 1 (cellar) was characterized by a dipolar anomaly, while Feature 2 was not as well defined. It appeared as a high positive anomaly. Anomaly 3 represented the location of Test Unit 2 and Auger Holes 11 and 12 dug by ECI in 1982. Anomaly 4 was characterized by high positive values. It was located within a wooded area and was not excavated. Feature 3 (piers) did not show up in the magnetometer survey. No buried features not evident in the magnetometer survey were found during the excavations. Several isolated negative anomalies were found to be associated with former units, including Test Unit 1 and Auger Hole 6. Several isolated positive anomalies with a +999 value were identified and were associated with buried metal. No subsurface features were located by the magnetometer survey.

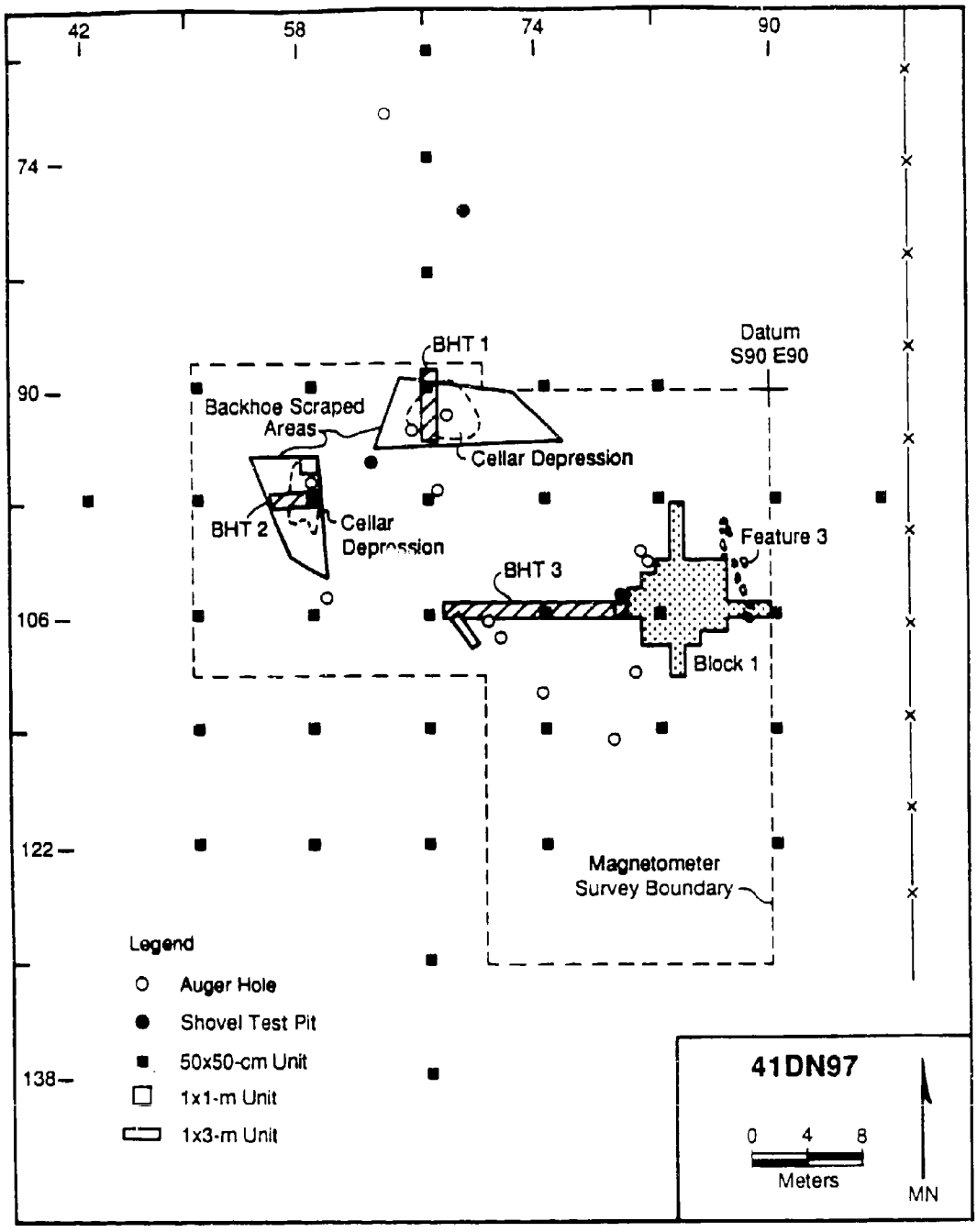


Figure 8-48. Site map for 41DN97.

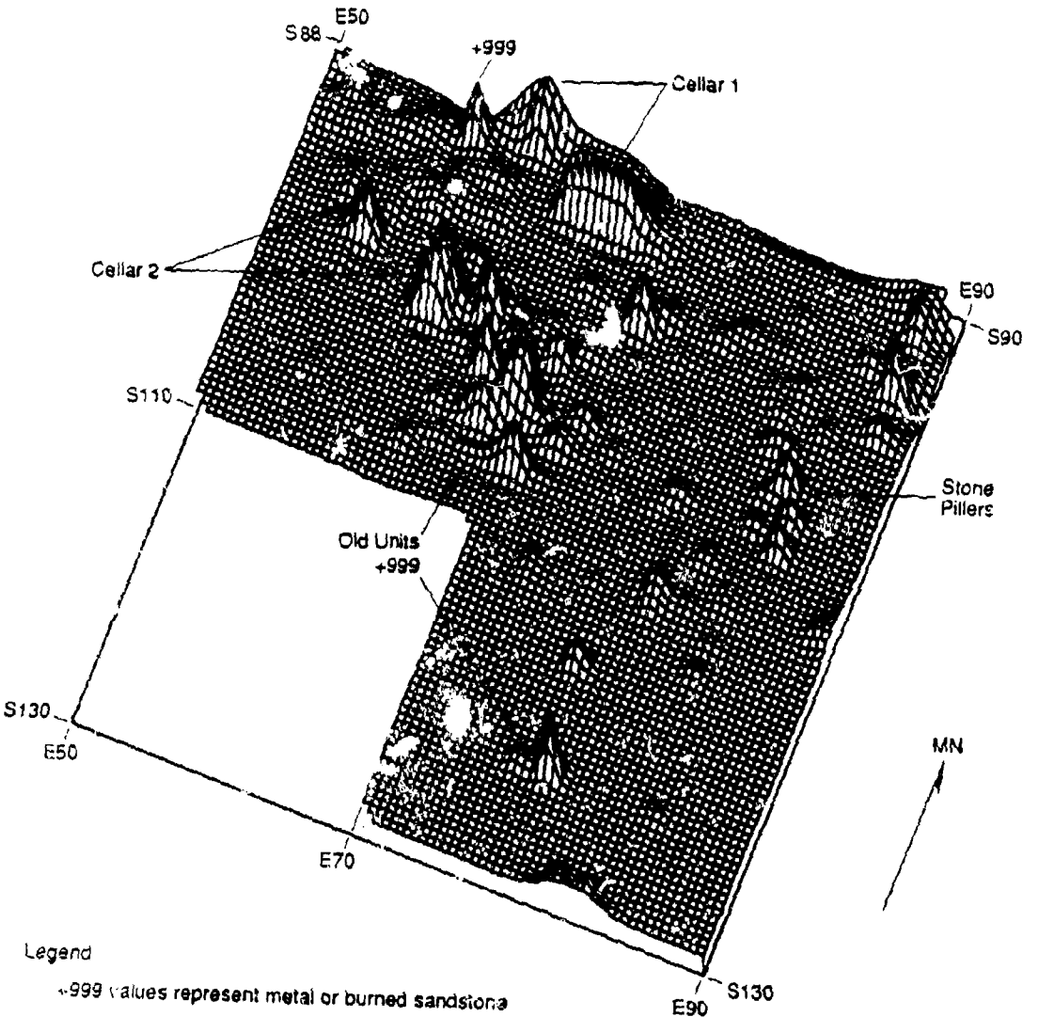


Figure 8-49. Magnetometer survey map of the positive magnetometer values for 41DN97.

Excavation Method: Sheet refuse investigations were conducted by NTSU in 1987, including the excavation of 34 50x50-cm units on an 8-m grid, three backhoe trenches, two machine-scraped areas, and a block excavation (see Figure 8-48). The 50x50-cm units were dug to provide good spatial coverage of the site area, to define the site limits, and recover a representative sample of the sheet refuse deposit. Two backhoe trenches were dug to examine the collapsed cellars. BHT 1 was oriented north-south and indicated that the door faced east. BHT 2 bisected the eastern cellar east-west. The cellar was rectangular with a door on the northeast corner. A third BHT was excavated through the center portion of the site to examine a low area that appeared to be the probable location of a filled well. A disturbed area was recorded that corresponded to the location of Unit 2 excavated by ECI in 1982. No evidence of a well was found.

The area above the cellar depressions were mechanically scraped, exposing planviews. This was accomplished before the backhoe trenches were dug through the cellars. This approach was undertaken because the cellars exhibited little fill. As a result, we did not expect to recover much information from an exposed profile.

A block (Block 1) comprised 44 contiguous 1x1-m units was excavated in the former dwelling area. Nine units were dug to 20 cm below the surface, while the others were excavated to 10 cm below the surface. Although the artifact deposit continued 10 cm below the surface, it was decided not to extend the excavations any deeper because of the recent age of the deposits within the block, and the absence of any indication of a nineteenth century component in the 50x50-cm units or Block 1.

Excavation Results: The site exhibited good subsurface integrity and a shallow sheet refuse deposit. Block 1 was located in the reported house area but did not extend over the entire dwelling location (Figure 8-48). No wall lines, driplines, or piers were found within the excavated block. The size and orientation of the structure was estimated based on the distribution of artifacts within Block 1 and the piers (Feature 3) to the northeast. These distributions are discussed below.

Excluding sterile units, the mean number of artifacts from the 50x50-cm units was 9.58 items. Excluding architectural remains, the mean decreased slightly to 8.12 items per unit. Bottle glass sherds were the most common type of artifact recovered, accounting for 51% of the sheet refuse material collected (Table 8-26), reflecting the recent occupation of the site. The assemblage from Block 1 (Table 8-26) contained predominately architectural items (76.13%), with mortar fragments representing over 67% of these remains. When architectural items are excluded, the ceramic and bottle glass assemblages from the sheet refuse deposit and Block 1 do not appear significantly different. In the midden (excluding architectural items), refined earthenwares represent 6.10% of the assemblage, stonewares total 0.94%, and bottle glass is 59.62% of the total. In Block 1, these items account for 6.26%, 2.09%, and 51.30%, of the assemblage respectively.

The collection recovered from the site by ECI in 1982 (Skinner et al. 1982b) is summarized in Appendix J of this report. Significant differences occurred between the mean beginning dates recovered from this material and the collections recovered in 1987. This disparity reflects several factors. First, much of the material recovered in 1982 was recovered from features, reflecting discrete temporal events. As such, these collections do not provide a useful indicator of the age and duration of occupation. Second, the house area, which contained considerable evidence of a twentieth century occupation, was not well represented in the 1982 collection.

A mean beginning date of 1854 (n=70 sherds) was obtained for the refined earthenwares from the 1982 collection. Dates of 1873 (n=14 sherds) and 1874 (n=104 sherds) were obtained from the sheet refuse 50x50-cm units and Block 1 in 1987. These dates correlate with each other, but are twenty years more recent than the date obtained for the 1982 collection. The early date of 1854 is not supported by the archival, architectural, or other archaeological data from the site. The sherds obtained in 1982 included 62 blue-tinted ironstones, both high-fired and non-vitrified sherds, and eight blue-tinted whitewares. No sherds from the twentieth century occupation at the site were collected.

Table 8-26
Artifact Assemblage from 41DN97 by Collection Area

Artifact Category	50x50s		Block 1	
	N	%	N	%
Refined Earthenware	16	3.00	105	1.52
Stoneware	4	0.75	34	0.50
Porcelain	1	0.19	2	0.03
Bottle Glass	183	34.33	829	11.97
Table Glass	5	0.94	59	0.85
Lamp Glass			2	0.03
Unid. Glass	1	0.19	2	0.03
Window Glass	142	26.64	662	9.56
Machine-Cut Nails	24	4.50	683	9.86
Wire Nails	20	3.75	271	3.91
Machine-Made Brick	5	0.94	10	0.14
Building Material	42	7.88	3660	52.84
Personal Items	1	0.19	20	0.29
Thin & Heavy Metal	74	13.88	524	7.57
Household Items	3	0.56	12	0.17
Machine & Wagon	2	0.38	22	0.32
Tools			2	0.03
Horse & Stable Gear			11	0.16
Ammunition			8	0.12
Electrical Items			3	0.04
Misc. Other			5	0.07
Total	533		6926	

The stoneware sample, however, was more representative of the age and duration of occupation. A mean beginning date of 1894 (n=14 sherds) was obtained for the 1982 collection. The sherds from the 50x50-cm units yielded a date of 1886 (n=5), while sherds from Block 1 dated 1897 (n=23 sherds). A mean beginning date of 1894 (n=42 sherds) was obtained for all stoneware sherds. This date correlates well with the mean beginning date obtained for the refined earthenwares collected in 1987, and the archival and architectural data.

The distribution of refined earthenwares in the sheet refuse midden are concentrated in the west and southwest yards. Within Block 1, they cluster in the center of the block and in units at the northern end (Figure 8-50a) and were probably located near the walls of the house.

On the other hand, stonewares were extremely uncommon outside Block 1. Two sherds were recovered in the sheet refuse midden in 1987. Stonewares clustered near the periphery of Block 1 but were absent in the northeastern area of the block. Like the refined earthenwares, stoneware probably cluster near the walls but farther outside the dwelling than refined earthenwares (Figure 8-50b).

The bottle glass recovered from the sheet refuse deposit yielded a mean beginning date of 1900 (n=9 sherds), while sherds from Block 1 dated 1904 (n=85 sherds). These dates more closely correspond with the stoneware data recovered in 1987 than the refined earthenware assemblage. A combined mean beginning date of 1894 (n=240 sherds) was obtained for the ceramic and bottle glass sherds collected in 1987. Bottle glass sherds are distributed over much of the site occurring most frequently in the west to southwest yard area. They exhibit a very different

pattern than the refined earthenwares or stonewares in Block 1 (Figure 8-50c). They are scattered throughout the block, only Unit S103 E86 did not contain bottle glass sherds. Three small clusters of units with more than 20 sherds occur.

Machine-cut nails were twice as frequent as wire nails in Block 1 supporting a late nineteenth century date for construction of the dwelling. No handmade bricks were found, and only 15 machine-made brick fragments were recovered from the site. Like the piers, the chimney was probably native sandstone.

The distribution of architectural remains cluster inside or adjacent to Block 1. None were found in the north site area or in Features 1 and 2. Within Block 1, window glass sherd counts ranged from sterile to 165 sherds per 1x1-m unit. Units containing more than 25 sherds clustered in the south-central part of Block 1 (Figure 8-50d), with a small cluster in Unit S99 E83 at the north end of the block. When correlated with the distribution of other artifact categories, the large window glass cluster appears to correlate with the west wall of the structure.

Machine-cut nails exhibit a similar distribution as window glass sherds (Figure 8-50e). They are scattered across the block but cluster in the south-central part of Block 1. Wire nails only account for 28.6% of the nails from Block 1. They spatially overlap the distribution of machine-cut nails and exhibit two clusters (Figure 8-50f), one inside the structure and one to the west.

Features: Features at the site include two collapsed cellars. No well or outbuildings were found. Feature 1, the eastern cellar, was located at the northern extent of the site. It was tested in 1982 using auger holes (see above). A single 50x50-cm unit was dug on the periphery in 1987 (Unit 16). It was excavated to 40 cm and contained sterile deposits. A single thin metal fragment was found in the upper few centimeters. The exposed planview (see Figure 8-48) indicated that the cellar was oriented east-west and measured approximately 3x2 m. The entry was about 1.5 m long and 1 m wide. The profile revealed that it had be constructed with earthen walls and floor, and the ceiling was probably supported by posts.

Feature 2, the western cellar, was located at the western extent of the site and was tested by Auger Hole 2 and Test Unit 1 by ECI. A 50x50-cm unit (Unit 19) and BHT 2 were placed in Feature 2. Unit 19 contained sterile matrix in Levels 1 through 3. Some charcoal was noted. Levels 4 and 5 contained several bottle glass and nail fragments, along with charcoal. No evidence of a trash deposit was found associated with Feature 2. The fill represented the collapsed roof (see Appendix B). The exposed planview was difficult to discern. The cellar was oriented north-south and measured 4.5x1.5 m (see Figure 8-48). A possible vent was located in the northeast corner. After scraping, little remained to profile. The fill indicated an east-west measurement of 2 m, slightly larger than the exposed planview.

Faunal Remains:

TOTAL BONE = 14

Identified fauna (n=7)
Gallus gallus (domestic chicken) - 5 (MNI=2)
Sylvilagus floridanus (cottontail) - 2

Unidentified bone (n=7)

At least two chickens are represented in this bone sample. The rabbit remains could represent hunted game, but this is not definitive since other sources are just as plausible (dogs, owls, etc.). The sample is too small to make cultural inferences.

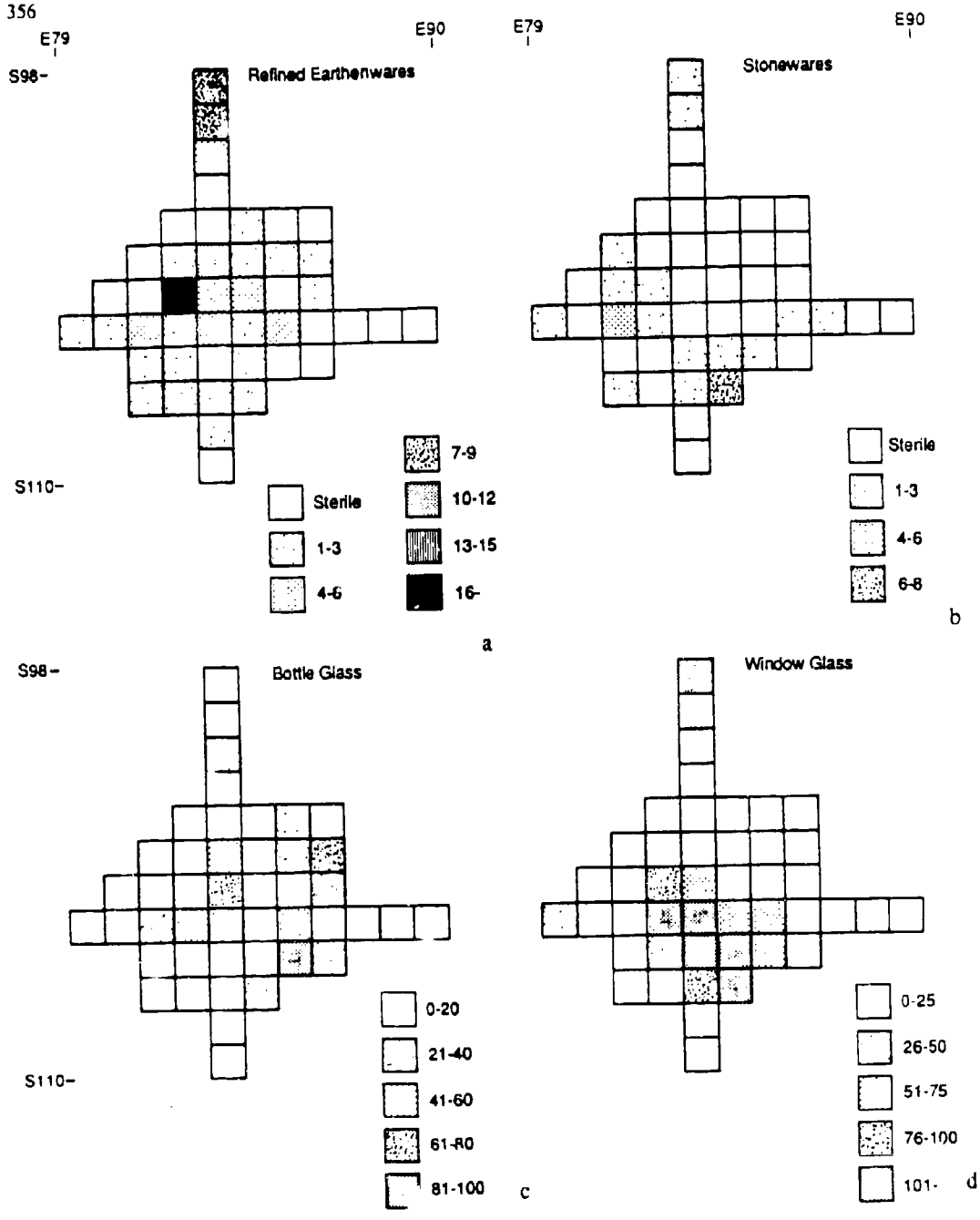


Figure 8-5). Artifact count distributions for Block 1 at 41DN91. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) cut nails, and (f) wire nails. Counts are provided by 1x1-m unit in Block 1, house area.

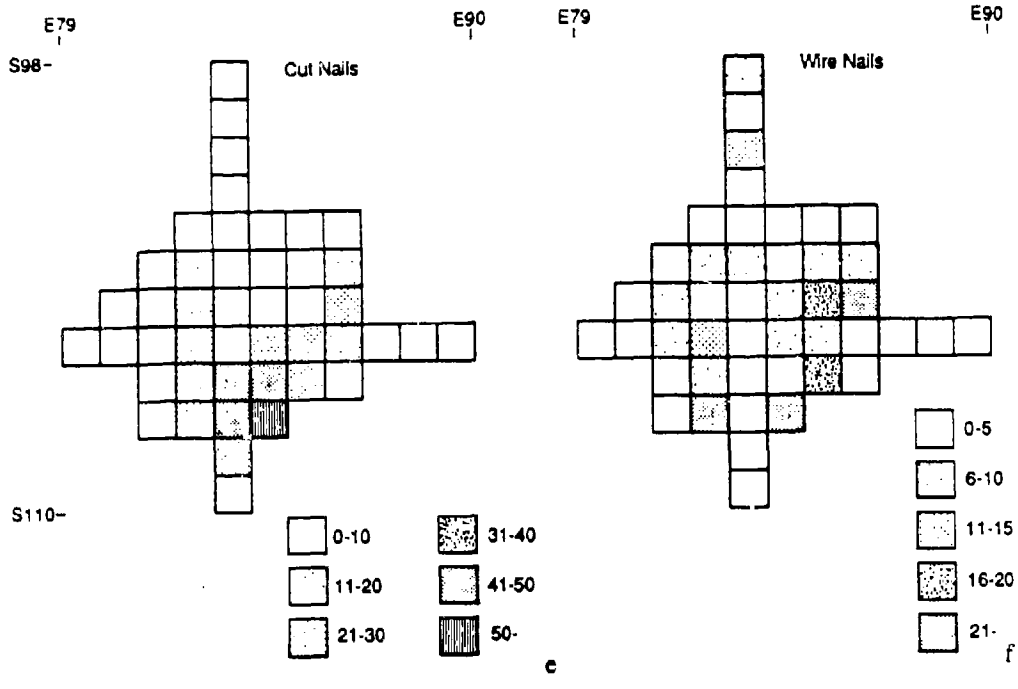


Figure 8-50. (continued) Artifact count distributions for Block 1 at 41DN91. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) cut nails, and (f) wire nails. Counts are provided by 1x1-m unit in Block 1, house area.

Summary: Site 41DN97 was determined National Register eligible in 1982. A proton magnetometer survey, backhoe excavation, machine scraping for features, and block excavation in conjunction with sheet refuse investigations were conducted. The results indicate this site contains a low-density sheet refuse deposit and several features. The cellars were extensively tested and no longer exhibit integrity. No outbuildings were found, and excavations in Block 1 indicate the dwelling was probably built in the late nineteenth century and modified during the twentieth century. The site was serially occupied by landowners and tenants (Roy Jones, personal communication, 1987), and artifacts from these occupations were recovered at 41DN97. While little material was recovered from the sheet refuse deposit, an extensive collection was obtained in Block 1. The bulk of this material dates to the early twentieth century.

This site is similar in nature to the farmsteads at 41DN77 and 41DN91, reflecting a serially occupied, small farmstead. Unlike 41DN77 and 41DN91, no well was found, and no evidence of an outbuilding was uncovered, although one probably occurred at this farm. Wells have been reported by several informants as an indication of

status and the absence of one at 41DN97 may reflect the long occupation of this farm by tenants. A well may have been associated with this farm, but not uncovered during excavation, but this is not highly probable as much of this site area burned before excavation began and visibility was high. The absence of any major outbuildings and the occurrence of several cellars is a common pattern in this region. Nearby farms investigated during this study include 41DN166, 41DN107, 41DN167, 41DN248, and 41DN224. With the exception of 41DN224, none of these farms had major outbuildings. The cellars at 41DN97 were earthen, as were those reported at the aforementioned farms.

The faunal and artifact assemblages reveal the difficulty of interpreting this site. The faunal assemblage is extremely small and does not reflect the dietary history of the families that occupied this farm. The poor recovery of faunal material is not easily explained as sufficient coverage was obtained to uncover subsurface features in the main site area. A single trash pit was identified in the dwelling area; refer to area 1x3-m unit excavated by ECI (see Figure 8-48). No concentration of faunal material was found in this feature. Excavation of Block 1, which included most of the dwelling location, also failed to recover any significant faunal remains. This paucity of remains suggests that the dwelling yard may have been swept and these remains were deposited outside the area investigated and/or trash pits occur outside this area. The low density of the sheet refuse midden supports this interpretation. If so, this pattern differs from the data recovered from the neighboring farms. Each of these farms contained evidence of trash deposits with significant faunal assemblages within the dwelling yard.

41DN118

Map Quad	Green Valley 7.5' (1960, rv. 1978), #3397-141
Elevation	650' amsl
Scheduled Investigations	Sheet refuse excavations
Additional Investigations	Archival
Soil Association	Navo clay loam
Cultural Affiliation	Historic (1875 to recent)

Description: Site 41DN118 is a large farmstead containing a number of structures built between 1883 and the 1980s (Figure 8-51). Among the extant structures are a Cumberland house with an attached cellar, a modern house, a trailer house, a frame barn, a metal barn, garage/shop, an outhouse, a concrete poultry house, a concrete dairy barn, several sheds, a pumphouse and windmill, and the Prairie Chapel School, which is currently being used as a granary. Other early structures included a granary located east of the Cumberland dwelling. A stock pond is located south of this house and an orchard occurs east of the stock pond.

These structures are located within a small portion of the farmstead, comprising an area about 260 m north-south by 220 m east-west. The Corps boundary bisects this area and the Cumberland house, and all the structures to the east are located within the project area. The structures to the west, including the modern house, the Prairie Chapel School (granary), and several barns are on private property.

Previous Investigations: The site was recommended for architectural documentation (Skinner et al. 1982a) because many of the structures built and used at 41DN118 during its hundred years of occupation remain standing. The Cumberland house and the Prairie Chapel School were recommended as significant structures. HABS documentation was done by ECI for the Cumberland house, the dairy barn, the Prairie Chapel School (formerly located at 41DN126), the chicken house, the pumphouse, and an outhouse. Copies of these HABS drawings are presented in Skinner and Baird (1985). The original drawings and photographs are on file at IAS, UNT. No test excavations were conducted. The site was determined eligible for the National Register in 1982. The site was revisited by personnel from NTSU in 1986. Because of the extensive architectural documentation that was compiled by ECI, oral history interviews were recommended but no additional fieldwork.

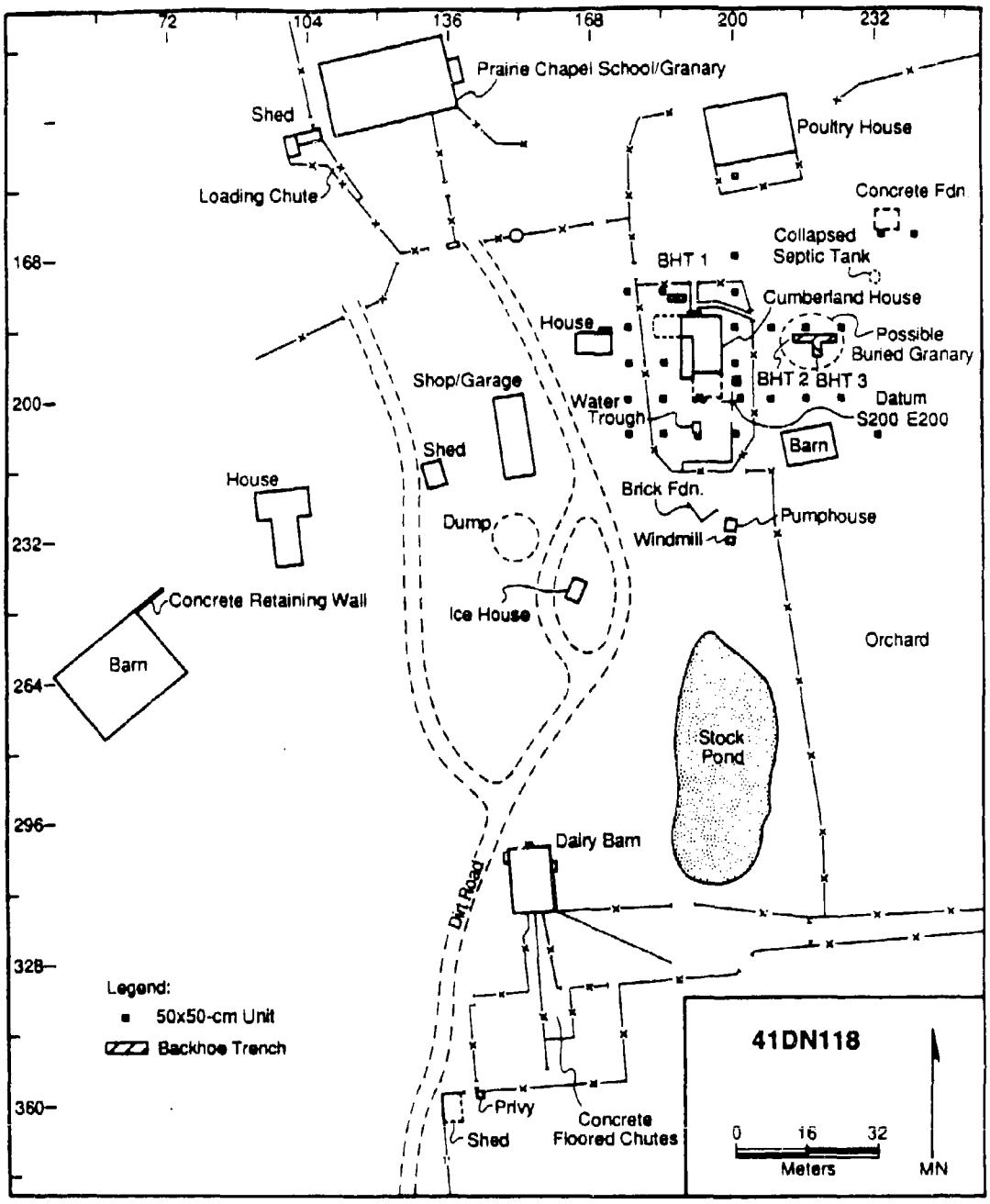


Figure 8-51. Site map for 41DN118.

Archival Investigations: Archival data were obtained by ECI (Skinner and Baird 1985:9-51), indicating that 41DN118 was located on two land patents. One patent was granted to heirs of Carmel Wetz Manchaca in 1856 (Patent Records A:576), and the other to Peyton R. Splaine in 1862 (Patent Records A:408). The first family recorded associated with 41DN118 was V. G. Evans [W. G. Evans] in 1900. During that year he sold 181.37 acres to G. A. and Lulu Douglas. The property was mortgaged in 1905, and purchased by William Sadau in 1907. William Sadau moved his family to 41DN118 the same year. William Sadau, his son Adolph, and one of Adolph's sons, Carl Sadau, have farmed this land for three generations (Skinner and Baird 1985:9-73). Adolph acquired the farm in 1937.

A more complete chain of title obtained during our research indicates that 41DN118 is located on Tract 5 of the Carmel Manchaca survey, which was divided among her heirs in 1875. The survey was initially divided north-south into a west half containing 350 acres, and the east containing 750 acres. In 1880 the east half was subdivided into 4 sections (1-4). The site is located in Section 2, which later was redesignated as Tracts 4a and 5. Site 41DN118 is situated near the eastern edge of Tract 5. The first sale of this property by the heirs of Carmel Manchaca occurred in 1880, when the land was purchased by J. H. Goode. He sold the north half of Tract 5 (as well as adjacent land) in 1884. The south half, also containing part of the site, was sold in 1890. Beginning in 1900, the entire acreage of 186.37 acres was sold as a block. The property was serially occupied from 1880 to present. The Corps purchased 35.05 acres in 1982. The remainder is still occupied by the Sadau family.

This information correlates well with the architectural and archaeological data obtained by ECI (Skinner and Baird 1985). The tax appraisal card for 1937 listed the house, garden, and orchard on 5 acres. The main house was recorded as being built in 1883, the barn in 1905, and another outbuilding in 1925. The Prairie Chapel School (41DN126) was moved to the farm from a 5-acre parcel located in the southeastern corner of Tract 5 conveyed to the County Judge of Denton by J. L. Trueheart and D. W. Heard of Bexar County in 1879 for use as a school and church (Patent L:340).

Architectural Investigations: As mentioned above, HABS documentation was conducted by ECI in 1982 (see HABS drawings in Skinner and Baird 1985), and this information is not repeated here. No additional architectural work was conducted in 1987.

Dating: The Prairie Chapel School built between 1910 and 1920 was the third school erected at 41DN126. It was moved to 41DN118 in the 1950s and converted into a granary. The Cumberland house was originally built as a one-and-a-half-story Cumberland and was later converted into a Tee-house when a tenant dwelling was added to the back. The original portion was built in 1883. Two modification episodes were recorded, one prior to 1937, and one after. The chicken house was built in 1928 and replaced an earlier structure destroyed in a tornado. The pumphouse was built on the location of a well dug in 1908. It is made of native sandstone and was built in 1942. The remaining structures are modern.

Significance: The Prairie Chapel School and the Cumberland house are the only architecturally significant structures at 41DN118 (see Skinner and Baird 1985). The Prairie Chapel School is currently used as a granary, while the Cumberland house is abandoned.

Dendrochronological Investigations: None.

Excavation Method: Sheet refuse investigations were conducted in 1987 and focused on excavating 27 50x50-cm units within the oldest part of the farmstead. Units were placed on an 8-m grid to recover a representative sample of the sheet refuse deposit associated with the original occupation. A single 1x1-m unit was dug to recover additional stratigraphic information. Three backhoe trenches were dug within this area of the site. BHT 1, oriented east-west, was placed to recover data on the sheet refuse deposit behind the house and for feature exploration (Figure 8-51). Trench 2 and Trench 3, oriented perpendicular to each other were placed in an area identified by Carl Sadau (personal communication, 1987) as the possible location of a burned granary. A buried oil drum was found, but no

evidence of a granary was indicated in the trench profile.

Units were not placed farther west because this area was outside the Corps property boundary. Units placed within the original farmstead did not yield intact deposits relating to the older component, and the site was downgraded in status from mitigation to testing only. The southern site area was not investigated because it is recent in age.

Excavation Results: No in situ subsurface features were found. The sheet refuse deposit (Table 8-27) was moderately dense, containing a mean of 21.55 artifacts per 50x50-cm unit. The artifact sample and the remaining yard area around the Cumberland dwelling is too small to obtain very meaningful spatial patterning. The house faces south and is connected to the cellar on the northwest corner.

Table 8-27
Artifact Assemblage from 41DN118

Artifact Category	N	%
Semi & Coarse Earthenware	1	0.17
Refined Earthenware	16	2.75
Stoneware	17	2.92
Porcelain	1	0.17
Bottle Glass	49	8.42
Table Glass	3	0.52
Lamp Glass	1	0.17
Window Glass	40	6.87
Machine-Cut Nails	30	5.15
Wire Nails	84	14.43
Machine-Made Brick	13	2.23
Building Material	174	29.90
Personal Items	4	0.69
Thin & Heavy Metal	30	5.15
Household Items	4	0.69
Machine & Wagon	10	1.72
Horse & Stable Gear	1	0.17
Ammunition	6	1.03
Electrical Items	5	0.86
Misc. Other	93	15.98
Total	582	

Refined earthenwares yielded a mean beginning date of 1877 (n=15). They were concentrated in the east side yard. No refined earthenwares were found in the north (back) yard or in the west yard. Several sherds occurred in the south or front yard. Stonewares were more scattered, with the bulk occurring in the east side yard, and equal but fewer sherds occurring in the front (south) and back (north) yards. None were found west of the barbed wire fence surrounding the dwelling or in the outbuilding areas sampled. Stonewares (n=18) yielded a mean beginning date of 1878.

Bottle glass and wire nails exhibited similar patterns. They were broadly distributed across the sample area, including the outbuilding areas. The bottle glass sample was predominately twentieth century, but too few datable sherds were recovered (n=4) to obtain a statistically meaningful beginning date. Bottle glass sherds occurred in all the yard areas around the dwelling.

Ma cut nails occurred primarily east of the dwelling, while wire nails were scattered across the sample area. Few nails (cut and wire) were found in the west side yard. Machine made brick and building material clustered near collapsed structural members from the house and outbuildings.

Faunal Remains:

Out of nine bone fragments, only one was identified. A cottonrat mandible from level 1 is probably intrusive to the occupation. A shaft fragment of a large mammal bone exhibits saw cut marks. This sample is too small for assessing subsistence information.

Summary: Site 41DN118 was determined National Register eligible in 1982. Sheet refuse investigations using 50x50-cm units revealed shallow midden deposits around the Cumberland dwelling. This site has been occupied for over 100 years, and the outbuilding remains and sheet refuse deposits associated with the early occupation have been disturbed and spatially truncated by more recent activities. No nineteenth century subsurface cultural features were found. Because of the disturbed nature of the archaeological deposits, no further work was recommended after consultation with the Corps.

Two nineteenth century structures remain standing at 41DN118 (1) a Cumberland dwelling, and (2) the Prairie Chapel School. The Cumberland dwelling is architecturally significant, and becomes increasingly more important as the number of similar age and type dwellings extant in the area landscape decreases. This structure is also significant because of the paucity of extant German farm dwellings in the Ray Roberts Lake area. The HABS documentation conducted in 1982 was undertaken to record this structure before it collapsed. This house is abandoned and continues to deteriorate. The school is architecturally important because of its historical use. This structure was built as the third Prairie Chapel School replacing two earlier school buildings that had burned. After this school closed, this building was acquired by the Sadau family and converted into a granary. Recycling of old structures was a common practice in the area, and this building provides an extant example of the economical re-use of resources by residents in the Ray Roberts Lake area.

This farm also provides continuing evidence of the economic resiliency of long-time farm families in this area. This farm continues to be occupied by the Sadau family, and many of the farm structures have been built or modified by the family over three generations. Skinner and Baird (1985:9-56 HABS discussion) states that during the early 1900s,

> ....The farm was one of the most prosperous in the area, growing cotton, oats, wheat, fruit and livestock.... The last cotton crop was planted in 1944; now the farm produces beef and dairy cows, with grasses and grain cultivation. The buildings on the Sadau farm represent more than a century of agricultural development in the project area, and in particular reflect the diversification of agricultural activities in the early twentieth century.

41DN146

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	620' amsl
Scheduled Investigations	Sheet refuse excavations
Soil Association	Navo clay loam
Cultural Affiliation	Historic (1890s to 1935)

Description: The site is located on the edge of a small wooded grove in the uplands, approximately 0.5 km south of FM455. It was situated in an African-American farming community called "out on Sanger Highway" or "Crosgrove's Bottom," and was occupied by sharecroppers from the early to mid-twentieth century (Skinner and Baird 1985:8-88). The site was characterized by a log dwelling, currently used for hay storage, and a small historic artifact scatter. No well, cellar, or outbuildings were visible (Figure 8-52). The site area is approximately 60 m north-south by 60 m east-west).

Previous Investigations: Four shovel test pits, HABS documentation, architectural photographs, and archival research was conducted by ECI in 1982 (Skinner et al. 1982b, Skinner and Baird 1985). The shovel test pits were placed around the dwelling, and only STP 2 contained material. The site was recommended for nomination to the National Register and was determined eligible in 1982. The HABS drawings are presented in Skinner and Baird (1985:9-86).

The log dwelling was dated ca. 1860 to 1875, and was interpreted as having been built by "some of the earliest settlers in this area. The one-room plank frame addition was built ca. 1925-1940" (Skinner and Baird 1985:9-86). The site was revisited in 1985 by personnel from UNT. The house had been completely removed. No additional work was recommended.

Archival Investigations: Research was conducted by ECI and is not duplicated here. These data indicated that the site was located on the Antonio Hernandez survey (A-615), granted in 1855. The land was conveyed to M. Cartwright in 1885. Following his death, and later his wife's death in 1894, the land was inherited by their children. The property was sold to A. P. Cosgrove in 1897, and continued to be owned by Cosgrove, and later, the Hayden family during the early twentieth century. The log dwelling at 41DN146 served as a black sharecropper's house during the 1910 to 1930s period (Skinner and Baird 1985:9-84).

Architectural Investigations: The dwelling was recorded as a single room log house set on sandstone piers. It was one-and-a-half stories, and the original roof was replaced with corrugated tin. The sills and walls were hewn oak logs with half-dovetail notching. The floor was dirt, but was assumed to have originally been 1x3-inch tongue and groove boards. The interior walls were finished with a thin coat of plaster, and wood and mortar chinking occurred between the logs. Doors were on the east and west sides, and a window occurred on the south. A plank shed addition was located on the west side.

Dating: The original room was assigned a probable construction date range between 1860 and 1875, although oral information reported that it was built in the fourth quarter of the nineteenth century. The addition dated to the late 1920s (Skinner and Baird 1985:9-85, 9-86).

Significance: The structure has been removed and is no longer significant.

Dendrochronological Investigations: None.

Excavation Method: Eighty-one 50x50-cm units were dug on an 8-m grid to determine site age, function, size, integrity, and locate subsurface features (see Figure 8-52). A 4-m grid was utilized in the area where the house had

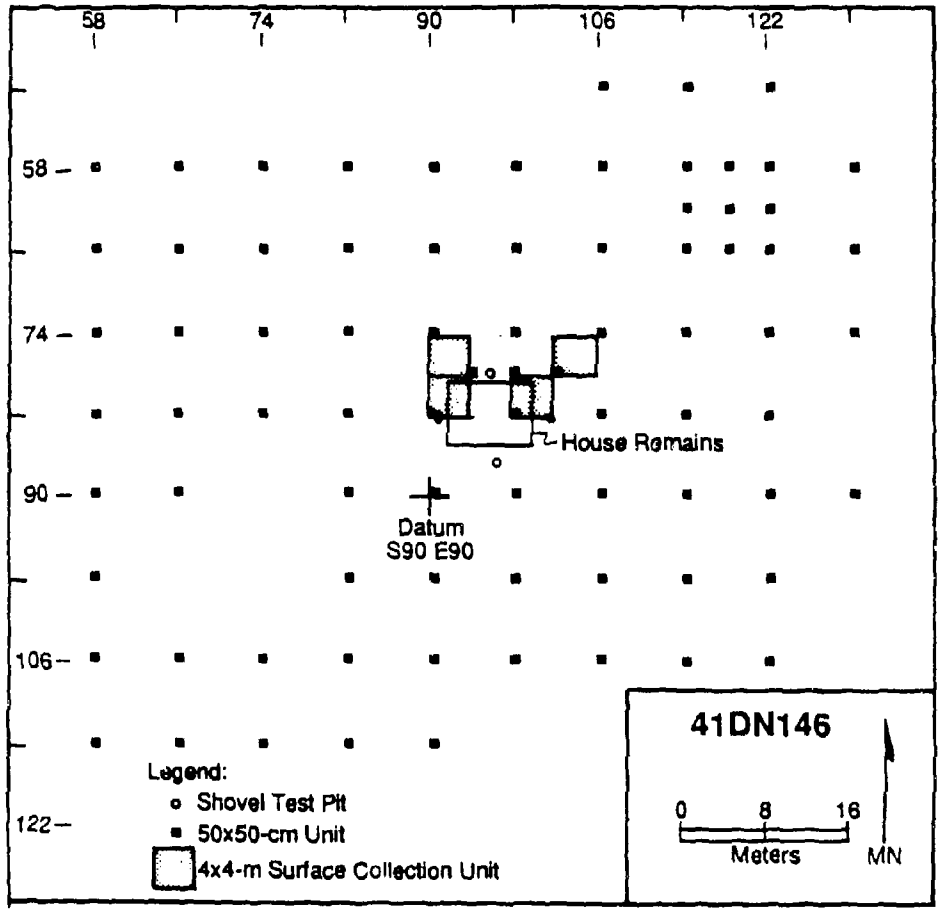


Figure 8-52. Site map for 41DN146.

been located and in a second area to the northeast that appeared to be a probable location of an outbuilding. Four 4x4-m surface collection units were placed within the house area to recover a sample of building debris.

Excavation Results: While the site was originally assigned a date range of 1875 to 1935, and the house was assigned a probable construction date between 1860 and 1875, these dates were not supported by the archaeological data. The sheet refuse deposit (Table 8-28) was extremely diffuse, low density (zero to 59 artifacts per 50x50-cm unit), and shallow (0 to 15 cm below surface). Only seven units (9%) contained more than 15 artifacts. These units were highly dispersed and contained isolated concentrations of a single artifact type (e.g., bottle glass).

Table 8-28
Artifact Assemblage from 41DN146

Artifact Category	N	%
Refined Earthenware	10	2.01
Stoneware	5	1.01
Bottle Glass	162	32.60
Lamp Glass	2	0.40
Window Glass	77	15.49
Machine-Cut Nails	1	0.20
Wire Nails	63	12.68
Machine-Made Brick	3	0.60
Building Material	40	8.05
Thin & Heavy Metal	126	25.35
Household Items	2	0.40
Machine & Wagon	4	0.80
Ammunition	2	0.40
Total	497	

Given the low-density nature of the sheet refuse deposit, no meaningful spatial patterns were found. The refined earthenwares (n=11) yielded a mean beginning date of 1874, the stonewares dated 1900 (n=4), and the bottle glass dated 1898 (n=24). A combined mean beginning date of 1892 was obtained. This date correlates with the A. P. Cosgrove's purchasing of the site. The architectural remains accounted for 37% of the assemblage from the 50x50-cm units, followed by bottle glass (33%), and thin and heavy metal remains (25%). The high percentage of architectural items reflects the dispersal of building material when the dwelling was removed, derived particularly from the twentieth century addition.

Summary: The archaeological data did not support the interpretation of a ca. 1860s or 1870 date for initial occupation. All of the refined earthenwares were plain, undecorated whitewares, and the stonewares were bristol glazed interior/exterior sherds. The lack of machine-cut nails and brick (excluding the use of sandstone for a chimney) further discounts this early date. If indeed the dwelling was built during the 1860-1870s period, it may have been moved to this location. Many structures in the project area were recycled either in situ or were moved. The construction style of the dwelling, however, correlates with the architecture of the single room dwellings from 41DN167 and 41CO118, neither of which date to the 1860 to 1870 period, but rather to a later date of around the turn-of-the-century.

The site was serially occupied by landowners and sharecroppers (Skinner and Baird 1985) during the twentieth century, and the diffuse, low density sheet refuse deposit did not yield any significant archaeological data. Architectural remains, thin and heavy metal, and bottle glass sherds account for much of the assemblage from 41DN146 (see Table 8-28). Many artifact categories commonly found at other farmsteads in the project area are absent at this farm. Among these categories are table glass, bricks, and personal items. Faunal remains were also uncommon at this site. Overall, the assemblage contains little cultural material other than architectural remains from the dwelling. Much of the thin and heavy metal fragments are building metal. The low density sheet refuse deposit suggests that this site was not occupied for any length of time. It further suggests that the few possessions owned by the sharecroppers at this farm were highly curated and re-used and did not often enter the archeological record.

The architectural data from 41DN146 supports the archival and oral-history data that this farmstead was also occupied by tenants and sharecroppers. No well, cellar, or outbuildings were found associated with the dwelling. Even if the dwelling was moved here, these support structures were not built and utilized by the occupants. A similar lack of support structures was identified at 41DN233 and 41DN234. These two sites were occupied by tenants or sharecroppers, and possibly by a small farm owner. These three sites are situated in Crosgrove's Bottom, which was occupied predominantly by non-landholding families, many of which were African-American. In addition, each of these farms is located at a high elevation and rocky terrain. Native sandstone outcrops are evident at 41DN146 and 41DN234, and less so at 41DN233 which is located on a slope.

The absence of these kinds of support structures and the placement of these farms on poor soils or topography undoubtedly reflects the poor economic conditions of these tenant or sharecropping families. The single room log dwelling at 41DN146 provides additional evidence of the economic poverty of the occupants of this farm.

41DN157

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	625' amsl
Scheduled Investigations	Sheet refuse, architecture, mapping
Soil Association	Callisburg fine sandy loam
Cultural Affiliation	Historic (1850s to present)

Description: Standing structures at 41DN157 included the main house, a smaller house (often called a "weaning" house), a garage, a large frame barn, a small log crib, a livestock shelter, a stone cellar, and a corral (Figure 8-53). A frame shed and privy recorded in 1981 and again in 1985 were no longer standing. The site is located largely in pasture, with cattle grazing the area after the farmstead was abandoned. Site 41DN157 is approximately 1.2 km south of the Denton-Cooke County line and 0.75 km east of the Elm Fork of the Trinity River.

Previous Investigations: The site was recorded by ECI in 1981. It was determined National Register eligible in 1982. The site was revisited by personnel from UNT in 1985, and architectural documentation, archival and oral history research, and test excavations were recommended (Ferring 1986a).

Archival Investigations: No archival work was requested for this site. Bates (1918:72) reports that Sullivan Settlement was started in 1847 by John and Dan Strickland. They settled on Big Elm near the Denton-Cooke County line. The Sullivans settled here in 1850, and because of their numbers, the settlement was named after them.

Previous research (Skinner et al. 1982a:8-29) indicates that George Hammons and his brother-in-law, Jack Sullivan, came to Texas and settled west of Pilot Point (Sullivan Settlement) in 1853-1854. George Hammons was born in Tennessee and married his cousin Mary "Mame" Sullivan in Missouri. A year after he arrived, George sent

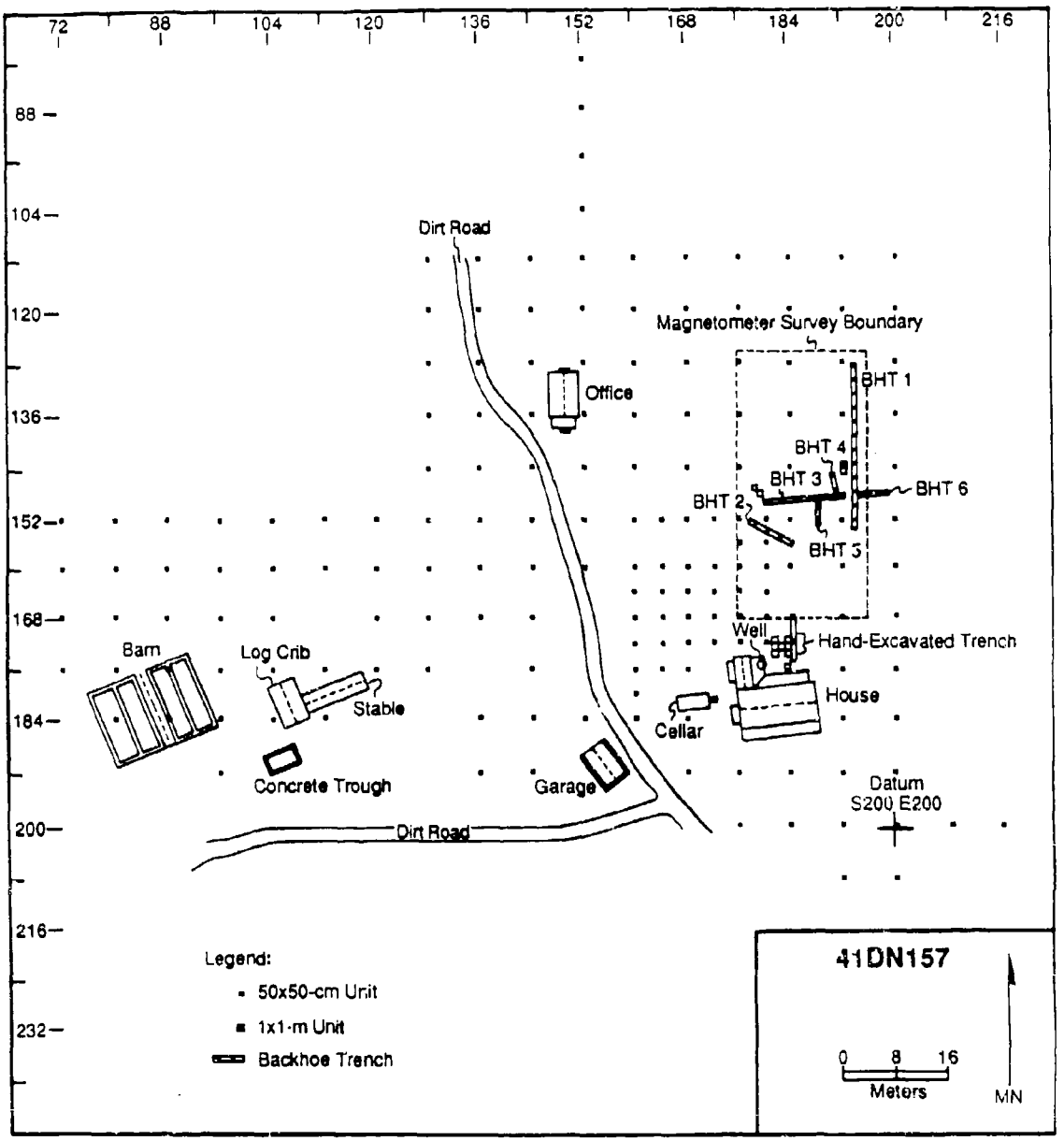


Figure 8-53. Site map for 41DN157.

for his wife and two children. Other family members came, including Mary's parents and brothers and their families. They settled in Sullivan Settlement. The original Hammons' house was a log dwelling. No archaeological evidence of this dwelling was found.

Architectural Investigations: Architectural descriptions, floorplans, elevational drawings, photographs, and field notes are on file at IAS, UNT. Descriptions are provided for all extant structures.

Dwelling: Skinner et al. (1982a) indicate that this house was reportedly built in the early 1870s, being finished in 1872. "The house was built from lumber hauled by oxcart from Jefferson, Texas, where a sawmill was then located ... The old log house out back was the kitchen... The back room was added on in the 1880s or early 1890s as a kitchen, and a well was dug adjacent to the new kitchen."

This house was the most interesting structure at the site. It was a two-story ell-plan dwelling set on a sandstone foundation. It had a full-length porch on the south elevation (Figure 8-54) and an L-shaped porch on the back (Figure 8-55). A small kitchen porch was located near the northwest corner of the house. The house was built in several phases, and additions and alterations are evident throughout the structure.

Several structural features suggest the original dwelling was the west room. The west room had hand hewn studs with full dove-tail notching on the center stud, and evidence of older flooring and interior wall styles than in the east room (Michael Cochran, personal communication, 1988).

The original structure, the west room, was a single room house. The east room was built subsequently followed by the breezeway. When this construction was completed the dwelling was a single story dogtrot house. Building details suggest there was a gap between the construction of the east room and the breezeway. A second story was added and a kitchen was built onto the north site of the original dwelling. The porch on the northeast side of the kitchen was enclosed to form a small room. The original well was below the back porch just outside the east kitchen door. It has been capped. A poured concrete base supported a water pump and pumping tank. The water pump is a Monitor. The pumping tank is a Pumpco product from Oklahoma City.

The house has two intersecting gable roofs. The first was oriented east-west and covers the main house, while the second was oriented north-south and covers the kitchen. The porches had shed roofs. The south porch was built in stages as the floorplan of the dwelling changed. The east-west gable and both the front and back porch roofs had cedar shakes. The small kitchen porch had asphalt shingles, while the kitchen gable was asphalt shingles over the original cedar shakes.

West Room: This room was the original house. It was a single pen with a full-length porch on the south elevation. The house faced south, with a central door flanked on either side by a double-hung, four-over-four window. A sandstone fireplace was located in the center of the west wall. The chimney was sandstone to a height of 1.2 m above the gable after which it was capped with machine-made brick. Interior doors were located on the north and east walls. These doors were not original, and they did not match in style the door on the south elevation.

The wall studs of the west room were hand hewn oak. The center stud on the north and south walls had full dovetail notching. The sills were mortise and tenon. The north interior wall showed evidence of two wall treatments. The original was tongue and groove one half inch thick 8-inch wide boards. This was later covered by thin beaded ceiling. The other interior walls were covered by wider beaded ceiling. All of the walls were later covered with wallpaper.

The original floor was tongue and groove 1x6-inch planks that were later covered by tongue and groove 1x4-inch planks. More recently, probably in conjunction with the kitchen, the floor was covered with linoleum. This room had wide beaded ceiling.

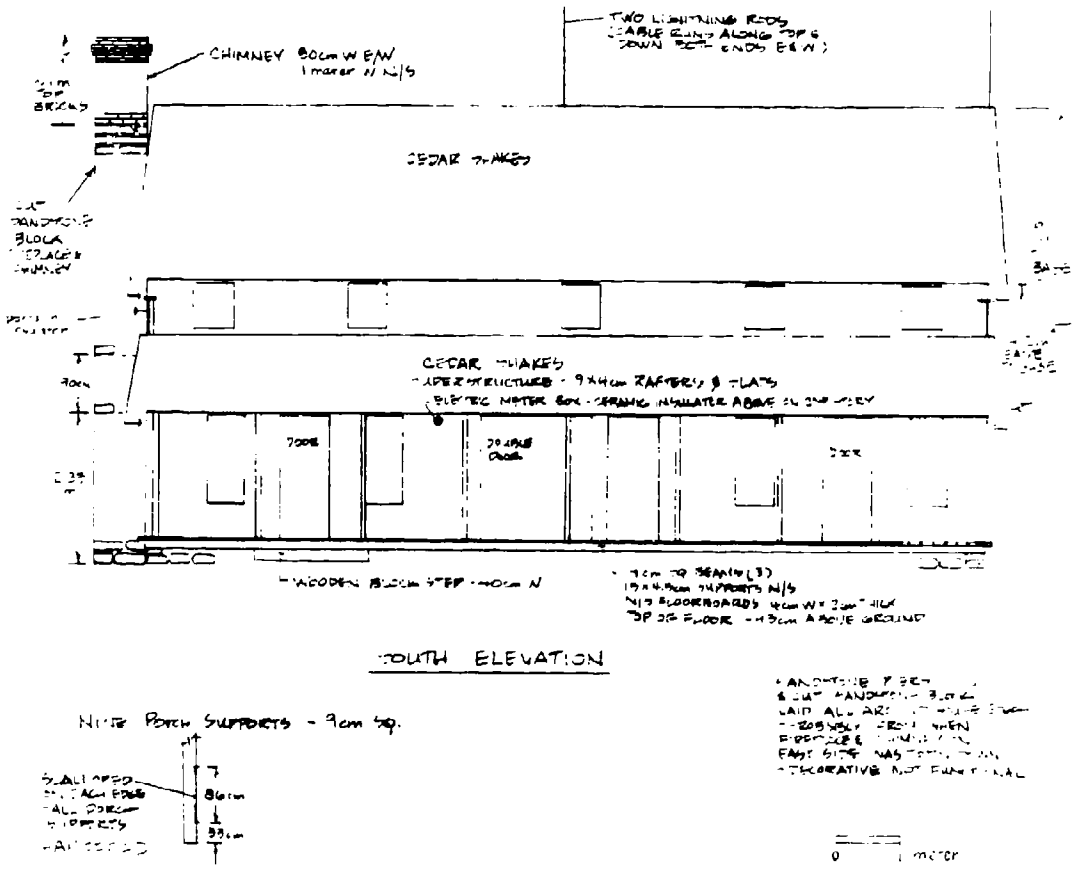


Figure 8-54. Field architectural drawings of the south elevation of the main dwelling at 41DN157.

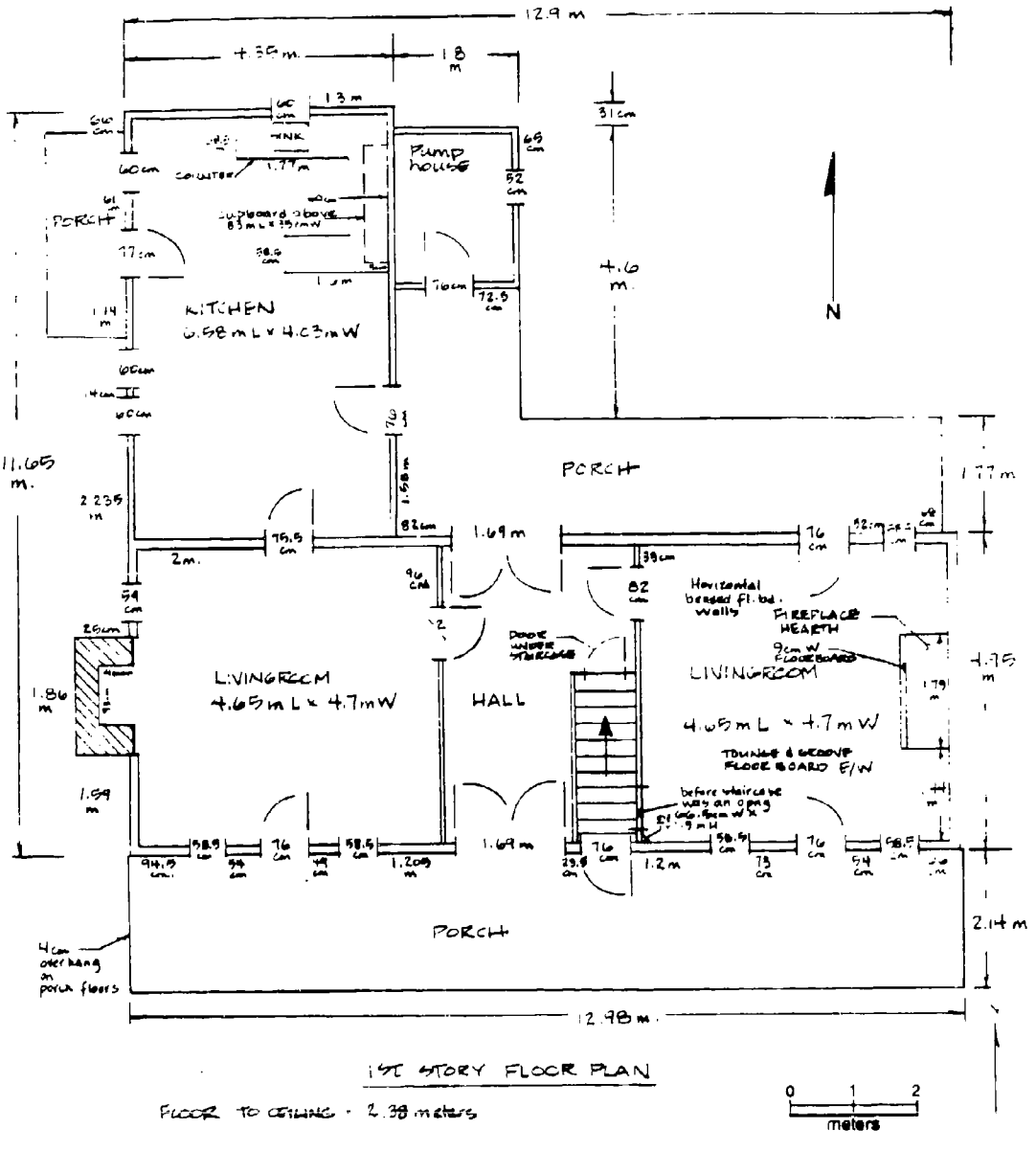


Figure 8-55. Field architectural floorplan of the first floor of the main dwelling at 41DN157.

East Room: The east room was built second. It had hewn, mortise and tenon sills. It was the same size as the west room. A matching sandstone fireplace was located on the east wall. It was removed at a later date. The front or south elevation was identical in plan to the south elevation of the west room, and the doors and windows match. The interior door on the west wall opened onto the breezeway but was not located directly across from the door that opened into the breezeway from the west room. The door from the east room was offset because of the placement of the staircase to the upper floor. An exterior door and a window were located on the north wall of the east room.

The flooring was tongue and groove 1x4-inch planking and matched the second floor of the west room and the breezeway floor. It was oriented east-west. The walls and ceiling had wide beaded ceiling that matched the style used in the kitchen and breezeway. The walls were later covered with cheesecloth-backed wallpaper. A porch was built on the south elevation that extended the full length of the east room, matching the south porch of the west room. Later, the two porches were connected when the breezeway was built. The original exterior of this room was board and batten. These walls extended up to the gable, indicating that the upstairs east room was originally separate from the west upstairs. The exterior walls of the west room were not board and batten.

Breezeway: The breezeway was the third room to be built. It sat at the same height as the west and east rooms and served to connect the two. Double doors were located directly across from each other on the south and north elevations. They both opened into the breezeway. The two sets of doors were the same size but did not match in style. The front doors had glass panels, while the north doors did not. Their locations were offset to the west of center. As a result, both the north and south elevations did not exhibit symmetry.

An exterior door was added in recent years east of the double doors on the south elevation. The door opened out and provided access to a staircase to the upper floor. The staircase was also recent. The original was located in the breezeway but had been removed. The orientation of the original staircase is unknown but was probably in the opposite direction. There was evidence in the upstairs east bedroom and the downstairs east room that access doors were located in the south corner of the west elevation. Both were covered over in order to accommodate the orientation of the new staircase.

There was only one level of flooring. It was 1x4-inch hardwood that matched the second floor in the west room. It was oriented east-west. The walls and ceiling were made of beaded ceiling, matching the larger beaded ceiling style of the kitchen and the west, south, and east walls of the west room. The walls and ceiling were painted dark brown and were covered with wallpaper at one time. Remnants of cheesecloth backing and staples remained.

Second Floor: The upstairs had two bedrooms with a hall or open room in between. The stairs were oriented north-south and the top step was in the northeast section of the hall. The bedrooms were equal size, and both had two windows on the south side. The east bedroom had two matching windows on the north, while the west room had one on the west wall, and one on the north. These windows were small, had four panes, and swiveled open. The sills sloped towards the exterior to keep rainwater out. The doorway to the west room was in the center of the east wall, while the east bedroom door was located off-center and just north of the staircase.

The upstairs floors were tongue and groove hardwood, and the walls and ceiling were wide beaded ceiling that matched the downstairs. Linoleum had been laid down over the hardwood floors in both bedrooms. The ceilings were a gambrel style. The east bedroom was painted royal blue, the center room was light blue, and the west bedroom was green.

The east room originally had a door in the south corner of the west wall. This indicates that the original stairway was probably oriented in the opposite direction of the modern stairway.

Kitchen: The kitchen and dining room were combined in a single room. They were added to the north side of the original room during the late 1880s or early 1890s. The room had one interior door on the south elevation and exterior doors on the west and east. There are three windows on the west elevation and one on the north. The north window was not original. A small porch provided access for the exterior door on the west elevation. It was

set on sandstone and brick piers. It had a shed roof with asphalt shingles. The east exterior door opened onto the back porch. The original floor was 3-inch hardwood, tongue and groove, and was oriented north-south. Four different styles of linoleum have been used over this floor. All of the interior walls were covered with wide beaded ceiling. The south part of the east wall, the south wall, and the west wall were later covered with sheetrock. The kitchen ceiling had either been lowered or was originally built low. There were two sets of joists for the rafters, about 30 cm apart. The upper joists were 2x4s on 2-foot centers while the lower set were 2x4s on 3-foot centers. The bottom joists matched the ceiling heights, while the uppers were at gable-eave height.

Summary: The main dwelling was a one-and-a-half or two-story ell-shaped structure with sandstone chimneys on the west and east elevations. The gable roof of the older sections was oriented east-west, while the kitchen gable ran north-south. The south or front elevation had a full-length porch, built in sections corresponding to changes in the floorplan. The ell addition was a kitchen added in the late 1880s or early 1890s. An ell-shaped porch was located on the back side of the house. A well was under the back porch east of the kitchen, and the reported detached log kitchen was probably located under the 1890s kitchen addition.

This dwelling had under undergone considerable alteration, and reconstructing the building history was a complex task. The structure appears to have undergone at least five major building episodes: (a) construction of the west room, (b) east room, (c) breezeway, (d) upstairs, and (e) kitchen.

Small House: This smaller, balloon-frame house was located about 45 m northwest of the main dwelling. It was a single room structure with a porch on the south and a shed addition on the north (Figure 8-56). The addition was the same east-west width of the house, while the porch was slightly smaller. The entire structure was built of commercial 14 cut lumber and wire nails. The exterior walls were board and batten on both the original room and the addition. The house had a high, east-west gable over the original room and shed roofs over the porch and addition. The original roof was cedar shakes, which were still visible under asbestos shingles. No cedar shakes occurred on the porch roof.

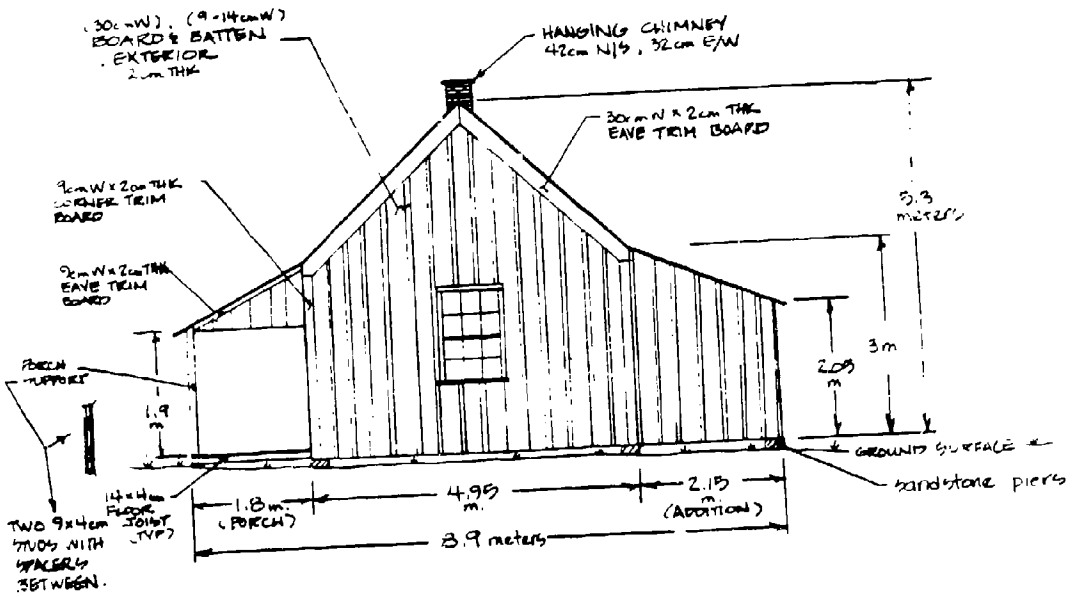
The south or front elevation had a central door flanked by two windows. A second door occurred on the north elevation, and a central window occurred on both the west and east elevations. A hanging, machine-made brick chimney was located just north of the window on the west elevation. The interior walls were veneer paneling in the original room and plywood in the addition. Under the paneling was tar paper and traces of wallpaper. The floor was tongue and groove 3-inch hardwood running east-west. The ceiling was tongued and had been painted dark brown.

A variety of accounts have been reported about the function of this structure and when it was built. Skinner et al. (1982a) mention that this structure has been referred to as a "slave quarters" by an informant. Further, they state that according to "Swick's interview with Eunice Gray, the house has been used as a tenant house." Others have described it as the oldest building on the farm, as an office, and as a "weaning house" for newlyweds who had not built their own house yet.

The construction material, including the exclusive use of wire nails, machine-made brick, the paneling, and commercial-sized lumber support an early to mid-twentieth century construction date.

Barn: This two-story structure had a witch's hat roof with a north-south gable over the center and shed roofs on the east and west (Figure 8-57). The barn appeared to have been built as a single unit rather than the sheds having been added later. It measured 17.75 m east-west by 12.88 m north-south. The roof was nongalvanized corrugated metal sheeting painted silver. It has a stone and mortar foundation, and the sills were commercial. The exterior walls were vertical planking with faded red paint. Wire nails were used throughout. Although, the last owner had heard that the barn was built during World War I, the lumber sizes indicate the barn was probably built after 1930.

The first floor had a central breezeway located west of center and running north-south. Nine livestock pens were arranged on either side of the breezeway. Three opened onto the breezeway from the west and four from the



EAST ELEVATION

Figure 8-56. Field architectural drawings of the east elevation of the small house at 41DN157.

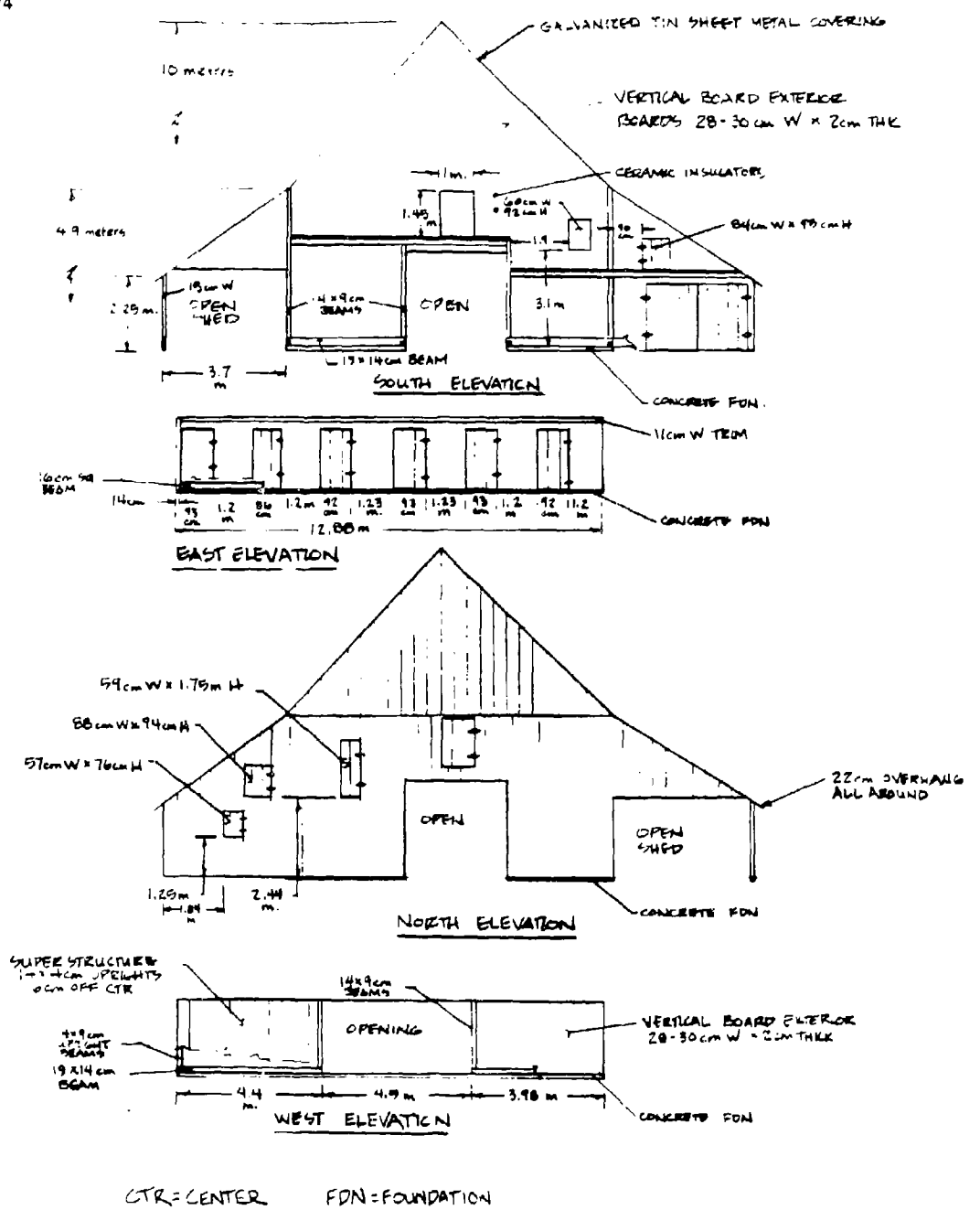


Figure 8-57. Field architectural drawings of the large barn at 41DN157. (a) south elevation, (b) east elevation detail, (c) north elevation, and (d) west elevation detail.

east. Two additional pens opened to the exterior on the east elevation. The second floor was divided into loft areas and three storage bins.

Log Crib: The core of this building was a log, single-pen crib granary (Figure 8-58). Shed additions occurred on the north and south sides. The original roof was replaced. A corrugated metal, witch's hat roof extended over the log crib and the additions. The gable over the pen was oriented east-west. The original pen measured 3.2 m^2 and was built of postoak logs set on sandstone piers. Except for the sills, the logs were predominately unhewn with V-notching. Some logs showed evidence of having been planed. The sills were hewn. A single door occurred on the east elevation of the crib. The floor and interior walls were plank. No chinking occurs.

The additions had hewn sills set on sandstone piers. The walls were vertical board planking, painted red, and both additions had a door on the west and east elevations. A loft was added above the log crib when the additions were built. Plank floors occurred in both additions, the north addition was divided into two feed storage compartments, and the south addition had three compartments.

Livestock Shelter: This building was frame and was in the process of being torn down and moved while it was being recorded. The structure had a high, north-south gable and corrugated metal roof. It was 3 m wide north-south, and 12.8 m long. The west wall abutted the log crib. The sills were hewn with half-lap notching and were set on sandstone piers. The exterior walls on the west, north, and east were cut boards, possibly cedar, and painted red. The south wall was open and the roof was supported by 13-cm diameter oak posts.

Garage: This building had vertical plank walls and a corrugated metal gable roof. The double doors were gone. The sills were oak and the foundation and floor were concrete.

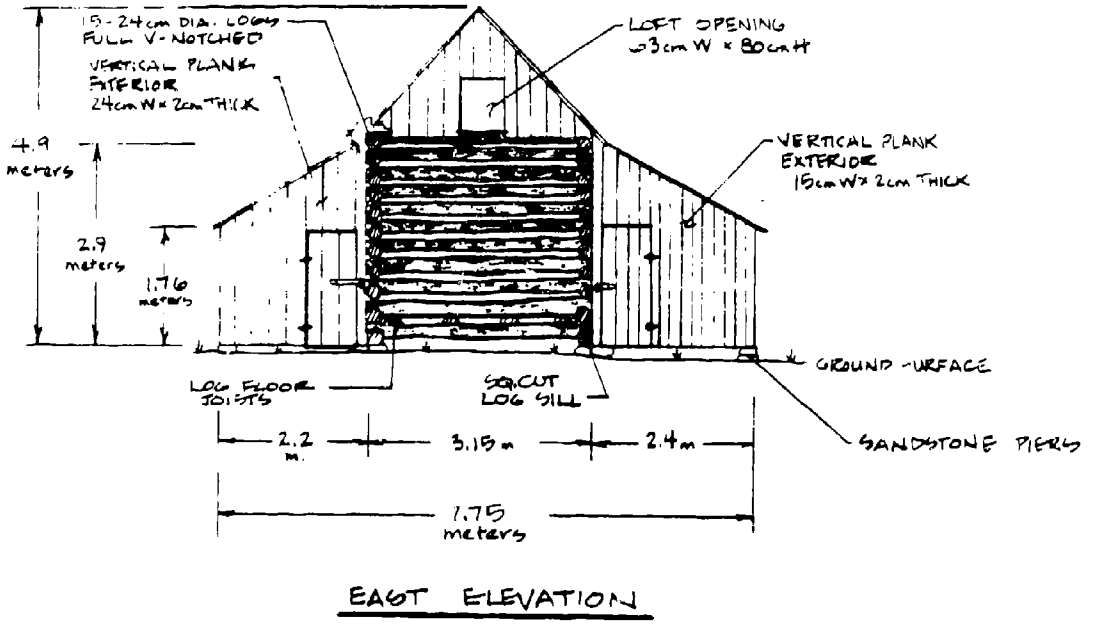
Cellar: The cellar, approximately 5 m west of the main house, was limestone. It had a vent on the west end and the entryway was on the east. The interior had an arched ceiling with limestone and mortar walls. The six steps were limestone and mortar and the floor was concrete. There were empty whole and broken jars, six jars with preserves, and a small table and two chairs in the cellar.

Dating: We were unable to obtain access to the sills and interior log members of the main dwelling or the log crib before they were acquired by a private individual and moved. As a result, we did not obtain tree-ring dates for these buildings.

Significance: The architectural assemblage provides a significant data set for examining changes in the building landscape of a farm occupied by several generations of the same family. This site contained a number of support buildings recorded in the reservoir, and, the dwelling, which was built in several phases, provides an excellent opportunity to study the construction history of a structure that was added onto and altered several times over a 100-year period.

Recommendation: Based on the history of this site, the architectural status of the dwelling, and the fact that the site was determined National Register eligible in 1982, U.N.T. recommended that the main house and the log crib be preserved. The house was acquired by a private individual and moved to Montague County where it is being restored. The log crib was destroyed before it could be moved. The large barn was retained by the last owner and moved.

Dendrochronological Investigations: Five dendro samples obtained from the log crib and two from the dwelling porches were sent to Dr. Malcolm Cleaveland at the University of Arkansas for analysis (Appendix G). All of the samples are oak (probably post oak), but only two yielded cutting dates. Sample 2 from log 1 at the bottom of the crib yielded a cutting date of 1902. Sample 7 from a sill to the front porch of the house yielded a cutting date of 1895.



EAST ELEVATION

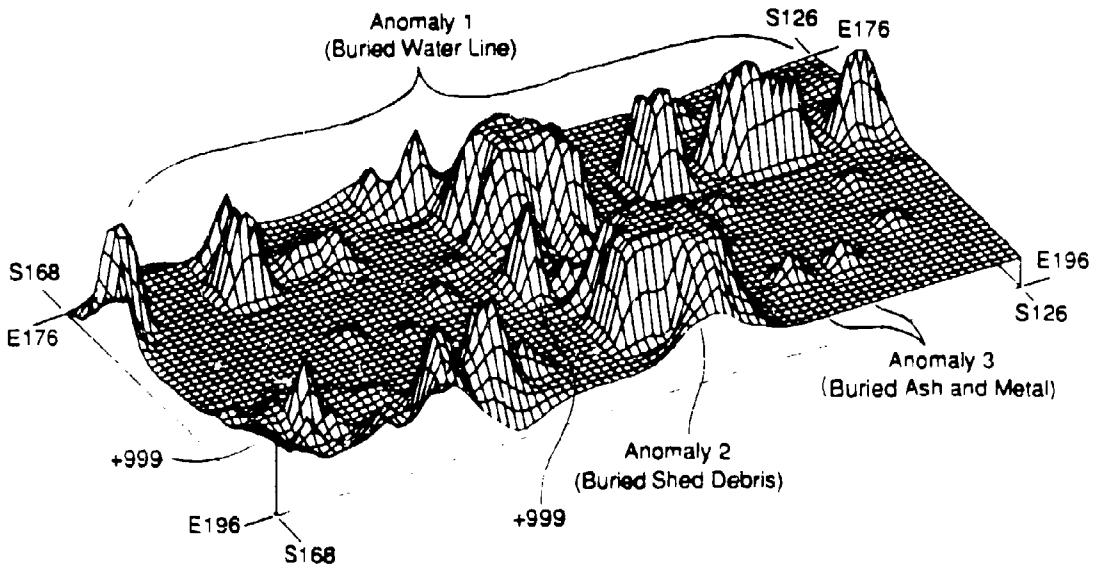
Figure 8-58. Field architectural drawing of the east elevation of the log crib at 41DN157.

Proton Magnetometer Survey: A magnetometer survey was conducted north of the house to identify subsurface anomalies that could be identified as archaeologically significant. No features were visible in this area prior to this survey. The vegetation was primarily mixed grasses and surface visibility was over 90%.

Two 20x20-m survey blocks were placed to recover information from the backyard behind the original dwelling and later additions. The survey was conducted by personnel from the Department of Geology at the University of Texas at Arlington, under the direction of Dr. Brooks Ellwood.

The values produced by the proton magnetometer ranged from -615 to +999. The background was primarily negative values, while the dominant anomalies were defined by high negative and high positive values less than -100

and greater than +100. The results of the proton magnetometer survey are illustrated in Figure 8-59. Only the positive values are presented. These data indicate three dominant or archaeologically significant anomalies.



Note: Only positive anomaly values shown.

Figure 8-59. Magnetometer survey map of the positive magnetometer values for 41DN157.

Anomaly 1 was a buried water or sewer line. The signature for this anomaly is unusual. While it is linear, gaps occur, and both positive and negative peaks are exhibited. The biggest gap occurs near the dwelling.

Anomaly 2 correlated with Feature 1, buried debris from a demolished shed that was recorded by the survey crew in 1981. At that time, the structure measured approximately 8 m east-west and 5 m north-south. A privy was located on the east side of the shed. Neither was standing when the site was tested in 1987.

Feature 1 was encountered in a 50x50-cm unit at Unit S144 E192. This unit was expanded into a 1x1-m unit and a second 1x1-m square was dug at Unit S145 E192 to further expose and map Feature 1. Following this, it was cross-sectioned and profiled in Backhoe Trench 1 between 20 cm and 120 cm below the surface. Within Backhoe Trench 1, Feature 1 measured 5 m north-south, extending from S148 to S143. The spatial extent of Feature 1 (see Figure 8-53) was estimated to be approximately 8 m north-south by 5 m east-west based on the size of Anomaly 2 (S141-S149 and E188-194). The privy was not found.

Anomaly 3 included Features 4 (buried metal bucket), 5 (ash lens), and 6 (ash and metal). These features were encountered when Backhoe Trench 1 was excavated to test Anomalies 2 and 3. No further excavations were conducted in these features.

An isolated high positive anomaly (+999 values) was recorded between Anomalies 1 and 2. No feature was found in Backhoe Trench 3 or Backhoe Trench 5, and this positive anomaly probably reflects buried metal. Another high positive anomaly (+999) occurred south of Anomaly 2 and probably also represents buried metal.

Excavation Method: Sheet refuse investigations included excavation of 170 50x50-cm units, four 1x1-m units for feature exploration in the former shed and privy area, six backhoe trenches, and one block containing six 1x1-m units and seven 1x0.5-m units. The 50x50-cm units were dug on an 8-m grid across the site to recover information on site size, age, function, integrity, and to recover a representative sample of subsurface artifacts. Based on this information, additional 50x50-cm units were excavated using a 4-m interval behind the house. This area contained the oldest domestic sheet refuse material and was the only part of the early backyard area that remained intact.

A block was excavated behind the dwelling. Excavation was conducted in a checkerboard fashion and while early material occurred in Block 1 the area was badly disturbed. Standing water collected in the block. The owners continued to graze cattle on the site, and because of the soft soil and standing water in this area, modern debris and older sheet refuse material were mixed. The 1x0.5-m units were hand-excavated as a trench. They contained mixed sheet refuse deposits similar to the deposits found in the 50x50-cm units on the 4- and 8-m grid in the house area.

The backhoe trenches were excavated to examine magnetic anomalies and subsurface features identified in the 50x50-cm test units. Backhoe Trench 1 was oriented north-south to bisect Anomaly 2. Backhoe Trench 2 and Backhoe Trench 3 bisected Anomaly 1, while Backhoe Trench 4 extended into Anomaly 2. Backhoe Trench 5 was dug to recover information on the high positive anomaly between Anomalies 1 and 2.

Excavation Results: The sheet refuse deposit contains evidence of general spatial patterning associated with outbuilding versus dwelling yard use. Considerable disturbance is evident, however, in many areas, reflecting the reuse of structures and yard areas. The exposure of a buried structure associated with Anomaly 2 and buried disturbed deposits in Anomaly 3 indicate the yard north of the dwelling has been disturbed by modern activities. The construction of the buried water line (Anomaly 1) also damaged the sheet refuse deposits north of the dwelling. Other factors contributing to the mixed nature of the sheet refuse midden include the use of the site as a grazing range for cattle after the farm was abandoned. Cattle wallows were evident at the site. All of these factors, as well as the over 100 years of occupation at this site, have resulted in mixed sheet refuse deposits and the removal or masking of earlier deposits. Artifacts from the earliest occupation are mixed with items from later occupations. For example, the reported detached kitchen was not found. It may be under the ca. 1890s addition to the house. Sheet refuse artifacts from activities conducted near the dwelling and detached kitchen during the early occupation are mixed with artifacts from similar domestic activities conducted by more recent occupants.

The impact of the considerable length of occupation is visible in the mean beginning dates obtained for the site. Because the site has been serially occupied for over 100 years, over 70 years during the twentieth century, the MBD values do not reflect the initial period of occupation (Table 8-29).

Table 8-29
MBD Values for 41DN157

Artifact Category	Date
Refined Earthenware	1877.4 (n=246)
Stoneware	1884.7 (n=84)
Bottle Glass	1909.4 (n=296)

The relative abundance of twentieth-century artifacts is evident across all categories, particularly bottle glass. Only 6.76% (n=20 sherds) of the datable bottle glass sherds were assigned pre-1900 initial popularity or manufacturing dates. On the other hand, only 13.41% of the datable refined earthenwares have initial popularity dates between 1900 and 1990, while 47.06% of the stonewares date to this period.

Bottle glass sherds account for the largest percentage of the artifacts recovered, totalling 39.49%. Architectural items total 30.10%, followed by thin and heavy metal (14.36%). Machine-cut nails only account for 29.48% of the nails collected. Wire nails total 70.52%, while both handmade bricks and machine-made bricks were uncommon. The artifacts recovered from the site are summarized in Table 8-30.

Table 8-30
Artifacts Recovered from 41DN157

Artifact Category	N	%
Semi & Coarse Earthenware	8	0.12
Refined Earthenware	243	3.68
Stoneware	109	1.65
Porcelain	6	0.09
Bottle Glass	2609	39.49
Table Glass	111	1.68
Lamp Glass	18	0.27
Unid. Glass	33	0.50
Window Glass	402	6.08
Machine-Cut Nails	316	4.78
Wire Nails	756	11.44
Handmade Brick	7	0.11
Machine-Made Brick	74	1.12
Building Material	434	6.57
Personal Items	72	1.09
Thin & Heavy Metal	949	14.36
Household Items	32	0.48
Machine & Wagon	58	0.88
Tools	4	0.06
Horse & Stable Gear	15	0.23
Ammunition	12	0.18
Electrical Items	11	0.17
Misc. Other	328	4.96
Total	6607	

The density maps produced for the site using the data from the 50x50-cm units indicates little sheet refuse material north of the barn and granary/stable. Many of the units in this area contain sterile deposits. Densities are low south of the dwelling and north of the small dwelling/office and Backhoe Trench 1.

Refined earthenwares are highly concentrated near the dwelling. They cluster in the north and west yards, particularly northwest of the kitchen addition. Some occur in disturbed contexts northeast of the small house/office. Few occur in the south (front) yard or west of the garage. None occur in the outbuilding area (barn, granary/stable). Refined earthenware counts range between zero and 18 sherds per 50x50-cm unit.

Stonewares exhibit a similar spatial distribution as refined earthenwares but cluster farther from the dwelling. A small cluster occurs northwest of the barn, between the outbuildings and the house, and over 12 m from the dwelling in the north yard. Only six sherds were found in the south (front) or east yards.

Bottle glass sherds cluster northwest of the dwelling and in disturbed deposits northeast of the small dwelling/office. No bottle glass sherds were found in the outbuilding area west of the house, few occur in the northeast yard or in the front (south) yards, or over 12-15 m from the house in the north yard.

Machine-cut nails and wire nails exhibited dissimilar distributions. Machine-cut nails were absent in the barn area. They cluster northwest of the dwelling and in disturbed deposits in the north yard. On the other hand, wire nails exhibit a broader distribution, with clusters in the outbuilding area near the small dwelling/office, and in the north yard, both west and east of the kitchen. Further, wire nails dominate the nail assemblage from the 1x1-m units dug north of the dwelling, and from the 1x1-m units dug in Feature 1, west of Backhoe Trench 1. These data indicate that machine-cut nails cluster near the early dwelling and reported detached kitchen but are absent or infrequent near the extant outbuildings that date to the twentieth century. The low frequency of machine-cut nails in the outbuilding areas suggests that the early outbuildings at this site were probably log with few nails, and/or the remains of these structures are masked by the more recent outbuildings.

Features: Six features were identified at 41DN157. The location, content, and function of these features are discussed below.

Features 1, 4, 5, and 6 corresponded to Anomaly 2 shown in Figure 8-59. Feature 1, debris from a demolished structure, included broken concrete slabs, limestone, reinforcing wire and mesh, boards and framing, and an assortment of domestic items. Units dug in Feature 1 included S144E192, S145E192, and Backhoe Trench 1. A total of 961 artifacts were recovered from Feature 1 (no material was collected in Backhoe Trench 1). Bottle glass sherds (n=399) comprise 41.52% of the collected artifacts from Feature 1. The structure dates to the twentieth century. Wire nails (n=283) comprise 90.13% of the nail assemblage.

Feature 4 was a buried metal bucket. Feature 5 was a small ash lens that extended into the east wall of Backhoe Trench 1. It was approximately 1 m in size north-south and more than 1 m east-west. A single bottle glass sherd was collected from Feature 5. Sheet metal and a second ash lens, Feature 6, was found in the west wall of Backhoe Trench 1 situated between Features 4 and 5. Both lenses measured 2.1 m north-south. These features were associated with Feature 1 and were probably deposited at the same time.

Features 2 and 3 were associated with the small office located northwest of the house. Features 2 and 3, encountered in Unit S136 E152, represent subsurface disturbance associated with the drainage system for the office. Both features were trench lines. Mixed sheet refuse and modern trash fill were found in the unit.

Faunal Remains:

TOTAL BONE = 209

Identified fauna (n=68)

Ictiobus sp. (buffalofish) - 1
Terrapene sp. (box turtle) - 2
Meleagris gallopavo (turkey) - 23
Gallus gallus (domestic chicken) - 7
Sylvilagus floridanus (cottontail) - 1
Rattus rattus (roof rat) - 2
Sus scrofa (domestic pig) - 14 (MNI=2)
Ovis/Capra sp. (sheep/goat) - 1
Bos taurus (domestic cattle) - 2
large mammal - 15

Unidentified bone (n=141)

The faunal remains from this site are remarkably different from the other sites, not in species composition, but in the number of bones exhibiting saw cut marks. Thirteen percent of the total bone recovered had been cut by a saw. Usually, between 1% and 4.4% of total bone recovery from the other sites was modified bone. This high percentage of cut bone may be a product of the site having been occupied for over 100 years and only recently vacated upon purchase by the Corps.

Eighteen of the 28 sawn bones are indeterminate to element; the rest are elements identified as cattle or pig. In fact, all four elements identified as cattle are sawn. These include a femur, a humerus, a scapula, and a rib. Except for the latter, these appear to be from roasts, ranging in cost efficiency from low cost/low yield (e.g., foreshank cut) to high cost/high yield (e.g., round cut) according to Lyman's model (1987).

Six elements identified as pig are sawn. These include three humeri, a radius, a scapula, and an ilium fragment. These elements likewise represent roast cuts of meat, such as picnic hams and shoulder (e.g., Boston butt), as well as loin roasts or tenderloins. Even though 44% of the pig elements were teeth, most of the post-cranial remains that were recovered exhibited cut marks. Only a scapula fragment and two foot bones were not cut, and these were not found in the areas of high faunal concentrations around the house.

A minimum of two individual pigs could be ascertained from the remains (two left humeri). This estimate is undoubtedly too low, given the occupation term, but is strictly based on recovered paired elements. Aging estimates were made on an unfused proximal radius and a mandible fragment with unerupted permanent incisors, both of which indicated individuals about 1 year old at death.

Besides pig and cattle, chicken completes the pattern of faunal utilization at 41DN157 and makes it similar to that typically noted from the other sites under study. Surprisingly few chicken bones were recovered from this site. Not one exhibits cut marks or evidence of burning. Likewise, no eggshells were recovered.

Even though 23 specimens are recorded for turkey, they apparently come from one individual, the remains of which were scattered in a small area at the farthest extent (S152 E168) of the house yard. There is no indication whether the turkey was of the wild or domestic variety.

Lastly, evidence of sheep or goat was found at the Hammonds House. This is unusual in the archaeological faunal assemblages from the area although many families were known to keep both (see the Jones Family oral histories). A metacarpal of sheep/goat was recorded from one of the units near the kitchen. It was neither cut nor burned.

Only eight bones were noted as having been burned. Two were identified as pig tooth enamel from two different units in the yard. No pattern of burned bone was detected at this site.

It is the distribution of large mammal bones (especially cut bones) that is interesting here. Over a quarter of the cut bone was recovered from one excavation unit in Block 1 (S176 E183), and the others clustered in the yard behind (west and north) of the kitchen. In general, the density of bone decreases outward from the kitchen.

Considering all bone recovered, 96% was found in units with south coordinates between 160 and 172 and east coordinates between 160 and 184. In other words, no bone was recovered from the large expanse of sheet refuse units between the dirt roads shown in Figure 8-53 or north of BHT 6, except for a few bones recovered from two units placed east of the "office" structure.

Summary: Site 41DN157 was occupied from about 1850 into the 1980s. This site contains mixed and badly disturbed deposits. The oldest component has been seriously impacted by the more recent occupations and by post-occupation activities. Several structures recorded in 1981 were bulldozed and buried before the site was excavated. This activity destroyed portions of the sheet refuse midden north of the dwelling. In addition, the site was used for cattle grazing in the late 1980s, and this activity has resulted in increased erosion and mixing of the archaeological deposits.

Standing structures at 41DN157 included the main house, a smaller house/office, a garage, a large frame barn, a small log crib, a livestock shelter, cellar, and a corral. The house was reportedly built in the early 1870s and had a detached log kitchen. The original log house and detached kitchen were not found. The ca. 1870s house underwent several building episodes. The original portion is the west room. The east room was added a short time later, followed by the breezeway, upstairs, and the kitchen. The kitchen was added in the late 1880s to early 1890s.

The small dwelling/office was built during the twentieth century and contained commercial 14 cut lumber and wire nails. The two-story barn was probably built after 1930. Other outbuildings included a log-crib granary with shed additions and a livestock shelter/stable, a garage, and a limestone cellar. All of these structures were built during the twentieth century. The cellar may have been built shortly after a tornado destroyed the nearby community of Hemming in 1907.

The proton magnetometer survey revealed three major anomalies (1) a buried water or sewer line, (2) Feature 1, the buried debris from a demolished structure, (3) Feature 4 (buried metal bucket), Feature 5 (ash lens), and Feature 6 (ash and metal).

Field investigations included excavation of 170 50x50-cm units, four 1x1-m units for feature exploration in the former shed and privy area, six backhoe trenches and one block containing six 1x1-m units and seven 1x0.5-m units. The 50x50-cm units were dug on an 8-m grid across the site to recover information on site size, age, function, integrity, and to recover a representative sample of subsurface artifacts. A block was excavated behind the dwelling to recover information close to the dwelling, while backhoe trenches were dug to examine magnetic anomalies and subsurface features identified in the 50x50-cm units. These field investigations indicate that the sheet refuse deposit is moderately dense and contains mixed deposits spanning over 100 years of occupation. Discrete features, sheet refuse, and disturbed deposits were found. Spatial data obtained from the 50x50-cm units indicate that the domestic sheet refuse material clusters in the north and west yards, primarily between the garage and the house, and between the small house/office and the main dwelling. Major areas of this deposit, however, have been adversely impacted by more recent activities. Little sheet refuse occurs in the outbuilding area or in the south or east yards.

The mean beginning dates obtained for the site reflect the long occupation associated with this farmstead, with the majority of the artifacts dating from the more recent occupations. The earliest component was not found, and the ca. 1870s occupation was largely masked or mixed with artifacts from later occupations.

The long occupation history of the early farmstead at 41DN157 is further masked by the extant architecture. The more recent house/office, the barn, concrete trough, and stable all reflect the cattle ranch occupation of this site during the twentieth century. Similar cattle-related structures occur at other twentieth century ranches in the

project area. While Skinner et al. (1982a, 1982b,), Skinner and Baird (1985) identified "barns" at a number of sites in the reservoir area (see Appendix K), many of these structures were actually sheds Barns, either dairy or cattle barns, were not common in this area and were most frequent at ranches and diversified farms occupied into the 1940s or more recently. For example, the large sheds at 41DN250 (Jones Farm) were mistakenly identified as barns, but in fact were buggy and work sheds.

41DN166

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	620' amsl
Scheduled Investigations	Limited testing
Additional Investigations	Archival, geomorphology, magnetometer survey, excavation
Soil Association	Callisburg soils
Cultural Affiliation	Historic (ca. 1880 to 1920)

Description: The site is near the Cooke/Denton county line, south of 41DN167, and southwest of 41DN250. It is in a wooded grove on a small promontory. It is bounded on the west by Johnson Branch Creek and on the east and southeast by a intermittent stream. The old road from Bloomfield to Hemming is located to the south. No extant structures occur, but surface features include a house mound, chimney debris, a stone-lined well, and a collapsed cellar (Figure 8-60). The site area is approximately 60x60 m based on the distribution of surface and subsurface features and artifacts.

Previous Investigations: The site was recorded by ECI in 1981. Testing was recommended to determine potential eligibility for nomination to the National Register. The site was revisited by personnel from NTSU in 1985, at which time, limited testing was recommended.

Archival Investigations: The site is located on the John Johnson survey (A-670). Archival research was not requested. However, research conducted on sites 41DN167 and 41DN248, also located on this survey, indicated that 41DN166 was situated on Tract 4 of this survey (see Appendix A). It contained 98 acres, and was bisected northwest to southeast by Johnson Branch. The survey was granted to John Johnson, and in 1881, he conveyed the western 203 acres of the 320-acre survey to his wife Sarah Johnson. The property was to transfer to her after his death. The Johnson homestead was located at 41DN248, and 41DN166 was not homesteaded until after 1881. However, based on the archaeological record at the site, it was probably occupied shortly after Sarah Johnson acquired it.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Proton Magnetometer Survey: A magnetometer survey was conducted at 41DN166 to identify subsurface anomalies that could be identified as archaeologically significant (Figure 8-61). Features visible prior to the survey included a cellar depression (Feature 3), the house mound (Feature 4), and a sandstone well (Feature 5). The vegetation was primarily mixed grasses and cedar trees, and surface visibility was over 90%.

Three 20x20-m and one 10x20-m blocks were surveyed to recover information for the main site area. The survey was conducted by personnel from the Department of Geology at the University of Texas at Arlington, under the direction of Dr. Brooks Ellwood.

The values produced by the proton magnetometer ranged from -280 to +999. The background was primarily negative values, while the dominant anomalies were defined by high negative (-99 to -280) and high positive values (+100 to +999). The results of the proton magnetometer survey are shown in Figure 8-61. Only the positive values are presented. These data indicate five archaeologically significant anomalies. Only Anomaly 4 (house mound) and Anomaly 5 (west cellar) were visible on the site surface.

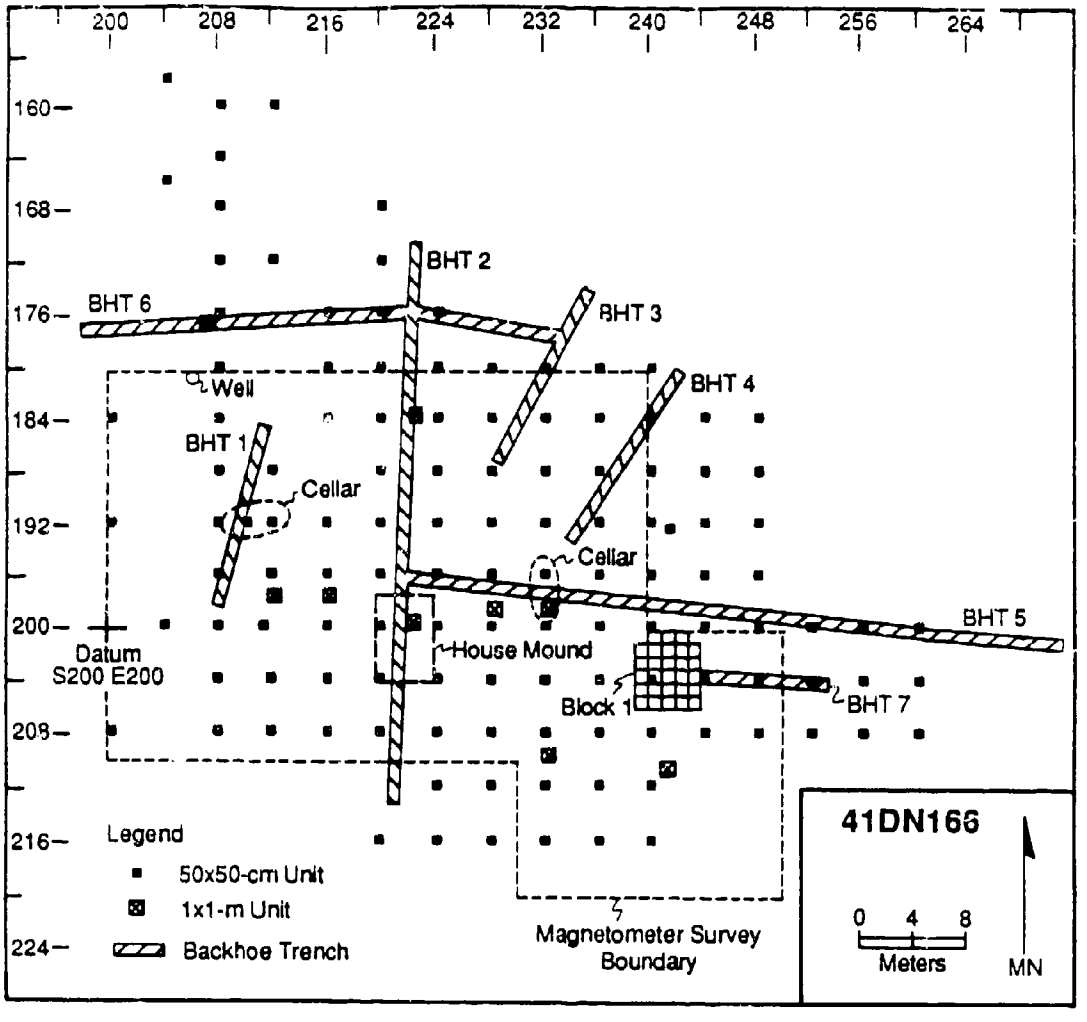
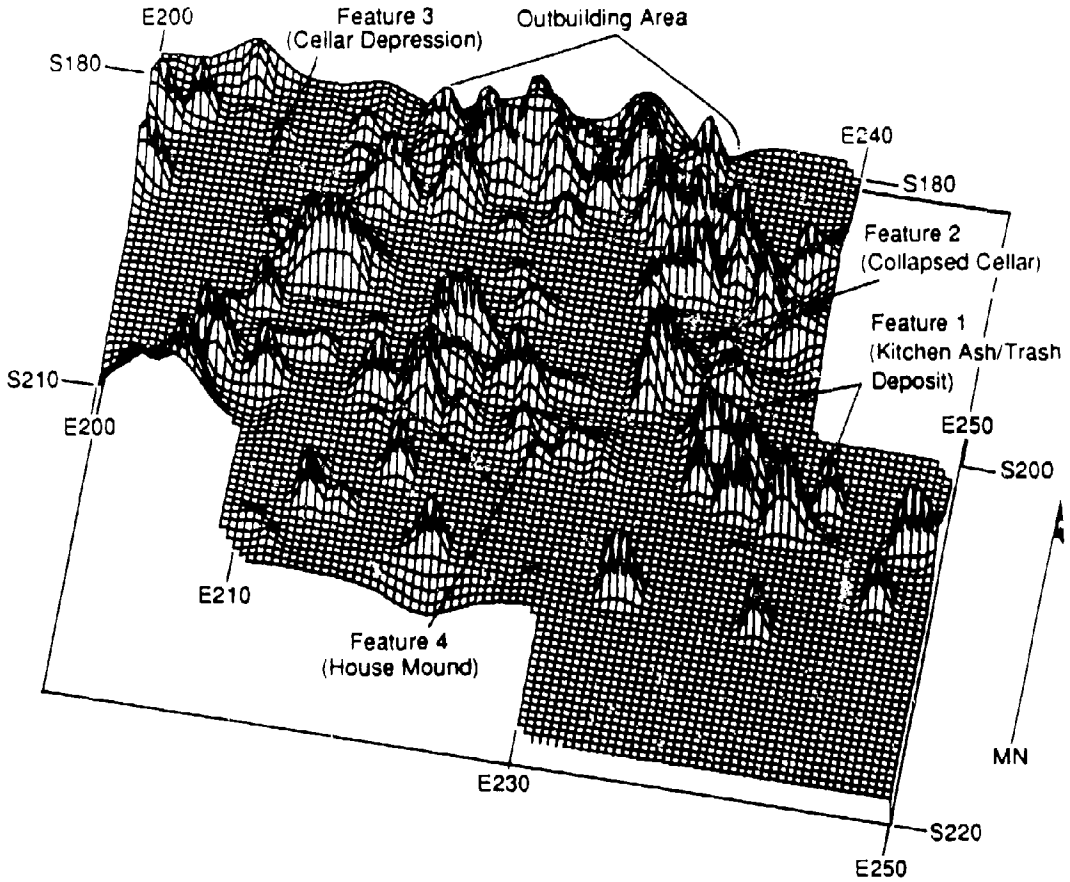


Figure 8-60. Site map of 41DN166.

The first anomaly is Feature 1, a buried kitchen-related trash deposit. This feature was exposed in several 50x50-cm units, and based on these data and the magnetometer data, Block 1 was excavated to recover additional information on this feature. This feature was characterized by both positive and negative proton magnetometer values, but was predominately identified by high positive values. The area southeast of this anomaly is characterized by a background of low negative values.

The second anomaly is Feature 2, a collapsed cellar. This anomaly was identified as a dipolar anomaly, with the positive values clustering to the north and the negative values to the south. Only the positive values are shown in

Figure 8-61. Based on the magnetometer data, this area was shovel scraped revealing a planview of the collapsed cellar. This exposed planview was drawn and the excavation of BHT 5 provided a profile of Feature 2.



Note: Only positive values are shown.
Small unlabeled peaks are primarily metal (values range from 500+ to 999+).

Figure 8-61. Magnetometer survey map of the positive magnetometer values for 41DN166.

Anomaly 3 is a possible outbuilding and barbed-wire fenceline northeast of the house and Feature 2. This anomaly contains both positive and negative values, with a linear arrangement of high positive values ranging from +100 to +999. The A-horizon is also shallower in this area than near the house mound and the eastern portion of the site. Backhoe Trenches 2, 3, and 4 bisect this anomaly providing several profiles.

Anomaly 4 is the house mound (Feature 4). This mound measured approximately 6 m north-south by 4 m east-west. This anomaly is characterized by both positive and negative values, but is largely visible as several small clusters of +999 values. This feature is bisected north-south by BHT 2.

Anomaly 5 is the west cellar (Feature 3). This cellar was collapsed, and a profile was exposed in BHT 1. This anomaly is dipolar, with the high positive values occurring to the north, and the negative values occurring to the south. This mirrors the pattern recorded for Anomaly 2 (east cellar).

Other small high positive peaks are visible in Figure 8-61. These are interpreted as small pieces of buried metal and generally occur as either isolated +500 or +999 values.

Excavation Methods: Twenty-one 50x50-cm units were dug during testing on an 8-m grid (see Figure 8-60) to recover information on site size, age, function, integrity, and to recover a representative sample of subsurface artifacts. These units indicated in situ deposits associated with a single house site occupied between the mid-1880s and the 1930s. Several 50x50-cm units revealed evidence of possible buried features. For example, Unit S204 E240 contained an ash lens, charcoal, and numerous domestic artifacts, particularly bottle glass and ceramics. Based on the initial testing results, additional sheet refuse investigations were undertaken, including a proton magnetometer survey to aid in locating buried archaeological features. The results of the proton magnetometer survey are discussed above (see Figure 8-61).

A total of 122 50x50-cm units, including the original 21, were dug at the site on a 4-m grid. A single judgmentally placed 50x50-cm unit, Unit S192 E210.5, was excavated in Feature 3, the west cellar. Backhoe trenches were also used to recover data on the sheet refuse deposit, as well as, information on geological site formation processes and cross-sectioning buried features. Seven backhoe trenches were excavated at the site. BHT 1 bisected Feature 3, the west cellar. Backhoe Trenches 2, 5, and 6 provided excellent coverage of the subsurface deposits for reconstructing the site formation history. BHT 2 yielded data on the house mound (Feature 4), while BHT 5 bisected Feature 2 (east cellar). The unexcavated portion of Feature 1, the kitchen-related ash/trash deposit, was bisected by BHT 7, and a large magnetometer anomaly northeast of the house was examined in BHT 3 and BHT 4.

A total of 28 1x1-m units were excavated in Block 1 to examine Feature 1. An additional eight 1x1-m units were judgmentally placed to investigate magnetometer anomalies (see above discussion). These units were excavated in 5-cm levels.

Other efforts included removal of the A-horizon by shovel-scraping to expose Feature 2 and machine-scraping to expose Feature 3. The relative placement and size of both features were estimated using the proton magnetometer data. A planview was exposed and drawn for both features at the base of the A-horizon.

Geology: Site 41DN166 is located east of Johnson Branch Creek in northernmost Denton County near the center of the Ray Roberts Lake project area. The site is situated on a low ridge that forms the eastern margin of the Johnson Branch Creek valley and is in an area that has been extensively cleared of vegetation in historic times. Because of nearby outcrops of Woodbine sands and the proximity of the Johnson Branch subplain, the native vegetation was probably dominated by low forests.

Geological exposures of the site were made by excavation of seven backhoe trenches and numerous 50x50-cm and 1x1-m test units (see Figure 8-60). Geologic investigations of the site include descriptions of two profiles. The first is in BHT 1 in the western portion of the site. The second is in the southern end of BHT 4 in the central and higher portion of the site. Observations were made in the other trenches and exposures in the site excavations.

Geomorphology: The site is situated on the southern and lower end of a low ridge. The western side of the ridge slopes off to the Johnson Branch floodplain. The eastern side of the ridge is defined by a much smaller southerly-flowing tributary to Johnson Branch. The site occupies a relatively level area on the crest of the ridge. The terrain drops gently away from the site to the south and rises towards a higher portion of the ridge to the north.

Surface Geology: Woodbine sandstone outcrops to the east and northeast of the site. The other surface sediments exposed at the site all appear to be alluvium or colluvium. A well (Feature 5) excavated by the site occupants in the northwestern portion of the site near BHT 6, apparently penetrated Grayson Marl bedrock at some unknown depth below the surface. Accumulations of this bedrock were found as spoil in the vicinity of the well during excavation of BHT 6. This is in accordance with the position of the site very near the contact of the Grayson Marl and the overlying Denton member of the Woodbine sandstone. In BHT 1, gravel and sand deposits, apparently alluvium, were exposed. These deposits appear to be related to a Pleistocene channel of Johnson Branch Creek. Similar gravels were also exposed in BHT 2 and BHT 3.

Soils: A soil profile was described in the southern portion of BHT 4 (Table 8-31). The 1.7 m exposure revealed a very well-developed alfisol with a strongly developed Bt-horizon underlain by a calcareous Btk-horizon. These sediments are predominately sandy loams in the AP-and A-horizons and are underlain by sandy clay loams and silty clay loams in the lower portions of the pedon. The soil has moderate to strongly developed structure and carbonate concretions in the lower part of the profile below 92 cm. This very well-developed soil is consistent with its position in alluvium overlooking the Johnson Branch floodplain. It is certainly of Pleistocene age, but correlations of this alluvium and the soil with other terraces in the area cannot be made at this time. Illuviation of clay from the AP- and A-horizons into the underlying B-horizons has left the surface sediments of the soil profile considerably coarser than the underlying B-horizon materials. This has left the surface sediments more prone to erosion.

Table 8-31
Soil Profile Description for BHT 4 at 41DN166

Horizon	Depth	Color Dry/Moist		Texture	Structure	Boundary
Ap	0-12	10YR4/3	10YR3/2	SL	2fgr	gs
A	12-20		7.5YR4/2	L-SL	2msab	ci
AB	20-35	7.5YR5/6	7.5YR4/6	SCL	2mag	cs
Bt	35-64	7.5YR5/6	7.5YR4/6	SiCL	3mag	gs
Bt2	64-92	7.5YR5/8	7.5YR5/6	SiL-SiCL	3mag	cs
Btk	92-135		7.5YR4/6	SiL	3cag	gs
Bt4	135-170+		10YR5/6	SiC	3msab	base

Key:
Texture: L=loam, SCL=sandy clay loam, SiL=silt loam, SiC=silty clay, SiCL=silty clay loam.
Structure: grade/class/type; grade: 2=moderate, 3=strong; class: c=coarse, f=fine, m=medium; type: ag=angular blocky, gr=granular, sab=subangular blocky.
Boundary: distinctness: c=clear, g=gradual.

A profile was described in BHT 1 (Table 8-32) near the location of the cellar (Feature 3). The surface of this soil profile has been truncated because of the lower slope position of this profile. The Bt-horizon described earlier was exposed in the top 25 cm of this profile. Below depths of 25 cm, gravels, loamy sands, and basal gravels were exposed to a depth of 115 cm below surface. These weathered alluvial deposits figured into the maintenance and

repair of the cellar (Feature 3) that was exposed in this trench. The site occupants had excavated the original cellar in this location down into the lower gravel (horizon unit 4). Because this gravel conveyed groundwater quite easily, it is clear that the cellar was probably flooded frequently after its initial construction. To accommodate this problem, the site occupants filled the cellar floor and raised it above the level of these lower gravels.

Table 8-32
Soil Profile Description for BHT 1 at 41DN166

Horizon	Depth	Color Moist	Texture	Structure	Boundary
1 (Bt)	0-25	10YR4/6	SCL	2sab	cs
2	25-40	7.5YR4/6	gr	-	cs
3	40-57	10YR4/6	L-SL	2mag	as
4	57-115+	7.5YR5/7	gr, SL	-	base

Key:
Texture: gr=gravel, L=loam, SCL=sandy clay loam, SL=sandy loam. Structure: grade/class/type; grade: 2=moderate; class: m=moderate; type: ag=angular blocky, sab=subangular blocky. Boundary: distinctness/topography; distinctness: a=abrupt, c=clear; topography: s=smooth.

Evidence of post-settlement erosion at this site was revealed in the profile of BHT 5, which extended from the central portion of the site, over to the east into the small gully that defines the eastern boundary of the site area. In the central portion of the site, BHT 5 revealed sediments that were similar to those of BHT 4 described above. However, towards the eastern part of the site where the terrain drops towards the intermittent stream or gully, a buried soil horizon was exposed. This over-thickened A-horizon is presumed to be late Holocene in age. It is overlain by 35 cm of white-brown loams, which probably eroded from the site area at the time the site was initially cleared and during its subsequent occupation. The relatively thin deposit of sediment eroded from the site area suggests that impacts to the landscape from clearing were probably minimal in the area of the residence. Farther to the south, in this gully, rather thick exposures of recent sediments were seen in the gully walls. These are probably sediments that were also eroded from nearby slopes after land clearing sometime in the historic period.

Discussion: The well-developed soil formed in Pleistocene alluvium at this site has implications for site formation processes. The sandy A-horizons extending to an average depth of 20cm over the central portion of the site would be more prone to erosion and bioturbation than would the clay and silty sediments in the lower B-horizons. Artifact movement would therefore be expected to be concentrated in the upper portion of the soil profile in the AP and A-horizons. Erosion of sediment from the site area as shown in the profile of BHT 5 suggest that artifact movement downslope would have accompanied occupation of the site. Also, this erosion would have thinned the A-horizon in areas of intensive site use and would have promoted accumulation of artifacts near the upper portion of the B-horizons. The presence of Pleistocene gravels at the site which thwarted initial efforts to build the cellar exposed in BHT 1 probably enabled the site occupants to construct a successful well in the northwestern portion of the site near BHT 6. These gravels probably collected water from the upslope areas and rapidly conveyed the water in the gravel aquifer to the well position. Rapid recharge of the well is expected since no other well was found at the site, suggesting that a relatively permanent supply of water was made available to the site occupants.

Excavation Results: The sheet refuse deposit provided considerable temporal and spatial data indicating the length and intensity of occupation and specific activity areas. Five features were identified, and the varied collection methods provided a detailed examination of content and spatial patterning data at the site. Sheet refuse and feature material were found in the 50x50-cm units, backhoe trenches, shovel and machine-scraped areas, Block 1, and the judgmentally placed 1x1-m units. Correlation of the proton magnetometer data with the geological information on site stratigraphy and site formation processes, and with the archaeological deposits, indicate both downward and downslope movement of artifacts associated with colluvial and alluvial deposition, although several important discrete features remain.

The location, function, and contents of the features are summarized below, followed by a discussion of the artifact assemblages from the different collections. These collection areas are discussed individually and include the 50x50-cm units, Block 1, the judgmentally-placed 1x1-m units, and the BHT data.

Features: Five major features were identified at 41DN166. These features include a kitchen-related deposit, two cellars, a house mound, and a sandstone-lined well. A possible fenceline and outbuilding were identified in the magnetometer data (see above discussion on the proton magnetometer survey). These features are discussed below.

Feature 1: Feature 1 was an oval-shaped pit or depression containing kitchen/house-related ash, trash, and sheet refuse (Figure 8-62 and Figure 8-63). This feature was located about 12 m east of the dwelling (see Figure 8-60) and was first identified in Units S200 E240 and S204 E240 as a buried ash deposit containing numerous temscussed above.

Feature 1 was located in Block 1 and was partially excavated. Block 1 contained 23 contiguous 1x1-m units. After Feature 1 was identified in several 50x50-cm units, the area was shovel scraped to remove the leaf cover and sod layer exposing a planview of the feature. Based on this planview, Block 1 was laid in to provide complete coverage of the exposed feature.

Block 1 was divided in half. The west half of the block containing 17 units was excavated to the base of the feature. The east half (11 units) was only partially excavated. Fine-screen samples were recovered from seven 50x50-cm quads in the east half of the block (see Figures 8-62 and 8-63). These samples were collected in 10 cm thick levels to provide additional feature coverage and to recovery sample of artifacts less than 1/4-inch in size.

Feature 1 measured over 5.5 m in diameter and was about 30 cm deep. it was exposed in Level 1 as a dense ash concentration. Both burned and unburned artifacts were found within Feature 1.

No secondary features were found within or directly associated with Feature 1. No postmolds or piers were found indicating that a structure had been located here and had burned. The architectural debris found in Feature 1 was similar in type and relative artifact size with the architectural items found in the house mound and sheet refuse deposit.

Architectural items (Table 8-33) were more common in Feature 1 than the surrounding sheet refuse deposit. In Feature 1, they totalled 28.94% of the assemblage, compared with 18.44% in the sheet refuse deposit. However, they did not indicate a separate building episode or evidence of a previous structure in this area.

The absence of burned earth and the paucity of charcoal in Feature 1 and the surrounding matrix further indicate a structure did not burn here. The ash concentration and mixed artifact assemblage indicate ash dumping from cleaning the stove and/or fireplace, some trash dumping, and sheet refuse. Evidence of trash dumping includes the recovery of a large number of sherds from the same vessel. For example, 109 sherds from one stoneware vessel were collected from Level 1 in Unit S205 E239. Only one intact milk glass jar was found. All other artifacts were broken and similar in type with the surrounding sheet refuse deposit.

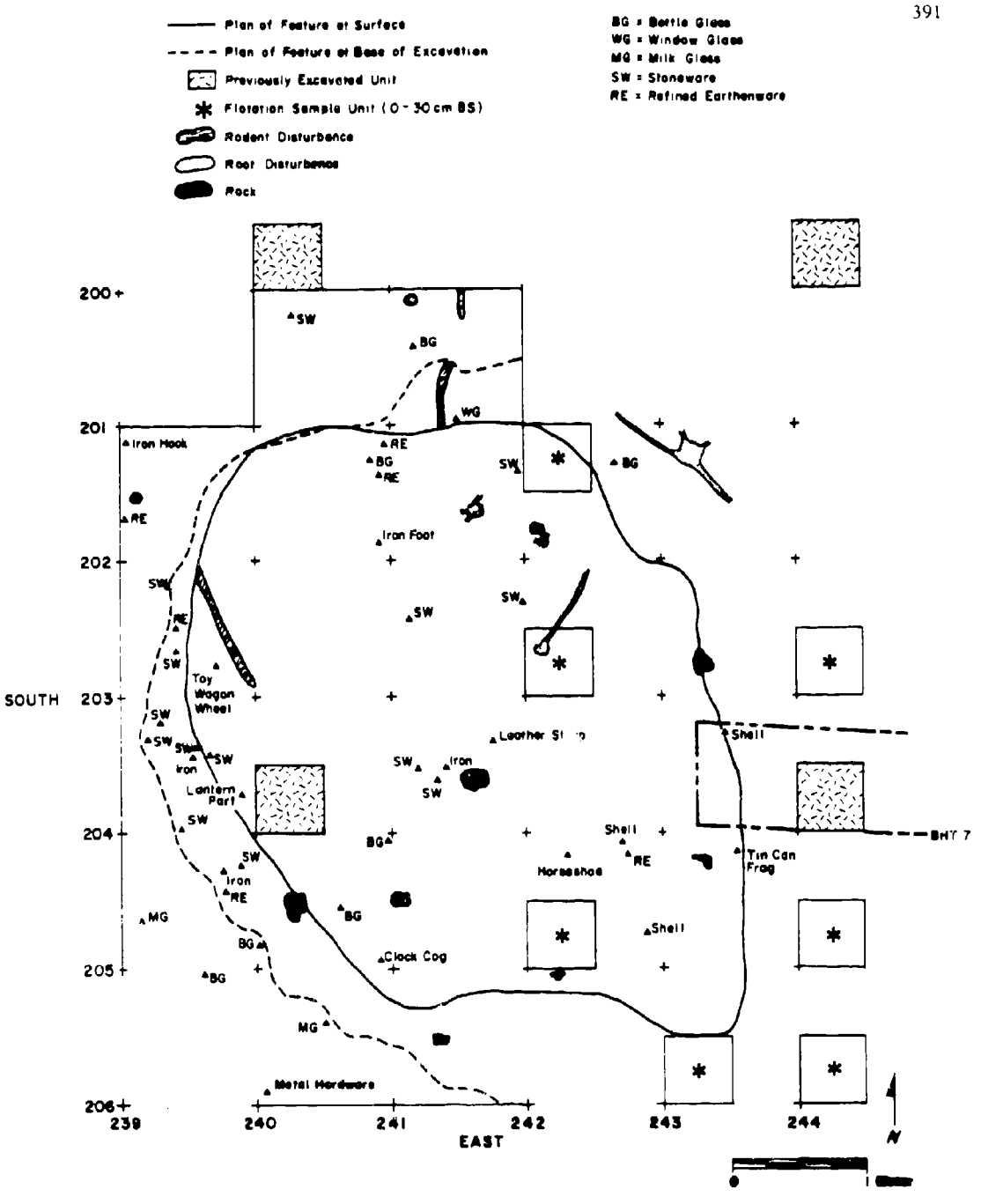


Figure 8-62. Planview of Feature 1 at the base of excavation 10 cm below surface at 41DN166. Feature 1 is a kitchen/house-related deposit excavated in Block 1.

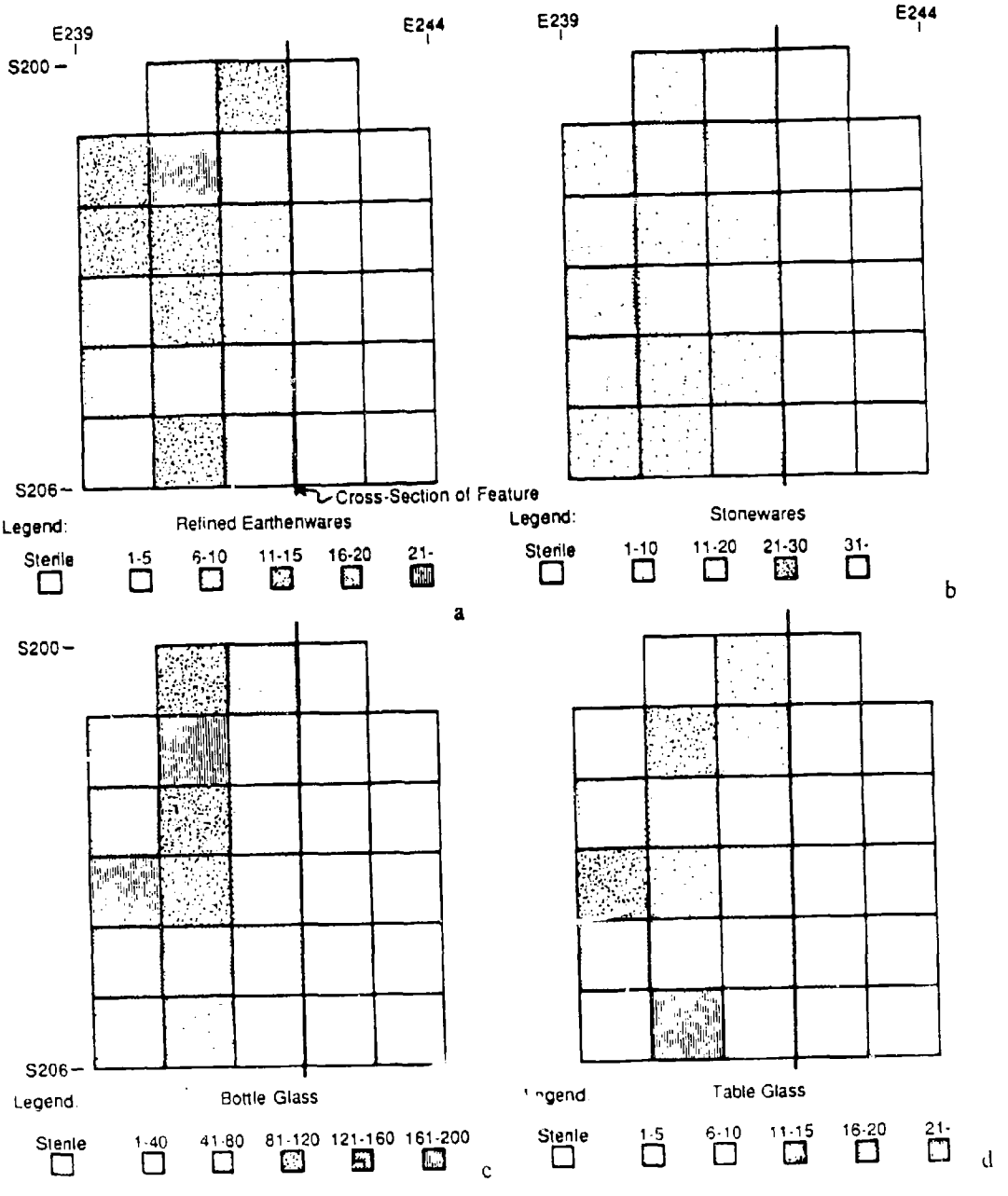


Figure 8-63. Artifact frequencies for the west half of Feature 1 (kitchen/house-related deposit) in Block 1 at 41DN166. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) table glass, (e) window glass, (f) cut nails, (g) wire nails, and (h) personal items.

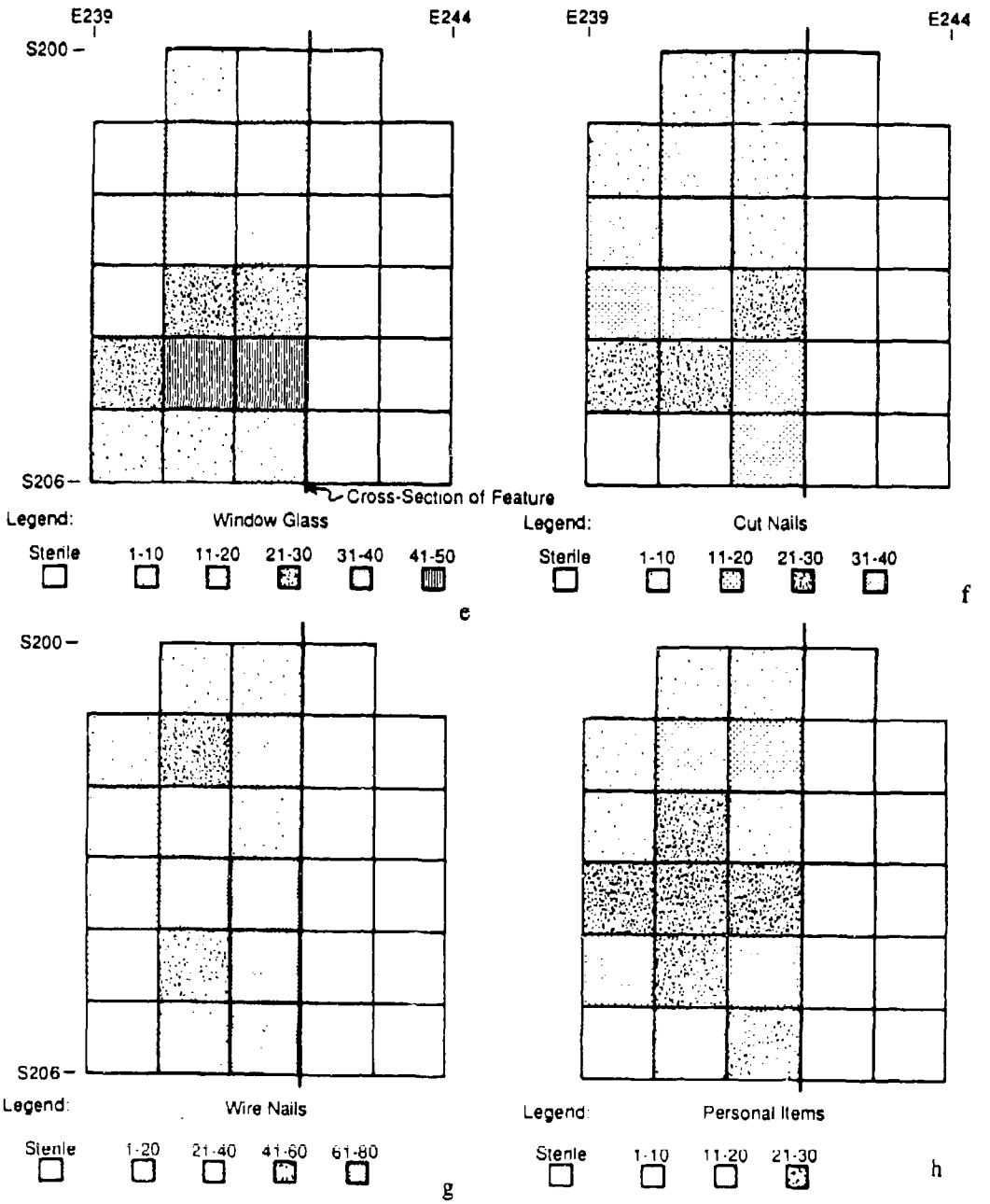


Figure 8-63. (continued) Artifact frequencies for the west half of Feature 1 (kitchen/house-related deposit) in Block 1 at 41DN166. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) table glass, (e) window glass, (f) cut nails, (g) wire nails, and (h) personal items.

Table 8-33

Artifacts Collected From Feature 1 at 41DN166

Category	N	%
Semi & Coarse Earthenware	13	0.25
Refined Earthenware	200	3.90
Stoneware	294	5.73
Porcelain	19	0.37
Bottle Glass	1698	33.09
Table Glass	96	1.87
Lamp Glass	106	2.07
Unid. Glass	109	2.12
Window Glass	400	7.80
Machine-Cut Nails	230	4.48
Wire Nails	564	10.99
Handmade Brick	18	0.35
Machine-Made Brick	19	0.37
Building Material	254	4.95
Personal Items	243	4.74
Thin & Heavy Metal	616	12.01
Household Items	55	1.07
Machine & Wagon	39	0.76
Tools	10	0.19
Horse & Stable Gear	20	0.39
Ammunition	25	0.49
Electrical Items	24	0.47
Misc. Other	79	1.54
Total	5131	

The MBD values obtained for Feature 1 vary between artifact category (Table 8-34), as well as with other collections from the site. Refined earthenwares yielded the earliest MBD, while stonewares produced the most recent. The higher stoneware MBS and the combined MBD values partially reflect the abundance of sherds form one vessel in Unit S205 E239. However, when these sherds are counted as one vessel, the MBD values for Feature 1 still indicate the more recent date. The adjusted stoneware date is 1895.95 (n=158) and the adjusted combined MBD is 1885.29 (n=558). These data suggest that Feature 1 contained trash dumped near the end of occupation or after occupation, as well as earlier sheet refuse.

Table 8-34
MBD Values Obtained for Feature 1 at 41DN166

Category	MBD Value	Sample Size
Refined Earthenwares	1868.25	154
Stonewares	1897.84	296
Bottle Glass	1889.12	246
Combined	1888.21	696

The distribution of major artifact categories in Feature 1 were mapped for the west half of Block 1 (Figure 8-63). These maps were constructed to determine if meaningful spatial patterning exhibited. Instead, these maps indicate this feature may have been a dump. The maps further indicate spatial variability in the distribution of these categories and that artifact density was generally greater in the southern portion of the feature (Table 8-35). The variability in distribution between artifact categories is not directly related to other features or activity areas at the site.

Table 8-35
Artifact Totals for Units in the
West Half of Block 1 (Feature 1) at 41DN166

S200	E239	E240	E241
S201		157	223
S202	165	480	241
S203	227	332	152
S204	425	299	383
S205	399	369	388
S206	8	81	389

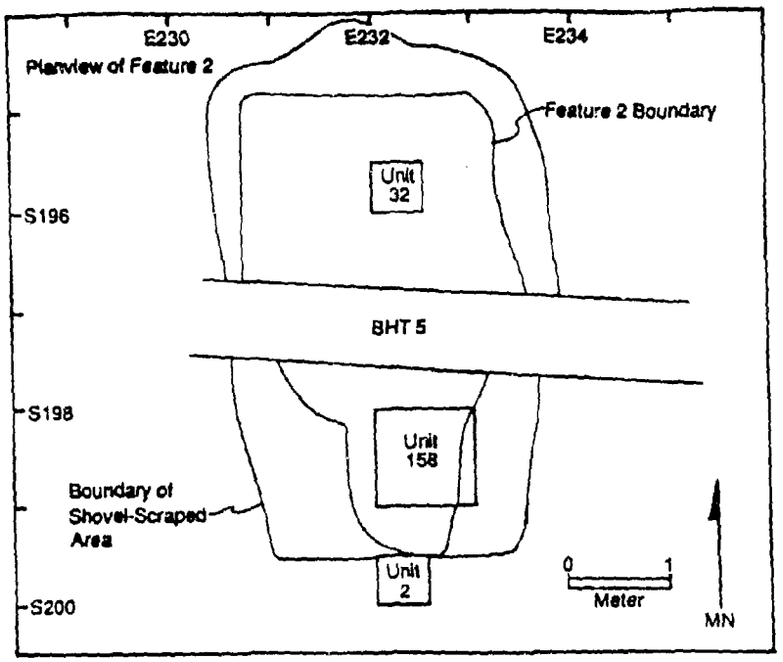
Feature 2: Feature 2 was the east cellar located about 8-10 m northeast of the house mound (see Figure 8-60). This feature was first identified in the proton magnetometer data. It was characterized as a dipolar anomaly matching the signature produced for the west cellar (Feature 3).

Several units were excavated in Feature 2 and include a 50x50-cm unit at S196 E232 and a 1x1-m unit at S199 E232. The 50x50-cm unit indicated disturbed deposits, but little information. Unit S199 E232 was judgmentally placed to expose a wall of the cellar. It was excavated in 5-cm levels to a depth of 70 cm below the surface.

Architectural debris and sheet refuse material were mixed within the feature fill, along with ash and charcoal. Unit S199 E232 was located near or in the entry which was located on the south end. The cellar measured approximately 4.6 m north-south and 2.5 m east-west. No postmolds were exposed in the planview (Figure 8-64), but the construction of this cellar was probably very similar to the construction of the west cellar.

Large uncut sandstone rocks and mortar were found within the cellar. This material was speculated as building material during excavation. However, the profile exposed in BHT 5 did not indicate any in situ sandstone walls or steps. Instead the walls can be defined by a sediment change, with the cellar fill containing concentrations of ash, charcoal, and some sandstone rocks.

The east cellar (Feature 2) extended to a depth of approximately 2 m below the surface, slightly deeper than the west cellar (Feature 3). No evidence of water table seepage was found in this cellar, and it is possible this cellar was dug to replace the west cellar (see Feature 3 discussion below).



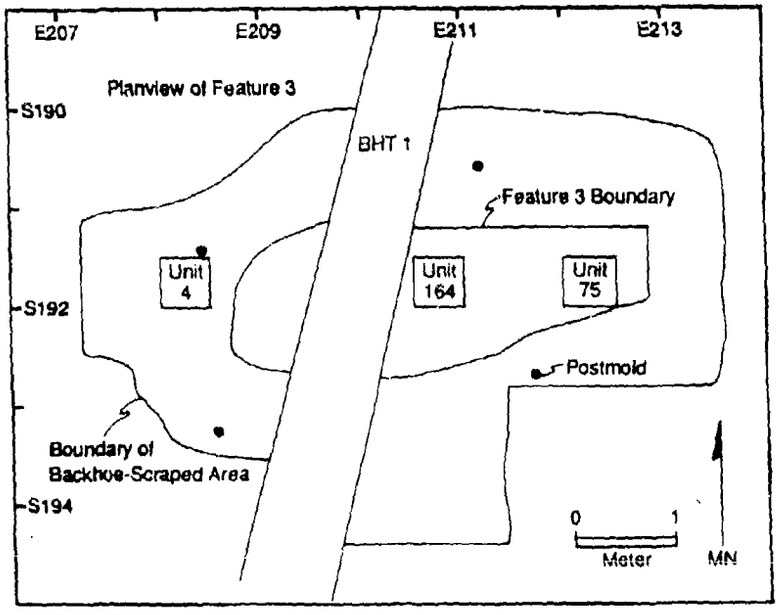


Figure 8-64. Planviews of Feature 2 (east cellar) and Feature 3 (west cellar) at 41DN166. Feature 2 was identified in the magnetometer survey and was exposed by shovel scraping. Feature 3 was visible on the ground surface as a large depression and was exposed by backhoe scraping.

The artifacts from Feature 2 are summarized in Table 8-36. These data indicate the cellar fill contains sheet refuse material deposited after the cellar collapsed. No trash dump was found within this feature.

Table 8-36
Artifacts Collected From Feature 2 at 41DN166

Category	N	%
Refined Earthenware	24	6.32
Stonewares	5	1.32
Bottle Glass	109	28.68
Table Glass	8	2.11
Lamp Glass	5	1.32
Unid. Glass	16	4.21
Window Glass	10	2.63
Machine-Cut Nails	55	14.47
Wire Nails	46	12.11
Machine-Made Brick	5	1.32
Building Material	21	5.53
Personal Items	11	2.89
Thin & Heavy Metal	31	8.16
Household Items	3	0.79
Machine & Wagon	1	0.26
Horse & Stable Gear	1	0.26
Ammunition	3	0.79
Misc. Other	26	6.84
Total	380	

Feature 3: Feature 2 was the west cellar located about 8 m northwest of the house mound. The cellar was visible as a depression and was identified as a dipolar anomaly in the magnetometer survey. Two 50x50-cm units were excavated in Feature 3 (Unit 164 at S192 E210.5, Unit 75 at S192 E212). Unit 75 was located on the 4-m grid and was excavated to a depth of 50 cm below the surface (Level 5). Profiles and planviews drawn for this unit indicated that the cellar fill contained burned earth, charcoal, and burned wood, as well as, sheet refuse material. The sheet refuse material continued to be found in Level 5, indicating that the loose fill facilitated the downward movement of sheet refuse from the site surface. The artifacts found in Feature 3 are summarized in Table 8-37.

Based on the information from Unit 75, Unit 164 was placed to recover a common sample from Feature 3. This 50x50-cm unit was excavated in 5-cm levels to a depth of 120 cm below the surface (Level 24). Artifacts were found in Level 6 (25-30 cm) to Level 23 (110-115 cm below the surface).

Several profiles and a planview were drawn for Feature 3. A backhoe was used to remove the A-horizon and expose a planview (Figure 8-64), which indicates the clear was oriented east-west. Backhoe Trench 1 was excavated

north-south to provide a cross-section of the cellar. The entry was on the east, and four postmolds indicated the location of the support posts in the scraped area.

Table 8-37
Artifacts Collected From Feature 3 at 41DN166

Category	N	%
Refined Earthenware	7	10.45
Bottle Glass	14	20.90
Window Glass	1	1.49
Machine-Cut Nails	8	11.94
Building Material	5	7.46
Personal Items	2	2.99
Thin & Heavy Metal	6	8.96
Misc. Other	24	35.82
Total	67	

Based on the architectural remains, the cellar probably had earthen walls, floor, and wooden support posts. The door was probably wood. The cellar measured approximately 4 m east-west by 1.5 m north-south.

This cellar was excavated into the substrate containing gravels associated with a local aquifer. The fill and soil profile of this feature also indicate that the cellar had been repaired after water from the aquifer seeped in damaging the cellar floor and lower walls. Apparently this did not solve the problem, and a second cellar was excavated east of the house.

Feature 4: Feature 4 was the house mound located in the south-central portion of the site. This feature was visible as a raised rectangular mound measuring approximately 6 m north-south by 4 m east-west. It was identified in the proton magnetometer survey (see above discussion) primarily as small clusters of high positive values. These clusters were associated with burned artifacts and bricks.

The house mound was cross-sectioned by BHT 2, and the chimney and several piers were found in units. The chimney base was in poor condition and was partially exposed in Unit S200 E220, which contained artifacts mixed with uncut limestone and sandstone rocks and both handmade and machine-made bricks. The chimney was located on the west elevation. Sandstone piers were found in several units and include Unit S204 E224 located at the southeast corner of the mound.

Feature 5: Feature 5 was a dry-laid sandstone well measuring about 2 m in diameter. The well was partially covered by vegetation, and the depth was not determined. The well is 22 m northwest of the house mound.

Artifact Assemblages: The artifact assemblages from the different collections (50x50-cm units, Block 1, 1x1-m units, and backhoe trenches/grab samples) provide valuable temporal and spatial information about the occupation of this site (Table 8-38).

Table 8-38
Artifacts From 50x50-cm Units, Judgmentally-Placed 1x1-m Units, and Backhoe Trenches/Surface Grab Samples at 41DN166

Artifact Category	50x50-m Units		1x1-m Units		BHT/Grab	
	N	%	N	%	N	%
Semi & Coarse Earthen.	6	0.17			1	0.58
Refined Earthenware	132	3.63	45	3.33	24	13.95
Stoneware	76	2.09	17	1.26	19	11.05
Porcelain	8	0.22	1	0.07		
Bottle Glass	1171	32.22	482	35.70	105	61.05
Table Glass	20	0.55	11	0.81	4	2.33
Lamp Glass	31	0.85	6	0.44		
Unid. Glass	45	1.24	46	3.40	2	1.16
Window Glass	179	4.93	63	4.67	3	1.74
Machine-Cut Nails	182	5.01	151	11.19	1	0.58
Wire Nails	194	5.34	118	8.74	2	1.16
Handmade Brick	7	0.19	8	0.59		
Machine-Made Brick	12	0.33	3	0.22		
Building Material	96	2.64	46	3.41		
Personal Items	34	0.94	19	1.41	3	1.74
Thin & Heavy Metal	1333	36.68	268	19.85	4	2.33
Household Metal	46	1.27	7	0.52	1	0.58
Machine & Wagon	20	0.55	6	0.44		
Tools	1	0.03			2	1.16
Horse & Stable Gear	4	0.11	3	0.22	1	0.58
Ammunition	7	0.19	4	0.30		
Electrical Items	3	0.08				
Misc. Other	27	0.74	46	3.41		
Total	3634		1350		172	

Comparison of the MBD values obtained for the different collections at 41DN166 indicates temporal variability within and between assemblages (Table 8-39). Refined earthenwares consistently yielded the earliest MBD values. While bottle glass produced the most recent values for the sheet refuse deposit, stonewares in Feature 1 produced the most recent MBD value for the site. This later date reflects artifact dumping near or after the end of occupation. The backhoe trenches contained mixed sheet refuse and feature material (cellars and house mound).

The MBD values obtained for the sheet refuse deposit correlate well with the archival data, which suggests the site was initially occupied in the 1880s. The extreme paucity of twentieth-century ceramic styles (ivory-tinted whitewares, Fiesta whitewares, and white whitewares) and post-1920 bottle glass indicates the site was probably abandoned during the early 1900s, and certainly before the 1930s.

Table 8-39
MBD Values for the Sheet-Refuse Deposit (50x50-cm Units and Judgmentally-Placed 1x1-m Units), Feature 1, and the Backhoe Trenches at 41DN166

Artifact Category	Sheet-Refuse	Feature 1	BHT Trenches
Refined Earthen.	1872.10 (n=223)	1868.25 (n=154)	1866.43 (n=21)
Stonewares	1884.22 (n=900	1897.84 (n=296)	1887.65 (n=17)
Bottle Glass	1892.22 (n=138)	1889.12 (n=246)	1889.60 (n=25)
Combined	1880.68 (451)	1888.21 (n=696)	1879.76 (n=63)

Spatial Distributions: Although the geological data indicate spatial movement of artifacts,t he distribution of the sheet refuse material and features indicate major activity areas utilized during occupation. Distributions of major artifact categories were defined by the assemblage recovered form the 50x50-cm units. Additional data were obtained for Feature 1 through the excavation of Block 1 (see discussion for Feature 1 above).

Correlation of the geological and archaeological data indicates that the deepest cultural deposits are associated with the fill of several major features (cellars) and units excavated in the lower elevation areas of the site, which received colluvial deposition. This distribution of artifact depth corresponds closely with the magnetometer data. The central part of the site, including an area extending up to 12 m away from the dwelling, contained only shallow deposits. Artifact density for the 50x50-cm units at 41DN166 are shown in Figure 8-65.

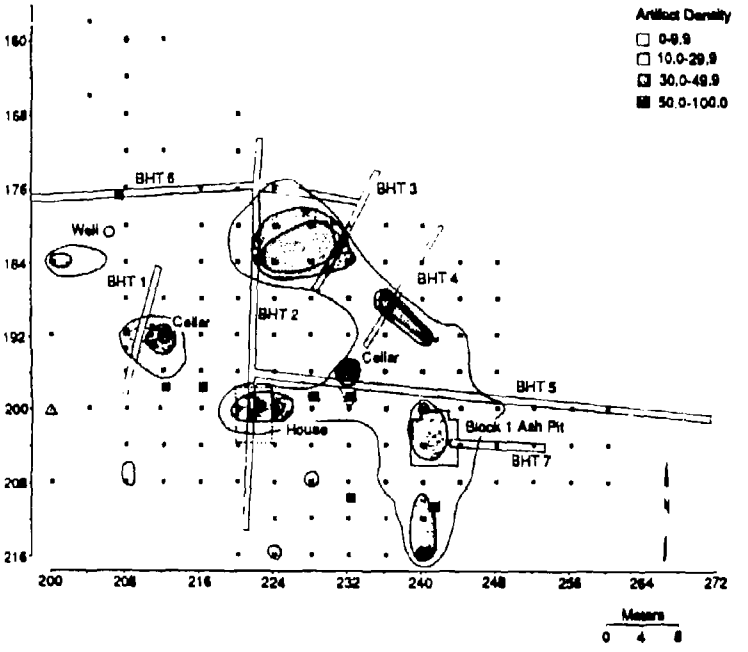


Figure 8-65. Artifact density map of total artifacts for 41DN166. Data plot is based on counts per 50x50-cm unit.

Artifact density corresponds with the distribution of magnetic anomalies. Only one of these features, Feature 1, contained trash deposits. The other magnetic anomalies correlated with structural features that contained primarily sheet refuse and building debris. In addition, a strong correlation is indicated between artifact density and both cultural and natural factors. Major factors include the fenceline in the northeast, which acted as a barrier to artifact deposition northeast of the fence, but did not impede colluvial deposition downslope. High artifact densities were associated with features and sheet refuse deposits in the southeastern portion of the site where colluvial deposition was greatest. In addition, the deposition of artifacts in this area was aided by erosion.

The post-settlement erosion revealed in BHT 5 indicates that the redeposited material was densest on the fringe of the site, increasing towards the creek drainage. Colluviation in this area has resulted not only in this accumulation of thick artifact deposits, but also high density artifact deposits.

Figure 8-66 shows the distribution of major artifact categories in the sheet refuse deposit at the site based on the data from the 50x50-cm units. Refined earthenwares clustered in a band around the dwelling except in the southwest yard. Densities west and northwest of the house are low (Figure 8-66). Refined earthenwares range in frequency from zero to eleven sherds per unit, with the highest densities occurring in the northeast yard and 50x50-cm units in features (east cellar and Feature 1).

Stonewares also cluster in the east yard, with the highest frequencies in the northeast yard (Figure 8-66). However, stonewares cluster farther away from the dwelling than do refined earthenwares, generally east of the east cellar (Feature 2). The distribution of stonewares in the northeast yard also closely correlates with the high magnetometer values in this area, which may represent an old fenceline.

Bottle glass sherds are scattered across the site. However, when only 50x50-cm units containing more than ten sherds are plotted, bottle glass clearly clusters in the northeast yard and in a small cluster south of Feature 1. The concentration of bottle glass sherds in the northeast, like stonewares, is correlated with the magnetometer anomaly in this area. No units in the northwest or the southern yards, west of Feature 1, contain over ten bottle glass sherds. These data indicate that bottle glass sherds do not cluster near the dwelling, but instead cluster near the fence. No whole or large bottle glass fragments from recent trash dumping were found at the site.

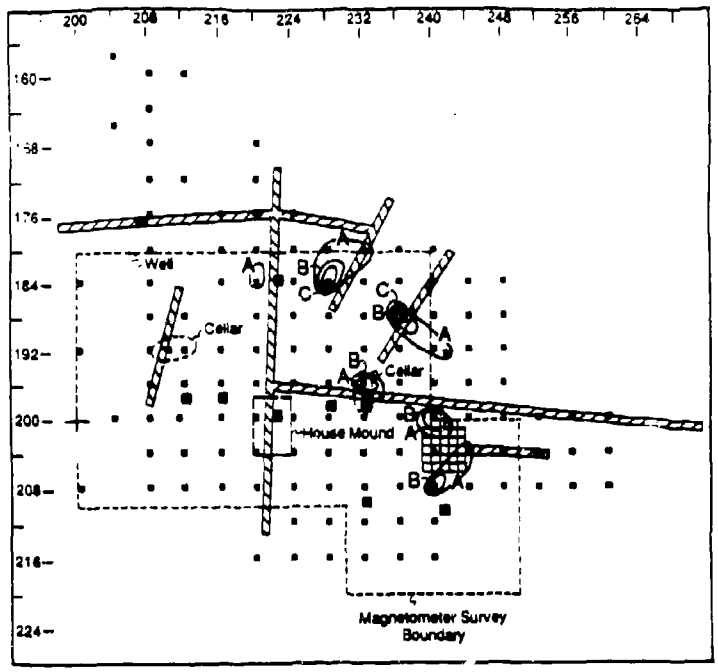
On the other hand, window glass clusters in several areas. One cluster is in the northeast yard, while a second is near the house mound (Figure 8-66). In general, window glass sherds occur primarily over 4 m from the house.

Machine-cut nails and wire nails (Figure 8-66) are scattered across the site, but cluster in different areas. Machine-cut nails cluster in one unit within the house mound and in the northeast yard. One the other hand, wire nails cluster near the house and in the southern yards, particularly between the house and Feature 1.

Faunal Results:

TOTAL BONE = 297

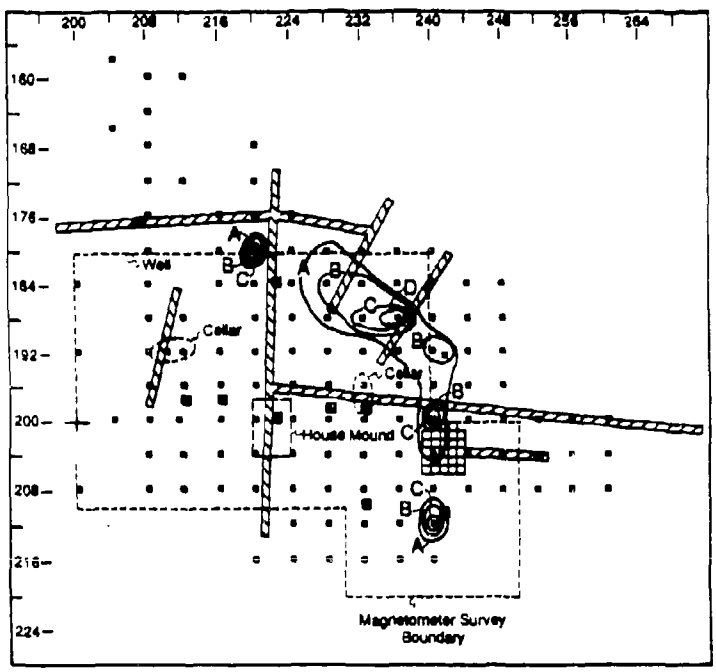
Identified fauna (n=75)
- Chrysemys sp. (slider - 1
- Chelydra serpentina (snapping turtle) - 2
- indet. turtle - 2
- Anserinae (goose sp.) - 1
- Gallus gallus (domestic chicken) - 5 (MNI=2)
- medium bird - 2
- small bird - 2
- Sylvilagus floridanus (cottontail) - 3
- Lepus californicus (jack rabbit) - 20



Refined Earthenwares

A 4-6
B 7-9
C 10-12

a

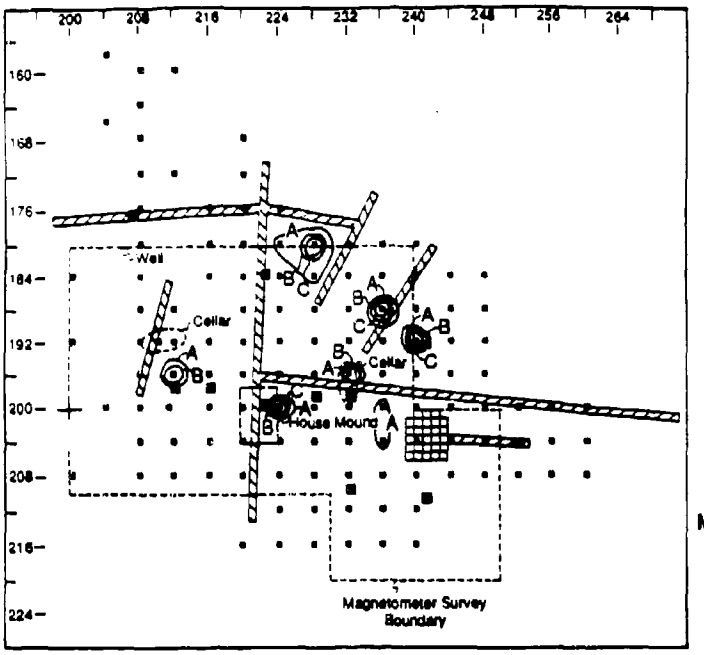


Bottle Glass

A 21-30
B 31-40
C 41-50
D 51-113

b

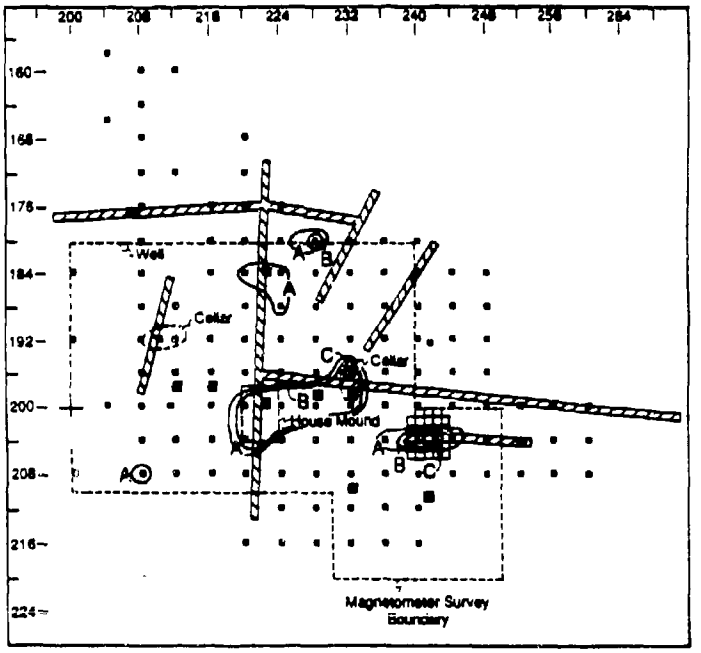
Figure 8-66. Artifact frequency distributions at 41DN166. (a) refined earthenwares, (b) bottle glass, (c) machine-cut nails, and (d) wire nails. Frequencies are based on counts per 50x50-cm unit.



Machine-Cut Nails

A 4-6
B 7-9
C 10-35

c



Wire Nails

A 4-6
B 7-9
C 10-19

d

Figure 8-66. (continued) Artifact frequency distributions at 41DN166. (a) refined earthenwares, (b) bottle glass, (c) machine-cut nails, and (d) wire nails. Frequencies are based on counts per 50x50-cm unit.

Sciurus sp. (squirrel) - 1
small mammal - 2
medium mammal - 9
Sus scrofa (domestic pig) - 19 (MNI=2)
Bos taurus (domestic cattle) - 1
large mammal - 6

Unidentified bone (n=222)

Even though jackrabbit remains outnumber other individual taxa at this site, only one carcass is represented. It is interesting to note that the jackrabbit remains, like those of the domestic fauna, consist of waste bone (i.e., teeth, phalanges, vertebrae), suggesting that the jackrabbit was disposed as a subsistence item. It is likely that the other small game represented in this assemblage were also hunted to supplement the meat diet provided by pig, cattle, and chicken; however, as noted in the above table (see also Appendix d), very few elements from cottontail, squirrel, or turtle were recovered to make a definitive assessment of their roles in the diet of the site's occupants.

Of the 75 identified elements, one-fourth are from pigs. At least two individual swine are represented, a young one and a mature individual. Waste elements dominate the small sample, and a skinning cut is present on a metapodial. A picnic ham, represented by elements of the foreleg, is the only recognized pork cut; furthermore, hand saw cuts are noted on an ulna shaft fragment. Pig teeth were recovered, which suggests that the animals were home raised and slaughtered on site.

Two chickens are represented among the handful of chicken bones identified. The medium-size bird category consists of none-diagnostic and/or immature elements that are probably from chicken.

The only identified cattle element is a maxillary third molar of a young individual found in Feature 1. A total of six fragmentary elements were assigned to the large mammal category, but their distribution in Feature 1 fails to clarify whether they are associated with cattle or swine butchery.

In fact, Feature 1 provided 56% of the entire faunal assemblage, excluding the fine-screened and flotation samples specifically collected from that feature. Sixty-one percent of the remains of pig were found in Feature 1, which also contained remains of turtle, birds (mostly chicken), rabbit, and elements assigned to small, medium, and large mammal categories. Of the 47 burned bones, all but four were round in Feature 1. Based on faunal remains alone, Feature 1 appears to be a refuse disposal.

Over half of the identified faunal remains were recovered from features. Features 2 and 3, judged to be cellars, yielded eight and four identified elements, respectively. Feature 2 contained squirrel, pig, chicken, and medium-size mammal, while Feature 3 contained two of the jackrabbit elements, and two large mammal bones with cut marks. Most of the jackrabbit, however, was recovered in Unit 2, just outside the southern edge of Feature 2.

Sheet refuse units produced an interesting assortment of isolated faunal remains. Fore instance, remains of a snapping turtle were recovered in Unit 159, 5 m south of Feature 1. A tarsometatarsus of a goose (possibly a domestic variety) was recovered from Unit 93, 1 m north of Feature 1. These two specimens may in fact be part of the extreme peripheries of that feature. Other 1x1-m units contained singular remains identified as turtle, chicken, and pig. A long bone fragment of a large mammal was found in Unit 71 and exhibited a hand saw cut; this unit is on the eastern edge of the excavated area.

Notwithstanding the rather small assemblage of faunal remains, site 41DN166 can be characterized as fitting the typical subsistence pattern for turn-of-the-century farmsteads.

Summary: Site 41DN166 was a farmstead occupied between ca. 1880 and 1920. No evidence of plowing was found within the main site area, and both surface and subsurface features were identified. The proton magnetometer survey yielded evidence of several anomalies later identified as archaeologically significant. These anomalies include Feature 1 (kitchen-related pit containing an ash and artifact concentration), Feature 2 (east cellar), and Feature 3 (west cellar). Features 1 and 2 were not visible on the surface. A possible outbuilding and fenceline was identified in the northeast yard based on the magnetometer data.

The distribution and types of features found at 41DN166 indicate considerable activity in the yard surrounding the dwelling. The yard area was small. The well, a possible animal pen near the northeast fence, two cellars, and Feature 1 were all located within a 20-m radius of the dwelling. Correlation of the archaeological, proton magnetometer, and geological data indicates that the artifacts clustered int he lower elevations of the site which received the greatest amount of colluvial deposition. These same data, however, also indicate a dense sheet refuse band around the north and east sides of the dwelling. These data correlate well with the sheet refuse pattern identified at farmsteads not impacted by colluvial artifact movement. This information indicates that while colluvial artifact movement occurred at this site, it did not seriously alter the sheet refuse pattern. The re-use and re-building of the west cellar indicates that drainage and a near-surface water table were factors the occupants at 41DN166 dealt with as part of their daily lives.

The location and contents of Feature 1 indicate that a kitchen or kitchen-refuse area may have been located east of the dwelling. The relative size of the artifacts and the general content of Feature 1 suggests that this feature contains both sheet refuse and trash-related artifacts. The domestic artifacts from Feature 1 are identical in size, function, and type with artifacts found in the sheet refuse deposit. The relatively higher frequency of architectural items in Feature 1 than in the sheet refuse deposit suggests a building may have been located here, or debris from a structure constituted the feature fill. The extremely high frequency of personal items in Feature 1 also suggests that this feature reflects an activity area rather than simply a trash deposit. A total of 243 personal items were recovered from Feature 1 compared with only 34 from the 50x50-cm units in the sheet refuse deposit. Five time as many horse and stable gear remains and 3.5 times as many ammunition remains were found in Feature 1 than in the sheet refuse deposit. This pattern cannot be accounted for by the colluvial deposition in the southeastern site area.

The concentration of faunal remains in Feature 1 also supports an interpretation that this feature is associated with an outdoor cooking area (possibly a detached kitchen). A similar density of faunal remains were uncovered in a possible detached kitchen area at the Johnson Farmstead (41DN248) located northeast of 41DN166. The Johnson Farmstead was occupied almost 30 years earlier, but detached kitchens or outdoor cooking areas remained common among small farming families during most of the nineteenth century.

The archaeological and architectural data from 41DN166 indicates that the farmstead occupation of this site was similar to the occupations identified at surrounding nineteenth-century to early twentieth-century farms (e.g., 41DN77, 41DN91, 41DN167, 41DN248, among others). Similar structures, sheet refuse deposits, and features were identified at these farmsteads. Undoubtedly, these patterns indicate similar lifestyles during this period at these sites in the Ray Roberts Lake area.

41DN167

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	660' amsl
Scheduled Investigations	Limited testing, archival
Additional Investigations	Architectural documentation, dendro, magnetometer survey, excavation
Soil Association	Navo clay loam
Cultural Affiliation	Historic (1875 to recent)

Description: The site is near the Cooke/Denton county line, north of 41DN166 and west of 41DN248 and 41DN250. It is located on an old road between Bloomfield and Hemming. The site is in a small wooded grove on the east terrace of Johnson Branch Creek. Extant structures included a single room log dwelling with several frame additions and a sandstone-lined well (Figure 8-67). The frame additions to the house have collapsed. A collapsed cellar is visible southeast of the dwelling. The site area is approximately 50x50 m based on the distribution of the surface and subsurface features and artifacts.

Previous Investigations: The site was recorded by ECI in 1981. Testing was recommended to determine potential eligibility for nomination to the National Register. A possible grave was reported northwest of the dwelling. The site was revisited by personnel from NTSU in 1985, at which time, architectural documentation and testing were recommended. Surface investigation did not support the interpretation of a grave northwest of the house.

Archival Investigations: The site was located on 29.05 acres of the JohnJohnson survey, near 41DN248, which was the original Johnson homestead (see Appendix A). The land was conveyed by J. Johnson to J. Johnson, Jr. in 1895. Dendrochronological data recovered for the log dwelling indicated it was built ca. 1871 or 1872. This suggests that J. Johnson Jr. may have established a homestead on this property before it was conveyed to him.

The site continued to be occupied by the Johnson family until 1903. In 1895, it was sold to J.E. Sullivan who was married to a Johnson girl (Roy Jo rsonal communication, 1987). E.M. Masters acquired the land in 1903. He was married to a cousin of Mr. Jones. Also, Mr. Jones' sister Hallie and her husband lived at 41DN167 for a short period. The property changed ownership a number of times during the twentieth century, during which time it was occupied by both landowners and tenants.

Architectural Investigations: Architectural documentation was conducted in 1987 and includes HABS-like documentation of the dwelling. Drawings and photographs of the house are on file at IAS, UNT.

Dwelling: The dwelling was described by ECI in 9181 as a log, one-room dwelling with rough-hewn squared logs and full-dovetail notching. The chinking included wood chips. Additions were added to the east and south elevations of the log room. These additions included a small room added to the east that ran the length of the original room and was half as wide. Two rooms were added to the south (Skinner et 1. 1982a:8-30). This description is incomplete and inaccurate, however, and a more complete description is given below.

The original dwelling was a single-room house measuring approximately 4.85 m east-west by 4.95 m north-south and sat on native sandstone, limestone, and wood piers (Figure 8-68). The logs were hewn: about 90% had full-dovetail notching and 10% had half-dovetail notching. The chinking was mostly mortar, although there was some evidence of cloth and wood chips being used to help plug holes. The exterior was covered with overlap siding which matched the west addition, and may have been added when the west addition was built. The flooring was tongue and groove boards oriented north-south over east-west running logs on 2-ft centers. The gable roof was covered with cedar shakes.

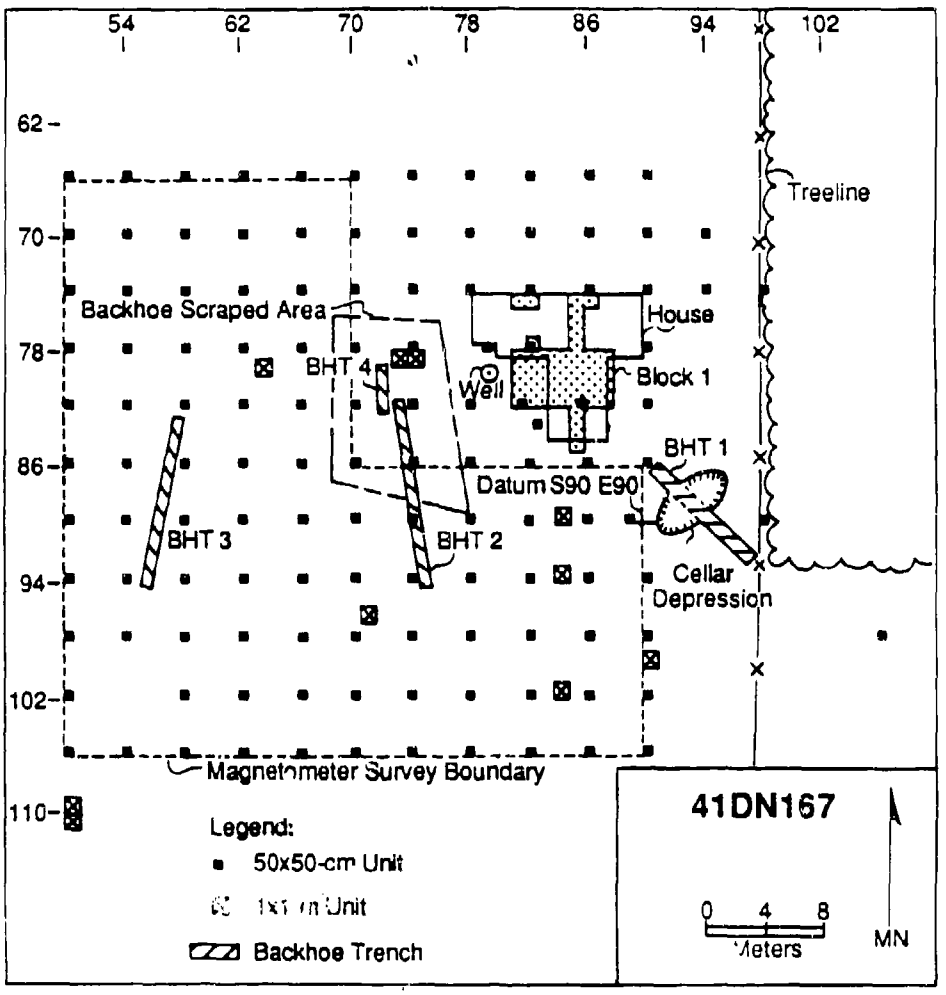
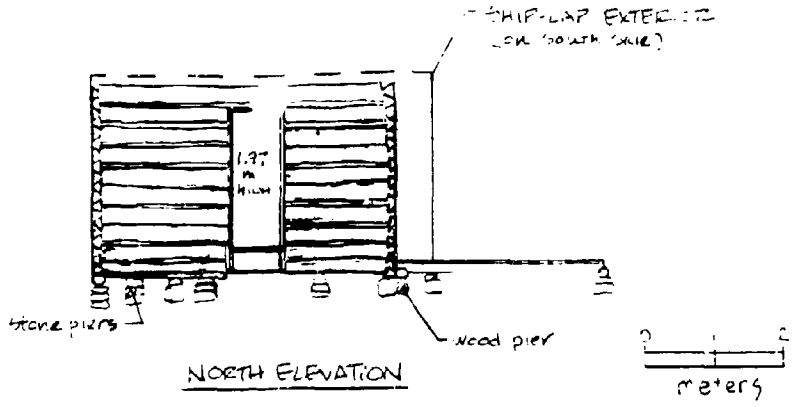


Figure 8-67. Site map of 41DN167.



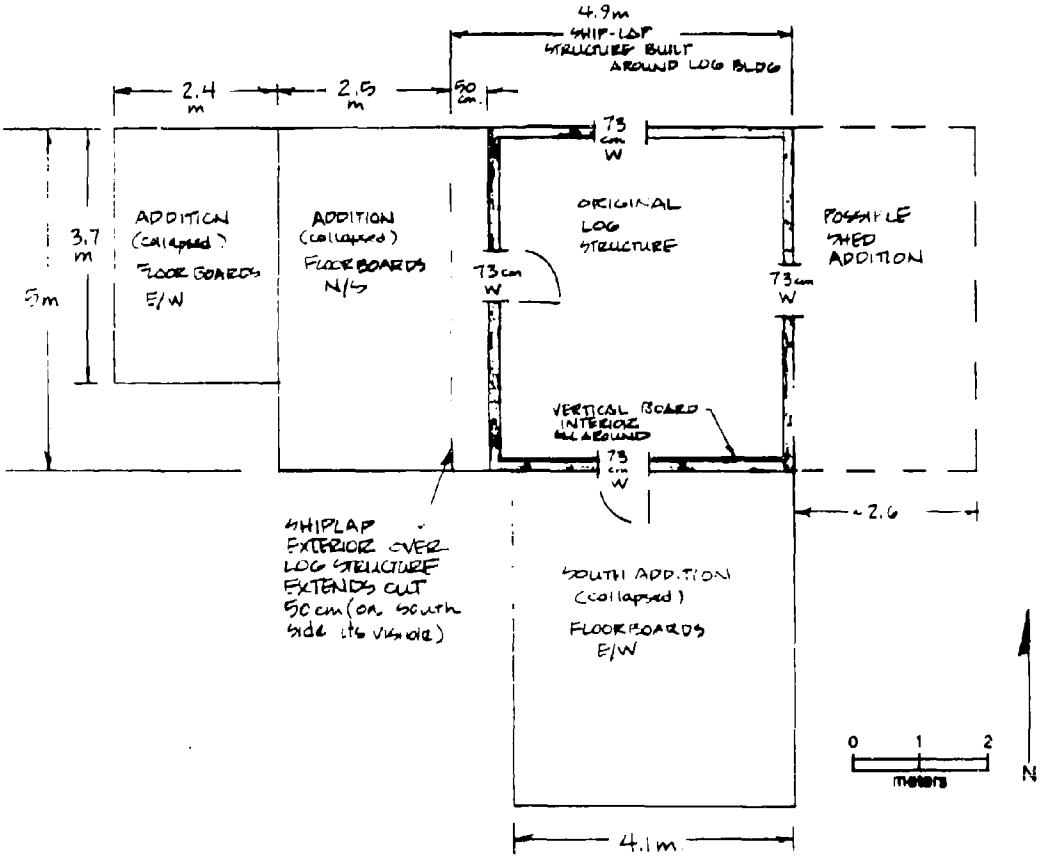


Figure 8-68. Field architectural drawings of the dwelling at 41DN167. (a) north elevation, (b) floorplan.

There was a single door in the center of the west, east, and south elevations, and a window on the north wall. The interior was covered with horizontal planking painted white. The location of the original chimney is unknown. No evidence was found that a full fireplace was ever built.

Several rooms and porches were added to the original log dwelling, but the sequence of these additions could not be determined because of the deterioration of this structure. Additions were made to the west, east, and south elevations. The west addition included two rooms built during the early twentieth century. Wire nails were used throughout these additions. The east room abutted the original dwelling on the west elevation and ran the full length of this wall. This addition measures about 2.5 m east-west by 4.95 m north-south. The piers were sandstone, limestone, and wood. The interior walls were made of horizontal planking, and the exterior walls had overlap siding, matching the wall treatment in the original dwelling.

The west room of the west addition may have been a porch. It was too badly collapsed to determine. This room measured approximately 2.4 m by 3.7 m, smaller than the east room, and the floor boards were oriented east-west rather than north-south like in the east room of the west addition.

All that remained of the east addition was the roof. This addition was set on sandstone piers and had a shed roof with cedar shingles. The function of this addition is unknown.

The south addition appeared to have been two rooms, but this could not be accurately determined because of poor integrity. A small 1-m wide porch extended along the west side of this addition. The piers of the south addition were native sandstone and limestone, and the sills were log. The roof was a gable catslide with cedar shakes. The exterior walls were board and batten, and the floor was tongue and groove boards running east-west. At least one double-hung four-over-four window was located ont he west wall of the south addition. The placement of other windows and doors could not be determined. The only door remaining was in the north elevation which provided access from the original log dwelling.

Dendrochronological Investigations: Five dendro samples obtained from the log dwelling were sent to Dr. Malcolm Cleaveland at the University of Arkansas for analysis (Appendix G). The samples are oak and yielded cutting dates after the growing season in 1871, suggesting the original log dwelling may have been built as early as late 1871 or 1872, if the logs were not stockpiled. All of the dated logs were from the lower portion of the walls.

Proton Magnetometer Survey: A proton magnetometer survey was conducted at 41DN167 to identify subsurface anomalies that could be identified as archaeologically significant. Features visible before the survey include a collapsed cellar (Feature 3), which was bisected by BHT 1, and a sandstone-line well (Feature 5) located southwest of the dwelling (see Figure 8-67).

The proton magnetometer survey results were affected by several factors. First, surface visibility was less than 40%. The site was covered with high grass. Scattered surface metal was not easily identified and removed prior to the survey. Secondly, the survey was conducted after the dwelling was removed. Removal of the dwelling increased the amount and distribution of scattered surface metal.

Three 20x20-m blocks were surveyed to recover information for the main site area excluding the area directly impacted by the removal of the dwelling (see Figure 8-67). The survey was conducted by personnel form the Department of Geology at the University of Texas at Arlington, under the direction of Dr. Brooks Ellwood.

The values produced bye the proton magnetometer ranged from -186 to +500. The background was primarily low negative values, while the dominant anomalies were defined by high positive values (+500) and a small number of high negative values)-111 to -186). The results of the proton magnetometer survey are shown in Figure 8-69. Only the positive values are presented. The locations of several major features are shown.

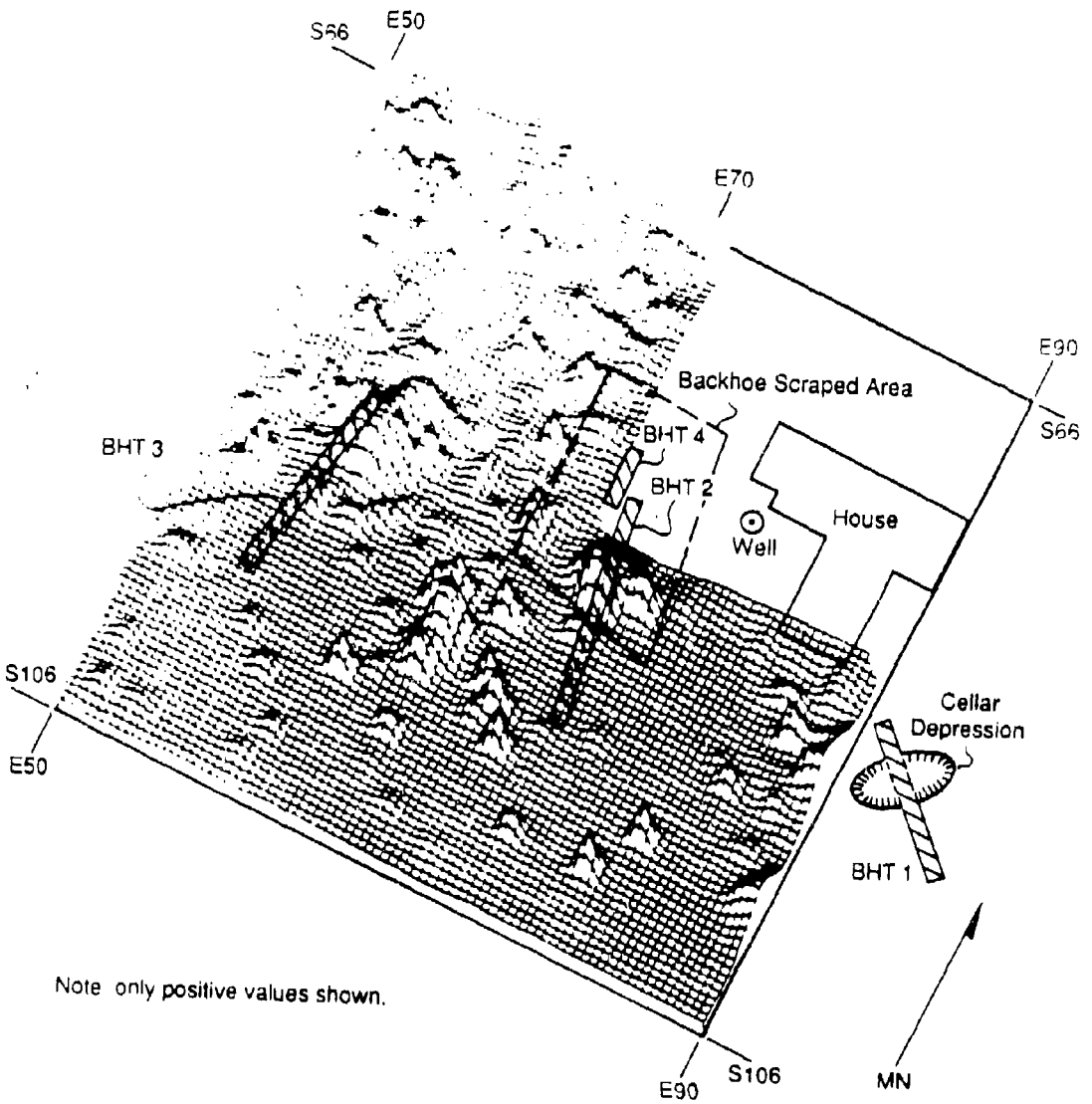


Figure 8-69. Magnetometer survey map of the positive magnetometer values at 41DN167. The locations of the major structures, and backhoe trenches are shown.

These 50x50-cm units were judgmentally placed to recover data on the deposits under the collapsed portions of the dwelling. BHT 1 was excavated northwest-southeast through Feature 3 (collapsed cellar) to expose a profile for mapping and to determine if a trash dump was located within this feature.

Based on the initial testing results, additional sheet refuse and feature investigations were recommended. The dwelling scheduled to be removed by the clearing contractor was moved using a backhoe, allowing the area under the dwelling to be excavated. A proton-=magnetometer survey was recommended to help locate archaeologically significant buried features outside the area directly impacted by removal of the house. the results of this survey are discussed above.

A total of 129 50x50-cm units, including the original 28, were dug at the site on a 4-m grid. Block 1 was excavated under the removed dwelling and contained 35 1x1-m units including four 50x50-cm units expanded to 1x1-m units. The units excavated in Block 1 were designed to delineate wall lines, locate piers, and recover both a sample of the architectural debris from the house and sheet refuse material. Eight judgmentally-placed 1x1-m units were excavated to recover data from magnetometer anomalies or areas where potential features were located. A total of four backhoe trenches were dug. Backhoe Trenches 1, 2, and 4 bisected collapsed cellars (see feature discussion), while BHT 3 was excavated southwest of the dwelling and Features 1 and 2. This area contained a high-positive anomaly. No buried features were found in this trench.

Other efforts included removal of the A-horizon by machine scraping to expose Features 1 and 2. The relative location and size of these features were determined from Backhoe Trenches 2 and 4, and the proton magnetometer data for Feature 2. A planview was exposed and drawn for both features at the base of the A-horizon. Finally, a surface grab sample was collected from the dwelling area after the house was removed.

Excavation Results: The sheet refuse deposit provided considerable temporal and spatial data indicating the length and intensity of occupation and specific activity areas. Five features were identified, and the varied collection methods provided a detailed examination of content and spatial patterning data at the site. Sheet refuse and feature material were found in the 50x50-cm units, backhoe trenches, shovel and machine-scraped areas, Block 1, and the judgmentally placed 1x1-m units.

The location, function, and contents of the features are summarized below, followed by a discussion of the artifact assemblages from the different collections. These collection areas are discussed individually and include the 50x50-cm units, Block 1, the judgmentally-placed 1x1-m units, and the BHT data.

Features: Five major features were identified at 41DN167. These features include three collapsed cellars, a sandstone-lined well, and a postmold. The house was designated Feature 4 in the field, but this number is not included here. The house is discussed above under Architectural Investigations. The other features are discussed below.

Feature 1: Feature 1 was a collapsed cellar first identified in Unit S82 E73.5 placed in a small depression about 8 m west of the dwelling. The unit was excavated in 10 cm levels to a depth of 40 cm below the surface (Level 4). Several large sandstone rocks occurred in Level 3, and a charcoal and ash lens was encountered in Level 4. The artifacts in Unit S82 E74 included an assortment of small, scattered artifacts, as well as larger items probably discarded in the depression that formed after the cellar collapsed.

Based on the data from Unit S82 E73.5 and the proton magnetometer survey, Unit S82 E73.5 (Unit 25) was expanded into a 1x1-m unit. This larger unit was also excavated in arbitrary 10-cm levels. Following this, Feature 1 was bisected by BHT 4 which provided a larger profile. The A-horizon was then removed using the front-end loader on the backhoe. A planview was exposed at the base of the A-horizon and was mapped. A 25x50-cm unit was then excavated in the east wall of the expanded Unit 25.

The exposed profiles, planview, and artifact assemblage indicated that Feature 1 was a collapsed cellar. The cellar had earthen walls and floor, the roof was supported by wood posts, and the entry was on the east side. The density of charcoal and ash found 40-50 cm below the surface indicates the cellar roof probably burned.

No postmolds were found, but the presence of two other cellars at the site suggests that the occupants faced similar construction problems as those recorded for site 41DN166. At 41DN166, the original cellar was excavated into the substrate containing gravels associated with a local aquifer. The fill and soil profile of this feature also indicate that the cellar had been repaired after water from the aquifer seeped in damaging the cellar floor and lower walls. Apparently this did not solve the problem and a second cellar was excavated east of the house.

It is unclear which cellar was constructed first at 41DN167, but Feature 3 appears to have been the last one built. Features 1 and 2 were similar in size, construction, and location. Gravels associated with the local aquifer occurred in the lower levels of Features 1 and 2.

The artifact assemblage recovered from Feature 1 indicates mixed sheet refuse material and trash. This assemblage is presented for the 1x1-m units (excluding the original 50x50-cm units) providing an overview of vertical changes in artifact content and frequency (Table 8-40).

Table 8-40
Artifacts Collected From Feature 1 by Level at 41DN167

Category Level	1	2	3	4	5	6	7	8	9	10
Refined Earthenware	32	23	1		4	1	1	2		
Stoneware	11	16	62	4						
Porcelain	9	22	2							
Bottle Glass	186	110	203	138	14	4	3	14	13	3
Table Glass	4	1							1	
Lamp Glass							1			
Window Glass	27	3						6		
Machine-Cut Nails		12	1				5		1	
Wire Nails	46	13	3		4	2	1	1	10	1
Building Material	9	7	2	4						
Personal Items	3	1	5							
Thin & Heavy Metal	36	510	109	128	25	1		4		
Household Items	1	2								
Machine & Wagon	2									
Tools				1						
Ammunition	3									
Misc. Other	2									
Total	371	720	388	274	48	8	11	27	25	4

The cellar roof was defined earlier based on the charcoal and ash lens visible between 35-50 cm below the surface. This lens also corresponds with a drop in artifacts. Above this lens, sheet refuse material and trash are intermixed, while below this lens, a small amount of sheet refuse which has moved down through the collapsed cellar fill is evident. Thin and heavy metal (77.79%) and bottle glass sherds (15.74%) were the most common items recovered.

The MBD values obtained for Feature 1 vary among artifact categories (Table 8-41), as well as with other collections from the site. Refined earthenwares yielded the earliest MBD, while bottle glass produced the most recent. The higher bottle glass and the combined MBD value are partially the result of trash dumping.

Table 8-41
MBD Values Obtained for Feature 1 (Unit S82 E72.5) at 41DN167

Category	MBD Value	Sample Size
Refined Earthenware	1869.45	73
Stoneware	1894.05	74
Bottle Glass	1904.00	70
Combined	1888.99	217

Feature 2: Feature 2 was a cellar located 4-6 m south of Feature 1 and 6-8 m southwest of the house. This feature was first identified in the proton magnetometer data as a dipolar anomaly matching the signature produced for cellars found at other sites in the project area (e.g. 41DN166).

Backhoe Trench 2 was excavated to bisect Feature 2 providing a profile of the cellar anomaly and recovering a sample of the feature fill. After the profile was drawn, the A-horizon was removed and a planview was drawn. These data indicate the remaining fill is about 110 cm thick, the cellar is oriented east-west, with the entry on the east, and is about 2 m by 3 m in size. The original height of the cellar could not be determined.

No hand-excavated units were dug in Feature 2, which fell between several 50x50-cm units on the 4-m grid. The artifacts recovered from the feature fill were found in BHT 2. These artifacts were from the sheet refuse deposit. No trash dump was found in the depression above the cellar. No postmolds or architectural remains were found in the planview or fill of Feature 2.

Feature 3: Feature 3 was the southeast cellar located about 6-8 m southeast of the house. The cellar was visible as a depression when the site was recorded. This cellar was probably the most recent in age. Because it was already identified, it was not included in the proton magnetometer survey.

BHT 1 was excavated northwest-southeast through the cellar to obtain a profile and recover information on the feature fill. Several flotation samples were collected from the fill. The artifacts found in BHT 1 are summarized in Table 8-42 and include sheet refuse material. The cellar is approximately 3 m wide and 5 m long. The cellar fill extended about 1 m below the surface, and the original height of the cellar could not be determined. Like Features 1 and 2, this cellar had earthen walls and floor, and the roof was probably supported by wooden posts. No posts were found.

Feature 5: Feature 5 was a dry-laid sandstone well measuring about 1 m in diameter and 5 m deep. The well is about 2 m west of the house. It was built during the early occupation at the site and was capped with machine-made brick sometime during the twentieth century.

Table 8-42
Artifacts From 50x50-cm Units, Block 1,
Judgmentally-Placed 1x1-m Units, and Feature 1 at 41DN167

Artifact Category	50x50s		Block 1		1x1s		Feature 1	
Refined Earthenware	213	4.22	120	1.97	16	10.92	76	1.05
Stoneware	70	1.39	21	0.34	2	0.69	99	1.36
Porcelain	18	0.36	11	0.18	1	0.35	41	0.56
Bottle Glass	2639	52.24	1043	17.12	137	47.57	1143	15.74
Table Glass	24	0.48	23	0.38	9	3.13	7	0.10
Lamp Glass	3	0.06	43	0.71	1	0.35		
Unid. Glass	15	0.30	10	0.16	4	1.39	4	0.06
Window Glass	407	8.06	2171	35.64	21	7.29	38	0.52
Machine-Cut Nails	36	0.71	41	0.67	3	1.04	19	0.26
Wire Nails	376	7.44	1431	23.49	34	11.81	95	1.31
Handmade Brick	10	0.20	3	0.05				
Machine-Made Brick	8	0.16			1	0.35		
Building Material	240	4.75	305	5.01	17	5.90	38	0.52
Personal Items	34	0.67	83	1.36	6	2.08	31	0.43
Thin & Heavy Metal	828	16.39	464	7.62	27	9.38	5648	77.79
Household Items	20	0.40	38	0.62			9	0.12
Machine & Wagon	29	0.57	41	0.67	1	0.35	6	0.08
Tools	3	0.06	3	0.05				
Horse & Stable	8	0.16	19	0.31	1	0.35	1	0.01
Ammunition	27	0.53	65	1.07	6	2.08	3	0.04
Electrical Items	13	0.26	11	0.18				
Misc. Other	31	0.61	145	2.38	1	0.35	3	0.04
Total	5052		6091		288		7261	

Feature 6: Feature 6 was a postmold measuring about 70 cm in diameter and 40 cm deep in Unit S79 E74. The postmold fill contains charcoal, gravel, and wood from a post. Fine-screen samples were collected. The association of Feature 6 with other features identified at the site is unknown. Feature 6 was located about 1.5 m northeast of Feature 1 (cellar).

Artifact Assemblages: The artifact assemblages from the different collections (50x50-cm units, Block 1, judgmentally-placed 1x1-m units, Feature 1, and Backhoe Trenches 1-4, and a surface grab sample) provide valuable temporal and spatial information about the occupation of this site (Table 8-42 and Table 8-43).

Considerable differences are evident in the relative percentage of the different major artifact categories among collection areas. Bottle glass is the most common artifact category found in the 50x50-cm and 1x1-m units containing primarily sheet refuse deposits, while architectural items are the second most common, ranging between 21% and 27%. Thin and heavy metal items are the third most frequent type of artifacts found.

Table 8-43
Artifacts From Backhoe Trenches 1 Through 4 and
the Surface Grab Sample from the House Area at 41DN167

Artifact Category	BHT 1		BHT 2		BHT 3		S. Coll.	
	N	%	N	%	N	%	N	%
Refined Earthenware	13	10.92	18	40.00	9	28.13	3	17.65
Stoneware	69	57.98	4	8.89	2	6.25	1	5.88
Porcelain	4	3.36			1	3.13	1	5.88
Bottle Glass	31	26.05	13	28.89	12	37.50	3	17.65
Table Glass			2	4.44				
Window Glass			1	2.22	4	12.50		
Wire Nails					2	6.25		
Building Material	1	0.84						
Personal Items			1	2.22			5	29.41
Thin & Heavy Metal					2	6.25		
Household Items	1	0.84	4	8.89				
Machine & Wagon			2	4.44				
Horse & Stable Gear							4	23.53
Total	119		45		32		17	

In Block 1, architectural items from the dwelling predominate the assemblage. Bottle glass sherds are the second most common artifact category found, followed by thin and heavy metal. Thin and heavy metal predominates in Feature 1, which contained trash in the depression above the collapsed cellar, followed by bottle glass. Architectural items are extremely poorly represented (2.61%).

Within these four collections, the architectural remains indicate primarily late nineteenth and twentieth-century building episodes. Wire nails predominate the nail assemblage in these collections, ranging between a low 83.33% in Feature 1 to a high of 97.21% in Block 1. Bricks are rare in each of these collections, while window glass frequencies are variable, with the highest occurring in Block 1.

Comparison of these collection areas with the assemblages from Backhoe Trenches 1 through 3, indicates several important differences between the three cellars (Features 1-3). As noted above, Feature 1 contained trash, including the high frequency of thin and heavy metal fragments. Similar trash was not found in the other cellars (Features 2 and 3). BHT 1 excavated through Feature 3 reveals a high percentage of stoneware and bottle glass. Stonewares are between 15% and 43% more frequent in the southeast cellar (Feature 3) than the two western cellars (Features 1 and 2). Bottle glass frequencies are similar between Features 2 and 3, but a little lower for Feature 1. Architectural items were uncommon in all three cellars.

The surface collection was a grab sample, and the results are highly biased towards ceramics and diagnostic personal items and farm-related artifacts. This sample cannot be meaningfully compared with the other collection areas.

Comparison of the MBD values obtained for different collections at 41DN167 indicates temporal variability within and among collections (Table 8-44). Refined earthenwares consistently yield the earliest MBD values. While Bottle glass yield the most recent dates for each collection except for BHT 1 (Feature 3) and BHT 4 (Feature 1).

Table 8-44
MBD Values for Collection Areas at 41DN167 (n)

Collection Area	Refined Earthenware	Stoneware	Bottle Glass	Combined
50x50s	1880.5 (196)	1897.1 (66)	1902.4 (199)	1892.3 (461)
Mag. 1x1s	1889.0 (35)	1895.0 (2)	1900.4 (25)	1893.8 (62)
Block 1	1873.8 (116)	1903.0 (37)	1906.2 (97)	1890.7 (250)
Feature 1	1869.5 (73)	1894.1 (74)	1904.0 (70)	1889.0 (217)
BHT 1	1875.0 (4)	1907.5 (2)	1905.0 (6)	1895.4 (12)
BHT 2	1861.5 (17)	1901.3 (4)	1901.7 (6)	1876.3 (27)
BHT 3	1893.3 (9)	1900.0 (2)	1912.5 (4)	1899.3 (15)
BHT 4	1873.8 (8)	1899.5 (60)	1883.3 (15)	1894.1 (83)
Combined	1877.1 (458)	1897.8 (247)	1902.9 (425)	1891.3 (1130)

[1] Values for Feature 1 were obtained from Unit 25; BHT 1 contains artifacts from Feature 3; BHT 2 contains artifacts from Feature 2; BHT 4 contains artifacts from Feature 1.

The earliest combined MBD value is derived from materials in BHT 2 (Feature 2), suggesting this cellar was the first cellar constructed at the site. Further, the combined MBD value for BHT 2 most closely correlates with the dendrochronology dates obtained for the original log portion of the house.

The combined MBD values obtained for Feature 1 and BHT 3 (Feature 3) support the interpretation that the southeast cellar (Feature 3) was the most recent of the three cellars. BHT 4, which bisected Feature 1 but contained mixed feature, sheet refuse material, and trash, had produced a more recent date than the date obtained for Unit 25 in Feature 1.

Excluding BHT 2 (Feature 2), the combined MBD values obtained for the different collection areas cluster near the early 1890s. These data suggest that either the logs for the dwelling were cut and stockpiled or scavenged from earlier structures in the area, thereby producing an erroneous construction date, or the early 1870s to 1890s component is masked by the more recent occupation deposits. On the other hand, the ca. 1890s MBD values obtained for most collection areas are slightly earlier than the 1895 conveyance of the property by J. Johnson to J. Johnson, Jr.

An examination of the refined earthenware, stoneware, and bottle glass sherds with initial popularity or manufacturing dates after 1895 indicates the site was abandoned during the early twentieth century, probably in the 1920s. Only 1.21% of the datable ceramics and bottle glass sherds have initial popularity or manufacturing dates of 1930. None date after 1930. No datable ceramic or glass sherds in the collections from the site have initial dates after 1930, and only seven refined earthenwares (Fiesta glazed) had initial popularity dates of 1930 (1930-1960).

Twentieth-century artifacts were found in all collection areas. An overview of twentieth-century ceramics and bottle glass is provided in Table 8-45 by collection area.

Table 8-45
Twentieth-Century Ceramic and Bottle Glass
Frequencies by Collection Area at 41DN167

Collection	R.Earthenware		Stoneware		Bottle Glass			
Area	1920	1930	1900	1915	1900	1910	1915	1920
50x50s	29	6	37	11	46	90	1	22
Mag. 1x1s8	1	1		13	8		1	
Block 1	2		20	12	14	48		22
Feature 1		39	3	8	46		5	
BHT 1			1	1		5		
BHT 2			1	2	2	3		
BHT 3	3		2			3		1
BHT 4			57			5		
Total	42	7	158	29	83	208	1	51

% Freq./(total ceramic, stoneware or bottle glass sample n):

50x50s	17.9 (196)	72.7 (66)	79.9 (199)
Mag. 1x1s	25.7 (35)	50.0 (2)	88.0 (25)
Block 1	1.72 (116)	86.5 (37)	86.7 (97)
Feature 1	0.00 (73)	56.8 (74)	84.3 (70)
BHT 1	0.00 (4)	100.0 (2)	83.3 (6)
BHT 2	0.00 (17)	75.0 (4)	83.3 (6)
BHT 3	33.3 (9)	100.0 (2)	100.0 (4)
BHT 4	0.00 (8)	95.0 (60)	33.3 (15)
Total	9.17 (458)	75.7 (247)	81.3 (422)

Spatial Distributions: The distribution of the sheet refuse material provides considerable spatial data indicating specific activities conducted at the site and changes in activity areas during occupation. Distributions of major

artifact categories for the sheet refuse deposit were defined by the assemblage recovered from the 50x50-cm units. Block 1 excavations obtained data on distributions under the dwelling.

The data from the 50x50-cm units indicate that the sheet refuse deposit is densest in the west yard near the two cellars (Features 1 and 2), with an extremely low-density deposit in the southwest, south, north, and east yards. Refined earthenwares concentrate in the west yard and occur between 4-12 m from the house in the south yard. They do not occur in the southwest yard south of the S94 line. They are also absent north of the house east of the E74 line. The highest frequency of refined earthenwares (n=76) occurs in Feature 1 (S82 E74), within 4 m of Features 1 and 2 (cellars),and near BHT 3 excavated through a high-positive anomaly. The refined earthenwares clustered in and near the cellars in the west yard include both sheet refuse and dumped trash. Only 14 50x50-cm units (including units under the house) contained more than five refined earthenware sherds.

Stonewares clustered in the west yard, with 22.48% of the 50x50-cm units containing stonewares. The highest frequency occurs in Feature 1, with a small, dispersed cluster near the two cellars. None occur in the south or east yards (excluding Feature 3). In contrast, bottle glass sherds were scattered across the site. However, when only 50x50-cm units containing more than 20 sherds are plotted, bottle glass clearly clusters in the west yard near the two cellars and BHT 3, which was excavated to examine a very large high-positive anomaly. This bottle glass cluster correlates with the distribution of these features, as well as, the heaviest concentration of sheet refuse material at the site.

Personal items also clustered west of the house, and except for Feature 1, these items did not correlate with the distributions of Feature 2 or the high-positive anomaly. Personal items occurred more frequently in the northwest portion of the yard between 10-20 m from the house. A few occurred along the walls of the dwelling and near the house in the south yard.

Architectural items clustered primarily near the dwelling, but some were broadly scattered across the site. Window glass sherds were scattered, but 50x50-cm units containing more than 20 sherds were clustered along the walls of the dwelling and near the western cellars (Features 1 and 2).

Machine-cut nails were low frequency items, occurring in 22 units, and were broadly scattered across the northern half of the site. They were poorly represented under the house or along the walls and are most frequent in Feature 1. On the other hand, wire nails were broadly scattered across the site and are densely clustered along the house walls. They also occurred in small clusters in or near Features 1 and 2.

Figure 8-70 shows the distribution of major artifact categories for the 1x1-m units excavated in Block 1 under the dwelling. These data indicate that the sheet refuse deposit was densest under the southern addition and near wall lines. Few data were recovered for the west and east additions to the original log pen.

Refined earthenwares were more common under the south addition, but did not cluster along wall lines. The highest frequencies occurred in units in the central part of the south addition and in several units excavated outside the house. Only three units along wall lines contained more than two sherds, while six were sterile.

Stonewares clustered under the south addition and units excavated west of the house. None occurred under the original log pen or under the east porch. On the other hand, bottle glass sherds occurred in all but one unit (S78 E85), with the highest frequencies occurring in the southern part of the south addition and units located southwest of this addition. Few bottle glass sherds occurred under the log pen.

Window glass sherds clustered along the east wall of the south addition and along the northwest corner of the original house and west porch. Few occurred on the west elevation of the south addition or the north and east walls of the log pen. Machine-cut nails were uncommon under the house, with the highest frequencies occurring in two units west of the south addition. Wire nails also concentrated in units west of the south addition, but are common

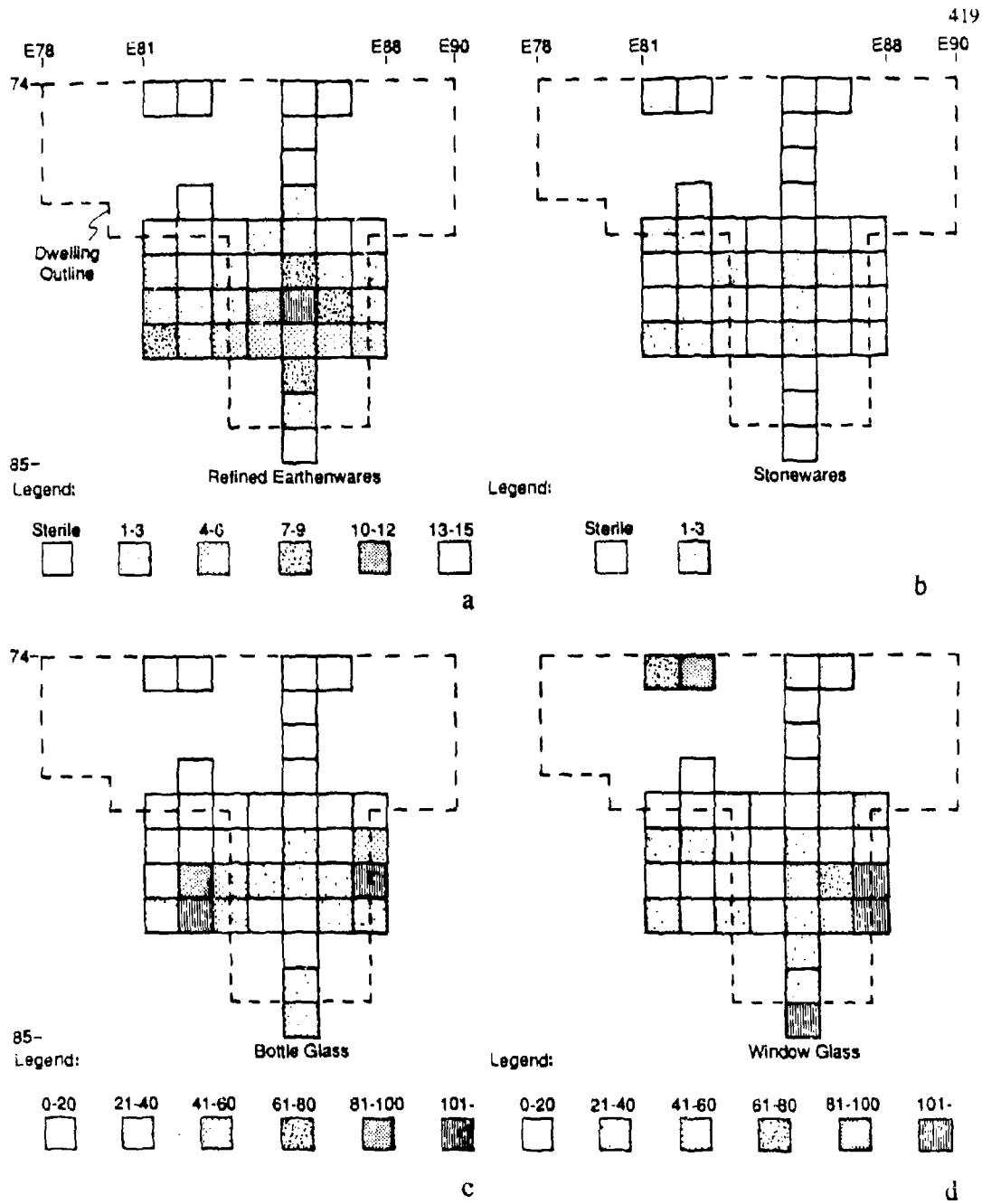


Figure 8-70. Artifact density distributions under the dwelling (Block 1) at 41DN167. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) cut nails, (f) wire nails, and (g) personal items. Counts are per 1x1-m unit in Block 1.

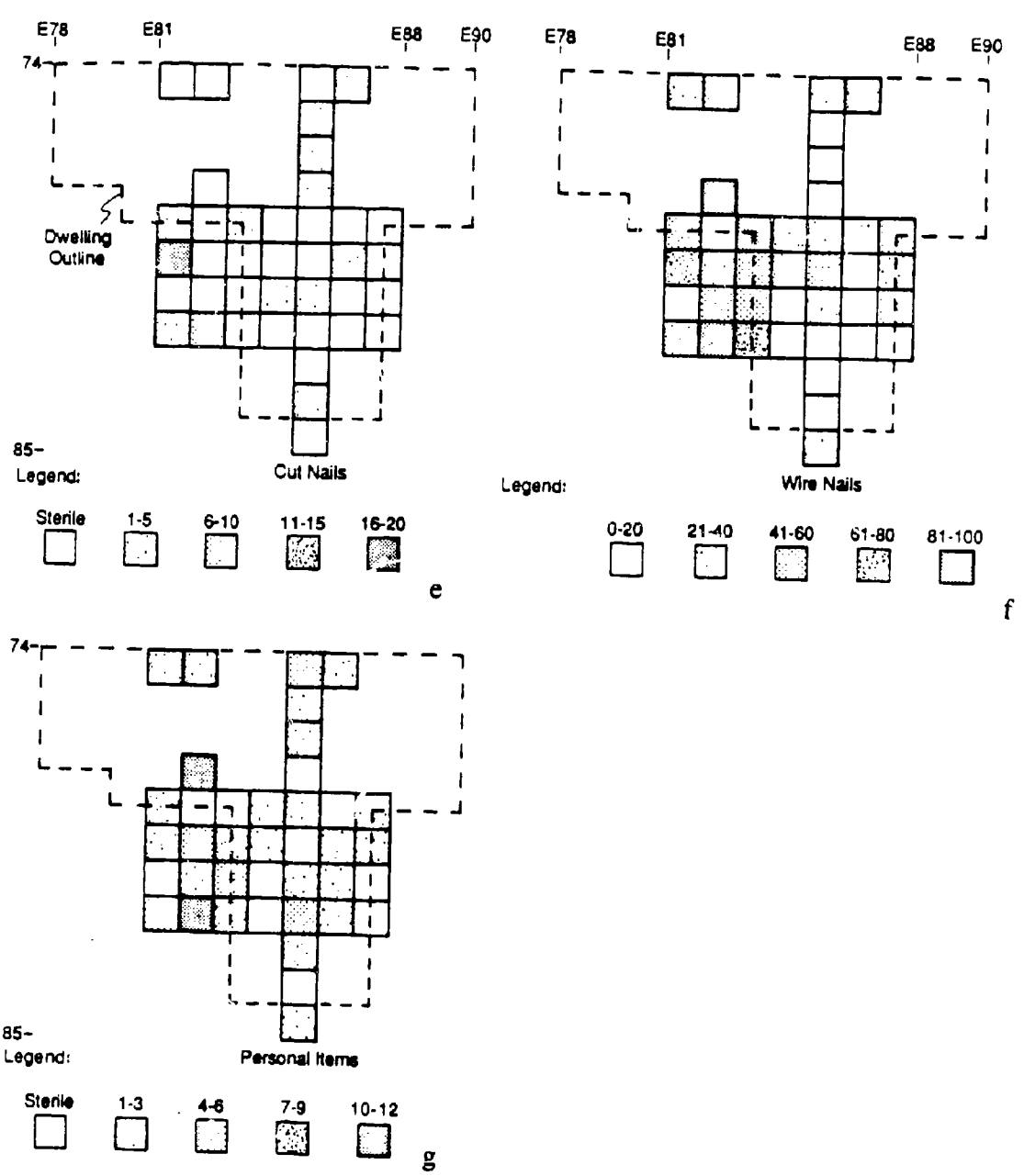


Figure 8-70. (continued) Artifact density distributions under the dwelling (Block 1) at 41DN167. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) cut nails, (f) wire nails, and (g) personal items. Counts are per 1x1-m unit in Block 1.

under the house. Personal items occurred both under the dwelling and in units west of the south addition. The relative frequencies of personal items under the log pen and the south addition were similar.

Faunal Remains:

TOTAL BONE = 293

Identified fauna (n=230)
- small fish - 1
- Bufo woodhousei (Woodhouse's toad) - 2
- Kinosternidae (musk/mud turtles) - 1
- Terrapene sp. (box turtle) - 1
- Colubridae (non-poisonous snake) - 1
- Chordeiles sp. (nighthawk) - 1
- Gallus gallus (domestic chicken) - 18 (MNI=5, R humeri)
- medium bird - 1
- small bird - 1
- Didelphis virginiana (opossum) - 4
- Dasypus novemcinctus (armadillo) - 57 (MNI=1)
- Sylvilagus floridanus (cottontail) - 37 (MNI=6)
- Sylvilagus cf. aquaticus (?swamp rabbit) - 1
- Lepus californicus (jack rabbit) - 9
- Sciurus niger (fox squirrel) - 1
- Sciurus sp. (squirrel) - 12 (MNI=3)
- Neotoma sp. (woodrat) - 4
- Sigmodon hispidus (cottonrat) - 2
- Rattus rattus (roof rat) - 21 (MNI=2)
- rodent sp. - 2
- small mammal - 6
- Mephitis mephitis (striped skunk) - 9
- medium mammal - 4
- Sus scrofa (domestic pig) - 19
- Bos taurus (domestic cattle) - 4
- large mammal - 10

Unidentified bone (n=63)

The distribution of animal bone at 41DN167 was highly segregated, found primarily under or around the house itself and in Feature 1 west of the house. In fact, 68% of the bones from this site were found in these two areas. Only a few pig teeth and isolated fragments were found in the sheet refuse recovery. The protection provided by the structure permitted a preponderance of identified faunal remains recovered from excavations there. Unless noted, therefore, locations of identified faunas discussed below should be assumed to come from the house and Feature 1 loci.

Even if armadillo and roof rat bones are discounted, fully half of the osteological material recovered was identifiable. As with other contemporary sites, pig and chicken bones are prominent. However, by virtue of NISP and MNI calculations, cottontail and squirrel must be considered important contributions to the meat diet. One of the rabbit innominates exhibits a slight cut mark, perhaps from removal of the thigh in a manner similar to cutting up chicken. None of these bones are burned.

At least five chickens are represented, and the presence of fused and unfused elements indicates no particular selection of young or old individuals. All of the chicken bones were recovered from under the house, yet some eggshells were recovered from Feature 1. No chicken bones exhibited burning or cut marks.

Only one pig is represented, and the deciduous teeth and unfused elements indicate a young individual. Two of the elements show evidence of butchering in the form of handsaw cuts across an ulna and a rib. These cuts indicate a picnic ham and some kind of loin chop or spare ribs. All but three teeth are from units under the house or between the house and the well. At least two discarded pork joints were recognized from units under the house: a left foreleg and left ankle joint from an immature pig. These articulating joints may be the remnants of ham hocks used as seasoning cuts in soups, etc.

Four elements were firmly identified as cattle, and ten could be categorized only as large mammal. Of the 33 elements from these large barnyard animals, 12 h evidence of saw cuts. Three of the four beef bones could be identified to type of cut: round, chuck, and hindshank. These marks indicate the full range of economic choice in cuts of beef: from expensive/high yield cuts like top round to cheap/low yield cuts represented by the hindshank (Lyman 1987:Table 2). Although there is no way to be sure, all three of these beef cuts could represent a single right hindquarter that was consumed at one time (such as a holiday or family gathering).

The remainder of the identified sample comes from animals that can be divided into those not likely to be part of the subsistence of the site's occupants and those that may have been taken as small game. In the former grouping should be placed the toad, snake, small birds, armadillo, the rats, and probably the skunk. Possible game animals include the fish, turtles, nighthawk, swamp?/jack rabbit, and the opossum.

Summary: Site 41DN167 was a farmstead occupied between ca. 1880 and 1920. Extant features included a single pen log house with frame additions, two cellar depressions (Features 1 and 3), and a sandstone-lined well. A third cellar (Feature 2) was identified during the proton magnetometer survey. A number of high positive anomalies were recorded within the magnetometer survey area. These anomalies appear to correlate with buried metal. The largest of these anomalies was located west of Features 1 and 2 and correlates with the highest density of sheet refuse, as well as, some buried metal.

Architectural documentation indicates the original dwelling was a single pen log house with about 90% full-dovetail and 10% half-dovetail notching. The house was modified during the early twentieth century when additions were added to the west, east, and south elevations of the original log dwelling. The west addition may have included a small room and a porch, the east addition was probably a porch, and the south included 1-2 rooms and a small porch on the west side.

The dendrochronology results indicate the log dwelling could have been built as early as late 1871 or 1872. However, these dates are earlier than the mean beginning dates obtained from the artifact data and the deed/title information. The logs may have been stockpiled for a period before the house was built, or J. Johnson, Jr. may have built his house on the site before he acquired title to the property in 1895. None of the logs exhibited evidence that they were removed from an earlier structure that was later recycled. The refined earthenwares yielded a ca. 1877 MBD date, while stonewares (1898) and bottle glass (1903) yielded MBD values that more closely correlate with when J. Johnson, Jr. acquired the title. The combined MBD value for ceramics and bottle glass (1891) also closely correlates with this 1895 title conveyance.

The archaeological and architectural data recovered at 41DN167 indicates this farmstead was occupied at least to the 1920s or 1930s. A comparison with the neighboring farms at 41DN166 and 41DN248 reveals that the assemblage from 41DN167 contains a much higher percentage of twentieth-century bottle glass, ceramics, and other domestic remains. These data suggest it was abandoned later than the farms at 41DN166 and 41DN248 (see Lebo, in prep, for discussion of 41DN248). However, a number of similarities are evident among these farms. Like 41DN166, the sheet refuse deposit, visible features, and activity areas occurred within a radius of 20 m of the

dwelling. Further, like 41DN166, no farm outbuildings were found within the magnetometer survey and/or excavation areas. In contrast, at least one small outbuilding was identified at 41DN248 over 20 m from the dwelling. In addition, several outbuildings were found within 20 m of the house at 41DN248, including a possible smokehouse and a shed used for food storage.

The dwellings at all three sites were originally small log structures. Frame rooms were added to the houses at 41DN167 and 41DN248, probably as the size of the families at these sites grew. The construction of several cellars at 41DN166 and 41DN167 was the result of poor drainage and a near-surface water table. Cellars at both farms exhibited evidence of repair, which was a common practice in the reservoir area. Several cellars were documented at a number of farms in the region.

The magnetometer and archaeological data at 41DN167 were difficult to interpret because of the extensive amount of buried metal and the collapsed nature of the dwelling. The volume of architectural debris from the dwelling masked the sheet refuse deposits in much of the yard, particularly under and within 8 m of the house.

41DN198

Map Quad	Green Valley 7.5' (1960, rv. 1978), #3397-143
Elevation	614' amsl
Scheduled Investigations	Sheet refuse, archival
Soil Association	Birome fine sandy loam
Cultural Affiliation	Historic (1880s to ca. 1940)

Description: A log dogtrot dwelling, four outbuildings, and a windmill were extant when the site was recorded. Several fence lines and a cellar depression were identified during testing. The dwelling was located near the crest of a gentle slope with the remainder of the farmstead slightly downslope. The dwelling remained standing when the site was revisited in 1985, but had been removed before testing. In addition, all but one of the outbuildings had collapsed or were removed (Figure 8-71). The site measured approximately 72 m north-south by 96 m east-west.

Previous Investigations: The site was recorded in 1981 and tested in 1982. Archival and oral history research, and HABS-like drawings of the dwelling were conducted by ECI. The site, including the architectural and archaeological deposits, were determined potentially National Register eligible in 1982 (see Chapter 2). The site was revisited in 1985, and excavations were recommended to recover information on a late nineteenth to early twentieth century African-American farmstead (Ferring 1986).

Archival Investigations: Archival research conducted by ECI was reviewed and expanded by NTSU in 1987 (see Appendix A). According to Skinner and Baird (1985:9-98),

> The original survey of the land was canceled. The C. Y. Douglass patent was the second patent. Eli Smith owned the land in February of 1839. Dr. Wosralin and Ezekiel Boon owned the land in 1862. However, Boon lost his certificate. A. W. Robertson wrote the land office in Austin about the certificate in 1871 and subsequently, the certificate was withdrawn. In 1872, Charles Y. Douglass patented the land. However, Ezekiel Boon, a land merchant from Denton, still held title on part of the land. He sold his share to Kendall for $180.00 on September 15, 1881. Kendall then sold the land to O. A. Hearne. In October of 1886, three black farmers, Mike Phillips, Colonel Smith, and Aaron Smith bought 82 ac from O. A. Hearne.

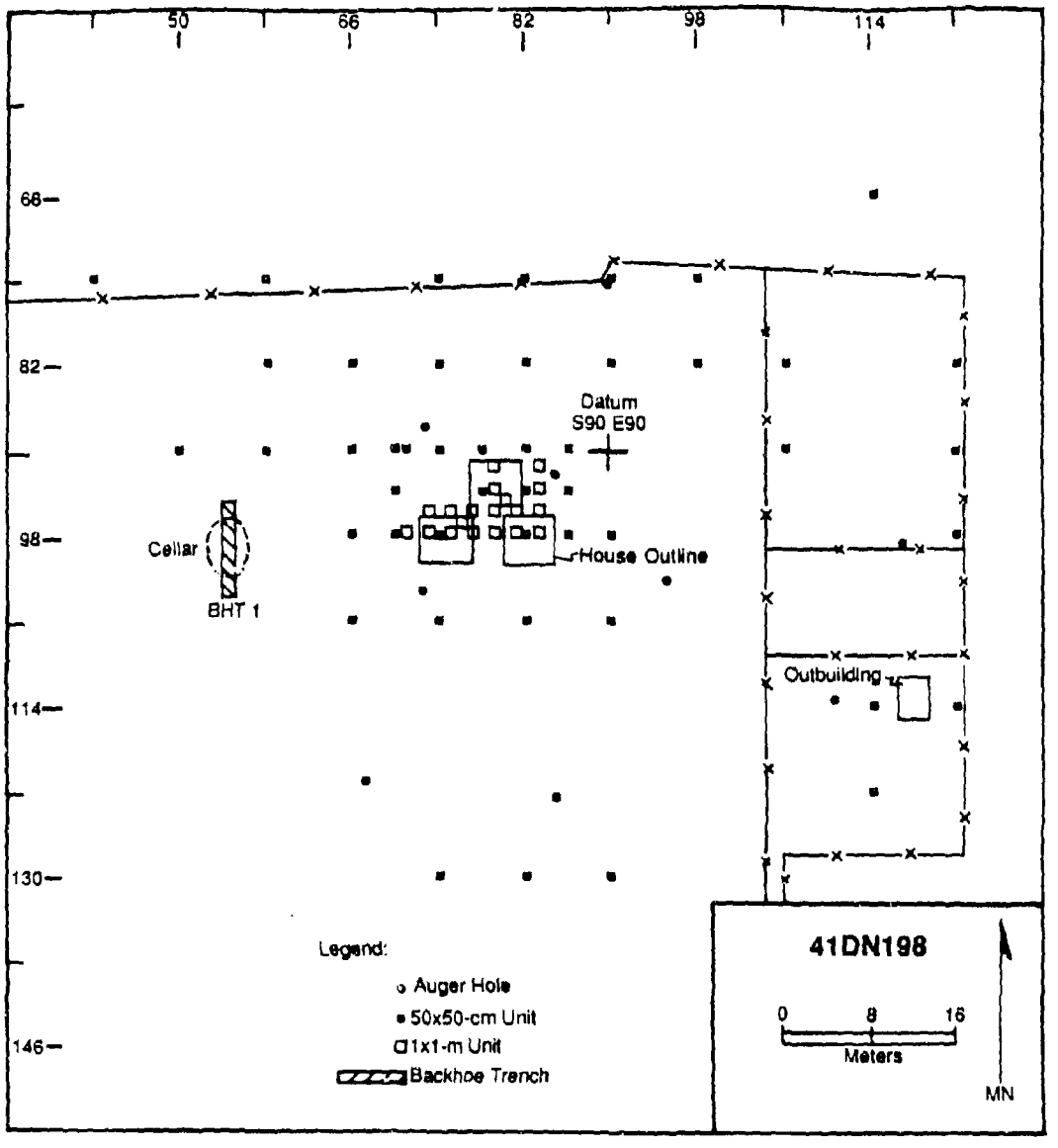


Figure 8-71. Site map of 41DN198.

The land remained within the Phillips and Smith families until 1939, when Dallas Curtsinger (Sheriff) auctioned off Tracts 1, 2 and 3, which were owned by the two families. The land was sold after M. Phillips' death, and the family lost a court battle to retain ownership. The property was purchased by J. S. Wilson, who continued to own it until it was purchased as part of the project area in 1981.

Between 1886, when the Phillips and Smith families acquired the property, and 1939 when they lost it, the acreage changed hands among different family members and heirs. A complete chain of title is provided in Appendix A.

Architectural Investigations: Architectural documentation conducted by ECI includes a brief description of the outbuildings, and HABS-like level documentation of the dwelling. Drawings and photographs of the house are on file at IAS, UNT.

Dwelling: According to Skinner et al. (1982a), Skinner and Baird (1985), the dwelling was a log dogtrot with hewn oak logs set on sandstone and limestone piers. A board and batten single pen addition was built onto the north side around 1910 to 1915 to form a dogtrot T-plan. The house was one-and-a-half stories with a loft. The floors were packed earth, and it was assumed that they were probably covered at one time with wood floor boards (Skinner and Baird 1985:9-98) although no evidence of flooring was found. No porches or chimneys were extant, and the original roof had been replaced. The extant roof was a corrugated metal east-west gable over the original dogtrot, which was removed along with the addition between 1981 and 1982 when the structure was documented. Chinking was present between the logs, including rocks, wood, and mud.

The floorplan of the house, as it was reconstructed in 1987, is shown in Figure 8-72. This reconstruction was made using the floorplan drawn for the house while it was still standing in 1982 (Skinner and Baird 1985: Figure 9-59) and correlating this data with the archaeological/architectural remains uncovered during excavation. The east pen (15.8x15.4 ft) and the west pen (15.3x15.0 ft) flanked the dogtrot passage (8.115 ft wide). The addition was removed before the dwelling was documented and exact measurements were not obtained (Skinner and Baird 1985:Figure 9-59).

Outbuildings: Four outbuildings were originally recorded. A hay crib was located approximately 120 m northwest of the house. According to Skinner et al. (1982a:8-36), the materials and construction were not recorded. A stable (outbuilding) was located southeast of the dwelling and is shown in Figure 8-71. The main section had a steep east-west gable and corrugated metal roof. Additions with shed roofs were located on all but the west side. The walls were vertical board (Skinner et al. 1982a:8-36). A vertical board outbuilding was located north of the stable. It had a corrugated metal north-south gable roof. It was identified as a possible smokehouse and had a metal chimney pipe or vent in the center of the roof gable. The fourth outbuilding was located approximately 100 m southeast of the dwelling. Its function, materials, and construction were not recorded. It was recorded missing in 1985.

Dating: No dates were obtained for the outbuildings, which probably dated to the early 1900s. According to Skinner and Baird (1985:9-99), the house was used mainly as rental property after 1920 and was located on the same road as a black settlement centered around the Kelso School No. 2. The house was assigned a construction date of pre-1870. Two possible periods of construction were hypothesized based on the size and shape of the logs, corner-notching style, and land ownership. The first date was ca. 1840; the second, ca. 1862.

The archaeological records, as well as the architectural information gathered do not support a pre-1870 date. A ca. 1880s date is more plausible, and correlates with the archival information indicating when the Smith, Phillips, and Smith families acquired the property, and the archaeological assemblage recovered.

Significance: The dwelling was architecturally significant, but no longer exists.

Dendrochronological Investigations: None.

Excavation Method: Sheet refuse investigations were conducted using a multi-phase approach, involving excavation of small test units, judgmentally placed 1x1-m units within the former house area, and backhoe exploration of a collapsed cellar. Forty-eight 50x50-cm units were dug on an 8-m grid across the site. These units were dug to recover information on site size, age, function, and subsurface integrity Nineteen 1x1-m units were excavated as

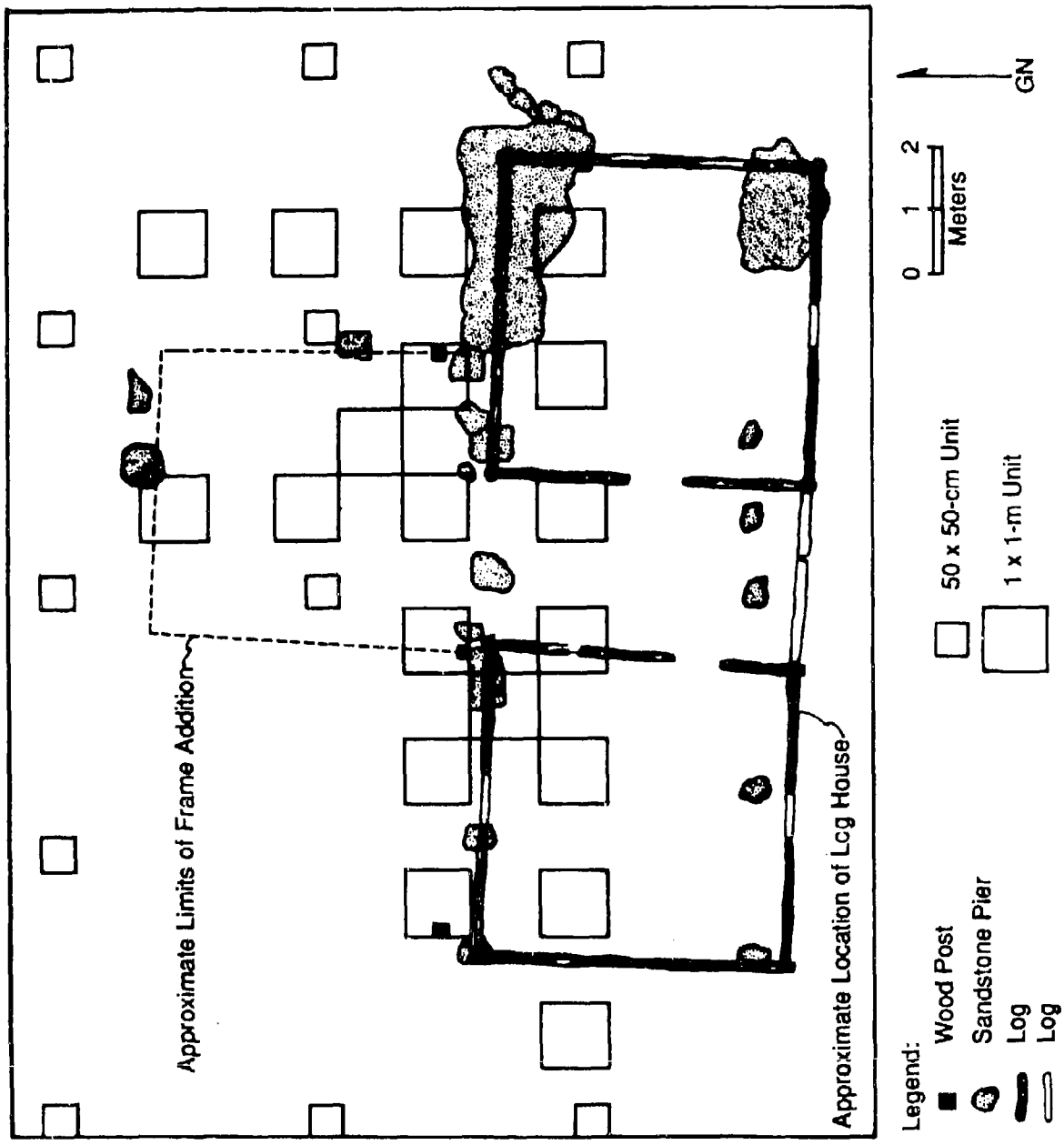


Figure 8-72. Reconstructed floorplan of the log dogtrot at 41DN198 showing the relationship of this building location with the units excavated in Block 1. The floorplan was reconstructed from photographs and field drawings made by ECI in 1982.

Block 1, which was placed to recover data on the dwelling and cultural deposits under the house. A single backhoe trench was excavated north-south through the collapsed cellar. A trash dump was located within this depression.

Excavation Results: A sheet refuse deposit (Table 8-46) occurred in the north or back yard and both side yards. A mean of 13.42 artifacts was recovered from the 50x50-cm units and a mean of 27.14 artifacts from the 1x1-m units (Block 1). Excluding architectural remains, these numbers decreased to 8.0 and 5.0, respectively. Architectural items reflected the 50 to 65 years of occupation at this site, representing 71.8% of the total recovered assemblage. The dwelling as noted above was log, and while the chimney(s) no longer remained, they were probably sandstone. Only 14 brick fragments were found, and no brick scatter occurred. Machine-cut nails accounted for only 6% of the nail assemblage, which reflected the relative lack of nails in the original structure and the exclusive use of wire nails in the addition. Building material (n=845) included primarily wire fragments, mortar, and staples or screws. One gate/door hinge and a white porcelain door knob were also found.

Table 8-46
Artifact Assemblage from 41DN198

Artifact Category	50x50-cm Units		Block 1	
	N	%	N	%
Refined Earthenware	71	11.02	22	1.07
Stoneware	9	1.40	8	0.39
Porcelain	9	1.40	8	0.39
Bottle Glass	183	28.42	202	9.79
Table Glass	7	1.09	1	0.05
Lamp Glass	5	0.78	7	0.34
Unid. Glass			3	0.15
Window Glass	55	8.54	34	1.65
Machine-Cut Nails	3	0.47	54	2.62
Wire Nails	138	21.43	800	38.78
Machine-Made Brick	5	0.78	9	0.34
Building Material	57	8.85	788	38.20
Personal Items	12	1.86	7	0.34
Thin & Heavy Metal	63	9.78	94	4.56
Household Items	7	1.09		
Machine & Wagon	9	1.40	13	0.63
Tools			3	0.15
Horse & Stable Gear	2	0.31	2	0.10
Ammunition	2	0.31	7	0.34
Electrical Items	2	0.31		
Misc. Other	5	0.78	1	0.05
Total	644		2063	

The floorplan of the dwelling was reconstructed (see Figure 8-72) based on the dimensions recorded during documentation, the placement of sandstone, limestone, and wood piers, and architectural debris found in the 1x1-m units. A small amount of sheet refuse occurred inside the dwelling, which reportedly had dirt floors (Skinner and Baird 1985). It is more likely, however, that this house originally had wood floors and these floors collapsed or were removed.

Refined earthenware sherds occurred near the walls of the west pen and inside the addition where these latter sherds predated the addition, and in the immediate yard areas where they clustered near the house. The highest frequency of refined earthenwares (n=12) in a single 50x50-cm unit occurred in Unit S74 E82 just north of the barbed wire fence. Refined earthenwares yielded a mean beginning date of 1875 (n=85 sherds) and included primarily blue-tinted whiteware and blue-tinted ironstone sherds. Excluding architectural items, the ratio of refined earthenwares in the sheet refuse deposit to the house block was 3:1 (18.4% to 5.8%). Stonewares (2.3%, 2.1%), porcelains (2.3%, 2.1%), and bottle glass (47.4%, 53.4%) exhibited similar frequencies, while personal items differed between the two areas (3.1%, 1.9%).

Stonewares were poorly represented in the ceramic assemblage (n=16) and yielded a mean beginning date of 1900. Several stoneware sherds occur inside the house area with the remainder in the north and east yards. One sherd occurred north of the barbed wire fence and one in the southeast corner. The majority cluster near the dwelling.

Bottle glass was scattered across the different yard areas, with only five 50x50-cm units containing more than nine sherds. As with refined earthenwares and stonewares, bottle glass was less frequent in the 1x1-m units inside the house than in the units located outside. The highest number of sherds occurred in units under or adjacent to the addition, which would have served as an outdoor activity area before the addition was built.

Other remains from the site include a small number of personal items (e.g., toys, clothing parts, 1928D Lincoln cent), tin cans and unidentifiable metal, broken machine parts, and an aluminum ear tag stamped "J.S. Wilson"). The items found in the dump include an assortment of ceramics, glass bottles and jars, tin cans, metal stove parts, chains, a washbasin, and barrel stays. This material was uncovered in the backhoe trench through the cellar but was not systematically collected because of its relatively recent age. This deposit probably dates near the end of occupation or after.

Faunal Remains:

TOTAL BONE = 112

Identified fauna (n=101)
- Ictalurus sp. (catfish) - 1
- Colubridae (non-poisonous snake) - 28
- Cathartidae (vulture) - 4
- Zenaidura macroura (mourning dove) - 2
- medium bird - 1
- Didelphis virginiana (opossum) - 31
- Dasypus novemcinctus (armadillo) - 3
- Sylvilagus floridanus (cottontail) - 4
- Lepus californicus (jack rabbit) - 1
- small mammal - 2
- Canidae (dog/coyote) - 1
- Urocyon cinereoargenteus (gray fox) - 1
- Procyon lotor (raccoon) - 3
- Mephitis mephitis (striped skunk) - 14
- Felis catus (domestic cat) - 1

medium mammal - 1
Sus scrofa (domestic pig) - 2 (MNI=2)
large mammal - 1

Unidentified bone (n=11)

The faunal assemblage from 41DN198 differs markedly from all other sites under study. First, domestic animals are among the least common species identified, even if dog and cat are included. There are no new world murids, in fact there are no rodents at all. However, there is a balanced mixture of prey and predators among the taxa. Then, there is the odd mixture of expected versus unexpected species incorporated in the matrix where the old double-crib structure once stood. Finally, the distribution pattern of bone recovery contrasts with that found at other sites.

Only two elements were identified as pig; furthermore, the number of specimens in the large mammal category is scant, in contrast to other samples where a reliance on beef and pork is evident. Curiously, these two elements indicate two individual pigs of different ages: one mature and the other a neonate. A rib from an adult pig was found under the structure, and an astragalus of a newborn was found in a unit along the northeastern edge of where the structure stood. Pig is the only barnyard animal represented, with dog and cat as the only other domestic species recognized. Medium-size mammals predominate the species list.

Of these medium-size mammals, many are considered game species (viz., opossum, jack rabbit, fox, raccoon); add to these, cottontail and non-mammals (catfish and dove), and one might speculate extensive hunting and fishing activities to supplement a meat diet of pork. Indeed, this may have been the case. However, consideration of the presence and provenience of some other animals in the list argues against this assemblage as wholly a byproduct of the site's human occupants. For example, vulture and fox are found at no other site in the study, and skunk is found at only one other site (41DN167, with the largest species list). These three species, especially vulture and skunk, are abjured by humans as food items unless nothing else is available. From the variety of species listed here and from other sites, the environment was rich in diversity and probably in abundance at the time of occupation, reducing the need to hunt uncustomary game. Furthermore, these three and all of the others were found together, either directly under the structure or in units adjacent to them along the northeastern edge. This mixture of species suggests that multiple agents are responsible for the assemblage.

Canids (dogs and coyotes) are most likely another agent involved, dragging bits of carrion underneath a structure to consume at leisure. This could have transpired during and after abandonment of the site by humans. Likewise, vultures have been known to roost in remote abandoned structures, and some of their victuals may have become mixed in with the refuse, as well as one of their own kind. It is unlikely that owls or other raptors used the structure because of the absence of rodents, their primary prey.

Only three specimens were found in the sheet refuse away from the structure; these consist of an armadillo femur, a large mammal fragment with a saw cut, and a burned fragment of unidentified bone. The armadillo is considered intrusive. The others are probably associated with the human occupation of the site, but in isolation, allow little interpretation.

Thirty-six percent of the bones were burned, but 25 of these 34 burned bones turned out to be a cluster of three different non-poisonous snakes (Unit 49, S98/E81, under the structure). Only one snake vertebra was recovered that was not burned, and it was not in that cluster. However, Unit 49 produced a burned skunk humerus and a burned canid calcaneum in addition to several unburned bones. Other burned elements were identified as belonging to cottontail, jack rabbit, and opossum, but these were recovered from various other units under the structure. The structure was still standing when recorded in 1982; therefore, the burned remains did not result from an incidental fire.

The anomalous nature of this assemblage could be explained by numerous scenarios. For example, instead of being hunted as food, most of the medium-size mammals could have been trapped as furbearers. The resulting carcasses would have also provided food for humans or for scavengers. Some of the bone was surely deposited by non-human agents during occupation or after abandonment. On the other hand, the burned bone from this site, given its distribution, should be considered the result of human action, but it is not clear what that action was. There is no pattern that conclusively delineates the sequence of events that resulted in this particular set of faunal remains.

Summary: While archaeological integrity remained under and near the dwelling in the back and side yards, the architectural integrity of the site had been lost before excavation began. The outbuildings had collapsed, and some, like the dwelling, had been removed.

Despite the loss of the architectural integrity of this site, excavations at this farmstead provided valuable comparative data for farmsteads in the Crosgrove's Bottom region of the project area. This farmstead was occupied by an African-American landholding family, and like other families in this area of Ray Roberts Lake, they settled on poor land. This farmstead was located on a slope, and no well was located near the dwelling. Undoubtedly because of the elevation, rocky terrain, and the depth to the water table, the well was situated further from the dwelling than documented at farmsteads in other parts of the project area. The closest well to the dwelling at 41DN198 was located over 30-40 m northwest of the house and outside the barbed wire fence that surrounded the dwelling yard.

Like other farmsteads occupied during the late nineteenth century, both Anglo and African-American, the archaeological, architectural, and archival data indicate the occupants at 41DN198 had similar possessions and lifeways (e.g., 41DN77, 41DN91, 41DN166, among others in the central project area, and 41DN234, 41DN273, and 41DN275 in Crosgrove's Bottom). Both log and frame dwellings were utilized. Among the support structures commonly found in the project area during this period were earthen cellars, a stone-lined well, and several small outbuildings, i.e., sheds and cribs.

The dwelling at 41DN198 was a one-and-one-half story double-pen log dogtrot. Few of these survived when we began our investigations in 1986; however, they were not uncommon in the region during the mid-nineteenth to early twentieth century (see Jordan 1978). A log dogtrot remains standing at 41CO111, the Reason Jones Farm, in the northcentral part of the project area. Several outbuildings were identified at this farmstead by ECI (Skinner and Baird 1985), including a hay crib, a stable (probably an animal shed), a possible smokehouse, and an unidentified structure. The possible smokehouse was not relocated in 1987, however, others are known from farmsteads in the project area (e.g., 41DN248, 41DN250). This type of outbuilding was probably common in the reservoir as most families butchered their own hogs and prepared smoked pork and beef for home consumption (see Chapter 9).

When compared with other farmsteads in the Crosgrove's Bottom area (41DN146, 41DN233, 41DN234, 41DN273, 41DN275), some similarities and differences are evident. With the exception of 41DN273, each of these farmsteads were located on upland, rocky soils. Each had a log dwelling, although only 41DN198 appears to have been a dogtrot. The other farmsteads had single-room log houses with stone chimneys (41DN146, 41DN273, 41DN275; no dwellings extant at 41DN233 or 41DN234). Both a well and cellar were found at 41DN273 and 41DN275, but none were identified at 41DN146, 41DN233, and 41DN234. Both 41DN146 and 41DN233 were occupied by tenants or sharecroppers. Evidence of sheds, fences, and animal pens were also found at 41DN275.

Similar types of artifacts were found at these farmsteads (except at 41DN146) and others occupied elsewhere in the project area during this period. See Skinner and Baird (1985) for additional data on other farmsteads in the Crosgrove's Bottom area.

41DN224

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	640' amsl
Scheduled Investigations	Sheet refuse, architecture
Soil Association	Navo clay loam
Cultural Affiliation	Historic (1850s to recent)

Description: Site 41DN224 is located in Johnson Branch Park. Two house sites occur, and the first includes a frame house built about 1909, a pump house, windmill, stone and concrete cellar, foundations of a large barn, remains of three small barns/sheds, a windmill and water tank, and a concrete water trough (Figure 8-73). The second, older house site, is south of the first, and includes the sills and piers of a 1850/60s dwelling, remains of a large outbuilding, and evidence of a collapsed cellar. Excavation uncovered a buried well and a second collapsed cellar (Figure 8-74).

The site was serially occupied between the 1850s and recent. Many of the outbuildings standing when the site was recorded in 1981 have collapsed or were removed. A "homemade" sawmill powered by an automobile engine was found at the northern extent of the main site area.

Previous Investigations: The site was recorded in 1981 and recommended for eligibility to the National Register of Historic Places. It was determined eligible in 1982. The site was recommended by ECI for additional investigation, including measured drawings, "archival-quality-HABS-like" photographs, and archaeological and historical research (Skinner et al. 1982a). These recommendations were supported by Ferring (1986) after the site was revisited and reevaluated in 1985 by personnel from UNT.

Archival Investigations: The site is located on the John Jones survey (A-669) patented to Jones in 1859, but occupied as early as 1855. Both house sites at 41DN224 are located on Tract 1, which is composed of 92.5 acres (Table A-27). The land was divided among the heirs in 1940, at which time the survey was divided into tracts. An early date of 1859 for the older house site is supported by information provided by Roy Jones (personal communication, 1987). According to Mr. Jones,

> My grandfather settled here before-- well, my dad was born down here on this next farm in 1863 [41DN224], but my granddad came here in about 1850. He started here from Missouri in a wagon in 1849, and they had a child born as they came through Indian Territory in 1850....And he settled on the next farm [41DN224] below me [41DN250], and he had a brother that came here ahead of him and settled on this old place where I lived [41DN250], where the house is now, and he didn't live out his contract....He sold his rights to one of dad's older brother-in-laws, and he got the first title to it-- J. S. Everly. [Site 41DN250 is located on the J. S. Everly survey, and the original Everly house site is located at 41DN250 and is situated just east of the 1898 house (see Lebo 1992a, 1992b).]

Further,

> ...I think my grandfather built a double log house way back down in the pasture [41DN107?]. I can remember two old log pens down there.....Then he built, just before the [Civil] war broke out, he built a house [41DN224?]. He didn't have it finished, but it was sufficient for him to move into....When the war was over they finished it. They had to haul up lumber from East Texas in an ox wagon....They built a frame house. I think it had a [hewn] log foundation...and they also hewned the studding for the walls out of little smaller logs. It had cypress siding.

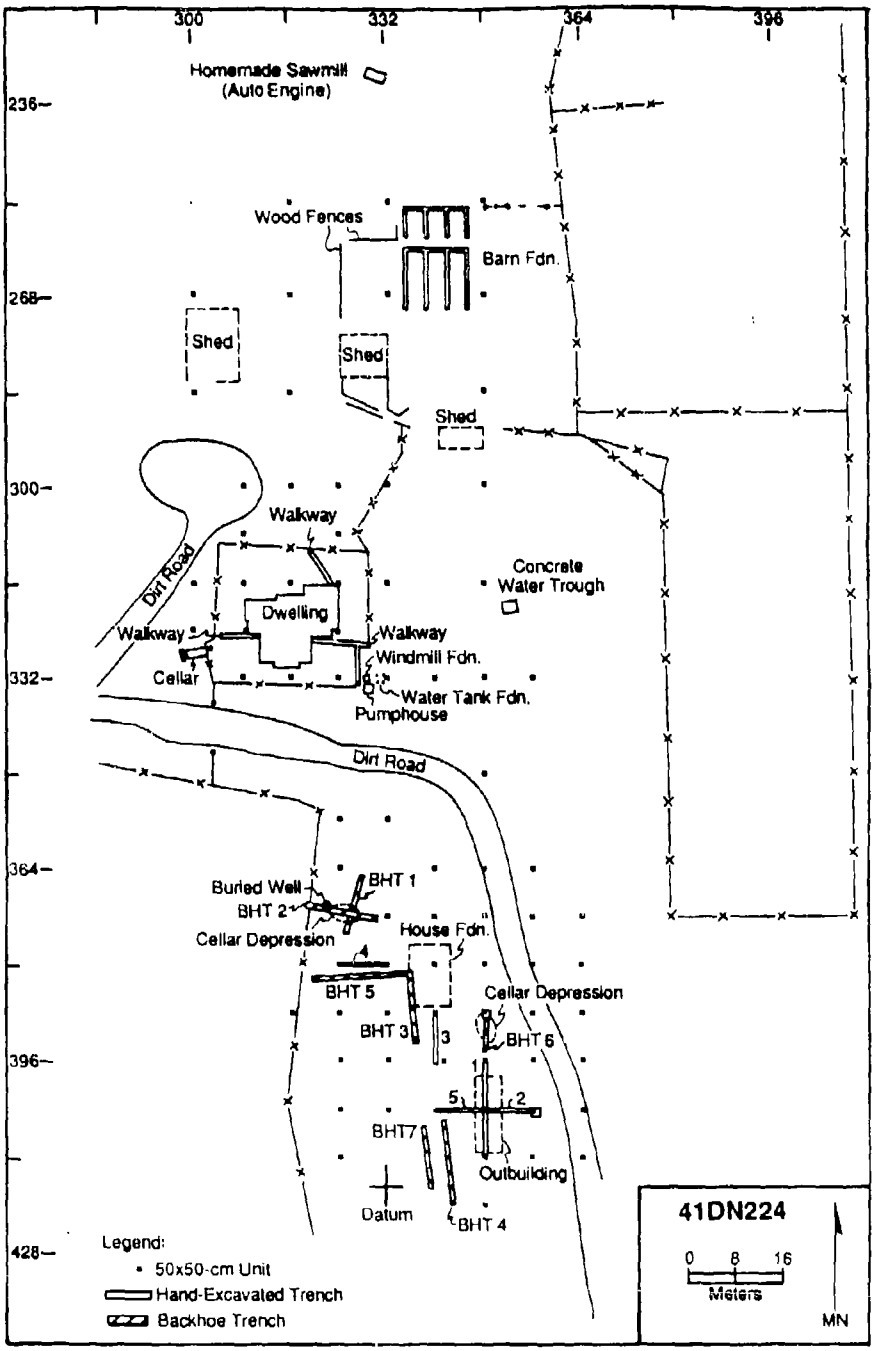


Figure 8-73. Site map of 41DN224.

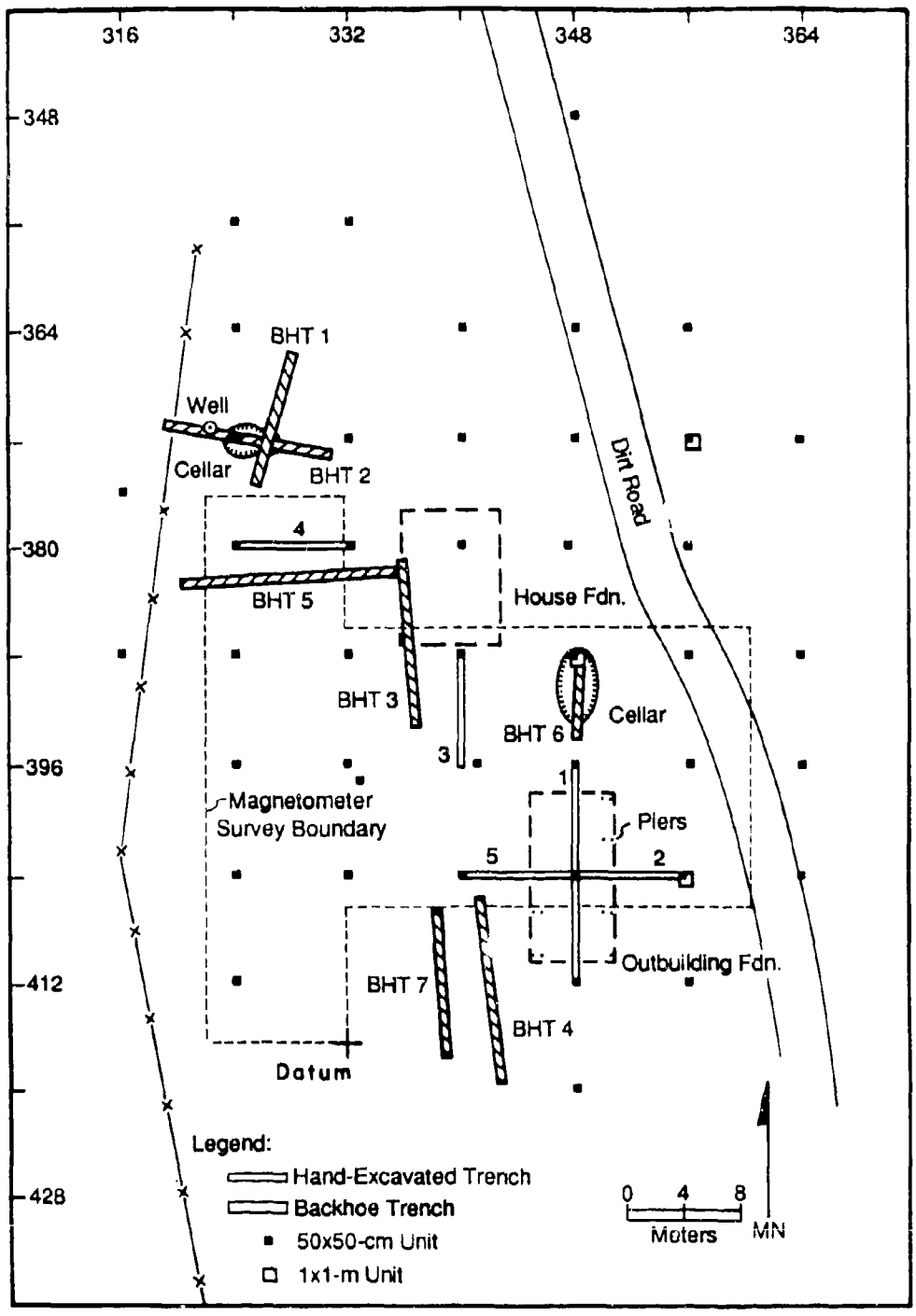


Figure 8-74. Site map showing the older component at 41DN224, including foundations of a ca. 1850s dwelling and a late nineteenth century outbuilding. A dwelling was located in this outbuilding area in the 1850s.

Architectural Investigations: Architectural descriptions, floorplans, photographs, and field notes for the extant structures are on file at IAS, UNT. Several structures recorded standing in 1981 had been lost, and only limited architectural data were obtained. Emphasis was placed on recording the early twentieth-century house and the ca. 1855 dwelling.

ca. 1855 House: Mr. Roy Jones remembered this dwelling, and his description is presented above. This structure was a single room dwelling with hewn sills and mortise and tenon joints (Figure 8-75). The house measured 9.3 m north-south by 5.84 m east-west and was set on sandstone and limestone piers. Machine-cut nails were found throughout the debris. Only the sills remain. Wire nails were found associated with the north and south additions. A fireplace was located in the center of the west wall. It is no longer standing, and no brick was found. Excavations failed to uncover evidence of brick and mortar fragments. This suggests that the fireplace may have been a mudcat, but no conclusive data were recovered.

Doors were located on both the north and south walls of the original room. The south addition was built before the north addition based on the construction materials. A flue damper was found in the south addition. The flooring that remained was not original. This flooring was secured with wire nails, but numerous machine-cut nails were imbedded in the sills and floor joists indicating that an earlier floor existed, which was secured with cut nails. At some point, the exterior was covered with shiplap. The original appearance of the interior and exterior walls is unknown.

Twentieth-century Dwelling: This house was built about 1909, and the original floorplan was a dogtrot, with a north-south gable roof. The floorplan and size of the house changed several times as new rooms were added (Figures 8-76 through 8-78). The first addition was a dining room on the east side of the north room, creating a small ell-shaped house. Subsequent additions included a kitchen, added to the east, and a bedroom, added to the west (Figure 8-78). Two ell-shaped porches were added at the same time on either side of the original breezeway. A porch was built on the north side of the kitchen and dining room addition. The porch was later enclosed, and the west half was converted into a bathroom. Alterations were also made to the interior of the house, including the removal of the original chimneys.

The original dogtrot was composed of two rooms with a central breezeway and Greek Revival detailing on the door and window openings (Skinner et al. 1982a). The siding was 5-inch shiplap painted white. The original north-south gable roof and the later east-west gable roof were covered with cedar shingles.

The south room of the original dogtrot measured 4.39 m east-west and 4.35 m north-south. There were three windows on the south elevation and one each on the east and west elevations. They were all double- hung, four-over-four windows. The interior walls were vertical planking, which were originally painted sky blue. Later, the walls were covered with cheesecloth and wallpaper. Baseboards occurred on each wall and measured about 2 ft high (23 cm). Skinner et al. (1982a) reported that a fireplace had been located on the south elevation of this room where the three windows now are. No evidence of a chimney or chimney opening that had been covered over was found. The doorway on the north elevation had two doors, one opening in and the other opening out.

The size, floor, window and door styles, the baseboards, and the ceiling of the north room were identical to those in the south room. The north wall had a fireplace flanked by two windows. The fireplace had largely been removed, but the cutout and concrete hearth slab remained. There was a door on both the west and east elevations. The west door opened into the room, while the east doorway had two doors, one opening into the room and one opening out, into the dining room. The walls of the north room were covered with sheetrock.

The west room (bedroom) measured 4.34 m north-south by 4.84 m east-west. The room had four windows, a door into the north room of the dogtrot, and one on the south elevation that opened in from the west porch. This doorway had two doors, one opening in and the other opening out. The walls were sheetrock and were covered with wallpaper. The floor was 1x3-inch tongue and groove oriented east-west.

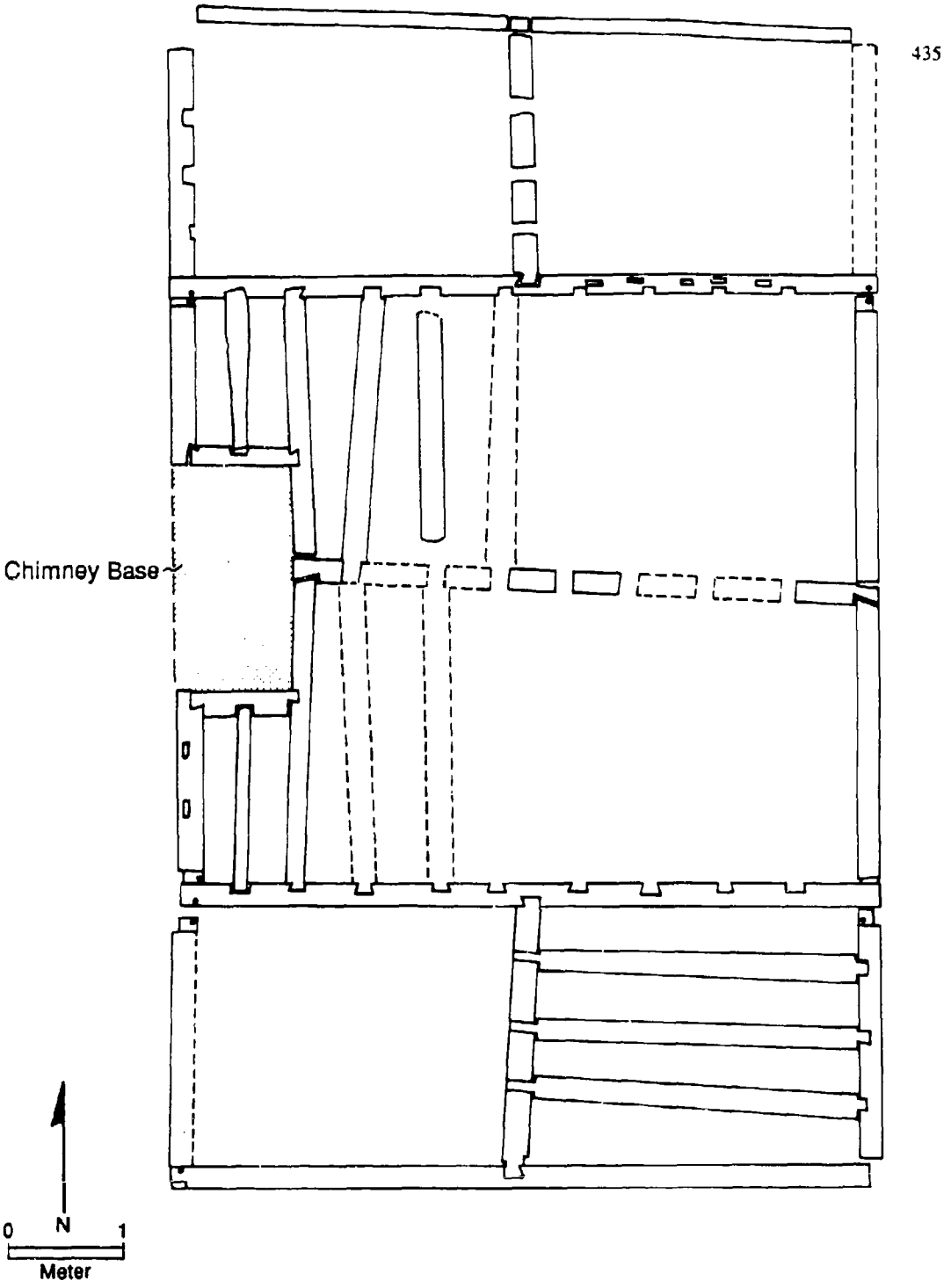


Figure 8-75. Architectural drawing of the log hewn sills and the sandstone chimney base of the 1850s dwelling at 41DN224.

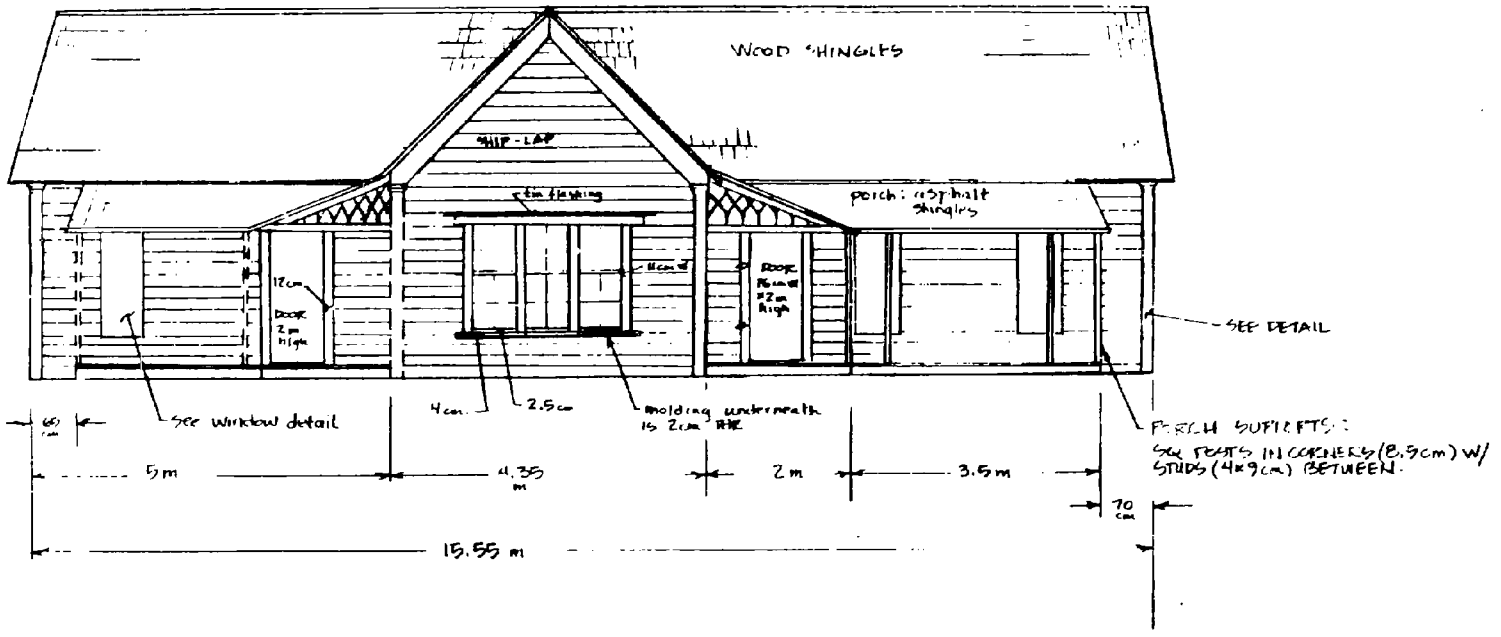


Figure 8-76. Field architectural drawing of the north elevation of the ca. 1909 dwelling at 41DN224.

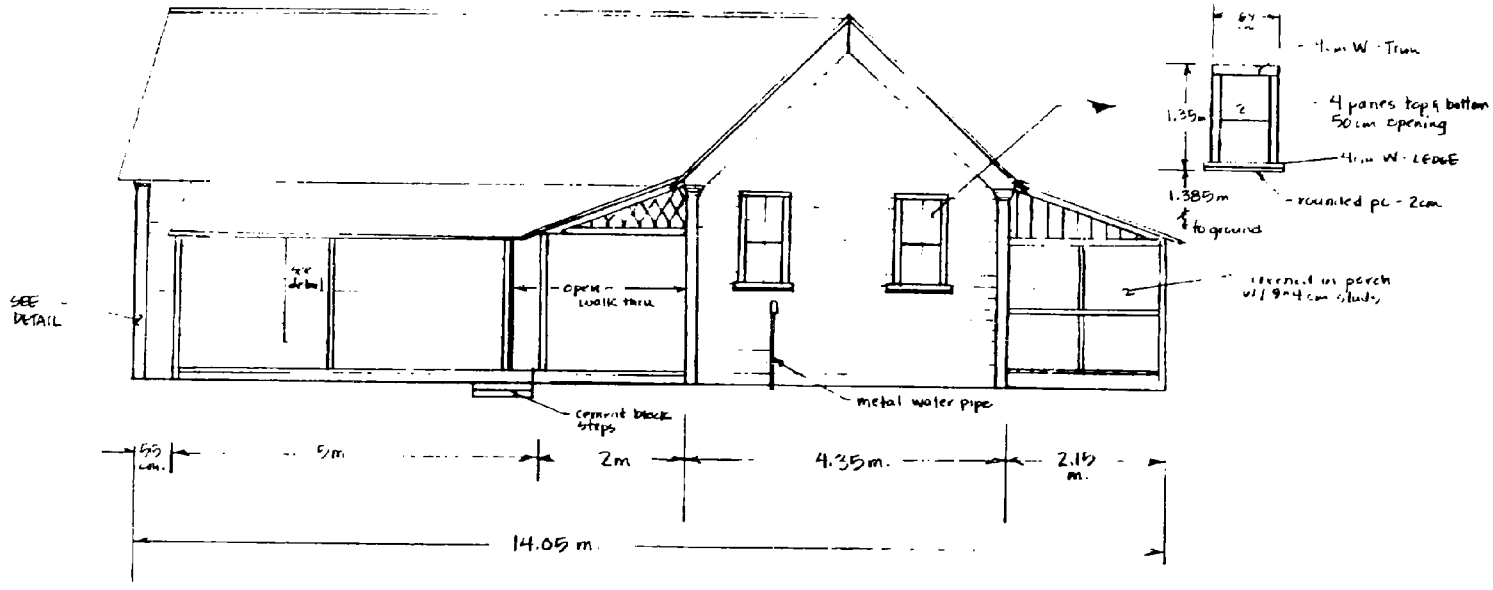
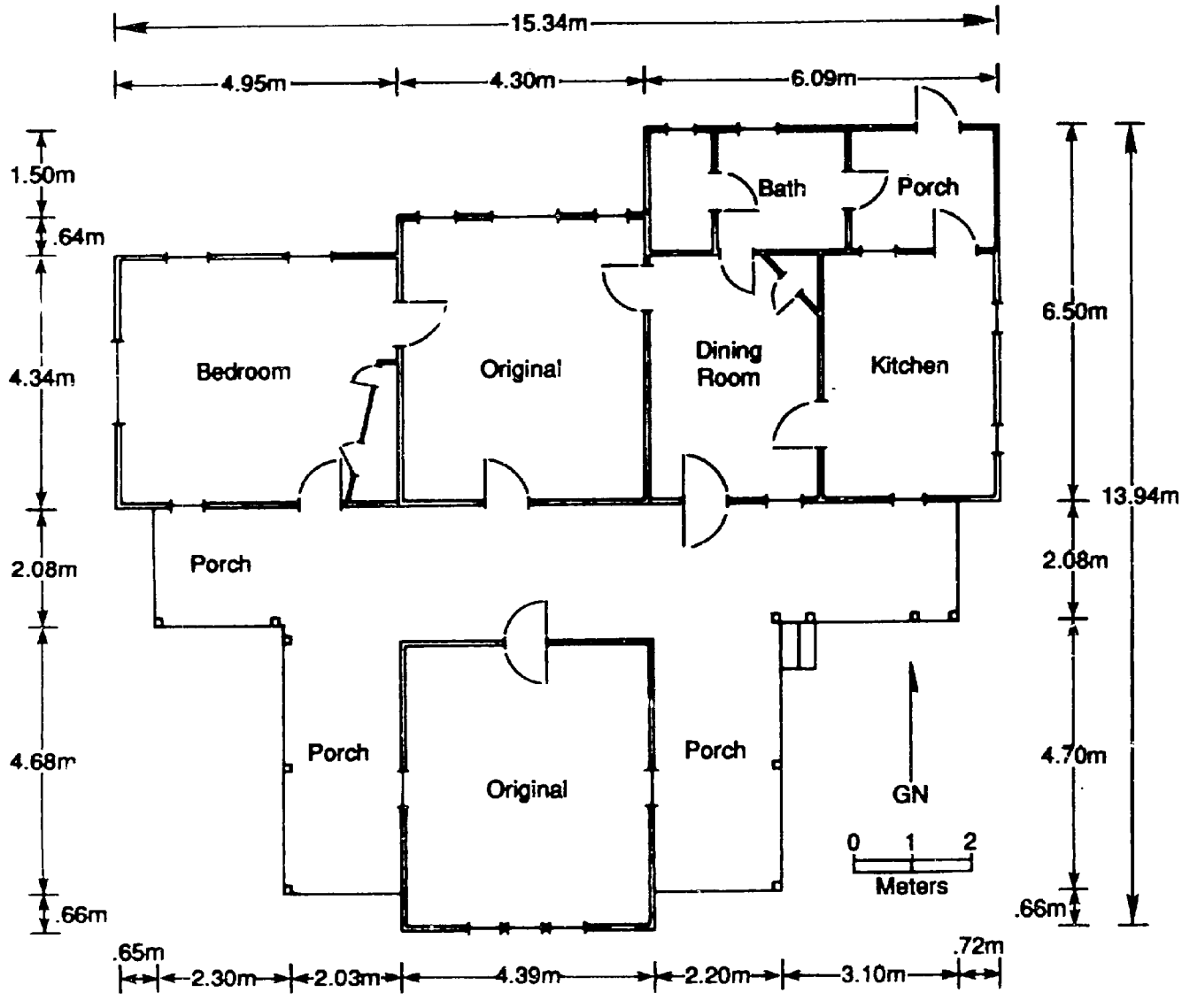


Figure 8-77. Field architectural drawing of the south elevation of the ca. 1909 dwelling at 41DN224.



438

Figure 8-78. Architectural floorplan of the ca. 1909 dwelling at 41DN224.

The dining room, east of the north room of the dogtrot, measured 2.96 m by 4.25 m. It had a door on each elevation and a single window on the south wall. The baseboard in this room was shorter than in the dogtrot, measuring about 1.6 ft high (19 cm). The west wall was vertical planking, and the east wall had horizontal planking and differed. The thickness of the boards also differed between the two walls. These walls were covered with sheetrock, and the north and south walls also had sheetrock but no planking. Wallpaper was visible under the sheetrock. The sheetrock was painted bluish-green, but the baseboard and door frames were originally painted the same sky blue seen in the dogtrot.

Two structural details indicate that the dining room and kitchen were not built at the same time. First, the stone pier foundation under the wall shared by these rooms was not centered between the rooms. Instead, it was built to hold the weight of the east wall of the dining room. Secondly, the removal of the connecting door between these rooms revealed that the dining room floor did not extend into the kitchen.

The kitchen porch, bathroom, kitchen, and dining room were all under the same east-west gable. The kitchen measured 2.95 m by 4.2 m and there were windows on the north, east, and south walls. They were double-hung, four-over-four windows. The doorway on the north elevation led to the enclosed porch and had two doors. One opened in, and the other opened out. The kitchen walls were sheetrock and have been painted yellow.

The east porch was built before the west porch. Both had shed roofs supported by 2x4s. The floors were 2x6s set on vertical 1x6s and brick piers. The flooring was pine 1x3s. The east porch roof rafters were 2x4s, the purlins were 1x3 set on 12-inch centers, and the shingles were cedar. The west porch roof was made with 2x4s on 2-foot centers and 1x6s laid north-south. Cedar shingles were never used on this porch. Both porches were covered with asphalt shingles.

The kitchen porch had a shed roof originally covered with cedar shingles. Later it was resurfaced with asphalt shingles and lastly by corrugated metal sheeting. The porch was screened; the west end had been enclosed to form a bathroom; and the center was a laundry room.

Cellar: The standing cellar was about 8 m west of the 1909 house. It was constructed of limestone and mortar. It was oriented east-west, with the entry on the house side (east), and a vent on the west elevation. The cellar was about 3.8 m east-west and 1.7 m north-south.

The six steps leading into the cellar were limestone, and the door was 2x4s, 1x4s, and galvanized metal. At one time, the entry and interior walls of the cellar were capped with concrete. Much of this has chipped away. Wooden shelving and 20 to 30 jars of preserved fruits and vegetables remained in the cellar.

Outbuildings: The barns/sheds have collapsed or have been removed. They were frame, dated to the more recent house occupation, and were used for grain storage, equipment storage, and stables.

Dendrochronological Investigations: None.

Proton Magnetometer Survey: A magnetometer survey was conducted in the southern site area where the older farmstead was located. Following initial testing, a magnetometer survey was recommended to identify subsurface anomalies that could be identified as archaeologically significant. The testing results indicated that an early farmstead was located in the southern portion of 41DN224, which was not recorded during the survey phase. Features in this area included a collapsed cellar, a collapsed well, and the ca. 1855 dwelling. Several poorly understood subsurface features were recorded at S388 E348 (Feature 3) and S404 E356 (Feature 1). Both were encountered in 50x50-cm units. Feature 3 was identified as a collapsed cellar, and Feature 1 was identified as a postmold associated with an earlier dwelling (ca. 1850s), or later outbuilding built in this same location.

Based on this information, four blocks were surveyed (Figure 8-79), including two measuring 20x20 m (Blocks 2 and 4) and two measuring 20 m north-south by 10 m east-west (Blocks 1 and 3). They were placed to include the entire area south of the collapsed well and cellar, and the southern edge of the ca. 1855 dwelling. Features 1 and 3 were included within the survey area.

The survey was conducted by personnel from the Department of Geology, University of Texas at Arlington, under the direction of Dr. Brooks Ellwood. The primary vegetation within the survey area was mixed grasses, small shrubs, and several large trees. An intensive surface reconnaissance was conducted to remove all recent metal present on the surface, including several metal drying racks associated with an outbuilding that had been located south of the ca. 1855 house, and metal cables associated with collapsed utility poles. A small number of excavation units had been dug in the survey area.

The values produced by the proton magnetometer ranged from -500 to +500. The negative values ranged primarily between -1 and -60, and are not included in the results shown in Figure 8-79. Three major anomalies were visible, including the southern portion of the ca. 1855 dwelling. It was represented by positive values ranging from +100 to +500. A second anomaly was located at S193 to S197 and E351 to E353. It was represented by only high positive values, ranging from +162 to +500. This anomaly was situated between several cultural features and probably reflects disturbed areas. The northwest edge of the anomaly abuts Feature 3 (Anomaly 3), which was represented by moderate positive (+50 to +90) and negative values (-50 to -106). Southwest of Anomaly 2 is an early dwelling area (ca. 1850s) and a later outbuilding. A dense sheet refuse band was also identified between Anomalies 1 2, and 3, and moderate positive and negative values (-20 to -100 and +20 to +100) were recorded. Anomaly 4 was identified east of the ca. 1850s dwelling at S401 to S406 and E334 to E340. It extended south beyond the survey area. It was represented by high positive values only, ranging from +100 to +500.

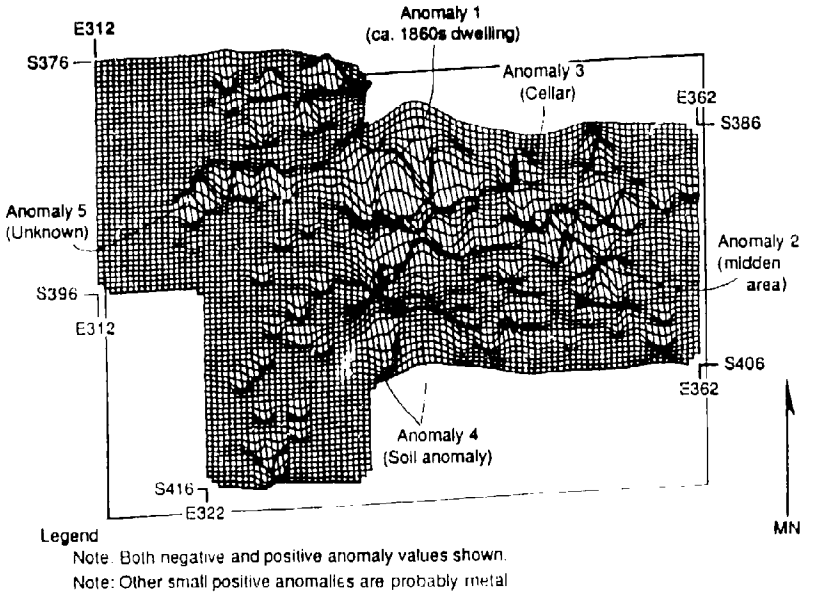


Figure 8-79. Magnetometer survey map of the negative and positive magnetometer values in the older component at 41DN224. The locations of major architectural remains and subsurface features are shown. The outbuilding foundation correlates with Anomaly 2 (deposits associated with the 1850/60s dwelling occupation).

Isolated high positive anomalies (+500 values) were recorded at several locations and probably reflect buried metal. They were not found to be associated with subsurface features. A moderate positive anomaly (Anomaly 5) was identified west of the house, but was not associated with a known feature.

Testing of Anomaly 1 included a hand-excavated trench (Trench 3) and a backhoe trench (BHT 3). A 50x50-cm unit excavated on the 8-m grid was expanded into a 1x1-m unit within Anomaly 3 (Feature 3). After this work was completed, a backhoe trench was excavated north-south through that anomaly, and the west wall was profiled. Two backhoe trenches were excavated in Anomaly 4, including the area outside the magnetometer survey. Soil samples were recovered for organic testing. Anomaly 4 appeared as a dense organic deposit within the exposed profiles. It was interpreted as a possible animal pen.

Excavation Method: The sheet refuse investigations included excavation of 78 50x50-cm units, five hand-excavated trenches composed of contiguous 1x.50-m units, seven backhoe trenches, and three 1x1 m units. The 50x50-cm units were dug on an 8-m grid across the site to recover information on site size, age, function, integrity, and to recover a representative sample of subsurface artifacts. Two components were identified. Thirty-six units were dug in the newer component (north dwelling area), and 42 were dug in the older component (south dwelling area). Following this initial excavation phase, more intensive investigations were conducted in the older component. The three 1x1-m units were excavated to expose features (Features 1, 2, and 3) uncovered within 50x50-cm units. The hand-excavated trenches were placed to recover architectural information associated with collapsed or removed structures and a representative sample of the sheet refuse deposits. The backhoe trenches were excavated to examine magnetic anomalies and subsurface features identified during the initial excavation phase.

Backhoe Trench 1 was oriented north-south through a collapsed cellar (Feature 5) associated with the earlier component (ca. 1855 dwelling). An east-west trench (BHT 2) was dug cross-cutting BHT 1 to examine a shallow depression west of the cellar. This trench revealed a buried sandstone well (Feature 4) that had been filled in after 1940. Backhoe Trenches 3 and 5 were placed to recover data on the ca. 1855 dwelling and sheet refuse deposits west of the structure. Backhoe Trenches 4 and 7 were oriented north-south, and were excavated through Anomaly 4, and BHT 6 bisected Anomaly 3 (Feature 3) north-south.

Excavation Results: The location, function, contents, and occupation association of the features are summarized, followed by a discussion of the artifact assemblage from the different collection areas. These collection areas include 36 50x50-cm units in the sheet refuse in the north dwelling area (ca. 1909 house), and 42 50x50-cm units and five hand-excavated trenches in the south dwelling area. These units provide considerable temporal and spatial data indicating the intensity and length of occupation, and activity areas in both dwelling areas.

Features: Six features were identified during excavation and include a postmold to a large outbuilding (Feature 1), a soil anomaly (Feature 2), two collapsed cellars (Features 3 and 5), a buried well (Feature 4), and the chimney base (Feature 6) to the ca. 1855 house. These features are listed in Table 8-47 are discussed below.

Table 8-47
Features Identified at 41DN224

Feature	Description	Location
1	Postmold	Unit S404 E356, Unit S404.5 E355.5
2	Soil Anomaly	Unit S372 E356, Unit S372.5 E356
3	South Cellar	Unit S388 E348, Unit S388.5 E348
4	Buried Well	BHT 2
5	North Cellar	BHT 1
6	Chimney Base	BHT 3

The six features identified at 41DN224 are located in the southern site area where the older farmstead was situated (Table 8-47). These features were constructed during the earlier occupation, but the well (Feature 4) contained artifacts from the more recent occupation. This well contained whole or nearly-whole bottles deposited after a second well was dug near the newer house and this well was no longer used. A grab sample of bottles from Feature 4 was collected and curated, but not analyzed. The artifacts from Features 1-3 and 5 are summarized in Table 8-48.

Feature 1: Feature 1 was a postmold to a large outbuilding. This postmold was visible in the south wall of Unit S404 E356 at 11 cm below surface. The unit was expanded from a 50x50-cm unit to a 1x1-m unit (S404.5 E355.5). The postmold measured approximately 30x38 cm and extended from about 6 cm to 54 cm below the surface. Feature 1 fill contained rocks placed to add additional post support, architectural items, and sheet refuse. These artifacts are summarized in Table 8-48.

Feature 2: Feature 2 was a soil anomaly located in Unit S372.5 E256 about 3m east of the dirt two-track road that bisects the older house component. This feature was identified as a circular area containing ash, charcoal, and burned earth. No artifacts were found in the feature fill, but a small number were found in the surrounding matrix (see Table 8-48). Feature 2 measures about 30x40 cm in diameter and extends between 23 and 29 cm below the surface. The function of Feature 2 is unknown.

Table 8-48
Artifacts Found in Features 1, 2, 3 and 5 at 41DN224

Artifact Category	Feat. 1	Feat. 2[1]	Feat. 3	Feat. 5
Refined Earthenware	3	6	72	2
Stoneware	1	3	9	1
Porcelain	1		2	1
Bottle Glass	9	9	204	5
Table Glass		1	9	
Lamp Glass			13	
Unid. Glass			8	
Window Glass		1	12	
Machine-Cut Nails	22	11	78	4
Wire Nails		3	413	
Building Material	6	2	178	1
Personal Items			10	
Thin & Heavy Metal	2	2	261	2
Household Items			7	
Machine & Wagon	1		7	
Horse & Stable Gear				2
Ammunition		1		
Misc. Other			18	1
Total	45	39	1301	7

[1] Artifacts listed for Feature 2 were found outside the fill in the surrounding matrix and probably are from the sheet-refuse deposit.

Feature 3: Feature 3 was the south cellar located 4-6 m southeast of the ca. 1855 dwelling. It is similar in construction to the north cellar, but it is unknown which was built first.

The south cellar was collapsed, but not visible on the surface, and was first identified in a 50x50-cm unit at S388 E348. This unit was expanded into a 1x1-m unit (S388.5 E348), but the function of this feature remained unknown. Backhoe Trench 6 was excavated to expose a profile and revealed that Feature 3 was a collapsed cellar constructed with earthen walls and floor and wood support posts. Both the east and west profiles of BHT 6 were drawn and indicate the feature fill contained several ash layers (lenses) and burned matrix. The cellar measured approximately 6x3 m and the entry may have been on the north.

The feature fill exposed in the excavation units includes trash and sheet refuse material, as well as building debris (see Table 8-48). The building debris included pieces of mill boards (door?) with machine-cut nails embedded in them. Several wood fragments were exposed in the BHT walls. Refined earthenwares from Feature 1 yielded a MBD value of 1866 (n=51), stonewares dated 1872 (n=7), while bottle glass dated 1900 (n=21). A combined MBD value of 1876 was obtained for Feature 3.

Feature 4: Feature 4 was a buried sandstone-lined well exposed by BHT 2. The well was not visible at the surface and the walls of BHT 2 slumped during excavation. However, the well was probably buried just below the surface. BHT 2 was excavated to bisect Feature 5 (north cellar) east-west. The well was dry-laid and was filled with sediment and domestic trash, primarily whole and nearly-whole bottles. Feature 4 was about 1 m in diameter, and no evidence of a brick cap was found. BHT 2 was excavated to about 1.5 m below the surface, and because of slumping, no further excavation was undertaken.

This well was built during the early occupation located in the southern site area and was filled during the early twentieth century, sometime after the ca. 1909 dogtrot house was built. Fruit jars, medicine bottles, and beverage bottles were the most common types recovered.

Feature 5: Feature 5 was the north cellar located about 8 m northwest of the ca. 1855 dwelling location. Both the north and south cellars were similar in construction, but it is unknown which was built first. It is interesting to note that the north cellar was built next to the well.

Feature 5 was visible on the ground surface as a large depression. BHT 1 was excavated northeast-southwest to bisect the feature along the shorter axis. The exposed profile revealed a collapsed cellar containing some sheet refuse material and building debris. Log floor joists or support posts (?) were exposed in the west profile of BHT 1 about 1 m to 1.2 m below the center of the depression.

BHT 2 was excavated perpendicular to BHT 1 to expose an east-west cross-section of Feature 1. The cellar measured about 2 m wide. The length was not determined, but it was about 1.2 m deep. No trash dump was found in the depression above the collapsed cellar fill.

Feature 6: Feature 6 was the sandstone chimney base located on the west elevation of the ca. 1855 dwelling (see Figure 8-75). The chimney was situated in the center of the west wall, but only the large cut sandstone base remained. The house sills did not extend under the chimney. The chimney base was further exposed in BHT 3, but excavations failed to uncover evidence of brick and mortar fragments or sandstone blocks that were used in the chimney. This suggests that the fireplace may have been a mudcat, but no conclusive data were recovered.

North Dwelling Area: The 36 50x50-cm units dug in the north dwelling area (20th-century component) contained primarily architectural items, bottle glass, and thin and heavy metal. A comparison of the artifact assemblage from this area with the 50x50-cm units and trenches in the south dwelling area is shown in Table 8-49.

When architectural items, which are highly biased in the north dwelling area because of the proximity of several units to broken windows or building debris, thin and heavy metal, and miscellaneous other (recent trash), are removed from the analysis of these assemblages, important similarities are visible between the north and south dwelling areas. Bottle glass predominates in both areas, followed by refined earthenwares, stonewares, and personal items. Several differences are visible between the two dwelling areas. Machine and wagon parts are more frequent

Table 8-49
Artifact Summary for the North and South Dwelling Areas
at 41DN224 by Collection Area

Artifact Category	North Area 50x50s N	North Area 50x50s %	South Area 50x50s N	South Area 50x50s %	South Area Trenches N	South Area Trenches %
Semi & Coarse Earth.			2	0.13		
Refined Earthenware	6	1.51	75	4.98	214	5.52
Stoneware	5	1.26	37	2.46	85	2.19
Porcelain	1	0.25	9	0.60	25	0.64
Bottle Glass	50	12.59	620	41.17	1212	31.25
Table Glass	2	0.50	8	0.53	33	0.85
Lamp Glass			4	0.27	54	1.39
Unid. Glass	3	0.76	7	0.46	24	0.62
Window Glass	169	42.57	68	4.52	122	3.15
Machine-Cut Nails	1	0.25	128	8.50	297	7.66
Wire Nails	48	12.09	109	7.24	451	11.63
Handmade Brick					2	0.05
Machine-Made Brick	1	0.25	14	0.93		
Building Material	40	10.08	86	5.71	181	4.67
Personal Items	4	1.01	34	2.26	119	3.07
Thin & Heavy Metal	34	8.56	233	15.47	892	23.00
Household Items	1	0.25	25	1.66	46	1.19
Machine & Wagon	5	1.26	18	1.20	23	0.59
Tools	1	0.07	12	0.31		
Horse & Stable	1	0.25	4	0.27	12	0.31
Ammunition			7	0.46	21	0.54
Electrical Items	1	0.25	4	0.27	11	0.28
Misc. Other	25	6.30	13	0.86	42	1.08
Total	397		1506		3878	

than personal items in the north dwelling area, but are less frequent in the south dwelling area. On the other hand, no semi-coarse earthenwares, lamp glass, tools, or ammunition remains were found in the units dug in the north dwelling area, but all occurred in the assemblage from the south dwelling area.

Artifact density in the north dwelling area is relatively low, ranging between 1 and 28 artifacts per 50x50-cm unit, excluding three units with high architectural counts. One unit, S332 E316 was located under a broken window on the south wall of the house and contained 117 window glass sherds.

The artifact assemblage and architectural remains in the north dwelling area date to the late nineteenth and early twentieth centuries. MBD values for refined earthenwares, stonewares, and bottle glass yielded a combined MBD of 1878.82 (n=17) for the north dwelling area (Table 8-50).

South Dwelling Area: The 42 50x50-cm units and five hand-excavated trenches dug in the south dwelling area (19th-century component) contained primarily bottle glass, architectural items, and thin and heavy metal. A comparison of the artifact assemblage from these units and the 50x50-cm units in the north dwelling area is shown in Table 8-49.

Table 8-50
MBD Values for the North and South Dwelling Areas at 41DN224

Artifact Category	North 50x50s	South 50x50s	Trenches
Refined Earthen.	1874.29 (n=7)	1860.78 (n=64)	1861.43 (n=168)
Stonewares	1873.33 (n=3)	1872.14 (n=35)	1871.53 (n=49)
Bottle Glass	1885.71 (n=7)	1896.02 (n=43)	1898.93 (n=148)
Combined	1878.82 (n=17)	1874.25 (142)	1877.99 (n=365)

As mentioned above, when architectural items, thin and heavy metal, and miscellaneous other (recent trash) are excluded, bottle glass predominates the assemblage from the south dwelling area, followed by refined earthenwares, stonewares and personal items. Bottle glass totalled 72.51% in the 50x50-cm units in this area and 64.09% in the hand-excavated trenches.

Artifact density in the south dwelling area is greater than in the north dwelling area. Artifact densities range between 1 and 144 artifacts per 50x50-cm unit located over 4 m from the dwelling. The mean artifact density is 34.47 artifacts per 50x50-cm units excluding sterile units.

The artifact assemblage and architectural remains in the south dwelling area contain both late nineteenth and twentieth-century items. MBD values for refined earthenwares, stonewares, and bottle glass yielded a combined MBD of 1877 for the south dwelling area (50x50-cm units and trenches).

Spatial Distributions: Distribution maps produced for major artifact categories using data from the 50x50-cm units and hand-excavated trenches in the south dwelling area indicate considerable spatial information about the location of major activity areas. The highest densities occur in a band around the dwelling in the south and east yards. Lower densities occur in the outbuilding area southeast of the house and near the well and cellar northwest of the dwelling. The lowest counts occur west of the outbuilding and over 10-12m from the house in the north, east, and southwest yards.

Data from the hand-excavated trenches provide a more detailed spatial look at changes in artifact frequencies in several areas of the sheet refuse deposit. These data support the general trends visible in the 50x50-cm data, but indicate that the 8-m grid spacing used in the south dwelling area is too great to indicate spatial changes within several important activity areas. First, the trench data recovered from the outbuilding indicate a broader distribution of specific artifact categories than is visible in the 50x50-cm data. For example, refined earthenwares are less common in the outbuilding area than between the dwelling and outbuilding, but their occurrence is significant and is not visible in the 50x50-cm data. Secondly, the trench data provides an opportunity to examine spatial change across contiguous units in both high-density and low-density areas.

The hand-excavated trench data indicate refined earthenwares occur in the outbuilding area, but their frequency distribution is also important. Their distribution is important because refined earthenwares are often absent or only occur in very low frequencies in outbuildings at other farmsteads in the project area. As such, their distribution suggests that an earlier dwelling or domestic activity area was located in this area before the outbuilding was built.

In low-density areas, the distribution of artifacts appears discontinuous in the trench data, while in high-density areas, small fluctations are visible and can be examined. These fluctations reveal that artifact density does not drop

in a direct linear fashion as the distance from the dwelling increases. Instead, peaks and valleys occur in the data, and depending on whether or not a 50x50-cm unit is located in a peak or a valley, will affect the general spatial distributions obtained for these discontinuous units. Trench 4 west of the dwelling is located in a low-density area, while Trench 5 and the north half of Trench 1 are in moderate to high-density areas. Trench 3 and the south half of Trench 1 contain low-density deposits.

Refined earthenwares form a band around the dwelling, with the highest concentration between 2-12 m from the house in the south yard. They also occur in the north half of the outbuilding, but are uncommon in the south half of the outbuilding and are absent in the southwest yard.

Stonewares occur in very low frequencies (1-2 sherds per unit) in all yards except the southwest with several high-density units southeast of the house between the dwelling and outbuilding and in one unit 6 m north of the house. They occur in the outbuilding where they are found primarily in the north half.

Bottle glass is dispersed with the highest frequencies in 50x50-cm units around the dwelling, in features, and the outbuilding. Few sherds occur in the southwest yard or in units over 12-15 m from the dwelling. The trench data also indicate high densities between the house and outbuilding, as well as in the north half of the outbuilding.

Window glass sherds concentrate within 8 m of the house and occur in Trenches 1-5, primarily near the dwelling and the north half of the outbuilding. Machine-cut nails cluster in several areas and include a concentration southwest of the dwelling and a second one northeast of the house. A third cluster occurs in the north half of the outbuilding. On the other hand, wire nails cluster under the dwelling and within 8 m south of the house, near the sandstone well, and in the outbuilding. However, the outbuilding cluster is not visible in the 50x50-cm data, but is evident in the trench data.

Faunal Remains:

TOTAL BONE = 500

Identified fauna (n=161)

- small fish - 9
- Lepisosteus cf. osseus (?long nose gar) - 1
- Bufo woodhousei (Woodhouse's toad) - 1
- Colinus virginianus (bobwhite) - 1
- Meleagris gallopavo (turkey) - 1
- Gallus gallus (domestic chicken) - 20 (MNI=2)
- medium bird - 7
- Didelphis virginiana (opossum) - 3
- Sylvilagus floridanus (cottontail) - 5
- Lepus californicus (jack rabbit) - 8
- Sciurus sp. (squirrel) - 5
- Sigmodon hispidus (cottonrat) - 3
- Rattus cf. norvegicus (?Norway rat) - 2
- rodent sp. - 1
- small mammal - 3
- Canidae (dog/coyote) - 1
- medium mammal - 1
- Sus scrofa (domestic pig) - 57 (MNI=3)
- Bos taurus (domestic cattle) - 7
- large mammal - 25

Unidentified bone (n=339)

The species list for this site is quite diverse, with four classes of vertebrates represented. The toad and small rodents are likely intrusive. Hunting and fishing is suggested by remains of small game and fish. Quail, turkey, rabbits, and squirrel were commonly hunted at the turn of the century as now, especially by youth.

Remains of pig dominate the assemblage, and those of cattle and chicken complete the typical farmstead larder represented at this site. The NISP for pig bones is 57, but fully 30% of those are isolated teeth. The remainder of the pig sample indicates a minimum of three individuals, with three different ages at slaughter (<1, 1-1.5, and over 2 years of age). Pig remains were found in the trenches emplaced under the 1855 house, in the root cellar north of that structure, and in Trench 3 between the 1855 house and the outbuilding to the south. Only two pig bones are burned: a charred fragment of tooth enamel and a calcined calcaneum. Three elements exhibit cut marks: one rib with a deep cut possibly made with a cleaver, another rib fragment with a slight oblique cut, and a calcaneum that has been sliced away from the ham bone.

At least two chickens are represented. Most of the chicken bones were recovered from Trench 3 and around the root cellar between the old houses; one element was found in the yard area near the 1860s house (Unit 27). Another cluster of chicken bones was found at the northeast corner of the 1909 house.

Strictly estimating, only one bovid is identified from the seven elements assigned to cattle. However, the distribution of these remains suggests more than one calf less than 1 year at death. All but one of these elements were recovered from Unit 77 at the northeast corner of the main house; the exception is a deciduous tooth fragment from Trench 1 underneath the 1850's house. Five of the elements from Unit 77 exhibit saw cut marks, representing cuts from the foreshank, the arm, and the round probably as steaks or roasts. Based on Lyman's (1987) model of economic rank of meat cuts, these cuts represent the entire spectrum of cost efficiency, suggesting that the animal was home butchered instead of purchased.

Of the 25 elements categorized as large mammal, 13 are cut with a saw. The distribution of these bones suggests that very few of the bones categorized as large mammal might be from cattle. These fragmentary elements are more likely from swine since they cluster with the other pig remains. The cut elements in this group are rib shafts, vertebral fragments, and splinters that retain evidence of cut marks.

The distribution of bone from these three taxa indicates distinct concentrations under the 1850s house and between that house feature and the 1860s house, specifically Trenches 1 and 3, and Feature 3 (cellar). Less than 10 elements identified to these animals were recovered from 50x50s in the yard. Feature 3 generated fully 45% of the identified remains, including eggshells, toad, chicken and other bird, opossum, cottontail and jackrabbit, squirrel, pig, and large mammal.

Summary: Site 41DN224 contained two house sites occupied by the Jones family from the 1850s to 1980s. The north site area includes a frame house built about 1909, a pump house, windmill, stone and concrete cellar, foundations of a large barn, remains of three small sheds, a windmill and water tank, a concrete water trough, and a automobile engine-powered sawmill. The south dwelling area contained the sills and piers of the ca. 1855 dwelling, remains of a large outbuilding, two collapsed cellars, and a buried sandstone-lined well. One cellar depression was visible on the surface. The other cellar and the stone-lined well were exposed during excavation.

The site was recorded in 1981 and determined eligible for the National Register of Historic Places in 1982 based on architectural and archaeological significance. The architecturally significant buildings include both houses and the barn. The ca. 1855 house was a single room dwelling with hewn sills and mortise and tenon joints. The ca. 1909 house was a frame dogtrot that has undergone several modification phases. None of the outbuildings remained standing when testing began in 1987.

A magnetometer survey was conducted in the south dwelling area (19th century component) where the older farmstead was located. Major anomalies were investigated using hand-excavated trenches, backhoe trenches, or hand-excavated test units. A total of 78 50x50-cm units, five hand-excavated trenches comprised of contiguous 1x0.50-m units, seven backhoe trenches and three 1x1-m units were excavated at the entire site.

Six features were identified during excavation and include a postmold to a large outbuilding (Feature 1), a soil anomaly (Feature 2), two collapsed cellars (Features 3 and 5), a buried well (Feature 4), and the chimney base (Feature 6) to the ca. 1855 house. These features are listed in Table 8-47 and were discussed above.

The sheet refuse midden from the south dwelling area at 41DN224 appeared similar in content and distribution with the yard refuse pattern recorded at other intact nineteenth-century farmstead components in the project area. The highest artifact densities were near the house, with a marked decrease in sheet refuse over 12 m from the dwelling. The highest densities occurred near the southeast corner of the dwelling and inside the large outbuilding southeast of the house. Fewer sheet refuse remains were found in the north yard although a well and cellar were located near the dwelling in this yard.

No visible trash dumps were found associated with the nineteenth-century component, which supports the interpretation that rural families during this period did not have access to nor utilize many disposable products. The trash dump found in the filled well northwest of the ca. 1855 dwelling was deposited during the twentieth century. This well was filled sometime after a new well was dug near the ca. 1909 house.

The architectural and land use history of 41DN224 provides information about lifeways changes in this region over the last 140 years. The south dwelling area provides information about the nineteenth-century occupation of this farm. In contrast, the north dwelling area contains data on the twentieth-century lifeways. Striking differences are evident between these two components.

The ca. 1855 dwelling built by the Jones family was small and utilized both local and imported materials (cypress). This early dwelling was probably log, which was the most common dwelling type during this period. The houses built by other members of the Jones family at this time were log, i.e., 41DN107, 41DN250, 41CO111. This early dwelling at 41DN224 was a single room structure similar to the house built on a neighboring farm (41DN248) owned by the John Johnson family (Lebo in prep). Both were set on stone piers, and the Johnson and other Jones' dwellings each had stone chimneys, a small number of windows, and a porch on the front. Some had shed additions on the rear. The ca. 1855 dwelling at 41DN224 probably had a full porch on one end and a shed addition on the other.

Like other early farmsteads in the central part of the project area, a well and at least one cellar was situated near the dwelling (e.g., 41DN77). It is unlikely that two cellars would have been used contemporaneously. As both cellars near the ca. 1855 dwelling were earthen, it is probable that one was built to replace the other after the initial cellar began to deteriorate beyond repair. Similar construction of replacement cellars was documented at nearby farms, e.g., 41DN166, and 41DN167. As mentioned in Chapter 10, cellars were common in the project area. Most families constructed cellars to provide storage for vegetables and fruits, milk, meat, and other foods. They were also utilized as storm cellars during bad weather.

Some architectural variability is also evident among the early farmsteads established by different members of the Jones family and their early neighbors. Wells were dug within 20 m or less at most of these farmsteads (e.g., 41DN107, 41DN224, 41DN250, and 41CO111), but the well at the Johnson farm (41DN248) was over 100 m from their dwelling. This well was used as a community well rather than a family well. Some variability also occurs among these farms in the utilization of cellars. Earthen cellars were exposed during excavations at 41DN107 and 41DN224, and an earthen cellar was reported but not excavated at the Johnson farm (41DN248).

No small sheds were found associated with the ca. 1855 house at 41DN224. Given the data recovered from other early farmsteads, the John Jones family probably had at least one small shed located 20 m or more from the

house. Small sheds were documented at 41DN248, 41CO111, and were reported at 41DN250 (Jones Farm). The possible animal pen identified from trenching of Anomaly 4 may be associated with a small shed in this dwelling area. The large outbuilding may have been a shed or barn, which is unclear.

The large outbuilding may have been utilized in part as a barn for cattle raised by the John Jones family. According to tax roll data examined for the years 1855 to 1910, the family raised cattle on this property as early as 1855. In 1855 they had 63 head of cattle. Between 1855 and 1889, they raised between a low of 11 head and a high of 100 head of cattle per year. These figures are much too high for a farmer raising cattle for home consumption. As such, the large outbuilding southeast of the ca. 1855 dwelling may have been used as a barn. The family also raised sheep, hogs, and between 4 and 28 horses/mules per year during this period.

The north dwelling area contained about 80 years of occupation history, which includes a change from traditional to popular lifeways. The original dogtrot floorplan of the ca. 1909 dwelling reflects a common building style of the nineteenth century. The fenced yard surrounding the house was also documented at many nineteenth century farmsteads. The stone cellar, pumphouse, large barn, and the concrete water troughs reflect common twentieth century structures. The distribution of these structures is shown in Figure 8-73. Also note in this figure the walkways associated with the dwelling, the support structures near the house, and the architectural and yard layout complexity of the north dwelling area.

The cellar in the north dwelling area is similar in style to the cellar at 41DN157. Many new cellars were built about 1908-1909 after a tornado in 1907 destroyed the nearby town of Hemming. Some of these cellars were built of stone, and others were concrete. The water troughs, fenced pens, sheds, and the large barn reflect continuance of cattle and horse/mule raising on this farm.

The homemade sawmill operation located at the northern extent of the north dwelling area (see Figure 8-73) also reflects the self-sufficient nature of many rural families in this area. Many families cut their own wood on their property for use in their hearths, cooking stoves, and for building construction. Other families acquired their wood from neighbors in exchange for other goods or services. For example, Roy Jones who resided on an adjacent farm had a portable saw for cutting fire wood on his property (41DN250).

In summary, the two components at 41DN224 provide information about the occupation of a farmstead over an almost 140-year period by members of the Jones family. The artifactual and architectural history of this farm is representative of neighboring farms occupied during this period, e.g., 41DN250. Several neighboring farms, i.e., 41DN166 and 41DN248, contain an archaeological record similar to the south component but not the north. The adjacent Jones farm at 41DN191, in contrast, contains a record only for the twentieth century. A separate report on the archaeology and history of 41DN248 and 41DN250 will be published (Lebo in prep).

41DN233

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	645' amsl
Scheduled Investigations	Limited testing, archival
Soil Association	Birome-Rayex-Aubrey complex
Cultural Affiliation	Historic (ca. 1860s to e. 20th century)

Description: This site is characterized as a sparse artifact scatter with a small depression and a small mound occurring on a grass-covered slope (Figure 8-80). A barbed-wire fence running north-south is located west of the site. The site is identified as a possible African-American farmstead located about 50 m west of 41DN234. The topography is hilly, and the site is on the west slope of a knoll within a proposed screened shelter loop. The main site area is 80 m east-west by 80 m north-south based on surface and buried artifacts.

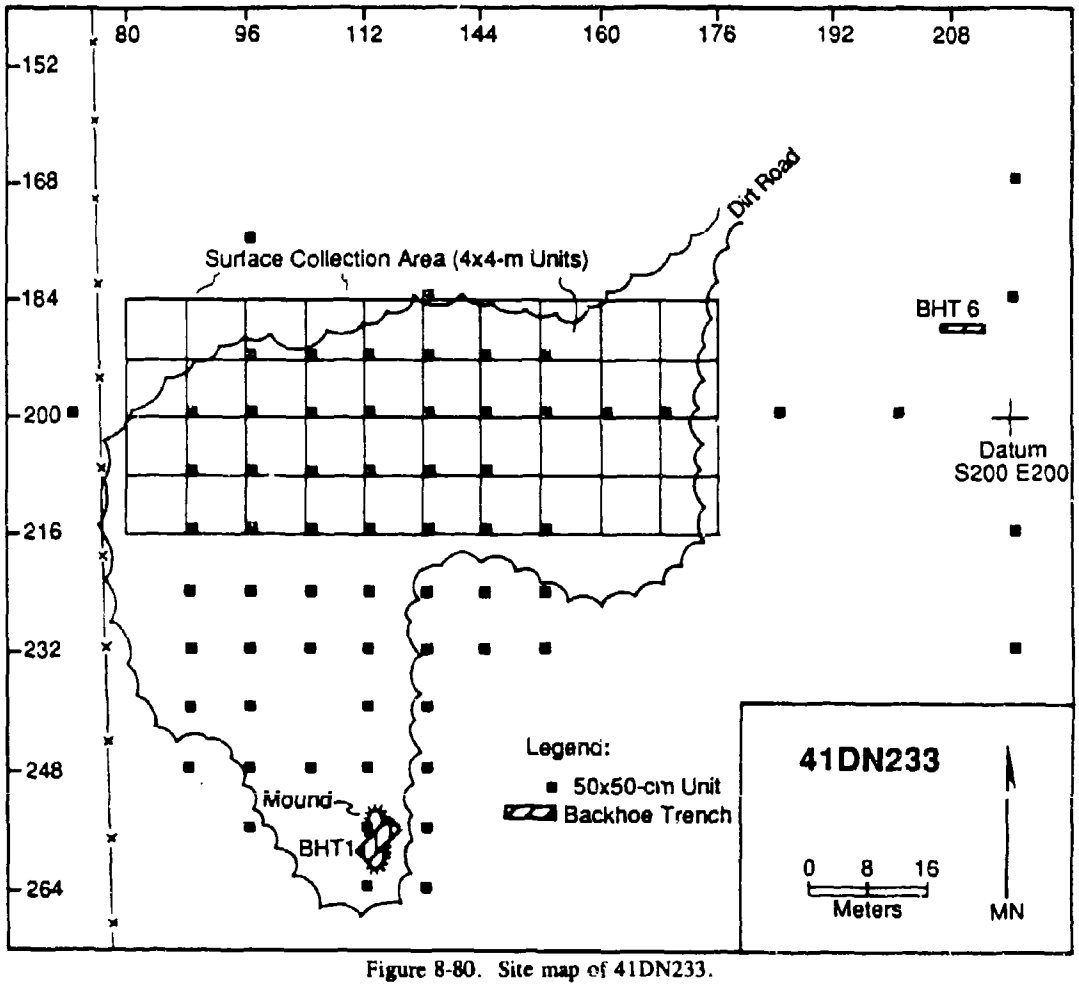


Figure 8-80. Site map of 41DN233.

Previous Investigations: The site was recorded by ECI in 1981. Testing was recommended to determine eligibility for nomination to the National Register and to obtain data from sites in a known African-American community in Crosgrove's Bottom (Skinner et al. 1982a). These recommendations were supported when the site was revisited in 1985 (Ferring 1986).

Archival Investigations: Sites 41DN233 and 41DN234 are located on a 75-acre tract of the Hannah Estes survey (A-389). The survey (Table A-28) contained a league and labor of land, and was patented to W. Oldham, assignee for Hannah Estes. The entire survey was conveyed to S. Vittitow in 1855, and by his heirs to J. Brown in 1884. The original occupation at these sites may date to this period. A gap occurs in the records between 1884 and 1895 when A. P. Crosgrove sold the land to the Buchanan and Combs families. A. P. Crosgrove sold other tracts of land during this period to African-American farmers. Among these other sites are 41DN146, 41DN198, and 41DN202.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Testing Method: Systematic surface collecting was conducted using a grid measuring 32 m north-south by 80-m east-west. A total of 160 4x4-m units were collected after which 20 50x50-cm units were excavated on an 8-m grid. Additional testing was recommended, and a second series of 50x50-cm units were dug. A total of 62 were excavated. A single backhoe trench (BHT 1) was excavated through a mound located at the southern edge of the site. This feature was initially thought to be a cellar, but the profile exposed in the backhoe trench (see Figure 8-80) indicated it was natural, rather than cultural in origin.

Testing Results: No features, including the former dwelling location, or a well, cistern, or cellar were found during testing. A total of 807 artifacts were recovered from test units and an additional 212 from surface collecting.

Ceramics and bottle glass sherds account for 84.36% of the artifacts recovered during surface collecting, while thin and heavy metal fragments (33.21%), and architectural items (31.72%) comprise the bulk of the buried artifacts collected (Table 8-51).

Table 8-51
Artifact Assemblage from 41DN233

Artifact Category	50x50s		Surface Coll.	
	N	%	N	%
Semi & Coarse Earthenware	1	0.12	3	1.42
Refined Earthenware	50	6.20	67	31.60
Stoneware	19	2.35	4	1.89
Porcelain	5	0.62	5	2.36
Bottle Glass	124	15.37	88	41.51
Table Glass	5	0.62	7	3.30
Lamp Glass	11	1.36	8	3.77
Unid. Glass	?	0.25		
Window Glass	8	1.00	5	2.36
Machine-Cut Nails	95	11.77	1	0.47
Wire Nails	82	10.16		
Building Material	71	8.80		
Personal Items	20	2.48	3	1.42
Thin & Heavy Metal	268	33.21	4	1.89
Household Items	10	1.24	5	2.36
Machine & Wagon	6	0.74	5	2.36
Tools	1	0.12	1	0.47
Horse & Stable Gear	3	0.37		
Ammunition	3	0.37	2	0.94
Electrical Items	1	0.12		
Misc. Other	22	2.73	2	0.94
Total	807		212	

Total artifact density for the test units indicates that buried sheet refuse deposits cluster in the center of the site near, but not exclusively, at the lowest elevation. Similar results are indicated in the surface collection data, suggesting a correlation between elevation and artifact density. The depositional matrix is extremely sandy, and the sheet refuse deposit extends up to 50 cm below surface.

The spatial distribution of machine-cut nails (53.93%) and wire nails overlapped, and both concentrate between S216-S232 and E104-E128. A few sandstones occur in the forested area near S224 E124, but no indications were found that they were piers. Nails and window glass sherds concentrate in this area, suggesting that the dwelling may have been located near S224 E104-E112. No stoneware or refined earthenwares were found in the units at S224 E104 and S224 E112 but clustered around them. Stonewares were found primarily southwest or northwest of these units, while refined earthenwares occurred around these units but were most common to the southwest or north. Bottle glass was scattered, exhibiting the greatest distribution but occurred in only two units (n=4 sherds) north of the S208 line.

The refined earthenwares yielded a mean beginning date of 1857, and no difference was found between the dates obtained for the surface collection material and the buried sheet refuse sherds. On the other hand, stoneware sherds from surface collecting yielded a mean beginning date of 1894 (n=4), while the buried sheet refuse sherds (n=18) dated 1879. A combined date of 1882 was obtained. The disparity between the collections may reflect the small sample size obtained from surface collecting. A bristol ale bottle sherd was collected from the surface but was not included in the calculation of mean beginning dates. A similar disparity occurred among the surface collection (n=20) and buried sheet refuse (n=7) bottle glass sherds. A mean beginning date of 1885 was obtained for the surface collection, 1867 for the subsurface collection, and 1880 for the combined collections.

A combined mean beginning date of 1865, based on the datable ceramics and bottle glass sherds, was obtained for initial site occupation. This suggests the site was first occupied when the property was owned by S. Vittitow. The architectural remains also support a late nineteenth century date for initial occupation.

Faunal Remains:

TOTAL BONE = 8

Identified fauna (n=2)
Sus scrofa (domestic pig) - 2

Unidentified bone (n=6)

Pig tooth enamel is generally indicative of the presence of hogs and by extrapolation, hog butchering on site and the disposal of non-usable waste. The tooth fragments from this site, however, are from immature individual(s) and may represent market hog raising without indication of home consumption.

Summary: Artifacts collected from the surface and sheet refuse deposit indicate a late nineteenth-century farmstead occupation. Little twentieth-century material, and no features or structures were found. While about an equal number of machine-cut and wire nails were found, no twentieth-century ceramics or bottle glass were recovered.

This site exhibits no real potential for providing spatial information for intra- and intersite comparisons than other farmstead sites dating to this period. The colluvial movement of artifacts and the lack of subsurface features combine to yield an artifact sample, but little more.

The farmstead at 41DN233 was located in a predominately African-American area in Crosgrove's Bottom situated east of Isle du Bois Creek and south of the old Highway 455. This community was farmed by

sharecroppers, tenants, and landowners. Many landowning families in this area originally worked the land as sharecroppers or tenants and later purchased some of the land they worked.

Site 41DN233 was occupied during the late nineteenth century, and possibly initially occupied as early as the 1860s. The sheet refuse deposit was low density and similar in content with other early, small farmsteads in the project area. However, the location of the site is interesting. Both sites 41DN233 and 41DN234 are located on a ridge above Isle du Bois Creek, but 41DN233 is located on a slope. There is no level ground in the area containing the domestic sheet refuse deposit. In addition, no structural remains were found. No well or cellar were found, although a well was reported for 41DN234; this well was not found during testing.

The absence of architectural remains, other than window glass and nails in the sheet refuse, suggests that few structures were located at this farmstead, and those that occurred here were probably log. Log dwellings, particularly single pen log houses were common in this area, and with the exception of 41DN198, all of the nineteenth-century dwellings examined in the Crosgrove's Bottom community were single pen log houses. The absence of a well suggests the family lacked status, the distance to the water table may have made a nearby well economical unfeasible, or a community well was available at a nearby farm at a lower elevation. The absence of a cellar may reflect ethnic or cultural differences.

Comparisons of the artifact and architectural data from this farmstead indicate that the family at 41DN233 probably lived in a single pen log dwelling and had few or no support structures (e.g., shed). Further, this family also probably were sharecroppers or tenants, working the nearby slopes.

41DN234

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	660' amsl
Scheduled Investigations	Limited testing, archival
Soil Association	Birome-Rayex-Aubrey complex
Cultural Affiliation	Historic (c. late 1860s to c. 20th century)

Description: This site is a sparse artifact scatter that extended over 100 m^2 on the eastern edge of a hilltop east of 41DN233 (Figure 8-81). No surface features, including a well or a house mound or cellar, were visible. Previously reported sandstone piers and a well (Texas Parks and Wildlife 1984:135) were not found. Sandstone outcropped on the site and surrounding vicinity and no definitive building piers were found during testing or excavation. The main site area, based on surface and subsurface artifact distributions, is approximately 56 m east-west by 52 m north-south.

Previous Investigations: The site was recorded by ECI in 1982, and no further work was recommended (Skinner et al. 1982a:A5-17). The site was re-recorded by Ron Ralph from Texas Parks and Wildlife, and testing and archival research was recommended to determine eligibility for nomination to the National Register.

The site was revisited in 1985 by personnel from NTSU. Testing was recommended to determine National Register eligibility and to recover additional information about an African-American farming community of Crosgrove's Bottom, which was located in the southeastern part of the reservoir project area (see Chapter 3).

Archival Investigations: Sites 41DN233 and 41DN234 are located on a 75-acre tract of the Hannah Estes survey (A-389). The survey (Table A-28) was a league and labor of land, and was patented to W. Oldham, assignee for Hannah Estes. The entire survey was conveyed to S. Vittitow in 1855, and by his heirs to J. Brown in 1884. The original occupation at these sites may date to the 1884 period. A gap occurs in the records between 1884 and 1895

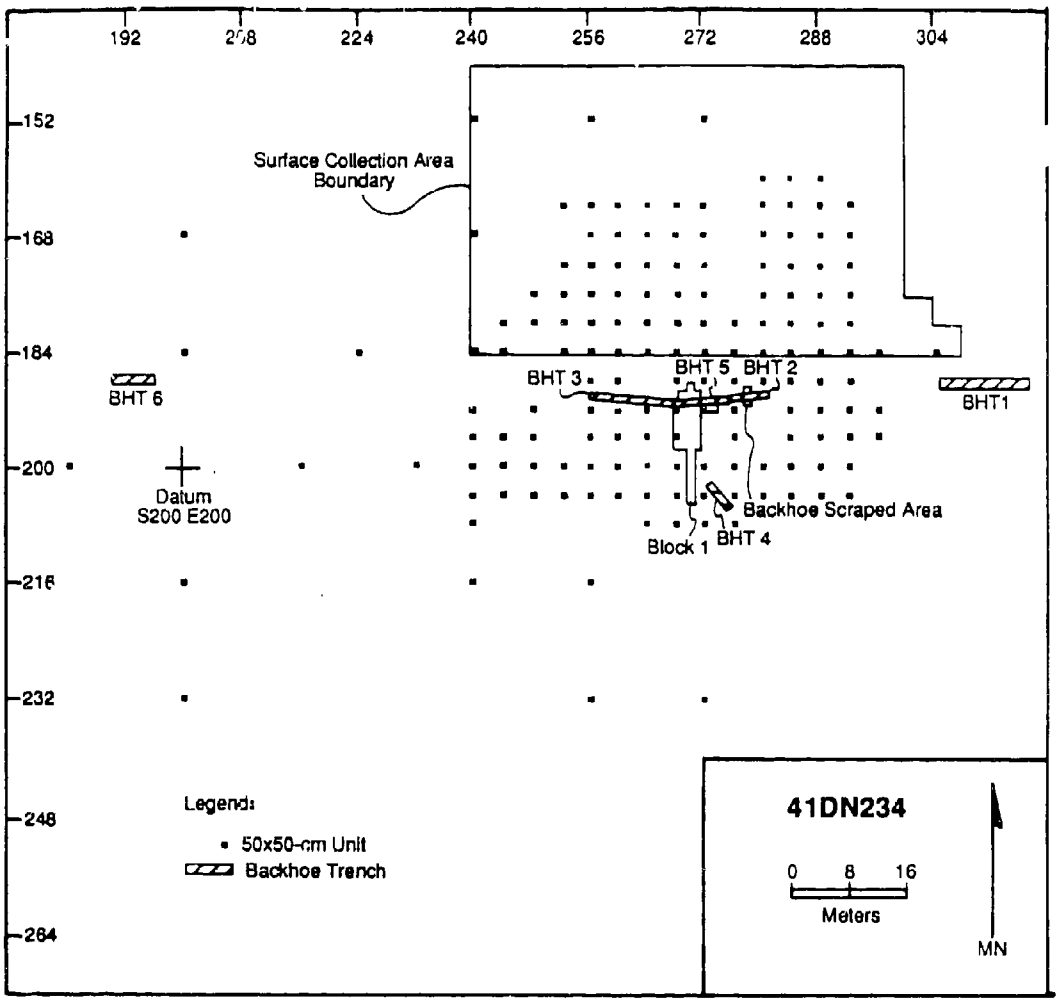


Figure 8-81. Site map of 41DN234.

when A. P. Crosgrove sold the land to the Buchanan and Combs families. A. P. Crosgrove sold other tracts of land during this period to African-American farmers. Among these other sites are 41DN146, 41DN198, and 41DN202.

Architectural Investigations: None.

Dendrochronological Investigations: None.

Testing Method: Twenty-eight 50x50-cm units were excavated on a 16-m grid, and 153 4x4-m contiguous units

were systematically surface collected within the main part of the site (see Figure 8-81). The distributions of total artifacts and refined earthenwares from the surface collection area are shown in Figure 8-82.

Excavation Method: Based on the testing results, the site was recommended for additional excavations. A 4-m grid interval was selected to recover a larger sample of the sheet refuse deposit. A total of 123 additional 50x50-cm units were dug. By plotting the spatial distribution of the recovered artifacts, the probable house area was determined, and Block 1 (see Figure 8-81) was laid in and excavated to recover architectural remains from the house and a larger sample of sheet refuse deposits under and immediately adjacent to the dwelling. A total of 49 1x1-m units were excavated in Block 1. Six backhoe trenches were dug to reconstruct the geological history of the site area. No cultural material was recovered from the backhoe trenches.

Geology: Site 41DN234 is located on a high bedrock remnant east of Isle du Bois Creek and several kilometers northeast of the confluence with the Elm Fork of the Trinity River. The site is situated on a knob of Woodbine sandstone that is one of many similar landforms in this part of the project area. This high upland setting on the centrally eroded regolithic bedrock surface is fundamental to interpreting the geology and site formation processes at this site and 41DN233 to the west.

The site is located at the eastern end of the bedrock remnant. It is surrounded by lower terrain in all directions. The site area drops off more steeply to the east towards a gully which ultimately feeds into Isle du Bois Creek.

A profile is described in the eastern end of BHT 1 in the central portion of the site (Table 8-52). This 1.9-m deep trench exposed deep sandy deposits in which a well-developed soil had formed. The upper portion of the profile is composed of gravelly-loamy sands and sands. A thick, pale E-horizon with several subhorizons occurs to a depth of 92 cm below surface. This is underlain by a relatively thin argilic horizon and below that is deeply-weathered bedrock sandstones. While some colluvial or alluvial(?) sedimentation may have occurred, this profile may also be interpreted as an extremely mature soil that has formed in exhumed sandy bedrock. The very sandy texture of the soil implies that both faunalturbation and plant activity may have reworked artifacts considerably in the profile. At least the very sandy texture of the soil would have made human activities much more prone to rework artifacts vertically through the profile. Also, clearing or plowing which may have been associated with the historic occupations would have enhanced the possibility of transporting sandy sediment across the surface through both aeolian activity and slopewash processes towards the lower portions of the site.

Table 8-52
Soil Profile Description for BHT 1 at 41DN234

Horizon	Depth (cms)	Color Moist	Texture	Structure	Boundary
O	0-3		litter		
A	3-12	10YR2/2	grLS	1mgr	ci
A2	12-23	10YR3/3	mLS	m	ci
E	23-45	7.5YR5/4	grLS-S	m	ci
2E2	45-75	7.5YR5/6	grS	m	gi
2E3	75-92	7.5YR5/7	grLS	m	ci
3Bt	92-102	10YR4/8	grSC	m	ci
R	102-190	mottled, weathered sandstone			

Key:
Texture: gr=gravelly, LS=loamy sand, S=sand, SC=sandy clay.
Structure: grade/class/type; grade: 1=weak; class: m=medium; type: gr=granular, m=massive.
Boundary: distinctness/topography; distinctness: c=clear; topography: i=irregular.

Excavation Results: The sheet refuse deposit varied considerably in depth across the site. Block 1 was at the highest elevation. Units located near the fringe of the excavated area (see Figure 8-81) were sterile or contained deposits between 0 to 10 cm below surface. Few contained material below 10 cm. Only one unit between E192 and E240, on a slope, contained artifacts. Units located on slopes generally contained shallower deposits, while units near the crest of the hill or at the highest elevation contained deeper deposits. Units containing material between 40 to 50 cm below surface were located just northwest of Block 1, the house area.

The artifact assemblages recovered from the 50x50-cm units, Block 1, and surface collecting are shown in Table 8-53. Architectural items predominate the block excavation (46.09%), while bottle glass (26.72%) was the most common artifact category in the sheet refuse deposit. The surface collection was highly biased towards bottle glass and ceramic sherds.

Table 8-53
Artifact Assemblage from 41DN234

Artifact Category	50x50s		Surf. Coll.		Block 1	
	N	%	N	%	N	%
Refined Earthenware	98	13.78	25	26.88	307	8.00
Stoneware	49	6.89	10	10.75	130	3.39
Porcelain	5	0.70	2	2.15	8	0.21
Bottle Glass	190	26.72	38	40.86	764	19.92
Table Glass	4	0.56			21	0.55
Lamp Glass	3	0.42			31	0.81
Unid. Glass	4	0.56	1	1.08	28	0.73
Window Glass	42	5.91	3	3.23	562	14.65
Machine-Cut Nails	81	11.39			1002	26.12
Wire Nails	9	1.27			95	2.48
Handmade Brick					4	0.10
Building Material	25	3.52			105	2.74
Personal Items	18	2.53			203	5.29
Thin & Heavy Metal	155	21.80	9	9.68	422	11.00
Household Items	12	1.69	1	1.08	16	0.42
Machine & Wagon	2	0.28			17	0.44
Tools	3	0.42			8	0.21
Horse & Stable Gear	2	0.20			10	0.26
Ammunition	4	0.56	4	4.30	15	0.39
Electrical Items					3	0.08
Misc. Other	5	0.70			80	2.09
Total	711		93		3836	

Similar mean beginning dates were obtained for the ceramics and bottle glass from the different assemblages. Refined earthenwares from surface collecting yielded a mean beginning date of 1864 (n=22 sherds), while the 50x50-cm units produced a date of 1861 (n=88 sherds), and the block sample (n=249 sherds) dated 1862. A combined date of 1862 (n=359 sherds) was obtained for the total refined earthenware sample. Stonewares yielded dates ranging from 1866 (n=117 sherds) for Block 1 to 1869 (n=35 sherds) for the 50x50-cm units, and 1870 for the surface collection (n=10 sherds). A mean beginning date of 1867 (n=162) was obtained for the combined stoneware samples.

Bottle glass sherds produced dates ranging from 1885 (n=21 sherds) for the 50x50-cm sample to 1891 (n=39 sherds) for Block 1, and 1894 (n=5) for the surface collection. A combined mean beginning date for the bottle glass

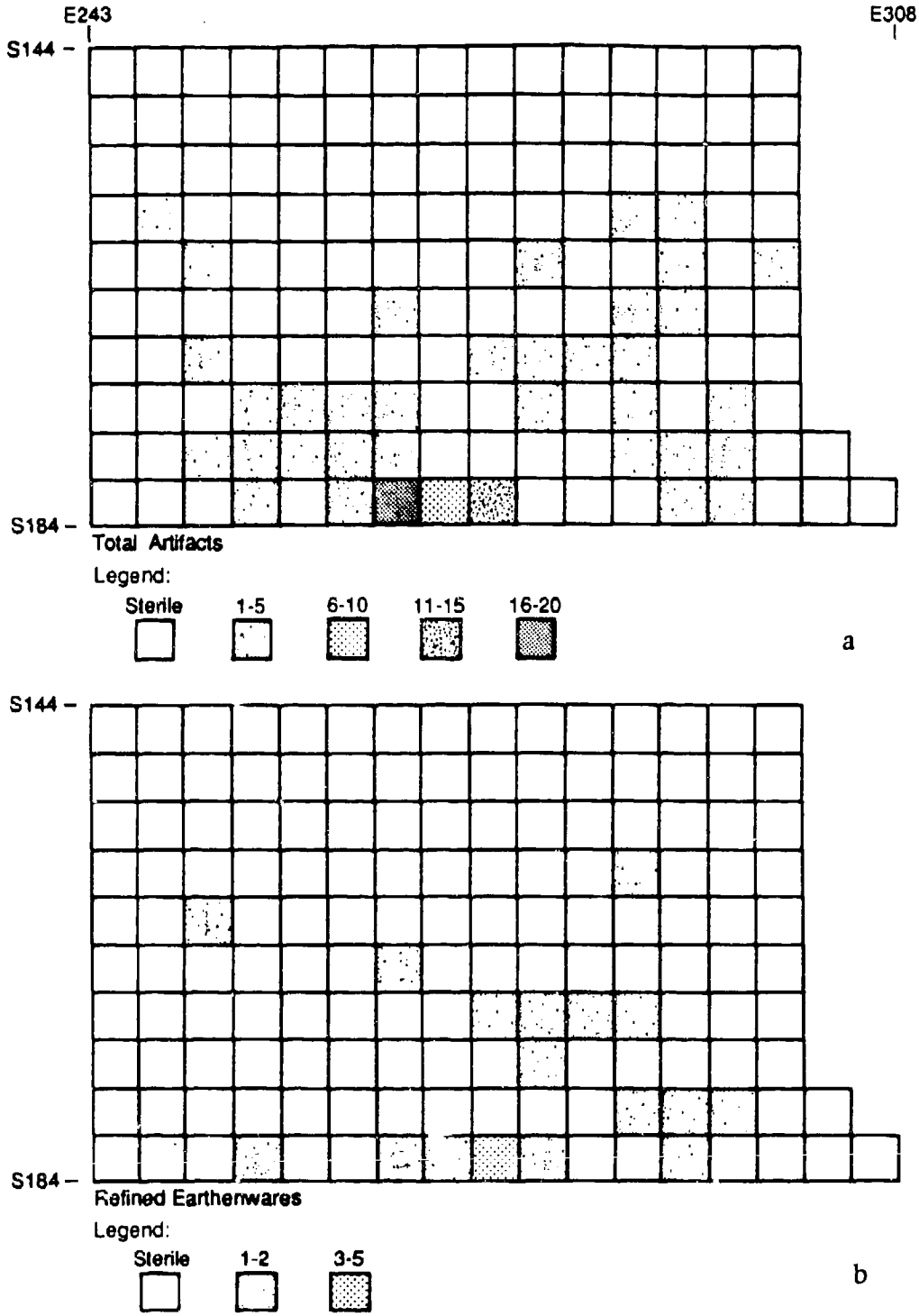


Figure 8-82. Artifact density distributions in the 4x4-m surface collection units at 41DN234. These units were located north of the dwelling and Block 1 (see Figure 8-73). (a) total artifacts, and (b) refined earthenwares.

from the three samples is 1889 (n=65). This date is over 20 years more recent than the dates obtained for the refined earthenwares and stonewares reflecting a greater number of early twentieth century bottles than ceramics. Only one twentieth century stoneware sherd, bristol glazed interior/bristol and cobalt blue exterior (1915-), was found other stoneware sherds were nineteenth century styles (salt, unglazed, natural clay slip). In addition, no early twentieth century refined earthenware styles were present (e.g., ivory-tinted whiteware, Fiesta).

These data suggest the site was abandoned during the early twentieth century. The bottle glass fragments dating after 1900 include early machine-made bottles.

The architectural remains further support a late nineteenth century occupation and probable abandonment in the early twentieth century. The dwelling was probably set on sandstone piers with some sandstone found in Block 1. Sandstone outcropped within the site area, and no cut sandstone blocks were found. Brick was extremely rare with only four handmade brick fragments being found.

Machine-cut nails comprised all but 1.03% of the nails found at the site, indicating that the structure was built during the late nineteenth century. Like 41DN233, the low density of nails from 50x50-cm units support an interpretation that the dwelling was probably a single pen log house. No evidence of a chimney or hearth was found. Cut nails occur in only 29 of the 50x50-cm units, producing a mean density of 0.54 nails per unit and are concentrated in 50x50-cm units located in Block 1, S192 E268 and S196 E268, and in six units north of the block (S180 E268, S180 E272, S184 E268, S184 E272, S184 E276, and S188 E268).

Feature 1 fill was compact, possibly burned sediment containing charcoal, ash, and some burned, as well as unburned artifacts. The boundary of Feature 1 was very diffuse but roughly comprises an area 2 m east-west by 4 m north-south. The lower and eastern extents of Feature 1 could not be clearly discerned because of the number of sandstones present. Feature 1 occurred in the northern-most units within Block 1. The distribution of cut nails suggests that Feature 1 correlates with the location of the dwelling. The distributions of refined earthenwares, stonewares, window glass, machine-cut nails, and personal items in Block 1 are shown in Figure 8-83. Machine-cut nails are concentrated southwest of Feature 1 in Block 1 and northwest of the feature in 50x50-cm units. They are poorly represented in Feature 1 and units to the east, both in Block 1 and the 50x50-cm units.

In the analysis, window glass sherds cluster south of Feature 1 in the block and in the north and east yards in the 50x50-cm units. Few sherds occur in units containing Feature 1 or in units over 3 m south of Feature 1 within Block 1. The distribution of ceramics, personal items, and bottle glass further suggests that the dwelling faced either a southerly or easterly direction. Ceramics cluster south and west of Feature 1 in Block 1.

Refined earthenwares occur in the sheet refuse deposit in all yard areas, clustering primarily north and southwest of Block 1. In Block 1, refined earthenwares cluster outside, but primarily within 4 m of Feature 1. Few occur in units containing Feature 1, and none occur east of Feature 1 within the block.

Stoneware sherds exhibit a smaller distribution than refined earthenwares and are more frequent in the southwest and southeast yard areas than north of Feature 1. Within the block, stonewares cluster south and southwest of Feature 1, with concentrations within 4 m of Feature 1 and a second concentration 6-8 m away.

On the other hand, personal items occur both in Feature 1 and units within 4 m of the feature in Block 1. They cluster both northeast and southwest of Feature 1 and are extremely uncommon in the sheet refuse deposit, concentrating north of Block 1. Bottle glass sherds occur in all yard areas, and within the sheet refuse deposit, they cluster north of Block 1.

Many of the surface collection units were sterile, and units containing artifacts clustered near the south end of the collection area and Block 1. This pattern correlates well with the spatial data obtained from the 50x50-cm units.

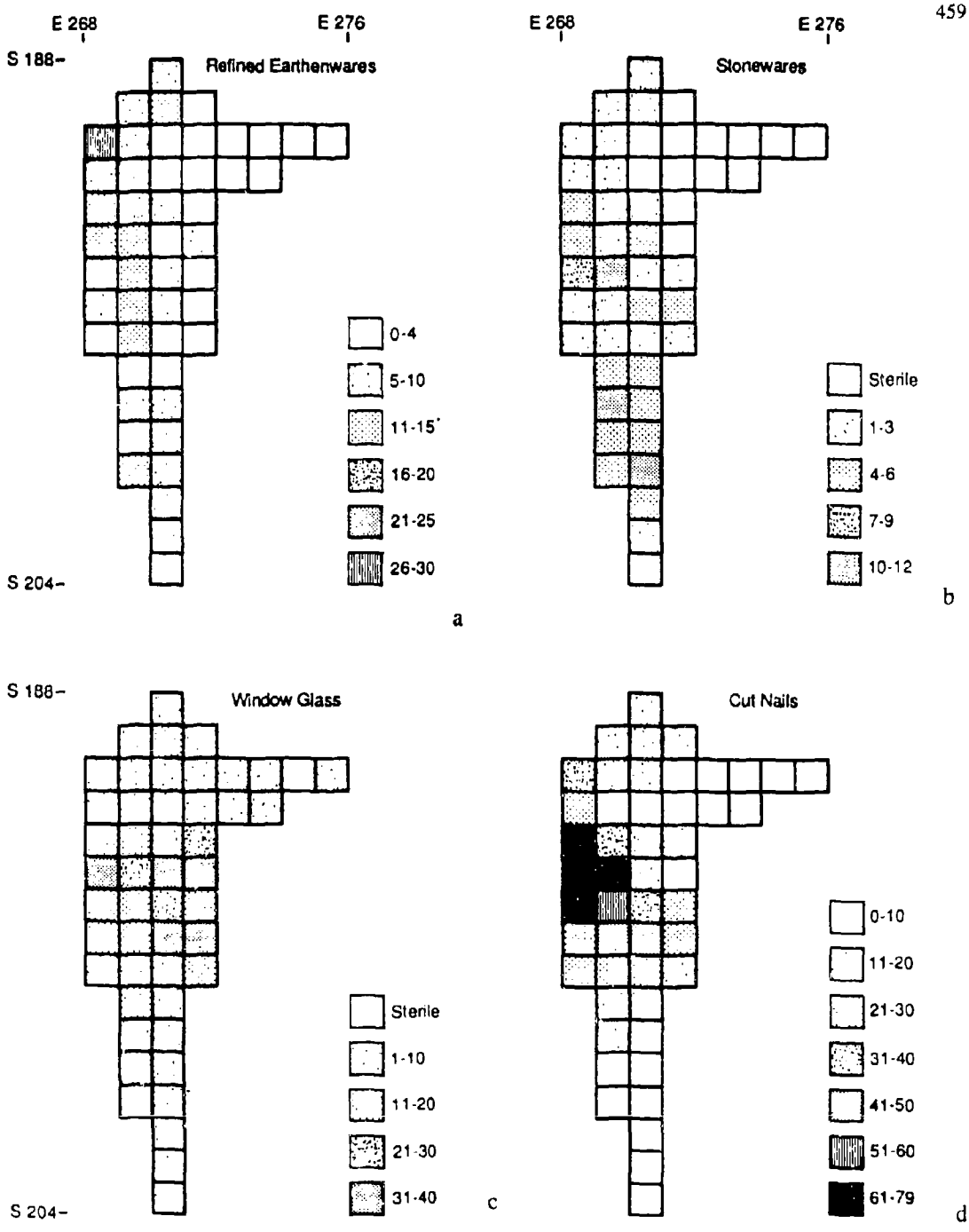


Figure 8-83. Artifact density distributions in the 1x1-m units excavated in Block 1 (dwelling area) at 41DN234. (a) refined earthenwares, (b) stonewares, (c) window glass, (d) cut nails, and (e) personal items.

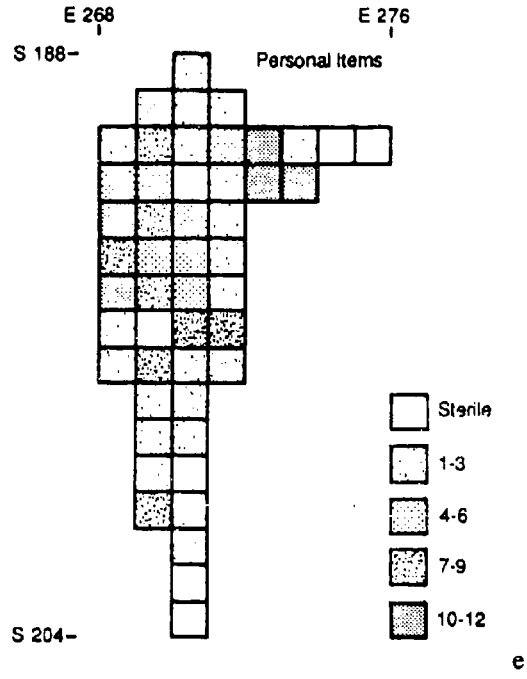


Figure 8-83. (continued) Artifact density distributions in the 1x1-m units excavated in Block 1 (dwelling area) at 41DN234. (a) refined earthenwares, (b) stonewares, (c) window glass, (d) cut nails, and (e) personal items.

Faunal Remains:

TOTAL BONE = 191

Identified fauna (n=79)

- Centrarchidae (bass/sunfish) - 1
- indet. turtle - 1
- Gallus gallus (domestic chicken) - 12 (MNI=2)
- medium bird - 7
- large bird (possibly goose) - 2
- Didelphis virginiana (opossum) - 7
- Sylvilagus floridanus (cottontail) - 10
- Lepus californicus (jack rabbit) - 1
- Sciurus sp. (squirrel) - 4
- Perognathus sp. (pocket mouse) - 1
- Neotoma sp. (woodrat) - 2
- Rattus rattus (roof rat) - 7
- rodent sp. - 3
- small mammal - 1
- medium mammal - 2
- Sus scrofa (domestic pig) - 10
- Odocoileus virginianus (wh-tailed deer) - 1
- large mammal - 7

Unidentified bone (n=112)

This small sample of identified faunal remains reiterates the pattern of farmstead subsistence as shown in other sites in the project area. On the basis of numbers of identified specimens, pig and chicken are most abundant, with small game such as rabbits and opossum well represented. One deer tooth was recovered, but little interpretation can be made of its occurrence at this site.

Distribution of the faunal remains was almost exclusively within Block 1; only six identified and seven unidentified bones were recovered outside the block. Within Block 1, the animal bones were concentrated around Feature 1 in association with the house area. These probably represent kitchen refuse that became swept under the house or deposited by dogs or other scavengers. At least 90% of the identified elements had been gnawed. Even a fragment of a bone knife handle showed evidence of gnawing (rodent); it was also found in the northeastern part of Block 1 (S190E271).

Only eleven bones exhibited burning, and all but one of these were associated with Feature 1. None of the burned bones was identified to species.

The pig bones were limited to elements of the skull and feet. Only one individual can be delimited in the small sample, and it appears to have been a juvenile. One ankle bone (astragalus) was noted as sawn, which would result as a byproduct from butchering for the hams. This particular cut is unusual because the customary cut for dismembering the hind foot is usually higher up on the leg, cutting through the distal tibia and tip of the calcaneum. It may be that because this was a young individual, cutting lower on the leg made the ham appear larger than it was; no ethnic differences in butchery is warranted on such a small sample. The presence of deciduous teeth (e.g., a p4 with advanced wear) mpts an estimate of a yearling at slaughter.

Four fragments recorded as large mammal exhibit butchering cuts: two ribs, a vertebra, and an unknown element. The ribs and vertebra were recovered from units around Feature 1, and the other came from Feature 2. The types of cuts cannot be confidently ascertained. A cut rib fragment was found in Feature 1 and is described as a rib from a medium-size mammal with a ring-and-snap cut. Another was found in Unit 341 (S192E172), but it was only identified as a medium-size mammal long bone with a deep cut. Although these last two cut elements were recorded as from a medium-size mammal, it is the opinion of the author that they are pro' ly parts of the same or another young pig slaughtered on site.

Unit 341 deserves special mention bec se it yielded fully one-third of the identified faunal emains and two-thirds of the chicken bones. Two individu hickens are represented in that one unit alone, and all but one chicken bone were found within a meter of that excav ion square; curiously, no eggshells were recovered at this site. The absence of egg shells is probably related to pr servation conditions, but may suggest free-ranging chickens which laid eggs in well-hidden locations.

The remainder of the identified ani als were found either in Feature 1 or, like Unit 341, in units around its indistinct periphery. In addition to the cosmopolitan roof rat and the wild woodrat, another large rat was noted, but its exact identification is indeterminate. Vermin were undoubtedly a nuisance at this site.

Summary: Site 41DN234 is a ca te 1860s to early twentieth-century farmstead that may have been occupied by an African American family. A combined mean beginning date for initial occupation of 1866 was obtained for datable ceramic and bottle glass sherds (n=586). The architectural data support a late nineteenth centur dwelling with little evidence of additions or modifications during the twentieth century. No outbuildings were found but probably once existed. These outbuildings would most likely have included a cellar and one or two sheds. The reported well was not relocated.

The dwelling was probably located in the northern part of Block 1, correlating with Feature 1, at the highest elevation of the local site area. The sheet refuse deposit in Block 1 exhibited good archaeological integrity, and no evidence of post-occupational disturbance was found. Outside of Block 1, colluvial deposition was evident on the

site slopes. Sandstone outcrops within the site area and was probably used for piers and a chimney for the house. The sheet refuse deposit was most dense north of Block 1, concentrating 4-10 m north of Feature 1. The lowest densities occurred in units over 12 m from Feature 1.

Like the other nineteenth-century farmsteads in Crosgrove's Bottom, the family at 41DN234 probably were not economically well off. They were sharecroppers or tenants, and if particularly fortunate, they eventually were able to purchase the property they worked. The location of their farm in this area of the project suggests they probably were African-American in heritage and that they worked poorer land than was available elsewhere in the area. Their artifactual and architectural remains, however, suggest their lifeways were similar to other families, whether landowner or tenant/sharecropper, Anglo or African-American.

41DN466

Map Quad	Mountain Springs 7.5' (1961, rv. 1978), #3397-144
Elevation	620' amsl
Scheduled Investigations	Survey
Additional Investigations	Magnetometer survey, Archival, Excavation
Soil Association	Altoga silty clay
Cultural Affiliation	Historic (ca. 1860 to 1890)

Description: This site was first identified as a sparse artifact scatter located within an eroded area surrounding a single bois d'arc tree. No surface or subsurface features were identified during testing. Remains of two collapsed cellars were uncoverd during excavation. A site map is provided in Figure 8-84.

Previous Investigations: The site was recorded by UNT in 1987 during a survey of 4,400 acres of the Ray Roberts Project area that remained unsurveyed. A surface reconnaissance was conducted, seven shovel test pits were excavated within the exposed area, and a representative sample of the diagnostic surface artifacts were collected (see Chapter 6). Intensive excavation utilizing small excavation units, 1x1-m units, block excavations, trenches, and feature exploration were recommended, along with a magnetometer survey to locate subsurface features, and archival research.

Archival Investigations: Site 41DN466 is located on the 160-acre J. J. Lytle survey (A-565). The survey was conveyed to James J. Lytle (Lyttle) by the State of Texas in 1860 (Patent Book A:315). However, the earliest conveyance is recorded in 1858 when J. J. Lyttle and his wife Hester Ann (Denton County) conveyed the entire survey to George W. Lytle (Denton County) (Deed Record G:92).

Ten acres out of the northeast corner were conveyed to Sarah Paine in 1864 (Deed Record 37:581). The remaining 150 acres, which includes the area where 41DN466 is located, was conveyed by Dora Lytle (wife of G. W. Lytle) to Andrew McCarthy in 1864 (Deed Record G:93).

The property changed ownership several times during the 1860s (see Table A-34), and improvements are reported in the 1870 conveyance (Deed Record G:97). L. G. Harris and his wife Edith A. Harris (Denton County) filed for a homestead in 1890 on 105 acres of the survey, which includes the area of 41DN466, as well as 118 acres of the James Brent survey. This homestead probably was not located at 41DN466 based on the archaeological and architectural remains recovered at this site (see following discussion).

Architectural Investigations: None.

Dendrochronological Investigations: None.

Proton Magnetometer Survey: The survey results indicated that this site had been occupied for only 30 to 40 years, and while in situ buried deposits occurred, no features were encountered. A proton magnetometer survey was recommended for the main site area defined by the distribution of artifacts from surface collecting and shovel test pits. Three 20x20-m blocks were surveyed by personnel from the Department of Geology, University of Texas at Arlington, under the direction of Dr. Brooks Ellwood.

Vegetation in the survey blocks was mixed grasses, small shrubs, and one bois d'arc tree. Surface metal was removed prior to the survey. Several of the shovel test pits dug by the survey crew were located inside the magnetometer blocks. No other modern disturbances were evident.

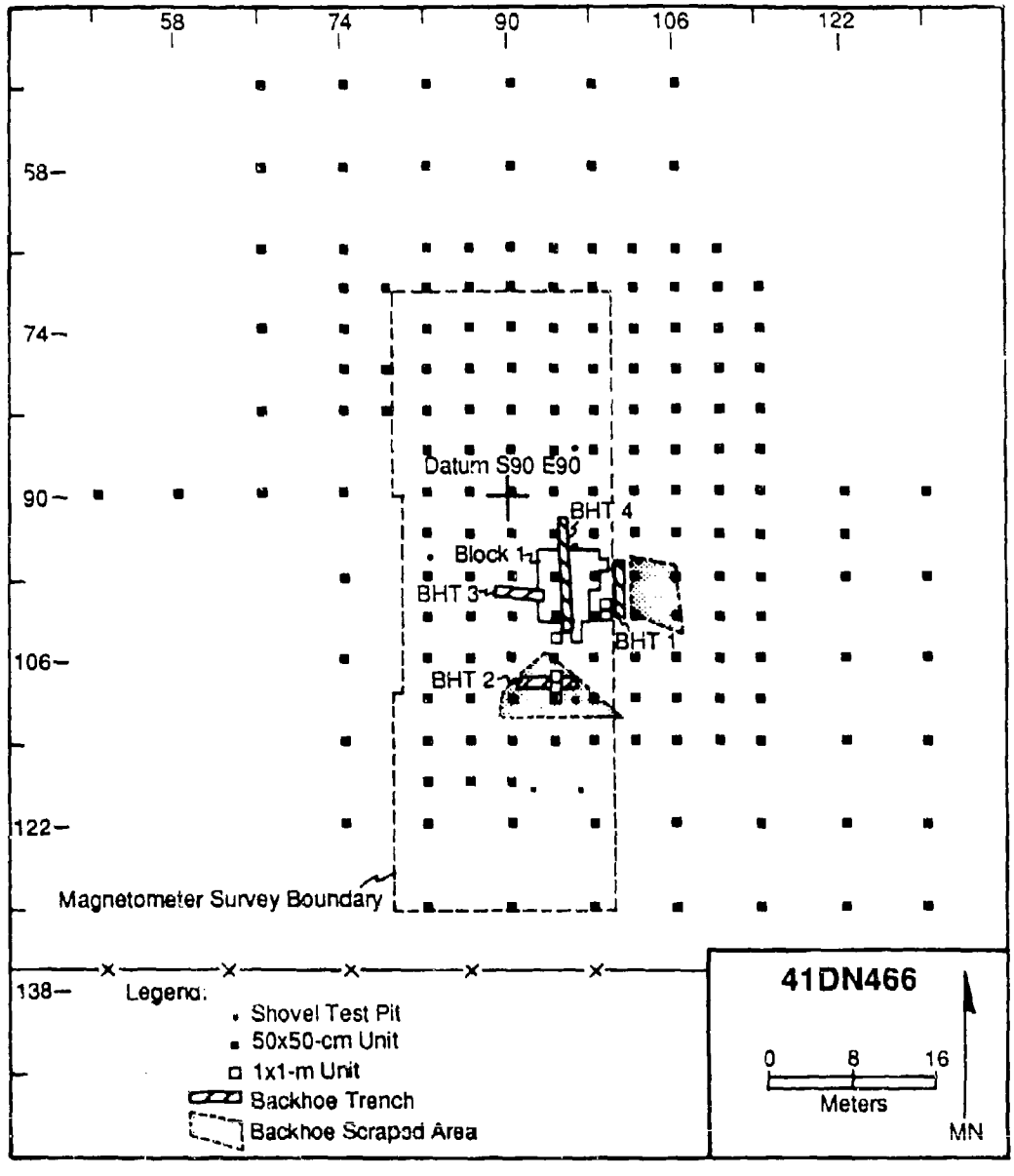


Figure 8-84. Site map of 41DN466.

The values produced by the proton magnetometer ranged from -164 to +124. With the exception of two anomalies, the magnetometer values usually ranged from -85 to +35, correlating with about ten points probably associated with small pieces of buried metal (Figure 8-85).

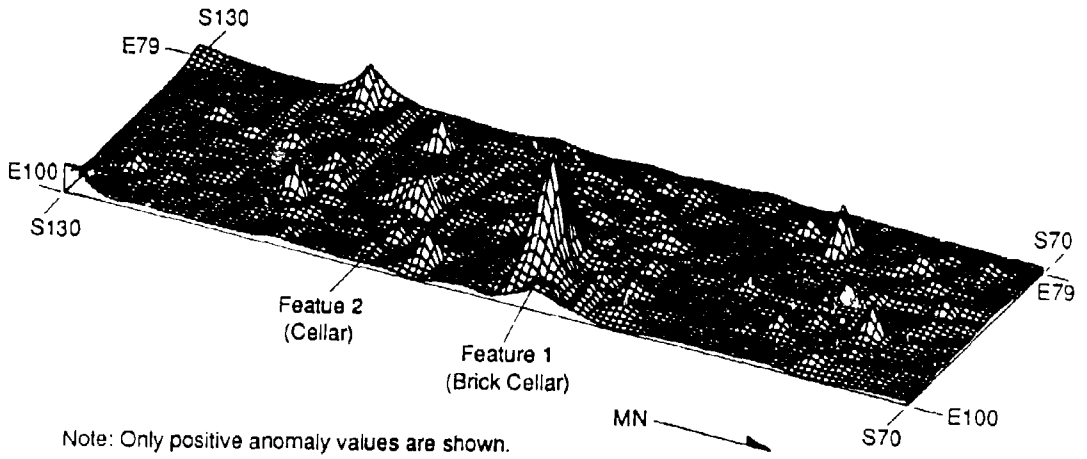


Figure 8-85. Magnetometer survey map of the postive magnetometer values at 41DN466. The locations of major subsurface features are shown.

A large dipolar anomaly occurred between S97-S102 and E93-E98. Excavation revealed that this anomaly was a buried brick cellar associated with the dwelling area. The magnetometer values produced for this anomaly, Feature 1, were positive to the north of S99 and negative to the south.

The second anomaly, Feature 2, occurred as a small positive anomaly, with values ranging from +4 to +33 (see Figure 8-85). While of very low intensity, this anomaly was visible in the magnetometer data because of the general lack of background noise. The anomaly occurred between S108-S109 and E90-E93. It was a dark, organic-rich soil, later identified as a collapsed cellar. No other anomalies were found.

Excavation Method: A total of 174 50x50-cm units were excavated on a 4- or 8-m grid to recover information on site age, size, integrity, and to recover a representative sample of the sheet refuse deposit. The magnetometer blocks (see above) were located over the main site area, and data from this undertaking were used to place Block 1 and the backhoe trenches. Forty-six 1x1-m units were dug in Block 1, later identified as containing a collapsed cellar (Feature 1), and three 1x1-m units were dug in a magnetic anomaly (Feature 2) south of the block. BHT 1, oriented north-south, was placed east of Block 1 to determine if Feature 1 extended farther east. BHT 3 was oriented east-west to define the west limits of Feature 1. BHT 4 provided a north-south profile through Block 1 and Feature 1. BHT 2, oriented east-west, was excavated after an area was machine scraped over Feature 2, first encountered in a 50x50-cm unit at S110 E94. Feature 2 appeared as a dark, organic soil anomaly. The planview revealed by the scraping indicated a collapsed cellar. BHT 2 was dug to recover a profile of Feature 2. After the south wall was profiled, a 50-cm wide by 25-cm deep column was dug in 10-cm thick increments through the fill for fine screening.

A backhoe was used to scrape the A-horizon in an area east of Block 1 to look for other subsurface features. No other features were found.

Geology: Site 41DN466 is located on an eroded terrace remnant just west of Pond Creek in the west-central portion of the Ray Roberts project area. Pond Creek is a southerly-flowing tributary of the Elm Fork of the Trinity River, and the confluence of these drainages lies approximately 3 km southeast of the site. The site occupies a narrow flat divide of Pond Creek, which is south of the site. This surface appears to be contiguous with the terrace remnant of the east side of Pond Creek, and therefore is probably a terrace of the Pleistocene terrace of the Elm Fork Trinity River. From the central site area the terrain drops from approximately 623-ft amsl down to the Pond Creek floodplain about 600-ft amsl. The terrain also drops gently into a broad shallow ravine west of the site. Northwest of the site area the terrain rises gradually to a bench at about 635-ft amsl. This may be a somewhat higher terrace of the Trinity River or a strata surface formed on the Cretaceous Denton Clay formation which outcrops in this area.

Stratigraphy: BHT 1 provides a reference column for describing the site geology (Table 8-54). The 1.9-m BHT 1 profile revealed a moderately-developed soil that formed in silty clay or silt loam parent materials. The thin A-horizon has a silt loam texture and is underlain by clay loam and silty clay B- and C-horizons. The weakly developed or moderately-developed B-horizon exhibits moderate structure, but deeper in the profile-common slick and slides were observed. In the lower part of the profile-carbonate concretions are present. This profile contains enough clay to promote fairly high shrink-swell properties. One artifact was observed in the profile at a depth of 28 cm below the surface. During dry seasons, extensive cracking would probably have occurred promoting the introduction of artifacts into deeper soil horizons in a very short time interval. The quite flat terrain in the immediate site area should have inhibited erosional removal of artifacts from the site area. Therefore, the predominate site formation process at this site would have been through turbation and reworking of artifacts into deeper portions of the soil profile of the site. Extensive construction of features, including a house and several cellars also contributed to movement of sediment in the site area.

Table 8-54
Soil Profile Description for BHT 1 at 41DN466

Horizon	Depth (cms)	Color Moist	Texture	Structure	Boundary
Ap	0-8	10YR3/2	SiL	3fsab	gs
Bwc	8-43	10YR3/3	CL	2msab	gs
BCk	43-68	10YR5/4	SiL	2msab	gs
Ck	68-101	10YR5/4	SiL	1msab	ds
Cks	101-190+	10YR5/6	SiL	2msab	base

Key:
Texture: CL=clay loam, SiL=silt loam.
Structure: grade/class/type; grade: 1=weak, 2=moderate, 3=strong; class: f=fine, m=medium; type: sab=subangular blocky.
Boundary: distinctness/topography; distinctness: d=diffuse, g=gradual; topography: s=smooth.

Excavation Results: The sheet refuse deposits contain considerable temporal data indicating the intensity and length of occupation, as well as information on specific features and/or activity areas. Two features, both cellars, were identified. The north cellar (Feature 1) was clearly visible in the proton magnetometer survey as a dipolar anomaly.

The second cellar (Feature 2) was visible as a small positive anomaly. Both features and the sheet refuse deposit were impacted by plowing. The entire site area has been plowed. The alluvium is truncated, and the plowzone extends to about 8 cm below the surface.

Block 1 was excavated to recover data on the north cellar (Feature 1) and the suspected dwelling area. The block was excavated in 10-cm levels, and a planview of Feature 1 was drawn (Figure 8-86). No piers or other structural evidence of the dwelling was found in Block 1 or the surrounding 50x50-cm units. Architectural remains found at the site include window glass, nails, and building material, but no in situ structural features were found.

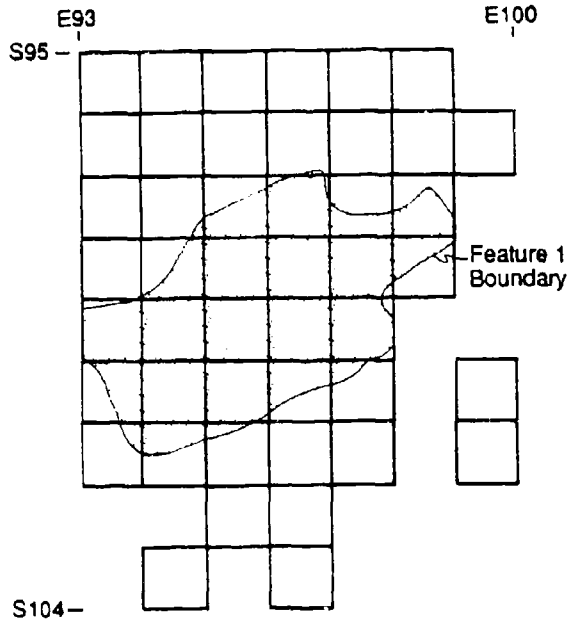


Figure 8-86. Planview of Feature 1 in Block 1. This buried brick cellar was exposed as a mottled sediment stain at 10 cm below ground surface. The brick walls were exposed in Backhoe Trenches 3 and 4. The location of Block 1 is shown in Figure 8-84.

The location, function, and contents of the features are summarized below, followed by a discussion of the artifact assemblage from the 50x50-cm units.

Features: Two features were identified at 41DN466. Both features were cellars. It is unclear which feature was built first, or why two cellars were constructed.

Feature 1: Feature 1 was a handmade-brick cellar located in the central site area. It was the northern cellar and was located about 6-8 m north of the other cellar (Feature 2). This cellar was identified in the magnetometer

survey as a large dipolar anomaly. This "signature" was not recognized as indicative of cellars before this feature was excavated.

Block 1 contained 46 1x1-m units and was placed to recover information on Feature 1 and the suspected dwelling area. This area contained the highest concentration of surface artifacts, which included architectural items. The artifacts recovered from the 50x50-cm units in this area contained a slightly higher percentage of architectural items which also suggested the house may have been located in this area.

A planview of Feature 1 was exposed in Block 1 (Figure 8-86), and profiles were obtained in BHT 4. BHT 1 was excavated to determine the east limits of Feature 1, but was located outside the feature.

This feature is unique at farmsteads studied in the reservoir. The exposed profile in BHT 4 indicates subsurface disturbance. Broken remains of a brick structure were found in this backhoe trench. This handmade brick is assumed to be from the north cellar. Feature 1 measured at least 4.5 m in length, excluding the stairway, and 3.5 m in width. Cellars of similar size occur in the reservoir. However, no other brick cellars have been identified at early farmsteads.

This cellar is even more interesting because of the lack of evidence for other equally substantial structures at the site. No in situ remains were found of the dwelling or other outbuildings. No well was found and the south cellar (Feature 2) is similar to other pre-1900 cellars in the project area.

The artifact assemblage from Block 1 (Table 8-55) contains primarily architectural items, which totalled 55.58% of the recovered artifacts. These items indicate the cellar and the house were built during the nineteenth century. Only three brick fragments were identified as machine made, and 87.79% of the nails are machine cut. Bottle glass and refined earthenwares are also common, along with thin and heavy metal fragments. The relative frequency of each artifact category is shown for all artifacts and for all artifacts excluding architectural items (Table 8-55).

Table 8-55
Artifacts Recovered from Block 1 at 41DN466

Artifact Category	Counts	Percentage w/Arch.	Percentage w/o Arch.
Refined Earthenware	482	9.03	20.34
Stoneware	141	2.64	5.95
Porcelain	3	0.06	0.13
Bottle Glass	1133	21.24	47.81
Table Glass	38	0.71	1.60
Lamp Glass	6	0.11	0.25
Unid. Glass	8	0.15	0.34
Window Glass	496	9.30	
Machine-Cut Nails	689	12.91	
Wire Nails	87	1.63	
Handmade Brick	1005	18.84	
Machine-Made Brick	3	0.06	
Building Material	685	12.84	
Personal Items	48	0.90	2.03
Thin & Heavy Metal	380	7.12	16.03
Household Items	20	0.37	0.84
Machine & Wagon	22	0.41	0.93
Tools	1	0.02	0.04
Horse & Stable Gear	15	0.28	0.63
Ammunition	2	0.04	0.08
Misc. Other	71	1.33	3.00
Total	5335		

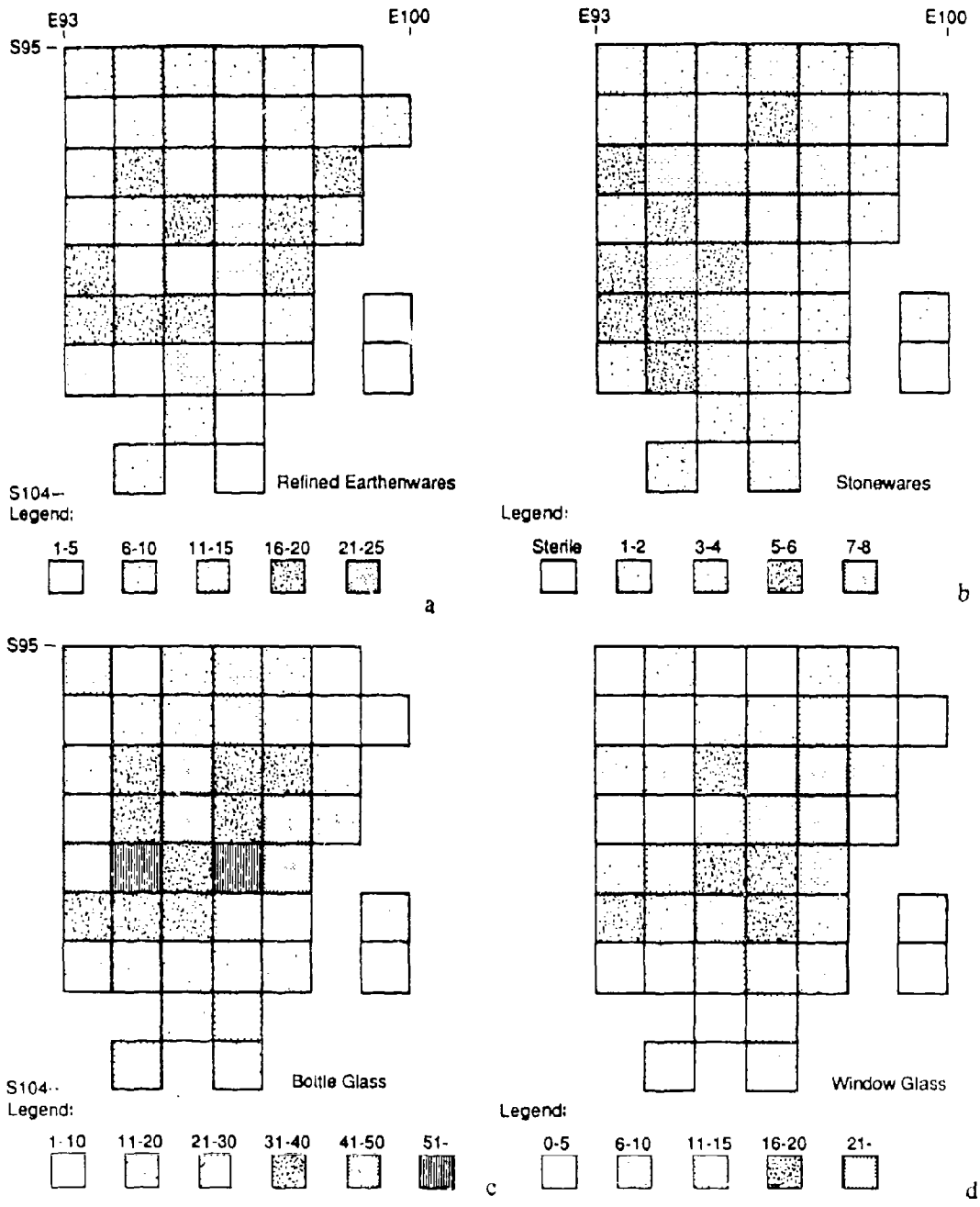
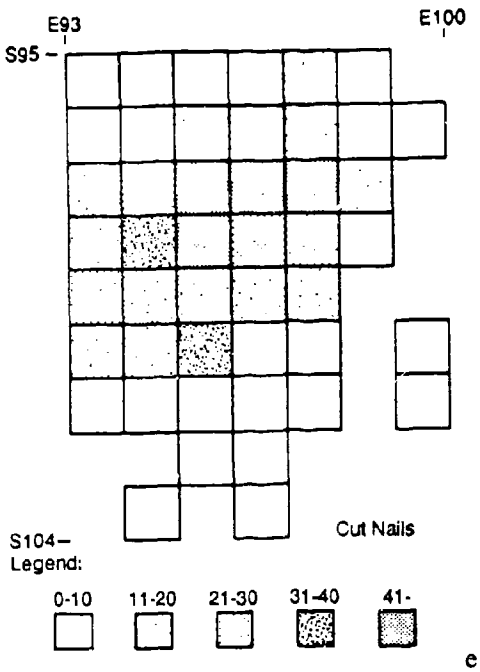
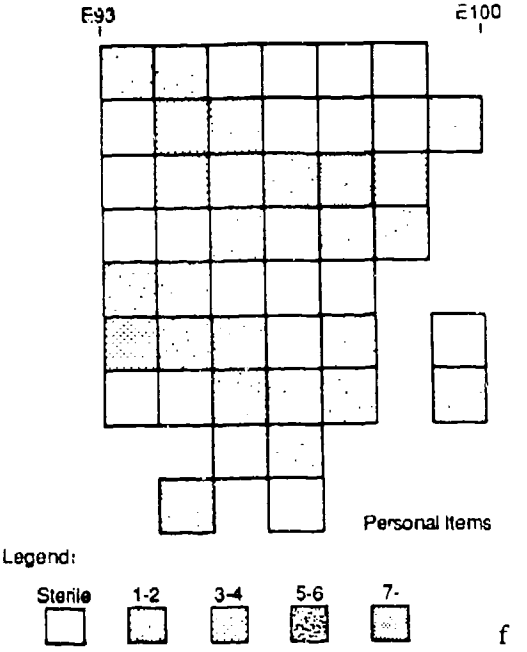


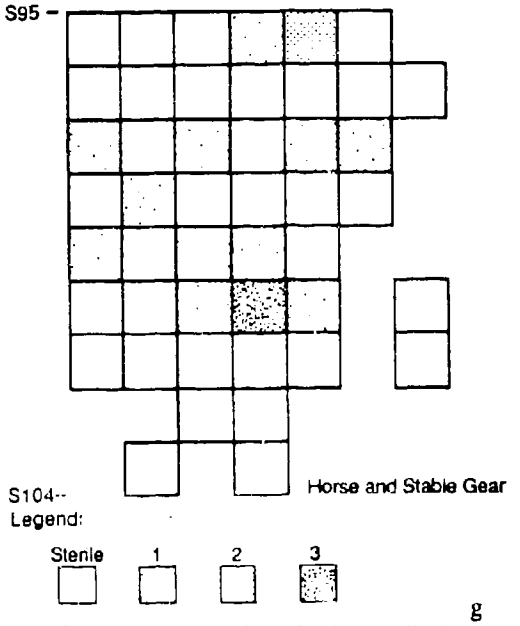
Figure 8-87. Artifact density distributions in the 1x1-m units excavated in Block 1 (dwelling area) at 41DN466. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) cut nails, (f) personal items, and (g) horse and stable gear.



e



f



g

Figure 8-87. (continued) Artifact density distributions in the 1x1-m units excavated in Block 1 (dwelling area) at 41DN466. (a) refined earthenwares, (b) stonewares, (c) bottle glass, (d) window glass, (e) cut nails, (f) personal items, and (g) horse and stable gear.

Density maps were made for major artifact categories in Block 1, but are difficult to interpret because the site was plowed for many years (Figure 8-87). The highest artifact densities appear to correlate with the areal extent of Feature 1, although the artifacts are sheet refuse material and are not all directly related to the cellar.

The distribution of sheet refuse artifacts in Block 1 suggests that Feature 1 was probably filled in and the sheet refuse material was pushed in when the site was plowed. Artifacts are scattered across Block 1, but are concentrated within the boundaries of Feature 1. The distribution of refined earthenwares, stonewares, bottle glass, window glass, machine-cut nails, and horse and stable gear were plotted for Block 1.

The mean beginning dates obtained for the sheet refuse in Block 1 correlate with the MBD values obtained for units outside the block. The combined MBD value for Block 1, including the backhoe trenches, is 1860.55 (Table 8-56).

Table 8-56
MBD Values for Block 1 and the Backhoe Trenches at 41DN466

Artifact Category	Date
Refined Earthenware	1856.99 (n=433)
Stoneware	1866.32 (n=125)
Bottle Glass	1866.56 (n=136)
Combined	1860.55 (n=694)

Feature 2: Feature 2 was a collapsed cellar (south cellar) identified during the proton magnetometer survey as a small positive anomaly. The type or function of the feature was unknown. The feature was first encountered in Unit S106 E94 and again in S114 E94. In both units, the feature appeared as a dark organic stain. The matrix was more clayey than surrounding 50x50-cm units on the 4-m grid, but the artifact content was similar. A third 50x50-cm unit was dug at S110 E94. Based on the data from these units and the magnetometer survey, three 1x1-m units (S108, S109, and S110 E94) were excavated to help identify the feature and define feature limits. However, these units provided little new information.

The area was then scraped using the backhoe, and a planview was drawn of the exposed feature below the plowzone (Figure 8-88). Feature 2 was then cross-sectioned by BHT 2, and a profile was drawn. A 50x25-cm unit was excavated in the south wall of BHT 2 to recover a column sample of the feature fill. Based on these data, Feature 2 was identified as a collapsed cellar. The artifacts recovered from the fill are sheet refuse. The cellar probably had earthen walls and floor. No postmolds or in situ building materials were found.

The Feature 2 fill contained low-density sheet refuse. No trash deposit was found in the south cellar. The artifacts from Feature 2 are summarized in Table 8-57. The artifacts are from Units 145, 147, 155, 219, and 220, and BHT 2 (see Figure 8-84 and Figure 8-88).

50x50-cm Units: The sheet refuse deposit recovered from the 50x50-cm units indicates the site was occupied during the late nineteenth century and was probably abandoned sometime around the turn of the century. Twentieth-century items found in these units are rare and may have been deposited after the site was abandoned. For example, none of the refined earthenware sherds from these units had initial popularity dates after 1900, and only seven (3.46%) had initial popularity dates after 1890.

Table 8-57
Artifacts From Feature 2 at 41DN466

Artifact Category	Units	BHT 2
Refined Earthenware	6	2
Stoneware	3	1
Porcelain	4	
Bottle Glass	33	9
Table Glass	3	
Window Glass	12	5
Machine-Cut Nails	14	1
Handmade Brick	23	1
Building Material	3	
Personal Items	1	
Thin & Heavy Metal	5	2
Household Items		1
Machine & Wagon Parts	1	1
Total	108	23

The relative absence of post-1900 artifacts is evident across all artifact categories recovered from the 50x50-cm units, as well as, Block 1. The MBD values obtained for refined earthenwares, stonewares, and bottle glass are shown in Table 8-58. These MBD values correlate with the data from Block 1.

Table 8-58
MBD Values for 50x50-cm Units at 41DN466

Artifact Category	Date
Refined Earthenware	1856.44 (n=202)
Stoneware	1866.77 (n=82)
Bottle Glass	1873.42 (n=38)
Combined	1861.07 (n=322)

The artifacts recovered from the 50x50-cm units are summarized in Table 8-59. These data indicate that architectural items account for 31.97% of the assemblage, followed by bottle glass and refined earthenwares.

Density maps made for major artifact categories based on the 50x50-cm unit data indicate the site was plowed and are difficult to interpret (Figure 8-89). As mentioned earlier, based on the proton magnetometer survey and the initial 50x50-cm units, Block 1 was placed to recover data on Feature 1 and the dwelling, which was not found.

Refined earthenwares are scattered broadly across the site, but concentrate in two linear clusters north of Block 1. They are less common south or west of the block than in the north half of the site. Stonewares cluster in the north site area and range in density between zero and six sherds per 50x50-cm unit. Higher stoneware densities occur north of Block 1 and in several units west or east of the block (Figure 8-89).

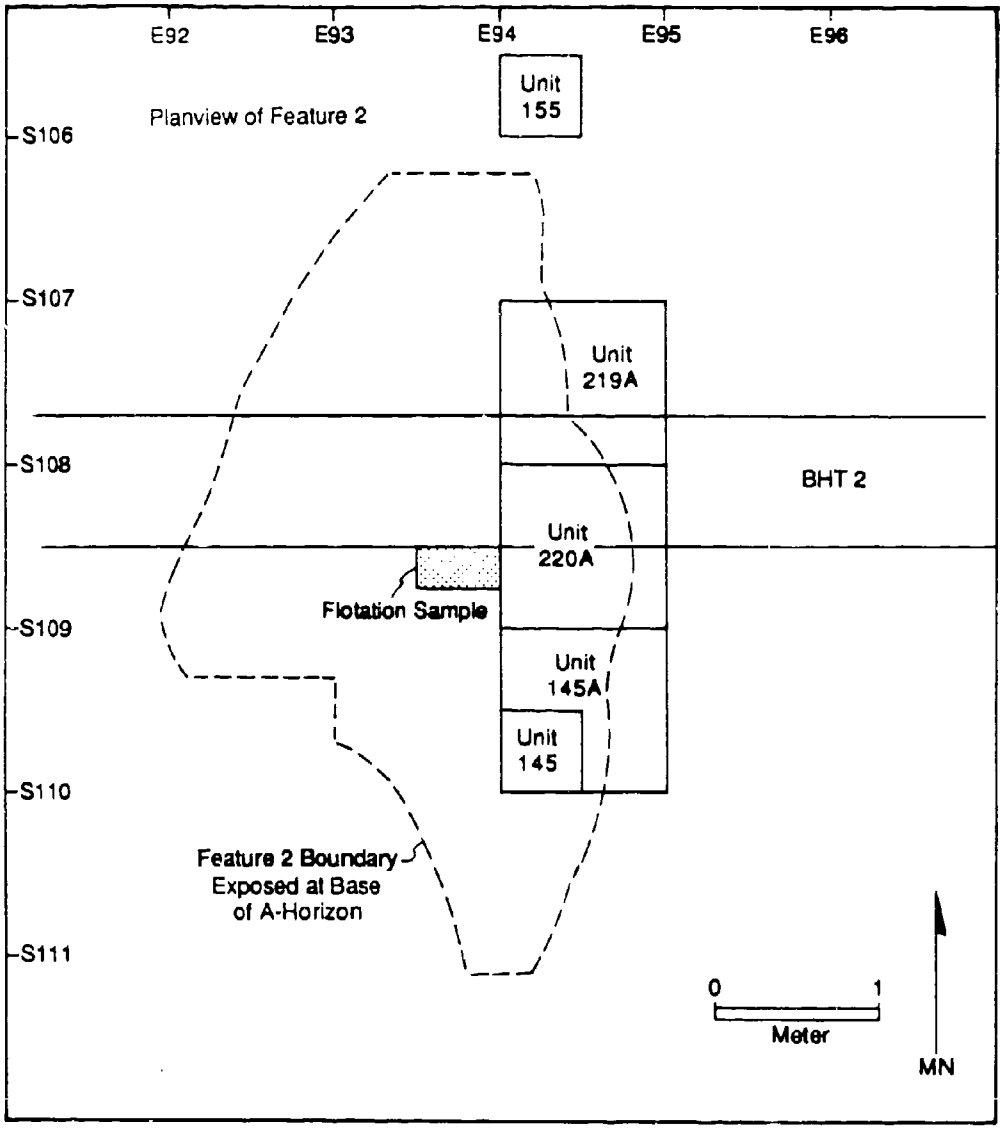
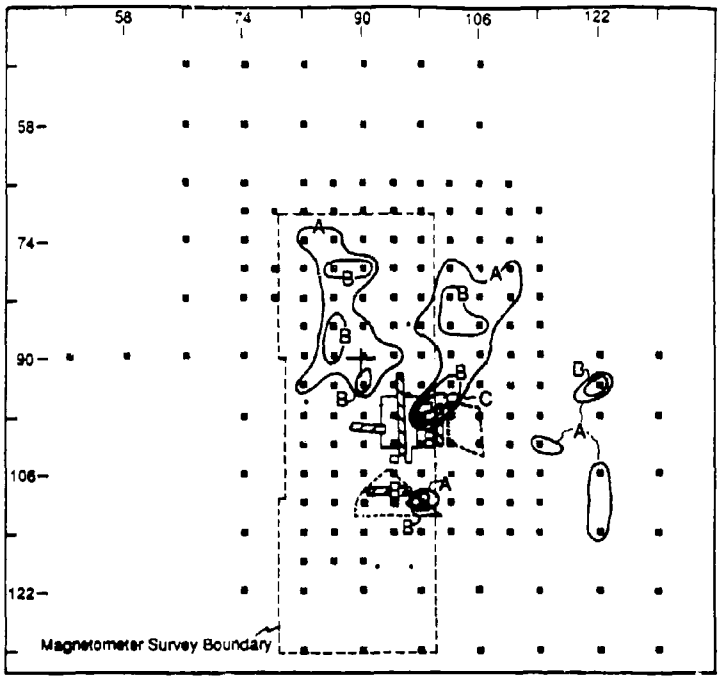


Figure 8-88. Planview of Feature 2, buried earthen cellar south of Feature 1 (buried brick cellar) and the dwelling. The location of Feature 2 is shown in Figure 8-84.

Table 8-59
Artifact Assemblage from the 50x50-cm Units at 41DN466,
xcluding Features and Units in Block 1

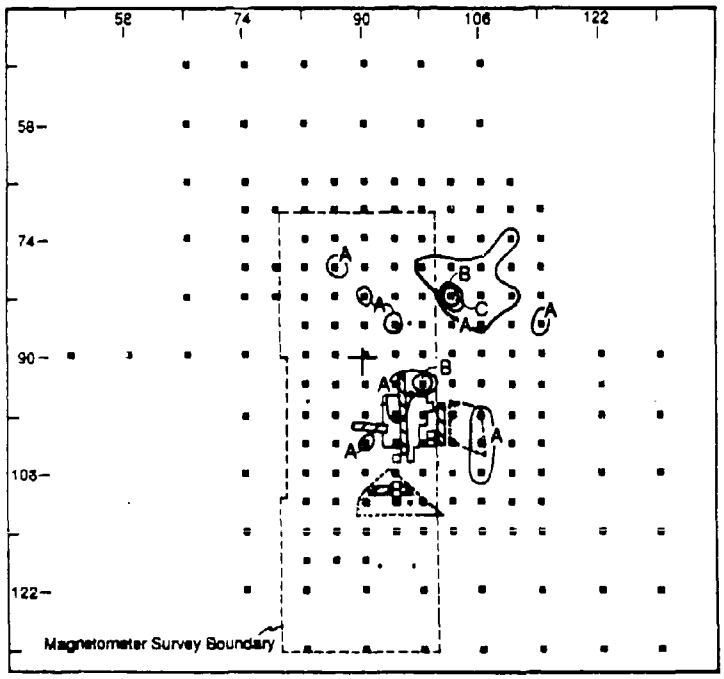
Artifact Category	N	%
Semi & Coarse Earthenware	3	0.29
Refined Earthenware	196	18.70
Stoneware	85	8.11
Porcelain	2	0.19
Bottle Glass	293	27.96
Table Glass	5	0.48
Lamp Glass	3	0.29
Unid. Glass	3	0.29
Window Glass	105	10.02
Machine-Cut Nails	152	14.50
Wire Nails	12	1.15
Handmade Brick	47	4.48
Building Material	19	1.81
Personal Items	10	0.95
Thin & Heavy Metal	89	8.49
Household Items	5	0.48
Machine & Wagon	6	0.57
Tools	2	0.19
Horse & Stable Gear	5	0.48
Ammunition	2	0.19
Misc. Other	4	0.38
Total	1048	



Refined Earthenwares

A 3-4
B 5-6
C 7-8

a

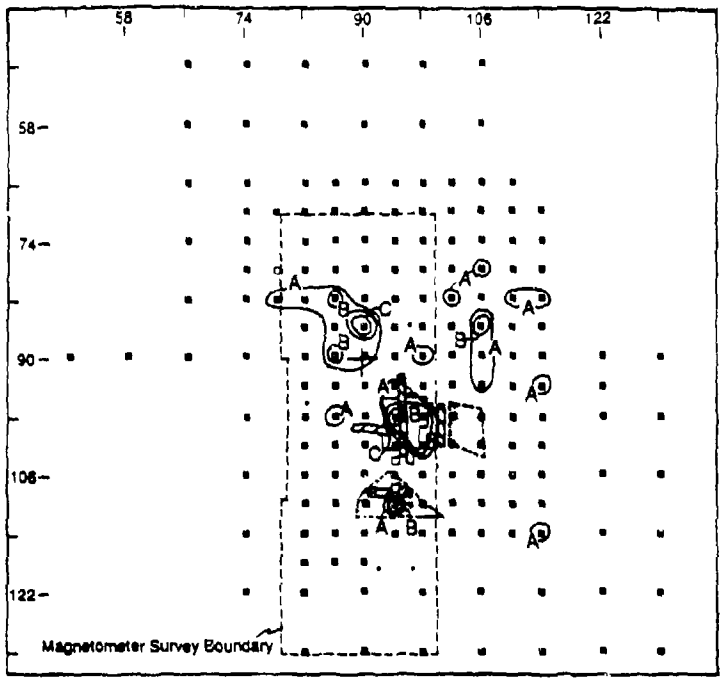


Stonewares

A 2-3
B 4-5
C 6-7

b

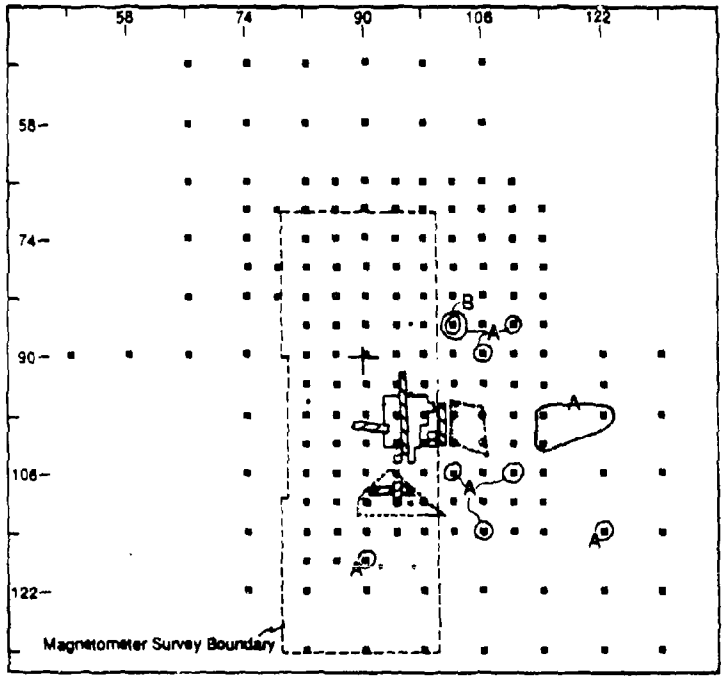
Figure 8-89. Artifact density plots for major artifact categories based on artifact counts per 50x50-cm unit at 41DN466. (a) refined earthenwares, (b) stonewares, (c) machine-cut nails, and (d) wire nails. These plots indicate that while the site was impacted by plowing, general sheet-refuse patterning is evident, but dispersed.



Machine-Cut Nails

A 3-4
B 5-6
C 7-12

c



Wire Nails

A - 1
B - 2

d

Figure 8-89. (continued) Artifact density plots for major artifact categories based on artifact counts per 50x50-cm unit at 41DN466. (a) refined earthenwares, (b) stonewares, (c) machine-cut nails, and (d) wire nails. These plots indicate that while the site was impacted by plowing, general sheet-refuse patterning is evident, but dispersed.

In the analysis, window glass sherds, machine-cut nails, and wire nails exhibit very different distributions. Window glass sherds are absent in the far northern site area, but are scattered across the remaining site area east of the E82 line. Window glass clusters east of Block 1, with a small cluster in the block. Machine-cut nails are scattered across the site except in the far north and far south ends and west of the E82 line. Machine-cut nails cluster in Block 1 and north of the block and are less common in the south site area. A small cluster occurs in Feature 2.

Wire nails exhibit a limited spatial distribution. With the exception of one nail in S118 E90, all wire nails are located east of Block 1. No wire nails occur in the 50x50-cm units in Block 1, but do occur in the 1x1-m units (see Feature 1 discussion above). The distribution of personal items is shown in Figure 8-89 and indicate that these items are scarce and cluster north and east of Block 1.

Based on these distributions, the main site area is between S74 and S114 and E78 and E122. Two cellars were identified within this area, but no other support structures were found.

Faunal Remains:

TOTAL BONE = 292

Identified fauna (n=54)
- Meleagris gallopavo (turkey) - 1
- Gallus gallus (domestic chicken) - 6
- medium bird - 1
- Didelphis virginiana (opossum) - 4
- Sylvilagus floridanus (cottontail) - 12
- Sigmodon hispidus (cottonrat) - 1
- Rattus rattus (roof rat) - 1
- Canidae (dog/coyote) - 1
- medium mammal - 2
- Sus scrofa (domestic pig) - 15 (MNI=2)
- Odocoileus virginianus (wh-tailed deer) - 4
- Bos taurus (domestic cattle) - 2
- large mammal - 4

Unidentified bone (n=238)

Although the sample of identified fauna is small in number, it exhibits the same pattern of subsistence as shown in larger samples from other farmsteads in the project area. Pork, beef, and fowl represent the staple meat items, and locally available game indicate supplementation by hunting. For this sample, opossum, cottontail, and deer are probable game animals: the skeletal element identified as turkey is not diagnostic for separating wild from domestic varieties. Wild turkeys were plentiful in Denton Co. early in this century, and it is likely that this specimen was procured by hunting the meadows of the Cross Timbers. This edge-type habitat is also ideal for hunting opossum, rabbit, and deer.

Only two other sites in this study produced evidence of deer (41DN91 and 41DN234). The elements identified as deer from this site were recovered in Block 1 and BHT 4. One of the elements is a metapodial shaft that has been burned. No deer teeth or toes were recovered, which suggests that the animal was field dressed.

None of the remains of the other game animals exhibit evidence of butchering or burning. Two rabbits are represented, and their remains are scattered through Block 1. The opossum remains are confined to a 3-m radius in the center of the block. The turkey element likewise was recovered in Block 1.

Block 1 yielded 90% of the faunal remains recovered from this site. In fact, only six identified bones and 26 unidentified bones were found in the extensive sheet refuse coverage at the site. A total of 22 burned bones was recovered, all but two coming from Block 1. Twenty of these burned bones were coded as large unidentified fragments. Besides the deer element mentioned above, the only other burned bone in the identified sample is a rib from a medium-size mammal, perhaps a coyote or bobcat. One of the bones categorized only as medium mammal compared well with bobcat, but no other carnivore remains were recognized.

Of the domesticated animals represented in this assemblage, pig provided the most meat. At least two pigs are represented, based on elements for which age at death could be determined: a mandible aged between 1 and 1.5 years at death; and a fused proximal ulna, which according to Schmidt (1972:75), is completely fused by 3 years of age. These pigs were probably butchered on site as evinced by numerous teeth fragments and a skull fragment. Only one pig bone was noted as cut, and that was a rib fragment with a deep (cleaver?) cut. One of the large mammal bones was unidentified as to element but exhibited a saw cut. Additionally, one of the chicken bones has a slight cut.

Even though cattle bones were recovered (only two elements: a tooth fragment and a carpal), it is difficult to assess the role of beef in the site occupants' diets from these bones. The elements categorized as large mammal could be either pig or cattle, and some are from immature animals; notably, a proximal tibia fragment was assessed to be from a neonatal individual large enough to be a calf. Beef, therefore was surely consumed by the site occupants, but very little can be ascertained from this sample. No pig or cattle bones were noted as burned, and all but four teeth fragments were recovered in Block 1, which most likely revealed the kitchen disposal area.

Summary: Site 41DN466 was identified during the 1986-1987 survey (see Chapter 6). This farm was occupied during the second half of the nineteenth century. No in situ deposits associated with the dwelling were found; this dwelling was situated in or just north of Block 1. Two features were identified during the proton magnetometer survey and were partially excavated. Both features were cellars. Mortared brick was found in BHT 4 associated with Block 1, and these bricks were assumed to have been from the north cellar (Feature 1). A planview of Feature 1 was identified, and the cellar was cross-section by BHT 4. This cellar appears to have been made of mortared handmade brick, while the south cellar (Feature 2) had earthen walls and floor.

The sheet refuse deposit is low to moderate density, contains little post-occupational debris, and has been impacted by plowing. The low-density deposit reflects the relatively short occupation span. The post-occupational debris dates to the twentieth century and contains a small number of ceramics, vessel glass, architectural items, and modern debris. The site is located in a field that has been plowed for a number of years during the twentieth century.

Spatial distribution maps for the sheet refuse deposit in the 50x50-cm units and Block 1 indicate that Feature 1 is located beneath the sheet refuse. This indicates that after the north cellar was abandoned, Feature 1 was probably filled in and the sheet refuse material was pushed in when the site was plowed. Artifacts are scattered across Block 1, but are concentrated within the boundaries of Feature 1.

Outside Block 1, the sheet refuse deposit contains evidence of horizontal displacement of artifacts by plowing. However, differences are visible in the distribution of different artifact categories at the site. For example, the distribution of wire nails is limited, concentrating east of Block 1, while machine-cut nails are broadly distributed and concentrate in Block 1 and north of the block.

The mean beginning dates obtained for the sheet refuse in Block 1 correlate with the MBD values obtained for units outside the block. These dates indicate the site was probably initially occupied in the 1860s, which correlates well with the archival data.

In summary, site 41DN466 was occupied for a relatively short period during the late nineteenth century. The

dwelling was not found, but two cellars were recorded and investigated. No well was found during the proton magnetometer survey or during excavation. Water may have been obtained from Pond Creek located east of the site.

Because of the extensive plowing that occurred at this site, it was difficult to interpret the archaeological deposits. As such, this site provides an excellent sample of nineteenth-century domestic artifacts, but little spatial information. Of the two features uncovered during excavation, Feature 1 is puzzling. This feature appears to have been a brick cellar. The planview shown in Figure 8-86 is typical of other cellars recorded in the reservoir area (e.g., 41DN166, 41DN167). This profile did not exhibit any evidence of disturbance when exposed below the plowzone. The walls of the cellar were clearly delinated by the contrast between the fill and the natural soil. But no other brick cellars were identified in the area, and certainly no evidence has been found that other families built anything but earthen cellars during the third quarter of the nineteenth century.

Other data from 41DN466 also raise questions about the construction of a brick cellar at this early farmstead. Among these data is the absence of any sheds, barns, or a well. Siginificant site area was investigated by the magnetometer survey and 50x50-cm excavation units. These outbuildings were common in this area, and wells were considered an indication of status. The expenditure of considerable cost and labor on the construction of a brick cellar and the absence of a well appear incongruous. Also, where is the dwelling? While a small log house would have been typical for this period and area, it seems unlikely that a family would built such a costly and elaborate cellar and not a substantial house. No evidence of a brick foundation, stone piers, or other structural remains from the dwelling were found.

Aside from Feature 1, the sheet refuse is similar in content to other early farmsteads studied in the project area. This similarity in sheet refuse content suggests that the same types of activities were conducted at this farmstead that were recorded elsewhere in the project a but are poorly preserved at this site.

41GS79

Map Quad	Pilot Point 7.5' (1961), #3396-23
Elevation	640' amsl
Scheduled Investigations	Testing
Additional Investigations	Architecture
Soil Association	Crosstell fine sandy loam
Cultural Affiliation	Historic (ca. 1880s to 1940s)

Description: The site is located on a Pleistocene terrace on the north side of Isle du Bois Creek. This farmstead is north of the creek in an area currently used for grazing. Extant features include a house mound, brick cellar, standing barn, well, a corral north of the barn, and several barbed-wire fencelines (Figure 8-90). A dirt two-track road bisects the site, and a county road runs north-south west of the site.

Previous Investigations: The site was recorded by ECI in 1981, and architectural documentation of the barn was recommended. Personnel from UNT visited the site in 1985, and archival, architectural, and archaeological investigations were recommended to determine site age, function, and significance.

Archival Investigations: No archival research was requested in the Scope of Work.

Architectural Investigations: The only standing structure at 41GS79 was a large barn recorded by ECI in 1981 as a possible tobacco barn based on its size, relative proportions, and framing (Skinner et al. 1982a:8-22). This barn (Figure 8-91 and Figure 8-92) was two-stories tall with simple brace framing, mortise and tenon joints, log sills, railroad-tie support posts, and piers. The south elevation had both sandstone and wood piers, while the remaining walls had sandstone piers. The walls were vertical pine boards, and the south wall showed evidence of board and

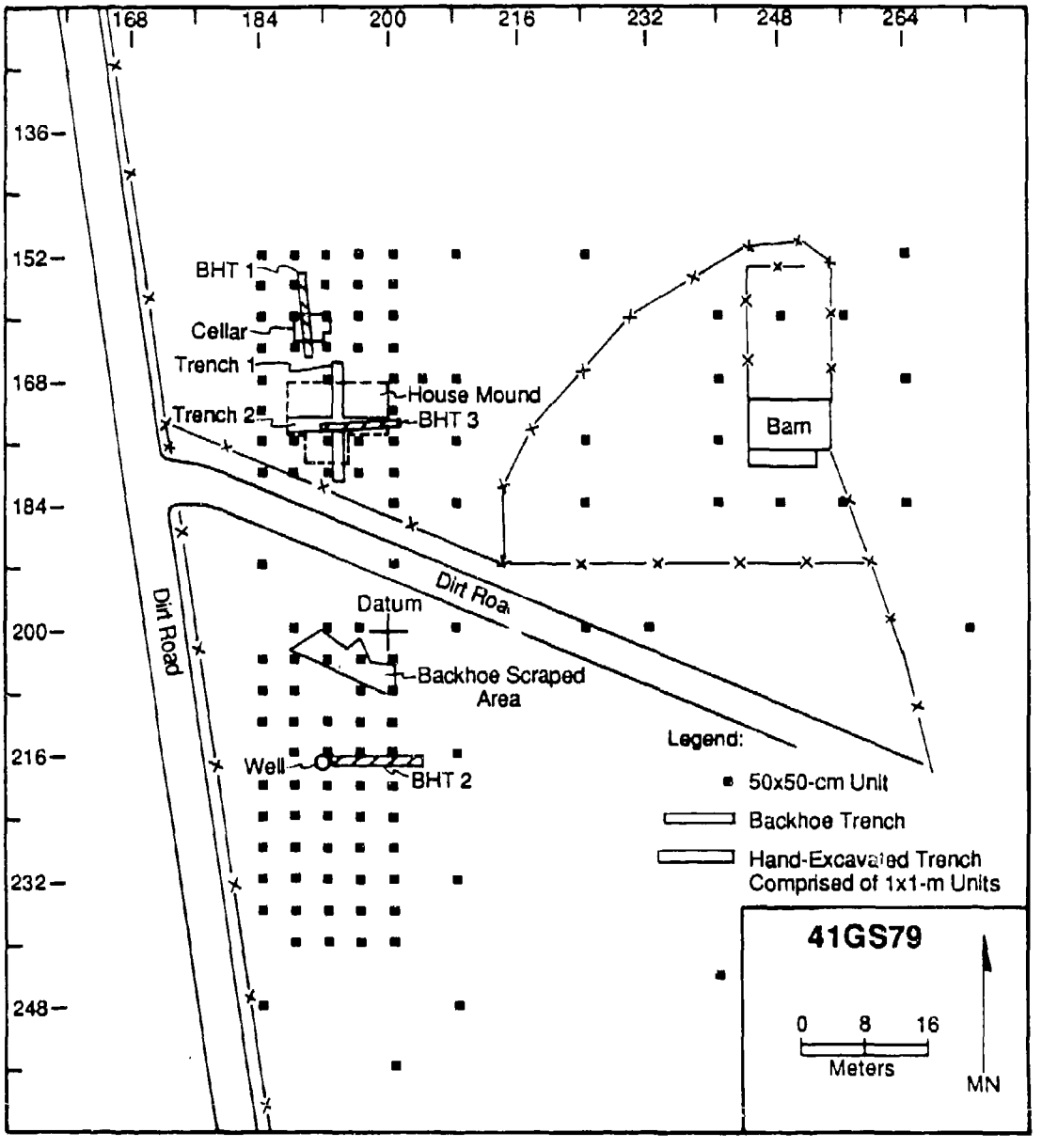
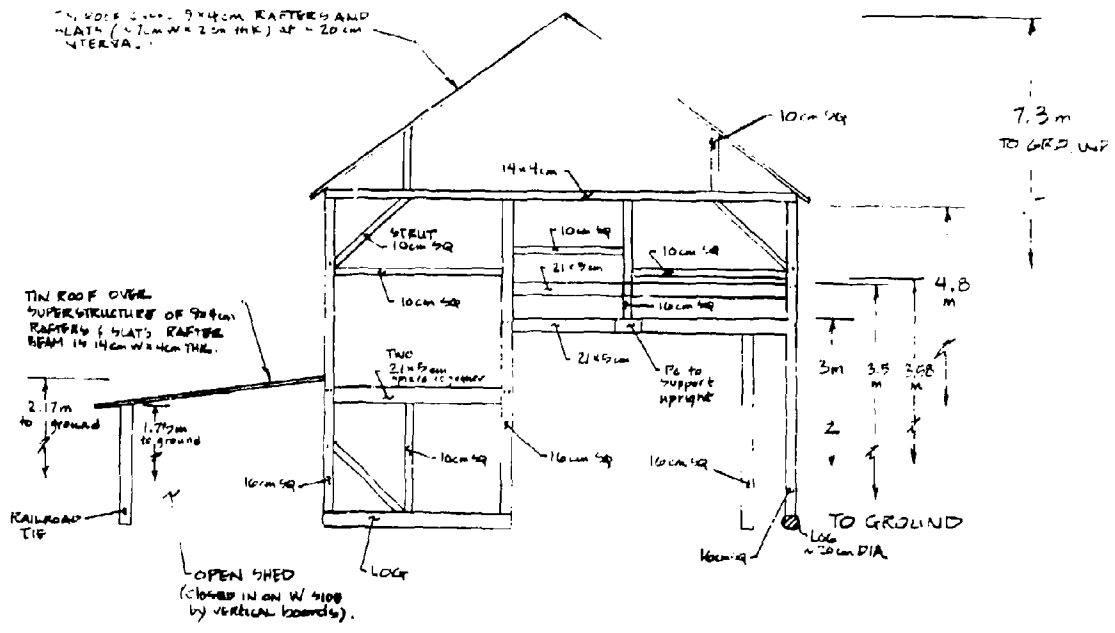
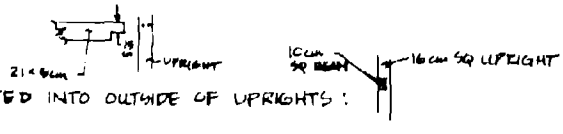


Figure 8-90. Site map of 41GS79.



EAST ELEVATION

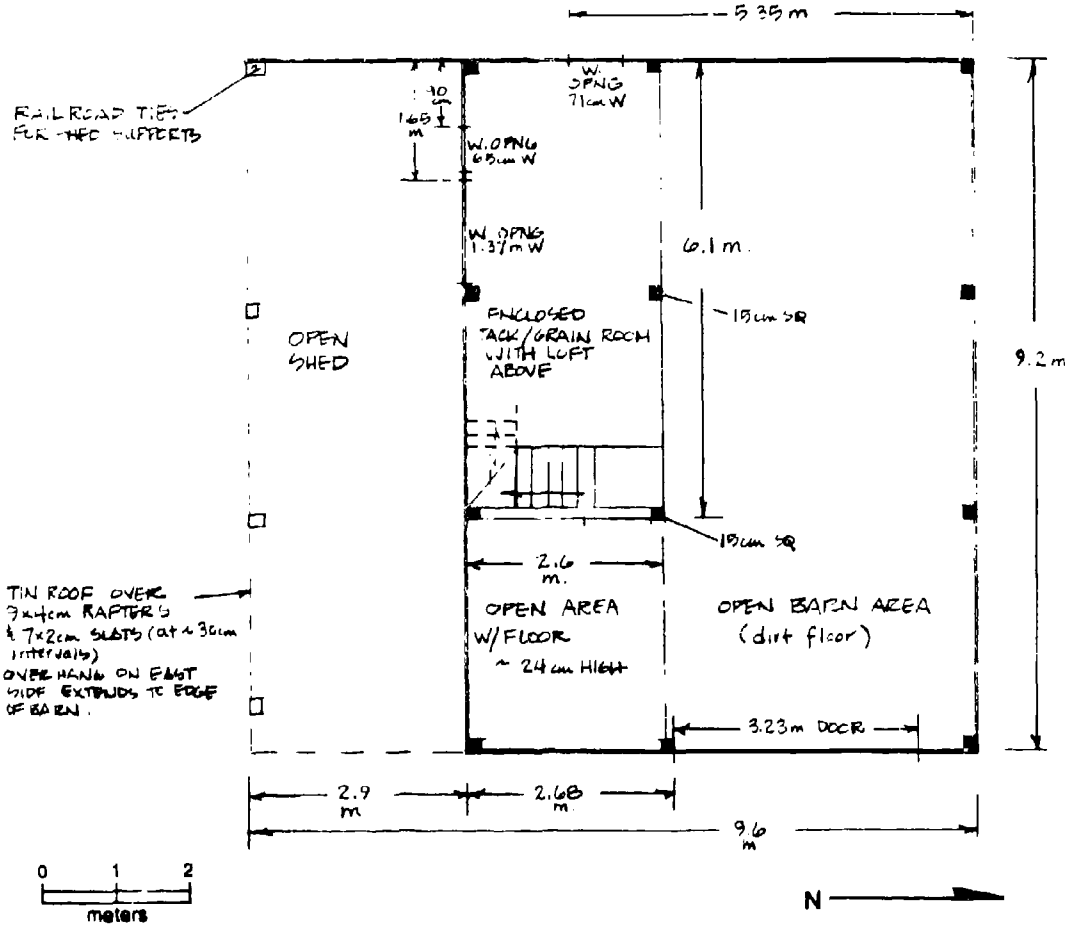
- CORNER STRUTS ARE SLOTTED INTO UPRIGHTS AND FASTENED WITH WOODEN DOWELS.
- 21×5cm CROSSBEAMS ARE SLOTTED (15cm W × 5cm THICK) INTO 16cm SQ UPRIGHTS AND FASTENED BY TWO WOODEN DOWELS:



- 10cm SQ BEAMS ARE SLOTTED INTO OUTSIDE OF UPRIGHTS.

BARN SUPERSTRUCTURE IS COVERED BY VERTICAL BOARDS (28-35cm W × 2cm THK)

Figure 8-91. Field architectural drawing of the east elevation of the barn at 41GS79.



BARN FLOOR PLAN

■ = TIMBER UPRIGHTS 16 cm SQ UNLESS OTHERWISE NOTED · EXTEND TO EAVE - 4.6m.

- ALONG SOUTH SIDE OF BARN EACH UPRIGHT HAS A STONE & WOOD PIER. ALL OTHER OUTSIDE UPRIGHTS HAVE STONE PIERS.

OPNG = OPENING
SQ = SQUARE

Figure 8-92. Field architectural floorplan of the barn at 41GS79.

was drawn at 20 cm below surface, and the removed fill from Level 2 (10-20 cm below surface) contained mortar and wire nails. No post was found, and the feature was not cross-sectioned. The postmold was approximately 45 cm north-south by 32 cm east-west.

Feature 6: Feature 6 was exposed in Unit S173 E193 within the house mound. It was a dark soil anomaly, exposed at 12 cm below surface and extended into units S173 E194 and S174 E193. Feature 6 contained a small concentration of artifacts, the matrix outside the feature being sterile in Levels 2 (10-20 cm below surface) and 3 (20-30 cm below surface). Artifacts in Feature 6 included window glass, nails, mortar, brick, a cartridge, marbles, and a button fragment.

Feature 7: Feature 7 was the house mound, which was T-shaped (see Figure 8-90) and was located just south of the cellar (Feature 8). Both were cross-sectioned by backhoe trenches, and two hand-excavated trenches were dug in the house mound. Feature 7 had a maximum length of 12 m north-south and east-west, and appeared to reflect a Tee floorplan with two rooms on the north and a third on the south.

Feature 8: Feature 8 was a machine-made brick cellar, with the entrance on the east. Excluding the entry, it was approximately 4 m by 4 m in size. The cellar had collapsed.

Feature 9: Feature 9 was a sandstone-lined well located about 40 m south of the dwelling. It was capped with machine-made brick and was approximately 100 cm in diameter. The brick was two courses thick and seven courses high. The well was over 7.5 m deep.

50x50-cm and Judgmental Units: The 50x50-cm units provide considerable temporal and spatial data on the sheet refuse deposit. These data include information on site age, length of occupation, function, site activity areas and features, and artifact density distributions. The judgmentally-placed units provide information on eight features which include the house mound, six posts or postmolds, and the cellar. The backhoe-scraped area did not reveal any buried intact features.

Similar artifacts occur in the 50x50-cm units excavated across the site and in the hand-excavated trenches in the house mound (Table 8-60), but a higher percentage of more recent material occurs in the house mound. The 1x1-m units in the hand-excavated trenches contain both sheet refuse artifacts and dwelling debris. This dwelling debris accounts for 63.93% of the artifacts from these units. Less architectural remains were recovered in the 50x50-cm units, with architectural items accounting for only 18.77% of the recovered artifacts.

When architectural items and thin and heavy metal (mostly tin can fragments) are excluded, several interesting differences are evident among the two collections (50x50-cm units and 1x1-m units). First, while vessel glass (bottle glass, table glass, lamp glass, unid. glass) occurs in similar frequencies in both collections, ceramics are three to four times more frequent in the sheet refuse outside the dwelling than under the dwelling. Secondly, personal items are almost as common under the dwelling as ceramics, but are three times more frequent outside the dwelling. On the other hand, machine and wagon and horse and stable gear are more common under the dwelling than in the sheet refuse recovered from the 50x50-cm units.

The MBD values obtained for the ceramic and glass sherds (Table 8-61) from 1x1-m units under the dwelling are more recent than for the sheet refuse deposit (50x50-cm units). The combined MBD value for the 50x50-cm units is 1883.64, while the combined MBD value for the 1x1-m units is 1908.50, indicating a difference of 24.86 years between the two collections. This difference suggests that the northern site area which includes the dwelling and cellar area (excluding the barn and corral) was more heavily utilized during the twentieth century. Further, artifact density is greater in the northern area. Fewer artifacts were found in the southern area which includes the units south of the dirt road, although more 50x50 units were dug in this area.

Table 8-60
Artifacts from the 50x50-cm Units
and the 1x1-m Units at 41GS79

Artifact Category	50x50-cm Units Count	%	%[1]	1x1-m Units Count	%	%[1]
Semi & Coarse Earth.	6	0.22	0.65	2	0.04	0.16
Refined Earthenware	85	3.05	9.27	54	0.95	4.19
Stoneware	79	2.83	8.62	5	0.09	0.39
Porcelain	1	0.04	0.11	6	0.11	0.47
Bottle Glass	549	19.70	59.87	827	14.58	64.10
Table Glass	20	0.72	2.48	64	1.13	4.96
Lamp Glass	12	0.43	1.49	77	1.36	
Unid. Glass	3	0.11	0.37			
Window Glass	109	3.91		1340	23.62	
Machine-Cut Nails	37	1.33		83	1.46	
Wire Nails	131	4.70		228	4.02	
Handmade Brick	14	0.50		440	7.76	
Machine-Made Brick	34	1.22		23	0.41	
Building Material	198	[illegible].10		1512	26.66	
Personal Items	109	[illegible].91	11.88	53	0.93	4.11
Thin & Heavy Metal	1347	48.33		756	13.33	
Household Items	17	0.61	1.85	22	0.39	1.71
Machine & Wagon	6	0.22	0.65	27	0.48	2.09
Tools	1	[illegible].04	0.11	4	0.07	0.31
Horse & Stable Gear	1	.04	0.11	2	0.04	0.16
Ammunition	1	0.04	0.11	11	0.19	0.85
Electrical Items				20	0.35	1.55
Misc. Other	27	0.97	2.94	116	2.05	9.00
Total	2787			5672		

[1] Percentages excluding architectural remains.

Table 8-61
MBD Values for Ceramics and Bottle Glass by Collection
Area for 41GS79

Artifact Category	50x50-cm Units	1x1-m Units
Refined Earthenware	1871.32 (n=72)	1902.14 (n=49)
Stoneware	1878.86 (n=79)	1881.67 (n=6)
Bottle Glass	1900.97 (n=73)	1913.86 (n=88)
Combined	1883.64 (n=224)	1908.50 (n=143)

Temporal differences occur within artifact categories from the northern and southern sheet refuse deposits. For example, only 25.95% of the wire nails from the 50x50-cm units are from the southern site area. On the other hand, 72.97% of the machine-cut nails from these units occur in the southern site area. When the nails from the 1x1-m units are included, machine-cut nails total only 25.05% of the nail assemblage.

Temporal differences occur within artifact categories between the sheet refuse deposits (50x50-cm units) and the house mound (1x1-m units). For example, machine-cut nails are slightly less common in the 50x50-cm units (22.02% of the nails) compared to 26.69% in the house mound. On the other hand, machine-made bricks total 70.83% of the bricks in the 50x50-cm units and only 4.97% in the house mound.

Based on the data in Table 8-61, the smallest difference in MBD values occurred among stonewares (2.81 years), while the largest was among refined earthenwares (30.82 years). It is unclear why this pattern occurs. The combined MBD date obtained for the site is 1893.33 (n=367 sherds).

Spatial Distributions: Artifact distribution maps were made using data from the 50x50-cm units and the 1x1-m units. In addition to content and temporal differences (see above discussion), these collections provide valuable spatial information. Distribution maps were made for refined earthenwares, stonewares, bottle glass, window glass, machine-cut and wire nails, and handmade and machine-made brick. The maps for both data sets will be discussed below.

The artifact-distribution maps for the 50x50-cm units indicate higher artifact densities in the northern site area. Refined earthenwares clustered north of the house mound and cellar (Figure 8-93). A more dispersed distribution occurred in the southern site area, but 54.12% of the refined earthenwares from the 50x50-cm units were from the northern site area. On the other hand, few stonewares occurred in 50x50-cm units in the northern site area (6.33%). Stonewares clustered in the southern area, but exhibited a diffuse pattern within this area. No stonewares were found in the sheet refuse deposit near the house.

Window glass was scattered across the site, with several sherds occurring in the barn area. Only 17.43% of the window glass sherds from 50x50-cm units occurred in the southern site area. In the house area, window glass clustered primarily north or northeast of the house and in the southwestern house area.

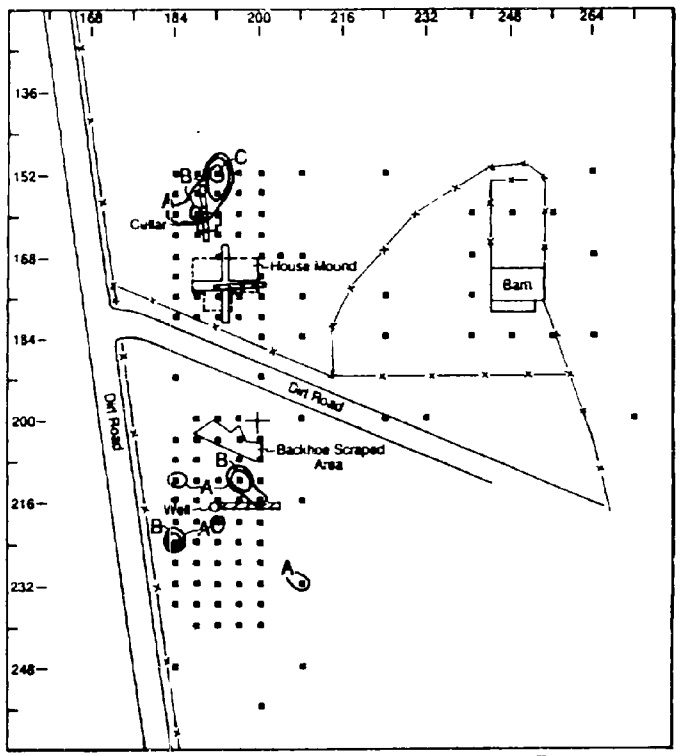
Machine-cut nails from 50x50-cm units occurred primarily in the southern site area (72.97%), while wire nails occurred predominately in the northern site area. In addition, wire nails were more widely distributed across the site.

Brick fragments were poorly represented in the 50x50-cm units, but both handmade and machine-made bricks occurred in both site areas. The handmade brick in the northern site area was from the dwelling chimney, while the machine-made brick was from the cellar. The machine-made brick in the southern area was probably from the well.

The artifact-distribution maps for the 1x1-m units indicate that both sheet refuse artifacts and building debris occurred in the house mound. However, building debris predominated the assemblage from these units (see Table 8-60). The refined earthenwares under the house clustered under the southern T-extension and the east room (Figure 8-94). Few occurred under the west room or near the outside walls except the outside east wall. This pattern is also evident in the sheet refuse deposit (see Figure 8-93).

Stonewares were extremely uncommon under the house (Figure 8-94) but appeared to cluster near the center of the house. No sherds occurred near exterior walls. No sherds were found in the sheet refuse deposit surrounding the house (see Figure 8-93).

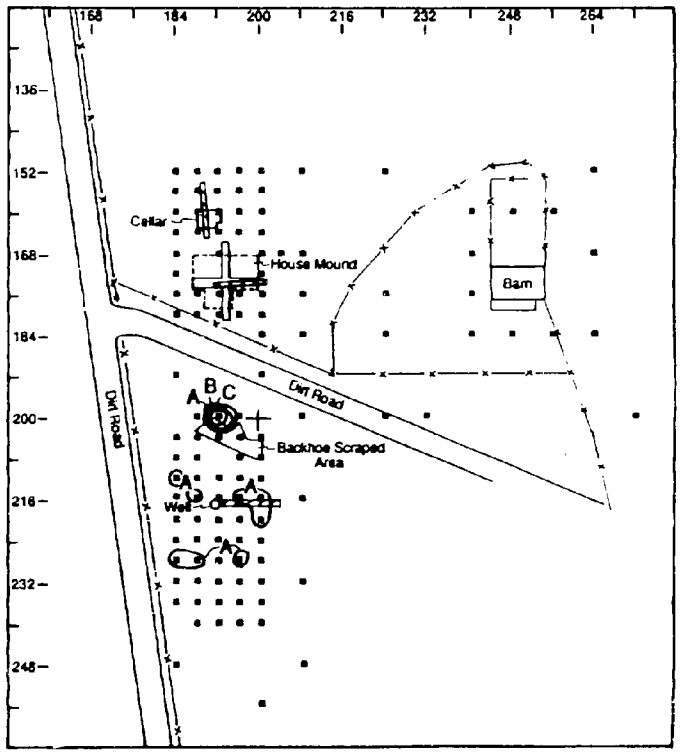
Window glass occurred in all units under the house (Figure 8-94), but only one large concentration occurred. This concentration was along the west exterior wall of the west room, indicating the location of one of the windows.



Refined Earthenwares

A 3-4
B 5-6
C 7-8

a



Stonewares

A 3-5
B 6-7
C 8-17

b

Figure 8-93 Artifact density distributions for major artifact categories based on artifact counts per 50x50-cm unit at 41GS79. (a) refined earthenwares, (b) stonewares, and (c) window glass.

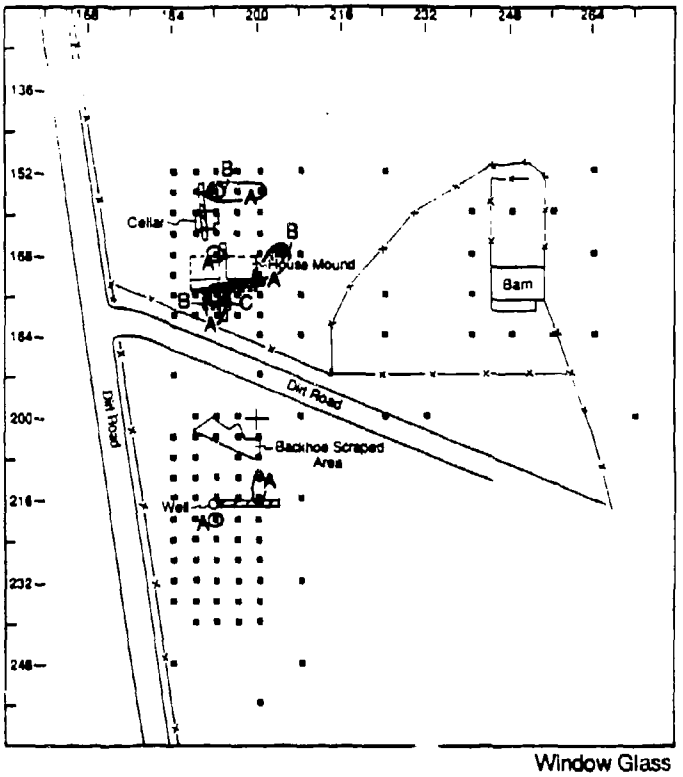


Figure 8-93. (continued) Artifact density distributions for major artifact categories based on artifact counts per 50x50-cm unit at 41GS79. (a) refined earthenwares, (b) stonewares, and (c) window glass.

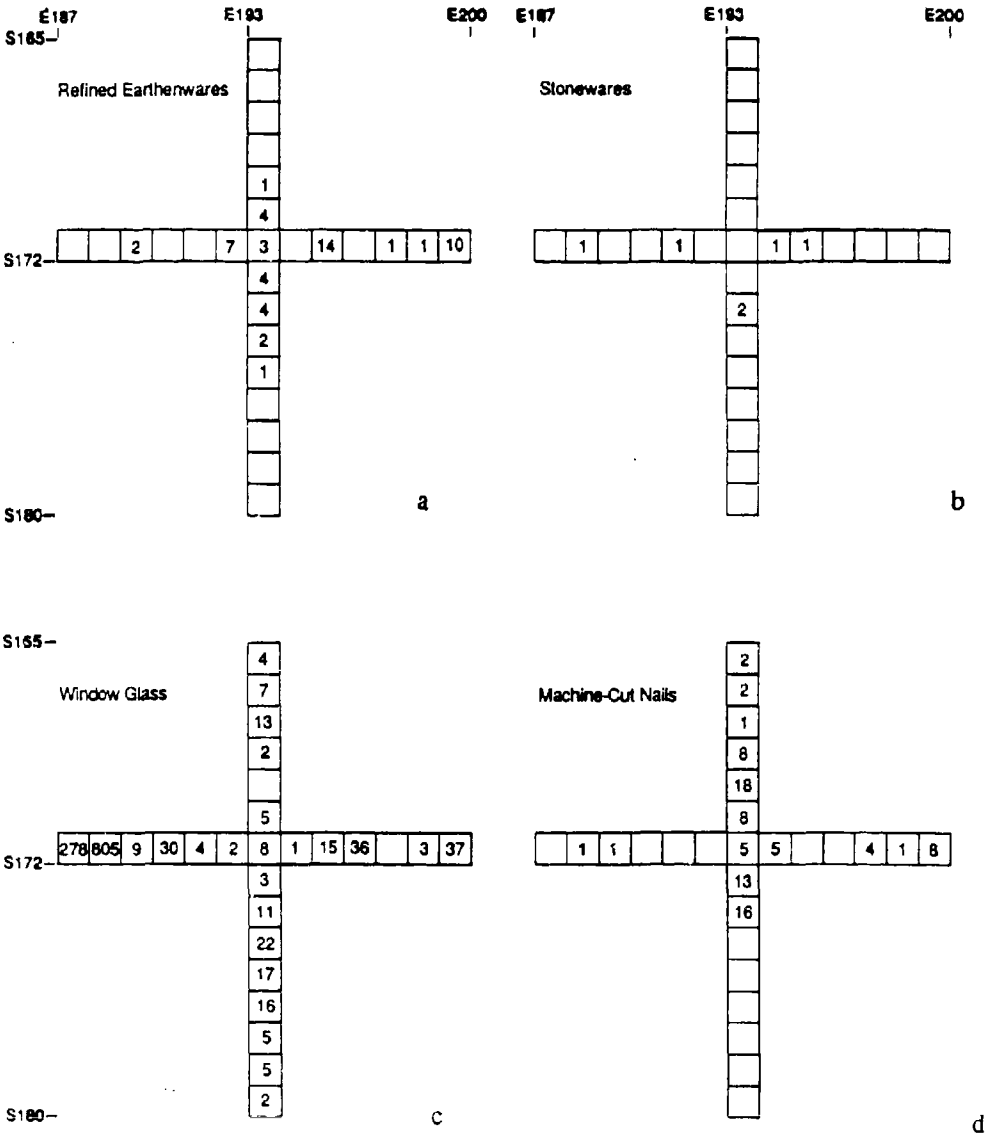


Figure 8-94. Artifact counts for major artifact categories in the hand-excavated trenches (Trenches 1 and 2) within the house mound at 41GS79. Trench units are 1x1 m in size and their locations are shown in Figure 8-82. (a) refined earthenwares, (b) stonewares, (c) window glass, (d) machine-cut nails, and (e) wire nails.

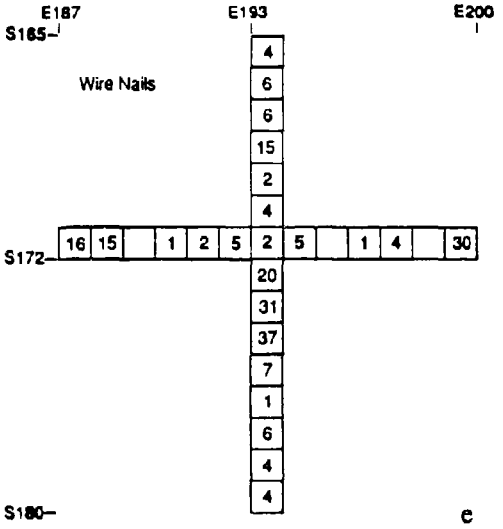


Figure 8-94. (continued) Artifact counts for major artifact categories in the hand-excavated trenches (Trenches 1 and 2) within the house mound at 41GS79. Trench units are 1x1 m in size and their locations are shown in Figure 8-82. (a) refined earthenwares, (b) stonewares, (c) window glass, (d) machine-cut nails, and (e) wire nails.

However, this concentration is not evident in the 50x50-cm unit sheet refuse data (see Figure 8-93).

Nails were relatively poorly represented in the 1x1-m units under the house. While wire nails clustered on the south and east sides of the house in the 50x50-cm units, clusters did not occur along wall lines in the house mound (Figure 8-94). Machine-cut nails clustered near the south wall of the house where the east and west rooms joined and where the southern Tee was added. This suggests that the original dwelling may have been built with machine-cut nails and the southern room was built with wire nails. The overlap of machine-cut and wire nails may be the result of later modifications.

The original chimney was handmade brick and brick fragments clustered in the center of Trench 1 between S168 and S175. The highest concentration was in S170 E193 which contained 142 handmade brick fragments. No handmade brick fragments were found in Trench 2. Instead, handmade bricks clustered near the north and south walls in the center of the dwelling (between the east and west rooms). No cluster occurred in the south Tee.

Faunal Remains:

TOTAL BONE = 53

Identified fauna (n=38)
- Anura (toad/frog) - 1
- Colubridae (non-poisonous snake) - 1
- Meleagris gallopavo (turkey) - 1
- Large bird - 1
- Didelphis virginianus (opossum) - 1

Dasypus novemcinctus (armadillo) - 1
Lepus californicus (jack rabbit) - 1
Sylvilagus aquaticus (swamp rabbit) - 1
Sylvilagus floridanus (cottontail) - 8
Sus scrofa (domestic pig) - 1
Bos taurus (domestic cattle) - 3 (1 burned)
Large mammal - 4
Medium mammal - 1

Unidentified bone (n=15)
unburned - 14
burned - 1

In this sample, only the large domestic mammals show evidence of cut marks (on ribs and pelvis fragments) or burning. It is undetermined whether the single turkey element is from a wild or domestic bird. Given the other wild game animals present in this assemblage, it is quite likely that turkey was also hunted. Furthermore, the absence of chicken remains suggests that the occupants did not keep domestic fowl. The frog, snake, and old world rat are probably intrusive.

Summary: Site 41GS79 was a ca. 1880s to 1930s farmstead. Extant features included a house mound, brick cellar, standing barn, a well, a corral north of the barn, several barbed-wire fencelines, and a dirt two-track road that bisects the site.

The site area north of the road contained the house mound, the collapsed cellar, and the barn and corral. Two hand-excavated trenches of 1x1-m units were excavated through the house mound to recover data on the dwelling and artifacts under the house. These units indicate the dwelling was built during the late nineteenth century with machine-cut nails and a handmade brick chimney. The original dwelling may have been two rooms, with a Tee addition added to the south during the twentieth century.

The cellar was built of machine-made brick during the early twentieth century. It had collapsed and was bisected by BHT 1 to obtain a profile. No hand-excavated units were dug in the cellar.

The barn and corral were built during the early twentieth century. The barn was originally identified as a possible tobacco barn (Skinner et al. 1982a), but this was not supported by the architectural data. The barn was designed as a hay barn, with a loft and a wagon pull-through and storage area in the northern section of the barn. Extensive modification and reuse of lumber is evident in the barn and the southern shed addition.

The sheet refuse deposit is low to moderate density, with temporal and content differences between the northern and southern site areas. A larger percentage of more recent artifacts (e.g., bottle glass and wire nails) occur in the sheet refuse north of the dirt road. The sheet refuse south of the road contains a relatively smaller percentage of twentieth-century material.

The location of the well and the age and content of the sheet refuse deposit in the southern site area suggest that a dwelling may have been located in this area. However, no dwelling was found. The spatial distribution of major artifact categories was diffuse in the southern sheet refuse deposit, but exhibited definable patterning in the northern site area.

In summary, site 41GS79 contained evidence of a farmstead occupied 40-50 years, with extant structures. Temporal differences between the 50x50-cm and 1x1-m data and the relative frequency of domestic items in the southern site area suggest that an earlier house was located near the well. However, no dwelling was found in this area during excavation.

The data from 41GS79 correlates well with the architectural and archaeological record recorded at other farmsteads in the project area that continued to be occupied into at least the 1940s. Several building episodes are indicated, with additions being made to the dwelling, re-use of earlier structural elements or modification of an earlier barn, and the construction of a new cellar. The extant cellar dates to the later part of the site occupation. An earlier cellar probably occurred, but was not located during excavation. Several periods of building construction or modification were also recorded for sites 41DN118 and 41DN224, among others.

The animal pen and corral associated with the barn suggest that the site occupants probably raised some cattle. However, like other farmsteads in the area, cattle are poorly represented in the faunal assemblage. This data suggest that the family at 41GS79 probably raised cattle for market and consumed little themselves. Roy Jones, who lived at 41DN250 and raised cattle, indicates that his family ate beef, but relatively little compared to chicken, turkey, and other foods. This pattern appears to have been common in this area.

CHAPTER 9

NINETEENTH CENTURY FOODWAYS

by

Bonnie C. Yates and Susan A. Lebo

Inferences regarding the lifestyle and foodways of nineteenth century homesteaders may be made from assessments of three components of archaeological research: the material record (e.g., bones, ceramics, glass); archival documentation (e.g., probate records, census data); and informant recollections (e.g., oral histories, diaries). As part of the material record, artifacts such as butchered faunal remains, cooking/eating utensils, food storage containers, and structural remains (e.g., smokehouses, coops, and pens) are basic data sets for inferring subsistence activities. The focus of this chapter will concern information derived from these data sets, as well as from archival data and oral histories, toward the end result of a description of nineteenth century foodways in northcentral Texas, specifically for the Ray Roberts Lake project area.

Plant Foods

Archaeologically, the vegetable contribution to historic dietary patterns is virtually non-existent. Pollen records are seldom investigated for historic sites studies, but some features such as wells and cesspits lend themselves to plant and animal microrganism research. Vegetable remains such as corn cobs, fruit pits, and certain hardy seeds may preserve under optimum conditions.

It is from settler literature and recorded reminiscences that the prominence of certain plant foods is known. Wheat, corn, and oats were staple cash crops in northcentral Texas as early as 1850 (Lowe and Campbell 1987:175), and vegetables, especially sweet potatoes, were included in the Agricultural Census (Dallas Co.) for that year. Historian Michael Hazel (1985:10) cites the lack of effective transportation as discouraging early farmers from growing more than they could consume or sell to newcomers. He quotes Mrs. George James of Garland as stating that "a farm of fifty acres was considered sufficient to grow all the wheat, corn and sorghum needed for home consumption" (Hazel 1985:10).

Mr. Roy Jones, a Denton County resident, commented on the fruit trees his family enjoyed on their farms in what is now the project area (Lohse, this volume). They planted peaches, plums, and pears and availed themselves of the wild plums that grew in thickets. His forbears had to compete with opossums, raccoons, and wasps for these fruits, but they also used them for supplemental foods for their livestock. The cows ate fallen pears, and the pigs got most of the wild plums. Scattered plum thickets were to be found over a large part of eastern Denton County (Cowling 1936) as they are today despite expansive agricultural practices and urban sprawl.

Early settlers encountered a diverse natural garden when they moved to northcentral Texas. Bridges (1978) states that wild plants in the Cross Timbers included plums (Chickasaw, hog, and cherry plums), grapes (postoak or turkey grapes and possum grapes), persimmons, nuts, berries, and honey. Pecans were the most common nuts, and less common types included black walnuts (Juglans microcarpa) and hickory nuts (Carya spp.). However, other mast crops such as chestnuts (Castenea pumila), butternuts (Juglans cinerea), hazelnuts (Corylus americana), or beechnuts (Fagus grandifolia) do not grow in the area. Blackberries (Rubus spp.) and dewberries (Rubus spp.) were common, while wild strawberries (cf. Fragaria ovalis), elderberries (Sambucus canadensis), and mulberries (Morus rubra) were less abundant.

However, Bridges also reports that settlers had no access to wild gooseberries (Ribes sp.), blueberries (Vaccinium spp.), or huckleberries (Gaylussacia spp.), delicious berries that folks from the Appalachias may have

sorely missed. He further listed as not available currants (Mahonia trifoliolata), which according to Vines (1960) do grow over most of Texas (except in the far eastern sections), and raspberries, of which Vines (1960:480) specifies that a variety called Rubus putus grows "at Pilot Point in Denton County."

Common herbs used by the settlers included Lamb's quarters (Chenopodium album), dandelions (Taraxacum officinale), sheep sorrel (Rumex acetosella), volunteer mustard (Brassica campestris), poke weed (Phytolacca americana), and wild onions (Allium cf. palmeri) (Bridges 1978).

Animal Foods

Because of taphonomic preservation factors in a temperate geographic locale, it is the meat diet that better lends itself to archaeological inquiry. Animal bones from historic sites are generally preserved and consist primarily as the results of food refuse either deposited near living quarters or dispersed in the yard areas between the dwelling and outbuildings. The remains are usually disturbed by scavengers, as evidenced by gnawing and missing elements, and covered by later occupational debris. Historic faunal remains are composed predominately of domesticates; however, the abundance and kind of wild species present in an historic site faunal assemblage can be indicative of ethnicity, and socioeconomic status, or conjectural about the recreational lifestyle of the site's occupants (Mudar 1978; Crabtree 1985; Reitz and Scarry 1985). "Hunting," states Doughty (1983:79), "like free land, was one of the lures of the frontier."

Without basic commodities that usually sustained the immigrant, newly freed slaves found hunting and fishing as a means of survival. "So difficult was the plight of freedmen that one black could only comment, 'if the woods were not full of wild game, all us Negroes would have starved to death'" (from a statement by Elige Davison in the Slave Narratives, Texas XVI, pt. 1, p.298 cited by Smallwood 1975:15).

Wild game in the Blackland Prairie and the Cross Timbers was abundant when the settlers arrived. The numerous wooded belts along the creeks and streams provided much of the "edge" type of habitats preferred by many game animals. Buffalo (Bos bison), antelope (Antilocapra americana), deer (Odocoileus virginiana), greater prairie chickens (Tympanuchus cupido), and wild turkeys (Meleagris gallopavo) were plentiful as were smaller game such as doves (Columbidae), quail (Colinus virginianus), rabbits (Lagomorpha), squirrels (Sciuridae), and bullfrogs (Rana catesbeiana) (Texas Game, Fish and Oyste. Comm. 1945:5).

By the last quarter of the nineteenth century, when the majority of the Ray Roberts Lake historic sites were being settled, the bison, antelope, and prairie chicken had been extirpated. The last bison in Cooke County was shot in 1872, "a bull that had drifted ahead of the northers of the winter months. . . . The buffalo had moved westward out of Cooke County in the year 1854" (Jones 1977:89). Nevertheless, Jones (1977:20) reports the general consensus that

> No better hunting grounds in Texas in those days [1870s] than that portion of the county [around] Gainesville . . . including Clear Creek and its tributaries, Elm and Fish creeks . . . abounded with predatory animals, also deer, [and] occasionally a bear was found in the bottoms.

The animals that were identified in the archaeological site assemblages are representative of the modern fauna. No bear bones were recovered from sites in the present study, and bison bones were not distinguished from those identified as bovine and assumed to be domestic cattle. Table 9-1 summarizes the taxa represented in the faunal remains at ten historic mitigation sites in the Ray Roberts Lake project area. These ten sites were all occupied between 1850 and 1930, and as a group, they can be used to characterize the meat diet common to the rural lifestyle of this time period. Sites with just a few taxa recovered from limited testing are discussed in the site descriptions (Chapters 7 and 8).

Table 9-1
Selected Taxa from Ten Historic Sites at Ray Roberts Lake

Taxon	CO121	DN91	DN157	DN166	DN167	DN198	DN224	DN234	DN248	DN466
Fishes			X		X	X	X	X		
Turtles		X	X	X	X					
Chickens	X	X	X	X	X		X	X	X	X
Turkeys			X				X			X
Game birds		X		X	X	X	X	X		
Opossums		X			X	X	X	X		X
Rabbits	X	X	X	X	X	X	X	X	X	X
Squirrels		X		X	X		X	X	X	
Rodents*	X				X		X	X	X	X
Rodents**	X		X		X		X	X		X
Dogs		X				X	X		X	X
Deer		X						X		X
Pig	12/1	15/1	14/2	18/2	19/1	2/1	57/3	10/1	27/2	15/2
Cattle	14/1	3/1	2/1	1/1	4/1	-	7/1	-	1/1	2/1
Other			a		b	c				

* New World rodents
** Old World rodents
a DN157, sheep/goat, house cat
b DN167, skunk
c DN198, vulture, skunk, house cat, fox, raccoon

Note: Values for pig and cattle are number of identified specimens/minimum number of individuals.

From Table 9-1, it is apparent that domestic animal remains are recorded consistently at most of the sites, but also that rabbit bones occur at each site. The presence of rabbit remains, as well as other wild animals, in a historic assemblage cannot be assumed to be of cultural origin. However, hunting locally available game and fishing is mentioned in many of the oral histories and reminiscences as ways to supplement a meat diet of pork, beef, and poultry:

Yes, people used to hunt . . . [my brothers] were quail hunters...and we used to go fishing. . . . They had

> a little boat, and I'd go and row the boat and they ran the hooks, and we usually caught a mess or two of fish (R. Jones, 1989. See Chapter 10, this volume).
>
> We had everything our hearts could wish for: deer, turkey, antelope, bear. I would not risk it to say that I had seen 500 deer at one sight. . . . We could go out any morning and kill a deer or turkey (J.P. Loving, ca. 1850 in Bates 1976:338).
>
> The turkeys at night would almost cover the timber on the creeks and the wild chickens could be seen flying in droves a mile long (Bates 1976:10).
>
> . . . squirrel stew with dumplings was the all-time favorite (Linck and Roach 1989:65).
>
> [The men] spent more time fishing and hunting small game (Smallwood 1975:47).

With the exceptions of bear and antelope, the faunal remains recovered from the Ray Roberts Lake sites attest to these recollections. But for dependable meat, the hog reigns supreme in the archaeological record. Cattle were certainly butchered and consumed, yet pig remains usually outnumber cattle in identified specimen counts and minimum number of individual estimates. There are some interpretive problems, however. Cattle yield more meat per individual (420 lbs vs. 176 for hogs), but over 40% live weight is lost to slaughter compared to only 20% for hogs (Eastman 1975). Therefore, in terms of meat contributed to the diet, cattle yield more in poundage, but swine are more efficient in converting fodder into meat, and because of their high reproductive rates, they were considered superior to cattle and sheep as meat producers (Hilliard 1972:102). "A hog could snuff out acorns and hickory nuts and needed no care . . . increasing its weight 150% in its first 8 or 9 months" (Linck and Roach 1989:4).

Pork is cited time and again by Hilliard (1972) and other researchers (e.g., Wigginton 1972:189; Peden 1974:112; Howell 1981:100-102; Taylor 1982; Price 1985:48; Pate 1988;) as being the meat of choice for this homesteading period all along the spreading frontier. Reasons for this preference stem from its taste (high fat content) and to the relative ease of butchering hogs and preserving the meat. On the frontier, most immigrating families brought their own hogs and chickens specifically to raise as food sources when they resettled. Both domesticates can subsist on free ranging, thus requiring no specific fodder. The cattle that were brought along were specifically needed for draft (oxen) or dairy (milch cows).

Preservation of relatively moderate amounts of pork was more manageable than beef, which was generally eaten fresh and thus produced more meat than a nuclear family could consume. Beef was considered harder to cure, with pickling and drying as the most commonly used methods of preservation; it was also believed to be nutritionally inferior to pork, and when fed to slaves, the allowances were generally higher (two lbs to one) than pork (Hilliard 1972:58-59).

These opinions likely came with the early settlers to north Texas. "When early Texans said 'meat', they meant pork" according to Linck and Roach (1989:4). This synonymy is echoed in the recollections of the oral interviews of first generation North Texans. Eunice Gray, when asked how her parents lived in early Denton County, replied, "I would think that they lived about like other people. They made their own sausage, and mincemeat and killed their own hogs" (Lohse, this volume).

Moir and Jurney (1988:383) state that "Cattle were the major meat source since beef bones were the most prevalent faunal remains recovered in refuse deposits at Joe Pool Lake historic farmsteads," further asserting that this pattern is "quite different from the typical traditional southern diet where pork dominates." They go on to state that the pattern had been repeated in the analysis of faunal remains from the Richland Creek project (Jurney 1987a), showing that "the nineteenth century Texan preferred beef."

The data for the Joe Pool Lake farmsteads, in contrast to these statements, indicate that MNI for swine is consistently higher than for cattle and in only two cases were bone counts for cattle higher (127 vs. 93 at 41TR39

and 9 vs. 7 at 41TR42). It must be noted that in his summary, Jurney (1988c:331) stipulates a greater contribution to the meat diet from beef, which would be accurate from the data in that the 22 head of cattle identified from the 12 historic components would have provided 9,240 lbs. of beef versus 6,336 lbs. from 36 head of swine, using Eastman's (1975) average estimated yield. These data do not seem strong enough to dethrone pork as the meat of preference in the late nineteenth century. Additionally, zooarchaeological data from historic farmsteads in the recently studied reservoir areas of North Texas support only a 1.7 averaged ratio in the meat weight contribution of cattle over swine based on MNI (Table 9-2).

Other variables affect the interpretation of the relative significance of pork over beef. For example, the archaeological record indicates that young cattle were more often butchered than full-grown beeves, thus generating a smaller poundage of edible meat than is commercially produced today. Cattle were raised as a cash commodity, consumed domestically only if needed or as part of a celebratory feast in which large numbers of people were to be fed. Then there is the abundance of preserved pork that was consumed as sausage and bacon, products that leave no archaeological evidence. Bacon, not beefsteak, is regarded as the meat staple in countless reminiscences about the early years in Texas; the archaeological record is denied the true significance of this food because it leaves no bones.

Table 9-2
Cattle and Swine at Selected North Texas Sites[1,2]

	DL181	DL192	TR39	DN401	DT97	NV145	NV267
Cattle	11/3	23/2	127/4	38/1	7/1	71/11	57/10
lbs beef	1260	840	1680	420	420	4620	4220
Swine	18/3	69/5	93/5	5/1	89/3	140/17	67/10
lbs pork	528	880	1056	176	528	2992	1760

[1] Sites 41DL181, 41DL192, and 41TR39 = Joe Pool Lake (Jurney 1988)
Site 41DN401 = Lewisville Lake (Yates 1991)
Site 41DT97 = Cooper Lake (Yates 1989)
Sites 41NV145 and 41NV267 = Richland/Chambers Reservoir (Jurney 1987)

[2] Values for cattle and swine are expressed as numbers of identified specimens/minimum number of individuals (NISP/MNI).
Edible meat yields = 420 lbs for beef and 176 lbs for pork (Eastman 1975).

A look at agricultural census records can be somewhat misleading when heads of cattle are compared to heads of swine. For example, the 1860 agricultural census records indicate that several households in the project area had as many or more cattle than hogs, but a closer look reveals that roughly one-third of these cattle were milch cows or draft oxen. Of the eight farmsteads investigated, the average number of milch cows was 12, oxen averaged 3, and "other cattle" numbered around 25 (excluding two ranching households). Landowners on the westernmost part of the project area had substantially more head of cattle, numbering several hundred head. Numbers of swine for these same households averaged 42. Unfortunately, the census recorders failed to make notations under the category of "numbers of livestock slaughtered," yet they frequently made note of how many had been "killed by dogs" or "strayed away."

Incidentally, seven of these households had sheep, with an average of 30 for the five small flocks and 340 for

the larger ranches. Curiously, the one site from which sheep remains were identified (41DN157) had no sheep recorded in the 1860 census.

Northcentral Texas during this time was in a pivotal geographical and temporal position because cattle raising was entering its ascendancy although subsistence farming was the norm. Texas cattlemen felt cramped by the advance of the farming frontier after 1864, and began to resettle farther west; barbed wire closed the eastern prairies in the 1870s (Collins 1981:25-27). The 1880s and 1890s were times of economic highs and lows, with periodic "panics" and devastating weather events. Depressions due to crop failures and livestock depletions put pressure on these farmsteads. For example, one of the 1860 households (John Shipley) could be traced in the census records of 1880, which showed a four-fold increase in improved acreage, but only a slight cash value increase in the value of the farm. Pressures like wars and depressions tend to return subsistence-level farming to the forefront, temporarily displacing production for profit.

Both cattle and hog production in the South had been decimated by the war between the states. Taylor (1982:113) notes that southerners probably ate less beef after the Civil War than before, and when they did, it was either as veal or as part of a celebration where great quantities of all kinds of meat were warranted. The majority of bovine elements from the historic sites in this study were from immature individuals, suggesting that families butchered calves which contribute a more manageable yield of meat.

With the beginnings of railways throughout northcentral Texas and the strategic position of the Fort Worth Stockyards linking the South Texas herds of longhorn cattle with the pricey markets of the northern slaughter houses, cattle ranching approaches mythic proportions in the minds of Texans. "During the decade following the Civil War, economic recovery in North Central Texas depended upon one commodity more than any other -- cattle" (Collins 1981:23). Because prosperity was equated with owning cattle, even memories of local informants tend to dwell on ranching activities in spite of the fact that most of their ancestors were not ranchers. The oral histories recount how many cattle someone had, getting out of the mule business to go into the cattle business, locations of good pastures to turn the cows on, and so forth (excerpts gleaned from oral histories of Virgle James, A. E. and Carl Sadau, Eunice Gray, and Roy Jones; see also Chapter 10). Yet from these same oral histories, memories of less glamorous activities such as hog butchering and canning pork were frequently mentioned along with tending chickens, sheep, goats, and milch cows.

Horses evoked familial recollections from the oral informants on this project:

"My grandfather had fought for the South, you see? So, he had three horses; one right after the other, all three named Dixie. . . . He said if the eyes are set close together, the horse is mean (E. Gray 1989).

"Dad was a great hand for good work stock, and he was a good horseman. He knew how to take care of them, and he knew how to work them" (R. Jones 1989).

Horses were indispensable to the frontier farmer for tilling the soil for food or cash crops, for moving supplies and equipment, for clearing the land, and for hauling the produce. Certainly, considering the cultural background of these farmers, the horse was not for eating; therefore, the odd horse bone that turns up in these assemblages is likely from one of the trusty steeds whose carcass had been dragged far away from the farmyard. An example of this practice was brought to the attention of the authors by Mr. C. W. Smith of west Denton County when he showed us the remains of a horse under 1.5 m of alluvium in a corner of one of his pastures that had been the property of his grandfather.

Vermin were hardly ever mentioned. Mr. Jones complained about opossum and raccoon getting to the plums and pears and eggs, but none of the informants spoke of rats, mice, and insects. The household garden was often beset with cutworms, grasshoppers, aphids, rabbits, and birds and ably defended against each (Linck and Roach 1989:116). But it is left to the archaeological record to document the ever-presence of the Old World rodents, which managed to migrate along with the frontier (See Table 11.1). Food supplies were frequently in danger from

contamination and spoilage by rodents and other destructive agents; therefore, storing food became a defensive art. And what better container to inhibit gnawing critters and seeping moisture than the stoneware crock.

Food Containers

Ceramic and glass containers provide invaluable information about rural foodways in the study area. Ceramic foodstuff containers include utilitarian stonewares manufactured at local and nonlocal potteries and purchased by rural families to meet their everyday household needs. A small number of stonewares were also brought by families as they immigrated to the region.

Utilitarian stonewares were purchased by rural families to meet a variety of household needs. Stonewares were used to process and store a variety of foods, including meats, fruits and vegetables, and dairy products. Smoked, pickled or salted meats, dried fruits and vegetables, and churned butter were stored in a variety of wide and narrow-mouthed crocks or jars. Mrs. T. E. Mason recalls,

> ". . . partially fried sausage would be stored in a stone crock covered with grease [and] when you wanted sausage for breakfast, you dipped out the sausage you wanted and finished frying it" (Cross Timbers Project).

Jugs were used for sorghum, vinegar, whiskey, and other liquids, while milkpans and bowls were used in food preparation, serving, and indoor and outdoor daily activities. Churns are common, while pitchers, bottles, animal dishes, poultry feeders, and ant traps are less common. Each of these vessel types were manufactured in the region and provide evidence of the utility of stonewares for farm life.

Less expensive mass-produced metal and glass containers began to cut into the market held by stoneware potteries in the region during the early twentieth century. Many rural potteries ceased production. In contrast, a small number of potteries utilizing imported clays were established in Dallas in the 1920s. While stonewares were an integral part of the household assemblage during the nineteenth century, they are largely replaced by tin cans and glass fruit jars during the twentieth century.

Food Production

Architectural remains indicate the rural economy in the project area was strongly based on diversified farming. Ranches occur more frequently in the prairie regions, which comprises a smaller portion of the project area.

Farming was diversified, and crops grown in the area include corn, oats, wheat, barley, sorghum, peanuts, and cotton. Peanuts were grown in sandy soils, concentrating near Aubrey. Grain mills, cotton gins, and sorghum mills occurred in small communities throughout the region (both within and near the Ray Roberts Lake project area).

Sheds, granaries, barns, animal pens and corrals, stock ponds and cattle tanks, chicken coops, cribs, cellars, and fenced gardens occur a farmsteads throughout the area (See Chapters 6-8, 12). Sheds were used for work areas, housing wagons and buggies, and as shelters for farm animals, including goats, horses, cows, and mules.

Animal pens, corrals, stock ponds, and cattle tanks provide evidence that pigs and cows were raised. Informants report that farmers usually raised only a small number of pigs, goats, and cows. These animals were raised for food and milk, and not for sale.

The paucity of large stock ponds at many farmsteads in the region support the oral history and archival evidence that farming was diversified and few cattle were raised by farmers. Large stockponds are more common at ranches and twentieth-century sites in the region.

Chicken coops are common, and some farms have several coops. Chickens were raised for eggs, consumption, and sometimes for sale. Eggs often provided extra money for many farm women.

Cribs or granaries for corn and grain storage are common; many were log. Several may occur on a farm.

Cellars were constructed of earth, logs, stone, oncrete. Cellars were used for storing food, as well as for shelter during tornadoes or other storms. Multiple cellars were built at a number of farms occupied for several generations. Indeed, some of these cellars show evidence of water seeping into the cellar from the water table, which caused them to be abandoned or rebuilt.

Gardens raised by farm families have been identified at some farms. While gardens were common activity areas at farms, many were unfenced and were not easily identified in the archaeological record. Fenced gardens were recorded more frequently.

Food Consumption

Besides anecdotes from diaries and inferences made from old cookbooks, additional information about the act of consuming food may be found by examining the food residue. nimal bones not only reveal what was eaten, but also how it was prepared. Table 9-3 summarizes the identified cuts of meat from ten historic mitigation sites at Ray Roberts Lake. Examples of well-preserved specimens are shown ... Figure 9-1.

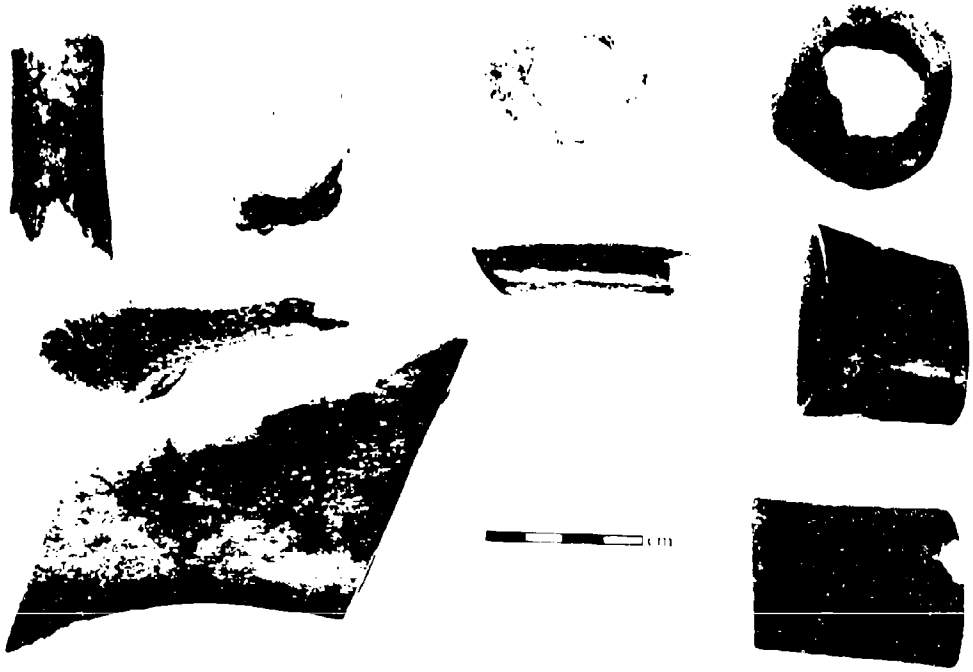


Figure 9-1. Butchered cattle and swine elements from the Jones Farm (41DN250) and the Hammonds Farm (41DN157).

Table 9-3
Summary of Historic Faunal Remains and Cut Marked Elements[1]

Site	# Elements[2]	% TBR	Type of Cut
41CO121	37/138	27.0	chicken femur (slight cut) pig picnic, hams, loin (sawn), cow shanks, chuck, dorsal ribs (sawn) LM vertebrae, pelvis, and indeterminate elements (sawn)
41DN79 Fea.18	17/685	2.5	turkey radii (tubular beads) fox squirrel innominate (deep cut) raccoon baculum (slight cut) pig ulna (sawn) LM vertebrae (1 deep cut, 1 sliced, 2 sawn); ribs (1 deep cut, 1 slight cut, 4 sawn); ischium (slight cut)
41DN91	5/219	2.3	chicken rib (sawn) pig rib (sawn) cow rib (slight cut) LM rib fragments (knife/cleaver)
41DN157	28/218	12.8	pig picnic and loins (sawn) cow round, chuck, and foreshank (sawn) LM rib fragments and indeterminate elements (sawn)
41DN166	4/297	1.3	pig picnic (sawn); metapodial (skinning cut) LM tibia shaft and indeterminate element (sawn)
41DN167	13/293	4.4	cottontail pelvis (skinning cut) pig picnic and rib (sawn) cow hindshank, round, and chuck (sawn) LM proximal femur (cleaver); vertebrae and indet. (sawn)
41DN198	1/112	0.8	LM fragment (sawn)
41DN224	22/500	4.4	pig calcaneum (sawn from ham); rib (cleaver); rib (knife) cow foreshank, arm, round (sawn) LM ribs, vertebrae, fragments (sawn)
41DN234	8/191	4.2	pig talus (sawn from ham) LM vertebrae, ribs, fragments (sawn) indeterminate long bones (ring & snap) other modification: knife handle
41DN248	4/353	1.1	cow rib (sawn) LM distal femur, ribs (sawn)
41DN466	3/292	1.0	chicken coracoid (slight cut) pig rib (cleaver or knife cut) LM fragment (sawn)

[1] Sites were selected based on sample size; 41DN79 is represented by historic features only.
[2] Number of elements is expressed as #/total bone recovered (TBR). LM refers to large mammal.

Home butchery is indicated by the range and variation in the types of meat cuts represented. Lyman (1987:62) has postulated that there are theoretical reasons to believe a correlation exists between the cost-efficiency of meat purchases as reflected by meat yield of a particular cut and the purchasing power, income level, or economic class of the purchaser. He contrasts the cost of different beef cuts by their edible meat yield and shows that a medium cost cut, such as the chuck, is a high efficiency cut because it yields more meat that a high cost item such as the short loin. Assuming that comparable pork cuts follow the same pattern, the Ray Roberts historic faunal samples of butchered bone were examined to ascertain any indication of socioeconomic status by virtue of Lyman's model. Only two sites had cut bones in excess of 10% of the total bone recovered from the site: 41DN157 and 41CO121. Both of these sites were occupied until purchased by the Corps, so they were not deemed appropriate for this analysis because the remains most likely reflected recent preservation and modern consumption practices.

Ethnic differences could not be reliably distinguished either. The occupants of 41DN198 and 41DN234 were of African descent; and although neither site contained evidence for beef consumption, the rest of the species list for 41DN234 is typical for other sites of its time period, and the number and type of pork cuts are similar to 41DN167 and 41DN224. Site 41DN198 is unusual in many ways (Site Description, Chap. 8, this volume), but with only one cut bone in the assemblage, little inference can be made about butchery practices. Site 41DN79 purportedly had an historic Native American component, but here again the sample is very small, with only one pig ulna and an assortment of axial fragments from large mammals exhibiting cut marks.

Home butchery of pig and chicken is deduced at most of the sites by the presence of pig teeth and eggshells. The use of knives, cleavers, and hand saws is not necessarily indicative of home production because these tools are still used by modern butchers. Three butchers were recorded in the 1880 census records for the city of Denton, and several are listed for Gainesville; the country folk probably did not avail themselves of their services, opting instead for home butchery until after the turn of the century when use of the automobile shortened travel time.

Food Disposal

Several of the sites in this study had localized refuse dumps. These features are usually characterized by an abundance of ash, burned and unburned bones, as well as broken and burned household and personal items in no other apparent association. The faunal remains have a bimodal distribution by element, composed mostly of waste elements such as teeth, caudal vertebrae, terminal phalanges, or of butchered cuts of meat such as bones from roasts, steaks, and hams.

It is no surprise that the features with the most faunal remains are usually in close proximity to the structure or part of the structure identified as the kitchen (See Site Descriptions for 41DN166 and 41DN166 as examples).

Food refuse in the form of faunal remains was rare in the 50x50-cm sheet excavations in non-feature areas. All of the yards seem to have been kept clean of this type of waste; preservation in those settings would have been poor as well.

Seasonal Foodways

For early farmers in northcentral Texas, the yearly routine was much the same whether one was a yeoman, a tenant, black or white, young or old. Smallwood (1975:47-48) summarized the annual routine thusly:

Spring -- plowed, planted crops and gardens
Summer -- cultivated
Fall -- harvested
Winter -- butchered hogs & cattle, tanned hides, cured meat

Butchering had to be done in the winter because warm weather hastened spoilage. Jurney (1978:Fig. 9) has noted a seasonal trend from the records of an antebellum Arkansas butcher in increased beef purchases during late fall.

This coincides with the seasonal depletion of hams and salted pork. Mr. Roy Jones provided a concise description of hog-butchering in his recollections as recorded during the oral history phase of this project; it matches the many remembrances passed along in other oral history projects (Howell 1981; Ferring and Reese 1982; Yates 1982; Lohse, this volume).

Planting "by the signs" was a commonplace practice when use of the zodiac was not considered sacrilegious, but rather quite in line with the Book of Ecclesiates, " 'A time to plant and a time to harvest'," as an informant told the Foxfire oral history project investigators (Wigginton 1972:225). That project interviewed scores of "old timers" in the southern Appalachias regarding everything from soapmaking to hog butchering. They found that many daily activities were thought to be more successful if conducted when the signs were right and the moon was in a beneficial phase. Numerous almanacs and planting guides have been available since the early nineteenth century, giving complete directions for planting and other helpful hints "as tested through years of research" (from a booklet entitled God's Way by T.E. Black of Alabama, cited in Wigginton 1975:215).

Both men and women used the signs to plan their subsistence chores. Men knew when to gather winter firewood, search for wild honey, gather wild fruit and nuts, make utensils and furnishings, and build sheds and animal pens. Women's chores were more on a daily basis: milking, feeding chickens and hogs, gathering eggs, making butter, tending gardens, drying fruits, making molasses and preserves, candles, and soap. Not everyone used the signs, but those that did claimed resounding success at each venture.

Rachel Eads, a Denton county resident writing around 1857, summed up the foodways of the time,

> Our cooking did not consist of pies, cakes, salads, and boiled eggs, but of bacon, black coffee, dried beans and bread made with water . . . [and] occasionally a mess of dried peaches (Bates 1978:366).

Another generation settled in during the 1870s and 1880s who seemed to enjoy a more varied diet than the one described by Rachel Eads. In contrast, it included all kinds of cakes made easier by the introduction of baking powder in the 1880s; salads were made from the greens in their gardens; eggs and an occasional Sunday chicken came from the farmstead coop; and every part of a hog or calf that could be eaten was consumed, and their bones became intermingled with the other debris of life in nineteenth century Texas farmsteads.

CHAPTER 10

RAY ROBERTS LAKE ORAL HISTORY PROGRAM

by

Stephen A. Lohse

Introduction

The Ray Roberts Oral Interview Program forms an integral part of the lake area archaeological investigations. The program complements the overall Ray Roberts Research Design, providing site-specific and regional insights unavailable through other research techniques. We carefully planned the interview program to accomplish three goals: (1) to provide maximum geographic coverage of the lake area, (2) to interview a representative cross-section of the population, and (3) to produce informative interviews of good technical quality.

Interviews with 12 informants in late 1987 generated 40 hours of taped conversation and 5 videotapes. From brief synopses of these interviews, we extract an overview of the lifestyles and communities throughout the lake area during the previous century.

An evaluation of the total interview effort indicates the methods were generally effective in producing useful information. However, some limitations of this usefulness exist which could have been avoided by slight program design changes.

This chapter presents the Ray Roberts Lake Oral Interview Program in the following four sections:

- Context - the interview program within the context of the Ray Roberts Research Design, data requirements and research techniques;
- Methods - the program plan and interview method;
- Interviews - interview synopses and an area overview; and
- Summary and Evaluation - program effectiveness and data limitations

Context

The Oral Interview Program complements the overall Ray Roberts Lake Research Design. The Research Design develops explicit data requirements which must be satisfied by a variety of research techniques. Oral interviews are but one of several techniques used to satisfy the data requirements. Interviews contribute to satisfying project data requirements by providing both site-specific and regional information. Interviews complement the other research techniques in two ways: (1) by providing information unavailable through other techniques, and (2) by providing insights which help interpret the information other techniques provide.

Data Requirements

Explicit project data requirements are developed from previous research and current knowledge of life conditions in the project area. The Ray Roberts area has been continuously occupied for 11,500 years by populations that

adapted to a changing landscape. It is clear that succeeding populations distributed themselves and used the land in ways that changed through time. In co[illegible]ast to prehistoric peoples, historic settlers were constrained by such factors as land prices, agricultural and li[illegible]ock potentials, markets for farm and ranch produce, availability of wage-earning positions, and regional and national economies. Landforms, soils, and vegetation were critical factors in potential agricultural or livestock production. Process changes also conditioned certain problems. For examples, tool purchase largely replaced tool manufacture, and food purchase increasingly replaced food production.

Ray Roberts archaeologists, through the Research Design, translated these conditions and constraints into specific variables which could be investigated quantitatively. These variables are measures of (1) environmental and cultural diversity, compactness, and density, (2) economic access, modes of transportation, and market distributions systems, (3) site types and diversity, (4) artifact or sheet refuse diversity and architectural diversity, (5) site size, (6) site complexity, (7) socioeconomic status, (8) ethnic affiliation, (9) duration of site use, and (10) cultural stratigraphy.

Oral interviews contribute to the investigation of each of these variables, providing both site-specific and regional information. Site-specific information focuses the variables on individuals or families at an intrasite activity level. Regional information focuses on communities at a project-wide level. Both levels of information ultimately contribute to our knowledge of changes through time in subsistence settlement patterns, industrial development and marketing patterns, and the establishment of social networks and community identities.

Research Techniques

Oral interviews are but one of several research techniques used to satisfy the project data requirements. Investigation emphasized an interdisciplinary approach to the Ray Roberts project to achieve a more complete understanding of the area than any one discipline alone could provide. The various disciplines employed include archaeological, geological, architectural, and dendrochronological studies, archival research, and cemetery documentation, in addition to oral histories.

Oral histories complement these other techniques in two ways. First, interviews provide information unavailable through other techniques. Interviews tap into that wealth of information which simply cannot be excavated or photographed but can only be transmitted by eyewitnesses.

Second, interviews provide insights which help interpret the information other techniques provide. For example, archaeological and architectural records provide physical evidence of material culture. These records answer our what, where, when, and how questions about families that settled in the area. On the other hand, oral histories provide the personal memories and stories that answer our who and why questions. This personal touch breathes life into our reconstructions of the physical record, enhancing both understanding and appreciation of our local heritage.

Methods

We carefully designed the Ray Roberts Oral Interview Program to accomplish three goals: (1) to provide maximum geographic coverage of the lake area, (2) to interview a representative cross section of the population, and (3) to provide informative interviews of good technical quality. The interview program plan assured geographic coverage and a representative cross section, while the interview methods assured useful information.

Program Plan

Several important considerations shaped the interview program plan. Time, budget, and personnel considerations demanded an efficient approach to the interview program. The most efficient approach avoided duplication of

previous oral history projects while combining maximum geographic coverage of the study area with a representative cross-section of the population.

Two major previous oral projects had been conducted in the lake area. The first was the Mountain Springs Community Club bicentennial project, the tapes from which are curated at the Gainesville Public Library. The second was an early lake-related project conducted by Environment Consultants, Inc. (ECI) for the Corps of Engineers (Corps). The ECI tapes are available at the Dallas Public Library and at the Institute of Applied Sciences (IAS), University of North Texas. Whereas the Mountain Springs project focused on an area somewhat north of the lake study area, the ECI project focuses on the initial construction area of the Ray Roberts Lake Dam. ECI interviewed 11 longtime area residents for site-specific, neighborhood, and folklife information.

To avoid duplication of the ECI interview effort, we assigned the area around the dam a low priority in our program. Concentrating on the rest of the reservoir gave use two advantages. First, concentrating our efforts allowed us better coverage of the remaining reservoir. Second, avoiding duplication of effort means the ECI and IAS interview programs complement each other, together providing total lake area coverage.

To ensure maximum geographic coverage of the remaining reservoir, we arbitrarily divided the area, then deliberately pursued at least one interview in each division. Figure 10-1 ia a map of Ray Roberts Lake showing geographic coverage by arbitrary divisions and our oral informants from each division. The lake is roughly V-shaped, so the divisions follow the limbs of the V. The South Division encompasses the area around the dam where ECI conducted its interviews. While we did not target the South Division for interviews. several of our informants form neighboring divisions were familiar with that area, giving our program a degree of overlap with ECI's program.

To ensure that our informants represented a cross-section of the lake area population, we deliberately developed our interview contacts to that end. Our informants include native-born and longtime residents, knowledgeable historians, and local business and professional people. Family backgrounds include "town folks" as well as ranchers and farmers, landowners, tenants, and sharecroppers. Men and women of diverse ethnic and education backgrounds are represented among our informants. In short, we gathered a group of informants well suited to represent life in the lake area, particularly when we consider that each informant also brings to each interview several generations of ancestors.

Interview Methods

Setting the program plan into motion, we selected and interviewed 12 oral informants from August to October of 1987. The effort resulted in over 40 hours of conversation on 27 tapes and 5 videotapes. Interview formats included at home, walking, or driving, depending on the interview situation. All interviews were planned in advance and managed around an Informant Questionnaire (see Appendix C) developed for this interview program. The tapes generated during this interview program will be curated with the U.S. Army Corps of Engineers (Corps), the Institute of Applied Sciences (IAS), University of North Texas, and the Library of Congress.

Table 10-1 presents the complete list of Ray Roberts oral informants with whom we taped interviews, including dates, tape numbers, videotape numbers, and brief interview descriptions. In addition to these 10 informants, Odessa Isbell, local author and historian, and Yvonne Jenkins, of the Denton County Historical Commission, provided invaluable information of a general historical nature, though no tapes were made of conversations with them.

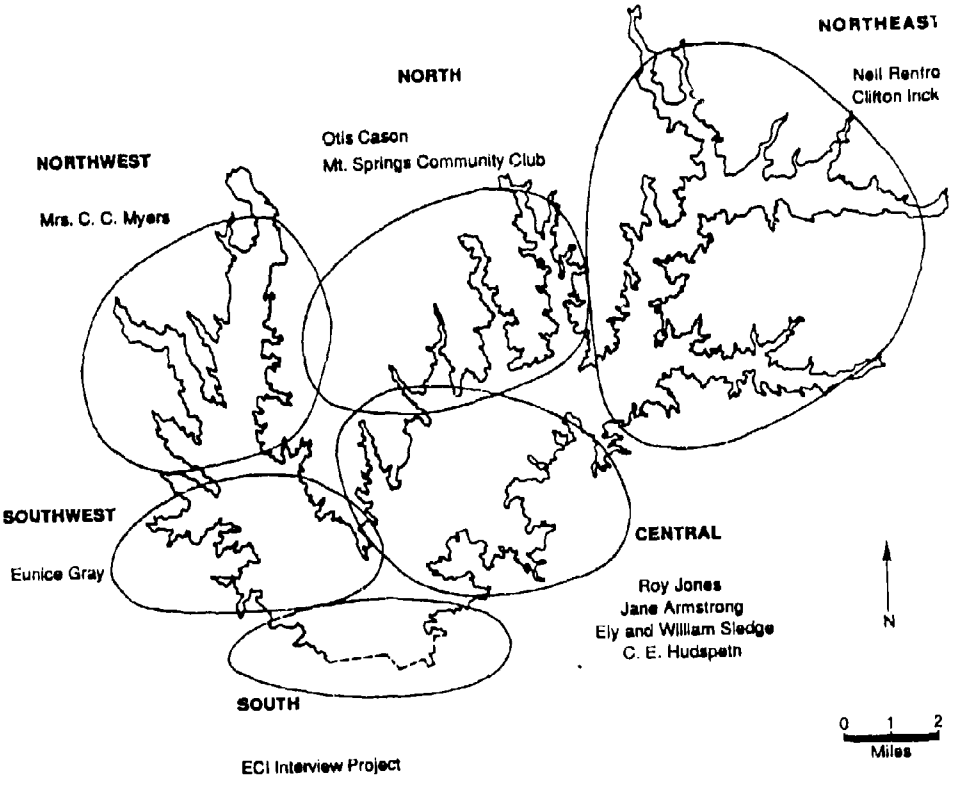


Figure 10-1. Areas of the project area discussed by oral informants during the 1986-1987 oral history program.

Table 10-1

Ray Roberts Oral Informants

Informant	Date	Tape#	Video#	Description
Jane Armstrong	8/20/87	LRR-OI-6	LRR-OI-V2	walking farm-
		LRR-OI-7		41CO11
		LRR-OI-8		at home
Otis Cason	8/26/87	LRR-OI-19		at home
Eunice Gray	10/16/87	LRR-OI-26		at home
		LRR-OI-27		
C.E. Hudspeth	8/22/87	LRR-OI-11	LRR-OI-V4	Massey Gin
Clifton Irick	9/2/87	LRR-OI-22		at office
Roy Jones	6/31/87	LRR-OI-1		walking farm-
		LRR-OI-2		41DN250
	8/19/87	LRR-OI-3		driving
		LRR-OI-4		
		LRR-OI-5	LRR-OI-VI	walking farm
	8/23/87	LRR-OI-12	LRR-OI-V5	walking farm
		LRR-OI-13		
	8/29/87	LRR-OI-14		at lunch/home
		LRR-OI-20		
	9/5/87	LRR-OI-21		at home/driving
		LRR-OI-23		driving
	10/9/87	LRR-OI-24		driving
		LRR-OI-25		
Mrs. C. C. Myers	8/24/87	LRR-OI-15		at home
		LRR-OI-16		
Nell Renfro	8/25/87	LRR-OI-17		at office
		LRR-OI-18		
Ely & William Sledge	8/21/87	LRR-OI-9	LRR-OI-V3	walking farm-
		LRR-OI-10		41CO10

As Table 10-1 shows, fully half the interview effort was devoted to Mr. Roy Jones. We did not plan originally to concentrate on one informant so heavily, but Mr. Jones proved irresistible. He was born in 1897 on his family farm in the central reservoir area, where he lived until the Corps bought his farm in 1984. His knowledge of the

entire reservoir area is inexhaustible, as are his patience and his energy. We actually began the interview program ahead of schedule by taking the opportunity to make our first two tapes when Mr. Jones showed up unexpectedly while we were working at his farm.

Table 10-1 also shows that we made the videotapes in conjunction with particular walking interview tapes. In other words, in particular cases where we had unusual architecture, farm machinery, or an industry, we simply videotaped an otherwise normal interview.

Normal interviews were always tape-recorded, though we used a variety of informants. We recorded all interviews on 90-minute, normal bias cassette tapes using hand-held recorders with condenser microphones. Interview formats included at home, walking, and driving. At-home interviews were seated conversations in the informant's home or office. Walking interviews were strolling conversations around a particular farm or industry site. We generally conducted walking interviews to stimulate detailed, site-specific information. Driving interviews were conversations recorded while touring the countryside. We conducted driving interviews to stimulate community and regional information.

After selecting the interview format appropriate both for the informant and for our information needs, we planned each interview in advance and managed each around our Informant Questionnaire, included here as Appendix C. The questionnaire is simply a list of 194 questions clustered around such topics as House, Family Data, Neighborhood, Church, School, Community, Farm Practices, Foodways, Land Use, Technology, Transportation, and Personal Memories. By no means did we read through 194 questions with any informant. Rather, we prepared in advance for each interview by considering which topics applied to a particular informant and interview situation. The questionnaire then served us as a guide to ensure that we fully covered all the important topics during the interview.

We gained two major advantages using the Informant Questionnaire. First, our ability to plan and manage our interviews around carefully organized questions ensured a maximum amount of useful information with the most efficient use of our interview time. Maximum useful information was gained through (1) flexibility in tailoring interviews to informants (both before and during the interview) with (2) simplicity in managing a tremendous amount of detail. The most efficient use of our interview time was ensured by our enhanced ability to manage the pace and direction of our interviews. Interviewing with a plan reduced to a minimum all fumbling for topics, rambling, or repetition without stifling an informant's enthusiasm or creative free association among topics.

The second major advantage gained by using the Informant Questionnaire lies in our ability to compare interviews. While no two interviews are alike, a certain standardization results from planning and managing all interviews around the same questionnaire. A pattern of similar treatment for similar topics emerges from the total interview effort. This similarity of topic and treatment among the interviews makes them well suited to use for extracting an overview of the lifestyles and communities of the Ray Roberts Lake area.

Interviews

Interviews with 12 informants in late 1987 generated over 40 hours of taped conversation on 27 90-minute cassette tapes. From brief synopses of these invaluable interviews, we can extract an overview of the lifestyles and communities throughout the Ray Roberts Lake area during the previous century. Figure 3-2 is a map of the nineteenth century communities of the lake area. Many of these rural communities no longer exist.

Interview Synopses

This section presents nine brief synopses of the taped interviews from the 1987 Ray Roberts Lake Oral Interview Program. The following 12 people participated as oral informants in the program: Jane Armstrong, Otis Cason, Eunice Gray, C.E. Hudspeth, Clifton Irick, Odessa Isbell, Yvonne Jenkins, Roy Jones, Mrs. C.C. Myers, Nell

Renfro, and Ely and William Sledge. However, Odessa Isbell and Yvonne Jenkins provided information on (1) of a general historical nature or (2) which helped us to locate other oral informants. Our conversation with them were not taped. Further, Ely and William Sledge were interviewed together in one session.

Jane Armstrong

Jane Armstrong's great grandfather, Reason Jones, born in 1830, came to the area from Missouri in 1851. Reason Jones was an uncle to Roy Jones' grandfather. Jane's great grandmother, Reason Jones' second wife, was mysteriously buried with a pistol in her hand.

The original house built by Reason Jones in 1854 is no longer standing (see Lebo in prep for detailed discussions of that site [41DN250]). The house was a two-story dog trot of hand-hewn logs.

Jane's grandfather was known for raising mules. Jane remembers peanuts, corn, wheat, cotton, cattle, and hogs as well as mules. Oil was discovered on the farm in 1929, and oil money made improvements possible.

The family went to Pilot Point for groceries. They had a garden with sandy soil suitable for root corps, carrots, onions, and potatoes. An uncle nearby raised corn, beans, and tomatoes, and everybody shared. They had fruit trees, peaches, apples, pears, and cherries. They ate mainly pork, chicken, and fish, but not much beef.

A blacksmith shop sat across the road from the house. The shop was a gathering place for local men. Electricity came to the area with the Rural Electrical Act (REA) in 1946.

Jane talks about ethnic communities, entertainment and games, and traveling peddlers. She mentions the communities of Hemming, Vaughantown, Bloomfield, and Fairview. She later goes into great detail about garden produce, pickling, honey, spices, and homemade beverages. We discussed epidemics, remedies, and local cemeteries.

Otis Cason

Otis Cason was born in 1897 in a log cabin on 80 acres along Indian Creek. His grandfather came to the area from Tennessee in 1883. Otis remembers Kiowa Indians living in the area as well as raiding parties coming down from Oklahoma. His father raised cotton, wheat, oats, and hay, "breaking out" the raw land with yokes of oxen. Besides farming, the family raised mules. When Otis and his brothers weren't working the fields, their father kept them busy breaking and training mules.

They made good money selling mules to the army during WW1. The family also kept a few cattle and 30 or 40 angora goats.

Otis remembers hog killing time with the first cold spell of the year and how his mother made lye soap for washing. The family always had a garden, as well as apple, peach, and plum trees.

When Otis' family went to town, they went to Gainesville, though Otis went to school in Burns City. He remembers grocery stores, a blacksmith shop, barber shop, a cotton gin and oil mill, and a large drug store. Sorghum mills and a charcoal kiln operated in the nearby countryside.

We contacted and interviewed Otis Cason with assistance from Gene Ray, his friend and neighbor.

Eunice Gray

Eunice Gray's family came from Ireland originally to Maryland, Virginia, Tennessee, Missouri, then Texas in 1856. Her grandfather, Jack R. Sullivan started in the mule business after the Civil War, then went to cattle. He built a large family house in 1878 beside the Elm Fork of the Trinity, just south of old highway 455.

Eunice remembers family stories of life on a large ranch, and she is extremely knowledgeable about families and relations in the southwest and central region of the reservoir, along old highway 455 and around Sullivan Settlement. Eunice is a cousin of Roy Jones; Reason Jones was her grandfather. (Reason Jones had 22 children).

Eunice remembers an excellent garden and orchards, oats, hay, corn, and hogs, and that her grandfather gave meat to the Indians so they wouldn't bother him. Even so, Jack Sullivan would move the family and his cowboys into houses he kept in Pilot Point when rumors of Indians spread.

In 1886 Jack built a house in Sanger, and the family moved there when Eunice's father was 11. The house burned in 1972.

C.E. Hudspeth

C.E. Hudspeth is the manager of the Massey Cotton Gin in Pilot Point, Texas. We taped this interview and made a videotape while he walked us through the gin.

We followed the ginning process from unloading the trailers to bailing the cotton. We discussed the farming of cotton, quality and prices, how much less is grown today than there used to be, and how the gin operates today compared to how it operated in past decades.

Mr. Hudspeth's family has raised cotton in Cooke County for several generations. His great grandmother came from England, and the family later moved from Tennessee to Texas. His great grandfather raised plow horses.

Clifton Irick

Clifton Irick's grandfather came to the area in the late 1880s. Clifton was raised in Pilot Point but lives today on his grandfather's old home place. He remembers cotton, corn, and peas as the main crops, until the early 1940s when peanuts began replacing cotton and the area money crops. The family had a garden and orchard and kept hogs and chickens.

Clifton is extremely knowledgeable about the Pilot Point area, the cotton gins, brick works, sawmills, ice plants, and all the businesses and industries in general. We discussed entertainment, local organizations, schools, and the effect of the Depression on the area.

Roy Jones

Roy Jones was born in 1897 on his family's farm, where he lived until the Corps bought his farm in 1984. His grandfather came to the area from Missouri in the early 1850s. Roy went to school in the Fairview Community. He married Burnie Lee Robinson from the Bloomfield Community in 1921. His farm was midway between the two communities.

We interviewed Mr. Jones extensively, devoting half the interview effort to him. On six separate days were produced 13 90-minute tapes and two videotapes. We conducted at home, walking, and driving interviews. During the driving interviews, Mr. Jones took us into every division of the reservoir, discussing families and describing events. His knowledge of the region is inexhaustible. We visited all the old communities in a triangle roughly from Pilot Point to Indian Creek to Sullivan Settlement (see Figure 10-2). We strolled through several cemeteries in this area, and Mr. Jones commented on the graves. We explored some of the old country roads which used to connect these now gone communities. Mr. Jones provided us a wealth of information in these interviews.

During the walking interviews Mr. Jones showed us his farm (41DN250). We discussed the buildings, their history and contents, the land and his family's use of it, and the people of his neighborhood, his relatives and friends (see Lebo in prep). The farm included a large collection of horsedrawn farm equipment, all modified to pull with a tractor.

Mrs. C.C. Myers

Mrs. Myers was born in the house where she granted us this interview. Though modified several times into a large and comfortable farm house, the original part of the house was built of logs by Captain Goodnight. The log house was already on the land when Mrs. Myer's grandfather, William Obuch, came from Missouri and acquired it in 1870. William Obuch was a naturalized citizen from Germany.

A water-powered grain elevator behind the house operated continuously for over 100 years until 1984. An artesian well, one of three in Cooke County, supplied the power until it ran dry in 1919. The elevator was converted to wind power, then to a gas engine, then to tractor power, then to electricity. Mrs. Myers sold the elevator in 1984.

Mrs. Myers is an expert on the history of Valley View, which her grandfather helped found. Valley View at one time had three cotton gins. For major shopping trips, the family went to Gainesville, a day's journey by horse and wagon.

The family had a big garden and orchard. They canned, pickled, made sausage, and smoked meat.

Mrs. Myers discussed community life and farm life for a little girl. Her grandfather was a surveyor, but the farm produced corn, wheat, oats, and cotton. The Depression hit the area pretty hard, she remembers.

Nell Renfro

Nell Renfro has been in the area since 1917. Her father was from Georgia. She knows lots of people in the Tioga area, so we sat down with a set of maps to locate some old family names. She located several Autrey places for us; Gene Autrey was born and raised around Tioga. She was unable to recommend several people who would make good informants.

Nell discussed growing up on a large farm. The family had a garden and orchard. They bought very little, maybe winter clothes and sugar. Nell's parents were both teachers before turning to farming, so education was stressed over farm work for children in her family. They hired a lot of help to work the farm as cotton was their principal crop.

Nell also remembered growing up in Tioga. She went to school in Tioga. In the winter when the weather was too bad to get home from school, the children stayed in a hotel to go to school. There were three hotels in town because people came for the mineral waters.

Radio was a big hit when it came in the early 20s. Gene Autrey was a big hit, too, even as a young boy. He used to sing at the movie house between reels and at school functions. Early in his career he returned to Tioga occasionally to do programs. Country picnics, dances, and medicine shows provided entertainment, too, and everybody looked forward to the beautiful things the traveling peddlers brought around.

Ely and William Sledge

Ely and William Sledge are brothers. Their step grandfather, Richard Israel, was born a slave in Mississippi in the early 1850s. He bought the farm where we conducted this interview in 1901. He had other property nearby bought in 1893. Cotton was his cash crop, and he later planted peanuts.

An enormous collection of horse-drawn farm equipment sat under the canopy of a huge tree in the farmyard. Their father worked the farm with horses from 1912 until he retired in 1970; he never used a tractor. The equipment was remarkably well preserved. Wood and leather parts were still intact.

The family had an orchard, a large garden and kept some cattle, hogs, and chickens. They canned, preserved, and cured their own meat. The few things they need to purchase were acquired in Pilot Point.

A sorghum mill stood in the woods behind the house. The four columns which supported the roller press and the long brick firebox for the copper pan were still in place. The family operated the mill from probably the early 20s to the late 50s, cooking neighbors' cane for a percentage of the syrup.

Ely remembers the first family radio, a little tube radio. Neighbors gathered from all over to listen to the fights. Joe Lewis was a favorite. Picnics and ball games also provided entertainment. Israel was a founding father of the St. James Baptist Church about 1900, and church and school were in the same building when Ely was a boy.

Area Overview

From even these nine brief synopses, we can extract an overview of lifestyles and communities throughout the lake area during the previous century. Both differences and similarities are evident in lifestyles across the region. Perhaps the differences are not as remarkable as the similarities.

A few of the more noticeable differences include memories of the Great Depression, some architectural preferences, and town versus country living. Memories of the Great Depression alternate between not too bad and pretty hard, depending on its personal effect. Some informants were not affected because they were more self-sufficient and less dependent on a cash economy. With a garden and some livestock, many were able to do without when they had to. On the other hand, some informants more dependent on cash economies suffered, like those in construction or those with mortgaged land.

Architectural preferences are highlighted with the example of cellars. Some families had them and some did not. The difference between the two groups seems to be the place of family origin. Cellars seem to be an idea families carry with them when they immigrate. We noted the rash of cellar building which took place across the region in 1908 after a 1907 tornado destroyed the Hemming community. We see evidence in this activity that with experience, families acquire new ideas about cellars plus the stimulus of need.

The differences between town versus country living seems to be more a matter of personal preference than a function of background. Some of our informants loved the farm and would not leave it. Some could not wait to leave and did so. However, the differences between small town and rural living a century ago may not have been all that great.

The similarities in lifestyles across the region are really more remarkable than the differences. These similarities are most obvious in such areas as foodways, technology (including transportation), community identity, and personal memories.

An examination of foodways most dramatically illustrates the similarity of lifestyles. The variety of background we deliberately sought among our informants totally disappeared before the topic of foodways. Everybody had gardens. Everybody had orchards. Everybody kept hogs, cows, and chickens. Everybody canned, pickled, preserved, and made sausage. Everybody had a smokehouse and cured meat. Everybody ate sorghum, and everybody bought in bulk those items they could not produce, like coffee, sugar, salt, and pepper. Farm, ranch, and town dweller alike ate simply and well.

Likewise, technology was simpler and did not differentiate lifestyles across the area. Our interviews reach to a time before telephones, radios, electricity, or cars. When horseback was state-of-the-art transportation, wealthy rancher and poor farmer travelled the same. Through our interviews, we saw radios come to the area in the 1920s, cars in the 1920s and 1930s, electricity in the 1940s. We saw these technologies equally available to anyone who wanted them throughout the reservoir.

Community identity demonstrated a similarity of lifestyles rooted deeply in human nature. Our informants identified themselves strongly with particular communities (Figure 3-2) regardless of occupation or location in the lake area. Communities filled a variety of needs, including school, church, market, recreation, and emotional support. Communities became almost like extended families; they literally were groupings of related families. Not uncommonly, a person would live his entire life without leaving his rural community. Roy Jones is a notable exception to this pattern; he roamed freely among all the communities of the region. The fact that a sense of community is deeply noted in us is demonstrated by the sense of loss many informants feel over the decline or disappearance of their communities.

Finally, personal memories illustrate convincingly a similar quality of lifestyles across the area. In response to question 193 of the Informant Questionnaire, "What are your fondest memories," without exception our informants remembered the closeness, the friendliness, the helpfulness, and the gentleness of their youth in the Ray Roberts area. Farm, ranch, and town dwellers alike remember a time when neighbors were loving, strangers were not dangerous, and life was less confusing. It is our hope that these interviews will help preserve those memories.

Summary and Evaluation

A final evaluation of the interview effort indicates the methods were generally successful in producing a maximum amount of useful information. However, some limitations to this usefulness exist which could have been avoided by slight program design changes.

Program Effectiveness

The planned approach employed in the interview program ensured its effectiveness in producing useful information. This planned approach consisted of two major elements: (1) use of the Informant Questionnaire, and (2) choice of interview informants. Use of these elements allowed us to (1) tailor thoughtful interviews to informants in advance and (2) better manage interviews in progress.

In addition, videotaping selected interviews is the most effective technique for preserving some kinds of information. Unusual architecture, large collections of farm machinery, or a local industry are better documented with words and pictures than with words alone.

Data Limitations

The interview program was conducted late in the Ray Roberts project, rather than toward its beginning. The late initiation of the program limited the usefulness of the interview information in two ways. First, later in the program people and sites are gone. In some cases we are attempting to interview elderly informants, and several years' delay can make a difference. In fact, one excellent ECI informant died and several entered nursing homes. In addition, the Corps was buying farms and the clearing contractors were clearing the reservoir, so people were moving. In many cases, they moved completely out of the area and could not be located for interviews. The loss of so much potential information clearly limits the overall usefulness of the interview program.

Second, late initiation of the interview program limits the usefulness of the information by keeping the interview information from being used in other early phases of the archaeological project. Interview information can be extremely useful early in an archaeological project both to help locate long abandoned sites and to help determine

whether sites are significant enough to warrant further work. Once again, conducting interviews late in a project limits the usefulness of the information as feedback to the project itself.

Oral Informants

Armstrong, Jane
1987 Interview with Stephen A. Lohse and Susan A. Lebo, August 20.

Cason, Otis
1987 Interview with Stephen A. Lohse, August 26.

Gray, Eunice
1987 Interview with Stephen A. Lohse, October 16.

Hudspeth, C.E.
1987 Interview with Stephen A. Lohse with videotaping by Susan A. Lebo, August 22.

Irick, Clifton
1987 Interview with Stephen A. Lohse and Susan A. Lebo, September 2.

Isbell, Odessa
1987 Interview with Stephen A. Lohse; phone conversation.

Jenkins, Yvonne
1987-90 Personal Conversations with Susan A. Lebo.

Jones, Roy
1987 Interview with Stephen A. Lohse, June 31.

Interview with Stephen A. Lohse, Susan A. Lebo, and Carin Horn, August 19.

Interview with Stephen A. Lohse, and videotaping by Susan A. Lebo and Carin E. Horn, August 19, 23.

Interview with Stephen A. Lohse and Susan A. Lebo, August 29.

Interview with Stephen A. Lohse, September 5.

Interview with Stephen A. Lohse, October 9.

Myers, Mrs. C. C.
1987 Interview with Stephen A Lohse, August 24.

Renfro, Nell
1987 Interview with Stephen A. Lohse, August 25.

Sledge, Ely and William
1987 Interview with Stephen A. Lohse, and videotaping by Susan A. Lebo and Carin E. Horn, August 21.

CHAPTER 11

DENDROCHRONOLOGY AND APPLICATIONS TO ARCHAEOLOGY AND PALEOCLIMATOLOGY IN TEXAS

by

Malcolm Cleaveland

Introduction

Dendrochronologists analyze annual growth layers of woody plants ("rings" or "increments") and apply the knowledge gained to various fields of inquiry. A. E. Douglass (1920) first systematized the science, but the principles underlying dendrochronology have been elaborated most recently by Fritts (1976) and Schweingruber (1988). When possible, sampling maximizes trees' diameter growth response to a widespread limiting environmental factor, available soil moisture (controlled by climatic variation). The common limiting factor permits crossdating between series. Crossdating matches patterns of wide and narrow annual growth rings to assure assignment of the correct calendar date to each ring (Douglass 1941; Stokes and Smiley 1968). Radiocarbon (14C or ^{14}C) dating is far less accurate and has a serious drawback for historical samples that date later than about 1650. Industrial pollution may create ambiguous 14C dates from material grown during this period (Long and Rippeteau 1974; Stuiver and Becker 1986).

Even in sampling living trees (when the date of the outer ring is known), accurate dating depends on crossdating because several growth anomalies may disrupt a ring count. One such anomaly is the false ring (Stokes and Smiley 1968; Fritts 1976), an abnormal band of cells within a true ring that resembles a normal growth ring. Although most false rings may be distinguished visually on the basis of cell anatomy, crossdating is the final criterion for identifying those that most closely resemble a true ring (Schulman 1941). At the opposite extreme are missing rings. When trees become severely stressed, an annual growth ring may not develop over much of the tree stem (e.g., Schulman and Baldwin 1939; Fritts 1976). The slow growing, old trees that dendrochronologists preferentially sample are prone to have missing rings in their growth sequences, so crossdating may be considered the essential technique for this science. Failure to correct ring series for false and missing rings leads to diffusion of the environmental signal (Holmes et al. 1986) or inaccurate dates.

Not all wood can be dated dendrochronologically. Some temperate deciduous species grow annual rings with indistinct boundaries (Panshin and de Zeeuw 1970), while other species have erratic annual growth that does not clearly reflect climatic influence (Fritts 1976). Even samples of species that can usually be crossdated may sometimes contain ring series so erratic, or with so little climatic influence, that dating is impossible. While crossdating often occurs between species (even those so extremely different in habitat and physiology as upland oak and bottomland baldcypress), crossdating is usually best between the same or closely related species growing in the same area, on the same type of site (Stahle 1979).

It should be noted that most dendrochronological research uses only the width of the annual ring in crossdating and environmental reconstruction. Annual increments, however, are complex and time transgressive structures; intra-annual features of rings may reflect climatic variation (Schulman 1942; Cleaveland 1975; Epstein and Yapp 1976; Gray and Thompson 1976; Engel et al. 1977; Schweingruber et al. 1978; Cleaveland 1986; Briffa et al. 1990). Other properties of growth rings may covary more than total width, forming a better basis for crossdating than ring widths alone.

Applications

Dendrochronological applications fall into two broad categories. The first, which may be termed "dating," uses the calendar dates of growth rings in samples to place some event in time. The most common example is dating the terminal ring (the year the tree was cut) of timbers in a building and inferring the year of construction and occupation from cutting dates that cluster, in conjunction with architectural evidence. The theory of interpretation of tree-ring dates for archaeological purposes has been extensively developed (Bannister 1962; Dean 1969, 1978; Ahlstrom 1985). While hundreds of pages have been devoted to discussion of the theory and practical applications of dendrochronological dates to archaeological problems, some of the most important potential sources of error or ambiguity may be summarized as: (i) absent outer rings (removed by decay or woodworking), rendering terminal dates unknown or approximate (the latter if evidence is available that the terminal ring was close, (ii) use of old timber (from dead trees, stockpiling, or salvage from older structures) dating before construction, and (iii) repair, replacement, or remodeling with new timber dating after the main construction event.

The problems discussed above are inherent in interpretation of tree-ring dates and cannot be avoided, but may be overcome with the use of several accepted practices (Dean 1969, 1978; Ahlstrom 1985). The architectural context of all wood and all details of its placement should be recorded carefully and completely, supplemented by photographs. Architectural relationships may facilitate a choice between alternative interpretations of tree-ring evidence. If specimens are not in context for some reason, however, valuable information can still be obtained, particularly when the structure is not complicated. A cluster of cutting dates from timbers not in context is still evidence of a construction event.

All construction material that has any chance of being dated should be sampled. The archaeologist should make a determination at the site whether timber has enough rings and climatic sensitivity for dating purposes. If there is doubt about a specimen's unsuitability, the specimen should be sampled and thoroughly examined in the laboratory. Where there are enough worthwhile specimens from a structure, this sampling technique often produces terminal date clusters that permit unambiguous dating of the construction event. Cutting dates before the main date cluster may be attributable to reuse or stockpiling, while dates after the cluster may be evidence of repair or remodeling (Bannister 1962; Ahlstrom 1985).

Dating fire scars to compile a history of fire in an area (Stokes and Dieterich 1980; Madany et al. 1982) is an example of dating applications of dendrochronology. A single tree may have many scars and multiple samples give a good idea of the fire history at the site (Swetnam 1983). Geomorphic events such as landslides and slope movement (Alestalo 1971; Shroder 1980) or snow avalanches (Burrows and Burrows 1976) may also be dated.

Tree-ring dated material has served to calibrate the radiocarbon dating method for the past 8,000 years (Damon et al. 1974, 1978; Stuiver and Quay 1980; Stuiver and Becker 1986). While this is an indirect application of dendrochronology to dating in archaeology, radiocarbon calibration has assumed such importance (Renfrew 1970; Watkins 1975) it would be remiss to omit mention of this particular application.

Environmental Reconstruction

In the second major category of dendrochronological applications, tree rings are used as proxy series to reproduce or reconstruct environmental variation in the past. Paleoenvironmental reconstruction has become a major use for series of growth increments because they: (i) are sensitive to seasonal and/or annual climatic variation, (ii) can be dated accurately, (iii) offer significant extension of instrumental records (from 200 to 8000 years), and (iv) are distributed over a broad geographical and altitudinal range. The approach most often used is to calibrate the modern segment of the chronology against appropriate climatic data through regression (Draper and Smith 1981).

The relationship between annual growth may be direct, as in the case of precipitation (Blasing et al. 1988) or indirect, with streamflow and runoff as examples (Stockton 1975; Stockton and Boggess 1980; Cleaveland and Stahle 1989). Among the environmental variables reconstructed through tree rings in addition to precipitation, streamflow, and runoff, are lake levels (Stockton and Fritts 1973; Brinkman 1987), snowfall (Tunnicliff 1975), surface atmospheric pressure patterns (Blasing and Fritts 1976; Fritts et al. 1981), drought indices (Stahle and Cleaveland 1988; Stahle et al. 1988), annual temperatures (Fritts and Lough 1985), and crop yields (Burns 1983).

Applications in North Texas

A large dendrochronological database of post oak (Quercus stellata), white oak (Q. alba), shortleaf pine (Pinus echinata), and baldcypress (Taxodium distichum) has recently become available for the south-central United States, including Louisiana, Mississippi, Texas, Oklahoma, Arkansas, Kansas, and Missouri (Stahle et al. 1985c; unpublished data). The longest chronology available in those states begins in 996, while the shortest starts in 1739. There is potential for very long chronologies that incorporate samples from historical buildings (Stahle 1979; Stahle et al. 1985c), from subfossil material (Stahle et al. 1985b; Jurney and Moir 1987a), and from living baldcypress (Taxodium distichum), a long lived species (over 1600 years) that includes eastern and southern Texas in its range (Stahle et al. 1985b) and has proven sensitive to spring and summer climatic variation (Stahle et al. 1985a, 1988; Cleaveland and Stahle 1989). Eastern red cedar (Juniperus virginiana) chronologies may also approach a millennium in length (Guyette 1981).

Dendrochronology has been applied successfully to dating of historical structures in Texas. Jurney (1984) derived cutting dates for five oak samples from a log courthouse in East Texas (Navarro County) and found that all the trees had been cut after the growing season of 1848. This cluster of cutting dates formed the basis for his inference that the settlers built the courthouse shortly thereafter. Jurney (1988a) also did a thorough dendrochronological study of other historical structures in the Richland Creek Reservoir Project area, deriving a total of 75 dates from 13 additional structures. Careful study of the dates and architectural context illuminated the history of the structures. In Jurney's (1988a) investigation he based the crossdating of some samples not only on matching patterns of wide and narrow rings (Stokes and Smiley 1968), but on synchronous occurrence of frost rings (caused by sudden hard freezes after the trees break dormancy in the spring; Stahle 1990). Dendrochronology proved to be an extremely cost-effective way of accurately dating large numbers of structures. In most cases the dates are accurate to within a year and may not have any error at all, far less associated error than radiocarbon dates.

A log house in Lavaca County, Texas, the Yoakum cabin, yielded 21 dated samples that were used in a chronology beginning in 1668 and ending in 1847 (Stahle et al. 1985c). Fourteen samples, some with two measured radii, from the Satajaj cabin in Freestone County (Jurney 1987a) were used to compile a 212-year chronology from 1668 to 1879 (Stahle et al. 1985c). Both the Satajaj and Yoakum chronologies could be merged with younger series from living trees to make one long, continuous chronology for reconstruction of climate. As an example of the climatic response of series collected for archaeological dates, the Satajaj cabin chronology shows very clearly a decade of spring and summer drought lasting from 1855 to 1864 also noted in Texas paleoclimatic studies (Blasing et al. 1988; Stahle and Cleaveland 1988).

Jurney (1987a) also dated historic structures for the Joe Pool Lake Archaeological Project. Five structures were dated and a 92-year floating chronology (with internal crossdating, but not tied to the calendar, i.e., not positively dated) was derived from some eastern red cedar timbers. Most specimens collected lacked the number of rings and/or sensitivity necessary for crossdating.

Environmental Reconstruction

The first climate studies from native trees in Texas occurred well over 100 years ago, as Jurney (1988a) has pointed out. After a long hiatus, Stahle and Hehr (1984) analyzed an east-west transect of post oak sites stretching

from northwestern Arkansas to northcentral Texas in order to explore the climatic response of the species. In general, as the climate becomes more arid moving westward, statistical parameters indicate increased sensitivity of the trees to climatic variability. In addition to descriptive statistics, response functions (Fritts 1976) were computed to find the influence of monthly climatic variables on tree growth. At the western extreme, 63% of chronology variance is accounted for by climate in a response function, while only 24% of variance is associated with climate in the eastern-most collection. The interpretation of these findings is that, as climate stresses the trees more, the law of limiting factors (Fritts 1976) insures that the trees' responses become more variable and better correlated with climate.

Ten tree-ring chronologies from western Arkansas, southern Oklahoma, and northcentral Texas were averaged into a regional chronology for reconstruction of annual (July to June) precipitation from 1750 to 1980 (Blasing et al. 1988). Analysis of the reconstruction showed that a decade-long drought centered on 1860 might have been worse than any in the instrumental records, and that precipitation deficits equivalent to many twentieth century droughts occurred at 15- to 25-year intervals in the reconstruction. Fidelity of the reconstruction was confirmed with statistical tests and comparison with documentary evidence such as diaries.

Stahle and Cleaveland (1988) used nine chronologies in Texas and southern Oklahoma to reconstruct June Palmer Drought Severity Index (PDSI), a soil moisture balance model that combines local temperature and precipitation data into a measure of growing conditions over a span of months (Palmer 1965). Drought and wetness are classified as near normal, mild, moderate, severe, or extreme in the Palmer Index. In the study, June PDSI was reconstructed because it correlates well with tree growth and reflects soil moisture conditions in the winter, spring, and early summer, a critical period for most crops. Principal components analysis (PCA) (Cooley and Lohnes 1971) shows a north-south division among the nine tree-ring chronologies used. Based on the PCA, the mean June PDSI of two climatic divisions in northern Texas (Low Rolling Plains and North Central divisions) and the average of two other divisions in southern Texas (Edwards Plateau and South Central) were reconstructed from 1698 to 1980. Southern Texas experiences more years of moderate or worse drought and wetness than northern Texas, but climate conditions correlate well between the two areas. The ranked three driest reconstructed decades are 1855-1864, 1950-1959 and 1772-1781 in both reconstructions, suggesting a recurrence interval for the worst droughts of about once per century. Over the whole 283 reconstructed years there is about a 0.9 probability (90% chance) of experiencing moderate or worse drought in any 10-year period. Moisture anomalies also tend to persist from year to year, particularly in southern Texas. Spectral analysis (Jenkins and Watts 1968) in both areas showed a weak concentration of variance between 14.0 an 18.7 years that might be associated with postulated soil-lunar influences on climate (Meko et al. 1985; Currie 1984).

Annual and seasonal runoff of the South Sulphur River near Cooper, Texas is well correlated with available tree-ring chronologies, offering possibilities for reconstruction and analysis of long hydrological series (Cleaveland 1987). The same study also determined that PDSI, precipitation, and temperature series of the East and North Central Texas climatic divisions correlate to differing degrees with tree-ring chronologies and might be reconstructed successfully.

Summary

Although some early experiments with dendrochronology occurred in Texas, applications of this science to current archaeological and paleoclimatological problems in Texas have just begun in this state. A large number of climatically sensitive tree-ring chronologies have recently become available and are now being applied to dating problems of historical structures. Large numbers of dates can be obtained that are both relatively inexpensive and very accurate; these dates are at least as good as those from archival sources and much superior to radiocarbon dates. Dated specimens from historical structures might be used to extend environmental reconstructions from living trees.

Recent environmental studies have reconstructed annual precipitation in Oklahoma and northern Texas from 1750 to 1980 (Blasing et al. 1988) and the June Palmer Drought Severity Index (a soil moisture balance indicator) from 1698 to 1980 (Stahle and Cleaveland 1988). Although the 1950s drought was probably the worst in terms of severity, a drought in the mid-1850s to mid-1860s was longer and probably averaged worse conditions.

CHAPTER 12
INTERSITE COMPARISON AND SUMMARY

by
Susan A. Lebo

This chapter provides a three-fold discussion of the history, archaeology, and architecture of the Ray Roberts Lake area based on the testing and mitigation work conducted by UNT in the study area in 1986 and 1987. This discussion includes (1) a review of the research hypotheses which structured our 1986-1987 investigations, (2) a synthetic discussion of our research results and interpretations for the 1986-1987 historic testing and mitigation sites, and (3) a comparative analysis of the Ray Roberts Lake area data in a regional framework. The review summarizes the research topics developed in the Research Design (Ferring and Lebo 1988) and presented in Chapter 5. These hypotheses are addressed by research topic in the synthetic discussion utilizing the archival, oral history, artifactual, and architectural data presented in Chapter 7 and Chapter 8, the faunal data in Chapter 10, and the historical and archival data in Chapters 3 and 4, Appendices A, H, and I, and the oral-history interviews in Chapter 10 (see also original files at IAS,UNT). The regional discussion of the Ray Roberts Lake historical sites provides an inter-reservoir or inter-project comparison of the historical archaeology of the northcentral Texas region. This is accomplished using data obtained from the Lewisville Lake (Brown and Lebo 1991; Lebo 1991; Lebo and Brown 1990), Joe Pool Lake (Ferring and Reese 1982; Jurney, Lebo, and Green 1988), and the Richland-Chambers Creek (Jurney and Moir 1987; Moir and Jurney 1987b) projects.

Research Hypotheses

The research hypotheses identified in the Ray Roberts Lake-Lewisville Lake Research Design were developed before the 1986-1987 testing/mitigation phase (Ferring and Lebo 1988). The research design, research topics, and data collection methods are summarized in Chapter 5. These hypotheses are listed here to aid the reader.

1. The distance to source areas for goods and services for families in the Ray Roberts Lake project area is reflected in the distribution (i.e., dispersal or compactness) of settlements.

2. The distance to source areas for goods and services differed among areas within northcentral Texas before 1870, and this variability is reflected in the establishment of industrial sites (e.g., sawmills, pottery kilns), site dispersal, and artifact diversity. Sites located near major sources, such as pottery kilns, reflect lower artifact diversity for these resources than site located farther from source areas.

3. Variability in the artifact and architecture assemblages from farmsteads in the Ray Roberts Lake area will reflect differences in site size, complexity, socioeconomic status, ethnic affiliation, date of initial occupation, and occupation turnover. Diachronic change in the interaction of these factors and farmstead assemblages can be quantitatively measured.

4. The distribution of farmsteads in the Ray Roberts Lake area reflects the productivity of the local environment, including market demands. Major environmental factors that affected the location of early farmsteads, industries, and settlements include soil type, topography, availability of water, and vegetation. During later periods, environmental factors such as the loss of soil productivity, boll weevil infestations, and droughts affected the survival potential of farmsteads.

5. Site function and/or activity areas will be reflected in the artifact assemblage and architecture of domestic and industrial sites.

6. The introduction, assimilation, dispersal, and duration of different architectural styles and technologies identified on the rural landscape at Ray Roberts Lake reflects sociocultural, economic, and political factors and changes.

7. Access to goods and services (economic variables) is the most important factor affecting the material record. This factor is less important at early sites where access is limited regardless of economic status. However, as geographical and cultural barriers are reduced, variability between sites will reflect many of the artifacts and architecture styles and technologies brought by new immigrants. Later, these styles and technologies will be replaced by goods and services produced locally or regionally, and differences between sites will reflect differential access to these products and not cultural or ethnic differences.

8. Cultural stratigraphy occurs in the material remains at farmsteads in the project area. Statistically similar material culture patterns will occur at sites of similar age occupied by only one family. Greater diversity will be evident for serially occupied sites, or sites occupied for longer periods.

These eight hypotheses developed in the research design are grouped together into the following five topics to increase clarity and reduce repetition: (1) settlement and site distribution, (2) environmental and socioeconomic diversity, (3) architecture, (4) artifact assemblage variability, and (5) site function and cultural stratigraphy. Each of these topics will be discussed separately in the research synthesis.

Research Synthesis

This synthesis is organized by major research topics and provides a discussion of our research results for the farmsteads investigated during the 1986-1987 season. Emphasis is placed on these sites, and where appropriate, data from previous investigations are utilized to provide a more complete framework for inter-site comparisons and reconstructions of past historic lifeways in the project area. An inventory of all historic sites in the project area is provided in Appendix K, and this data is utilized in this synthesis. However, it should be noted that the data in Appendix K is based largely on survey information and was compiled from data recorded by ECI.

Settlement and Site Distribution: Research Topics 1, 2, 3, and 4

Rural settlers in the project area were primarily farmers. Many of these settlers immigrated to the area as part of the Peters Colony (see Chapter 3). After gaining independence, the Spanish empresario system of immigration was continued, and immigration to Texas was encouraged (Jordan 1966). Instead of rearranging settlers already in Texas, immigration from other states and from Europe was encouraged by the offer of free Colony land to non-Texas residents (Cowling 1936). Early settlers to the project area came largely from the Upper South. The major routes used by Upper South immigrants are illustrated in Figure 12-1. By the early 1850s, almost a dozen small communities were established in the study area, occurring in both the Blackland Prairie and Eastern Cross Timbers (see Figure 10-2). These communities were established as immigrants settled near each other because of family or community ties and for protection.

Often the first buildings in a rural community were several farmsteads, followed by a store, a school or a church, and a post office. Some communities only had a school or church surrounded by a small number of farmsteads. In the late nineteenth century, many of the small communities in the Ray Roberts Lake area had one or two stores, a cotton gin, a grist mill, a blacksmith shop, a post office, and a school/church. Figure 12-2 shows the community of Hemming about 1907 before it was virtually destroyed by a tornado. This figure illustrates what a "typical" community in this area may have looked like at the turn-of-the-century. Communities located along major transportation or communication (e.g., mail) routes or that had "unique" resources (e.g., mineral water at Burns City and Tioga) faired best during the late nineteenth century.

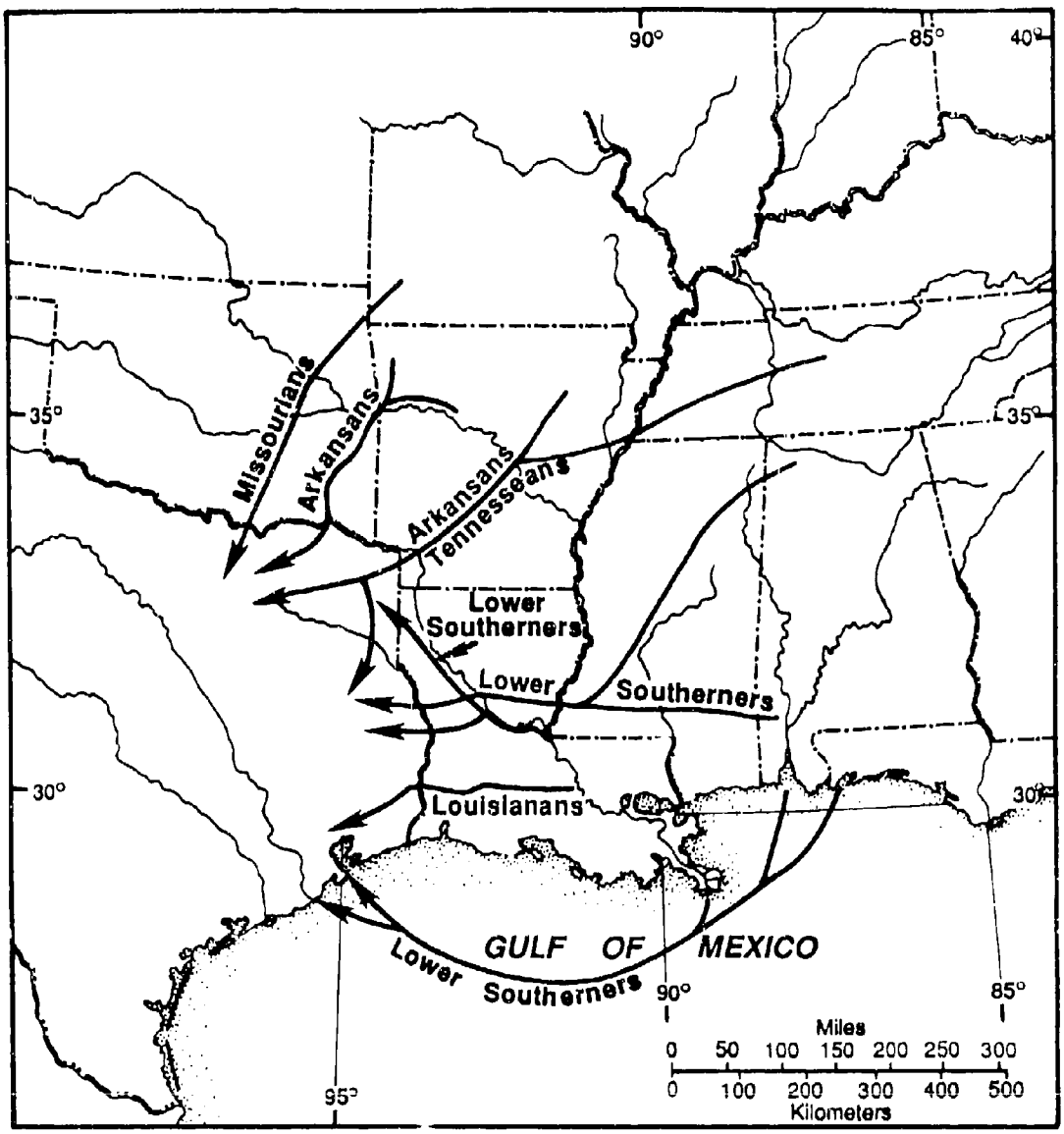
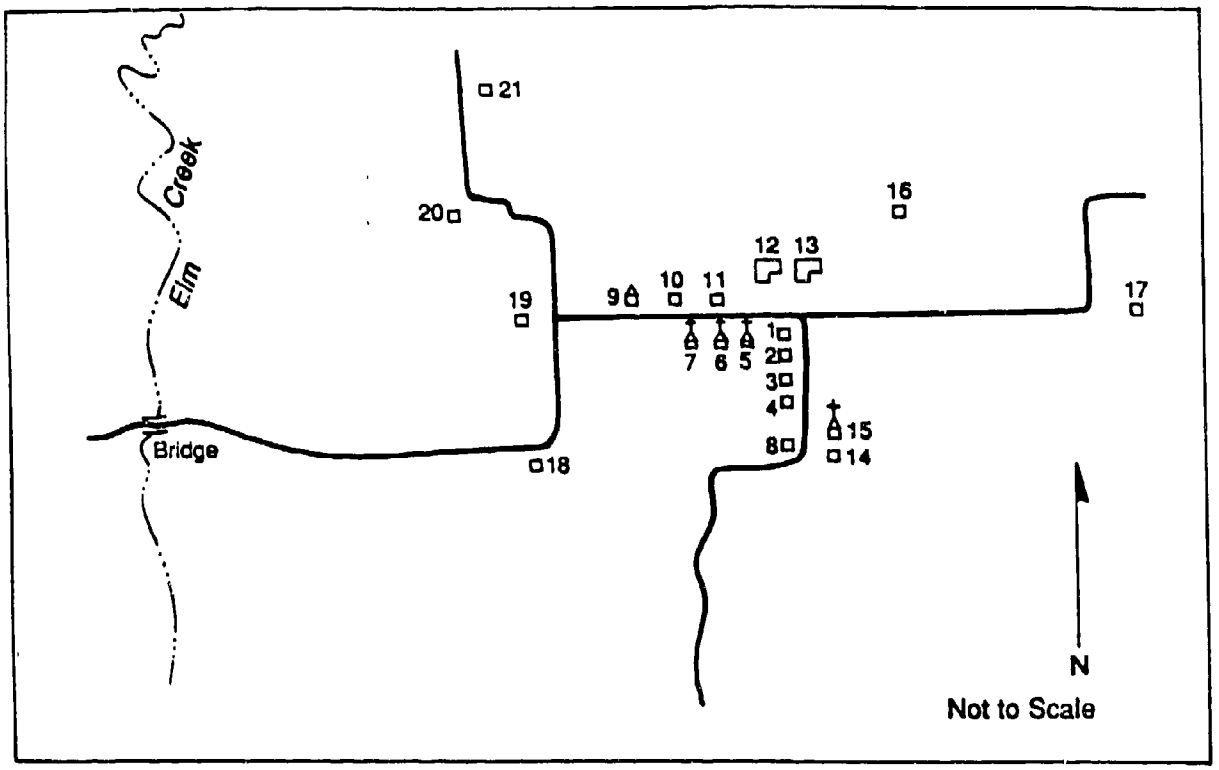


Figure 12-1. Immigration routes used by families immigrating from Upper and Lower South states (from Jordan 1976).



Legend:

1. Gin - Knudsen 1894
2. Wilkins - Blacksmith and House
3. House
4. House
5. Methodist Church 1908
6. Church of Christ 1905
7. Baptist Church 1904
8. Alexander House (Only House Standing After 1907 Storm)
9. School
10. Riley House
11. Nail House
12. Gardner Boydston - Blacksmith Shop and Mill
13. Ben Newton - Store and P.O. 1900
14. Dr. Shipley (After Storm)
15. Methodist Church (After Storm 1909)
16. Tillery House
17. House
18. House
19. House
20. Bevers House
21. Thomas House

Figure 12-2. Drawing of the Hemming Community in Southeastern Cooke County about 1807 (Adapted from map by Odessa Morrow Isbell for the 1976 BiCentennial Sullivan Reunion; see Genealogy of the True and Bevers (Beavers) Families, 1983,p.216).

Larger communities were situated outside the lake area in Cooke and Denton counties and served as the major commerical centers for rural families. Among these communities were Gainesville and Valley View in Cooke County and Sanger, Denton, and Pilot Point in Denton County (see Chapter 3 for a discussion of these communities). While some "industrial" activities were first established on farms, many became centered early in either the rural communities within the lake area or the larger communities easily accessible to rural residents. Among these early "industrial" activities were blacksmithing, grain milling, and pottery, stone or brick production.

The archival record indicates that the frequency distribution of farmsteads, rural communities, and the larger communities have changed considerably in the last 140 years. The distance between early farms being determined by the number of acres granted to immigrants was larger than in later periods. Where possible, friends and family settled on adjoining farms, and often built their homes within short distances of neighbors. As the amount of available land decreased, the distance between farms and farm size decreased. Many rural communities were established during the mid-nineteenth century, but with the coming of the railroads, the numbers and distributions of these communities changed. The railroad ensured the success of some communities and resulted in the death of others. Important towns in the Ray Roberts Lake area that grew along the railroad include Denton, Gainesville, Valley View, and Pilot Point. Others include Sanger and Tioga.

> The Missouri, Kansas, & Texas Railroad reached Denison in 1873 and Gainesville in 1879, the Houston, Texas, & Central (HT&C) Railroad reached Sherman from the south in 1872, the Texas & Pacific (T&P) Railroad reached Tioga in 1881, both in the Missouri, Kansas, & Texas Railroad and the Texas & Pacific Railroad reached Denton in 1881, the Santa Fe reached Sanger in 1886, and the Gulf, Colorado & Santa Fe (GC&SF) Railroad reached Gainesville from the south in 1886 (Odum 1980). (Skinner et al. 1982a:7-67).

By the mid-1880s, no part of the Ray Roberts Lake project area was more than about 20 miles from a railroad depot, and most families were much closer. Rural communties were located about 5 miles apart, reducing the necessity to travel long distances to obtain supplies. "The average rural community size seems to have encompassed a roughly circular area about 8 to 10 mi[les] in diameter" (Skinner et al. 1982a:7-67, 68). Prior to the railroads, however, many supplies not locally available had to be shipped long distances overland by freight wagon from Jefferson, Texas. In turn, settlers freighted wheat, oats, and corn north and west to government forts, and some items "such as kegs, tubs, and buckets were produced at home for local use and for sale" (Skinner et al. 1982a:7-65).

Changes in farming practices and new waves of immigration after the Civil War affected the frequency and distribution of farmsteads, rural communities and the larger, periphery communities. The new immigrants were primarily from the Upper and Lower South, but also included a higher percentage of foreign-born immigrants (see Chapter 3). Some of these settlers established "ethnic" clusters in the three-county area. Largely local freed slaves, African-American families clustered in towns such as Gainesville in Cooke County and Denton in Denton County. In rural areas within these counties, they often established small ethnic communities, such as St. James and Crosgrove's Bottom in the Ray Roberts Lake area. These settlements are situated in the three-corner area in southeast Cooke, southwestern Grayson, and northern Denton County. Some of these communities had churches (e.g., County-Line Church), while others had only a school (e.g., Kelso or Dry; see Chapter 3).

Foreign-born immigrants established several colonies in the Ray Roberts Lake area. Among these ethnic groups were German, French, and Czech settlers. By the time many foreign-born settlers arrived in the late 1880s, large tracts of farmland were more difficult to obtain, and this scarcity was a primary factor in determining their settlement (Skinner et al. 1982a:7-69). Several of these colonies were established in southeastern Cooke County (see Chapter 3). Among these was the community of Dye or Dye Schoolhouse. Located near Gainesville, this community had a school but not a post office. O'Brien (1944:12) reports that, "About the same time that the Peters Colony began operations, George Diester brought a group of German colonists to the area around the community later known as Dye schoolhouse. This settlement was destroyed by disease" (Skinner et al. 1982a). Czech settlement in

southwestern Grayson County did not occur before 1880, and Czech settlement in the Ray Roberts Lake project area occurred in the twentieth century. German settlement near Pilot Point also dates to the turn-of-the century.

Site Types

Farmsteads were the most common type of site in the Ray Roberts Lake area (see Appendix K). The second most most common site type recorded in the project area was "domestic artifact scatter." These scatters probably are associated with the former locations of farmsteads, but these sites lacked extant architecture, and many also lacked subsurface integrity. No commerical centers were recorded in the project area, and this pattern correlates with the available archival data. The town of Vaughantown or Cosner was identified (41DN87) but it was largely destroyed by construction activity before it was recorded. Other communities were not identified during the archaeological survey of the reservoir area in 1980-1981. Among these major communities were Fairview and Bloomfield in the central portion of the project area. Other site types reported for the area include bridges, churches, schools, and cemeteries. Several bridges were recorded, but no historic trails, roads, trading posts or depots were found. Many of these non-farmstead sites were under-represented in the recovered archaeological data base, and their distributions can best be reconstructed from available archival and oral history sources.

Environmental and Socioeconomic Diversity: Research Topics 1, 2, and 7

Archival and archaeological research indicates environmental, economic/occupation and settlement diversity in this region. Three environmental zones occur in the lake area, and from west to east these include the Grand Prairie, the Eastern Cross Timbers, and the Blackland Prairie. Environmental diversity is affected by agricultural and livestock potentials associated with soil types/conditions, topography, and vegetation. Economic/occupational diversity is affected by factors such as land prices, markets for farm and ranch produce, the availability of wage-earning positions, and regional and national markets. Other important factors may include socio-economic, ethnic, and cultural background. Clearly, different religious, ethnic, and social groups in the United States have experienced dramatically divergent patterns of access to social, political, and economic opportunities and participation at different periods in our history. Settlement diversity also is affected by many of the factors important to examining environmental and economic/occupation diversity.

The majority of the reservoir is in the Eastern Cross Timbers, while the western fringe is situated in the Grand Prairie. The Blackland Prairie includes the eastern fringe of the lake. The soils, vegetation, and topography differ between these environmental zones (see Chapter 2). Initial settlement began along the streams in the Eastern Cross Timbers. The Blackland Prairies "were thought good only for livestock and were avoided because of the labor involved in breaking the sod" (Skinner et al 1982a:7-62). The early settlers were predominately farmers who settled in the Eastern Cross Timbers.

Historical data for this period (see Chapter 3) indicate that some crop diversity occurred among these environmental zones, but subsistence farming characterized all three zones during the Antebellum Period. Environmental diversity became more important with the introduction of cattle ranching (see Jordan 1981). By 1860, cattle raising was predominately in the Grand Prairie region of Cooke County (see Chapter 3), with a ratio of 6 to 9 cattle to each individual. This ratio was two to four times higher than the figures reported for Denton and Grayson counties. In contrast, cotton was economically more important in the Blackland Prairie.

Diversified farming characterized the Eastern Cross Timbers. Similar crops and animals were raised at farms across the three environmental zones. Corn, wheat, oats, and cotton were grown, and hogs, chickens, horses, and cattle were raised by farmers in each environmental zone. The relative economic importance of these different crops

and animals, however, varied among these zones. Cotton tenant farming and sharecropping also crossed zone boundaries.

Socioeconomic diversity was evident in the region prior to the Civil War as a small number of wealthy immigrants and both slave and non-slave holding families settled in the area. Fourteen occupations other than farmer or laborer (primarily farm laborer) were listed in the 1860 population census schedule for Grayson County which was settled first of the three counties in which Ray Roberts Lake is situated. In contrast, only five non-farming occupations were listed for Denton County, and only one non-farming occupation was listed for Cooke County in 1850 (see Appendix H). By 1860, however, numerous professional, artist, tradesmen, and other non-agricultural jobs were reported in the census schedules for these counties. A total of 40 non-agricultural jobs each were reported in the 1860 population schedules for Cooke and Denton counties, while 77 were listed for Grayson County (see Appendix H). These data indicate that occupational diversity was well established in the three-county area by 1860. This diversity, however, was concentrated in larger communities (e.g., Denton, Pilot Point, and Gainesville). Occupational diversity in small, rural communities included blacksmithing, ginning, and small businesses such as groceries or dry goods stores and mills. Some of these communities also had a physician, a teacher, and a preacher. Some physicians, peddlers, and blacksmiths among others, travelled and provided services to families among several communities.

Farming was the primary occupation listed by settlers in the 1850s, although some settlers raised numerous heads of cattle or sheep. Non-farming occupations listed in the 1860 population census schedules were often conducted seasonally and were primarily service related (Chapter 3; Appendix H). The 1870 population census schedules (Appendix H) indicates occupational diversity among "in town" or urban dwellers. Rural dwellers remained overwhelmingly farmers and farm laborers. The 1850 population census schedules for Cooke, Denton, and Grayson counties indicate that cattle raising was extremely uncommon during the 1840-1860 period or poorly reported. The highest percentage of ranchers (cattle or stock raisers, herders, drivers, and traders) occurred in Grayson County in 1860 where only 43 individuals listed themselves as stock herders/raisers. In contrast, only two individuals are identified as stock herders/raisers in Cooke County, and none were reported for Denton County. While these figures indicate that early settlers in these counties were overwhelmingly farmers, a higher number of individuals in these counties raised cattle primarily for market rather than home consumption than these figures indicate. Some early settlers in the Ray Roberts Lake area are known to have raised large herds of cattle (e.g., William Downard, and Madison Rolls). Although under-represented in census records, relatively few early settlers were cattle herders/raisers/traders during this early period.

The high percentage of farmers and the contrastive low percentage of cattle herders/raisers/traders in the project area reflects several factors. Among these factors is the major source areas of immigrants to northcentral Texas and the availability of suitable farmland. The overwhelming majority of the immigrants to the project area were Yeoman farmers from the Upper South who settled in the Eastern Cross Timbers. Although the Eastern Cross Timbers were described as an imprenetrable thicket (Bates 1918; Bridges 1978), once cleared, this area provided excellent farm land. In contrast, a greater percentage of cotton farmers from the Lower South settled on the Blackland Prairie soils. The Grand Prairie was found to be extremely suitable for cattle ranching. As the western edge of settlement, farming, and ranching spread west of Cooke and Denton counties in the 1860s, a higher percentage of cattle herders/raisers/traders settled and established ranches in these two counties, particularly Cooke County. In Denton County, for example, the 1870 census indicates that while farming remained the primary occupation of rural residents, an increasing number of individuals were involved in cattle ranching (see Appendix H). A higher percentage of individuals were involved in ranching in Cooke County than Denton County, and this trend continued through the nineteenth and twentieth centuries.

The relative increase in ranching in the Ray Roberts Lake area correlates with the pattern evident in the population census schedules. This increase reflects the extension of cattle ranching through northcentral Texas towards West Texas during this period and the completion of trails, and later, railroad service between major cattle centers during the second half of the nineteenth century. Cooke County began the transition to an agricultural rather

than cattle-raising county during the 1890s. One of the factors influencing this change was the major immigration of German farmers to the county beginning in 1889 (Skinner et al. 1982a).

Few of the nineteenth-century historic sites investigated in the Ray Roberts Lake area were ranches. Instead, many were established as farms and only during the twentieth century did the raising of cattle become economically important to families at these sites (e.g., 41DN157). For example, members of the Jones Family settled several farms in the Johnson Branch area in the central part of the reservoir (41DN107, 41DN224, 41DN250) during the 1850s. Not until the twentieth century, however, did they begin raising cattle for markets in Gainesville or Fort Worth. Instead, a small number of cattle were raised for home or community consumption.

The economy of the lake area changed with the completion of the railroad lines, and later with the advent of the automobile and truck service. During the late nineteenth to early twentieth centuries, farmers in the Ray Roberts Lake area increasingly gained access to larger supply communities (e.g., Cosner (later called Vaughantown), Pilot Point, Sanger, and Valley View) and extended their access to larger and more distant markets. These transportation changes affected the source and movement of goods and services obtained by rural farmers in the area. Prior to the railroads, goods and services from other areas were costly and had to be transported overland by freight wagon. They became less costly and easier to acquire after railroads reached the area. Dallas and Fort Worth became major urban centers in the 1870s, and crops and other commodities produced in the Ray Roberts Lake area were shipped to other areas. New technologies also changed the availability of many products. Stoneware storage vessels provide an excellent example of how acquisition patterns changed after railroad service reached the area. Stonewares were locally produced in Denton County as early as 1854, and fragments of locally-produced stonewares were commonly found at nineteenth-century farmsteads in the Ray Roberts Lake project area. Until the 1880s, stoneware production in Denton County was concentrated in the southeastern part of the county near early settlements established in the 1840s to 1855 period. By the 1880s, however, the town of Denton became the major center of stoneware production. Stonewares were shipped from Denton by freight wagon as well as on the railroad. During the early twentieth century, however, stoneware production in Denton declined as goods and services available from markets in other parts of Texas and the Midwest competed for customers in northcentral Texas.

The archaeological data recovered from the farmsteads in the project area (see Chapters 7 and 8) indicate that the distance to source areas for goods and services was similar across households. While families in the project area were more isolated than families near major transportation routes, the distance to commerical products was relatively equal across households, excluding differences in socioeconomic status and purchasing power. Despite socioeconomic differences, similar types of products were purchased by both poor and wealthy households. The greatest difference among these households appears to be in the amount of land they owned and the size and materials used in building construction. As noted in Chapter 3 and in the land data in Appendix A, farm size varied considerably across households in the project area. Poorer farmers lived on smaller tracts of land and built smaller, largely more traditional dwellings using local tree species. Farmers of greater means were able to import sawn lumber of cypress and pine from East Texas for construction of frame dwellings instead of relying on the locally available oaks, cedars, and bois d'arcs. They also were better able to afford larger, more expensive dwelling types, owned larger tracts of land, and based on available tax data, they raised more farm animals, stock, and crops than their poorer neighbors.

Access to goods and services was also aided by family ties. The basic family pattern in the project area was that of a large extended family. Related family members lived near each other, often on adjacent farms. This pattern was indicative of both Anglo and African-American families. Indeed, Skinner and Baird (1985:8-1) reports, "Marriage between these extended families often helped to enlarge farm holdings." An examination of birth and death, marriage, church, land, and cemetery records for the project area indicates that many families across a broad stretch of the project area were related. These family ties crossed community boundaries, and the land holdings of many early families remained within the family as they were passed from one generation to the next.

Archaeological examination of foodways, architectural, and artifactual data indicate major similarities within the project area. Differences among households do not appear to exhibit a direct correlation with socioeconomic status, ethnicity, or environmental setting.

Foodways

Families in the Ray Roberts Lake area raised a variety of crops and animals primarily intended for home consumption. Among the crops raised in the area were corn, wheat, and oats for both human and animal consumption. Some families also raised peanuts and sorghum. Garden crops included onions, cabbage, lettuce, potatoes, sweet potatoes, squash, okra, tomatoes, green beans, peas, among other vegetables. Numerous fruits were raised in orchards or wild thickets and canned. Among these fruits were plums, peaches, pears, and apples. Wild berries and nuts were collected, and wild animals such as deer, rabbits, ducks and geese, opposums, and squirrels. Farm animals consumed by local families included primarily chickens, hogs, and turkeys. Sheep were raised for wool and were not commonly eaten. Goats also were eaten rarely, while cattle were raised for both home consumption and meat markets. Pork was consumed by farm families in the region more often than beef (see Chapter 9 and Chapter 10). Most families had one or two milk cows, from which they produced their own butter, buttermilk, and cream.

The foodways data presented in Chapter 9 (see especially Table 9-1) revealed that dietary differences were not significant across households, although the relative abundance of particular faunal or floral species varied among families. Oral history and tax data further support this interpretation. Families of different socio-economic status acquired and consumed similar food items, except for a few sites which either contained mixed prehistoric/historic components (41DN79 and 41DN81) or occurred in a poor agricultural area where few food bones were recovered (e.g, 41DN146, 41DN233, 41DN273, 41DN275). One anomalous farmstead is 41DN198 which contained a high preponderance of hunted animals. In general, most families raised gardens, a small orchard, and traded or bartered with their neighbors for basic foods. Across the region, families largely raised similar farm animals and food crops. Hogs and goats destined for the table were primarily butchered on the farm (oral interviews wi and William Sledge, and Roy Jones), while cattle were taken to nearby towns for butchering (see Appendix 1). Eggs, fruits, grains, and various barnyard animals were traded for other commodities or services (Billie Barker personal communication). The diversity of food production by farm families in the region is indicated by oral informant data and architectural remains documented at numerous farmsteads. Sheds, granaries, barns, animal pens and corrals, chicken coops, cribs, cellars, gardens, and orchards occurred throughout the area (see Chapters 9 and 10, and the following discussion on architecture).

While food production and consumption patterns were generally similar across households, some temporal variability occurred among the small sample of farmsteads studied (Figure 12-3; compiled from Table 9-3). A higher percentage of cut bones were found at farmsteads occupied until fairly recent. The highest percentage of cut bones occurred at farmsteads occupied over 100 years (41CO121, 41DN157, and 41DN224). Architectural and archival data indicate that cattle were raised at these sites. Low percentages of cut bone were found at several farmsteads that were abandoned before 1920 (41DN166, 41DN248, and 41DN466). The moderate percentage of cut bone from Feature 18 (trash pit) at 41DN79 is interesting. This farmstead was owned by a larger cattle rancher, and both wild and domestic cut animal bones occurred in this feature, with the highest percentage representing a "Large Mammal," possibly cattle.

Foods purchased by farm families in town included primarily those items they or their neighbors did not raise, gather, or hunt (e.g., sugar, spices, coffee). Beverages and medicines were also purchased, either in town or from travelling peddlers, as indicated by the numerous fragments from glass, ceramic, and metal food containers recovered at farmsteads in the project area. Stoneware food preparation and storage containers predominate at nineteenth-century farmsteads and include jugs, crocks, churns, and milkpans or bowls. They decreased in frequency at twentieth century sites where they were increasingly replaced by glass and metal containers (see Chapter 9). No wooden containers were recovered from farmsteads in the project area, although they undoubtedly were used.

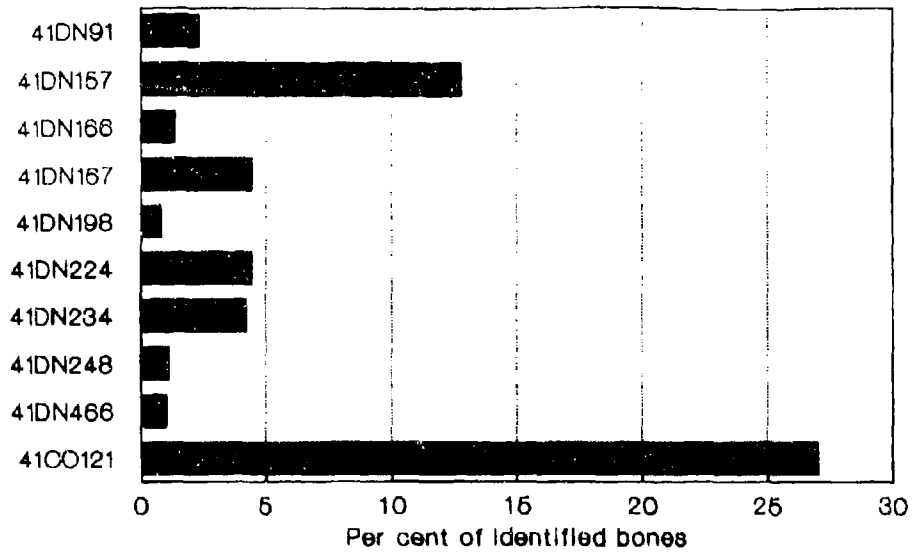


Figure 12-3. The percentage of butchered bones at ten farmsteads in the Ray Roberts Lake area.

Architecture: Research Topics 3, 5, 6, and 7

The building styles of dwellings and farm-related support structures common to the Ray Roberts Lake project area were typical of rural areas of the South, particularly the Upper South. Early farmsteads were established near creeks, dwellings were primarily hewn, half-dovetail notched, and many had a small well, "dugout" cellar, and one or two small outbuildings. Some had swept yards, split-rail fences, and most had a small number of hogs, chickens, a milk cow, and several head of cattle.

Types of Structures

Tables 12-1 through 12-4 provide a comparative summary of the structures at each of the historic farmsteads investigated during the 1986-1987 season. These tables are organized by county, and because of the number of farmsteads studied in Denton County, sites for the county are presented in two groups (1) limited testing and testing sites, and (2) intensive excavation sites. The data in these tables reveal considerable similarity in the types of structures across farmsteads (see also Appendix K). Common support structures recorded at farmsteads in this project sample were wells, cellars, sheds, cribs, chicken houses/coops, and animal pens. Less frequent farm-related structures found at sites in the project area include smokehouses, drying sheds, and well or spring houses. Cattle-related buildings including barns, corrals, loading chutes, stockponds, and water troughs were uncommon at nineteenth century sites in the project area, occurring most often at sites occupied until recent. Windmills and water towers were common, but appear to have been inconsistently reported (see Skinner et al. 1982a, b,; Skinner and Baird 1985). The distribution of these support structures cross-cuts environmental zones (Grand Prairie, Eastern Cross Timbers, and Blackland Prairie), and socio-cultural and ethnic boundaries. The frequency of these structures is evident in the historic site data presented in Appendix K.

Building Traditions

Skinner and Baird (1985) reported three building traditions typical of the Ray Roberts Lake area: log, frame, and hole-set construction. The two most common log structure types in the project area are indicative of the Upper

Table 12-1
Comparative Summary of Structures at the Historic Farmsteads
Investigated in Cooke County in 1986-1987

Site	Dwelling	Well	Cellar	Outbuildings	Fences
CO33	Frame, Board & Batten	1	1	Log crib	X
C036	Frame?, T-plan	3 wells, 1 cistern	2	Double crib barn (includes frame house and log crib), animal pens	X
CO38	Frame, Board & Batten	none	none	2 log cribs	X
CO39	2 dwellings; only Frame Cumberland extant	2	2	18 sheds, barn, chicken coop, pumphouse	X
CO83	Single pen log frame additions	1	1	Cinderblock dairy, metal shed, animal pen/shed, water trough	X
CO103	Unk.	1	none	Shed, privy, garage, barn	X
CO111	2 -- (1) Log dogtrot, (2) Frame Cumberland	1	1	Frame barn w/original log dogtrot dwelling inside, log school house (moved to farm), 2nd frame barn, blacksmith shop (now gone)	X
CO118	Log, single pen	1	1	Log corn crib, log crib, double pen log shed, frame barn	X
CO119	Frame school	none	1	Cemetery	X
CO120	Frame, multiroom modular design	3	1	Log double-pen barn, 3 sheds, water tower, concrete water trough, garage, grist mill	X
CO121	Frame, multiroom	1	1	Chicken coop, privy, pumphouse, log crib (may have been an earlier dwelling), frame barn, corral, animal pens, blacksmith shop	X
CO136[1]	Log dwelling w/frame additions	?	1	Grain elevator, barn, garage, others?	X
CO143	Frame bungalow	1	1	Barn, corral, chicken coop, 3 sheds, garage, water tower	X

[1] Only the grain elevator at 41CO136 was located inside the project area.

Table 12-2
Comparative Summary of Structures at the Historic Farmsteads
Documented and/or Tested in Denton County in 1986-1987

Site	Dwelling	Well	Cellar	Outbuildings	Fences
DN106	Frame, board & batten	none	none	log & plank outbuilding, board & batten shed	none
DN107	?, T-plan (burned)	1	2	chicken coop, privy, 2 sheds (1 log crib w/frame addition), 1 unid. outbuilding, stockpond	X
DN165	? (burned; concrete porch)	1	1	shed, pumphouse, barn, log crib w/ frame additions, corral/animal pen, 3 demolished outbuildings (sheds)	X
DN172	? (burned)	1	1	garage, 2 sheds, log shed w/ frame additions	X
DN174	Frame, central hall (burned?)	1	1	1 barn, 4 sheds, 2 chicken coops, garage, corral/pen, possible still in 1 chicken coop	X
DN190	Unknown	1	4 depressions	log crib, oil pump mound	X
DN191	Frame, T-plan	none	1	privy, barn, shed, several sheds moved to 41DN250	X
DN193	Frame, T-plan	1	1	2 sheds, water trough, barn, animal pen	X
DN232	none	none	none	cemetery? (site was destroyed)	wood
DN248	Log	1	1	2 sheds	X
DN273	Log, single pen	1	1	none	none
DN275	Log, single pen	2	1	3 log cribs/sheds, animal pens	X
DN349	Frame, board & batten	1	1	chicken coop, 3 sheds, barn, loading chute, pens	X

Table 12-3
Comparative Summary of Structures at the Historic Farmsteads
Intensively Investigated in Denton County in 1986-1987

Site	Dwelling	Well	Cellar	Outbuildings	Fences
DN77	Log?	1	1	none	X
DN79	Log?	none	none	none	none
DN81	Unknown	none	none	none	none
DN91	Unknown, Log?	2	1	shed	X
DN97	Unknown	none	2	none	X
DN118	Frame, Cumberland; modern frame	1	attached to Cumberland	2 barns, 2 cinderblock sheds?, dairy, pumphouse, shed, Prairie Chapel School (now a granary), possible buried (collapsed) granary, poultry house, corrals, loading chutes, shop/garage, ice house, stock pond, water trough, animal pens	X
DN146	Log, single pen	none	none	none	none
DN157	Frame, 1 1/2 story w/log members, frame office/house	1	1	log crib, frame barn, stable, garage, privy, buried structure (unk. function)	modern metal
DN166	Log?	1	2	possible animal pen	X
DN167	Log, single pen	1	1	none	X
DN198	Log, dogtrot	1	1	hay crib, stable (animal shed), windmill, possible smokehouse, animal pens	X
DN224	2 components: 1st--log, single pen; 2nd--frame dogtrot w/additions	2	3	1st-- shed, possible animal pen; 2nd-- 3 sheds, frame barn, animal pens, water trough, windmill, water tower, sawmill, pumphouse	X
DN233	Log, single pen?	none	none	none	none
DN234	Log?	none	none	none	none
DN466	Log, single pen?	none	2	none	none

Table 12-4
Comparative Summary of Structures at the Historic Farmsteads
Investigated in Grayson County in 1986-1987

Site	Dwelling	Well	Cellar	Outbuildings	Fences
GS46	Frame, central hall	1	none	5 sheds, barn, animal pens	X
GS59	Unknown	1	1	none	X
GS79	Unknown	1	1	barn, corral, animal pen	X

South and include the single pen and to a lesser extent, the two room central hall. Dogtrots such as the one at 41DN198 occurred as a minor building type in the Upper South, being more indicative of the Lower South (Jordan 1966, 1978; Jurney 1987a,d, 1988a; Lavender 1979; Skinner and Baird 1985). Log granaries, single pen cribs and barns, and double pen barns were constructed in the project area. Braced frame, box frame, plank frame (box and strip), and balloon frame construction (see Crosby 1977; Jurney 1987a, d; Upton 1981) were developed as simplifications of timber framing and involved a reduction in construction costs and the necessity of particular groups of framing members (Jurney 1987d; Skinner and Baird 1985). Braced frame technology was used early in New England and was brought to Texas by Upper South settlers who used them in dwelling, public building (e.g., schools, churches), and outbuilding construction (Jurney 1987d; Skinner and Baird (1985:9-125). Braced frame construction was used contemporaneously with horizontal log construction; but Jurney (1987d) reports that "framing was used more often for status housing and community buildings". Frame buildings also seem to have been more common in Prairie regions" where there was less need for clearing trees for farmland. Each of these frame building types occurred in the project area along with the use of hole-set construction which Skinner and Baird (1985:9-122) reports was most common among outbuildings (e.g., double crib barn at 41DN143).

Log Construction

Methods for shaping logs and corner-notching techniques are commonly used to identify cultural traditions (e.g., Upper South, Midwestern) and chronological associations (Glassie 1968, 1975; Jordan 1978; Jurney 1987d; Lavender 1977; Worthy 1983). While log shaping and corner-notching techiques are strongly associated with cultural or ethnic background, they are also influenced by environmental factors, including available wood types. Multiple notching techniques were utilized at many farmsteads (Jordan 1978). Theses patterns are evident in the Ray Roberts Lake area. In the Eastern Cross Timbers, dwellings were most commonly made of "planked" half-dovetail-notched logs set on sandstone piers. Oak was the most frequently utilized wood for log dwellings (see Chapter 11), although cedar, pecan, bois d'arc, and other varieties were also used. Wood piers were also made and used, often being associated with outbuildings or occurring as replacement piers for dwellings. Other pier materials included limestone and brick.

Four corner-notching styles were common in northcentral Texas and include half-dovetail, saddle, V, and square notching (Figure 12-4). Jordan (1980:38) reports that, "One of the most striking aspects of Cross Timbers log hoses is seen in the corner notching ... Two notch types, both typical of the Upper South, are overwhelmingly dominant. The half-dovetail notch is found on nearly three quarters of the houses observed, and most of the remainder, about twenty percent, have the 'V' notch." Of the four notching styles, only square notching was not commonly used in the Ray Roberts Lake area. Half-dovetail notching was first extensively used in the border region of Virginia and West Virginia (Jordan 1978). It was the dominant type used in northcentral Texas and was particularly prevalent

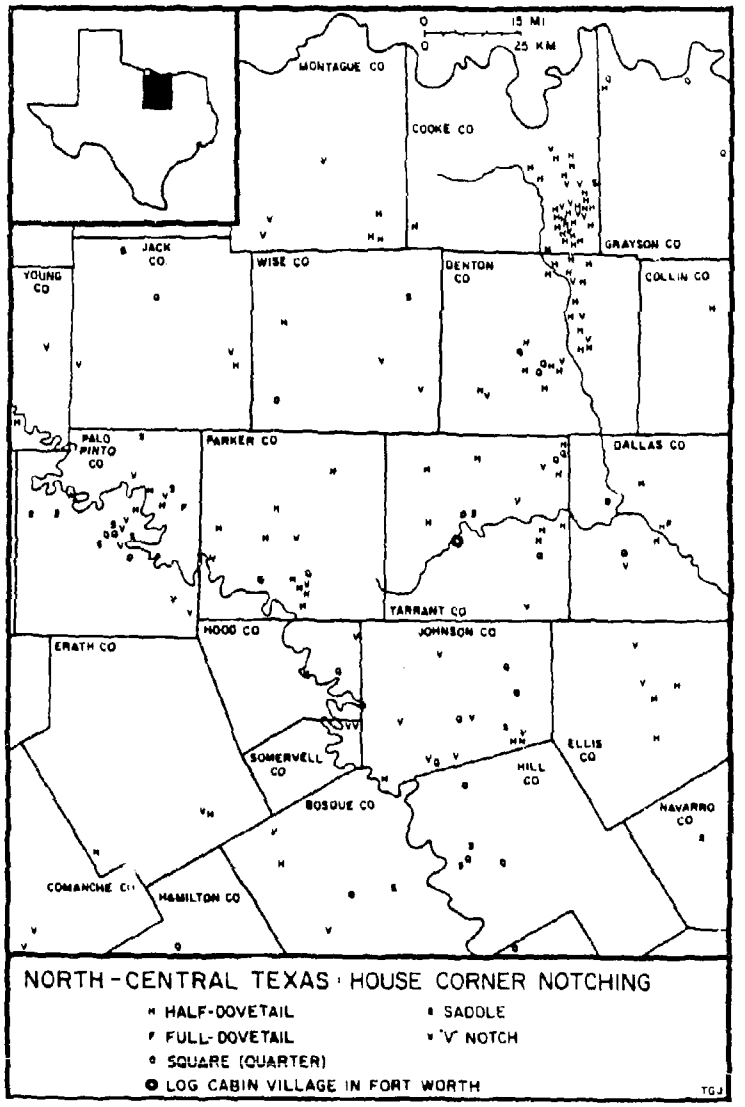


Figure 12-4. Log corner notching styles documented for dwellings in northcentral Texas (from Jordan 1980: Figure 3-4).

among oak log buildings in this region, generally being used with "planked timbers" (Jordan 1978, 1980). Saddle notching was most commonly found associated with unshapened, round log outbuildings in this region. V-notching was brought to Texas by way of the Ohio Valley and Missouri and was closely associated with settlers from the Upper South and those of German heritage. This notching technique occurred almost exclusively in the northcentral part of Texas and was most often associated with square-hewn houses and outbuildings (Jordan 1978, 1980). According to Jordan, square-notching was the second most common notching technique used in Texas for dwellings and public buildings, but it was rare in northcentral Texas. Of 36 dwellings studied in Cooke County, none exhibited square-notching (Jordan 1978:71).

While Jordan (1978) presents a linear model of construction techniques and notching styles for Texas, overlap occurs and reflects cultural changes, environmental factors, and economic factors, and dendrochronological data available for the northcentral Texas area supports this interpretation. According to Jordan (1978), half-dovetail notching accounted for the majority of log dwellings built before the 1870s and was infrequently associated with those built after 1890. Saddle-notched dwellings were rare prior to the Civil War but accounted for over half of the log houses built after 1890. V-notching peaked in frequency between 1870 and 1890, while square-notching remained relatively constant during the log construction period (Jordan 1978; Jurney 1987a, d). In the Ray Roberts Lake area, log dwellings predominated the pre-1880s landscape. They occurred in each of the environmental zones and cross-cut socioeconomic and ethnic and racial groups. Log construction after the turn-of-the-century in the Ray Roberts Lake area appears to have been limited to outbuildings. Major log outbuildings during the early twentieth century were primarily log cribs for grain, corn, or cotton storage, with saddle-notched logs.

Among the log dwelling floorplans documented for northcentral Texas (Figure 12-5 and Figure 12-6), the most common log dwelling was a single pen house followed by the double pen log house. Dogtrots were less common, being found more often in East Texas as North Texas "winter northers" turned dogtrots into frigid wind tunnels (Jordan 1978). "Only 16 percent of the thirty-one log houses observed in upper southern Cooke County in North Texas are dogtrots" (Jordan 1978:119). Double pen dwellings were sometimes originally built as a single pen house with a second room added later. Others were built as a double pen with a wall between the two rooms. Jordan (1978:115) reports that, "In Middle Tennessee, a major source of Texas settlers, a basic double pen with two front rooms is the prevalent type and has been labeled the 'Cumberland House.'" This style occurs in the Ray Roberts Lake area. A variation of the dogtrot is a central-hall house, "identical to the dogtrot except that the open passage is walled in front and back to form a hall, with front and rear doors providing access" (Jordan 1978:123).

Frame Construction

Braced frame or timber frame technology involves the construction of buildings with a superstructure of hewn or sawn beams, the use of large corner and weight-bearing diagonal posts, and lighter weight studs. This technology was used for one, one-and-a-half, and two-story structures and was brought by settlers from the Mid-Atlantic region, many of whom traveled through the Upper South to Texas (see Jurney 1987a,d). These structures were common in northcentral Texas. They "appear to have served as high-status indicators on the early Texas Frontier" (Jurney 1987d) and required access to sawmills for lumber and siding. The box frame dwellings consist of vertical weight-bearing posts only at the corners of the structure, allowing the studs to be eliminated (Harris 1985; Skinner and Baird 1985). In box and strip or plank frame dwellings, the vertical walls support their own weight and the roof, providing for the removal of the studs and involve attaching the sills and plates directly to the inside of the plank walls (Crosby 1977; Skinner and Baird 1985; Upton 1981). Both plank frame and box frame technology were introduced into Kentucky by 1880, and Tennessee, Arkansas, and Texas by the mid-1800s (Skinner and Baird 1985). While box frame and plank frame methods developed as distinct technologies, Stan Solamillo (Skinner and Baird 1985:9-125) states that, "box and plank framing became identified with a single definition in the vernacular builder's vocabulary." Both box frame and plank frame dwellings and/or outbuildings have been documented in the Ray Roberts Lake project area. Several types of siding were used on box or plank frame buildings, including clapboard or battens. Board and batten walls came into use in the early nineteenth century (Jurney 1987d; Skinner and Baird 1985). Balloon frame dwellings are built using a series of studs extending from the sill plate to the top plate to form the walls (Worthy 1983). The balloon frame technology became popular in the mid- to late-nineteenth century in

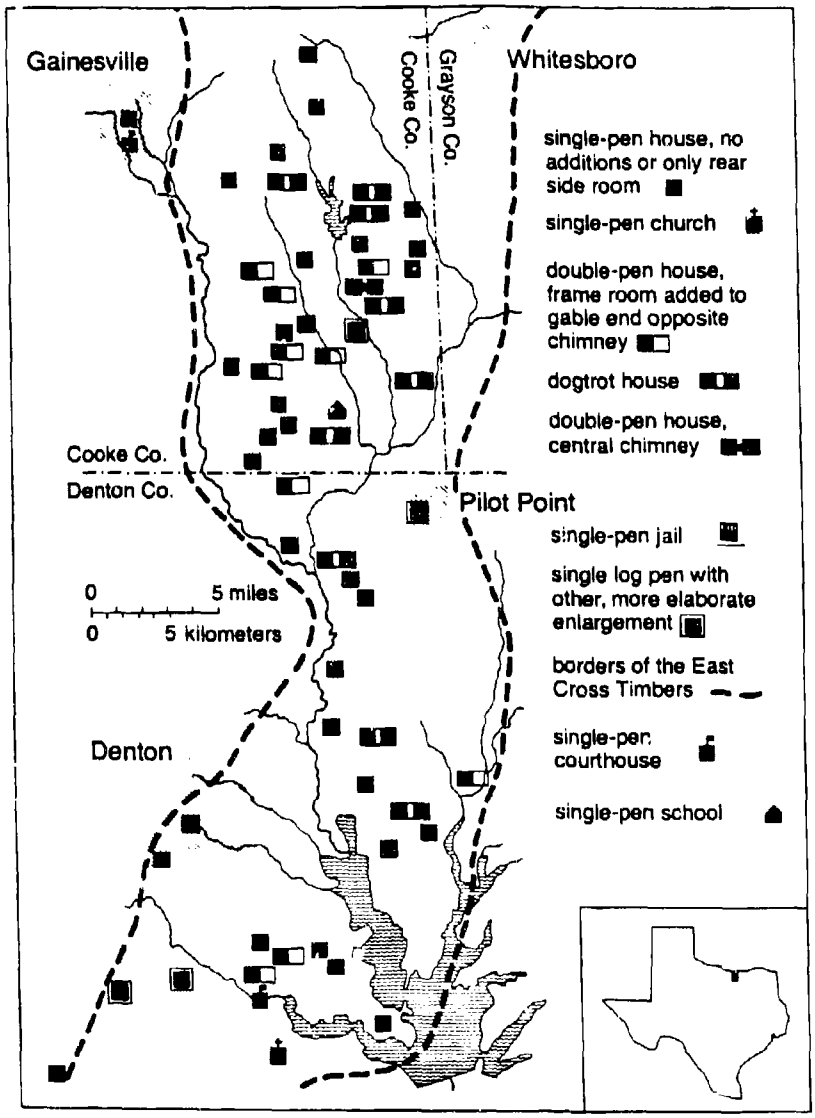


Figure 12.5 Log dwelling types documented in the Eastern Cross Timbers (from Jordan 1978: Figure 6-33).

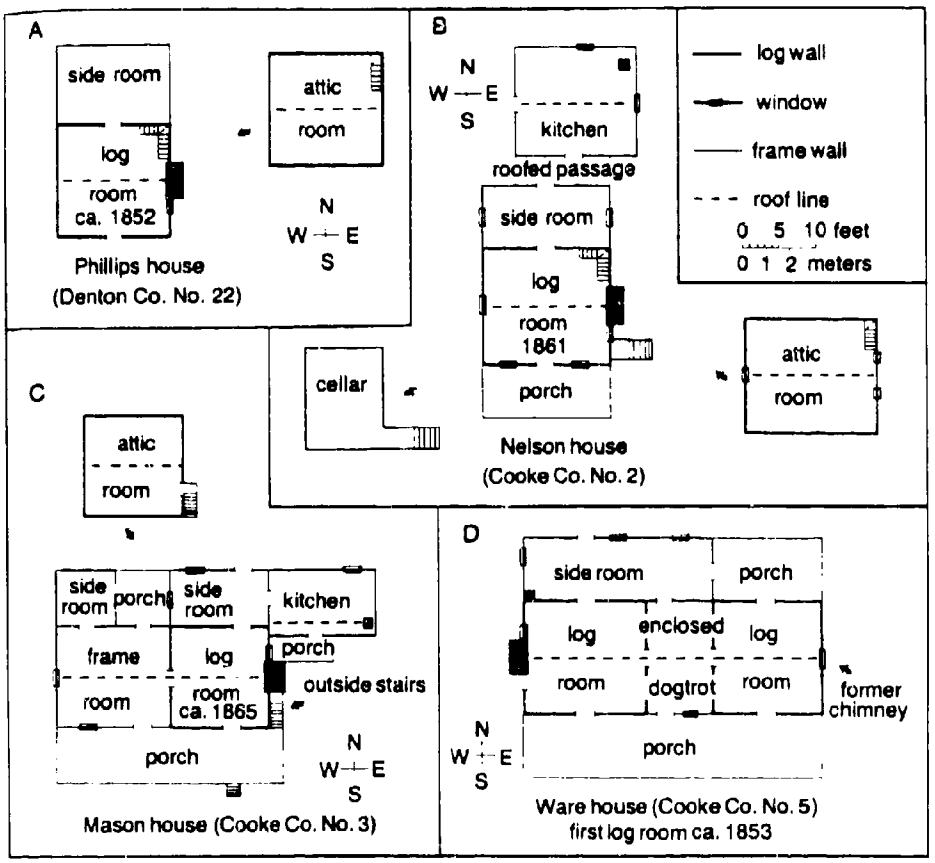


Figure 12.6 Log dwelling floorplans documented in the Eastern Cross Timbers (from Jordan 1978: Figure 6-34).

the South, with the advent of sawmills, and the increased availability of nails (Worthy 1983). Jurney (1987d), however, reports that box and strip [plank framing] remained the favored dwelling type among rural residents in southern states.

Hole-Set Construction

These hole-set outbuildings were constructed simply of wood posts driven into the ground, with the walls and roof structure supported by wood nailers and plates (Skinner and Baird 1985). A variety of wooden posts were used, with families appearing to use the most cost-effective materials available. Often these materials were recycled from earlier structures and include oak poles, railroad ties, and phone poles. Similar materials were used for outbuildings in the Richland-Chambers Creek area (Jurney 1987d). This building technique was used throughout the Ray Roberts Lake area for many frame additions to log cribs, as well as for frame cribs, sheds, and stables (see architectural descriptions in Chapters 7 and 8). The blacksmith shop at 41CO121 is an excellent example (see architectural drawings in Chapter 8).

Dwellings

Among the farmsteads studied, nineteenth-century dwellings were primarily single pen log houses (e.g., 41CO83, 41CO118, 41DN248, 41DN273, and 41DN275, among others). Single pen dwellings were more common in the Ray Roberts Lake area, which like the rest of northcentral Texas, was colonized by a large number of immigrants from the Upper South. While no detatched log kitchens were identified in our study of the Ray Roberts Lake area, several were reported historically, including one at 41DN157. A possible shed kitchen or detatched kitchen area was identified at 41DN248 (see Lebo 1992a, 1992b). Roy Jones (personal communication, 1991) reported that the kitchen to the 1850s dwelling at the Jones Farm (41DN250) was a shed room on the north side of the house. Log double pen and dogtrot dwellings also occurred in the project area during the nineteenth century, and among the sites studied, dogtrot dwellings were identified at 41CO111 and 41DN198. Frame dwellings occurred among the farmsteads studied, the earliest dated to the 1870s (41DN157) and has log members. Frame dwellings were more common by the 1890s period, and the 1898 house at 41DN250 provides an extant example of vernacular frame architecture. Other excellent examples are the Cumberland houses at 41DN118 and 41CO111. A frame dogtrot was built at 41DN224 about 1909, and a frame board and batten house was built near the turn-of-the-century at 41CO33. Frame additions were commonly added during the twentieth century to log dwellings. Such additions were documented at 41CO83, 41DN167, and 41DN224. While log dwellings continued to be occupied in the project area, some even up into the 1970s when Terry Jordan conducted his log cabin survey (see Jordan 1978), none of the log houses studied were built during the twentieth century. Frame dwellings were the most common style by the 1890s, and among the farmsteads studied frame houses were documented at all sites initially occupied by the turn-of-the-century (see Table 12-1 thru T[illegible]-4).

Ten log dwellings were documented (Table 12-5), of which eight were single pen houses, and two were dogtrots. The log dwellings at 41CO83, 41DN118, 41DN167, and 41DN198 had frame room additions, while no additions were made to the single pen log dwelling at 41DN273. The log house at 41DN146 was converted into an outbuilding, and the dogtrot at 41CO111 forms the core of a large barn at this site. The log dwelling at 41CO121 also forms the core of a large barn. It contains two notching styles, of which half-dovetailing predominates. Only the foundation and sills remained of the log dwellings at 41DN275 and 41DN224; both were single pen houses. Among these dwellings, three notching styles were used, of which half-dovetail predominates, and only two houses exhibited evidence of multiple notching styles (41CO118 and 41CO121).

Wells

Wells were common support structures at many farmsteads (Table 12-6; see also Appendix K). Reportedly, wells were an indication of wealth. They appeared to be less frequent among some farmsteads in the Crosgrove's Bottom area which was occupied by a number of sharecropper and tenant farm families. Wells, however, were sometimes absent at small landowner farmsteads (e.g., 41DN97). It is also important to acknowledge that their

Table 12-5
Floorplan, Number of Stories, Notching Style,
and Wood Type for Log-Core Dwellings

Site	Floorplan	Stories	Notching	Wood Type
41CO83	single pen	1	half-dovetail	oak, pecan
41CO111	dogtrot	2	half-dovetail	oak
41CO118	single pen	1	half- and full- dovetail	oak
41CO121	single pen	1 1/2 - 2	half- and full- dovetail	oak
41DN146	single pen	1	half-dovetail	oak
41DN167	single pen	1	full-dovetail	oak
41DN198	dogtrot	1	half-dovetail	oak
41DN224	single pen	1	?	oak
41DN273	single pen	1	V-notch	oak
41DN275	single pen	1	?	oak

"absence" at some farmsteads (see Appendix K) may simply reflect recording biases which resulted because of poor surface visibility or because wells were buried. Among some of the farmsteads studied, previously unrecorded buried wells were found during excavations (e.g., 41CO36 and 41DN224). Most commonly, among the wells studied, the walls were native sandstone. Several stone-lined wells were later capped with brick (e.g., 41DN167) or a hand pump (e.g., 41DN157), or a windmill pump (e.g., 41DN248). A number of capped wells were probably bored wells. Most of the studied wells (see Table 12-6), however, remained uncapped and were sandstone-lined (e.g., 41DN77, 41DN91, 41DN166, 41DN273, and 41DN275, among others). Windmills and water-towers were associated with many bored wells, but these architectural structures were not consistently recorded during survey. They were, however, common in the project area and surrounding landscape (see Appendix K).

Cellars

Cellars were common throughout the Ray Roberts Lake area (see Appendix K), and many extant cellars appear to have been built after the Hemming Tornado. In his study of Texas Log Buildings, Jordan reports that among the sites he examined, "In every instance, these cellars were built by settlers who had previously resided in Indiana, Illinois, or Missouri" (Jordan 1978:142). German cellars were underneath the dwelling, while Upper Southerners built a "dugout cellar" separate from the house, a type commonly seen in parts of northcentral Texas (Jordan 1978:142).

Table 12- 6
Wells, Cisterns, and Cellars at the Historic Farmsteads Investigated in 1986-1987[1]

Site	Wells, Cisterns	Cellars
41CO33		depression
41CO36	1 capped, 1 stone-lined, 1 brick cistern	2 depressions
41CO39	1 brick-lined, 1 stone-lined	1 depression, 1 sandstone
41CO103	capped	
41CO118	capped	concrete
41CO119		concrete
41CO120	3 capped	concrete
41CO121	capped	depression
41CO143	capped	concrete
41DN77	stone-lined	depression
41DN91	2 stone-lined	depression
41DN97		2 depressions
41DN107	capped	1 depression, 1 dugout
41DN157	capped	limestone
41DN165	capped	sandstone
41DN166	stone-lined	2 depressions
41DN167	stone-lined w/brick at top	3 depressions
41DN172	capped	concrete
41DN174	capped	concrete
41DN190	capped	4 depressions
41DN191		sandstone w/concrete roof
41DN193	capped	sandstone
41DN198	stone-lined	depression
41DN224	1 stone-lined, 1 capped	2 depressions, 1 limestone
41DN349	1 stone-lined	earthen (extant)
41DN466		2 depressions (1 brick)
41GS46	capped	
41GS59	capped	depression
41GS79	brick	brick

[1] No wells or cellars were found at 41CO38, 41DN79, 41DN81, 41DN106, 41DN146, 41DN233, and 41DN234.

Both German and Upper South "dugout" cellars occurred in the project area. German cellars were rare, possibly occurring at two farmsteads (41CO36 and 41DN118). The reported dwelling at 41CO36 was a Tee-plan house with a stone foundation and a cellar under the house. Based on this dwelling/cellar arrangement and the double crib barn at the site, this farmstead was assumed to have been occupied by a German family (Skinner et al. 1982a). A large stone cellar occurred at 41DN118 which was settled by the Sadau Family. The cellar was originally built separate from the dwelling, but it was later attached to the Cumberland house when the dwelling underwent a second period of modification (Skinner and Baird 1985:9-55). Upper South "dugout" cellars predominate in the region, occurring at most farmste . Early "dugout" cellars had earthen floors, walls, and roofs, with wooden support posts and ceiling beams. The stairs were often stone, and the doors were wood. After the Hemming Tornado, more substantial "dugout" cellars were built at many farms. These cellars were constructed of native limestone or sandstone, brick, and/or concrete.

Earthen "dugout" cellars occurred at many farmsteads occupied before the turn-of-the century (see Table 12-6). Among these farmsteads were 41CO33, 41CO39, 41DN107, 41DN166, 41DN167, 41DN198, 41DN224, 41DN248, 41DN273, 41DN275, 41DN349, and 41DN466, among others (see Chapters 7 and 8). Several earthen cellars were found at 41DN107, 41DN166, 41DN167, and 41DN224. While most of these cellars were situated within 10 m of the dwelling, a number were found between 10 and 20 m from the house, and some were located at a relatively great distance from the house. Brick cellars were found at 41DN466 and 41GS79, while concrete cellars were common at farmsteads occupied until recent (e.g., 41CO120, 41DN172, and 41DN174, among others). everal farmsteads serially occupied over a long period had both earthen and concrete cellars (e.g., 41CO39).

Sheds/Cribs (Barns)

Both log and frame sheds and cribs occurred in the project area. Many small single pen cribs dot the landscape. Figure 12-7 taken from Jordan 1978 shows the distribution of log outbuildings still standing in the Ray Roberts Lake and Lewisville Lake areas in the early 1970s. Among these log outbuildings are single crib and double crib structures, barns, cornerib, smokehouses, cotton sheds, and detached kitchens. Undoubtedly, based on historical information, each of these log outbuilding types were utilized by families in the project area. Among the farmsteads studied in 1986-1987, single and double crib outbuildings, barns, cornerib (also used to denote small granaries or barns; see Jordan 1978), and cotton sheds were still extant. The best preserved suite of log outbuildings were preserved at 41CO118 where a log corn crib, a double pen barn, and a single pen barn were found associated with a single pen house which had frame additions, and a two-story plank barn probably built in the 1930s (see site description in Chapter 7). Data provided in Chapters 7 and 8 on farm outbuildings indicates that overwhelmingly the most common log outbuilding remaining is the single pen crib. This correlates with the outbuilding data gathered by Jordan (1978, 1980). Both hewn and unhewn logs and a variety of notching styles were used, sometimes several of these techniques were used at a single farmstead (e.g., 41CO118). Several of these single pen cribs were originally built as dwellings but after abandonment were converted into barns (e.g., 41CO121, 41DN146).

The majority of the extant cribs in the region were frame (see site descriptions in Chapters 7 and 8). Many cribs were used for hay storage, but several were found to have been used for corn (north crib at 41CO118) and cotton seed (41DN250; see Lebo 1992a, 1992b); most were probably used at varying times for storing a variety of crops. Some cribs were modified and used for several functions. For example, the crib at 41CO121 had been partitioned with the north pen being used for hay or corn storage, while the south was converted into animals stalls with watering troughs along the partition wall.

Only one of the double crib barns documented in 1986-1987 was originally built as a barn (41CO120). The double crib barn at 41CO111 was no longer standing, and Roy Jones reported that the log barn at the Jones Farm (41DN250) burned from a lightning fire in 1939 (see Lebo 1992a, 1992b).

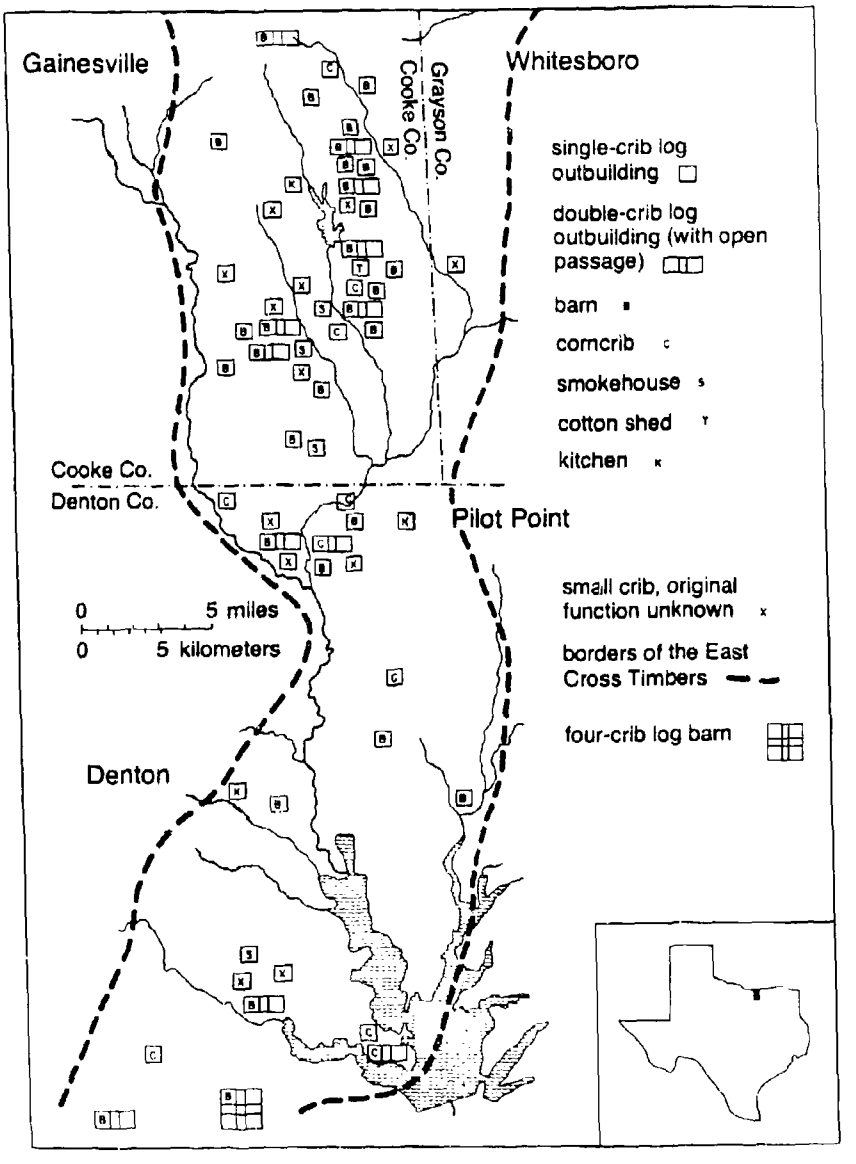


Figure 12.7 Log outbuilding floorplans and building types documented in the Eastern Cross Timbers (from Jordan 1978: Figure 8-11).

Other Outbuildings

Among the other outbuildings documented at the study sites (see Tables 12-1 through 12-4) are chicken houses/coops, stables/animal pens, dairies, and privies. These outbuildings were largely frame structures (see Chapters 7 and 8), and the relative frequency of these outbuildings that were observed during the survey phases is undoubtedly a poor reflection of their occurrence during the late nineteenth and early twentieth centuries. Each of these outbuilding types were discussed by oral informants as common farm buildings with no association with a particular cultural, ethnic, and racial group; only the dairies were uncommon.

Jordan (1978:177) reported that, "Next to barns, the most common log outbuilding on Texas farms is the smokehouse." While he recorded several log smokehouses in the Ray Roberts Lake area (see Figure 12-7), no extant examples were found during our investigations. Archaeological evidence of a possible smokehouse at the Johnson Farmstead (41DN248) was exposed during recent excavations in 1990-1991 (see Lebo 1992a, 1992b), and historical data were found for the turn-of-the-century smokehouse at the Jones Farm (see Lebo 1992a, 1992b). Smokehouses also occurred at 41DN198 (Skinner and Baird 1985) and at 41CO10 (Eli and William Sledge interview) during the 1980-1981 survey phases.

Artifact Assemblage Variability: Research Topics 3, 5, 6, 7, and 8

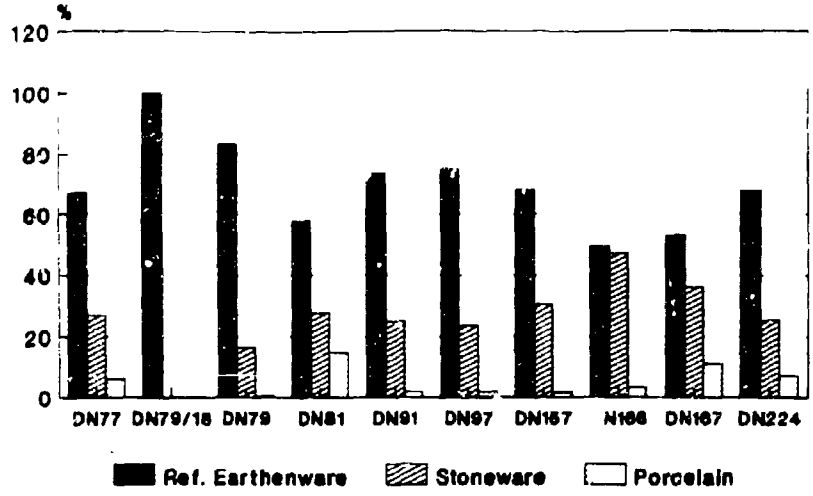
Sheet Refuse Middens: Artifact Assemblages

As Nunley (1987:206) reports based on oral interviews of individuals from the Richland-Chambers Creek area, "In a general sense, everyday activities were virtually identical in all families." This pattern is evident among the Ray Roberts Lake households (see Chapter 10 of this volume). Much of each day was spent carrying out farm chores such as cooking, cleaning, making soap, chopping wood, milking the cows, working the garden and fields, and so forth. Some chores were conducted year round, while others were seasonal. This similarity in activities as well as the relative similarity in access to goods and services translates into relatively similar artifact assemblages across farmsteads. The major artifact categories defined for this project occurred at each farmstead, excluding the impact of sample size. Major differences in artifact frequencies at these farmsteads primarily reflect temporal changes rather than socioeconomic or ethnic variability.

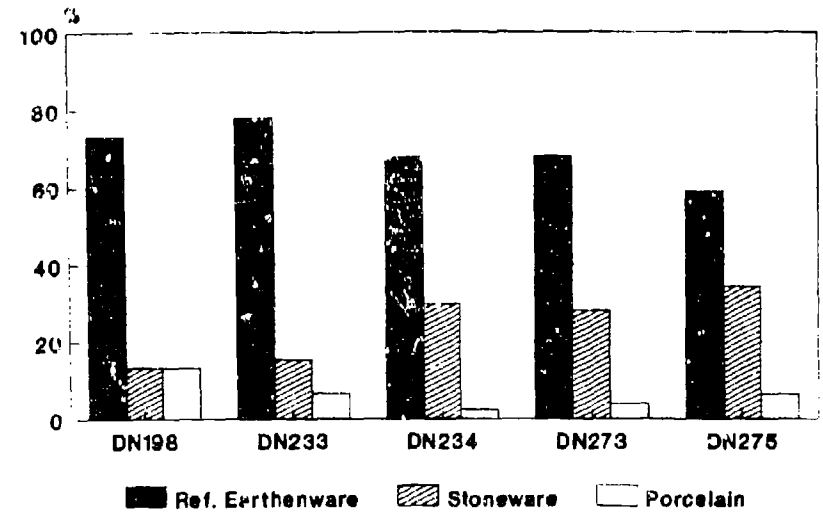
Ceramics

Four major types of ceramics were recovered from farmsteads, including semi-coarse and coarse, refined earthenwares, stonewares, and porcelains. Semi-coarse and coarse ceramics included primarily flower pot fragments and were uncommon. Earthenwares and porcelains were largely tablewares, although some porcelain doll or children's tea set fragments were also found. Stoneware vessels were primarily food preparation, storage, and serving vessels, including crocks, churns, jars, jugs, and bowls.

Figure 12-8a illustrates the relative percentage of each of the three major ceramic types (refined earthenwares, stonewares, and porcelains) at nine farmsteads in the central project area. In this figure, site 41DN79 is separated into two assemblages (1) Feature 18, and (2) the sheet refuse midden. This figure indicates that refined earthenwares dominate the ceramic assemblage at each farmstead, with the exception of 41DN166. The relatively equal assemblages of refined earthenwares and stonewares at 41DN166 reflects the large number of stonewares found associated with Feature 1, a kitchen-related deposit. Porcelains were uncommon, accounting for less than 10% of the ceramics at each farmstead, exluding 41DN81. It is unclear why a higher percentage of porcelains were found at 41DN81. The assemblage from Feature 18 deviates from the pattern found for the other farmsteads. No stonewares or porcelains were recovered from Feature 18.

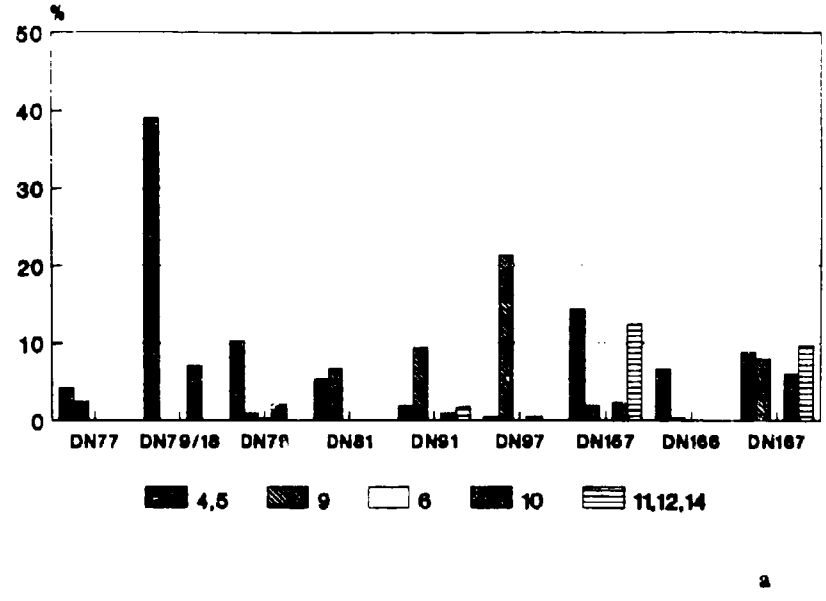


a



b

Figure 12.8 Ceramic percentages for farmsteads in the Central Area (a) and the Crosgrove's Bottom Area (b) of the Ray Roberts Lake project area. Percentages are based on ceramic type/ceramic total, excluding semicoarse earthenwares.



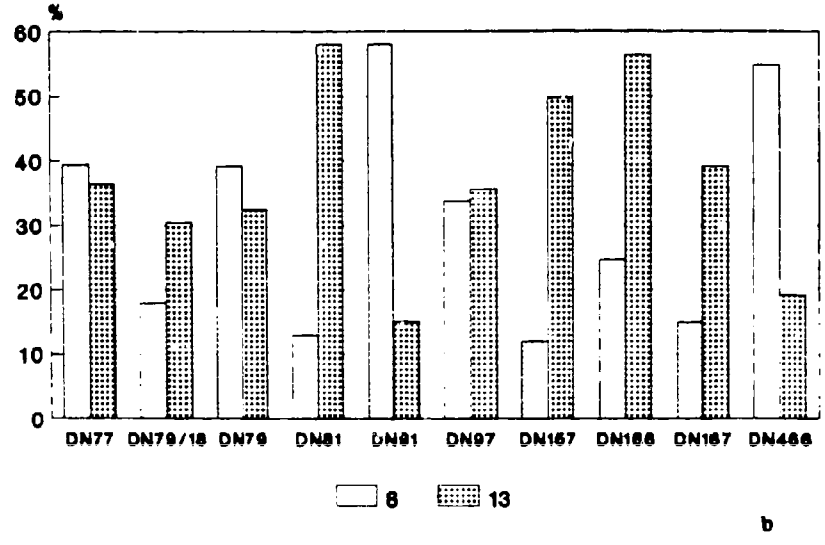


Figure 12.9 Major refined earthenware types (a) and the relative percentage of blue-tinted ironstone (Type 8) and blue-tinted whitewares (Type 13) at farmsteads in the Central Area of the Ray Roberts Lake project area. Percentages are based on refined earthenware type/refined earthenware total. Type 4,5 is transitional pearlware/early whitewares; Type 9 is white whitewares, Type 6 is flow blue, Type 10 is imitation flow blue, and Type 11,12,14 is ivory tinted whitewares and fiesta ceramics.

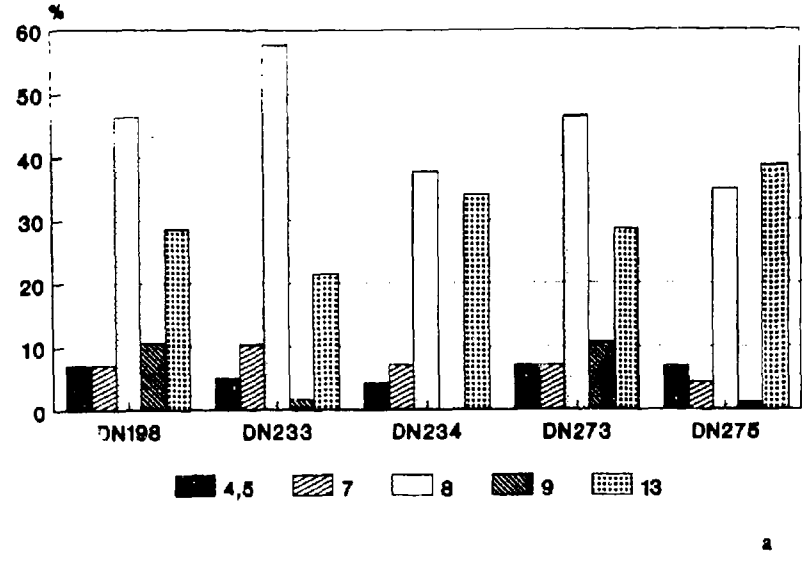
Figure 12-8b shows the relative percentage of the different ceramic categories at five farmsteads in the Crosgrove's Bottom area. This figure also indicates a predominance of refined earthenwares in the ceramic assemblages in this area. Two abberant sites are evident in this figure. First, 41DN198 contains an equal percentage of porcelains and stonewares, while porcelains account for less than 10% of the ceramic assemblage from farmsteads in both the central and Crosgrove's Bottom areas, with the exception of 41DN81. The African-American farmers at 41DN198 appear to have acquired relatively fewer stonewares than their Anglo and African-American neighbors. The family at site 41DN233 also appeared to have a relatively smaller percentage of stonewares than their neighbors. With the exception of 41DN79 in the central area, all of the farmsteads illustrated in these two figures had ceramic assemblages characterized by at least 20% stonewares and over 50% refined earthenwares. Other than 41DN233, the only farmstead in this sample with less than 20% stonewares is 41DN79 which contained a preponderance of refined earthenwares, and shallow storage pits.

Among the refined earthenwares, two major types occurred at farmsteads in the area (see Appendix B for classification system). These two types include (#8), non-vitrified blue-tinted ironstones (1850-1910) and (#13), light blue-tinted whitewares (1880-1930). The third most common type was (#5), early ironstone whitewares (1840-1910). Because of the difficulty in separating stained, eroded, or worn sherds, vessel fragments assigned to (#4), the transitional pearlware/whiteware type (1820-187) were included as ironstone whitewares category (#4,5).

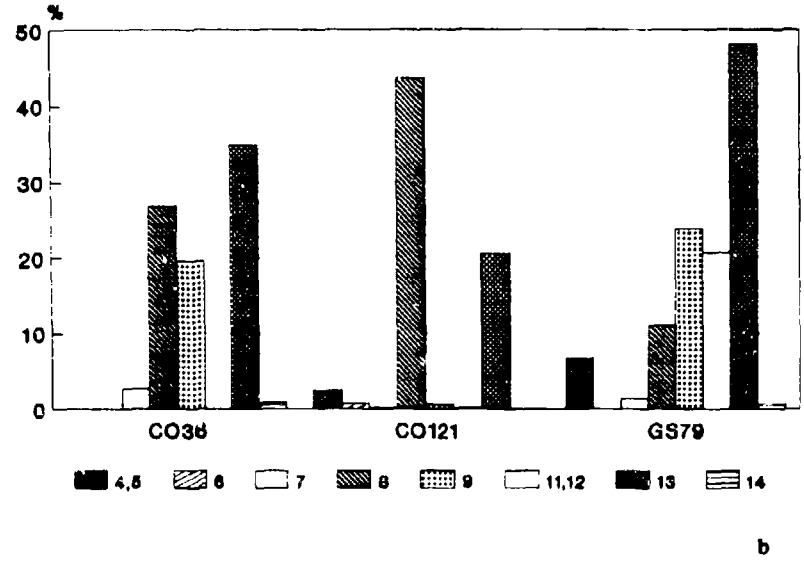
Non-vitrified ironstones were most frequent at farmsteads abandoned before 1930. Figure 12-8a illustrates the relative frequency of refined earthenware types for eight farmsteads in the central project area, with Feature 18 separated from the sheet refuse midden at 41DN79. Early whitewares (#4,5) occurred at each of these eight farmsteads, with the highest frequency occurring in Feature 18 at 41DN79 and the lowest at 41DN97 which was initially occupied during the late nineteenth century. The earlier age of Feature 18 compared to the general sheet refuse midden at 41DN79 is apparent in this figure. When only non-vitrified blue-tinted ironstones (#8) and light blue-tinted whitewares are examined (Figure 12-8b) for these farmsteads, it is apparent that the ironstone predominate at sites occupied early, while blue-tinted whitewares are more frequent at later sites, reflecting the temporal differences in their popularity. Feature 18 at 41DN79 appears anomolous, with a higher frequency of blue-tinted whitewares. These ceramics however correlate well with the sheet refuse midden which intruded into the upper levels of this feature. Sites abandoned in the late nineteenth or early twentieth century also exhibited higher percentages of ironstones to blue-tinted whitewares (e.g., 41DN77, 41DN79, and 41DN466). Farmsteads occupied after 1930 contained a higher percentage of blue tinted whitewares. A small number of twentieth-century refined earthenware types were recovered from farmsteads in this area. Among these ceramics were (#10), imitation flow blue (1890-1925), (#11, #12) ivory-tinted whitewares, and fiesta (#14). These types accounted for about 15% of the refined earthenware assemblages from 41DN157 and 41DN167. Site 41DN157 was occupied until the 1980s, while 41DN167 was also occupied until fairly recently.

In the Crosgrove's Bottom area, the twentieth century types (#11, #12, and #14) were absent, except for two ivory-tinted whiteware sherds (#11, #12) from 41DN198. Figure 12-10a indicates that blue-tinted ironstones (#8) and blue-tinted whitewares (#13) predominated at all assemblages, with only 41DN275 containing a large percentage of blue-tinted whitewares. Early whitewares (#4, #5) also occurred in each assemblage, ranging from about 4 to 8% of the refined earthenwares. Vitrified blue-tinted ironstones (#7) ranged from 4 to 10%, while pure white whitewares (#9; 1890-1992) accounted for between 1% and 10% of the refined earthenwares.

Refined earthenware types from three farmsteads from the northeastern part of the project area are shown in Figure 12-10b. As in the other parts of the project area, blue-tinted ironstones and blue-tinted whitewares dominated the assemblages. White whitewares (#9) accounted for at least 19% of the assemblages from 41CO36 and 41GS79, while ivory-tinted whitewares (#11, #12) were important only at 41GS79. The data for 41GS79 indicates that this farmstead was occupied for a long period, including both early types (e.g., #4, #5, and #8), but at least 20% were purchased after 1920 (#11, and #12). In contrast, the refined earthenware assemblage from 41CO121 is unusual. This farmstead was also occupied until recently, but only pre-1930s refined earthenware types were commonly recovered. This suggests that either the family was conservative and purchased few new styles or newer ceramics were deposited in trash features which were not excavated.



a



b

Figure 12.10 Major refined earthenware types at farmsteads in the Cosgrove's Bottom Area (a) and the Northeast Area (b) of the Ray Roberts Lake project area. Percentages are based on refined earthenware type/refined earthenware total. Type 4,5 is transitional pearlware/early whitewares; Type 7 is high-fired blue-tinted ironstones, Type 8 is non-vitrified blue-tinted ironstones, Type 9 is white whitewares, and Type 13 is blue-tinted whitewares.

A comparison of decorative attributes between the central project area and Crosgrove's Bottom sites reflects some evidence for socioeconomic or ethnic differences between these areas. Figure 12-11a illustrates the percentage of refined earthenwares with decorations and the number of decoration combinations identified at nine farmsteads in the central area. This same information is illustrated for five Crosgrove's Bottom farmsteads in Figure 12-11b. Farmsteads that continued to be occupied after 1930 are characterized by assemblages containing at least 20% decorated refined earthenwares (e.g., 41DN157 and 41DN167). The single exception is Feature 18 which contained more than 40% decorated sherds. These sherds, however, exhibited early handpainted, stencilled, spattered, and transfer-printed motifs associated with pre-1860 ceramics. The high percentage of decorative refined earthenwares at 41DN273 was unexpected, but largely reflects late decorative combinations including scalloped and/or relief-decorated edges. The low frequency of decorated refined earthenwares from 41DN77 and 41DN234 was unexpected and is not easily explained and does not appear to correlate with any socioeconomic or ethnic trends. As discussed earlier, sites 41DN233 and 41DN234 were occupied during a similar period most probably by tenants or small landowners, and therefore a similar frequency of decorated sherds were expected for these two farmsteads.

Socioeconomic or ethnic patterns associated with the refined earthenwares from these assemblages is tentative at best based on the number of decorative combinations identified for each farmstead. Farmsteads in the Crosgrove's Bottom area exhibited less than 10 combinations, while farmsteads in the central area all had more than 10 decorative combinations, except 41DN77 and 41DN97. This fact suggests that the Anglo farmers in the central area acquired more different decorative patterns than the Anglo and African-American farmers, sharecroppers, and tenant farmers in Crosgrove's Bottom. Other factors, however, may be associated with this pattern, including date of occupation (e.g., Feature 18 at 41DN79) and length of occupation (41DN157) where decorative patterns reflect buying preferences and availability patterns over several generations. Moir (1988c) reports that like other project areas in North Texas, "Socioeconomic separation between landowner and tenant assemblages was not evident in the types of fine tablewares recovered" from the Joe Pool Lake farmsteads.

Bottle Glass

The highest frequencies of bottle glass, and the ratio of bottle glass to ceramics reflects occupation into the mid- or late twentieth century. Early farmsteads exhibit a smaller bottle glass/ceramic ratio that later farmsteads. Figure 12-12a illustrates this ratio for farmsteads in the central project area, while Figure 12-12b provides comparative data for the Crosgrove's Bottom area. In the central area, bottle glass was between 4 and 8 times more frequent than ceramics at five sites occupied at least to 1930 or later. The highest ratio was reported for 41DN157 which was occupied by a well-to-do ranching family and continued to be occupied until the 1980s. Sites 41DN97 and 41DN167 also had long occupation histories, while 41DN81 and 41DN166 were probably abandoned by 1930, but were probably occupied for 40-50 years. In the Crosgrove's bottom area, the highest ratios also occurred at farmsteads occupied up to or after 1930. In both areas, farmsteads occupied near the turn-of-the-century or before 1930 had lower bottle glass/ceramic ratios.

Major bottle glass types recovered from Ray Roberts Lake farmsteads include fruit jars, condiment bottles, and beverage containers, including soda, mineral water, and liquors. Large collections of whole or nearly complete bottles were found in several trash features, while the bulk of the bottle glass from farmsteads were recovered as small sherds in the sheet refuse midden. The filled well associated with the early component contained a trash assemblage high in bottle glass and tin can fragments. A number of whole fruit jars and liquor bottles were found in this well. Similarly high densities of bottle glass were found in trash dumps deposited in depressions associated with collapsed cellars (e.g., 41DN167).

Architectural Remains

Bricks were uncommon in the assemblages recovered from many farmsteads, while window glass, nails, and building material were frequent (see Chapters 7 and 8). The absence of bricks at a number of farmsteads reflects

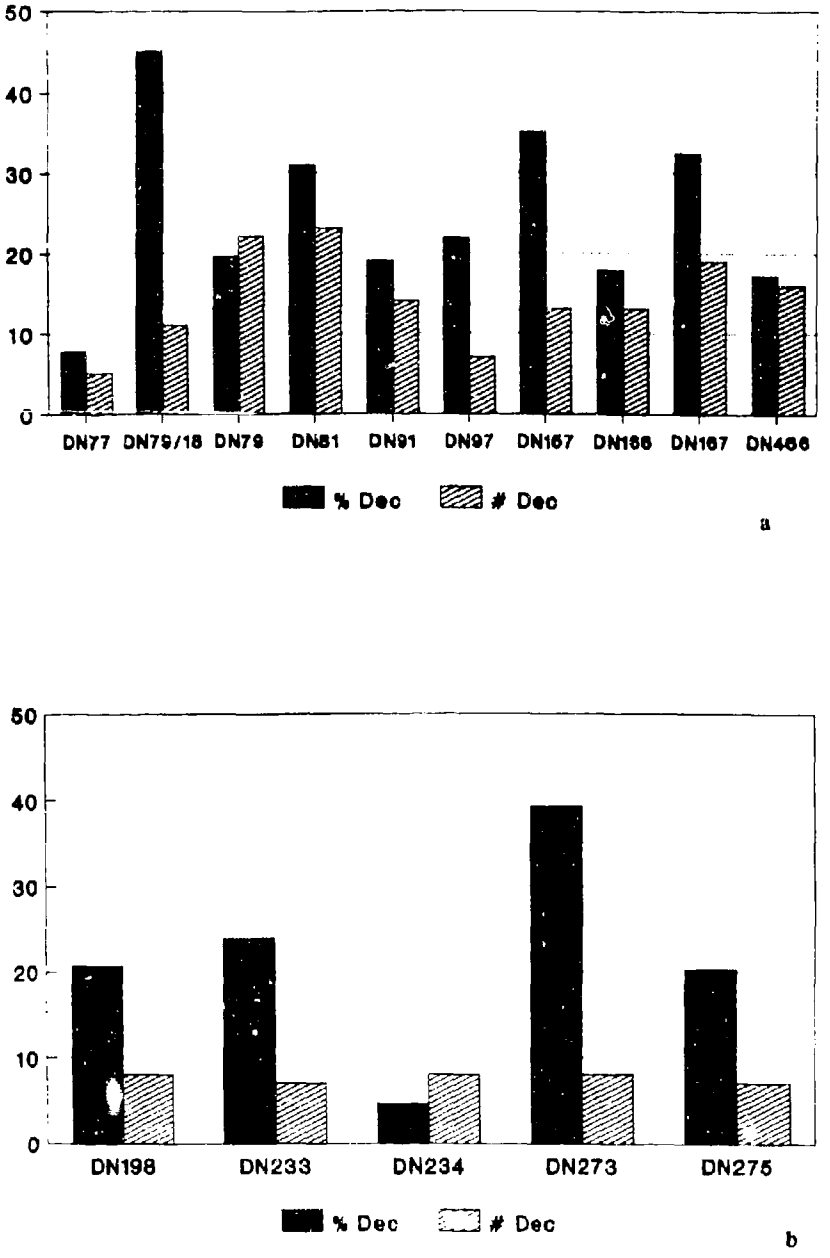
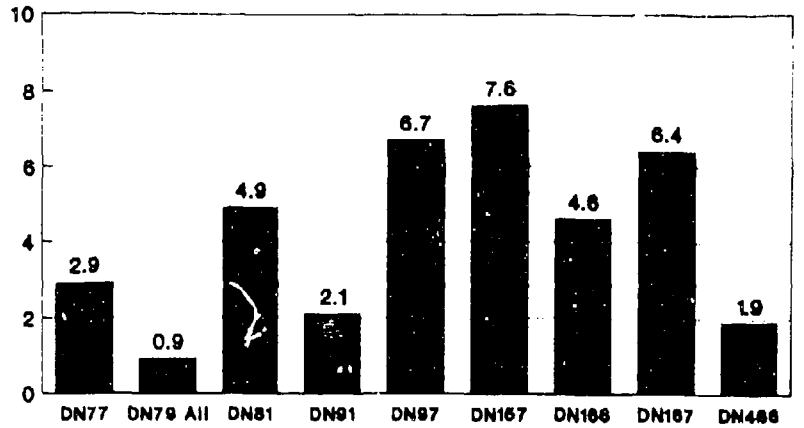
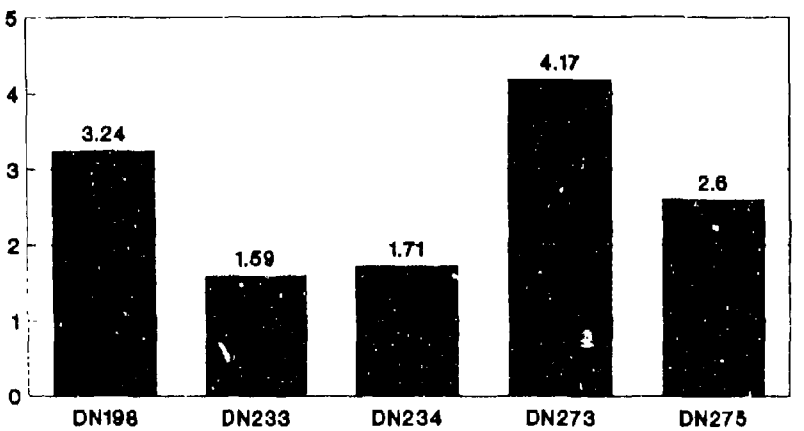


Figure 12.11 The percentage of decorated refined earthenwares and the number of decoration combinations for farmsteads in the Central Area (a) and the Crosgrove's Bottom Area (b) of the Ray Roberts Lake project area. Percentages are based on decorated refined earthenwares/total refined earthenwares.



a



b

Figure 12.12 Vessel glass/ceramic ratio for farmsteads in the Central Area (b) and the Crosgrove's Bottom Area (b) of the Ray Roberts Lake project area. Ratios are based on vessel glass total/ceramic total. Vessel glass includes bottle, table, lamp, and unidentified burned or melted sherds.

two factors (1) native sandstone was used by many families for chimney construction and piers, and (2) later dwellings had metal hanging chimneys. Native sandstone and/or limestone were used for the walls of hand-dug wells, and the use of brick in wells was uncommon. Handmade brick rubble to a chimney was recovered from the house area at 41CO121. Other farmsteads with brick features include 41DN466 and 41GS79. The brick found at 41DN466 was associated with a collapsed and buried handmade brick cellar. At 41GS79, the recovered brick included handmade bricks from the dwelling chimney and machine-made bricks from the cellar.

Nails recovered from sheet refuse deposits in the project area indicated associations between building condition as well as construction dates. Figure 12-13a illustrates the ratio of wire nails to machine-cut nails at a sample of farmsteads from the central project area. This figure indicates that wire and machine-cut nails were relatively equally frequent at six of the 10 farmsteads examined. A higher ratio of wire to machine-cut nails occurred at farmsteads with major building episodes during the twentieth century (41DN81 and 41DN167). The ratio at 41DN157 is less than expected given that this farmstead was occupied until recently and several major outbuildings were built during the twentieth century. This discrepancy, however, can be accounted for by the fact that the twentieth-century structures at this farmstead had not collapsed and several were moved from the site still assembled (e.g., large barn). Figure 12-13b illustrates the ratio of wire and machine-cut nails in the Crosgrove's Bottom area. These data similarly indicate low ratios at farmsteads where major building episodes date to the nineteenth century. The high ratio of wire nails at 41DN198 is associated with the shed addition and roof of the dwelling at this site; the original dwelling was log. High wire to machine-cut nail ratios were reported for 41DN349, and 41CO121, 41GS46, and 41GS79 in the northeastern project area. At each of these farmsteads, major building episodes were conducted during the twentieth century. At 41CO121, this building included most of the major outbuildings (e.g., privy, sheds, barn, and blacksmith shop) as well as additions to the dwelling.

Building material recovered from farmsteads in the project area included fencing wire (barbed and plain), fence staples, mortar, concrete, and building hardware (e.g., doorknobs, hinges, screws). High frequencies of building material were associated with farmsteads characterized by burned and/or collapsed dwellings and outbuildings, particularly those farmsteads with frame structures rather than log buildings.

Personal Items

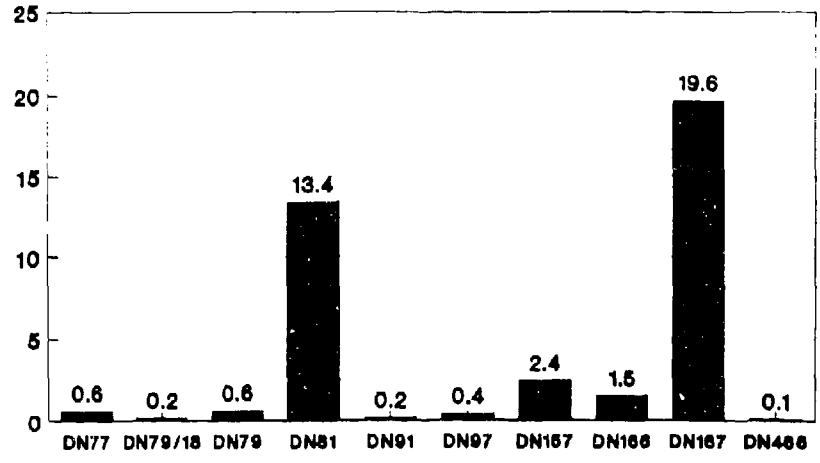
Personal items exhibited low but variable frequencies at farmsteads in the region. Major types of personal items recovered from these farmsteads were buttons, metal clothing fasteners, jewelry, stoneware tobacco pipes, tobacco tags, children's toys (e.g., marbles), and slateboard and slate pencil fragments. Personal hygiene items (e.g., combs and toothbrushes) also occurred but were less frequent. A small number of bone personal items, largely buttons, were recovered from several farmsteads (Table 12-7).

Thin and Heavy Metal

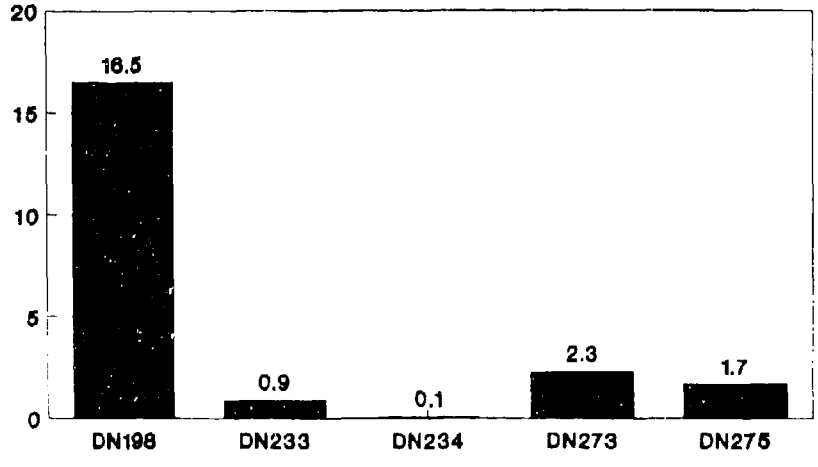
The major artifacts reported in this category were tin can fragments and unidentifiable scraps of thin or heavy metal; most of which were iron. Tin can fragments were included in this category because with rare exception, whole or diagnostic tin cans were not found. Thin and heavy metal remains generally accounted for between 10% and 20% of the collected artifact assemblage. Higher percentages occurred at farmsteads with low artifact samples (e.g., 41DN146), farmsteads with major trash features (e.g., 41CO121 and 41DN167) or sites with relatively low frequencies of architectural material (e.g., 41GS79).

Household Items

This artifact category occurred as low frequency remains which included primarily metal bottle caps (e.g., crown caps), rubber fruit jar liners, cooking and eating utensils, furniture parts (e.g., casters), curtain hardware, sad irons, sewing items (e.g., scissors, straight pins, needles), and household cleaning implements. A small number of bone utensil handles were recovered from farmsteads in the project area (Table 12-7).



a



b

Figure 12.13 Machine-cut nail/wire nail ratios for farmsteads in the Central Area (a) and the Crosgrove's Bottom Area (b) of the Ray Roberts Lake project area. Ratios are based on wire nail total/machine-cut nail total.

Table 12-7
Worked Bone Artifacts from Historic Farmsteads[1]

Farmstead	Provenience	Artifact Type
41CO121	U.59, L.1, S91 E117 U.62, L.1, S90 E118	2 4-hole buttons 1 4-hole button
41DN79	U.79, L.1, S202 E200 Block 2, Fe.18, E1/2, L.1, FS Block 2, Fe.18, W1/2, L.2 Block 2, Fe.18, W1/2, L.2 Block 2, Fe.18, W1/2, L.3 Block 2, Fe.18, W1/2, L.3, FS Block 2, Fe.18, E1/2, L.2 Block 2, Fe.18, E1/2, L.3 Block 2, Fe.18, E1/2, L.3 Block 2, Fe.18, E1/2, L.4 Block 2, Fe.18, E1/2, L.4, FS Block 2, Fe.18, E1/2, L.4, FS Block 2, Fe.18, E1/2, L.5 Block 2, Fe.18, E/12, L.5	1 button, unid. frag. 1 4-hole button 1 lg. utensil handle 1 tubular bead 1 tubular bead 2 4-hole button 1 4-hole button 1 5-hole button 1 lice comb fragment 1 5-hole button 3 lice comb fragments 1 4-hole button 2 4-hole buttons 1 tubular bead
41DN81	U.0, Fe.16, L.1, FS U.0, Fe.16, L.5	1 4-hole button 1 4-hole button
41DN91	U.2, L.1, ECI collection	2 utensil handle frags.
41DN166	U.130, L.2, S204 E241, Fe.1 U.136, L.1, S202 E241, Fe.1	1 doll limb fragment 1 button, unid. frag.
41DN224	U.22, L.1, S380 E340 U.108, L.2, S392 E340, Trench 3	1 button with shank 1 4-hole button
41DN248	U.45, L.2, S80 E110, Fe.6 U.62, L.2, S86 E11	1 4-hole button 1 4-hole button
41DN275	U.170, L.0, S208 E180	1 4-hole button

[1] Provenience designations: U = unit number, L = excavation level, W and E refer to west and east 1/2 of unit, Fe = feature, FS = fine screen sample.

Machine and Wagon Hardware and Tools

Both the machine and wagon hardware and the tool category occurred as low frequency remains. Machine and wagon hardware included primarily nuts, bolts, washers, and identifiable items such as mower blades, box staples, axle rods, headlight parts, and similar items. Nuts, bolts, and washers were the most common. Among tools were items such as fishing weights, axe heads, bastard files, triangular files, saw blades, and ferrules. The largest assemblage of machine and wagon hardware and tools were obtained at 41CO121. These items were found largely in Block 1 located within the blacksmith shop (see Chapter 8). Other items included parts of animal traps.

Horse and Stable Gear

Horse and stable gear occurred in the assemblages from most farmsteads, exhibiting low frequenices. Like machine and wagon hardware, the highest frequency of horse and stable items were recovered from the blacksmith shop at 41CO121. Common horse and stable gear found at farmsteads in the region include snap hooks, harness and rein buck ings, horse and mule shoes, harness rivets, and horse bits. Horseshoe nails were relatively uncommon.

Ammunition

This category included primarily rimfire and centerfire cartridges and shotgun shells and wadding. Less frequently lead shot, grapeshot, percussion caps, and gun parts were found. Several gunflints were also recovered (e.g., 41DN79 and 41DN248).

Electrical Items

This category was extremely infrequent at most farmsteads in the region, particularly those abandoned before telephone or electric service was installed. The major artifacts included in this category were battery parts which occurred at many farmsteads.

Miscellaneous Other

This category includes those items that could not easily be included in the above categories. These items were primarily modern trash, including cigarette butts, paper agments, foil and cellophane or plastic fragments, plastic bag ties, plastic dishes and utensils, and similar items. Higher frequencies of miscellaneous items were reported for recently abandoned sites, sites still occupied when they were purchased by the Corps, and sites that were disturbed after they were abandoned (e.g., vandalized, associated with landfill areas, or received heavy foot traffic; see also the trash associated with the blacksmith shop at 41CO121).

Regional Comparative Study of Farmsteads: Ray Roberts Lake, Lewisville Lake, Joe Pool Lake, and Richland-Chambers Creek Projects

A regional analysis of farmsteads in northcentral Texas will be accomplished using data from four major reservoir projects in the region. These projects include Ray Roberts Lake (Skinner et al. 1982a, b,; Skinner and Baird 1985), Lewisville Lake (Brown and Lebo 1991; Lebo and Brown 1990; Lebo 1991), Joe Pool Lake (Ferring and Reese 1982; Jurney, Lebo, and Green 1988), and Richland-Chambers Creek (Archaeology Research Program 1982; Jurney and Moir 1987; Moir and Jurney 1987a,b,c). Data from these projects will be utilized to examine two major topics (1) association between socioeconomic, ethnic, religous, and racial background and farmstead architecture, farm layout, and the artifactural record, and (2) foodways.

Association of Settler's Background and the Architectural and Artifactual Record

Farmstead Architecture

Although the farmsteads located in the Ray Roberts Lake area were occupied by families from varying socioeconomic, ethnic, religious, and racial backgrounds, these families shared similar lifeways which are evident in the architectural and archaeological remains recovered from the studied farmsteads. As discussed earlier, most families in the region were largely self-sufficient farmers who raised most of their own food, were involved in

cotton cash crop agriculture, and who acquired most of their food and necessities from their own labors or through trading and bartering with their neighbors and from stores in nearby towns such as Pilot Point, Valley View, and Sanger. While some variability in farm activities occurred among families in the area, distinct socioeconomic, ethnic, religious, or racial patterns were not evident in the architectural, archival, oral history, and archaeological data. Figure 12-14 indicates that wells, cellars, barns or sheds, animal pens or stables and corrals were common features at farmsteads studied in 1986-1987. Each of these structural types occurred at farmsteads established by Anglo-American, foreign-born European, and freed slave settlers. For example, see the African-American farmstead at 41DN198, the Anglo-American farmstead at 41DN248, and the German farmstead at 41DN118 (see Chapter 8 and architectural discussion above).

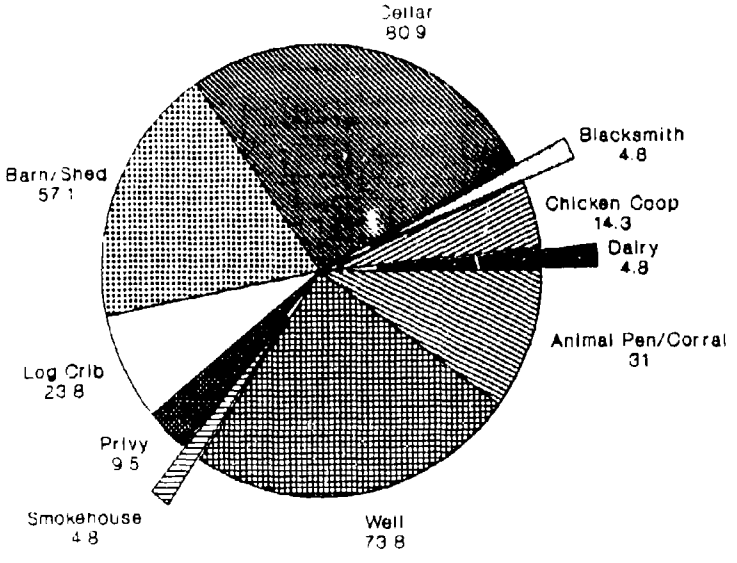


Figure 12-14. The percentage of farmsteads investigated in 1986-1987 (n=42) with specific extant outbuildings. For example, of the 42 farmsteads included here, 80.9% of them had cellar remains, 57.1% of them had barn/shed outbuildings, and so forth.

In studying farmsteads in the Joe Pool Lake area in Dallas County, Moir and Jurney (1988) reached a similar conclusion that a direct association did not occur between nationality, ethnicity, or racial background and architectural and archaeological remains such that a distinct pattern could be assigned to a specific group of settlers, but some differences are evident among families from different regions of the United States (e.g., Upper South, Lower South, Midwest).

For example, both the Holvecks (41DL183), who immigrated to the U.S. in 1872 from France, and the Hintzes (41DL181), who immigrated to the U.S. in about 1878 from Germany, occupied dwellings and left behind artifacts that looked the same as those recovered from native born households (e.g., Penn, Anderson, Pool, and Lowe households).

Different building traditions predominated and characterized particular cultural regions in the U.S. (e.g., Upper South, Lower South). As families from several different cultural areas immigrated to the Ray Roberts Lake area they brought their traditions with them. Within the Ray Roberts Lake area, these traditions are mixed, occurring across cultural boundaries, indicating a blending of traditions. For example, site 41DN198 was settled by African-Americans during the late 1800s, and structures at this site included a log dogtrot dwelling, a cellar, a hay crib, a stable, sheds, animal pens, and a possible smokehouse. In contrast, sites 41DN107, 41DN224, and 41DN250 were settled by members of the Jones Family who immigrated from the Upper South. The earliest dwellings at 41DN224 and 41DN250 were single pen log houses, while the second house at 41DN224 was a frame dogtrot. The outbuildings at these three farmsteads included cribs, cellars, stone-lined wells, animal pens, and at 41DN250, a smokehouse, cribs, sheds, a double crib log barn, and animal pens. This information indicates that while these families have different heritages and immigrated from different cultural regions, the architectural assemblages from these farmsteads indicated a blending of cultural traditions.

The architectural record for the Ray Roberts Lake area corresponds well with the data reported for the Lewisville Lake and the Joe Pool Lake areas which were settled primarily by families from the Upper South and Midwest, with a smaller number of foreign-born settlers and immigrants from the Lower South. In contrast, the architectural records from Ray Roberts Lake and the Richland-Chambers Creek area are more variable as the Richland-Chambers Creek area was settled largely by families from the Lower South (see Brown and Lebo 1991; Ferring and Reese 1982; Jurney and Moir 1987; Jurney, Lebo, and Green 1988; Lebo and Brown 1990; Moir and Jurney 1987b,c).

While cellars, privys, stone-lined wells, log and frame cribs, animal pens, and barns and sheds were commonly found at farmsteads in the Ray Roberts Lake, Lewisville Lake, and Joe Pool Lake areas, they were uncommon or absent at farmsteads in the Richland-Chambers Creek area. Moir (1987a) states that the paucity of some of these outbuilding structures reflects not cultural differences but preservation problems. "Since most all of the Richland Creek farmsteads were abandoned by 1950 or earlier, privies, smokehouses, sheds, fences, and paths [within the yard] had long since disappeared. Many sites had been plowed or overgrazed, removing most other types of evidence." While the effect of preservation cannot be discounted, cultural differences do occur between these project areas. Many sites in the Ray Roberts Lake area were also abandoned prior to 1950 (e.g., 41DN166, 41DN466, 41DN248, among others) but still contained good evidence of outbuilding structures not commonly found in the Richland-Chambers Creek area, and these differences reflect a predominance of Lower South cultural traits, with some Upper South and Midwest traits.

The Richland-Chambers Creek area comprised "intensively cultivated cotton farms" (Moir and Jurney 1987c), while the other three reservoir areas were characterized largely by diversified farms. Of the 32 farmsteads discussed by Moir and Jurney (1987c), none had evidence of cellars, log cribs, smokehouses, chicken coops or animal pens, corrals, or stables, each of which occurred in the other project areas. The absence of cellars in the Richland-Chambers Creek area reflects the preponderance of families from the Lower South where cellars were not common. Smokehouses were under-represented in each of these project areas, while animal pens, corrals, and stables were commonly found in the three reservoir areas where families practiced diversified farming, cotton production, and cattle raising. Many of these outbuildings would have been relatively uncommon among families relying entirely on cash crop cotton cultivation. As Figure 12-15a and Figure 12-15b indicate these outbuildings occurred in the prairie environs in the Ray Roberts Lake area where families were involved in cotton production, but also produced much of their own food, including a small number of hogs, chickens, turkeys, and cattle. Some variability is evident among these prairie environs with farmsteads documented in the Eastern Cross Timbers (Figure 12-15c). Many of the sheds/barns and cribs in the Ray Roberts Lake, Lewisville Lake, and Joe Pool Lake areas were used for storing grains, cotton, or corn. The frequency of the farm outbuildings for the Ray Roberts Lake, Joe Pool Lake, and Richland-Chambers Creek areas are shown in Figure 12-16.

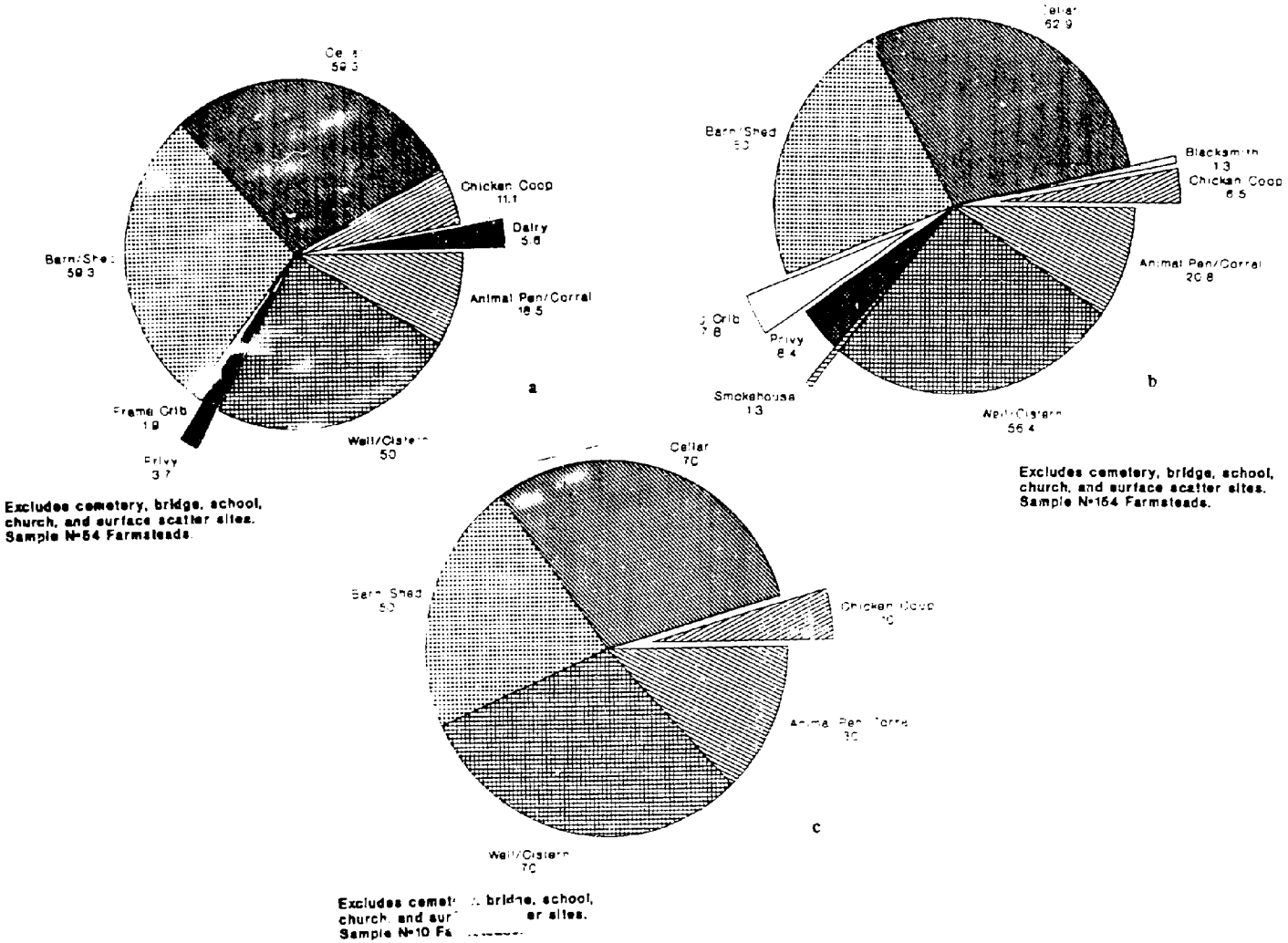


Figure 12-15. The percentage of Grand Prairie farmsteads (a) Eastern Cross Timber farmsteads (b), and Blackland Prairie farmsteads (c) in the Ray Roberts Lake project area with specific extant outbuildings.

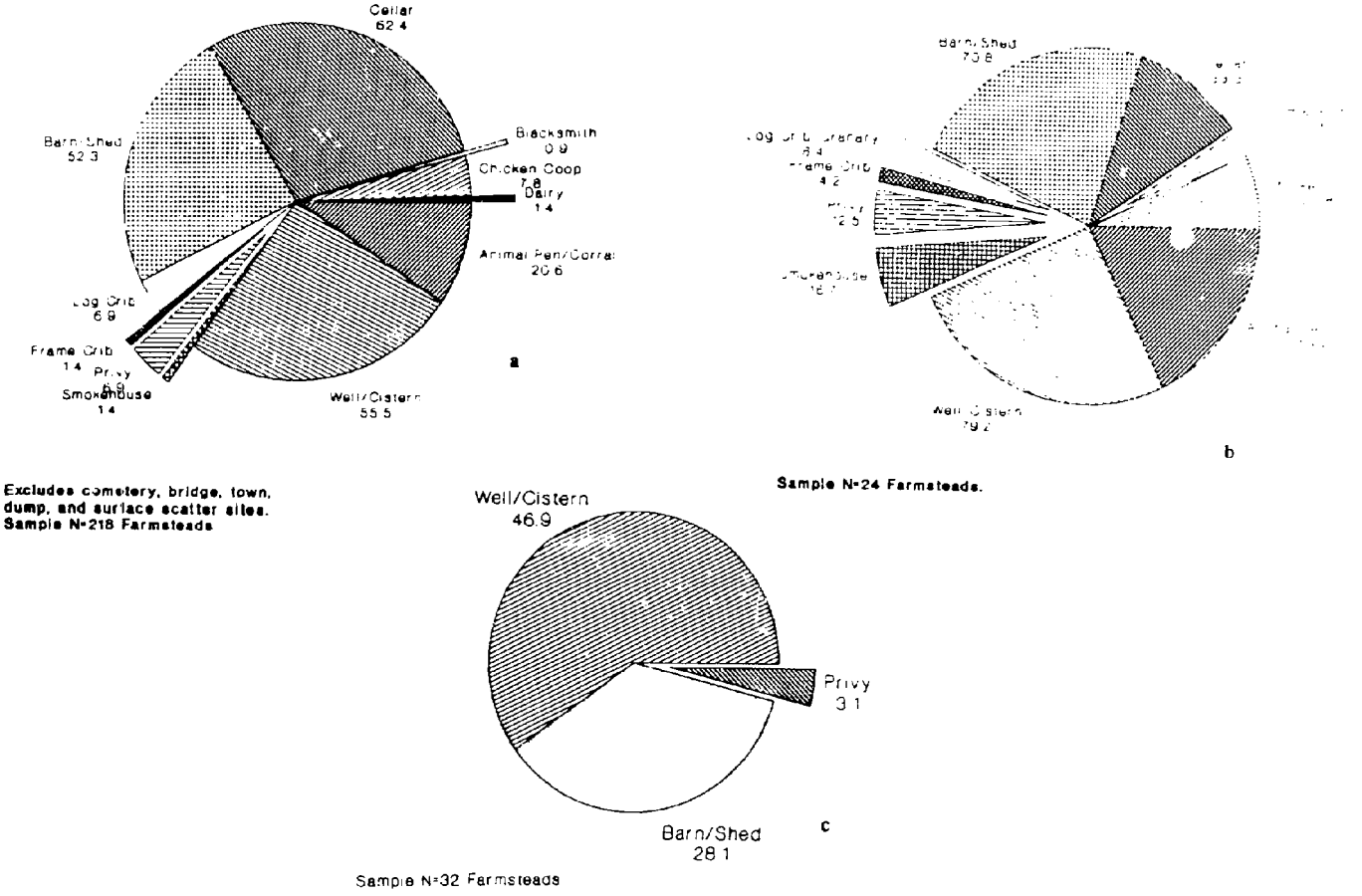


Figure 12-16. The percentage of farmsteads in the Kay Roberts Lake area (a), Joe Pool Lake area (b), and the Richland-Chambers Creek area (c) with specific extant outbuildings.

Similar log and frame building technologies were utilized by families in each of the four reservoir areas; note that little architectural data remained in the Lewisville Lake area. Dwelling types included log single pen, frame single and frame double pen, log and frame dogtrots, Cumberlands, Gable and Hip-Roof Bungalows, Central Hall, T-plans and Cross-Gables, and Shotgun houses. Of the dwellings documented at Ray Roberts Lake during the 1986-1987 season, the most frequent dwelling type was the single pen log house (see Chapters 7 and 8). In order of their frequency, Central Hall and Cumberland houses were most common in the Joe Pool Lake area (Jurney 1988a), while Cumberlands, Gable Bungalows, and frame double pens were most frequent in the Richland-Chambers Creek area (Jurney 1987a,d). Three Shotgun dwellings were reported for the Richland-Chambers Creek area (Jurney 1987a,d), while none were reported in the other reservoir areas.

Farm Layout

Moir (1987a) reports that farm layout was not haphazard being regulated within reasonable limits by a household's cultural affiliations and ethnic roots. The space surrounding the dwelling was partitioned, and the placement of domestic support structures, such as sheds, smokehouses, privies, cellars, wells, cisterns, and barns was determined in part by cultural background but also by household needs. Using historical geography models of Upper South farmsteads (e.g., Glassie 1968, 1975; Kniffen 1965; Kniffen and Glassie 1966; Smith, Barton, and Riordan 1982), farm layouts were modeled for the Richland-Chambers Creek (Moir 1987a) and the Joe Pool Lake area (Moirb). Glassie (1975) reports that farm layout varied within and among culture areas, of which some of this variability was temporal. Farmsteads had two centers,

> the house and the barn, around which smaller dependencies were dropped. Beside the house are the outbuildings needed by the woman in order to get food on the table; beside the barn are the outbuildings needed by the man to keep the cattle fat. (Glassie 1975:144)

Moir (1987a, 1988a) defined proxemics as the interpretation of the spatial and diachronic patterning of the yard around dwellings. Farmstead space was divided into two yards, the active yard and the peripheral yard. The active yard corresponds with Glassie's recognition of the woman's yard space and outbuildings, while the peripheral yard correlates with the man's yard space and outbuildings. Within the active yard, two major activity areas are defined, including the inner active and the outer active yards. The inner active yard surrounds the dwelling and does not contain outbuildings. Some families swept the inner active yard; see Richland-Chambers Creek and Joe Pool Lake reports, and for the Ray Roberts Lake area see Chapter 10 of this volume. The inner active yard was also sometimes fenced, separating the dwelling from the outbuildings in the outer active yard. Fenced yards are evident at some of the Lewisville Lake (Lebo 1991), and the Ray Roberts Lake farmsteads discussed in Chapter 8 of this volume. The major sheet refuse midden occurred in the outer active yard along with chicken coops, wells, cisterns, smokehouses, and privies; privies often marked the outer edge of this yard. Beyond the privy and the active yard was the peripheral yard, which contained the major barns, cribs, and sheds. Utilizing data compiled from 50 farmsteads, Moir (1987a) defined the space comprising each yard, noting that the distances between the dwelling and specific outbuildings and the yard areas are modal distances not absolute distances (Figure 12-17a and Figure 12-17b). This same model was applied to the farmsteads in the Joe Pool Lake area with similar results, although the sheet refuse middens indicated larger, more dispersed yard areas than recorded for the Richland-Chambers Creek area (Moir 1988a). It is important to recognize that these models of farmstead yard proxemics are applicable on a general level, with variations among farmsteads also reflecting differences in surface topography, available resources (e.g., water), the relative abundance of available land, and whether a farmstead was occupied by tenants or landowners. For example, at 41CO143 the placement of the chicken coop does not correspond with the proxemic model. The chicken coop which would have been utilized most frequently by the women and girls in the family and therefore should have been located in the active yard, is located farther from the dwelling than major outbuildings common to the peripheral yard sheds, corrals, and barns (see Chapter 7). Socioeconomic differences would affect not only the amount of land a family sharecropped, tenant farmed, or owned, but also the types of buildings that may have been utilized. Few tenants would have had much resources or finances to build outbuildings not provided by the landholder. Families with large tracts of land could best afford to utilize a larger area within both the active yard and the peripheral yard. For example, compare 41DN157, 41DN224, 41DN198, and

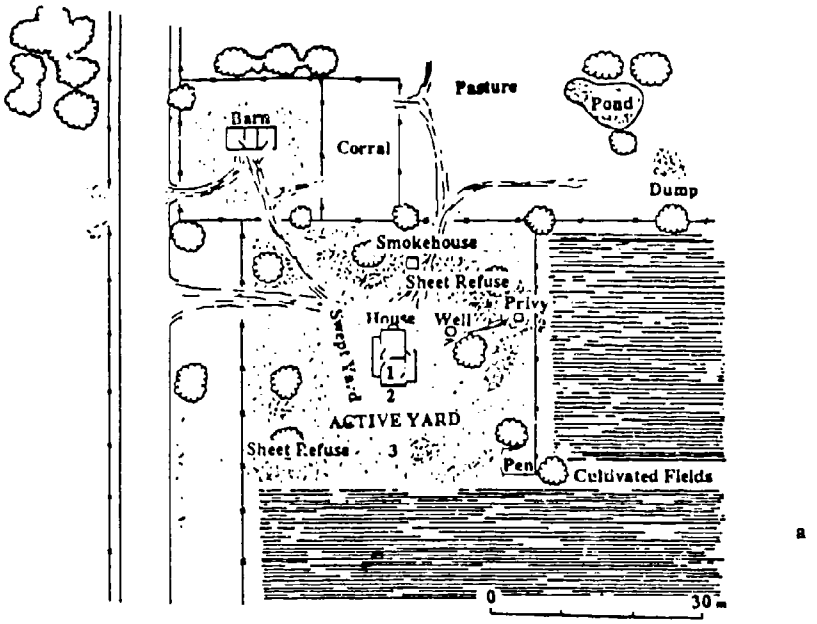


Figure 14-1 An idealized small landowner's farmstead in the Richland/Chambers Creek area around 1890 to 1910. The farmhouse, a two room Cumberland with rear addition, sits in the center of an Active Yard covering about 2,000 m^2 and containing several important outbuildings and support structures. The Inner Yard is differentiated from the Outer Yard by its barren soil and comparatively uncluttered surface. Both the Inner and Outer Yards make up the Active Yard. Located about 50 m away from the farmhouse are the major agricultural outbuildings.

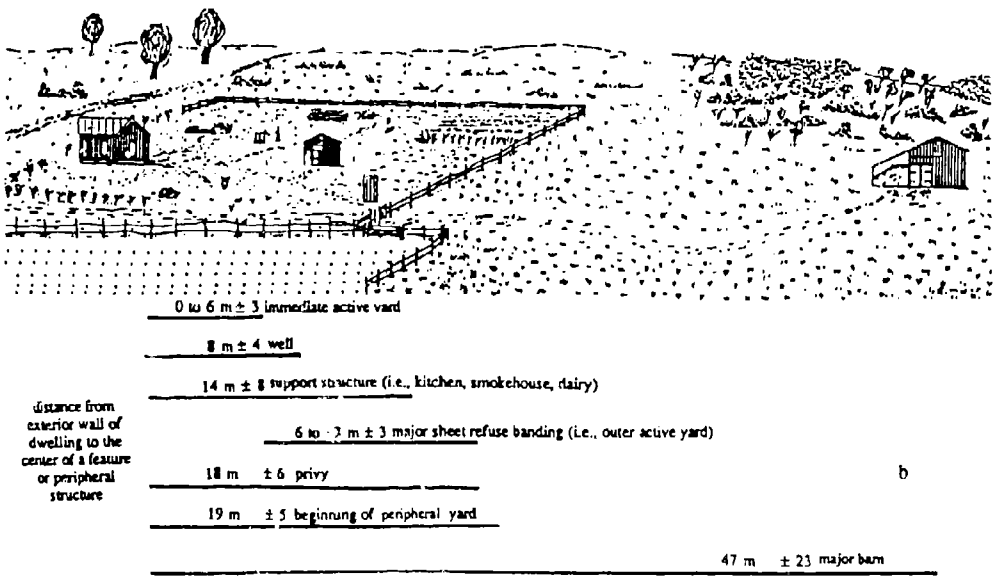


Figure 14-3 A model of yard proxemics for the traditional farmstead in the Richland/Chambers Creek area. The yard around the farmhouse has several divisions based on activities and structures. The Inner Yard is the cleanest area, both from heavy foot traffic and from periodic maintenance. The distances listed below are based on data collected from over 50 farmsteads and represent modal values with rough variances noted.

Figure 12-17. (a) An idealized model of yard area and farm structures at a small landowner farmstead, and (b) a proxemic model of a traditional farmstead in the Richland-Chambers Creek project area (from Moir 1987a; Figure 14-1 and Figure 14-3).

41CO143. Both the active and peripheral yards at 41DN198 are relatively small, while larger yards are visible at the other three farmsteads. The relative size of these yards also may have played a role in yard layout.

The yard layout data for major outbuildings at the farmsteads investigated at Ray Roberts Lake during 1986-1987 indicate that unlike the proxemic data reported for the Richland-Chambers Creek area, some outbuildings were located within the inner active yard and were not limited to the outer active or peripheral yards (see Chapters 7 and 8). Wells and cellars occurred most frequently in the active yard, although some occurred over 50 m from the dwelling. Privies appeared to be located near the fringe of the active yard as reported by Moir (1987a), although some were located less than 20 m from the house. The greatest variability in the proxemic pattern reported by Moir (1987a, 1988a), was the distribution of outbuildings. A number of Ray Roberts Lake farmsteads had outbuildings located in the active yard and within 15 m of the house. Many of these same farms, however, also had outbuildings located in the peripheral yard. The outbuildings situated closest to the dwelling were most often small sheds.

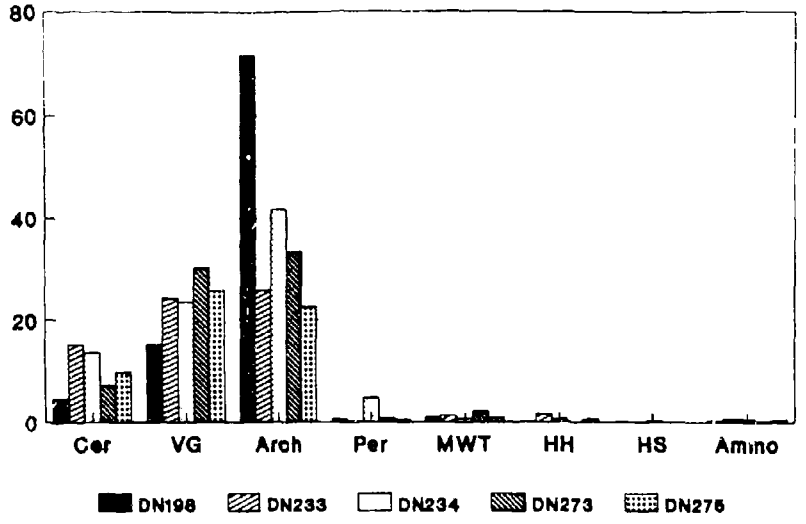
Artifactual Record

The artifactual records from Ray Roberts Lake farmsteads were similar with those documented for the Joe Pool Lake and the Richland-Chambers Creek project areas. In each of these project areas, domestic and farm-activity related artifacts were recovered from broad sheet refuse middens (see Chapters 7 and 8). These middens contained a rain of largely broken artifacts deposited in the active yard. Similar deposition occurred in the peripheral yard, but densities in this area are characteristically low. Some trash features occur in this region, inflating artifact counts when encountered. In many outbuilding locales, few artifacts were recovered because of the nature of the activities associated with these structures.

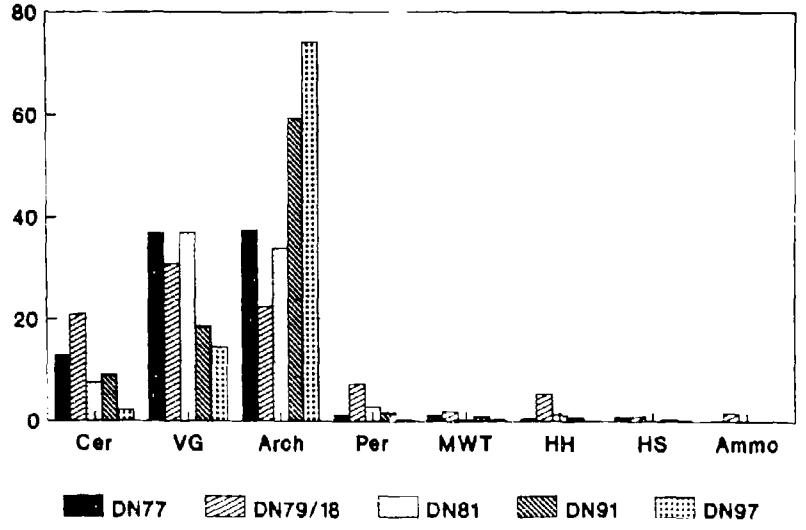
Jurney and Moir (1987) report that in the Richland-Chambers Creek area, many of the similarities present among farmstead assemblages represent the strong traditional orientation of these rural households, regardless of temporal or socioeconomic status. At a general level, similar artifact types, occurring in relatively similar frequencies were recovered from farmsteads in the area. In the Ray Roberts Lake project area, as well as other project areas in the region, this pattern reflects a variety of factors, including length of occupation, date of abandonment, the integrity of farm buildings (e.g., standing, collapsed, or moved), among others.

A test of these factors can be made by examining several farmsteads. Using data from five farmsteads in Crosgrove's Bottom and five farmsteads in the central area of the Ray Roberts Lake area, a comparison is made in the relative frequency of specific artifact categories. Figure 12-18a indicates that among the farmsteads in Crosgrove's Bottom, the highest percentage of architectural remains were recovered from farmsteads where block excavations were conducted under the dwelling (41DN198 and 41DN234). The higher percentage of architectural items at 41DN198 also reflect the twentieth century frame additions to the log dogtrot house which resulted in a large nail rain. In contrast, the highest percentage of ceramics were recovered from farmsteads where large surface collections were made, including 41DN233, 41DN234, and 41DN275. The ceramic percentage at 41DN233 is also inflated as the dwelling location was not identified and a large sample of building material was not found.

Figure 12-18b illustrates the percentage contribution of specific artifact categories for the central area of the Ray Roberts Lake project area. As this figure indicates, the highest percentage of architectural remains were recovered from farmsteads where block excavations were undertaken in the dwelling area. The highest percentage of ceramics occurred at 41DN79, Feature 18, a trash deposit associated with an early occupation at this site. In both areas of the reservoir, it is clear that personal items, machine/wagon/hardware, household items, horse and stable gear, and ammunition occurred as low frequency artifact categories. The highest percentage of personal items were recovered at 41DN234 and 41DN79. Feature 18 at 41DN79 concentrated block excavations undertaken in the dwelling area. These data reflect similar patterns reported for the Lewisville Lake, Joe Pool Lake, and the Richland-Chambers Creek area.



a



b

Figure 12.18 Artifact percentages for major artifact categories at farmsteads in the Crosgrove's Bottom Area (a) and the Central Area (b) of the Ray Roberts Lake project area. Cer = ceramics, VG = vessel glass, Arch = architectural items, Per = personal items, MWT = machine and wagon hardware and tools, HH = household items, HS = horse and stable gear, and Ammo = ammunition.

Foodways

A comparative study of faunal assemblages from the four reservoirs reveals that during the nineteenth and early twentieth centuries families in this region consumed a mixed diet of wild, aquatic, and domestic animals. The meat diet was dominated by swine, beef, and poultry. A similarly varied diet is evident in the faunal data from Richland-Chambers Creek (Jurney 1987c) and Joe Pool Lake (Jurney 1988c). Jurney (1987a, c) states that in the Richland-Chambers Creek area,

> The most common food items were pig and cattle. Pig remains dominated most assemblages, but cattle also contributed greatly to [the] meat diet.

While the available beef and swine samples recovered from farmsteads were low, Jurney (1987a, c) reported that,

> During the twentieth century, the Richland Creek diet, especially among tenants, changed radically. Studies among North Carolina, Georgia, and Texas farm families during the 1920s indicated that 138 pounds of pork and only 12 pounds of beef were consumed per adult per year (Vance 1929:246). This general trend was shown by the faunal remains recovered from the twentieth century Richland Creek farmsteads.

A similar trend towards higher beef consumption was not identified for the Ray Roberts Lake farmsteads. As with the Richland-Chambers Creek farmsteads, the faunal assemblages from farmsteads at Ray Roberts Lake were small. Faunal data from the Ray Roberts Lake farmsteads indicates that families in the area had a mixed diet which included cattle and swine, but which was not dominated by beef consumption. A trend in butchery patterns, however, was evident among Ray Roberts Lake farmsteads (see Figure 12-3; see Table 9-3 for data). The highest percentage of cut bones were identified at farmsteads that were occupied until fairly recently. Among these were 41CO121, 41DN157, 41DN167, and 41DN224. The settlers at 41DN157 and 41DN224 are known to have raised large herds of cattle based on tax roll data. Both cattle and swine bones occurred in the cut-bone assemblage, as well as chickens and rabbits at several sites.

Summary

Historical investigations in the Ray Roberts Lake area have involved both excavation and documentary research which was conducted over a number of years by several organizations (see Ferring 1986; Skinner et al. 1982a, Skinner and Baird 1985). From these investigations we have gained some insight into the history and lifeways of the families that lived in the Ray Roberts Lake area. Architectural documentation and archaeological excavations have indicated that many families in the middle to late nineteenth century lived in well constructed log or frame dwellings. Among log dwellings, single pen, double pen, and dogtrot floorplans are recorded in this area, with the single pen dwelling being the most common. Frame dwelling construction was utilized in the Ray Roberts Lake area by the early 1870s but did not become common until near the turn-of-the century. Sawmills were operating in the area by 1870, including one operated by Charles Oldham, and the arrival of the railroads would have facilitated the importing of sawn lumber. Skinner et al. (1982a:7-77) reported that, "building practices in the project area through time can be characterized as very culturally conservative, both in terms of form and style and in terms of the materials and techniques used in the construction."

The farmsteads investigated in the Ray Roberts Lake area reflect a mixture of socioeconomic, ethnic, and racial groups involved in diversified farming and cattle ranching. While little evidence was found in the archaeological

record of the extent of cattle ranching in this area, oral history and archival data indicate that some families in this area raised large herds of cattle. Many families raised only a few head of cattle, focusing largely on growing grains or cotton. The diversity of farm outbuildings attest to the diversity of farm activities conducted in this area over the last 140 years. Faunal remains recovered from the farmsteads studied indicate a mixed diet including wild and domestic species, with swine, beef, and chicken being well represented. Wild and domestic plants were also important contributors to the diet of these families. These foods were raised in orchards, farm gardens, and collected from wild berry patches, pecan trees, and the like.

The artifacts recovered from excavations of the yard areas surrounding dwellings provided valuable information about the daily chores and household possessions. Traditional lifeways dependent on home production, and the bartering and trading with neighbors has been documented for this region. Small shopping trips were made to small community stores such as those at Hemming, Fairview, Bloomfield, and the like. "Store-bought" foods reflected largely those foodstuffs that could not be locally produced. Families made trips to large communities outside, but near the fringe of the project area, including Valley View, Sanger, Pilot Point, and during the twentieth century, more frequently to Fort Worth and Dallas. Families and neighbors had a strong sense of community and shared their labors during planting and/or harvesting, attended socials, spelling events, and the like. Farm equipment was largely horse-drawn until the early to mid twentieth century. At which time, some families purchased tractors and converted their horse-drawn equipment to be pulled by tractor, while others invested in tractor-drawn equipment. Harpole (personal communication, 1981) reported that mechanized farming became more common after World War I, with tractors common in the area by 1935. While farm activities focused largely on chopping wood, making soap, preserving fruits and vegetables, butchering and smoking or salting pork and beef, tending family gardens and orchards, and raising crops and farm animals (e.g., goats, sheep, chickens, and turkeys), home industries that supplemented family income were identified at some farmsteads in the project area. These home industries included small blacksmith shops (often really workshops for repairing farm implements and equipment), dairies, grist mills, and sorghum mills.

Many of the small communities in the project area had small flour/grist mills, cotton gins, and blacksmith shops. Cottonseed mills were also located in this region. A sawmill was operated by Bink Simpson in the western part of the project area in northern Denton County. A stirrup factory operated between about 1900 and 1908 in the Indian Creek Community, and a second stirrup factory was located in Tioga. A broom factory was located in the Mt. Pleasant area during the 1920s, and the Cooke County liquor business was severely curtailed by the 1903 local option law (Skinner et al. 1982a:7-70).

The excavations of the sheet refuse middens also revealed that traditional lifeways were maintained through the early twentieth century. Trash dumps were uncommon, occurring primarily on farmsteads occupied after 1940 or to fairly recently. Rural electricity reached many communities in the 1940s, although some such as Tioga did not have electricity until the 1960s (Skinner et al. 1982). The area continued to be rural, with farmsteads and ranches dotting the landscape when the Corps began purchasing land for the construction of Ray Roberts Lake.

REFERENCES

Acheson, Sam
1977 Dallas Yesterday. Southern Methodist University Press, Dallas, Texas.

Ahlstrom, R.V.N.
1985 The Interpretation of Archaeological Tree-Ring Dates. Ph.D. dissertation, University of Arizona, Tucson.

Ahman, Kacie, Monica Hunsinger, Rhoda Reitz, and Karen Ring
1986 Persuasive Campaign Developed for the Bloomfield Schoolhouse Unpublished Manuscript for Dr. Victoria O'Donnell, Communication 4650, University of North Texas. On file in the Archives, Willis Library, University of North Texas, Denton.

Alestalo, J.
1971 Dendrochronological Interpretation of Geomorphological Processes. Society of Geografica Fennica 105: 1-140.

Anonymous
1971 Water Resources Development by the U.S. Army Corps of Engineers in Texas. U.S. Army Corps of Engineers, Southwest Division, Dallas, Texas.

Baird, LeAnne
1985 Cemeteries. In The Archeology and History of Lake Ray Roberts, Vol. III, Settlement in a Marginal Zone, edited by S. Alan Skinner, et al. Environment Consultants, Inc., Dallas. Submitted to the U.S. Army Corps of Engineers, Fort Worth District.

Baker, T. Lindsay, and Billy R. Harrison
1986 Adobe Walls: The History and Archaeology of the 1874 Trading Post. Texas A&M University Press, College Station.

Bannister, B.
1962 The Interpretation of Tree-Ring Dates. American Antiquity 27(4): 508-514.

Barrett, Thomas
1061 The Great Hanging at Gainesville, Texas. State Historical Association, Austin.

Bates, Ed. F.
1918 History and Reminiscences of Denton County. McNitzky Printing Company, Denton, Texas.

1976 History and Reminiscences of Denton County. Revised Edition. Terrel Wheeler Printing, Inc., Denton, Texas.

Belcher, Mary Lois McCurley
1984 Folks on McCurley Prairie. Shirley Howeth (private publication). On file at the Denton County Courthouse, Denton.

Bennett, Jeyne (assembler)
1981 Cultural Resources Survey of the Dallas Floodway Extension. Cultural Resources Program Investigative Report 81-26, Environment Consultants, Inc., Dallas, Texas.

Blair, W. Frank
1950 The Biotic Provinces of Texas. Texas Journal of Science 2(1): 93-117.

Blasing, T.J., and H.C. Fritts
1976 Reconstructing Past Climatic Anomalies in the North Pacific and Western North America from Tree-Ring Data. Quaternary Research 6: 563-579.

Blasing, T.J., D.W. Stahle, and D.N. Duvick
1988 Tree Ring-Based Reconstruction of Annual Precipitation in the South-Central United States from 1750 to 1980. Water Resources Research 24: 163-171.

Boehm, Richard G.
1975 Exporting Cotton in Texas: Relationships of Ports and Inland Supply Points. Urban and Regional Studies No. 2. Bureau of Business Research, University of Texas at Austin.

Bolton, H.E.
1914 Athanase De Mezieres and the Louisiana-Texas Frontier 1768-1780. 2 volumes. Arthur H. Clark Co., Cleveland.

1915 Texas in the Middle Eighteenth Century. University of California Publications in History, Volume 3. University of California Press, Berkeley.

Bousman, B., and L. Verrett
1973 An Archeological Reconnaissance of Aubrey Reservoir. Archaeology Research Program, Research Report 18. Southern Methodist University, Dallas.

Bridges, Clarence A.
1978 History of Denton, Texas: From Its Beginning to 1960. Texian Press, Waco.

Briffa, K. R., T. S. Bartholin, D. Eckstein, P. D. Jones, W. Karlen, F. H. Schweingruber, and P. Zetterberg
1990 A 1,400-Year Tree-Ring Record of Summer Temperatures in Fennoscandia. Nature 346: 434-439.

Brinkmann, W.A.R.
1987 Water Supplies to the Great Lakes - Reconstructed From Tree Rings. Journal of Climate and Applied Meteorology. 26: 530-538.

Brown, Clayton
1986 Life on the Farm: A Transitional Decade. Heritage News 11(1): 16-17.

Brown, E.H.
1930 Trinity River Canalization. Published under the auspices of the Trinity River Canal Association, Clyde C. Cockrell, Dallas.

Brown, Kenneth L. and Susan A. Lebo
1991 Archaeology Testing of the Lewisville Lake Shoreline, Denton County, Texas. University of North Texas, Institute of Applied Sciences. Report submitted to the Corp of Engineers, Ft. Worth District.

Burke, J., Jr.
1882 Burke's Texas Almanac and Immigrants Handbook for 1882, with which is incorporated Hanford's Texas State Register. American News Co., New York.

Burns, B.T.
1983 Simulated Anasazi Storage Behavior Using Crop Yields Reconstructed from Tree Rings: A.D. 652-1968. Ph.D. dissertation. University of Arizona, Tucson.

Burrison, John A.
1975 Alkaline-Glazed Stoneware: A Deep South Pottery Tradition. Southern Folklore Quarterly 39(4): 377-403.

Burrows, C.J., and V.L. Burrows
1976 Procedures for the Study of Snow Avalanche Chronology Using Growth Layers of Woodsy Plants. Occasional Paper No. 23. University of Colorado Institute of Arctic and Alpine Research, Boulder.

Byrd, Lonnie Dale
1981 One Hundred Years of Texas Pottery. Winona, Texas.

Calvert, Robert A.
1970 Nineteenth Century Farmers, Cotton and Prosperity. Southwestern Historical Quarterly 73(April 1970): 509-538.

Cauely, T.J.
1930 Agriculture Land Tenure in Texas. Political and Social Science Quarterly 11(2): 135-147.

Cleaveland, M.K.
1975 Dendroclimatic Relationships of Shortleaf Pine (Pinus echinata Mill.) in the South Carolina Piedmont. M.S. thesis. Clemson University, Clemson, South Carolina. (Masters Abstracts 18:7, 1980).

1986 Climatic Response of Densitometric Properties of Semiarid Site Tree Rings. Tree-Ring Bulletin 46: 13-29.

1987 Phase I of Dendroclimatic Research for the Cooper Lake Project: Delta and Hopkins Counties, Texas. Report submitted to the Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

Cleaveland, M.K., and D.W. Stahle
1989 Tree-Ring Reconstruction and Analysis of Surplus and Deficit Streamflow in the White River, Arkansas Water Resources Research 25: 1391-1401.

Cliff, Maynard B., and Randall W. Moir
1985 Cultural Resource Survey of Wynnewood Park, Lewisville Lake, Denton County, Texas. Archaeology Research Program, Southern Methodist University. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District, Contract No. DACW63-85-M-0761.

Cochran, R.A., C.R. Cail, and L.A. Putnam
1980 Soil Survey of Grayson County, Texas. U.S. Department of Agriculture, Soil Conservation Service and Texas Agricultural Experiment Station.

Collins, Michael
1981 Cooke County, Texas: Where the South and the West Meet. Cooke County Heritage Society, Inc., Gainesville.

Connor, Seymour V.
1953 A Statistical Review of the Settlement of the Peters Colony, 1841-1848. Southwestern Historical Quarterly 57: 38-64.

1959 The Peters Colony of Texas: A History and Biographical Sketches of the Early Settlers. The Texas State Historical Association, Austin, Texas.

Cook County Immigration Society
n.d. Texas: Cooke County, Its People, Productions and Resources. Prepared and published by the Cooke County Immigration Society, Gainesville, Texas 1888-1889. Reprinted by the Cooke County Heritage Society, Inc., Gainesville, Texas.

Cooley, W.W., and P.R. Lohnes
1971 Multivariate Data Analysis. John Wiley, New York.

Coues, Elliot
1890 Key to North American Birds, 4th Ed. Estes and Lauriat, Boston.

Cowling, Mary Jo
1936 Geography of Denton County. Banks Upshaw and Co., Dallas.

Crabtree, P.J.
1985 Historic Zooarchaeology: Some Methodological Considerations. Historical Archaeology 19:76-78.

Crosby, H. Anthony
1977 Architcture of Texana 1831-1883, Jackson County, Texas. Texas Archaeological Survey, University of Texas at Austin, Research Report 57, vol. 2.

Cross Timbers Geneological Society (Compilers)
1980 Cemetery Records of Cooke County, Texas. Cross Timbers Geneological Society, Gainesville, Texas.

Currie, R.G.
1984 Periodic (18.6-year) and Cyclic (11-year) Induced Drought and Flood in Western North America Journal of Geophysical Research. 89D: 7215-7230.

Damon, P.E., C.W. Ferguson, A. Long, and E.I. Wallick
1974 Dendrochronologic Calibration of the Radiocarbon Time Scale. American Antiquity 39: 350-366.

Damon, P.E., J.C. Lerman, and A. Long
1978 Temporal Fluctuations of Atmospheric 14C: Causal Factors and Implications. Annual Review Earth Planetary Science. 6: 457-494.

Dawson, A.G.
1904 Texas' Great Cattle Industry. In Texas Almanac and State Industrial Guide, pp. 117-123. Galveston and Dallas News.

Dean, J.S.
1969 Chronological Analysis of Tsegi Phase Sites in Northeastern Arizona. Papers of the Laboratory of Tree-Ring Research No. 3. University of Arizona Press, Tucson.

1978 Tree-Ring Dating in Anthropology, Miscellaneous Paper No. 24. In University of Utah Anthropological Papers 99, edited by J. D. Jennings, pp. 129-163. University of Utah, Salt Lake City.

Denton County Historical Commission
1980 Denton County Community and Public Schools Information. Unpublished manuscript on file at the Denton County Historical Commission, Denton County Museum, Denton County Courthouse, Denton.

Denton County Historical Commission
1991 Folklife Preservation: Quakertown. Denton County Historical Commission, Denton.

Doughty, R.
1983 Wildlife and Man in Texas. Texas A&M University Press, College Station.

Douglass, A.E.
1920 Evidence of Climatic Effects in the Annual Rings of Trees. Ecology 1: 24-32.

1941 Crossdating in Dendrochronology. Journal of Forestry 39:825-831.

Draper, N.R. and H. Smith
1981 Applied Regression Analysis, Second Edition. John Wiley and Sons, New York.

Dugas, Vera Lea
1955 Texas Industry, 1860-1880. Southwestern Historical Quarterly 59(2): 151-183.

Dyksterhuis, E.J.
1946 The Vegetation of the Fort Worth Prairie. Ecological Monographs 16: 1-29.

1948 The Vegetation of the Western Cross Timbers. Ecological Monographs 18: 325-376.

Eastman, W.F., Jr.
1975 The Canning, Freezing, Curing & Smoking of Meat, Fish & Game. Garden Way Publishing Co., Charlotte, Vermont.

Eldridge, Hope T., and D.S. Thomas
1964 Population Redistribution and Economic Growth, United States, 1870-1950, III Demographic Analyses and Interrelations. Memoirs of the American Philosophical Society 61.

Ellis, L.T.
1970 The Revolutionizing of the Texas Cotton Trade. 1865-1885. Southwestern Historical Quarterly 73: 478-508.

Engel, M.H., J.E. Zumberge, and B. Nagy
1977 Kinetics of Amino Acid Racemization in Sequoiadendron giganteum Heartwood. Analytical Biochemistry 82: 415-422.

Epstein, S., and C.J. Yapp
1976 Climatic Implications of the D/H Ratio of Hydrogen in C-H Groups in Tree Cellulose. Earth and Planetary Science Letters 30: 252-261.

Ewers, J.C.
1957 Hair Pipes in Plains Indian Adornment: A Study in Indian and White Ingenuity. Bureau of American Ethnology Bulletin 164, Anthropological Papers No. 50. Smithsonian Institution, Washington, D.C.

Fenneman, N.M.
1983 Physiography of the United States. McGraw-Hill Book Co., New York.

Ferring, C. Reid
1986 Lake Ray Roberts Archaeological Mitigation Plan. Institute of Applied Sciences, North Texas State University. Draft report submitted to the U.S. Army Corps of Engineers, Ft. Worth District, Contract No. DACW63-85-D-0066, Work Orders #5 and #7.

1990 Late Quaternary Geology and Geoarchaeology of the Upper Trinity River Drainage Basin, Texas. GSA Field Trip #11. Dallas Geological Society, Dallas.

Ferring, C. Reid, and Susan A. Lebo
1988 Research Design for Archaeological and Historical Investigations at Lake Ray Roberts and Lake Lewisville, Texas. Institute of Applied Sciences, University of North Texas. Report submitted to the U.S. Army Corps of Engineers, Ft. Worth District, Contract No. DACW63-86-C-0098.

Ferring, C. Reid, and Nancy G. Reese
1982 Part II: Historical Archaeology, In Archaeological Investigations at Lakeview Lake: 1979 and 1980, edited by M. Raab, pp. 109-234. Archaeological Monographs, Number 2. Archaeology Research Program, Southern Methodist University, Dallas.

Ferring, C. Reid, Bonnie C. Yates, and Kenneth Lynn Brown
1992 Holocene Archaeology and Geoarchaeology at Ray Roberts Lake, Northcentral Texas. Institute of Applied Sciences, University of North Texas. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District. Contract No. DACW63-86-C-0098.

Fite, Gilbert C.
1984 Cotton Fields No More: Southern Agriculture, 1865-1980. University of Kentucky, Lexington.

Fitzpatrick, Lloyd C. (editor)
1972 A Systems Evaluation of the Environmental Impact of the Aubrey Reservoir Project on Elm Fork of the Trinity River in North Texas. Institute for Environmental Studies, North Texas State University, Denton. Final Report Submitted to the U.S. Army Corps of Engineers, Ft. Worth District, Contract No. DACW63-72-C-0052.

Ford, Alan, and Ed Pauls
1980 Soil Survey of Denton County, Texas. U.S. Department of Agriculture, Soil Conservation Service and the Texas Agricultural Experiment Station.

Fox, Daniel E.
1983 Traces of Texas History: Archaeological Evidence of the Past 450 Years. Corona Publishing Company, San Antonio.

Fox, Joseph J.
1912 The Banner County of Texas. The Texas Magazine, March 1912: 76-79.

Frey, Fred C., and T. Lynn Smith
1936 The Influence of the AAA Cotton Program Upon the Tenant, Cropper, and Laborer. Rural Sociology 1(4): 481-505.

Fritts, H.C.
1976 Tree Rings and Climate. Academic Press, London.

Fritts, H.C., G.R. Lofgren, and G.A. Gorden
1981 Reconstructing Seasonal to Century Time Scale Variations in Climate from Tree-Ring Evidence. In Climate and History, edited by T.M.L. Wigley, M.J. Ingram, and G. Farmer, pp. 139-161. Cambridge University Press, Cambridge.

Fritts, H.C., and J.M. Lough
1985 An Estimate of Average Annual Temperature Variations for North America, 1602 to 1961. Climatic Change 7: 203-224.

Fulton, M.G.
1941 Diary and Letters of Josiah Gregg: Southwestern Enterprises 1840-1847. University of Oklahoma Press, Norman, Oklahoma.

Galloway, B.P.
1962 Population Trends in the Western Cross Timbers of Texas, 1850-1960: Growth and Distribution. Southwestern Historical Quarterly 65(3):333-347.

Genealogy of the True & Bevers (Beavers) Families
1983 Gainesville Printing Co., Gainesville.

Glassie, Henry H.
1968 Patterns in the Material Folk Culture of the Eastern United States. University of Pennsylvania Press, Philadelphia.

1975 Folk Housing in Middle Virginia. University of Tennessee Press, Knoxville.

Grace, Maude S.
1944 History of Green Valley: 1870 to 1900. Herald Printing Co., Shawnee, Oklahoma.

Gray, J., and P. Thompson
1976 Climatic Information from $^{18}O/^{16}O$ Ratios of Cellulose in Tree Rings. Nature 262:481-482.

Grayson, D.K.
1978 Reconstructing Mammalian Communities: A Discussion of Shotwell's Method of Paleoecological Analysis. Paleobiology 4:77-81.

Grayson Country Frontier Village
1981 The History of Grayson County Texas: Volume II. Heritage Publishing Company, Tulsa, Oklahoma.

Grayson County, Texas, Genealogical Society
1980 Ancestors and Descendants, Grayson County, Texas. Grayson County, Texas, Genealogical Society, Sherman.

Green, J.R.
1977 Tenant Farmer Discontent and Socialist Protest in Texas 1901-1917. Southwestern Historical Quarterly 81(2): 133-154.

Green, A.C.
1973 Dallas: The Deciding Years, A Historical Portrait. Encino Press, Austin, Texas.

Gunter, Lillian
1910 Gainesville and Cooke County. Texas Magazine, 1910:75-77.

Guyette, R.P.
1981 Climatic Patterns of the Ozarks as Reconstructed from Tree Rings. M.S. thesis. University of Missouri, Columbia.

Harris, Mrs. J.M.
1986 One Hundred Twelve Years in Little Elm Community: From Material Given by Pioneer Residents and their Descendants. Sesquicentennial Reprint Edition, Terrill Wheeler Printing, Inc., Denton, Texas.

Harris, Michael S.
1985 Farming in Texas: Dallas, Ellis, Johnson, and Tarrant Counties, 1850-1940. Ms. on file, Archaeology Research Program, Southern Methodist University, Dallas.

Hazel, Michael V.
1985 Putting Down Roots: The Penns and Their Farmstead. Heritage News 10 (3): 6-10, edited by Michael V. Hazel. Dallas County Heritage Society, Dallas.

Hill, Robert T.
1887 The Topography and Geology of the Cross Timbers and Surrounding Regions in Northern Texas. American Journal of Science 33(196):291-303.

1901 Geography and Geology of the Black and Grand Prairies, Texas with Detailed Description of the Cretaceous Formations and Special Reference to Artesian Waters. In Twenty-first Annual Report to the United States Geological Survey 1899-1900, Part 2--Texas. U.S. Government Printing Office, Washington, DC.

Hilliard, S.B.
1972 Hog Meat and Hoecake: Food Supply in the Old South, 1840-1860. Southern Illinois University Press, Carbondale.

Hillson, S.
1986 Teeth. Cambridge University Press, Cambridge.

Holmes, R.L., R.K. Adams, and H.C. Fritts
1986 Tree-Ring Chronologies of Western North America: California, Eastern Oregon and Northern Great Basin. Chronology Series VI. University of Arizona Laboratory of Tree-Ring Research, Tucson.

Hooks, Michael Quinley
1979 The Struggle for Dominance: Urban Rivalry in North Texas, 1970-1910. Ph.D. dissertation, Texas Tech University. University Microfilms International, Ann Arbor.

Houck, Lazell
n.d. Jones-Montgomery. Unpublished manuscript in the possession of the author. [Jones-Montgomery Geneology].

Howell, B.J.
1981 A Survey of Folklife along the Big South Fork of the Cumberland River. Report of Investigations No. 30. Department of Anthropology, University of Tennessee, Knoxville.

Humphrey, T.C., and L.T. Humphrey (editors)
1988 "We Gather Together": Food and Festival in American Life. UMI Research Press, Ann Arbor.

Institute of Applied Sciences
1988 Pre-Impoundment Environmental Study of Ray Roberts Lake. Supplement to Design Memorandum No. 8, Master Plan. Department of Biological Sciences, Division of Environmental Sciences, Institute of Applied Sciences, University of North Texas, Denton. Report prepared for the U.S. Army Corps of Engineers, Fort Worth District.

Jenkins, G.M., and D.G. Watts
1968 Spectral Analysis and Its Applications. Holden-Day, San Francisco.

Jones, C.N. (compiler)
1977 Early Days in Cooke Count, 1848-1873. Cooke County Heritage Society, Inc., Gainesvlle, Texas.

Jordan, Terry G.
1966 German Seed in Texas Soil: Immigrant Farmers in Nineteenth-Century Texas. University of Texas Press, Austin.

1969 The German Settlement of Texas after 1865. Southwestern Historical Quarterly. 73(2):193-212.

1973a Log Construction in the East Crosstimbers of Texas. Proceedings of the Pioneer America Society 2: 101-124.

1973b Pioneer Evaluation of Vegetation in Frontier Texas. Southwestern Historical Quarterly 76:233-254.

1976 Forest Folk, Prairie Folk: Rural Religious Cultures in North Texas. Southwestern Historical Quarterly 80(2): 135-162.

1978 Texas Log Buildings: A Folk Architecture. University of Texas Press, Austin.

1981 Trails to Texas: Southern Roots of Western Cattle Ranching. University of Nebraska Press, Lincoln.

1982 Texas Graveyards: A Cultural Legacy. University of Texas Press, Austin.

Junior Historians Club
1976 Cross Timbers: Folklore and Local History from the Denton Area. Oral history project sponsored by North Texas State University, Willis Library Collection. F392D4C76 UNT Rare Books.

Jurney, David H.
1978 The Ridge House Cellars: Using Faunal Analysis to Reconstruct Meat Diet. M.A. thesis, University of Arkansas, Fayetteville.

1984 A Newly Discovered East Texas Log Courthouse. Bulletin of the Texas Archaeological Society 55: 53-60.

1987a Architectural Site Descriptions. In Historic Buildings, Material Culture, and People of the Prairie Margin: Architecture, Artifacts, and Synthesis of Historic Archaeology, edited by David H. Jurney and Randall W. Moir, pp. 7-40. Richland Creek Technical Series, Volume V., Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1987b Dendrochronology of Historic Structures. In Historic Buildings, Material Culture, and People on the Prairie Margin. Richland Creek Technical Series, Volume V, edited by David H. Jurney and Randall W. Moir, pp. 55-72. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1987c Faunal Analysis: Clues to Diet and Site Formation Processes. In Historic Buildings, Material Culture, and People on the Prairie Margin. Richland Creek Technical Series, Volume V, edited by David H. Jurney and Randall W. Moir, pp. 143-153. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1987d Trends in the Architectural Record. In Historic Buildings, Material Culture, and People of the Prairie Margin: Architecture, Artifacts, and Synthesis of Historic Archaeology, edited by David H. Jurney and Randall W. Moir, pp. 41-54. Richland Creek Technical Series, Volume V., Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1988a Architectural Trends. In Historic Farming on the Hogwallow Prairies: Ethnoarchaeological Investigations of the Mountain Creek Area, North Central Texas, compiled by David H. Jurney, Susan A. Lebo, and Melissa M. Green, pp. 225-234. Joe Pool Lake Archaeological Project, Volume II., Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1988b Dendrochronology of Historic Buildings. In Historic Farming on the Hogwallow Prairies: Ethnoarchaeological Investigations of the Mountain Creek Area, North Central Texas, compiled by David H. Jurney, Susan A. Lebo, and Melissa M. Green, pp. 363-374. Joe Pool Archaeological Project, Volume II, Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University.

1988c Historic Faunal Remains. In Historic Farming on the Hogwallow Prairies: Ethnoarchaeological Investigations of the Mountain Creek Area, North Central Texas, compiled by D.H. Jurney, S.A. Lebo, and M.M. Green, pp.325-331. Joe Pool Lake Archaeological Project Volume II, Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

Jurney, David H., Susan A. Lebo, and Melissa M. Green, compilers
1988 Historic Farming on the Hogwallow Prairie: Ethnoarchaeological Investigations of the Mountain Creek Area, North Central Texas. Joe Pool Lake Archaeological Project, Volume II. Archaeological Research Program, SMU, Dallas, Texas.

Jurney, David H., and R.W. Moir (editors)
1987 Historic Buildings, Material Culture, and People of the Prairie Margin: Architecture, Artifacts, and Synthesis of Historic Archaeology. Richland Creek Technical Series, Volume V. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

Kendall, George W.
1845 Across the Great Southwestern Prairies. 2 volumes. March of America Facsimile Series No. 78. University Microfilms, Inc., Ann Arbor, 1966.

Kerr, Homer Lee
1953 Migration into Texas, 1865-1880. Unpublished Ph.D. dissertation, University of Texas, Austin.

1966 Migration into Texas, 1860-1880. Southwestern Historical Quarterly 69(2):184-216.

1967 Migration into Texas, 1860-1880. Southwestern Historical Quarterly 70(2):184-216.

Kniffen, Fred
1965 Folk Housing: Key to Diffusion. Annals of the Association of American Geographers 55(4):549-577.

Kniffen, Fred, and Henry Glassie
1966 Building in Wood in the Eastern United States: A Time-Place Perspective. Geographical Review 56(1):40-66.

Klute, Arnold (editor)
1986 Methods of Soil Analysis, 2 volumes. American Society of Agronomy, Inc., and the Soil Science Society of America, Inc., Madison, Wis.

Landrum, Graham, and Allan Smith
1967 Grayson County: An Illustrated History of Grayson County, Texas. Historical Publishers, Fort Worth.

Lavender, Linda
1979 Dog Trots Mud Cats: The Texas Log House. Historical Collection, North Texas State University, Denton.

Lebo, Susan A.
1987 Local Utilitarian Stonewares: A Diminishing Artifact Category, In Historic Buildings, Material Culture, and People of the Prairie Margin: Architecture, Artifacts, and Synthesis of Historic Archaeology, edited by David H. Jurney and Randall W. Moir, pp. 121-142. Richland Creek Technical Series Volume V. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1989a Evaluation of Site 41DN410. Letter report dated 7 March to Jay Newman, CESWF-PL-RC, U.S. Army Corps of Engineers, Fort Worth District.

1989b Archaeological Testing at 41DN356 and Limited Surveying in Hickory Creek Park. Institute of Applied Sciences, University of North Texas, Denton. Submitted to the U.S. Army Corps of Engineers, Fort Worth District, Purchase Order No. DACW63-89-M-D053.

1991 Archaeology of Nineteenth and Early Twentieth Centuries Lifeways in the Lewisville Lake Area, Denton County, Texas. Draft report submitted to the U.S. Army Corps of Engineers, Ft. Worth District.

1992a Historic Archaeology of the Jones (41DN250) and Johnson (41DN248) Farmsteads in the Ray Roberts Lake Area: 1850-1950, edited by Susan A. Lebo. Institute of Applied Sciences, University of North Texas. Technical report submitted to the U.S. Army Corps of Engineers, Fort Worth District.

Lebo, Susan A., and Kenneth L. Brown
1990 An Archaeological Survey of Lake Lewisville Shoreline, Denton County, Texas, Denton. Report submitted to the U.S. Army Corps of Engineers, Ft. Worth District, Contract No. DACW63-86-C-0098.

Lee, T.R.
1982 Cultural Ecology of the Middle Trinity River Basin 1850-1970. Unpublished Ph.D. dissertation, Department of Anthropology, Southern Methodist University, Dallas.

Leshner, William
1912 Towns of Grayson County. Texas Magazine, Dec. 1912:75-77.

Linck, E.S., and J.G. Roach
1989 Eats: A Folk History of Texas Foods. Texas Christian University Press, Fort Worth.

Long, A., and B. Rippeteau
1974 Testing Contemporaneity and Averaging Radiocarbon Dates. American Antiquity 39: 205-215.

Lowe, Richard G., and Randolph B. Campbell
1987 Planters and Plain Folk: Agriculture in Antebellum Texas. Southern Methodist University Press, Dallas.

Lowry, Bullit (editor)
1980 The Historical Markers of Denton County, Texas. Denton County Historical Commission. Terrill Wheeler Printing, Inc., Denton, Texas.

Lyman, R. L.
1987 On Zooarchaeological Measures of Socioeconomic Position and Cost-Efficient Meat Purchases. Historical Archaeology 21:58-66.

Madany, M.H., T.W. Swetnam, and N.E. West
1982 Comparison of Two Approaches for Determining Fire Dates from Tree Scars. Forest Science 28:856-861.

Marcy, R.B.
1849 His Diary as Captain of 5th Infantry U.S. Army, 31st Congress, 1st Session 1849-50. U.S. Senate Executive Document, Vol. 14, Nos. 54-82:204-220.

1866 Thirty Years of Army Life on the Border. Harper and Bros., Franklin Square, New York.

Martin, T.J., and J. S. Phillippe
1986 Subsistence and Socioeconomic Status at the Drake Site: A Late 19th Century Farmstead in Northern Illinois. Paper presented at the Midwest Archaeological Conference, Columbus, Ohio.

Maxwell, Robert S.
1964 The Pines of Texas: A Study in Lumbering and Public Policy, 1880-1930. East Texas Historical Journal 2(2): 77-86.

1982 The First Big Mill: The Beginning of Commercial Lumbering in Texas. Southwestern Historical Quarterly 86(1): 1-30.

McCormick, Olin F., Roger E. Filson, and Janis L. Darden
1975 The Xerox-Lewisville Archaeological Project. Institute for Environmental Studies, North Texas State University, Denton.

Meko, D.M., C.W. Stockton, and T.J. Blasing
1985 Periodicity in Tree Rings from the Corn Belt. Science 229: 381-384.

Miller, Henry M.
1980 Classification and Economic Scaling of the 19th Century Ceramics. Journal of Historical Archaeology 14:1-40.

Miller, Henry M., and L.G. Lewis
1978 Zoocultural Resource Utilization at a Low Country South Carolina Plantation. Conference on Historic Site Archaeology Paper 12: 250-266.

Moir, Randall W.
1982 Sheet Refuse: An Indicator of Past Lifeways. In Settlement of the Prairie Margin: Archaeology of the Richland Creek Reservoir, Navarro and Freestone Counties, Texas 1980-1981, edited by L. Mark Raab, pp.139-152. Archaeology Research Program, Archaeological Monograph No. 1. Southern Methodist University, Dallas.

1987a Farmstead Proxemics and Intrasite Patterning. In Historic Buildings, Material Culture, and People of the Prairie Margin: Architecture, Artifacts, and Synthesis of Historic Archaeology, edited by D.H. Jurney and R.W. Moir, pp.229-237. Richland Creek Technical
Series, Vol. V, Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1987b Refined Earthenwares and Rural Ceramic Traditions. In Historic Buildings, Material Culture, and People of the Prairie Margin: Architecture, Artifacts, and Synthesis of Historic Archaeology, edited by David H. Jurney and Randall W. Moir, pp. 97-120. Richland Creek Technical Series, Volume V., Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1987c An Introduction to Historical Archaeology of the Project Area. In Pioneer Settlers, Tenant Farmers, and Communities Objectives, Historical Background, and Excavations, edited by R. W. Moir and D.H. Jurney, pp.1-10. Richland Creek Technical Series, Vol. IV. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1987d Trends in the Archaeological Record. In Pioneer Settlers, Tenant Farmers, and Communities Objectives, Historical Background, and Excavations, edited by R. W. Moir and D.H. Jurney, pp.171-179. Richland Creek Technical Series, Vol. IV. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1988a Farmstead Proxemics and Intrasite Space. In Historic Farming on the Hogwallow Prairies: Ethnoarchaeological Investigations of the Mountain Creek Area, North Central Texas, compiled by D.H. Jurney, S.A. Lebo, and M.M. Green, pp. 215-223. Joe Pool Lake Archaeological Project Vol. II, Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1988b Introduction and Research Design. In Historic Farming on the Hogwallow Prairies: Ethnoarchaeological Investigations of the Mountain Creek Area, North Central Texas, compiled by D.H. Jurney, S.A. Lebo, and M.M. Green, pp.1-13. Joe Pool Lake Archaeological Project Vol. II, Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1988c Refined Earthenwares and Ceramic Traditions. In Historic Farming on the Hogwallow Prairies: Ethnoarchaeological Investigations of the Mountain Creek Area, North Central Texas, compiled by D.H. Jurney, S.A. Lebo, and M.M. Green, pp. 251-262. Joe Pool Lake Archaeological Project Vol. II, Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

Moir, R.W., and D.H. Jurney

1987a Farmstead Site Descriptions. In Pioneer Settlers, Tenant Farmers, and Communities Objectives, Historical Background, and Excavations, edited by R. W. Moir and D.H. Jurney, pp. 69-148. Richland Creek Technical Series, Vol. IV. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1987b Pioneer Settlers, Tenant Farmers, and Communities Objectives, Historical Background, and Excavations. Richland Creek Technical Series, Volume IV. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

1987c Richland Creek Farmsteads: Summary and Conclusions. In Historic Buildings, Material Culture, and People of the Prairie Margin: Architecture, Artifacts, and Synthesis of Historic Archaeology, edited by David H. Jurney and Randall W. Moir, pp. 239-245. Richland Creek Technical Series, Volume V. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

Moir, Randall W., and David H. Jurney
1988 Historic Investigations: Summary and Conclusions. In Historic Farming on the Hogwallow Prairies: Ethnoarchaeological Investigations of the Mountain Creek Area, North Central Texas, compiled by David H. Jurney, Susan A. Lebo, and Melissa M. Green, pp. 375-383. Joe Pool Lake Archaeological Project, Volume II. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

Mt. Springs Community Club and North Texas State University
1986 Mt. Springs Oral History: A Community Project for the 1986 Texas Sesquicentennial. The Communities of Bloomfield, Breedlove/Needmore, Burns City, Hemming, Mt. Olive, Mt. Springs, Oak Hill, Prairie Grove, Union Grove and Walling. Sponsored by the Mt. Springs Community Club and co-sponsored by the North Texas State University Oral History Project.

Mudar, Karen
1978 The Effects of Socio-Cultural Variables on Food Preferences in Early 19th Century Detroit. Conference on Historical Site Archaeology (1977), Vol. 12, pp.322-391.

Munzel, S.
1986 Quantitative Analysis and the Reconstruction of Site Patterning. Paper presented at the Vth International Conference of the International Council for ArchaeoZoology, Aug. 25-30, Bordeaux.

Newcomb, William W.
1961 The Indians of Texas from Prehistoric to Modern Times. University of Texas Press, Austin.

O'Brien, Randolph
1944 A History of the Schools of Cooke County, Texas. M.A. Thesis, North Texas State Teachers College, Denton.

Odom, E. Dale, and Bullit Lowry
1975 A Brief History of Denton County, Texas. Denton County Historical Commission, Denton.

Olsen, S.J.
1960 Post-cranial Skeletal Characteristics of Bison and Bos. Papers of the Peabody Museum of Archaeology and Ethnology 35(4):1-64.

1961 The Relative Value of Fragmentary Mammalian Remains. American Antiquity 26:538-540.

1964 Mammal Remains form Archaeological Sites, Part I: Southeastern and Southwestern U.S. Papers of the Peabody Museum of Archaeology and Ethnology 56(1):1-162.

1968 Fish, Amphibian and Reptile Remains from Archaeological Sites, Part I: Southeastern and Southwestern U.S. Papers of the Peabody Museum of Archaeology and Ethnology 56(2):1-104.

Orton, Robert B.
1980 Climate. In Soil Survey of Denton County, Texas, by Alan Ford and Ed Pauls, pp. 1-2. U.S. Department of Agriculture, Soil Conservation Service, and the Texas Agricultural Experiment Station.

Palmer, W.C.
1965 Meteorological Drought. U.S. Dept. of Commerce Weather Bureau Research Paper No. 45. U.S. Government Printing Office, Washington, D.C.

Panshin, A.J., and C. de Zeeuw
1970 Textbook of Wood Technology, vol. I., 3rd ed. McGraw-Hill, New York.

Parker, Frank, and James Smallwood (compliers)
1975 History of Cooke County: A Pictorial Essay. Gainesville American Revolution Bicentennial Committee, Gainesville.

Pate, J'Nell L.
1988 Livestock Legacy: The Fort Worth Stockyards, 1887-1987. Texas A&M University Press, College Station.

Peden, Rachel
1974 Speak to the Earth: Pages from a Farmwife's Journal. Alfred A. Knopf, New York.

Pilot Point Chamber of Commerce
1978 Pilot Point: The Early Days. Pilot Point Chamber of Commerce, 1977-1978, Pilot Point, Texas.

Price, C.R.
1985 Patterns of Cultural Behavior and Intra-Site Distributions of Faunal Remains at the Widow Harris Site. Historical Archaeology 19:40-56.

Prikryl, Daniel J., Bonnie C. Yates (editors)
1987 Test Excavations at 41CO141, Ray Roberts Reservoir, Cooke County, Texas. Contributions in Archaeology No. 4. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District, Contract No. DACW63-85-D-0066.

Pulich, W.M.
1988 The Birds of North Central Texas. Texas A & M University Press, College Station.

Putnam, Lee A., Charles R. Cail, Rex A. Cochran, William J. Guckian, Lyle C. Lovelace, and Billy J. Wagner
1979 Climate. In Soil Survey of Cooke, County, Texas, pp. 2. U.S. Department of Agriculture, Soil Conservation Service, and Cooperation with the Texas Agricultural Experiment Station.

Raab, L.M., J.E. Bruseth, A.J. McIntyre, C.R. Ferring, and N.G. Reese
1980 Archaeological Testing at Lakeview Lake, 1979- Human Use of the Land. Archaeology Research Program, Southern Methodist University, Dallas.

Raab, L.M., A.J. McIntyre, J.E. Bruseth, D.E. McGregor, C.R. Ferring, and N.G. Reese
1982 Archaeological Investigations at Lakeview Lake: 1979 and 1980. Archaeological Monographs No. 2, Archaeology Research Program, Southern Methodist University, Dallas.

Reese, Nancy G., Cecily A. Pegues, Bonnie C. Yates
1986 Historic Archaeology. In An Assessment of the Cultural Resources in the Trinity River Basin, Dallas, Tarrant, and Denton Counties, Texas, edited by Bonnie C. Yates and C. Reid Ferring, Institute of Applied Sciences, North Texas State University, Denton.

Reese, Nancy G., Cecily A. Pegues, Bonnie C. Yates
1988 Historical Archaeology in the Metroplex: Floodplain Sites. The Record 42(3):179-201.

Reitz, E.J. and C.M. Scarry
1985 Reconstructing Historic Subsistence with an Example from Sixteenth Century Spanish Florida. Special Publication Series, No. 3, Society for Historical Archaeology.

Renfrew, C.
1970 The Tree-Ring Calibration of Radiocarbon: An Archaeological Evaluation. Proceedings of the Prehistoric Society 36: 280-311.

Rice, Lawerence D.
1971 The Negro in Texas: 1874-1900. Louisiana State University Press, Baton Rouge.

Richardson, Rupert N.
1963 The Frontier of Northwest Texas, 1846 to 1876: Advance and Defense by the Pioneer Settlers of the Cross Timbers and Prairies. Arthur H. Clark Co., Glendale, California.

Richardson, R.N., E. Wallace and A. Anderson
1988 Texas: The Lone Star State, 5th ed. Prentice Hall, Englewood Cliffs, NJ.

Richner, Jeffrey and Joe Bagot (assemblers)
1978 A Reconnaissance Survey of the Trinity River Basin. Archaeology Research Program, Report No. 113, Southern Methodist University, Dallas. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District, Contract No. DACW63-76-C-0013.

Sanderson, Dwight
1937 The Effect of the Depression on Tenancy in the Central States. Rural Sociology 2(1):3-9.

Saunders, J.
1982 The Material Manifestations of Social Stratification among Tenant Farming Families. In Settlement of the Prairie Margin: Archaeology of the Richland Creek Reservoir, Navarro and Freestone Counties, Texas, 1980-1981: A Research Synopsis, edited by L.M. Raab, pp. 179-189. Archaeological Monographs No. 1. Archaeology Research Program, Southern Methodist University, Dallas.

Schmid, E.
1972 Atlas of Animal Bones. Elsevier Publishing Co., Amsterdam.

Schulman, E.
1941 Some Propositions in Tree-Ring Analysis. Ecology 22: 193-195.

1942 Dendrochronology in Pines of Arkansas. Ecology 23: 309-318.

Schulman, E., and G.C. Baldwin
1939 The Chronology in OL-12, A Dissected Ponderosa. Tree-Ring Bulletin 38: 61-91.

Schweingruber, F. H.
1988 Tree Rings. D. Reidel, Dordrecht.

Schweingruber, F. H., H. C. Fritts, O. U. Braker, L. G. Drew, and E. Schar
1978 The X-Ray Technique as Applied to Dendroclimatology. Tree-Ring Bulletin 38: 61-91.

Sciscenti, J.V. (assembler)
1971 Environmental and Cultural Resources within the Trinity River Basin. Institute for the Study of Earth and Man, Southern Methodist University, Dallas. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District, Contract DACW63-71-C-0075.

Shroder, J.R., Jr.
1980 Dendrogeomorphology: Review and New Techniques of Tree-Ring Dating. Progress in Physical Geography 4: 161-188.

Sibley, Marilyn McAdams
1967 Travelers in Texas 1761-1860. University of Texas Press, Austin.

Sisson, Septimus, and J.D. Grossman
1953 The Anatomy of the Domestic Animals, 4th ed., revised. W.B. Saunders Co. Philadelphia.

Skinner, S.A., M.B. Cliff, L. Baird, A.B. Amerson, Jr., J. Bennett, A.R. Faust, J. Kaskey, K. Ludden, M.D. Northern, A. Pritchford, J. Raley, D.G. Shaddox, and D. Shannabrook
1982a The Archaeology and History of Lake Ray Roberts: Cultural Resources Survey, vol. 1. Cultural Resources Report 82-86, Environment Consultants, Inc., Dallas. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District.

Skinner, S.A., M.B. Cliff, L. Baird, J. Garber, V. Scarborough, K. Singleton, A. Pritchford, J. Renner, K. Fimple, K. Hahn, and D.G. Shaddox
1982b The Archaeology and History of Lake Ray Roberts: Construction Area Testing, vol. 2. Cultural Resources Report 82-9, Environment Consultants, Inc., Dallas. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District.

Skinner, S.A., and LeAnne Baird (assemblers)
1985 The Archaeology and History of Lake Ray Roberts: "Settlement in a Marginal Zone," vol. 3. AR Consultants, Dallas, Texas. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District.

Smallwood, James
1975 A Century of Achievement: Blacks in Cooke County, Texas. Gainesville American Revolution Bicentennial Committe, Gainesville.

Smith, A. Morton
1955 The First 100 Years in Cooke County. Naylor Company, San Antonio, Texas.

Smith, Sherry Y.
1984 Bloomfield Schoolhouse: A Brief History of the School and Daily Activities of Students during the Late 19th and Early 20th Centuries. Unpublished manuscript on file in the Library Archives, Willis Library, University of North Texas, Denton.

Smith, Steven D., David F. Barton, and Timothy B. Riordan
1982 Ethnoarchaeology of the Bay Springs Farmsteads: A Study of Rural American Settlement. Resource Analysts, Inc., Bloomington. Report submitted to the National Park Service, Santa Fe.

Stahle, D. W.
1979 Tree-Ring Dating of Historic Buildings in Arkansas. Tree-Ring Bulletin 39: 1-29.

1990 The Tree-Ring Record of False Spring in the Southcentral USA. Ph.D. dissertation. Arizona State University, Tempe.

Stahle, D.W., and M.K. Cleaveland
1988 Texas Drought History Reconstructed and Analyzed from 1698 to 1980. Journal of Climate 1:59-74.

Stahle, D.W., M.K. Cleaveland, and J.G. Hehr
1985a A 450-year Drought Reconstruction for Arkansas, United States. Nature 316: 530-532.

Stahle, D.W., M.K. Cleaveland, and J.G. Hehr
1988 North Carolina Climate Changes Reconstructed from Tree Rings: A.D. 372 to 1985. Science 240:1517-1519.

Stahle, D.W., E.R. Cook, and J.W.C. White
1985b Potential for Millennia Long Tree-Ring Chronologies in the Southeastern USA. American Antiquity 50:796-802.

Stahle, D.W., and J.G. Hehr
1984 Dendroclimatic Characteristics of Post Oak Across A Precipitation Gradient in the Southcentral United States. Annals Association American Geographers 74:564-573.

Stahle, D.W., J.G. Hehr, G.G. Hawks, Jr., M.K. Cleaveland, and J.R. Baldwin
1985c Tree-Ring Chronologies for the Southcentral United States. University of Arkansas Dept. of Geography Tree-Ring Laboratory and Office of the State Climatologist, Fayetteville.

Stockton, C.W.
1975 Long-Term Streamflow Records Reconstructed from Tree Ring. Paper of the Laboratory of Tree-Ring Research No. 5. Univ. of Arizona Press, Tucson.

Stockton, C.W., and W.R. Boggess
1980 Augmentation of Hydrologic Records Using Tree Rings. In Proceeding of the Engineering Foundation Conference On Improved Hydrologic Forecasting--Why and How, pp. 312-321. American Society of Civil Engineers, New York.

Stockton, C.W., and H.C. Fritts
1973 Long-term Reconstruction of Water Level Changes for Lake Athabasca by Analysis of Tree Rings. Water Resources Bulletin 9:1006-1027.

Stokes, M.A., and J.H. Dieterich, (Technical Coordinators)
1980 Proceeding of the Fire History Workshop. U.S. Department of Agriculture Forest Service General Technical Report RM-81. Rocky Mountain Forest and Range Experiment Station, Fort Collins.

Stokes, M.A., and T.L. Smiley
1968 An Introduction to Tree-Ring Dating. University of Chicago Press, Chicago.

Stout, Jerry
1986 Reflections. Denton Record-Chronicle, February 28, 1986.

Strickland, Rex Wallace
1937 Anglo-American Activities in North East Texas, 1803-1845. Unpublished Ph.D. dissertation, University of Texas at Austin.

Stuiver, M., and B. Becker
1986 High-Precision Decadal Calibration of the Radiocarbon Timescale, AD 1950-2500 BC. Radiocarbon 28(2B):863-910.

Stuiver, M., and B. Becker
1987 Radiocarbon Calibration Program 1987. University of Washington, Quaternary Isotope Lab, Seattle.

Stuiver, M., and P.D. Quay
1980 Changes in Atmospheric Carbon-14 Attributed to a Variable Sun. Science 207: 11-19.

Swetman, T.W.
1983 Fire History of the Gila Wilderness, New Mexico. M.S. Thesis. University of Arizona, Tucson.

Tate, Terry
1984 Old Bloomfield School to Bloom Again as Museum. Denton Record-Chronicle, September 11, 1984, pp.A-1, A-5, Denton.

Taylor, Joe Gray
1982 Eating, Drinking, and Visiting in the South: An Informal History. Louisiana State University, Baton Rouge.

Texas Almanac
1912 The Encyclopedia of Texas. A.H. Belo Corporation, Dallas.

1914 The Encyclopedia of Texas. A.H. Belo Corporation, Dallas.

1927 The Encyclopedia of Texas. A.H. Belo Corporation, Dallas.

1929 The Encyclopedia of Texas. A.H. Belo Corporation, Dallas.

1931 The Encyclopedia of Texas. A.H. Belo Corporation, Dallas.

1936 The Encyclopedia of Texas. A.H. Belo Corporation, Dallas.

1937 The Encyclopedia of Texas. A.H. Belo Corporation, Dallas.

1939 The Encyclopedia of Texas. A.H. Belo Corporation, Dallas.

1941 The Encyclopedia of Texas. A.H. Belo Corporation, Dallas.

Texas Game, Fish and Oyster Commission
1945 Principal Game Birds and Mammals of Texas. Press of von Boeckmann-Jones Co., Austin.

Texas Parks and Wildlife Department
1984 Master Plan-Architectural Theme and Site Analysis for Ray Roberts Lake State Park Isle du Bois Unit: Denton, Cook[e] & Grayson Counties, Texas. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District.

Tunnicliff, B.M.
1975 The Historical Potential of Snowfall as a Water Resource in Arizona. M.S. thesis. University of Arizona, Tucson.

Upton, Dell
1981 Traditional Timber Framing. In Material Culture of the Wooden Age, edited by B. Hindle, pp. 35-93. Sleepy Hollow Press, Tarrytown, New York.

U.S. Army Corps of Engineers
1974 Final Environmental Impact Statement, Audrey Lake, Elm Fork, Trinity River, Texas. Report prepared by the U.S. Army Corps of Engineers, Fort Worth District.

1988 Cultural Resources Mitigation at Ray Roberts Lake Scope of Work. U.S. Army Corps of Engineers, CESWF-PL-RC, Ft. Worth District, Solicitation No. DACW63-86-R0092.

U.S. Census Bureau
Agriculture Census: 1860, 1870, 1880, 1890, 1900. U.S. Government Printing Office, Washington, DC.
Manufacturing Census: 1860, 1880. U.S. Government Printing Office, Washington, DC.
Population Census: 1860, 1870, 1880. Microfilm on file at Willis Library, University of North Texas, Denton.

Valley View Historical Committee
1972 Valley View Centennial 1872-1972. Valley View Historical Committee, Texas. Valley View.

Vines, Robert A.
1960 Trees, Shrubs, and Woody vines of the Southwest. University of Texas Press, Austin.

Watkins, T., Editor
1975 Radiocarbon: Calibration and Prehistory. Edinburgh Univ. Press, Edinburgh.

Watson, Myrtle
1976 Education A Debt the Present Owes to the Future. Unpublished manuscript on file at the Denton County Historical Commission, Denton County Courthouse, Denton.

White, Raymond E.
1957 Cotton Ginning in Texas in 1861. Southwestern Historical Quarterly 61(2)257-269.

1967 The Texas Cotton Ginning Industry: 1860-1900. Texana 5(4):344-358.

Whiting, W. H. C.
1850 Report of the Military Frontier in Texas. U.S. Senate Executive Document 14(64-82), 31st Congress, 1st Session.

Wigginton, Eliot (editor)
1972 The Foxfire Book. Doubleday & Co., Inc., New York.

Williams, B.T.
1969 The Frontier Family: Demographic Fact and Historical Myth. In Essays on the American West, edited by H.M. Hollingsworth and S.L. Myres, pp. 40-65. The Walter Prescott Webb Memorial Lectures, University of Texas Press, Austin.

Worthy, Linda H. (editor and assembler)
1983 All That Remains: The Traditional Architecture and ... oric Engineering Structures: Richard B. Russell Multiple Resource Area, Georgia and South Carolina. Archaeological Services Branch, National Park Service, Atlanta, Georgia. Report submitted to the U.S. Army Corps of Engineers, Savannah District.

Yates, Bonnie C.
1982 Observations on the Faunal Remains from the Lakeview Project: Phase One. In Archaeological investigations at Lakeview Lake: 1979 and 1980, edited by L.M. Raab, pp. 241-246. Archaeological Monographs No. 2, Archaeology Research Program, Southern Methodist University, Dallas.

1984 Destructive Inventory of Human Skeletal Remains, Hackberry Site, Lake Lewisville. The Record 40(1):8-9.

1989 Vertebrate Remains from 41DT97. In The James Franks Site (41DT97): Excavation at a Mid-Nineteenth Century Farmstead in the South Sulphur River Valley, Cooper Lake Project, Texas, edited by T.K. Perttula, pp. 111-127. Contributions in Archaeology No. 7, Institute of Applied Sciences, University of North Texas, Denton.

Yates, Bonnie C., and C. Reid Ferring (editors)
1986 An Assessment of the Cultural Resources in the Trinity River Basin, Dallas, Tarrant, and Denton Counties, Texas. Institute of Applied Sciences, North Texas State University, Denton. Final report submitted to the U.S. Army Corps of Engineers, Fort Worth District.

Zucker, Paul
1941 American Bridges and Dams. Graystone Press, New York.