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LONG BRANCH LAKE ARCHAEOLOGICAL RESOURCES
VOLUME TWO: B
Appendices II through VII

by
Larry Grantham

PREPARED FOR

KANSAS CITY DISTRICT
U. S. ARMY CORPS OF ENGINEERS

DACW41-76-C-0116

UNCLASSIFIED
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; DISTRIBUTION UNLIMITED
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION NORTHEAST MISSOURI STATE UNIVERSITY, KIRKSVILLE, MO 6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (City, State, and ZIP Code)	7b. ADDRESS (City, State, and ZIP Code)
8a. NAME OF FUNDING / SPONSORING ORGANIZATION KC DISTRICT CORPS OF ENGINEERS 8b. OFFICE SYMBOL (If applicable) PD-R	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER DACW41-76-C-0116
8c. ADDRESS (City, State, and ZIP Code) 700 FEDERAL BUILDING, 601 E. 12th STREET KANSAS CITY, MO 64106-2896	10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO. / PROJECT NO. / TASK NO. / WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification)
AN INTENSIVE SURVEY OF ARCHAEOLOGICAL RESOURCES IN THE PROPOSED LONG BRANCH RESERVOIR - VOLUME IIB

12. PERSONAL AUTHOR(S)
LARRY GRANTHAM

13a. TYPE OF REPORT	13b. TIME COVERED	14 DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT
FINAL	FROM 1976 TO 1977	1977	224

16. SUPPLEMENTARY NOTATION

17 COSATI CODES		
FIELD	GROUP	SUB-GROUP

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
Archaeological Long Branch Historical house sites
Macon County, MO

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

Volume IIA and IIB contains the appendices to volume one of the Long Branch Lake Cultural Resources Survey. These should be viewed as supportive data for the discussions included in volume one. Appendices include individual site descriptions, artifacts measurements, fire-cracked rock tables, a glossary, maps, and plates. Maps and plates. Maps and plates were included in volume IIB so that reference can be made without the necessity of locating text and plates in the same volume.

Titling information and nomenclature for all of the categories appear in volume one. Artifacts referred to in Appendices I and II refer to artifact descriptions in volume one. Apendix I includes general provience data, material collected, chronological implications, inferred site functions where possible, estimated impacts sites, and general recommendations for sites recorded during the general survey. Apendix III consists of numbers and weights of fire-cracked rock by general

(continued on back)

20. DISTRIBUTION / AVAILABILITY OF ABSTRACT ☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED
22a. NAME OF RESPONSIBLE INDIVIDUAL	22b. TELEPHONE (Include Area Code) 816-426-3402 / 22c. OFFICE SYMBOL PD-R

DD Form 1473, JUN 86 *Previous editions are obsolete.*

SECURITY CLASSIFICATION OF THIS PAGE
UNCLASSIFIED

19. (continued)

rock types. Appendix IV is a glossary of selected terms utilized in this report which appear to need clarification. Only those terms which are somewhat ambiguous in general usage are included. Appendix V contains plates of selected representative sites and artifacts. Appendix VII contains review comments and responses on the survey report.

AN INTENSIVE SURVEY OF ARCHAEOLOGICAL RESOURCES IN THE PROPOSED LONG BRANCH RESERVOIR VOLUME IIB

by

Larry Grantham

AN ARCHAEOLOGICAL PROJECT CONDUCTED FOR

U.S. ARMY CORPS OF ENGINEERS

KANSAS CITY, MISSOURI DISTRICT

by

NORTHEAST MISSOURI STATE UNIVERSITY
KIRKSVILLE, MISSOURI

IN FULFILLMENT OF CONTRACT
DACW41-76-C-0116

Appendix II

ARTIFACT MEASUREMENTS

This section includes measurements and observations on artifacts recovered from the sites during the summer of 1976. Specific data on extremely fragmentary tools or waste have been excluded. Linear measurements are in millimeters, and weights are in grams. Asterisks (*) indicate that the measurement is only a portion of the original, and asterisks only indicate that determination of the dimension being measured was not possible. Artifacts are referred to by an artifact number — specimen letter system. Artifact category numbers refer to artifact descriptions presented in volume one.

A number of abbreviations appear in the table and are explained below:

Utilization
L - light
M - moderate
H - heavy
VH - very heavy

Remarks
p - pecked
pk - pecked area
pt - pit
g - ground
b - battered
cb - continuously battered
ch - chipped
poss - possibly
frag - fragmentary

Hematite
c - chipped
s - scratched
f - flake
g - ground

FGQtt - Fine-grained Quartzite
QttSc - Quartzite/Sileceous Chert
I - Indeterminant

Material
d - Diorite
D - Dolerite
Gb - Gabbro
G - Granite
DGb - Dolerite/Gabbro
Grd - Grano-Diorite
dD - Diorite/Dolerite
GbD - Gabbro/Dolerite
Fld - Felso-Diorite
flD - Felso-Dolerite
dQtt - Dioritic Quartzite
QttGb - Gabbritic Quartzite
GtQtt - Granitic Quartzite
PFt - Porphoritic Felsite
FGGb - Fine-grained Gabbro
GcGb - Gneissic Gabbro
TGn - Talc Gneiss
ShGb - Schistic Gabbro
ShD - Schistic Dolerite
FH/SS - Flint Hill Sandstone
Mss - Micaceous Sandstone
fss - Ferruginous Sandstone
A - Argillite
c - chert
Qtz - Quartz
Qtt - Quartzite
SS/Qtt - Sandstone/Quartzite
CGQtt - Coarse-grained Quartzite

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INTRODUCTION TO APPENDICES

Volume IIA and IIB contains the appendices to volume one of the Long Branch Lake Cultural Resources Survey. These should be viewed as supportive data for the discussions included in volume one. Appendices include individual site descriptions, artifact measurements, fire-cracked rock tables, a glossary, maps, and plates. Maps and plates were included in volume IIB so that reference can be made without the necessity of locating text and plates in the same volume.

Titling information and nomenclature for all of the categories appear in volume one. Artifacts referred to in Appendices I and II refer to artifact descriptions in volume one. Appendix I includes general provience data, material collected, chronological implications, inferred site functions where possible, estimated impacts to sites, and general recommendations for sites recorded during the general survey. Appendix II includes metric data and observations on pertinent artifacts collected during the survey. Appendix III consists of numbers and weights of fire-cracked rock by general rock types. Appendix IV is a glossary of selected terms utilized in this report which appear to need clarification. Only those terms which are somewhat ambiguous in general usage are included. Appendix V contains maps of the reservoir area, public usage plan map, and a map of the survey. Appendix VI contains plates of selected representative sites and artifacts. Appendix VII contains review comments and responses on the survey report.

TABLE VIII

DIMENSIONS AND ATTRIBUTES OF
STONE ARTIFACTS — LONG BRANCH RESERVOIR

Category	Specimen	Site Number	Catalog Number	Length in millimeters	Width in millimeters	Thickness in millimeters	Weight in grams
Points							
Contracting-stemmed, square-based points							
1	a	23MC55	4-4	50	25	9	9.6g
	b	23MC88	2-1	74	39	9	22.8g
	c	23MC298	10-4	51	31	9	11.4g
Contracting-stemmed, rounded-based points							
2	a	23MC270	2-2	63	*28	*11	* 12.7g
	b	23MC298	1-5	*35	*23	7	* 5.2g
	c	FS76-263	1-1	*27	*32	7	* 4.3g
Contracting-stemmed, concave-based point							
3	a	23MC318	2-1	*13	*18	*6	* 1.2g
Large, expanding-stemmed points							
4	a	23MC142	5-3	75	32	9	19.9g
	b		13-9	68	24	11	19.1g
	c		9-18	*29	30	9	* 9.6g
	d		9-17	*21	*27	*9	* 4.8g
	e	23MC298	10-5	46	31	9	14.0g

	f		9-4	*18	*15	*9	* 1.7g
	g	23MC323	4-8	*14	*25	*6	* 1.9g
	h		4-9	*18	*26	*6	* 2.7g
	i	23MC341	5-1	*81	30	10	* 24.0g
Slightly expanding-stemmed point with prominent shoulders							
5	a	23MC110	2-3	*30	*22	*8	* 5.3g
Narrow, expanding-stemmed points							
6	a	23MC70	14-1	*24	20	8	* 4.0g
	b	23MC323	1-4	49	20	8	7.5g
Straight-based, narrow incurvate-stemmed points							
7	a	23MC142	13-10	54	21	11	11.8g
	b	23MC277	4-1	*21	21	*8	* 3.6g
Straight-stemmed points							
8	a	23MC56	2-3	*29	30	*9	* 9.5g
	b	23MC86	1-2	*22	26	*9	* 5.7g
	c	23MC142	9-19	*38	30	*9	* 10.8g
Straight-stemmed points reworked from other forms							
9	a	23MC67	1-6	37	*19	8	* 7.0g
	b	23MC326	1-3	55	27	10	15.6g
Side-notched, straight-based points							
10	a	23MC55	3-2	*17	29	6	* 2.7g
	b		13-1	*17	27	6	* 2.7g
	c	23MC323	3-1	*25	26	7	* 4.3g

Side-notched, concave-based points

11	a	23MC77	2-3	*24	*25	*7	*	3.4g
	b	23MC88	1-1	*16	*29	*5	*	2.0g
	c	23MC148	2-2	*19	*24	*6	*	2.5g
	d	23MC286	1-1	*29	26	7	*	6.7g
	e	23MC308	1-2	*22	24	7	*	4.3g

Medium-sized, lobate-stemmed points

12	a	23MC74	3-2	41	23	9		7.9g
	b		2-5	*	*	*	*	2.1g
	c	23MC100	1-2	*40	*25	*5	*	.9g
	d	23MC142	6-1	*11	*26	*5	*	1.6g

Narrow, lobate-stemmed points

13	a	23MC70	18-3	46	18	9		7.4g
	b	23MC339	1-2	*19	*22	*7	*	1.8g

Broad, side-notched (Originally corner-notched), convex-based points

14	a	23MC330	1-2	51	27	9	10.5g
	b	FS76-289	1-1	50	22	6	7.6g

Narrow, side-notched (Originally corner-notched), convex-based points

15	a	23MC74	2-6	45	31	10		12.4g
	b	23MC135	4-1	*25	26	*8	*	4.4g

Short, expanding-stemmed, slightly convex-based point

16	a	23MC66	2-1	*38	24	7	*	7.5g

Lanceolate points

17	a	23MC55	15-1	81	23	10	19.8g

	c	23MC60	1-1	*18	*23	*10	*	2.6g

Large, triangular points — reworked from stemmed forms

18	a	23MC70	14-2	41	*27	10	*	8.8g
	b	23MC323	3-2	55	28	8		12.6g

Medium, triangular point — reworked from square-stemmed point

19	a	23MC142	14-9	39	19	6		5.0g

Small, unnotched triangular points

20	a	23MC70	13-6	26	15	2		.6g
	b	23MC134	2-1	*11	15	3	*	.2g
	c	23MC334	1-1	24	14	2		.5g
	d	FS76-274	2-1	*22	13	3	*	.6g
	e	FS76-291	1-1	29	14	2		.7g

Small, pointed-ovate point

21	a	23MC100	1-3	22	16	4		1.7g

Medium, corner-notched, concave-based points

22	a	23MC123	1-1	53	26	8		7.6g
	b	23MC298	6-1	35	29	10		5.0g
	c	23MC323	3-3	*33	29	7	*	5.8g
	d	23MC327	1-1	*30	23	7	*	4.8g

Large, broad corner-notched, straight-based points

23	a	23MC142	4-1	*52	37	8	*	14.2g
	b		9-20	*38	32	10	*	11.5g

Medium, broad corner-notched, convex-based points

24	a	23MC58	1-2	47	25	11		11.2g
	b	23MC142	14-10	*25	32	7	*	5.2g
	c	23MC298	9-5	54	31	8		11.8g
	d		6-2	*28	31	8	*	5.9g

Medium, narrow corner-notched, straight-based, broad-stemmed point

25	a	23MC110	1-2	*19	*32	*8	*	3.5g

Large, basal-notched, convex-based point

26	a	23MC148	1-3	*28	*33	*8	*	5.4g

Small, corner-notched, straight-based points

27	a	23MC74	1-2	*23	*16	5	*	1.5g
	b	23MC102	1-1	41	20	10		3.8g
	c	23MC139	1-2	32	20	10		2.7g
	d	23MC142	9-21	*15	*20	5	*	1.0g
	e	23MC225	1-2	22	14	4		.6g
	f	23MC321	2-1	*18	*20	5	*	1.5g

Small, corner-notched, concave-based point

28	a	23MC298	9-6	*14	*19	5	*	.8g

Small, elongate, corner-notched, rounded based point

29	a	23MC86	1-3	*24	*10	3	*	.3g

Miscellaneous unclassified small points

30	a	23MC142	10-3	20	17	5		1.3g
	b	23MC298	11-5	*13	10	3		.2g

Basal Fragments — Small, corner-notched points
(No measurements)

31	a	23MC55-1
	b	23MC90-1
	c	23MC142-1
	d	23MC323-1

Basal Fragments — Medium, corner-notched, convex-based points
(No measurements)

32	a	23MC70-1
	b	23MC96-1
	c	23MC110-1
	d	23MC139-1
	e-f	23MC142-2
	g	23MC337-1

Basal Fragments — Large, corner-notched, convex-based points
(No measurements)

33	a	23MC298-1
	b	23MC332-1

Basal Fragment — Medium, square-stemmed point
(No measurements)

34	a	23MC142-1

Basal Fragments — Miscellaneous unclassified basal point fragments
(No measurements)

35	a-b	23MC142-2	i	23MC77-1
	c	23MC276-1	j	23MC103-1
	d	23MC326-1	k	23MC136-1
	e-h	23MC70-4	l	23MC142-1

Distal projectile point fragments
(No measurements)

36	a-g	23MC55-7	af	23MC135-1
	h	23MC56-1	ag-as	23MC142-13
	i	23MC66-1	at	23MC148-1
	j	23MC67-1	au-aw	23MC149-3
	k	23MC68-1	ax	23MC152-1
	l-s	23MC70-8	ay	23MC236-1
	t	23MC72-1	az	23MC269-1
	u	23MC74-1	ba	23MC271-1
	v	23MC75-1	bb-be	23MC277-4
	w	23MC77-1	bf	23MC290-1
	x	23MC88-1	bg-bm	23MC298-7
	y-z	23MC90-2	bn	23MC307-1
	aa	23MC91-1	bo	23MC319-1
	ab	23MC92-1	bp	23MC320-1
	ac	23MC100-1	bq-bv	23MC323-6
	ad	23MC110-1	bw	23MC337-1
	ae	23MC123-1		

Distal projectile point fragments — partially reworked

36	bx	23MC74-1
	by	23MC77-1
	bz-ca	23MC92-2
	cb	23MC142-1
	cc	23MC323-1

Medial projectile point fragments
(No measurements)

37	a	23MC55-1	w	23MC225-1
	b-c	23MC65-2	x	23MC270-1
	d	23MC67-1	y-z	23MC277-2
	e-f	23MC70-2	aa	23MC298-1
	g	23MC75-1	ab	23MC307-1
	h	23MC77-1	ac-ad	23MC323-2
	i	23MC78-1	ae	23MC326-1
	j	23MC136-1	af	23MC333-1
	k-u	23MC142-11	ag	23MC337-1
	v	23MC146-1		

Miscellaneous projectile point fragments

Large fragments — corner-notched points

38	a	23MC55-1
	b	23MC159-1
	c	23MC270-1

Medial fragments — two shoulders

38	d	23MC67-1
	e-g	23MC142-3
	h	23MC148-1
	i	23MC298-1

Medial fragments — one shoulder
(No measurements)

38	j	23MC55-1	l-m	23MC70-2
	k	23MC65-1	n	23MC77-1

	o	23MC83-1		y	23MC277-1		
	p-w	23MC142-8		z-ab	23MC298-3		
	x	23MC148-1		ac	23MC323-1		

Stem fragments (No measurements)

38	ad	23MC77-1					
	ae	23MC142-1					

Shoulder fragments (No measurements)

38	af	23MC142-1					
	ag	23MC323-1					
	ah	23MC282-1					

Miscellaneous fragments (No measurements)

38	ai	23MC55-1					
	aj-ak	23MC67-2					
	al	23MC70-1					
	am	23MC110-1					
	an	23MC138-1					
	ao-aq	23MC142-3					
	ar	23MC331-1					

Scrapers

Large side scrapers

39	a	23MC78	1-2	117	43	18	85.0g
	b	23MC320	1-2	104	39	22	91.7g

End scrapers made from flakes

40	a	23MC65	1-3	33	24	6	4.3g

	b	23MC142	11-1	*23	*45	9	*	9.4g
	c		15-8	*38	*28	*10	*	13.5g
	d		6-2	*	*	*11	*	5.5g
	e	23MC278	1-1	*29	*25	*8	*	6.5g
	f	23MC311	1-1	32	21	6		4.3g
	g	23MC319	2-1	67	42	12		30.6g
	h	23MC323	1-5	18	17	3		.4g
End scrapers made from distal point fragments								
41	a	23MC142	2-5	*50	*24	9	*	7.7g
	b	23MC298	9-7	50	29	8	*	10.9g
	c		6-3	52	37	9		18.3g
	d		9-8	63	29	13		19.3g
	e		2-4	57	38	12		22.1g
Hafted scrapers								
42	a	23MC100	2-1	35	25	8		8.6g
	b	23MC142	6-3	31	32	7		7.8g
	c	23MC298	11-6	40	30	7		9.3g
Drill-like Implements								
Narrow, drill-like implements								
43	a	23MC55	4-5	*8	*7	*5	*	.2g
	b		4-6	*25	*11	*6	*	1.3g
	c	23MC67	3-3	47	22	10		7.5g
	d	23MC70	9-2	*12	*7	*5	*	.2g
	e		9-3	*22	*10	*5	*	.7g
	f	23MC142	5-4	*40	21	6	*	4.0g

	g		9-22	*19	*11	*5	* .4g
	h	23MC277	4-2	*39	*11	*8	* 4.0g
	i	23MC298	6-4	*26	*14	*6	* 1.7g

Broader, drill-like implements

44	a	23MC73	1-1	*23	14	6	* 2.4g
	b	23MC90	3-1	*13	12	7	* .5g
	c	23MC91	2-2	*36	20	11	* 8.4g
	d	23MC134	1-1	*19	*15	8	* 1.7g
	e	23MC276	1-1	*38	15	11	* 7.4g
	f	23MC298	4-1	*37	15	6	* 3.2g

Bifaces

Thick, pointed-ovate bifaces

45	a	23MC61	1-2	92	55	14	72.5g
	b	23MC135	1-2	84	46	29	85.8g
	c	23MC142	4-2	*38	75	*23	* 62.8g
	d		4-3	*49	78	*20	* 65.2g
	e	23MC323	2-4	107	62	22	145.4g

Large, thick flake/bifaces

46	a	23MC67	2-5	93	69	21	117.4g
	b	23MC326	1-4	127	92	29	329.8g

Long, thin biface with slightly excurvate lateral margins

47	a	23MC296	1-1	*103	30	12	40.3g

Long, thick, elongate, pointed-ovate biface

48		23MC134	3-1	140	45	20	122.9g

Thin, ovoid biface

49	a	23MC323	3-4	70	44	11	39.3g

Thin, trianguloid bifaces

50	a	23MC70	9-4	*54	42	9	* 24.4g
	b	23MC153	1-3	*70	*38	10	* 27.8g

Thick, ovate, steep-edged biface

51	a	23MC323	4-10	61	39	15	37.8g

Small, rectanguloid, steep-edged biface

52	a	23MC142	6-4	42	31	15	20.3g

Thin, narrow, elongate-ovoid biface

53	a	23MC137	1-2	59	20	13	14.2g

Miscellaneous ovoid bifaces

54	a	23MC75	2-1	58	34	13	24.4g
	b	23MC323	1-6	49	36	16	26.8g
	c	23MC339	2-1	32	34	14	22.3g

<u>Biface Fragments</u>

Distal fragments — thick, pointed bifaces

55	a	23MC142	6-5	*58	*31	*17	* 23.1g
	b	23MC298	1-3	*73	*31	*19	* 32.6g

Distal fragment — thin, very broad, pointed biface

56	a	23MC298	5-1	*60	*74	12	* 45.8g

Distal fragments — thin, pointed, broad bifaces

57	a	23MC55	7-2	*44	*44	9	* 11.7g

	b	23MC56	1-3	*34	*37	8	* 8.7g
	c	23MC96	1-1	*27	*41	10	* 6.6g
	d	23MC110	5-10	*26	*40	12	* 9.8g
	e		3-3	*30	*43	9	* 10.1g
	f	23MC142	8-2	*31	*32	10	* 10.4g
	g	23MC298	9-9	*47	*47	11	* 18.5g
	h	23MC323	6-11	*35	*54	12	* 18.2g
	i	23MC326	1-5	*32	*42	12	* 13.3g
	j	23MC343	1-1	*32	*38	8	* 9.7g

Medial fragments — thin, broad bifaces

58	a	23MC70	20-4	*28	*34	*11	* 8.8g
	b		6-2	*31	*40	*10	* 15.1g
	c	23MC130	1-1	*36	*25	*8	* 8.1g
	d	23MC133	1-1	*18	*52	*10	* 9.3g
	e	23MC142	11-9	*41	*34	*9	* 14.9g
	f		13-11	*28	*34	*9	* 8.2g
	g		13-12	*30	*35	*11	* 9.7g
	h	23MC298	10-6	*27	*43	*16	* 21.1g
	i		9-10	*24	*42	*7	* 5.6g
	j	23MC323	1-7	*18	*35	*10	* 8.4g
	k	23MC329	1-1	*25	*38	*9	* 7.4g
	l	23MC337	1-1	*26	*40	*8	* 10.8g

Proximal fragments — thin, broad bifaces with rounded bases

59	a	23MC55	15-2	*25	45	8	* 10.0g
	b	23MC148	3-1	*15	*41	8	* 5.0g
	c	23MC149	1-2	*44	49	11	* 22.5g

	d	23MC277	6-1	*47	45	10	* 23.4g
	e	23MC298	4-2	*19	*43	10	* 7.3g
	f	23MC323	6-12	*35	*46	12	* 20.7g
	g		3-5	*37	47	12	* 21.4g

Proximal fragments — thin, narrow bifaces with rounded bases

60	a	23MC67	1-7	*17	*36	8	* 4.9g
	b	23MC139	2-1	*28	35	9	* 8.3g
	c	23MC142	6-6	*22	27	8	* 4.0g
	d	23MC291	1-1	*40	30	9	* 10.3g
	e	23MC298	9-11	*45	*32	12	* 14.8g
	f	23MC323	3-6	*29	28	9	* 4.7g

Proximal fragments — thin, broad bifaces with square bases

61	a	23MC55	10-4	*24	44	7	* 11.3g
	b	23MC142	2-6	*28	34	7	* 8.9g
	c	23MC298	9-12	*19	29	8	* 4.0g

Proximal fragments — thin, broad bifaces, straight-based, contracting sides

62	a	23MC142	6-7	*33	*41	13	* 18.1g
	b		15-9	*31	*30	8	* 8.0g
	c		5-5	*36	*27	13	* 11.5g
	d	23MC298	4-3	*38	*38	9	* 12.4g
	e	23MC323	1-8	*30	*39	10	* 12.0g

Thin, relatively narrow, rectanguloid biface fragments

63	a	23MC70	5-1	*59	26	11	* 17.2g
	b	23MC142	6-8	*49	*31	12	* 17.3g
	c	23MC298	11-7	*48	30	9	* 13.1g

	d	23MC323	1-9	*46	28	13	* 16.5g

Thin, narrow biface fragments

64	a	23MC142	8-3	*42	22	7	* 7.6g
	b		9-23	*25	21	6	* 2.3g
	c		13-13	*21	19	9	* 3.2g
	d	23MC323	4-11	*31	21	7	* 6.6g

Miscellaneous thin biface fragments
(No measurements)

Tertiary flaking/carefully trimmed edges

65	a-i	23MC55-9	aw-bt	23MC142-24
	j-k	23MC56-2	bu-bx	23MC148-4
	l	23MC58-1	by	23MC153-1
	m	23MC61-1	bz	23MC166-1
	n	23MC65-1	ca	23MC264-1
	o	23MC66-1	cb-ce	23MC277-4
	p	23MC67-1	cf	23MC291-1
	q-ai	23MC70-19	cg-ck	23MC298-5
	aj	23MC72-1	cl	23MC303-1
	ak	23MC74-1	cm	23MC308-1
	al	23MC90-1	cn	23MC318-1
	am	23MC99-1	co-cq	23MC323-3
	an-ao	23MC100-2	cr	23MC332-1
	ap	23MC101-1	cs	FS76-274-1
	aq	23MC103-1		
	ar-au	23MC110-4		
	av	23MC136-1		

Medial

65	ct-cu	23MC70-2
	cv-cw	23MC90-2
	cx	23MC99-1
	cy-da	23MC142-3
	db	23MC339-1

Tertiary one edge, retouch other edge

65	dc-dd	23MC323-2

Secondary flaking

65	de-dh	23MC55-4	eb-et	23MC142-19
	di	23MC56-1	eu	23MC149-1
	dj	23MC65-1	ev-ew	23MC277-2
	dk-dt	23MC70-10	ex	23MC298-1
	du	23MC90-1	ey	23MC307-1
	dv-dx	23MC105-3	ez	23MC323-1
	dy	23MC110-1	fa	23MC331-1
	dz	23MC135-1	fb	23MC339-1
	ea	23MC136-1		

Miscellaneous thick biface fragments
(No measurements)

Primary flaking

66	a-f	23MC55-6	r	23MC74-1
	g-h	23MC56-2	s-t	23MC75-2
	i-k	23MC67-3	u	23MC77-1
	l-q	23MC70-6	v	23MC85-1

	w-x	23MC90-2	aw	23MC143-1
	y	23MC101-1	ax-az	23MC149-3
	z	23MC110-1	ba	23MC153-1
	aa	23MC112-1	bb	23MC269-1
	ab	23MC123-1	bc-bd	23MC277-2
	ac	23MC135-1	be-br	23MC298-14
	ad	23MC137-1	bs-bu	23MC323-3
	ae	23MC139-1	bv	23MC337-1
	af-av	23MC142-17	bw	FS76-294-1
	Secondary flaking			
66	bx-ca	23MC55-4	cq	23MC148-1
	cb	23MC67-1	cr-cs	23MC149-2
	cc-ce	23MC70-3	ct-cu	23MC277-2
	cf	23MC72-1	cv-cx	23MC298-3
	cg-ch	23MC110-2	cy	23MC316-1
	ci	23MC135-1	cz-da	23MC323-2
	cj	23MC136-1	db	23MC331-1
	ck-cp	23MC142-6		
	Tertiary			
66	dc	23MC70-1		
	dd	23MC110-1		
	de-dg	23MC142-3		
	dh	23MC298-1		
	di	23MC323-1		
	Medial			
66	dj	23MC298-1		

Miscellaneous Worked Chert

Miscellaneous crude bifaces

67	a	23MC55	15-3	52	30	13	18.7g
	b	23MC66	2-2	48	46	21	37.3g
	c	23MC77	1-2	44	30	10	11.3g
	d	23MC88	1-2	62	51	24	69.3g
	e	23MC142	5-6	55	28	13	16.0g
	f		5-7	37	24	7	7.1g
	g		9-24	62	50	16	55.7g
	h	23MC152	1-1	46	37	14	23.0g
	i	23MC323	4-12	53	45	12	28.9g

Miscellaneous worked chert (No measurements)

68	a	23MC56-1	q	23MC139-1
	b	23MC65-1	r-u	23MC142-4
	c-e	23MC67-3	v	23MC149-1
	f-i	23MC70-4	w	23MC276-1
	j	23MC77-1	x-aa	23MC298-4
	k	23MC88-1	ab	23MC306-1
	l-m	23MC100-2	ac-ae	23MC323-3
	n	23MC110-1	af	23MC326-1
	o	23MC120-1	ag	FS76-34-1
	p	23MC135-1		

Miscellaneous bifaces, utilized after breakage (No measurements)

69	a	23MC148-1
	b-c	23MC323-2

Flake Tools

Miscellaneous steep-edged uniface fragments
(No measurements)

70	a-c	23MC55-3	k	23MC111-1
	d	23MC65-1	l	23MC138-1
	e	23MC67-1	m-o	23MC142-3
	f-g	23MC72-2	p	23MC153-1
	h	23MC94-1	q-s	23MC298-3
	i	23MC101-1	t	23MC321-1
	j	23MC110-1		

Retouched flakes with pointed ends

71	a	23MC134	1-2	20	12	6	1.7g
	b	23MC142	6-9	33	12	4	1.8g
	c		5-8	36	27	7	7.2g
	d	23MC298	6-5	29	19	4	2.4g

Retouched flakes — miscellaneous areas
(No measurements)

72	a	23MC55-1	n	23MC148-1
	b	23MC56-1	o	23MC153-1
	c	23MC67-1	p	23MC269-1
	d-f	23MC70-3	q	23MC271-1
	g	23MC74-1	r	23MC298-1
	h	23MC77-1	s	23MC322-1
	i	23MC110-1	t-x	23MC323-5
	j-m	23MC142-4		

Retouched shatter (No measurements)

73	a	23MC142-1

Utilized flakes — miscellaneous areas (No measurements)

74	a-aj	23MC55-36	et	23MC105-1
	ak-am	23MC56-3	eu-fe	23MC110-11
	an-ao	23MC58-2	ff-fg	23MC115-2
	ap	23MC61-1	fh	23MC129-1
	aq-au	23MC65-5	fi-fk	23MC135-3
	av	23MC66-1	fl	23MC136-1
	aw-bj	23MC67-14	fm	23MC137-1
	bk-de	23MC70-47	fn	23MC139-1
	df-dg	23MC72-2	fo	23MC140-1
	dh	23MC73-1	fp-fq	23MC141-2
	di-dl	23MC74-4	fr-kl	23MC142-125
	dm-dq	23MC75-5	km-kq	23MC148-5
	dr	23MC84-1	kr-kw	23MC149-6
	ds	23MC86-1	kx-ld	23MC153-7
	dt	23MC87-1	le	23MC164-1
	du-dw	23MC88-3	lf	23MC165-1
	dx-ee	23MC90-8	lg	23MC172-1
	ef	23MC94-1	lh	23MC236-1
	eg-eh	23MC99-2	li-lk	23MC271-3
	ei-el	23MC100-4	ll-ln	23MC277-3
	em-eo	23MC101-3	lo-nt	23MC298-58
	ep	23MC103-1	nu	23MC305-1
	eq-es	23MC104-3	nv	23MC319-1

nw	23MC321-1	ph-pk	23MC331-4	
nx	23MC322-1	pl-pm	23MC332-2	
ny-pd	23MC323-32	pn	23MC339-1	
pe	23MC326-1	po	23MC341-1	
pf	23MC328-1	pp-pq	23MC343-2	
pg	23MC330-1	pr	FS76-80-1	

Utilized shatter
(No measurements)

75	a	23MC55-1					
	b	23MC142-1					
	c	23MC149-1					
	d	23MC339-1					

Cores

Polyhedral chert cores

76	a	23MC55	16-1	70	61	44	181.0g
	b		17-1	70	67	49	196.7g
	c	23MC65	5-1	107	89	64	565.9g
	d	23MC68	2-1	53	44	13	34.0g
	e	23MC70	23-4	79	63	44	192.8g
	f		25-4	85	72	51	296.3g
	g		26-1	55	51	28	93.1g
	h		26-2	65	57	39	127.6g
	i		24-3	71	39	35	121.8g
	j		27-1	74	58	39	139.4g
	k		28-2	82	39	30	74.8g
	l	23MC73	2-1	69	63	42	164.7g

m	23MC77	4-1	77	58	36	160.2g
n	23MC91	3-1	56	44	32	74.1g
o	23MC96	2-1	87	76	57	197.6g
p		2-2	51	37	22	34.6g
q	23MC108	1-2	55	36	20	39.4g
r		2-2	92	70	63	293.4g
s	23MC110	10-1	67	61	50	158.8g
t		10-2	74	50	23	105.4g
u		11-2	60	44	26	46.9g
v		11-3	47	46	42	70.4g
w		12-1	67	38	25	78.3g
x		12-2	71	37	35	93.0g
y	23MC142	17-5	57	45	40	91.3g
z	23MC142	18-2	53	37	17	33.6g
aa		18-3	51	47	20	38.4g
ab		18-4	71	57	39	128.4g
ac		19-4	55	37	22	38.8g
ad		20-1	68	52	34	102.7g
ae		22-1	71	60	58	220.3g
af		22-2	65	57	27	78.1g
ag		27-1	87	76	66	285.4g
ah		28-1	69	46	33	94.5g
ai		28-2	61	51	41	136.1g
aj	23MC225	3-1	52	36	26	49.6g
ak	23MC298	13-5	68	67	42	124.4g
al	23MC308	2-3	104	76	62	477.2g
am	23MC319	3-1	55	38	21	40.5g

	an		3-2	71	41	18	54.3g
	ao	23MC323	8-1	53	47	30	92.3g
	ap		9-1	93	43	24	83.7g
	aq	23MC330	2-1	51	45	37	71.4g
	ar	23MC333	1-1	64	50	32	63.3g
	as	23MC337	2-1	72	39	31	92.1g
Chert cores with a flat striking platform							
77	a	23MC67	5-2	82	64	45	179.4g
	b	23MC110	9-1	73	57	43	149.7g
	c		9-2	69	51	45	146.0g
	d	23MC277	7-1	62	47	34	87.1g
	e	23MC323	9-2	52	37	26	41.8g
Discoidal chert cores							
78	a	23MC110	11-4	63	53	25	87.7g
	b	23MC196	1-1	88	71	33	192.8g
	c	23MC298	7-1	83	61	26	129.0g
	d	23MC321	3-1	83	63	23	135.9g
	e	23MC323	9-3	85	63	25	127.0g
Chert nuclei							
79	a	23MC55	20-2	49	36	25	36.7g
	b	23MC65	4-1	36	30	19	131.1g
	c	23MC67	6-1	36	26	14	12.2g
	d	23MC110	10-3	40	30	15	13.3g
	e		14-1	38	29	19	17.4g
	f		14-2	25	19	17	5.9g

g		15-1	49	31	31	40.9g		
h	23MC140	1-2	45	34	26	32.4g		
i	23MC142	9-25	35	25	21	15.8g		
j		23-1	36	32	17	19.8g		
k		29-1	45	37	20	26.7g		
l	23MC298	14-10	47	37	21	34.3g		
m	23MC344	1-1	50	33	29	37.1g		
n	FS76-274	3-1	50	35	26	38.2g		

Chert core fragments
(No measurements)

80	a-b	23MC55-2	q	23MC172-1
	c	23MC56-1	r	23MC269-1
	d-f	23MC70-3	s	23MC298-1
	g	23MC99-1	t-w	23MC323-4
	h	23MC110-1	x	23MC326-1
	i	23MC140-1	y	FS76-290-1
	j-p	23MC142-7		

Ground and/or Pecked Stone

Large, full-grooved axe

81	a	23MC54	1-2	139	105	42	961.8g	H	d

Small, full-grooved axe

82	a	23MC277	5-1	88	*65	22	*160.2g	L	A

Celt fragment

83	a	23MC123	1-2	*50	39	*18	* 51.0g	H	F1d

Chipped stone celt or axe blank

84	a	23MC142	11-10	107	71	31	303.0g	–	A	

Pecked or pitted stone

85	a	23MC54	1-1	191	143	49	199.0g	H	FH/SS	1pt
	b	23MC55	2-1	94	*73	39	*315.4g	H	A	2pt
	c		2-2	96	63	34	364.0g	L	Fld	2pk
	d		4-2	113	83	45	589.8g	M	Fld	2pk, 1pt
	e		5-4	126	88	50	796.9g	M	Gc Gb	2pk
	f		6-1	119	90	61	865.5g	M	FH/SS	1pk
	g		7-1	*73	*50	*32	*135.2g	M	A	1pk
	h		9-1	84	*66	47	334.5g	M	A	2pk
	i	23MC56	2-1	*	*	*	*111.5g	H	Qtt	1pk
	j	23MC65	1-1	*48	55	*37	*138.0g	M	A	1pk
	k	23MC67	1-2	115	65	45	552.4g	L	FlD	2pk
	l		3-1	114	96	36	586.5g	L-M	Fld	2pk
	m		4-3	*81	*42	*20	* 93.3g	M	A	1pk
	n		5-1	71	62	41	267.3g	M-H	A	2pk
	o	23MC70	3-1	86	66	55	322.8g	H	d	2pk
	p		11-1	*	*	*	* 43.4g	H	A	1p
	q		16-1	86	70	42	351.5g	M	A	2pk
	r		16-2	71	65	48	246.6g	M	A	2pk
	s		18-1	*70	*43	57	*224.5g	H	A	2p
	t		18-2	*62	*59	57	*285.5g	H	A	2p
	u		20-1	98	79	52	529.1g	L	A	1pk
	v		13-1	*58	62	32	*125.5g	M-H	A	1pk/p
	w		24-2	73	61	40	201.8g	H	D	2pk/p

x		31-2	84	73	49	418.5g	L	A	lp
y	23MC74	3-1	*70	*46	*25	* 77.7g	M-H	FH/SS	lp
z	23MC77	2-1	85	71	30	*307.2g	L	Qtt	lp
aa	23MC91	2-1	102	65	35	261.3g	L	Sh	lp
ab	23MC93	1-1	98	65	41	274.2g	M-H	Gb D	lp
ac	23MC94	1-1	*79	*46	*34	*233.6g	H	d	lp
ad	23MC110	5-2	*53	*64	*44	*188.1g	M-H	A	lp
ae		5-5	70	64	42	296.6g	M	FlD	lp
af		5-6	79	53	24	134.6g	L	A	lp
ag		7-1	173	138	46	1305.5g	H	fSS	lp
ah	23MC115	1-1	116	72	43	470.4g	L	Qtt	lp
ai	23MC135	1-1	123	94	66	1184.7g	M	D	lp
aj		2-1	84	59	43	349.1g	L-M	A	lp
ak	23MC137	2-1	97	66	55	501.8g	M	Fld	2p
al	23MC138	1-1	81	74	44	395.8g	M	A	2p
am	23MC139	1-1	*34	64	39	*114.0g	M	A	lp
an	23MC140	4-1	*53	*50	52	*225.2g	M	Gb	lp
ao	23MC141	1-1	*87	*59	48	*327.4g	L	A	lp
ap	23MC142	1-1	88	82	50	499.5g	L	Qtt	lp
aq		5-2	86	71	58	510.8g	L	d	lp
ar		7-3	148	83	50	980.1g	M-H	A	2p
as		8-1	95	68	38	406.7g	M-H	D	lp
at		9-4	66	51	37	174.7g	L	Qtt	2p
au		9-7	*61	63	*34	*153.6g	L	d	lp
av		9-15	84	57	44	272.5g	L-M	A	lp
aw		11-3	*106	*43	*55	*287.7g	L	Gb/D	lp
ax		11-5	*63	85	*43	*244.3g	M	A	lp

ay		11-7	96	70	41	429.7g	L-M	A	lp
az		11-8	100	72	39	356.1g	M-H	Fld	lp
ba		12-1	101	83	55	672.8g	L	Qtt	lp
bb		13-4	78	74	37	284.5g	L	A	2p
bc		13-5	82	*58	43	*285.3g	M	A	2p
bd		13-6	188	122	57	1558.5g	M	D	lp
be		14-1	*53	74	52	*238.8g	M-H	A	lp
bf		14-8	122	90	47	631.3g	H	A	2p
bg		16-1	116	112	61	1212.4g	L-M	A	lpk
bh		16-3	93	82	52	483.7g	M	A	2pk
bi		17-3	*49	*65	28	*118.6g	M-H	A	lpk
bj		20-2	*81	93	43	*441.6g	M	D	lpk
bk		26-2	65	59	43	239.3g	H	A	lpk, lp
bl		26-3	128	98	59	1070.1g	M-H	A	2pk
bm	23MC148	2-1	*72	*68	*44	*179.5g	M	A	lpk
bn	23MC153	2-1	126	99	52	1130.6g	L	ShD	lpk
bo	23MC225	1-1	83	56	33	219.4g	L	A	2pk
bp	23MC237	1-1	95	84	36	498.5g	H	A	2pk/p
bq	23MC277	1-1	83	79	43	358.7g	M	A	lpk
br		2-6	91	83	60	711.6g	M-H	A	2pk/p
bs		3-2	118	89	60	943.7g	M	Qtt	2pk
bt	23MC289	1-1	60	57	38	182.4g	M	Qtt	2pk
bu	23MC298	1-1	70	62	34	217.9g	L	Fld	lpk
bv		2-2	80	63	53	378.0g	L-M	Gb	lpk
bw		9-2	*84	*37	*41	*160.6g	M	DGb	lpk
bx		10-1	*	*	*	* 74.3g	H-M	SS/ Qtt	lp

by		11-1	116	88	58	804.0g	L	Fld	1pk
bz		11-3	81	57	47	307.4g	L	Qtt	1pk
ca		12-5	84	62	38	318.6g	M-H	Fld	2pk/p
cb		13-4	122	79	53	797.5g	H	A	1pk
cc		14-3	75	68	39	281.2g	L	Qtt	1pk
cd		14-9	110	83	*46	*444.3g	M-H	A	1pk
ce	23MC308	1-4	91	84	38	472.6g	L-M	A	2pk
cf	23MC319	1-1	149	87	38	542.7g	L	A	1pk
cg		1-2	99	82	21	218.7g	H	A	1pk
ch	23MC320	1-1	*119	*80	50	*690.1g	V-H	Grd	1p
ci	23MC323	2-3	103	80	41	519.3g	H	Gt/ Qtt	2pk
cj		4-4	*	*	*	* 96.7g	M	FlD	1pk
ck		4-6	*	*	*	*165.1g	M	Qtt	1pt
cl		6-1	82	74	55	469.8g	M	Qtt	1pk/p
cm		6-3	117	90	65	954.3g	H	A	2pk/p
cn		6-5	87	86	49	492.8g	H	A	2pk/p
co		6-6	108	75	45	501.9g	L-M	A	1pk
cp		6-7	89	83	52	574.4g	M-H	A	2pk/p
cq		6-8	83	78	43	371.9g	H-VH	A	2p
cr		6-9	*107	*55	81	*638.1g	M-H	A	1pk/p
cs		6-10	94	67	30	257.6g	L	A	1pk
ct	23MC326	1-1	105	97	56	780.5g	L-M	A	2p
cu		1-2	93	92	50	613.4g	L-M	A	2p
cv	23MC338	1-1	72	66	51	390.5g	L-M	A	2pk
cw	23MC341	2-1	76	62	44	277.2g	M	A	2pk
cx		4-1	89	80	46	455.1g	L-M	Qtt	2pk
cy	23MC342	1-1	110	83	49	573.3g	M-H	Qtt	1pk

Ground stone

86	a	23MC55	3-1	131	90	*43	*642.2g	L-M	A	2g
	b		10-1	103	40	*22	*131.4g	L	A	1g
	c		11-1	112	89	62	869.7g	M	A	1g
	d	23MC56	1-1	*	*	*	3.8g	M-H	A	1g
	e		1-2	*	*	*	41.8g	L-M	A	1g
	f	23MC67	1-1	*153	*123	*50	*712.1g	L	A	1g
	g		1-5	*73	74	44	*322.3g	M	A	2g
	h		2-1	*74	*45	*19	* 55.3g	M-H	A	1g
	i		4-2	*67	*82	38	*281.8g	M-H	d	2g
	j		4-4	*45	*36	*38	* 84.2g	L	A	1g
	k		4-5	*	*	*	* 29.0g	M-H	A	1g
	l		4-6	*	*	*	* 39.6g	M	A	1g
	m	23MC70	2-1	*59	*38	35	* 72.3g	M	FH/SS	1g
	n		13-2	*	*	*	*179.8g	H	Sh Gb	2g
	o		20-3	92	79	41	523.6g	L-M	Fld	1g
	p	23MC72	1-2	*	*	*	* 97.5g	L-M	A	1g
	q		1-3	*	*	*	* 75.8g	L-M	A	1g
	r		1-4	*	*	*	* 89.5g	L	A	1g
	s	23MC74	1-1	*	*	*	* 60.6g	M-H	A	1g
	t		4-3	*84	*48	53	*202.7g	L-M	A	1g
	u	23MC77	1-1	*	*	*	* 90.3g	H	Qtt	1g
	v		1-3	*	*	*	*166.3g	L	Qtt	1g
	w	23MC83	1-1	*	*	*	*297.9g	M-H	d	1g
	x	23MC90	2-1	*	*	*	* 29.1g	M-H	d	1g
	y	23MC92	2-1	*59	*48	33	*159.1g	H	TGn	1g
	z	23MC110	2-1	*	*	*	* 37.2g	H	A	1g

aa		4-2	*	*	*	* 35.6g	M	A	lg
ab		4-3	*	*	*	* 25.8g	M	A	lg
ac		4-4	*	*	*	* 92.8g	H	A	lg
ad		5-1	*	*	*	*152.5g	M-H	d	lg
ae		5-9	*	*	*	*133.1g	M	A	lg
af	23MC125	1-1	*	*	*	*452.2g	L	A	lg
ag	23MC140	1-1	*	*	*	* 59.5g	M	Qtt	lg
ah		2-1	*	*	*	*180.8g	L	Gb	lg
ai		3-1	*	*	*	* 78.7g	M-H	A	lg
aj	23MC142	2-2	*	*	*	*227.6g	H	D	2g
ak		2-3	*	*	*	* 51.9g	M-H	D	lg
al		2-4	*	*	*	* 61.0g	M-H	D	lg
am		3-1	*	*	*	* 90.0g	M-H	Gb	lg
an		3-2	*	*	*	*163.9g	H	Qtt	lg
ao		7-1	*	*	*	* 68.7g	M	G	lg
ap		9-6	*	*	*	*156.0g	L-M	A	lg
aq		9-9	*	*	*	* 15.0g	M	A	lg
ar		9-10	*	*	*	*121.7g	L-M	Fld	lg
as	23MC142	9-14	*119	*66	*30	*286.9g	L	Sh	lg
at		14-3	*76	*44	46	*192.2g	M	Gb A	lg
au		15-1	*	*	*	*112.8g	M-H	A	lg
av		15-2	*	*	*	* 15.6g	V-H	D	lg
aw		15-3	*	*	*	* 79.0g	M-H	DGb	lg
ax		16-8	*	*	*	*118.3g	H	A	lg
ay		17-1	*	*	*	* 64.6g	M	A	lg
az		17-2	*	*	*	* 31.3g	L-M	A	lg
ba		18-1	*69	*78	55	*395.7g	L-M	A	lg

bb		19-2	102	84	51	548.9g	L-M	G	2g
bc		19-3	*122	*77	*62	*645.6g	M	A	1g
bd	23MC153	1-1	*98	*62	*60	*535.3g	M	G	1g
be	23MC270	2-1	*94	*60	*84	*645.7g	M-H	G	1g
bf	23MC298	1-2	*121	*58	*33	*240.5g	L	A	1g
bg		2-3	*93	*68	*62	*493.2g	L	Qtt	1g
bh		3-1	*	*	*	* 16.3g	L	A	1g
bi		3-2	*	*	*	*105.6g	L	A	1g
bj		3-4	*	*	*	*140.2g	L	A	1g
bk		9-3	*	*	*	*174.9g	M-H	G	1g
bl		11-4	*	*	*	*162.6g	L	A	1g
bm		12-1	*	*	*	* 50.9g	L	A	1g
bn		12-2	*	*	*	*109.4g	L-M	Gt Qtt	1g
bo		12-3	*	*	*	* 21.1g	L-M	Qtt	1g
bp		12-4	*	*	*	* 12.5g	L-M	A	1g
bq		13-2	*	*	*	*223.7g	M	d/ Qtt	1g
br		13-3	*	*	*	* 77.2g	L	A	1g
bs		14-6	*	*	*	*210.0g	M-H	D	1g
bt	23MC308	1-1	*57	*46	56	*231.8g	M-H	A	1g
bu	23MC323	1-2	*	*	*	* 78.5g	M-H	A	1g
bv		1-3	*93	*57	22	*154.9g	M-H	A	2g
bw		4-3	*	*	*	* 72.6g	L	A	1g
bx		4-5	*	*	*	* 41.8g	H	A	1g
by		4-7	*	*	*	* 92.1g	V-H	Qtt	1g
bz	23MC330	1-1	*	*	*	* 6.2g	M-H	Qtt	1g
ca	23MC331	2-1	*127	*74	*64	*590.8g	M-H	dD	1g

	cb	23MC341	1-1	*104	*82	*36	*282.7g	H	FH/SS	lg
	cc		3-1	*	*	*	*309.5g	M-H	G	lg
Ground and pecked stone										
87	a	23MC55	9-2	*43	*36	*37	* 43.0g	M-H	A	lp,lg
	b		5-2	78	71	46	505.0g	L-M	A	2p,lg
	c		10-2	*99	*73	*57	*601.7g	M	G	lp,2g
	d	23MC56	2-2	103	89	54	651.6g	M	Gt Qtt	lp,lg
	e	23MC58	2-1	*49	85	47	*285.3g	M	Qtt	lp,lg
	f	23MC61	1-1	*33	*62	*39	*142.8g	M	A	lp,lg
	g		2-2	121	105	55	986.7g	L	d	lp,lg
	h	23MC65	2-1	123	95	73	1151.9g	L-M	G	lp,lg
	i	23MC67	3-2	91	81	48	540.7g	L	Qtt Qtt	lp,lg
	j	23MC70	7-1	*59	*61	*26	*169.5g	M-H	d	lp,lg
	k		13-4	110	85	55	738.6g	L	A	lp,lg
	l		17-1	96	72	47	418.1g	M	A	lp,lg
	m		22-1	*60	*37	*35	* 78.0g	M	A	lp,lg
	n		25-1	118	75	65	806.6g	M	A	2p,lg
	o	23MC74	4-1	102	64	43	396.0g	M	A	2p,2g
	p	23MC86	1-1	*55	84	49	*342.2g	H	A	lp,2g
	q		2-1	131	111	62	1512.5g	M	CG	lp,lg
	r	23MC110	3-1	103	79	52	595.6g	L	Qtt A	lp,lg
	s		5-7	*	*	*	* 28.5g	M-H	D	lp,lg
	t		5-8	*	*	*	* 87.3g	M-H	D	lp,lg
	u		8-1	82	78	44	461.9g	M	A	2p,2g
	v		8-2	84	66	41	347.6g	L-M	A	lp,2g

	w	23MC138	3-1	68	*57	*35	*153.7g	L-M	A	1p,1g
	x	23MC142	9-12	101	70	58	463.8g	M	A	1p,1g
	y		9-13	88	68	36	293.0g	L-M	A	2p,1g
	z		11-4	*64	84	39	*296.6g	M	Qtt	1p,1g
	aa		12-3	80	63	33	247.1g	L	A	2p,1g
	ab		13-8	*27	*68	*37	* 92.3g	M-H	A	2p,1g
	ac		16-2	*111	*70	*49	*543.5g	M	Qtt	2p,2g
	ad		16-4	*53	*74	*35	*234.5g	L	A	1p,1g
	ae		20-1	89	71	40	391.1g	M-H	A	2p,1g
	af	23MC270	1-1	73	55	42	*230.6g	M	G	1p,1g
	ag	23MC277	2-5	85	70	40	376.5g	M	A	2p,1g
	ah	23MC298	9-1	78	71	40	293.0g	H	I	1p,1g
	ai		11-2	124	106	49	1002.4g	H-VH	A	2p,1g
	aj		13-1	*72	*46	*36	*209.4g	M-H	FG Gb	1p,1g
	ak	23MC323	6-2	117	102	54	963.9g	L-M	A	2p,1g
Ground and battered stone										
88	a	23MC142	1-2	82	64	46	394.7g	M-H	A	2g,1b
Pecked and battered stone										
89	a	23MC55	4-3	114	76	40	394.8g	M	Qtt	1pk,1b
	b	23MC67	1-3	87	77	32	368.6g	M-H	PFt	2pk,2b
	c		2-2	92	53	35	270.8g	L-M	Qtt	1pk,1b
	d	23MC70	13-3	79	68	62	439.2g	L-M	Qtt	2p,2b
	e		13-5	63	60	43	242.8g	M-H	Qtt	1p,cb
	f	23MC77	2-2	96	74	34	350.2g	L-M	A	1pk,1b
	g	23MC78	1-1	110	96	60	891.5g	M-H	A	2p,4b

h	23MC108	1-1	87	77	48	467.6g	L-H	Qtt	1p,2b
i	23MC110	4-1	*69	73	*38	*192.8g	M	A	1p,1b
j		5-4	71	55	39	210.0g	M	A	1p,3b
k	23MC142	1-3	75	61	53	288.8g	M-H	A	1p,3b
l		2-1	98	78	56	574.4g	L-S	A	1p,4b
m		9-8	80	67	53	374.3g	M-H	Qtt	2p,1b
n		12-2	73	68	43	352.3g	L	Fld	2pk,4b
o		13-3	101	82	56	665.0g	L-M	Qtt	2pk,3b
p		14-2	83	55	47	329.8g	M-H	Fld	2p,2b
q		15-5	76	60	34	188.0g	L-M	Qtt	2p,3b
r		15-6	107	74	47	525.1g	M-H	A	2p,4b
s		26-1	80	65	45	349.6g	H	Qtt	2p,2b
t	23MC148	1-1	85	75	40	334.2g	H	Qtt	2p,2b
u	23MC149	2-1	99	77	57	622.3g	M-H	Qtt	2p,3b
v	23MC258	2-1	70	53	30	202.1g	M	A	2pk,1b
w	23MC277	2-2	92	88	42	497.8g	L-M	Qtt	1p,cb
x		3-1	105	101	43	694.6g	L	A	2pk,2b
y	23MC298	3-5	79	76	45	364.2g	M	A	2pk,2b
z		2-1	84	72	57	470.8g	M-H	A	2pk,2b
aa		3-3	93	68	54	437.9g	M-H	A	2p,4b
ab		10-3	91	78	36	374.5g	H	A	2pk,3b
ac		14-4	98	60	42	301.6g	M	A	2pk,4b
ad		14-5	93	74	54	502.3g	L	A	2pk,1b
ae		14-7	81	79	49	444.7g	L	A	2pk,3b
af	23MC323	1-1	99	70	48	532.2g	H-S	Qtt	2pk,3b
ag	23MC332	1-1	92	78	48	487.8g	M-H	Qtt	2p,1b
ah	23MC339	1-1	107	78	42	481.5g	L-M	Qtt	1p,2b

Ground, pecked and battered stone

90	a	23MC54	2-1	69	66	29	231.5g	L-M	A	2p,2g,2b
	b	23MC55	4-1	89	85	49	516.9g	H	Qtt	2p,1g,4p
	c		12-1	*71	*62	*27	*187.7g	M-H	A	1p,1g,1b
	d		5-1	86	60	49	371.6g	M	Qtt	2p,1g,2b
	e		5-3	89	72	44	422.9g	M-H	Qtt	2p,2g,1b
	f		8-1	86	62	46	344.8g	L-M	FG	2p,1g,4b
	g		8-2	102	93	44	562.8g	M-H	Qtt A	2p,2g,4b
	h		11-2	114	71	46	530.8g	M	A	2p,2g,4b
	i	23MC58	2-2	87	72	46	444.6g	M-H	A	1p,2g,2b
	j	23MC67	1-4	103	85	31	408.7g	M	A	2p,1g,1b
	k		2-4	82	63	41	276.8g	M	A	1p,1g,1b
	l		4-1	113	78	55	682.2g	L	A	1p,2g,2b
	m	23MC70	6-1	117	87	52	786.5g	L-M	A	2p,1g,3b
	n		9-1	83	69	49	363.4g	M-H	A	2p,1g,4b
	o		20-2	98	75	48	572.1g	M-H	Qtt	2p,1g,4b
	p		23-2	84	65	52	370.4g	M	A	2p,1g,4b
	q		23-3	96	86	52	620.8g	M-H	A	2p,2g,4b
	r		24-1	110	67	39	403.0g	L	Qtt	1p,1g,2b
	s		25-2	94	73	52	493.6g	M	A	2p,1g,3b
	t		25-3	84	84	57	621.8g	M-H	A	1p,2g,4b
	u		28-1	105	86	50	576.6g	M-H	A	1p,1g,2b
	v	23MC72	1-1	*64	*76	*23	*123.6g	M	A	1p,1g,1b
	w	23MC74	2-4	96	73	51	479.6g	M-H	Qtt	2p,1g,4b
	x		4-2	81	74	43	404.5g	H	A	2p,2g,4b
	y	23MC85	1-1	*49	66	43	*216.8g	H	A	2p,1g,1b

z	23MC108	2-1	97	74	51	539.6g	H	A	2p,2g,4b
aa		3-1	91	66	52	423.0g	M	A	2p,1g,3b
ab		4-1	128	97	63	931.4g	L	A	1p,1g,1b
ac	23MC110	3-2	77	71	48	372.0g	M	Qtt	2p,1g,3b
ad		5-3	*47	*57	*55	*160.6g	L	Qtt	1p,1g,1b
ae		6-1	119	99	53	933.7g	L-M	A	2p,2g,2b
af	23MC136	1-1	105	71	42	439.7g	M-H	A	2p,1g,4b
ag	23MC142	3-3	133	96	51	871.9g	M	A	2p,1g,4b
ah		5-1	94	76	42	436.4g	M	A	2p,1g,4b
ai		14-6	111	78	61	642.9g	L-M	Qtt	2pk,1g,1b
aj		14-7	99	78	43	551.4g	M-H	Fld	2p,2g,1b
ak		16-6	*91	*38	*41	*187.9g	M-H	A	1p,1g,1b
al		17-4	*95	58	32	*244.6g	L-M	A	1p,1g,2b
am		19-1	*78	88	53	*511.6g	M-H	A	2p,2g,2b
an	23MC148	1-2	100	82	44	604.6g	M	A	2p,1g,1b
ao	23MC277	2-7	90	74	48	423.3g	M	A	2p,1g,2b
ap		3-3	102	85	44	589.6g	M-H	Qtt	2p,2g,4b
aq	23MC298	14-8	100	81	37	453.1g	M	FlD	2p,2g,2b
ar	23MC308	3-1	98	65	42	407.2g	M-H	Fld	2p,1g,3b
as		2-1	108	90	60	835.7g	H-VH	A	2p,2g,4b
at	23MC323	4-1	131	79	61	1032.2g	H-VH	A	1p,1g,2b
au		4-2	76	66	38	*320.1g	L-M	A	1p,1g,2b
av		6-4	116	83	4b	720.7g	H-VH	A	2p,2g,4b
aw		3-1	112	100	62	1088.4g	M-H	A	2pk,2g,4b

Very heavily, deep, random, pecked stone

91	a	23MC92	1-1	143	122	61	1545.9g	H	Sh Gb	2pk

	b	23MC142	10-2	135	122	45	1158.9g	VH	D	2pk
End battered cobbles										
92	a	23MC58	1-1	122	52	*42	362.9g	M-H	Qtt	2b
	b	23MC67	2-3	78	51	44	228.1g	L	A	2b
	c	23MC70	4-1	70	56	33	201.5g	L-M	A	1b
	d	23MC74	2-1	*40	*49	*34	* 80.4g	M-H	Qtt	1b
	e		2-3	103	66	63	552.2g	L-M	A	1b
	f	23MC93	2-1	64	54	49	224.3g	L-M	Qtz	1b
	g	23MC110	2-2	*	*	*	* 31.4g	M	Gb	1b
	h	23MC137	1-1	76	64	55	348.1g	L	Qtt	2b
	i	23MC138	5-1	*62	55	51	*245.8g	M-H	Qtt	1b
	j	23MC142	7-2	68	54	35	165.0g	M	A	1b
	k		9-2	66	54	25	113.8g	L	Qtt	2b
	l		9-3	99	56	49	455.0g	L	Gb	1b
	m		11-6	81	55	22	139.7g	L	Qtt	2b
	n		13-2	*74	*80	45	*350.4g	L-M	Qtt /sc	1b
	o		14-5	68	48	*25	*102.8g	M-H	Qtz	2b
	p		15-4	*	*	*	* 22.9g	M-H	Qtt	2b
	q		16-5	80	51	29	178.0g	L	Qtt	2b
	r	23MC149	1-1	*	*	*	* 60.3g	L	Qtt	1b
	s	23MC277	2-3	112	101	65	969.9g	H	Qtt	2b
	t		2-4	75	69	38	282.5g	M	Qtt	2b
	u	23MC298	14-1	87	57	50	269.7g	M	FH/ SS	2b
	v		14-2	*	*	*	*138.2g	L	Qtt	1b
	w	23MC308	2-2	70	61	36	241.9g	M	Qtt	1b
	x	23MC323	2-2	81	71	28	231.4g	L	Qtt	1b

Edge battered cobbles

93	a	23MC66	1-1	77	61	32	336.6g	M-H	Qtt	2b
	b	23MC298	10-2	82	74	40	282.4g	M-H	Qtt	2b
	c	23MC335	1-1	103	60	30	302.3g	L	Qtt	2b

End and edge battered cobbles

94	a	23MC70	31-1	89	65	36	276.4g	M	Qtt	4b
	b	23MC74	2-2	68	66	34	223.4g	M	Gt	4b
	c	23MC138	2-1	75	66	34	239.1g	M	Qtt Qtt	4b

Continuously edge-battered cobbles

95	a	23MC61	2-1	*88	*49	*59	*295.9g	H	Qtt	cb

End and facially battered stone

96	a	23MC142	14-4	115	84	62	823.3g	M-H	Qtt	2b,1b

Facially battered stone

97	a	23MC142	16-7	*50	64	*39	*212.2g	H	A	1b

Thin distally ovate battered stone

98	a	23MC90	1-1	84	68	16	119.4g	M-H	Gc Gb	

Chert and quartzite hammerstones

99	a	23MC55	1-1	58	51	35	138.4g	M	c	S,B
	b		10-3	70	62	53	276.5g	M	Qtt	M,B
	c	23MC110	1-1	*29	51	25	* 35.4g	L	c	S,B
	d		11-1	81	39	27	92.3g	M	c	S,B
	e	23MC138	4-1	76	68	47	277.3g	M	c	M,cb
	f	23MC142	12-4	81	71	55	454.3g	H-VH	c	L,cb

Chipped stone fire-cracked rock										
100	a	23MC55	5-5	105	85	41	268.9g	L	A	1ch side
	b	23MC142	9-1	63	59	20	82.1g	no	A	1ch side
	c		9-16	82	81	60	466.2g	no	A	2ch side
	d		12-5	78	49	22	99.3g	no	A	1ch side
	e	23MC258	1-1	119	90	42	382.8g	no	A	2 ends 1ch side
Chipped stone metate fragment										
101	a	23MC142	13-1	139	57	39	319.7g	M	A	1g, 2ch edge
Abraded sandstone										
103	a	23MC70	21-1	72	51	17	67.1g	L-M	MSS	1g, flat
	b		23-1	*51	*25	*117	* 23.1g	L-M	MSS	1g, flat
	c	23MC100	1-1	45	38	22	56.7g	M	SS/ Qtt	1g, groove
	d	23MC103	1-1	98	*53	33	*197.7g	M-H	FH/ SS	1g,
	e	23MC142	9-11	*	*	*	* 31.7g	M	FH/ SS	1g, flat
	f		13-7	43	42	34	50.2g	H	MSS	2g, grooves
	g		15-7	*70	*50	*30	*114.5g	M-H	MSS	1g, flat
Metates										
104	a	23MC55	20-1	153	120	51	177.4g	H	d	2g
	b		1-2	247	181	52	342.0g	H	A	1g
	c	23MC142	10-1	166	123	49	177.0g	M	FlD	1g
	d		1-4	232	216	73	573.0g	M-H	d	1g
	e	23MC153	1-2	194	186	88	450.0g	H	Qtt	2g
Metate/sharpening stone										
105	a	23MC65	1-2	168	152	53	1498.9g	VH	SS/ Qtt	2g faces

Metate with subsequent deep facial pecking

106	a	23MC158	[illegible]	159	138	50	1578.5g	H	Qtt	ig,lp

Battered stone [illegible]

107	a	23MC323	2-1	56	55	52	199.2g	M	A	cb

Hematite

Modified Hematite

108	a	23MC26	2-4	39	21	8	10.9g	C
	b	23MC58	1-3	58	51	21	76.0g	S
	c	23MC67	3-4	22	17	4	2.0g	F
	d	23MC74	4-4	18	16	12	6.7g	C
	e	23MC102	3-1	35	26	8	12.1g	C
	f	23MC108	2-3	24	23	13	12.4g	C
	g	23MC110	1-3	68	44	14	57.4g	C
	h		3-4	30	24	17	21.2g	C
	i		4-5	29	21	12	11.2g	C
	j		4-6	40	24	6	9.6g	F
	k		5-11	32	20	9	6.5g	C
	l		6-2	12	9	2	.4g	G
	m	23MC135	3-1	42	29	13	19.6g	C
	n	23MC136	4-1	42	23	14	26.0g	C&G
	o	23MC142	6-10	24	19	7	5.8g	C
	p		11-11	38	32	11	23.4g	C
	q		3-4	47	20	8	11.0g	G
	r		22-3	56	12	32	129.4g	G
	s		26-4	24	14	11	3.0g	C

t		26--5	37	14	14	14.2g	C&G
u		9-4	39	31	8	17.0g	C
v		8-5	33	20	8	11.4g	C
w		15-10	59	39	14	64.0g	C&G
x		15-11	69	54	30	199.4g	C
y		16-9	37	12	8	4.8g	C
z		14-11	44	33	6	14.5g	G
aa		14-12	67	39	33	116.4g	S
ab		13-14	38	24	21	33.1g	C
ac		13-15	52	35	27	82.7g	G
ad		13-16	30	22	6	6.7g	G
ae	23MC162	1-1	13	7	1	.2g	F
af	23MC172	1-1	42	33	10	18.2g	G
ag	23MC277	1-2	43	34	12	22.0g	G
ah		2-1	39	24	10	8.6g	C
ai	23MC279	1-1	30	17	12	8.3g	C
aj	23MC282	1-1	37	11	9	5.4g	G
ak	23MC297	1-1	88	62	21	224.6g	C
al	23MC298	12-6	35	20	10	9.7g	
am		14-11	18	10	3	.7g	F
an	23MC311	1-2	22	11	11	3.3g	C
ao	23MC318	1-1	22	18	5	2.3g	G
ap	23MC323	1-10	29	17	12	5.5g	C&G
aq		1-11	50	35	22	58.8g	C&G
ar		12-1	80	74	18	203.9g	C&G
as		12-2	60	31	14	37.5g	C&G

at		12-3	37	30	15	31.5g	C&G
au		12-4	51	41	12	41.1g	C
av	23MC337	1-2	61	41	26	135.0g	C

Unmodified hematite
(No measurements)

109	a-b	23MC55-2	bm	23MC135-1
	c-h	23MC56-6	bn	23MC136-1
	i-k	23MC61-3	bo-bt	23MC138-6
	l-m	23MC67-2	bu-cv	23MC142-28
	n-y	23MC70-12	cw	23MC269-1
	z	23MC74-1	cx-da	23MC277-4
	aa-ab	23MC77-2	db	23MC280-1
	ac-ah	23MC100-6	dc	23MC291-1
	ai-ak	23MC101-3	dd	23MC297-1
	al	23MC108-1	de-dh	23MC298-4
	am-bi	23MC110-23	di-dk	23MC323-3
	bj-bl	23MC134-3		

Appendix III

FIRE-CRACKED ROCK TABLES

This section summarizes the fire-cracked rock and unmodified stone recovered from sites. Numbers and weights by size grades of specific stone types have been included. A comparison of these with modern lithic samples from the lower half of the reservoir can be made from Table II in volume one. Upper numbers represent raw counts and lower numbers represent weight in grams.

All labeling information should be self-explanatory. The only abbreviations utilized are:

FG - Fine-grained
MG - Medium-grained
CG - Coarse-grained

These abbreviations refer to within-class diversity. Thus, a fine-grained gabbro is somewhat finer-grained that the modal class characteristics, but is not sufficiently fine-grained to be classed as a basalt.

23MC54
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Flint Hill Sandstone	1 2g	8 61g	13 473g	6 674g				(28) 1210
Dolerite		2 35g						(2) 35
Granite					1 572g		1 1065g	
	2g (1)	9g (10)	473g (13)	674g (6)	572g (1)	—	1065g (1)	(2) (32) 1882

23MC55
FCR-Surface-(6)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	6-7	
Flint Hill Sandstone	51 65g	530 4847g	515 17,776g	151 13,650g	35 8292g	11 5373g	5 3682g	1 1402g	(1299) 55,087
Quartz	2 2g	1 2g	1 23g						(4) 27g
Cherty Limestone	1 1g	1 10g	2 29g						(4) 40g
Feldspar		1 3g							(1) 3g
Quartzite/ Sileceous Chert		1 18g							(1) 18g
Argillite	2 2g	12 108g	21 900g	9 1004g	4 897g	3 1781g			(51) 4692g
Diorite		3 30g	4 171g	6 976g	1 196g				(14) 1373g
MG Argillite		1 12g	9 362g	2 200g					(12) 574g
Quartzite	1 1g	15 137g	16 812g	12 1344g	3 879g	1 456g	1 799g		(49) 4408g
Porphoritic Felstie					1 210g				(1) 210g
Basalt		6 69g	4 145g	4 453g					(14) 667g
Gneissic Dolerite		1 9g	2 175g	1 79g					(4) 263g
Granite		2 9g	1 41g	3 404g	2 783g				(8) 1237g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	6-7	
Felso-Dolerite		1 12g		3 413g	1 499g				(5) 924g
Gneissic Gabbro						2 1289g			(2) 1289g
Sandstone/ Quartzite			1 61g						(1) 61g
Dolerite		2 32g	2 151g	4 621g		2 1125g			(10) 1929g
Granitic Quartzite		1 13g	1 12g	2 244g	3 1549g				(7) 1818g
Gneissic Diorite			1 50g						(1) 50g
Gabbro		1 21g	5 213g	1 202g		1 277g			(8) 713g
Felsite			1 37g						(1) 37g
Olivine Felsite				2 221g					(2) 221g
Felso-Dolerite/ Gabbro			1 59g						(1) 59g
Porphoritic FG Gabbro			1 34g						(1) 34g
Metamorphozed Felsite			2 57g						(2) 57g
Grano-Diorite			1 45g	1 183g					(2) 228g
Gneissic Dolerite/Gabbro				2 195g	1 197g				(3) 392g
Indeterminant			1 77g						(1) 77g
	(57) 71g	(579 5332g	(592) 21,230g	(203) 20,189g	(51) 13,502g	(20) 10,301g	(6) 4,461g	(1) 1407g	(1509) 76,488g
Glacial	2 4g		4 151g	4 1051g	6 2498g	2 2586g			(18) 6290g
Unmodified Flint Hill Sandstone				1 105g					(1) 105g
	(59) 75g	(579) 5332g	(596) 21,381g	(208) 21,345g	(57) 16,000g	(22) 12,887g	(6) 4,461g	(1) 1402g	(1528g) 82,883g

23MC56
FCR-Surface-(3)

	¼-½	½-1	1-2	2-3	3-4	
Sandstone	1 1g	2 11g				(3) 12g
Chert	1 1g		2 108g			(3) 109g
Quartzite	2 3g	2 27g	10 305g			(14) 375g
Granitic Quartzite	1 1g	3 43g	4 161g	3 382g	1 201g	(12) 788g
Diorite	1 3g	2 27g		2 327g		(5) 357g
Argillite	1 2g	17 126g	6 266g	1 184g		(25) 578g
Metamorphozed Felsite		3 40g	1 53g	1 120g		(5) 213g
MG Argillite	1 2g	4 28g	1 111g			(6) 141g
Granite		1 18g	2 60g			(3) 78g
Felsite		2 13g	1 32g			(3) 45g
Felso-Dolerite		2 16g				(2) 16g
Dolerite		2 15g				(2) 15g
Gneissic Dolerite		1 19g				(1) 19g
Brown Limestone		1 19g				(1) 19g
Nodular Limestone		1 7g				(1) 7g
Quartz		1 15g				(1) 15g
Glacial Sandstone		1 7g	2 53g			(3) 60g
Red Cherty Limestone		1 3g				(1) 3g
Ferruginous Sandstone		1 19g				(1) 19g

	¼-½	½-1	1-2	2-3	3-4	
Basalt			1 69g			(1) 69g
Rhyolite			1 29g			(1) 29g
Schistic Dolerite			1 34g			(1) 34g
Sandstone/ Quartzite					1 119g	(1) 119g
FG Sandstone Sandstone			1 37g			(1) 37g
Porphoritic Felsitic				1 71g		(1) 71g
Indeterminant			1 32g			(1) 32g
	(8) 13g	(47) 453g	(34) 1350g	(8) 1084g	(2) 320g	(99) 3220g
Unmodified Glacial	2 2g					(2) 2g
	(10) 15g	(47) 453g	(34) 1350g	(8) 1084g	(2) 320g	(101) 3222g

23MC58
FCR-Surface

	¼-½	½-1	1-2	2-3	3-4	4-5	
Quartzite			3 132g	1 125g	1 285g	1 363g	(6) 905g
Argillite			2 91g				(2) 91g
Granite				1 312g	1 523g		(2) 835g
Dolerite			3 189g	2 329g			(5) 518g
Gneissic Dolerite		1 26g					(1) 26g
	(1) 26g	(8) 412g	(4) 766g	(2) 808g	(1) 363g		(16) 2375g
Unmodified Glacial	—	(1) 26g	(8) 412g	1 146g (5) 912g	(2) 808g	(1) 363g	(1) 146g (17) 2521g

23MC60
FRC-Surface & Test

	¼-½	½-1	
Argillite	1 1g		(1) 1g
Sandstone	1 1g		(1) 1g
Granite	1 2g	1 4g	(2) 6g
Granitic Quartzite	2 2g		(2) 2g
Indeterminant Schist	1 10g		(1) 10g
	(5) 6g	(2) 14g	(7) 20g
Unmodified glacial	1 1g		(1) 1g
	(6) 7g	(2) 14g	(8) 21g

23MC61
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Argillite	3 4g	15 119g	9 295g	5 383g			(32) 801g
MG Argillite		3 26g	1 47g				(4) 73g
Quartzite		8 90g	7 267g	2 290g	1 296g		(18) 943g
Granite	1 7g	1 7g	1 36g	2 193g		1 174g	(6) 411g
Quartzo-Quartzite		1 7g					(1) 7g
Gabbro		1 14g	2 85g	1 259g			(4) 358g
Diorite		2 22g	2 86g	2 207g			(6) 315g
Ferruginous Sandstone		2 16g					(2) 16g
Glacial Sandstone		1 7g					(1) 7g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Dolerite		2 21g	2 70g	3 295g		1 1088g	(8) 1474g
Indeterminant Schist			1 17g				(1) 17g
Quartzite/ Siliceous Chert		1 14g	1 20g				(2) 34g
Basalt		1 16g	2 86g				(3) 102g
Metamorphozed Felsite		1 3g	2 51g	1 169g			(4) 223g
Felso-Diorite				1 162g			(1) 162g
Grano-Diorite					2 324g		(2) 324g
Quartz	1 1g	1 12g			2 219g		(4) 232g
Chert		1 20g					(1) 20g
Granitic Quartzite		1 11g					(1) 11g
Porphoritic Felsite			1 32g				(1) 32g
Indeterminant				1 113g			(1) 113g
	(5) 6g	(42) 405g	(31) 1092g	(18) 2071g	(5) 839g	(2) 1262g	(103) 5675g
Unmodified glacial			3 192g	1 137g			(4) 329g
	(5) 6g	(42) 405g	(34) 1284g	(19) 2208g	(5) 839g	(2) 1262g	(107) 6004g

23MC62
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Gabbro		1 14g		1 153g		(2) 167g
Argillite					1 282g	(1) 282g
		(1) 14g		(1) 153g	(1) 282g	(3) 449g

23MC65
PCR-(4)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	6-7	78	
Flint Hill Sandstone		12 71g	8 219g	4 397g	1 437g					(25) 1124g
Argillite		4 49g	4 240g	1 142g						(9) 431g
Quartzite		5 48g	3 121g	3 450g	2 698g					(13) 1317g
Granite			1 39g	1 147g						(2) 186g
Granitic Quartzite	1 1g	1 3g	2 58g	1 223g		1 384g				(6) 669g
Chert		1 8g	1 39g							(2) 47g
Gray Limestone			1 35g	1 43g	1 123g					(3) 201g
Gramo-Diorite									1 234g	(1) 234g
Quartz		1 15g								(1) 15g
Gabbro		1 6g								(1) 6g
Metamorphozed Felsite		1 22g	1 30g							(2) 52g
Basalt			1 30g							(1) 30g
Quartzite/ Sileceous Chert			2 70g							(2) 70g
Dolerite				1 124g						(1) 124g
	(1) 1g	(26) 222g	(24) 881g	(12) 1526g	(4) 1258g	(1) 384g	0	0	(1) 234g	(69) 4506g
Unmodified glacial		1 14g		2 608g						(3) 622g
Unmodified Sandstone				1 111g						(1) 111g
	(1) 19g	(27) 236g	(24) 881g	(15) 2245g	(4) 1258g	(1) 384g	0	0	(1) 234g	(73) 5239g

23MC66
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Argillite		1 6g	2 58g		(3) 64g
Quartzite				1 227g	(1) 227g
Granitic Quartzite				1 201g	(1) 201g
Felsitic/ Basaltic				1 203g	(1) 203g
		(1) 6g	(2) 58g	(3) 631g	(6) 695g

23M67
FCR-Surface-(2)

	⅛-½	½-1	1-2	2-3	3-4	4-5	5-6	
Argillite		14 185g	21 938g	21 2228g	3 877g		1 712g	(60) 4900g
Quartzite	2 2g	16 221g	25 1064g	16 2078g	3 786g		1 542g	(63) 4693g
Dolerite		5 78g	2 135g	7 1014g	1 218g	1 487g		(16) 1932g
Diorite	1 1g	4 51g	5 234g	12 1620g	1 282g			(23) 2188g
Gabbro		4 48g	4 166g	3 353g	3 1526g	1 386g		(15) 2479g
Basalt		3 43g	4 159g	4 515g				(11) 717g
Granite	2 5g	4 34g	6 236g	7 890g	6 1551g		1 1158g	(26) 3879g
Quartz		4 45g	1 41g					(5) 86g
Quartzo-Quartzite		1 17g	1 26g					(2) 43g
Gneissic Dolerite		1 9g	2 54g	1 111g			1 237g	(5) 411g
Chert	1 2g	1 3g	2 98g	1 199g				(5) 302g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Metamorphosed Felsite		2 15g	3 102g	1 112g		1 144g		(7) 423g
MG Argillite		3 31g	4 145g	2 241g				(9) 417g
Granitic Quartzite		1 8g	2 62g			1 685g		(4) 755g
Felso-Dolerite		1 20g	1 65g	2 376g	1 295g			(5) 756g
Limestone		1 15g	3 73g	5 427g	1 260g	1 941g		(11) 1716g
Gneissic Gabbro	1 1g	1 2g	1 82g					(3) 85g
Dolerite/ Grabbro			1 180g		1 294g			(2) 494g
Quartzite/ Sileceous Chert			2 101g					(2) 101g
Felso-Diorite		1 4g		4 631g	1 214g			(6) 849g
Sileceous Chert		1 12g						(1) 12g
Gneissic Dolerite/Gabbro		1 33g	1 13g					(2) 46g
Felsite		1 9g	2 108g					(3) 117g
Rhyolite			1 77g					(1) 77g
Schistic Dolerite			1 28g					(1) 28g
Glacial Sandstone		1 9g						(1) 9g
Olivine Felsite					1 239g			(1) 239g
Indeterminant	1 2g	3 34g	2 75g					(6) 111g
	(8) 13g	(74) 926g	(97) 4262g	(86) 10,795g	(22) 6,542g	(5) 2,693g	(4) 2,649g	(296) 27,880g
Unmodified Glacial	3 3g	4 51g	2 111g	1 249g	2 1017g			(12) 1836g
	(11) 16g	(78) 977g	(99) 4378g	(87) 11,044g	(24) 7559g	(5) 2693g	(4) 2649g	(308) 29,316g

23MC68
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Dolerite	1 1g	1 7g		1 306g		1 557g		(4) 871g
Quartz	2 2g	2 8g						(4) 10g
Diorite			1 57g	3 408g	1 294g	2 839g	1 1066g	(8) 2664g
Granite		1 18g	1 98g	4 1161g	2 904g	4 2937g	1 1242g	(13) 5360g
MG Argillite		1 4g		1 92g	1 405g			(3) 546g
Argillite		1 3g	1 20g	2 291g				(4) 264g
Porphoritic Felsitic				1 247g				(1) 247g
Granitic Quartzite					1 622g			(1) 622g
Quartzite		1 5g	2 112g	2 278g				(5) 395g
Gneissic Dolerite			2 94g		1 297g			(3) 319g
Metamorphozed Felsite			2 149g					(2) 149g
Basalt				1 68g				(1) 68g
Doleritic Quartzite					1 312g			(1) 312g
Dolerite/ Gabbro						1 381g		(1) 381g
Indeterminant				1 98g				(1) 98g
	(3) 3g	(7) 45g	(9) 530g	(16) 2899g	(7) 2879g	(8) 4714g	(2) 2308g	(52) 13,378g
Unmodified Glacial					2 1165g	1 481g		(3) 1646g
	(3) 3g	(7) 45g	(9) 530g	(16) 2899g	(9) 4044g	(9) 5195g	(2) 2308g	(55) 15,024g

23MC70
FCR-Surface-(8)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	6-7	
Micaceous Sandstone	67 68g	177 1515g	123 4299g	54 4969g	10 2070g	4 1451g		2 2155g	(437) 16,527g
Argillite	9 15g	55 565g	60 2183g	23 2368g	2 250g	2 1250g	1 392g		(152) 7,023g
Quartzite	12 15g	72 776g	65 2933g	28 3497g	7 1775g	4 2334g			(188) 11,330g
Flint Hill Sandstone	4 8g	31 376g	31 1178g	9 767g	1 258g				(67) 2587g
Chert	4 6g	20 174g	8 331g	1 88g					(33) 599g
Quartz	8 8g	2 27g	1 77g						(11) 112g
Basalt	3 7g	6 34g	5 225g	4 363g					(18) 629g
Gabbro	2 5g	13 146g	15 783g	11 1543g	3 608g				(44) 3085g
Diorite	2 3g	9 125g	18 964g	7 955g	4 972g				(40) 3019g
Granite	16 17g	47 528g	27 1165g	28 4205g	3 1268g	1 749g			(122) 7952g
Dolerite	1 2g	8 115g	18 946g	4 559g					(31) 1622g
Limestone	1 2g	5 30g	4 140g	3 192g	1 120g			1 287g	(15) 771g
Sileceous Chert		4 55g	1 46g	1 29g					(6) 130g
MG Argillite		2 25g	5 268g	3 291g					(10) 584g
Grano-Diorite		2 39g	2 68g	3 283g					(7) 390g
Felsite		2 37g		4 360g					(6) 397g
Metamorphozed Felsite		2 34g	2 171g	1 62g	1 165g				(6) 432g
Porphoritic Felsite			1 41g	2 208g					(3) 249g
Quartzo-Quartzite		4 44g	3 121g	1 201g					(8) 366g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	6-7	
Gneissic Granite		6 90g	4 158g	5 661g	1 261g	1 234g			(17) 1404g
Gneissic Dolerite		1 17g	3 183g	2 251g					(6) 451g
Gneissic Diorite			7 348g	2 214g					(9) 562g
Gneissic Gabbro		3 37g	2 111g						(11) 148g
Ferruginous Sandstone		10 86g	1 20g	1 87g					(12) 193g
Glacial Sandstone	3 3g	3 21g	1 37g	1 56g					(8) 117g
Shale	1 1g			1 117g					(2) 118g
Felso-Granitic			2 112g						(2) 112g
Felso-Diorite			1 113g						(1) 113g
Felso-Dolerite			2 126g						(2) 126g
Travertine?			1 17g	1 38g					(2) 55g
Andesite		3 49g	1 64g	1 65g					(5) 178g
Granitic Schist	1 1g	1 26g							(2) 27g
Grano-Diorite Schist				1 155g					(1) 155g
Diorite Schist		1 7g							(1) 7g
Dolerite/ Gabbro-Schist			1 49g		1 172g				(2) 221g
Gabbro Schist			1 32g		1 180g	1 280g			(3) 492g
Indeterminant Schist	1 1g	1 6g	2 104g						(4) 111g
Conglomerate/ Quartzite			1 52g						(1) 52g
Dolerite/ Gabbro				1 78g					(1) 78g
Granitic Quartzite				3 458g	1 342g				(4) 800g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	6-7	
Chert Breccia		1 3g							(1) 3g
Feldspar	1 3g								(1) 3g
Indeterminant	2 3g	8 48g	2 67g						(12) 118g
	(138) 168g	(499) 5035g	(421) 17,532g	(206) 23,120g	(36) 8,441g	(13) 6,298g	(2) 679g	(2) 2155g	(1317) 63,428g
Unmodified Glacial	11 12g	29 278g	19 890g	7 916g	6 2473g		1 1438g		(73) 6007g
	(149) 180g	(528) 5313g	(440) 18,422g	(213) 24,036g	(42) 10,914g	(13) 6,298g	(3) 2117g	(2) 2155g	(1391) 69,435g

23MC72
FCR-Surface-(3)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill Sandstone	15 24g	265 2490g	195 6253g	26 2527g	2 458g	(503) 11,752g
Argillite		9 140g	14 624g	5 550g	1 262g	(29) 1576g
Quartzite	1 2g	6 50g	11 628g	2 232g		(20) 912g
Diorite		1 15g	2 67g	1 137g		(4) 219g
Granitic Quartzite		1 7g	6 272g	4 617g		(11) 896g
Gabbro			2 214g			(2) 214g
Felso-Dolerite			1 40g			(1) 40g
Dolerite Schist			1 57g			(1) 57g
Felsite	1 3g	2 18g		1 75g		(4) 96g
Chert		2 23g	2 86g			(4) 109g
Dioritic Quartzite			1 32g			(1) 32g
Basalt		1 8g	1 52g			(2) 60g

	¼-½	½-1	1-2	2-3	3-4	
Gneissic Dolerite			3 107g	2 205g		(5) 312g
Dolerite/ Gabbro			1 76g	1 163g		(2) 239g
Dolerite				1 247g		(1) 247g
Quartz	3 2g					(3) 2g
Sandstone/ Quartzite		1 7g				(1) 7g
MG Argillite			1 83g			(1) 83g
Granite			1 113g	1 419g		(2) 532g
	(20) 31g	(288) 2758g	(242) 8704g	(44) 5172g	(3) 720g	(597) 17,385g
Unmodified Glacial		4 49g	1 17g			(5) 66g
Unmodified Sandstone			1 40g			(1) 40g
	(20) 31	(292) 2807g	(244) 8761g	(44) 5172g	(3) 720g	(603) 17,491g

23MC73
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Flint Hill Sandstone	9 10g	40 331g	34 1258g	10 983g	(93) 2582g
Quartzite		1 4g	2 139g		(3) 143g
Felsite			1 18g		(1) 18g
Granitic Quartzite			1 27g		(1) 27g
Chert	1 1g	1 14g			(2) 15g
Argillite		1 8g			(1) 8g

	¼-½	½-1	1-2	2-3	
Dolerite			1 46g		(1) 46g
Felso-Dolerite			1 78g		(1) 78g
Porphoritic Felsite			1 49g		(1) 49g
	(10) 11g	(43) 357g	(41) 1615g	(10) 983g	(104) 2966g

23MC74
FCR-Surface-(3)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone	5 4g	203 1865g	171 5962g	43 4254g	7 1390g	(429) 13,475g
Argillite		8 81g	15 521g	5 468g	3 460g	(31) 1530g
Quartzite		3 18g	5 215g		1 293g	(9) 556g
Gabbro			1 44g			(1) 44g
Dolerite			1 55g	1 152g	1 346g	(3) 553g
Granite				1 210g		(1) 210g
Basalt			1 42g	1 56g		(2) 98g
Metamorphozed Felsite				1 105g		(1) 105g
Chert	1 1g					(1) 1g
Granitic Quartzite	1 1g		3 222g	1 340g		(5) 563g
Diorite			2 104g	1 203g	1 510g	(4) 817g
Felso-Dolerite			1 34g			(1) 34g
Quartz	1 1g					(1) 1g
Sandstone/ Quartzite		1 10g	1 27g			(2) 37g

	¼-½	½-1	1-2	2-3	3-4	
Limestone (local)				1 105g		(1) 105g
Limestone (non-local)		1 6g				(1) 6g
Felsite			2 50g	1 145g		(3) 195g
Gneissic Dolerite/Gabbro			1 86g			(1) 86g
Gneissic Diorite		1 15g				(1) 15g
Felso-Dioritic		1 18g				(1) 18g
	(8) 7g	(218) 2013g	(204) 7362g	(56) 6038g	(13) 2999g	(500) 18,499g
Unmodified Glacial				1 162g		(1) 162g
	(8) 7g	(218) 2013g	(204) 7362g	(57) 6200g	(13) 2999g	(500) 18,661g

23MC75
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	
Argillite			1 64g	1 265g	(2) 329g
Dolerite			2 116g		(2) 116g
Gabbro				1 148g	(1) 148g
Felso-Diorite				1 139g	(1) 139g
Felso-Dolerite			1 101g		(1) 101g
Diorite-Dolerite			1 66g		(1) 66g
Quartzite			1 58g		(1) 58g
Indeterminant				1 194g	(1) 194g
			(6) 405g	(4) 746g	(10) 1151g

23MC77
FCR-Surface-(3)

	¼-½	½-1	1-2	2-3	3-4	
Argillite		5 61g	11 512g	5 574g		(21) 1147g
Quartzite		11 139g	16 799g	6 794g		(33) 1732g
Dolerite		2 37g	4 214g	1 261g		(7) 512g
Chert		1 10g	1 67g			(2) 77g
Sandstone/Quartzite		1 8g				(1) 8g
Gneissic Dolerite		1 17g				(1) 17g
Chert/Quartzite		1 13g	1 35g			(2) 48g
Gabbro		4 40g	4 182g	3 472g		(11) 694g
Dolerite/Gabbro			2 103g			(2) 103g
MG Argillite			1 47g			(1) 47g
Diorite			4 208g	2 368g	1 242g	(7) 818g
Felso-Diorite			2 122g			(2) 122g
Felso-Dolerite			3 123g			(3) 123g
Basalt			1 36g			(1) 36g
Quartz			1 35g			(1) 35g
Metamorphozed Felsite				1 71g		(1) 71g
Dolerite Schist			1 58g			(1) 58g
Red Brown Limestone			1 26g			(1) 26g

	¼-½	½-1	1-2	2-3	3-4	
Granitic Quartzite			1 54g	1 150g		(2) 204g
Sileceous Chert			1 62g			(1) 62g
Granite					1 398g	(1) 398g
Indeterminant		2 166g				(2) 166g
		(28) 491g	(55) 2683g	(19) 2690g	(2) 640g	(105) 6504g
Unmodified Glacial			1 22g			(1) 22g
		(28) 491g	(56) 2705g	(19) 2690g	(2) 640g	(105) 6526g

23MC78
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Granite		1 10g	1 69g	1 144g			(3) 223g
Argillite		7 89g	12 553g	5 539g			(24) 1181g
Quartzite		4 44g	14 590g	11 1322g	1 321g		(30) 2277g
Granitic Quartzite		1 8g	2 60g	1 181g	1 304g	1 1123g	(6) 1676g
Metamorphozed Felsite		2 28g		1 116g			(3) 144g
Felso-Diorite		1 9g	2 86g				(3) 95g
Dolerite		8 108g	3 161g	3 595g		1 384g	(15) 1248g
Chert		2 25g	4 193g				(6) 218g
Felsite			2 83g	1 151g			(3) 234g
Sandstone/ Quartzite			1 36g				(1) 36g
Gneissic Diorite			2 59g				(2) 59g
Diorite			5 257g				(5) 257g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Quartzo-Quartzite				3 301g			(3) 301g
Gabbro			1 65g	3 264g			(4) 329g
Felso-Dolerite			1 45g	2 353g	2 547g		(5) 945g
Quartz	1 1g		1 49g				(2) 50g
Schistic Granite		1 43g		1 192g			(2) 235g
White Nodular Limestone		1 2g					(1) 2g
Glacial Sandstone		1 4g					(1) 4g
Grano-Diorite		1 14g					(1) 14g
Basalt			1 55g				(1) 55g
Indeterminant Schist			1 25g				(1) 25g
	(1) 1g	(30) 384g	(53) 2386g	(32) 4158g	(4) 1172g	(2) 1507g	(122) 9608g

23MC84
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Gneissic Dolerite		1 20g				(1) 20g
Argillite			2 52g			(2) 52g
Grano-Diorite					1 287g	(1) 287g
		(1) 20g	(2) 52g		(1) 287g	(4) 359g

23MC85
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Dolerite			2 183g		(2) 183g
Argillite			2 50g	1 217g	(3) 267g
Granitic Quartzite			1 37g		(1) 37g
			(5) 270g	(1) 217g	(9) 487g

23MC86
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Argillite			1 47g	3 333g	1 342g	(5) 722g
Quartzite			7 301g	4 535g	1 375g	(12) 1211g
MG Argillite			1 47g	1 145g		(2) 192g
Chert			1 26g			(1) 26g
Micaceous Sandstone			2 82g	1 122g		(3) 204g
Olivine Felsite				1 71g		(1) 71g
Gabbro				1 193g		(1) 193g
Rhyolite				1 52g		(1) 52g
Felso-Diorite					1 319g	(1) 319g
			(12) 503g	(12) 1451g	(3) 1036g	(27) 2990g
Unmodified Glacial			1 40g			(1) 40g
			(13) 543g	(12) 1451g	(3) 1036g	(28) 3030g

23MC87
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	
Quartzite				1 32g	(1) 32g
Argillite		1 16g	1 14g	1 159g	(3) 189g
Granite			1 27g	1 64g	(2) 91g
MG Argillite				1 83g	(1) 83g
		(1) 16g	(2) 41g	(4) 338g	(7) 395g
Unmodified Glacial		1 20g	1 55g	1 294g	(3) 369g
		(2) 36g	(3) 96g	(5) 632g	(10) 764g

23MC88
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Quartzite		1 14g		2 249g		(3) 263g
Argillite			1 25g	2 93g		(3) 118g
Glacial Sandstone			1 31g			(1) 31g
Diorite					1 403g	(1) 403g
Dolerite					1 220g	(1) 220g
Felsite					1 299g	(1) 299g
		(1) 14g	(2) 56g	(4) 342g	(3) 922g	(10) 1334g

23MC89
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Argillite		1 13g		1 79g	(2) 92g
Chert			1 34g		(1) 34g
Felso-Dolerite				1 112g	(1) 112g
		(1) 13g	(1) 34g	(2) 201g	(4) 248g

23MC90
FCR-Surface-(6)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Argillite		3 66g	6 199g	4 232g			(13) 497g
Houx Limestone		1 10g		2 107g			(3) 117g
Granite		2 14g	3 147g		1 416g		(6) 577g
Quartzite		1 7g	7 264g	1 98g	1 149g		(10) 518g
Chert		2 20g					(2) 20g
Diorite		1 12g	2 63g	1 197g			(4) 272g
Porphoritic Andesite		1 10g					(1) 10g
Basalt		2 22g	1 22g				(3) 44g
Felso-Diorite		1 20g					(1) 20g
Dolerite			6 262g	3 268g		1 239g	(10) 769g
Granitic Quartzite			2 85g				(2) 85g
Metamorphozed Felsite			2 60g				(2) 60g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Gneissic Dolerite			1 43g	1 177g			(2) 220g
Felsite			1 54g				(1) 54g
MG Argillite			2 88g				(2) 88g
Gneissic Diorite			1 32g				(1) 32g
Gabbro			1 100g	1 101g			(2) 201g
Gneissic Gabbro				1 174g	1 119g		(2) 293g
Gneissic Granite				1 65g			(1) 65g
Gneissic Dolerite				1 140g			(1) 140g
Indeterminant			1 35g				(1) 35g
		(14) 181g	(36) 1454g	(16) 1559g	(3) 684g	(1) 239g	(70) 4117g
Unmodified Glacial		2 32g	1 44g				(3) 76g
		(16) 213g	(33) 1498g	(16) 1559g	(3) 684g	(1) 239g	(73) 4193g

23MC91
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	
Diorite		1 3g			(1) 3g
Dolerite		2 33g		2 153g	(4) 186g
Quartzite		4 39g	2 92g	3 645g	(9) 776g
Diorite Schist		1 5g		1 116g	(2) 121g
Chert				1 110g	(1) 110g

	¼-½	½-1	1-2	2-3	
Houx		1			(2)
Limestone		2g			2g
Granite		1	1	1	(3)
		7g	86g	172g	265g
Gneissic		1			(1)
Dolerite		10g			10g
Gabbro			1	1	(2)
			23g	388g	411g
Quartzite/Chert			1		(1)
			25g		25g
Indeterminant		1		1	(2)
		14g		94g	108g
		(12)	(5)	(10)	(27)
		113g	226g	1678g	2017g
Unmodified			1		(1)
Glacial			40g		40g
		(12)	(6)	(10)	(28)
		113g	266g	1678g	2057g

23MC92
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Quartzite			1	1				(2)
			61g	131g				192g
Granitic			1					(1)
Quartzite			42g					42g
Chert				1				(1)
				185g				185g
Basalt							1	(1)
							1032g	1032g
Talc?				1				(1)
Gneiss				159g				159g
			(2)	(3)			(1)	(6)
			103g	475g			1032g	1610g

23MC93
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Argillite		1 19g	2 87g				(3) 106g
Chert		2 24g					(2) 24g
Chert Breccia		1 9g					(1) 9g
Dolerite		1 8g			1 274g		(2) 282g
Quartzite			1 94g				(1) 94g
Flint Hill/ Sandstone			1 66g		2 562g	1 399g	(4) 1027g
Felsite			1 90g				(1) 90g
Basalt			1 47g				(1) 47g
Gabbro			1 59g				(1) 59g
Granitic Quartzite					1 252g		(1) 252g
Gneissic Dolerite					1 162g	1 400g	(2) 562g
		(5) 60g	(7) 443g		(5) 1250g	(2) 799g	(19) 2552g
Unmodified Glacial						1 720g	(1) 720g
		(5) 60g	(7) 443g		(5) 1250g	(3) 1519g	(20) 3272g

23MC94
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Granite					1 175g	(1) 175g
Basalt			1 60g			(1) 60g

	¼-½	½-1	1-2	2-3	3-4	
Dolerite			2 123g	4 833g		(6) 956g
Chert		1 8g				(1) 8g
MG Argillite		2 28g		1 264g		(3) 292g
Gabbro		2 20g				(2) 20g
Quartzite		1 13g				(1) 13g
Felsite		1 6g				(1) 6g
Diorite			1 40g		1 234g	(2) 274g
Metamorphozed Felsite			1 34g			(1) 34g
Flint Hill/ Sandstone			1 23g			(1) 23g
Porphoritic Brown Felsite				1 160g		(1) 160g
Indeterminant Schist		1 14g				(1) 14g
		(8) 89g	(6) 280g	(6) 1257g	(2) 409g	(22) 2035g

23MC95
FCR-Surface-(1)

	¼-½	½-1	1-2	
MG Argillite			1 75g	(1) 75g
Gabbro			2 105g	(2) 105g
Granite			1 52g	(1) 52g
Granitic Quartzite			3 194g	(3) 194g
			(7) 426g	(7) 426g

23MC96
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Argillite		1 4g	1 37g	1 137g				(3) 178g
Quartzite		1 7g	1 43g					(2) 50g
Limestone		1 9g		1 147g				(2) 156g
Dolerite Gneiss		1 12g						(1) 12g
Chert			1 45g					(1) 45g
Ferruginous Sandstone			1 30g					(1) 30g
Porphoritic Felsite			1 40g					(1) 40g
Dolerite				1 135g	1 219g		1 1214g	(3) 1568g
Olivine Felsite				1 120g				(1) 120g
Indeterminant Gneiss		1 20g						(1) 20g
Indeterminant Schist			1 36g					(1) 36g
Indeterminant			1 47g					(1) 47g
		(5) 52g	(7) 278g	(4) 539g	(1) 219g		(1) 1214g	(18) 2302g
Unmodified Glacial		1 14g	3 178g		1 370g			(5) 562g
		(6) 66g	(10) 456g	(4) 539g	(2) 589g		(1) 1214g	(23) 2864g

23MC97
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Quartzite			1 67g	1 121g	(2) 188g
Diorite				2 113g	(2) 113g
			(1) 67g	(3) 234g	(4) 301g

23MC98
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Flint Hill Sandstone		1 19g	2 65g		(3) 84g
Basalt		1			(1)
Argillite			2 62g		(2) 62g
Quartzite			1 37g		(1) 37g
Dolerite			1 37g		(1) 37g
Gabbro				1 107g	(1) 107g
		(2) 40g	(6) 201g	(1) 107g	(9) 348g

23MC99
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Quartzite	1 2g	1 7g					(2) 9g
Granitic Quartzite						1 356g	(1) 356g
Argillite	2 1g	2 29g		2 167g			(6) 197g
Shale	1 2g	5 19g					(6) 21g
Diorite		1 3g					(1) 3g
	(4) 5g	(9) 58g		(2) 167g		(1) 356g	(16) 586g

23MC100
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Chert	2 4g		3 105g				(5) 109g
Argillite		1 2g	1 39g	1 125g			(3) 166g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Granite			1 16g	1 125g			(2) 141g
Dolerite			1 52g				(1) 52g
Diorite				2 410g	1 230g	1 359g	(4) 999g
Quartzite		1 11g	3 169g	1 130g	1 337g	1 126g	(7) 773g
Gabbro Gneiss		1 5g					(1) 5g
Dolerite/ Gabbro Gneiss			1 32g				(1) 32g
Basalt			1 28g				(1) 28g
	(2) 4g	(3) 18g	(11) 441g	(5) 790g	(2) 567g	(2) 485g	(25) 2305g
Unmodified Glacial		1 7g		1 124g			(2) 131g
	(2) 4g	(4) 25g	(11) 441g	(6) 914g	(2) 567g	(2) 485g	(27) 2436g

23MC101
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	
Chert		.3 29g			(3) 29g
Quartzite		2 20g	1 44g	1 155g	(4) 219g
Quartzo- Quartzite			1 45g		(1) 45g
Flint Hill Sandstone			1 22g		(1) 22g
Argillite		2 41g	1 50g	1 103g	(4) 194g
Dolerite			3 102g		(3) 102g
Gabbro			1 42g		(1) 42g
Glacial Sandstone			1 31g		(1) 31g

	¼-½	½-1	1-2	2-3	
Diorite				1 104g	(1) 104g
Basalt			1 20g		(1) 20g
		(7) 90g	(10) 356g	(3) 362g	(20) 808g

23MC102
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Chert		1 15g				(1) 15g
Quartzite			2 67g			(2) 67g
Argillite				1 74g	1 269g	(2) 343g
Diorite		1 19g				(1) 19g
Granite			1 22g			(1) 22g
Glacial Sandstone			1 37g			(1) 37g
		(2) 34g	(4) 126g	(1) 74g	(1) 269g	(8) 503g

23MC103
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Argillite		4 30g	3 79g		1 80g	(8) 189g
Quartzite		2 15g	4 132g	1 192g		(7) 339g
Basalt			3 101g			(3) 101g
Gneissic Granite			1 59g			(1) 59g
MG Argillite			1 40g		1 202g	(2) 242g
Glacial Sandstone		1 18g				(1) 18g

	¼-½	½-1	1-2	2-3	3-4	
Chert		1 12g	1 23g			(2) 35g
Flint Hill Sandstone					1 198g	(1) 198g
Indeterminant		1 6g		1 42g		(2) 48g
		(9) 81g	(13) 434g	(2) 234g	(3) 480g	(27) 1229g
Unmodified Glacial		1 12g				(1) 12g
		(10) 93g	(13) 434g	(2) 234g	(3) 480g	(28) 1241g

23MC107
FCR-Surface-(1)

	¼-½	½-1	
Chert	1 1g	1 4g	(2) 5g
Quartz	1 1g		(1) 1g
	(2) 2g	(1) 4g	(3) 6g

23MC108
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Quartzite		4 70g	5 306g	3 659g	1 584g	(13) 1619g
Chert		3 30g				(3) 30g
Quartz		2 8g				(2) 8g
Granite		2 35g				(2) 35g
Gabbro		1 17g	2 87g			(3) 104g
Sileceous Chert		1 30g				(1) 30g
Granite Quartzite			2 86g	3 438g	1 281g	(6) 805g

	¼-½	½-1	1-2	2-3	3-4	
Diorite			1 56g	2 153g		(3) 209g
Dolerite			1 59g	3 496g	1 137g	(5) 692g
Gneissic Dolerite			1 46g	4 580g	1 174g	(6) 800g
Basalt			1 46g	1 335g	1 122g	(3) 503g
Limestone					2 234g	(2) 234g
Argillite		2 26g	6 251g	3 179g		(11) 456g
Quartzite/ Chert		1 17g				(1) 17g
Metamorphozed Felsite		1 24g	1 13g	2 152g		(4) 189g
Dolerite Schist			1 57g			(1) 57g
Dolerite Quartzite					1 137g	(1) 137g
Felsite		1 10g				(1) 10g
MG Argillite		1 13g	1 33g	2 257g		(4) 303g
Glacial Sandstone		1 4g				(1) 4g
Indeterminant Schist			1 16g			(1) 16g
		(20) 284g	(23) 1056g	(23) 3249g	(8) 1669g	(74) 6258g
Unmodified Glacial		1 10g	3 191g	2 203g	2 1038g	(8) 1442g
		(21) 294g	(26) 1247g	(25) 3432g	(10) 2707g	(82) 7700g

23MC110
FCR-Surface-(3)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Chert	17 22g	55 492g	6 183g	3 224g			(81) 921g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Dolerite	2 3g	23 350g	19 905g	11 1479g	4 1188g		(59) 3925g
Granitic Quartzite	4 4g	30 334g	29 1257g	5 719g	4 1360g		(72) 3674g
Quartzite	14 22g	104 990g	98 4337g	28 3601g	3 765g		(247) 9715g
Flint Hill? Sandstone		2 27g	1 26g				(3) 53g
MG Argillite	2 2g	13 170g	32 1339g	4 457g			(51) 1968g
Diorite	4 7g	4 40g	14 790g	8 1189g	4 1076g	1 441g	(35) 3543g
Argillite	22 29g	131 1243g	97 4170g	28 3085g	5 889g		(283) 9416g
Felsite	1 1g	9 104g	10 500g	4 363g	2 386g		(26) 1354g
Gabbro		5 96g	8 448g	8 1030g			(21) 1574g
Felso-Diorite		5 76g	7 362g	5 546g			(17) 984g
Quartz	7 7g	8 83g	2 91g	1 162g			(18) 343g
Glacial Sandstone	1 1g	7 60g	3 91g	1 77g			(12) 229g
Gneissic Dolerite		8 130g	10 539g	5 554g	1 253g		(24) 1476g
Sileceous Chert		5 41g	6 181g				(11) 222g
Granite		6 63g	7 288g	3 468g	1 321g		(17) 1140g
Metamorphozed Felsite		15 177g	16 775g	9 860g	1 204g		(41) 2016g
Felso-Dolerite		6 83g	13 694g	2 266g		1 439g	(22) 1482g
Houx or Local Limestone	1 1g	3 20g	1 25g	3 208g			(8) 254g
Non-local Limestone		5 29g		1 94g			(6) 123g
Gneissic Diorite		6 40g	3 147g	2 422g	1 433g		(12) 1042g
Diorite Schist		1 20g		1 124g			(2) 144g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Gneissic Gabbro		2 19g	4 212g	3 268g			(9) 499g
Quartzite/ Chert	1 1g	4 50g	2 59g				(7) 110g
Gneissic Granite		1 15g	1 32g				(2) 47g
Sandstone/ Quartzite		2 18g	1 54g				(3) 72g
Granite Schist			1 92g				(1) 92g
Diorite Quartzite			1 55g	1 62g	1 408g		(3) 525g
Ferruginous Sandstone		2 13g	3 94g				(5) 107g
Andesite		1 12g	1 41g	3 278g			(5) 331g
Slaty Shale			1 23g				(1) 23g
Gabbro Schist		1 7g	2 70g	1 47g			(4) 124g
Nodular Limestone		1 1g					(1) 1g
Glacial Shale		1 9g					(1) 9g
Dolerite Schist		2 11g		1 84g			(3) 95g
Quartzo-Quartzite		2 16g	7 229g	2 322g			(11) 567g
Micaceous Sandstone	1 1g	3 45g	1 25g				(5) 71g
Shale		1 8g					(1) 8g
Basalt		5 53g	4 233g				(9) 286g
FG Dolerite				1 184g			(1) 184g
Quartzite/ Sileceous Chert		1 11g					(1) 11g
Indeterminant	4 6g	7 31g	6 331g	3 415g	1 400g		(21) 1183g
	(81) 107g	(487) 4987g	(417) 18,198g	(147) 17,580g	(28) 7683g	(2) 880g	(1162) 49,943g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Unmodified	18	13	15	9	2		(57)
Glacial	11g	173g	769g	1663g	639g		3255g
	(99)	(500)	(432)	(156)	(30)	(2)	(1219)
	118g	5160g	19,467g	19,251g	8322g	880g	53,198g

23MC114
FCR Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Chert		2 29g				(2) 29g
Argillite		1 17g	2 85g	2 216g		(5) 318g
Felsite			1 59g			(1) 59g
Diorite			1 68g		1 328g	(2) 396g
Granitic Quartzite		2 9g	2 108g	1 158g	2 945g	(7) 1220g
Gneissic Dolerite/Gabbro				1 139g		(1) 139g
Felso-Diorite				1 110g		(1) 110g
Quartzite		1 17g	1 19g	2 185g		(4) 221g
Glacial Sandstone		1 18g				(1) 18g
MG Argillite			1 50g			(1) 50g
Quartzite/ Sileceous Chert				1 76g		(1) 76g
Dolerite					2 820g	(2) 820g
		(7) 90g	(8) 389g	(8) 884g	(5) 2093g	(28) 3456g
Unmodified Glacial		1 9g				(1) 9g
		(8) 99g	(8) 389g	(8) 884g	(5) 2093g	(29) 3465g

23MC116
FCR-Surface-(2)

	¼-½	½-1	1-2	
Argillite		1 4g		(1) 4g
Quartzite			1 32g	(1) 32g
		(1) 4g	(1) 32g	(2) 36g

23MC117
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Quartzite			1 24g			(1) 24g
Gabbro			1 66g			(1) 66g
Gneissic Dolerite				1 37g		(1) 37g
Felsite				1 86g		(1) 86g
Granite					1 234g	(1) 234g
			(2) 90g	(2) 123g	(1) 234g	(5) 447g

23MC119
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Quartzite		1 13g	1 80g			(2) 93g
Felsite			1 39g			(1) 39g
Dolerite				1 202g		(1) 202g
		(1) 13g	(2) 119g	(1) 202g		(4) 334g

	¼-½	½-1	1-2	2-3	3-4	
Unmodified Glacial				1 485g	1 1039g	(2) 1524g
		(1) 13g	(2) 119g	(2) 687g	(1) 1039g	(6) 1858g

23MC120
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Quartzite		1 16g						(1) 16g
Granitic Quartzite			2 39g					(2) 39g
Dolerite/ Gabbro							1 1695g	(1) 1695g
		(1) 16g	(2) 39g				(1) 1695g	(4) 1750g

23MC121
FCR-Test-(1)

	¼-½	½-1	1-2
Flint Hill/ Sandstone			1 43g

23MC122
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	
Argillite				1 32g	(1) 32g
Granitic Quartzite				1 117g	(1) 117g
				(2) 249g	(2) 249g

23MC123
FCR-Surface & Test

	¼-½	½-1	1-2	2-3	
Dolerite			1 78g	1 135g	(2) 213g
Granitic Quartzite	4 3g	1 7g			(5) 10g
Argillite	3 2g				(3) 2g
Ferruginous Sandstone	3 2g				(3) 2g
Quartzite		1 10g	3 115g		(4) 125g
Micaceous Sandstone	1 1g				(1) 1g
Felsite	2 47g	3 29g	1 22g		(6) 55g
Chert	1 1g				(1) 1g
Dolerite/ Gabbro	1 1g				(1) 1g
Diorite	1 2g				(1) 2g
Sandstone/ Quartzite	1 1g	1 3g	1 18g		(3) 22g
	(17) 17g	(6) 49g	(6) 233g	(1) 135g	(30) 434g
Unmodified Glacial	3 2g			1 147g	(4) 149g
	(20) 19g	(6) 49g	(6) 233g	(2) 282g	(34) 583g

23MC124
FCR-Test-(1)

	¼-½	½-1	1-2
Quartzite			1 35g

23MC125
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4
Felsite					1 452g

23MC127
FCR-Test-(1)

	¼-½	½-1
Quartzite		1 16g

23MC128
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Quartzite		2 16g			(2) 16g
Diorite			1 64g		(1) 64g
Argillite				1 157g	(1) 157g
		(2) 16g	(1) 64g	(1) 157g	(4) 237g

23MC129
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Basalt	1 13g			1 75g		(2) 88g
Gneissic Gabbro	1 19g					(1) 19g
Chert		1 34g				(1) 34g
Gabbro		3 215g				(3) 215g

	¼-½	½-1	1-2	2-3	3-4	
Dolerite		3 234g				(3) 234g
Gneissic Dolerite				2 181g		(2) 181g
Quartzite				1 171g		(1) 171g
Diorite					1 211g	(1) 211g
	(2) 32g	(7) 483g		(4) 427g	(1) 211g	(14) 1153g

23MC131
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Flint Hill Sandstone		8 85g	14 457g	4 256g	(26) 798g
		(8) 85g	(14) 457g	(4) 256g	(26) 789g

23MC133
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Argillite		1 20g	2 102g	1 75g	1 246g	(5) 443g
Granite		1 13g				(1) 13g
Granitic Quartzite			1 51g	1 121g		(2) 172g
Quartzite			1 53g			(1) 53g
Chert			1 34g			(1) 34g
Felsite			1 36g			(1) 36g
Basalt			1 97g	1 142g		(2) 239g
Gneissic Dolerite				1 46g		(1) 46g
Dolerite				1 167g		(1) 167g

	½-½	½-1	1-2	2-3	3-4	
Diorite				1 190g	1 245g	(2) 435g
Gabbro				1 102g		(1) 102
		(2) 33g	(7) 373g	(7) 843g	(2) 491g	(18) 1740g

23MC134
FCR-Surface-(5)

	½-½	½-1	1-2	2-3	3-4	4-5	5-6	
Quartzite	1 7g	3 100g	3 517g	1 81g		1 746g		(9) 1451g
Granitic Quartzite		1 7g			1 312g			(2) 319g
Quartz		2 6g						(2) 6g
Chert	1 7g	1 5g	2 68g					(4) 80g
Argillite			2 117g		1 181g			(3) 298g
Basalt				1 114g				(1) 114g
Dolerite Quartzite			1 30g		1 106g		1 874g	(3) 1010g
Quartzo-Quartzite			1 43g					(1) 43g
Gabbro					1 457g			(1) 457g
	(2) 14g	(7) 118g	(9) 775g	(2) 195g	(4) 1056g	(1) 746g	(1) 874g	(26) 3778g

23MC135
FCR-Surface-(4)

	½-½	½-1	1-2	2-3	3-4	4-5	
Dolerite					1 607g	1 1185g	(2) 1792g
Quartzite	1 2g	3 23g	2 47g	2 301g			(8) 373g
Granitic Quartzite		2 36g					(2) 36g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Flint Hill/ Sandstone		11 90g	11 408g	5 572g			1070g
Argillite		4 41g	2 51g	1 220g			(7) 312g
Felso-Diorite		2 40g	1 32g	1 77g			(4) 149g
Nodular Limestone		1 4g					(1) 4g
Felso-Dolerite				1 247g			(1) 247g
Metamorphozed Felsite		2 26g	1 48g				(3) 74g
Micaceous Sandstone		1 8g					(1) 8g
Houx Limestone			1 47g				(1) 47g
	(1) 2g	(26) 268g	(18) 633g	(10) 1417g	(1) 607g	(1) 1185g	(57) 4112g
Unmodified Glacial			1 27g	2 302g			(3) 329g
	(1) 2g	(26) 268g	(19) 660g	(12) 1719g	(1) 607g	(1) 1185g	(60) 4441g

23MC136
FCR-Surface-(3)

	¼-½	½-1	1-2	2-3	3-4	445	
Flint Hill/ Sandstone	1 3g	4 48g	3 94g	2 156g			(10) 301g
Argillite		1 7	3 100g		1 226g		(5) 333g
Felso-Dolerite		1 6g	1 30g	1 64g			(3) 100g
MG Argillite			1 30g				(3) 30g
Metamorphozed Felsite						1 603g	(1) 603g
Quartzite	1 1g	1 18g	1 47g	3 416g			(6) 482g
Diorite		1 10g		3 472g			(4) 482g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Chert		2 21g	1 79g				(3) 100g
Limestone		1 4g		1 82g			(2) 86g
Gabbro		1 22g					(1) 22g
Glacial Sandstone			1 34g				(1) 34g
Granitic Quartzite			2 80g	1 124g			(3) 204g
Dolerite Schist					1 132g		(1) 132g
Indeterminant			1 24g				(1) 24g
	(2) 4g	(12) 136g	(14) 518g	(11) 1314g	(2) 358g	(1) 603g	(42) 2933g
Unmodified Glacial					1 576g		(1) 576g
	(2) 4g	(12) 136g	(14) 518g	(11) 1314g	(3) 934g	(1) 603g	(43) 3509g

23MC137
FCR-Surface-(1)

	¼-½	½-1	1-2	
Argillite	4 7g	4 32g	1 59g	(9) 98g
Dolerite	1 2g			(1) 2g
Flint Hill Sandstone		1 4g	1 46g	(2) 50g
Metamorphozed Felsite		2 12g		(2) 12g
Quartzite/ Chert			1 80g	(1) 80g
Glacial Sandstone			1 18g	(1) 18g
Diorite			1 61g	(1) 61g
	(5) 9g	(7) 48g	(5) 264g	(17) 321g

23MC138
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Quartzite		15 190g	10 491g	12 1671g			(37) 2352g
Chert	2 2g	4 42g	3 110g	1 70g			(10) 224g
Argillite	1 1g	6 56g	8 442g	4 385g			(19) 884g
Felsite		1 17g	3 149g	1 77g			(5) 243g
Dolerite		5 45g	2 104g	1 146g			(8) 295g
Gneissic Dolerite		1 3g		1 63g		1 1035g	(3) 1101g
Metamorphozed Felsite		2 17g	2 99g			1 918g	(5) 1034g
MG Argillite		2 16g		1 128g			(3) 144g
Andesite		1 20g					(1) 20g
Micaceous Sandstone		1 14g					(1) 14g
Houx Limestone		1 15g				1 565g	(2) 580g
Granitic Quartzite		2 22g		2 232g			(4) 254g
Basalt		1 7g					(1) 7g
Diorite		2 22g	3 184g	2 228g			(7) 434g
Gneissic Diorite		1 11g	1 55g	1 122g			(3) 188g
Dolerite Schist		1 13g	1 33g				(2) 46g
Gabbro		3 34g		1 214g			(4) 248g
Gneissic Gabbro		1 18g					(1) 18g
Shale? (non-local)			1 29g				(1) 29g
Felso-Diorite			1 52g				(1) 52g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Felso-Dolerite			3 140g	1 52g			(4) 192g
Quartzo-Quartzite			1 52g				(1) 52g
Felso-Granitic				1 159g			(1) 159g
Sandstone/ Quartzite		2 23g		1 111g			(3) 134g
Indeterminant Schist				1 55g			(1) 55g
Indeterminant		1 5g					(1) 5g
	(3) 3g	(53) 590g	(39) 1940g	(31) 3713g		(3) 2518g	(129) 8764g
Unmodified Glacial	3 4g		3 197g	2 193g			(8) 394g
	(6) 7g	(53) 590g	(42) 2137g	(33) 3906g		(3) 2518g	(137) 9158g

23MC139
FCR-Surface-(3)

	¼-½	½-1	1-2	2-3	
Quartz	1 1g				(1) 1g
Argillite		1 3g	2 92g	2 327g	(5) 422g
Quartzite			1 19g		(1) 19g
Felsite		1 20g			(1) 20g
Chert		1 7g			(1) 7g
	(1) 1g	(3) 30g	(3) 111g	(2) 327g	(9) 469g
Unmodified glacial		(4) 35g			(4) 35g
	(1) 1g	(7) 65g	(3) 111g	(2) 327g	(13) 504g

23MC140
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Argillite		1 8g	2 126g	1 147g		(4) 281g
Metamorphozed Felsite		1 19g				(1) 19g
Quartzite		1 9g	3 115g	2 461g		(6) 585g
Diorite Schist		1 23g				(1) 23g
Felso-Dolerite		1 14g		1 214g		(2) 228g
Dolerite Gneiss		1 24g			1 414g	(2) 438g
Gabbro		1 11g	2 406g			(3) 417g
MG Argillite			1 132g			(1) 132g
Sandstone/ Quartzite			1 37g	1 87g		(2) 124g
Granitic Quartzite			2 117g		1 311g	(3) 428g
Felsite			1 46g			(1) 46g
Dolerite			1 41g	1 58		(2) 99g
Basalt			2 79g	1 66g		(3) 145g
		(7) 108g	(15) 1099g	(7) 1033g	(2) 725g	(31) 2965g

23MC141
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Quartz	1 1g					(1) 1g
Argillite		1 17g			1 327g	(2) 344g

	¼-½	½-1	1-2	2-3	3-4	
Gneissic Gabrro				1 79g		(1) 79g
Felsite				1 147g		(1) 147g
	(1) 1g	(1) 17g		(2) 226g	(1) 327g	(5) 571g

23MC142
FCR-Surface-(8)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Argillite	9 11g	106 1018g	130 5119g	100 9279g	15 2884g	3 1408g	1 320g	(364) 20,039g
MG Argillite		14 184g	25 1140g	9 1028g	3 676g	1 434g		(52) 3462g
Metamorphozed Felsite		11 108g	31 876g	11 796g				(53) 1780g
Quartzite	14 24g	79 981g	109 4755g	56 5917g	20 4459g	4 2679g		(282) 18,815g
Basalt		14 143g	25 1190g	17 1867g	1 169g			(58) 3369g
Diorite	3 6g	17 192g	43 2001g	29 3756g	8 1888g	1 340g	1 1943g	(102) 10,126g
Dolerite		27 391g	50 2722g	30 3662g	9 2435g	1 240g	1 868g	(118) 10,318g
Granite	8 13g	24 290g	50 2372g	47 5574g	10 2589g	3 1833g		(142) 12,671g
Gabbro	2 4g	28 354g	63 2988g	36 4001g	8 2124g	1 288g		(138) 9759g
Dolerite/ Gabbro		2 28g	3 161g	5 616g				(10) 805g
Grano-Diorite	1 1g	7 96g	5 337g	2 269g	1 430g			(16) 1133g
Chert	2 7g	15 127g	13 402g					(30) 536g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Quartz	8 9g	10 66g	2 75g	1 103g				(21) 253g
Feldspar	4 7g	2 16g						(6) 23g
Micaceous Sandstone		5 69g	6 195g	8 856g		1 450g		(20) 1570g
Flint Hill Sandstone	1 3g	23 169g	24 752g	14 1367g	1 95g			(63) 2386g
Cherty Limestone		4 34g	10 396g	6 624g	3 1113g	1 132g		(24) 2299g
Glacial Sandstone	1 1g	10 117g	3 128g	4 269g				(18) 515g
Ferruginous Sandstone	4 8g	5 52g	2 76g	2 125g				(13) 261g
Sandstone/ Quartzite				2 201g	1 96g			(3) 297g
Chert Breccia					1 172g			(1) 172g
Quartzite Breccia			1 29g					(1) 29g
Sileceous Chert	1 1g	3 34g	3 145g		1 350g			(8) 530g
Quartzite/ Chert			2 103g					(2) 103g
Quartzo-Quartzite		1 10g	10 198g	2 230g				(13) 438g
Felso-Granitic			4 207g	1 56g				(5) 263g
Felso-Diorite		3 31g	3 131g	3 338g	1 457g			(10) 957g
Felso-Dolerite			2 94g	1 37g				(3) 131g
Gneissic Granite	1 2g	3 26g	2 98g	6 548g	1 201g			(13) 884g
Gneissic Diorite		2 15g	2 84g	2 199g	1 184g			(7) 482g
Gneissic Dolerite		10 133g	11 471g	10 944g	2 212g	1 407g		(34) 2167g
Gneissic Gabbro		1 5g	3 129g	3 322g				(7) 456g
Schist Granite		1 7g	1 15g	2 164g				(4) 186g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Schistic Diorite			1 42g	2 143g				(3) 185g
Schistic Dolerite	1 1g	2 39g	1 17g	1 85g				(5) 142g
Schistic Gabbro		2 26g	2 146g	3 310g		1 287g		(8) 769g
Talc? Schist		1 3g						(1) 3g
Olivine Felsite				2 495g	2 662g			(4) 1157g
Felsite		1 32g	6 363g	2 197g				(9) 592g
Shaley Limestone		1 2g						(1) 2g
Limonite				1 60g				(1) 60g
Chert cortex-Limestone		2 11g	1 26g					(3) 37g
Metamorphozed Basalt		3 52g	1 33g	2 101g				(6) 186g
Metamorphozed Diorite			1 20g	1 103g				(2) 123g
Granitic Quartzite		1 8g	3 199g		1 540g			(5) 747g
Andesite		1 7g	2 26g	1 76g	1 164g			(5) 316g
Rhyolite				1 103g				(1) 103g
Indeterminant Schist		1 10g	3 76g					(4) 86g
Indeterminant	1 2g	8 58g	20 814g	5 566g	1 89g	1 367g		(36) 1896g
	(61) 100g	(450) 4944g	(680) 29,194g	(430) 45,387g	(92) 21,998g	(19) 8865g	(3) 3131g	(1735) 113,619g
Unmodified								
Glacial	7 11g	10 109g	16 684g	17 3014g	12 4452g	3 2204g		(65) 10,474g
Flint Hill/ Sandstone		1 13g					1 2116g	(2) 2129g
Micaceous Sandstone		1 18g	2 52g					(3) 70g
	(68) 111g	(462) 5084g	(698) 29,930g	(447) 48,401g	(104) 26,450g	(22) 11,069g	(4) 5247g	(1805) 126,292g

23MC143
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	
Quartzite				1 224g	(1) 224g
				(1) 224g	(1) 224g

23MC144
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	
Sandstone/ Quartzite	1 1g	2 17g			(3) 18g
Basalt	1 1g				(1) 1g
Quartzite		1 16g			(1) 16g
Houx Limestone		1 7g			(1) 7g
Granitic Quartzite		1 11g	1 42g		(2) 53g
Dolerite		1 15g			(1) 15g
Felso- Diorite		1 20g		1 187g	(2) 207g
Gneissic Gabbro				1 183g	(1) 183g
	(2) 2g	(7) 86g	(1) 42g	(2) 370g	(12) 500g

23MC147
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	
Granitic Quartzite		1 22g		1 112g	(2) 134g
Felsite		1 8g		1 115g	(2) 123g

	¼-½	½-1	1-2	2-3	
Argillite			1 42g		(1) 42g
	(2)	(2) 30g	(1) 42g	(2) 227g	(5) 299g

23MC148
FCR-Surface-(5)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone		11 68g	13 396g	5 428g	1 158g	(30) 1050g
Diorite Schist				1 73g		(1) 73g
Houx Limestone		2 20g	1 27g			(3) 47g
Quartzite	1 2g			1 151g		(2) 153g
Argillite			1 27g			(1) 27g
Quartz			1 26g			(1) 26g
Felsite			1 53g			(1) 53g
MG Argillite				1 180g		(1) 180g
	(1) 2g	(13) 88g	(17) 529g	(8) 832g	(1) 158g	(40) 1609g

Unmodified

Flint Hill/ Sandstone		1 14g	4 143g	1 75g		(6) 232g
Glacial				1 251g		(1) 251g
	(1) 2g	(14) 102g	(21) 672g	(10) 1158g	(1) 158g	(47) 2092g

23MC149
FCR-Surface-(4)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone	1 1g	15 176g	12 340g	1 100g		(29) 617g

	¼-½	½-1	1-2	2-3	3-4	
Felso-Dolerite		1 23g				(1) 23g
Quartzite			2 81g			(2) 81g
Argillite				1 51g		(1) 51g
	(1) 1g	(16) 199g	(14) 421g	(2) 151g		(33) 772g
Unmodified						
Flint Hill/ Sandstone			1 29g	4 432g	1 172g	(6) 633g
	(1) 1g	(16) 199g	(15) 450g	(6) 583g	(1) 172g	(39) 1405g

23MC153
FCR-Surface-(3)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Flint Hill/ Sandstone		5 72g	4 151g	8 1027g		1 362g	(18) 1612g
Argillite			1 43g		1 314g		(2) 357g
Quartzite		1 10g	2 77g	1 55g			(4) 142g
Quartz				1 288g			(1) 288g
Gneissic Diorite			1 30g				(1) 30g
MG Argillite				1 114g			(1) 114g
Granite				1 535g			(1) 535g
		(6) 82g	(8) 301g	(12) 2019g	(1) 314g	(1) 362g	(28) 3078g

23MC154
FCR-Surface & Test

	¼-½	½-1	1-2	2-3	
Flint Hill/ Sandstone	1 1g	3 30g	1 22g		(5) 53g

	¼-½	½-1	1-2	2-3	
Granitic Quartzite		1 4g			(1) 4g
Dolerite				1 59g	(1) 59g
Indeterminant	1 1g				(1) 1g
	(2) 2g	(4) 34g	(1) 22g	(1) 59g	(8) 117g
Unmodified Glacial	5 4g	2 15g			(7) 19g
	(7) 6g	(6) 49g	(1) 22g	(1) 59g	(15) 136g

23MC155
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Chert	1 1g				(1) 1g
Argillite			1 72g	1 110g	(2) 182g
Granitic Quartzite			1 75g	1 159g	(2) 234g
Felso-Dolerite				1 102g	(1) 102g
Dioritic Quartzite				1 220g	(1) 220g
	(1) 1g		(2) 147g	(4) 591g	(7) 739g

23MC156
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Flint Hill/ Sandstone		1 15g	2 134g		(3) 149g
Argillite		1 5g		1 88g	(2) 93g
Quartzite			1 74g		(1) 74g
MG Argillite				1 194g	(1) 194g

	¼-½	½-1	1-2	2-3	
Granitic Quartzite				2 205g	(2) 205g
		(2) 20g	(3) 208g	(4) 487g	(9) 715g
Unmodified Glacial			1 63g		(1) 63g
Unaltered Flint Hill/ Sandstone			1 31g		(1) 31g
		(2) 20g	(5) 302g	(4) 487g	(11) 809g

23MC158
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone		2 12g	2 97g	1 111g	1 199g	(6) 419g
Quartzite/Chert		2 20g				(2) 20g
Argillite			1 32g	1 254g		(2) 286g
Quartzite			1 44g			(1) 44g
Sandstone/ Quartzite				1 76g		(1) 76g
Dolerite				1 95g		(1) 95g
Dolerite/ Gabbro				1 278g		(1) 278g
		(4) 32g	(4) 173g	(5) 814g	(1) 199g	(14) 1218g
Unmodified Glacial		1 17g				(1) 17g
		(5) 39g	(4) 173g	(5) 814g	(1) 199g	(15) 1235g

23MC159
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Flint Hill/ Sandstone			2 80g	2 153g	(4) 233g

	¼-½	½-1	1-2	2-3	
			(2)	(2)	(4)
			80g	153g	233g
Unmodified Flint Hill/ Sandstone				2	(2)
				267g	267g
			(2)	(4)	(6)
			80g	420g	500g

23MC160
FCR-Test-(1)

	¼-½	½-1	
Granitic Quartzite	2	1	(3)
	2g	19g	21g
Quartzite	1		(1)
	1g		1g
Indeterminant	2		(2)
	1g		1g
	(5)	(1)	(6)
	4g	19g	23g
Unmodified Glacial	55	1	(56)
	35g	3g	38g
	(60)	(2)	(62)
	39g	22g	61g

23MC161
FCR-Test-(1)

	¼-½	½-1	
Quartzite		2	
		9g	
			(2)
			9g

23MC162
FCR-Test-(2)

	¼-½	½-1	1-2	2-3	
Argillite	5	2			(7)
	3g	12g			15g

	¼-½	½-1	1-2	2-3	
Flint Hill/ Sandstone	2 2g				(2) 2g
Granitic Quartzite	7 4g	3 31g	1 18g		(11) 53g
Dolerite				1 134g	(1) 134g
Sandstone/ Quartzite	1 2g				(1) 2g
Quartz	1 T				(1) T
Gneissic Dolerite	1 T				(1) T
Granite	1 2g				(1) 2g
Limestone	1 2g				(1) 2g
Quartzite		1 4g			(1) 4g
Felso-Diorite				1 84g	(1) 84g
Felsite				1 130g	(1) 130g
	(19) 15g	(6) 47g	(1) 18g	(3) 348g	(29) 428g
Unmodified Glacial	12 7g		1 138g		(13) 145g
	(31) 22g	(6) 47g	(2) 156g	(3) 348g	(42) 573g

23MC164
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	
Quartzite	1 1g			1 64g	(2) 65g
Sileceous Chert		1 17g			(1) 17g
Chert		1 3g			(1) 3g
Argillite	2 1g	1 12g			(3) 13g
Gneissic Dolerite		1 11g			(1) 11g

	¼-½	½-1	1-2	2-3	
Granitic Quartzite		1 11g			(1) 11g
Glacial Sandstone	2 2g				(2) 2g
	(5) 4g	(5) 54g		(1) 64g	(11) 122g
Unmodified Glacial	1 1g				(1) 1g
	(6) 5g	(5) 54g		(1) 64g	(12) 123g

23MC165
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Argillite	3 4g	2 11g	1 54g	1 125g	(7) 194g
Quartzite		3 49g		1 146g	(4) 195g
Glacial Sandstone		1 5g			(1) 5g
Felsite		1 13g			(1) 13g
Chert		1 9g			(1) 9g
Limestone		1 18g			(1) 18g
Gneissic Dolerite		2 24g			(2) 24g
Dolerite		1 14g			(1) 14g
Nodular Limestone		1 7g			(1) 7g
Gneissic Diorite			1 29g		(1) 29g
Granitic Quartzite			1 99g		(1) 99g
Gneissic Gabbro				1 171g	(1) 171g
	(3) 4g	(13) 150g	(3) 182g	(3) 442g	(22) 778g

	¼-½	½-1	1-2	2-3	
Unmodified Glacial				2 420g	(2) 420g
	(3) 4g	(13) 150g	(3) 182g	(5) 862g	(24) 1198g

23MC166
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	
Argillite		2 21g			(2) 21g
Quartzite		2 8g		1 144g	(3) 152g
Rhyolite		1 16g			(1) 16g
Glacial Sandstone		1 7g	1 20g		(2) 27g
Granite		1 9g			(1) 9g
Limestone (yellow nodular)		1 3g			(1) 3g
Chert cortex		1 4g			(1) 4g
Sileceous Chert		1 2g			(1) 2g
Dolerite			1 46g		(1) 46g
		(10) 70g	(2) 66g	(1) 144g	(13) 280g
Unmodified Glacial		1 4g			(1) 4g
		(11) 74g	(2) 66g	(1) 144g	(14) 284g

23MC172
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	
Granitic Quartzite	1 2g				(1) 2g
Felso-Dolerite	1 3g				(1) 3g

	¼-½	½-1	1-2	2-3	
Diorite	1 1g				(1) 1g
Feldspar	1 T				(1) T
Argillite		1 10g			(1) 10g
Quartzite		1 6g	1 36g		(2) 42g
Dolerite		1 9g		1 45g	(2) 54g
Gneissic Diorite		1 13g			(1) 13g
Gabbro		2 20g			(2) 20g
Indeterminant		1 11g			(1) 11g
	(4) 6g	(7) 69g	(1) 36g	(1) 45g	(13) 156g

23MC176
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Argillite	28 14g	9 44g	1 11g	1 49g		1 166g	(40) 284g
Chert/ Quartzite	6 2g						(6) 2g
Granitic Quartzite	12 9g	2 15g					(14) 24g
Quartzite	7 5g	1 4g		1 302g			(9) 311g
Felsite	1 3g						(1) 3g
Diorite	1 1g						(1) 1g
Dolerite				1 133g	2 774g	1 759g	(4) 1666g
	(55) 34g	(12) 63g	(1) 11g	(3) 484g	(2) 774g	(2) 925g	(75) 2291g

23MC220
FCR-Test-(1)

	¼-½	½-1	1-2	
Granitic Quartzite	5 5g	3 15g	1 38g	(9) 58g
Argillite	5 2g			(5) 2g
Gabbro	2 2g			(2) 2g
Felsite	1 T			(1) T
Cherty Limestone	3 5g			(3) 5g
Quartzite	1 T		2 84g	(3) 84g
Gneissic Dolerite		1 14g		(1) 14g
Flint Hill/ Sandstone			1 37g	(1) 37g
Indeterminant	1 T	1 5g		(2) 5g
	(18) 14g	(5) 34g	(4) 159g	(27) 207g
Unmodified Glacial	87 51g	3 17g		(90) 68g
	(105) 65g	(8) 51g	(4) 159g	(117) 275g

23MC221
FCR-Test-(1)

	¼-½	½-1	1-2	
Flint Hill/ Sandstone	1 1g	1 4g	1 85g	(3) 90g
Granitic Quartzite	1 2g			(1) 2g
	(2) 3g	(1) 4g	(1) 85g	(4) 92g

23MC222
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone	12 12g	12 78g	3 129g	2 188g	1 636g	(30) 1043g
Quartzite	1 2g					(1) 2g
Dolerite		1 11g				(1) 11g
	(13) 14g	(13) 89g	(3) 129g	(2) 188g	(1) 636g	(32) 1056g
Unmodified Glacial	1 1g	3 20g				(4) 21g
	(14) 15g	(16) 109g	(3) 129g	(2) 188g	(1) 636g	(36) 1077g

23MC223
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone	34 17g	36 257g	7 219g	3 268g	1 251g	(81) 1012g
Chert	1 1g	1 4g				(2) 5g
Quartzite	3 4g					(3) 4g
Granitic Quartzite	2 2g					(2) 2g
Felsite	1 1g					(1) 1g
Felso-Diorite		1 27g				(1) 27g
Slightly micaceous Silty Shale		1 2g				(1) 2g
	(41) 25g	(39) 290g	(7) 219g	(3) 268g	(1) 251g	(91) 1053g
Unmodified Glacial	16 12g	2 7g				(18) 19g
	(57) 37g	(41) 297g	(7) 219g	(3) 268g	(1) 251g	(109) 1072g

23MC224
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone	82 46g	25 189g	7 302g	4 362g	1 145g	(119) 1044g
Chert	↓ 1g					(1) 1g
Felso-Dolerite			1 45g			(1) 45g
	(83) 47g	(25) 189g	(8) 347g	(4) 362g	(1) 145g	(121) 1090g
Unmodified Glacial	4 2g		1 15g			(5) 17g
	(87) 49g	(25) 189g	(9) 362g	(4) 362g	(1) 145g	(126) 1107g

23MC225
FCR-Surface & Test-(2)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone	87 61g	62 411g	33 1211g	7 580g	2 399g	(191) 2662g
Diorite		1 11g				(1) 11g
MG Argillite			2 55g			(2) 55g
Basalt/ Gabbro			1 33g			(1) 33g
Argillite	3 1g					(3) 1g
Felsite	2 2g	1 9g				(3) 11g
Granitic Quartzite	1 T					(1) T
Quartzite		1 8g				(1) 8g
	(93) 64g	(65) 439g	(36) 1299g	(7) 580g	(2) 399g	(203) 2781g
Unmodified Glacial		2 12g				(2) 12g
	(93) 64g	(67) 451g	(36) 1299g	(7) 580g	(2) 399g	(205) 2793g

23MC226
FCR-Test-(1)

	¼-½	½-1	1-2	
Chert		1 5g		(1) 5g
Dolerite		1 8g		(1) 8g
Argillite			1 34g	(1) 34g
		(2) 13g	(1) 34g	(3) 47g

23MC228
FCR-Surface-(1)

	¼-½	½-1	1-2	
Felso-Diorite		1 12g		(1) 12g
Granitic Quartzite			1 98g	(1) 98g
		(1) 12g	(1) 98g	(2) 110g

23MC229
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Argillite		2 35g			1 157g	(3) 192g
Chert		1 3g				(1) 3g
Dolerite/ Gabbro			1 64g	1 132g		(2) 196g
		(3) 38g	(1) 64g	(1) 132g	(1) 157g	(6) 391g

23MC230
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	
Quartzite			1 39g	
				(1) 39g

23MC231
FCR-Test-(1)

	¼-½	½-1	1-2	
Flint Hill/ Sandstone			1 56g	(1) 56g
Gneissic Diorite		1 8g		(1) 8g
		(1) 8g	(1) 56g	(2) 64g

23MC232
FCR-Test-(1)

	¼-½	½-1	1-2	
Flint Hill/ Sandstone		2 28g	3 99g	(5) 127g
		(2) 28g	(3) 99g	(5) 127g

23MC233
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	
Flint Hill/ Sandstone			1 23g	1 104g	(2) 127g
Quartzite		1 12g			(1) 12g
Argillite		2 8g	1 23g		(3) 31g

	¼-½	½-1	1-2	2-3	
MG Argillite				1 133g	(1) 133g
		(3) 20g	(2) 46g	(2) 237g	(7) 303g

23MC234
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Quartzite		1 16g			(1) 16g
Argillite				1 74g	(1) 74g
Metamorphozed Felsite				1 109g	(1) 109g
		(1) 16g		(2) 183g	(3) 199g

FS76-235
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Quartzite			1 57g		(1) 57g
Granitic Quartzite				1 136g	(1) 136g
Argillite				1 219g	(1) 219g
			(1) 57g	(2) 355g	(3) 412g

23MC236
FCR-Surface-(1)

	¼-½	½-1	1-2	
Gneissic Dolerite		1 4g		(1) 4g
Argillite			1 32g	(1) 32g
		(1) 4g	(1) 32g	(2) 36g

23MC237
FCR-Surface & Tests-(2)

	¼-½	½-1	1-2	
Flint Hill/ Sandstone	2 2g	6 32g	5 227g	(13) 261g
Argillite			1 27g	(1) 27g
Indeterminant			1 42g	(1) 42g
	(2) 2g	(6) 32g	(7) 296g	(15) 330g
Unmodified Glacial		1 3g		(1) 3g
	(2) 2g	(7) 35g	(7) 296g	(16) 333g

23MC238
FCR-Test-(1)

	¼-½	½-1	1-2	
Flint Hill/ Sandstone	1 1g	4 30g	3 103g	(8) 134g
Granitic Quartzite			1 24g	(1) 24g
	(1) 1g	(4) 30g	(4) 127g	(9) 158g
Unmodified Glacial	5 6g	4 21g	1 29g	(10) 56g
	(6) 7g	(8) 51g	(5) 156g	(19) 214g

23MC239
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Granite	1 1g	2 29g	2 59g	1 117g	2 474g		(8) 680g
Argillite		2 22g	2 97g	4 366g	3 757g	1 427g	(12) 1669g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Felsite			1 41g		1 532g		(2) 573g
Quartzite		3 49g	7 301g		2 771g		(12) 1121g
Diorite			2 85g				(2) 85g
Flint Hill/ Sandstone		7 83g	6 222g	3 212g	2 296g		(18) 813g
Metamorphozed Diorite				1 95g			(1) 95g
Gabbro				1 62g	1 312g		(2) 374g
Andesite		1 5g					(1) 5g
Quartz	1 3g	1 14g					(2) 17g
Indeterminant Schist		1 8g					(1) 8g
Indeterminant	1 1g						(1) 1g
	(3) 5g	(17) 210g	(20) 805g	(10) 852g	(11) 3142g	(1) 427g	(62) 5441g
Unmodified Glacial					1 304g		(1) 304g
	(3) 5g	(17) 210g	(20) 805g	(10) 852g	(12) 3446g	(1) 427g	(63) 5745g

23MC240
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Quartzite		1 17g		1 139g	(2) 156g
Glacial Sandstone			1 29g		(1) 29g
Granitic Quartzite			1 66g		(1) 66g
Argillite				1 66g	(1) 66g
Gabbro				1 143g	(1) 143g
		(1) 17g	(2) 95g	(3) 348g	(6) 460g

	¼-½	½-1	1-2	2-3	
Unmodified Glacial			1 35g		(1) 35g
		(1) 17g	(3) 130g	(3) 348g	(7) 495g

23MC241
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone		2 15g				(2) 15g
Argillite			1 63g			(1) 63g
Quartzite					1 289g	(1) 289g
		(2) 15g	(1) 63g		(1) 289g	(4) 367g

23MC242
FCR-Test-(1)

	¼-½	½-1	1-2	
Granitic Quartzite			1 21g	(1) 21g
Limonite		1 3g		(1) 3g
Glacial Sandstone		1 2g		(1) 2g
		(2) 5g	(1) 21g	(3) 26g

23MC255
FCR-Test-(1)

	¼-½	½-1	1-2	
Quartzite		2 29g		(2) 29g
Chert		2 13g		(2) 13g

	¼-½	½-1	1-2	
Felsite			1 131g	(1) 131g
		(4) 42g	(1) 131g	(5) 173g
Unmodified Glacial	1 3g	3 19g		(4) 22g
	(1) 3g	(7) 61g	(1) 131g	(9) 195g

23MC256
FCR-Test-(1)

	¼-½	½-1	1-2	
Granitic Quartzite	4 4g	3 13g	1 26g	(8) 43g
Glacial Sandstone		1 16g		(1) 16g
Dolerite		1 7g		(1) 7g
	(4) 4g	(5) 36g	(1) 26g	(10) 66g

23MC258
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	3-4	
Granitic Quartzite	2 3g	2 9g	1 25g			(5) 37g
Granite	1 2g		2 84g			(3) 86g
Ferruginous Sandstone		1 16g				(1) 16g
Argillite			1 50g		1 383g	(2) 433g
Gneissic Dolerite			1 41g			(1) 41g
Glacial Sandstone			1 45g			(1) 45g
Quartzite				1 109g		(1) 109g
Dioritic Quartzite				1 218g		(1) 218g

	¼-½	½-1	1-2	2-3	3-4	
Indeterminant Schist		1 11g				(1) 11g
Indeterminant		1 3g				(1) 3g
	(3) 5g	(5) 39g	(6) 245g	(2) 327g	(1) 383g	(17) 999g
Unmodified Glacial	3 2g	1 5g				(4) 7g
	(6) 7g	(6) 44g	(6) 245g	(2) 327g	(1) 383g	(21) 1006g

23MC259
FCR-Test-(1)

	¼-½	½-1	1-2	
Granitic Quartzite	1 2g			(1) 2g
Argillite			1 29g	(1) 29g
	(1) 2g		(1) 29g	(2) 31g

23MC262
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Flint Hill/ Sandstone		1 8g			(1) 8g
Dolerite				1 179g	(1) 179g
		(1) 8g		(1) 179g	(2) 187g

23MC263
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	
Flint Hill/ Sandstone		6 45g	8 237g		(14) 282g
Quartzite		1 5g	1 22g	1 118g	(3) 145g

	¼-½	½-1	1-2	2-3	
Argillite			1 26g		(1) 26g
Indeterminant		1 5g			(1) 5g
		(8) 55g	(10) 285g	(1) 118g	(19) 458g
Unmodified Glacial		4 37g	4 164g		(8) 201g
		(12) 92g	(14) 449g	(1) 118g	(27) 659g

23MC264
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Chert		1 18g				(1) 18g
Quartzite			1 46g	1 233g	1 360g	(3) 639g
Argillite					1 180g	(1) 180g
Dioritic Quartzite				1 206g		(1) 206g
		(1) 18g	(1) 46g	(2) 439g	(2) 540g	(6) 1043g
Unmodified Glacial					1 456g	(1) 456g
		(1) 18g	(1) 46g	(2) 439g	(3) 996g	(7) 1499g

23MC266
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	
Quartz	1 1g	1 5g			(2) 6g
Granitic Quartzite	2 2g			1 97g	(3) 99g
Chert	1 3g		1 41g		(2) 44g

	¼-½	½-1	1-2	2-3	
Gabbro	1 4g				(1) 4g
Glacial Sandstone	1 1g	1 2g			(2) 3g
Yellow Concretionary Limestone	1 T				(1) T
Argillite		1 3g			(1) 3g
Felso-Diorite		1 13g			(1) 13g
Silty Micaceous Shale		3 16g			(3) 16g
Quartzite			1 26g	1 106g	(2) 132g
Granite			1 42g		(1) 42g
	(7) 11g	(7) 39g	(3) 109g	(2) 203g	(19) 362g
Unmodified Glacial	3 2g	1 4g	1 46g		(5) 52g
	(10) 13g	(8) 43g	(4) 155g	(2) 203g	(24) 414g

23MC267
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	
Argillite	1 T				
Dolerite				1 157g	
	(1) T			(1) 157g	(2) 157g
Unmodified Glacial	2 2g	1 4g			(3) 6g
	(3) 2g	(1) 4g		(1) 157g	(5) 163g

23MC269
FCR-Surface & Test-(2)

	¼-½	½-1	1-2	2-3	3-4	
Quartzite	1 T	1 19g	1 51g			(3) 70g
Feldspar	1 1g					(1) 1g
Argillite		1 5g	1 29g			(2) 34g
Granitic Quartzite		2 20g	1 82g	1 97g		(4) 199g
Dioritic Quartzite		2 37g				(2) 37g
Limestone (yellow-local)			1 75g		1 169g	(2) 244g
Gneissic Diorite			1 20g			(1) 20g
Glacial Sandstone			1 29g			(1) 29g
Gneissic Gabbro				1 113g		(1) 113g
Sileceous Chert				1 74g		(1) 74g
Granite				2 307g		(2) 307g
Indeterminant			1 57g			(1) 57g
	(2) 1g	(6) 81g	(7) 343g	(5) 591g	(1) 169g	(21) 1185g

23MC270
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Chert	2 4g							(2) 4g
Argillite		1 8g						(1) 8g
Dioritic Quartzite		1 17g						(1) 17g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Granitic Quartzite			1 142g					(1) 142g
Quartz			1 31g					(1) 31g
MG Argillite			1 18g					(1) 18g
Quartzite			2 62g					(2) 62g
Dolerite				1 149g				(1) 149g
Glacial Sandstone							1 845g	(1) 845g
Granite				1 231g	2 895g			(3) 1126g
Gneissic Granite			1 19g	1 90g				(2) 109g
Gabbro				1 114g				(1) 114g
	(2) 4g	(2) 25g	(6) 272g	(4) 584g	(2) 895g		(1) 845g	(17) 2625g
Unmodified Glacial	5 6g	1 6g		2 211g	1 547g	1 1101g		(10) 1871g
	(7) 10g	(3) 31g	(6) 272g	(6) 795g	(3) 1442g	(1) 1101g	(1) 845g	(27) 4496g

23MC271
PCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Granite				1 99g	1 233g	1 844g	(3) 1176g
Argillite				1 29g			(1) 29g
				(2) 128g	(1) 233g	(1) 844g	(4) 1205g
Unmodified Glacial						1 991g	(1) 991g
				(2) 128g	(1) 233g	(2) 1835g	(5) 2196g

23MC272
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Felsite				1 60g	
					(1) 60g

23MC273
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Basalt				1 135g	(1) 135g
Quartzite			1 75g		(1) 75g
			(1) 75g	(1) 135g	(2) 210g

FS76-274
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Flint Hill/ Sandstone				1 137g	
					(1) 137g

23MC274
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	
Granitic Quartzite		1 11g			(1) 11g
Glacial Sandstone		1 7g			(1) 7g
Metamorphozed Felsite		2 18g			(2) 18g

	¼-½	½-1	1-2	2-3	
Quartzite			1 65g		(1) 65g
Glacial Sandstone			1 54g		(1) 54g
Dolerite				1 80g	(1) 80g
		(4) 36g	(2) 119g	(1) 80g	(7) 235g

23MC275
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	
Quartzite		4 60g	2 84g	4 416g	1 444g	(11) 1004g
Argillite	1 1g	10 117g	3 77g	1 102g		(15) 297g
Metamorphozed Felsite		1 20g	2 67g	1 92g	2 249g	(6) 428g
Sileceous Chert		1 7g				(1) 7g
Granitic Quartzite		1 20g	1 101g	2 321g		(4) 442g
Gneissic Gabbro		1 24g				(1) 24g
Gabbro		1 21g		2 228g		(3) 249g
Dolerite		1 13g				(1) 13g
Felso-Diorite		1 8g	1 42g	1 75g		(3) 125g
Felso-Dolerite			1 49g	1 50g		(2) 99g
Felsite			1 37g			(1) 37g
Diorite				1 181g		(1) 181g
Andesite		1 8g				(1) 8g
Granite		1 12g		1 92g	1 297g	(3) 501g

	¼-½	½-1	1-2	2-3	3-4	
Gneissic Dolerite			1 62g			(1) 62g
Gneissic Diorite				1 95g		(1) 95g
	(1) 1g	(23) 310g	(12) 519g	(15) 1652g	(4) 1090g	(55) 3572g

23MC276
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Granitic Quartzite	1 1g	1 12g					1 1286g	(3) 1299g
Argillite		1 8g						(1) 8g
Felso-Diorite		1 10g						(1) 10g
Indeterminant	1 T							(1) T
	(2) 1g	(3) 30g					(1) 1286g	(6) 1317g
Unmodified Glacial	5 3g							(5) 3g
	(7) 4g	(3) 30g					(1) 1286g	(11) 1320g

23MC277
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Quartz	8 11g	6 35g	1 32g				(15) 78g
Granitic Quartzite	2 2g	2 52g	1 48g	1 72g	1 340g		(7) 514g
White Limestone		5 9g		3 211g			(8) 302g
Yellow Limestone		1 15g					(1) 15g
Gray Limestone	1 2g	6 32g	1 22g	1 97g			(9) 153g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Red Limestone		6 57g	6 238g	2 188g			(14) 483g
Brown Limestone			1 60g				(1) 60g
Dark gray/ black Limestone		2 21g	2 48g	4 356g	1 72g		(9) 497g
White concretionary Limestone		1 2g					(1) 2g
Glacial Sandstone		2 15g	6 303g	2 244g	1 262g		(11) 824g
Argillite		11 111g	19 583g	4 356g	3 906g		(37) 1956g
Chert	1 1g	9 88g	4 203g				(14) 292g
Quartzite	1 1g	7 51g	15 639g	6 1214g	1 496g		(30) 2401g
Gneissic Dolerite		2 35g	3 130g	1 102g	1 402g		(7) 669g
Felso- Dolerite		2 34g					(2) 34g
MG Argillite		3 41g	9 439g	3 474g	1 524g		(16) 1478g
Gabbro		2 31g		2 322g			(4) 353g
Felsite		2 39g	3 129g	4 548g			(9) 716g
Feldspar	1 1g						(1) 1g
Dolerite		2 19g	7 530g	1 101g			(10) 650g
Yellowish Nodular Limestone		1 7g					(1) 7g
Schistic Dolerite			1 20g				(1) 20g
Felso-Diorite			2 75g				(2) 75g
Diorite				1 56g			(1) 56g
Sandstone/ Quartzite		1 11g	2 89g	2 204g	1 266g		(6) 570g
Quartzite/ Chert				1 102g			(1) 102g

	½-½	½-1	1-2	2-3	3-4	4-5	
Sileceous Chert		1 17g					(1) 17g
Basalt			1 47g				(1) 47g
Metamorphozed Felsite			1 23g				(1) 23g
Indeterminant Schist			2 61g	1 76g			(3) 137g
Indeterminant	1 1g		7 179g	3 432g	1 207g		(12) 819g
	(15) 19g	(74) 804g	(94) 3898g	(42) 5155g	(11) 3475g		(236) 13,351g
Unmodified Glacial	2 2g	9 74g	1 75g	1 283g	2 1093g	1 776g	(16) 2303g
	(17) 21g	(83) 878g	(95) 3973g	(43) 5438g	(13) 4568g	(1) 776g	(252) 15,654g

23MC278
FCR-Surface-(2)

	½-½	½-1	1-2	2-3	3-4	
Quartz		1 23g				(1) 23g
Argillite		3 41g	5 172g	3 402g		(11) 615g
Quartzite		2 17g	5 201g	2 132g		(9) 132g
Felsite		2 10g				(2) 10g
Dolerite			2 137g	2 226g		(4) 363g
Diorite			1 57g	1 162g		(2) 219g
Chert			1 105g			(1) 105g
White Limestone			1 43g			(1) 43g
Red Limestone		1 15g			1 356g	(2) 371g
Sandstone/ Quartzite			1 63g			(1) 63g

	¼-½	½-1	1-2	2-3	3-4	
Granitic Quartzite			2 108g			(2) 108g
Gneissic Gabbro			1 32g	1 97g		(2) 129g
Basalt			1 73g			(1) 73g
Granite			1 69g			(1) 69g
MG Argillite				1 125g		(1) 125g
Dioritic Quartzite				1 119g		(1) 119g
Dolerite Schist					1 195g	(1) 195g
		(9) 106g	(21) 1060g	(11) 1263g	(2) 551g	(43) 2980g
Unmodified Glacial	1 2g				1 313g	(2) 315g
	(1) 2g	(9) 106g	(21) 1060g	(11) 1263g	(3) 864g	(45) 3295g

23MC279
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Quartz	1 2g	1 14g			(2) 16g
Chert		2 19g			(2) 19g
Gabbro		1 11g	1 48g		(2) 59g
MG Argillite		2 32g			(2) 32g
Quartzite		1 12g	1 120g	1 98g	(3) 230g
Sandstone/ Quartzite			1 85g		(1) 85g
Argillite			2 61g		(2) 61g
Granitic Quartzite			2 104g		(2) 104g
Dioritic Quartzite			1 28g		(1) 28g

	¼-½	½-1	1-2	2-3	
Indeterminant		1 13g			(1) 13g
	(1) 2g	(8) 101g	(8) 446g	(1) 98g	(18) 647g

23MC280
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Glacial Sandstone		1 2g				(1) 2g
Dolerite		1 10g				(1) 10g
Metamorphozed Felsite		1 9g				(1) 9g
Limestone		1 3g		1 44g		(2) 47g
MG Argillite			2 165g			(2) 165g
Basalt			1 50g			(1) 50g
Ferruginous Sandstone				1 48g		(1) 48g
Gabbro					1 226g	(1) 226g
		(4) 24g	(3) 215g	(2) 92g	(1) 226g	(10) 557g

23MC281
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	
Argillite			1 16g	2 74g	(3) 90g
Quartzite			2 49g		(2) 49g
			(3) 65g	(2) 74g	(5) 139g

23MC282
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Schistic Dolerite	2 3g				(2) 3g
Chert	2 2g				(2) 3g
Granite	2 1g				(2) 1g
Gneissic Dolerite		1 13g			(1) 13g
Yellow Concretionary Limestone		1 2g			(1) 2g
Dolerite				1 104g	(1) 104g
Argillite			1 35g	1 92g	(2) 127g
Indeterminant Schist	1 2g	1 2g			(2) 4g
	(7) 8g	(3) 17g	(1) 35g	(2) 196g	(13) 256g

23MC283
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Argillite	2 2g				(2) 2g
Diorite				1 189g	(1) 189g
	(2) 2g			(1) 189g	(3) 191g
Unmodified Glacial	41 30g				(41) 30g
	(43) 30g			(1) 189g	(44) 221g

23MC284
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	3-4	
Gabbro	1 T					(1) T
Chert		1 9g				(1) 9g
Quartzite	1 T	2 24g	1 38g		1 361g	(5) 423g
Gray Limestone				1 99g		(1) 99g
Diorite				1 231g		(1) 231g
	(2) T	(3) 33g	(11) 38g	(2) 330g	(1) 361g	(9) 762g

23MC285
FCR-Test-(1)

	¼-½	½-1	
Argillite	1 2g	2 16g	(3) 18g
Chert		2 21g	(2) 21g
Indeterminant	1 T	1 3g	(2) 3g
	(2) 2g	(5) 40g	(7) 42g
Unmodified Glacial	1 2g	1 6g	(2) 8g
	(3) 4g	(6) 46g	(9) 50g

23MC286
FCR-Surface & Test--(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Argillite		1 18g	2 78g	1 82g			(4) 178g

23MC282
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Schistic	2				(2)
Dolerite	3g				3g
Chert	2				(2)
	2g				3g
Granite	2				(2)
	1g				1g
Gneissic		1			(1)
Dolerite		13g			13g
Yellow					
Concretionary		1			(1)
Limestone		2g			2g
Dolerite				1	(1)
				104g	104g
Argillite			1	1	(2)
			35g	92g	127g
Indeterminant	1	1			(2)
Schist	2g	2g			4g
	(7)	(3)	(1)	(2)	(13)
	8g	17g	35g	196g	256g

23MC283
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Argillite	2				(2)
	2g				2g
Diorite				1	(1)
				189g	189g
	(2)			(1)	(3)
	2g			189g	191g
Unmodified	41				(41)
Glacial	30g				30g
	(43)			(1)	(44)
	30g			189g	221g

23MC284
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	3-4	
Gabbro	1 T					(1) T
Chert		1 9g				(1) 9g
Quartzite	1 T	2 24g	1 38g		1 361g	(5) 423g
Gray Limestone				1 99g		(1) 99g
Diorite				1 231g		(1) 231g
	(2) T	(3) 33g	(11) 38g	(2) 330g	(1) 361g	(9) 762g

23MC285
FCR-Test-(1)

	¼-½	½-1	
Argillite	1 2g	2 16g	(3) 18g
Chert		2 21g	(2) 21g
Indeterminant	1 T	1 3g	(2) 3g
	(2) 2g	(5) 40g	(7) 42g
Unmodified Glacial	1 2g	1 6g	(2) 8g
	(3) 4g	(6) 46g	(9) 50g

23MC286
FCR-Surface & Test--(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Argillite		1 18g	2 78g	1 82g			(4) 178g

	¼–½	½–1	1–2	2–3	3–4	4–5	
Dolerite		1 13g		1 112g			(2) 125g
Felsite		1 18g					(1) 18g
Granitic Quartzite			1 64g			1 558g	(2) 622g
Gabbro			1 35g				(1) 35g
Sandstone/ Quartzite			2 63g				(2) 63g
Quartzite			1 47g				(1) 47g
Granite				2 362g		1 1239g	(3) 1601g
Felso-Dolerite			1 19g				(1) 19g
Metamorphozed Felsite			2 25g				(2) 25g
		(3) 49g	(10) 331g	(4) 556g		(2) 1797g	(19) 2733g
Unmodified Glacial		1 7g	1 72g		1 431g		(3) 510g
		(4) 56g	(11) 403g	(4) 556g	(1) 431g	(2) 1797g	(22) 3243g

23MC287
FCR-Test-(1)

	¼–½	
Quartzo-Quartzite	2 2g	(2) 2g
Ferruginous Sandstone	1 1g	(1) 1g
	(3) 3g	(3) 3g
Unmodified Glacial	1 2g	(1) 2g
	(4) 5g	(4) 5g

23MC288
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Quartzite	1 3g	1 19g			(2) 22g
Felso- Dolerite	1 2g				(1) 2g
Argillite		1 5g			(1) 5g
Gabbro		1 19g			(1) 19g
MG Argillite		1 19g			(1) 19g
Chert		2 28g			(2) 28g
Diorite		1 11g			(1) 11g
Glacial Sandstone			1 15g		(1) 15g
Granitic Quartzite			1 46g		(1) 46g
Basalt			1 60g		(1) 60g
Felsite			1 45g		(1) 45g
Diorite				1 124g	(1) 124g
	(2) 5g	(7) 101g	(4) 166g	(1) 124g	(14) 396g

23MC289
FCR-Test-(1)

	¼-½	½-1	1-2	
Argillite	1 2g	1 16g		(2) 16g
Ferruginous Sandstone		1 17g		(1) 17g
Quartzite			1 68g	(1) 68g

	¼-½	½-1	1-2	
Indeterminant		1 13g		(1) 13g
	(1) 2g	(3) 46g	(1) 68g	(5) 116g

23MC290
FCR-Surface & Test

	¼-½	½-1	1-2	2-3	
Quartzite	1 T	1 17g	1 19g	3 496g	(5) 532g
Argillite		2 20g		1 52g	(3) 72g
Granitic Quartzite		1 7g			(1) 7g
Gneissic Dolerite		1 10g			(1) 10g
Chert		1 15g			(1) 15g
Dolerite			1 26g	1 153g	(2) 179g
Indeterminant		1 5g			(1) 5g
	(1) T	(7) 74g	(2) 45g	(5) 701g	(15) 820g
Unmodified Glacial	2 2g				(2) 2g
	(2) 2g	(7) 74g	(2) 45g	(5) 701g	(17) 822g

23MC291
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	3-4	
Argillite	2 1g	4 42g	1 81g	3 349g		(10) 473g
Quartzite	1 T		1 35g	2 297g		(4) 332g
Granitic Quartzite	4 4g	1 5g	4 238g	1 200g		(10) 447g

	¼-½	½-1	1-2	2-3	3-4	
Diorite	6 6g					(6) 6g
Dolerite		1 10g		1 197g		(2) 207g
Gneissic Gabbro		1 4g				(1) 4g
Chert		3 32g				(3) 32g
MG Argillite			3 142g	1 59g		(4) 201g
Basalt				1 333g		(1) 333g
Ferruginous Sandstone				1 87g		(1) 87g
Gneissic Dolerite					1 265g	(1) 265g
	(13) 11g	(10) 93g	(9) 496g	(10) 1522g	(1) 265g	(43) 2387g
Unmodified Glacial	28 17g	1 8g				(29) 25g
	(41) 28g	(11) 101g	(9) 496g	(10) 1522g	(1) 265g	(72) 2412g

23MC292
FCR-Test-(1)

	¼-½	½-1	1-2	
Argillite	2 2g		1 73g	(3) 75g
Quartz	1 1g			(1) 1g
Chert	1 1g			(1) 1g
Sandstone	1 1g			(1) 1g
Yellow Nodular Limestone	1 T			(1) T
Micaceous Shaley Siltstone		1 3g		(1) 3g
	(6) 5g	(1) 3g	(1) 73g	(8) 81g

	¼-½	½-1	1-2	
Unmodified Glacial	6 3g			(6) 3g
	(12) 8g	(1) 3g	(1) 73g	(14) 84g

23MC293
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	
Quartzite		1 5g		1 282g	(2) 287g
MG Argillite			1 49g		(1) 49g
		(1) 5g	(1) 49g	(1) 282g	(3) 336g

23MC294
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	
Quartzite			1 109g	1 101g	(2) 210g
			(1) 109g	(1) 101g	(2) 210g
Unmodified Glacial	2 1g				(2) 1g
	(2) 1g		(1) 109g	(1) 101g	(4) 211g

23MC295
FCR-Surface-(1)

	¼-½	½-1	1-2	
Argillite			1 67g	
				(1) 67g

23MC296
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Quartz	1 T					(1) T
Chert		4 46g		1 160g		(5) 206g
Granite			1 36g			(1) 36g
Quartzite			1 37g			(1) 37g
Granitic Quartzite				1 75g		(1) 75g
Limestone (Local)				1 47g		(1) 47g
Gneissic Dolerite				1 59g	1 352g	(2) 411g
Doleritic Quartzite					1 192g	(1) 192g
Felsite					1 238g	(1) 238g
	(1) T	(4) 46g	(2) 73g	(4) 341g	(3) 782g	(14) 1242g

23MC298
FCR-Surface-(8)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	
Gray Limestone	2 2g	9 67g	7 186g	7 405g	1 201g		1 545g			(27) 1406g
Brown Limestone		4 45g	6 170g	12 1136g	12 2168g	3 1333g	2 1038g		1 621g	(40) 6511g
Quartz	8 8g	10 92g	1 49g							(19) 149g
Micaceous Sandstone	5 4g	29 317g	49 1534g	27 2634g	9 1834g					(119) 6323g
Quartzite	2 1g	34 407g	73 3269g	40 5467g	4 1345g	1 336g				(154) 10,825g
Argillite	4 2g	30 355g	61 2683g	30 2563g	3 525g	2 685g				(130) 6813g

	¼–½	½–1	1–2	2–3	3–4	4–5	5–6	6–7	7–8	
Granitic Quartzite	1 2g	15 155g	36 2050g	34 4431g	6 2849g	1 494g				(93) 9981g
Granite	1 T	1 8g	8 570g	3 334g						(13) 912g
Diorite		4 56g	14 775g	15 2295g						(33) 3126g
Dolerite		3 48g	16 788g	16 2258g	4 1395g	1 511g				(40) 5000g
Gabbro	1 T	2 27g	7 358g	7 1170g						(17) 1555g
Grano-Diorite			2 173g	1 147g						(3) 320g
Diorite/ Dolerite	2 2g	1 12g	2 139g							(5) 153g
Dolerite/ Gabbro		1 15g	2 975g		2 507g					(5) 1497g
Flint Hill/ Sandstone		8 87g	12 418g	3 273g						(23) 778g
Glacial Sandstone		2 153g		1 84g						(3) 237g
Shale	2 1g	12 13g	2 65g		1 161g					(17) 240g
Sandstone/ Quartzite		2 11g	2 66g	6 460g						(10) 537g
Ferruginous Sandstone	3 4g	1 3g	2 76g	1 76g						(7) 159g
Quartzite/ Sileceous Chert		2 17g	5 220g							(7) 237g
Chert	1 1g	2 23g	3 106g	4 453g	1 402g					(11) 985g
MG Argillite	1 2g	2 5g	6 261g	5 470g	1 408g					(15) 1146g
Felsite	2 4g	4 47g	15 669g	4 290g						(25) 1010g
Basalt		1 10g	7 418g	5 655g	1 249g					(14) 1332g
Gabbro/ Basalt			2 129g	1 104g						(3) 233g
Olivine Felsite		1 6g		3 561g	1 312g					(5) 879g
Metamorphozed Felsite			3 204g	2 344g						(5) 548g

	¼–½	½–1	1–2	2–3	3–4	4–5	5–6	6–7	7–8	
Felso-Diorite			2 70g	1 178g						(3) 248g
Felso- Dolerite		3 36g	2 107g	2 207g						(7) 350g
Andesite				1 155g						(1) 155g
Gneissic Grano-Diorite			1 25g							(1) 25
Gneissic Diorite			2 79g							(2) 79g
Gneissic Dolerite		1 23g	4 260g	6 1019g	1 459g					(12) 1761g
Gneissic Gabbro		1 3g								(1) 3g
Granite Schist			3 144g							(3) 144g
Dolerite Schist	1 2g		3 148g							(4) 150g
Gabbro Schist		1 4g	1 43g							(2) 47g
Massive Diorite	1 2g	2 7g	4 169g	1 112g						(8) 290g
Grano-Diorite Quartzite			2 98g	3 366g			1 1057g			(6) 1521g
Dioritic Quartzite			2 81g		1 224g					(3) 305g
Dolerite Quartzite			2 110g							(2) 110g
Glacial Limestone			1 28g	1 43g	1 271g					(3) 342g
Indeterminant Gneiss		1 10g								(1) 10g
Indeterminant Schist		1 2g	1 ½ 26g	1 80g						(3) 108g
Indeterminant		8 82g	12 406g	8 709g	1 290g					(29) 1487g
	(37) 37g	(198) 2146g	(385) 18,145g	(251) 29,479g	(50) 13,600g	(8) 3359g	(8) 2640g		(1) 621g	(934) 70,027g
Unmodified Glacial	13 15g	41 415g	35 1575g	12 1675g	2 944g	1 665g				(104) 5329g
	(50) 52g	(239) 2561g	(420) 19,720g	(263) 31,154g	(52) 14,594g	(9) 4014g	(4) 2640g		(1) 621g	(1038) 75,356g

23MC299
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Argillite		1 7g		3 176g		(4) 183g
Quartzite		1 12g	2 110g			(3) 122g
MG Argillite			1 71g			(1) 71g
Quartzite/ Sileceous Chert			2 113g			(2) 113g
Felso-Dolerite			1 28g			(1) 28g
Felsite					1 164g	(1) 164g
Indeterminant			1 31g			(1) 31g
		(2) 19g	(7) 353g	(3) 176g	(1) 164g	(13) 712g
Unmodified Glacial			1 54g			(1) 54g
		(2) 19g	(8) 407g	(3) 176g	(1) 164g	(14) 766g

23MC300
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	
Sandstone/ Quartzite			1 54g	(1) 54g
Indeterminant Schist		1 2g		(1) 2g
		(1) 2g	(1) 54g	(2) 56g
Unmodified Glacial	1 T			(1) T
	(1) T	(1) 2g	(1) 54g	(3) 56g

23MC301
FCR-Test-(1)

	¼-½	½-1	
Unmodified	90	7	(97)
Glacial	77g	47g	124g
	(90)	(7)	(97)
	77g	47g	124g

23MC302
FCR-Test-(1)

	¼-½	½-1	1-2	2-3	
Granitic	1				(1)
Quartzite	1g				1g
Felsite				1	(1)
				76g	76g
Indeterminant	1				(1)
	T				T
	(2)			(1)	(3)
	1g			76g	77g
Unmodified	48	13			(61)
Glacial	31g	74g			105g
	(50)	(13)		(1)	(64)
	32g	74g		76g	182g

23MC303
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Argillite		2	1	2	1	(6)
		25g	59g	206g	217g	507g
Quartzite		1				(1)
		2g				2g
Felso-Diorite		1	1			(2)
		2g	24g			26g
Felso-Dolerite					1	(1)
					147g	147g
		(4)	(2)	(2)	(2)	(10)
		29g	83g	206g	364g	682g

	¼-½	½-1	1-2	2-3	3-4	
Unmodified	1		1			(2)
Glacial	1g		41g			42g
	(1)	(4)	(3)	(2)	(2)	(12)
	1g	29g	124g	206g	364g	724g

23MC304
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3		
Quartzite		1			(1)	
		23g			23g	
Granitic		1	1	1	(3)	
Quartzite		6g	53g	94g	153g	
Chert			2		(2)	
			130g		130g	
Argillite				1	(1)	
				103g	103g	
Felso-				1	(1)	
Dolerite				151g	151g	
		(2)	(3)	(3)	(8)	
		29g	183g	348g	560g	

23MC305
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Granitic		1	2	3		(6)
Quartzite		10g	147g	366g		523g
Argillite		1	1	3		(5)
		6g	46g	271g		323g
Quartzite			1	1	1	(3)
			23g	118g	135g	276g
Dolerite			1		1	(2)
			34g		145g	179g
Felsite				1		(1)
				103g		103g
Felso-Dolerite					1	(1)
					162g	162g
		(2)	(5)	(8)	(3)	(18)
		16g	250g	858g	442g	1566g

	¼-½	½-1	1-2	2-3	3-4	
Unmodified Glacial	1 18g					(1) 18g
		(9) 36g	(5) 250g	(8) 858g	(3) 442g	(19) 1584g

23MC306
FCR-Test-(1)

	¼-½	½-1	
Chert	1 ,T		(1) T
Quartzite		1 3g	(1) 3g
Indeterminant		1 2g	(1) 2g
	(1) T	(2) 5g	(3) 5g
Unmodified Glacial	24 12g	4 13g	(28) 25g
	(25) 12g	(6) 18g	(31) 30g

23MC307
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Quartzite		1 6g	3 141g	1 270g	(5) 417g
Chert		1 11g			(1) 11g
Schistic Granite		1 11g			(1) 11g
Argillite		2 19g	2 97g	3 220g	(7) 336g
Dolerite/ Gabbro			1 63g		(1) 63g
Limestone			1 24g		(1) 24g
Diorite				1 227g	(1) 227g

	¼–½	½–1	1–2	2–3	
Granitic Quartzite				1 95g	(1) 95g
Indeterminant		1 6g			(1) 6g
		(6) 53g	(7) 325g	(6) 812g	(19) 1190g

23MC308
FCR-Surface-(1)

	¼–½	½–1	1–2	2–3	3–4	4–5	5–6	
Granitic Quartzite	1 2g	1 13g	2 52g	6 658g	2 666g		1 1471g	(13) 2862g
Quartzite		3 41g	16 805g	7 1144g	3 1239g	1 1130g		(30) 4359g
Chert		2 27g						(2) 27g
Cherty Red Friable Limestone		1 7g	4 97g					(5) 104g
Glacial Limestone					1 79g			(1) 79g
Felso-Dolerite		1 13g						(1) 13g
Argillite			6 281g	3 433g				(9) 714g
Diorite			2 143g	3 524g				(5) 667g
Felsite			2 103g	1 121g				(3) 224g
Dolerite				2 205g	2 663g			(4) 868g
Dolerite/ Gabbro				1 211g				(1) 211g
Felso- Diorite				1 184g				(1) 184g
MG Argillite			1 38g					(1) 38g
Gneissic Diorite			1 18g					(1) 18g
Ferruginous Sandstone				1 90g				(1) 90g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Diorite/ Dolerite				1 93g				(1) 93g
Gneissic Dolerite				1 65g				(1) 65g
	(1) 2g	(8) 101g	(34) 1537g	(27) 3728g	(8) 2647g	(1) 1130g	(1) 1471g	(80) 10,616g

23MC309
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Argillite			1 22g		(1) 22g
Chert			1 59g		(1) 59g
Granitic Quartzite				1 139g	(1) 139g
			(2) 81g	(1) 139g	(3) 220g

23MC310
FCR-Surface-(1)

	¼-½	½-1	
Quartzite		1 9g	(1) 9g
Chert		1 10g	(1) 10g
		(2) 19g	(2) 19g

23MC311
FCR-Surface & Tests

	¼-½	1-2	1-2	
Quartzite			1 57g	(1) 57g
Granitic Quartzite	3 3g	1 3g	1 42g	(5) 48g
Basalt			1 29g	(1) 29g

	¼-½	½-1	1-2	
Argillite	1 1g			(1) 1g
Dolerite Schist	1 1g			(1) 1g
Felsite			1 27g	(1) 27g
	(5) 5g	(1) 3g	(4) 155g	(10) 163g
Unmodified Glacial	5 2g			(5) 2g
	(10) 7g	(1) 3g	(4) 155g	(15) 165g

23MC312
FCR-Surface & Test-(1)

	¼-½	½-1	6-7	
Argillite	1 1g			(1) 1g
Granite	3 2g		1 1290g	(4) 1292g
Limonite		1 3g		(1) 3g
Non-Local Limestone	1 2g			(1) 2g
	(5) 5g	(1) 3g	(1) 1290g	(7) 1298g
Unmodified Glacial	12 9g	1 12g		(13) 21g
	(17) 14g	(2) 15g	(1) 1290g	(20) 1319g

23MC313
FCR-Surface-(1)

	¼-½	½-1	1-2	
Argillite		1 2g		(1) 2g
Quartzite			1 46g	(1) 46g
		(1) 2g	(1) 46g	(2) 48g

	¼-½	½-1	1-2	
Unmodified Blackshale	1 T	1 1g		(2) 1g
	(1) T	(2) 3g	(1) 46g	(4) 49g

23MC314
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Argillite			1 35g		(1) 35g
Granitic Quartzite				1 110g	(1) 110g
			(1) 35g	(1) 110g	(2) 145g

23MC315
FCR-Test-(1)

	¼-½	½-1	
Argillite	2 1g		(2) 1g
Red, Cherty, Friable Limestone		1 4g	(1) 4g
	(2) 1g	(1) 4g	(3) 5g
Unmodified Glacial	2 1g		(2) 1g
	(4) 2g	(1) 4g	(5) 6g

23MC316
FCR-Surface & Tests-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Argillite	2 1g	3 8g	1 19g				(6) 28g
Dolerite	1 T	1 3g	1 38g	1 110g			(4) 151g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Nodular White Limestone	3 3g	1 1g					(4) 4g
Sandstone/ Quartzite	1 1g	1 16g	1 52g				(3) 69g
Schistic Gabbro		1 18g					(1) 18g
Brown Limestone			1 49g				(1) 49g
Granitic Quartzite	6 3g	2 5g			1 411g	1 639g	(10) 1058g
Quartzite	4 2g	2 9g	3 179g		1 539g		(10) 729g
Gneissic Gabbro	1 1g						(1) 1g
Gabbro		1 6g					(1) 6g
Grano-Diorite Quartzite	2 1g	1 2g	2 66g				(5) 69g
Quartz	2 T						(2) T
Feldspar	1 T						(1) T
	(23) 12g	(14) 75g	(9) 403g	(1) 110g	(2) 950g	(1) 639g	(50) 2189g
Unmodified Glacial	12 6g						(12) 6g
	(35) 18g	(14) 75g	(9) 403g	(1) 110g	(2) 950g	(1) 639g	(62) 2195g

23MC318
FCR-Surface & Test-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Dolerite	2 2g	4 20g	1 37g				1 2993g	(8) 3052g
Granitic Quartzite	5 4g	3 22g	4 228g	2 231g				(14) 485g
Diorite	1 1g							(1) 1g
Quartzite	2 1g		5 122g	2 555g		1 869g		(10) 1547g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Dolerite/ Gabbro Schist	2 1g							(2) 1g
Felsite		1 13g						(1) 13g
Chert		1 2g						(1) 2g
Gneissic Dolerite			1 19g					(1) 19g
Argillite		2 31g	1 27g		1 159g			(4) 217g
Quartzite/ Siliceous Chert			1 50g					(1) 50g
Micaceous Sandstone			1 22g	1 103g				(2) 125g
Glacial Sandstone		1 16g						(1) 16g
Indeterminant				1 116g				(1) 116g
	(12) 9g	(12) 104g	(14) 505g	(6) 1005g	(1) 159g	(1) 869g	(1) 2993g	(47) 5644g
Unmodified Glacial	4 4g	2 16g		1 331g	1 400g			(8) 751g
	(16) 13g	(14) 120g	(14) 505g	(7) 1336g	(2) 559g	(1) 869g	(1) 2993g	(55) 6395g

23MC319
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Argillite		1 6g		1 182g	1 219g		1 543g	(4) 950g
Felsite		1 12g	1 21g					(2) 33g
Granitic Quartzite				2 249g				(2) 249g
Schistic Grano-Diorite				1 52g				(1) 52g
Schistic/ Dolerite Gabbro			1 61g					(1) 61g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Quartzite							1 1252g	(1) 1252g
Felso- Dolerite		1 27g						(1) 27g
		(3) 45g	(2) 82g	(4) 483g	(1) 219g		(2) 1795g	(12) 2624g

23MC320
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Argillite		1 9g	2 98g				(3) 107g
Felsite		2 18g		1 177g			(3) 195g
Quartzite			1 31g	1 140g			(2) 171g
Olivine Felsite				1 160g			(1) 160g
Felso-Diorite			1 33g				(1) 33g
Granitic Quartzite				1 278g			(1) 278g
Grano- Diorite						1 690g	(1) 690g
		(3) 27g	(4) 162g	(4) 755g		(1) 690g	(12) 1634g

23MC321
FCR-Surface-(3)

	¼-½	½-1	1-2	2-3	
Flint Hill/ Sandstone		4 47g	4 157g	1 110g	(9) 314g
Quartzite/ Chert		1 14g	1 50g	1 72g	(3) 136g
Dolerite/ Gabbro			1 75g		(1) 75g
Quartzite				1 95g	(1) 95g

	¼-½	½-1	1-2	2-3	
Quartz		1 15g			(1) 15g
		(6) 76g	(6) 282g	(3) 277g	(15) 635g
Unmodified Flint Hill/ Sandstone	2 3g			2 162g	(4) 165g
	(2) 3g	(6) 76g	(6) 282g	(5) 439g	(19) 800g

23MC322
FCR-Surface-(1)

	½-¾	1-2	
Argillite	1 16g	1 35g	(2) 51g
Quartz		1 30g	(1) 30g
	(1) 16g	(2) 65g	(3) 81g

23MC323
FCR-Surface-(2)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Quartz	2 1g	9 66g	2 125g	1 87g			(14) 279g
Olivine Felsite	1 1g	2 7g					(3) 8g
Argillite	1 1g	14 131g	16 559g	7 606g	7 1911g	1 638g	(46) 3846g
Quartzite	4 7g	8 100g	13 675g	5 615g	1 165g		(32) 1562g
Chert	2 4g	4 39g	3 120g				(9) 163g
Red Friable Cherty Limestone	2 2g	6 47g	6 170g	2 161g			(16) 380g
Yellow Friable Cherty Limestone		3 16g	2 47g				(5) 63g
White Nodular Limestone	1 1g	4 22g					(5) 23g

	¼–½	½–1	1–2	2–3	3–4	4–5	
Quartzite/ Chert		2 10g					(2) 10g
Felsite		2 31g	3 116g	1 147g			(6) 294g
Metamorphozed Felsite		1 13g	3 184g				(5) 197g
Dolerite		1 25g	3 250g	2 383g	1 176g		(7) 834g
Basalt			1 45g	2 301g			(3) 346g
MG Argillite			1 19g	1 204g			(2) 223g
Granitic Quartzite			1 127g	2 365g			(3) 492g
Dolerite/ Gabbro				1 79g			(1) 79g
Micaceous Sandstone				1 59g			(1) 59g
Gneissic Diorite				1 151g			(1) 151g
Gneissic Dolerite		1 22g		1 102g			(2) 124g
Quartzo-Quartzite			1 62g				(1) 62g
Non-Local Limestone			1 39g		1 117g		(2) 156g
Felso-Dolerite				1 97g			(1) 97g
Sileceous Chert	1 9g		1 38g				(2) 39g
Black Chert Cortex		1 8g					(1) 8g
Felso-Diorite			1 32g				(1) 32g
Gabbro			1 137g				(1) 137g
Diorite				1 81g			(1) 81g
Indeterminant		1 4g	1 19g				(2) 23g
	(14) 18g	(60) 541g	(61) 2764g	(29) 3438g	(10) 2369g	(1) 638g	(175) 9768g

	¼-½	½-1	1-2	2-3	3-4	4-5	
Unmodified	1	5	1	3			(10)
Glacial	T	51g	59g	904g			1014g
	(15)	(65)	(62)	(32)	(10)	(1)	(185)
	18g	592g	2823g	4342g	2369g	638g	10,782g

23MC326
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Quarts		1		1	(2)
		8g		225g	233g
Sandstone/		1	1		(2)
Quartzite		12g	38g		50g
Quartzite		1	1	1	(3)
		18g	38g	253g	309g
Argillite		2	2	1	(5)
		26g	64g	153g	243g
Flint Hill/		1			(1)
Sandstone		7g			7g
Gneissic		1			(1)
Grano-Diorite		17g			17g
Diorite			1		(1)
			60g		60g
Granitic			3	1	(4)
Quartzite			157g	152g	309g
Gneissic				1	(1)
Dolerite				53g	53g
		(7)	(8)	(5)	(20)
		88g	357g	836g	1281g
Unmodified		1	1		(2)
Glacial		5g	133g		138g
		(8)	(9)	(5)	(22)
		93g	490g	836g	1419g

23MC329
FCR-Surface-(1)

	¼-½	½-1	1-2
Argillite			1
			26g
			(1)
			26g

23MC330
FCR-Surface-(1)

	½-½	½-1	1-2	2-3	
Quartzite		2 24g	1 40g		(3) 64g
Flint Hill/ Sandstone			1 59g		(1) 59g
Argillite				1 155g	(1) 155g
		(2) 24g	(2) 99g	(1) 155g	(5) 278g

23MC331
FCR-Surface-(1)

	½-½	½-1	1-2	2-3	3-4	4-5	5-6	
Micaceous Sandstone	1 1g		2 88g	1 71g		1 437g		(5) 597g
Quartzite		2 19g	1 33g	3 429g	2 649g	1 521g		(9) 1651g
Diorite		1 12g		1 102g	1 304g			(3) 418g
Chert		1 4g						(1) 4g
Granitic Quartzite		1 5g		2 266g				(3) 271g
Argillite		1 12g	2 126g	5 804g				(8) 942g
Granite			1 38g	2 271g	1 249g		1 1146g	(5) 1704g
Flint Hill/ Sandstone			2 77g	1 62g				(3) 139g
Felsite				1 152g				(1) 152g
Dolerite				1 182g			1 591g	(2) 773g

	¼-½	½-1	1-2	2-3	3-4	4-5	5-6	
Schistic Dolerite				1 305g				(1) 305g
Diorite/ Dolerite						1 591g		(1) 591g
Indeterminant			1 53g					(1) 53g
	(1) 1g	(6) 52g	(9) 415g	(18) 2644g	(4) 1202g	(3) 1549g	(2) 1737g	(43) 7600g
Unmodified Glacial					(1) 334g			(1) 334g
	(1) 1g	(6) 52g	(9) 415g	(18) 2644g	(5) 1536g	(3) 1549g	(2) 1737g	(44) 7934g

23MC332
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	4-5	
Flint Hill/ Sandstone		1 10g		2 214g			(3) 224g
Quartzite		1 6g				1 317g	(2) 323g
Argillite		1 13g					(1) 13g
Brown Limestone			1 30g				(1) 30g
		(3) 29g	(1) 30g	(2) 214g		(1) 317g	(7) 590g
Unmodified Glacial		1 5g			2 736g		(3) 741g
Black shale		1 1g					(1) 1g
		(5) 35g	(1) 30g	(2) 214g	(2) 736g	(1) 317g	(11) 1332g

23MC335
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Quartz	1 1g					(1) 1g

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone			1 34g	1 149g		(2) 183g
Quartzite					1 993g	(1) 993g
	(1) 1g		(1) 34g	(1) 149g	(1) 993g	(4) 1177g

23MC337
"CR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone		1 9g	1 46g	1 64g	1 143g	(4) 262g
White Limestone				1 48g		(1) 48g
Gray Limestone					1 70g	(1) 70g
Sileceous Chert		1 16g	1 18g			(2) 34g
Argillite			2 105g			(2) 105g
Felso-Dolerite				1 85g		(1) 85g
		(2) 25g	(4) 169g	(3) 197g	(2) 213g	(11) 604g
Unmodified Glacial		1 5g			1 596g	(2) 601g
		(3) 30g	(4) 169g	(3) 197g	(3) 809g	(13) 1205g

23MC338
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Shale	7 4g	3 13g		1 44g	(11) 61g
Quartz	4 3g	1 4g			(5) 7g
Glacial Sandstone	3 1g	3 31g	2 64g		(8) 96g

	¼-½	½-1	1-2	2-3	
Argillite		1 10g	1 102g		(2) 112g
Felsite		1 10g			(1) 10g
Granite		1 21g		1 113g	(2) 134g
Red Friable Cherty Limestone		1 2g			(1) 2g
Quartzite			2 68g	1 153g	(3) 221g
Red Shaley Limestone			2 78g		(2) 78g
Schistic Gabbro				1 38g	(1) 38g
	(14) 8g	(11) 91g	(7) 312g	(4) 348g	(36) 759g

23MC339
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Quartz		1 4g				(1) 4g
Argillite		1 5g				(1) 5g
Shale			1 35g			(1) 35g
Micaceous Sandstone				1 66g		(1) 66g
		(2) 9g	(1) 35g	(1) 66g		(4) 110g
Unmodified Glacial Glacial					1 305g	(1) 305g
		(2) 9g	(1) 35g	(1) 66g	(1) 305g	(5) 415g

23MC340
FCR-Surface-(1)

	½-½	½-1	1-2	2-3	3-4	
Flint Hill/ Sandstone		2 14g				(2) 14g
Micaceous Sandstone		1 6g				(1) 6g
Argillite			2 49g		1 566g	(3) 615g
Basalt			6 309g			(6) 309g
Granitic Quartzite					1 315g	(1) 315g
Indeterminant		1 7g		1 105g		(2) 112g
		(4) 27g	(8) 358g	(1) 105g	(2) 881g	(15) 1371g

23MC341
FCR-Surface-(1)

	½-½	½-1	1-2	2-3	3-4	4-	
Gneissic Dolerite		1 19g					(1) 19g
Granite		2 28g		1 184g	1 310g	2 1169g	(6) 1691g
Gneissic Diorite		1 5g					(1) 5g
Argillite				2 519g			(2) 519g
Quartzite			1 29g		1 394g		(2) 423g
Flint Hill/ Sandstone					1 283g		(1) 283g
		(4) 52g	(1) 29g	(3) 703g	(3) 987g	(2) 1169g	(13) 2940g

23MC343
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	
Argillite		1 4g			(1) 4g
Quartzite				1 122g	(1) 122g
		(1) 4g		(1) 122g	(2) 126g

23MC344
FCR-Surface-(1)

	¼-½	½-1	1-2	2-3	3-4	
Granitic Quartzite		1 3g		1 108g	2 672g	(4) 783g
Diorite					1 598g	(1) 598g
		(1) 3g		(1) 108g	(3) 1270g	(5) 1381g
Unmodified Glacial					1 597g	(1) 597g
		(1) 3g		(1) 108g	(4) 1867g	(6) 1978g

Appendix IV

GLOSSARY

This appendix is a glossary of selected terms utilized in the body of the report. Not all terms are contained in this glossary. We have defined only those terms which are somewhat ambiguous in general usage, but have somewhat more specific implications in this report. Other terms have been included at the request of reviewers of this manuscript.

GLOSSARY

Albany slip - A dark brown clay (originally utilized in potteries in the Albany, New York area) used as a glaze in slip form on American stoneware.

Branch - A principle tributary of a river comparable in size with the main stem.

Bristol slip - A white to light gray clay used as a glaze in slip form. The high tin content in the clay yields a white, slightly bluish cast. Originally used to conceal yellow - or reddish-firing interior clays.

Chevron - A decorative pattern made up of rows of short bars or lines meeting at an angle.

Compound fracture - A complicated fracture created usually by inclusions or fracture planes within the material. Multiple fractures are distinguished from compound fractures.

Cordate - Like ropes or cords

Creek - A principle tributary of a river smaller than a branch and larger than a stream. A creek flows water most of the year.

Draw - A natural drainage unit smaller than a stream and larger than a wash. A draw seldom flows a large amount of water and has a sand and gravel bottom.

Edge - Synonymous with lateral margin. Edge is a term for visual aspect when length and thickness are viewed in the same plane.

End - End is also a term for visual aspect with width and thickness in the same plane.

Face - The third term for visual aspect. Face is the portion of the specimen viewed when length and width are in the same plane.

Fork - A fork is comparable in size with the main stem. They are rivers in their own right, and all join the main stem just prior to their entrance to larger rivers.

Longitudinal fracture - A fracture which occurs parallel with the line from the distal to proximal ends.

Gizzard stone - The gizzard is the second stomach of birds (especially seed-eating birds) in which food is ground by the muscle walls. Some of these birds swallow gravel in order to assist in the grinding process. When these stones are passed, they exhibit highly rounded edges and numerous, random fine scratches over the entire specimen. Glass specimens are easily noted. The quantities of chert on archaeological sites often result in chert flakes being used as gizzard stones by chickens.

Oblique fracture - A fracture from lateral margin to lateral margin which is at an angle between a transverse and longitudinal fracture.

Porcelain - A translucent, highly vitrified ware which has been fired at a high temperature.

River - The main stem of a drainage unit.

Stoneware - Hard, opaque, vitrified ware between pottery (or earthenware) and porcelain and possessing some of the features of both. Stoneware has been divided in this report into low and high temperature fired stoneware. Low temperature fired stoneware is not highly vitrified and can be scratched with a nail. High temperature fired stoneware exhibits a compact dense body which cannot be scratched with a nail.

Stream - A stream is a major secondary smaller than a creek and larger than a draw. Streams generally flow water only during periods of extended rainfall and have a sand and gravel bottom. These are the major drainage units between upland ridges.

Stress fracture - A non-percussion fracture resulting from a force on the tool which exceeds the elasticity of the internal material. These are separated into transverse stress fractures resulting from excess stress on the end or face with a non-percussion fracture

running from face to face. A transverse lateral stress fracture results from excess stress to the lateral margin with the fracture running from lateral margin to lateral margin.

Terra cotta - Clay baked without a glaze, generally cast and more intricately shaped than brick.

Transfer print - Refers to the method where an impression from an engraved metal plate inked with enamel colors is made on a thin piece of paper and transferred to the surface of pottery or porcelain and subsequently melted into the glaze.

Transverse fracture - A fracture running from lateral margin to lateral margin perpendicular to the longitudinal axis.

Two-track - A road for vehicles less frequently used than a lane. There are only two tracks for the tires and grass growing between the tracks.

Wash - A wash is the smallest unit of drainage and is shorter and shallower than a draw. It seldom flows water with sufficient intensity to have resulted in a sand and gravel bottom.

Appendix V

MAPS AND FIGURES

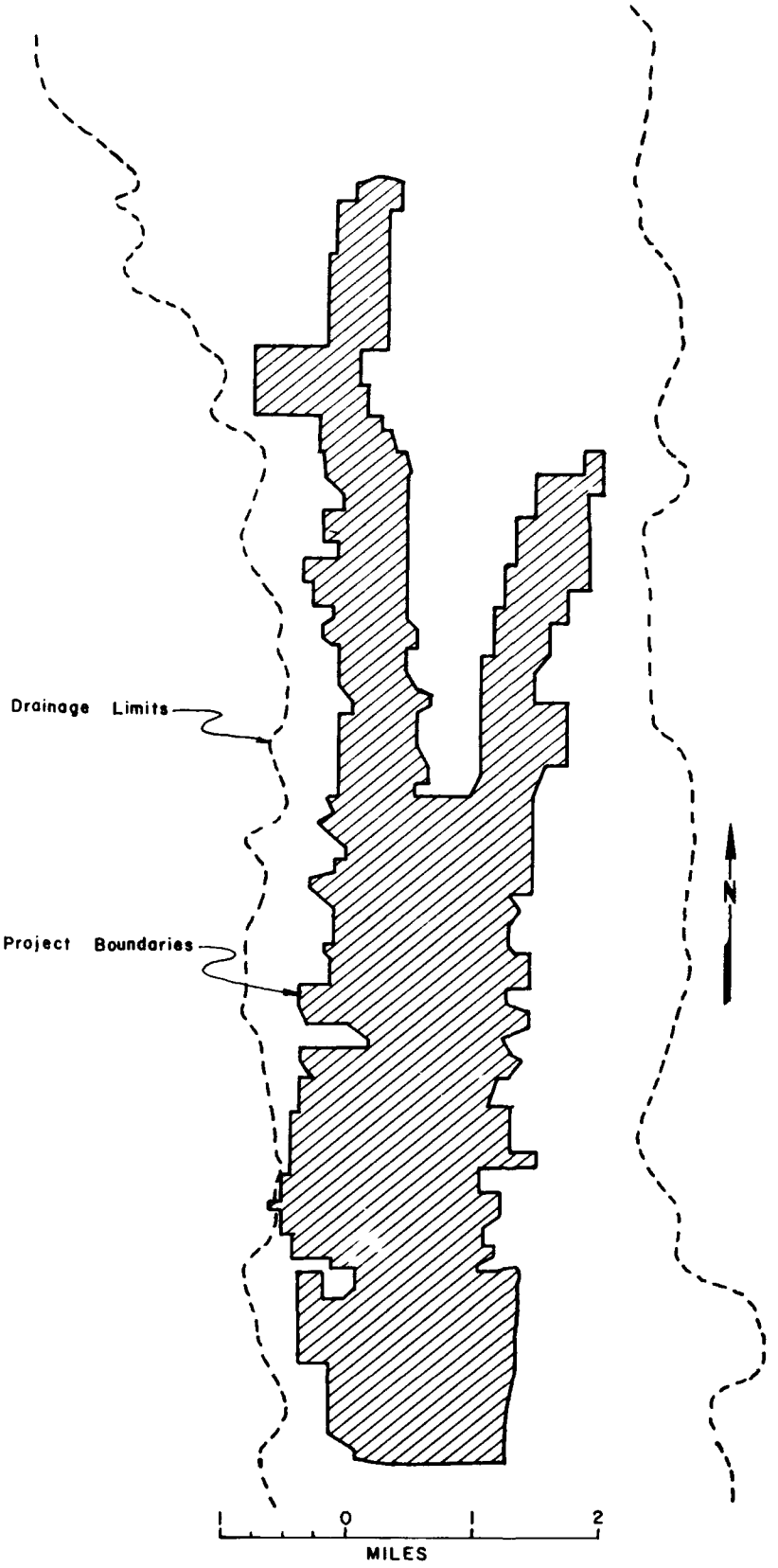


Figure 16. Relation of project boundaries to drainage limits, Long Branch area, East Fork Chariton.

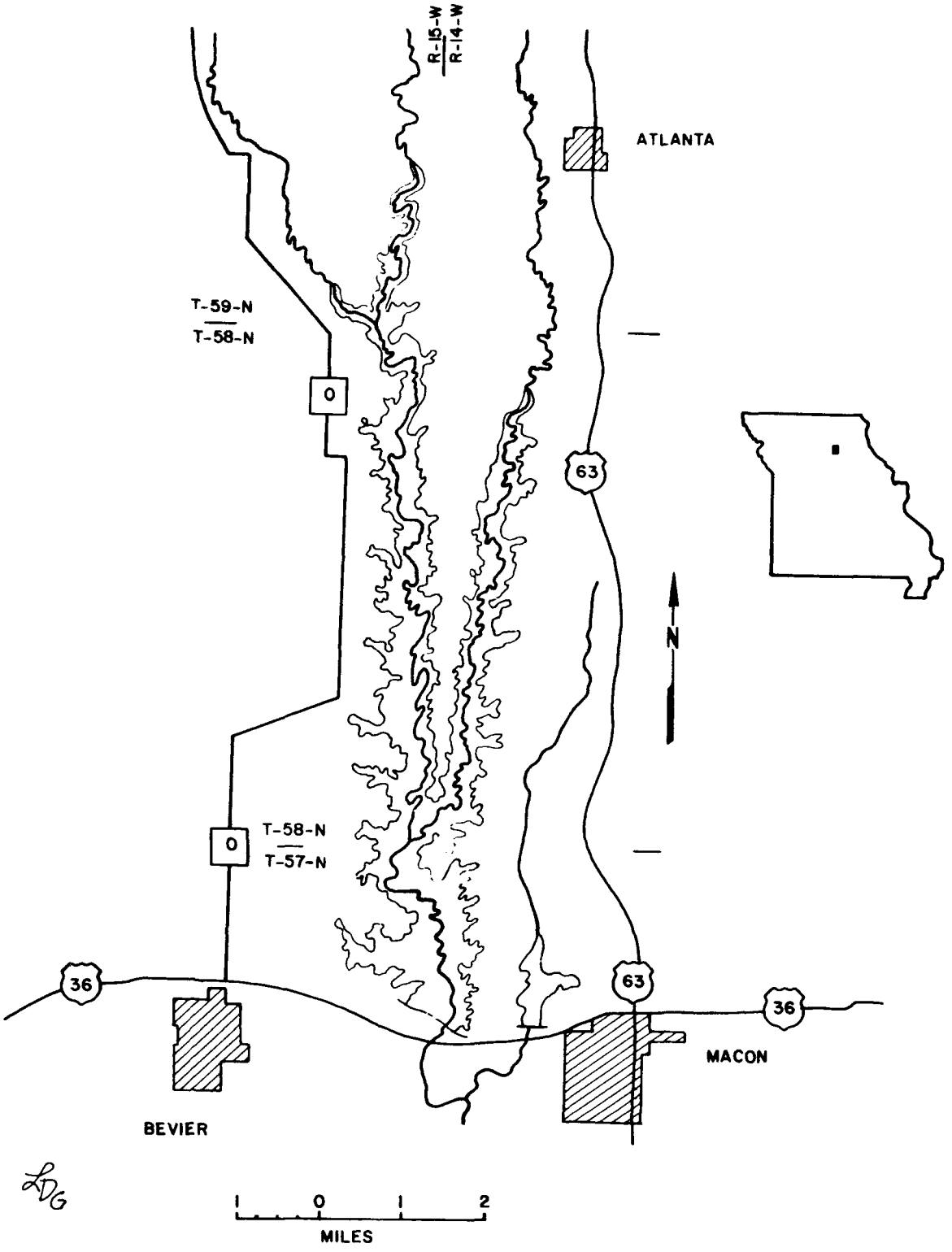


Figure 17. Public use areas, Long Branch lake.

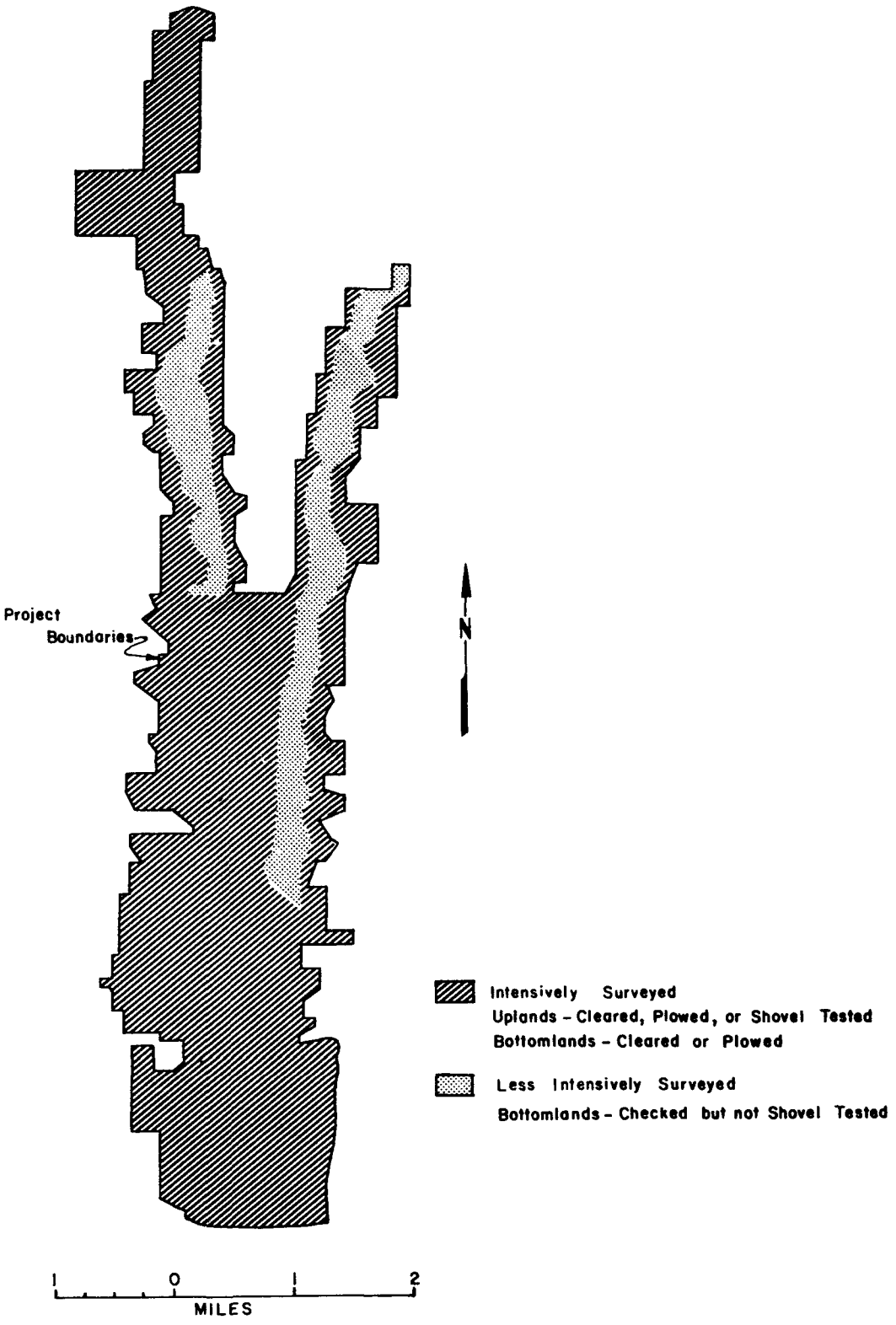
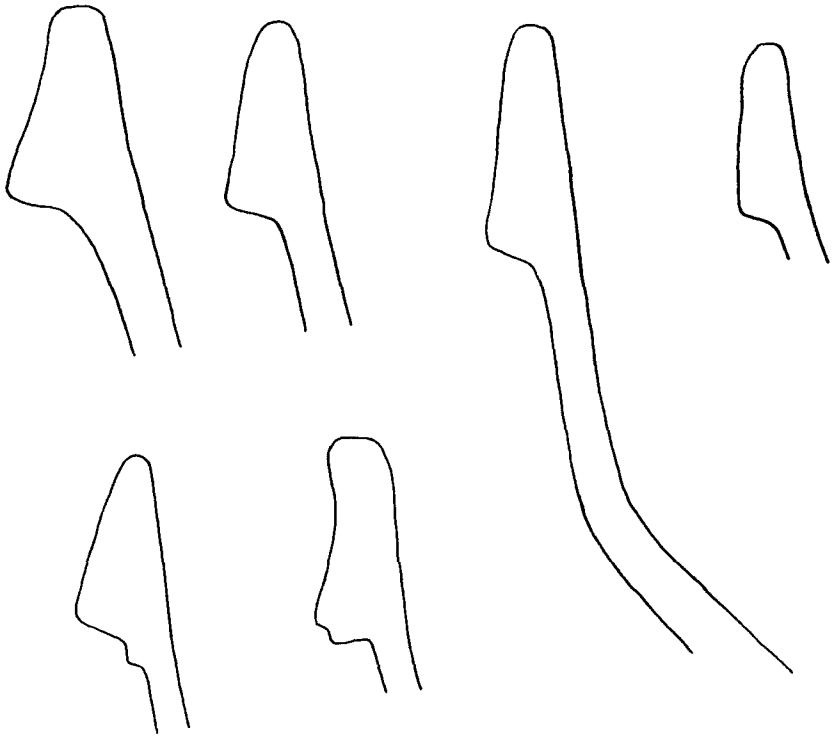


Figure 18. Survey intensity, fee simple lands, Long Branch project.

HISTORIC CERAMICS - RIMS

GROUP ONE



GROUP TWO

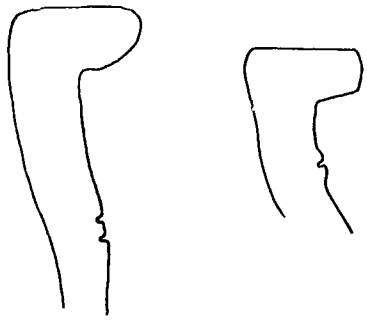


Figure 19. Historic ceramics. Rim forms One and Two

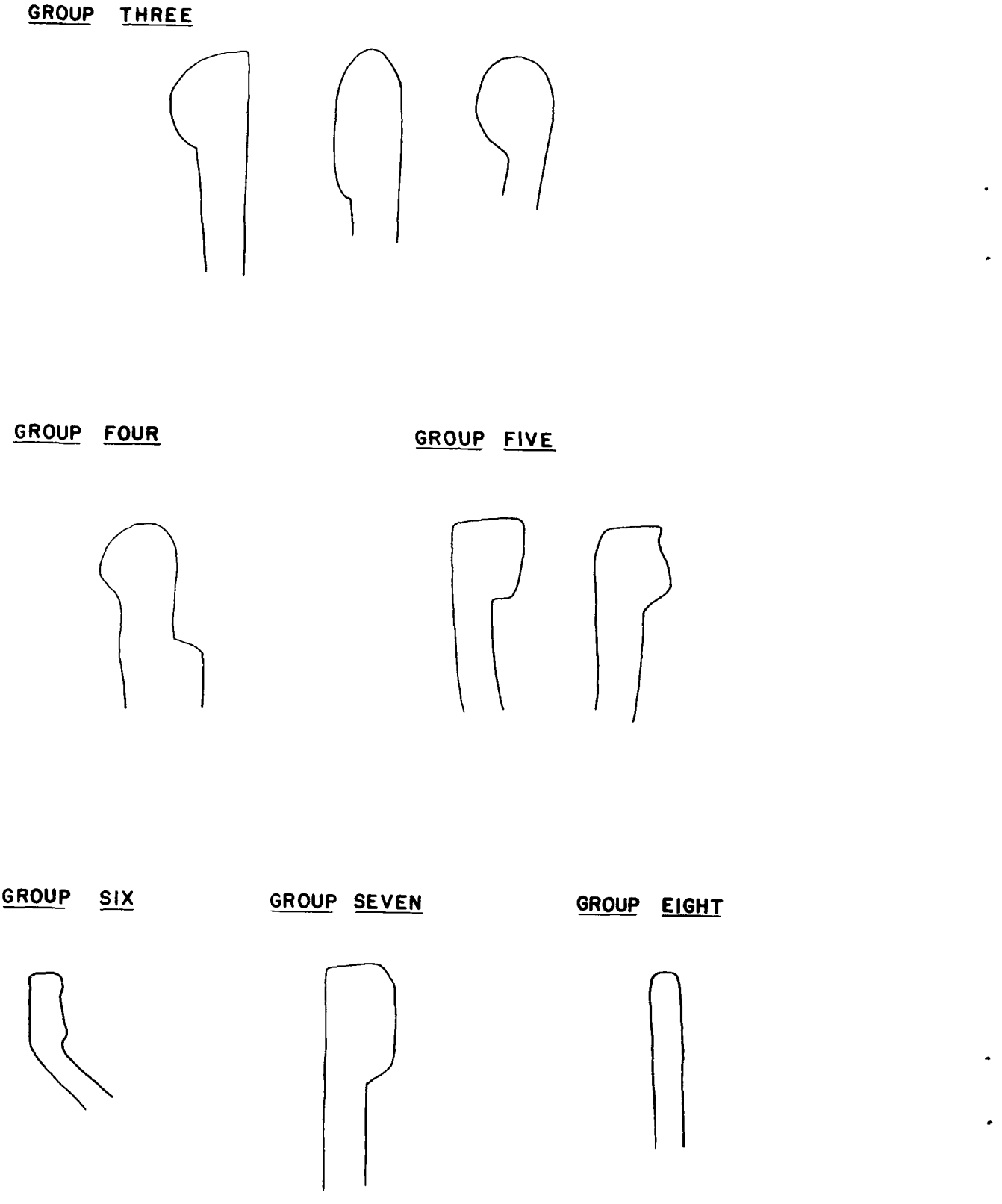


Figure 20. Historic ceramics. Rim forms Three through eight

HISTORIC CERAMICS - BASES

GROUP ONE

GROUP TWO

GROUP THREE

Figure 21. Historic ceramics. Basal forms One through three

Appendix VI

PLATES

Plate 1. Large seasonal upland and small seasonal bottomland sites. a). 23MC55 hill in background, 23MC330 near foreground, view west. b). 23MC65 hill in background, 23MC332 in willow line in background, 23MC333 at far left, and 23MC334 and 23MC335 near foreground, view south.

Plate 2. Large seasonal site and small upland hunting camp. a). 23MC73, view northeast. b). 23MC155, view west.

Plate 3. Ridge site and small upland seasonal site. a). 23MC61, view southwest. b). 23MC116, far center, view southwest.

Plate 4. Small upland and bottomland sites - Long Branch. a). 23MC267, view west. b). 23MC271 near foreground, 23MC270 on rise in center, and 23MC268 on hill in background, view north.

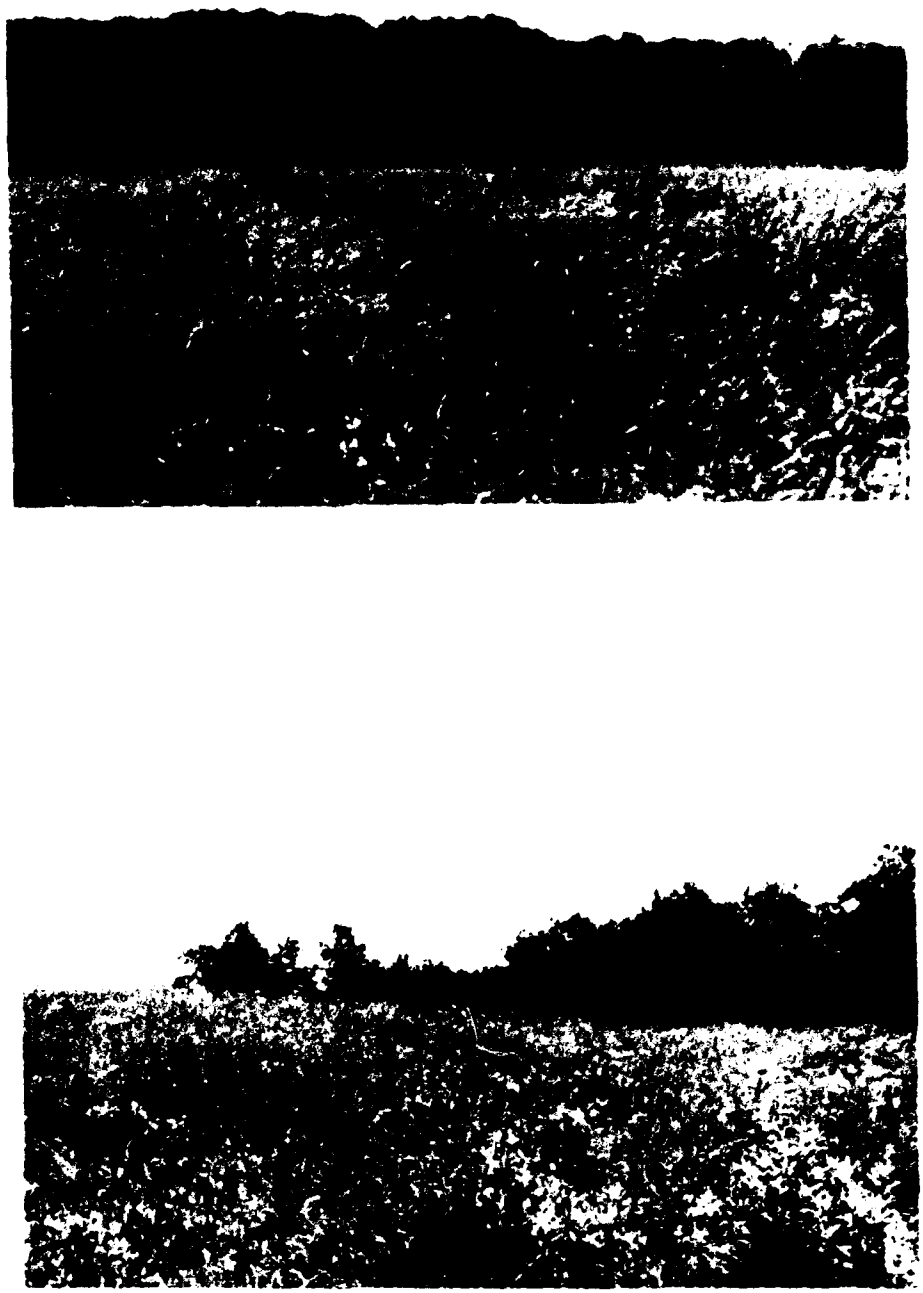


Plate 5. Large upland seasonal sites - Long Branch. a). 23MC162 left center, 23MC163 right center, view east. b). 23MC164, view north.

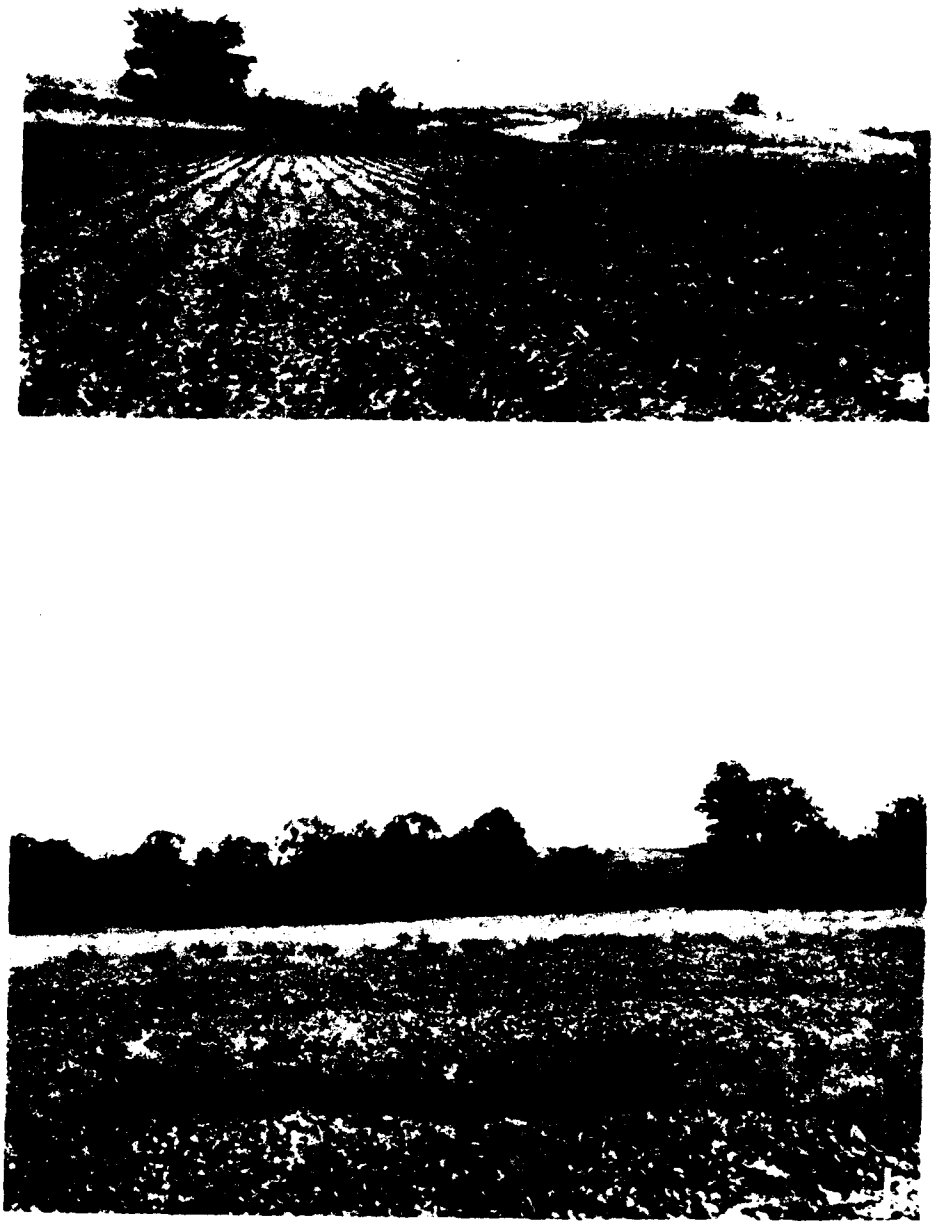


Plate 6. Small upland seasonal sites - Long Branch. a). 23MC280, view north. b). 23MC236, view south.

Plate 7. Small bottomland seasonal site and upland burial mound. a). 23MC266, view north. b). 23MC69-4, view west.

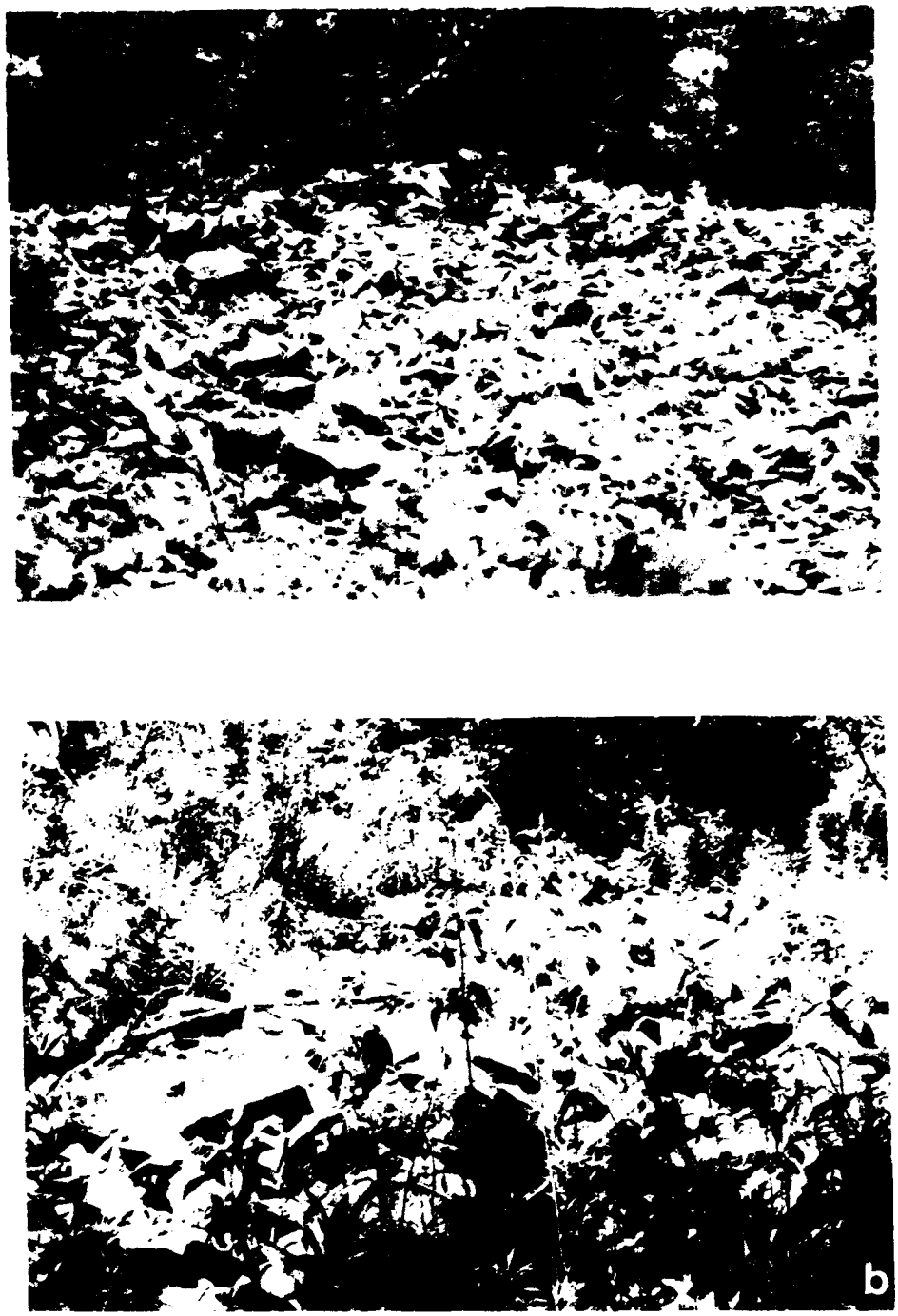


Plate 8. Historic limestone quarry. a). 23MC82H, pile on top of hill, view east. b). 23MC82H backpile, working face to left, view northeast.

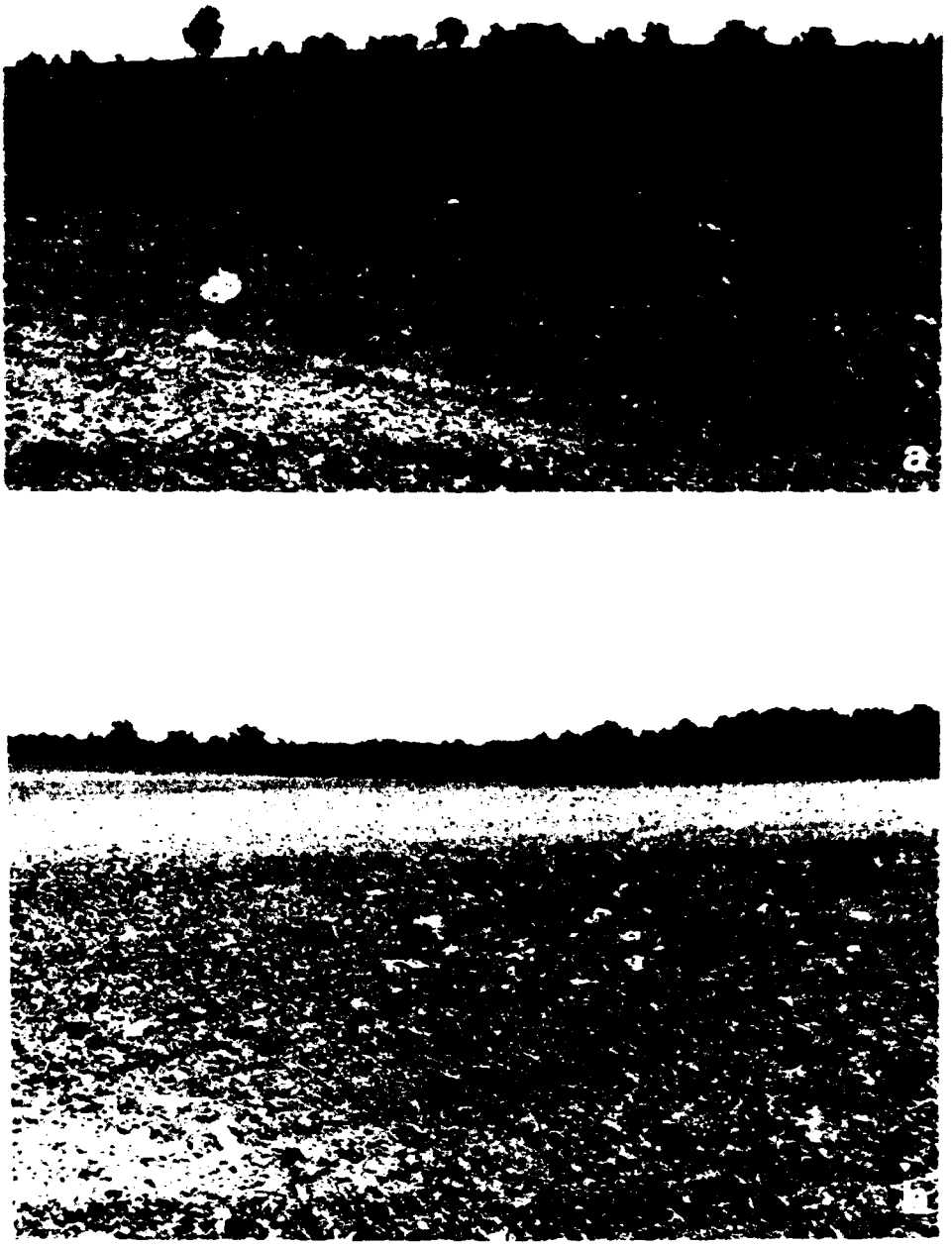
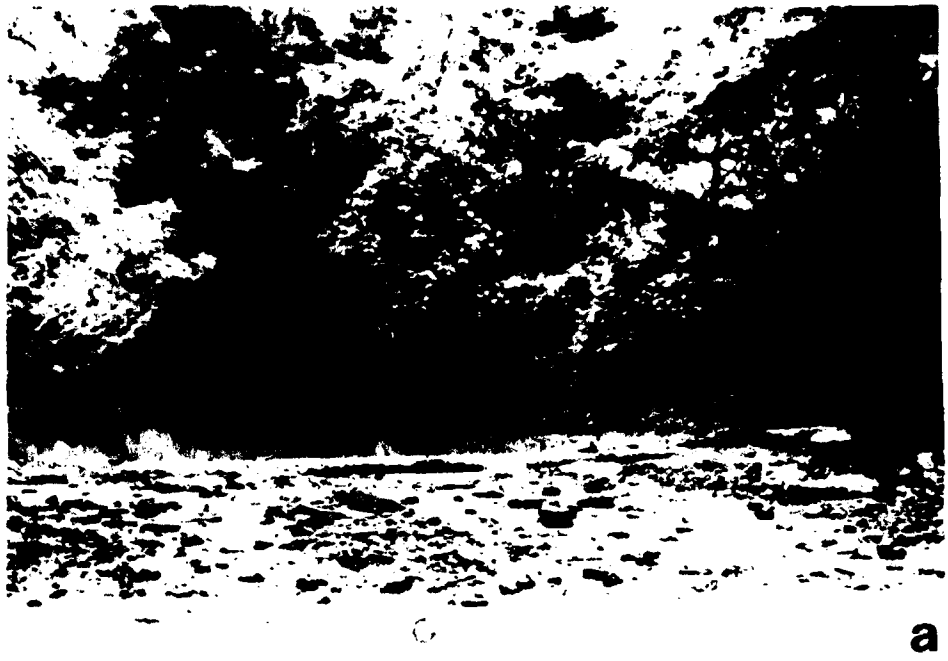


Plate 9. Historic house sites. a). 23MC150H, view north. b). 23MC151H, view east.



a

Plate 10. Historic dam. a). 23MC157H, remnant in river, view northwest. b). 23MC157H, right abutment, view southeast.

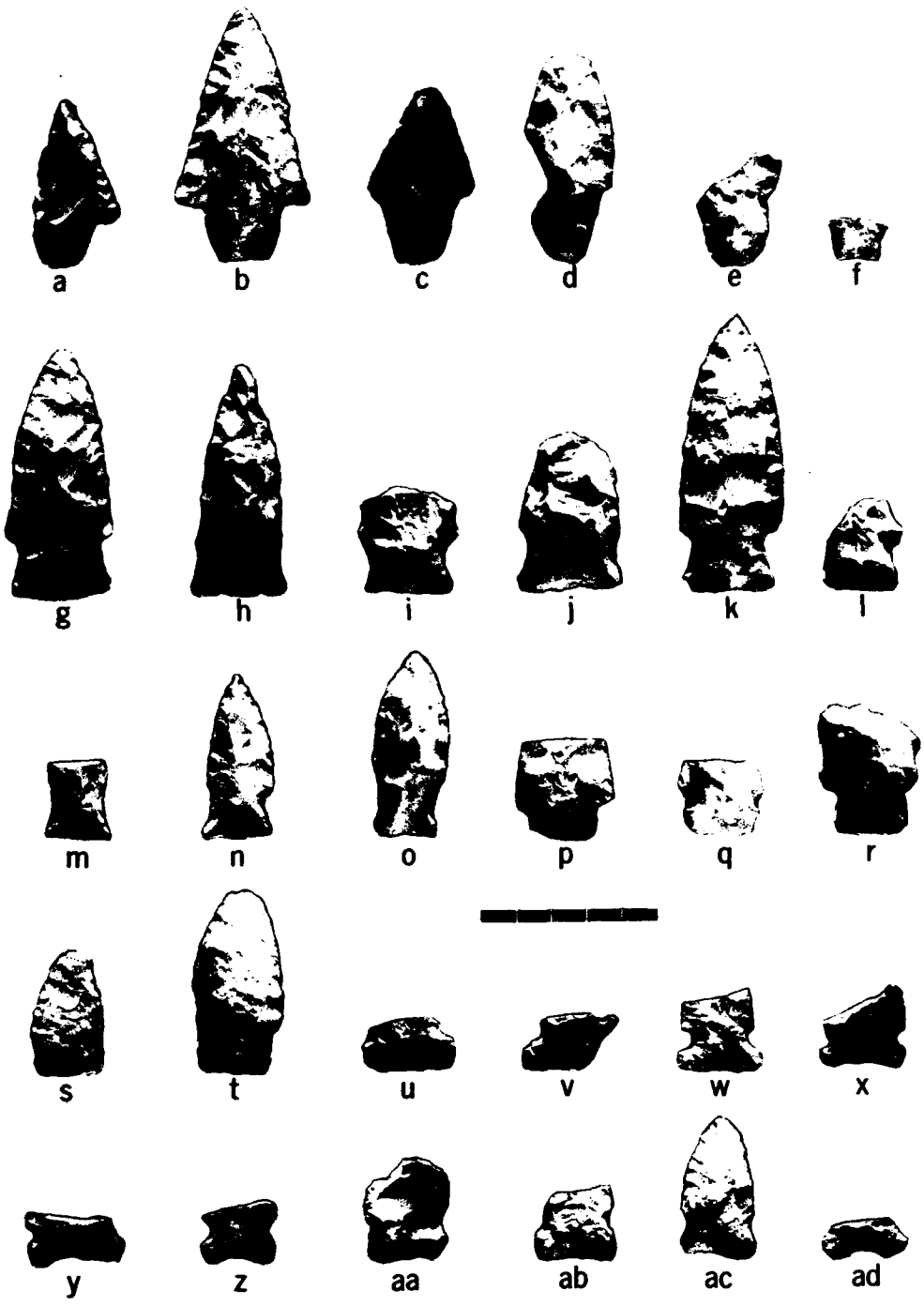


Plate 11. Projectile points. a, 1:a; b, 1:b; c, 1:c; d, 2:a; e, 2:b; f, 3:a; g, 4:a; h, 4:b; i, 4:c; j, 4:e; k, 4:i; l, 5:a; m, 6:a; n, 6:b; o, 7:a; p, 8:a; q, 8:b; r, 8:c; s, 9:a; t, 9:b; u, 10:a; v, 10:b; w, 10:c; x, 11:a; y, 11:b; z, 11:c; aa. 11:d; ab, 11:e; ac, 12:a; ad, 12:d.

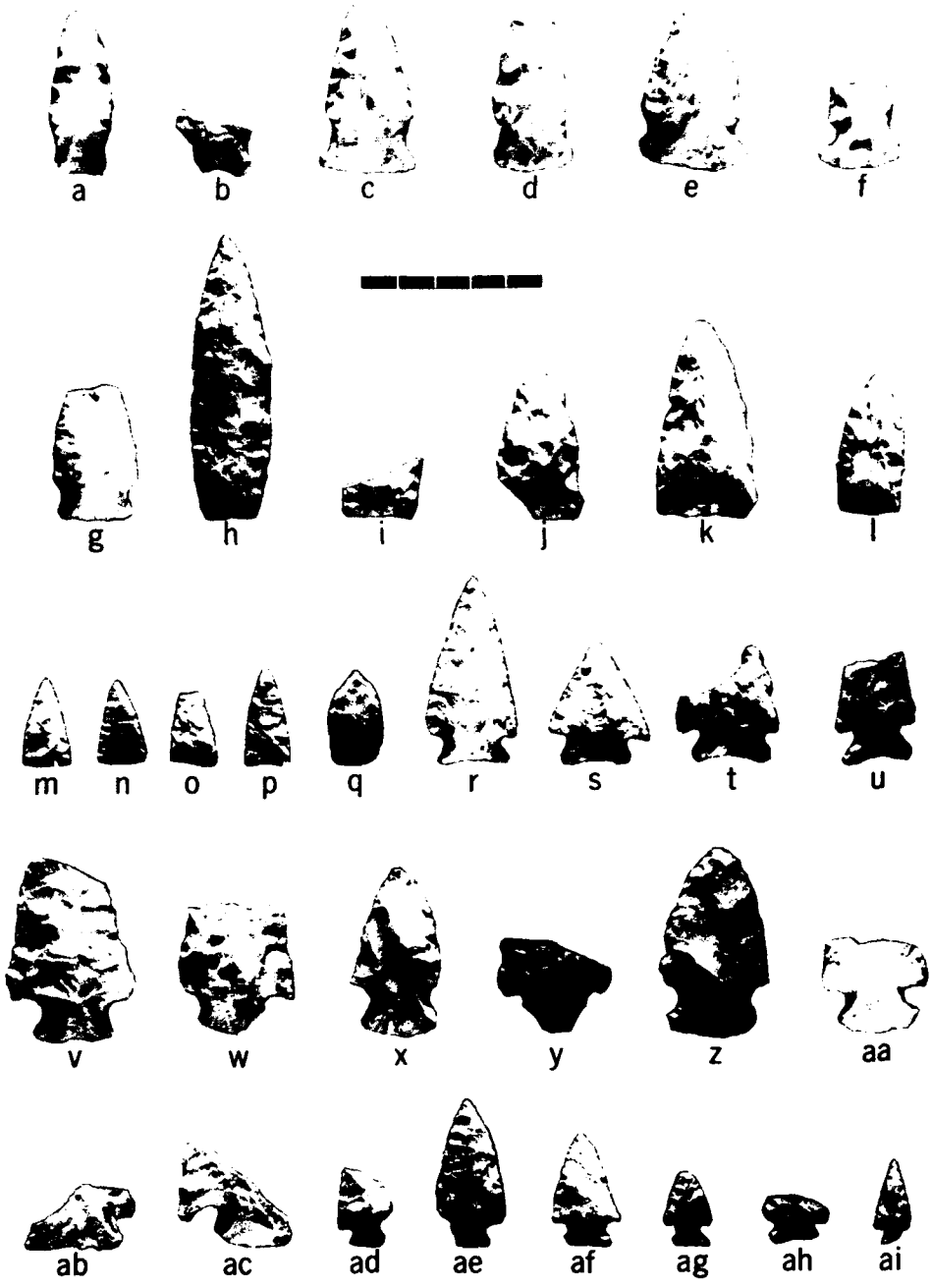


Plate 12. Projectile points. a, 13:a; b, 13:b; c, 14:a; d, 14:b; e, 15:a; f, 15:b; g, 16:a; h, 17:a; i, 17:b; j, 18:a; k, 18:b; l, 19:a; m, 20:a; m, 20:c; o, 20:d; p, 20:e; q, 21:a; r, 22:a; s, 22:b; t, 22:c; u, 22:d; v, 23:a; w, 23:b; x, 24:a; y, 24:b; z, 24:c; aa, 24:d; ab, 25:a; ac, 26:a; ad, 27:a; ae, 27:b; af, 27:c; ag, 27:e; ah, 28:a; ai, 29:a.

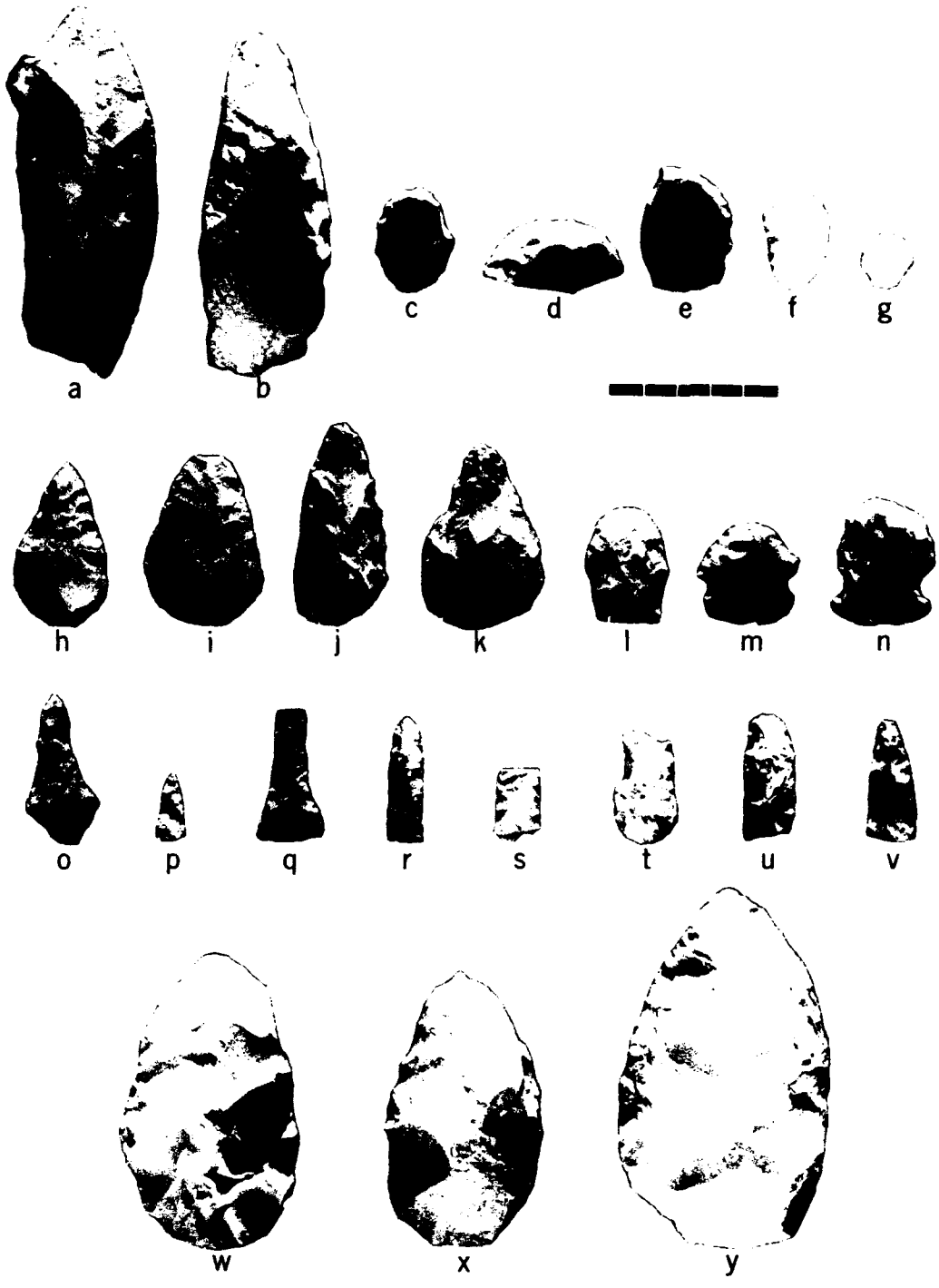


Plate 13. Scrapers, drills, and bifaces. a, 39:a; b, 39:b; c, 40:a; d, 40:b; e, 40:c; f, 40:f; g, 40:h; h, 41:b; i, 41:c; j, 41::d; k, 41:e; l, 42:a; m, 42:b; n, 42:c; o, 43:c; p, 43:e; q, 43:f; r, 43:h; s, 44:a; t, 44:c; u, 44:e; v, 44:f; w, 45:a; x, 45:b; y, 45:e.

Plate 14. Bifaces. a, 46:a; b, 46:b; c, 47:a; d, 48:a; e, 49:a; f, 50:a; g, 50:b; h, 51:a; i, 52:a; j, 53:a; k, 54:b; l, 54:c.

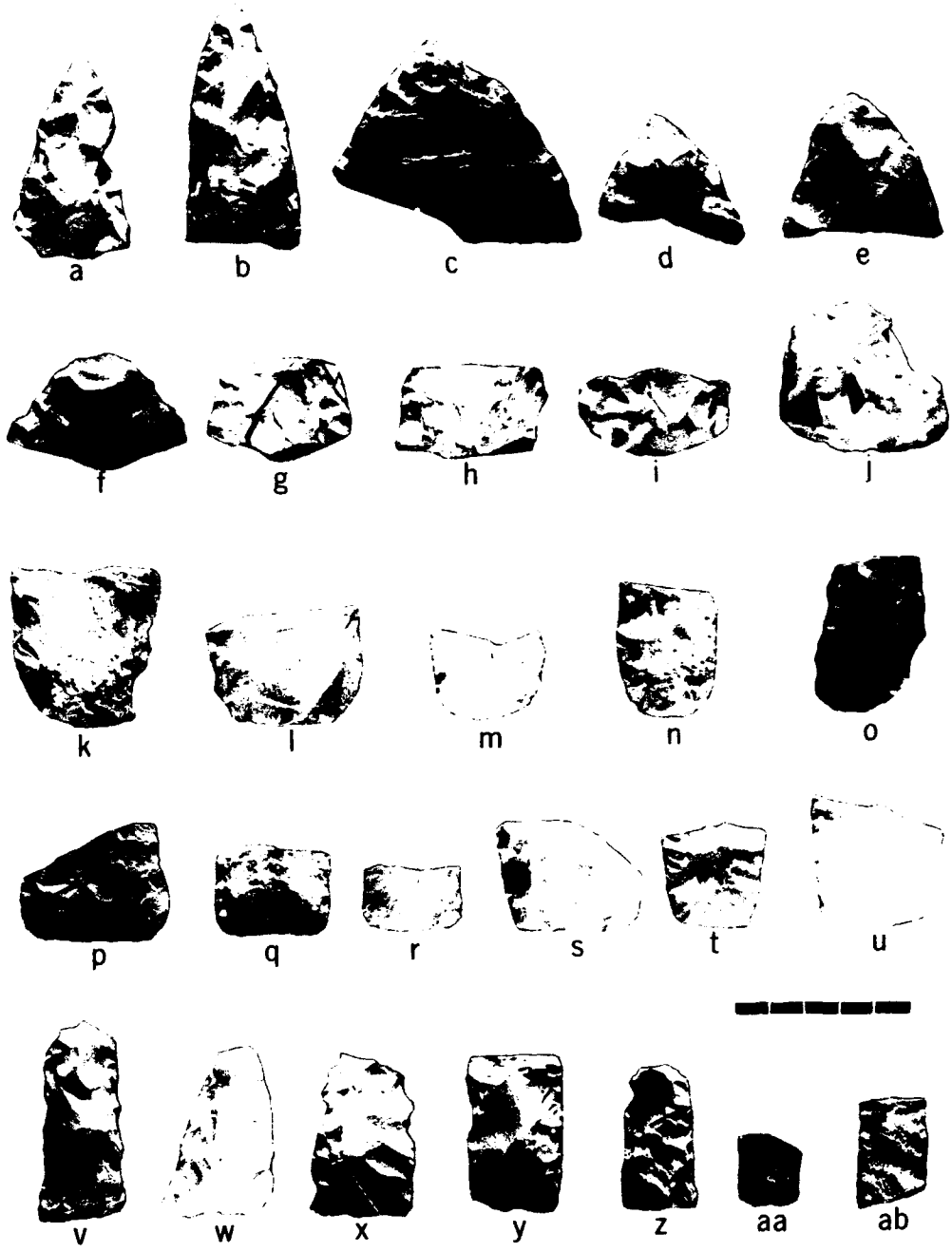


Plate 15. Biface fragments. a, 55:a; b, 55:b; c, 56:a; d, 57:a; e, 57:g; f, 57:h; g, 58:b; h, 58:h; i, 59:a; j, 59:c; k, 59:d; l, 59:g; m, 60:b; n, 60:d; o, 60:e; p, 61:a; q, 61:b; r, 61:c; s, 62:a; t, 62:b; u, 62:d; v, 63:a; w, 63:b; x, 63:c; y, 63:d; z, 64:a; aa, 64:c; ab, 64:d.

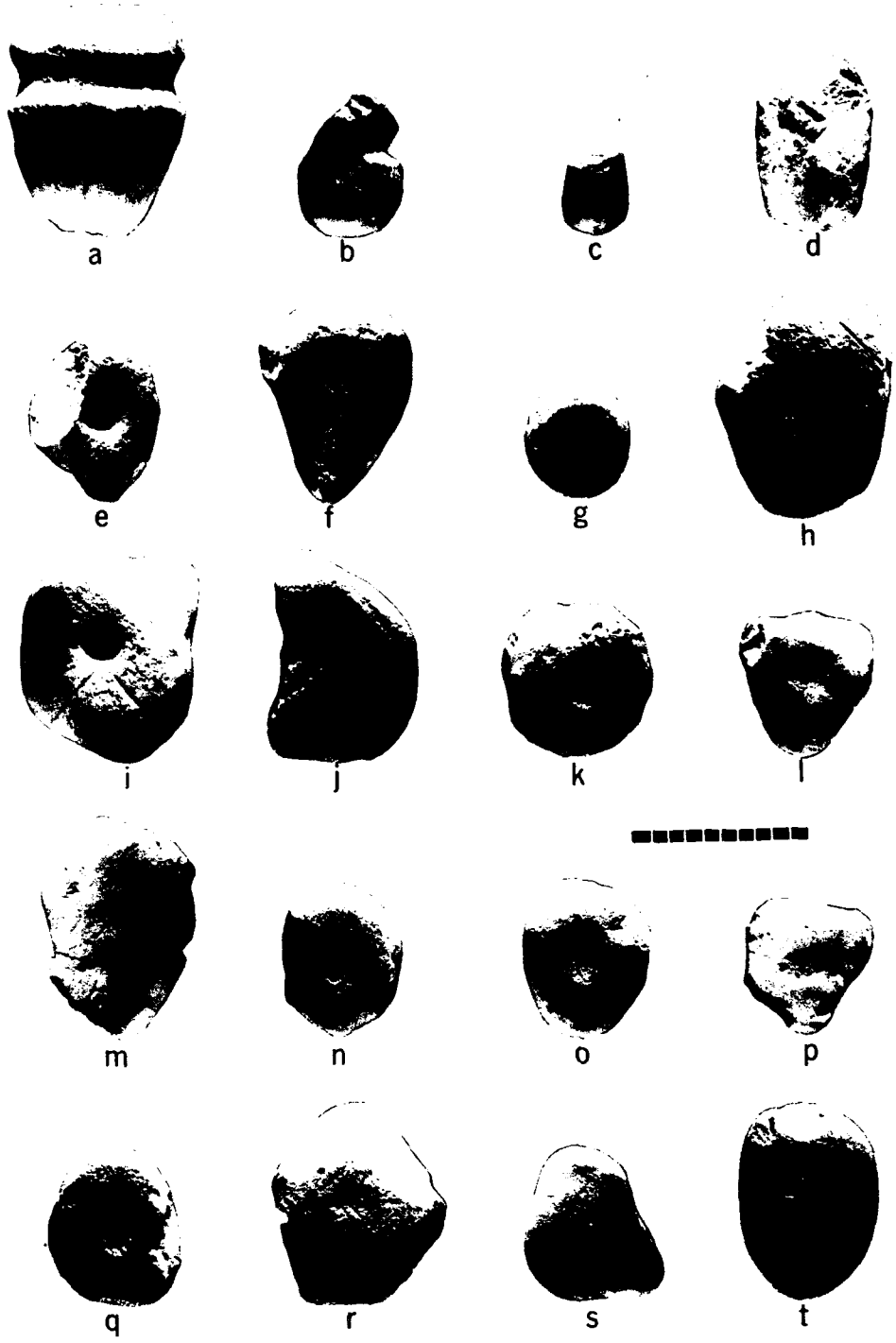


Plate 16. Ground and pecked stone. a, 81:a; b, 82:a; c, 83:a; d, 84:a; e, 85:b; f, 85:bf; g, 85:bk; h, 85:bl; i, 85:by; j, 85:cb; k, 85:ch; l, 85:cp; m, 86:c; n, 87:ae; o, 87:ag; p, 87:ah; q, 89:l; r, 89:y; s, 89:ab; t, 89:af.

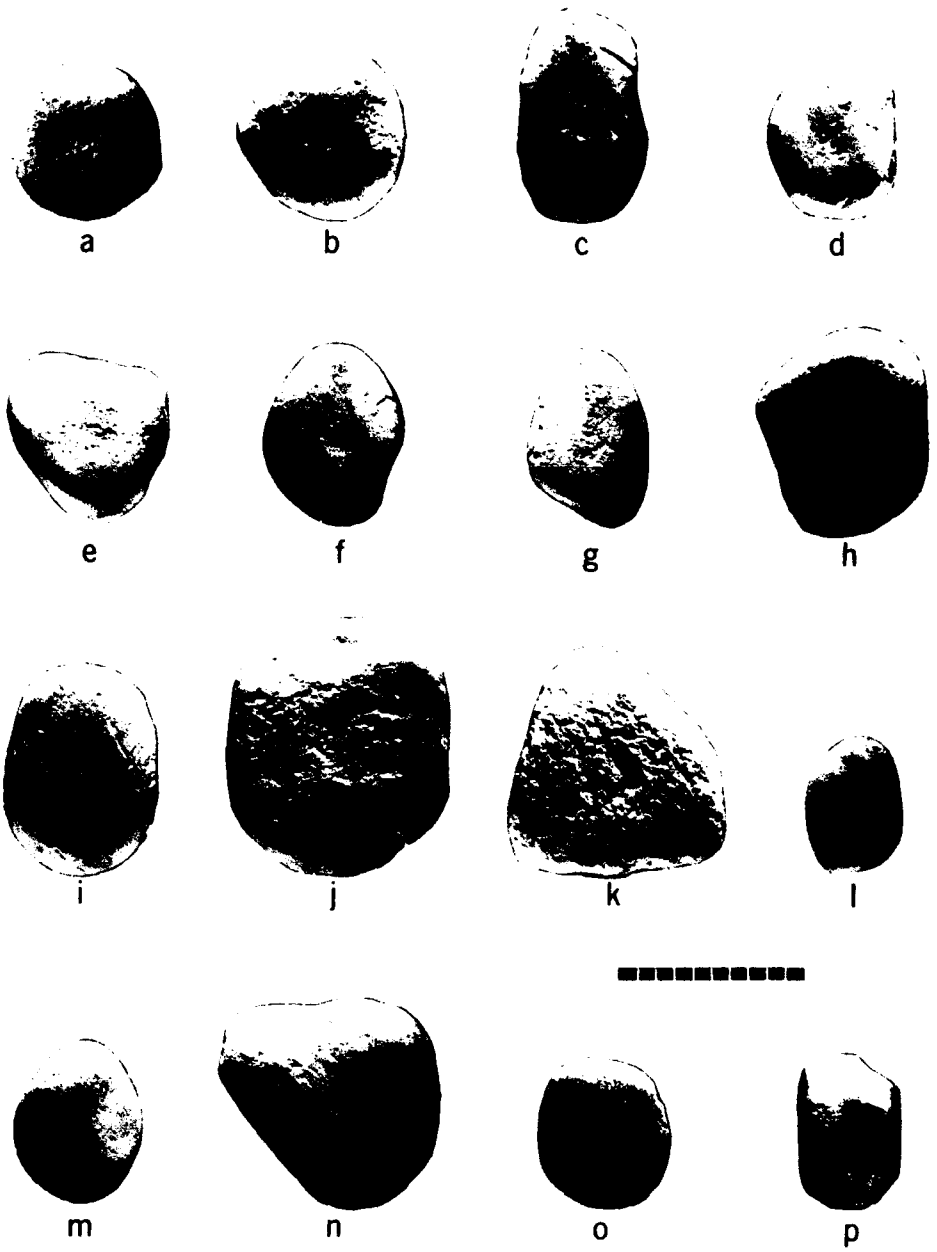


Plate 17. Ground and pecked stone. a, 90:b; b, 90:g; c, 90:h; d, 90:i; e, 90:q; f, 90:z; g, 90:ar; h, 90:as; i, 90:av; j, 91:a; k, 91:b; l, 92:j; m, 92:k; m, 92:s; o, 93:b; p, 95:a.

Plate 18. Ground and pecked stone. a, 97:a; b, 98:a; c, 99:a; d, 99:b; e, 99:e; f, 99:f; g, 100:a; h, 101:a; i, 102:a; j, 104:a; k, 104:b; l, 104:d; m, 105:a; n, 106:a; o, 107:a.

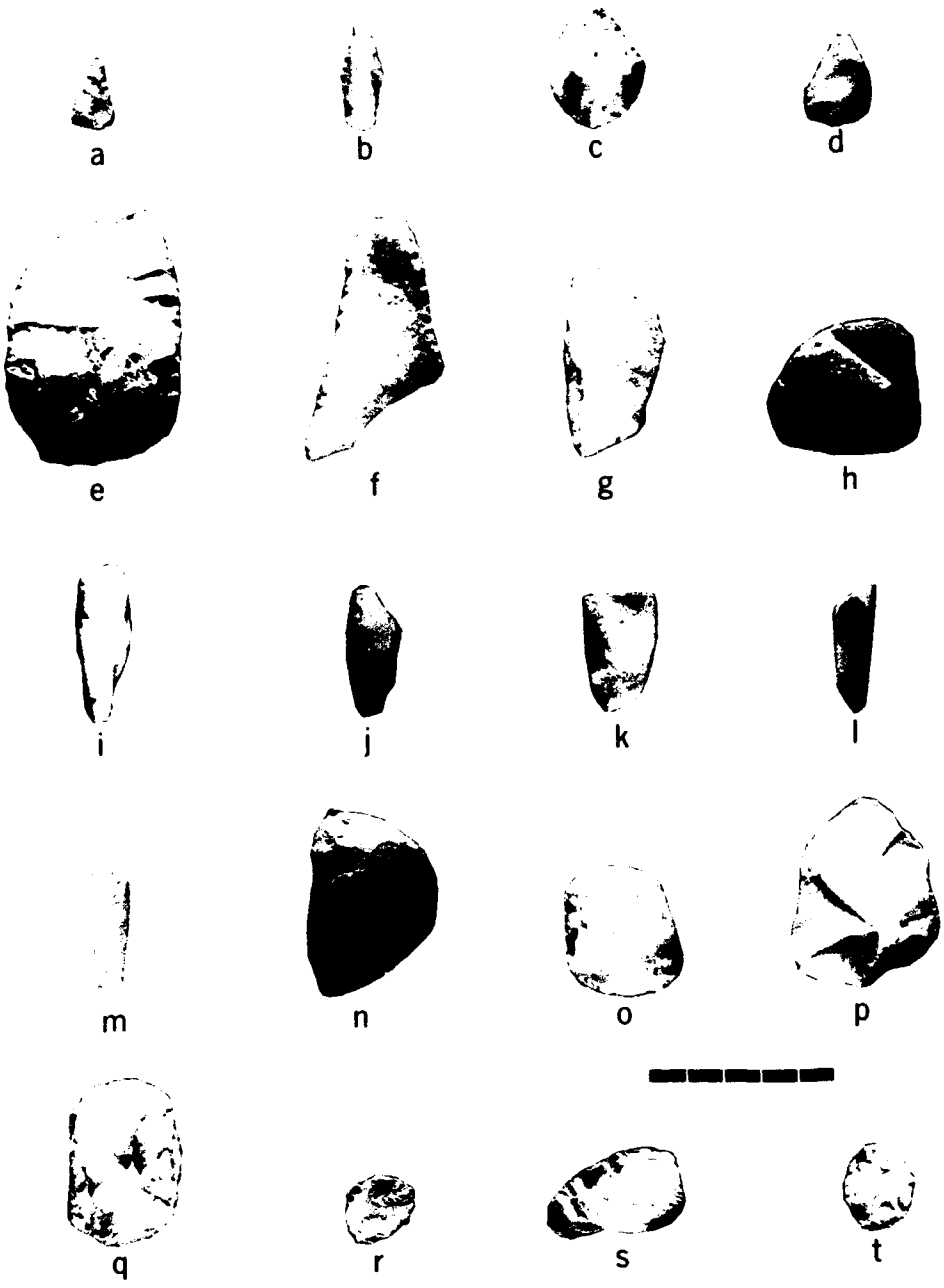


Plate 19. Flake tools, abraded sandstone, and hematite. a, 71:a; b, 71:b; c, 71:c; d, 71:d; e, 72:t; f, 72:a; g, 103:b; h, 103:f; i, 108:h; j, 108:t; k, 108:v; l, 108:y; m, 108:aj; n, 108:ac; o, 108:at; p, 108:x; q, 108:av; r, 108:c; s, 108:j; t, 108:am.

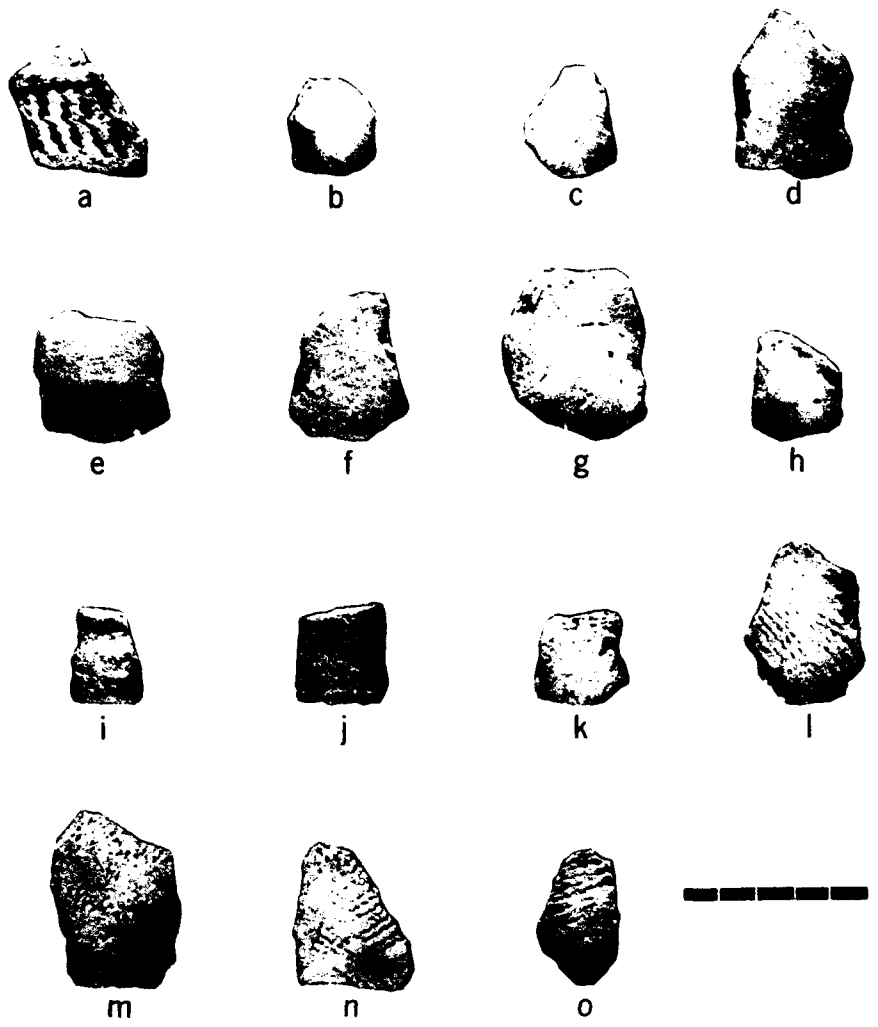


Plate 20. Pottery. a, 119:b; b, 119:c; c, 119:p; d, 119:y; e, 119:z; f, 119:ad, g, 119:ae; h, 119:be; i, 119:bg; j, 119:bi; k, 119:bj; l, 119:bm; m, 119:bn; n, 119:bo; o, 119:bp.

APPENDIX VII

REVIEW COMMENTS

A draft version of this cultural resources survey report was sent to the following agencies and individuals for review of the merits and acceptability of the report. The comments which are pertinent to the final report are listed below together with the Corps of Engineers' responses.

Missouri Department of Natural Resources. Comment 1. We basically agree with the proposed mitigation plan as stated in Volumes I and II. Nomination procedures should be initiated for these structures.
Response: No reply. Doubtless nomination procedures will be initiated in Macon County.

Comment 2. However, we do not agree with the statement as presented in Volume II that none of these buildings are worthy of preservation. If at all feasible, efforts should be made to preserve these structures.
Response: Correction has been made; the Lea House was so recommended for preservation.

Comment 3. The Office of Historic Preservation Inventory Forms should have been utilized for architectural/historical sites.
Response: Original inquiries to the Corps of Engineers at the inception of the project brought the reply that we were to survey the sites in whatever manner we thought best. Had there been buildings of historic interest, with the details which are listed on such charts, we would have used them. The extreme simplicity of the structures made such forms superfluous, in our estimation.

Comment 4. Furthermore, inclusion of place names, i.e., most recent owner, on the survey forms which were used would aid in identifying the location of these sites. The use of only site numbers represents a potential source of confusion.
Response: Agreed. These have been inserted.

Comment 5. Also the rationale behind the selection process utilized in deciding which of these sites should be tested

should be explicitly stated. This process should be directly related to answering the research questions postulated in the report.
Response: Agreed. Statements relating to rationale behind selection have been added.

Comment 6. Furthermore, the sample universe from which the sites to be tested were selected should be expanded to include those sites located within both the five-year flood pool and the proposed construction areas. It should not be limited only to those located within the multipurpose pool.
Response: Agreed. These sites were already included as part of the recommendations in the draft report. We are more than aware of problems of slumpage and shoreline erosion after an examination of Thomas Hill and Rathbun reservoirs. Sites falling above the spillway level have also been included if slumpage appeared to pose a problem. Monitoring of sites after impoundment should be particularly attuned to these problems.

Comment 7. An ongoing program of periodic site monitoring should be developed to assess the long range impact this project will have on archaeological sites. Such a program should be designed now instead of waiting until after the reservoir is in operation.
Response: Agreed. The speed with which the reservoir fills will determine erosion below multipurpose pool level. Monitoring during this period should be almost continuous. Monitoring after impoundment is proposed in periods not exceeding one year.

Comment 8. We agree with the recommendations as stated on page 379 of Volume III that Long Branch reservoir is eligible for inclusion in the National Register of Historic Places as an archaeological district. However, we do not agree with the concept that nomination procedures should be postponed until further evaluation is made of adjacent areas. The responsibility of the Corps of Engineers in this matter is clearly outlined in 36CFR800. It is recommended that nomination procedures to place this area on the National Register as an archaeological district be initiated as soon as possible.
Response: Agreed. Statement has been revised accordingly.

Comment 9. The discussion of ceramic sequence (p. 328) should be considerably expanded, particularly in regard to the Black Sand sherds recovered from 23MC65 and 23MC70.
Response: Agreed. Discussion of ceramics by chronological units has been included. The latter sherds were recovered under National Park Service funded work in the reservoir and will appear in that report.

Comment 10. The sections on chronology, site function, and settlement patterns should also be expanded, possibly employing more comparative data, to include a more detailed discussion of these aspects of the aboriginal occupation in this portion of the Chariton River drainage basin.
Response: Agreed. These sections have all been substantially expanded.

Comment 11. The Office of Historic Preservation should also be provided with copies of the archaeological site forms filed for each site.
Response: Agreed. This was part of the Scope of Work.

National Park Service. Comment 1. The inclusion of subject headings would improve organization and help the reader to distinguish between specific and often unrelated topics.
Response: We decided against subject headings in such a short report. We have, however, divided the work into four chronological sections or chapters.

Comment 2. More explanation is needed for the system used to locate sites (I:3) with special reference to the maps.
Response: System is standard for legal descriptions. No additional explanation was considered necessary. Maps are locations by tract. Legal descriptions appear on site sheets.

Comment 3. Site numbering designations should be consistent throughout the report. We suggest the "modified" Smithsonian, e.g., 23MC1AH.
Response: Agreed. The "modified" Smithsonian numbering system has been added.

Comment 4. In general, the author needs to pay more attention to detail in reporting procedures, methods, etc. We would suggest the work by Nannette Linderer for the Harry S. Truman Architectural History project be used as a guide for all architectural history studies.
Response: Agreed. Section on methods has been expanded. Report should be made available on a wider basis.

Comment 5. Several references are made to social organization, site functions, and the Long Branch area as being a cultural contact area. These statements need further support.
Response: Agreed. Sections have been substantially expanded. It is hoped that these have been sufficiently supported.

Comment 6. We concur with Mr. Grantham's recommendation that the area be nominated to the National Register of Historic Places as an archaeological district. However, we disagree with the statement on page 339 that a "fuller understanding of the actual limits of this adaptational area is necessary before the nomination to the register". The assessment of the actual "adaptational limits" would be extremely difficult to document archaeologically and a considerable amount of money would be required for such an investigation. A postponement of nomination to the register would not provide the immediate protection and mitigation needed to those known sites in the impact area that are destined for destruction in the immediate future. As dam construction has been completed, we see no reason to postpone the nomination of the immediate project area to the register. Sites found outside the immediate area to be included in an archaeological district can always be added at a later date or nominated separately to the register. It is our understanding that enough information was present a few years ago for the reservoir area to have accomplished the National Register procedures and this volume by Mr. Grantham would support that contention.
Response: Agreed. Statement has been revised accordingly.

Dr. Robert Cooley, draft reviewer. Comment 1. A design weakness of the report is the lack of coordination and feedback among the three major areas of study (archaeology, history, architectural history). The three volumes were authored by individuals having particular expertise and specialties, but more "group" research would have been desirable. Evidence of some group coordination includes the information Larry Grantham provided the historians concerning historic quarries and Grantham's cross-referencing of his historic archaeological sites with the architectural study, but the overall lack of communication detracts from the study.
Response: Agreed. We have attempted to correct this.

Comment 2. Grantham (1977:10) provided a major research design of investigating the cultural ecology, "the points

of intersection between culture and environment." He uses his data base concerning prehistoric archaeological sites to evaluate the man-environment interactions in his sections concerning physical environment, settlement patterns, and site functions. His examination of the prehistoric man-environment relationships are good, but he does not carry the model forward in time to the historic period. His section entitled "Early Euro-American Settlement Phytogeographic Model" is a detailed and important piece of ecological research; however, he does not articulate the historic man-environment relationship. Although March and Stephens (1977:6) provide a glimpse at the cultural ecology of the early settlers, more is needed.
Response: Agreed. A statement on settlement patterns of historic Euro-American populations has been added. This was not required by the Scope of Work by either the historians or the archaeologist.

Comment 3. The inclusion of a data section (segments of oral history interviews, reprints of historic documents, early maps, photographs, or excerpts from diaries, etc.) would have greatly strengthened the historic study and provided a more valuable research tool for other investigators. The one Foley poem is a start, but more is needed to help document the author's interpretations.
Response: Maps and photographs were supplied. Excerpts were also added.

Comment 4. The archaeological and historical reports are referenced by two different editorial systems.
Response: This was discussed in some depth. As historians will be more likely to use the historians' report and archaeologists the archaeological report, the two systems may be justified. If a standard system had been employed, it would have been somewhat more confusing to those using the document. As either system is mutually intelligible by others, two systems were used to minimize confusion by those most likely to use these documents.

Comment 5. The architectural-historical report is totally lacking in footnotes or a bibliography.
Response: True; it was intentionally carried out in such a way as to concentrate on the documentation of what was standing at the time of inspection, completely surveying every site, rather than spot surveying as in many such reports, and writing an "architectural history" of the area. The type of structure we were dealing with made this approach appear to be preferable.

Comment 6. The architectural-historical report makes no comparisons with architectural features and styles outside of the Long Branch Lake study area.
Response: See response to comment 5.

Comment 7. March and Stephens (1977:20) made several important observations concerning cemeteries in Macon County; however, they did not take into consideration many of the potential questions. Historic cemeteries offer much valid data for both historians and genealogists. The historical survey could have developed research question(s) aimed at determining why some burials were made in family cemeteries, while others were individual burials.
Response: This has been partially dealt with in the text. Further considerations are beyond the scope of this report.

Comment 8. We are told that most of the original settlers lie at rest in the Chitwood-Taylor, Bellview, and Powell cemeteries, but the document does not indicate whether or not these cemeteries are in the floodpool, on government land, or many miles distant.
Response: Agreed. Maps have been included.

Comment 9. It would have been interesting if portions of the Afro-American history had been strengthened by interviewing blacks who once lived in the study area.
Response: Agreed. Two interviews with Black-Americans were added in the summer of 1977.

Comment 10. It is almost impossible to determine if the historic sites discussed in the report will be inundated or are outside of the project area. For example, is the Painter Creek Battle site within the reservoir floodpool, or is it outside?
Response: Agreed. Historical site appendix has been added. The Painter Creek Battle site lies well outside Corps' property.

Comment 11. Some historical sites (such as the saw mills) appear to be located in the floodpool area, but there is no evaluation of their significance.
Response: Evaluation of the significance of all sites is provided in summary form in the final chapter. The sites listed in the comment do not appear to warrant preservation and do not appear to qualify for nomination to the National Register.

Comment 12. Photographs and sketch maps would be of considerable aid for other investigators. The Haley burial place certainly deserves a photograph and sketch map.
Response: Agreed. Photos and maps have been included in the historical site appendix (map 2). The latter was recommended for preservation.

Comment 13. The mitigation plan for historical resources focuses on the restoration and use of the old Lea House as a living museum. The idea has merit. We would suggest that the museum be maintained and museum staff funded on an annual basis. If recreational fees are to be charged at Long Branch, it is suggested that a portion of the income from this source be allotted for the museum. The average citizen often resents charges at government-managed museums and it is recommended that the museum not charge an entrance fee. Museum personnel should include at least one individual with training in historical research and museum curation. The museum director should be encouraged and assisted in conducting additional oral interviews and literature research.
Response: Incorporated in mitigation statement.

Comment 14. I was particularly intrigued by the Haley burial place (March and Stephens 1977:20), and was surprised to see no mention of mitigating this site. The burial place is outside the floodpool but will be on government property. It is essential that the marker trees are not destroyed by vandalism or accidental clearcutting. If any marker trees are destroyed, it is suggested that new trees of the same species be planted so that the site location can be restored for future generations. Development of the site for interpretation is questionable (because of its sensitive nature), but it definitely deserves to be on a schedule of patrolled sites.
Response: Mitigation strongly recommended preservation of this site.

Comment 15. The surprising feature of the historical architectural report is that over ninety percent of the study is data, and only a small section at the beginning of the report describes the methodology of the survey and the recommendations. There is much to be said for short and direct reports, but the architectural report leaves this reviewer looking for additional synthesis of the data.
Response: This suggested approach calls for a different type of survey, based on a different time frame and different budget. It is more typical of the usual, larger and more varied areas but we were here confronted with a small, unified land area which could be documented in detail, and that method was chosen.

Comment 16. Some of the data is synthesized as it is presented in the Historical-Architectural Survey Sheets, but this is not a satisfactory method. Sections should have been developed evaluating and comparing the variations in sites within several architectural types (i.e., styles of barns or standards in bridge construction).
Response: As stated in response to earlier comments, the original scope of the survey as defined by the Corps of Engineers was somewhat more limited than the various evaluators would wish, but it must be remembered that there was a definite time limitation and also a budget limitation on what our job was. Future work of this type might well aim at a much more ambitious type of report.

Comment 17. A unique feature of this historical-architectural study is that it generated its own survey form, which is an obvious adaptation of the Archaeological Survey of Missouri forms. The form has some advantages over the Historic Inventory form prepared by the Office of Historic Preservation, but the latter is still considered the standard reporting form.
Response: Agreed. We were informed that the modified ASM form was sufficient for Corps' purposes. We were instructed that this form was to be used.

Comment 18. Two types of information are missing from the survey sheets: names of previous owners and the date(s) or period of time. The use of a site number and alphanumeric tract designation is justified in such a large project; however, it would have been desirable to know whether the farm was originally owned by Jones, O'Connor, or Wolfinbarger.
Response: Agreed. Previous owners have been added. Dates for structures will be available later.

Comment 19. The lack of date(s) or periods is the greatest drawback.
Response: Agreed. Dates will be available at a later date. Houses have not been assigned to periods as houses often vary regardless of temporal indications as noted by the comment by Henning. Periods cannot be determined solely by architectural style.

Comment 20. Reports by Cole, Kaplan, Mori, and Wireman (1966) and Cooley and Fuller (1976) should be noted as archaeological resource studies at the mouth of the Grand River; these two reports contain descriptions of Middle

and Late Woodland sites which are probably directly or indirectly related to sites of the same substages in the Long Branch Lake area.
Response: Agreed. These have been added.

Comment 21. There are no references to Chapman (1975).
Response: Chapman is referenced in the artifact descriptions and now in the later sections of Volume I.

Comment 22. One pertinent area which needs elaboration is the professional status of the individual who collected and analyzed the environmental data. Archaeologists often are prone to collect and analyze their own data, sometimes to the consternation of specialists in paleo-ecology.
Response: The author analyzed the environmental data. All nonreferenced materials in the text are the responsibility of the author. Any data collected for a specific research problem need not be directly usable in any other research problem.

Comment 23. The sections concerning sampling and methods indicate a progressive form of research. Included in this area should be a list of all personnel participating in the survey and laboratory analysis, as well as the starting and finishing dates for the fieldwork.
Response: Agreed. These have been inserted.

Comment 24. We are unaware that such sites exist and are not sure what purpose is served by labeling artifactual material as random. Natural exposures of chert are more common in southern Missouri, and it is true that there are more naturally occurring chert exposures south of the Missouri River. After several years of research in southern Missouri, we have been able to develop hypotheses concerning the patterns (trade, food gathering, etc.) which account for the majority of known archaeological sites. Certainly there are some sites in southern Missouri which are difficult to interpret, and some of the current hypotheses may be questioned, but other researchers should not be misled concerning the basic nature of prehistoric sites in southern Missouri as contrasted with those in the northern portion of the State.
Response: There appears to be a misunderstanding. The statement was intended to indicate random material--not random sites. Sites are the result of patterned behavior, and patterned is the opposite of random. However, random or nonsite material represents unpatterned behavior. It has been my experience collecting in the White River drainage when I was young, that material could be found anywhere, and that sites were defined on the basis of concentrated material. Such random material is rare in northern Missouri.

Comment 25. There are no historic archaeological sites slated for testing or further excavation. Twenty-three sites are situated beneath the multipurpose pool, and approximately twice that number are situated in the five-year flood pool and above the spillway level. It is not likely that all of these sites are totally disturbed or completely understood.
Response: The key to any responsible management plan is preservation. Excavations are very costly, and such recommendations have to be justified. The historic sites are either bridges, historic structures which the architectural historian did not recommend for preservation, or highly disturbed sites. Work on these is not considered to be of sufficient importance to expend funding.

Comment 26. Historic archaeological site 23MC157H is an excellent example of a site situated below the multipurpose pool. The site is not described in terms of chronological placement or site function, and it is not cross-referenced to the historical or architectural-historical reports. Is the dam part of an old mill or a recreational structure? While the report has no recommendations for the site, it would be wise for all of the investigators (the three disciplines would be involved with this site) to conduct further studies concerning the age and function of the site. I have not visited the dam and have no knowledge of its significance, but the report provides no means of evaluating the site. If the dam is associated with a buried mill structure, testing and extensive excavations could be justified.
Response: Site is now cross-referenced to the historic report which gives this information.

Comment 27. Historic archaeological site 23MC150H is a historic log cabin site situated in a plowed field. The recommendations are that the site should be re-collected since it is highly disturbed. Suggestion for more aggressive approach to the site is that a metal detector survey be used to locate distinct metal features, and that test excavations be conducted to determine if undisturbed historic features (privy, burials, cistern, etc.) can be identified.
Response: See response to comment 25.

Comment 28. Historic archaeological site 23MC188H includes an old, collapsed log cabin, a hen house, a storage shed, and a root cellar. Grantham (1977:184) notes that the site will be destroyed by the Corps,

but does not cross-reference to the architectural historical report. In fact, this site is not listed in the historical architectural resource report. The site is above the spillway, and if the structure is to be destroyed, there should be limited archaeological testing for important historic features.
Response: Recommendations for preservation of the structure are not the responsibility of the author. As the site is a historic archaeological site and will be above the spillway level, its preservation is possible.

Comment 29. The recommendations for these three historic sites require reevaluation; the recommended action may be the proper mitigation, but the archaeological report does not present sufficient data to make this determination. The recommendations for the prehistoric archaeological resources appear appropriate.
Response: Preservation of these sites as historic archaeological sites appears to be the most appropriate action.

Mr. Richard Daley, draft reviewer. Comment 1. Overall, the literature search and field research is more thorough than often seen in preimpoundment surveys. This is exceedingly important since the field research can rarely be repeated. I commend the project leaders and participants for this.
Response: No response required.

Comment 2. The cultural survey suffers, however, from the lack of synthesis and editing in the reports. Generally, the writing tends to be repetitive, be directed neither at the professional or layman and the in-between leaves everyone dissatisfied, shows little synthesis, provides few connections between volumes, and needs editing for punctuation and sentence structure as well. I have provided examples of these in the next section.
Response: Agreed. We have attempted to correct these problems.

Comment 3. The absence of a map of the project area and the boundaries of the reservoir is frustrating. A map finally occurs in Volume III, but it does not name most of the towns and rivers mentioned in the earlier volumes.
Response: The order of the report has been changed, making Volume III, Volume I. In addition, maps and plates have been added to the historical report.

VOLUME III. HISTORICAL RESOURCES.

Comment 4. I found this volume quite interesting. A stronger organization would make it more coherent. I suggest insertion of several subdivisions as follows:

European Settlement	- p. 1
Churches	- 17
Slavery	- 27
Civil War	- 29
Post Civil War Politics	- 32
Post Civil War Economy	- 35
Post Civil War Social Structure	- 39

Response: We subdivided the report into four chronological sections or chapters.

Comment 5. The history clearly begins with European settlement but the termination date is unclear. I would like to see an introductory section on the prehistory which would relate it to the archaeological survey and interpretation and an explicit termination date, perhaps 1900.
Response: The explicit termination date is the present.

Comment 6. I strongly recommend that a map of the area and one of the reservoir be added to the introductory section or abstract. A select group of photographs interspersed with the text would help the reader follow the historical account and could be used to link this report with the architectural survey.
Response: Maps and photos have been added in a historic appendix. Their appearance in the text is not considered necessary. A map of the reservoir appears in Volume I.

VOLUME IV. HISTORICAL ARCHITECTURAL RESOURCES.

Comment 7. I like the idea of stressing the typical design rather than the unusual. I was disappointed, though, that after all the work recording ordinary farmsteads, no attempt was made to summarize. I would like to see a sketch or even a description of a composite, typical farm unit.
Response: The architectural historian felt that his task was best defined as one of complete documentation and description, and that some later historian might want, from these facts, photos, and descriptions, to "generalize" as suggested.

Comment 8. There seems to have been no attempt to make the tie between the architectural and historical surveys. This puzzles me, and there must be some way to do this. Giving the names of the owners of some of the farmsteads mentioned in the historical account would be one possibility.
Response: Agreed. The owners' names have been added.

VOLUMES I AND II. ARCHAEOLOGICAL RESOURCES.

Comment 9. The archaeological field research appears to have been thorough insofar as the collection of cultural artifacts is concerned. The discussion of the paleo-environment in the beginning of the report certainly implies that the perspective was to have been more ecological, yet I see little indication of that in the site reports. Few, if any, floral or faunal remains were collected. A detailed ecological analysis could not be conducted as part of a survey and properly belongs with a testing and excavation program, but I would like to have seen some preliminary tests conducted.
Response: A detailed ecological analysis could not have been performed by the time of the draft report. This section is important in view of the discussion of site relations to resources, site functions, and cultural and environmental change included in the final report. An environmental analysis can be conducted as part of a survey. Preliminary testing was not part of the original contract.

Comment 10. I am puzzled by the emphasis on secondary data analysis of environmental parameters and the absence of any discussion of the primary archaeological data. Somehow the analysis of the survey results is lost in the document.
Response: A full analysis of artifacts was initially part of the appendices. This order has subsequently been changed in order to clarify the survey results. Environmental analysis was necessary to the planned discussion of subsistence-settlement systems in the final report.

VOLUME III. HISTORICAL RESOURCES.

Comment 11. White settlement. I prefer use of European to white throughout text as it is less ambiguous.
Response: Agreed. Text has been changed to reflect your comment.

Comment 12. Use native instead of indigenous.
Response: We prefer indigenous.

Comment 13. What are the dimensions of a typical double log house?
Response: We have never seen the dimensions given. The log houses were usually 14-feet or 16-feet square.

Comment 14. What dates are meant by the early days? Before 1800? Can some more specific date be given?
Response: General meaning clarified in text.

Comment 15. Use arabic numerals for numbers greater than nine.
Response: The general rule is to spell out numbers fewer than three digits.

Comment 16. How many years did the block house on the Chariton River last?
Response: The number of years which the block house lasted may be located but is not felt to be directly pertinent to the text. No attempt was made to locate such information and is not included.

Comment 17. Battle of Kirksville is mentioned several times and should be briefly described.
Response: No description necessary in context of paper

Comment 18. Mitigation. The recommendations should be stronger: Many things could be done, but this is the place for the historians to argue for a particular plan.
Response: Agreed. A preservation plan has been developed and included in the final report.

VOLUME IV. HISTORICAL ARCHITECTURAL RESOURCES.

Comment 19. The identification of one structure worth preservation conflicts with earlier and later statements that no structures are of value.
Response: Agreed. Correction has been made.

Comment 20. What is meant by land quality?
Response: The term refers to the ability of the land to produce farm products--the whole area is rolling hills, timbered, mostly fit for pasturage, with few rich bottom fields.

Comment 21. The glossary is very good. Sketches of some items would be helpful.
Response: Agreed. Most can, however, be easily identified by referring to a large dictionary if a picture is needed.

Comment 22. Survey sheets. Elevation units omitted from numerous sheets. Scale is left off the sketch maps even though they are drawn to scale.
Response: All contour elevations are understood as feet above mean sea level. The sketches are exactly that, general indicators of the farmstead layout, rather than scale maps of each site. If they were the latter, elevation and scale would be given. Scale and contour maps of each site proved difficult because of extensive alteration of many sites by Corps' operations before the survey was begun. The sketches attempt to show how it was when in operation.

Comment 23. "30's" should be 1930's.
Response: No response--the meaning is clear.

Comment 24. Is tall field grass a common name for a species or a general reference?
Response: General reference.

Comment 25. Elevation is given to nearest foot, yet preceded by circa.; why?
Response: Because, as in many other cases, Corps of Engineers' operations had altered the original site, and map readings could not be counted as entirely accurate.

Comment 26. III:27. Is the well open or closed?
Response: The well is capped with concrete slab.

Comment 27. III:34. I like the two sketches together and wish it could have been done on more buildings.
Response: None required.

Comment 28. III:47. Changes in color of vegetation might indicate several things besides previous structure.
Response: The statement is qualified by a "might" indicating that such could be the case.

Comment 29. III:94. A sketch of this structure is needed. The other sketches in the report of wood joints and other details are extremely helpful and interesting.
Response: As the two following photos show, there was not much left to sketch. It was thought that the details were of more importance than the overall artist's rendering would have been.

Comment 30. III:110. What kind of native lumber, oak?
Response: Oak.

VOLUMES I AND II. ARCHAEOLOGICAL RESOURCES.

Comment 31. I:1. Should cite Henning and Klippel's work here: also the work by the Marion-Ralls County Archaeological Society should be cited in this paragraph.
Response: Not necessary. Only cited sources are those from the Chariton and Grand systems. These sources have been used for comparative work only. The history of archaeological work is limited to the Chariton and Grand--both Missouri River drainage systems. Some limits to the area discussed must be set.

Comment 32. I:4. The objectives should be rewritten and presented as a list. Each one could then be discussed after the reader has reviewed the total program goals.
Response: It is believed that a fuller discussion of these objectives than a simple listing is necessary. To discuss them in more detail at a later time would be necessary and would produce redundancy.

Comment 33. I do not understand the phrase "generalized environment."
Response: Adapted from Odum (1959), Fundamentals of Ecology. Term refers to "generalized ecosystem" (as opposed to a "specialized ecosystem")--i.e., there is a higher diversity index.

Comment 34. Long-term meteorological data are available and are quite useful. Long-term hydrologic data are sometimes available as well.
Response: Long-term meteorological and hydrological data have been included.

Comment 35. p. 9. The point is belabored.
Response: Disagree. Section refers to reasoning behind the whole viewpoint of the report. Section on subsistence-settlement systems is basic to entire later section.

Comment 36. I:8. The entire section could be shortened by at least half. I have the feeling that part of the text is written as if it were to be delivered to an introductory archaeology class; other parts as if they were directed to interested laymen; and others are directed at the professional archaeologist.
Response: Section is as simply written as possible in order to be read by anyone. The length of the section has already been compressed as much as possible. This section is important to justification, not only of later sections, but also to the rationale behind selection of sites for further work.

Comment 37. I:13. The area shown as "conifer forest" is more commonly called the "northern hardwoods." I like to have the source given for all maps, too.
Response: Source is Wright (1968).

Comment 38. Discussion of why river valleys are moister than uplands could be written simpler. Also, the effect of slope on solar insolation should be mentioned.
Response: Discussion of moisture in alluvial settings is the author's understanding of active processes. As no note of error is made, statement stands. Although solar insolation is a factor, hills are in general too small to be highly affected by this. Such a statement does not appear to be necessary.

Comment 39. I:17. "trees grow where they are able to survive". Obvious.
Response: Statement is a summary statement of the preceding discussion. It is hoped that the statement in light of the preceding discussion would be obvious.

Comment 40. The extirpation of these species is at least as much a result of habitat loss as it is a result of overkill.
Response: Agreed. Statement has been revised.

Comment 41. The comparison of different soils should be put into a single matrix showing texture, color, topographic position and other characteristics of all soils together.
Response: Although this might have been possible, a later section depends much on comparability in order to make statements on vegetational change.

Comment 42. The geologic discussion is not related to the archaeology and should be summarized.
Response: The geology is directly related to the archaeology both in the physiographic forms available as well as its extreme impact on available resources.

Comment 43. I:40. Use of "scrub oak" is ambiguous. Does this mean black jack oak (Quercus marilandica) since scrub oak is an alternate common name for this species or does the term scrub simply mean any stunted oak species?
Response: Agreed. Use of term is somewhat ambiguous, but in this report the term refers to the latter.

Comment 44. I:40. I doubt if the contention that there is little or no undergrowth can be defended.
Response: Close canopies in a number of these areas have little in the way of undergrowth.

Comment 45. I:41. Why use generic names instead of specific names? For example, the maple referred to is silver maple and the oak is probably pin oak or possibly even bur oak.
Response: The author did not take samples or specific notes in the field. These are interpretations made after the survey. Specific names were not appropriate.

Comment 46. Since Tomanek and Hulett's paper was published in 1968, it could not have discussed the 1970's which many meteorologists consider another drought. Consequently, this survey may have been conducted in the middle of a drought rather than two decades since the last dry period.
Response: Rainfall in northern Missouri had been average or above until 1974 when initial observations were made. While this survey was conducted in the third year of drought, many observations were made prior to that. Statement has been revised to reflect this, however.

Comment 47. I:43. There is no discussion of fire at all which is most surprising since fire is a major factor influencing the prairie-forest transition and since most of the fires which burned the native prairies were set by man. This is one of the most important interactions of man with his environment, yet it is not even discussed in the report.
Response: We are not sure that much is served by including any mention of fire. We have no ethnographic data to assure that this has ever happened in the area (although it probably did). By the same token, there are only two alternatives to its use in any model. One is to treat it as an uncontrolled variable and the other to treat it as a constant. As the latter appears to be nearer the case in other areas, it would not have a major effect on the model.

Comment 48. I:46. I question whether shingle oak succeeds white oak and black oak with any regularity.
Response: We would agree that this may be the case. However, shingle oak has a leaf morphology which is highly distinctive. The chances that it would be mistaken are probably not great. However, since we would agree with the statement above, we have attempted to clarify this in the report.

Comment 49. II:5. After all the discussion on vegetation, there is this ambiguous use of "tall grass."
Response: Grasses (as noted in the introduction) are not native. Grasses were timothy and fescue, but the area was originally forested. Environmental data in the introduction was for use in later sections, not for site descriptions. Where vegetation is natural, it is so noted.

Comment 50. Recommendations. This is an example of the unforceful style of writing: "It is recommended that some action be taken" and "would lead us to believe."
Response: Statement out of context. Recommendations state that excavations should be conducted on the site.

Comment 51. I think historic sites should be put in a separate section from the archaeological ones and whenever possible cross-references should be made to the architectural survey.
Response: Sites are reported in the order of their recording. Both prehistoric and historic sites should be treated on the same basis. Second part of comment is highly inaccurate. All historic sites reported by the architectural historian are cross-referenced.

Comment 52. I:168. Why separate discussion of manos and metates?
Response: Manos and metates are certainly not equivalent tools. This can easily be seen by the overwhelming number of pieces of ground stone compared with the number of metates.

Comment 53. The settings do not create the bends in the rivers.
Response: Although the statement is no longer applicable, the hills on which most of these sites are located do indeed create bends in the river.

Comment 54. I:219. This statement indicating a constant high contact area contradicts, or appears to contradict, the data that Mississippian and Oneota sites are rare.
Response: Not true. The degree and types of culture contact need not take the same form. Mississippian and Oneota are not necessarily temporal contemporaries. Even if they were, a buffer zone phenomenon would have resulted in very meager evidence of either.

Comment 55. The recommendations are greatly weakened by poor sentence structure, especially the phrases "it is proposed", "it is suggested", and "it is desirable."
Response: Perhaps. We have attempted to correct this.

Dr. Dale Henning, draft reviewer. Comment 1. All of us are interested in program development and implementation and how others have done it. It would be of interest to a number of contract archaeologists and historians to know what the level of funding was and how those funds were allocated to each portion.
Response: Citation of level of funding not necessary. It should, perhaps, be noted how funds were allocated, and a statement to this effect has been added. It is noted that the level of funding was not sufficient to have performed at as a high level of professional standard as might have been possible.

Comment 2. Comments on Volume I are not extensive. It was impossible for me to check factual data offered because of physical distance from many of the sources used and because of the manner which historians feel is adequate for providing references. For instance, many factual statements are made in the first three pages of Volume I, but no source is offered until page 3 where one author is credited.
Response: This is background material which does not warrant research into original sources--especially since it was work March and the others cited have published in many available sources. We intended to focus on local county and township data.

Comment 3. This earliest period is important and is not covered completely by March. For instance, Fort Orleans is now on the National Register and, I believe, has been published on by Carl H. Chapman and by Chapman and Smith. Further, there is a good deal of material written about de Bourgmond (some of the best by Folmer). Why not research that in some depth.
Response: Fort Orleans was mentoned in connection with French penetration and withdrawal, not because it affected the white settlement in the Long Branch area. It is doubtful that the early settlers had even heard of Fort Orleans. Hence, there was no reason to go beyond that which March had written, for which he cited Giraud, Garraghan, and Folmer, among others. Wright II Archaeological Site, in Carroll County, is on the National Register but not Fort Orleans as such.

Comment 4. Also, the French were exploring into northeast Missouri, not just sticking close to the villages as suggested by March and Stephens on page 2. It has been some time since I reviewed it for my own research, but I believe

there were some traces or trails used by Indians and whites which passed near the reservoir area. These are mapped and discussed by Martha May Wood (1936) in her unpublished M.A. thesis out of Columbia, Missouri.
Response: A rightful reading of the paragraph clearly shows that March was pointing out that French settlers preferred to live in villages, not on isolated farms. He was not referring to explorers. The point is that American settlers, unlike the French, were not reluctant to reside on isolated farms. Martha Wood's thesis was of no help.

Comment 5. Pertinent to the paragraph devoted to family life in the 1840's (which seems awfully idyllic to me), it might be wise to compare with the architectural volume and refer to an actual house, if such exists. Besides, not all the houses dating in the 1840's and even before were log; sawmills existed and sawn timber and frame structures were being built then as well. Log houses, by the way, were not necessarily early; we have documented one built in 1918 in the Cannon. We also have located and verified frame houses used in the 1840's.
Response: Yes, frame structures soon appeared, but the earliest settlers did build houses of logs according to the evidence available. Log houses were not necessarily early, we agree. Some are being built today.

Comment 6. Many historians apparently feel no responsibility for the sources used. March and Stephens appear to be no exception. They use and cite several county histories, but give us no idea as to the qualifications of the author(s) and not very much as to their interpretations of fact. The Big Neck Affair is the most glaring example of this. Their statement in the end notes "several accounts of the Big Neck War exist", but no two agree on the details. It was particularly exasperating to me. How do March and Stephens interpret the sources they used in researching the "Big Neck War"? Much of my research has been in ethnohistory; none of my respected colleagues would allow me the luxury of the kind of cavalier treatment of sources I see through the earlier years covered in this volume. Were title and abstract and county records checked regarding ownership, sale, and transfer of property? We have had the use of excellent records in Monroe and Ralls Counties, clearing up many misconceptions offered in county histories and newspapers. Through these, we have located several mills and other business operations not referred to elsewhere and have located the remains of most of them through field checking. Tax records are also helpful in this respect and can be used for scientific research.

Response: The only reason for relating the Big Neck Affair was that stories about it doubtlessly affected the attitude of the settlers in the Long Branch area toward the Indians. The affair took place far to the north of Long Branch in what became Schuyler County. Again, we saw no reason to conduct research into the primary sources on the "Big Neck War." The account by Caldwell is the best, but we did want to point out that various accounts exist that do not agree on details. That is because they are based on different versions as originally told by different people involved, all of which may contain some truth.

Perhaps too much reliance seems to be put on county historians. We agree, but we did use them carefully and tried, when possible, to verify from other sources the material used. More original research was conducted in the summer of 1977.

Comment 7. I think that historical research in an area this small should be very intensive and helpful to the architectural historian and archaeologist. What I see is a good summary of northeast Missouri history which will suffice as background for studies in architecture and late prehistory, but leaves the intensive, local research and interpretations up to ... someone else.
Response: Each critic is entitled to his opinion even if it is contrary to the evidence. The critic evidently knows little of the history of northeast Missouri.

Comment 8. My comments throughout the reading suggested further research using U.S.G.S. quad sheets for locating now-defunct structures, researching county tax records, title and abstracts which are available. It is possible to name the original owner and/or builder and the extent of original lands owned through this kind of intensive research. Such an effort should be made before passing off all structures in the reservoir as of no historic or architectural interest. Some may be valuable because of who built them or how they were used.
Response: True, and it has been recommended that future surveys of this kind take into consideration the time and expense that would be required to make the complete report suggested. A check of the historian's report does not indicate that any structures in the area were the sites of important events, nor that people of importance built or lived in them.

Comment 9. In this portion, a note offering the construction schedule and projected dam closing date would be helpful in evaluating the procedures employed.
Response: Dam is already closed and reservoir cleared. This will be apparent by the photo in the preface of the final report.

Comment 10. I believe that quoting portions of the Corps' Scope of Work would be helpful on page 64. This would give the reviewer a "feel" for the charges and limitations imposed by the contracting agency. Often, these tend to guide or channel our research without our realizing it.
Response: Scope of work is largely summarized on that page.

Comment 11. Second, there are a series of diagnostics for activities such as "plant-processing" which should be stated clearly so they can be evaluated by other researchers. What items can one expect to find on a hunting, gardening, plant-processing, or toolmaking site? Other people need to have access to the thoughts that went into Grantham's decisions for assignment. We would probably agree with him but must be able to evaluate his work, his interpretations, and, ultimately, his recommendations.
Response: Agreed. These have been included.

Comment 12. I have always insisted that page numbers be offered where a citation to a specific thought or item is made. None appear through the volume, making checking of references difficult at best. There are very few references offered in the body of the ms. (sic), too few considering the number of named types mentioned.
Response: References to types appeared in the artifact descriptions and recitation was not considered necessary. Other uncited information in the text is the author's own.

Comment 13. Another general question. How does Grantham determine that a stone is a "gizzard stone"? The only regional animals I am familiar with which might have produced gizzard stones are turkeys, ducks, geese, and chickens. Those would be awfully small gizzard stones. Perhaps they are all from dinosaurs? Seriously, what are the characteristics of a gizzard stone?
Response: "Gizzard stone" has been included in a glossary. These are relatively small. However, I have seen chickens take in glass in excess of an inch in length. Stones or glass exhibit highly rounded edges and numerous fine, random scratches on the surface.

Comment 14. I wonder why one class of stone tools is referred to as ground and pecked rather than pecked and ground, the more common usage?
Response: As neither have precedence in the order of usage and no order is implied by the titling information, the order does not appear to be of significance.

Comment 15. II:4. I would be careful in assigning a full-grooved axe to the Middle Archaic. Does Chapman say this in his most recent publication? I do not recall that specifically. Full-grooved axes occur in the midwest from the Early Archaic through early Woodland. If Grantham feels that the full-grooved axe is diagnostic of the Middle Archaic, he should offer evidence for a literature search, evaluate the information, and prove it.
Response: Agreed. There are, however, few sites from the Early Archaic with full-grooved axes and a number of recorded Middle Archaic sites with full-grooved axes. Late Archaic sites onward are more typified by three-quarter-grooved axes. In addition, projectile points from 23MC55 just to the south are more typical of a Middle Archaic component. As the two are separated only by a short draw, it is not unreasonable to assume that this is part of that component.

Comment 16. Why is MC74 assigned to the Middle Woodland? I see no diagnostics in the list which would lead me in this direction.
Response: In the final report, we have noted that site designations are based on a number of years' work. The site apparently contains a Middle Archaic, Middle Woodland, and Late Woodland component. The Middle Woodland component is based on a number of medium to large corner-notched points, Gary, and Lantry points.

Comment 17. Where did the idea that the length-width ratio of simple triangular points will offer a clue to Oneota vs. Mississippian come from? There is no citation. Personally, I doubt that it has any basis in fact. I also doubt the Oneota and Mississippian authorship for the simple triangular points. They were used by Late Woodland peoples all over the midwest, along with other forms. Late Woodland people seem to have been very casual re. (sic) point types.
Response: Agreed. Evidence has been provided in the final report that these are not Late Woodland. The idea of length:width ratio came from a private collector in the area. It does indeed appear to have validity for the reservoir area. Its validity for a wider application is, of course, nonexistent.

Comment 18. II:93. Be careful of assigning Oneota or Mississippian on the basis of triangular points. Other groups used such points; you are stretching your evidence and assigning sites to "stages" that are not represented at all in the area. This is very serious. Prove your statements.
Response: Agreed. This has been provided in the final report.

Comment 19. II:116 - and many other places. Please offer a citation and/or description for Albany Slip, Chevron-Cordate, etc.
Response: It was believed that these terms were in somewhat more general usage. These have been defined in a glossary section.

Comment 20. II:147. Are these button blanks? If so, do they suggest a local industry?
Response: They are. There was a button factory in Macon, and the punched shells were often used to line driveways in the area.

Comment 21. II:163. What is your rationale for Middle Woodland assignment?
Response: See response to comment 16.

Comment 22. II:210. Here you have a full-grooved axe. You assigned MC54 to the Middle Archaic on the basis of one found there. Why is there no Middle Archaic component here?
Response: The specimen, although morphologically an ax, does not exhibit wear patterns similar to an ax. The specimen was chipped into shape and only roughly ground. The specimen is also small for an ax.

Comment 23. I do not believe the Middle Woodland assignment for MC298. Perhaps I would if illustrations were included.
Response: See response to comment 16.

Comment 24. The specifics cited by page number are not exhaustive, but will serve as examples of problems encountered through the body of the report. These are questions I am sure I would ask if using the information offered and probably will ask in the near future. All of these contract materials produced under pressure of construction schedules and precise deadlines must be usable to future researchers; many will not see formal

publication and will be all we have. So, they must assume nothing and all levels of abstraction must be carefully explained in detail.
Response: No response necessary.

Comment 25. The section entitled Artifacts does not seem to fit where it is; it is not really a discussion of artifacts, but of stone resources. It would be better placed before the body of the report.
Response: Agreed. The entire report has been reorganized for clarity.

Comment 26. A section describing and defining the artifact classes referred to would be invaluable to anyone interested in northeast Missouri archaeology. This should include all of the chipped stone artifacts, pecked and ground stone and pottery. It should be illustrated and metric data afforded. Then, we will know what each projectile point, etc., form discussed really is.
Response: Agreed.

Comment 27. A section offering the characteristics used in assigning components on sites would be invaluable. Then, again, the reader would know how and why Grantham assigned certain components to the sites found. The reader might not agree in these assignments, but would at least know what was going on, make his own interpretations, and disagree or agree using the data afforded. He cannot do this now.
Response: Agreed. This has been added.

Comment 28. The section on Chronology lacks proof throughout, which harks back to my comments on literature search and artifact definitions. A chronology should be developed around proof through comparison with available literature resources and physical comparison of materials already excavated. Following research in the Cannon Reservoir, there are many radiocarbon dates available; none are cited. Klippel, 1972, offers radiocarbon dates; these are not used.
Response: Agreed. This has been included. Cannon radiocarbon dates subsequent to Klippel's work were not available. Although a copy of the report was promised by Mr. Hunt, none was forthcoming.

Comment 29. I do not believe that Black Sand Incised sherds are found anywhere in Missouri because the

literature available has not offered good descriptions, comparative data, or dates proving their existence. Just saying that these cultural "stages" are present is not sufficient without this proof.
Response: Black Sand Incised sherds have posed, and certainly will continue to pose, severe problems. Until more work is done, dates are still questionable. Although these certainly may not be Black Sand Incised, they differ significantly in temper and methods of manufacture from other ceramics in the area.

Comment 30. The assertion for Oneota and Mississippian intrusions into the area also lacks proof, although I would be willing to believe that Oneota peoples used the area for hunting. Some proof for this exists in the accounts of the Big Neck War referred to in Volume I. The Ioways are well-documented as sharing an Oneota cultural tradition and there they were in the early 1800's. Why not use this?
Response: Agreed. These have been included.

Comment 31. If Mississippian peoples penetrated this far into interior Missouri, that is indeed a revelation. I am willing to believe it, but would like to weigh the evidence. It will take more than a few triangular projectile points to do it, though.
Response: Most of this basic data is derived from work supported by the National Park Service. That data will be shortly forthcoming. Unnotched and multiple-notched triangular projectile points appear at one site which also contains Late Woodland material; comparable Late Woodland material is present on other sites in the area. This has been used as the basis for Mississippian assignment.

Comment 32. Having had a number of lengthy discussions with members of the Corps of Engineers, I am well attuned to the problems of site selection for mitigation. Assuming that mitigation and excavation are the same, the work is expensive and time-consuming. The selection of sites for excavation must be very carefully done, weighing all factors ... both what we know and do not know. How is this to be done for Long Branch?
Response: This information has been included. We agree that mitigation is expensive, and we believe that preservation must be the major part of any cultural resources management plan.

Comment 33. The suggestion of district nomination for National Register purposes looked fairly good to me a

few years ago. Now, I am not sure it is feasible in the long run. Nomination to the Register of a large tract of land means that every time a road or additional boat ramp is constructed, the unit of land will have to be rechecked and cleared. If this causes enough trouble, ultimately the law will be ignored. It is much more feasible to develop units of sites which suggest some relationship, cultural or chronological, and make a very serious effort to conserve those. Today, and my ideas may change in the future, I would recommend development of several complexes and work very hard for their conservation.
Response: Although we would agree that district nomination for a large tract of land might not be completely advisable, the reservoir does not qualify as a large tract of land. In addition, if preservation of sites is to be our main concern, Federal lands are one of the few areas where this is possible.

U.S. Army Corps of Engineers.

HISTORICAL SURVEY.

Comment 1. State in the preface the percentage of funds that were allocated to each area of the survey.
Response: Agreed. The statement has been added.

Comment 2. The historic sites should be cross-referenced with the other two volumes.
Response: In general, it was felt that it would largely be read by historians and it would create confusion. Since it was cross-referenced in the other volumes, we felt it wasn't necessary.

HISTORIC-ARCHITECTURAL SURVEY.

Comment 3. Discussion of methodology should be expanded.
Response: Agreed. The methodology has been expanded.

Comment 4. Site numbers in Volume II should be changed to the "modified" Smithsonian numbering system and sites should be cross-referenced with the archaeological report.
Response: Agreed. The "modified" Smithsonian numbering system has been added and the sites have been cross-referenced with the archaeological report.

ARCHAEOLOGICAL SURVEY.

Comment 5. Insert summary table in the appendix giving site numbers, tract numbers, and legal description.
Response: We did not want locational information to appear in the body of the report so the table was compiled and will be sent under separate cover as material not for public release.