Final
Remedial Investigation Report
Presidio Main Installation

Presidio of San Francisco

Volume III
Figures Sections 1-5

Contract No. DAAA15-90-D-0018
Task Order 0002, Data Item A009

Prepared by

DAMES & MOORE

Prepared for

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland 21010-5401

20050603 026

January 1997

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	January 1997	Final

4. TITLE AND SUBTITLE
Final Remedial Investigation Report, Presidio Main Installation, Presidio of San Francisco, Volumes I, II, III, ~~IV, V, VI, VII and VIII~~

5. FUNDING NUMBERS
DAAA15-90-D-0018,
Task Order 0002

6. AUTHOR(S)

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Dames and Moore
633 Seventeenth Street
Suite 2500
Denver, CO 80202-3625

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Army Environmental Center
ATTN: SFIM-AEC-ER
Aberdeen Proving Ground, MD 21010-5401

10. SPONSORING / MONITORING AGENCY REPORT NUMBER
SFIM-AEC-ER-CR-98018

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT
Distribution Unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

Dames and Moore has conducted a Remedial Investigation (RI) of the Presidio of San Francisco (PSF), CA. The objectives of the RI included the determination of the nature and extent of contamination at PSF and to quantify both the human health and ecological risk posed by that contamination. The report concludes that, in general, the Presidio does not pose a significant risk to either human health or the environment. There are, however, a number of locations where elevated risks are present. The remedial actions to abate those risks will be identified in a follow -on document called the "Presidio Main Installation, Feasibility Study".

14. SUBJECT TERMS

15. NUMBER OF PAGES
9,500 (approx)

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	UL

1. INTRODUCTION

This Final Remedial Investigation (RI) Report presents the results of the Main Installation RI conducted under the direction of the U.S. Army Environmental Center (USAEC), formerly U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) at the Presidio of San Francisco (PSF). This RI report was prepared by Dames & Moore under contract No. DAAA15-90-D-0018 with the USAEC.

Volume III, this volume, of the Final Remedial Investigation Report contains the figures referenced by sections 1 through 5 of the report text in Volume I. Section tabs in this volume correspond to the section tabs in Volume I, making it easy to find the corresponding figure.

The remaining seven volumes contain information as follows: Volume I contains the text of the body of the report. Volume II contains the tables referenced in Volume I. Volume IV contains the figures referenced by section 6 of Volume I. Volume V contains the figures referenced by sections 7 through 15 of Volume I. Volumes VI through VIII contain supporting documentation for the RI in Appendices A through U.

The following report outline shows section and Appendix titles for all eight report volumes and is included in the introduction section of each volume of this RI report.

1.1 Report Outline: Final Remedial Investigation Report Presidio Main Installation, Presidio of San Francisco

The following outline lists the major sections in each of the eight volumes of this RI report.

VOLUME I TEXT

1. Introduction
2. Background
3. Investigation Methods
4. Nike Facility
5. Crissy Field Study Area
6. Building 900s Series Study Area
7. Directorate of Engineering and Housing Study Area
8. Main Post Study Area
9. Fill Sites and Landfills
10. Miscellaneous Sites
11. Golden Gate Bridge Highway and Transportation District Study Area
12. Baker Beach Study Area
13. Battery Howe/Wagner
14. Miscellaneous Follow-on Sites
15. Baseline Risk Assessment
16. References

VOLUME II TABLES

1. Introduction
2. Background
3. Investigation Methods
4. Nike Facility
5. Crissy Field Study Area
6. Building 900s Series Study Area
7. Directorate of Engineering and Housing Study Area
8. Main Post Study Area
9. Fill Sites and Landfills
10. Miscellaneous Sites
11. Golden Gate Bridge Highway and Transportation District Study Area
12. Baker Beach Study Area
13. Battery Howe/Wagner
14. Miscellaneous Follow-on Sites
15. Baseline Risk Assessment

VOLUME III FIGURES SECTIONS 1-5

1. Introduction
2. Background
3. Investigation Methods
4. Nike Facility
5. Crissy Field Study Area

VOLUME IV FIGURES SECTION 6

Introduction

6. Building 900s Series Study Area

VOLUME V FIGURES SECTIONS 7-15

Introduction

7. Directorate of Engineering and Housing Study Area
8. Main Post Study Area
9. Fill Sites and Landfills
10. Miscellaneous Sites
11. Golden Gate Bridge Highway and Transportation District Study Area
12. Baker Beach Study Area
13. Battery Howe/Wagner
14. Miscellaneous Follow-on Sites
15. Baseline Risk Assessment

VOLUME VI APPENDICES A-F

Introduction

A Background/PSF Water Supply
B Nike Facility
C Crissy Field Study Area
D Building 900s Series Study Area
E DEH Study Area
F Main Post Study Area

VOLUME VII APPENDICES G-Q

Introduction

G Fill Sites and Landfills
H Miscellaneous Sites
I Golden Gate Bridge Highway and Transportation District Study Area
J Baker Beach Study Area
K Battery Howe/Wagner
L Miscellaneous Follow-on Sites
M Physical Properties Data
N Geophysical Data
O Well and Sample Data
P Transducer Study
Q Fate and Transport Data

VOLUME VIII APPENDICES R-U

Introduction

R IRA Data
S Soil Gas Data
T QA/QC Program
U Risk Calculation Spreadsheets

1.2 Index of Study Areas, Buildings, and Sites, with Section Numbers

The following index shows where each study area, building, and site is discussed in the RI report. Note, however, that although all listed items are discussed, not all listed items are areas which were investigated in this RI. The index can also be cross referenced with Figure 1.2-1.

For space requirements in the index, and for brevity in the rest of this RI report, the Golden Gate Bridge, Highway, and Transportation District Study Area is abbreviated as GGBHTD Study Area. For the same reasons, the Directorate of Engineering and Housing Study Area is abbreviated as DEH Study Area.

Study Area/Building/Site	RI Report Section
Baker Beach Study Area	12. Baker Beach Study Area
Battery Howe/Wagner	13. Battery Howe/Wagner
Bone Yard Area	11. GGBHTD Study Area
Bridge District Area (see GGBHTD Study Area)	11. GGBHTD Study Area
Building 1029	8. Main Post Study Area
Building 1040	8. Main Post Study Area
Building 1057	8. Main Post Study Area
Building 1065	8. Main Post Study Area
Building 1151	8. Main Post Study Area
Building 1152	8. Main Post Study Area
Building 1153	8. Main Post Study Area
Building 1167	8. Main Post Study Area
Building 1244	10. Miscellaneous Sites
Building 1245	14. Miscellaneous Follow-on Sites
Building 1285	13. Battery Howe/Wagner
Building 1287	13. Battery Howe/Wagner
Building 1351	10. Miscellaneous Sites
Building 1369	14. Miscellaneous Follow-on Sites
Building 1388	14. Miscellaneous Follow-on Sites
Building 1450	4. Nike Facility
Building 1451	4. Nike Facility
Building 1750	14. Miscellaneous Follow-on Sites
Building 201	8. Main Post Study Area
Building 205 (see Sewer Lift Station 2)	5. Crissy Field Study Area
Building 206	8. Main Post Study Area
Building 207	8. Main Post Study Area
Building 208	8. Main Post Study Area
Building 215	8. Main Post Study Area
Building 228	8. Main Post Study Area
Building 229	8. Main Post Study Area

Study Area/Building/Site	RI Report Section
Building 230	8. Main Post Study Area
Building 231	8. Main Post Study Area
Building 267	7. DEH Study Area
Building 268	7. DEH Study Area
Building 269	7. DEH Study Area
Building 269	7. DEH Study Area
Building 283	7. DEH Study Area
Building 285	7. DEH Study Area
Building 286	7. DEH Study Area
Building 287	7. DEH Study Area
Building 293	7. DEH Study Area
Building 302	14. Miscellaneous Follow-on Sites
Building 609	5. Crissy Field Study Area
Building 611	5. Crissy Field Study Area
Building 633	5. Crissy Field Study Area
Building 634	5. Crissy Field Study Area
Building 637	5. Crissy Field Study Area
Building 638	5. Crissy Field Study Area
Building 640	5. Crissy Field Study Area
Building 642	5. Crissy Field Study Area
Building 643	5. Crissy Field Study Area
Building 645 (see Sewer Lift Station 1)	5. Crissy Field Study Area
Building 661	10. Miscellaneous Sites
Building 662	10. Miscellaneous Sites
Building 663	10. Miscellaneous Sites
Building 664	10. Miscellaneous Sites
Building 665	10. Miscellaneous Sites
Building 669	14. Miscellaneous Follow-on Sites
Building 680	10. Miscellaneous Sites
Building 900s Series Study Area	6. Building 900s Series Study Area
Building 920	6. Building 900s Series Study Area
Building 923	6. Building 900s Series Study Area
Building 924	6. Building 900s Series Study Area
Building 925	6. Building 900s Series Study Area
Building 926	6. Building 900s Series Study Area
Building 927	6. Building 900s Series Study Area
Building 929	6. Building 900s Series Study Area
Building 930	6. Building 900s Series Study Area
Building 931	6. Building 900s Series Study Area
Building 933	6. Building 900s Series Study Area
Building 934	6. Building 900s Series Study Area
Building 937	6. Building 900s Series Study Area
Building 949	6. Building 900s Series Study Area
Building 950	6. Building 900s Series Study Area
Building 973	6. Building 900s Series Study Area
Building 974	6. Building 900s Series Study Area

Study Area/Building/Site	RI Report Section
Building 976	6. Building 900s Series Study Area
Building 979	6. Building 900s Series Study Area
Building 979 Area	6. Building 900s Series Study Area
Building 991	10. Miscellaneous Sites
Building 992	10. Miscellaneous Sites
Building 993	10. Miscellaneous Sites
Building 994	10. Miscellaneous Sites
Building 995	10. Miscellaneous Sites
Building 996	10. Miscellaneous Sites
Building 997	10. Miscellaneous Sites
Building 998	10. Miscellaneous Sites
Building 999	10. Miscellaneous Sites
Consolidated Motor Pool	5. Crissy Field Study Area
Crissy Field Study Area	5. Crissy Field Study Area
Directorate of Engineering and Housing Study Area	7. DEH Study Area
Disturbed Area 1	12. Baker Beach
Disturbed Area 2	12. Baker Beach
Disturbed Area 3	12. Baker Beach
Disturbed Area 4	12. Baker Beach
Disturbed Area E (see Landfill E)	9. Fill Sites and Landfills
East of Mason	14. Miscellaneous Follow-on Sites
Fill Site 1	9. Fill Sites and Landfills
Fill Site 5	9. Fill Sites and Landfills
Fill Site 6	9. Fill Sites and Landfills
Fill Site 7	5. Crissy Field Study Area
Fill Sites and Landfills	9. Fill Sites and Landfills
Fort Point U.S. Coast Guard Station (FPCGS)	10. Miscellaneous Sites
GGBHTD Study Area	11. GGBHTD Study Area
Graded Area 9	9. Fill Sites and Landfills
Landfill 1 (see Fill Site 1)	9. Fill Sites and Landfills
Landfill 2	9. Fill Sites and Landfills
Landfill 3 (see Transfer Station)	9. Fill Sites and Landfills
Landfill 4	9. Fill Sites and Landfills
Landfill 5 (see Fill Site 5)	9. Fill Sites and Landfills
Landfill 6 (see Fill Site 6)	9. Fill Sites and Landfills
Landfill 7 (see Fill Site 7)	5. Crissy Field Study Area
Landfill 9 (see Graded Area 9)	9. Fill Sites and Landfills
Landfill E	9. Fill Sites and Landfills
Letterman Army Institute of Research	2. Background
Letterman Army Medical Center	2. Background
Lobos Creek	10. Miscellaneous Sites
Main Post Study Area	8. Main Post Study Area
Miscellaneous Follow-on Sites	14. Miscellaneous Follow-on Sites
Miscellaneous Sites	10. Miscellaneous Sites
Mountain Lake	10. Miscellaneous Sites
Nike Facility	4. Nike Facility

Study Area/Building/Site	RI Report Section
Paint Operations Area	11. GGBHTD Study Area
POL Area	5. Crissy Field Study Area
Sewer Lift Station 1	5. Crissy Field Study Area
Sewer Lift Station 2	5. Crissy Field Study Area
Silo 1	4. Nike Facility
Silo 2	4. Nike Facility
Silo 3	4. Nike Facility
Transfer Station	9. Fill Sites and Landfills
Transformer Area	11. GGBHTD Study Area
UST Area	11. GGBHTD Study Area
Vehicle Maintenance Area	6. Building 900s Series Study Area

LIST OF FIGURES

Figure 1.1-1	PSF Site Location Map
Figure 1.2-1	Remedial Investigation Study Area/Site Locations and Sample History, Presidio of San Francisco
Figure 2.3-1	Average Total Monthly Precipitation for 1951 - 1994, San Francisco, California
Figure 2.3-2	Potentiometric Surface Map of First Encountered Groundwater, Presidio of San Francisco
Figure 2.3-3	Surface Geology Map, Presidio of San Francisco
Figure 2.3-4	Structure Contour Map of the Bedrock Surface, Presidio of San Francisco
Figure 2.3-5	Regional Cross Section Location Map, Presidio of San Francisco
Figure 2.3-6	Regional Cross Section A-A', Presidio of San Francisco
Figure 2.3-7	Regional Cross Section B-B', Presidio of San Francisco
Figure 2.3-8	Generalized Geology Showing Major Shear Zones & Fold Axes
Figure 2.3-9	Crissy Field Groundwater Area Water Table Elevation Map, Presidio of San Francisco
Figure 2.3-10	Schematic Illustration of a Coastal Aquifer
Figure 2.3-11	Crissy Field Groundwater Area TDS Isoconcentration Map, Presidio of San Francisco
Figure 2.3-12	Crissy Field Groundwater Area Electrical Conductivity Map, Presidio of San Francisco
Figure 2.3-13	General Mineral Characteristics of Surface Water & Groundwater, Presidio of San Francisco
Figure 3.1-1	Conceptual Site Model for Human Receptors at the Presidio of San Francisco
Figure 3.1-2	Conceptual Site Model for Ecological Receptors at the Presidio of San Francisco
Figure 3.2-1	Resistivity Schematic and Electrode Configuration
Figure 3.2-2	Typical Monitoring Well Construction

Figure 3.2-3 Background Soil and PSF Water Supply Sample Locations

Figure 3.4-1 Data Management Flow Scheme

Figure 3.7-1 Summary of Process of Identifying Inorganic COCs in Soil and Sediment

Figure 3.7-2 Method for Performing Statistical Comparisons of Background Chemical Data

Figure 4.1-1 Nike Facility Study Area and Cross Section Location Map

Figure 4.1-2 Nike Facility, Drainage Structures, Wipe, Sediment, and Surface Water Sample Locations

Figure 4.1-3 Nike Facility, Missile Silo Plan Map

Figure 4.1-4 Nike Facility, Cross Section A-A'

Figure 4.1-5 Nike Facility, Cross Section B-B'

Figure 4.2-1 Nike Facility, Monitoring Well and Soil Boring Location Map

Figure 4.3-1 Nike Facility, Cross Section C-C'

Figure 4.3-2 Nike Facility, Potentiometric Surface Map

Figure 4.5-1 Nike Facility, Concentrations of Chromium in Soil

Figure 4.5-2 Nike Facility, Concentrations of Copper in Soil

Figure 4.5-3 Nike Facility, Concentrations of Cyanide in Soil

Figure 4.5-4 Nike Facility, Concentrations of Lead in Soil

Figure 4.5-5 Nike Facility, Concentrations of Manganese in Soil

Figure 4.5-6 Nike Facility, Concentrations of Mercury in Soil

Figure 4.5-7 Nike Facility, Concentrations of Nickel in Soil

Figure 4.5-8 Nike Facility, Concentrations of Zinc in Soil

Figure 4.5-9 Nike Facility, Concentrations of Benzo(a)pyrene in Soil

Figure 4.5-10 Nike Facility, Concentrations of Benzo(a)anthracene in Soil

Figure 4.5-11 Nike Facility, Concentrations of PCB-1260 in Soil

Figure 4.5-12 Nike Facility, Concentrations of Antimony in Groundwater and Surface Water

Figure 4.5-13 Nike Facility, Concentrations of Chromium in Groundwater and Surface Water

Figure 4.5-14 Nike Facility, Concentrations of Lead in Groundwater and Surface Water

Figure 4.5-15 Nike Facility, Concentrations of Manganese in Groundwater and Surface Water

Figure 4.5-16 Nike Facility, Concentrations of Mercury in Groundwater and Surface Water

Figure 4.5-17 Nike Facility, Concentrations of Nickel in Groundwater and Surface Water

Figure 5.1-1 Crissy Field Study Area

Figure 5.1-2 Crissy Field Study Area, Test Pit, Soil Boring, Monitoring Well & Cross Section Locations

Figure 5.1-3 Historical Wetlands, Presidio of San Francisco

Figure 5.1-4 Crissy Field Study Area, Storm Drain and Sediment, Wipe, and Surface Soil Sample Locations

Figure 5.1-5 POL Area, Montgomery Watson Soil Boring Locations

Figure 5.3-1 Crissy Field Study Area, Cross Section A-A'

Figure 5.3-2 Crissy Field Study Area, Cross Section B-B'

Figure 5.3-3 Crissy Field Study Area, Debris Fill Isopach

Figure 5.3-4 Crissy Field Study Area, Potentiometric Surface Map, Low Tide, November 1992

Figure 5.3-5 Crissy Field Study Area, Potentiometric Surface Map, High Tide, November 1992

Figure 5.3-6 Crissy Field Study Area, Potentiometric Surface Map, High Tide, March 1995

Figure 5.3-7 Crissy Field Study Area, Potentiometric Surface Map, Low Tide, March 1995

Figure 5.5-1 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Aluminum in Soil

Figure 5.5-2 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Arsenic in Soil

Figure 5.5-3 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Barium in Soil

Figure 5.5-4 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Beryllium in Soil

Figure 5.5-5 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Cadmium in Soil

Figure 5.5-6 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Chromium in Soil

Figure 5.5-7 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Cobalt in Soil

Figure 5.5-8 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Copper in Soil

Figure 5.5-9 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Iron in Soil

Figure 5.5-10 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Lead in Soil

Figure 5.5-11 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Manganese in Soil

Figure 5.5-12 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Mercury in Soil

Figure 5.5-13 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Nickel in Soil

Figure 5.5-14 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Vanadium in Soil

Figure 5.5-15 Crissy Field Study Area, Consolidated Motor Pool, POL Area, and Buildings 609 and 633, Concentrations of Zinc in Soil

Figure 5.5-16 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Aluminum in Soil

Figure 5.5-17 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Arsenic in Soil

Figure 5.5-18 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Barium in Soil

Figure 5.5-19 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Beryllium in Soil

Figure 5.5-20 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Cadmium in Soil

Figure 5.5-21 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Chromium in Soil

Figure 5.5-22 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Cobalt in Soil

Figure 5.5-23 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Copper in Soil

Figure 5.5-24 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Iron in Soil

Figure 5.5-25 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Lead in Soil

Figure 5.5-26 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Manganese in Soil

Figure 5.5-27 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Mercury in Soil

Figure 5.5-28 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Nickel in Soil

Figure 5.5-29 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Vanadium in Soil

Figure 5.5-30 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Zinc in Soil

Figure 5.5-31 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Benzo(a)pyrene in Soil

Figure 5.5-32 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of ppDDE in Soil

Figure 5.5-33 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of ppDDT in Soil

Figure 5.5-34 Crissy Field Study Area, Fill Site 7 and Sewer Lift Stations, Concentrations of Endrin in Soil

Figure 5.5-35 Crissy Field Study Area, Concentrations of Aluminum in Groundwater

Figure 5.5-36 Crissy Field Study Area, Concentrations of Chromium in Groundwater

Figure 5.5-37 Crissy Field Study Area, Concentrations of Copper in Groundwater

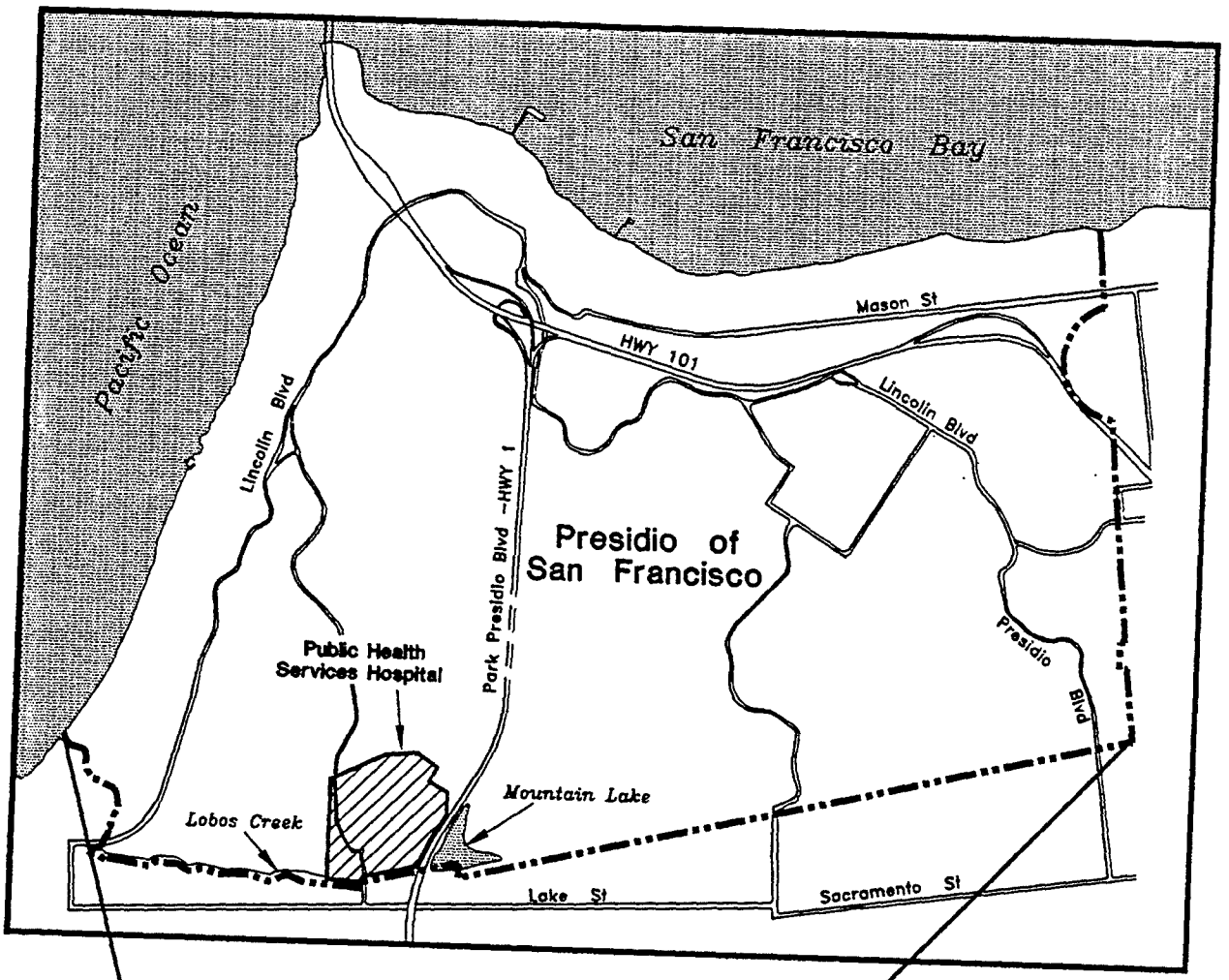
Figure 5.5-38 Crissy Field Study Area, Concentrations of Lead in Groundwater

Figure 5.5-39 Crissy Field Study Area, Concentrations of Nickel in Groundwater

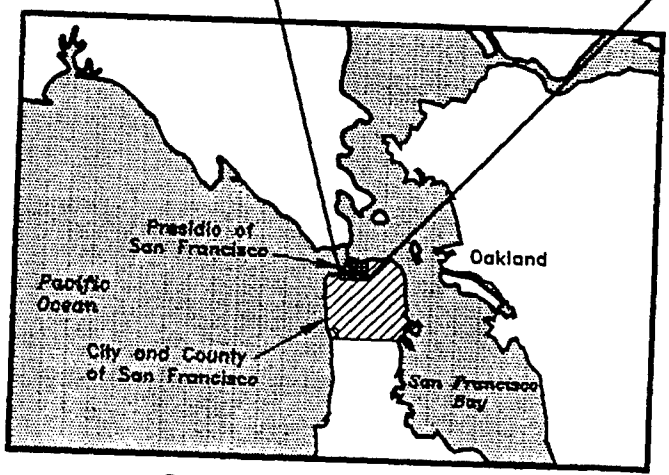
Figure 5.5-40 Crissy Field Study Area, Concentrations of Vanadium in Groundwater

Figure 5.5-41 Crissy Field Study Area, Concentrations of Zinc in Groundwater

Figure 5.5-42 Crissy Field Study Area, Concentrations of Vinyl Chloride in Groundwater



Presidio of San Francisco Boundary



San Francisco Bay Area
Not Drawn to Scale

-N-

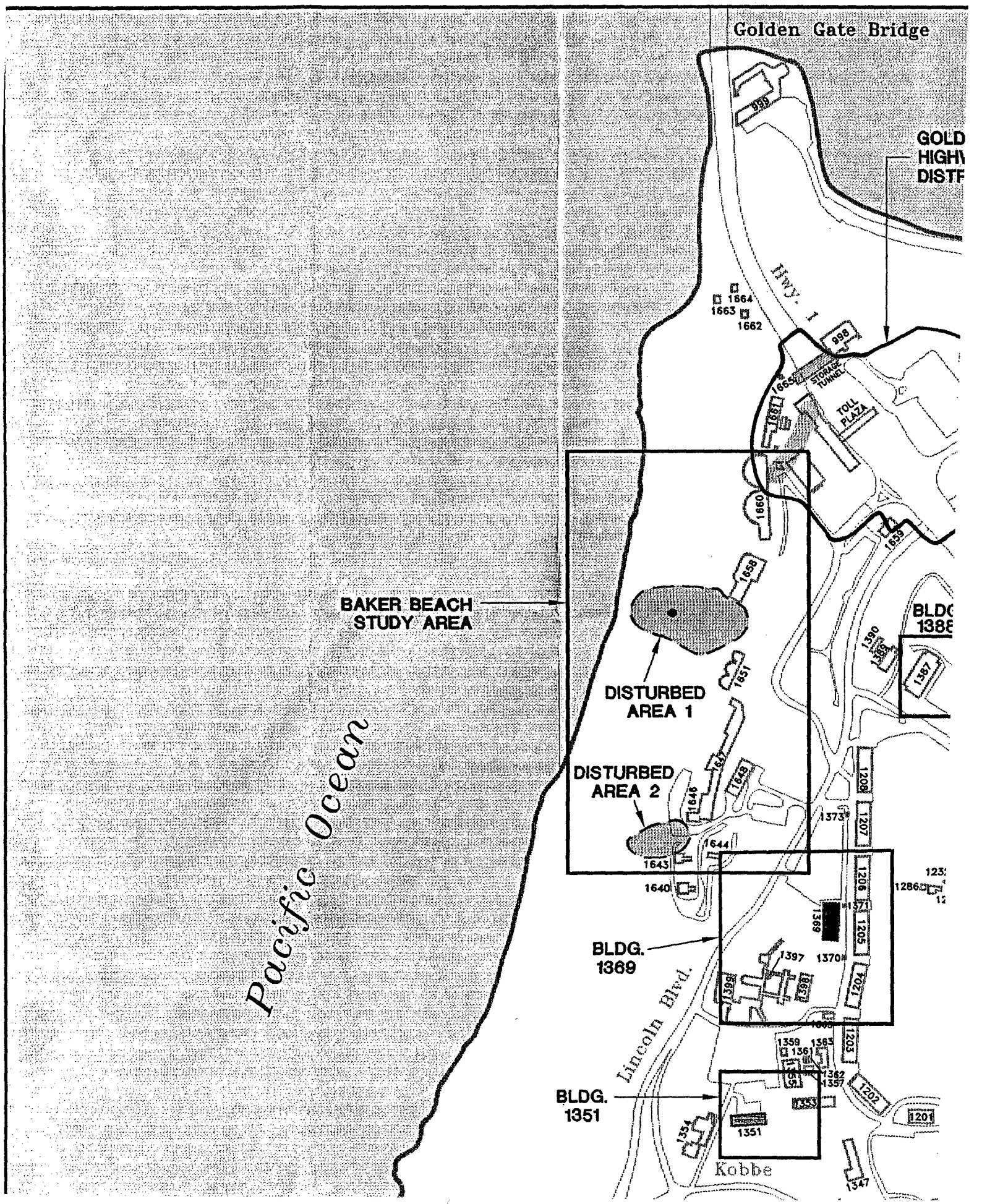
0 2000
SCALE IN FEET

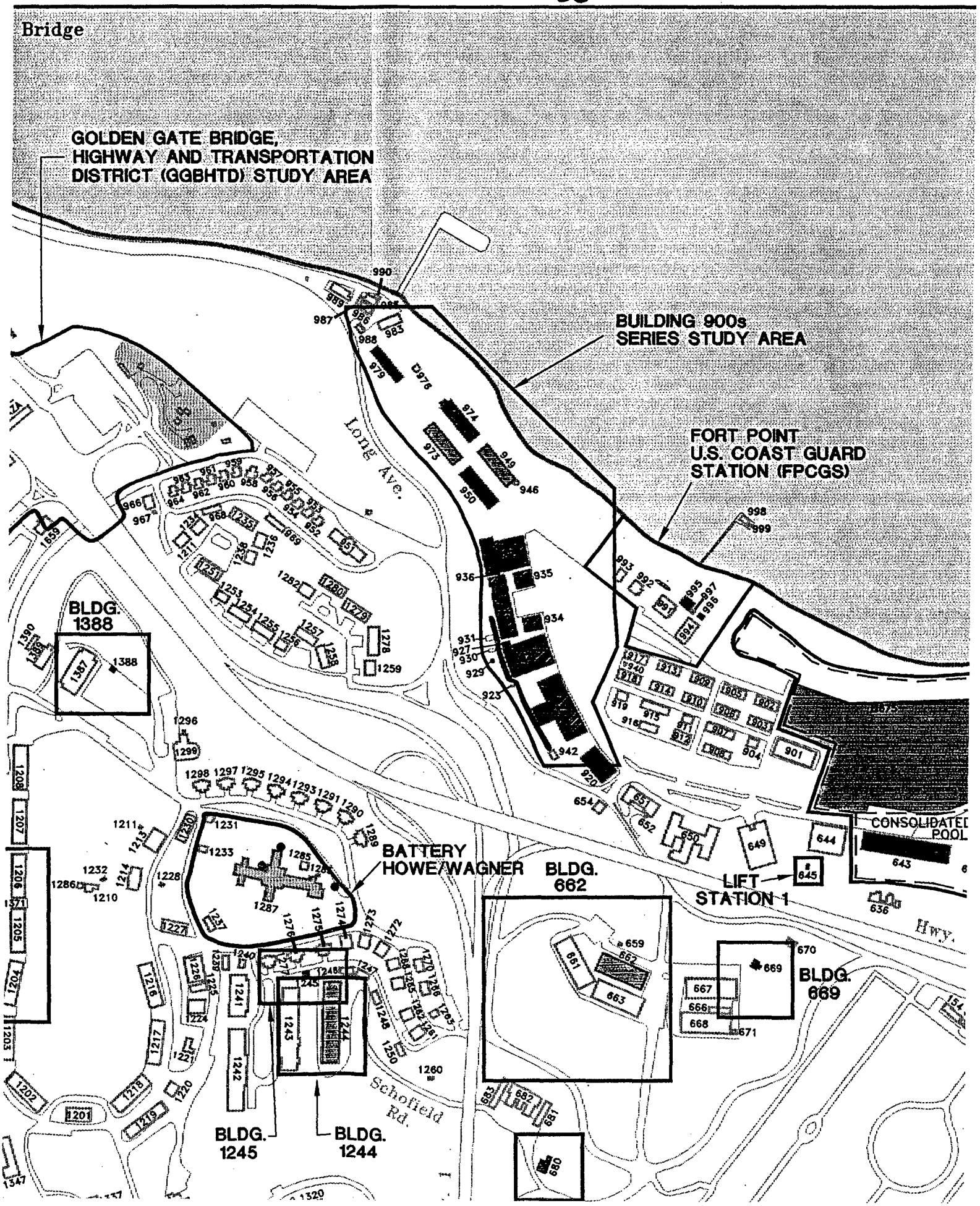
DAMES & MOORE

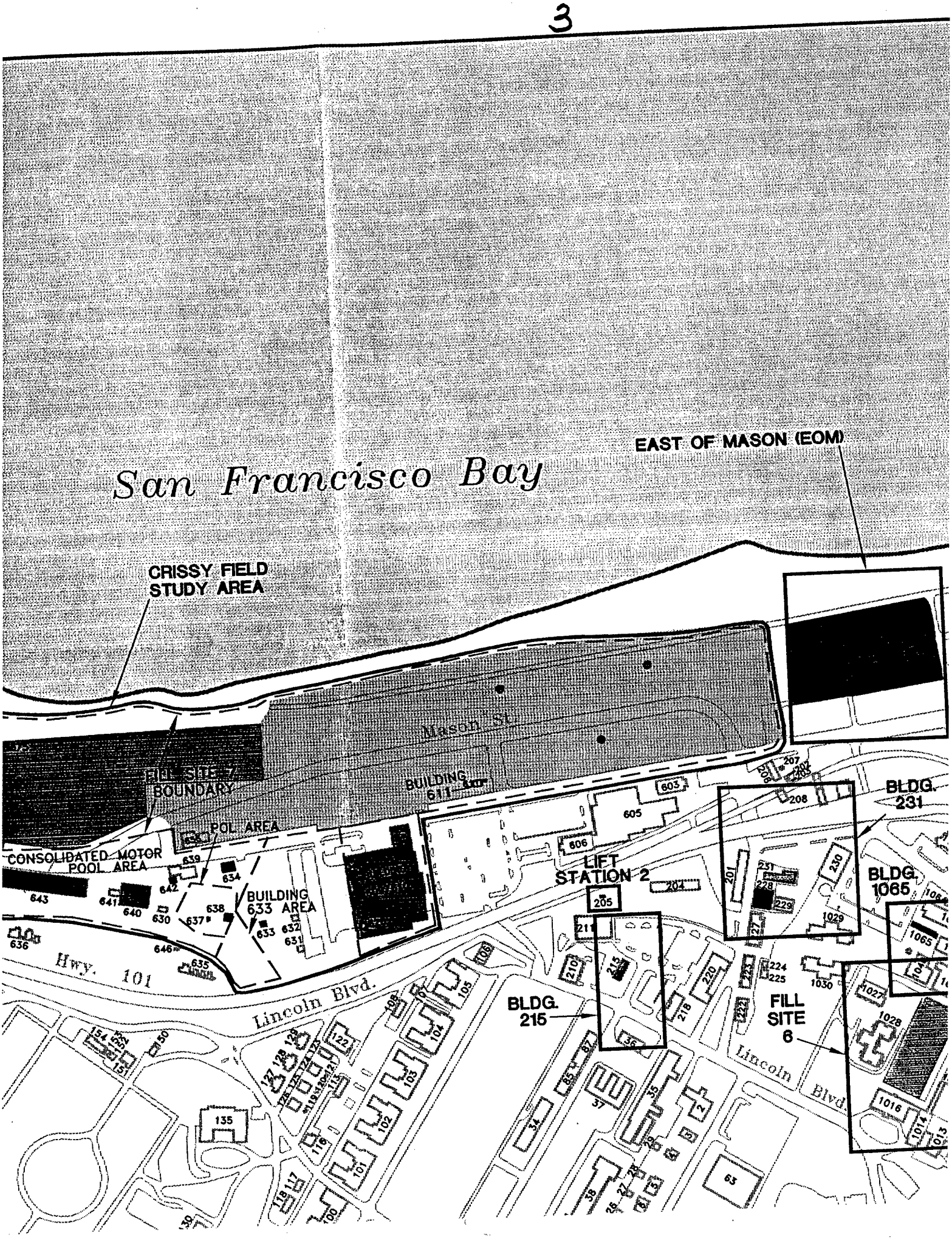
PRESIDIO OF SAN FRANCISCO
SITE LOCATION MAP

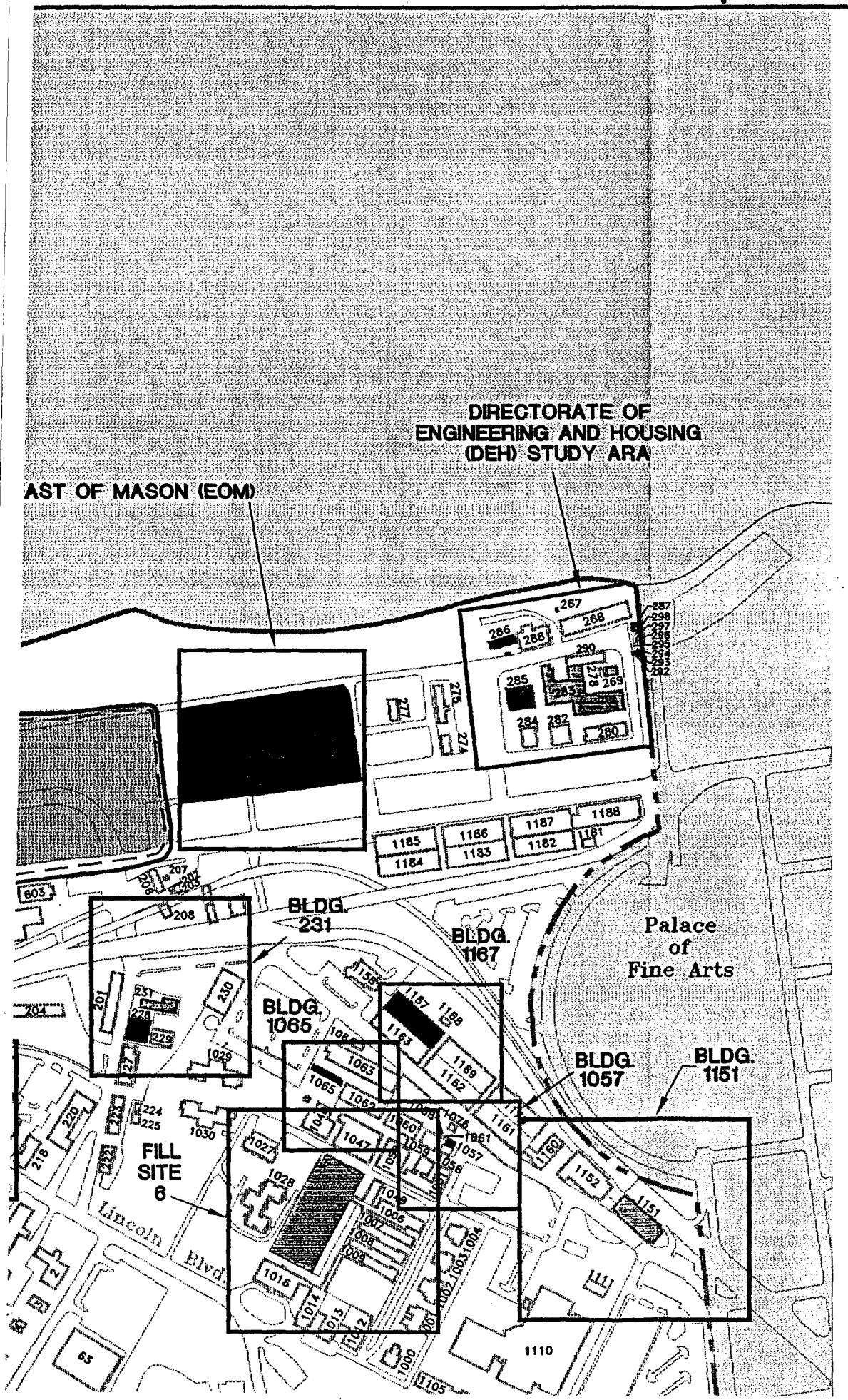
PSF25184\DV3

Date: January 1997 | Figure 1.1-1


Golden Gate Bridge
GOLD
HIGH
DIST
Hwy. 1
999
1664
1663
1662
998
STORAGE TUNNEL
1665
1661
TOLL PLAZA
1660
1659
1658
BAKER BEACH STUDY AREA
DISTURBED AREA 1
1651
DISTURBED AREA 2
1647
1648
1646
1644
1643
1640
BLDG. 1369
1369
1397
1370
1399
1398
1400
1359
1361
1363
1362
1357
BLDG. 1351
1353
1351
1354
Kobbe
1347
1202
1201
1203
1204
1205
1206
1207
1208
1373
1386
1387
1390
BLDG 1388
Pacific Ocean
Lincoln Blvd.


Bridge
GOLDEN GATE BRIDGE, HIGHWAY AND TRANSPORTATION DISTRICT (GGBHTD) STUDY AREA
BUILDING 900s SERIES STUDY AREA
FORT POINT U.S. COAST GUARD STATION (FPCGS)
Lone Ave.
BLDG. 1388
BATTERY HOWE/WAGNER
BLDG. 662
LIFT STATION 1
CONSOLIDATED POOL
BLDG. 669
BLDG. 1245
BLDG. 1244
Schofield Rd.
Hwy.


San Francisco Bay
EAST OF MASON (EOM)
CRISSY FIELD STUDY AREA
FILL SITE 7 BOUNDARY
POL AREA
CONSOLIDATED MOTOR POOL AREA
BUILDING 633 AREA
BUILDING 611
Mason St.
LIFT STATION 2
BLDG. 231
BLDG. 1065
BLDG. 215
FILL SITE 6
Hwy. 101
Lincoln Blvd.
Lincoln Blvd.



EX

Site Map Outline

Vicinity of RI Sampling

Initial RI

Supplemental RI

Follow–On RI

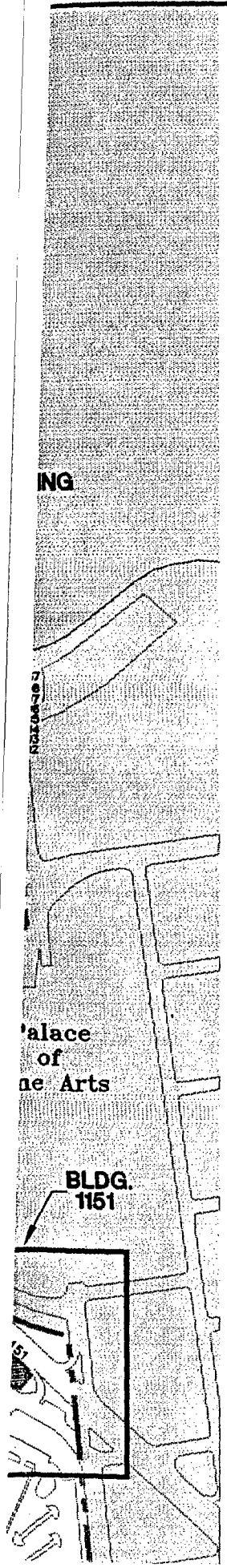
Initial and Supple

Initial and Follow

Supplemental an

Initial, Supplemer

RI Groundwa
Study Area/Site
Nike Facility
Crissy Field + Study Area
Building 900s +



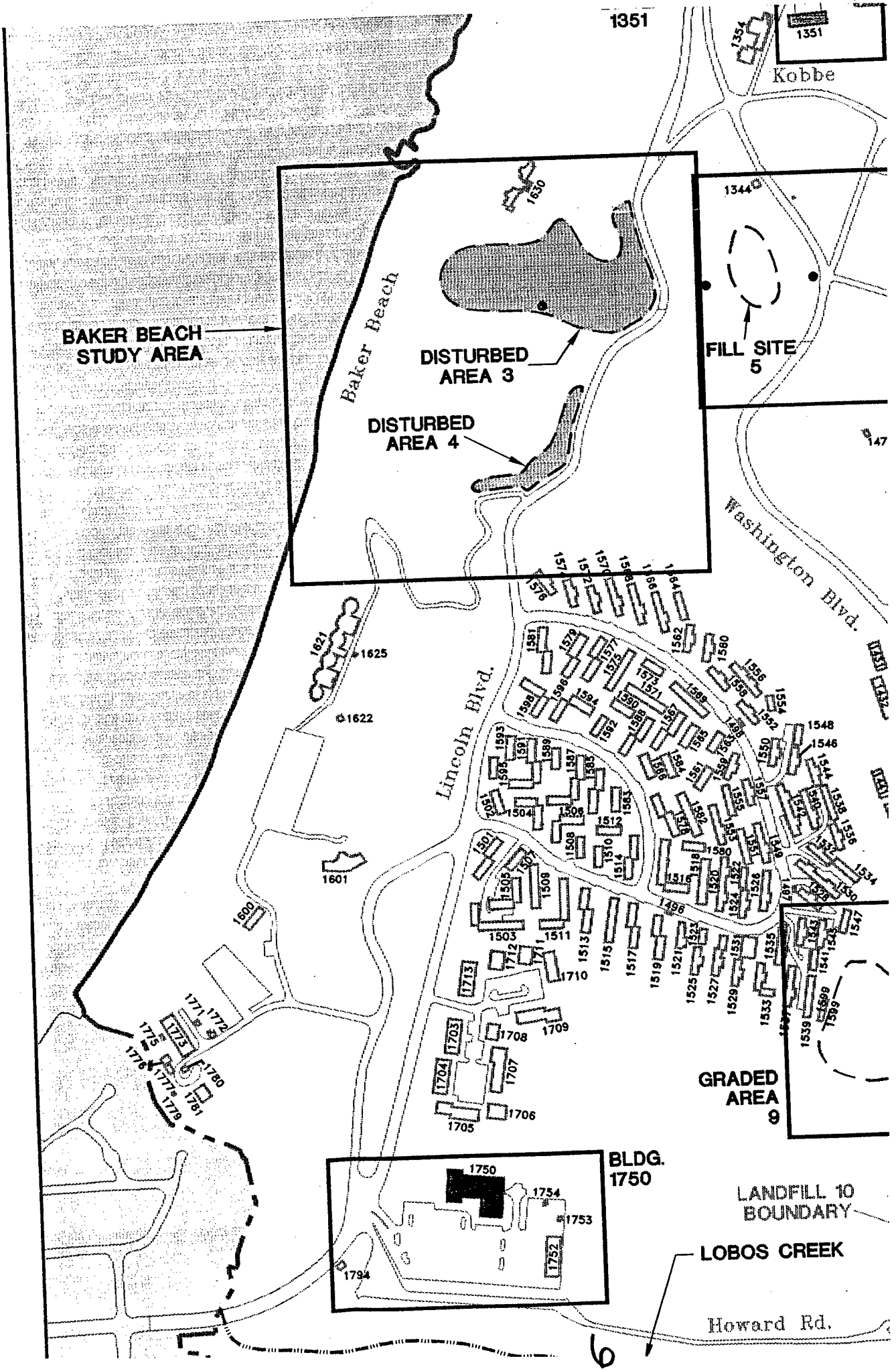
EXPLANATION

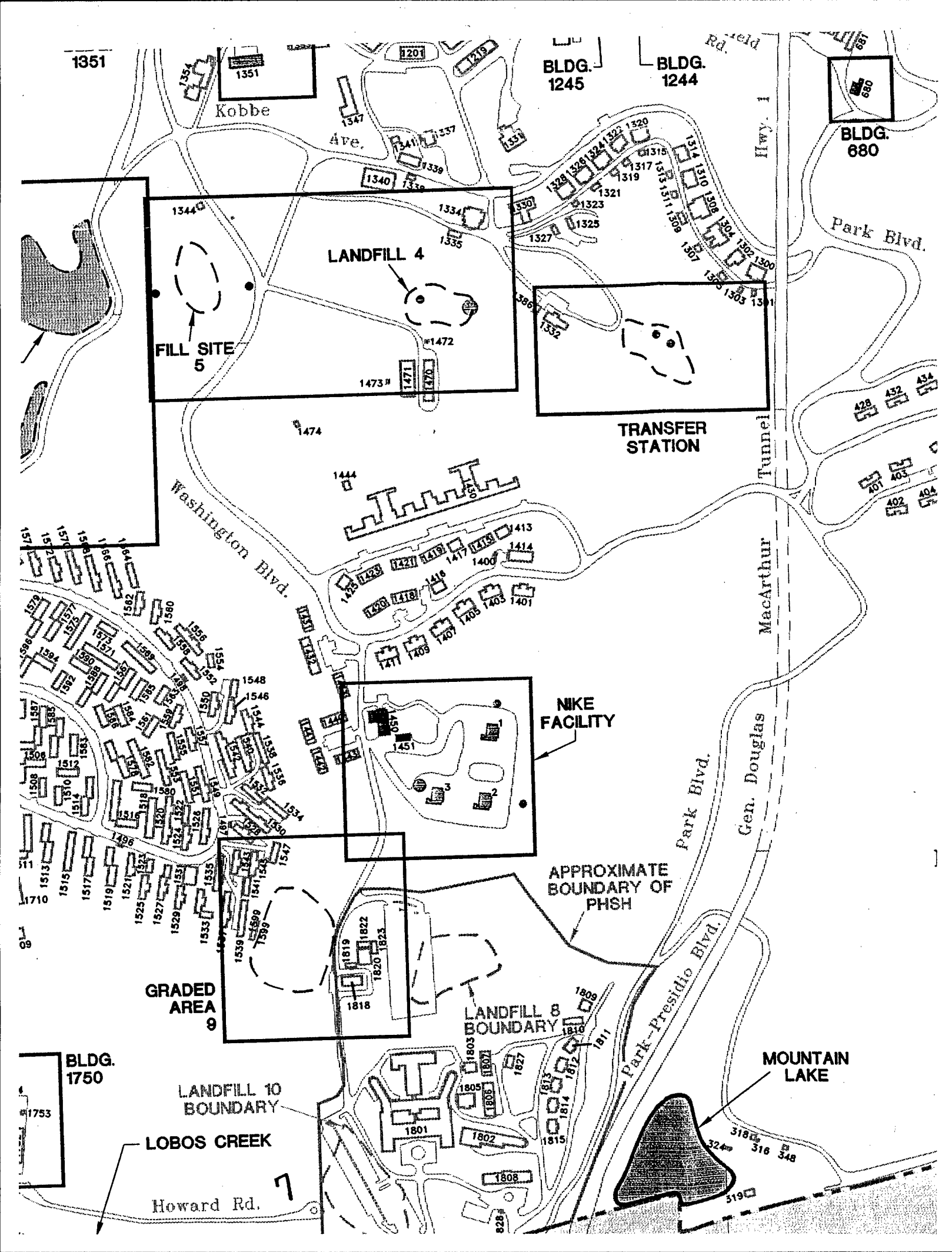
Site Map Outline

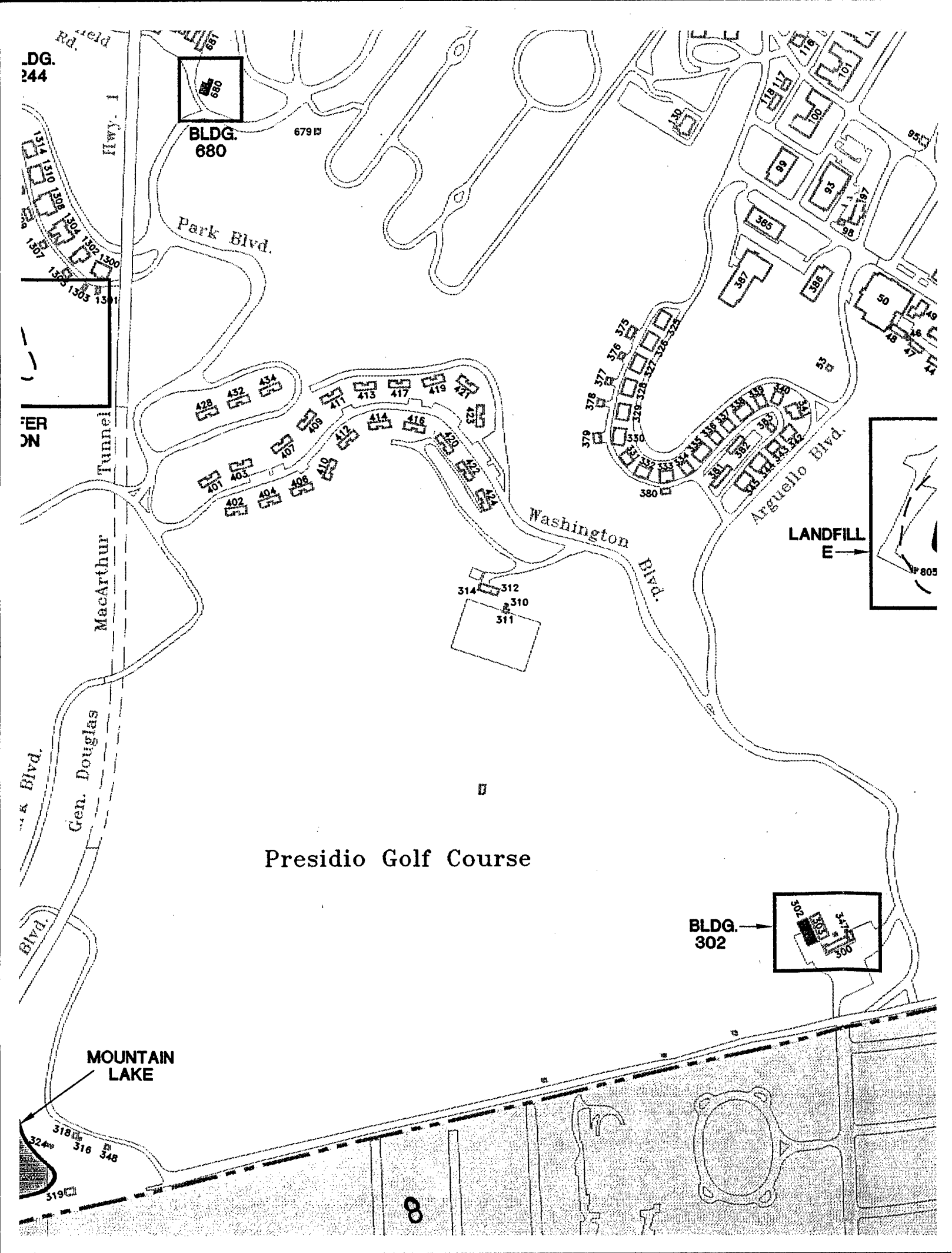
Vicinity of RI Sampling Excluding Groundwater Sampling

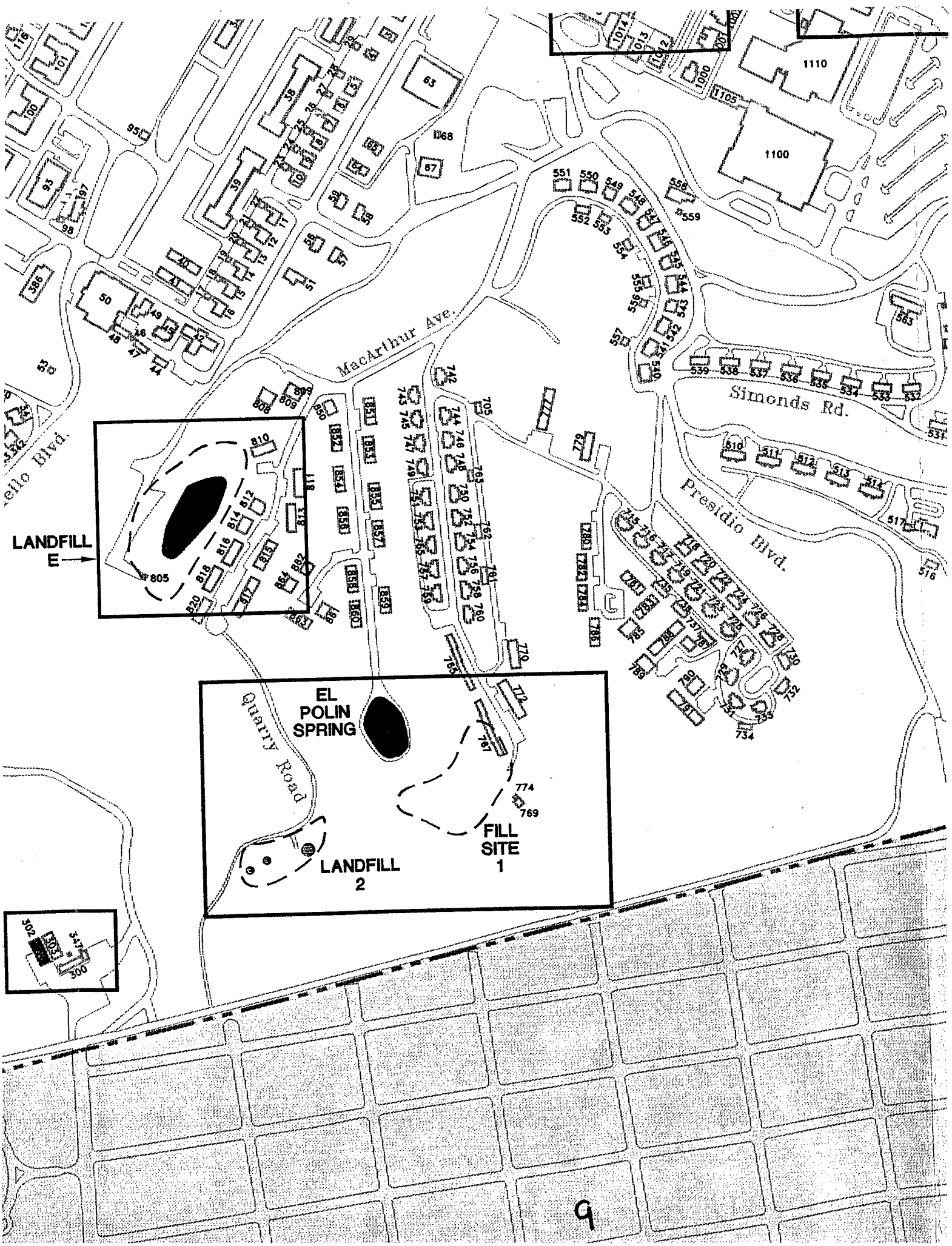
- Initial RI
- Supplemental RI
- Follow–On RI
- Initial and Supplemental RI
- Initial and Follow–On RI
- Supplemental and Follow–On RI
- Initial, Supplemental, and Follow–On RI

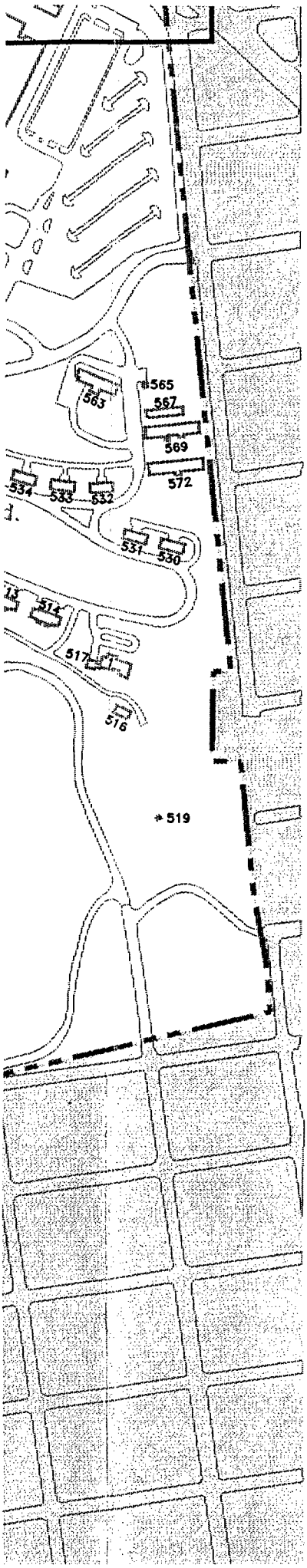
RI Groundwater Monitoring Well Sampling			
Study Area/Site	Initial	Supplemental	Follow–On
Nike Facility	–	I,S	I,S
Crissy Field + Study Area	I,S	I,S	S
Building 900s +	I,S	I,S	I,S


BAKER BEACH STUDY AREA
DISTURBED AREA 3
DISTURBED AREA 4
FILL SITE 5
GRADED AREA 9
BLDG. 1750
LANDFILL 10 BOUNDARY
LOBOS CREEK
Baker Beach
Lincoln Blvd.
Washington Blvd.
Howard Rd.
Kobbe
1351
1344
1147
1625
1622
1601
1600
1503
1710
1709
1708
1707
1706
1705
1750
1754
1753
1752
1794
1548
1546
1498
6


1351
BLDG. 1245
BLDG. 1244
BLDG. 680
Kobbe Ave.
Hwy. 1
Park Blvd.
LANDFILL 4
FILL SITE 5
TRANSFER STATION
Washington Blvd.
MacArthur Tunnel
NIKE FACILITY
APPROXIMATE BOUNDARY OF PHSH
Park Blvd.
Gen. Douglas
Park-Presidio Blvd.
GRADED AREA 9
LANDFILL 8 BOUNDARY
LANDFILL 10 BOUNDARY
LOBOS CREEK
MOUNTAIN LAKE
BLDG. 1750
Howard Rd.
7


BLDG.
680
679
Park Blvd.
Hwy. 1
Tunnel
MacArthur
Gen. Douglas
Washington Blvd.
Arguello Blvd.
LANDFILL
E
Presidio Golf Course
BLDG.
302
MOUNTAIN
LAKE
8


LANDFILL E
EL POLIN SPRING
Quarry Road
LANDFILL 2
FILL SITE 1
MacArthur Ave.
Simonds Rd.
Presidio Blvd.
1110
1105
1100
1000
1014
1013
1012
1001
805
769
774



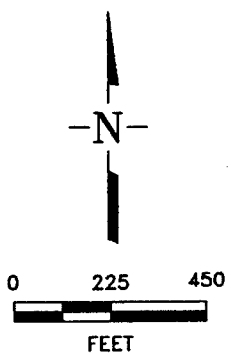
Nike Facility	–	I,S	I,S
Crissy Field + Study Area	I,S	I,S	S
Building 900s + Series Study Area	I,S	I,S	I,S
DEH Study Area	–	I,S	S
Building 215	I,S	–	S
Building 231 +	I,S	–	–
Fill Site 1	I,S	I,S	I,S
Landfill 2	I,S,NG	S	I,S,NG
Transfer Station	–	–	NG
Landfill 4	NG	–	I,S,NG
Fill Site 5	NG	–	NG
Landfill E	NG	I,S	I,S
FPCGS	–	I,S	S
GGBHTD Study Area	–	I,S	–
Battery Howe/Wagner	–	I,S,NG	S

I = Installed Monitoring Well

S = Sampled Montioring Well

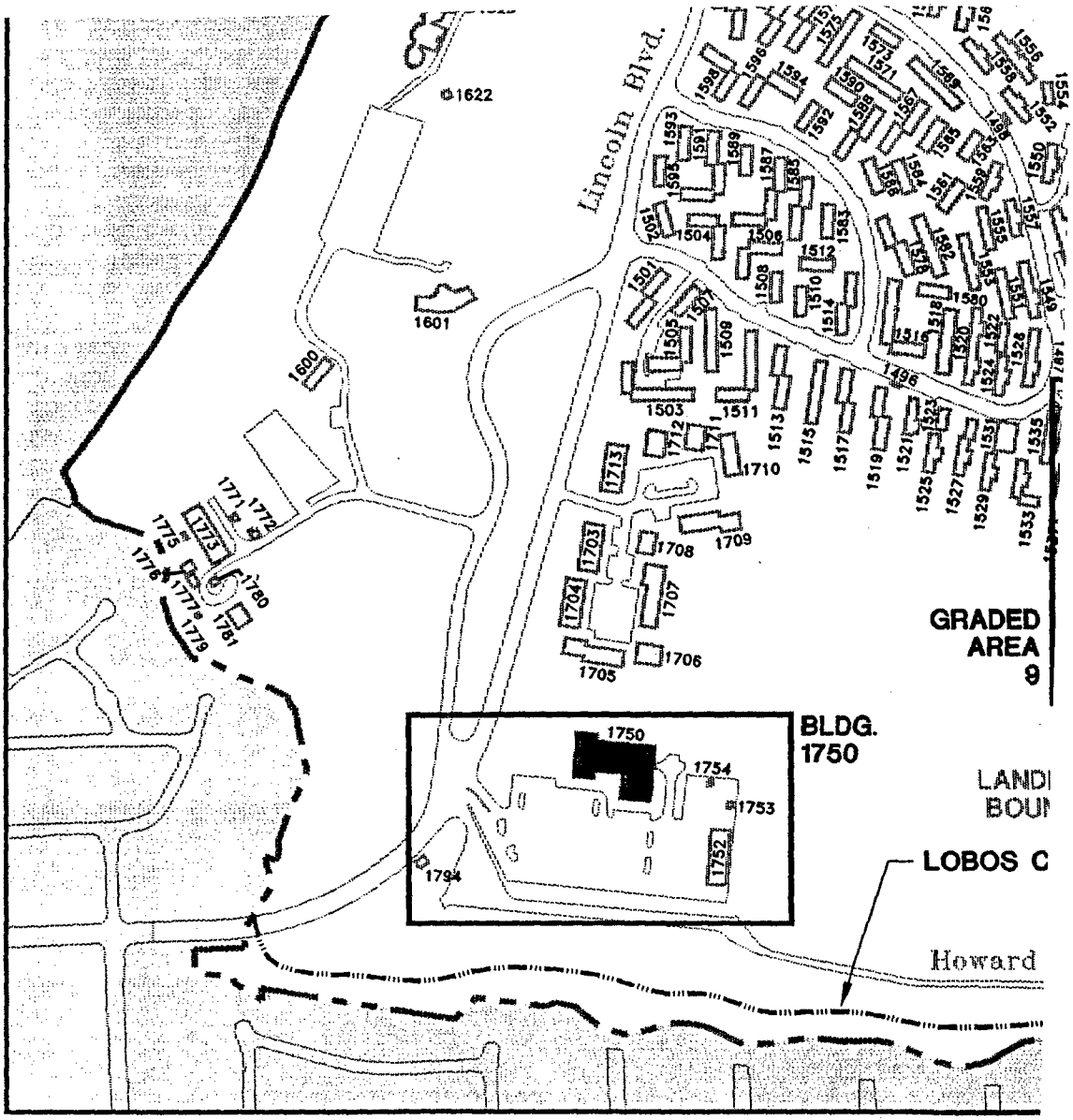
NG = No groundwater encountered during attempt to install monitoring well

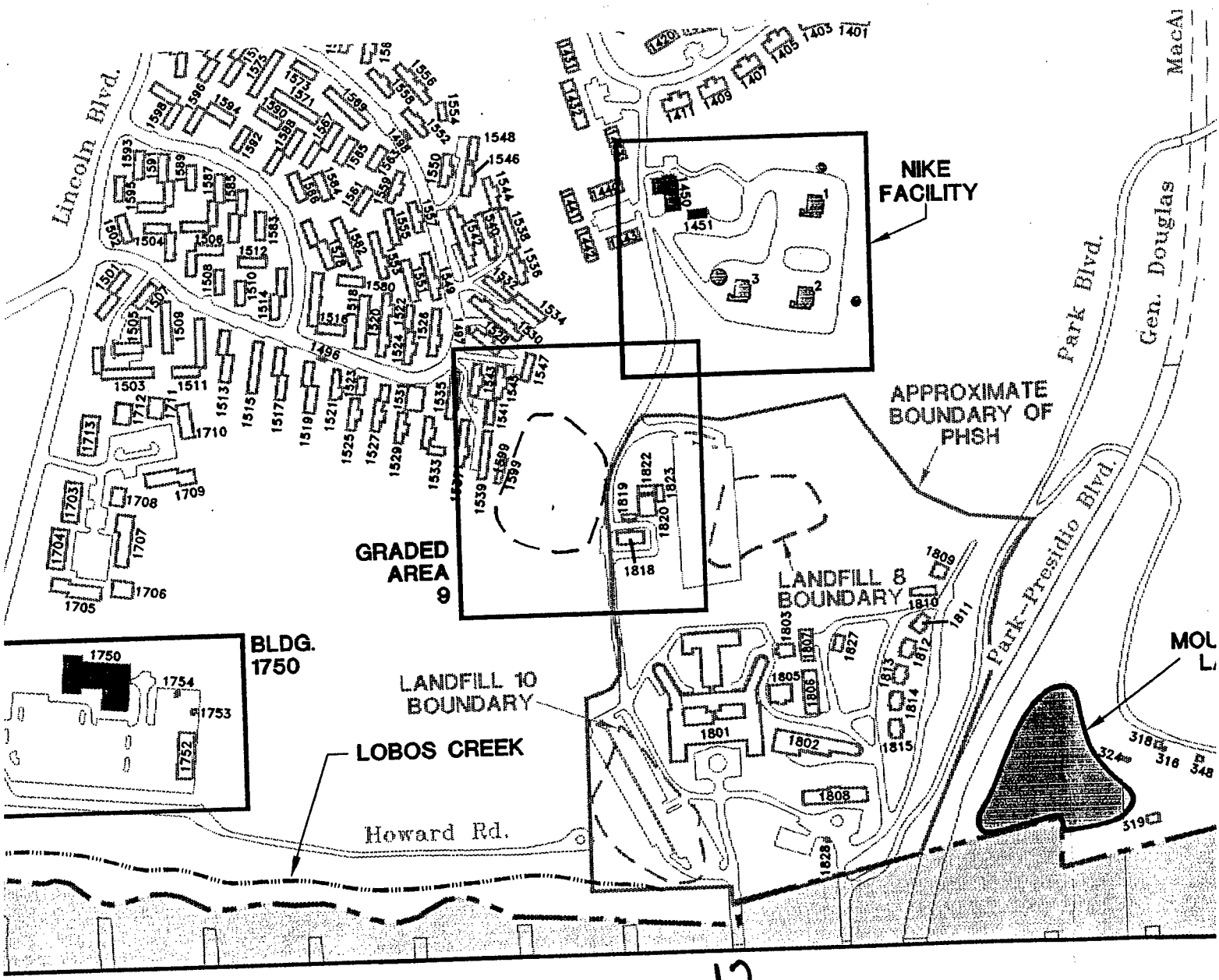
\+ = Selected wells are monitored quarterly under separate program

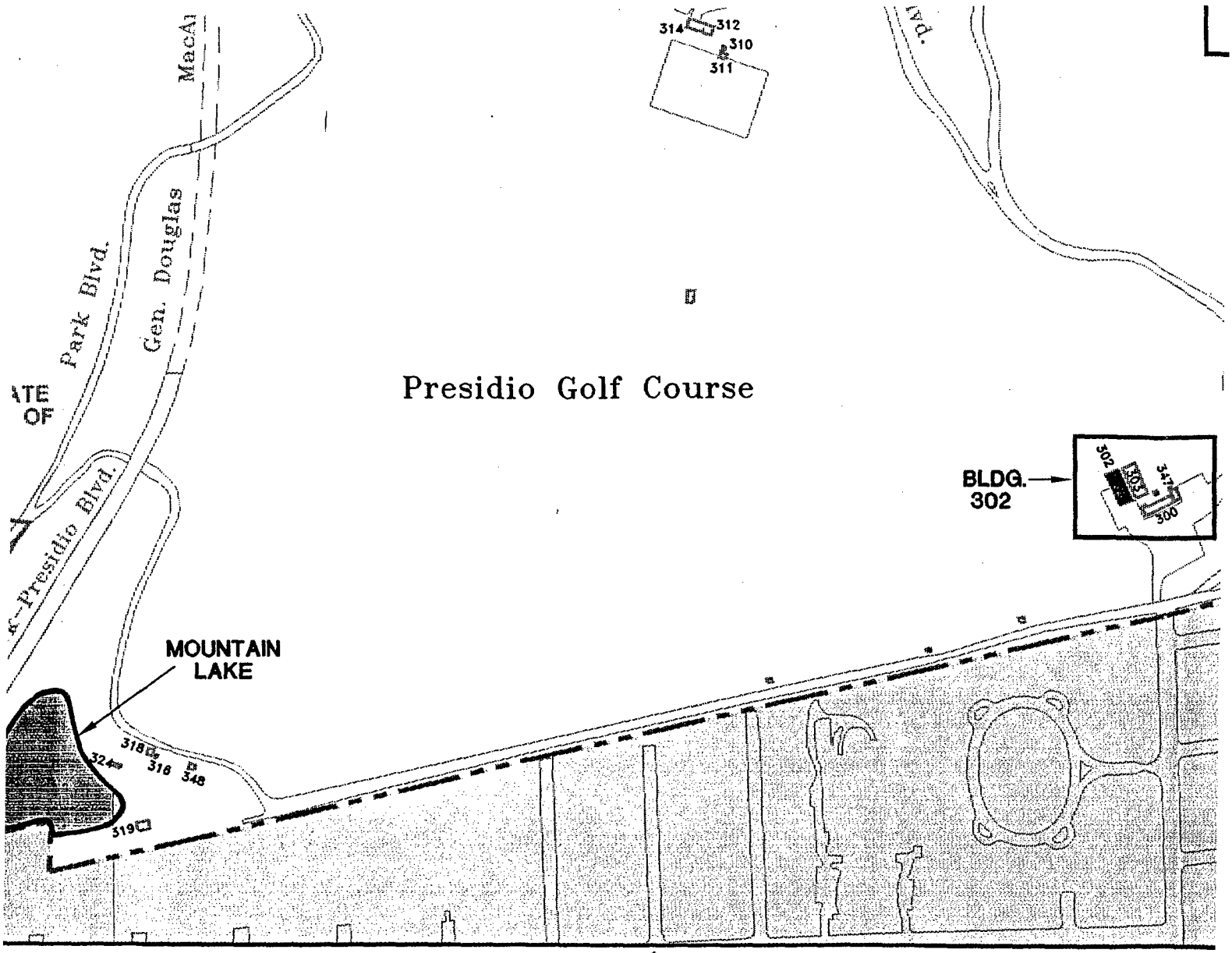


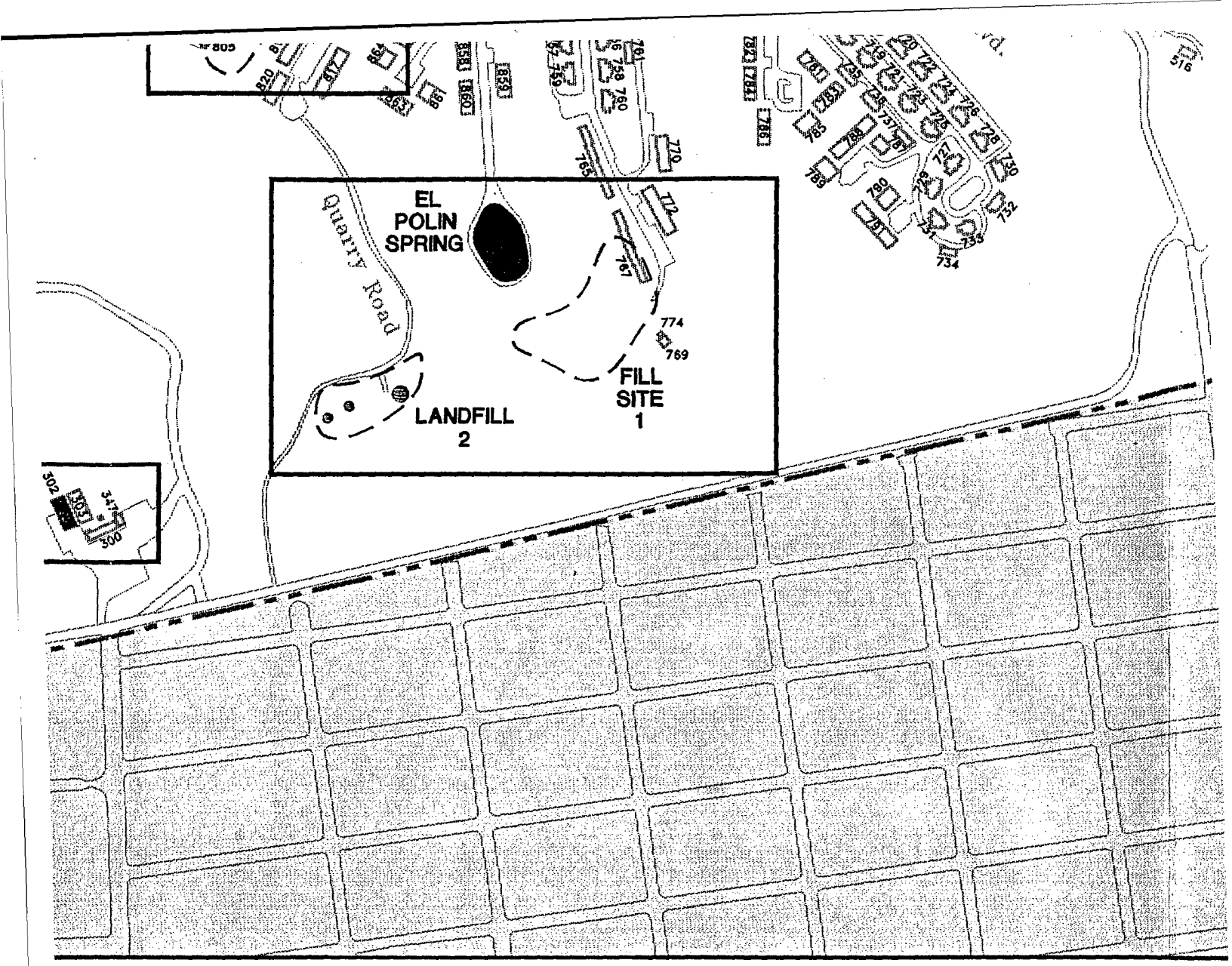
DAMES & MOORE

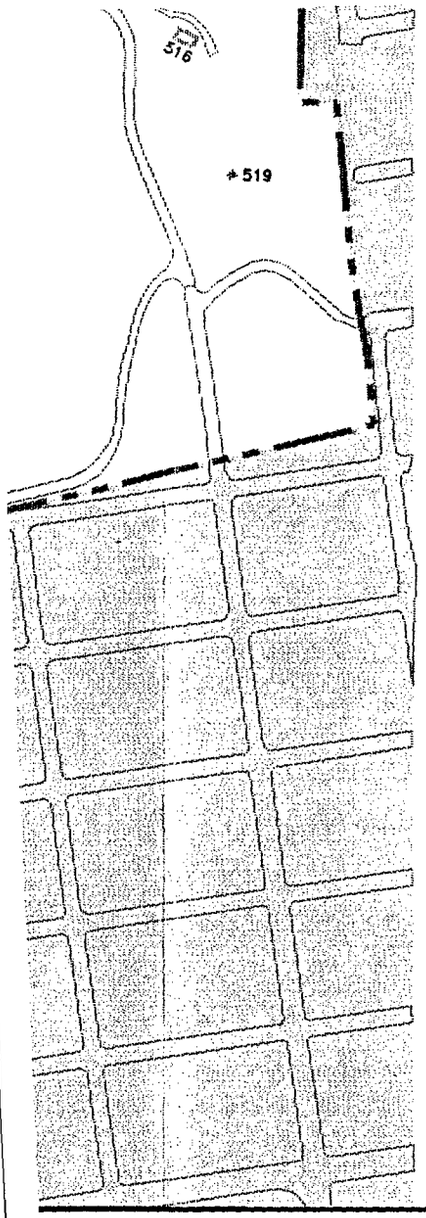
REMEDIAL INVESTIGATION STUDY AREA/SITE LOCATIONS AND SAMPLE HISTORY, PRESIDIO OF SAN FRANCISCO


Lincoln Blvd.
1622
1601
1600
1503
1511
1710
1708
1709
1707
1706
1705
1703
1704
1713
1712
1711
1750
1754
1753
1752
1794
GRADED
AREA
9
BLDG.
1750
LANDI
BOUI
LOBOS C
Howard


NIKE FACILITY
APPROXIMATE BOUNDARY OF PHSH
GRADED AREA 9
LANDFILL 8 BOUNDARY
LANDFILL 10 BOUNDARY
BLDG. 1750
LOBOS CREEK
Howard Rd.
Lincoln Blvd.
Park Blvd.
Park-Presidio Blvd.
Gen. Douglas
MacA


MacArthur
Park Blvd.
Gen. Douglas
Presidio Blvd.
Presidio Golf Course
MOUNTAIN LAKE
BLDG. 302
314
312
310
311
318
324
348
319

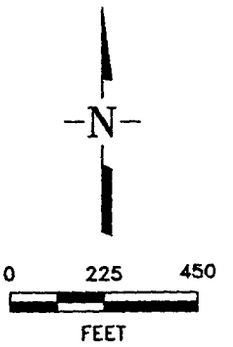

EL
POLIN
SPRING
Quarry Road
LANDFILL
2
FILL
SITE
1
774
769
767
765
779
772
758
760
759
858
860
820
805
786
730
732
734
302
303
300



S = Sampled Montioring Well

NG = No groundwater encountered during attempt to install monitoring well

\+ = Selected wells are monitored quarterly under separate program



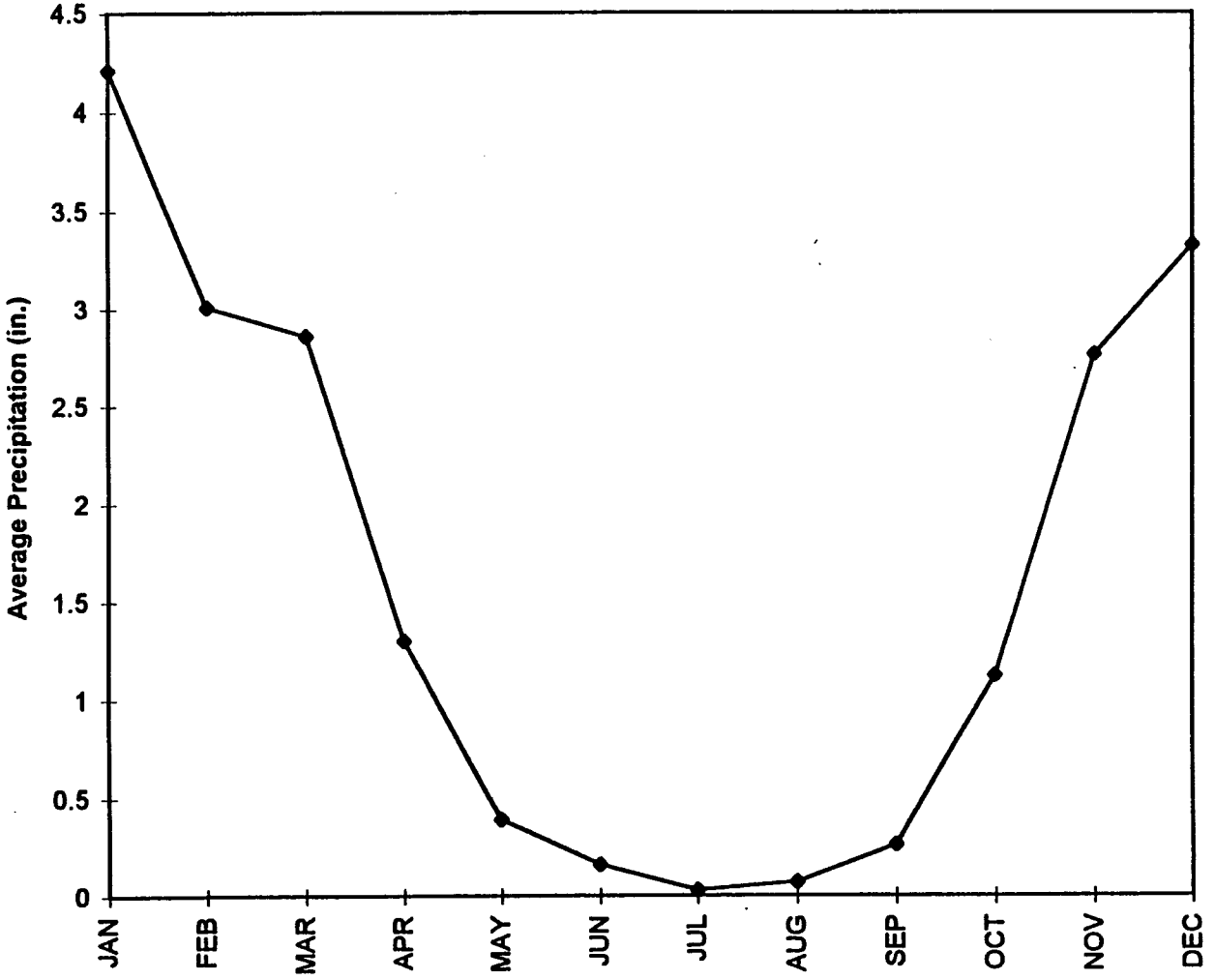
DAMES & MOORE

REMEDIAL INVESTIGATION
STUDY AREA/SITE LOCATIONS
AND SAMPLE HISTORY,
PRESIDIO OF SAN FRANCISCO

PSF25063\DV1

Date: January 1997 | Figure 1.2-1

(Based on Data From Table 2.3-1)

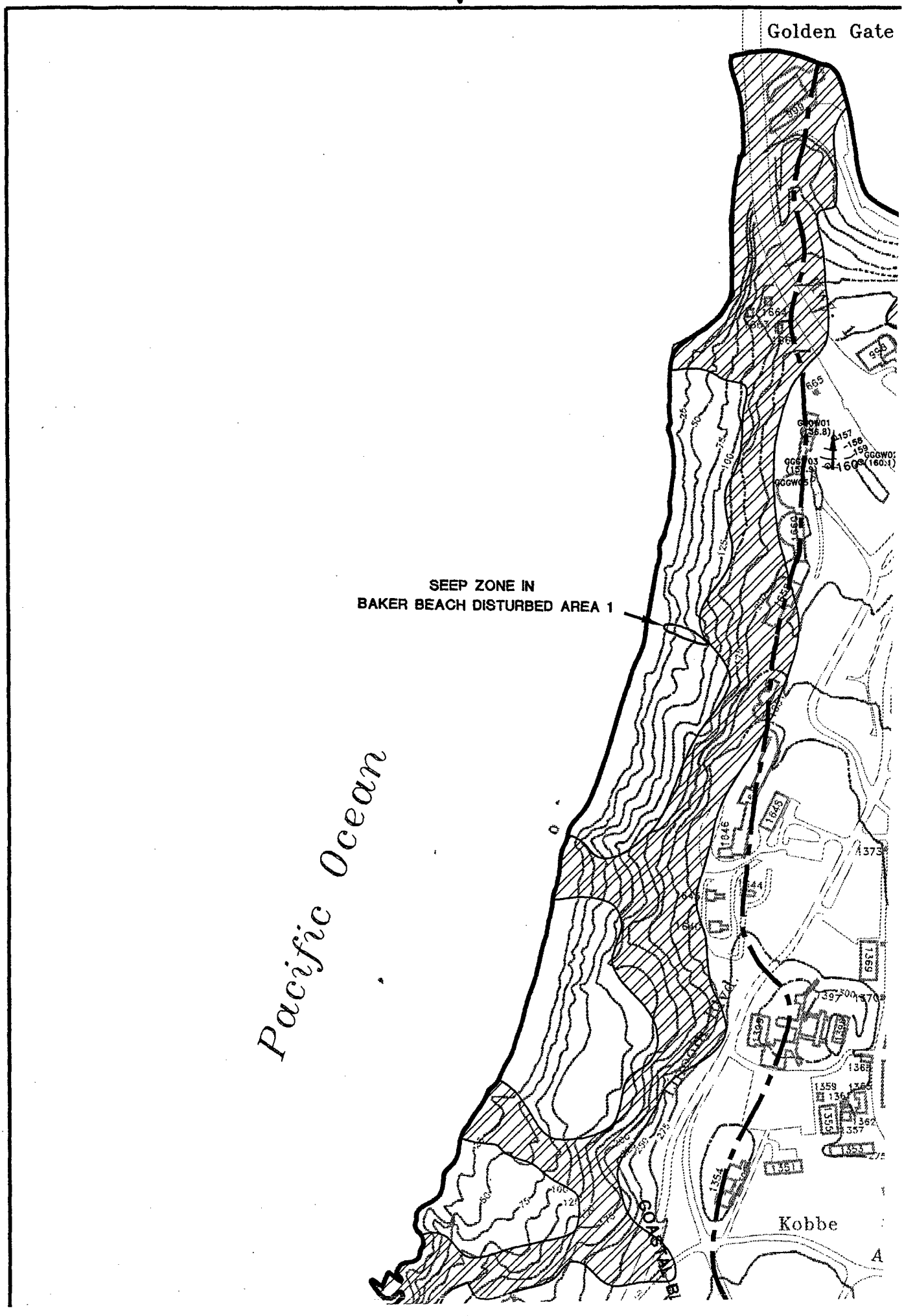


DAMES & MOORE

AVERAGE TOTAL MONTHLY PRECIPITATION FOR 1951-1994 SAN FRANCISCO, CALIFORNIA

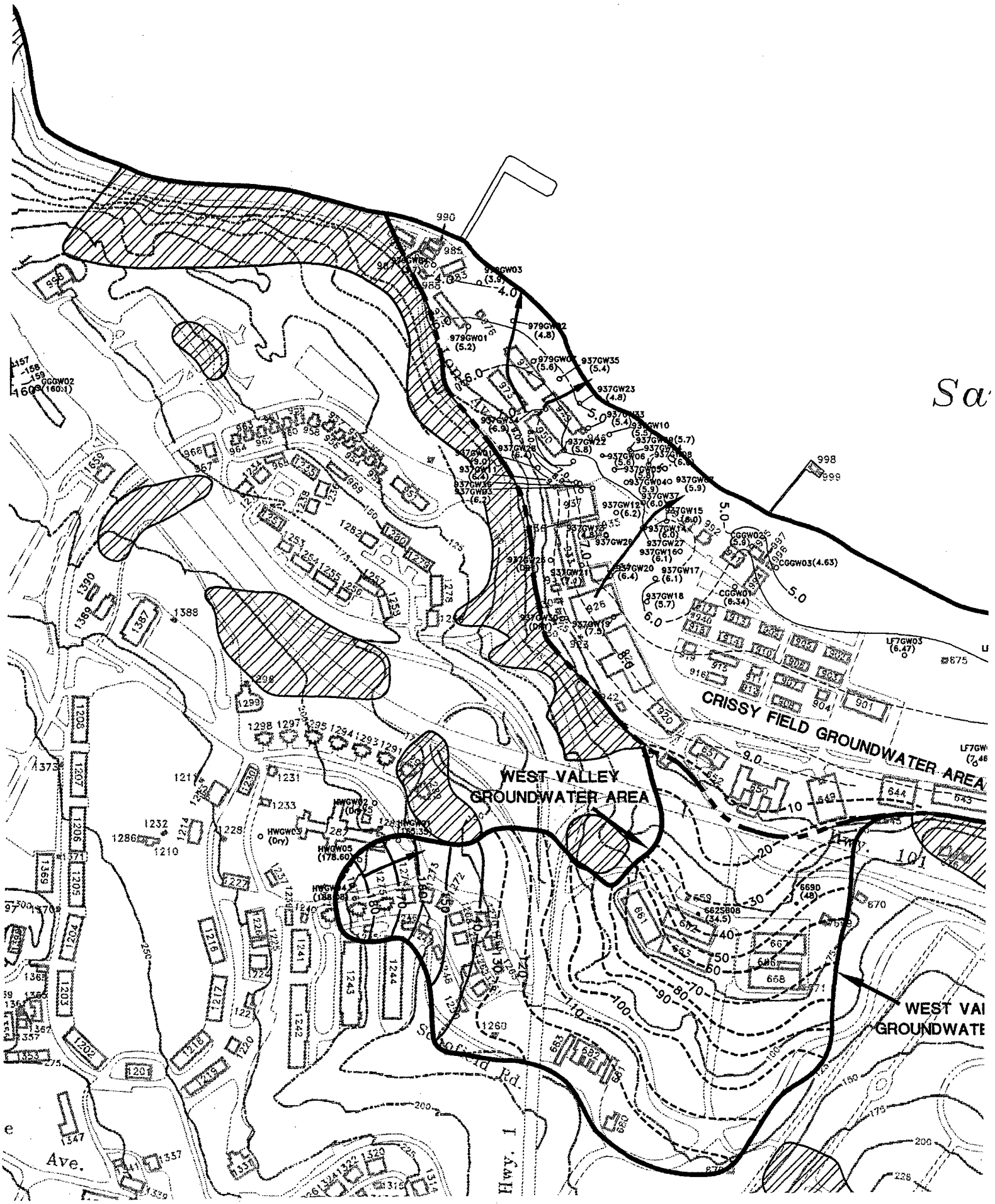
PSF25161/DV2

Date: January 1997 | Figure 2.3-1

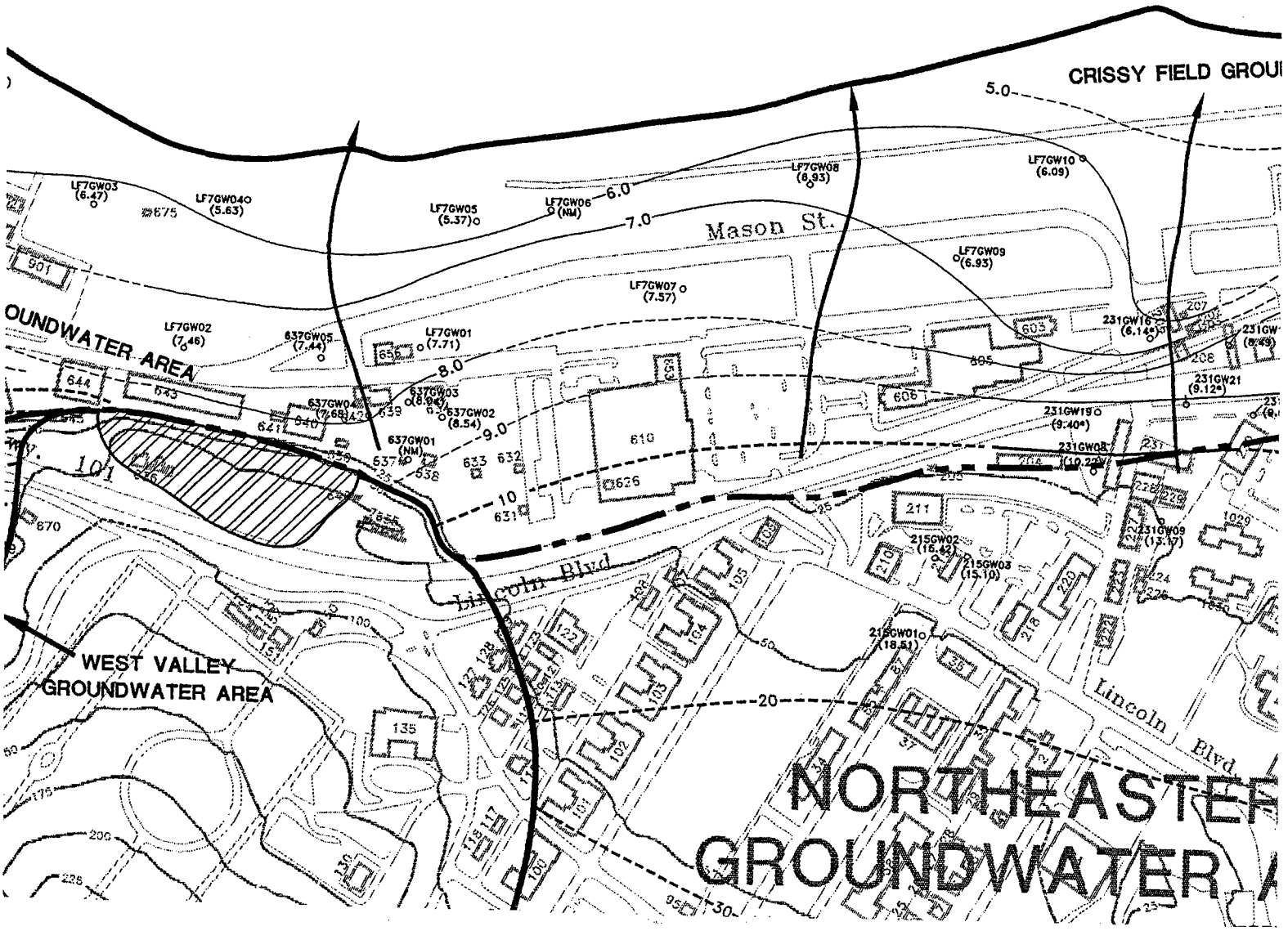

Golden Gate
SEEP ZONE IN
BAKER BEACH DISTURBED AREA 1
Pacific Ocean
Kobbe

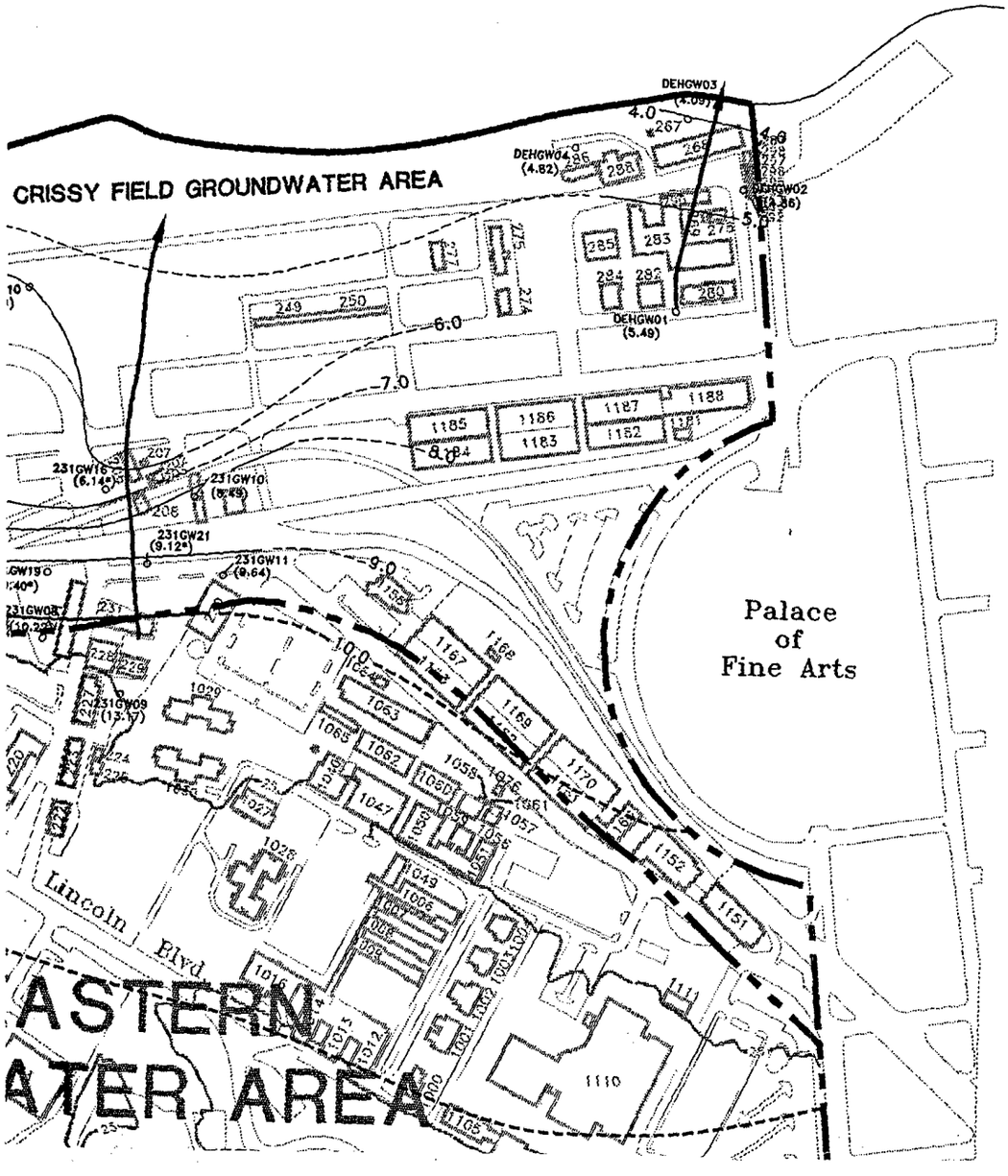
Gate Bridge

2



San Francisco Bay





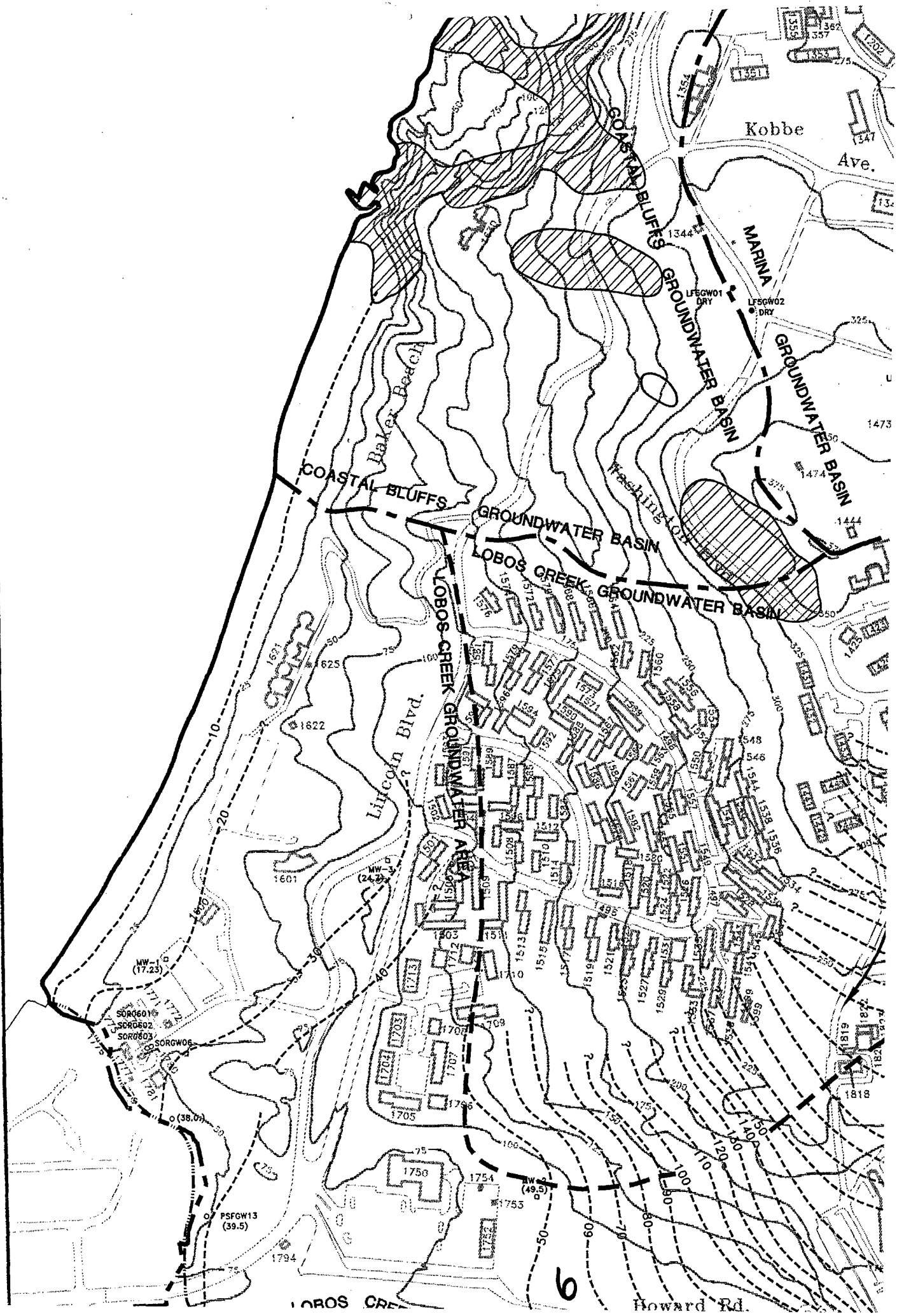
- ○ MONITORING WE
- ● SOIL BORING
- (4.09) POTENTROMETRI GROUNDWATER (NM): NOT MEA
- (9.40*) WATER LEVEL D THEREFORE, EQ ADJUSTING WAT FLUCTUATIONS (
- 24.7 □ MONITORING WEI BY NOLTE & AS
- (47.37) △ MONITORING WEI FOR WETLANDS
- GENERAL GROUN
- ESTIMATED LIMIT UNCONSOLIDATEC
- GROUNDWATER B
- CRISSY FIELD GR
- BOUNDARY OF LC CALIFORNIA REGI ORDER NO. 96-C
- AREA OF BEDROC
- 60 POTENTIOMETRIC GROUNDWATER (D CONTOUR INTERV
- 5.0 POTENTIOMETRIC GROUNDWATER IN (DASHED WHERE
- 200 TOPOGRAPHIC CO

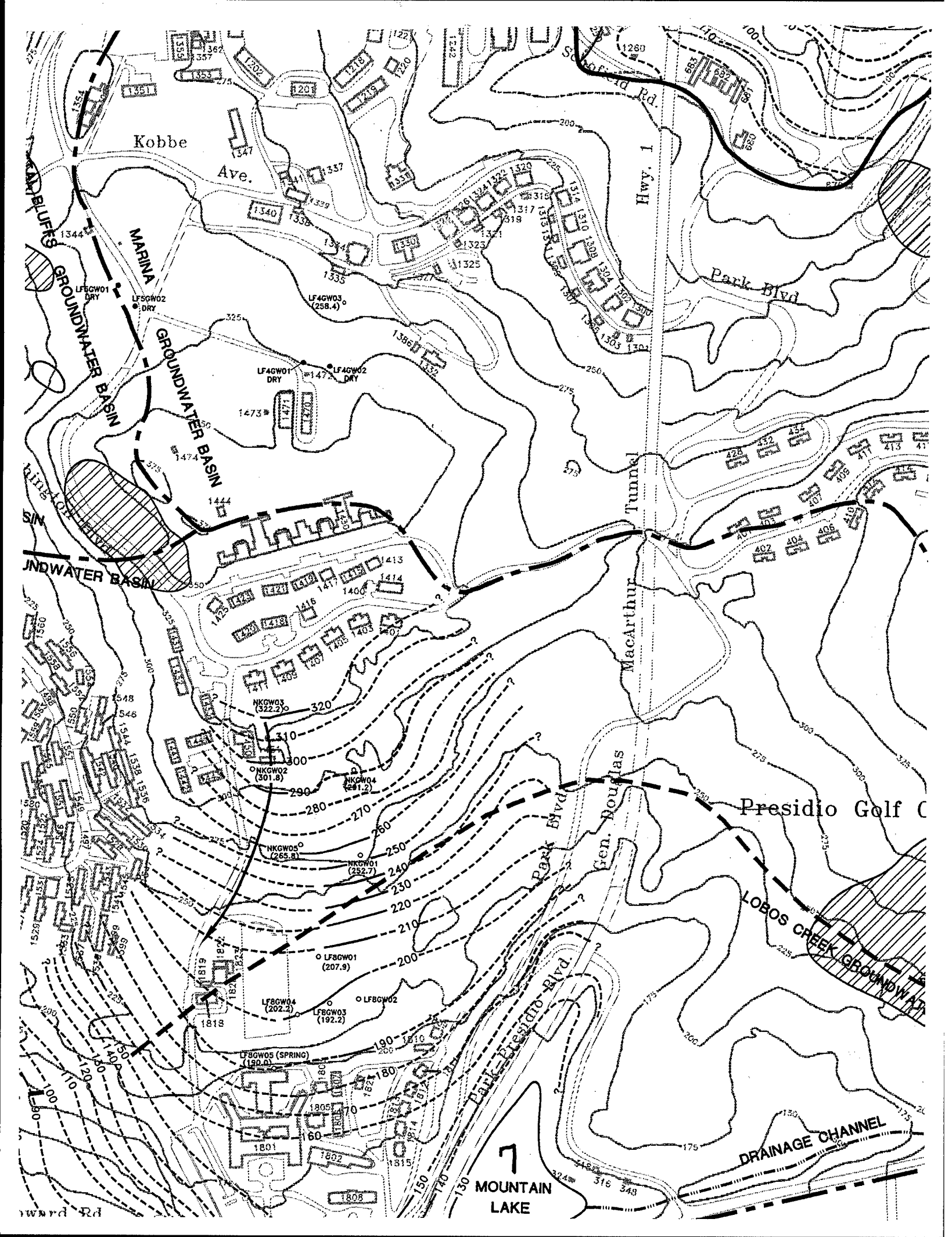
ALL ELEVATIONS I

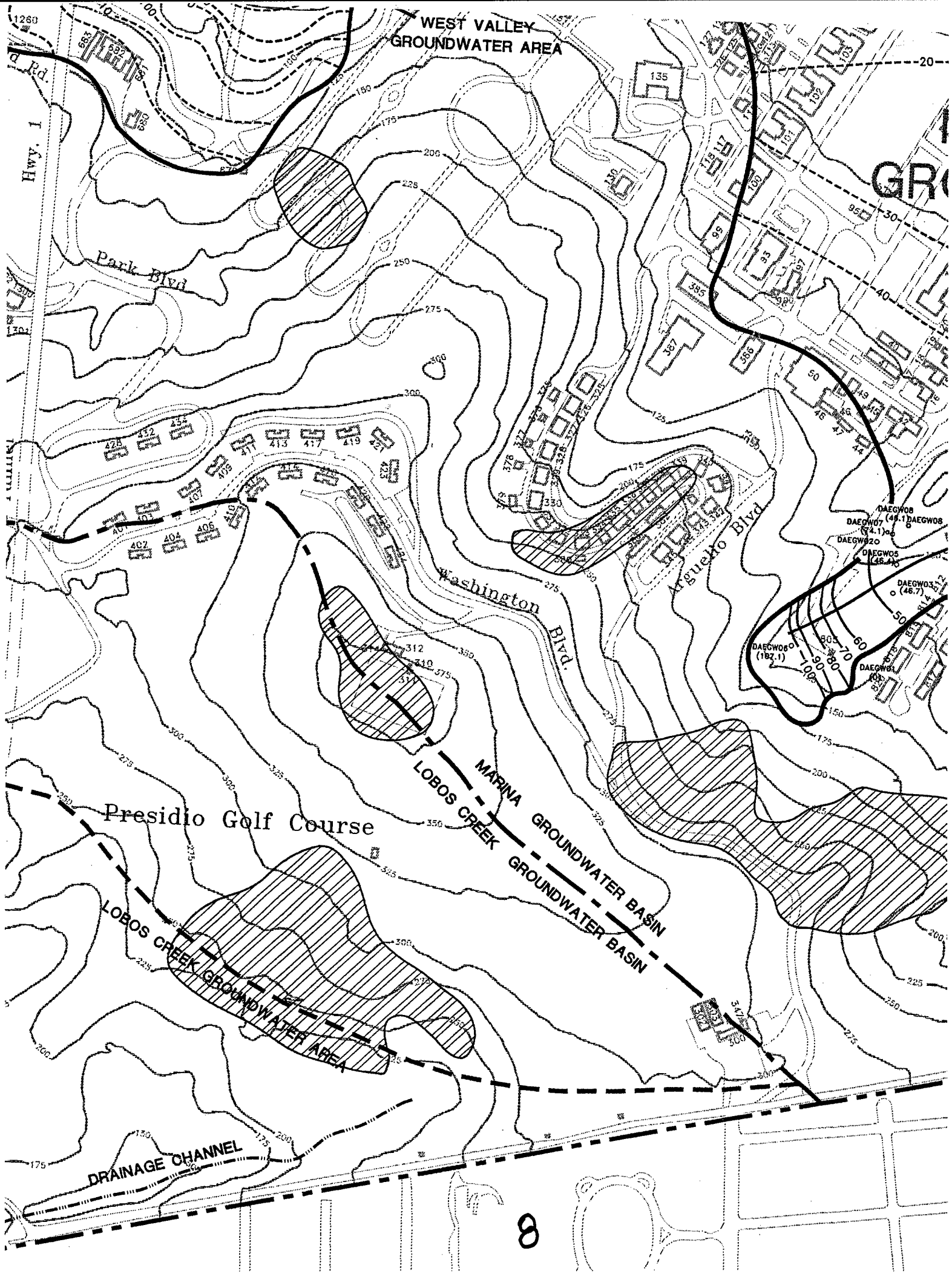
EXPLANATION

○	MONITORING WELL
●	SOIL BORING
(4.09)	POTENTROMETRIC SURFACE ELEVATION OF FIRST-ENCOUNTERED GROUNDWATER MEASURED IN MARCH OR APRIL 1995. (NM): NOT MEASURED. ESTIMATED IN SOIL BORINGS.
(9.40*)	WATER LEVEL DATA FOR LOW TIDE ON 3/16/95 WERE NOT AVAILABLE; THEREFORE, EQUIVALENT WATER LEVELS WERE ESTIMATED BY ADJUSTING WATER LEVELS MEASURED AT HIGH TIDE ON 4/14/95 BY FLUCTUATIONS OBSERVED IN ADJACENT WELLS.
24.7 □	MONITORING WELL AND WATER LEVEL MEASURED IN DECEMBER 1991 BY NOLTE & ASSOCIATES (1993)
(47.37) △	MONITORING WELL AND WATER LEVEL MEASURED MARCH 9, 1994 FOR WETLANDS FEASIBILITY STUDY, DAMES & MOORE (1995b)
——→	GENERAL GROUNDWATER FLOW DIRECTION
———	ESTIMATED LIMIT OF GROUNDWATER IN UNCONSOLIDATED MATERIALS
— — —	GROUNDWATER BASIN DIVIDE
—·—·—	CRISSY FIELD GROUNDWATER AREA BOUNDARY
— — —	BOUNDARY OF LOBOS CREEK GROUNDWATER AREA, TAKEN FROM CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD ORDER NO. 96-070. SEE TEXT DISCUSSION IN SECTION 2.3.5.
▨	AREA OF BEDROCK OUTCROP
60	POTENTIOMETRIC SURFACE CONTOUR OF FIRST-ENCOUNTERED GROUNDWATER (DASHED WHERE INFERRED). CONTOUR INTERVAL: 10 FEET
5.0	POTENTIOMETRIC SURFACE CONTOUR OF FIRST-ENCOUNTERED GROUNDWATER IN CRISSY FIELD GROUNDWATER AREA (DASHED WHERE INFERRED). CONTOUR INTERVAL: 1 FEET
200	TOPOGRAPHIC CONTOUR. CONTOUR INTERVAL: 25 FEET

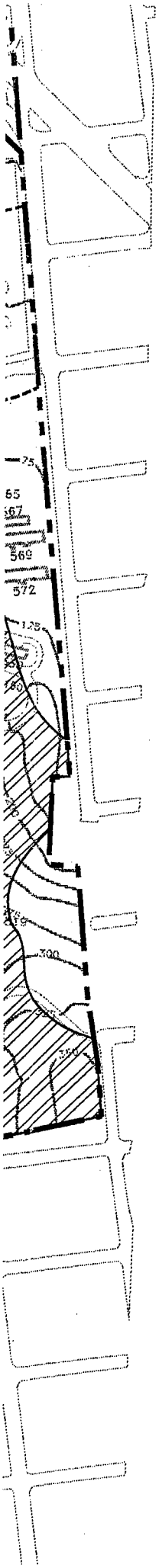
ALL ELEVATIONS IN FEET-PRESIDIO LOWER LOW WATER


COASTAL BLUFFS GROUNDWATER BASIN
MARINA GROUNDWATER BASIN
COASTAL BLUFFS GROUNDWATER BASIN
LOBOS CREEK GROUNDWATER BASIN
LOBOS CREEK GROUNDWATER AREA
Kobbe Ave.
Lincoln Blvd.
Howard Rd.
Reservation Rd.
LF5GW01 DRY
LF5GW02 DRY
MW-1 (17.23)
MW-3 (24.0)
MW-5 (49.5)
SORG601
SORG602
SORG603
SORGW06
PSFGW13 (39.5)
(38.0)


Kobbe
Ave.
Lincoln Blvd.
Park Blvd
Hwy 1
Tunnel
MacArthur
Gen. Douglas
Park Presidio Blvd.
Presidio Golf C
MARINA
BLUFFS
GROUNDWATER BASIN
GROUNDWATER BASIN
GROUNDWATER BASIN
LOBOS CREEK GROUNDWATER
DRAINAGE CHANNEL
MOUNTAIN LAKE
LF5GW01 DRY
LF5GW02 DRY
LF4GW03 (258.4)
LF4GW01 DRY
LF4GW02 DRY
NKGW03 (322.2)
NKGW02 (301.8)
NKGW04 (291.2)
NKGW05 (265.8)
NKGW01 (252.7)
LF8GW01 (207.9)
LF8GW04 (202.2)
LF8GW03 (192.2)
LF8GW02
LF8GW05 (SPRING) (190.0)

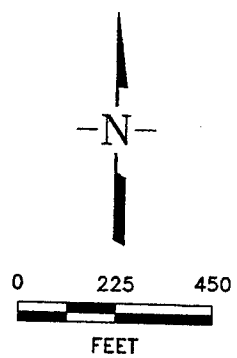

WEST VALLEY
GROUNDWATER AREA
Hwy. 1
Park Blvd
Washington Blvd
Arguello Blvd
Presidio Golf Course
MARINA GROUNDWATER BASIN
LOBOS CREEK GROUNDWATER BASIN
LOBOS CREEK GROUNDWATER AREA
DRAINAGE CHANNEL
DAEGW08
DAEGW07
DAEGW02
DAEGW05
DAEGW03
DAEGW06
DAEGW01

NORTHEASTERN
GROUNDWATER AREA
Lincoln Blvd.
MacArthur Ave.
Sinsands Rd.
El Polin Blvd.
EL POLIN SPRING
TH-4 (38.71)
TH-1 (54.54)
TH-2 (47.37)
TH-3 (46.75)
DAEGW08 (46.1)
DAEGW07 (74.1)
DAEGW02
DAEGW05 (45.4)
DAEGW04 (45.5)
DAEGW03 (46.7)
DAEGW01
LF1GW05 (70.3)
LF1GW02 (65.1)
LF2GW01 (98.6)
LF1GW06 (74.5)
LF2GW02 (101.1)
LF1GW01 (100.6)
LF1GW03 (100.8)
LF1GW04 (99.4)
LF2GW04 (159.4)
LF1GW07 (103.1)
1110
1100

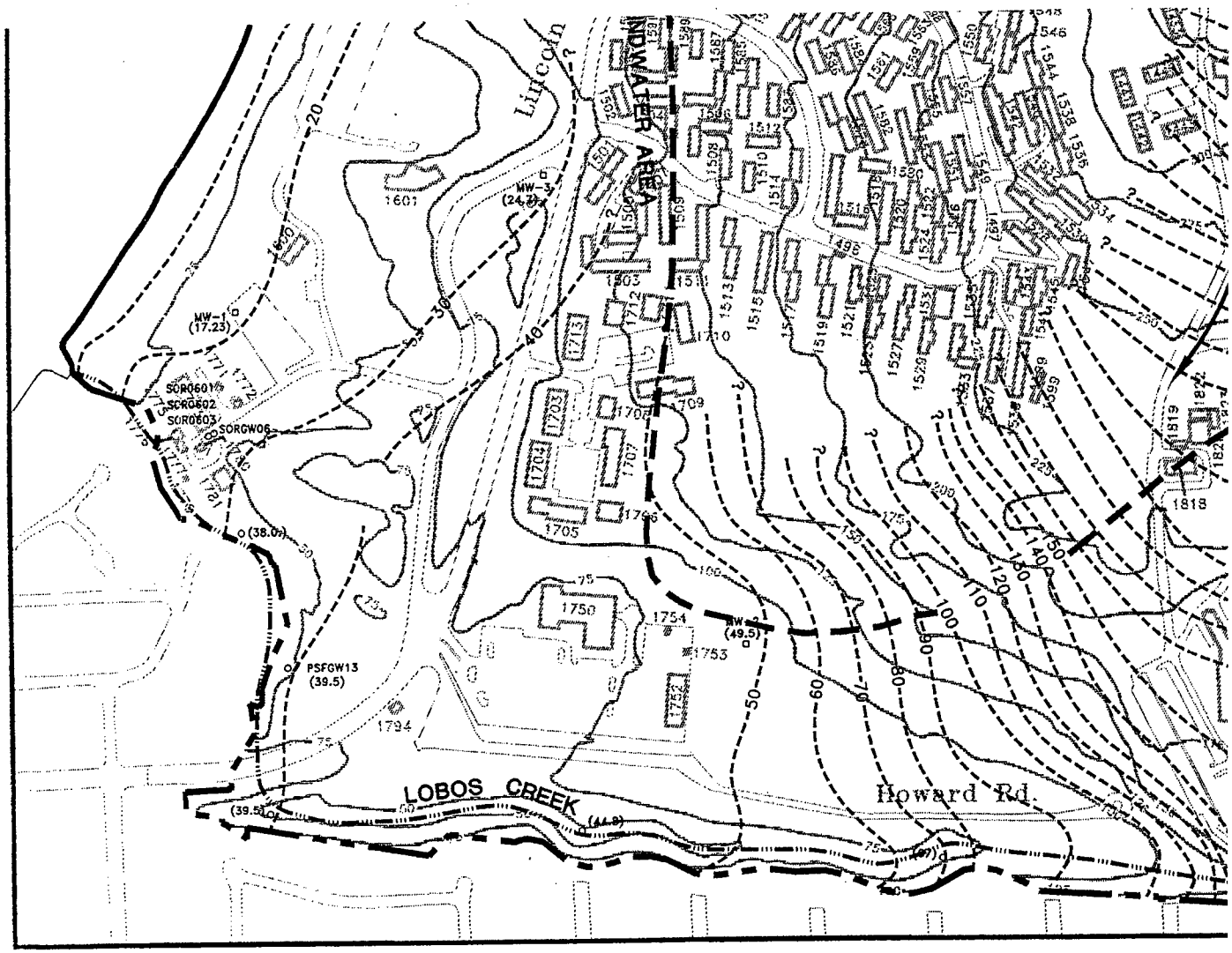


200 TOPOGRAPHIC CONTOUR. CONTOUR INTERVAL: 25 FEET

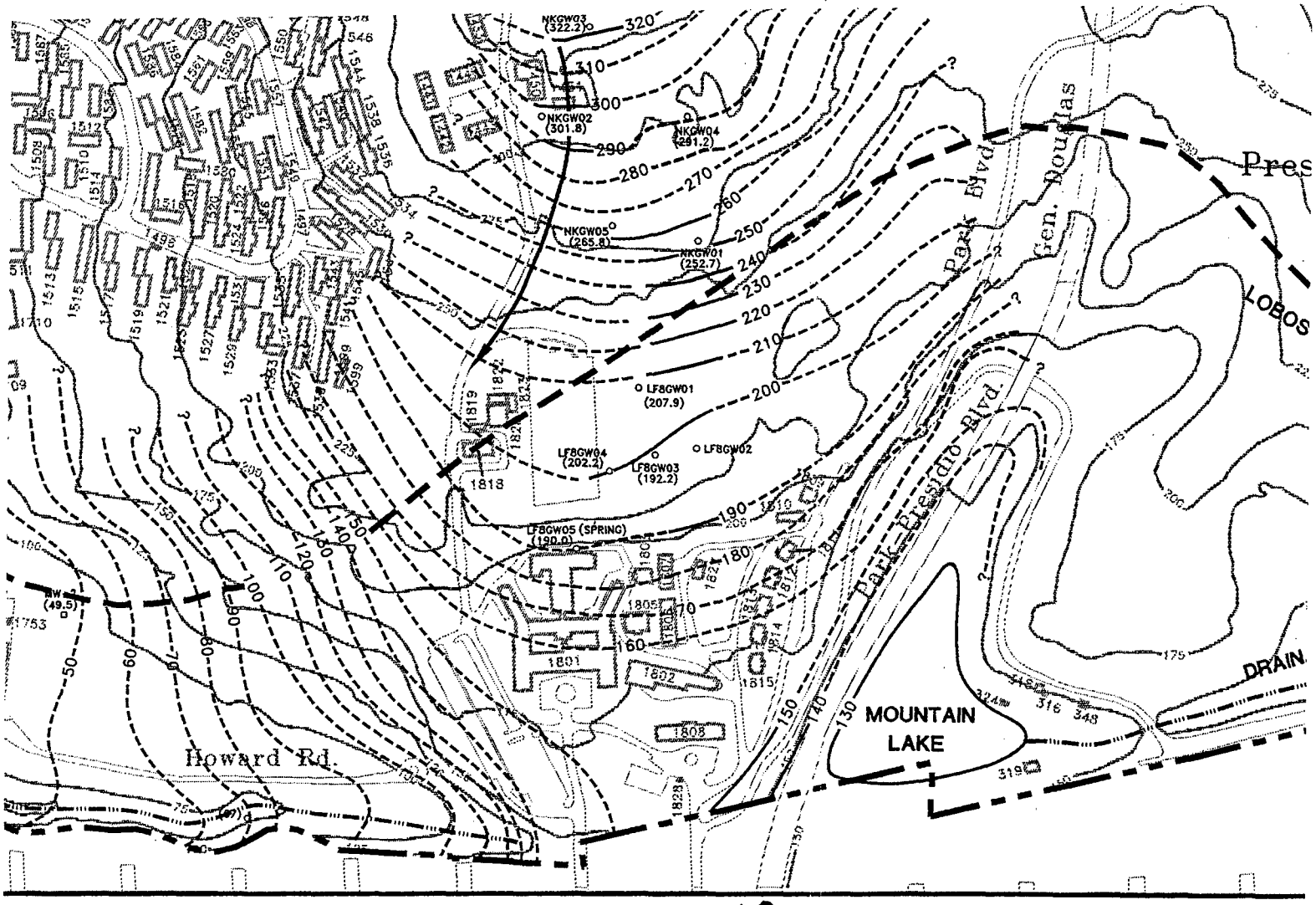
ALL ELEVATIONS IN FEET—PRESIDIO LOWER LOW WATER

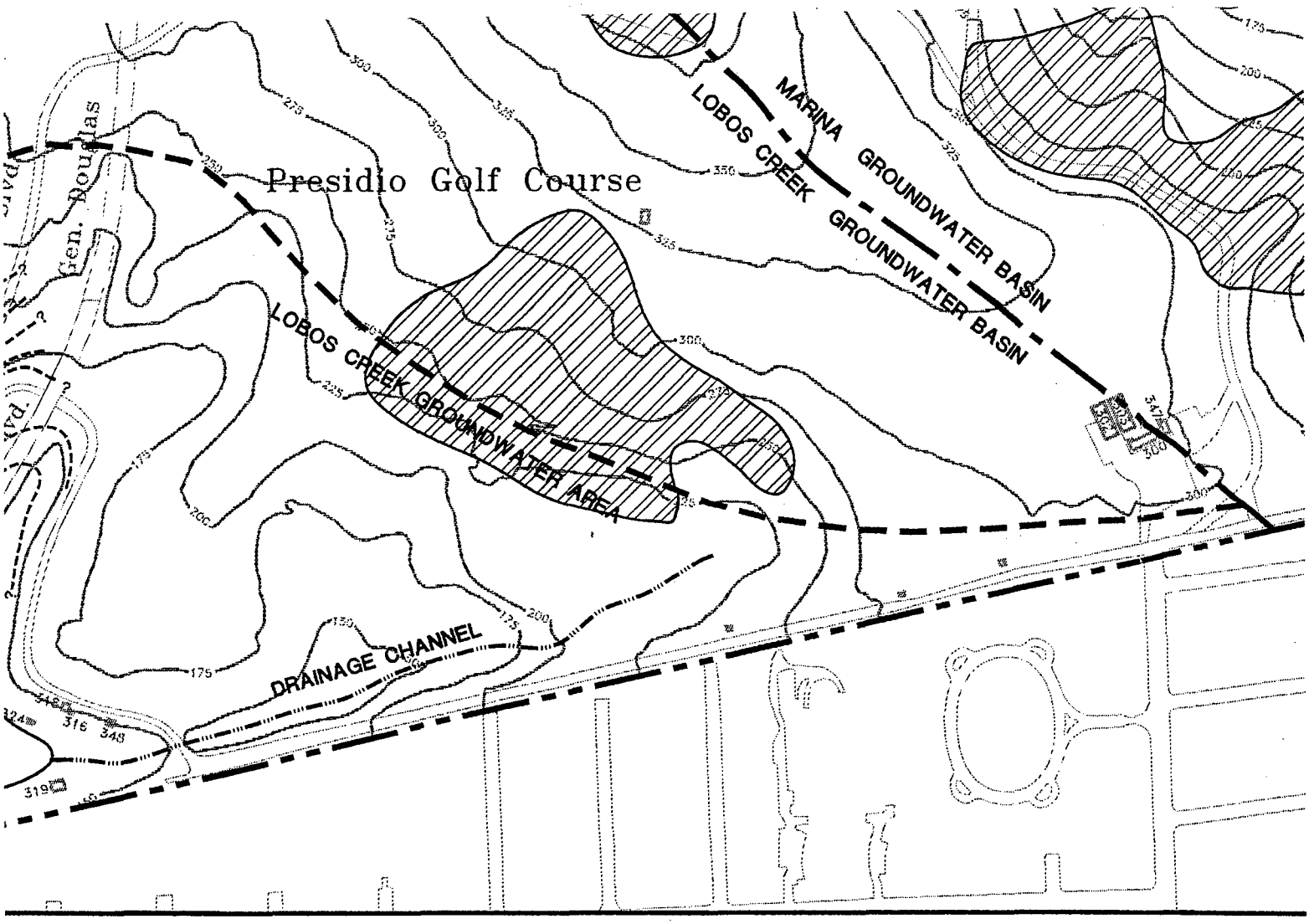


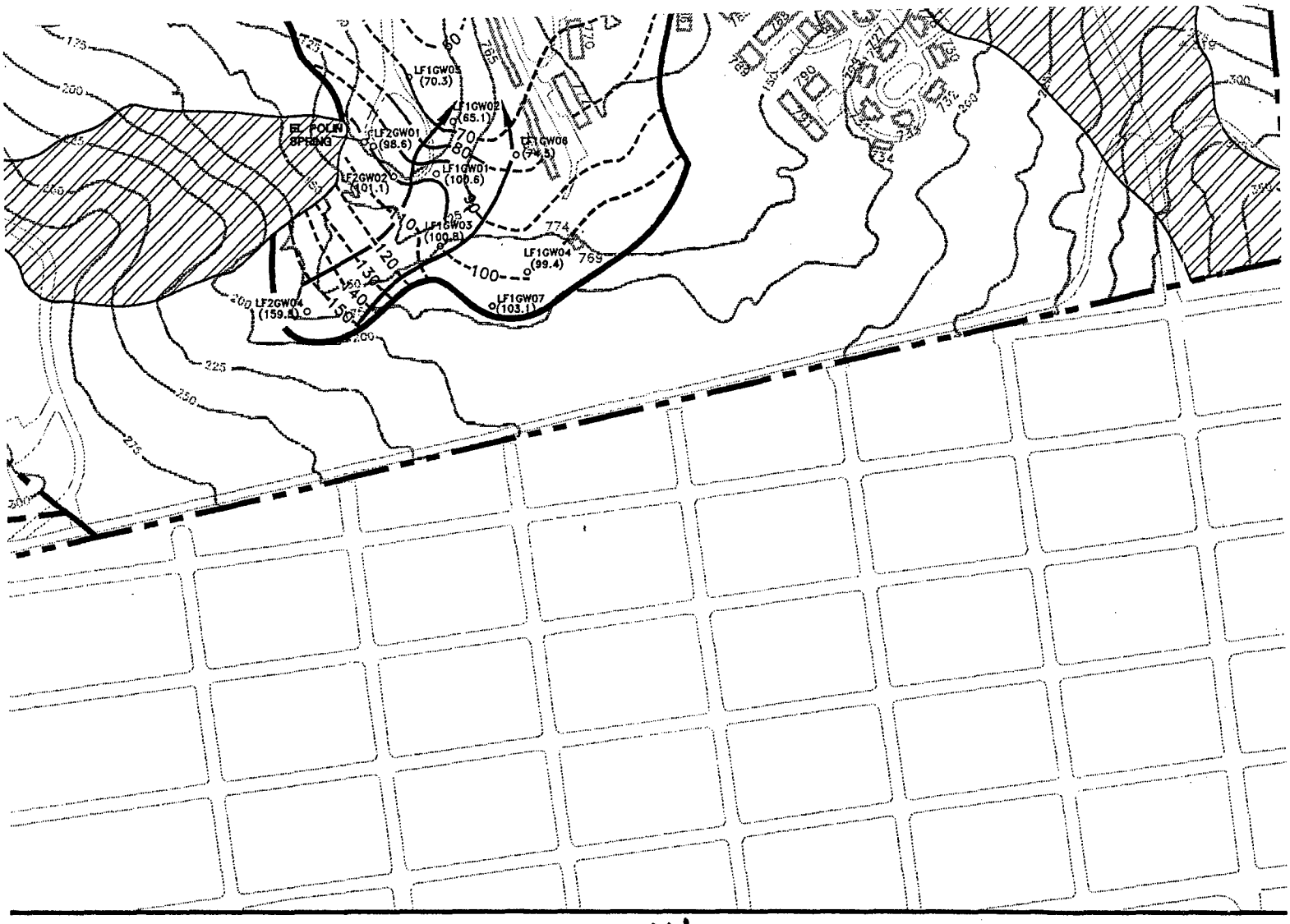
DAMES & MOORE

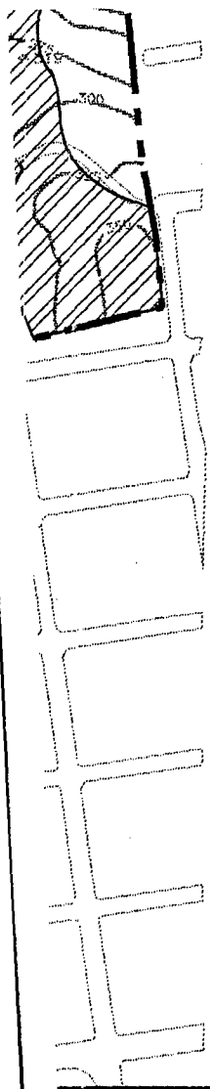

Lincoln
NDWATER AREA
MW-1 (17.23)
MW-3 (24.2)
SORG601
SORG602
SORG603
SORGW06
(38.0)
PSFGW13 (39.5)
MW-2 (49.5)
LOBOS CREEK
(39.5)
(44.8)
Howard Rd.
1601
1705
1750
1754
1753
1794
1818

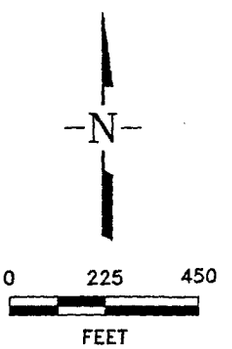
11


NKGW03 (322.2)
NKGW02 (301.8)
NKGW04 (291.2)
NKGW05 (265.8)
NKGW01 (252.7)
LF8GW01 (207.9)
LF8GW04 (202.2)
LF8GW03 (192.2)
LF8GW02
LF8GW05 (SPRING) (190.0)
NW-4 (49.5)
MOUNTAIN LAKE
Howard Rd.
Park Presidio Blvd
Gen. Douglas
Pres
LOBOS
DRAIN


Presidio Golf Course
MARINA GROUNDWATER BASIN
LOBOS CREEK GROUNDWATER BASIN
LOBOS CREEK GROUNDWATER AREA
DRAINAGE CHANNEL


LF1GW05
(70.3)
LF1GW02
(65.1)
LF2GW01
(98.6)
LF1GW06
(74.5)
LF1GW01
(100.6)
LF2GW02
(101.1)
LF1GW03
(100.8)
LF1GW04
(99.4)
LF2GW04
(159.5)
LF1GW07
(103.1)
774
769



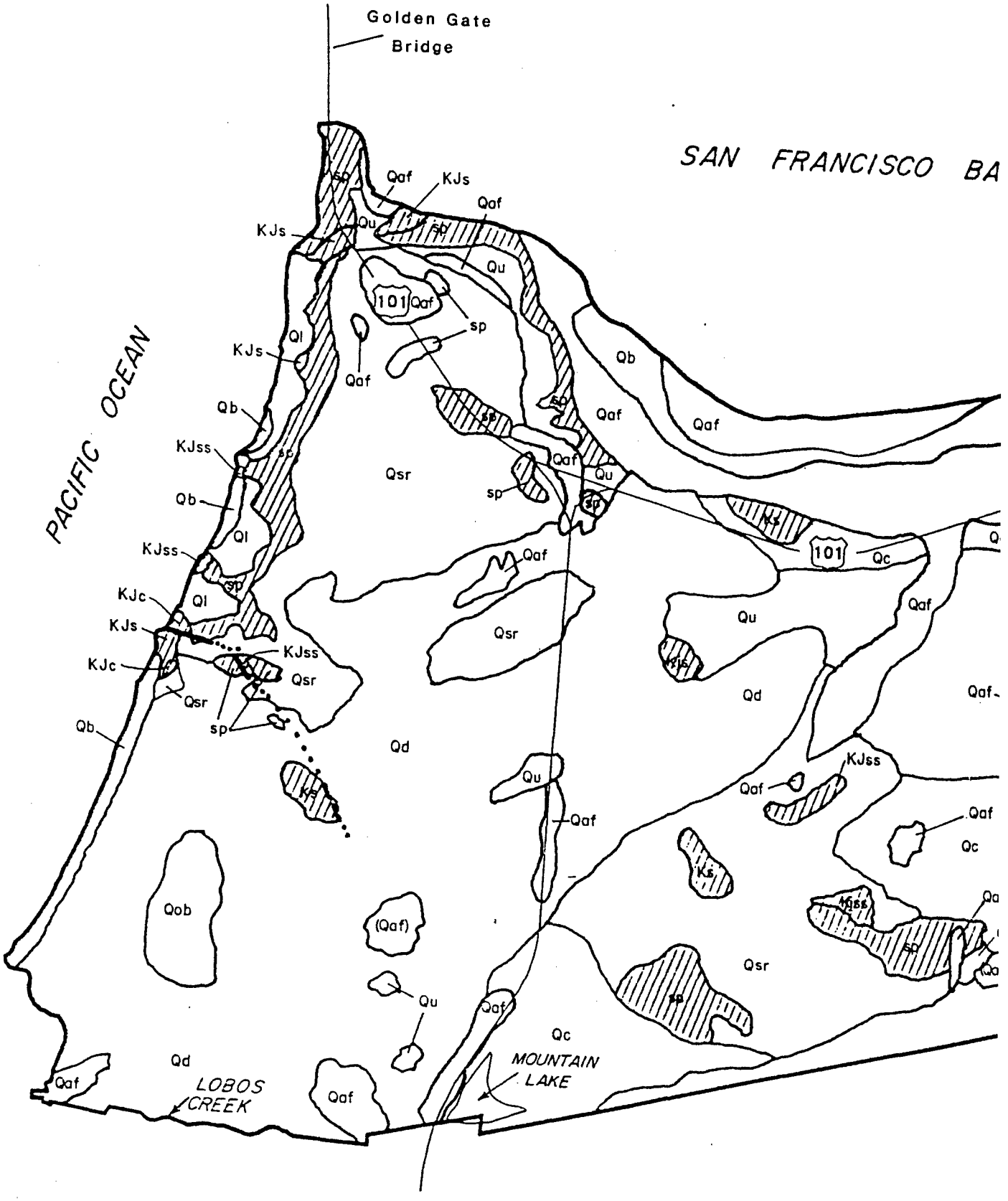


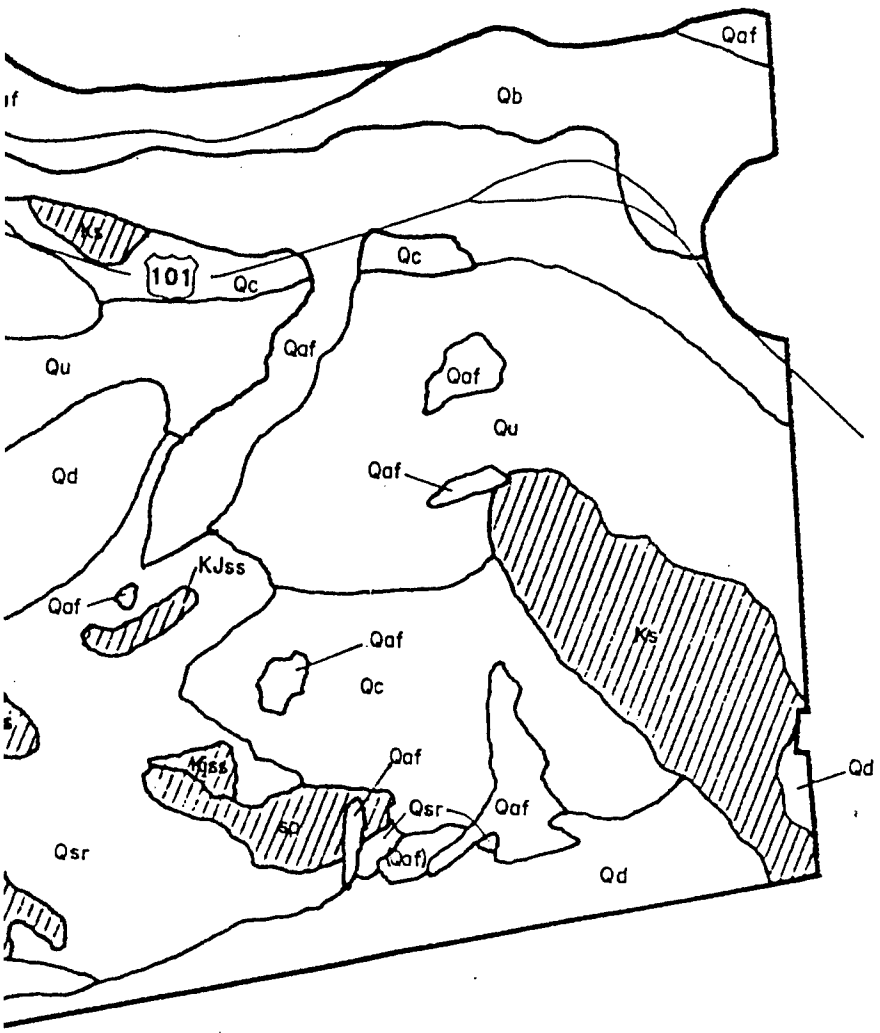
DAMES & MOORE

POTENTIOMETRIC SURFACE MAP OF FIRST ENCOUNTERED GROUNDWATER PRESIDIO OF SAN FRANCISCO

PSF25055\DV2

Date: January 1997 | Figure 2.3-2


Golden Gate
Bridge
SAN FRANCISCO BA
PACIFIC OCEAN
Qaf
KJs
Qu
sp
101
Ql
Qb
KJss
sc
Qsr
KJc
Qd
Qob
(Qaf)
Ks
Qc
LOBOS
CREEK
MOUNTAIN
LAKE



EXPLANATIO

Surficial Depos

Holocene	Qaf	Artifical Fill
	(Qaf)	Possible Artii
	Qb	Modern Beac
Holocene/ Pleistocene	Qsr	Slope Debris
	Qd	Dune Sand
	Ql	Landsilde Dep
	Qu	Surficial Depc
Pleistocene	Qob	Older Beach i
	Qc	Colma Format

Bedrock

(clastic sedimentar

Upper Cretaceous, Franciscan Formation	Ks	Sheared Roc Undifferenti
	Sp	Serpentine
Jurasic (?) & Upper Cretaceous, Franciscan Formation	KJc	Radiolarian C
	KJss	Sandstone
	KJs	Sandstone & Undifferentia

Fault, Dashed w

Dotted where p

N

0 600 1200

FEET

DAME

SURFACE
PRESIDIO O

PSF25164\DV2

Date: January 199

(Modified from Schlocker, 1974)

2

IN FRANCISCO BAY

EXPLANATION

Surficial Deposits

Holocene

- Qaf — Artifical Fill
- (Qaf) — Possible Artifical Fill
- Qb — Modern Beach Deposits

Holocene/ Pleistocene

- Qsr — Slope Debris & Ravine Fill
- Qd — Dune Sand
- Ql — Landslide Deposits
- Qu — Surficial Deposits, Undivided

Pleistocene

- Qob — Older Beach Deposits
- Qc — Colma Formation

Bedrock

(clastic sedimentary rocks)

Jurassic (?) & Upper Cretaceous

Franciscan Formation

Upper Cretaceous

- Ks — Sheared Rocks, Undifferentiated
- Sp — Serpentine
- Kvc — Radiolarian Chert & Shale
- Kss — Sandstone
- Kvs — Sandstone & Shale, Undifferentiated

Fault, Dashed where Appropriate, Dotted where projected

-N-

0 600 1200

FEET

ed from Schlocker, 1974)

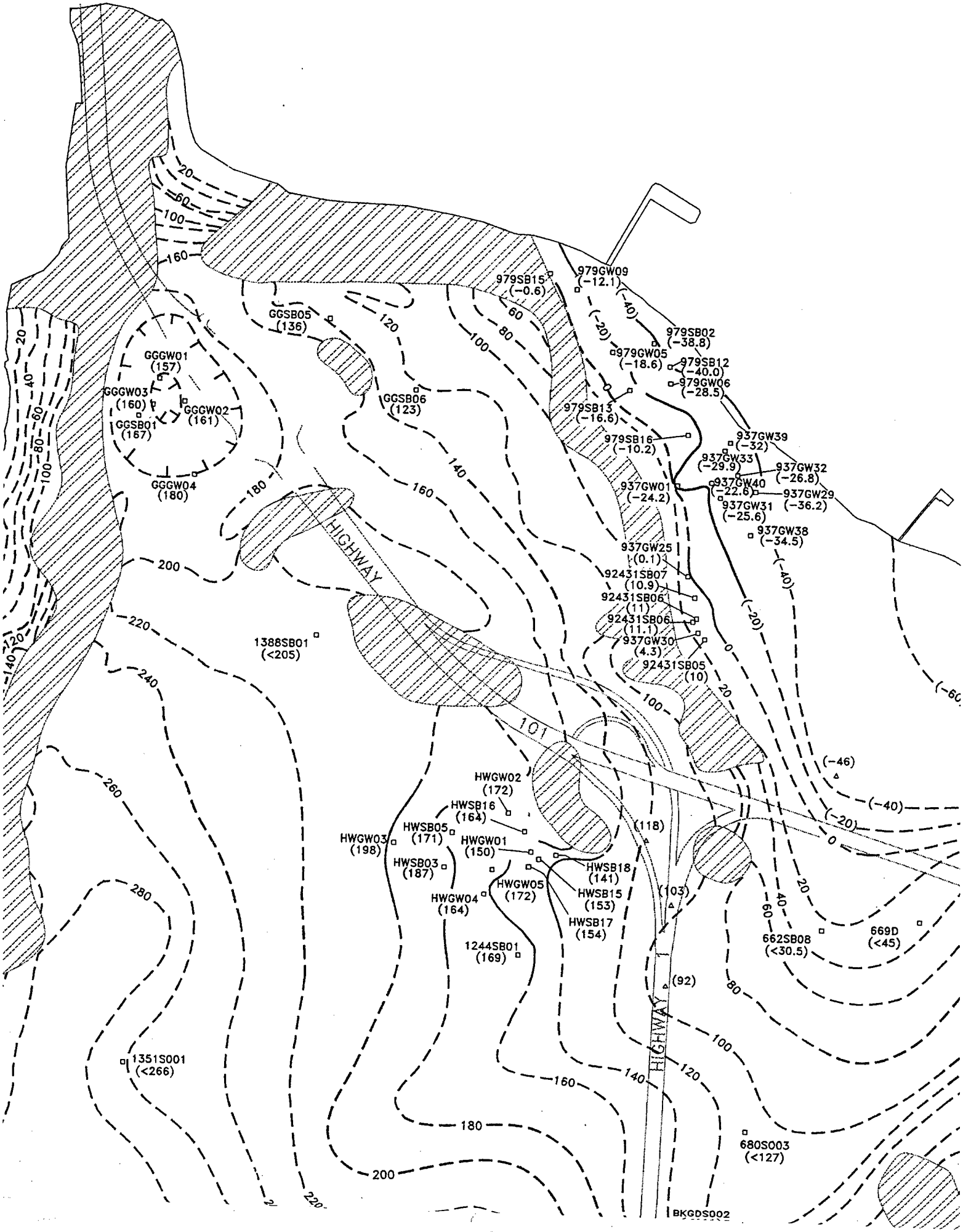
DAMES & MOORE

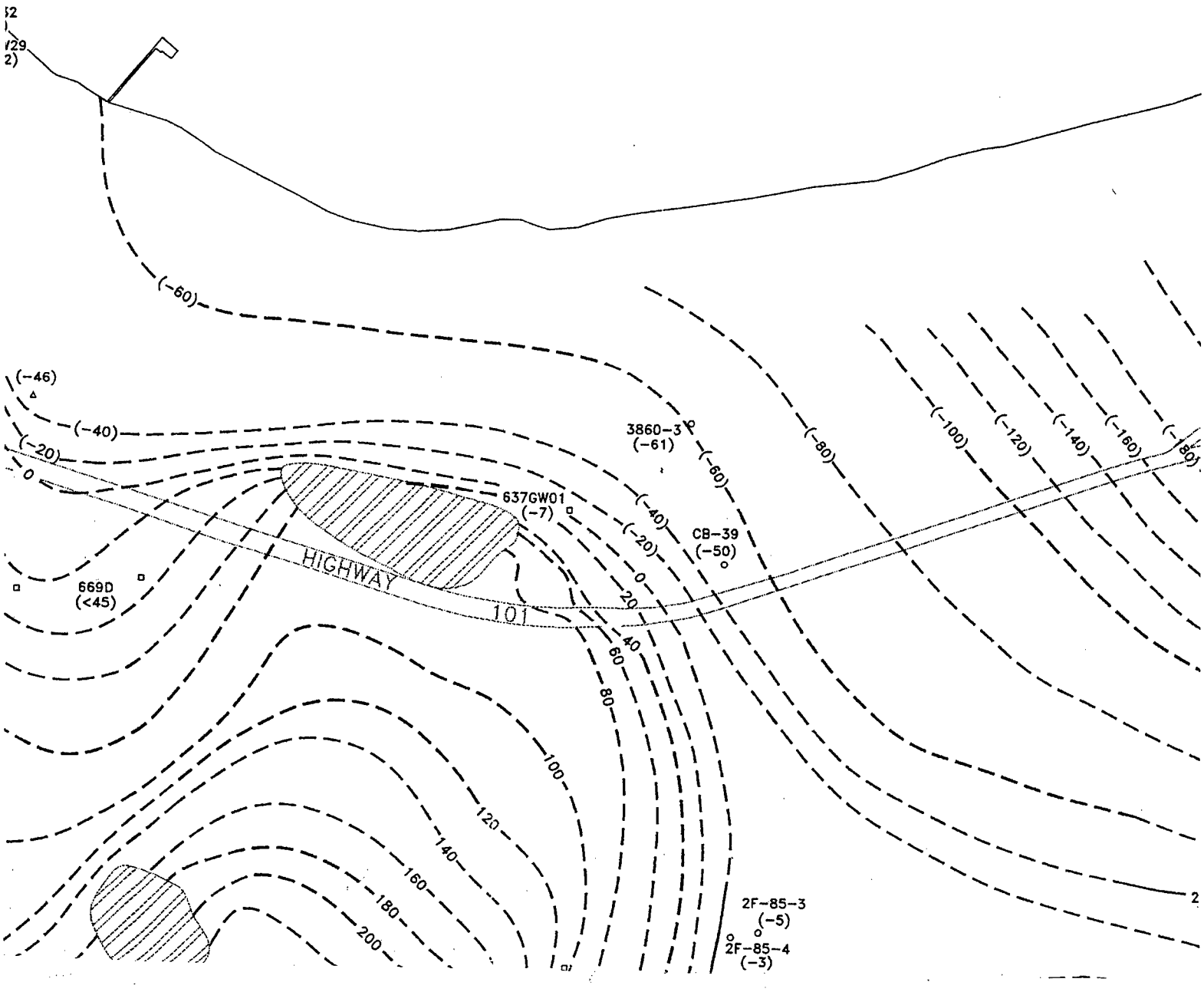
SURFACE GEOLOGY MAP,
PRESIDIO OF SAN FRANCISCO

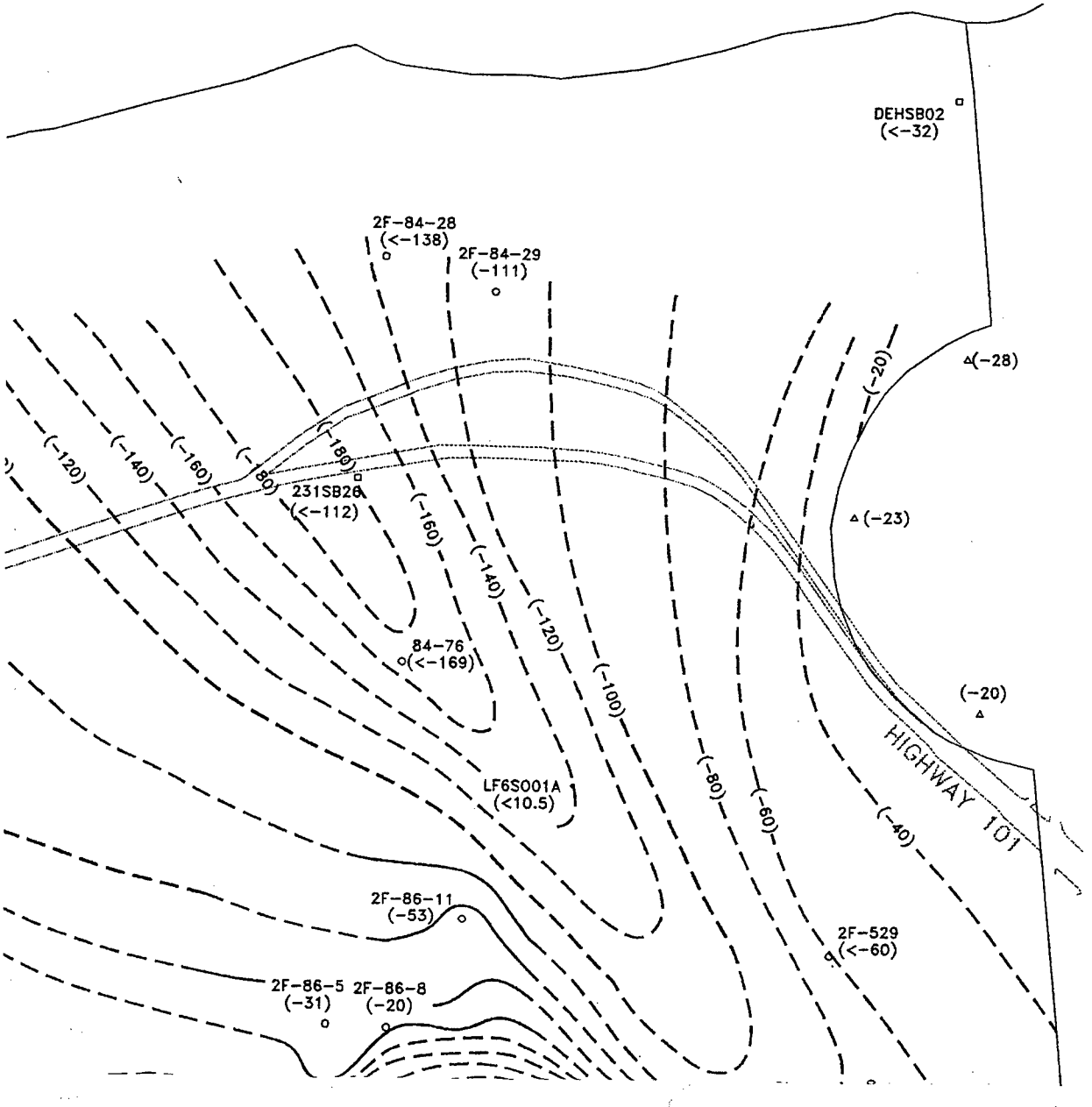
PSF25164\DV2

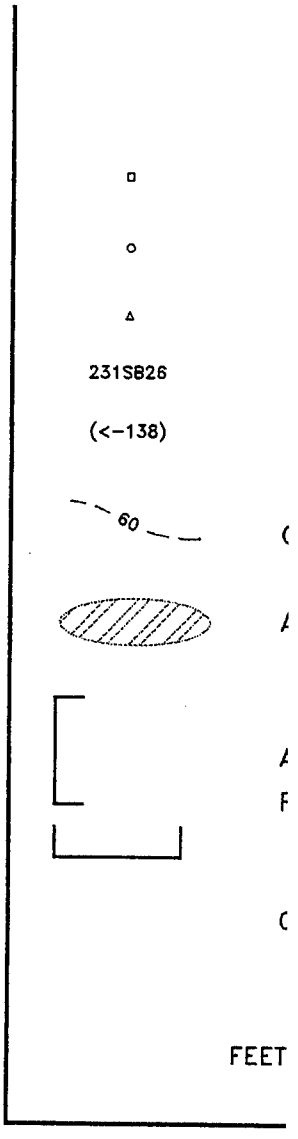
Date: January 1997 | Figure 2.3-3

20
40
60
80
100
120
140
20
40
60
80
100
120
140
20
40
60
80
100
120
140


979SB15 (-0.6)
979GW09 (-12.1)
979SB02 (-38.8)
979GW05 (-18.6)
979SB12 (-40.0)
979GW06 (-28.5)
GGSB05 (136)
GGGW01 (157)
GGGW03 (160)
GGGW02 (161)
GGSB01 (167)
GGSB06 (123)
GGGW04 (180)
979SB13 (-16.6)
979SB16 (-10.2)
937GW39 (-32)
937GW33 (-29.9)
937GW32 (-26.8)
937GW40 (-22.6)
937GW29 (-36.2)
937GW31 (-25.6)
937GW01 (-24.2)
937GW38 (-34.5)
937GW25 (0.1)
92431SB07 (10.9)
92431SB06 (11)
92431SB06 (11.1)
937GW30 (4.3)
92431SB05 (10)
HIGHWAY
101
1388SB01 (<205)
HWGW02 (172)
HWSB16 (164)
HWSB05 (171)
HWGW03 (198)
HWGW01 (150)
HWSB03 (187)
HWSB18 (141)
HWGW05 (172)
HWSB15 (153)
HWGW04 (164)
HWSB17 (154)
1244SB01 (169)
(118)
(103)
(92)
662SB08 (<30.5)
669D (<45)
1351S001 (<266)
680S003 (<127)
BKGDS002


(-60)
(-46)
(-40)
(-20)
0
20
40
60
80
100
120
140
160
180
200
(-80)
(-100)
(-120)
(-140)
(-160)
(-180)
3860-3
(-61)
637GW01
(-7)
CB-39
(-50)
669D
(<45)
HIGHWAY
101
2F-85-3
(-5)
2F-85-4
(-3)





NOTE: BEDROCK
BOREHOL
ELEVATIO

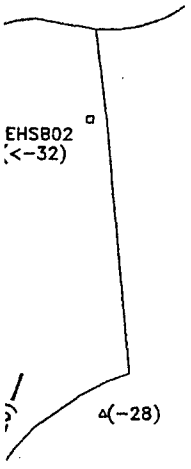
EXPLANATION

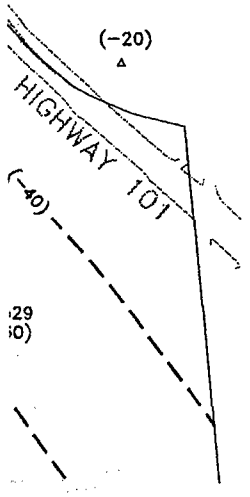
▫	DAMES & MOORE DATA LOCATION
○	DATA OBTAINED FROM MONTGOMERY WATSON (1995)
△	DATA OBTAINED FROM SCHLOCKER (1974)
231SB26	SITE ID
(<-138)	ELEVATION OF TOP OF BEDROCK AT DATA LOCATION
60	CONTOUR INDICATING ELEVATION OF TOP OF BEDROCK
	AREA OF BEDROCK OUTCROP
	AREA OF BEDROCK CONTOURS OBAINTED FROM NOLTE & ASSOCIATES (1993)

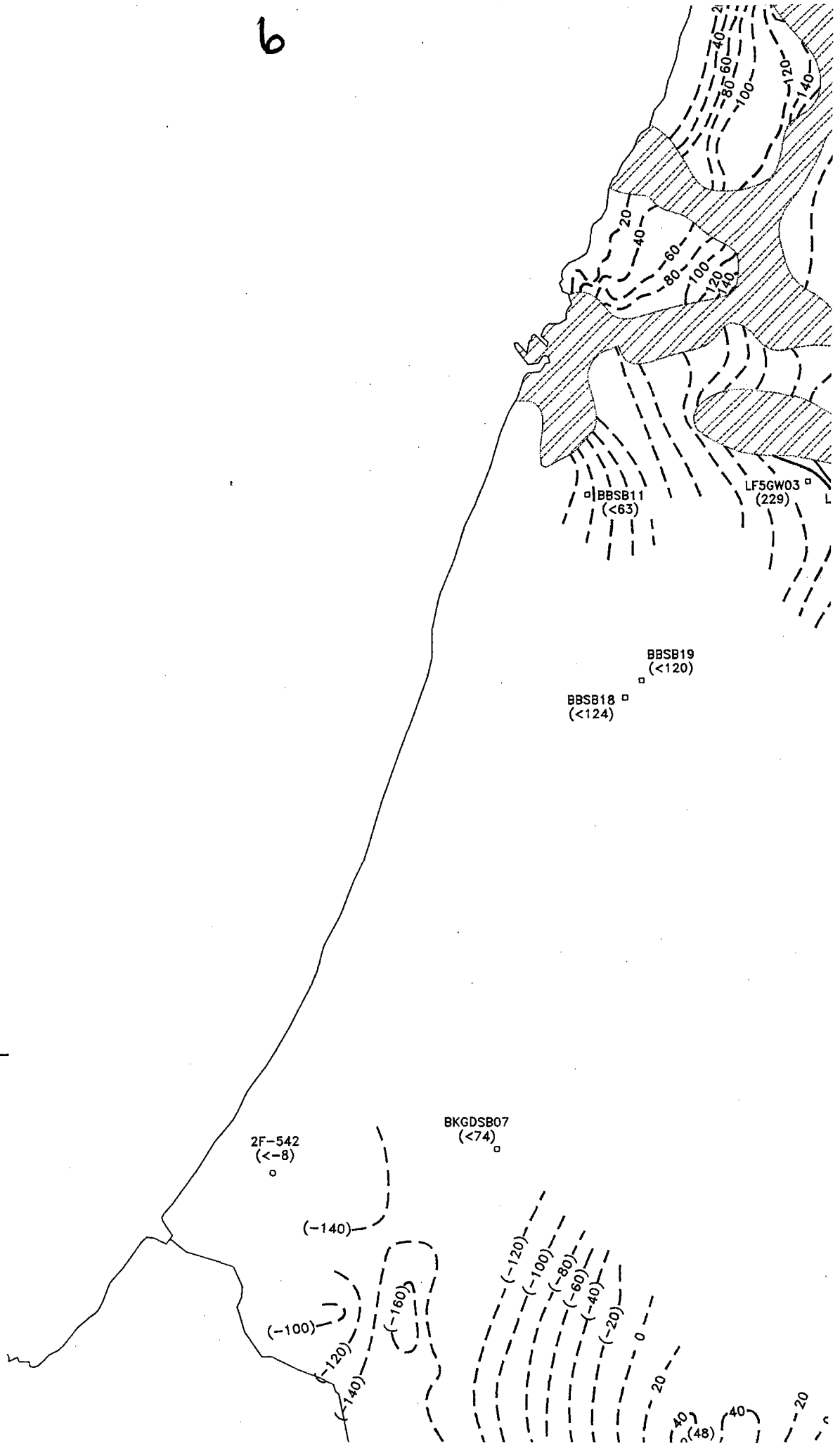
CONTOUR INTERVAL: 20 FEET

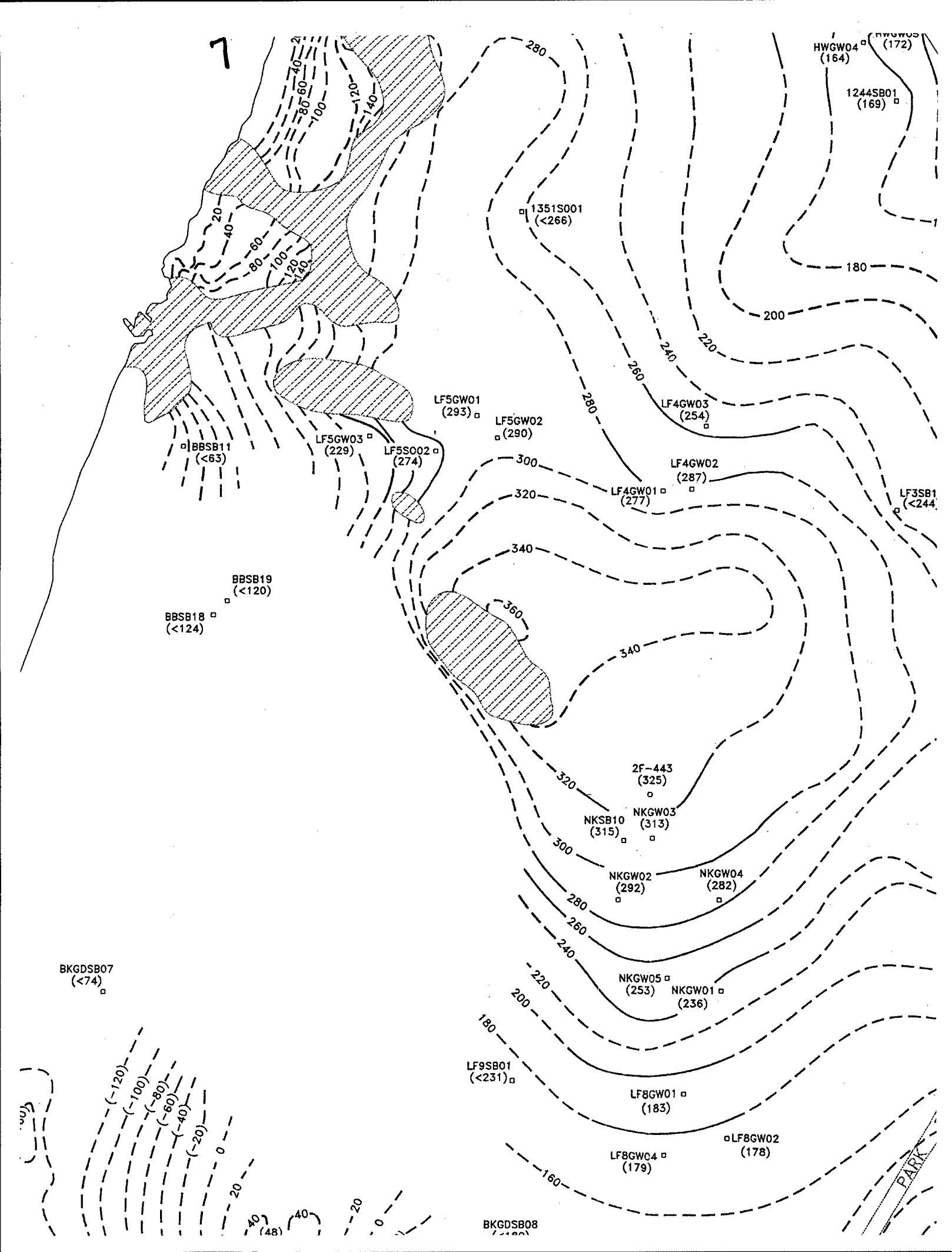
ELEVATIONS IN FEET–PRESIDIO LOWER LOW WATER

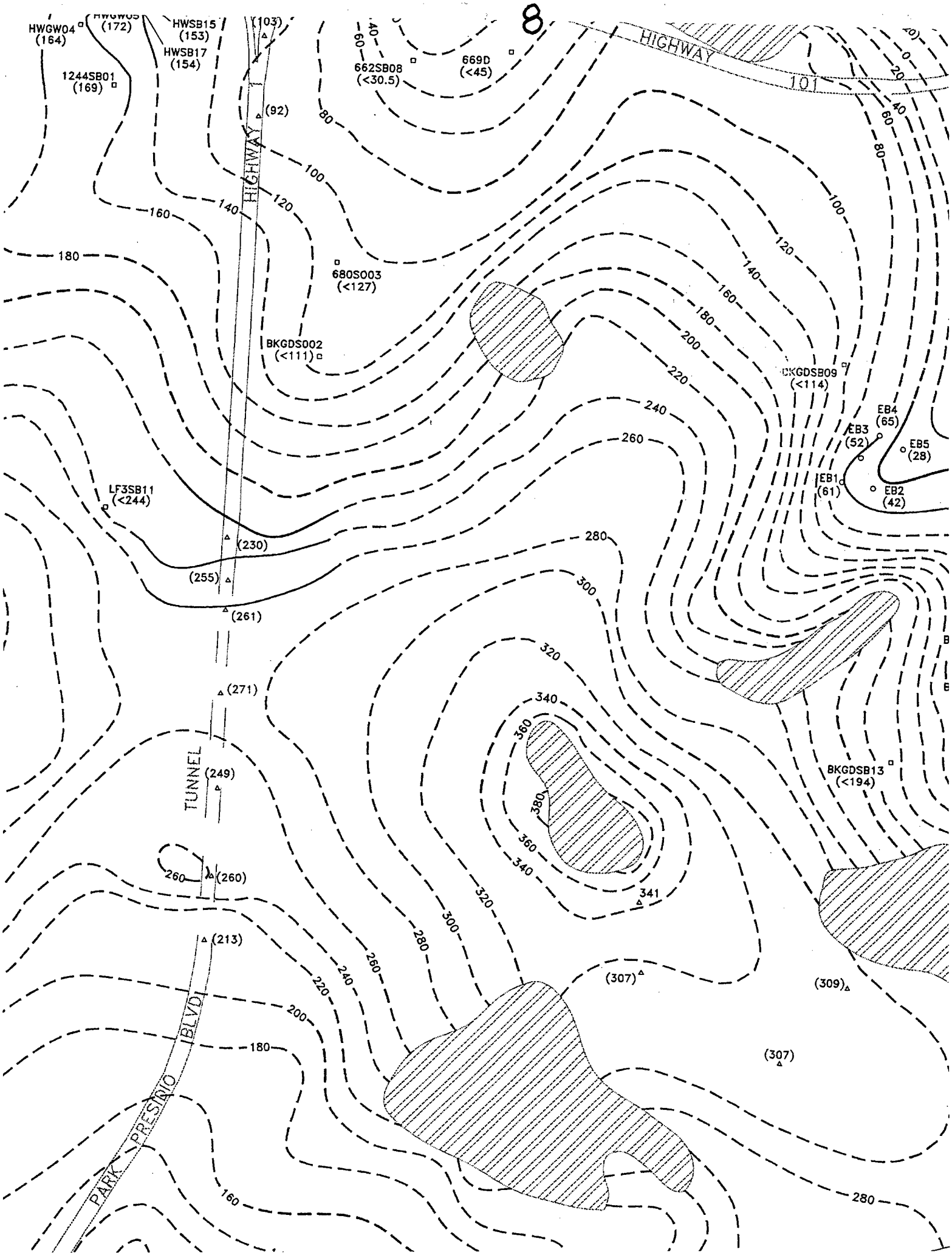
NOTE: BEDROCK SURFACE ELEVATIONS OBTAINED FROM BOREHOLE DATA EXCEPT FOR NOLTE & ASSOCIATES ELEVATIONS WHICH WERE OBTAINED FROM GEOPHYSICAL DATA.

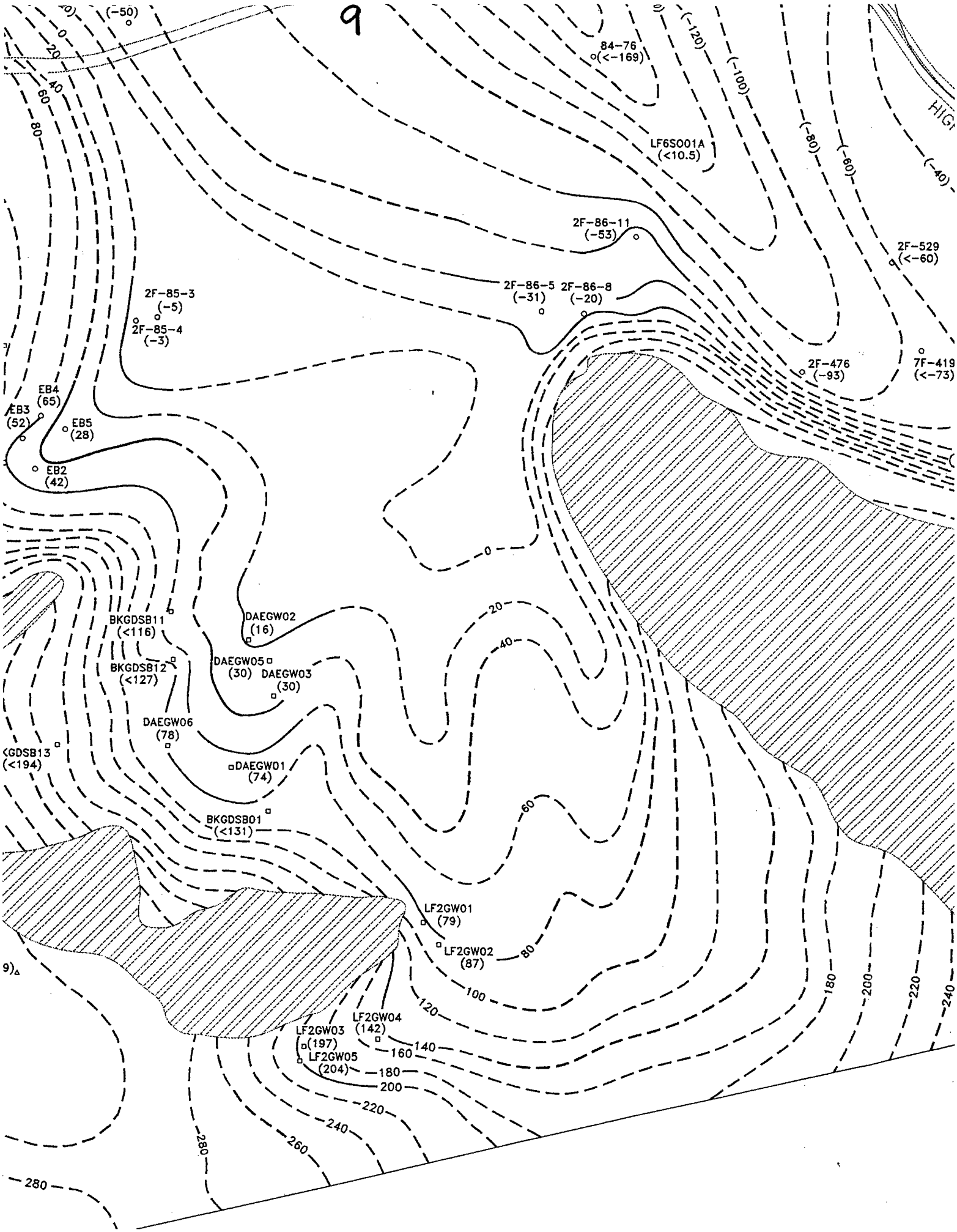


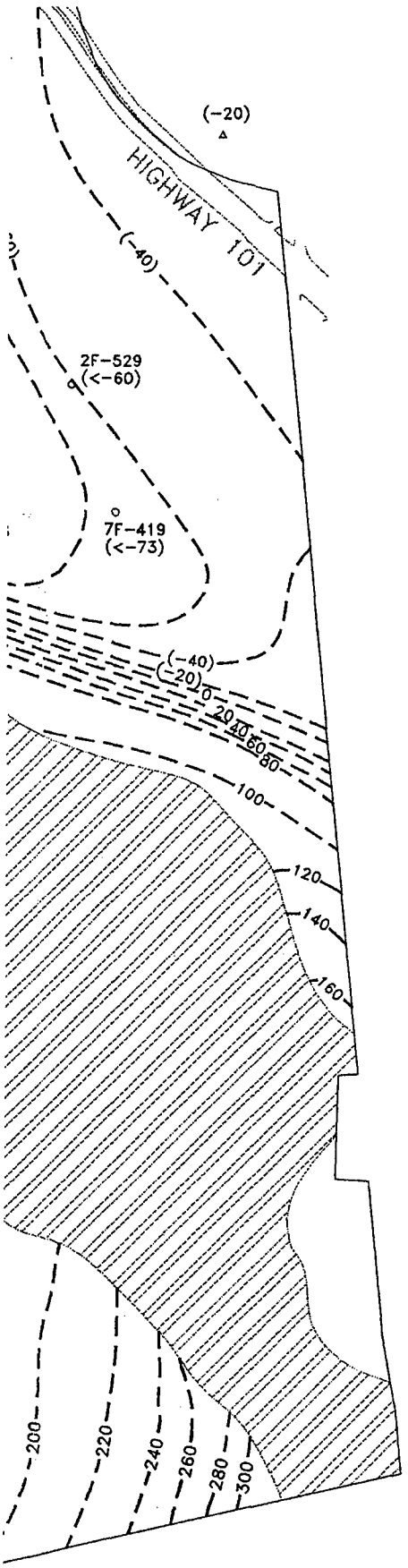


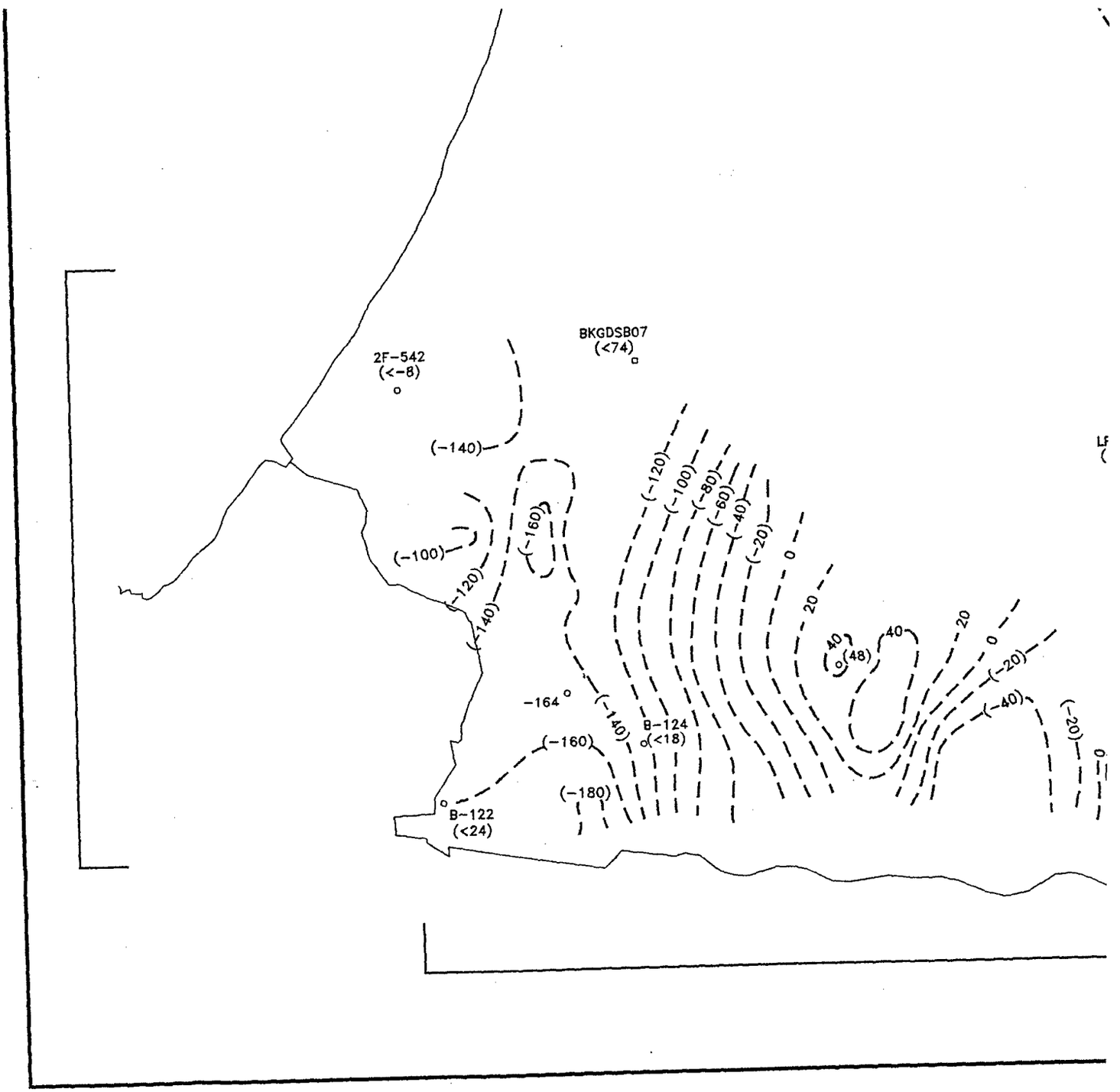

20
40
60
80
100
120
140
BBSB11
(<63)
LF5GW03
(229)
BBSB19
(<120)
BBSB18
(<124)
BKGDSB07
(<74)
2F-542
(<-8)
(-140)
(-100)
(-120)
(-140)
(-160)
(-120)
(-100)
(-80)
(-60)
(-40)
(-20)
0
20
40
(48)
40
20

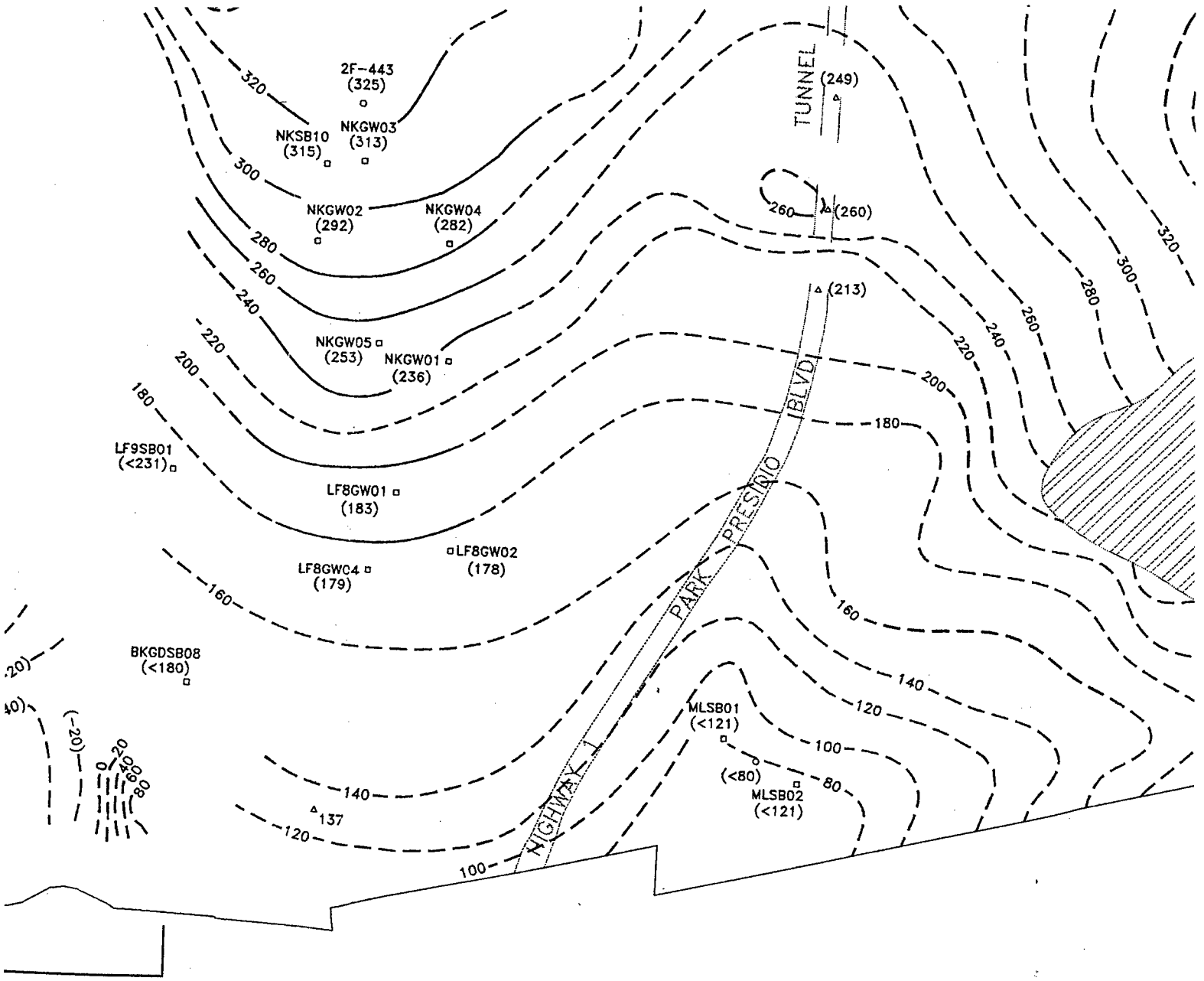

7
HWGW04 (164)
(172)
1244SB01 (169)
1351S001 (<266)
LF5GW01 (293)
LF5GW02 (290)
LF5GW03 (229)
LF5S002 (274)
BBSB11 (<63)
LF4GW03 (254)
LF4GW02 (287)
LF4GW01 (277)
LF3SB1 (<244
BBSB19 (<120)
BBSB18 (<124)
2F-443 (325)
NKSB10 (315)
NKGW03 (313)
NKGW02 (292)
NKGW04 (282)
NKGW05 (253)
NKGW01 (236)
BKGDSB07 (<74)
LF9SB01 (<231)
LF8GW01 (183)
LF8GW02 (178)
LF8GW04 (179)
BKGDSB08
PARK

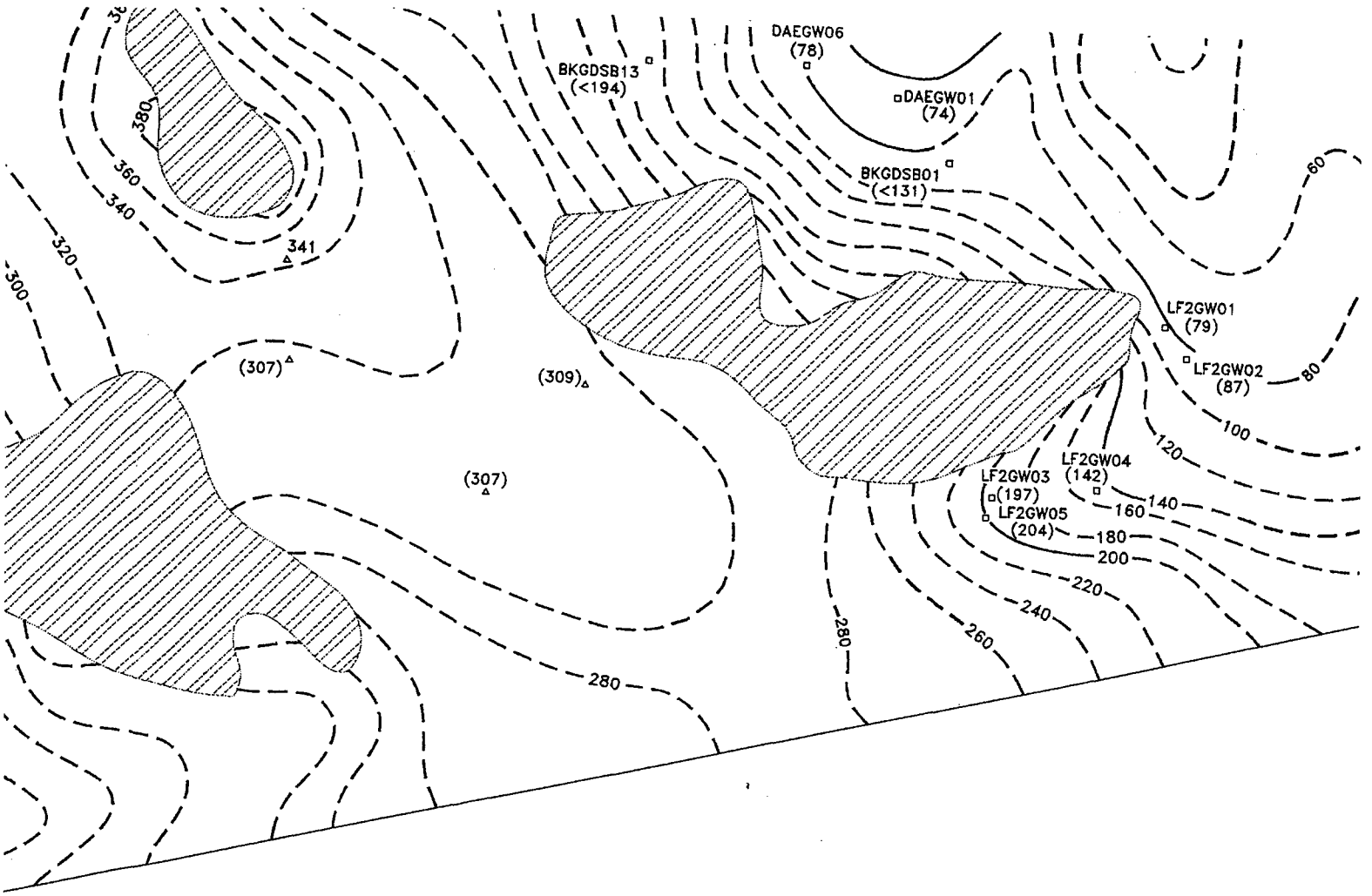

HWGW04 (164)
HWSB15 (153)
HWSB17 (154)
1244SB01 (169)
662SB08 (<30.5)
669D (<45)
680SO03 (<127)
BKGDS002 (<111)
BKGDSB09 (<114)
BKGDSB13 (<194)
LF3SB11 (<244)
EB1 (61)
EB2 (42)
EB3 (52)
EB4 (65)
EB5 (28)
HIGHWAY 101
HIGHWAY
TUNNEL
PARK PRESIDIO BLVD
(103)
(92)
(230)
(255)
(261)
(271)
(249)
(260)
(213)
(307)
(309)
341
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380

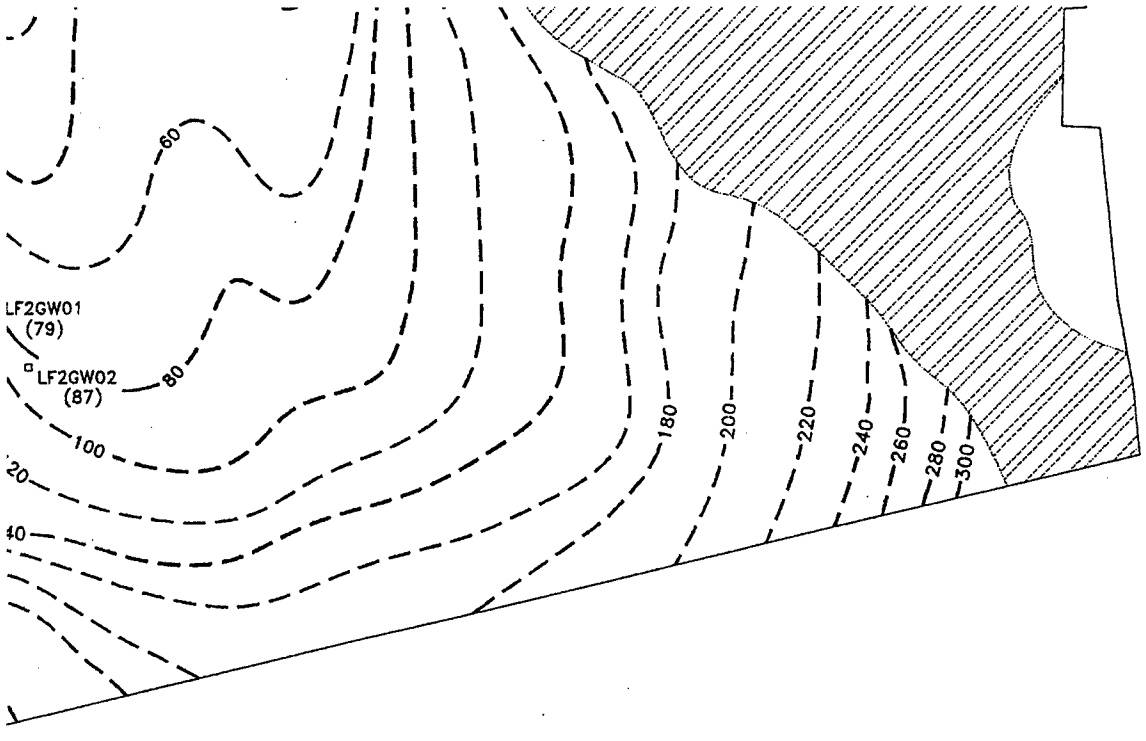

9
(-50)
84-76
(<-169)
LF6S001A
(<10.5)
2F-86-11
(-53)
2F-529
(<-60)
2F-86-5
(-31)
2F-86-8
(-20)
2F-85-3
(-5)
2F-85-4
(-3)
2F-476
(-93)
7F-419
(<-73)
EB4
(65)
EB3
(52)
EB5
(28)
EB2
(42)
BKGDSB11
(<116)
DAEGW02
(16)
BKGDSB12
(<127)
DAEGW05
(30)
DAEGW03
(30)
DAEGW06
(78)
(GDSB13
(<194)
DAEGW01
(74)
BKGDSB01
(<131)
LF2GW01
(79)
LF2GW02
(87)
LF2GW04
(142)
LF2GW03
(197)
LF2GW05
(204)
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
(-120)
(-100)
(-80)
(-60)
(-40)

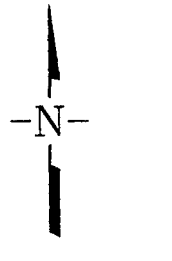

(-20)
(-19)
HIGHWAY 101
(-40)
2F-529
(<-60)
7F-419
(<-73)
(-40)
(-20)
0
20
40
60
80
100
120
140
160
200
220
240
260
280
300


BKGDSB07
(<74)
2F-542
(<-8)
(-140)
(-100)
(-120)
(-140)
(-160)
(-120)
(-100)
(-80)
(-60)
(-40)
(-20)
0
20
40
(48)
40
20
0
(-20)
(-40)
(-20)
0
-164°
(-140)
B-124
(<18)
(-160)
(-180)
B-122
(<24)


2F-443
(325)
NKSB10
(315)
NKGW03
(313)
NKGW02
(292)
NKGW04
(282)
NKGW05
(253)
NKGW01
(236)
LF9SB01
(<231)
LF8GW01
(183)
LF8GW02
(178)
LF8GW04
(179)
BKGDSB08
(<180)
MLSB01
(<121)
(<80)
MLSB02
(<121)
137
(249)
(260)
(213)
TUNNEL
PARK PRESIDIO BLVD
HIGHWAY 1
320
300
280
260
240
220
200
180
160
140
120
100
80


DAEGW06
(78)
BKGDSB13
(<194)
DAEGW01
(74)
BKGDSB01
(<131)
LF2GW01
(79)
LF2GW02
(87)
LF2GW03
(197)
LF2GW04
(142)
LF2GW05
(204)
380
360
340
341
320
300
(307)
(309)
(307)
280
280
260
240
220
200
180
160
140
120
100
80
60

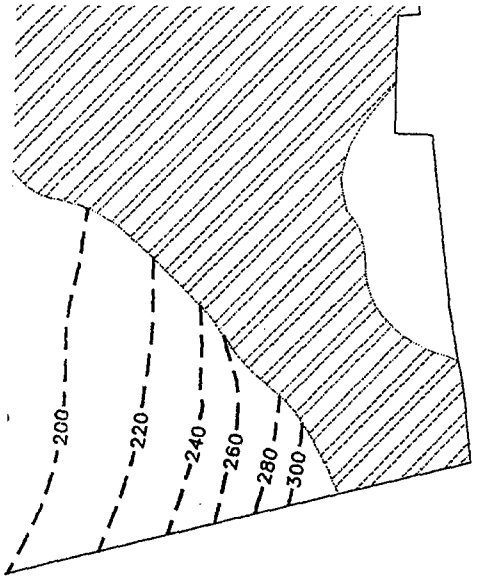




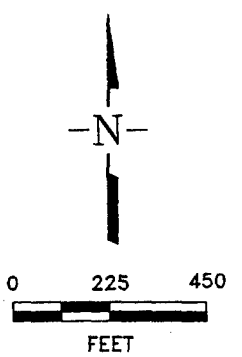
0 225 450

FEET

NOTE: Adapted from Schlocker, 1974.



ed from Schlocker, 1974.

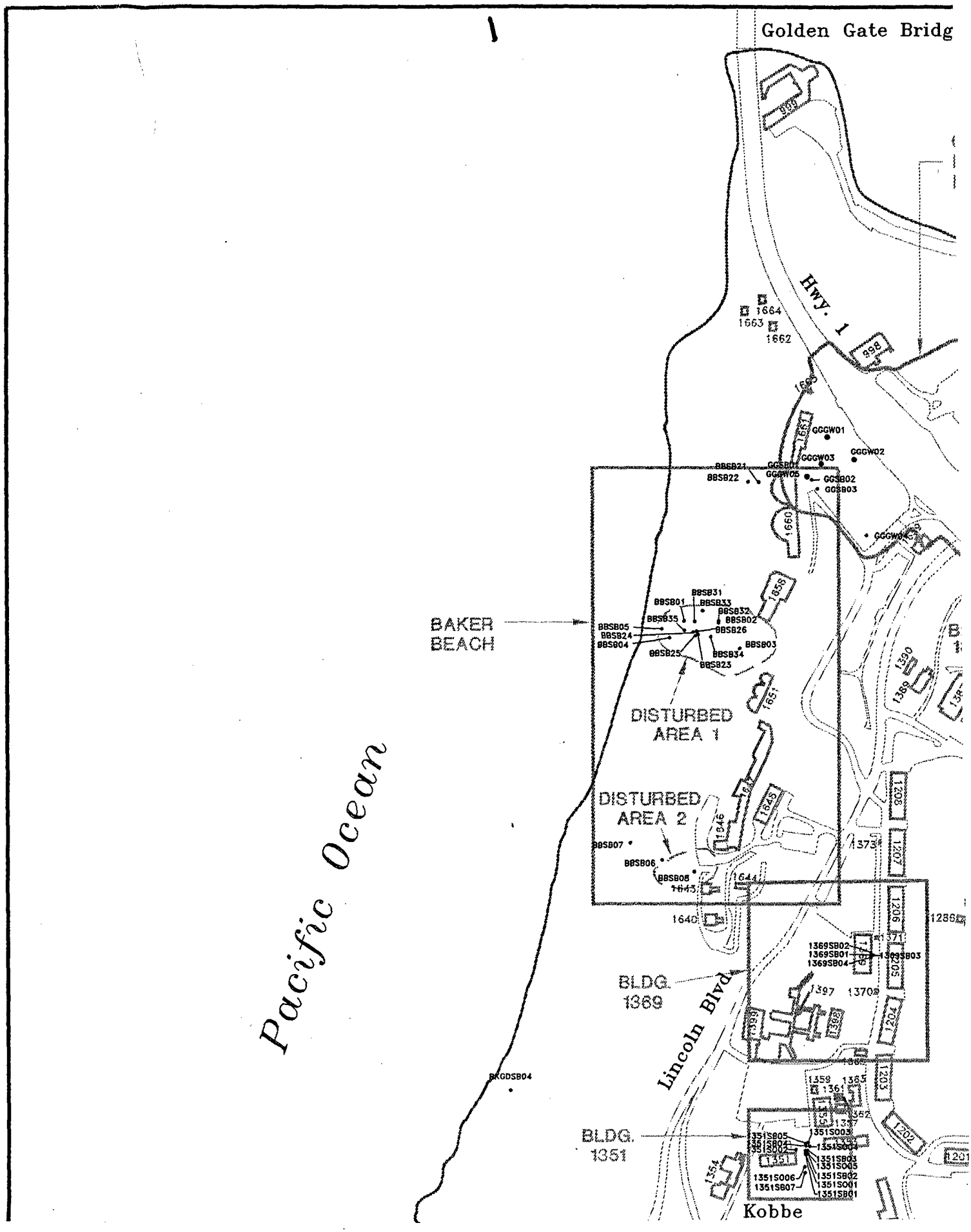


DAMES & MOORE

STRUCTURE CONTOUR MAP
OF THE BEDROCK SURFACE
PRESIDIO OF SAN FRANCISCO

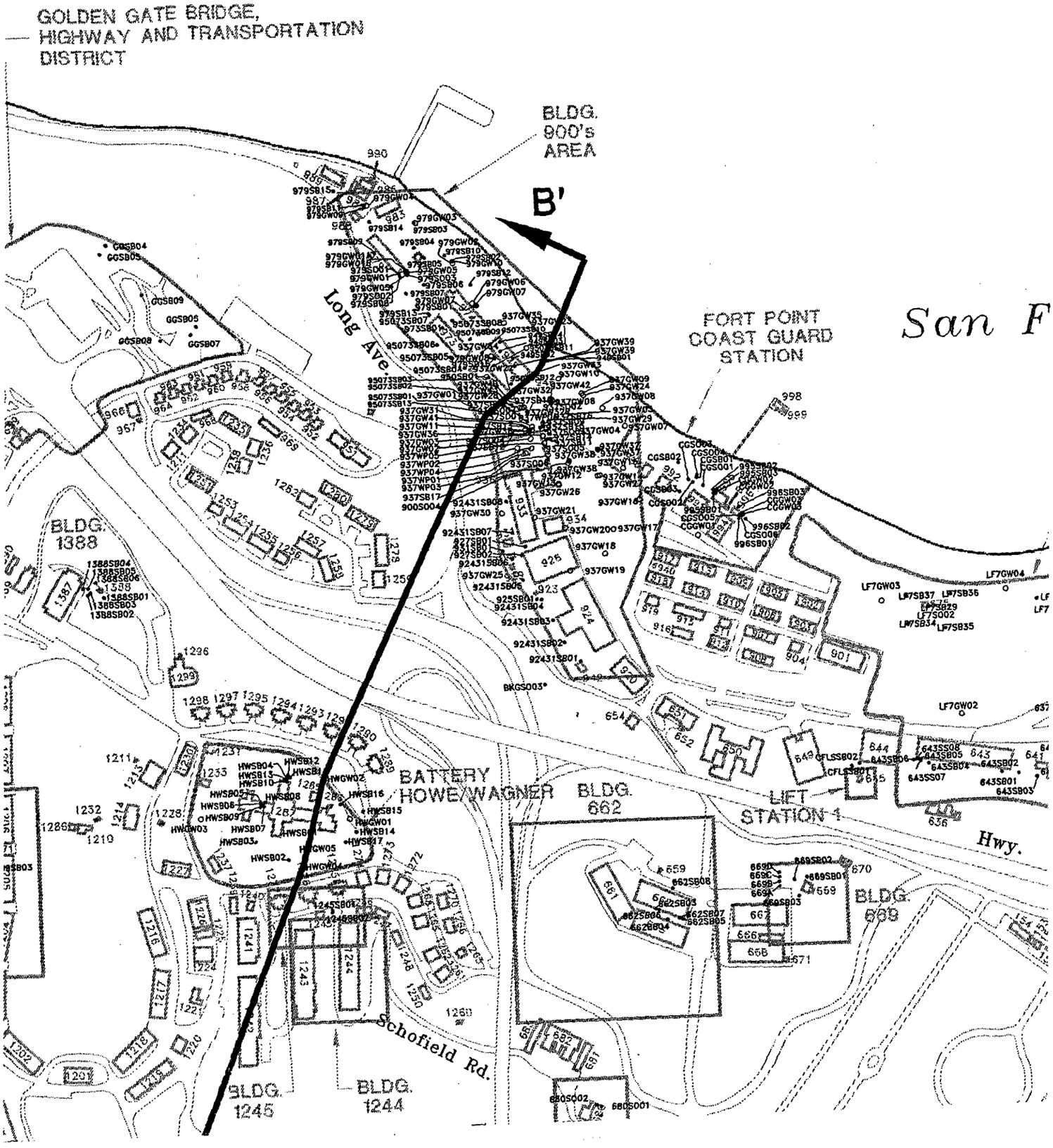
PSF25057\DV1

Date: January 1997 | Figure 2.3-4

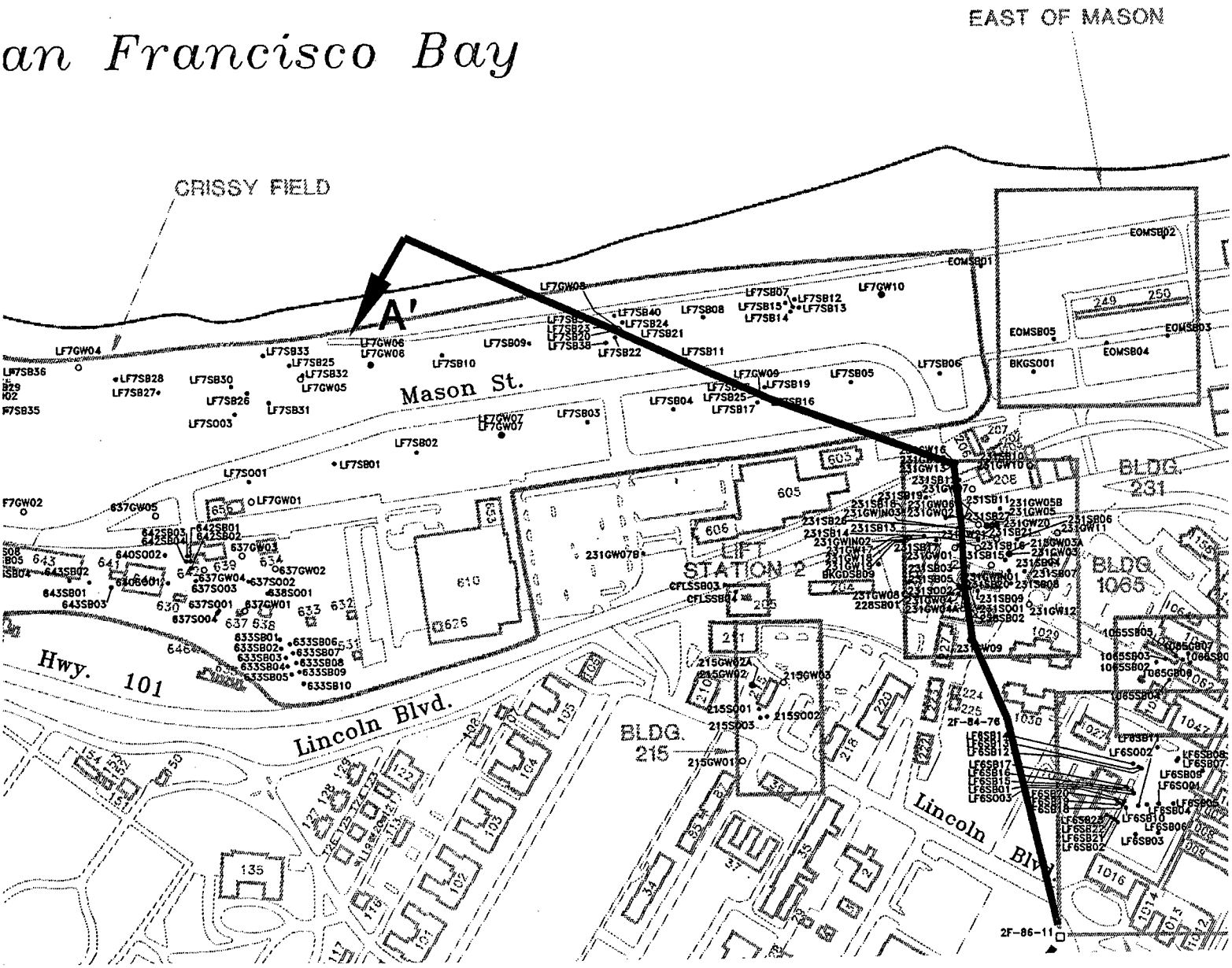

Golden Gate Bridg
Hwy. 1
Pacific Ocean
BAKER BEACH
DISTURBED AREA 1
DISTURBED AREA 2
BLDG. 1369
BLDG. 1351
Lincoln Blvd
Kobbe
BKGDSB04
BBSB01
BBSB02
BBSB03
BBSB04
BBSB05
BBSB06
BBSB07
BBSB08
BBSB21
BBSB22
BBSB23
BBSB24
BBSB25
BBSB26
BBSB31
BBSB32
BBSB33
BBSB34
BBSB35
GGGW01
GGGW02
GGGW03
GGGW04
GGGW05
GGSB01
GGSB02
GGSB03
1369SB01
1369SB02
1369SB03
1369SB04
1351SB01
1351SB02
1351SB03
1351SB04
1351SB05
1351SB06
1351SB07
1351S001
1351S002
1351S003
1351S004
1351S005
1351S006

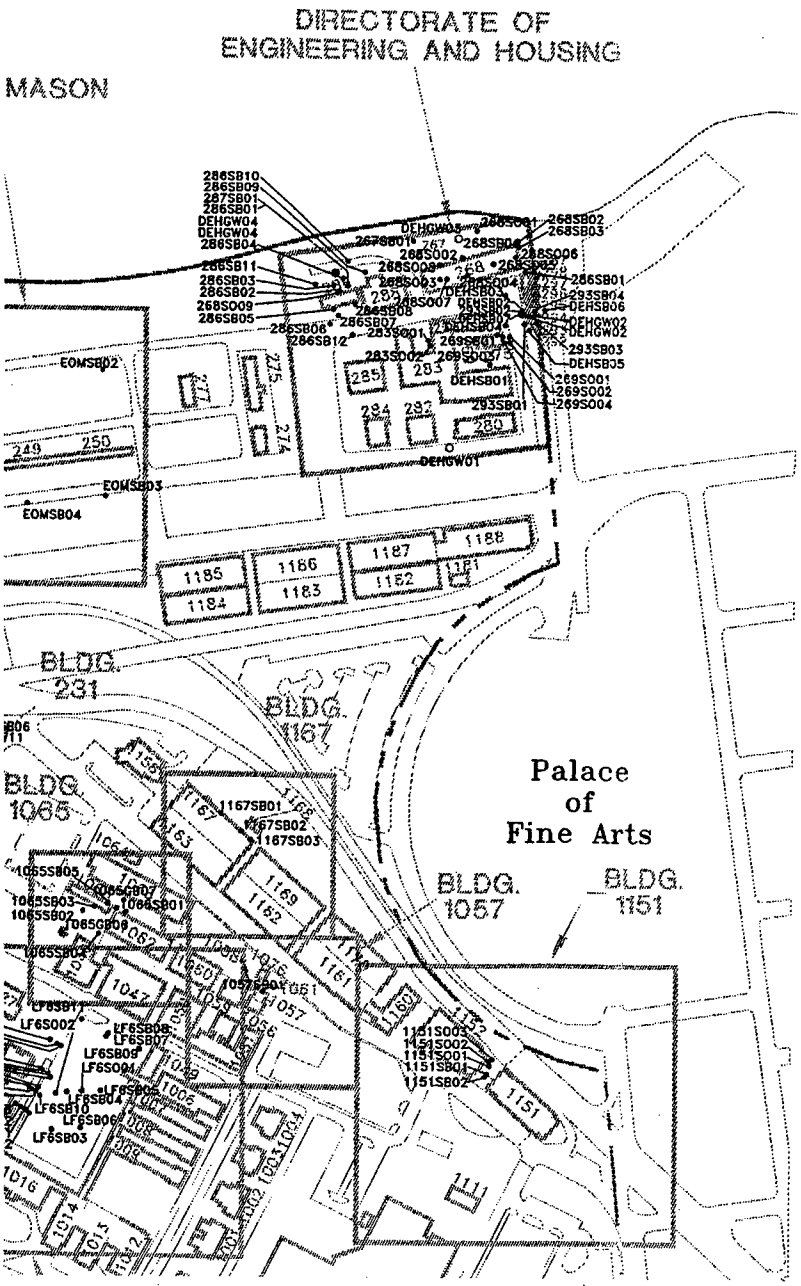
idge

2


GOLDEN GATE BRIDGE,
HIGHWAY AND TRANSPORTATION
DISTRICT
BLDG.
900's
AREA
B'
Long Ave
FORT POINT
COAST GUARD
STATION
San F
BLDG.
1388
BATTERY
HOWE/WAGNER
BLDG.
662
LIFT
STATION 4
Hwy.
BLDG.
669
Schofield Rd.
BLDG.
1245
BLDG.
1244

an Francisco Bay





EXPLANATION

DEHGW03 — DAMES & MOORE MON

268SO01 — DAMES & MOORE SOIL

2F-86-8 — DATA OBTAINED FROM MONTGOMERY WATSON

A A' — CROSS SECTION LINE

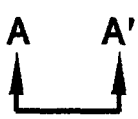
SITE MAP OUTLINE

EXPLANATION

DEHGW03 ○ — DAMES & MOORE MONITORING WELL

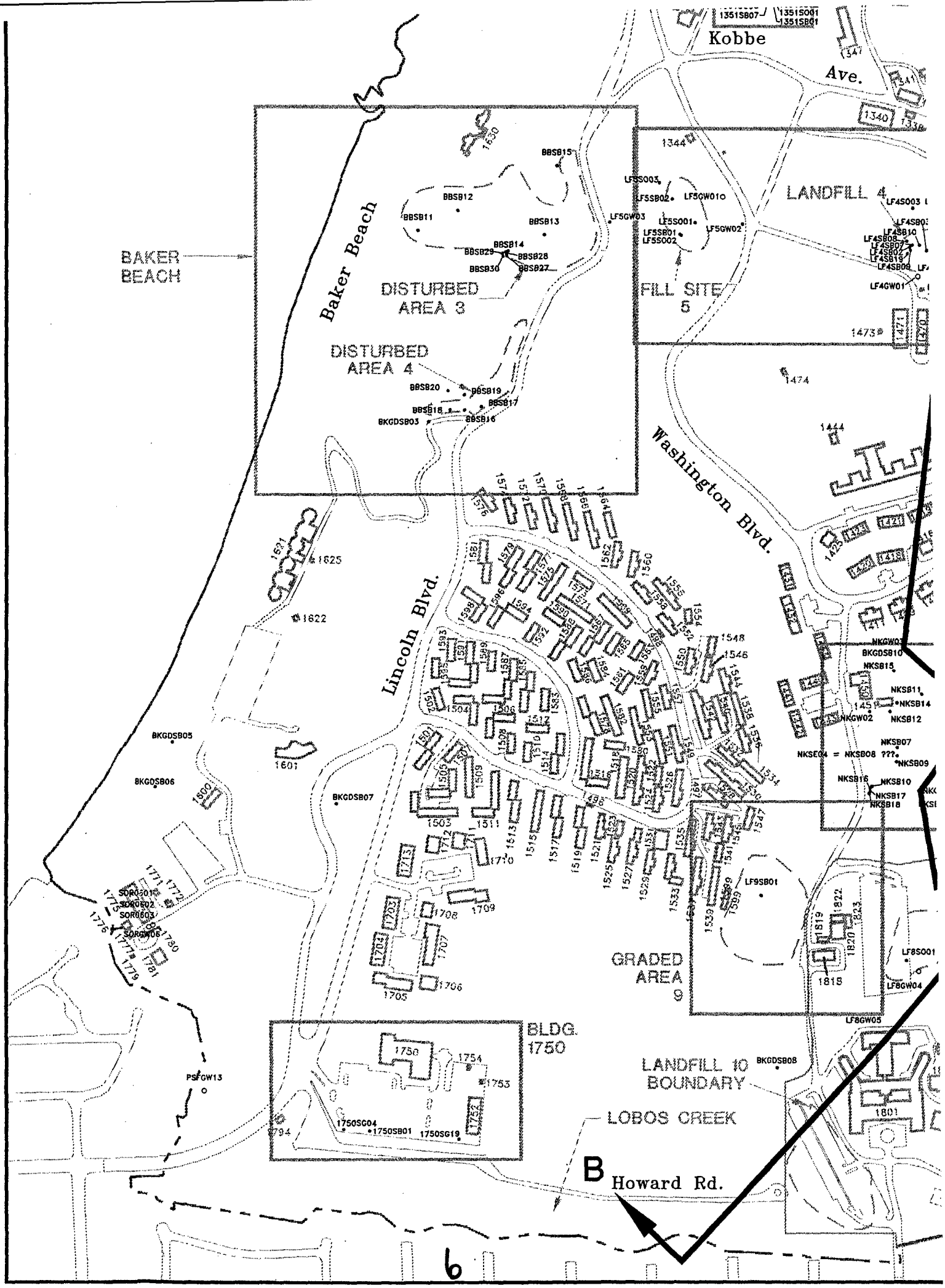
268SO01 ● — DAMES & MOORE SOIL BORING

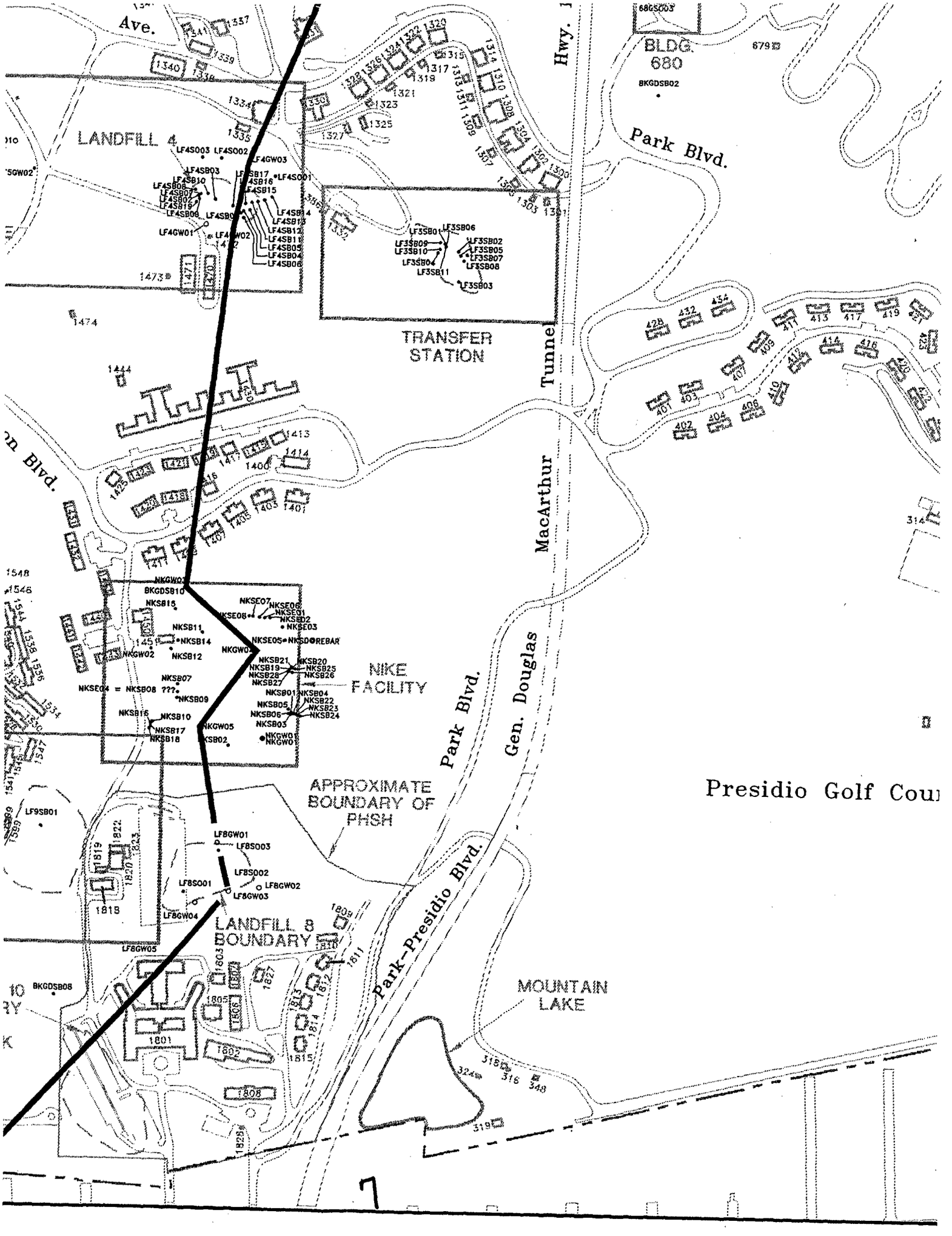
2F-86-8 □ — DATA OBTAINED FROM MONTGOMERY WATSON (1995e)

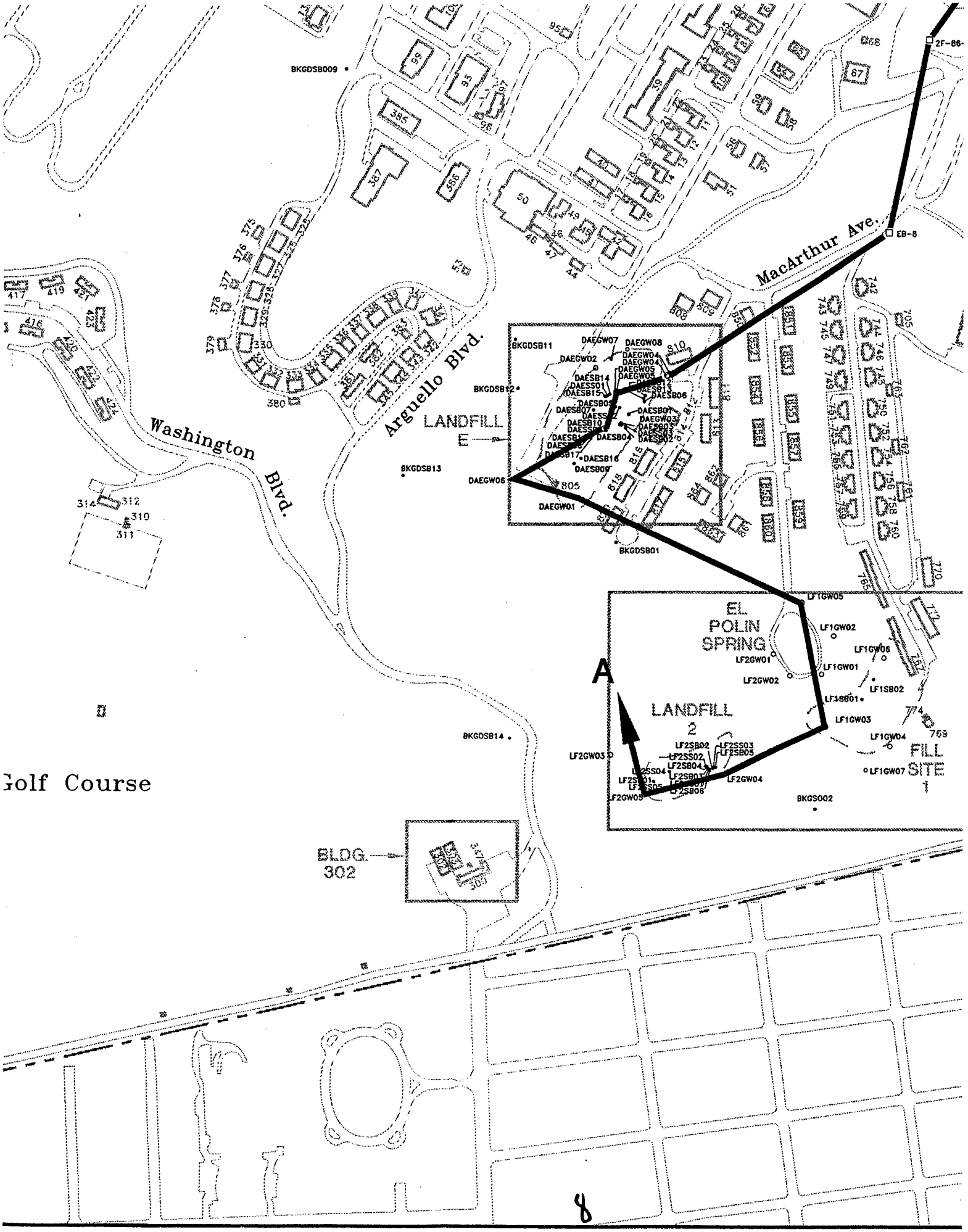


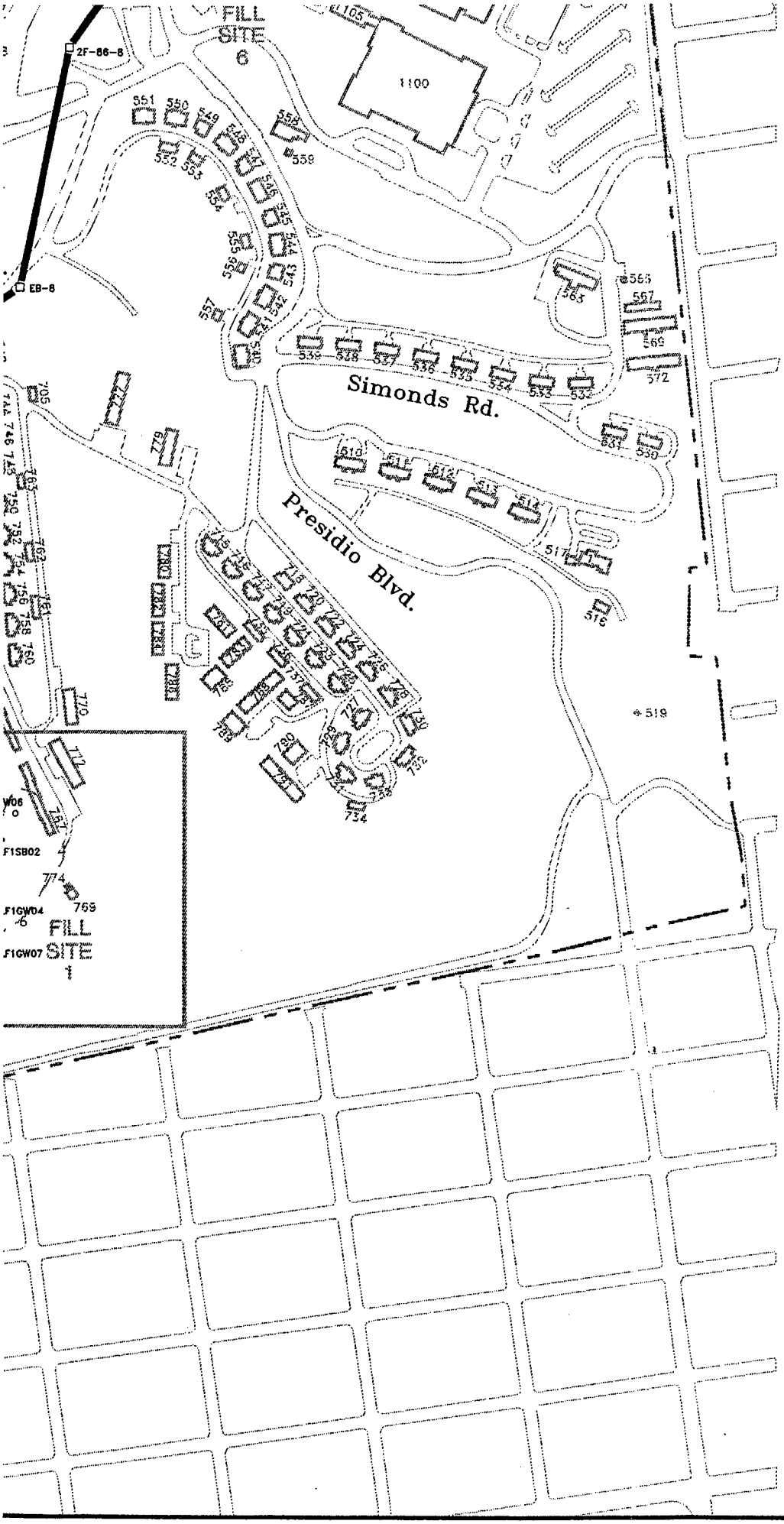
CROSS SECTION LINE

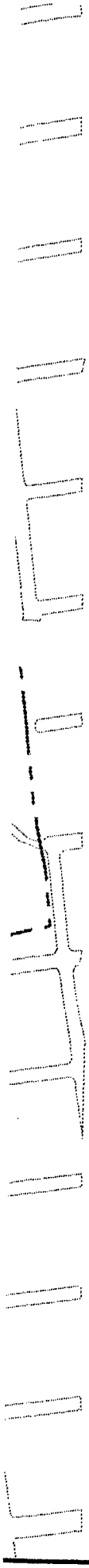
SITE MAP OUTLINE

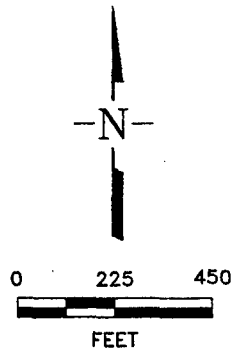

Kobbe
Ave.
BAKER BEACH
Baker Beach
DISTURBED AREA 3
DISTURBED AREA 4
LANDFILL 4
FILL SITE 5
Washington Blvd.
Lincoln Blvd.
GRADED AREA 9
BLDG. 1750
LANDFILL 10 BOUNDARY
LOBOS CREEK
B
Howard Rd.
BBSB15
BBSB12
BBSB11
BBSB13
BBSB14
BBSB29
BBSB28
BBSB30
BBSB27
BBSB20
BBSB19
BBSB17
BBSB18
BBSB16
BKGDSB03
LF5SS003
LF5SB02
LF5GW010
LF5GW03
LF5SS001
LF5SB01
LF5SS02
LF5GW02
LF4S003
LF4GW01
BKGDSB05
BKGDSB06
BKGDSB07
SOR0501
SOR0502
SOR0503
SOR0504
SOR0505
PSFGW13
1750SG04
1750SB01
1750SG19
LF9SB01
LF8S001
LF8GW04
LF8GW05
BKGDSB08
NKGW01
BKGDSB10
NKSB15
NKSB11
NKSB14
NKSB12
NKGW02
NKSB07
NKSE04 = NKSB08 ???
NKSB09
NKSB16
NKSB10
NKSB17
NKSB18


LANDFILL 4
LF4SO03
LF4SO02
LF4GW03
LF4SB03
LF4SB10
LF4SB08
LF4SB07
LF4SB02
LF4SB19
LF4SB06
LF4SB09
LF4SB17
LF4SB16
LF4SO01
LF4SB15
LF4SB14
LF4SB13
LF4SB12
LF4SB11
LF4SB05
LF4SB04
LF4SB00
LF4GW01
LF4GW02
LF3SB01
LF3SB06
LF3SB09
LF3SB10
LF3SB04
LF3SB11
LF3SB02
LF3SB05
LF3SB07
LF3SB08
LF3SB03
TRANSFER STATION
BLDG. 680
BKGDSB02
Park Blvd.
Hwy.
Tunnel
MacArthur
Park Blvd.
Gen. Douglas
NIKE FACILITY
NKSB15
NKSB11
NKSB14
NKSB12
NKGW02
NKGW03
NKSB21
NKSB20
NKSB19
NKSB25
NKSB28
NKSB26
NKSB27
NKSB07
NKSE04 = NKSB08 ???
NKSB09
NKSB01
NKSB04
NKSB22
NKSB05
NKSB23
NKSB06
NKSB24
NKSB16
NKSB10
NKSB17
NKSB18
NKGW05
NKSB03
NKGW01
NKSE07
NKSE06
NKSE08
NKSE01
NKSB02
NKSE03
NKSE05
NKSD REBAR
BKGDSB10
APPROXIMATE BOUNDARY OF PHSH
Park-Presidio Blvd.
LF9SB01
LF8GW01
LF8SO03
LF8SO02
LF8SO01
LF8GW02
LF8GW03
LF8GW04
LF8GW05
LANDFILL 8 BOUNDARY
BKGDSB08
MOUNTAIN LAKE
Presidio Golf Cou


MacArthur Ave.
Arguello Blvd.
Washington Blvd.
LANDFILL E
LANDFILL 2
EL POLIN SPRING
FILL SITE
A
BLDG. 302
Golf Course
BKGDSB009
BKGDSB11
BKGDSB12
BKGDSB13
BKGDSB14
BKGDSB01
BKGS002
EB-8
DAEGW01
DAEGW02
DAEGW04
DAEGW05
DAEGW06
DAEGW07
DAEGW08
DAEGW03
DAESB01
DAESB02
DAESB03
DAESB04
DAESB05
DAESB06
DAESB07
DAESB08
DAESB09
DAESB10
DAESB11
DAESB12
DAESB13
DAESB14
DAESB15
DAESB16
DAESB17
LF1GW01
LF1GW02
LF1GW03
LF1GW04
LF1GW05
LF1GW06
LF1GW07
LF1SB01
LF1SB02
LF2GW01
LF2GW02
LF2GW03
LF2GW04
LF2GW05
LF2SB02
LF2SB03
LF2SB04
LF2SB05
LF2SB06
LF2SS02
LF2SS03
LF2SS04


FILL SITE 6
2F-66-8
EB-8
1100
Simonds Rd.
Presidio Blvd.
F1SB02
F1GW04
F1GW07
FILL SITE 1



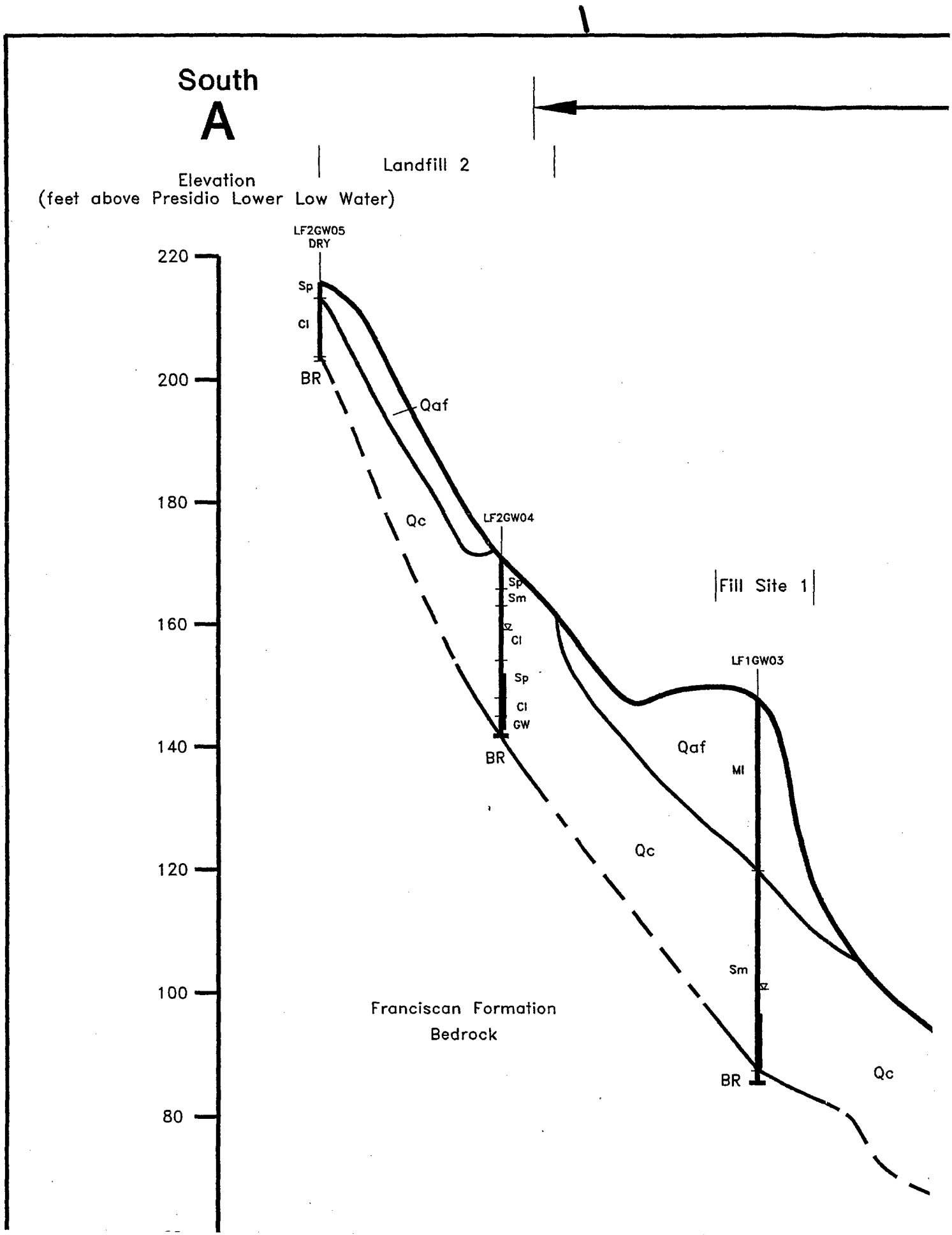


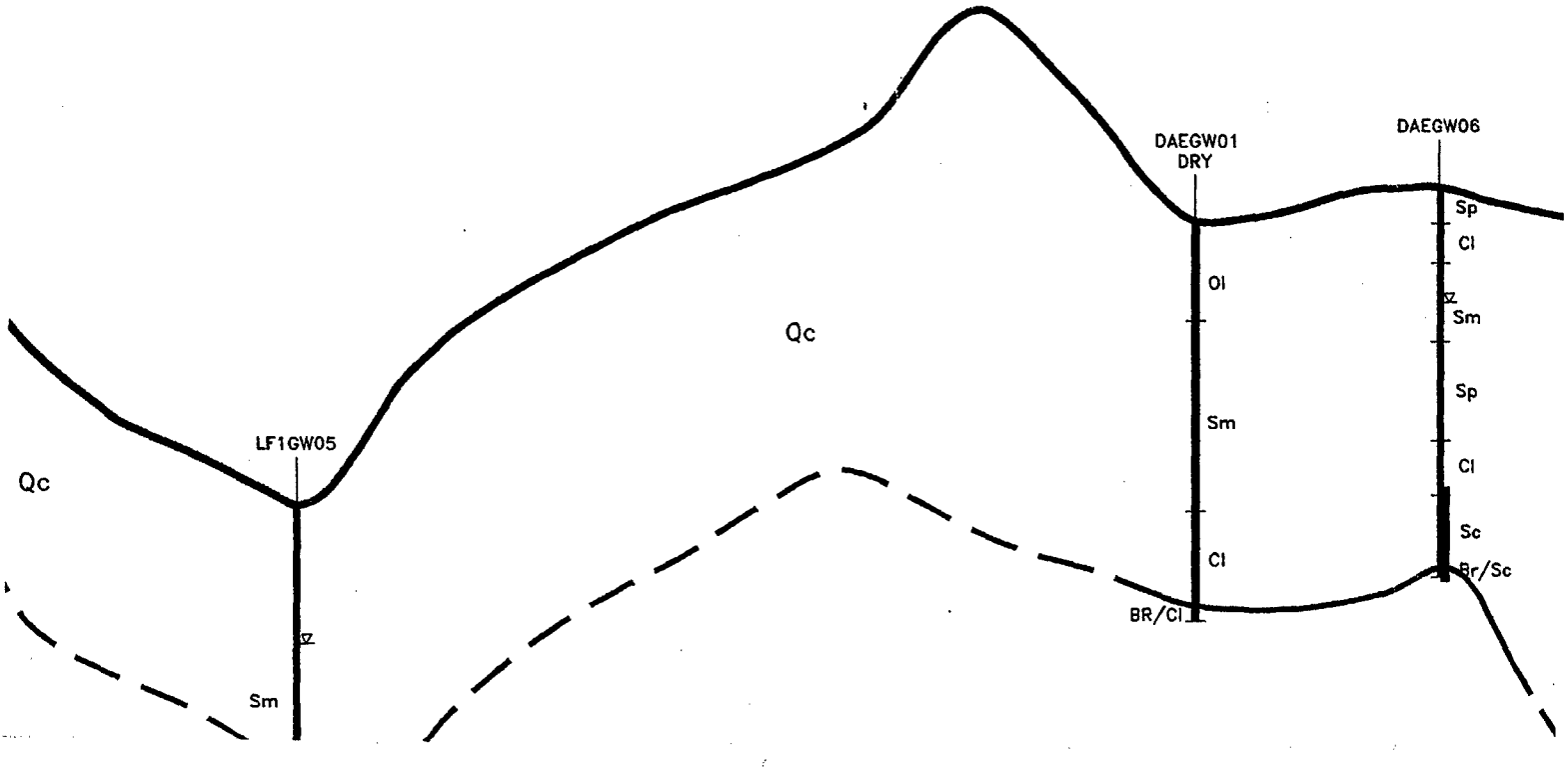
DAMES & MOORE

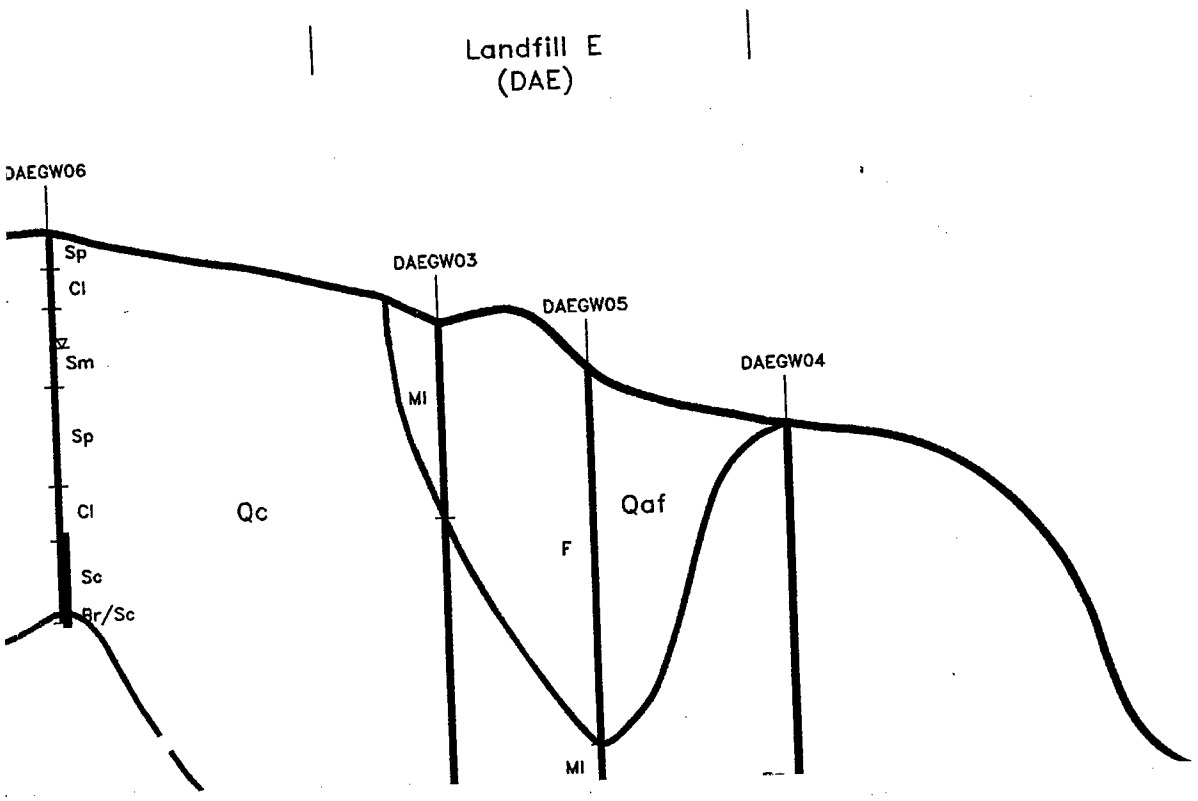
REGIONAL CROSS SECTION
LOCATION MAP
PRESIDIO OF SAN FRANCISCO

PSF25056\DV1

Date: January 1997 | Figure 2.3-5


South
A
Landfill 2
Elevation
(feet above Presidio Lower Low Water)
220
200
180
160
140
120
100
80
LF2GW05
DRY
Sp
Cl
BR
Qaf
Qc
LF2GW04
Sp
Sm
Cl
Sp
Cl
GW
BR
Fill Site 1
LF1GW03
Qaf
MI
Qc
Sm
BR
Qc
Franciscan Formation
Bedrock


DAEGW01
DRY
DAEGW06
Sp
Cl
Ol
Sm
Sp
Sm
Cl
Sc
Cl
Br/Sc
BR/Cl
Qc
Qc
LF1GW05
Qc
Sm


Landfill E
(DAE)
DAEGW06
Sp
Cl
Sm
Sp
Cl
Sc
Br/Sc
Qc
DAEGW03
MI
DAEGW05
F
Qaf
MI
DAEGW04

r Area

General Direction
of Groundwater Flow

(feet ab

North

A'

Elevation
et above Presidio Lower Low Water)

220

200

180

160

140

120

100

80

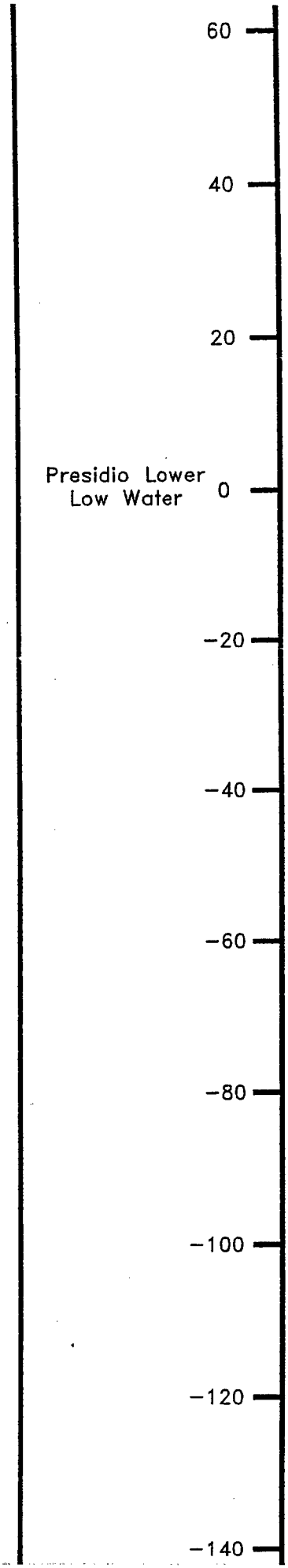
EXPLANATION

GEOLOGIC UNIT

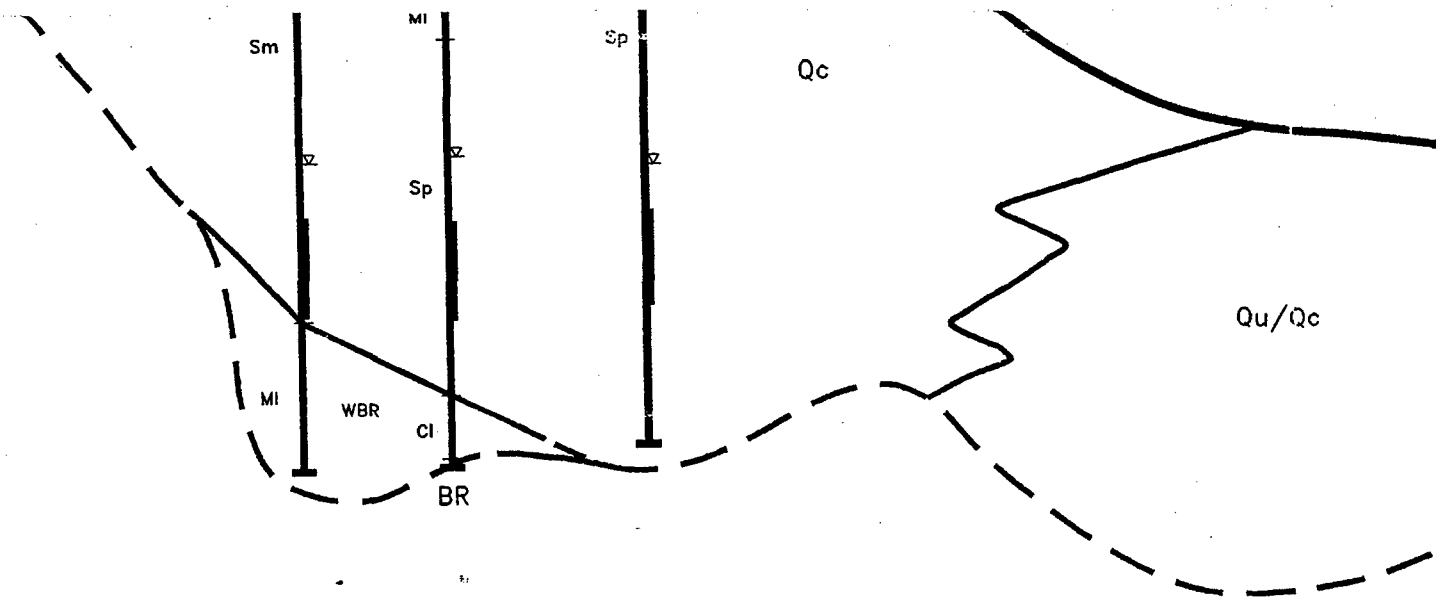
Qaf	ARTIFICIAL FILL
Qb	MODERN BEACH DEPOSITS
Qm	BAY MUD
Qu	UNDIVIDED SURFICIAL DEPOSITS
Qc	COLMA FORMATION
Qu/Qc	MAPPED AS UNDIVIDED SURFICIAL DEPOSITS BUT POSSIBLY COLMA FORMATION
WBR	WEATHERED BEDROCK OF THE FRANCISCAN FORMATION
BR	BEDROCK OF THE FRANCISCAN FORMATION (PREDOMINANTLY SERPENTINITE)

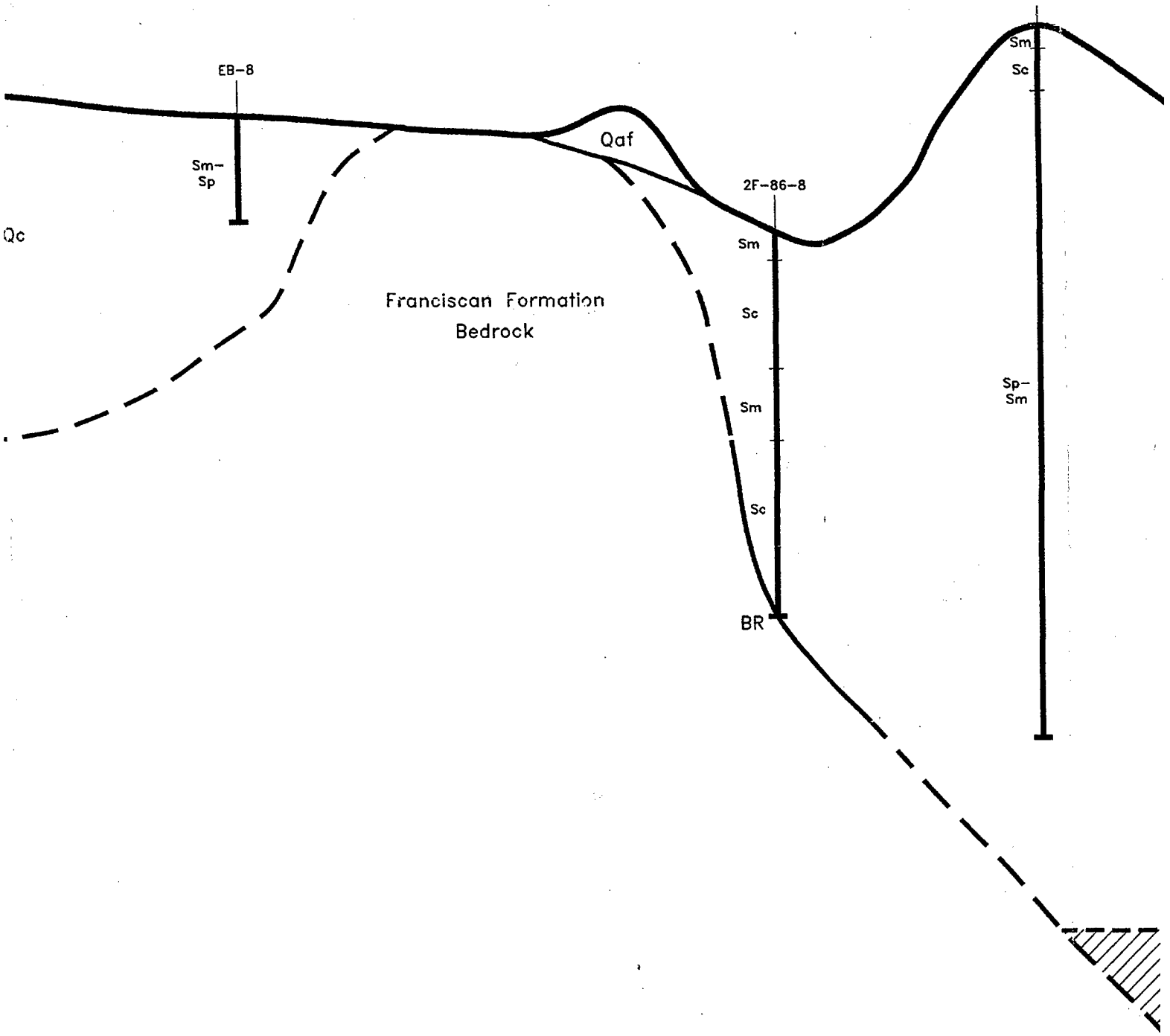
SOIL CLASSIFICATION

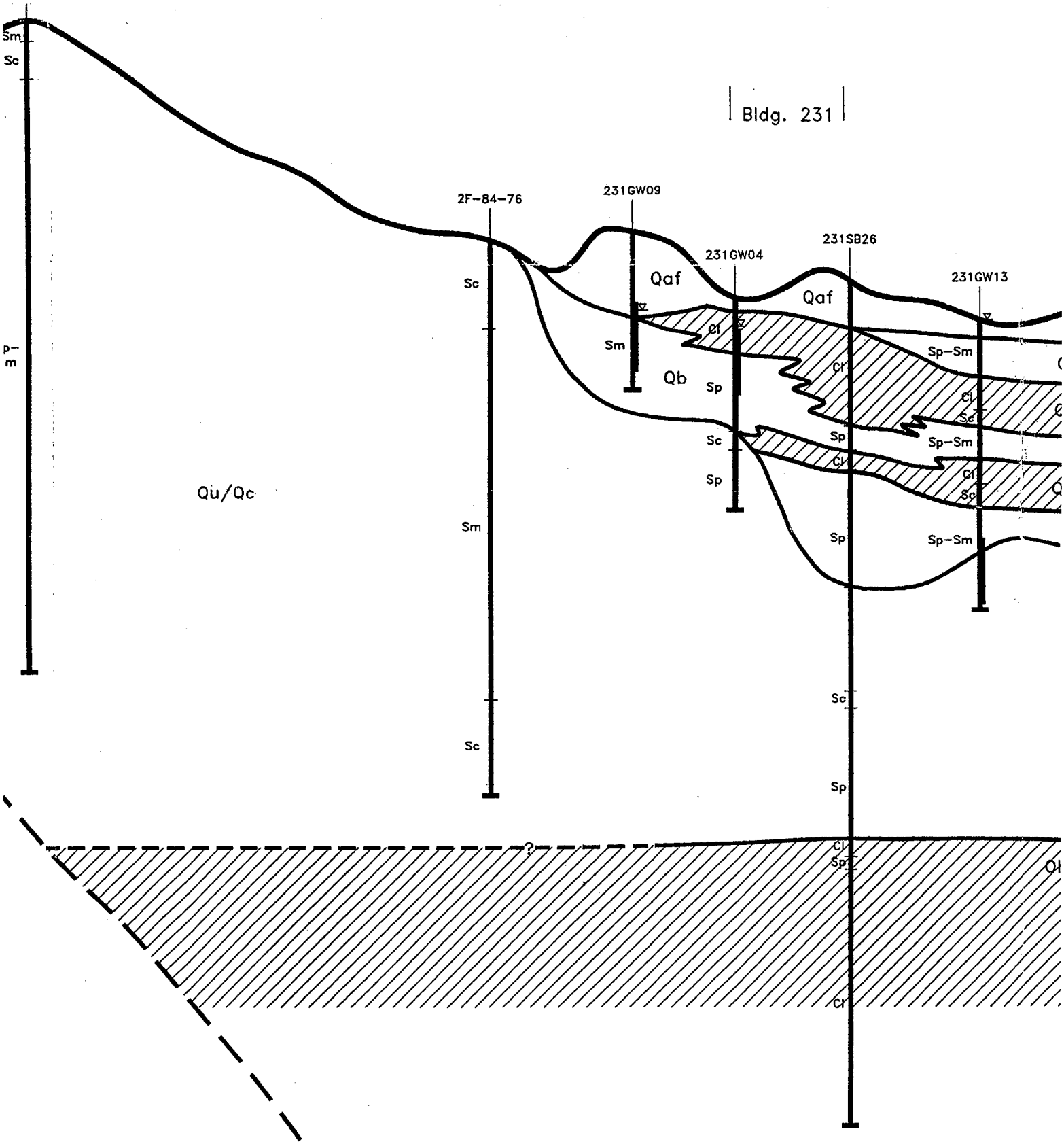
cl	CLAY
	SILT


60
40
20
Presidio Lower
Low Water
0
-20
-40
-60
-80
-100
-120
-140

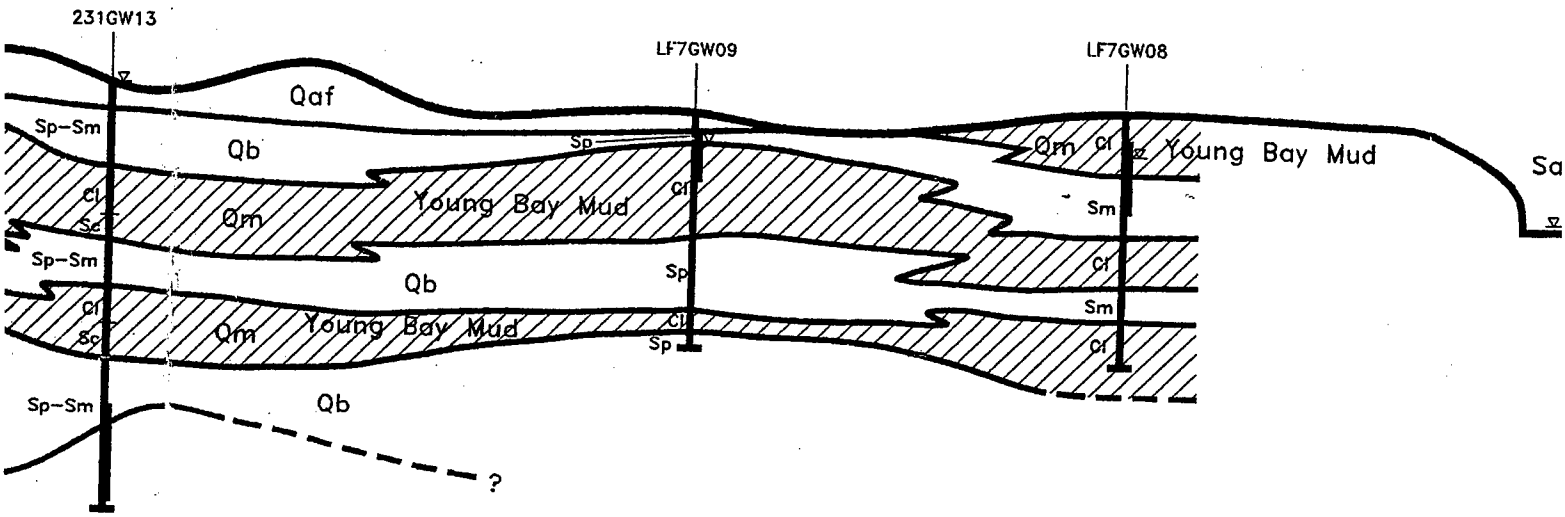
Franciscan Formation
Bedrock


Sm
MI
Sp
Sp
Qc
Qu/Qc
MI
WBR
CI
BR

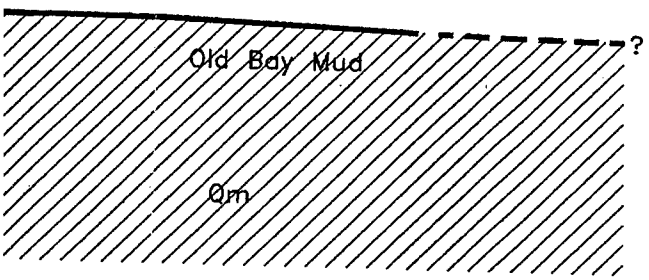

EB-8
Sm-
Sp
Qc
Qaf
2F-86-8
Sm
Sc
Sm
Sc
BR
Franciscan Formation
Bedrock
Sm
Sc
Sp-
Sm

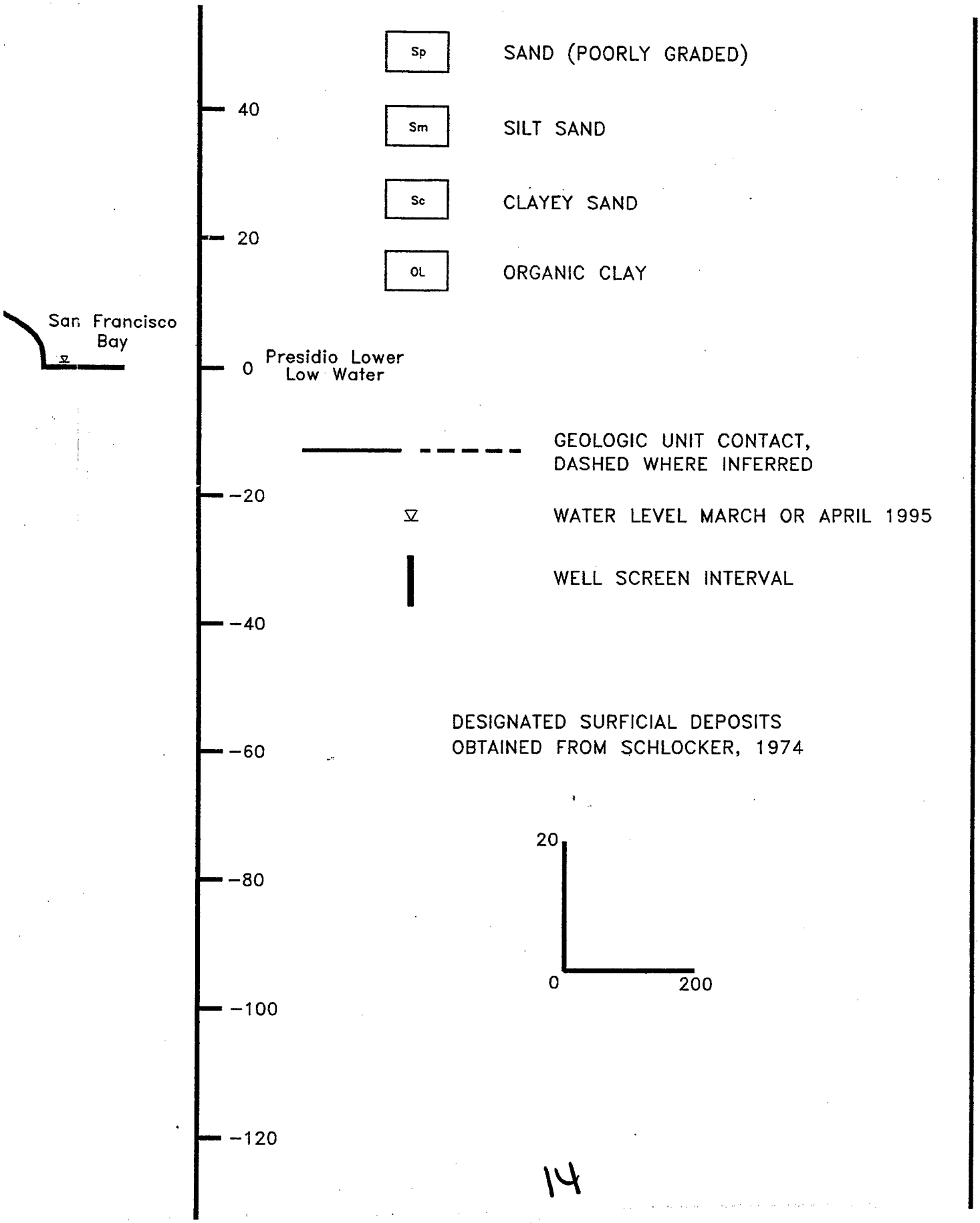

Bldg. 231
2F-84-76
231GW09
231GW04
231SB26
231GW13
Qaf
Qaf
Qb
Qu/Qc
Sm
Sc
Sp
Cl
Sp-Sm
?

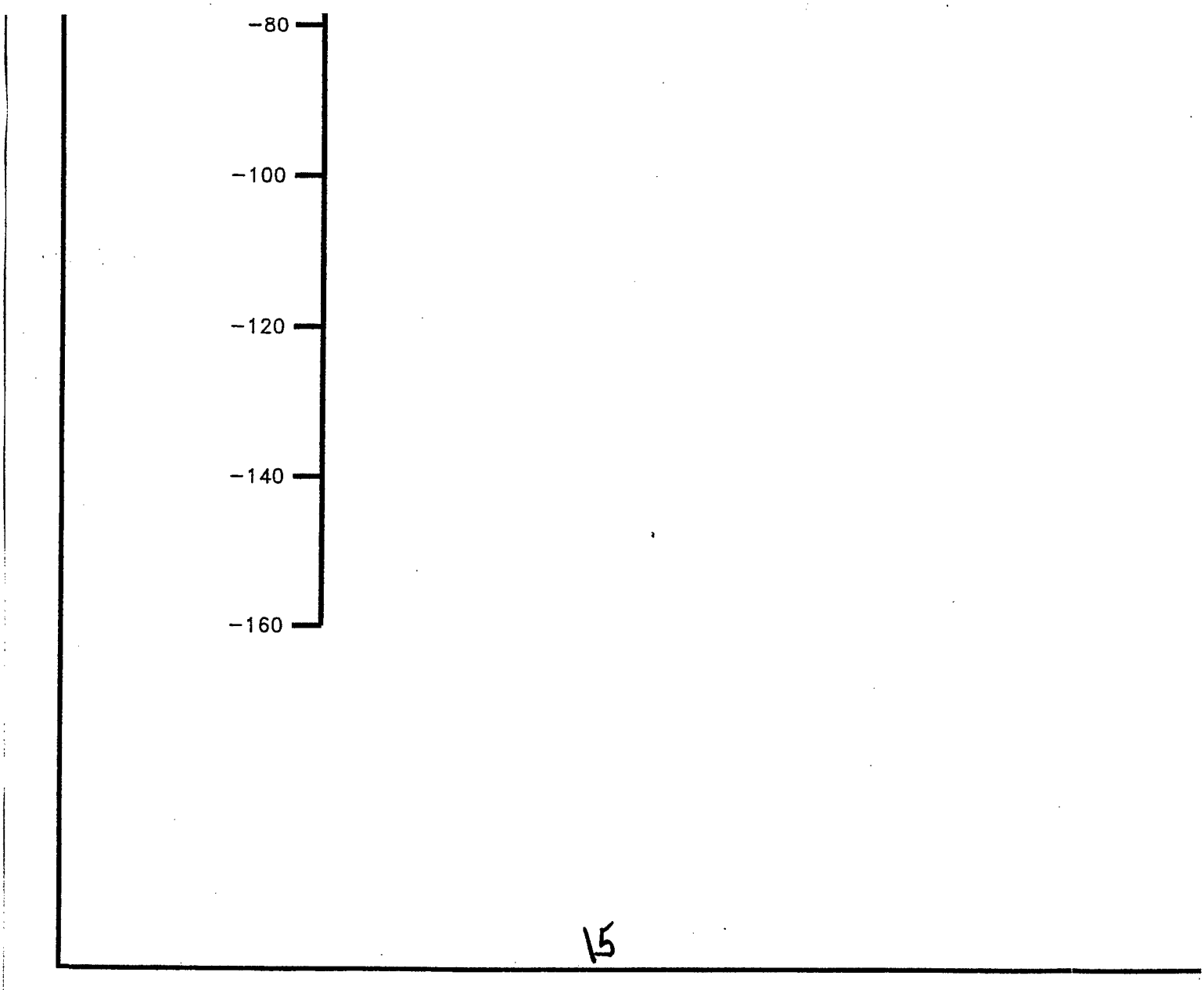
Fill Site 7

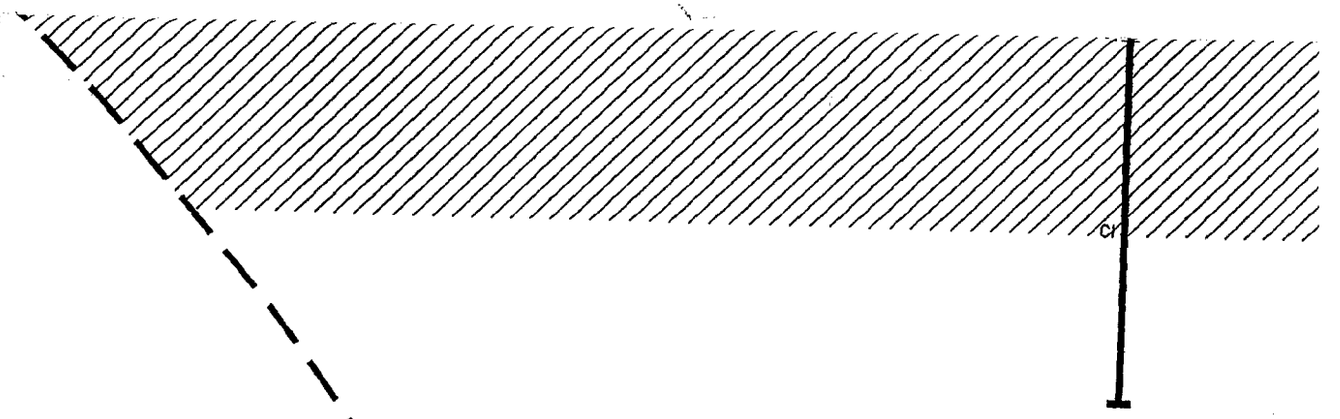


Qu/Qc



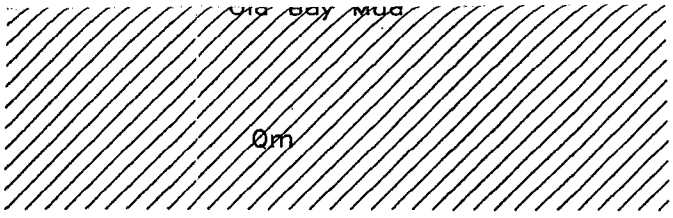

Sp
SAND (POORLY GRADED)
Sm
SILT SAND
Sc
CLAYEY SAND
OL
ORGANIC CLAY
40
20
San Francisco Bay
0
Presidio Lower Low Water
GEOLOGIC UNIT CONTACT, DASHED WHERE INFERRED
-20
WATER LEVEL MARCH OR APRIL 1995
WELL SCREEN INTERVAL
-40
DESIGNATED SURFICIAL DEPOSITS OBTAINED FROM SCHLOCKER, 1974
-60
20
-80
0
200
-100
-120


-80
-100
-120
-140
-160

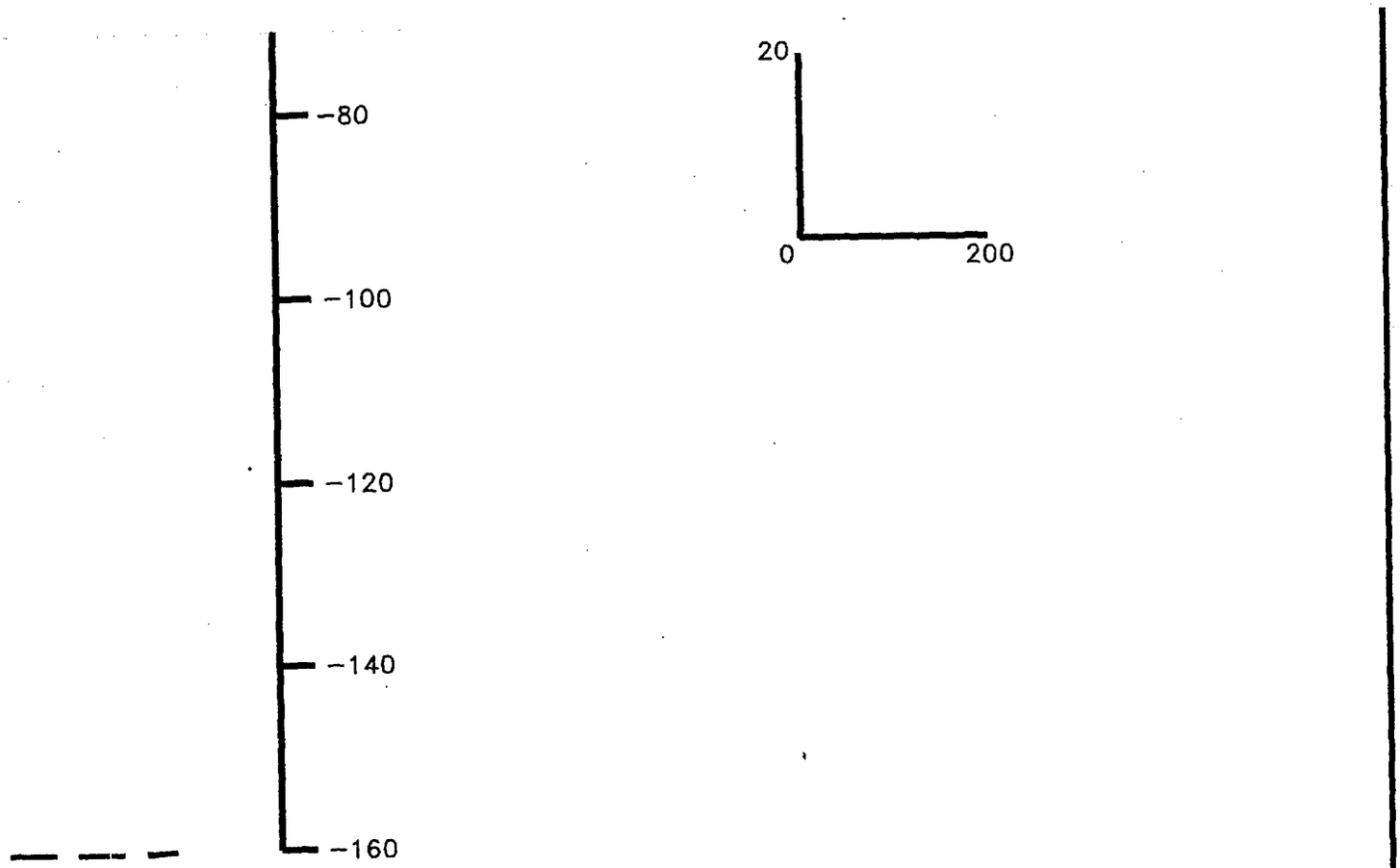


Franciscan

16



Franciscan Formation Bedrock

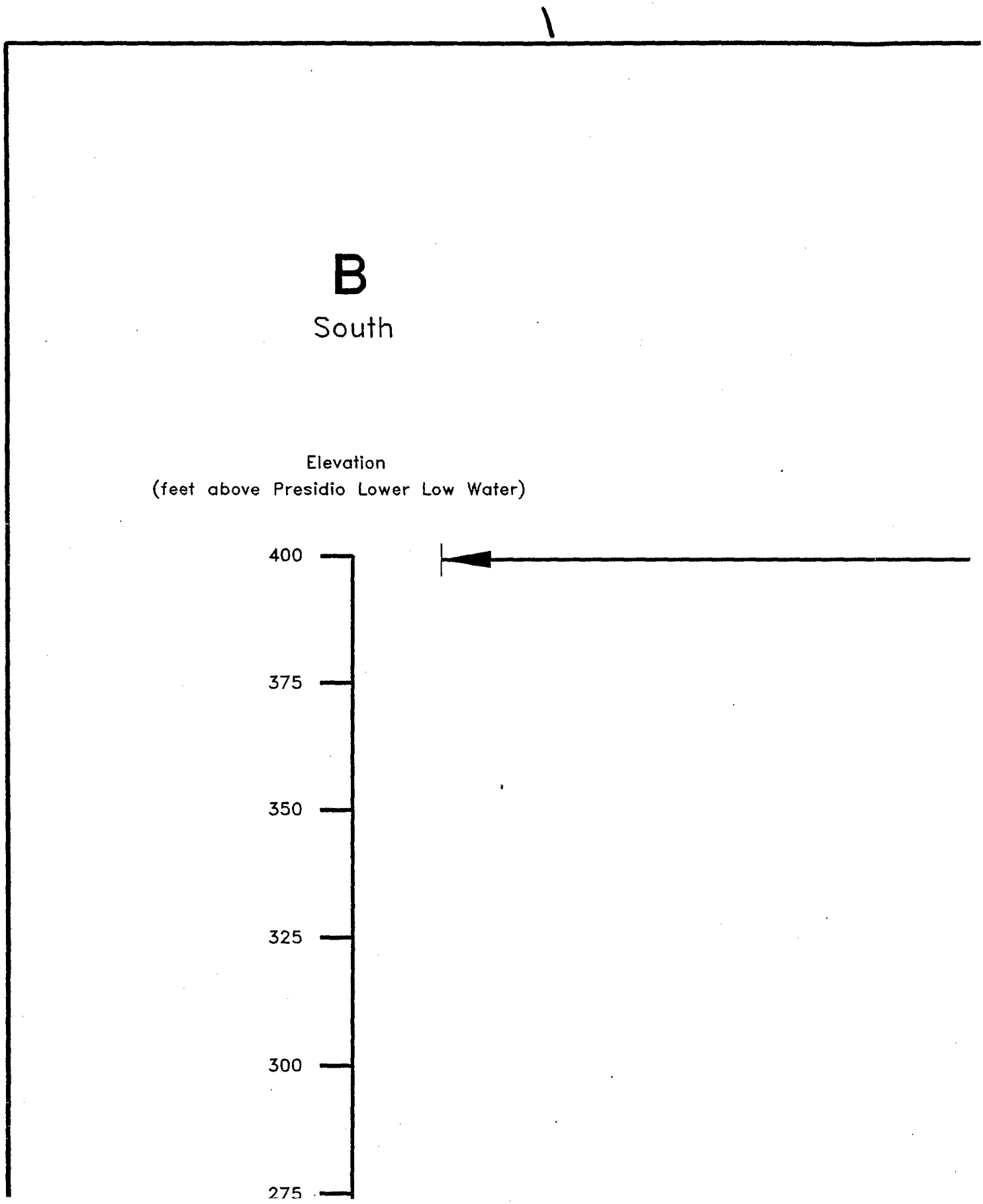


DAMES & MOORE

REGIONAL CROSS SECTION A-A'
PRESIDIO OF SAN FRANCISCO

PSF25135\DV1

Date: January 1997 | Figure 2.3-6


B
South
Elevation
(feet above Presidio Lower Low Water)
400
375
350
325
300
275

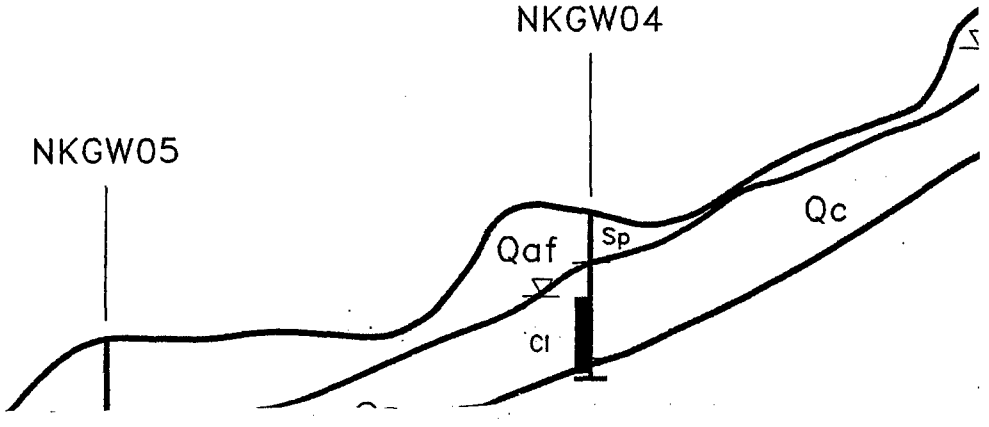
2

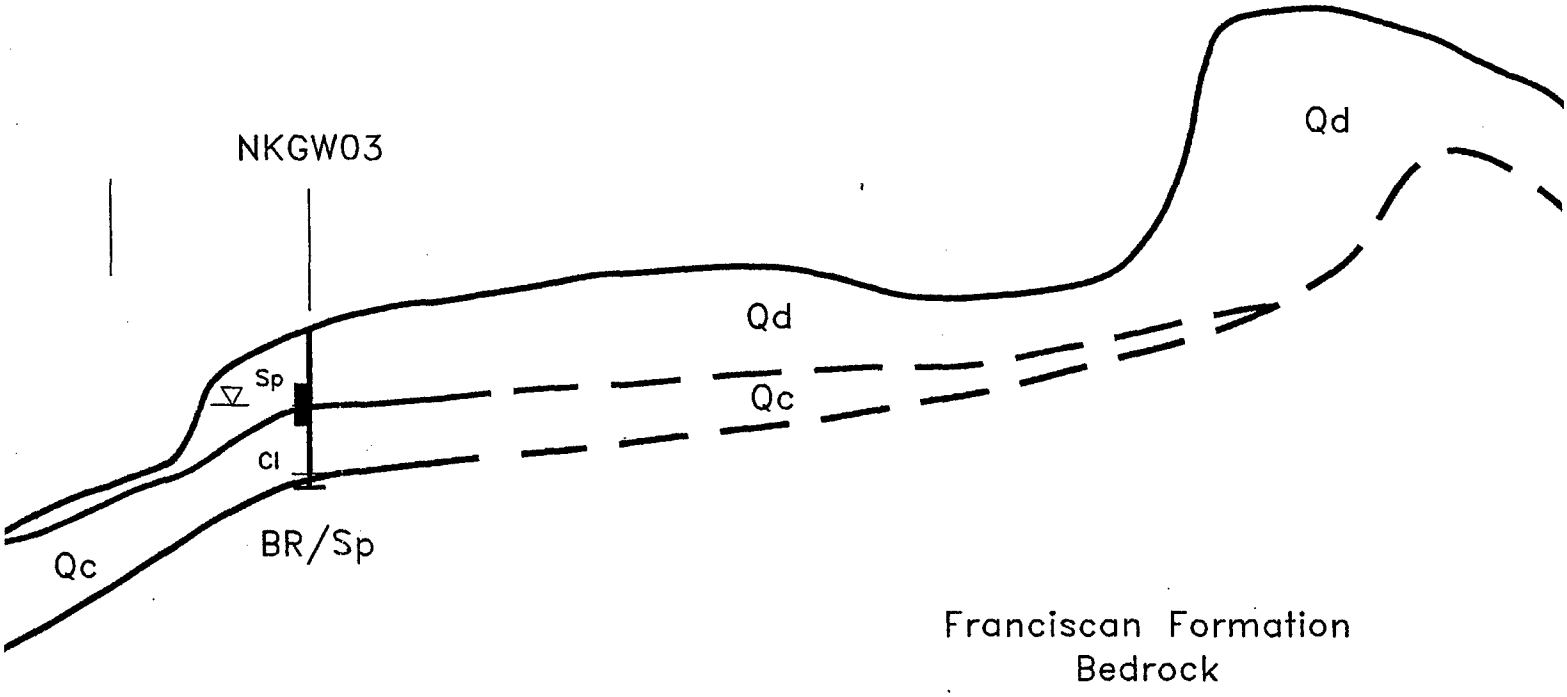
Lobos Cre

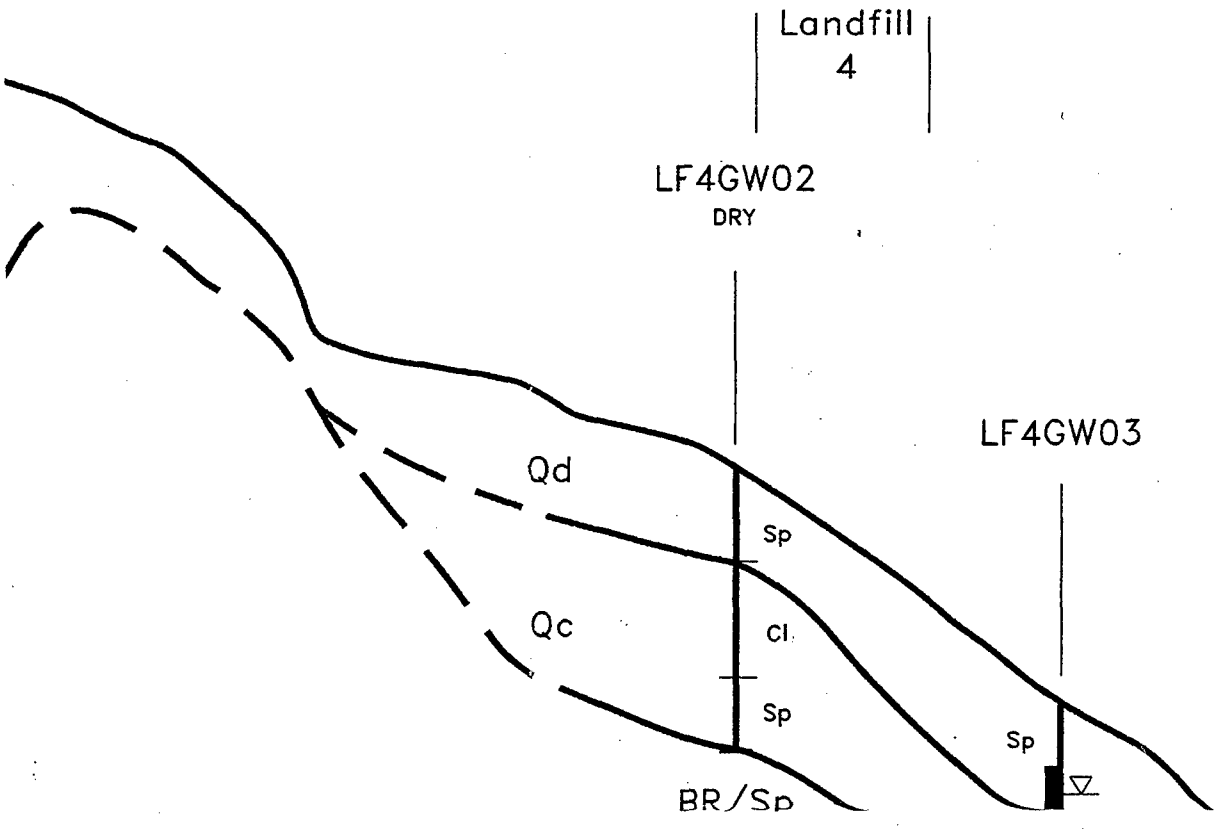
General Direction
of Groundwater Flow

Creek Groundwater Basin

Nike Facility




NKGW03
Qd
Qd
Qc
Sp
Cl
Qc
BR/Sp
Franciscan Formation
Bedrock


Landfill
4
LF4GW02
DRY
LF4GW03
Qd
Qc
Sp
Cl
Sp
Sp
BR/Sp

Marina Ground

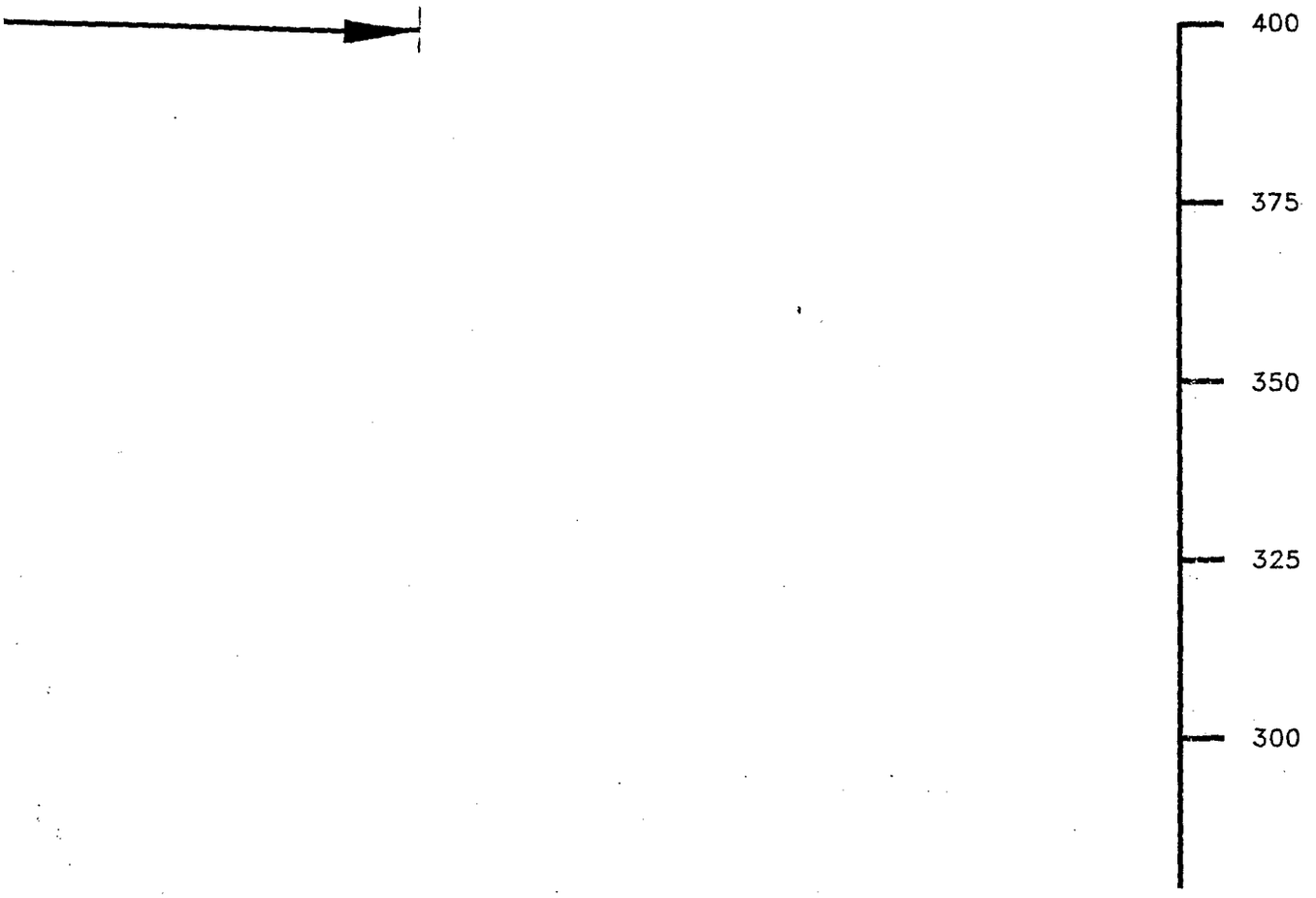
Groundwater Basin

Battery

B'

North

Elevation
(feet above Presidio Lower Low Water)



EXPLANATION

GEOLOGIC UNIT

Qaf	ARTIFICIAL FILL
Qb	MODERN BEACH DEPOSITS
Qu	UNDIVIDED SURFICIAL DEPOSITS
Qsr	SLOPE DEBRIS AND RAVINE FILL
Qd	DUNE SAND
Qc	COLMA FORMATION
WBR	WEATHERED BEDROCK OF THE FRANCISCAN FORMATION
BR/Sp	SERPENTINITE BEDROCK OF THE FRANCISCAN FORMATION
BR/Kjss	SANDSTONE BEDROCK OF THE FRANCISCAN FORMATION

wer Low Water)

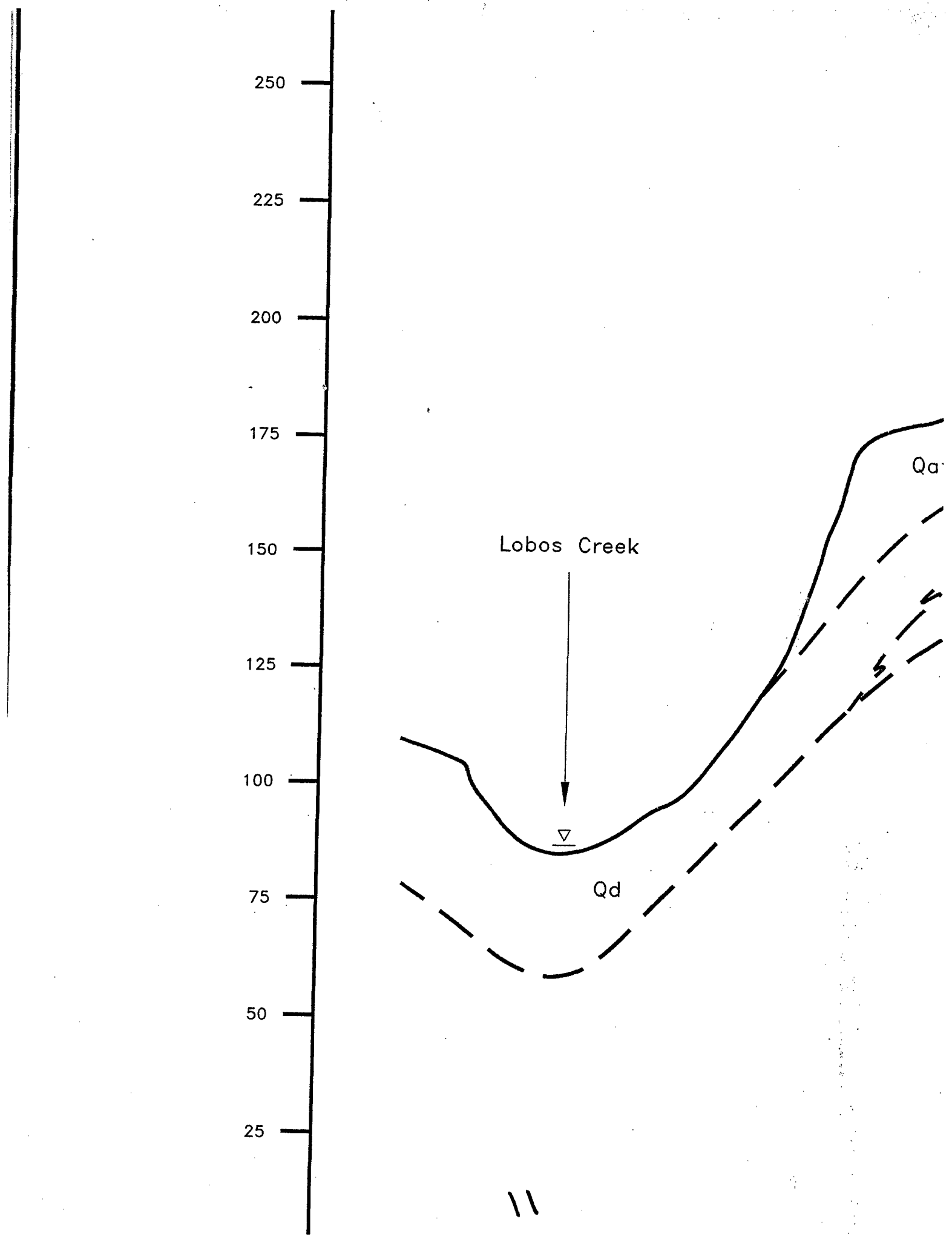
400

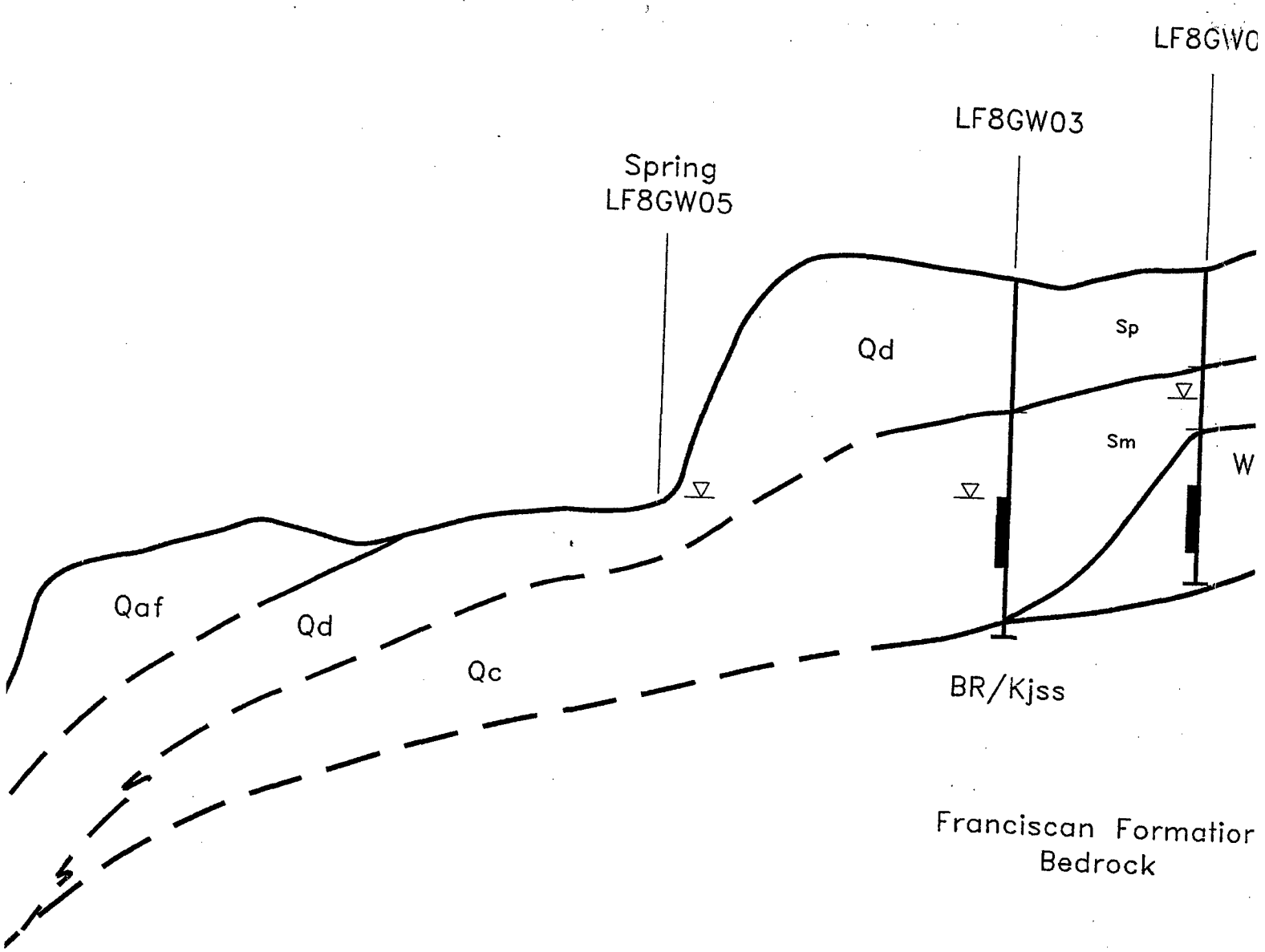
375

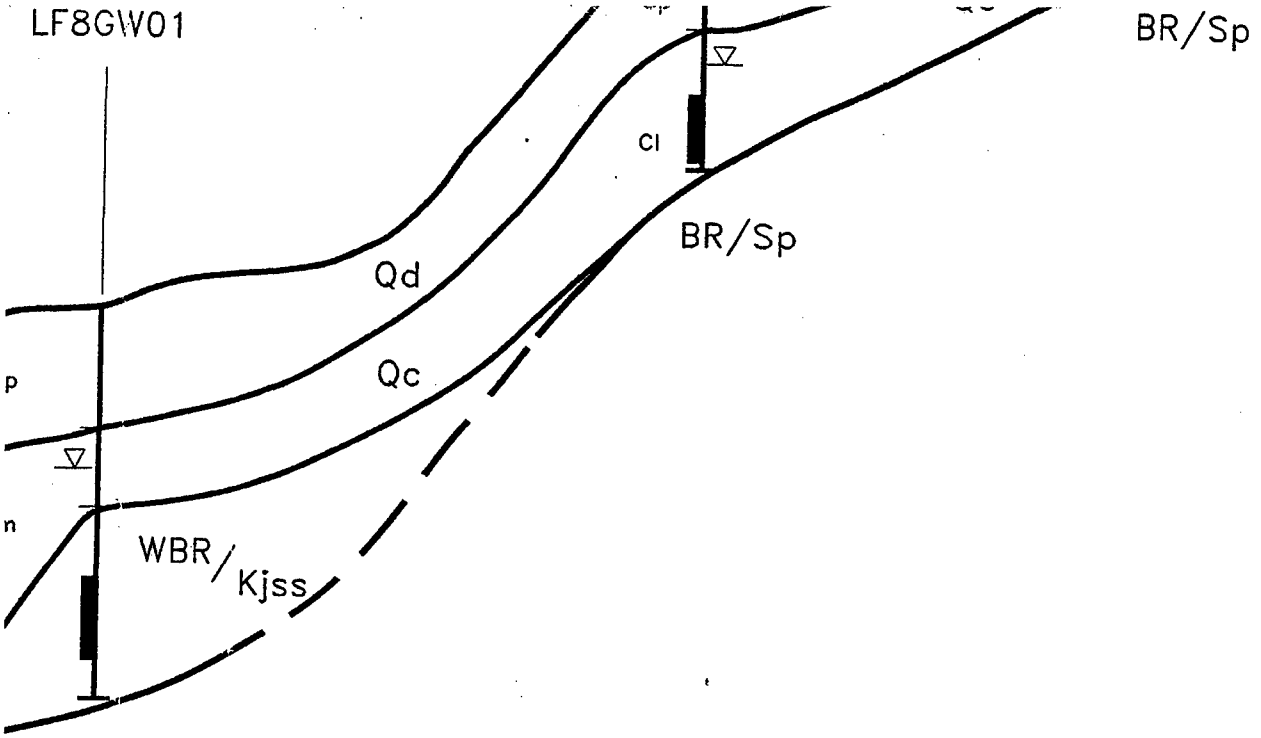
350

325

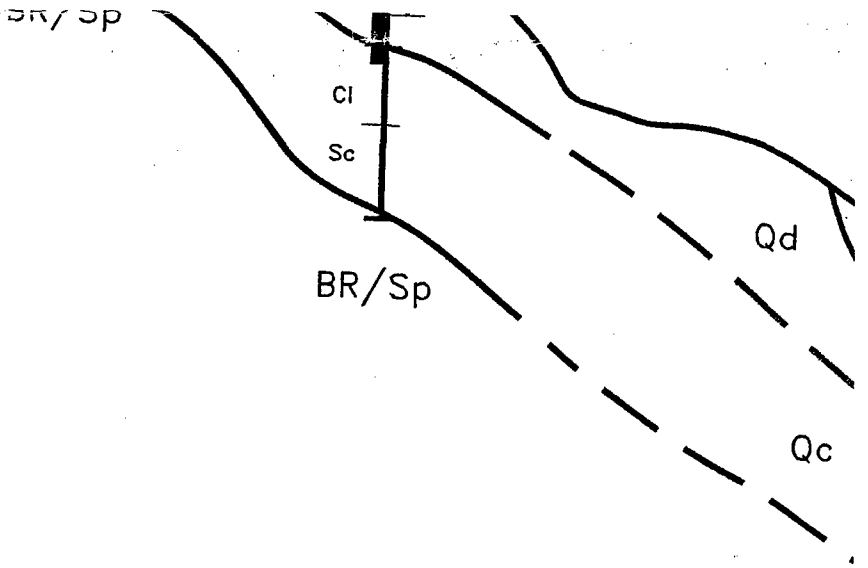
300

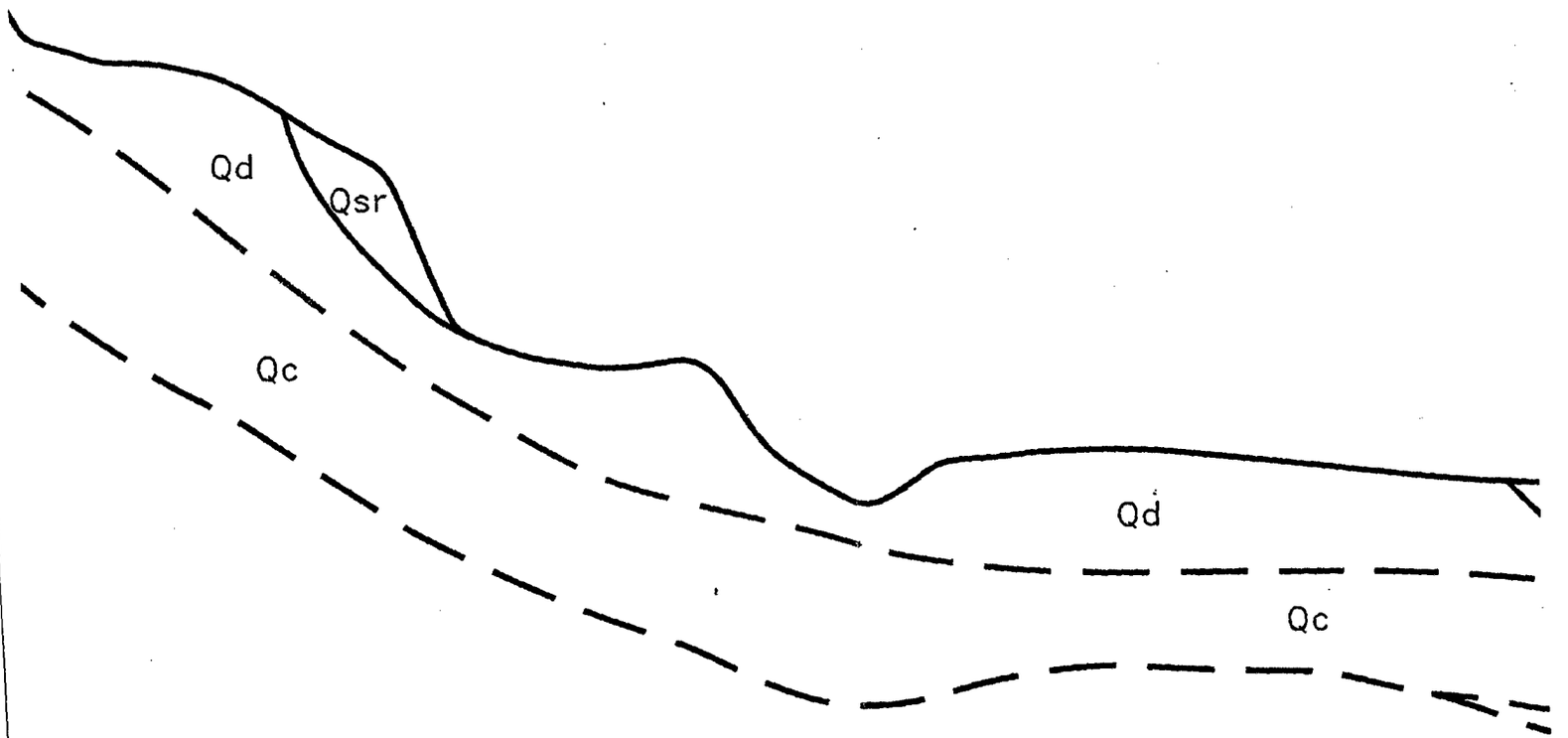

250
225
200
175
150
125
100
75
50
25
Lobos Creek
Qa
Qd


LF8GW0
LF8GW03
Spring
LF8GW05
Qd
Sp
Sm
W
Qaf
Qd
Qc
BR/Kjss
Franciscan Formation
Bedrock



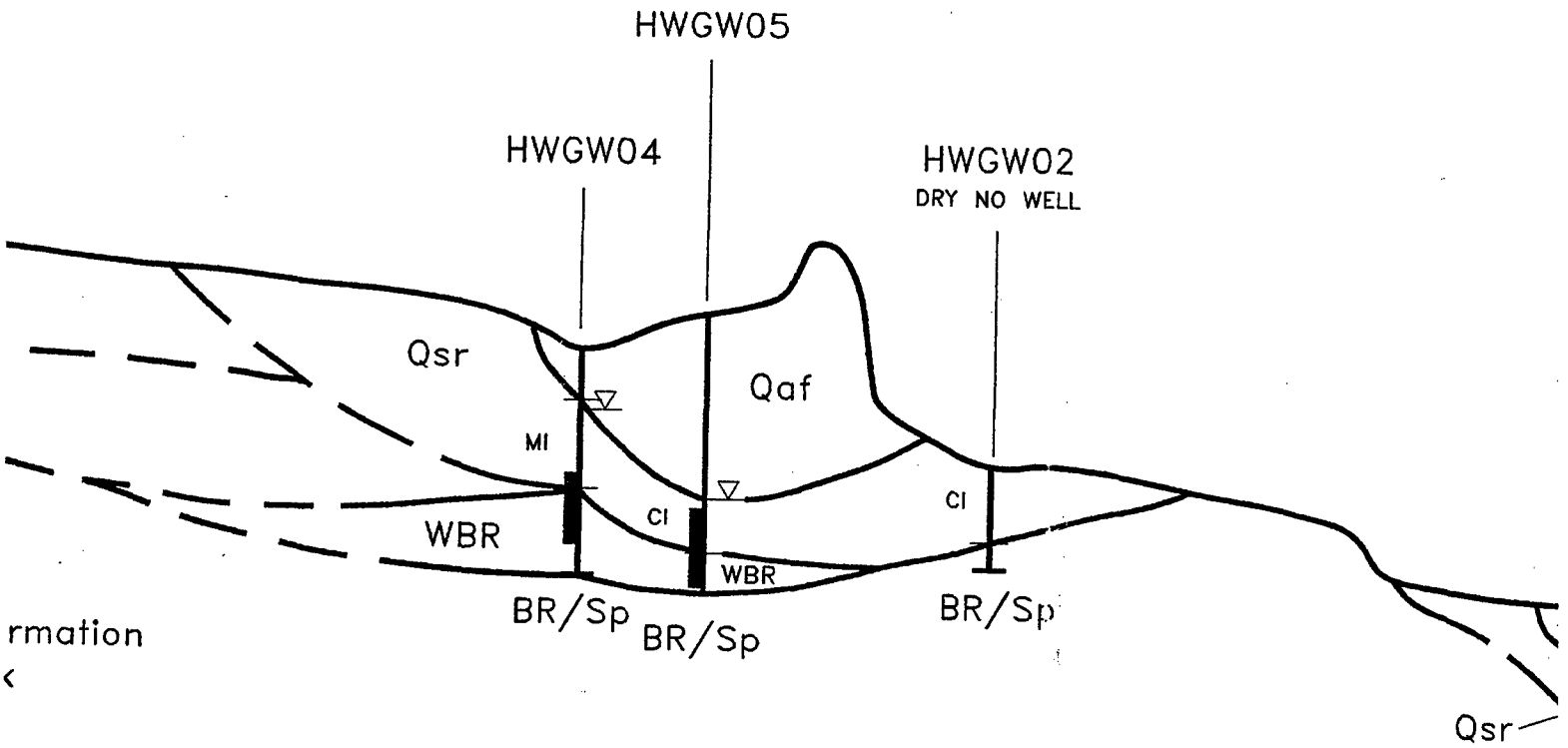
Formation
ıck

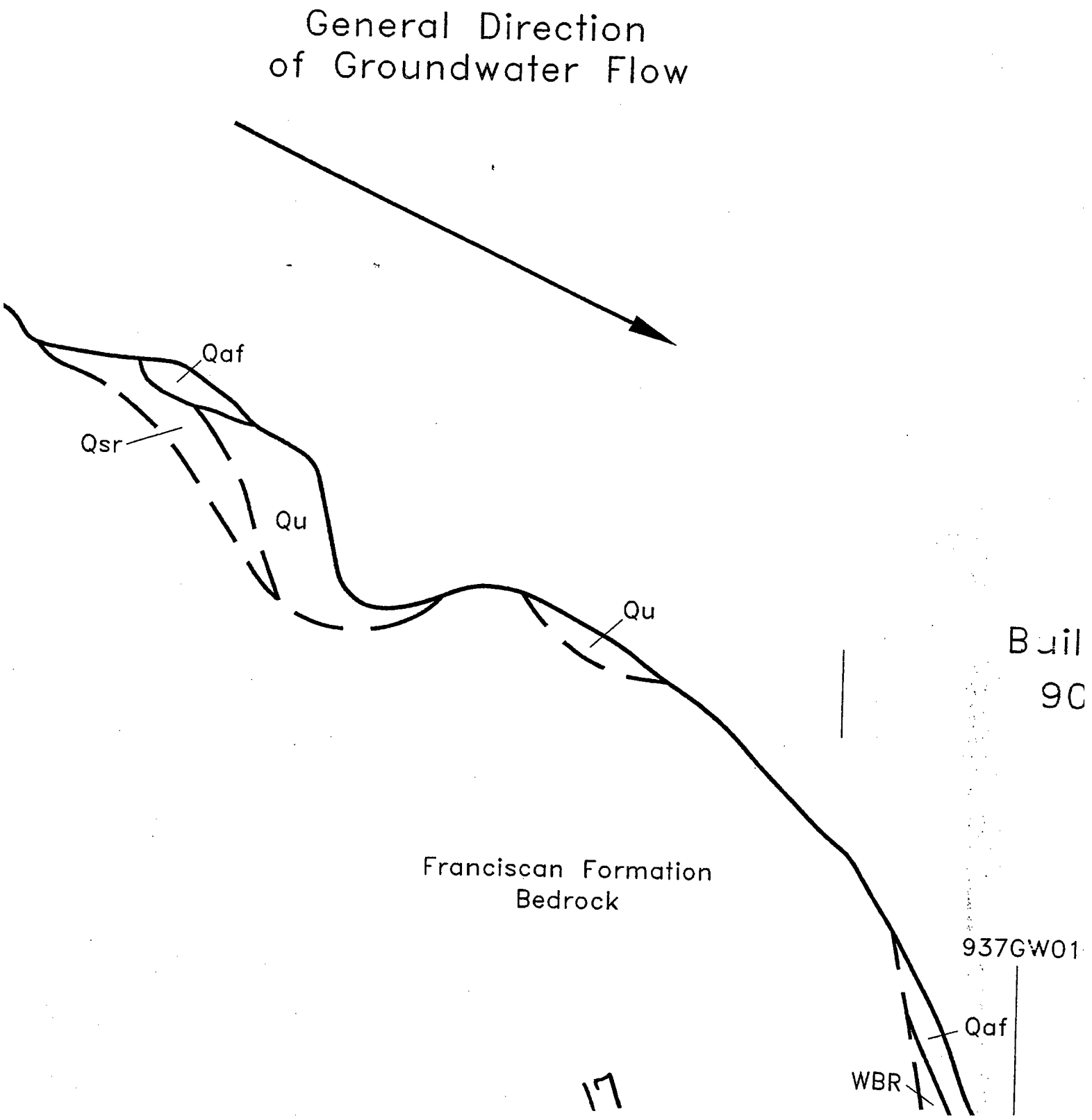

BR/Sp
Cl
Sc
Qd
BR/Sp
Qc

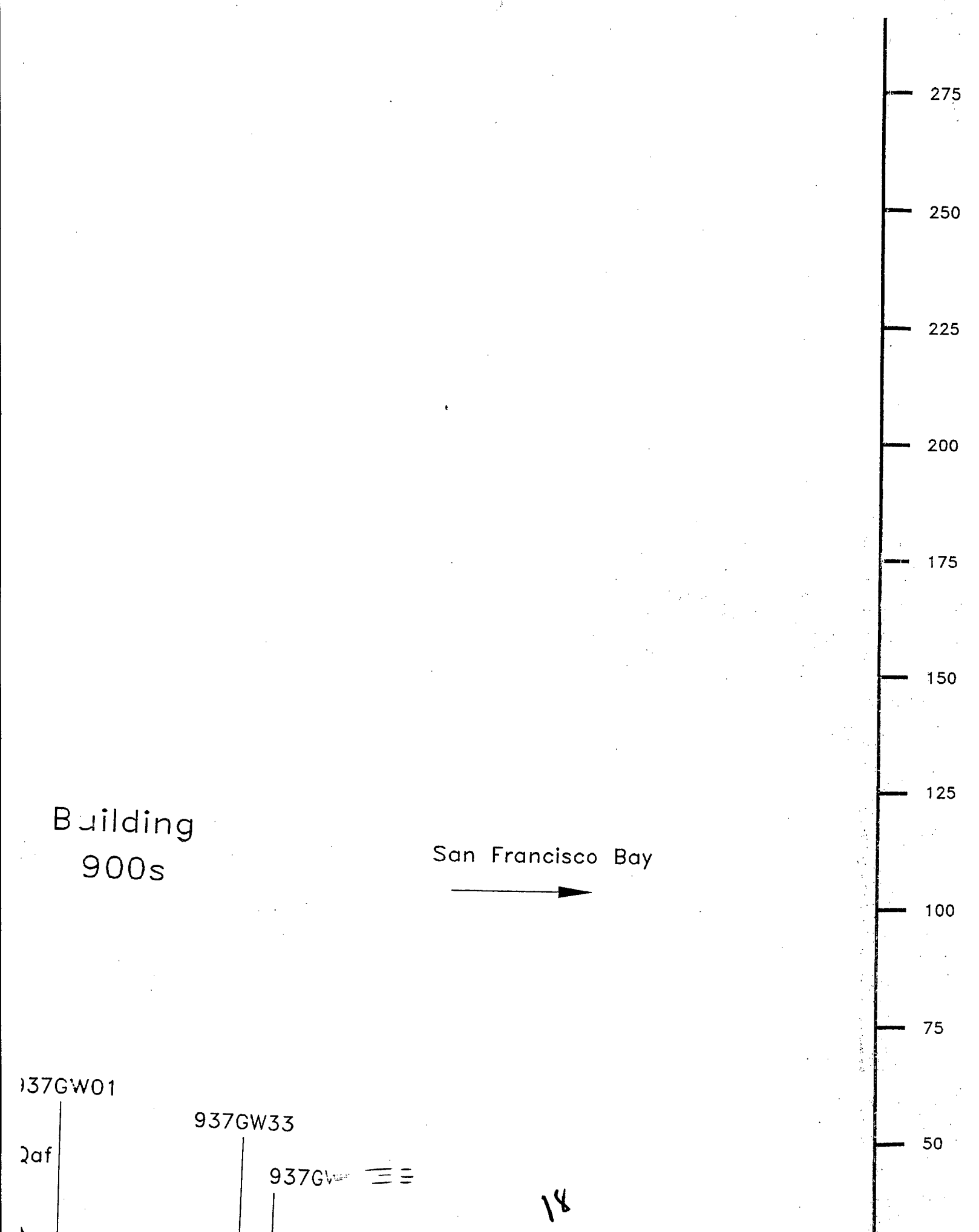


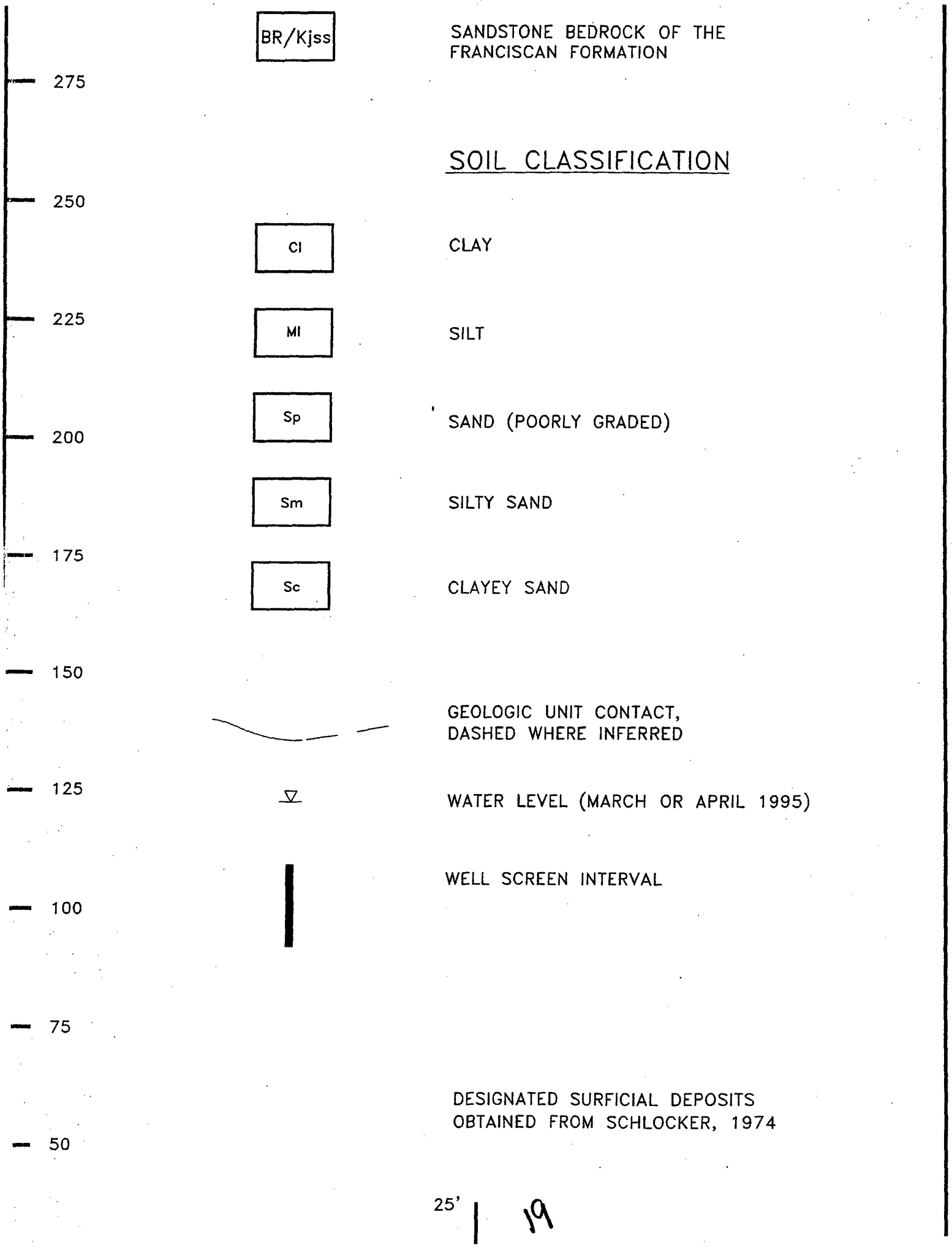
Franciscan Formation
Bedrock

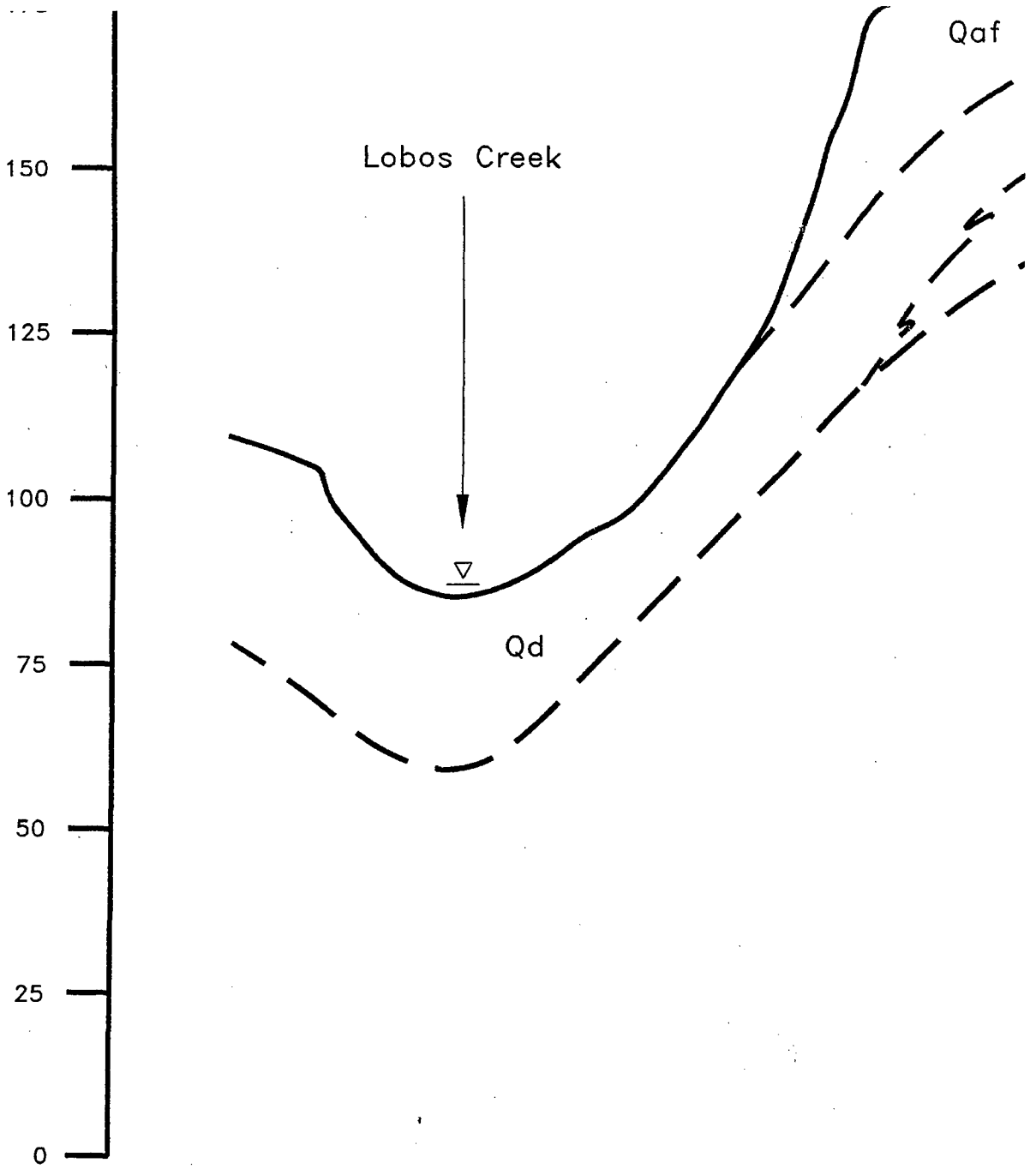
Battery
Howe/Wagner

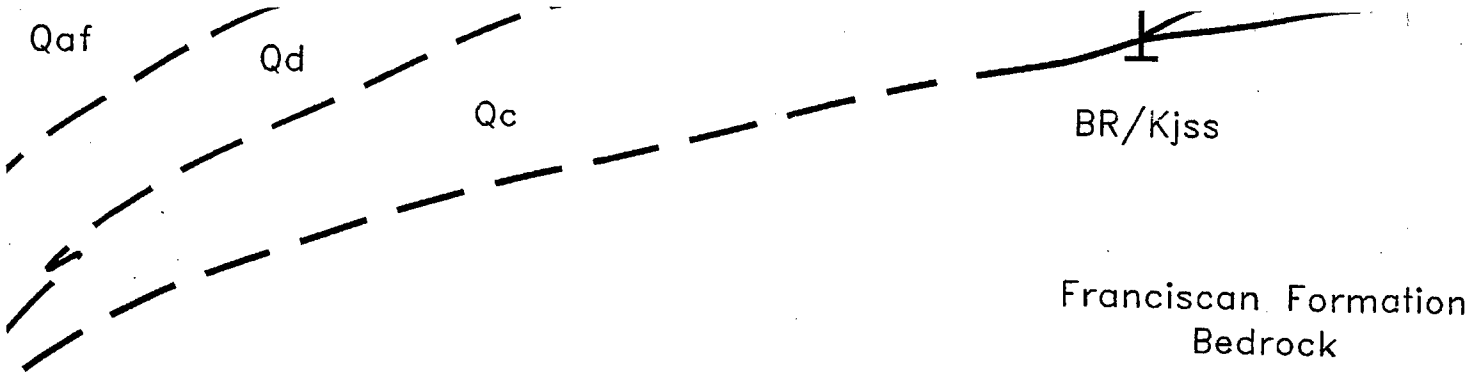



General Direction
of Groundwater Flow
Qaf
Qsr
Qu
Qu
Bail
90
Franciscan Formation
Bedrock
937GW01
Qaf
WBR


275
250
225
200
175
150
125
100
75
50
Building
900s
San Francisco Bay
937GW01
Qaf
937GW33
937GW
18

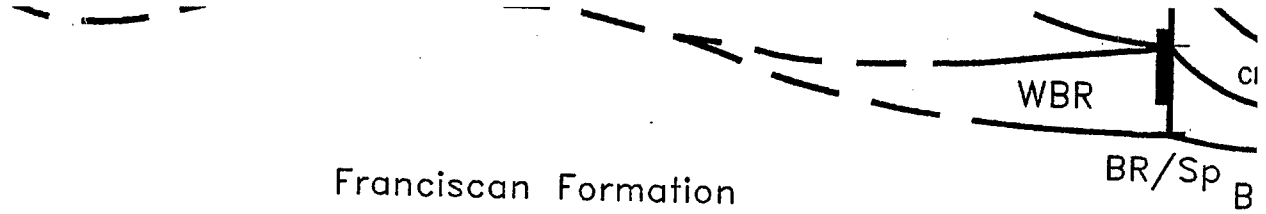

BR/Kjss
SANDSTONE BEDROCK OF THE FRANCISCAN FORMATION
275
SOIL CLASSIFICATION
250
Cl
CLAY
225
Ml
SILT
Sp
SAND (POORLY GRADED)
200
Sm
SILTY SAND
175
Sc
CLAYEY SAND
150
GEOLOGIC UNIT CONTACT, DASHED WHERE INFERRED
125
WATER LEVEL (MARCH OR APRIL 1995)
WELL SCREEN INTERVAL
100
75
DESIGNATED SURFICIAL DEPOSITS OBTAINED FROM SCHLOCKER, 1974
50
25'
19


150
125
100
75
50
25
0
Lobos Creek
Qaf
Qd

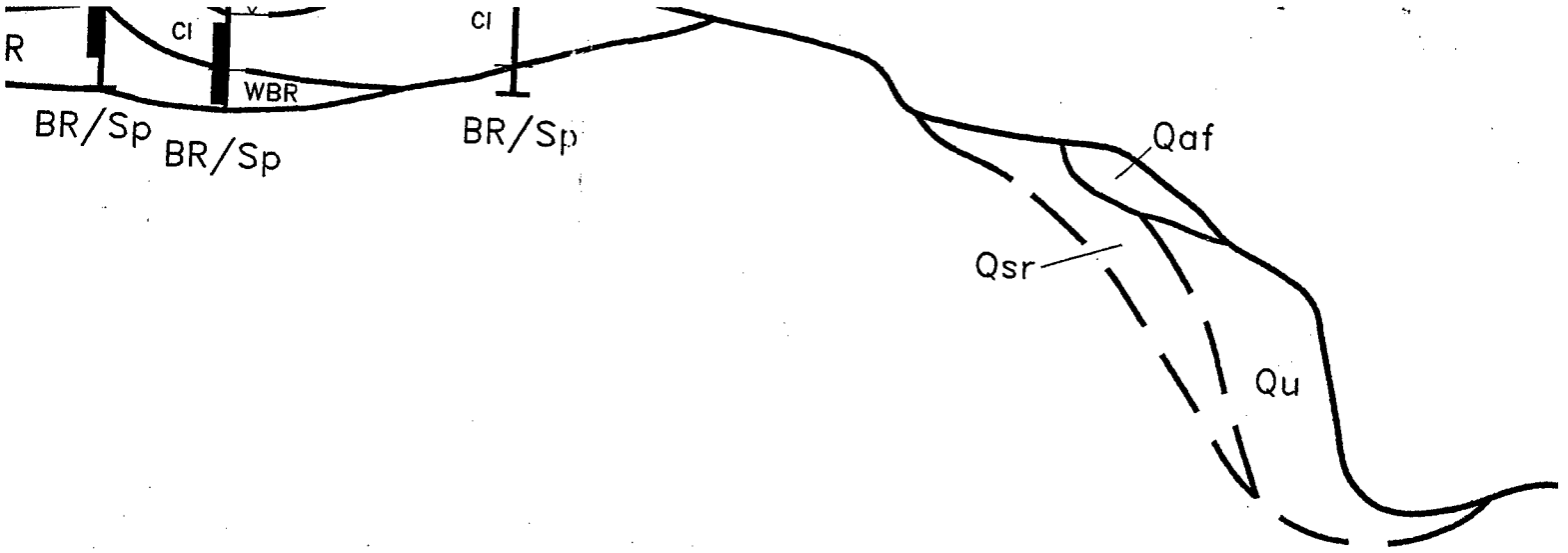


Franciscan Formation
Bedrock

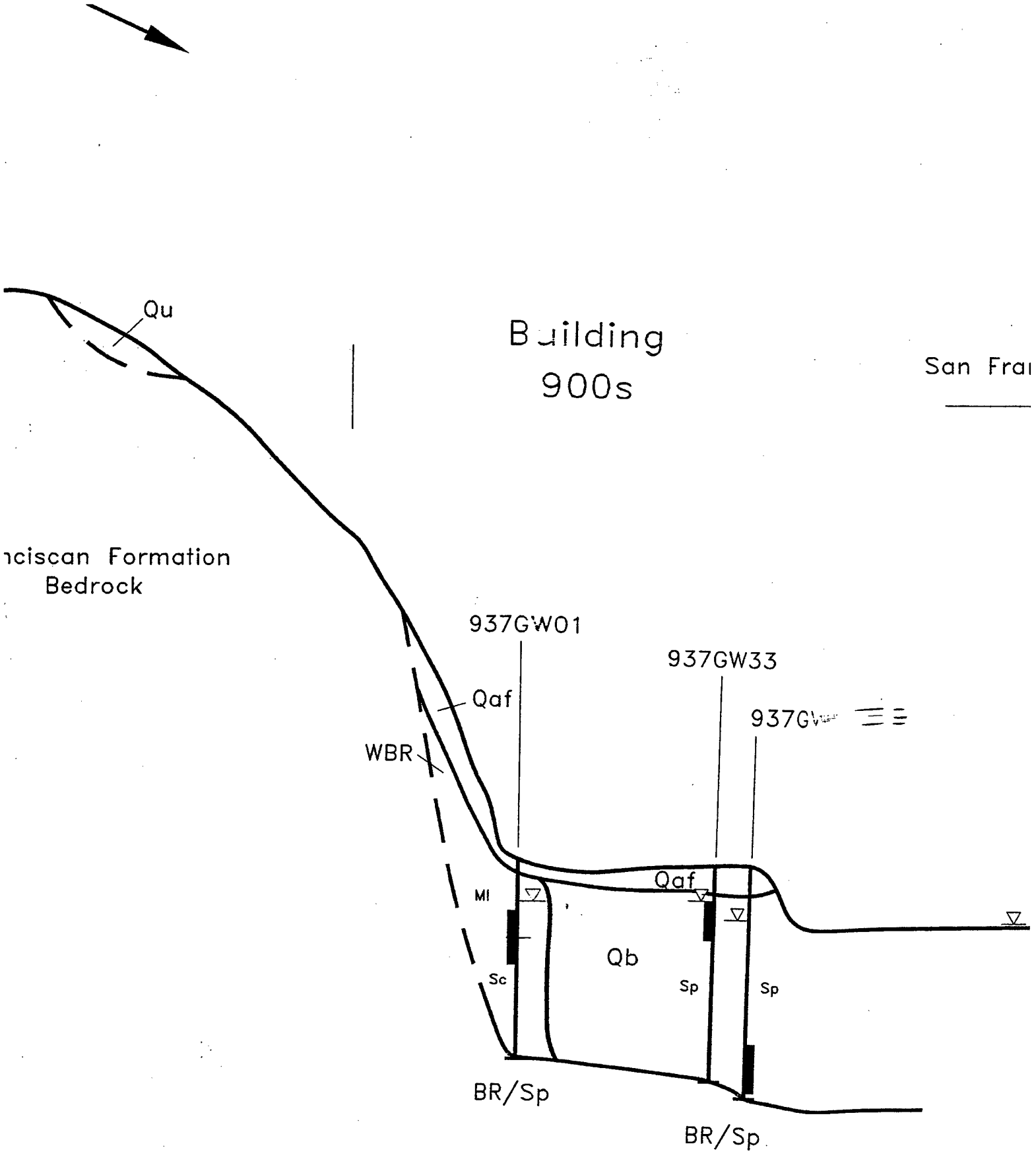
ıtion

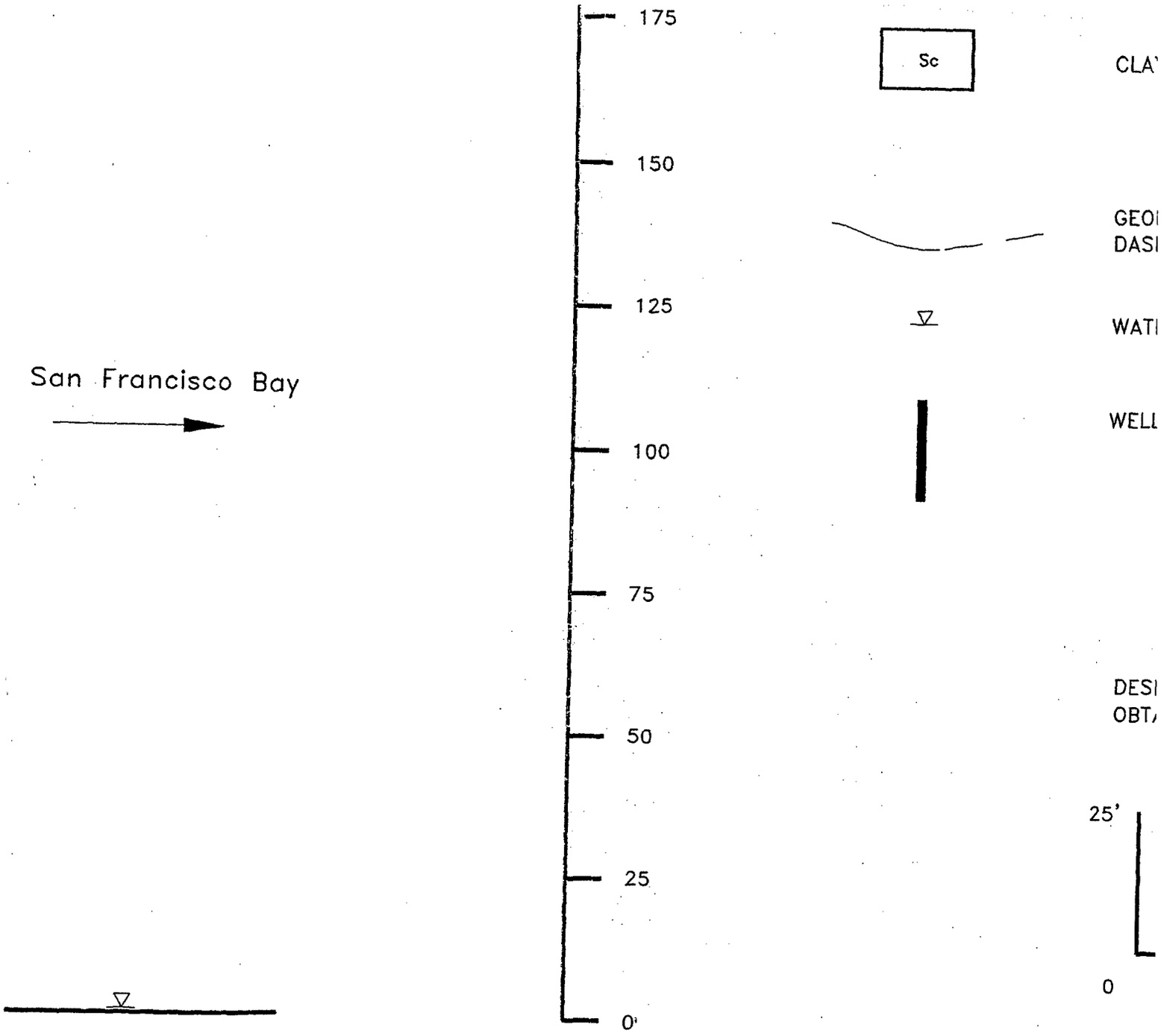


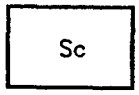
Franciscan Formation
Bedrock



Franc


Qu
Building
900s
San Fra
ıciscan Formation
Bedrock
937GW01
937GW33
937GW
Qaf
WBR
Qaf
MI
Qb
Sc
Sp
Sp
BR/Sp
BR/Sp


175
150
125
100
75
50
25
0
Sc
CLA
GEOI
DASI
WATI
WELL
DESI
OBT
25'
0
San Francisco Bay



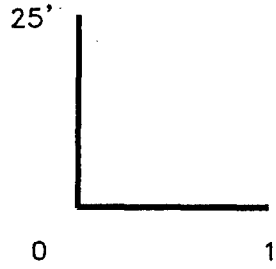
CLAYEY SAND

GEOLOGIC UNIT CONTACT,
DASHED WHERE INFERRED

WATER LEVEL (MARCH OR APRIL 1995)

WELL SCREEN INTERVAL

DESIGNATED SURFICIAL DEPOSITS
OBTAINED FROM SCHLOCKER, 1974

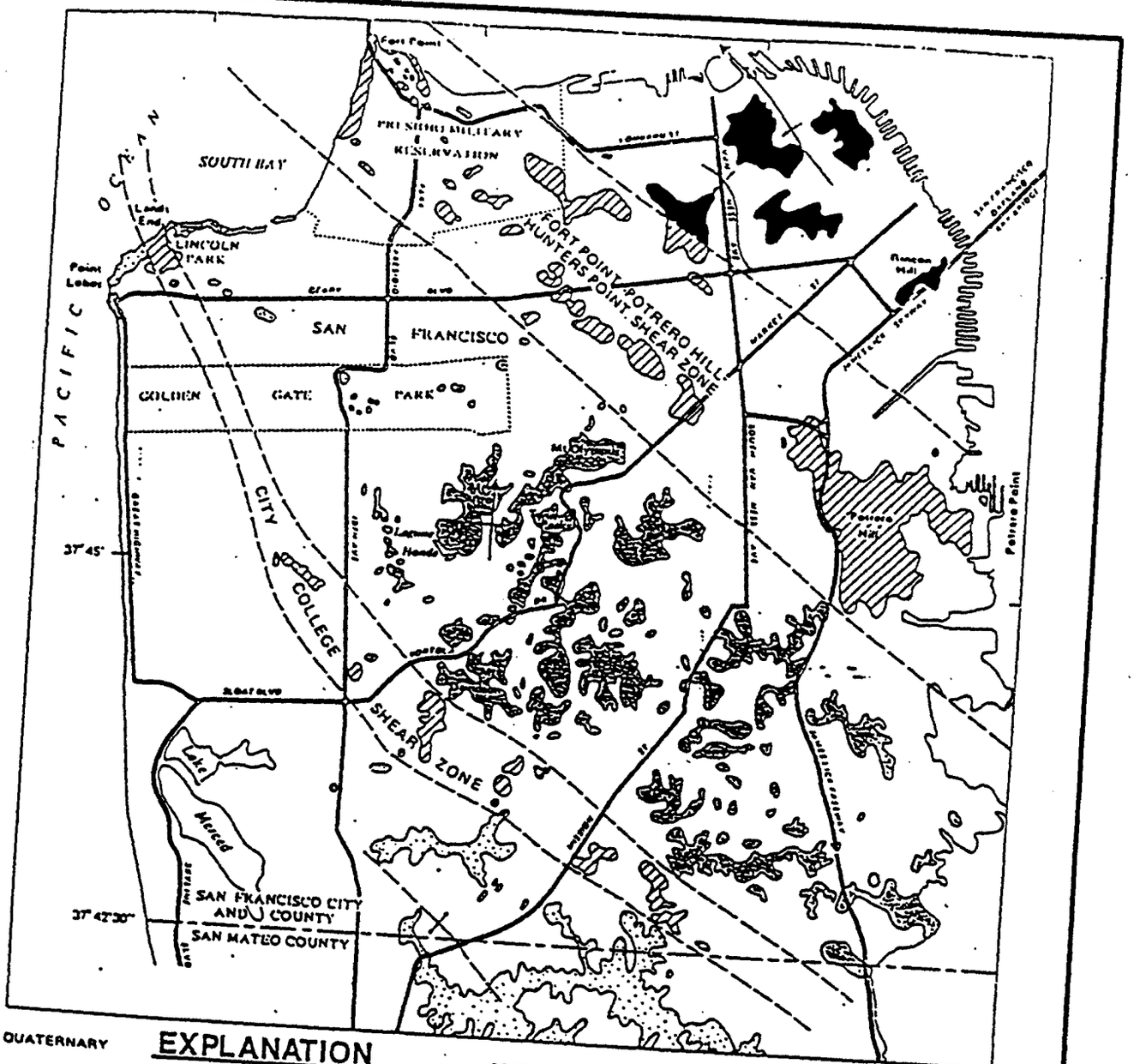


DAMES & MOORE

REGIONAL CROSS SECTION B-B'
PRESIDIO OF SAN FRANCISCO

PSF25136\DV1

Date: January 1997 | Figure 2.3-7



EXPLANATION

QUATERNARY

Surficial rocks

CRETACEOUS AND JURASSIC(?)

Great Valley sequence

Sandstone and shale
Rocks in the Point Lobos area, west of the City College shear zone, are tentatively assigned to the Great Valley sequence

Franciscan Formation

Radiolarian chert; greenstone, and some sandstone and shale

Sandstone and shale

Sheared rocks
Includes fragments of Franciscan Formation, Great Valley sequence, and serpentine

Contact

Anticline

Syncline

-N-

0 1
Miles

(from Schlocker, 1974)

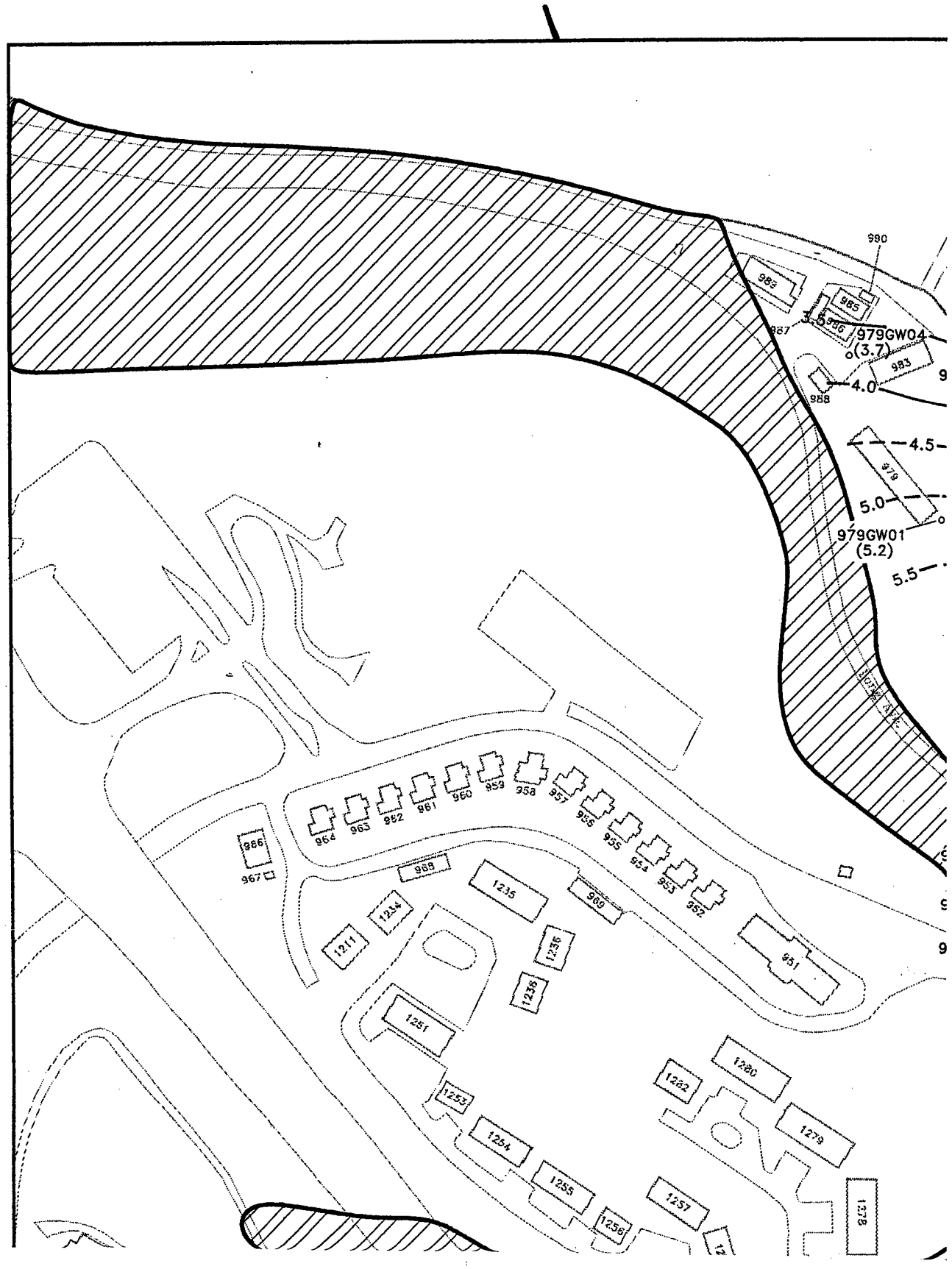
DAMES & MOORE

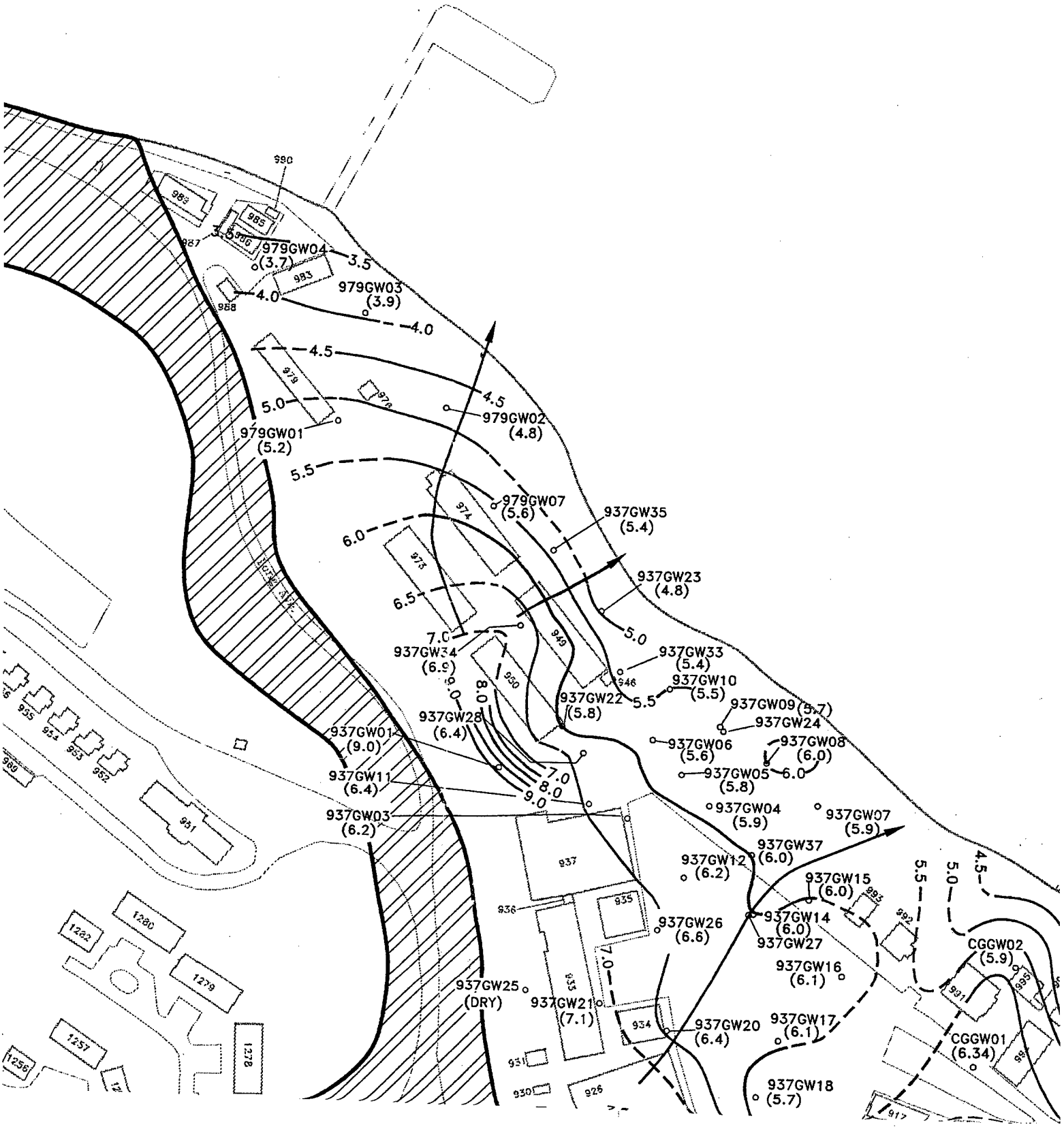
GENERALIZED GEOLOGY SHOWING MAJOR SHEAR ZONES & FOLD AXES

PSF25163\DV2

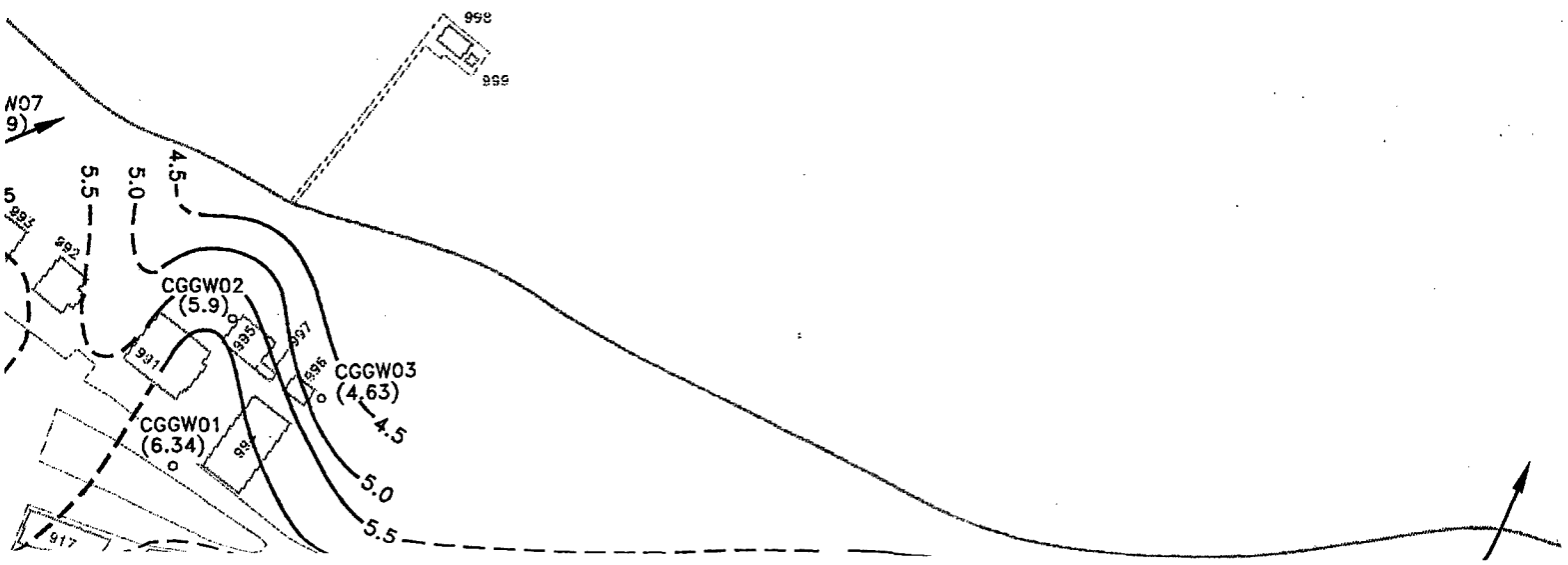
Date: January 1997

Figure 2.3-8

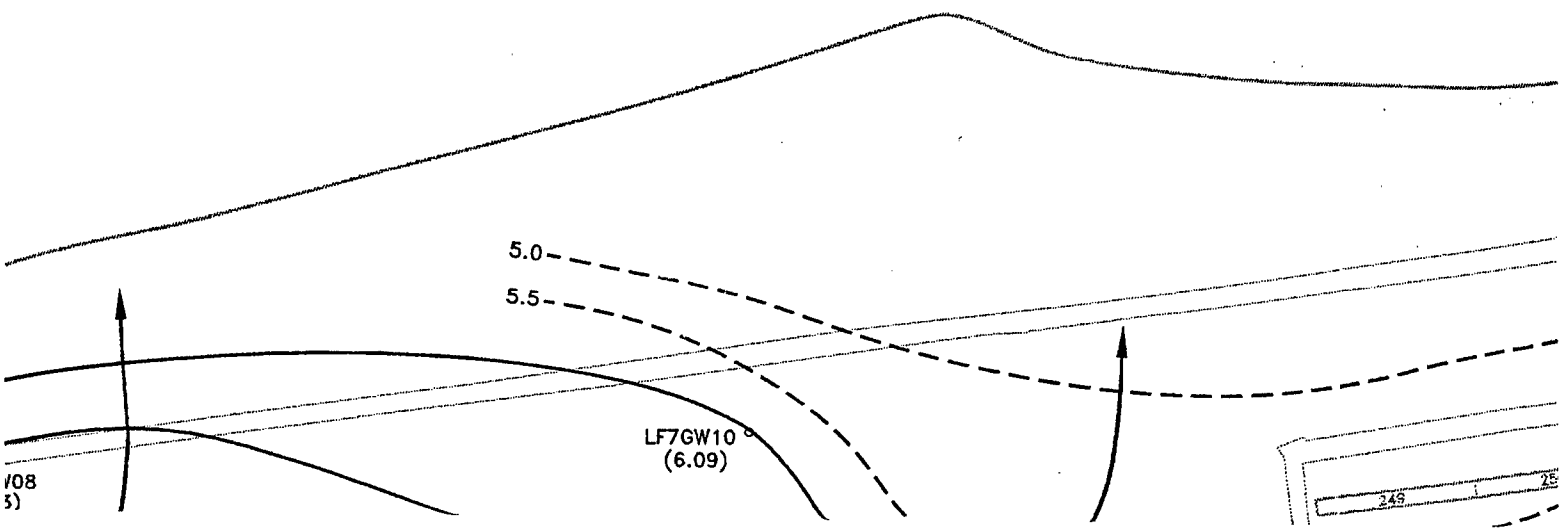

980
982
985
987
986
979GW04
(3.7)
983
988
4.0
4.5
979
5.0
979GW01
(5.2)
5.5
964
963
962
961
960
959
958
957
956
955
954
953
952
967
968
1235
980
1234
1211
1236
1236
981
1251
1253
1254
1255
1256
1257
1260
1242
1279
1278

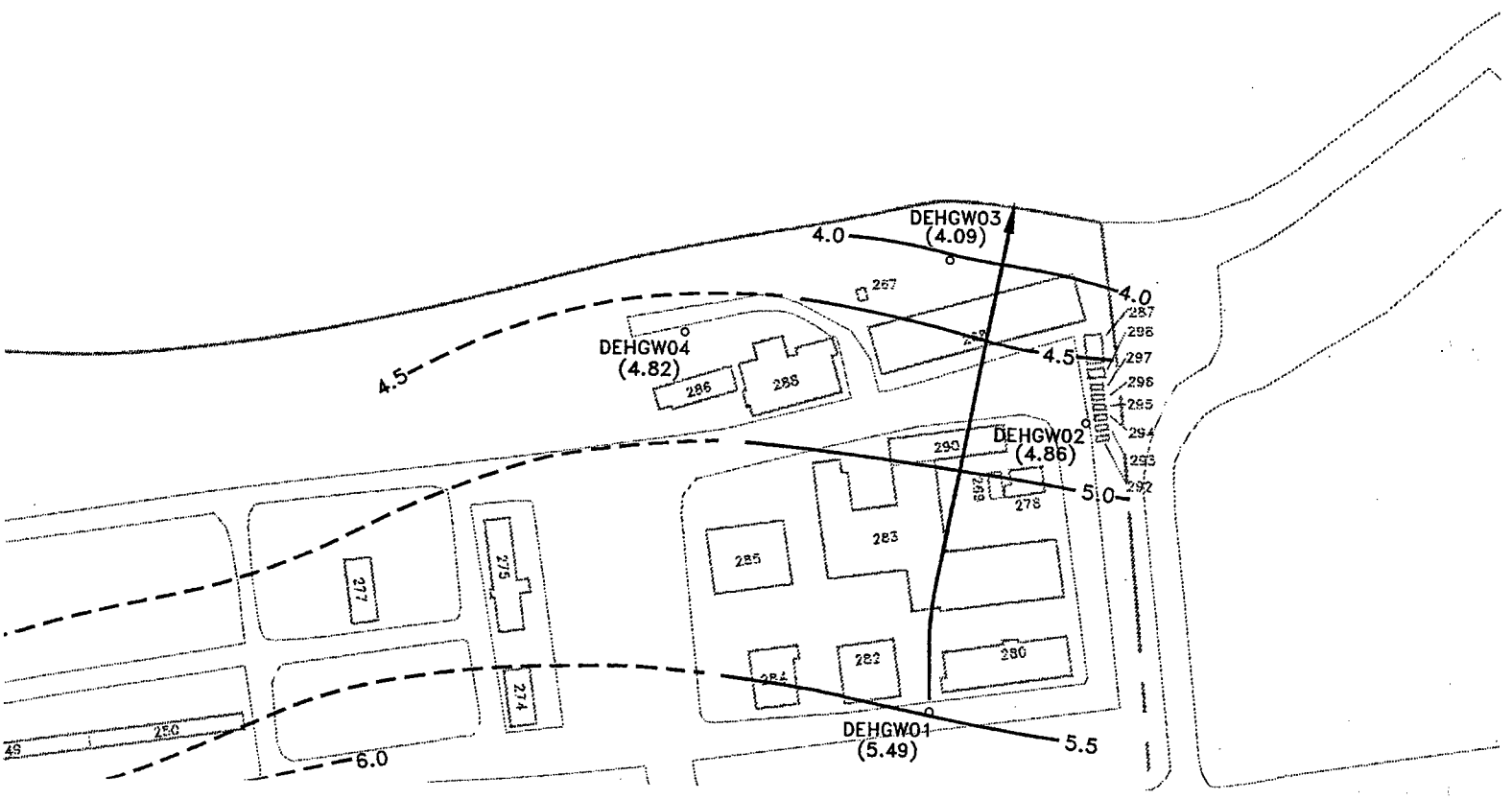

979GW04 (3.7)
979GW03 (3.9)
979GW01 (5.2)
979GW02 (4.8)
979GW07 (5.6)
937GW35 (5.4)
937GW23 (4.8)
937GW34 (6.9)
937GW33 (5.4)
937GW10 (5.5)
937GW22 (5.8)
937GW09 (5.7)
937GW24
937GW28 (6.4)
937GW06 (5.6)
937GW08 (6.0)
937GW01 (9.0)
937GW05 (5.8)
937GW11 (6.4)
937GW03 (6.2)
937GW04 (5.9)
937GW07 (5.9)
937GW37 (6.0)
937GW12 (6.2)
937GW15 (6.0)
937GW14 (6.0)
937GW27
937GW26 (6.6)
CGGW02 (5.9)
937GW16 (6.1)
937GW25 (DRY)
937GW21 (7.1)
937GW20 (6.4)
937GW17 (6.1)
CGGW01 (6.34)
937GW18 (5.7)

San F



San Francisco Bay


5.0
5.5
LF7GW10
(6.09)

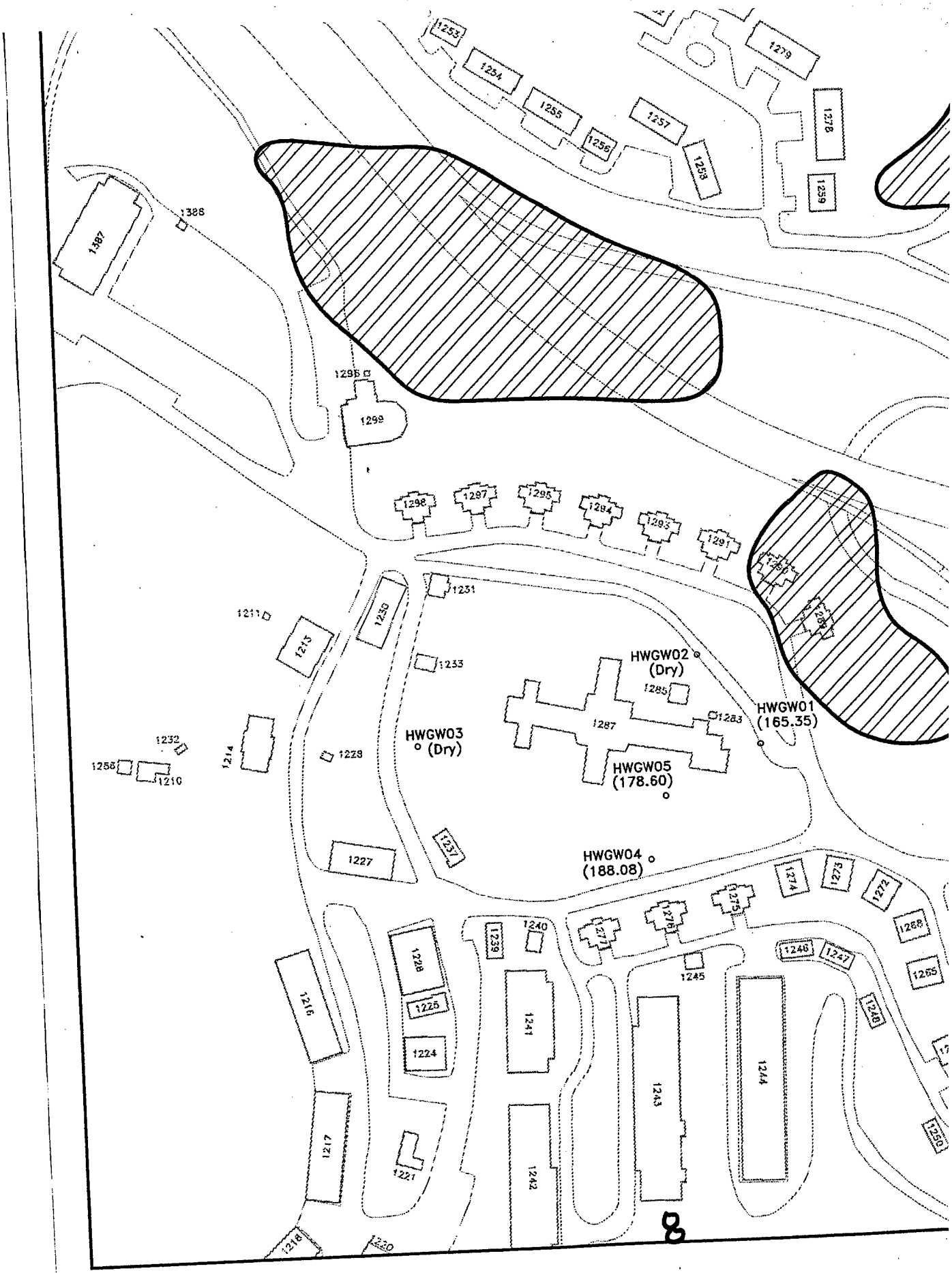

DEHGW03
(4.09)
4.0
4.0
DEHGW04
(4.82)
4.5
4.5
DEHGW02
(4.86)
5.0
DEHGW01
(5.49)
5.5
6.0
267
286
288
290
278
283
285
275
277
274
282
280
250
297
296
295
294
293
292

EXPLANATION

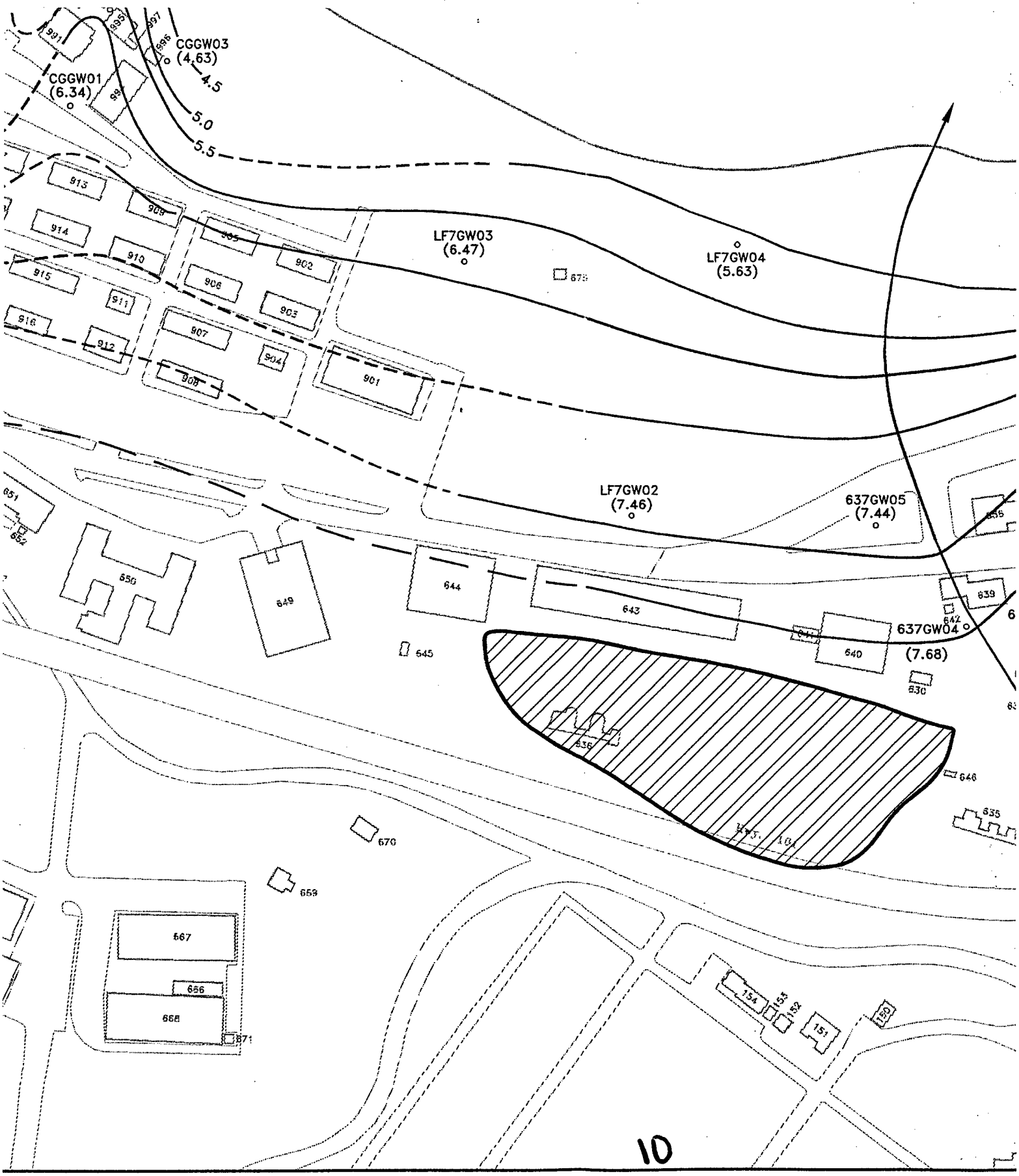
○	SHALLOW MONITORING WELL
(8.49)	WATER TABLE ELEVATION TAKEN 3/16/95, 1640–1740 PST LOWER LOW TIDE: 1649 PST, 0.2 FT–PLLW
(6.43*)	WATER–LEVEL DATA FOR 3/16/95 WERE NOT AVAILABLE; THEREFORE, EQUIVALENT WATER LEVELS WERE ESTIMATED BY ADJUSTING WATER LEVELS MEASURED ON 4/14/95 BY FLUCTUATIONS OBSERVED IN ADJACENT WELLS.
(NM)	NO MEASUREMENT
—4.0—	WATER TABLE CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL 0.5 FEET
→	GROUNDWATER FLOW DIRECTION
▨	AREA OF BEDROCK OUTCROP

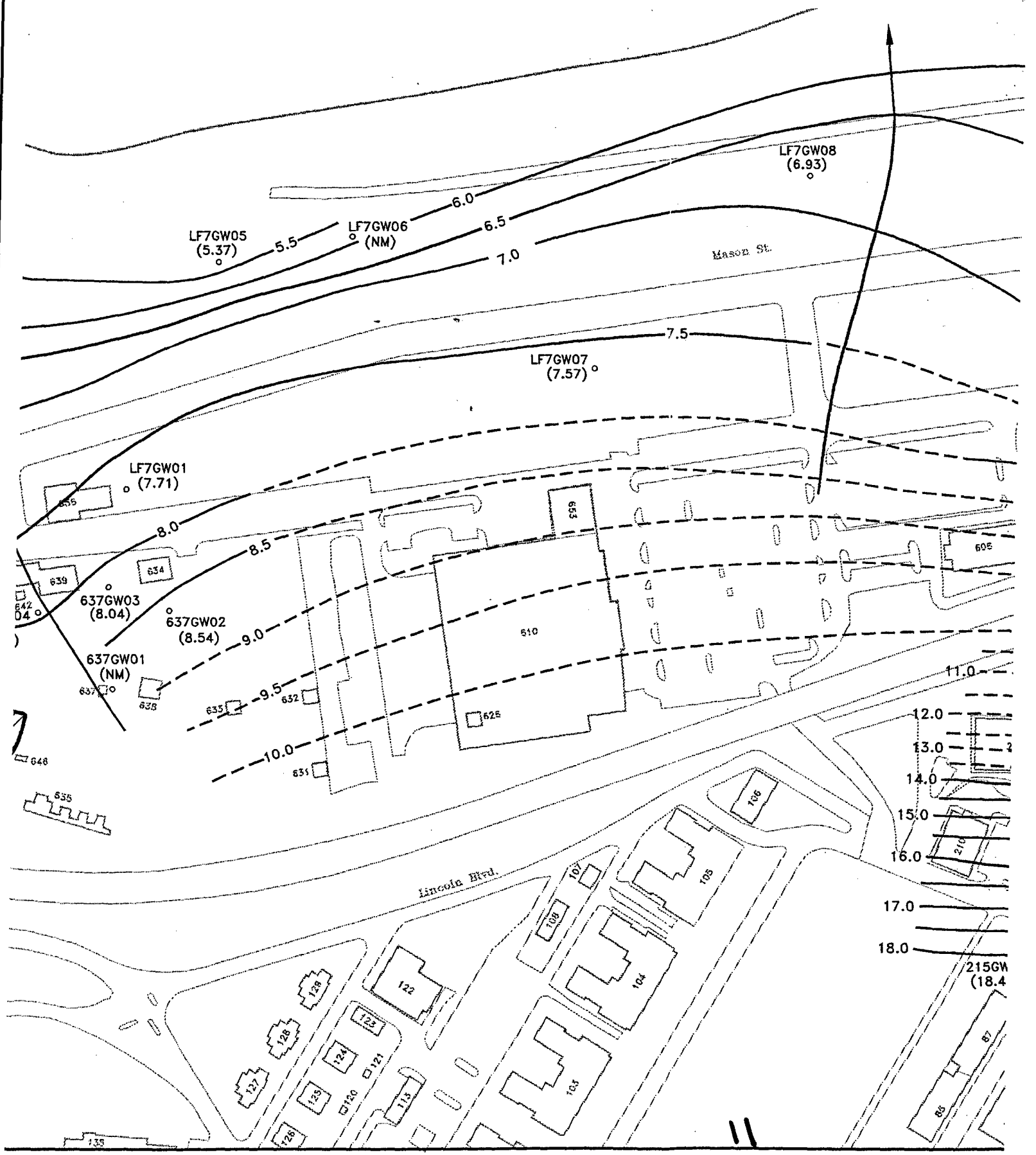
ELEVATIONS IN FEET–PRESIDIO LOWER LOW WATER

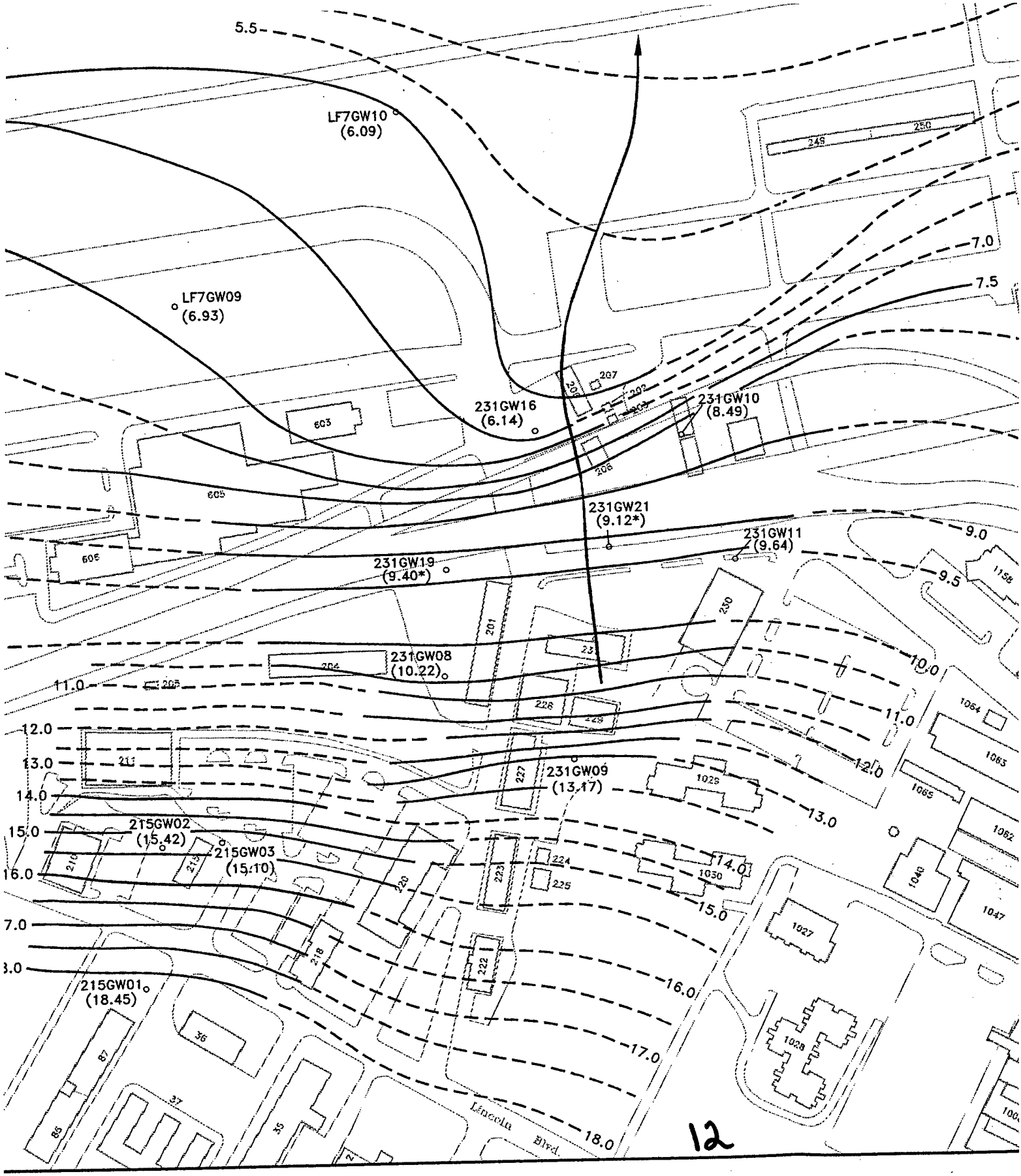
NOTE: SHALLOW WELLS ARE SCREENED ACROSS THE WATER TABLE

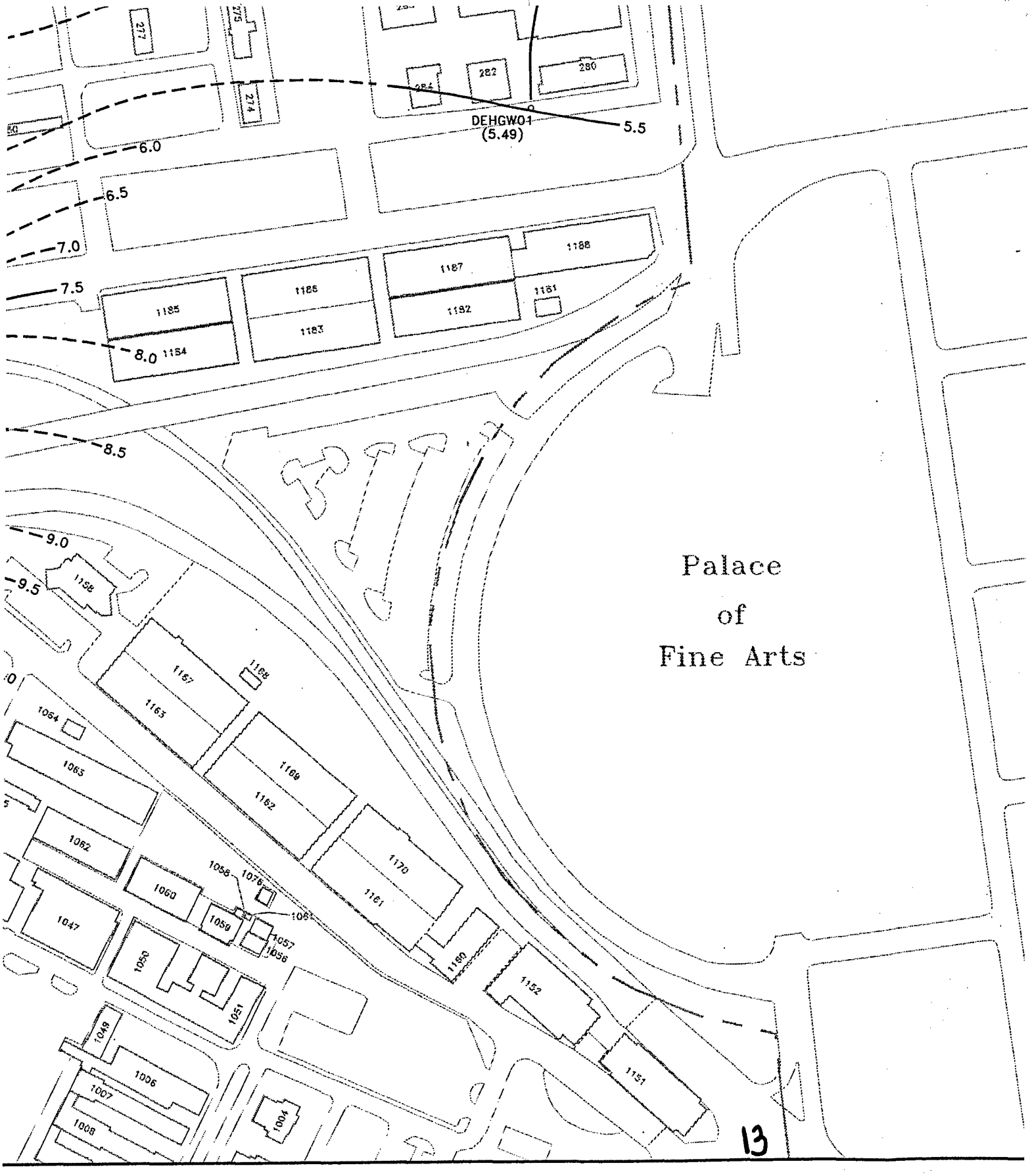

1253
1254
1255
1256
1257
1258
1259
1278
1279
1387
1388
1295
1298
1297
1296
1294
1293
1291
1290
1289
1231
1211
1213
1250
1233
HWGW02
(Dry)
1285
1283
1287
HWGW01
(165.35)
HWGW03
(Dry)
1232
1256
1210
1214
1228
HWGW05
(178.60)
1227
1237
HWGW04
(188.08)
1274
1273
1272
1275
1276
1277
1268
1240
1239
1246
1247
1245
1265
1216
1228
1225
1241
1243
1244
1248
1224
1217
1221
1242
1250
1218
1220

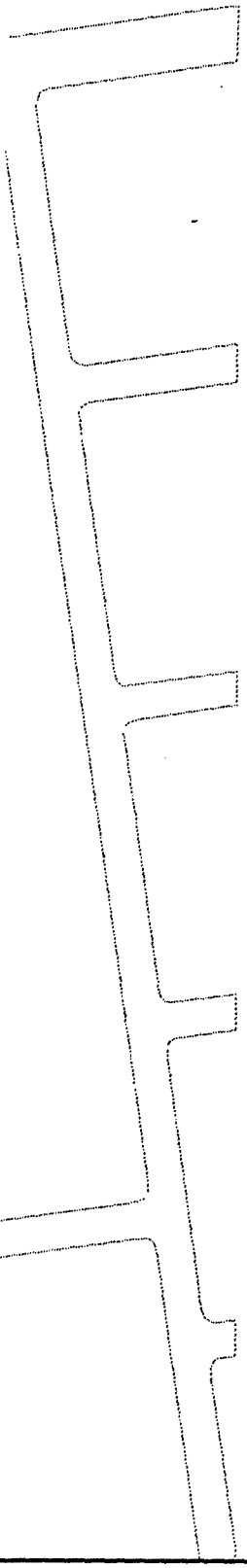
937GW25
(DRY)
937GW21
(7.1)
937GW16
(6.1)
937GW20
(6.4)
937GW17
(6.1)
CGGW01
(6.34)
937GW18
(5.7)
937GW30
(DRY)
937GW19
(7.5)
7.5
6.0
6.5
8.0
HWGW02
(Dry)
HWGW01
(165.35)
HWGW05
(178.60)
HWGW04
(188.08)
9

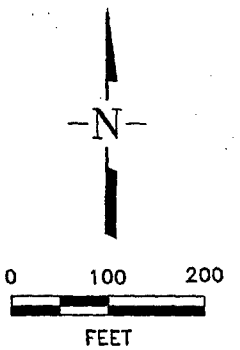

CGGW03
(4.63)
CGGW01
(6.34)
4.5
5.0
5.5
LF7GW03
(6.47)
LF7GW04
(5.63)
LF7GW02
(7.46)
637GW05
(7.44)
637GW04
(7.68)
913
914
915
916
909
910
911
912
905
906
907
908
902
903
904
901
651
652
656
649
644
643
645
639
642
640
630
636
646
635
676
659
667
666
668
671
154
153
152
151
150


LF7GW08
(6.93)
LF7GW05
(5.37)
LF7GW06
(NM)
6.0
6.5
5.5
7.0
Mason St.
7.5
LF7GW07
(7.57)
LF7GW01
(7.71)
8.0
8.5
637GW03
(8.04)
637GW02
(8.54)
9.0
637GW01
(NM)
9.5
10.0
11.0
12.0
13.0
14.0
15.0
16.0
17.0
18.0
215GW
(18.4
Lincoln Blvd.
655
653
634
639
642
04
638
635
632
631
626
610
605
646
635
106
107
108
105
104
103
122
123
124
125
126
127
128
129
121
120
115
135
87
86
210


5.5
LF7GW10
(6.09)
LF7GW09
(6.93)
231GW16
(6.14)
231GW10
(8.49)
231GW21
(9.12*)
231GW11
(9.64)
231GW19
(9.40*)
231GW08
(10.22)
231GW09
(13.17)
215GW02
(15.42)
215GW03
(15.10)
215GW01
(18.45)
7.0
7.5
9.0
9.5
10.0
11.0
12.0
13.0
14.0
15.0
16.0
17.0
18.0
Lincoln Blvd.


DEHGW01
(5.49)
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
Palace
of
Fine Arts
13



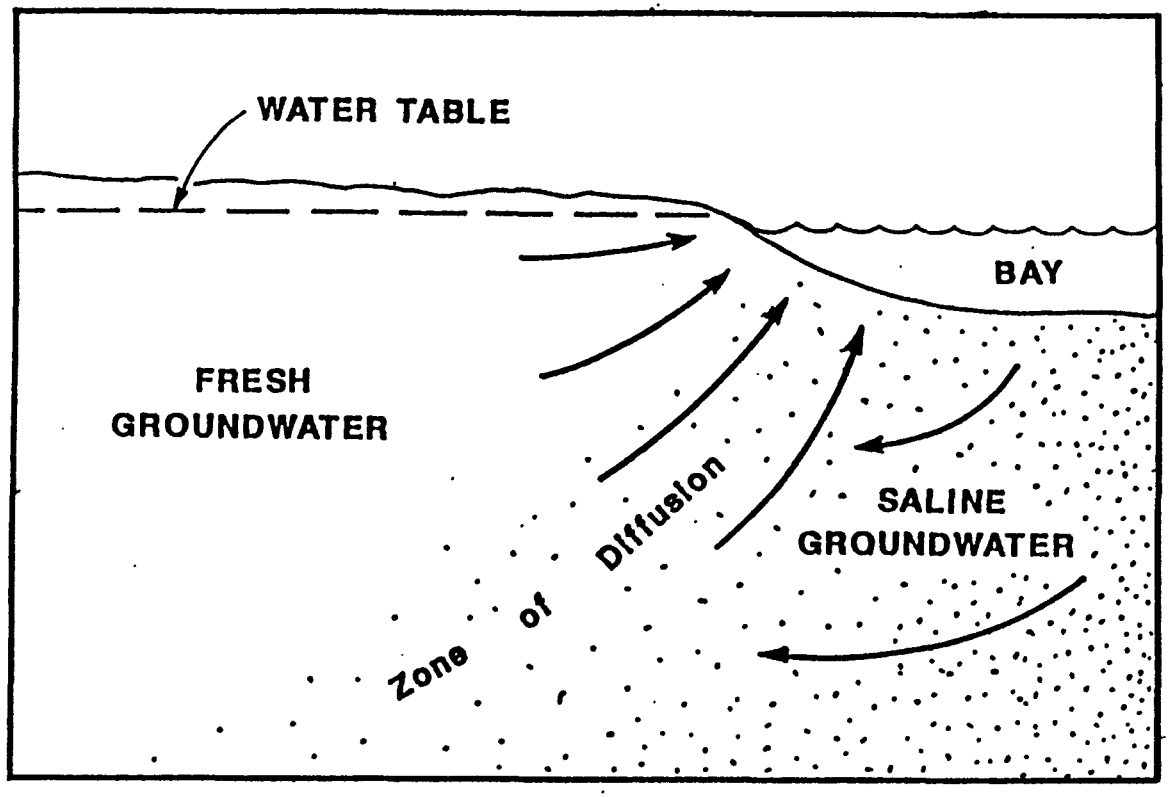


DAMES & MOORE

CRISSY FIELD GROUNDWATER AREA
WATER TABLE ELEVATION MAP
PRESIDIO OF SAN FRANCISCO

PSF25054\DV2

Date: January 1997 | Figure 2.3-9



EXPLANATION

GROUNDWATER
FLOW DIRECTION

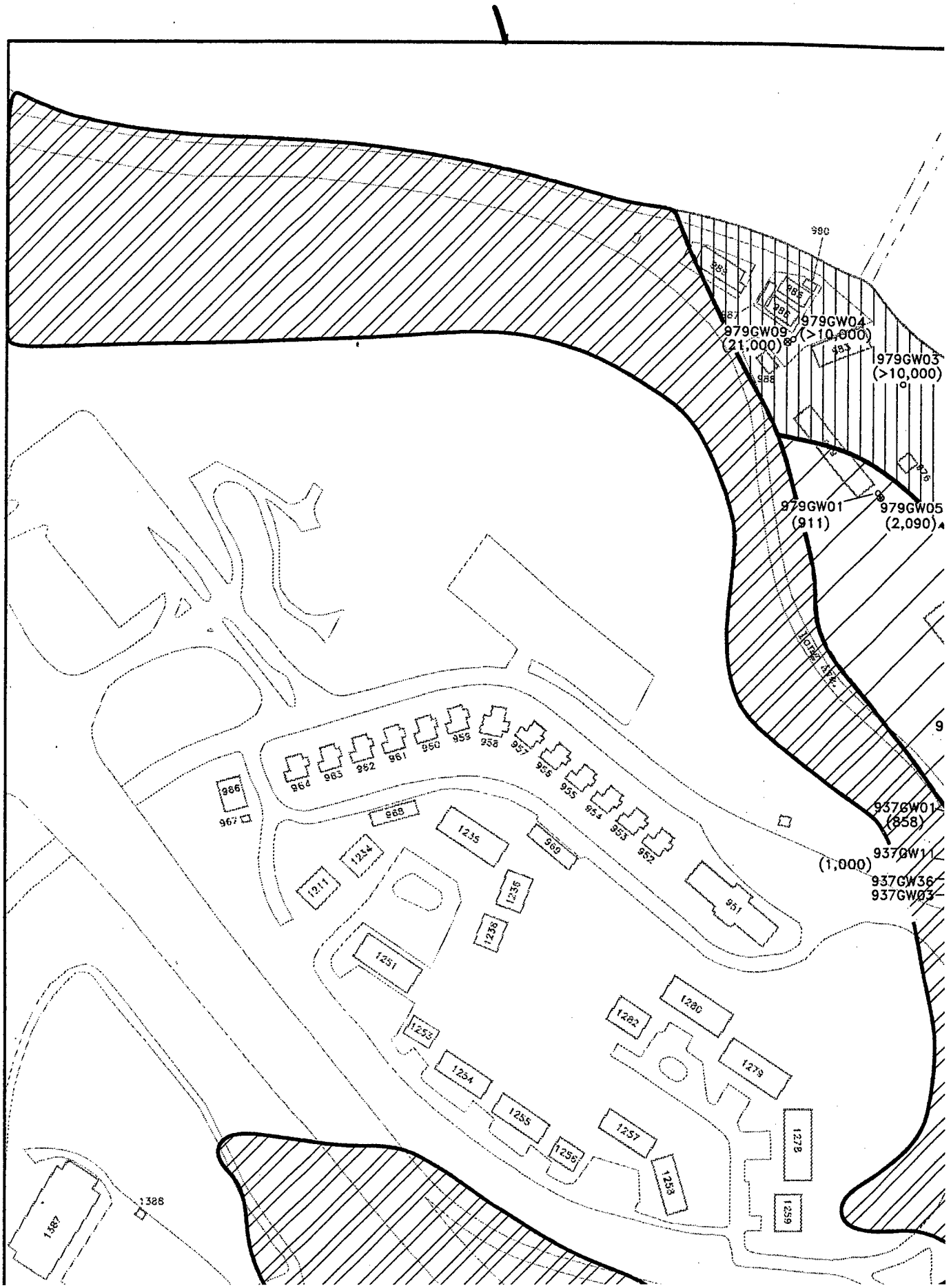
(Modified from Walton, 1985)

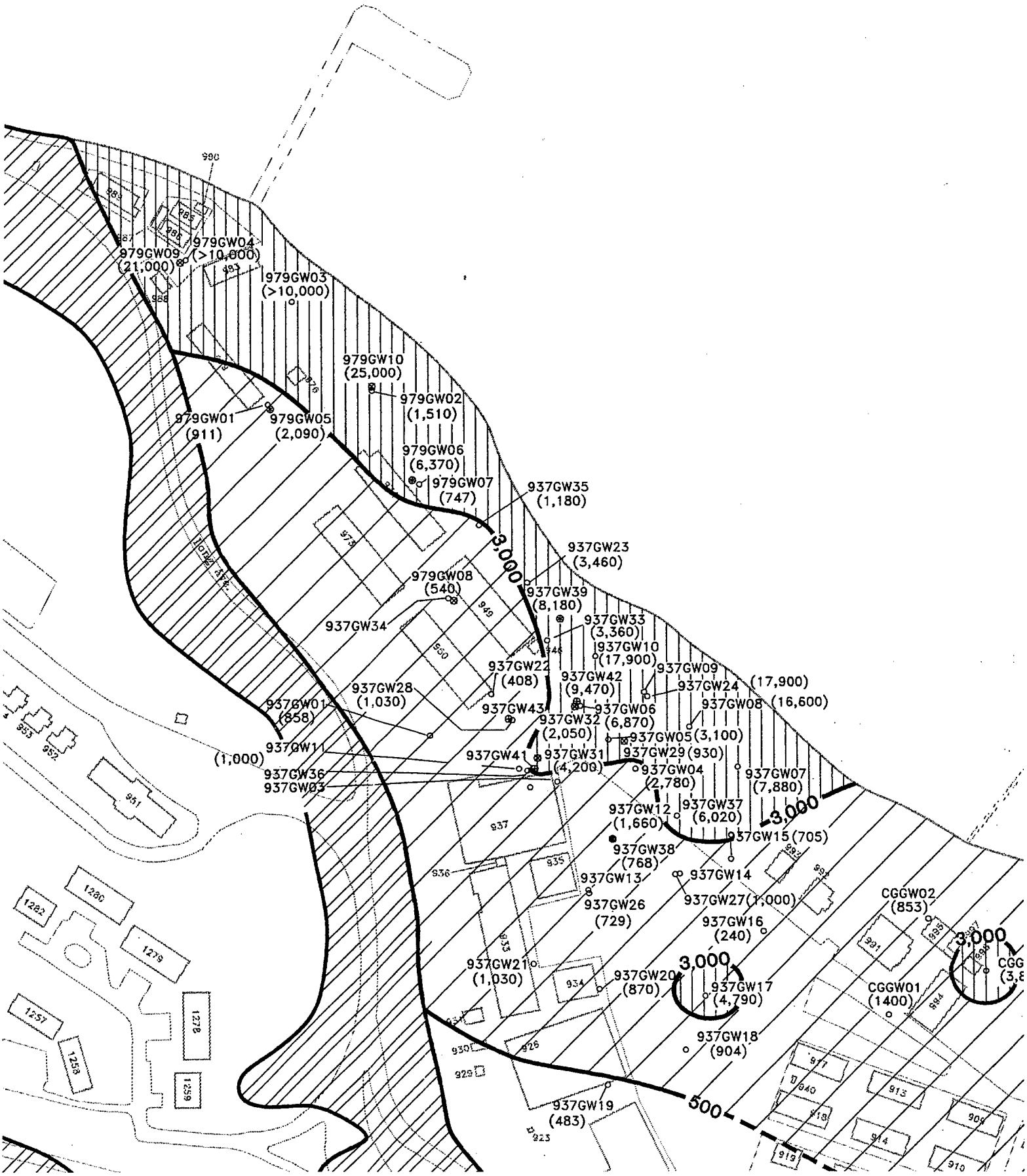
DAMES & MOORE

SCHEMATIC ILLUSTRATION
OF A COASTAL AQUIFER

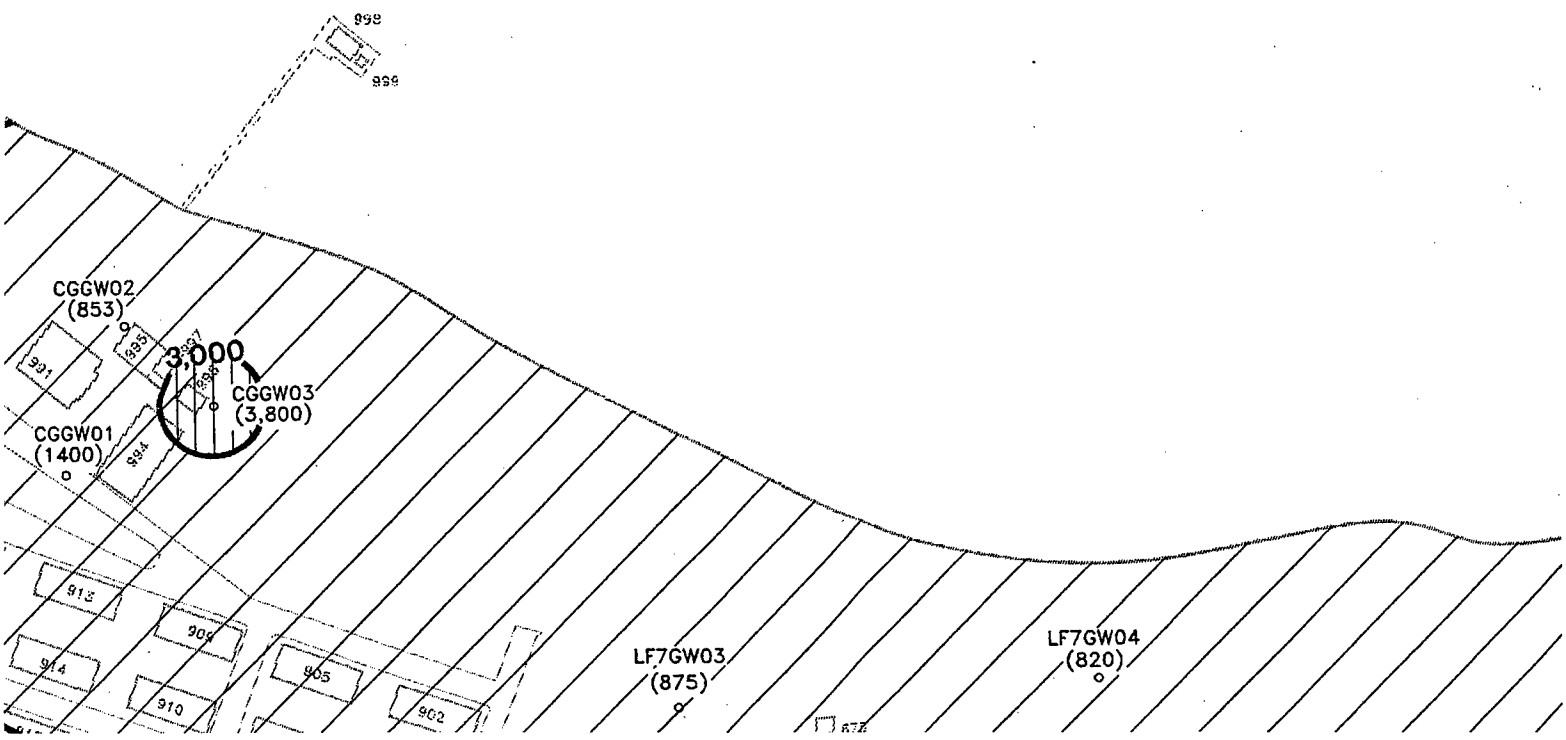
PSF25120/DV2

Date: January 1997 | Figure 2.3-10

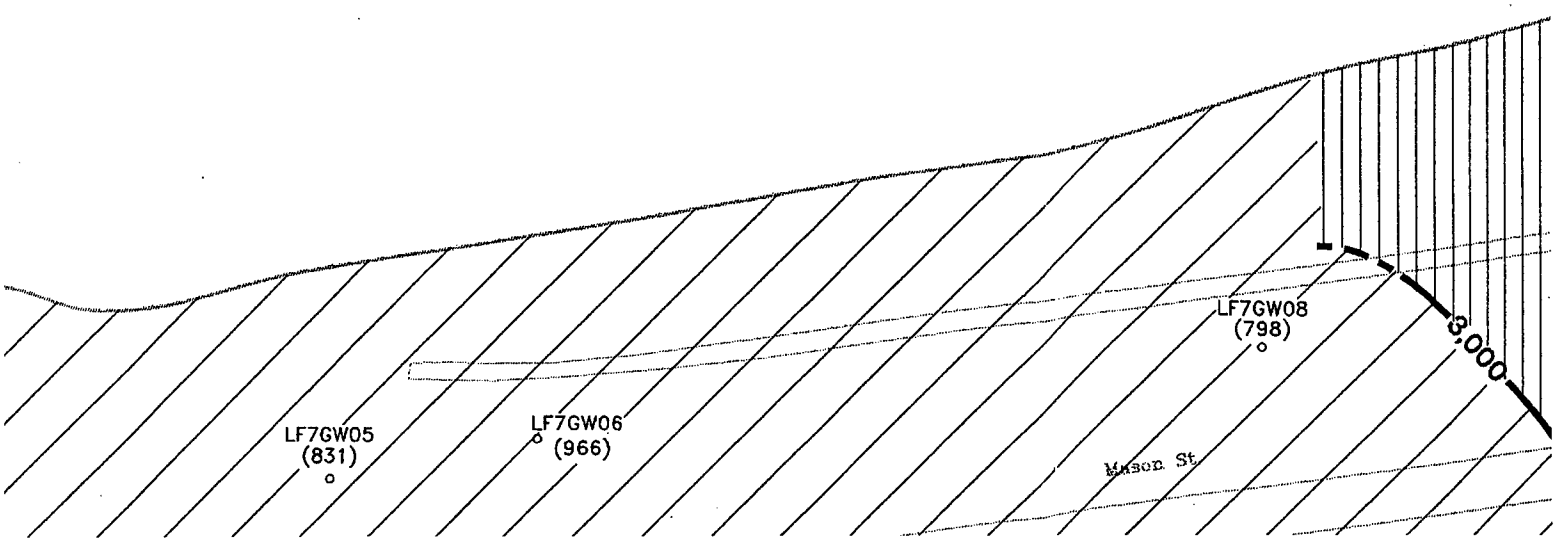

979GW09
(21,000)
979GW04
(>10,000)
979GW03
(>10,000)
979GW01
(911)
979GW05
(2,090)
937GW01
(858)
937GW11
(1,000)
937GW36
937GW03
980
985
984
981
983
988
976
1212
1213
964
963
962
961
960
959
958
957
956
955
954
953
952
951
966
967
968
1235
969
1234
1211
1236
1238
1251
1253
1254
1255
1256
1257
1258
1280
1282
1279
1278
1259
1387
1388

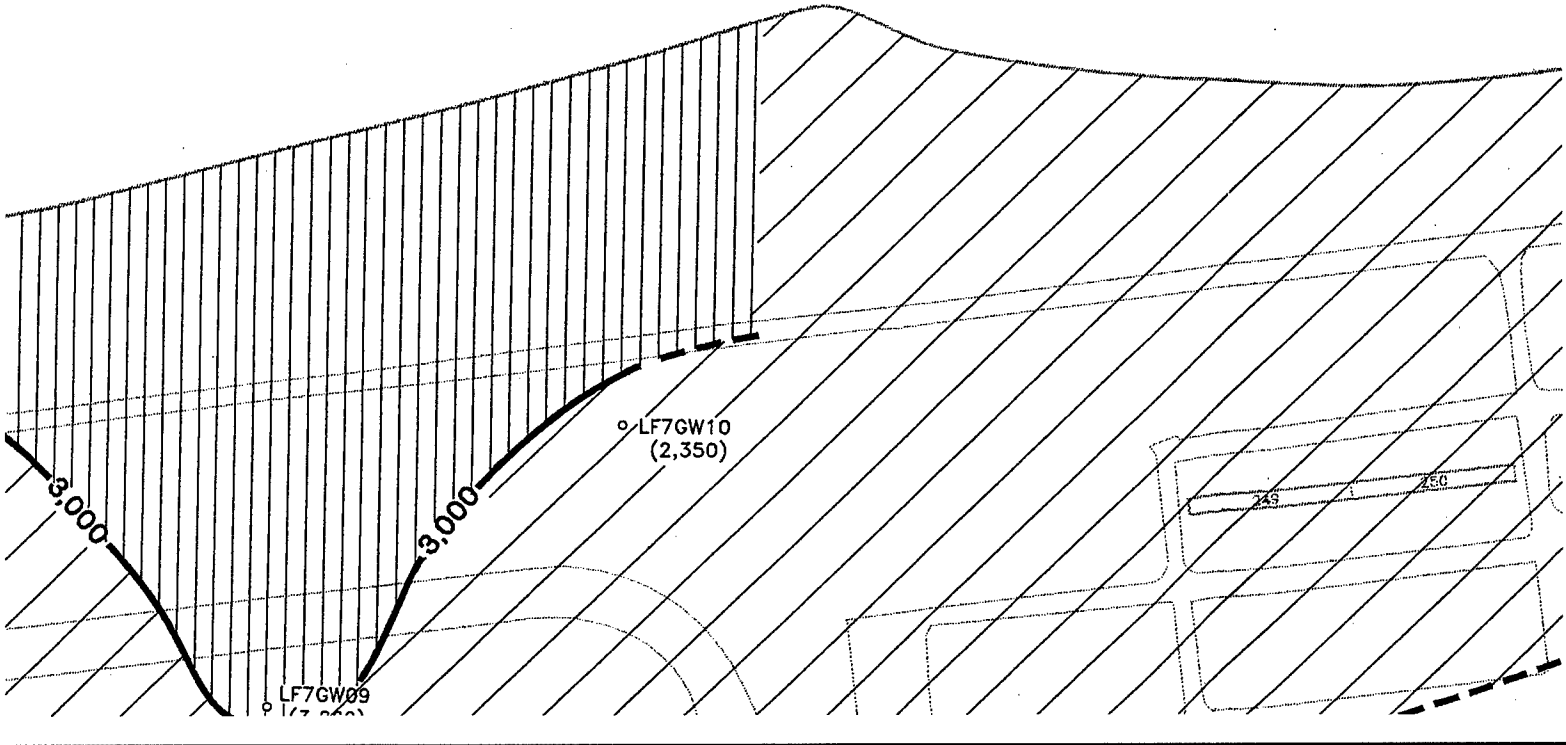

979GW09 (21,000)
979GW04 (>10,000)
979GW03 (>10,000)
979GW10 (25,000)
979GW02 (1,510)
979GW01 (911)
979GW05 (2,090)
979GW06 (6,370)
979GW07 (747)
979GW08 (540)
937GW35 (1,180)
937GW23 (3,460)
937GW39 (8,180)
937GW33 (3,360)
937GW10 (17,900)
937GW34
937GW22 (408)
937GW42 (9,470)
937GW09 (17,900)
937GW24 (16,600)
937GW08
937GW28 (1,030)
937GW01 (858)
937GW43
937GW06
937GW32 (6,870)
937GW05 (3,100)
937GW11 (1,000)
937GW41
937GW31 (4,200)
937GW29 (930)
937GW36
937GW03
937GW04 (2,780)
937GW07 (7,880)
937GW12 (1,660)
937GW37 (6,020)
937GW15 (705)
937GW38 (768)
937GW13
937GW14
937GW26 (729)
937GW27 (1,000)
937GW16 (240)
CGGW02 (853)
937GW21 (1,030)
937GW20 (870)
937GW17 (4,790)
CGGW01 (1400)
937GW18 (904)
937GW19 (483)
3,000
500

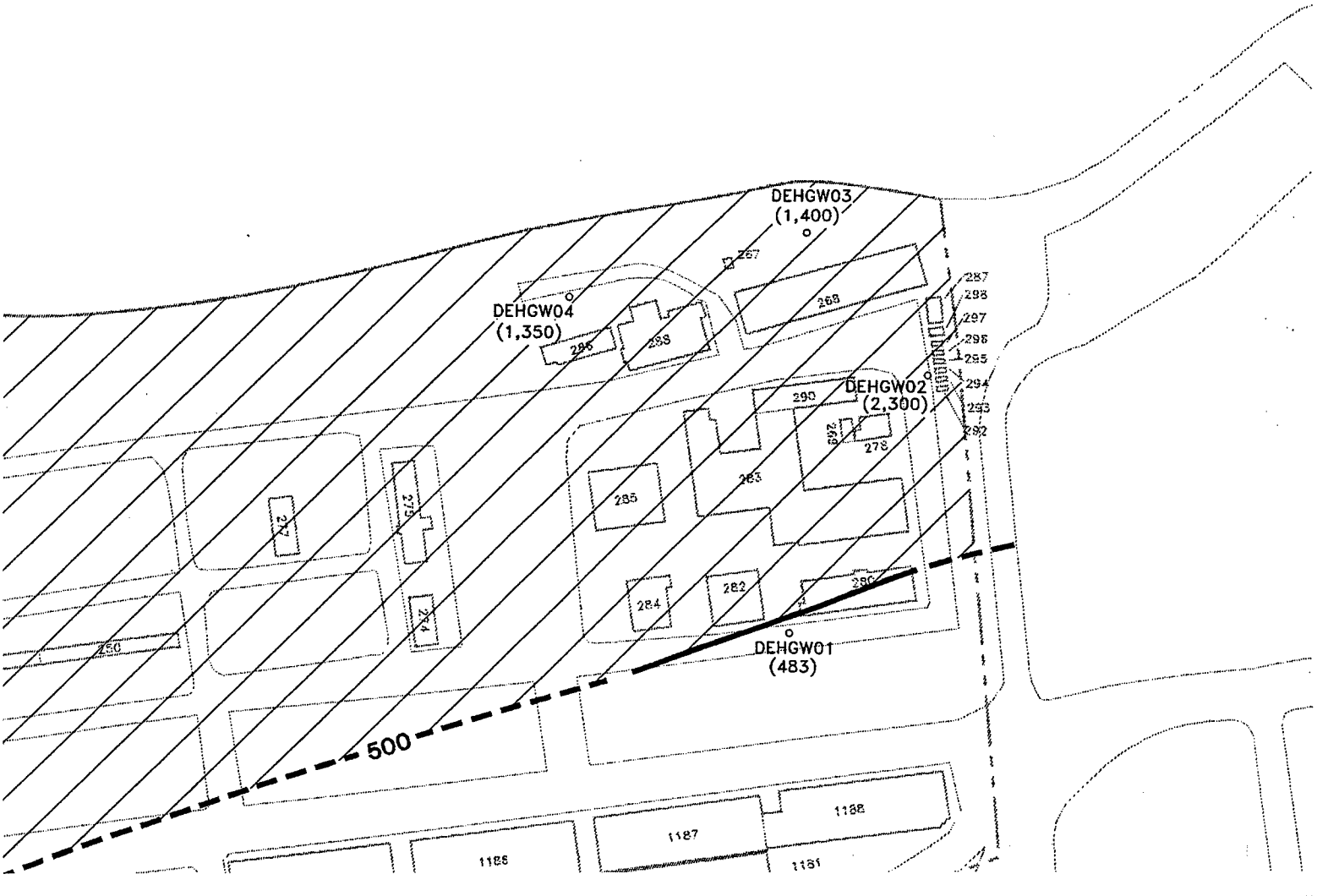
San Fran


CGGW02
(853)
3,000
CGGW03
(3,800)
CGGW01
(1400)
LF7GW03
(875)
LF7GW04
(820)

Francisco Bay




3,000
3,000
LF7GW10
(2,350)
LF7GW09
245
250


DEHGW03
(1,400)
DEHGW04
(1,350)
DEHGW02
(2,300)
DEHGW01
(483)
500
267
268
286
288
290
278
263
285
284
282
280
260
1188
1187
1186
1181

EXPLANATION

○	SHALLOW MONITORING WELL[1]
⊕	INTERMEDIATE MONITORING WELL
⊗	DEEP MONITORING WELL[2]
⊛	DEEP MONITORING WELL[2] WITH SOIL SAMPLES
(1,350)	TDS CONCENTRATION, mg/L
(NDA)	NO TDS DATA AVAILABLE
—500—	TDS ISOCONCENTRATION CONTOUR. LINE IS BASED ON HIGHEST TDS VALUE REGARDLESS OF DEPTH
— - - —	CRISSY FIELD GROUNDWATER AREA BOUNDARY
	APPROXIMATE AREAL EXTENT OF BEDROCK OUTCROP
	AREAL EXTENT OF GROUNDWATER EXCEEDING THE TDS STANDARD OF 3,000 mg/L FOR MUNICIPAL OR DOMESTIC WATER SUPPLIES (STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 88-63)
	AREAL EXTENT OF GROUNDWATER EXCEEDING THE RECOMMENDED SECONDARY DRINKING WATER STANDARD OF 500 mg/L TDS

NOTES:

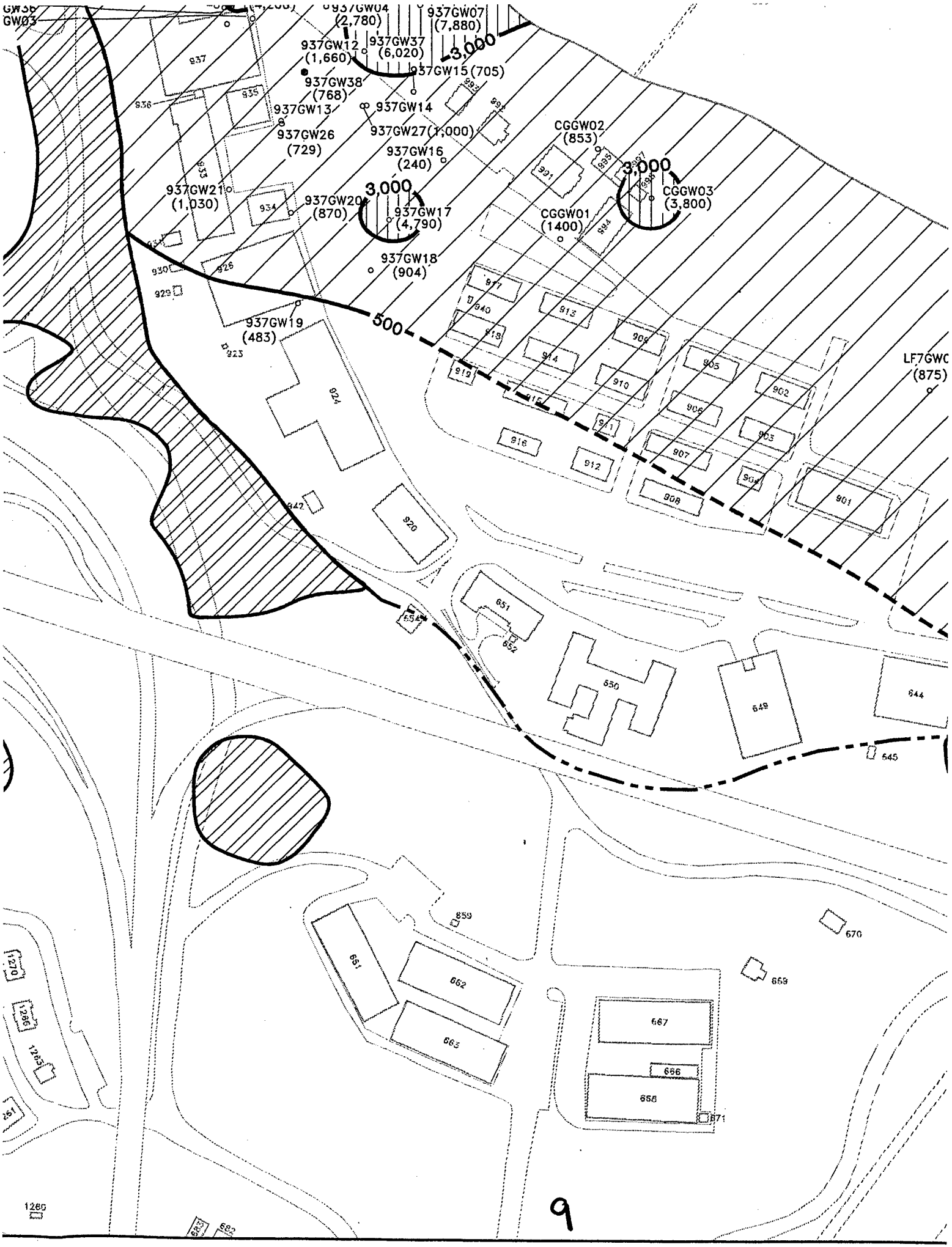
1. SHALLOW MONITORING WELLS ARE SCREENED ACROSS THE WATER TABLE

2. DEEP MONITORING WELLS ARE SCREENED AT BOTTOM OF AQUIFER

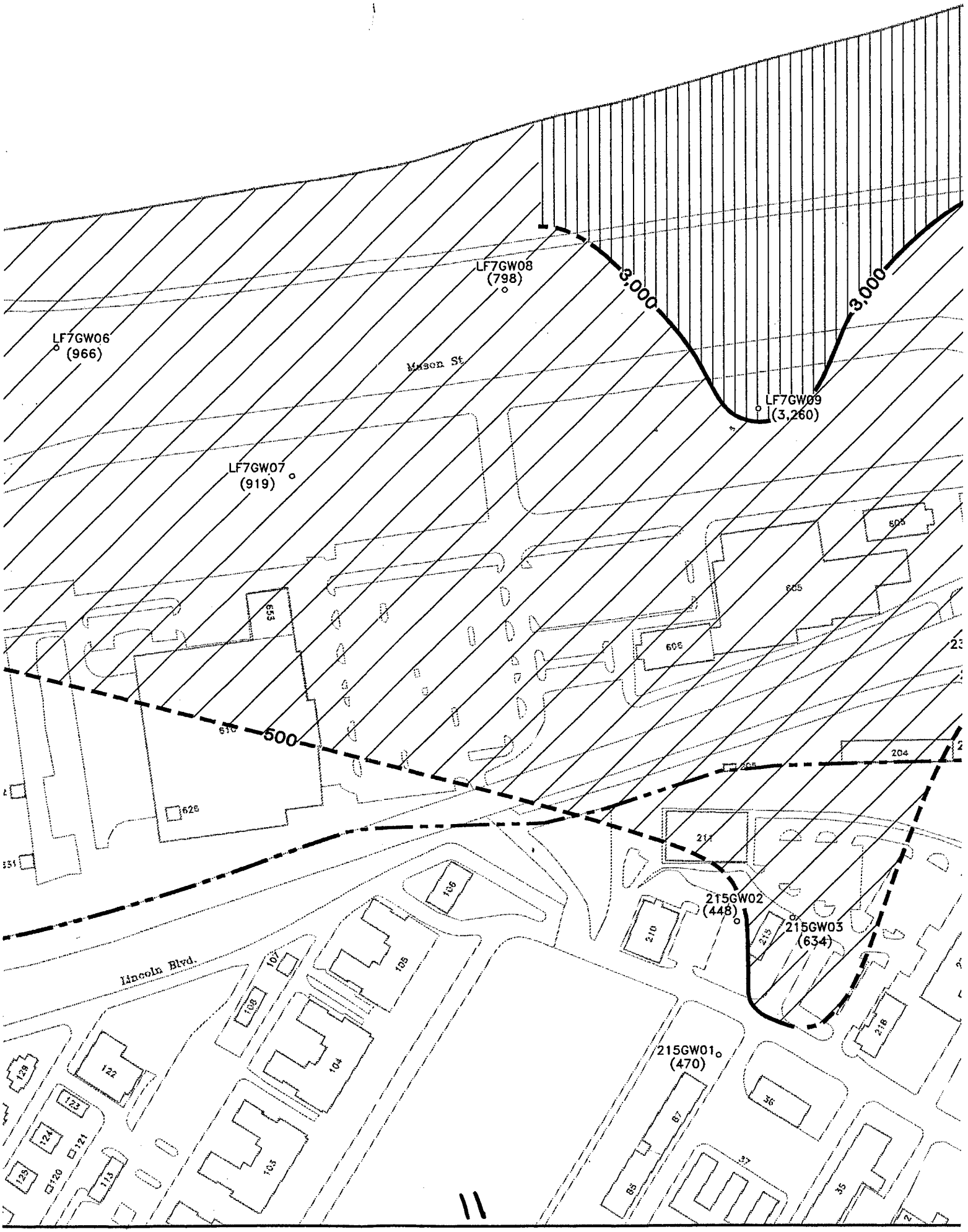
SOURCES OF TDS DATA

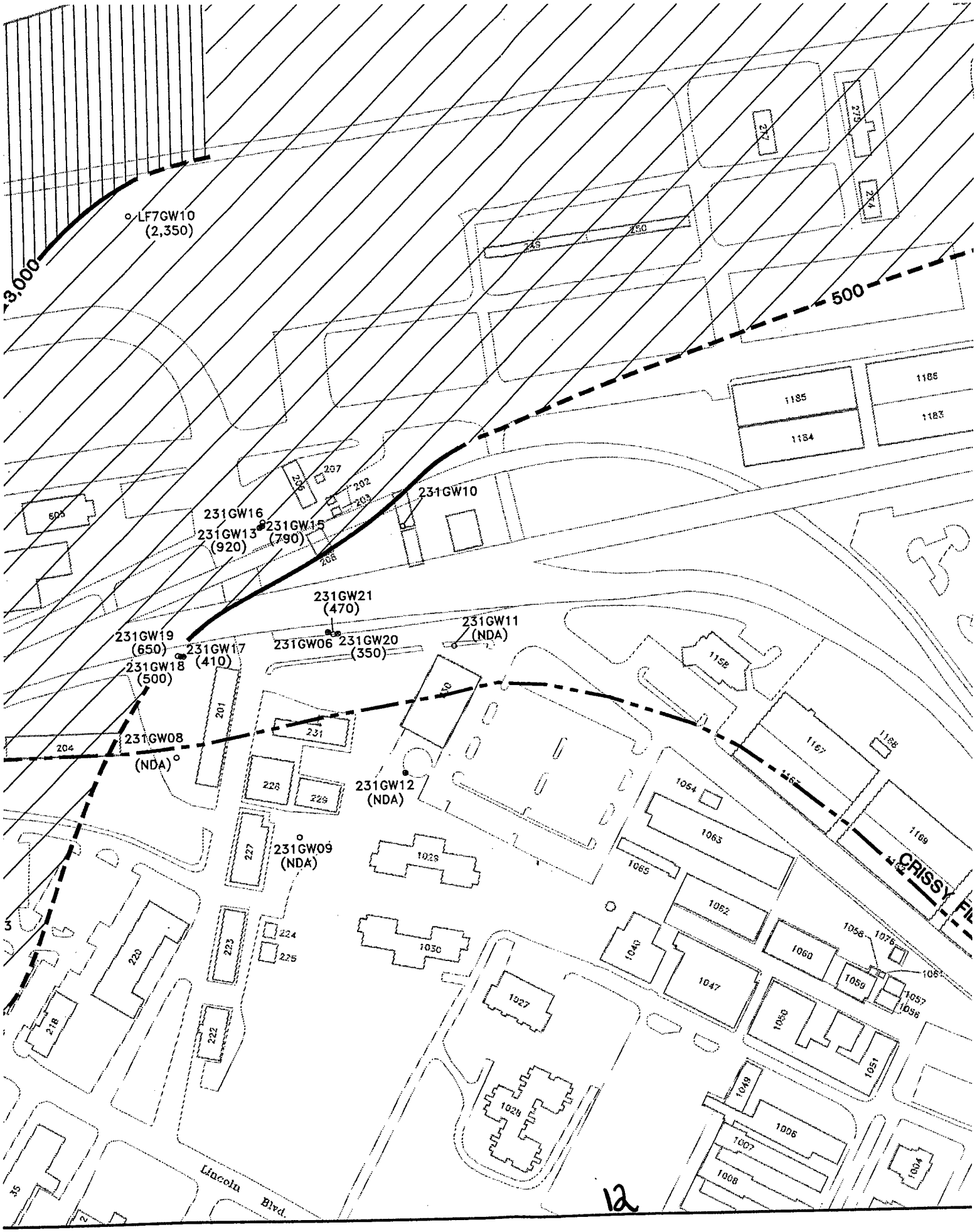
LOCATION/SITE	TDS DATA SOURCE
BUILDING 231	FOLLOW-ON RI
BUILDING 637	MONTGOMERY-WATSON (1995a)
BUILDING 937	IRA QUARTERLY SAMPLING AVERAGES
MONITORING WELLS 979GW01-07	SUPPLEMENTAL RI
MONITORING WELLS 976GW08-10	FOLLOW-ON RI
DEH STUDY ARA	SUPPLEMENTAL RI
FPCGS	SUPPLEMENTAL RI
CRISSY FIELD STUDY AREA	SUPPLEMENTAL RI

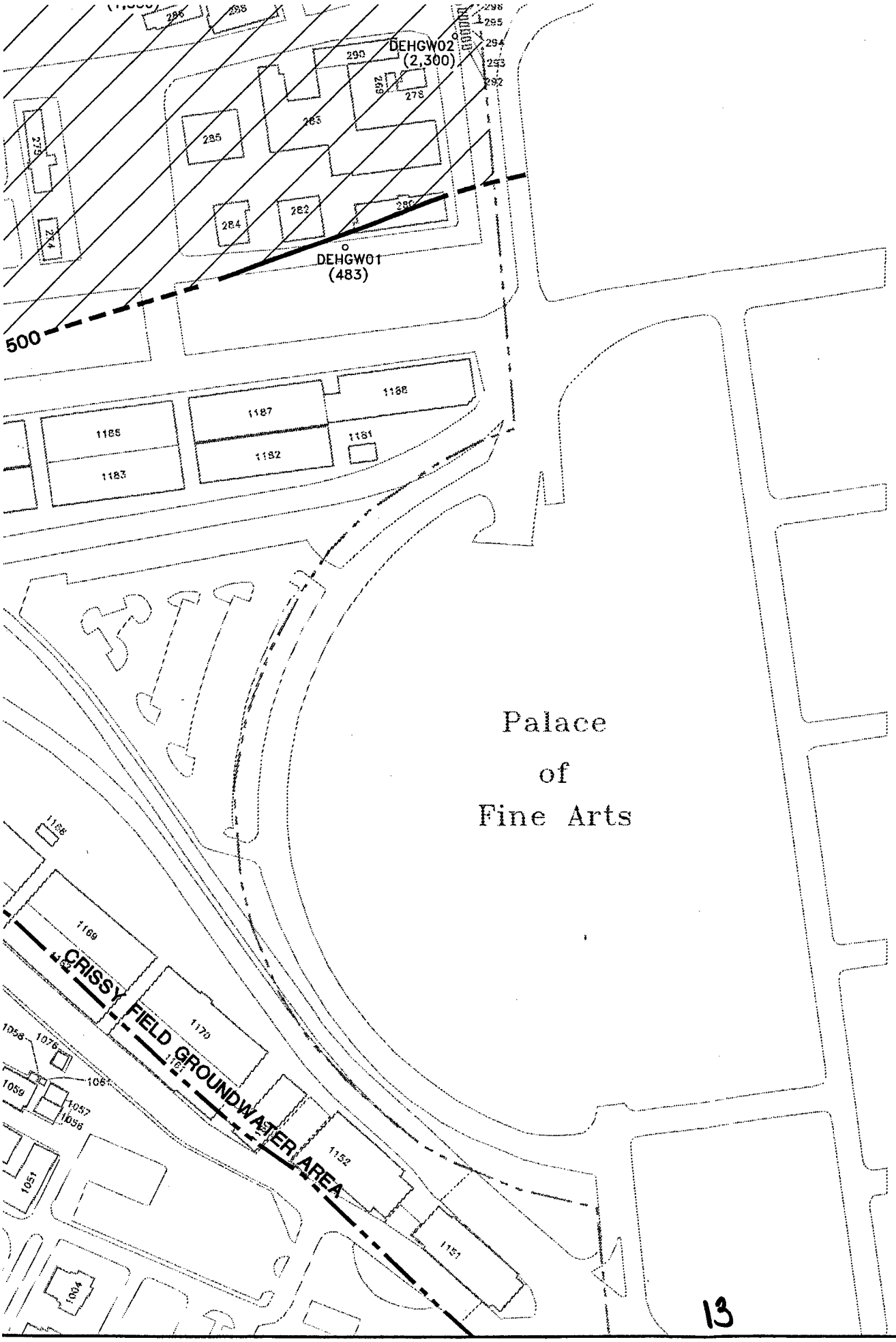
937GW36
937GW03
951
1211
1236
1236
1251
1253
1254
1255
1256
1257
1253
1260
1262
1278
1278
1259
1387
1388
1298
1299
1298
1297
1295
1294
1293
1291
1231
1211
1213
1259
1233
1285
1287
1283
1232
1256
1210
1214
1228
1227
1237
1274
1273
1272
1275
1276
1277
1240
1239
1245
1246
1247
1268
1270
1265
1266
1248
1252
1251
1250
1216
1225
1224
1241
1243
1244
1217
1221
1242
1218
1220
1260
8


937GW04 (2,780)
937GW07 (7,880)
937GW12 (1,660)
937GW37 (6,020)
3,000
937GW15 (705)
937GW38 (768)
937GW13
937GW14
937GW26 (729)
937GW27 (1,000)
937GW16 (240)
CGGW02 (853)
3,000
CGGW03 (3,800)
937GW21 (1,030)
3,000
937GW20 (870)
937GW17 (4,790)
CGGW01 (1400)
937GW18 (904)
500
937GW19 (483)
LF7GWC (875)
937
936
935
933
934
930
929
926
923
924
921
995
997
998
994
984
977
940
918
913
914
919
910
909
905
902
906
911
916
912
907
904
908
903
901
942
920
651
652
654
650
649
644
645
659
670
662
665
667
656
658
671
1280
1270
1265
1260
1262
682
683

LF7GW03
(875)
LF7GW04
(820)
LF7GW05
(831)
LF7GW06
(966)
LF7GW02
(768)
637GW05
(536)
LF7GW01
(799)
637-13
(372)
637GW04
637-12
(448)
637GW03
(422)
637GW02
637GW01
(574)
CRISSY FIELD GROUNDWATER AREA
Hwy. 101
Lincoln
644
643
641
640
645
646
635
634
639
638
633
632
631
636
656
678
154
153
152
151
150
122
123
124
121
128
127
125
126
113
135
10


LF7GW06
(966)
LF7GW08
(798)
LF7GW09
(3,260)
LF7GW07
(919)
3,000
3,000
500
Mason St.
Lincoln Blvd.
215GW02
(448)
215GW03
(634)
215GW01
(470)


LF7GW10
(2,350)
3,000
500
231GW10
231GW16
231GW13
(920)
231GW15
(790)
231GW21
(470)
231GW19
(650)
231GW17
(410)
231GW18
(500)
231GW06
231GW20
(350)
231GW11
(NDA)
231GW08
(NDA)
231GW12
(NDA)
231GW09
(NDA)
CRISSY FI
Lincoln Blvd.
12



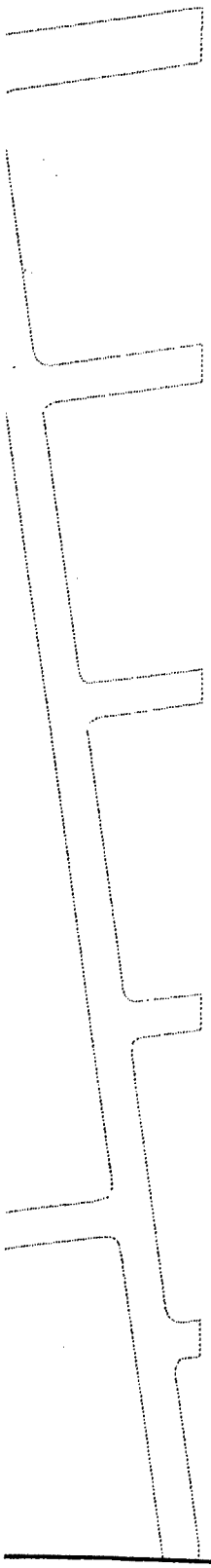
BUIL
BUIL
BUIL
MON
MON
DEH
FPC
CRIS
BUIL

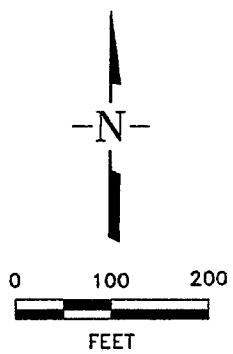
1. SHALLOW MONITORING WELLS ARE SCREENED ACROSS THE WATER TABLE

2. DEEP MONITORING WELLS ARE SCREENED AT BOTTOM OF AQUIFER

SOURCES OF TDS DATA

LOCATION/SITE	TDS DATA SOURCE
BUILDING 231	FOLLOW-ON RI
BUILDING 637	MONTGOMERY-WATSON (1995a)
BUILDING 937	IRA QUARTERLY SAMPLING AVERAGES
MONITORING WELLS 979GW01-07	SUPPLEMENTAL RI
MONITORING WELLS 976GW08-10	FOLLOW-ON RI
DEH STUDY ARA	SUPPLEMENTAL RI
FPCGS	SUPPLEMENTAL RI
CRISSY FIELD STUDY AREA	SUPPLEMENTAL RI
BUILDING 215	FOLLOW-ON RI



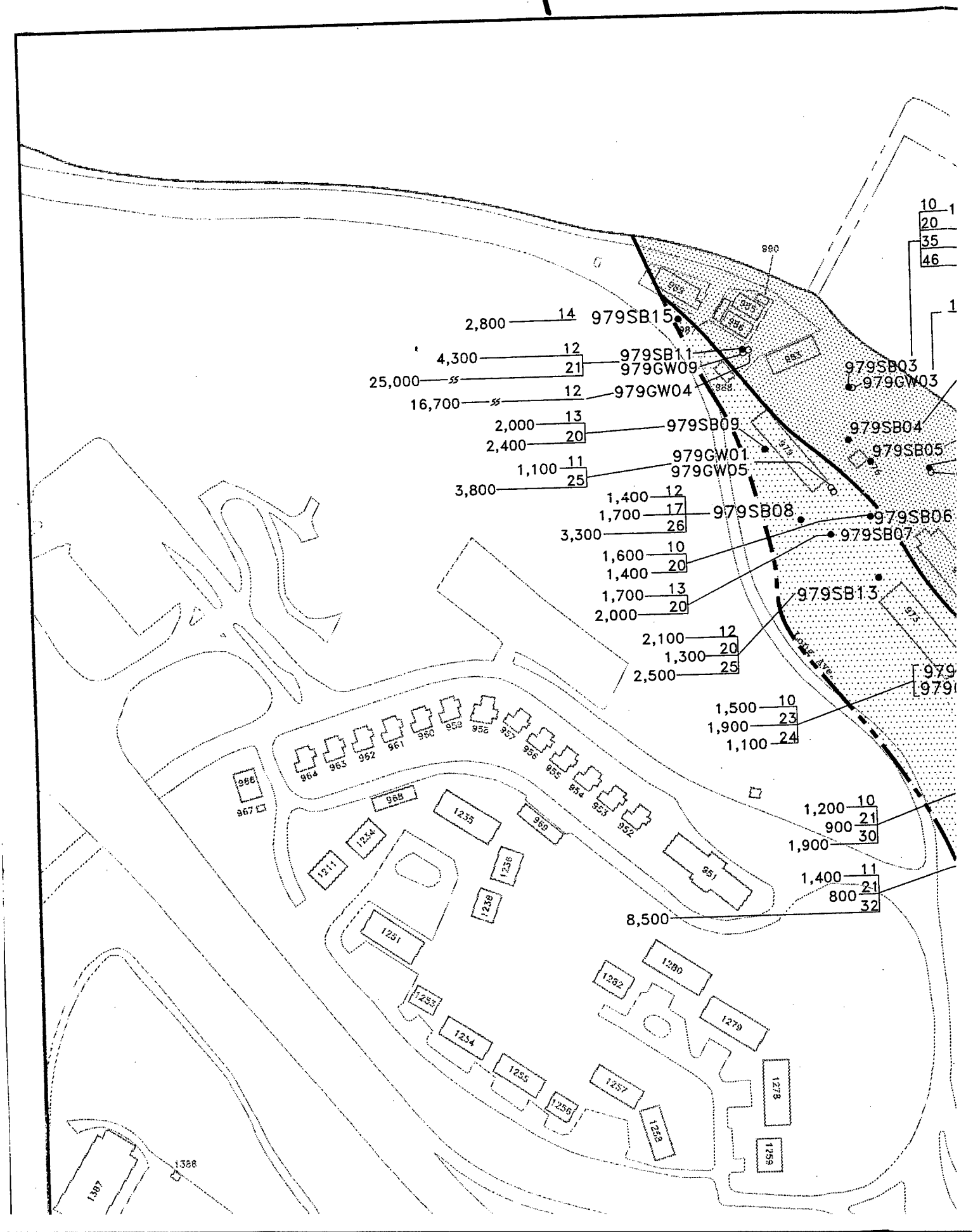


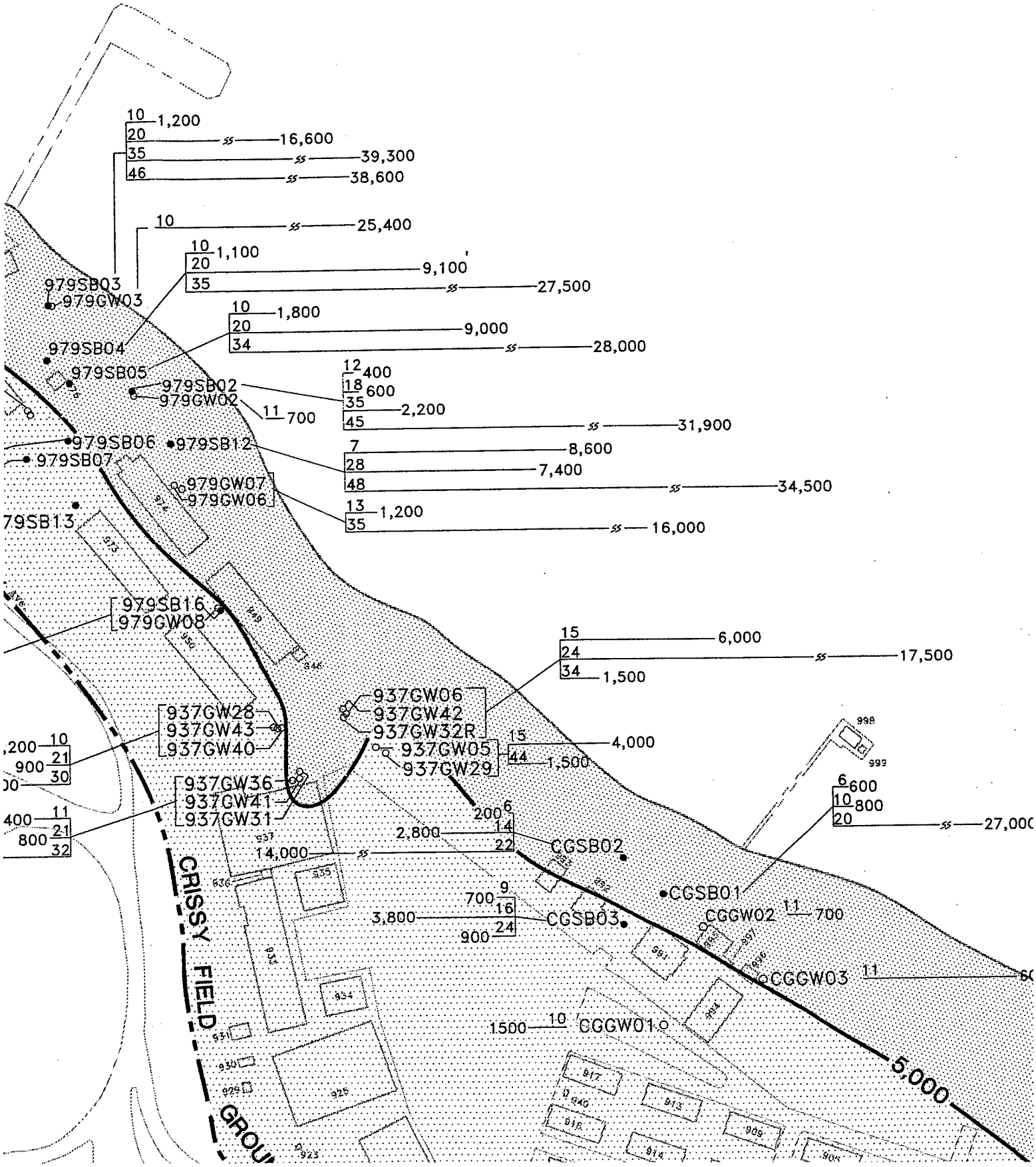
DAMES & MOORE

CRISSY FIELD GROUNDWATER AREA TDS ISOCONCENTRATION MAP, PRESIDIO OF SAN FRANCISCO

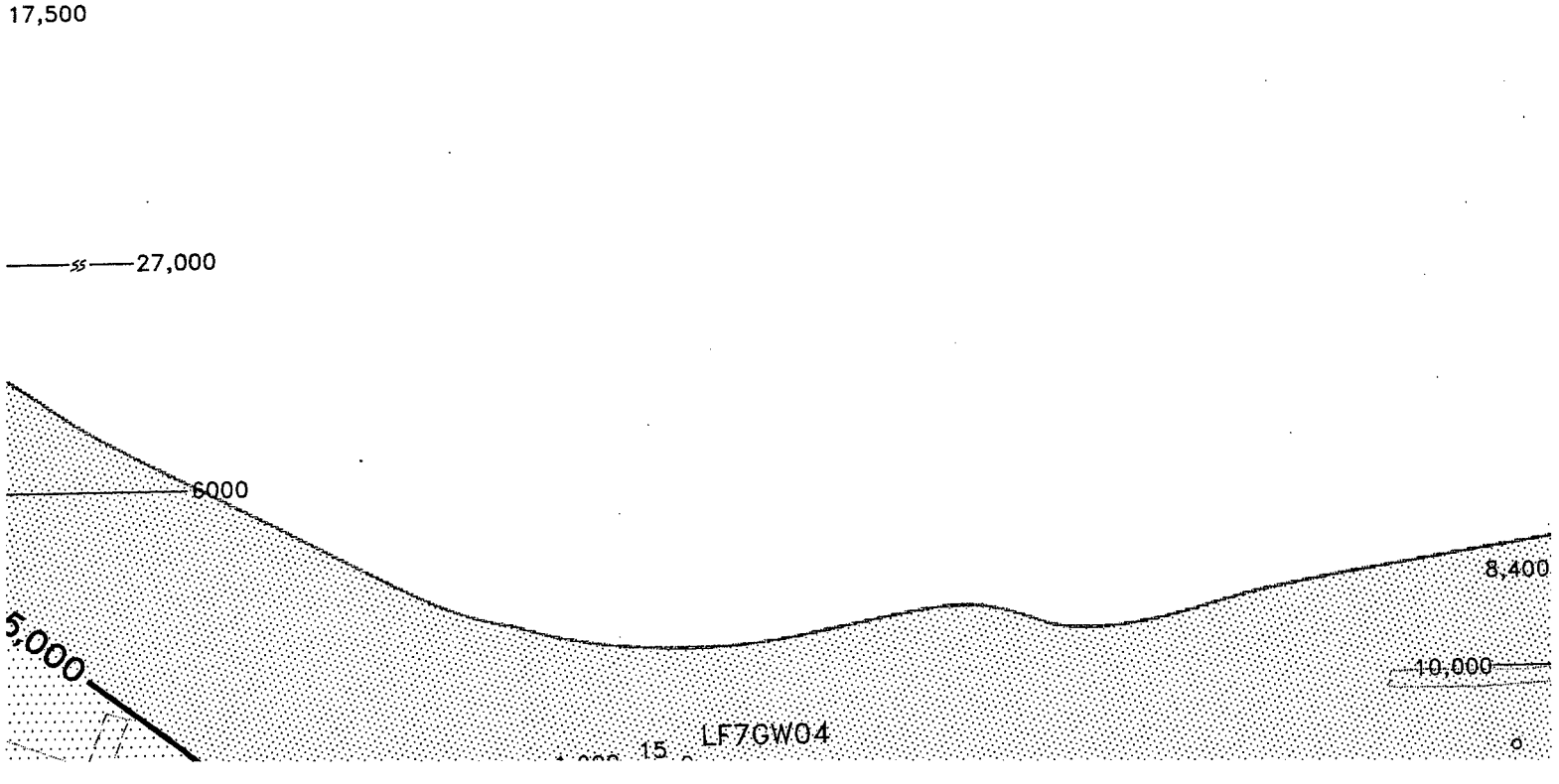
PSF25157\DV1

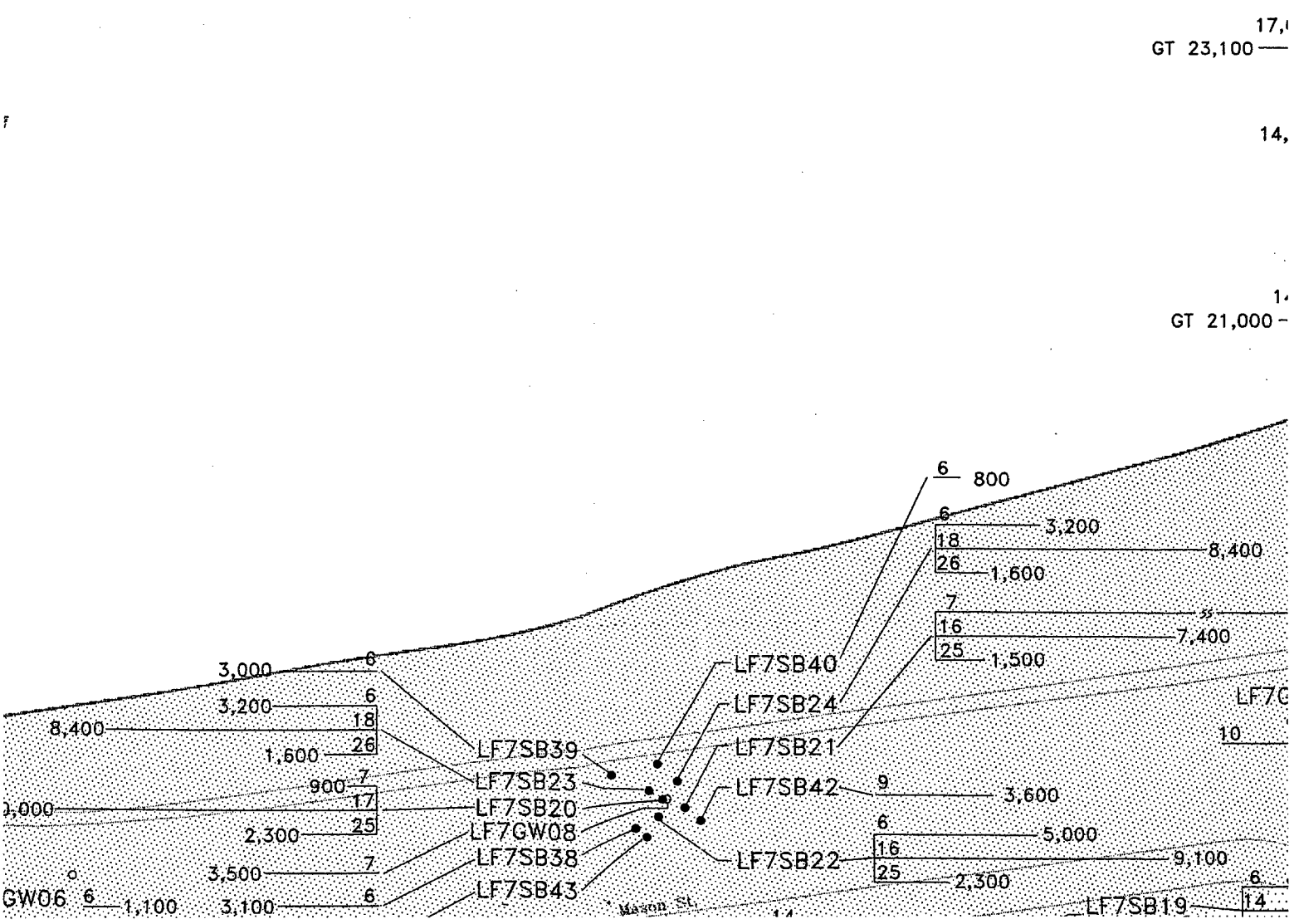
Date: January 1997 | Figure 2.3-11

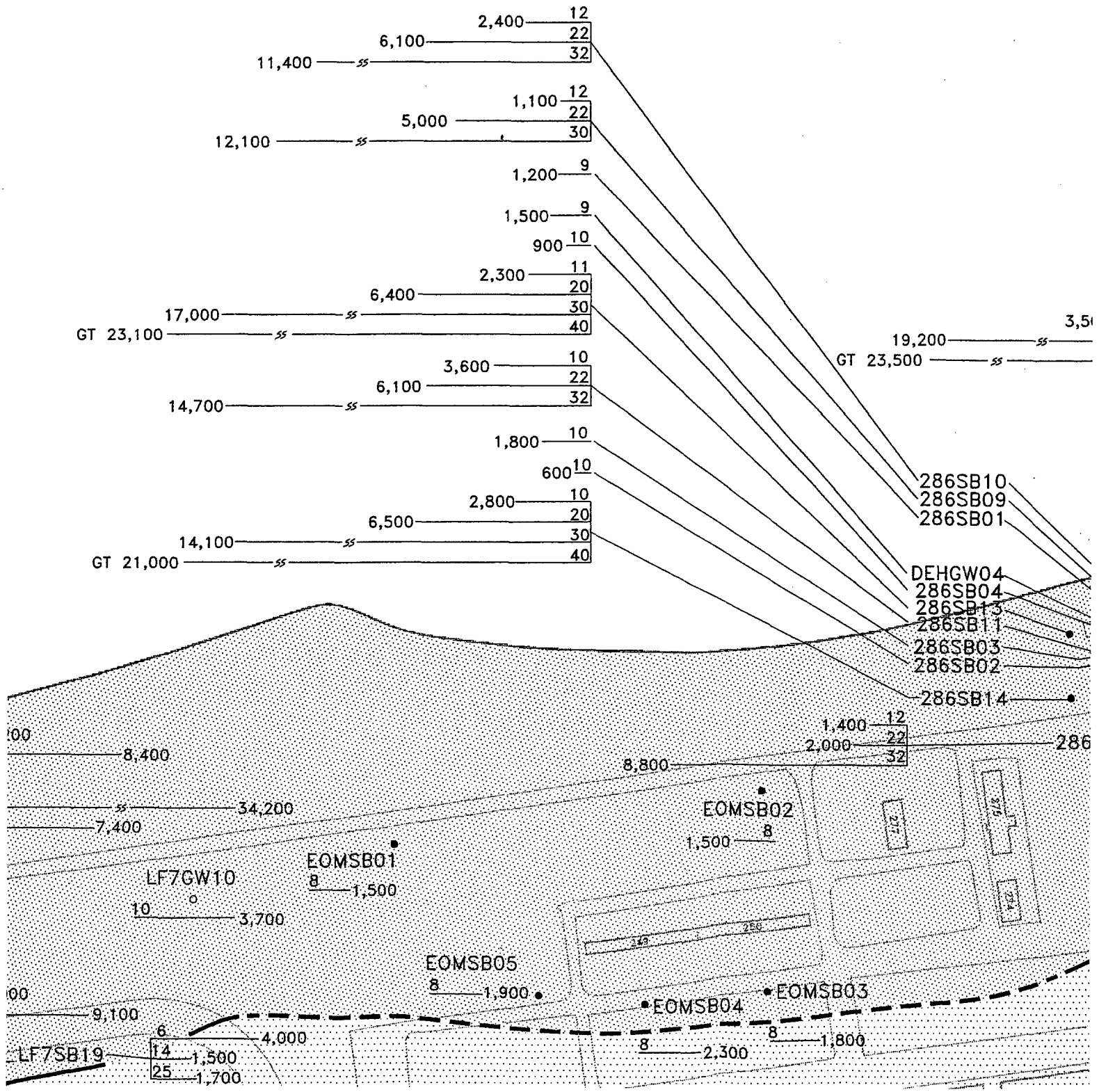

2,800 14 979SB15
4,300 12 21 979SB11 979GW09
25,000 SS
16,700 SS 12 979GW04
2,000 13 20 979SB09
2,400
1,100 11 25 979GW01 979GW05
3,800
1,400 12
1,700 17 26 979SB08
3,300
1,600 10 20
1,400
1,700 13 20
2,000
2,100 12 20
1,300 25
2,500
1,500 10 23
1,900 24
1,100
1,200 10 21
900 30
1,900
1,400 11 21
800 32
8,500
979SB03 979GW03
979SB04
979SB05
979SB06
979SB07
979SB13
10 1
20
35
46
Lot 2 Ave.
980
982
983
984
985
986
987
988
989
973
975
976
978
964 963 962 961 960 959 958 957 956 955 954 953 952
966
967
968
1235
960
1234
1236
1211
1238
951
1251
1250
1252
1253
1279
1254
1255
1257
1256
1258
1278
1259
1387
1388

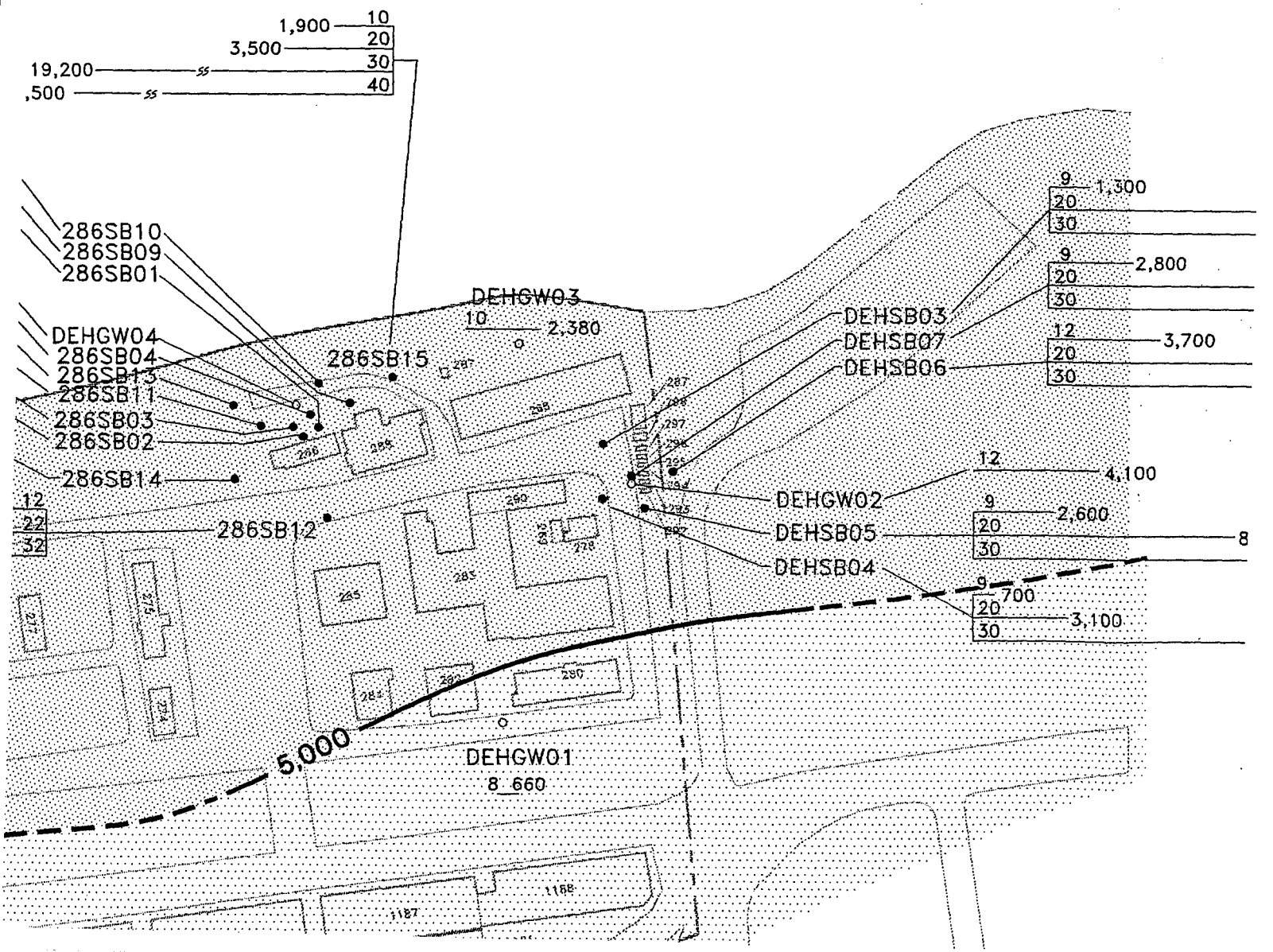

979SB03
979GW03
979SB04
979SB05
979SB02
979GW02
979SB06
979SB07
979SB12
979GW07
979GW06
979SB13
979SB16
979GW08
937GW28
937GW43
937GW40
937GW36
937GW41
937GW31
937GW06
937GW42
937GW32R
937GW05
937GW29
CGSB01
CGSB02
CGSB03
CGGW01
CGGW02
CGGW03
CRISSY FIELD
5,000
10 1,200
20 SS 16,600
35 SS 39,300
46 SS 38,600
10 SS 25,400
10 1,100
20 9,100
35 SS 27,500
10 1,800
20 9,000
34 SS 28,000
12 400
18 600
35 2,200
45 SS 31,900
11 700
7 8,600
28 7,400
48 SS 34,500
13 1,200
35 SS 16,000
15 6,000
24 SS 17,500
34 1,500
15 4,000
44 1,500
200 6
14 2,800
22 CGSB02
14,000 SS
700 9
16 3,800
24 900
6 600
10 800
20 SS 27,000
11 700
1500 10 CGGW01
10
21 900
30
11 400
21 800
32

San Francisco Bay




17,
GT 23,100
14,
1
GT 21,000
6
800
6
3,200
18
8,400
26
1,600
7
16
7,400
25
1,500
LF7SB40
LF7SB24
LF7SB21
LF7SB42
9
3,600
6
5,000
16
9,100
25
2,300
LF7SB22
LF7SB19
14
3,000
6
3,200
6
18
8,400
26
1,600
900
7
17
25
2,300
3,500
7
3,100
6
LF7SB39
LF7SB23
LF7SB20
LF7GW08
LF7SB38
LF7SB43
GW06
6
1,100
Mason St.


2,400 12
6,100 22
11,400 SS 32
1,100 12
5,000 22
12,100 SS 30
1,200 9
1,500 9
900 10
2,300 11
6,400 20
17,000 SS 30
GT 23,100 SS 40
3,600 10
6,100 22
14,700 SS 32
1,800 10
600 10
2,800 10
6,500 20
14,100 SS 30
GT 21,000 SS 40
19,200 SS
GT 23,500 SS
286SB10
286SB09
286SB01
DEHGW04
286SB04
286SB13
286SB11
286SB03
286SB02
286SB14
1,400 12
2,000 22
8,800 32
286
8,400
34,200
7,400
EOMSB02
8
1,500
EOMSB01
8 1,500
LF7GW10
10 3,700
EOMSB05
8 1,900
EOMSB04
EOMSB03
9,100
6 4,000
LF7SB19
14 1,500
25 1,700
8 2,300
8 1,800


1,900
10
20
3,500
30
19,200
40
,500
286SB10
286SB09
286SB01
DEHGW03
10
2,380
DEHGW04
286SB04
286SB13
286SB11
286SB03
286SB02
286SB15
286SB14
12
22
32
286SB12
DEHSB03
DEHSB07
DEHSB06
9
1,300
20
30
9
2,800
20
30
12
3,700
20
30
12
4,100
DEHGW02
DEHSB05
DEHSB04
9
2,600
20
30
8
9
700
20
30
3,100
5,000
DEHGW01
8 660

EXPLANATION

9 ——— 2,800 depth (ft) EC, uS/cm

o GROUNDWATER MONITORING WELLS

• DISCRETE GROUNDWATER SAMPLING LOCATION

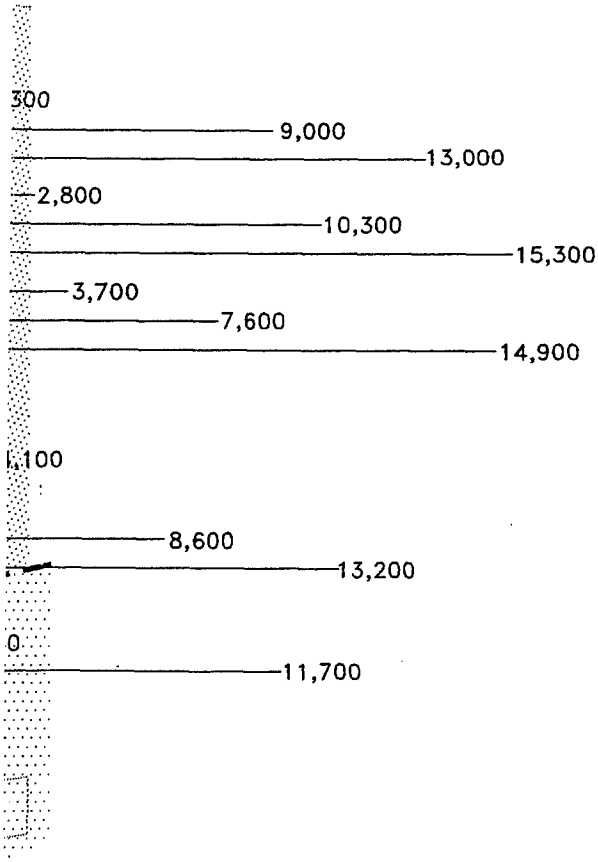
637–10a APPROXIMATE LOCATION OF MONTGOMERY WATSON WELLS (MONTGOMERY WATSON, 1995d)

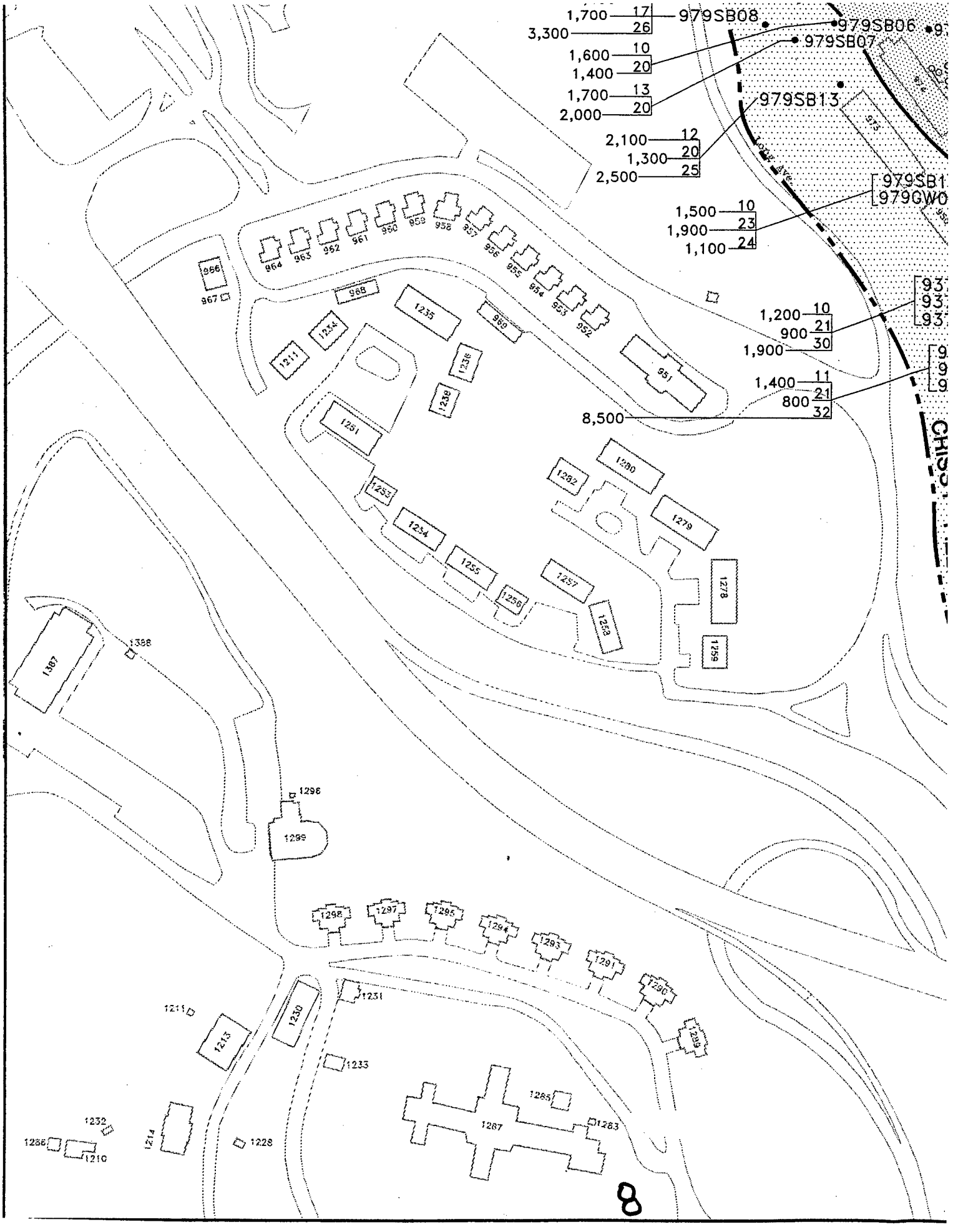
—5,000— ELECTRICAL CONDUCTIVITY STANDARD FOR MUNICIPAL OR DOMESTIC WATER SUPPLIES IN CALIFORNIA (STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 88–63) (DASHED WHERE INFERRED). LINE IS BASED ON HIGHEEST ELECTRICAL CONDUCTIVIY VALUE; REGARDLESS OF DEPTH.

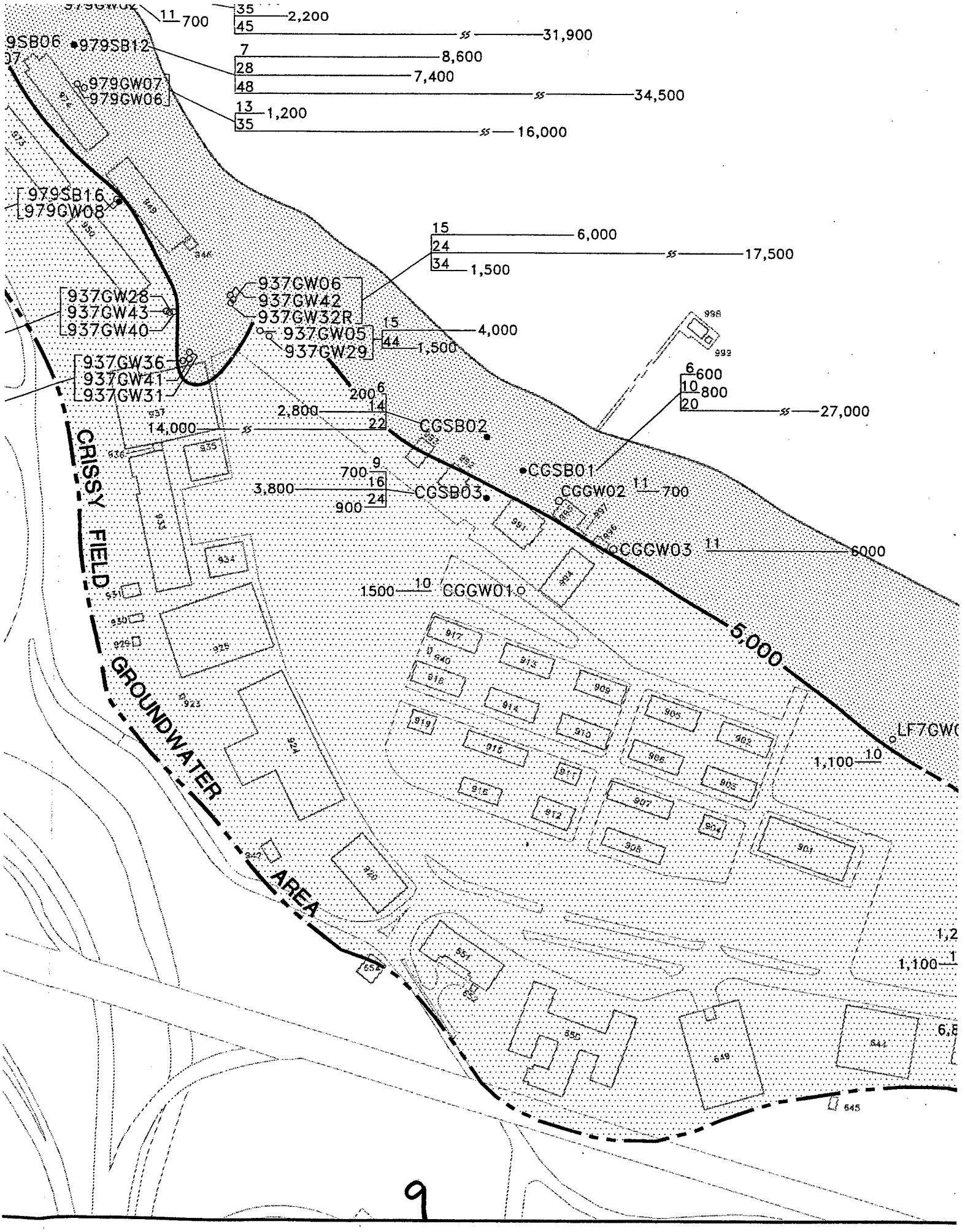
CRISSY FIELD GROUNDWATER AREA BOUNDARY

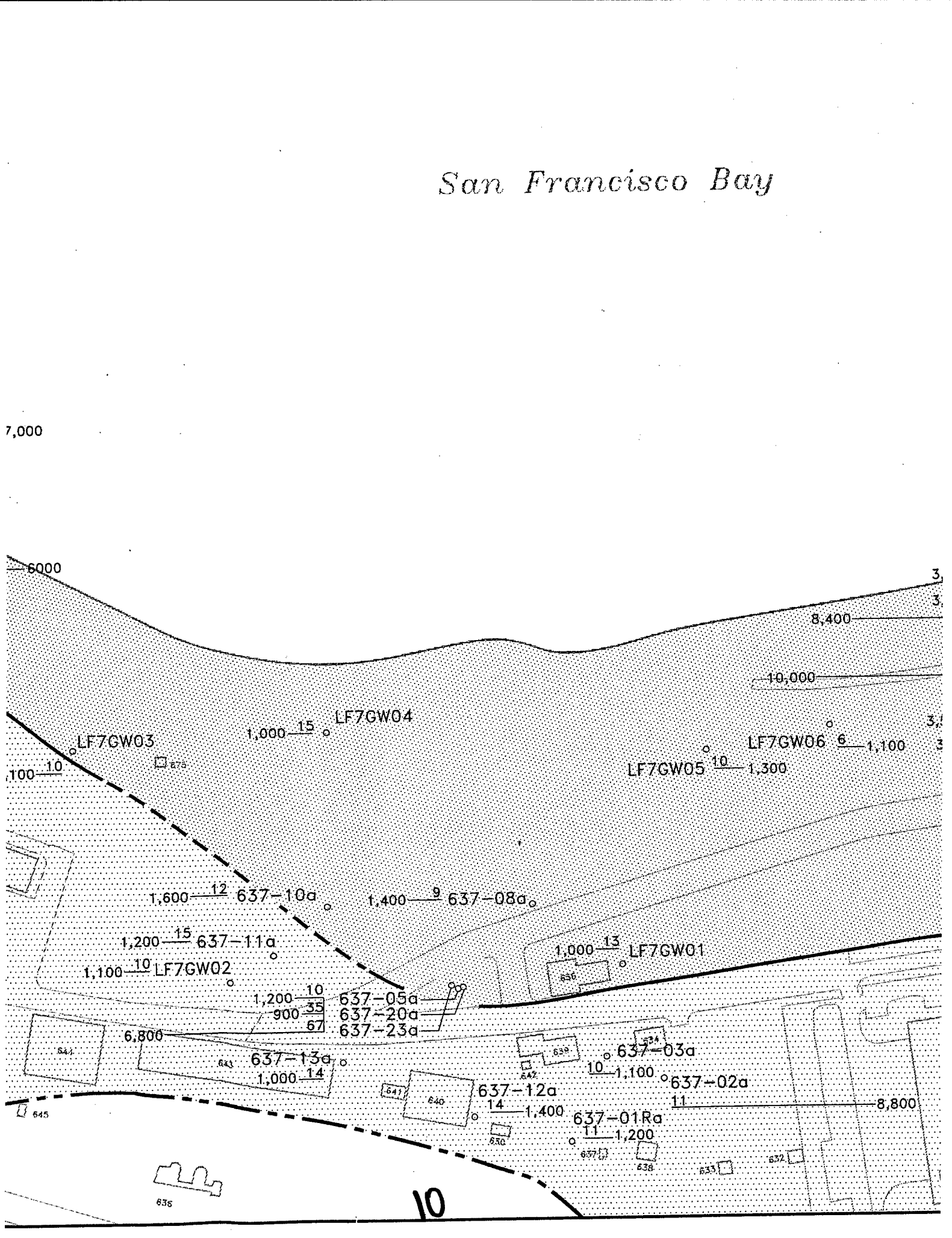
AREAL EXTENT OF GROUNDWATER EXCEEDING THE ELECTRICAL CONDUCTIVITY STANDARD OF 5,000 uS/cm FOR MUNICIPAL OR DOMESTIC WATER SUPPLIES (STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 88–63)

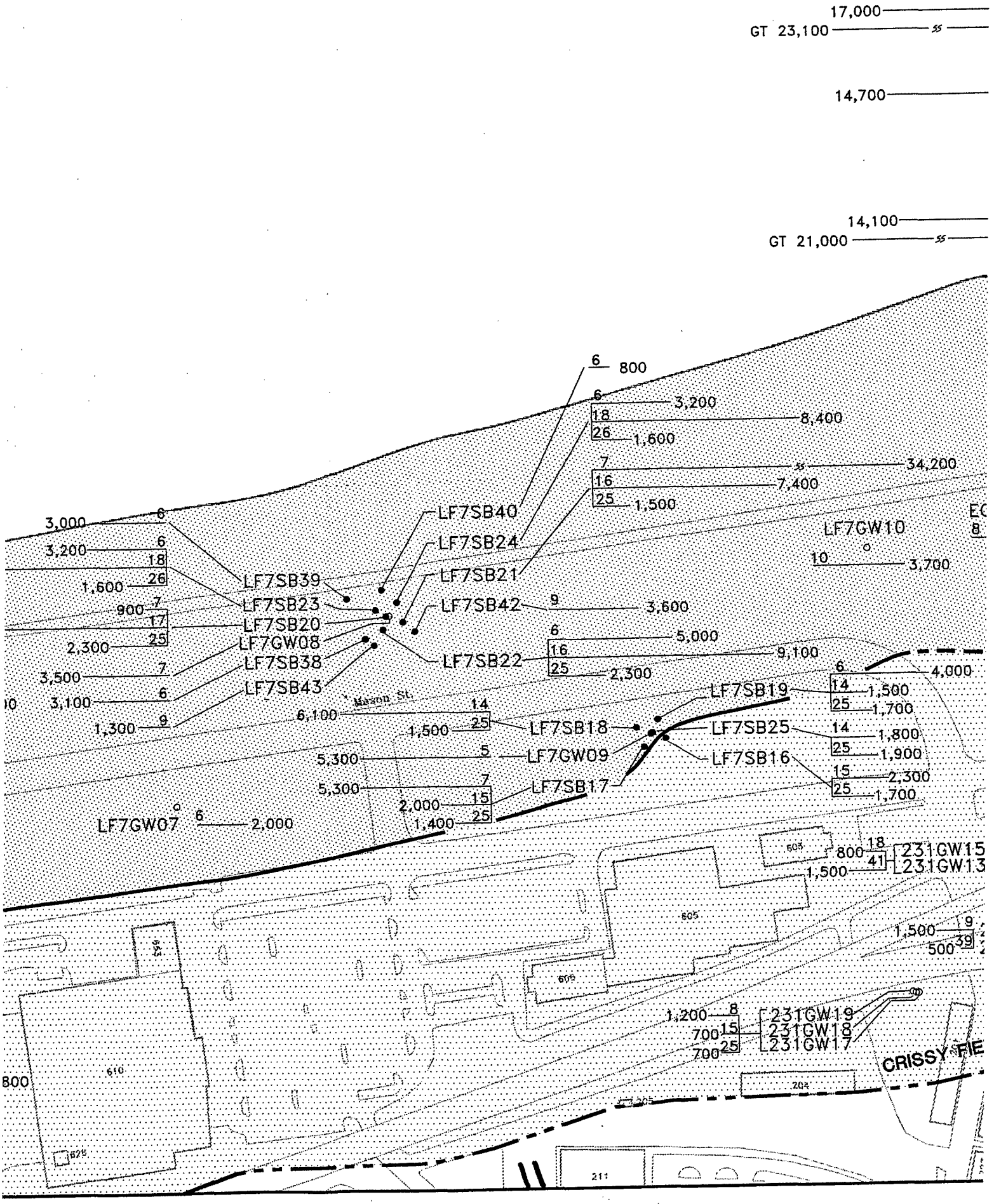
AREAL EXTENT OF GROUNDWATER EXCEEDING THE RECOMMENDED SECONDARY MCL FOR ELECTRICAL CONDUCTIVITY (900 uS/cm).

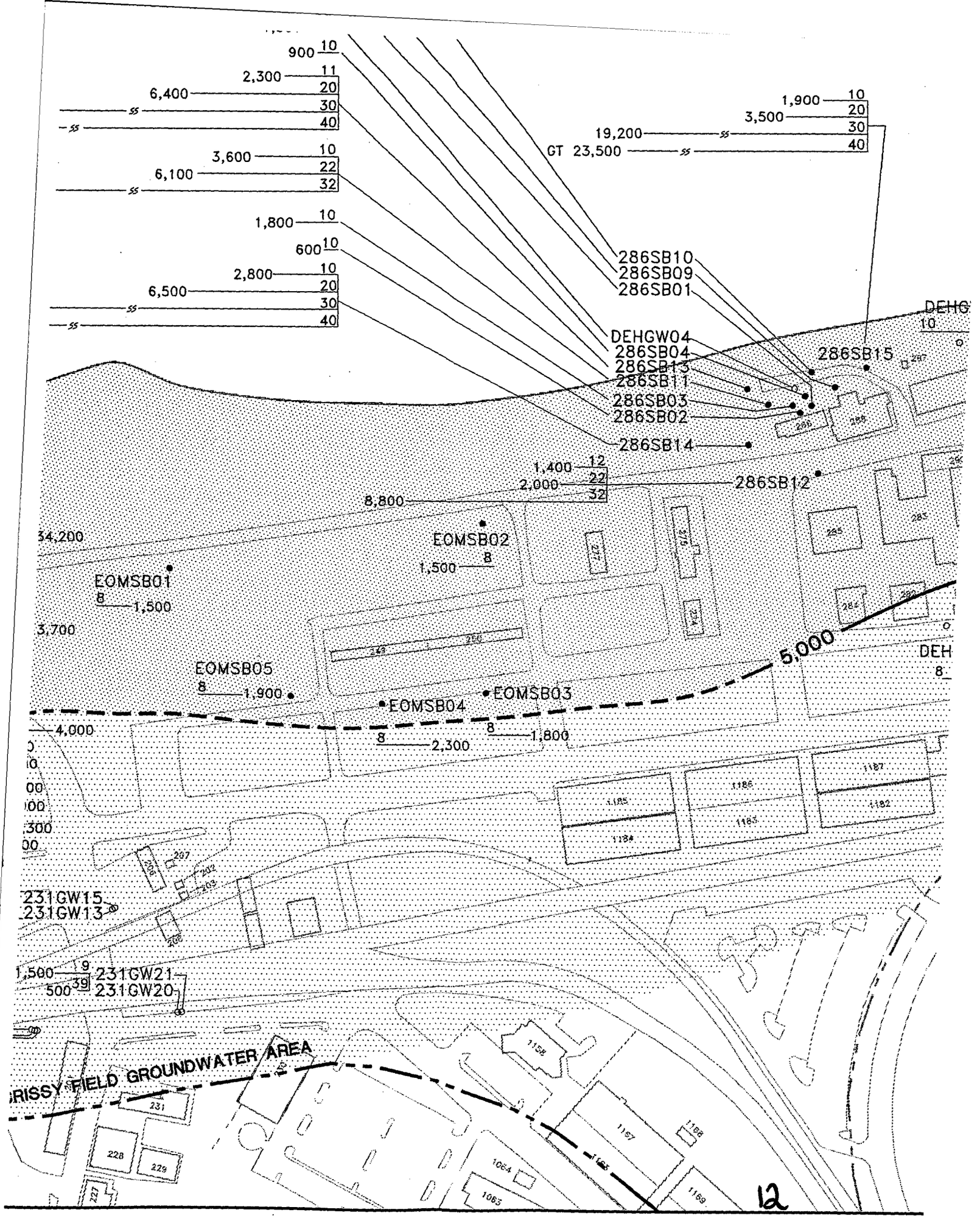


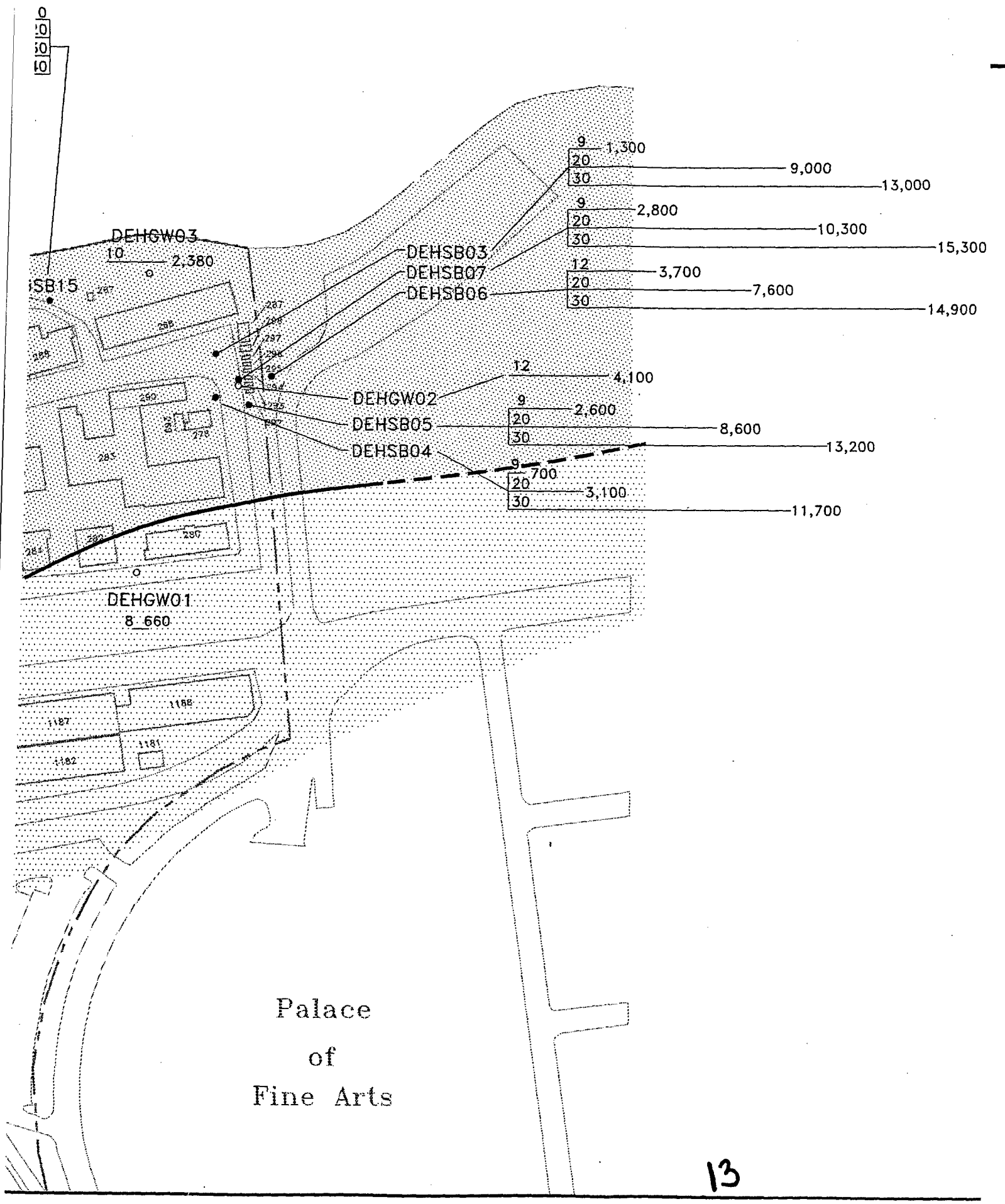

1,700 17
3,300 26
979SB08
979SB06
979SB07
1,600 10
1,400 20
1,700 13
2,000 20
979SB13
2,100 12
1,300 20
2,500 25
979SB1
979GW0
1,500 10
1,900 23
1,100 24
1,200 10
900 21
1,900 30
1,400 11
800 21
8,500 32
964 963 962 961 960 959 958 957 956 955 954 953 952
966
967
968
1235
969
1234
1211
1236
1238
1251
951
1253
1254
1255
1256
1257
1252
1280
1279
1278
1259
1387
1388
1296
1299
1298
1297
1295
1294
1293
1291
1290
1289
1231
1230
1211
1213
1233
1214
1232
1286
1210
1228
1285
1287
1283
8

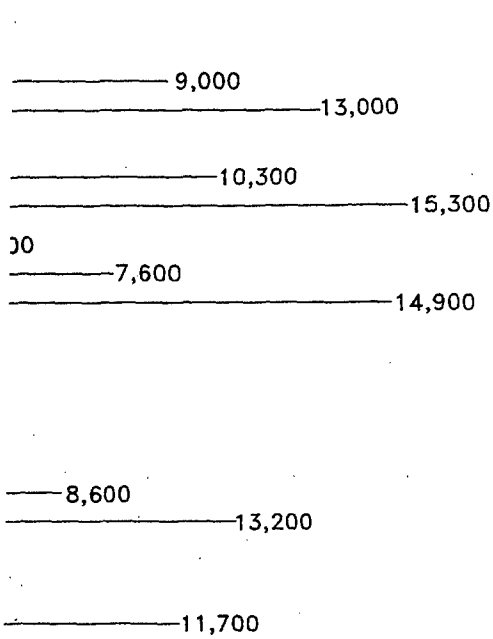

979GW02
11 700
35 2,200
45 ss 31,900
979SB06
979SB12
7 8,600
28 7,400
48 ss 34,500
979GW07
979GW06
13 1,200
35 ss 16,000
979SB16
979GW08
15 6,000
24 ss 17,500
34 1,500
937GW28
937GW43
937GW40
937GW06
937GW42
937GW32R
15 4,000
937GW05
44 1,500
937GW29
937GW36
937GW41
937GW31
200 6
2,800 14
14,000 ss 22
CGSB02
CGSB01
6 600
10 800
20 ss 27,000
700 9
16
3,800 CGSB03
24
900
CGGW02 11 700
CGGW03 11 6000
1500 10 CGGW01
CRISSY FIELD GROUNDWATER AREA
5,000
LF7GW(
1,100 10
1,2
1,100 1
6,8
9


San Francisco Bay
7,000
6000
8,400
10,000
LF7GW04
1,000 15
LF7GW03
100 10
LF7GW06 6 1,100
LF7GW05 10 1,300
1,600 12 637-10a
1,400 9 637-08a
1,200 15 637-11a
1,100 10 LF7GW02
1,000 13 LF7GW01
1,200 10 637-05a
900 35 637-20a
67 637-23a
6,800
637-13a
1,000 14
637-12a
14 1,400
637-03a
10 1,100
637-02a
11 8,800
637-01Ra
11 1,200
10


17,000
GT 23,100 SS
14,700
14,100
GT 21,000 SS
LF7SB40
LF7SB24
LF7SB21
LF7SB42
LF7SB22
LF7SB39
LF7SB23
LF7SB20
LF7GW08
LF7SB38
LF7SB43
LF7GW10
LF7SB19
LF7SB25
LF7SB16
LF7SB18
LF7GW09
LF7SB17
LF7GW07
Mason St.
231GW15
231GW13
231GW19
231GW18
231GW17
CRISSY FIE
6 800
6 3,200
18 8,400
26 1,600
7 SS 34,200
16 7,400
25 1,500
3,000 6
3,200 6
18
1,600 26
900 7
17
2,300 25
3,500 7
3,100 6
1,300 9
6,100 14
1,500 25
5,300 5
5,300 7
2,000 15
1,400 25
LF7GW07 6 2,000
6 5,000
16 9,100
25 2,300
9 3,600
10 3,700
6 4,000
14 1,500
25 1,700
14 1,800
25 1,900
15 2,300
25 1,700
800 18
41
1,500
1,500 9
39
500
1,200 8
700 15
700 25
605
610
625
211
205
204


900 10
2,300 11
20
6,400 30
SS
SS 40
3,600 10
22
6,100 32
SS
1,800 10
600 10
2,800 10
20
6,500 30
SS
SS 40
1,900 10
20
3,500 30
19,200 SS
40
GT 23,500 SS
286SB10
286SB09
286SB01
DEHGW04
286SB04
286SB13
286SB11
286SB03
286SB02
286SB14
286SB15
DEHG
10
1,400 12
22
2,000 32
286SB12
8,800
34,200
EOMSB02
8
1,500
EOMSB01
8 1,500
3,700
EOMSB05
8 1,900
EOMSB04
EOMSB03
8 2,300
8 1,800
5,000
DEH
8
4,000
231GW15
231GW13
1,500 9
500 39
231GW21
231GW20
RISSY FIELD GROUNDWATER AREA
12


DEHGW03
10
2,380
SB15
DEHSB03
DEHSB07
DEHSB06
9
1,300
20
9,000
30
13,000
9
2,800
20
10,300
30
15,300
12
3,700
20
7,600
30
14,900
DEHGW02
12
4,100
DEHSB05
9
2,600
20
8,600
30
13,200
DEHSB04
9
700
20
3,100
30
11,700
DEHGW01
8
660
Palace
of
Fine Arts

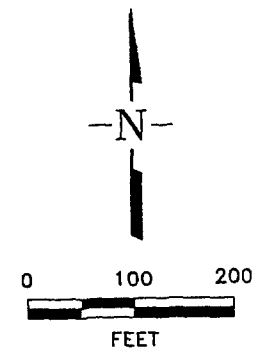


LINE IS BASED ON HIGHEEST ELECTRICAL CONDUCTIVIY VALUE; REGARDLESS OF DEPTH.

CRISSY FIELD GROUNDWATER AREA BOUNDARY

AREAL EXTENT OF GROUNDWATER EXCEEDING THE ELECTRICAL CONDUCTIVITY STANDARD OF 5,000 uS/cm FOR MUNICIPAL OR DOMESTIC WATER SUPPLIES (STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 88-63)

AREAL EXTENT OF GROUNDWATER EXCEEDING THE RECOMMENDED SECONDARY MCL FOR ELECTRICAL CONDUCTIVITY (900 uS/cm).



DAMES & MOORE

CRISSY FIELD GROUNDWATER AREA ELECTRICAL CONDUCTIVITY MAP, PRESIDIO OF SAN FRANCISCO

PSF25160\DV1

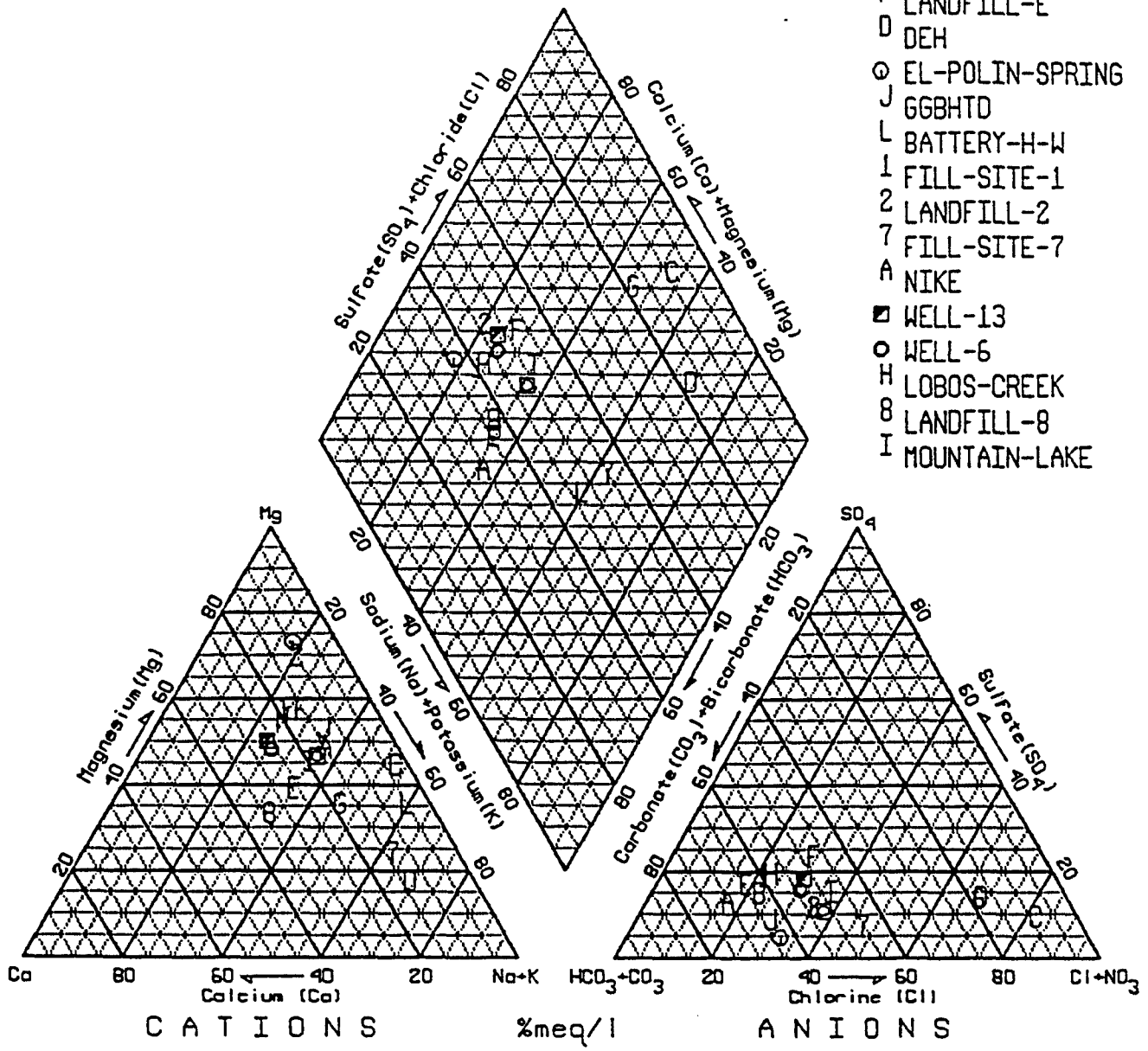
14

Date: January 199-

Figure 2.3-12

EXPLANATION

- C 900S
- E 231
- ⊠ BAKER-BEACH
- G FPCGS
- F LANDFILL-E
- D DEH
- ⊙ EL-POLIN-SPRING
- J GGBHTD
- L BATTERY-H-W
- 1 FILL-SITE-1
- 2 LANDFILL-2
- 7 FILL-SITE-7
- A NIKE
- ▣ WELL-13
- O WELL-6
- H LOBOS-CREEK
- 8 LANDFILL-8
- I MOUNTAIN-LAKE

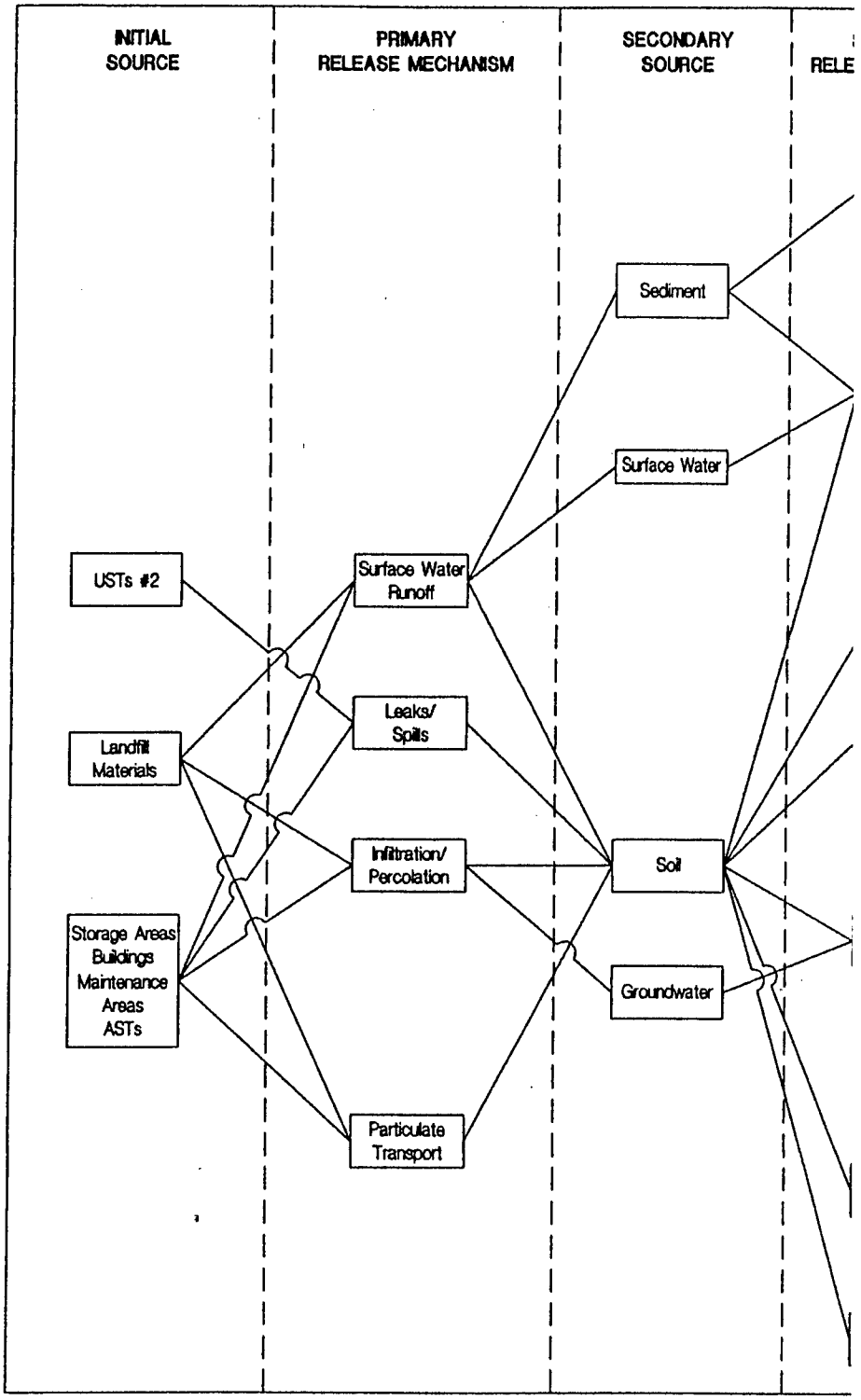


DAMES & MOORE

GENERAL MINERAL CHARACTERISTICS OF SURFACE WATER AND GROUNDWATER PRESIDIO OF SAN FRANCISCO

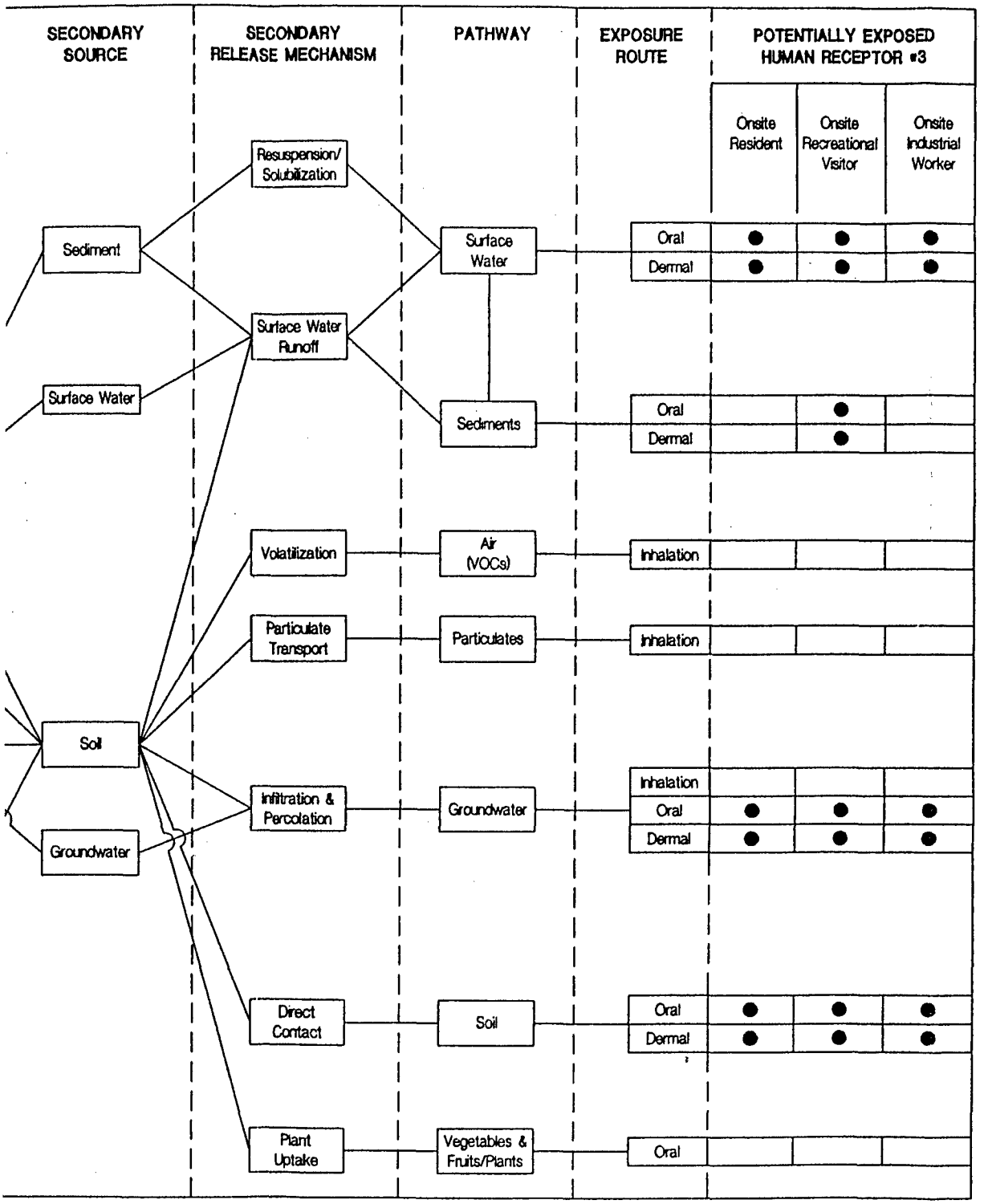
PSF25162\DV1

Date: January 1997 | Figure 2.3-13



EXPLANATION

- Potentially Complete Pathway for Human Exposure



n Exposure

NOTES:

#1. Potentially complete dermal pathways will be quantitatively assessed only if investigation demonstrates presence of organic contaminants of concern.

#2. USTs evaluated under the Corps of Engineers Program

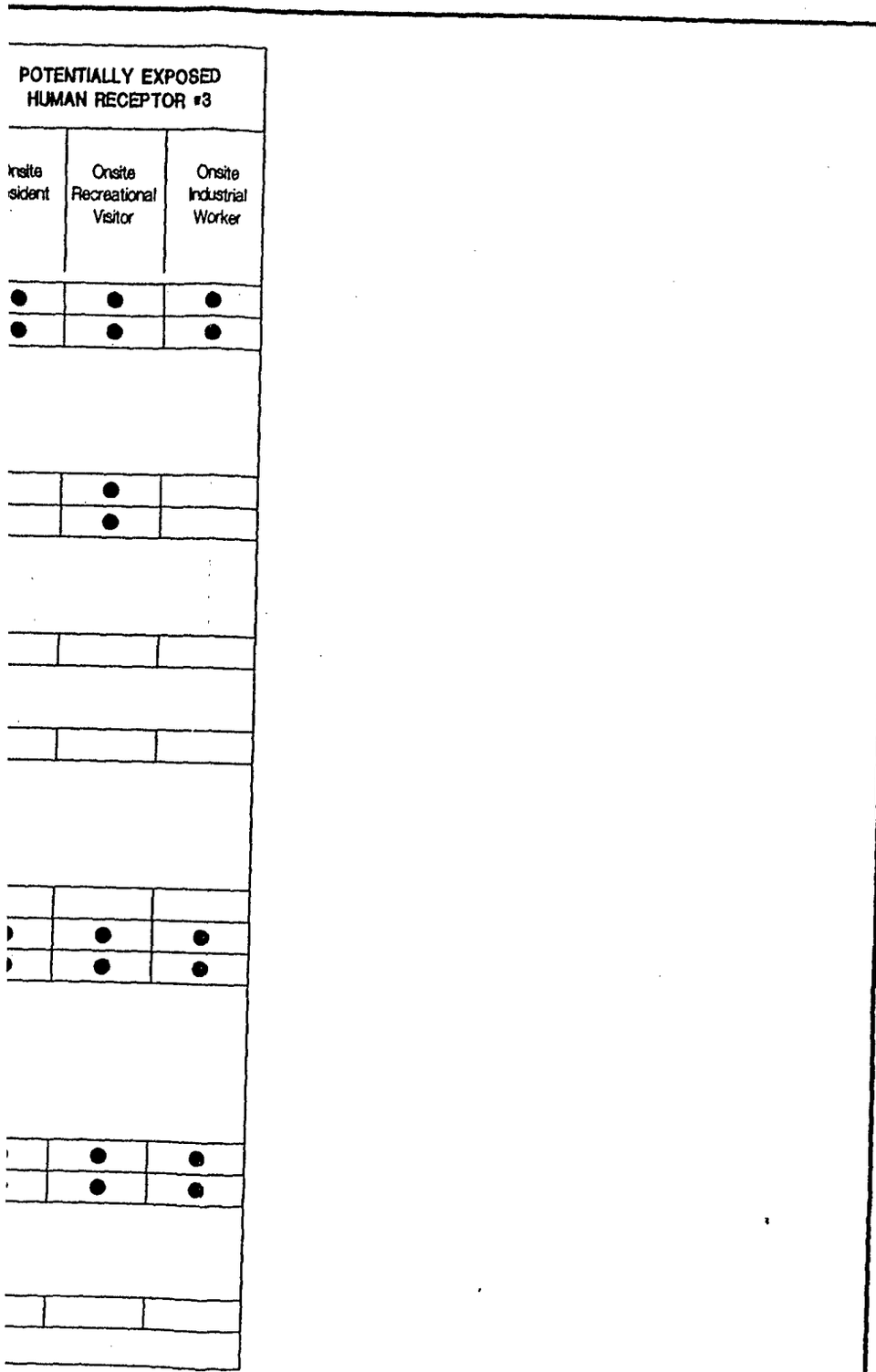
#3. See Figure 3.1-2 for Ecological Receptors

DAMES

CONCEPTU
FOR HUMAN RE
PRESIDIO OF

PSF25149\DV2

Date: January 1997



DAMES & MOORE

CONCEPTUAL SITE MODEL
FOR HUMAN RECEPTORS AT THE
PRESIDIO OF SAN FRANCISCO

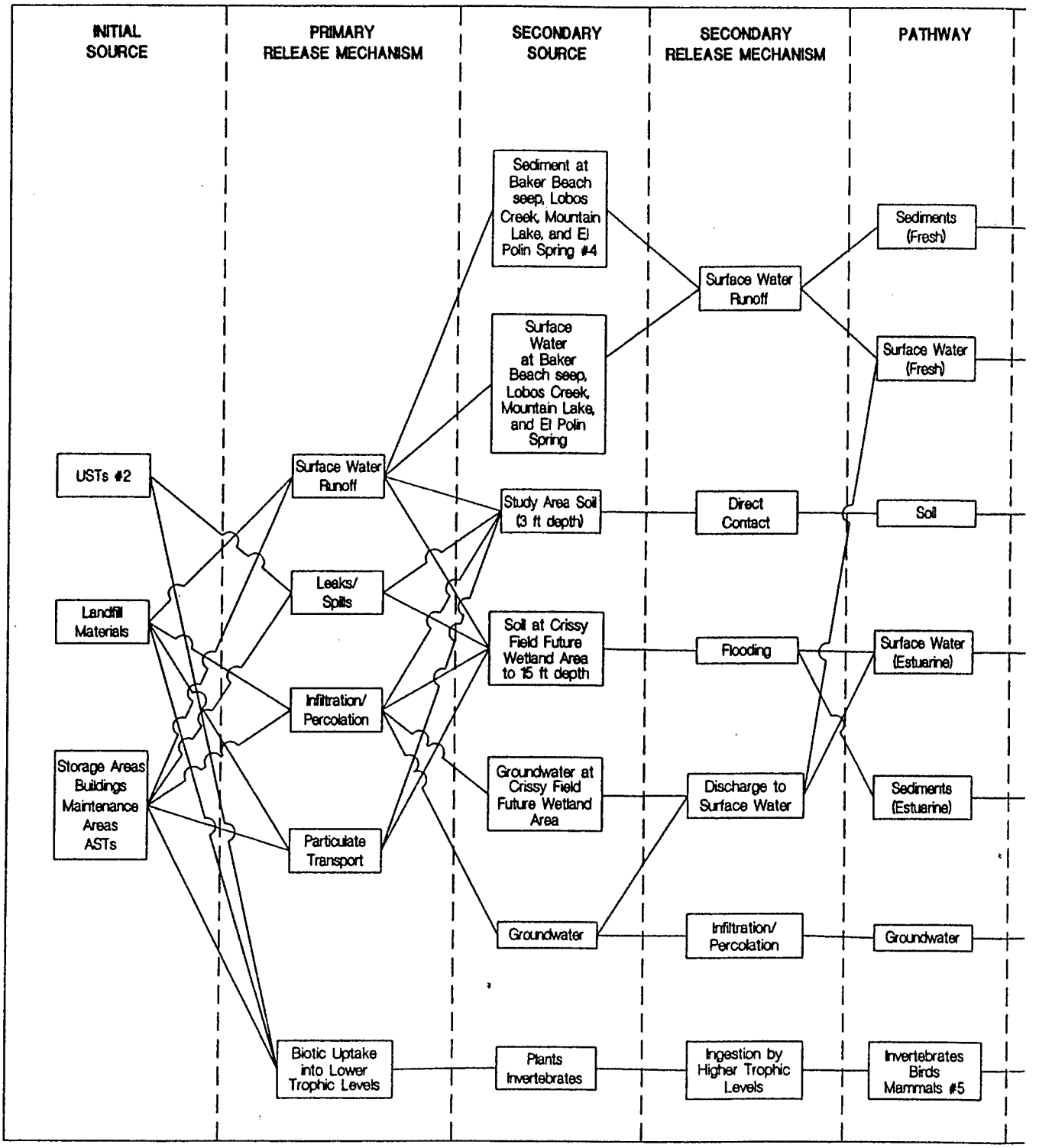
PSF25149\DV2

Date: January 1997 | Figure 3.1-1

be

ers Program

3



EXPLANATION

- ● Quantitated
- ○ Not quantitated
- NA Not Applicable

NOTES:

#1. The t
is not
rather
conce

#2. USTs

#3. See F

#4. No Se

#5. See S
of fo

SECONDARY RELEASE MECHANISM	PATHWAY	EXPOSURE ROUTE	POTENTIALLY EXPOSED ECOLOGICAL RECEPTOR #3					
			Plant	Invertebrate	Bird	Mammal	Aquatic Life- Plant, Invert, Fish	Amphibian
Surface Water Runoff	Sediments (Fresh)	Oral	NA	NA	●	●	O	O
		Dermal	NA	NA	●	●	O	O
		Direct Contact #1	NA	NA	NA	NA	●	●
	Surface Water (Fresh)	Oral	NA	NA	●	●	O	NA
		Dermal	NA	NA	●	●	O	O
		Direct Contact #1	NA	NA	NA	NA	●	●
Direct Contact	Soil	Oral	NA	O	●	●	NA	O
		Dermal	O	O	●	●	NA	O
		Direct Contact #1	●	●	NA	NA	NA	O
Flooding	Surface Water (Estuarine)	Oral	NA	NA	●	NA	O	NA
		Dermal	NA	NA	O	O	O	NA
		Direct Contact #1	NA	NA	NA	NA	●	NA
Discharge to Surface Water	Sediments (Estuarine)	Oral	NA	NA	●	●	O	NA
		Dermal	NA	NA	O	O	O	NA
		Direct Contact #1	NA	NA	NA	NA	●	NA
Infiltration/ Percolation	Groundwater	Oral	NA	NO EXPOSURE POINT UNTIL DISCHARGE TO SURFACE WATER				
		Dermal	NA					
		Direct Contact #1	O					
Ingestion by Higher Trophic Levels	Invertebrates Birds Mammals #5	Oral	NA	O	●	●	NA	O
		Dermal	NA	NA	NA	NA	NA	NA
		Direct Contact #1	NA	NA	NA	NA	NA	NA

NOTES:

#1. The term direct contact implies that exposure is not assessed by comparing intakes to TBVs; rather, exposure is assessed by comparing media concentrations directly to a criterion based on same medium.

#2. USTs evaluated under the Corps of Engineers Program

#3. See Figure 3.1-1 for Human Receptors

#4. No Sediment data available for El Polin Spring

#5. See Section 15.2.2 for more detailed description of food web modeling

2

DA

CON
FOR ECOL
PRESI

PSF25194\DV4

Date: Januar

LY EXPOSED RECEPTOR •3		
Mammal	Aquatic Life-Plant, Invert. Fish	Amphibian
●	O	O
●	O	O
NA	●	●
●	O	NA
●	O	O
NA	●	●
●	NA	O
●	NA	O
NA	NA	O
NA	O	NA
O	O	NA
NA	●	NA
●	O	NA
O	O	NA
NA	●	NA

OINT UNTIL DISCHARGE TO FACE WATER		
●	NA	O
NA	NA	NA
NA	NA	NA

s;
nedia
n same medium.
Program

g
tion

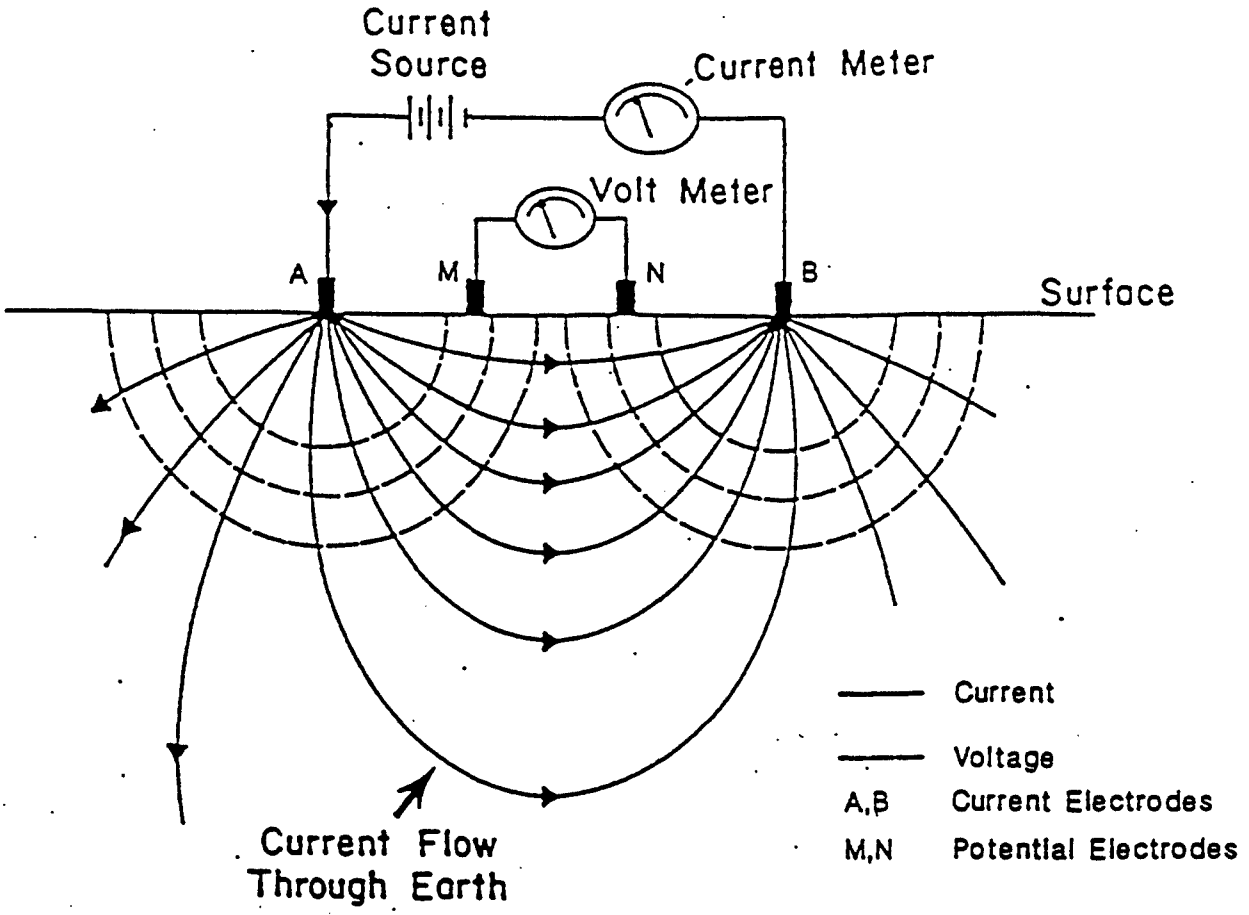
DAMES & MOORE

CONCEPTUAL SITE MODEL
FOR ECOLOGICAL RECEPTORS AT THE
PRESIDIO OF SAN FRANCISCO

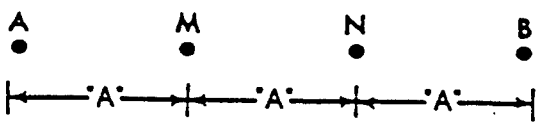
PSF25194\DV4

Date: January 1997 | Figure 3.1-2

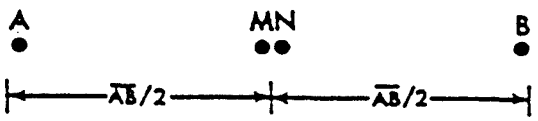
Resistivity Schematic



Electrode Configurations



WENNER ELECTRODE ARRAY



SCHLUMBERGER ELECTRODE ARRAY

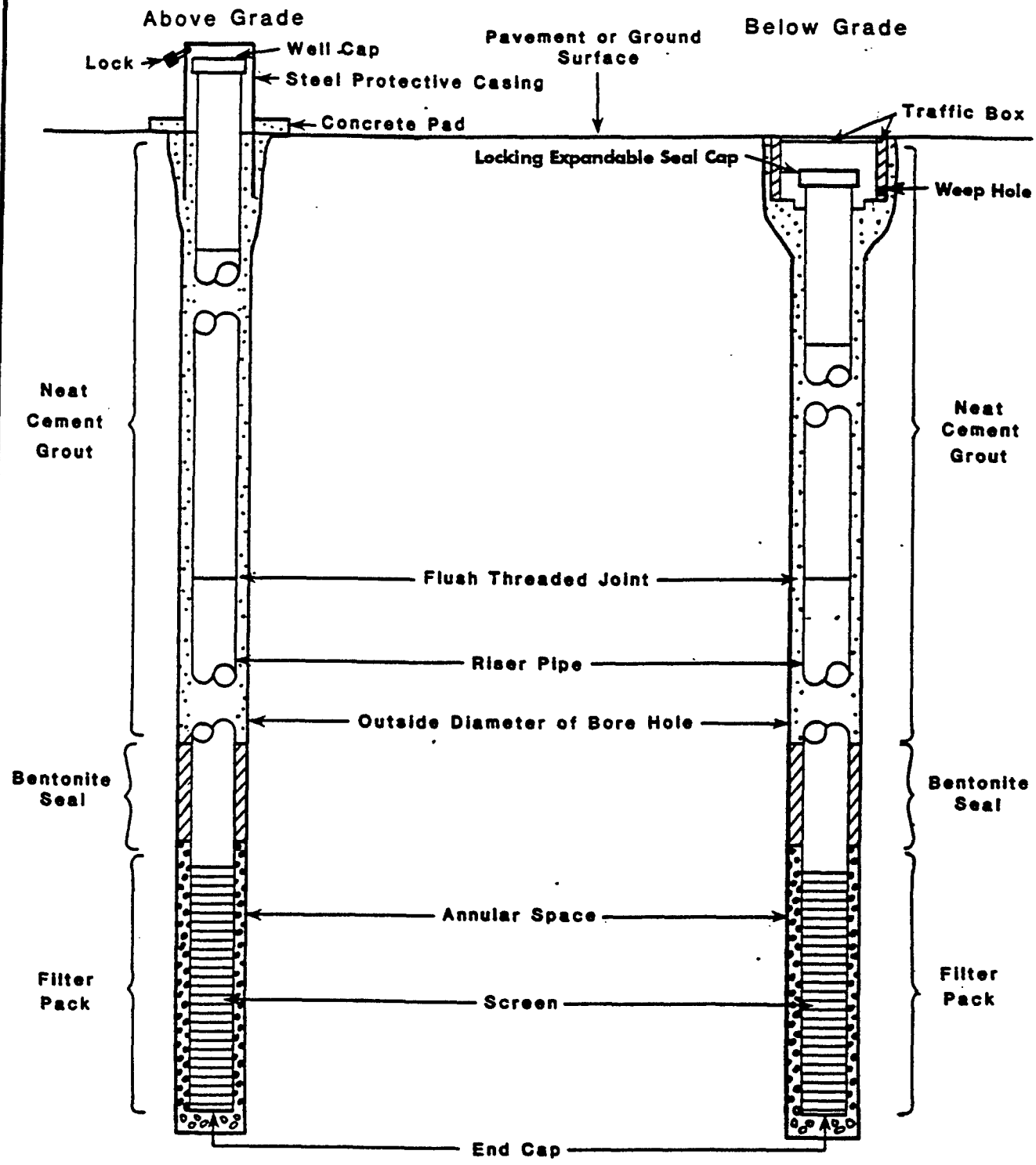
(after Zohdy, et. al., 1984; and Benson, et. al., 1982)

DAMES & MOORE

RESISTIVITY SCHEMATIC AND ELECTRODE CONFIGURATION

PSF25191\DV1

Date: January 1997 | Figure 3.2-1

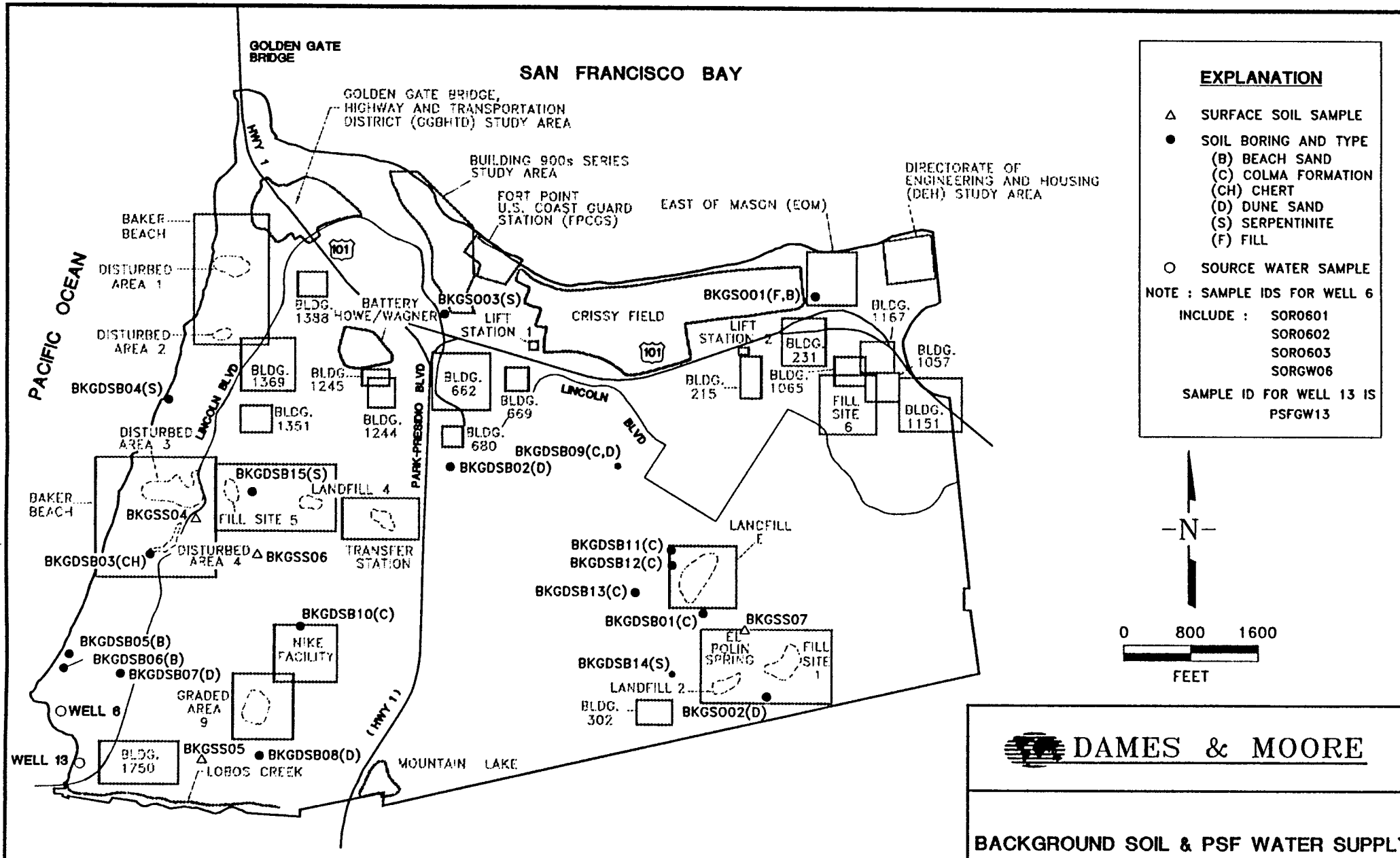


DAMES & MOORE

TYPICAL MONITORING WELL CONSTRUCTION

PSF25190\DV1

Date: January 1997 | Figure 3.2-2



EXPLANATION

- △ SURFACE SOIL SAMPLE
- ● SOIL BORING AND TYPE
  - (B) BEACH SAND
  - (C) COLMA FORMATION
  - (CH) CHERT
  - (D) DUNE SAND
  - (S) SERPENTINITE
  - (F) FILL
- ○ SOURCE WATER SAMPLE

NOTE : SAMPLE IDS FOR WELL 6 INCLUDE : SOR0601, SOR0602, SOR0603, SORGW06

SAMPLE ID FOR WELL 13 IS PSFGW13

N

0 800 1600

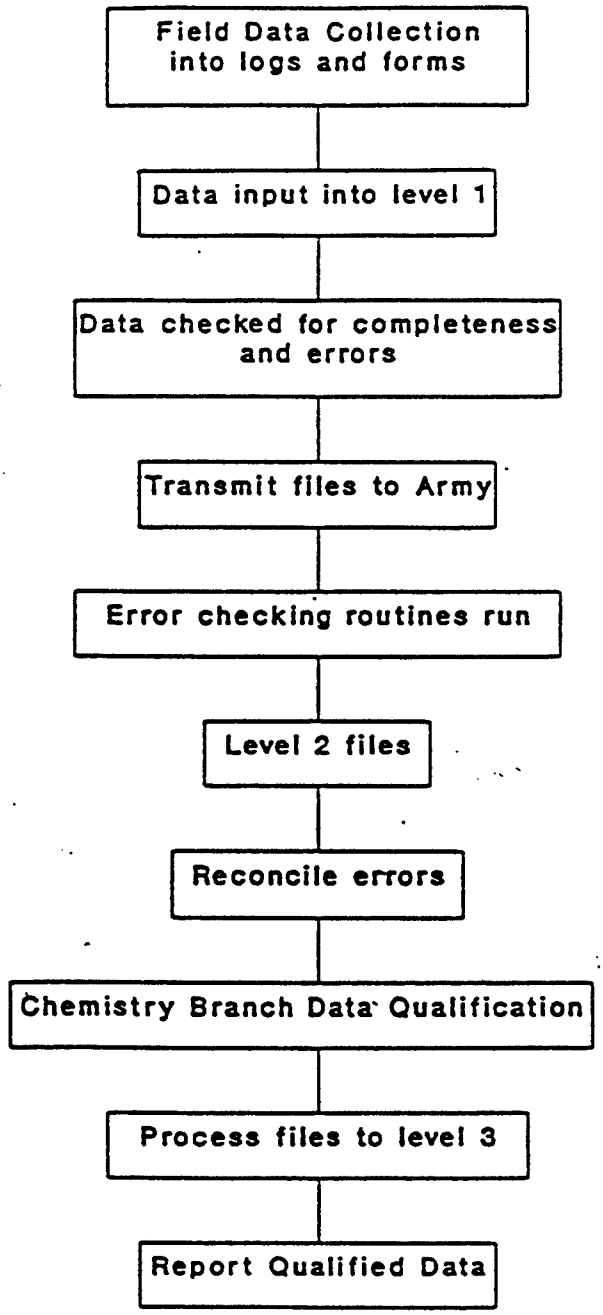
FEET

DAMES & MOORE

BACKGROUND SOIL & PSF WATER SUPPLY SAMPLE LOCATIONS

PSF25021\DV3

Date: January 1996 | Figure 3.2-3

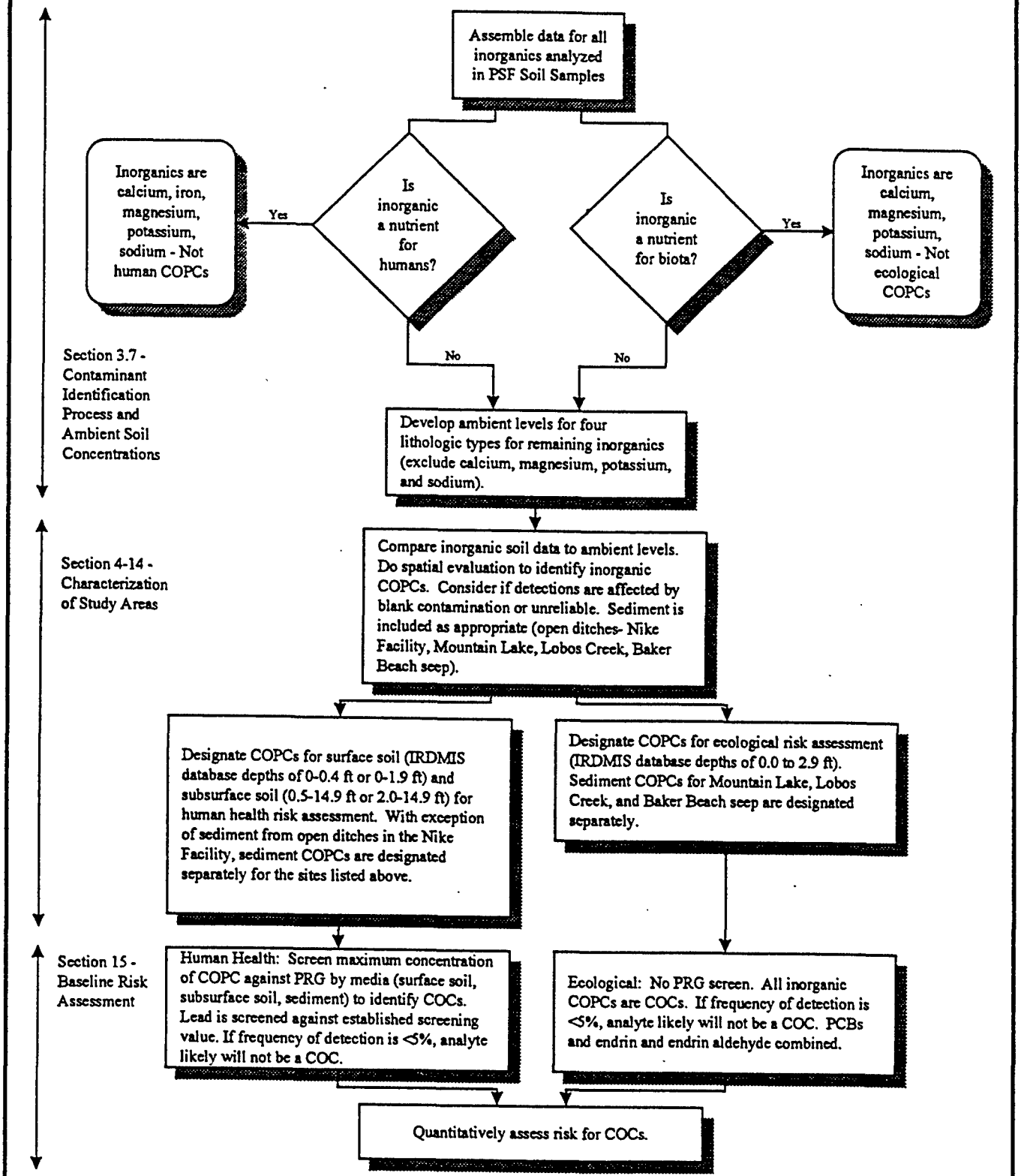


DAMES & MOORE

DATA MANAGEMENT
FLOW SCHEME

PSF25193\DV1

Date: January 1997 | Figure 3.4-1



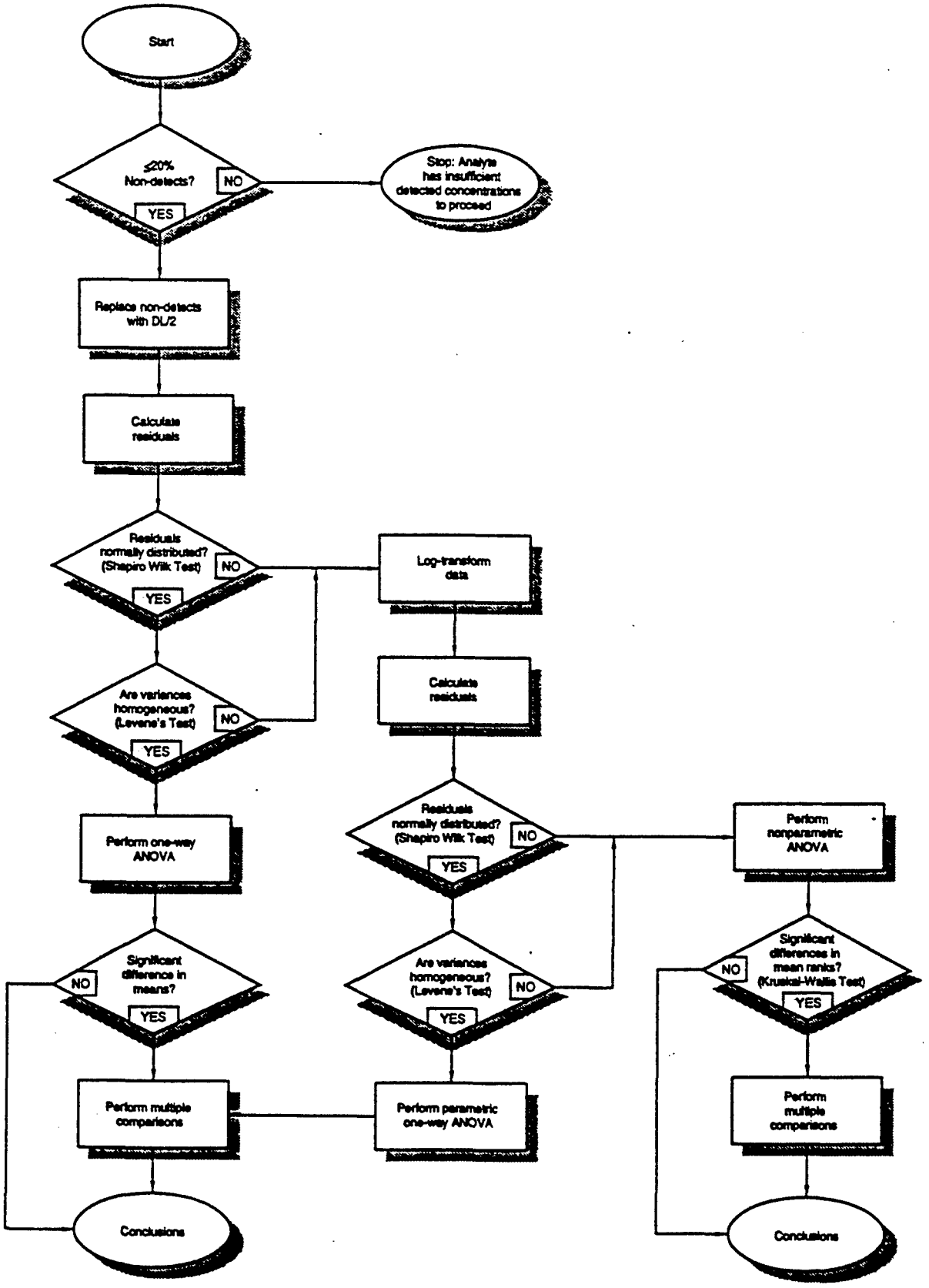
PRG = Preliminary Remedial Goal. Humans: residential scenario (EPA Region IX, August 1996)
COPC = Chemical of Potential Concern
COC = Chemical of Concern

DAMES & MOORE

SUMMARY OF PROCESS OF IDENTIFYING INORGANIC COCs IN SOIL AND SEDMENT

PSF25195\DV1

Date: January 1997 | Figure 3.7-1

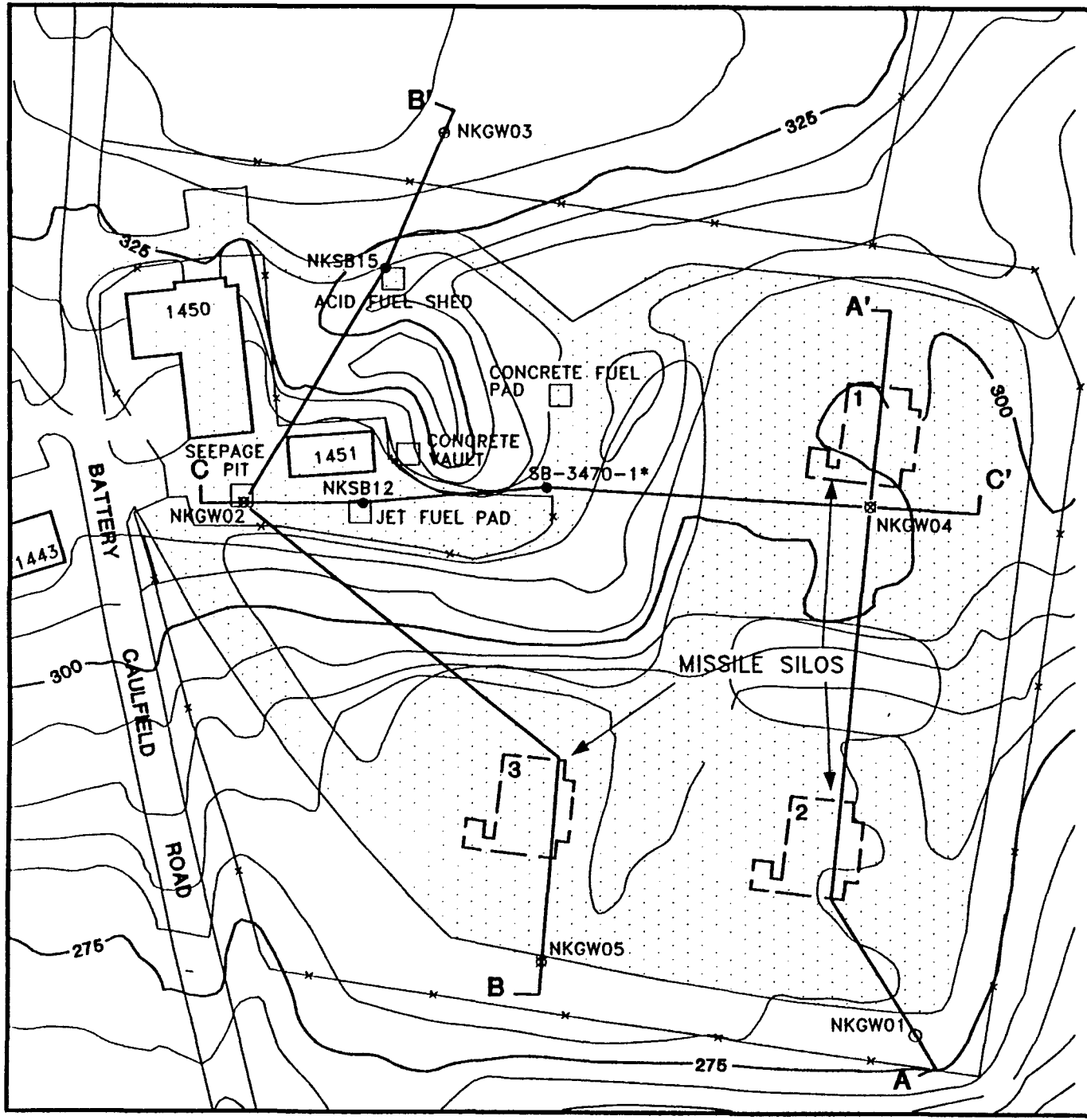


DAMES & MOORE

Method for Performing Statistical Comparisons of Background Chemical Data

Date: January 1997 | Figure: 3.7-2

MTH-STEV.DWG



EXPLANATION

- PRECONSTRUCTION GEOTECHNICAL SOIL BORING (USCOE,1954)
- MONITORING WELL WITH SOIL SAMPLES
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- A A' CROSS SECTION LINE
- SURFACES COVERED BY PAVEMENT OR BUILDINGS
- —325— TOPOGRAPHIC CONTOUR

CONTOUR INTERVAL 5 FEET
ELEVATIONS IN
FEET–PRESIDIO LOWER LOW WATER

* PRECONSTRUCTION GEOTECHNICAL SOIL BORING (USCOE, 1954)

0 50 100
FEET

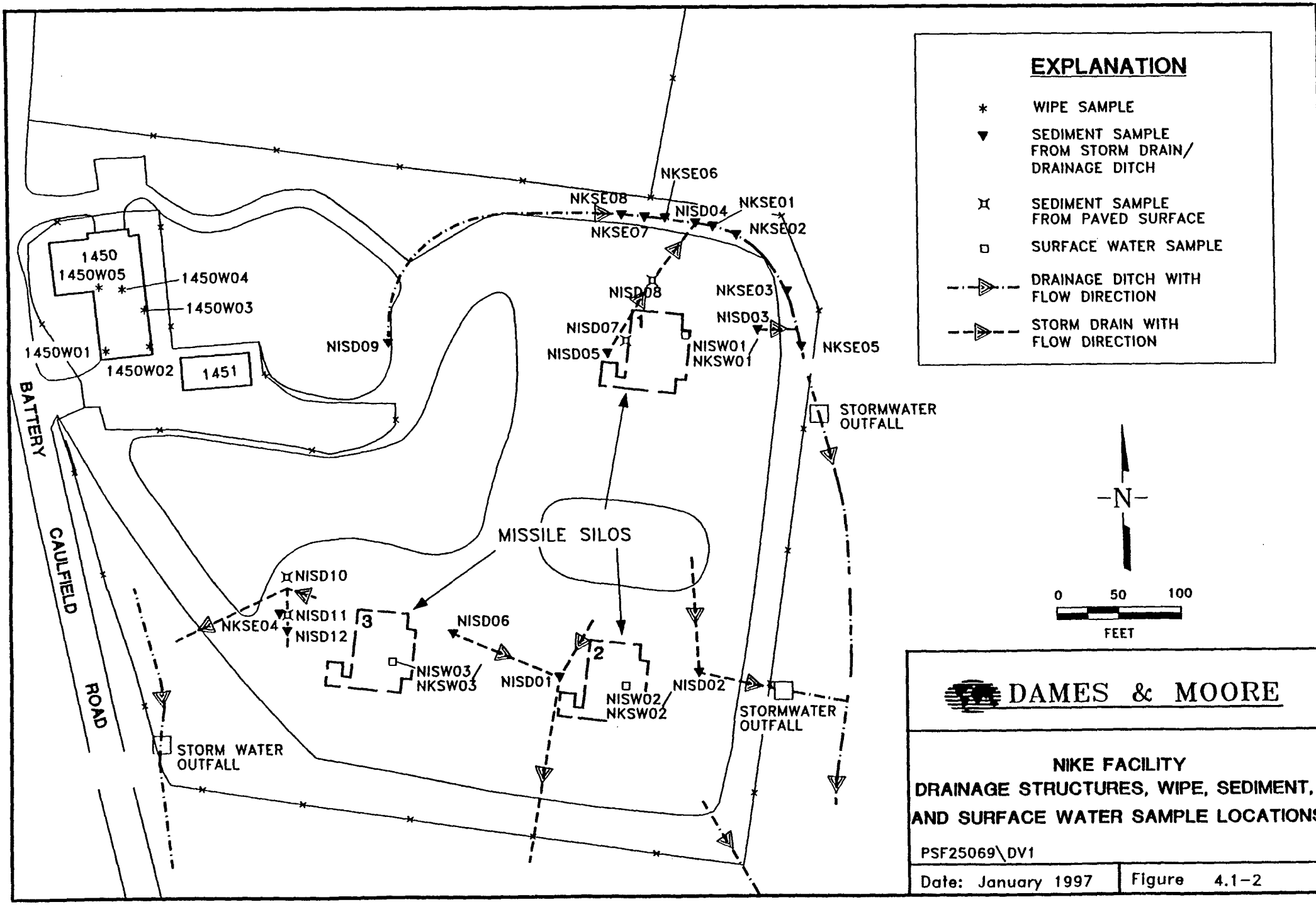
N

DAMES & MOORE

NIKE FACILITY STUDY AREA AND CROSS SECTION LOCATION MAP

PSF25085\DV1

Date: January 1997 | Figure 4.1–1

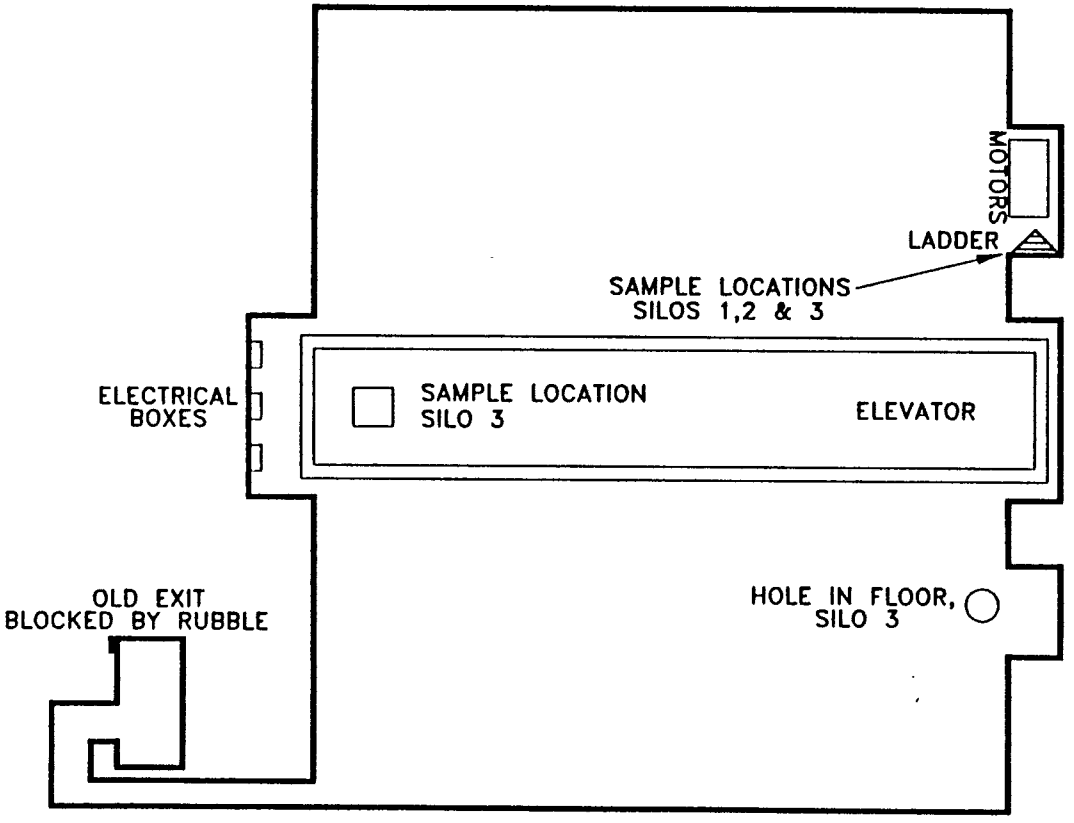


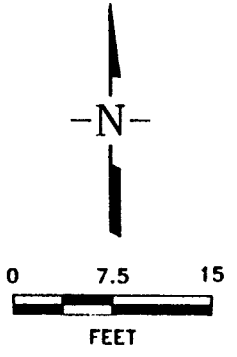
DAMES & MOORE

NIKE FACILITY
DRAINAGE STRUCTURES, WIPE, SEDIMENT, AND SURFACE WATER SAMPLE LOCATIONS

PSF25069\DV1

Date: January 1997 | Figure 4.1-2



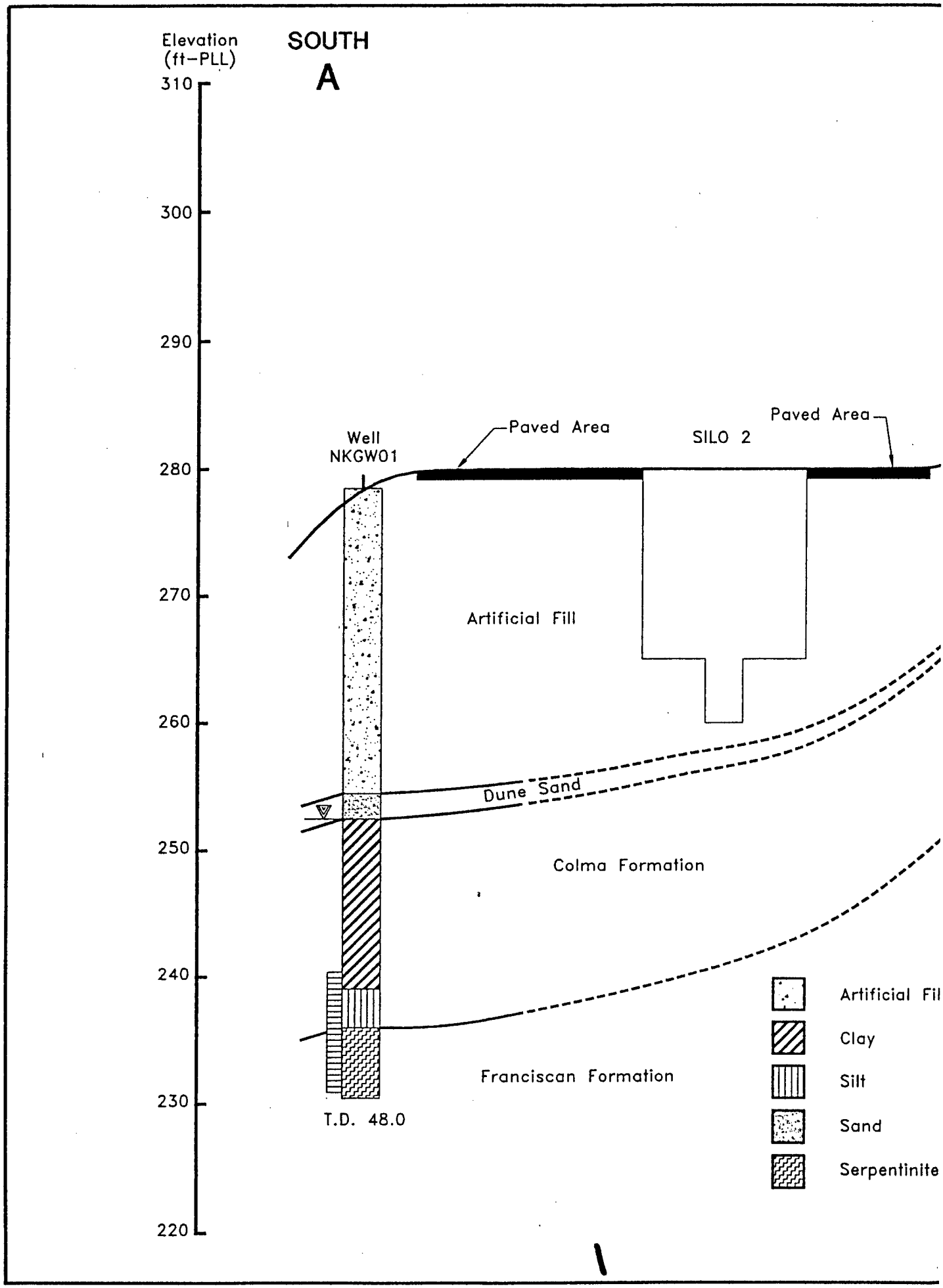


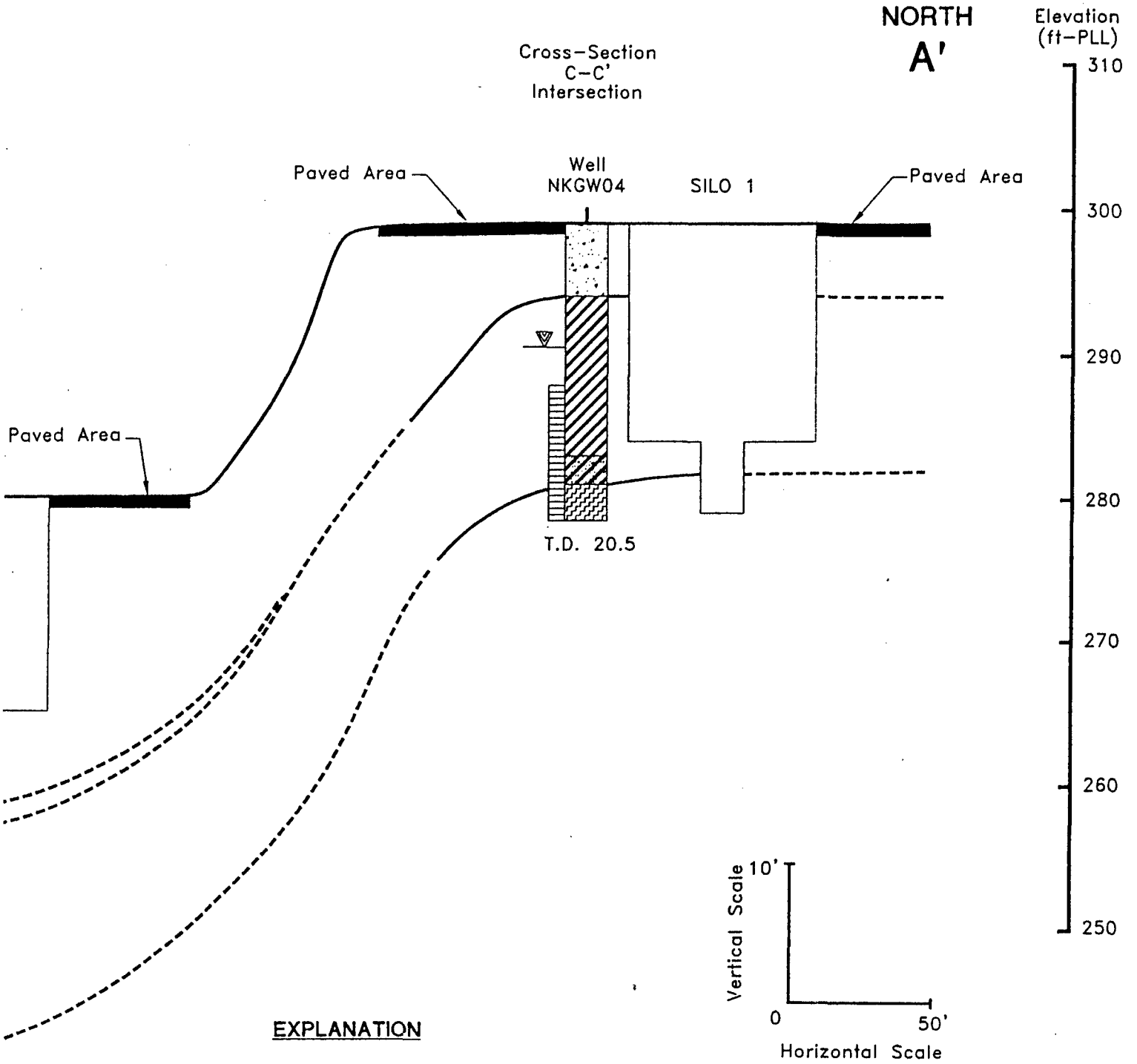
DAMES & MOORE

NIKE FACILITY
MISSILE SILO PLAN MAP

PSF25086\DV1

Date: January 1997 | Figure 4.1-3


Elevation
(ft-PLL)
SOUTH
A
310
300
290
280
270
260
250
240
230
220
Well
NKGW01
Paved Area
Paved Area
SILO 2
Artificial Fill
Dune Sand
Colma Formation
Franciscan Formation
T.D. 48.0
Artificial Fil
Clay
Silt
Sand
Serpentinite



EXPLANATION

Artificial Fill	---———	Contact, dashed where inferred
Clay	▽	Water Level (04/03/95)
Silt	T.D.	Total Depth (ft bgs)
Sand	ft-PLL	feet-Presidio Lower Low Water
Serpentinite	(a)	Approximate location & elevation
		Well Screen Interval

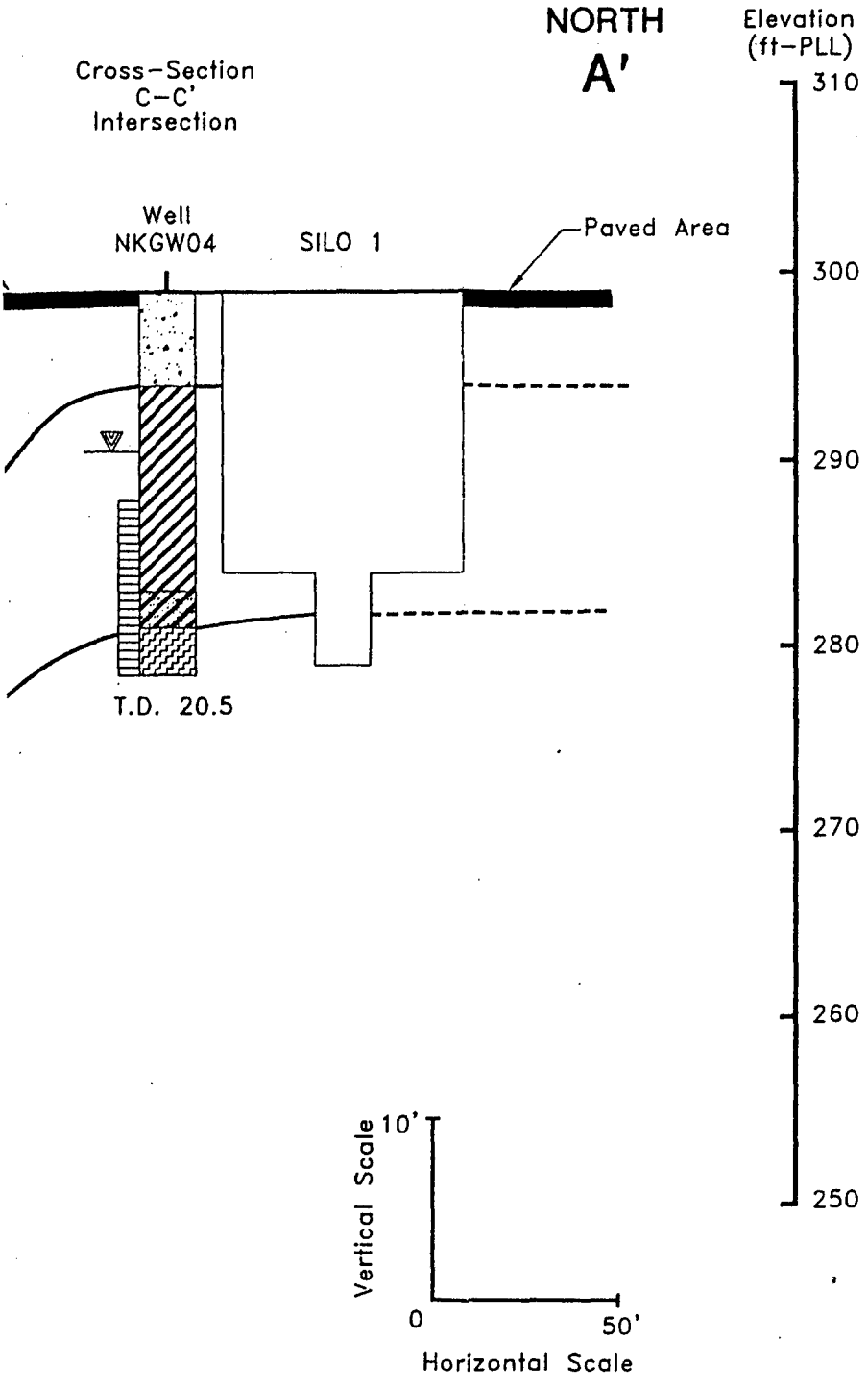
DAMES & M

NIKE FACILIT
CROSS SECTION

PSF25150/DV1

Date: January 1997 | Figur

2



lashed where inferred

el (04/03/95)

lh (ft bgs)

idio Lower Low Water

ıte location & elevation

ın Interval

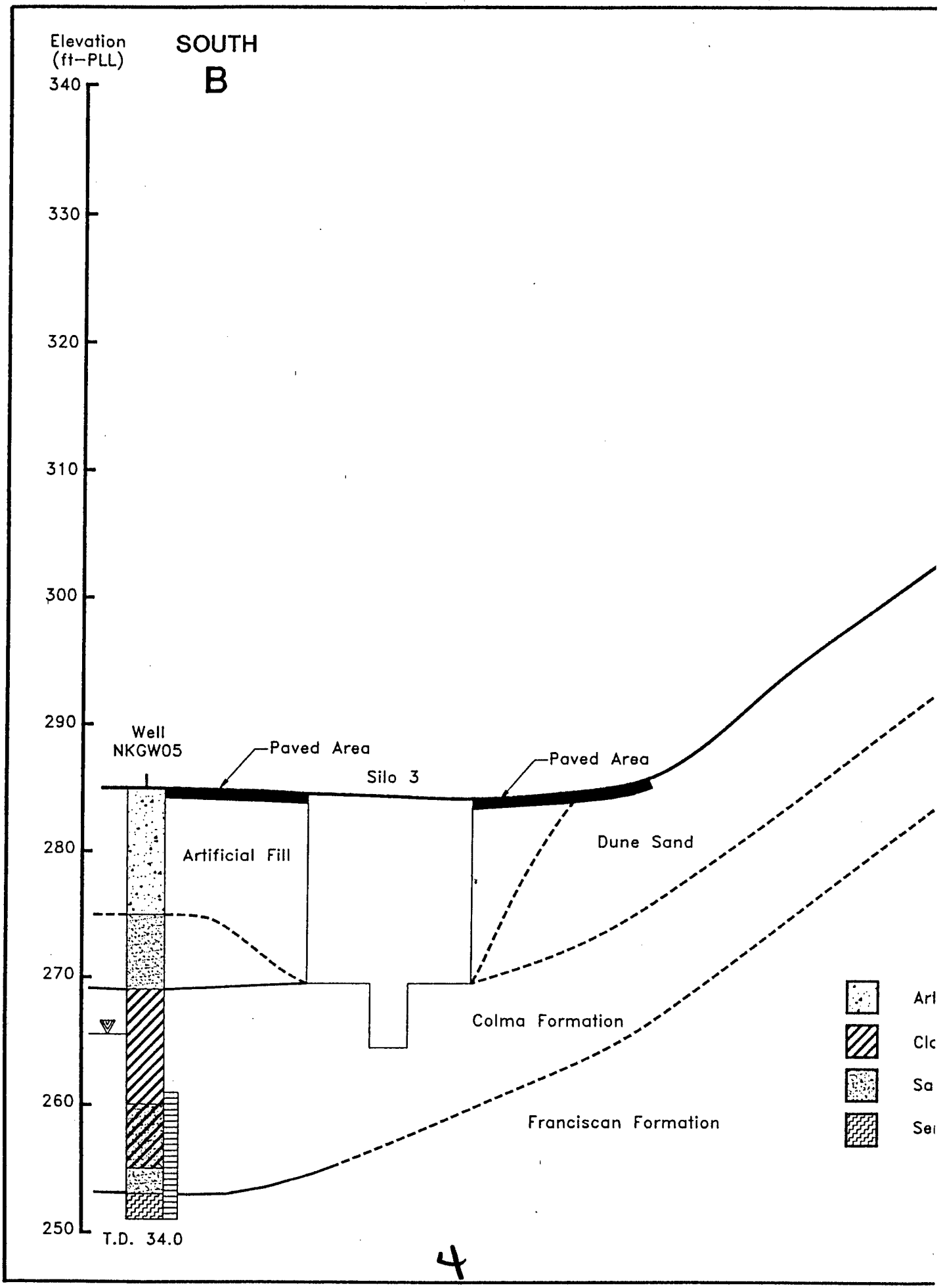
DAMES & MOORE

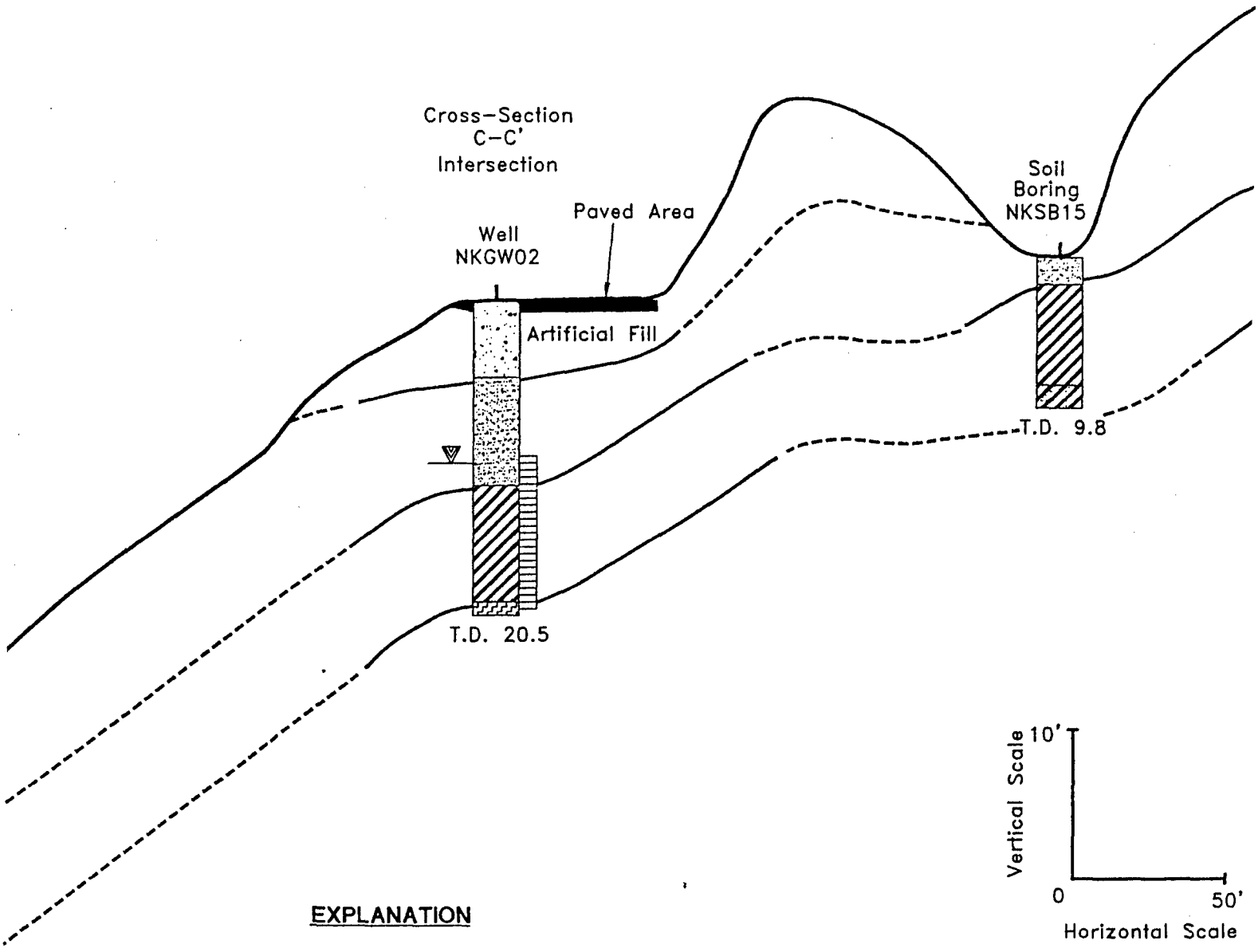
NIKE FACILITY
CROSS SECTION A-A'

PSF25150/DV1

Date: January 1997 | Figure 4.1-4

3


Elevation
(ft-PLL)
SOUTH
B
340
330
320
310
300
290
280
270
260
250
Well
NKGW05
Paved Area
Silo 3
Paved Area
Artificial Fill
Dune Sand
Colma Formation
Franciscan Formation
T.D. 34.0
Art
Clc
Sa
Sei



EXPLANATION

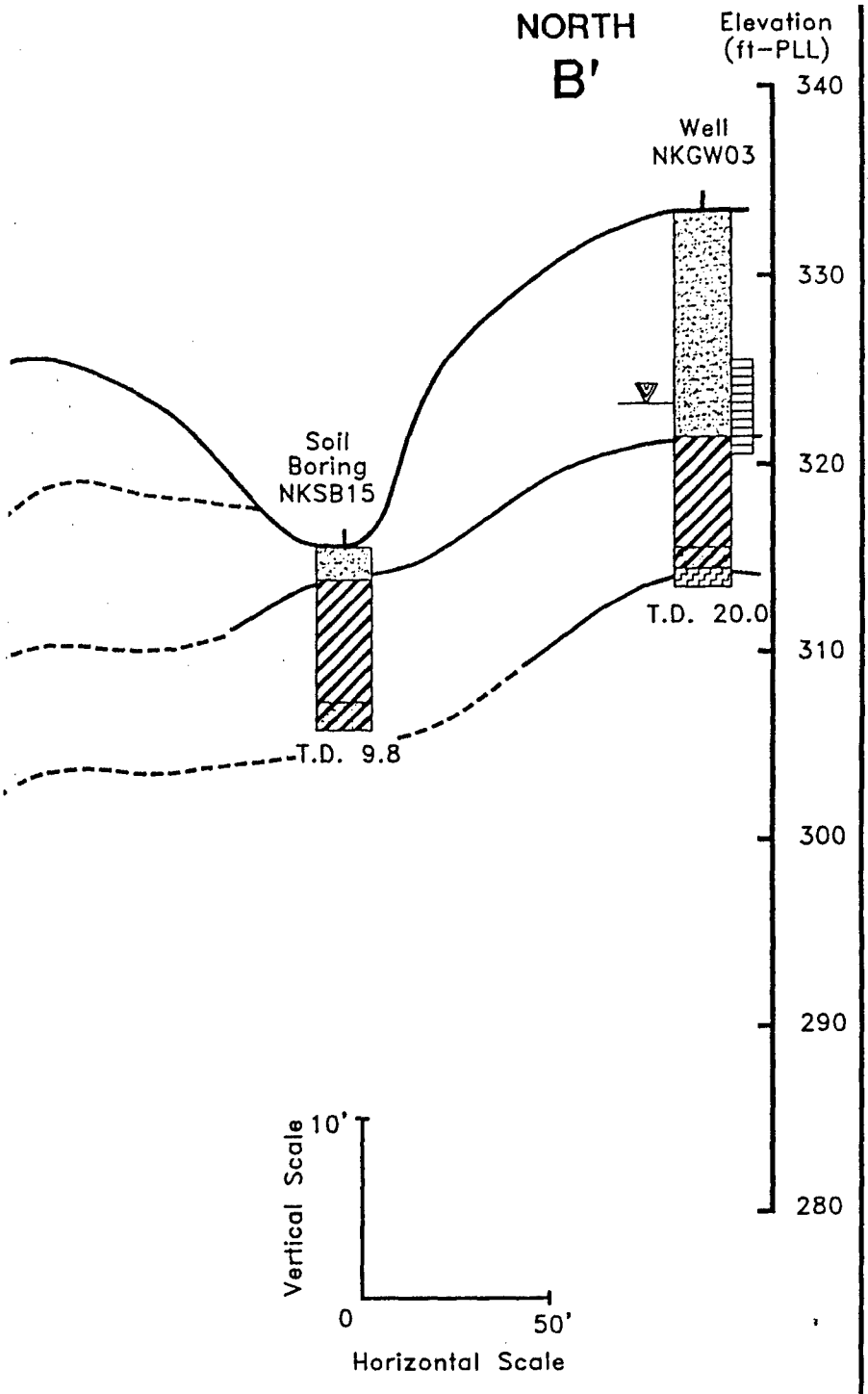
Artificial Fill	----------	Contact, dashed where inferred
Clay	▽	Water Level (04/03/95)
Sand	T.D.	Total Depth (ft bgs)
Serpentinite	ft-PLL	feet-Presidio Lower Low Water
	(a)	Approximate location & elevation
		Well Screen Interval

DAMES &

NIKE FAC
CROSS SEC

PSF25072/DV1

Date: January 1997



re inferred

95)

Low Water

& elevation

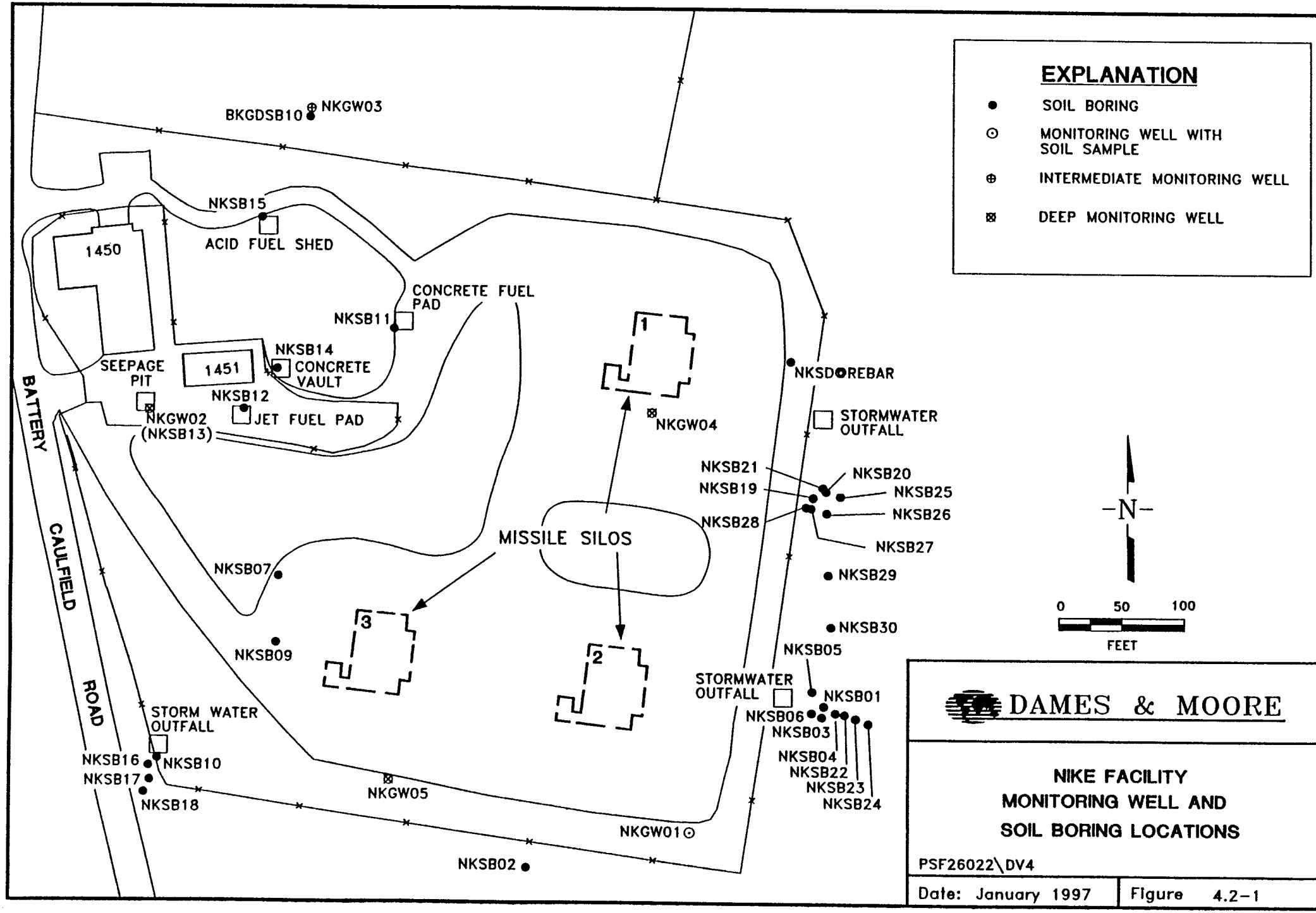
DAMES & MOORE

NIKE FACILITY
CROSS SECTION B-B'

PSF25072/DV1

Date: January 1997 | Figure 4.1-5

6

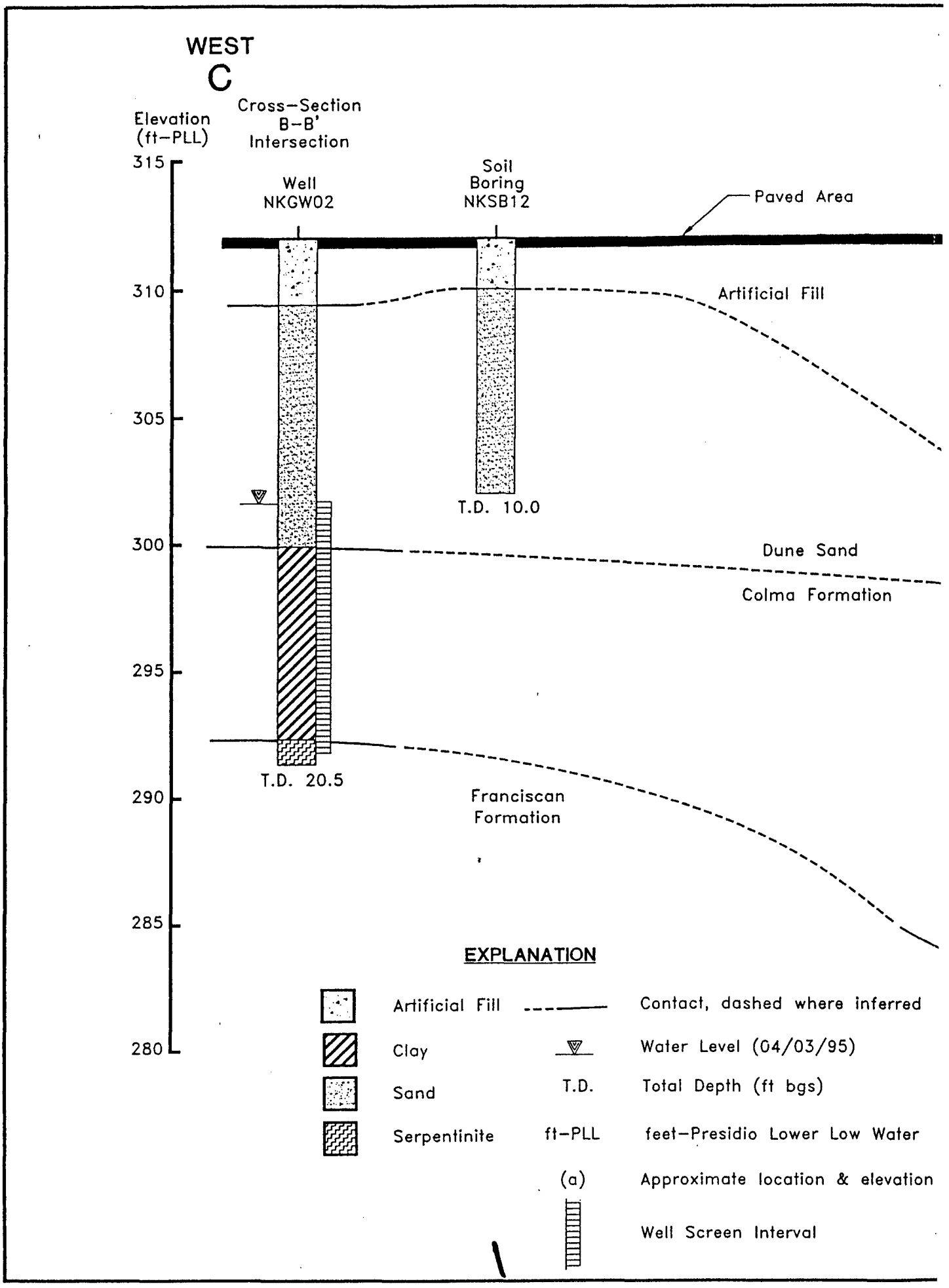


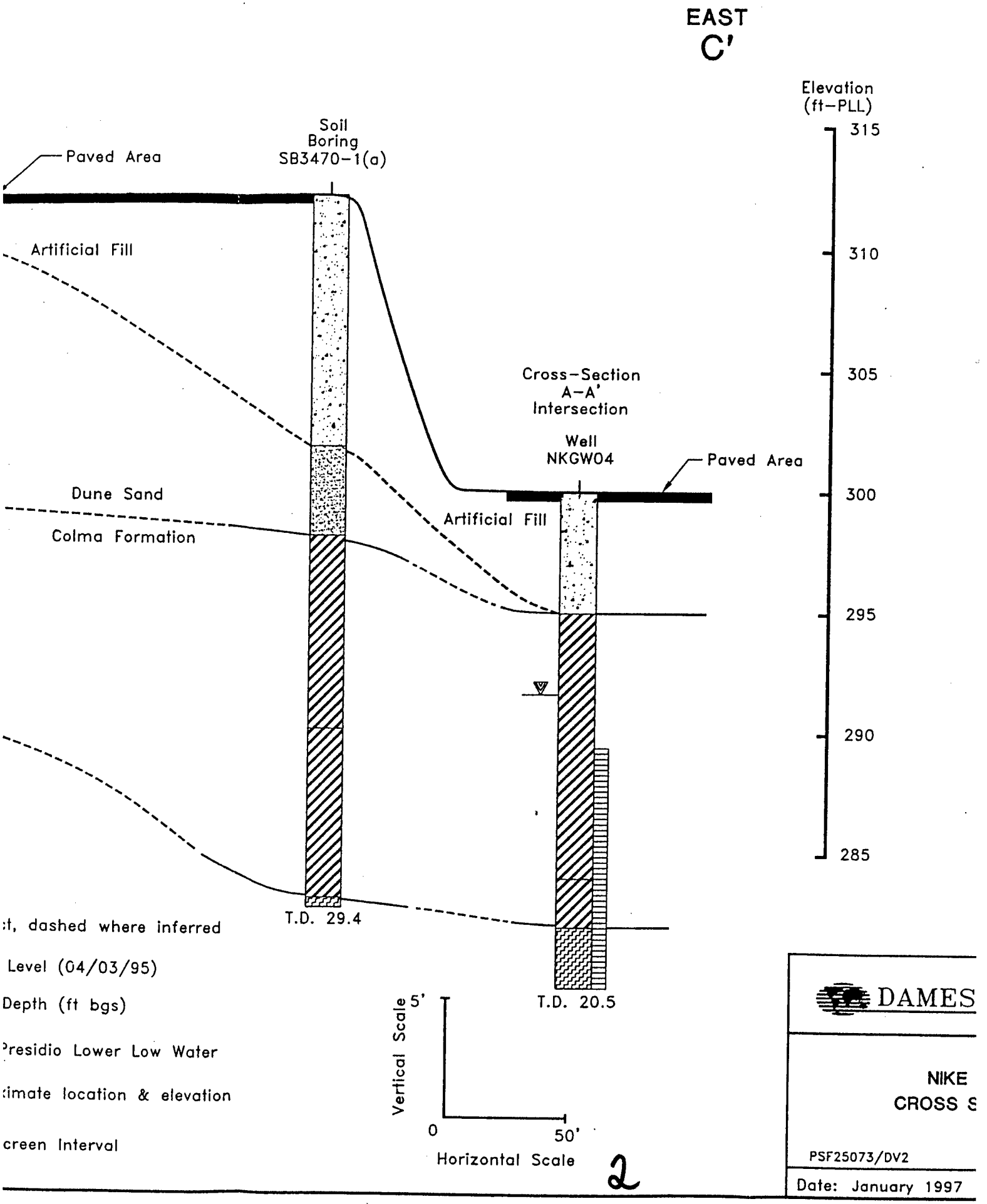
DAMES & MOORE

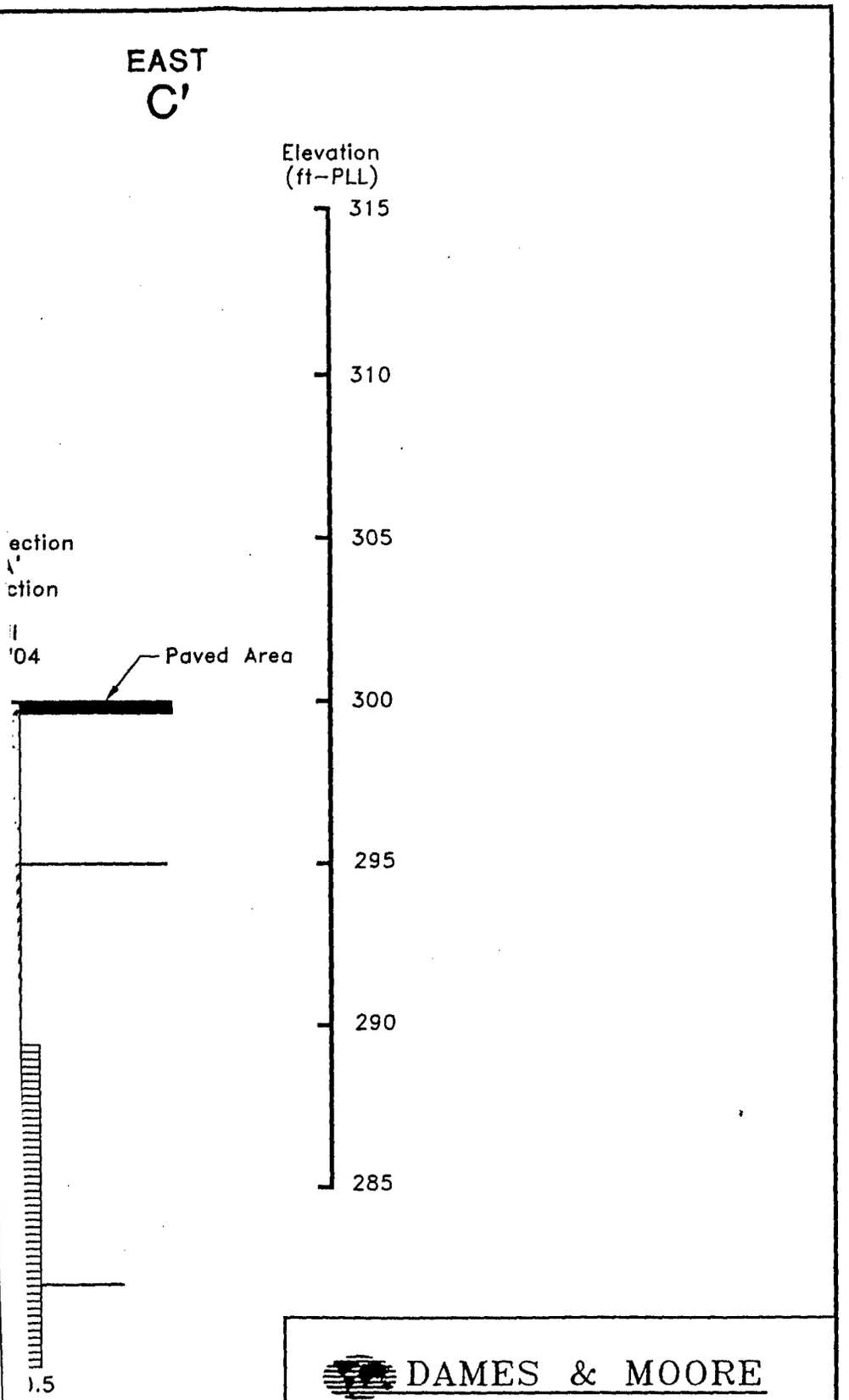
NIKE FACILITY
MONITORING WELL AND
SOIL BORING LOCATIONS

PSF26022\DV4

Date: January 1997 | Figure 4.2-1


WEST
C
Cross-Section
B-B'
Intersection
Elevation
(ft-PLL)
315
310
305
300
295
290
285
280
Well
NKGW02
Soil
Boring
NKSB12
Paved Area
Artificial Fill
T.D. 10.0
Dune Sand
Colma Formation
T.D. 20.5
Franciscan
Formation
EXPLANATION
Artificial Fill
Clay
Sand
Serpentinite
Contact, dashed where inferred
Water Level (04/03/95)
T.D.
Total Depth (ft bgs)
ft-PLL
feet-Presidio Lower Low Water
(a)
Approximate location & elevation
Well Screen Interval


EAST
C'
Elevation
(ft-PLL)
315
310
305
300
295
290
285
Soil
Boring
SB3470-1(a)
Paved Area
Artificial Fill
Cross-Section
A-A'
Intersection
Well
NKGW04
Paved Area
Dune Sand
Colma Formation
Artificial Fill
T.D. 29.4
T.D. 20.5
:t, dashed where inferred
Level (04/03/95)
Depth (ft bgs)
Presidio Lower Low Water
:imate location & elevation
creen Interval
Vertical Scale
5'
0
50'
Horizontal Scale
2
DAMES
NIKE
CROSS S
PSF25073/DV2
Date: January 1997



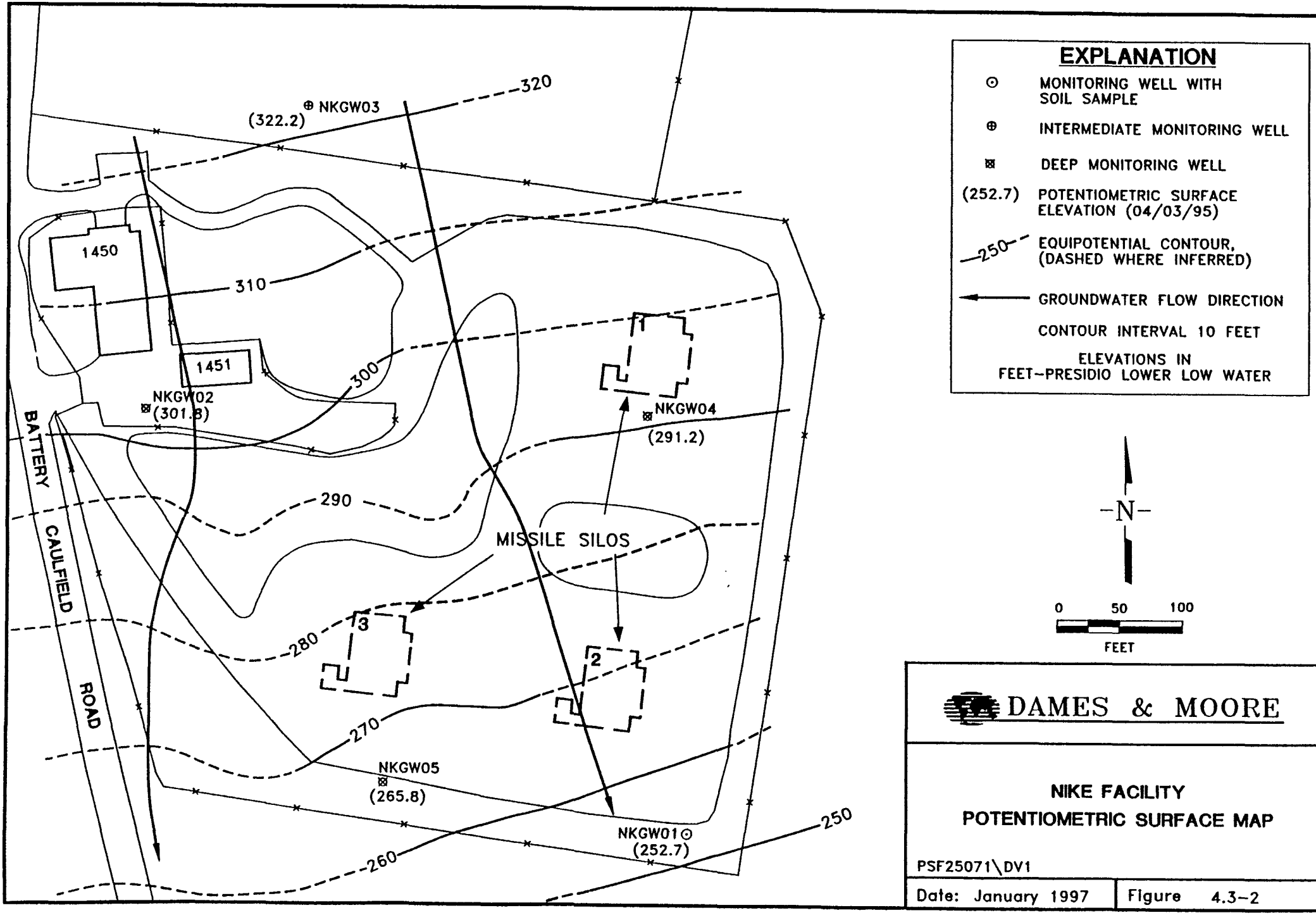
DAMES & MOORE

NIKE FACILITY
CROSS SECTION C-C'

PSF25073/DV2

Date: January 1997

Figure 4.3-1



DAMES & MOORE

NIKE FACILITY
POTENTIOMETRIC SURFACE MAP

PSF25071\DV1

Date: January 1997 | Figure 4.3–2

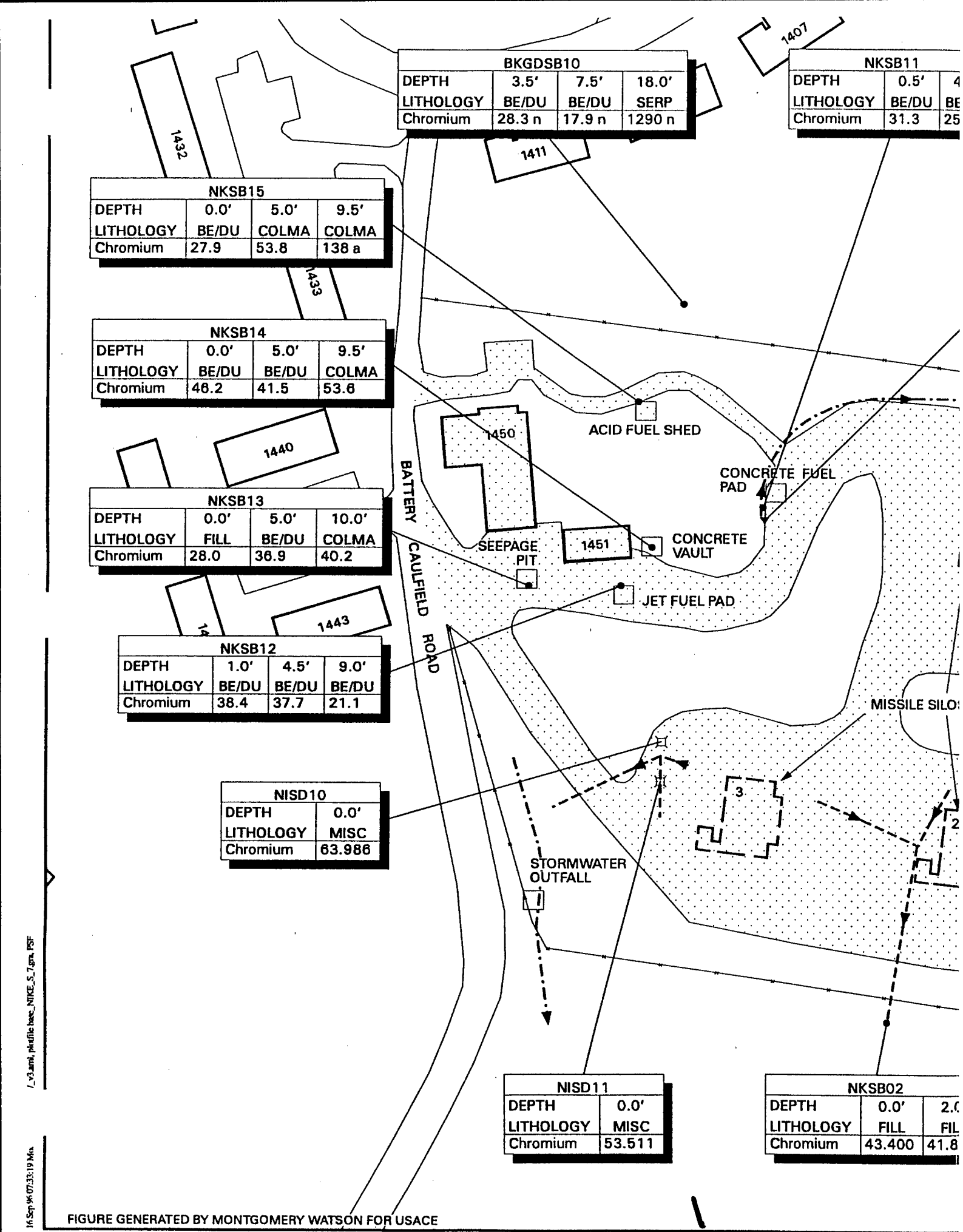
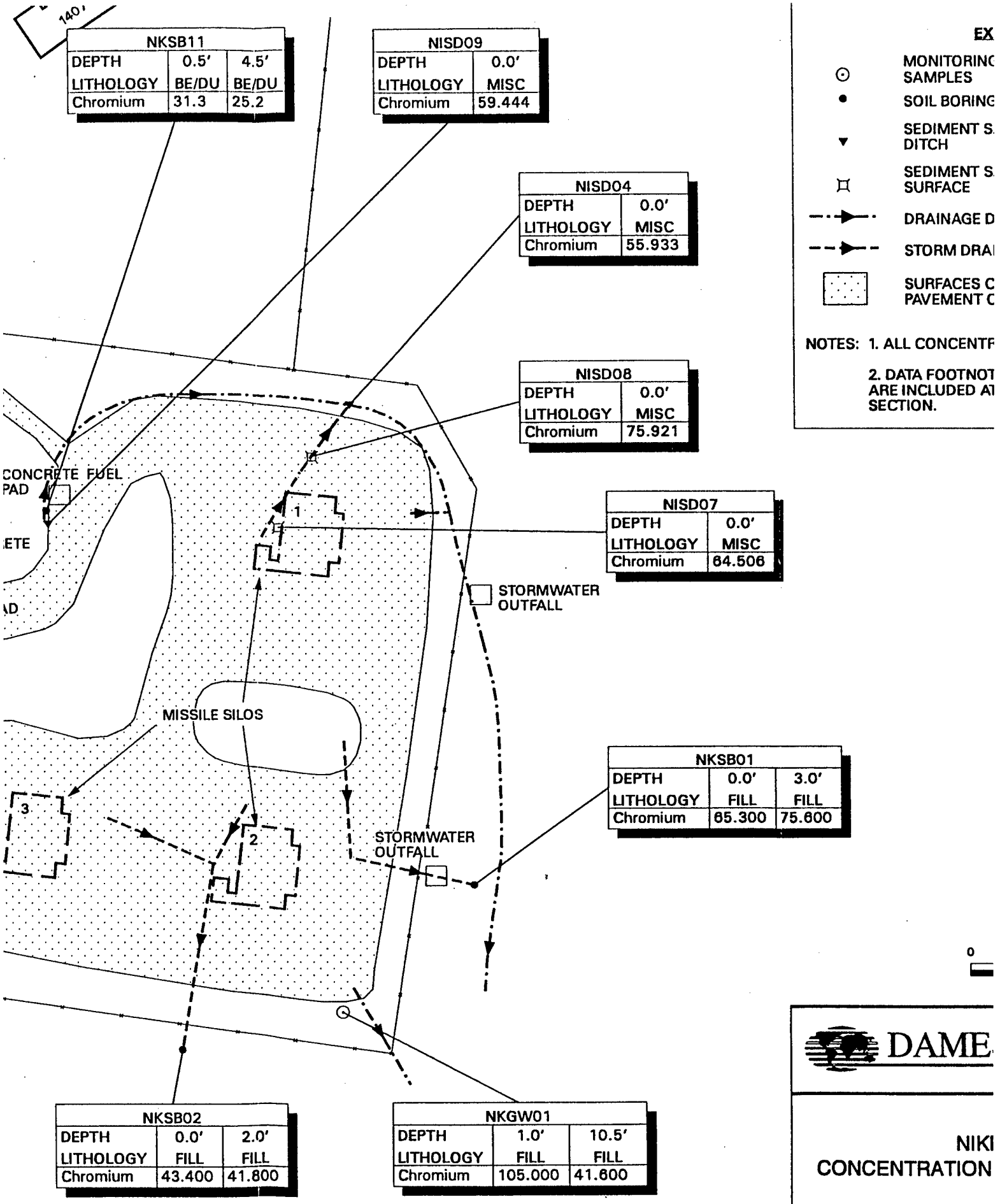


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

16 Sep 96 07:33:19 Mia

l_v3.aml, plotfile base_NIKE_S_7.grn, PSF


140'
NKSB11
DEPTH 0.5' 4.5'
LITHOLOGY BE/DU BE/DU
Chromium 31.3 25.2
NISD09
DEPTH 0.0'
LITHOLOGY MISC
Chromium 59.444
NISD04
DEPTH 0.0'
LITHOLOGY MISC
Chromium 55.933
NISD08
DEPTH 0.0'
LITHOLOGY MISC
Chromium 75.921
NISD07
DEPTH 0.0'
LITHOLOGY MISC
Chromium 64.506
NKSB01
DEPTH 0.0' 3.0'
LITHOLOGY FILL FILL
Chromium 65.300 75.600
NKSB02
DEPTH 0.0' 2.0'
LITHOLOGY FILL FILL
Chromium 43.400 41.800
NKGW01
DEPTH 1.0' 10.5'
LITHOLOGY FILL FILL
Chromium 105.000 41.600
CONCRETE FUEL PAD
STORMWATER OUTFALL
MISSILE SILOS
STORMWATER OUTFALL
1
2
3
EX
MONITORING SAMPLES
SOIL BORING
SEDIMENT S. DITCH
SEDIMENT S. SURFACE
DRAINAGE D
STORM DRA
SURFACES C PAVEMENT C
NOTES: 1. ALL CONCENTR
2. DATA FOOTNOT ARE INCLUDED AT SECTION.
0
DAME
NIKI
CONCENTRATION
PSF26194
Date: January 1997
2

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- ● SOIL BORING
- ▼ SEDIMENT SAMPLE FROM DRAINAGE DITCH
- ⌑ SEDIMENT SAMPLE FROM A PAVED SURFACE
- —·→·— DRAINAGE DITCH WITH FLOW DIRECTION
- – – → – – STORM DRAIN WITH FLOW DIRECTION
- ⁘ SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

NISD04	
EPTH	0.0′
ITHOLOGY	MISC
hromium	55.933

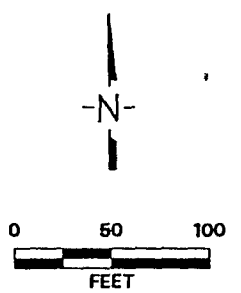
NISD08	
EPTH	0.0′
THOLOGY	MISC
ıromium	75.921

NISD07	
DEPTH	0.0′
LITHOLOGY	MISC
Chromium	64.506

/WATER
\LL

NKSB01		
DEPTH	0.0′	3.0′
LITHOLOGY	FILL	FILL
Chromium	65.300	75.600

	10.5′
	FILL
)	41.600



DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF CHROMIUM IN SOIL

PSF26194

3

Date: January 1997

Figure 4.5-1

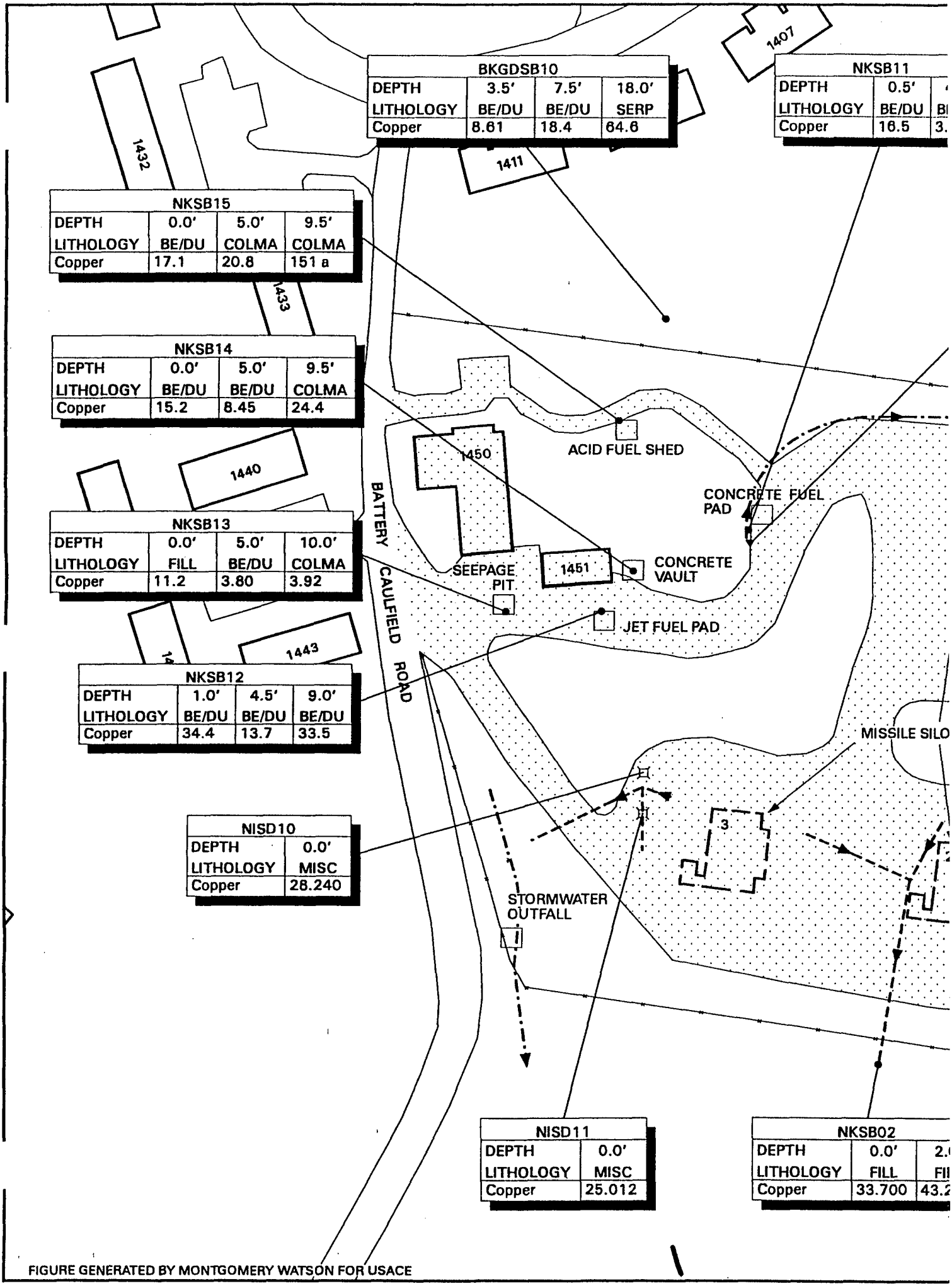
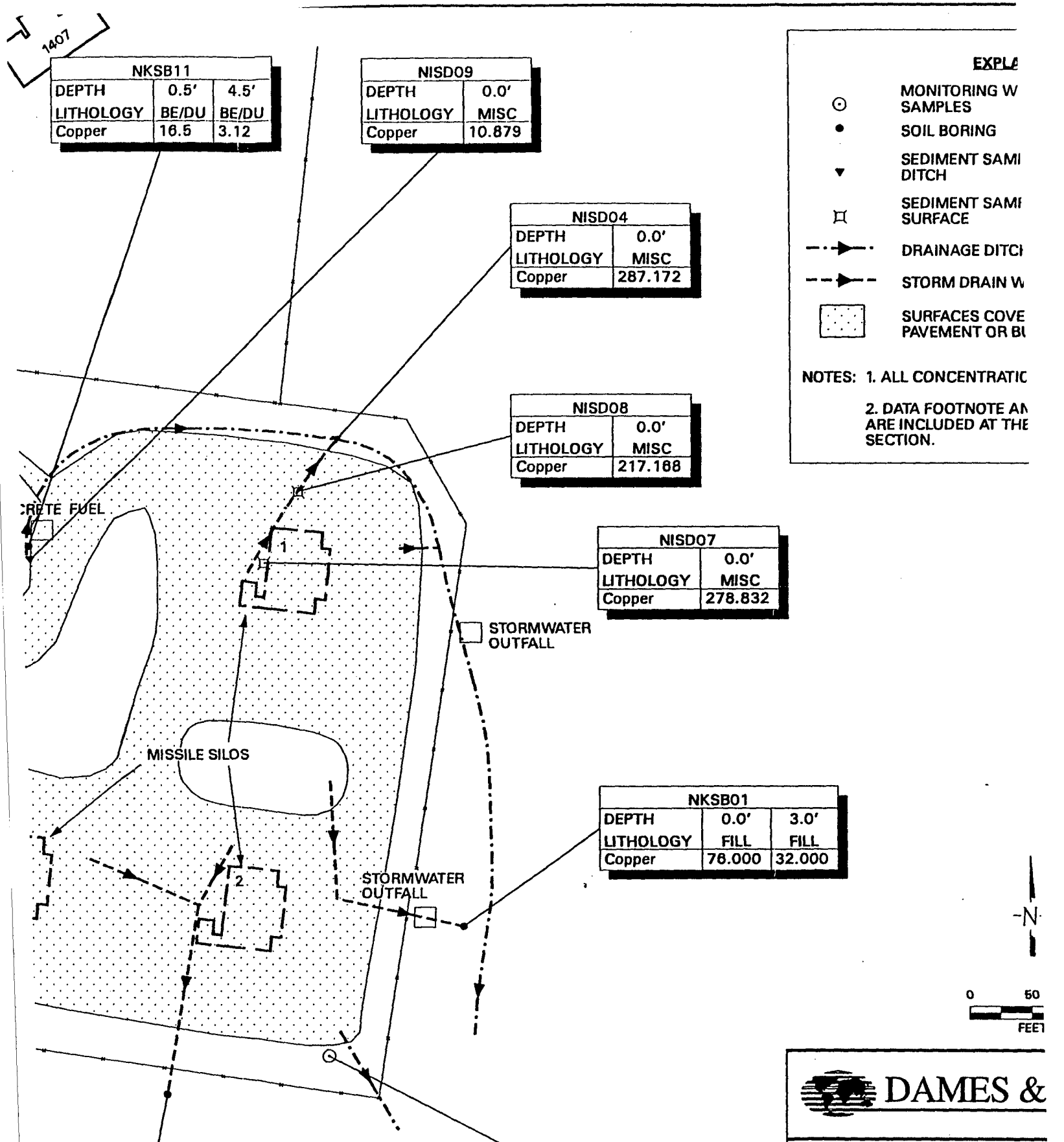


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

16 Sep 96 07:34:52 Mn
_v3.aml, pkdfile base_NIKE_S_9.grn, PSF



DAMES &

NIKE FAC
CONCENTRATIONS OF

PSF26196

Date: January 1997

2

EXPLANATION

- MONITORING WELL WITH SOIL SAMPLES
- SOIL BORING
- SEDIMENT SAMPLE FROM DRAINAGE DITCH
- SEDIMENT SAMPLE FROM A PAVED SURFACE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

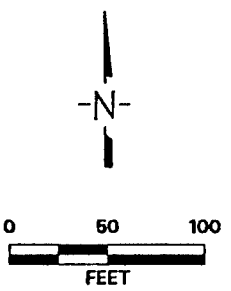
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

).0'	
MISC	
7.172	

).0'	
MISC	
7.168	

NISD07	
'H	0.0'
DLOGY	MISC
er	278.832

NKSB01		
'H	0.0'	3.0'
DLOGY	FILL	FILL
ıer	76.000	32.000



DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF COPPER IN SOIL

PSF26196

3

Date: January 1997

Figure 4.5-2

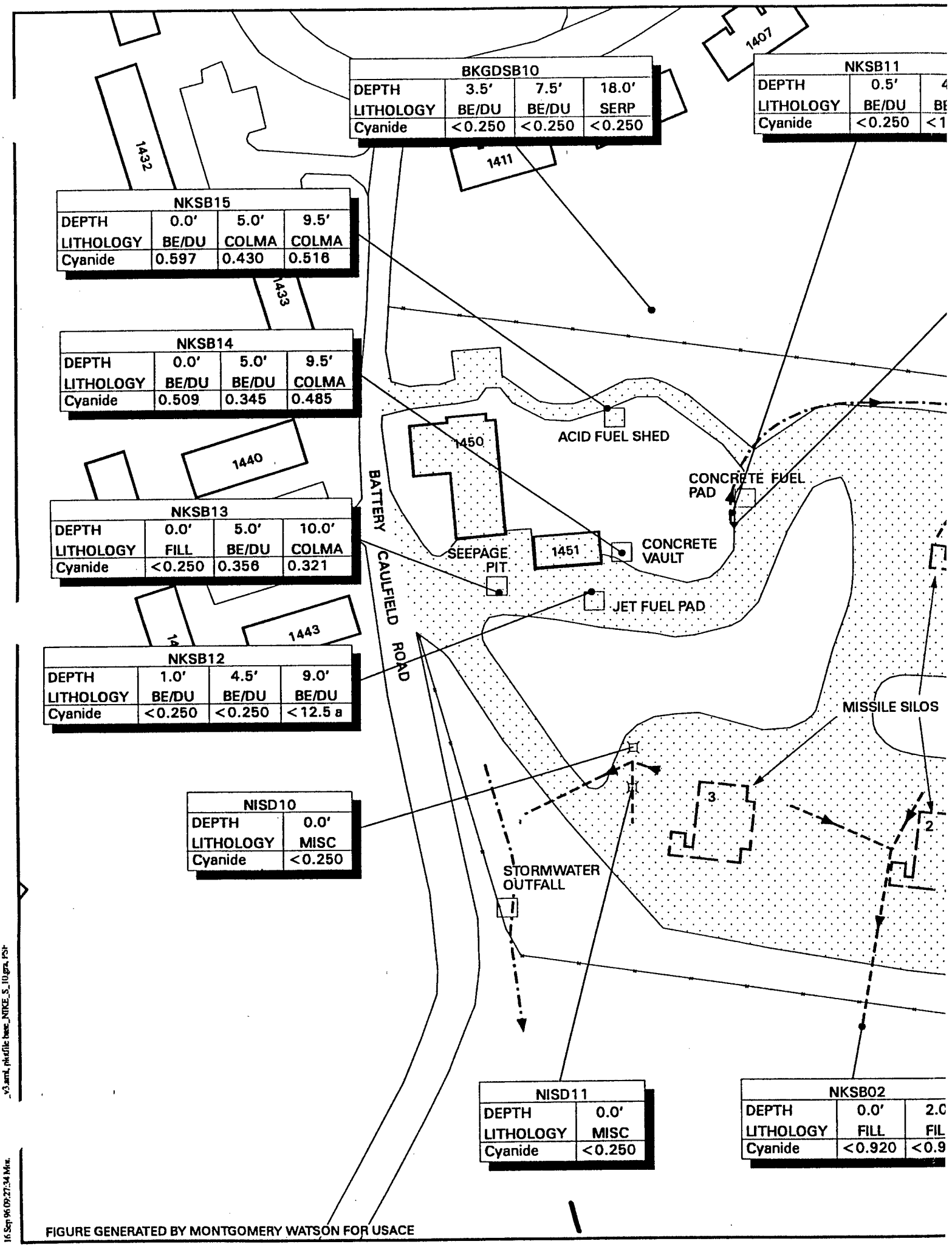
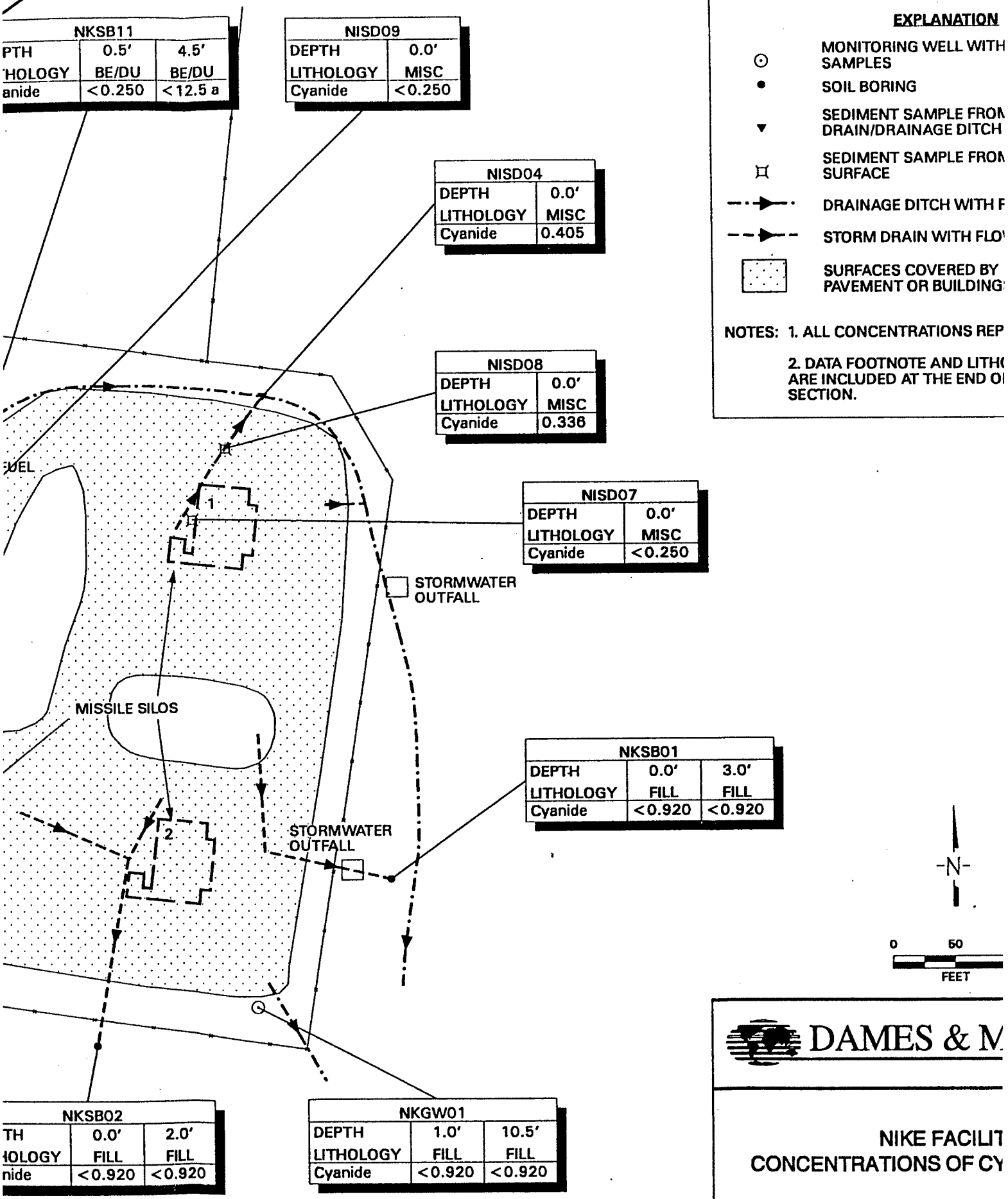


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

16 Sep 96 09:27:34 Mrs.



DAMES & M

NIKE FACILIT
CONCENTRATIONS OF CY

PSF26197

Date: January 1997 | Fi

2

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- • SOIL BORING
- ▼ SEDIMENT SAMPLE FROM STORM DRAIN/DRAINAGE DITCH
- ⌑ SEDIMENT SAMPLE FROM A PAVED SURFACE
- —·→·— DRAINAGE DITCH WITH FLOW DIRECTION
- – – → – – STORM DRAIN WITH FLOW DIRECTION
- ⠿ SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

NISD07	
	0.0'
LOGY	MISC
e	<0.250

NKSB01		
	0.0'	3.0'
LOGY	FILL	FILL
e	<0.920	<0.920

-N-

0 50 100

FEET

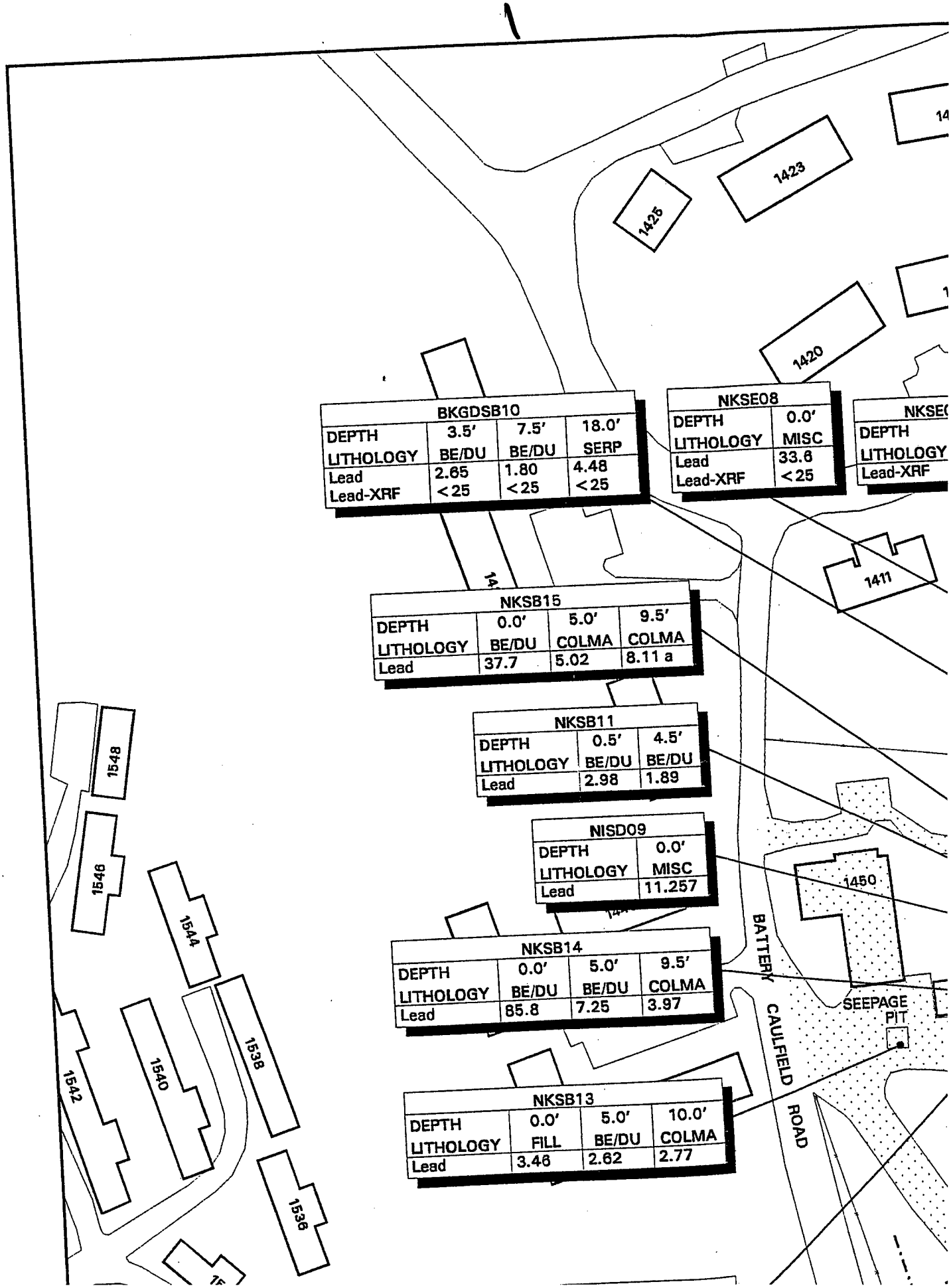
DAMES & MOORE

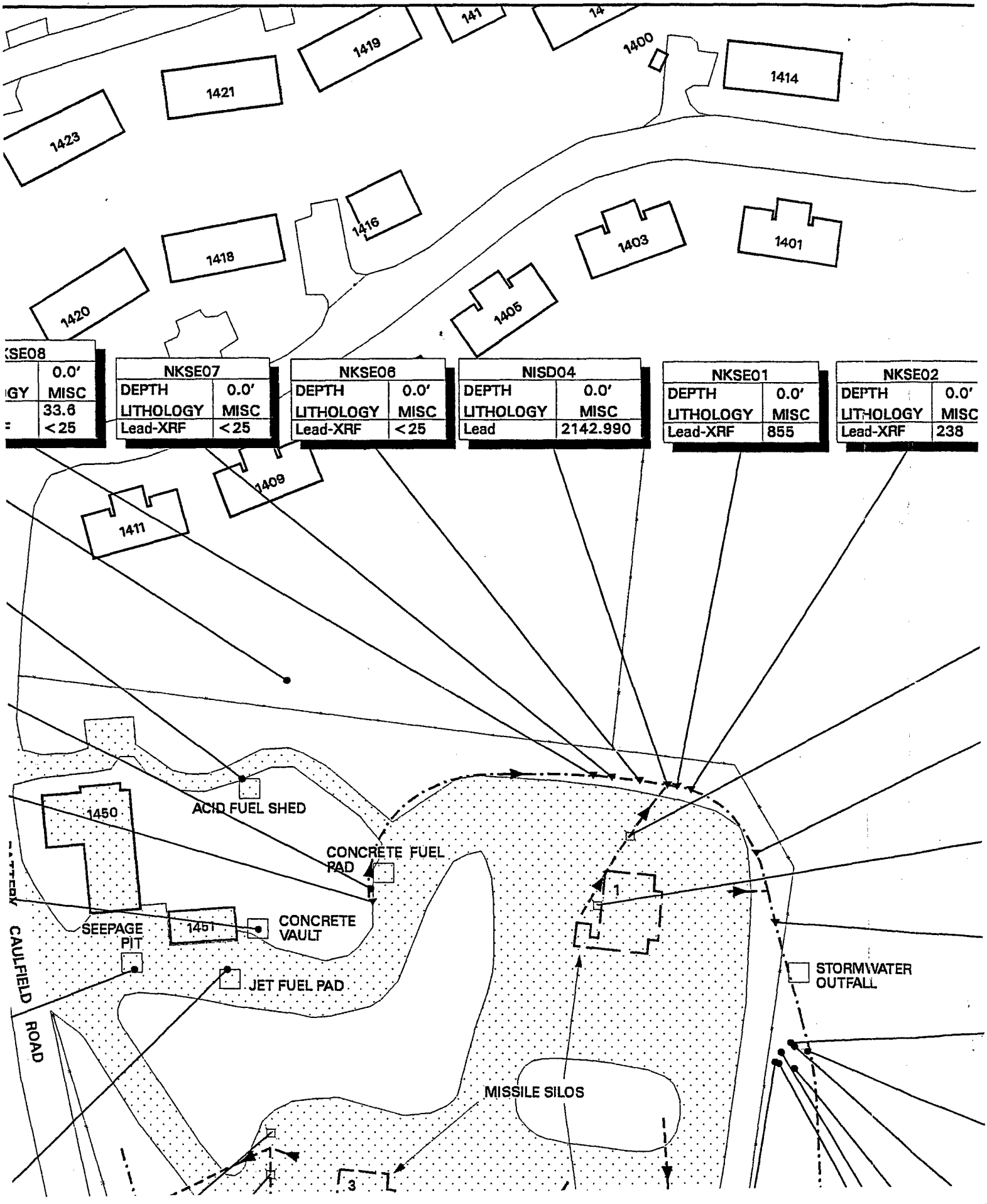
NIKE FACILITY
CONCENTRATIONS OF CYANIDE IN SOIL

PSF26197

3

Date: January 1997 | Figure 4.5-3


1423
1425
1420
1411
1450
1548
1546
1544
1542
1540
1538
1536
BATTERY
CAULFIELD
ROAD
SEEPAGE
PIT
BKGDSB10
DEPTH | 3.5' | 7.5' | 18.0'
LITHOLOGY | BE/DU | BE/DU | SERP
Lead | 2.65 | 1.80 | 4.48
Lead-XRF | <25 | <25 | <25
NKSE08
DEPTH | 0.0'
LITHOLOGY | MISC
Lead | 33.6
Lead-XRF | <25
NKSB15
DEPTH | 0.0' | 5.0' | 9.5'
LITHOLOGY | BE/DU | COLMA | COLMA
Lead | 37.7 | 5.02 | 8.11 a
NKSB11
DEPTH | 0.5' | 4.5'
LITHOLOGY | BE/DU | BE/DU
Lead | 2.98 | 1.89
NISD09
DEPTH | 0.0'
LITHOLOGY | MISC
Lead | 11.257
NKSB14
DEPTH | 0.0' | 5.0' | 9.5'
LITHOLOGY | BE/DU | BE/DU | COLMA
Lead | 85.8 | 7.25 | 3.97
NKSB13
DEPTH | 0.0' | 5.0' | 10.0'
LITHOLOGY | FILL | BE/DU | COLMA
Lead | 3.46 | 2.62 | 2.77



SE08	
GY	0.0'
	MISC
	33.6
=	<25

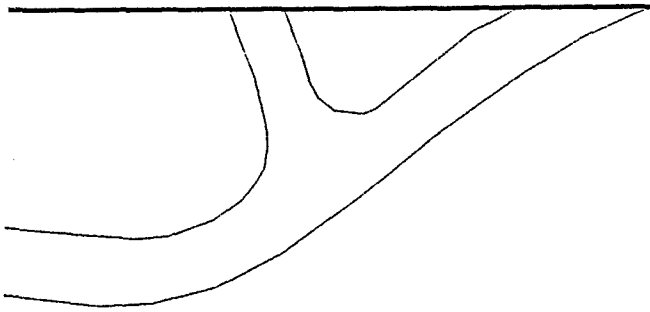
NKSE07	
DEPTH	0.0'
LITHOLOGY	MISC
Lead-XRF	<25

NKSE06	
DEPTH	0.0'
LITHOLOGY	MISC
Lead-XRF	<25

NISD04	
DEPTH	0.0'
LITHOLOGY	MISC
Lead	2142.990

NKSE01	
DEPTH	0.0'
LITHOLOGY	MISC
Lead-XRF	855

NKSE02	
DEPTH	0.0'
LITHOLOGY	MISC
Lead-XRF	238



EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- • SOIL BORING
- ▼ SEDIMENT SAMPLE FROM DRAINAGE DITCH
- ⌑ SEDIMENT SAMPLE FROM A PAVED SURFACE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

SE02	
	0.0'
GY	MISC
F	238

NISD08	
DEPTH	0.0'
LITHOLOGY	MISC
Lead	250.760

NKSE03	
DEPTH	0.0'
LITHOLOGY	MISC
Lead-XRF	46.8

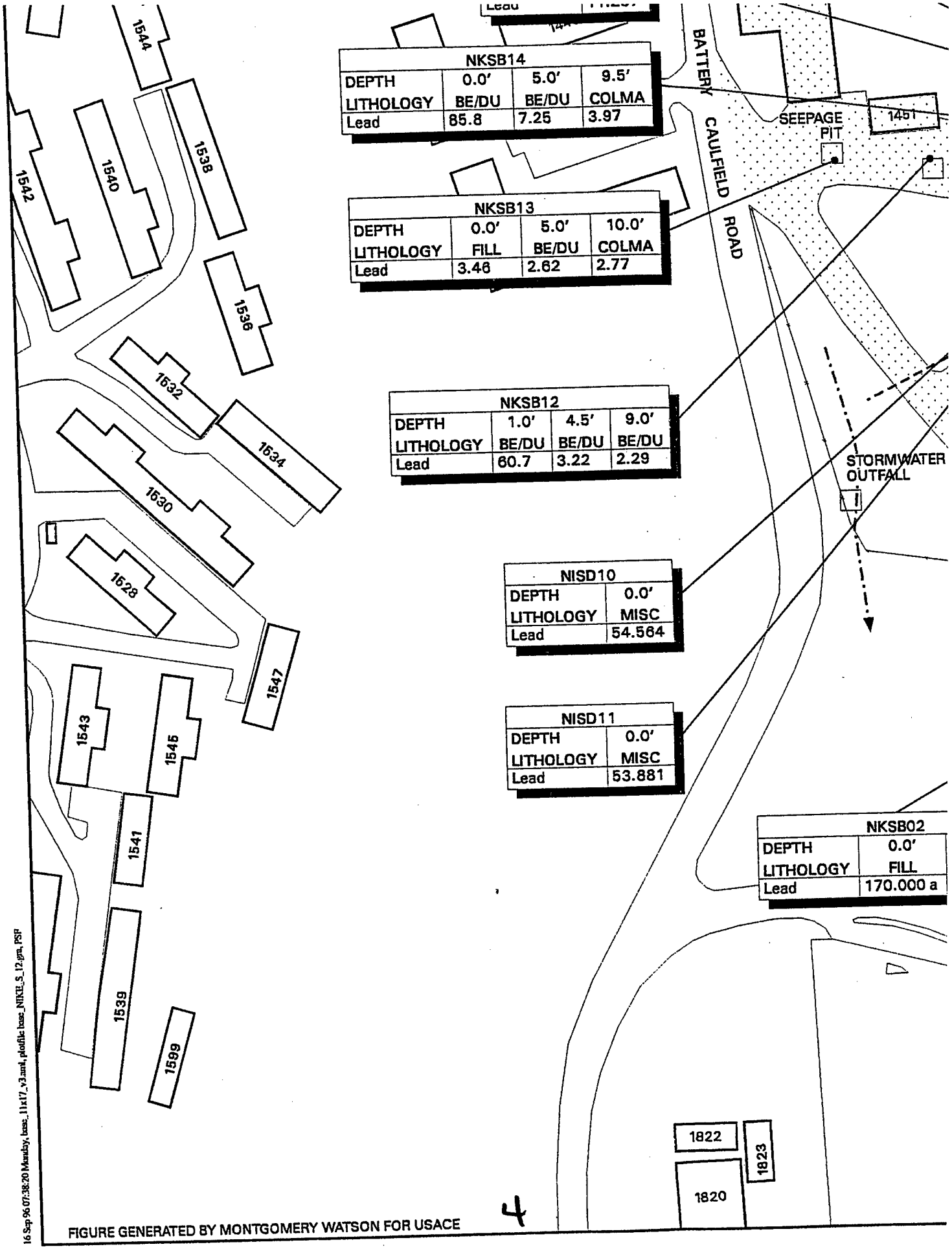
NISD07	
DEPTH	0.0'
LITHOLOGY	MISC
Lead	684.247

NKSE05	
DEPTH	0.0'
LITHOLOGY	MISC
Lead-XRF	315

TER

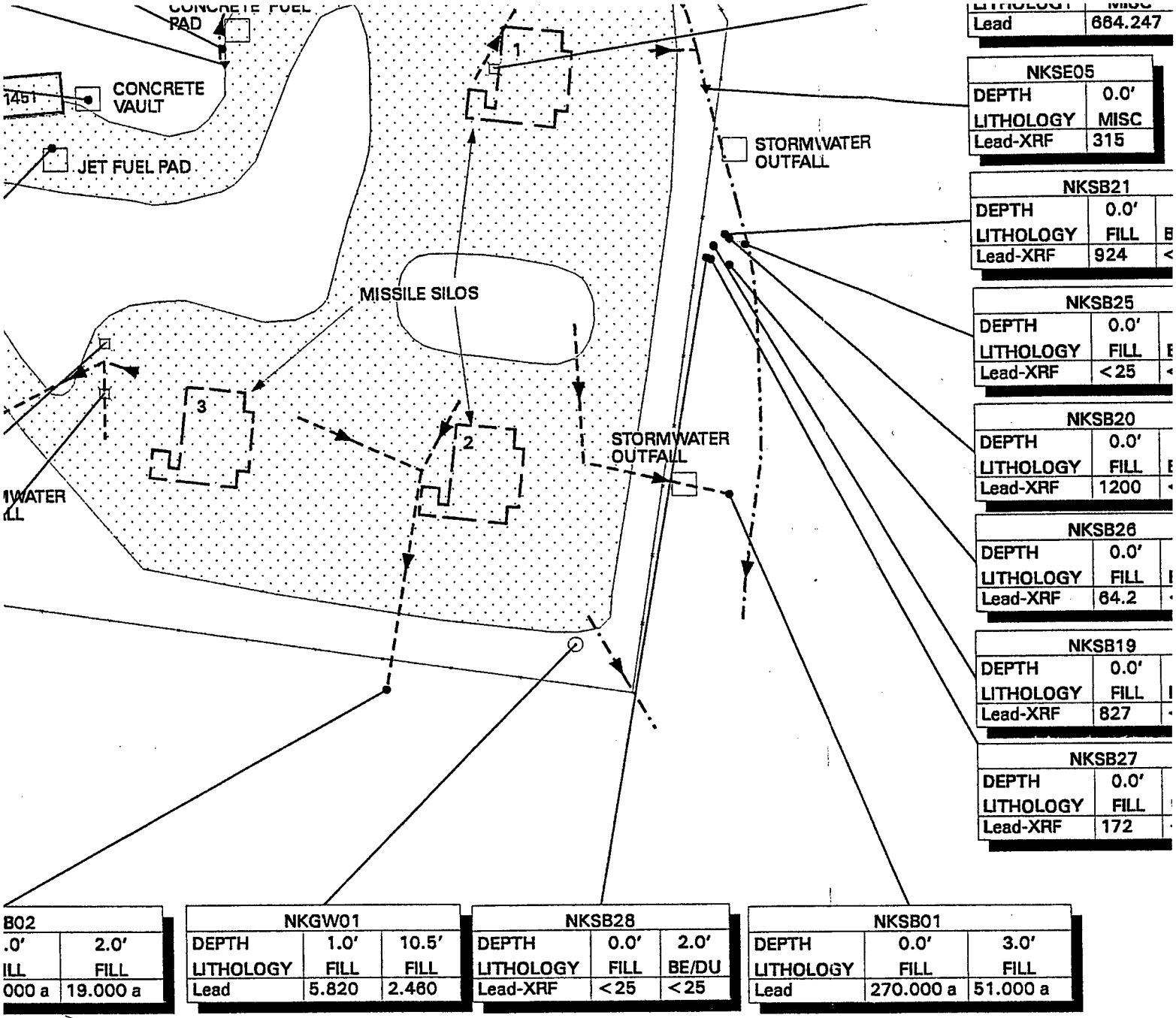
NKSB21		
DEPTH	0.0'	1.7'
LITHOLOGY	FILL	BE/DU
Lead-XRF	924	< 25

NKSB25		
DEPTH	0.0'	2.0'
LITHOLOGY	FILL	BE/DU
Lead-XRF	< 25	< 25



16-Sep-96 07:38:20 Mandoy, base_11x17_v3.mnt, plotfile base_NIKII_S_12.gm, PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



Lead	664.247

NKSE05	
DEPTH	0.0′
LITHOLOGY	MISC
Lead-XRF	315

NKSB21		
DEPTH	0.0′	
LITHOLOGY	FILL	B
Lead-XRF	924	<

NKSB25		
DEPTH	0.0′	
LITHOLOGY	FILL	B
Lead-XRF	<25	<

NKSB20		
DEPTH	0.0′	
LITHOLOGY	FILL	B
Lead-XRF	1200	<

NKSB26		
DEPTH	0.0′	
LITHOLOGY	FILL	B
Lead-XRF	64.2	<

NKSB19		
DEPTH	0.0′	
LITHOLOGY	FILL	B
Lead-XRF	827	<

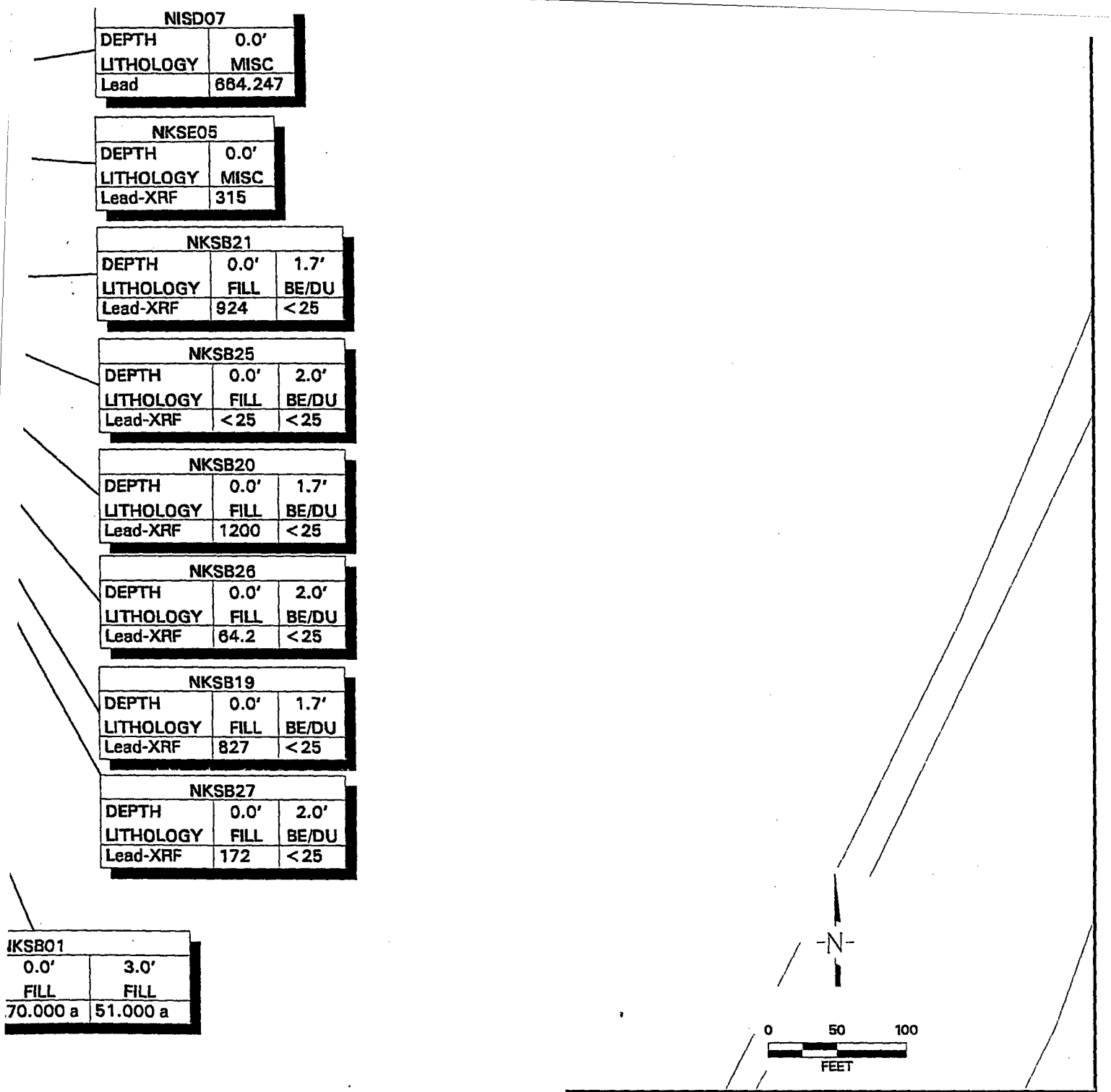
NKSB27		
DEPTH	0.0′	
LITHOLOGY	FILL	
Lead-XRF	172	<

B02		
.0′	2.0′	
ILL	FILL	
000 a	19.000 a	

NKGW01		
DEPTH	1.0′	10.5′
LITHOLOGY	FILL	FILL
Lead	5.820	2.460

NKSB28		
DEPTH	0.0′	2.0′
LITHOLOGY	FILL	BE/DU
Lead-XRF	<25	<25

NKSB01		
DEPTH	0.0′	3.0′
LITHOLOGY	FILL	FILL
Lead	270.000 a	51.000 a



DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF LEAD IN SOIL

PSF26205

Date: January 1997

Figure 4.5-4

6

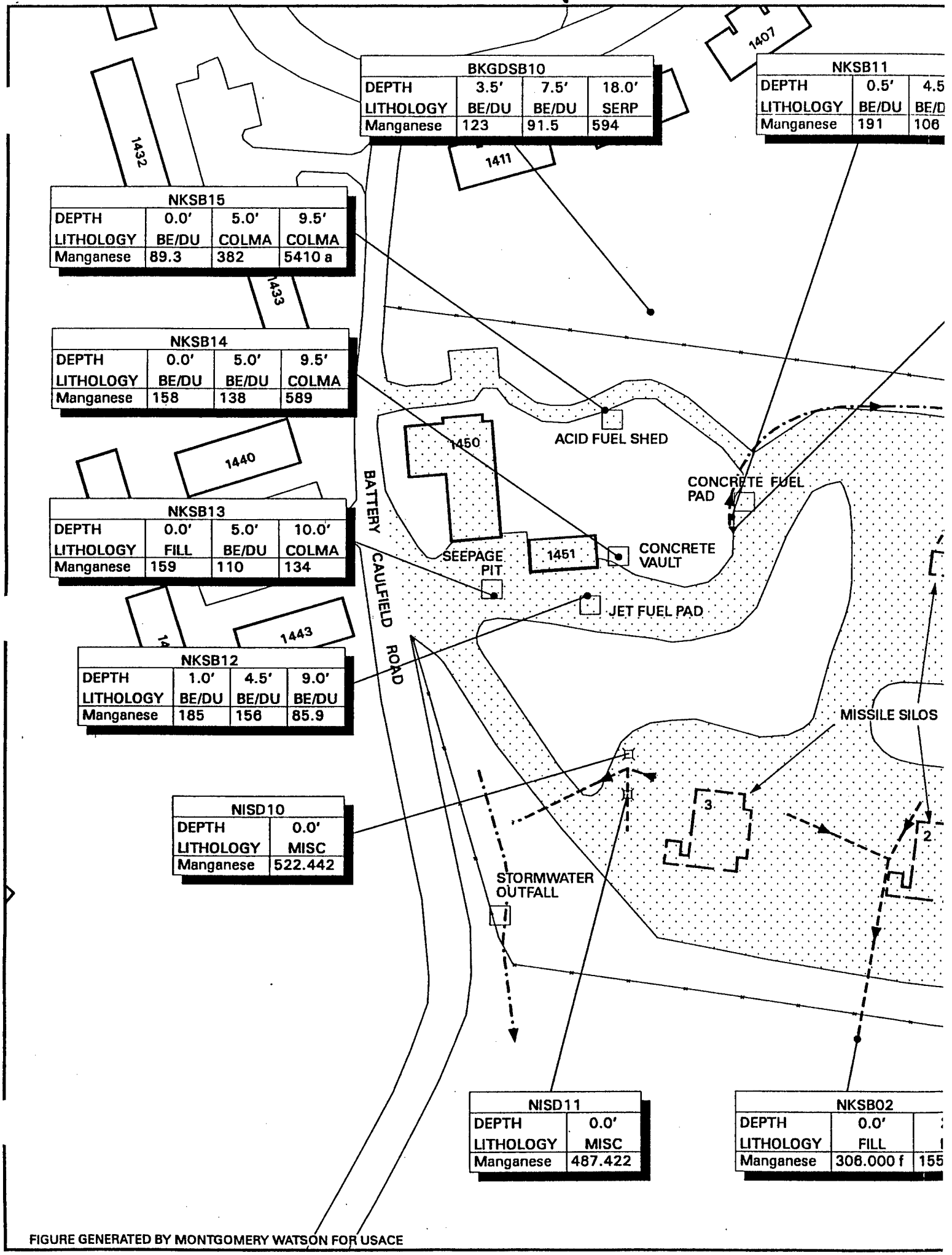
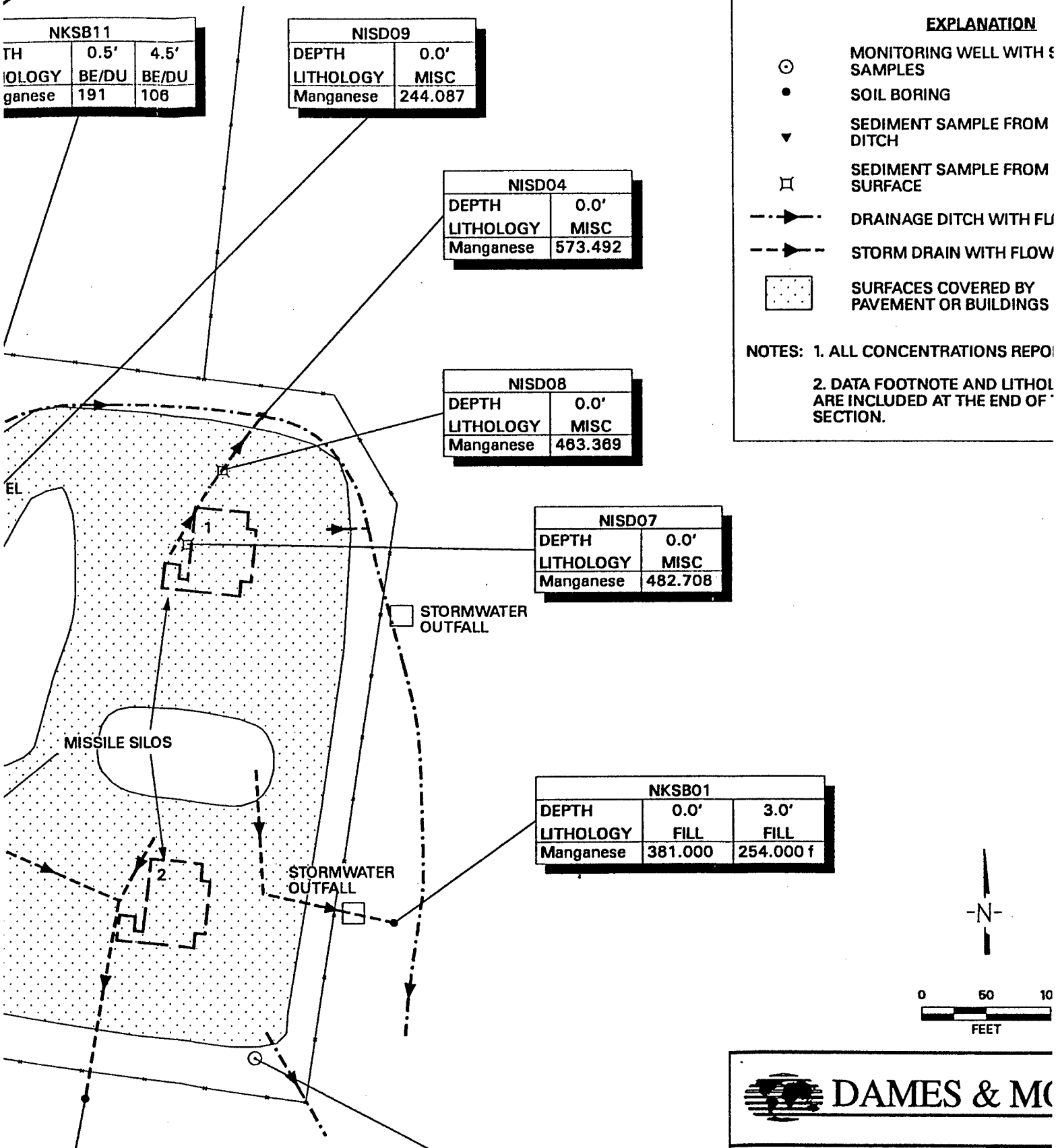


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

16-Sep-96 07:39:53 Monday, [illegible]_v3.ami, [illegible]_NIKE_3_14.grn, PSF



DAMES & MC

NIKE FACILITY
CONCENTRATIONS OF MANGA

PSF26201

Date: January 1997 | Figu

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- ● SOIL BORING
- ▼ SEDIMENT SAMPLE FROM DRAINAGE DITCH
- ⌑ SEDIMENT SAMPLE FROM A PAVED SURFACE
- —·→·— DRAINAGE DITCH WITH FLOW DIRECTION
- – – → – – STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

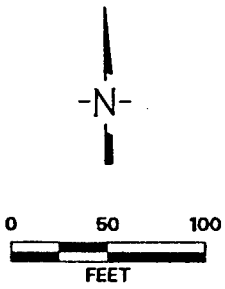
D04	
	0.0'
'	MISC
	573.492

D08	
	0.0'
'	MISC
	463.369

NISD07	
DEPTH	0.0'
LITHOLOGY	MISC
Manganese	482.708

NKSB01		
DEPTH	0.0'	3.0'
LITHOLOGY	FILL	FILL
Manganese	381.000	254.000 f

.5'
LL
000



DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF MANGANESE IN SOIL

PSF26201

Date: January 1997 | Figure 4.5-5

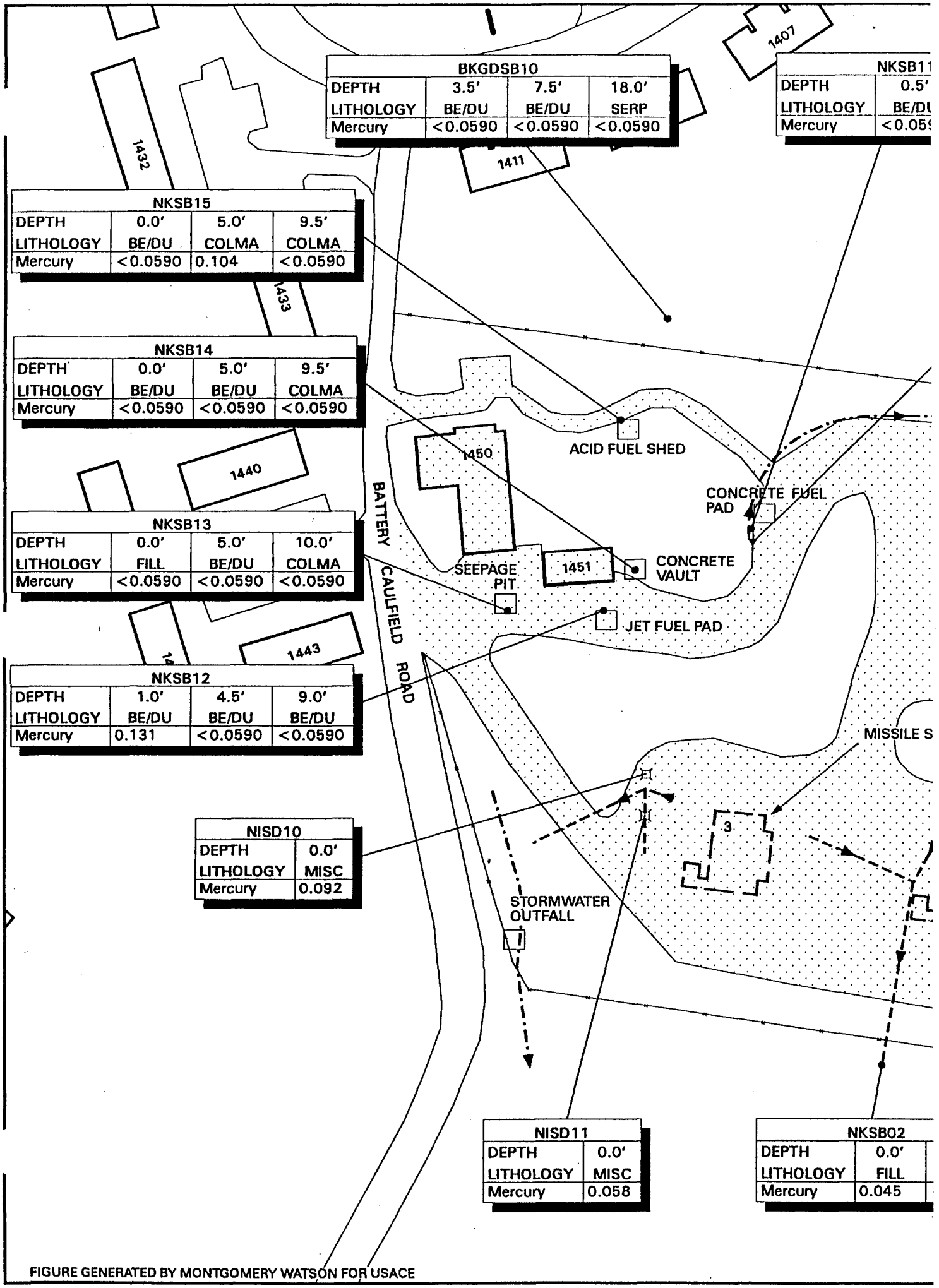
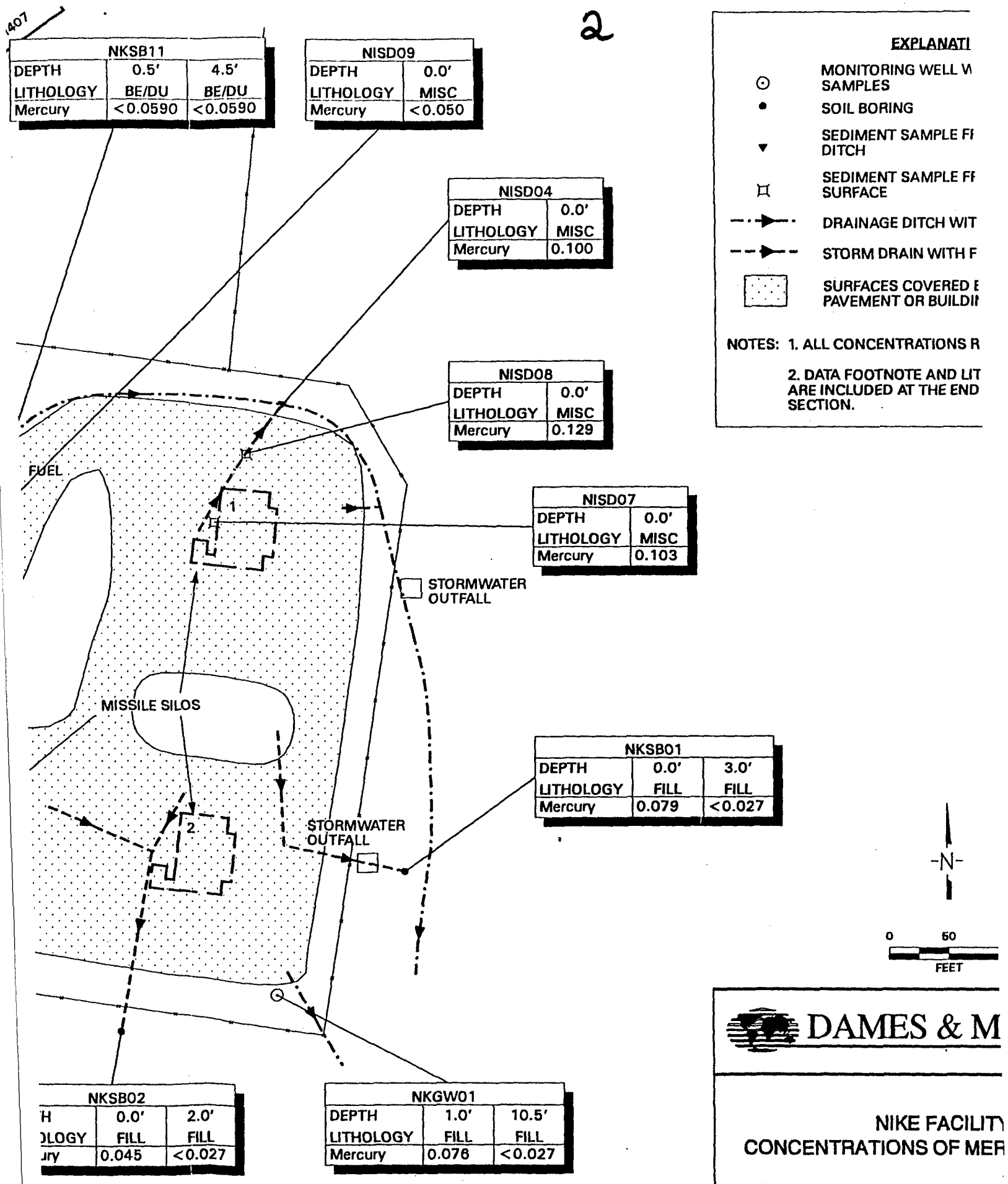
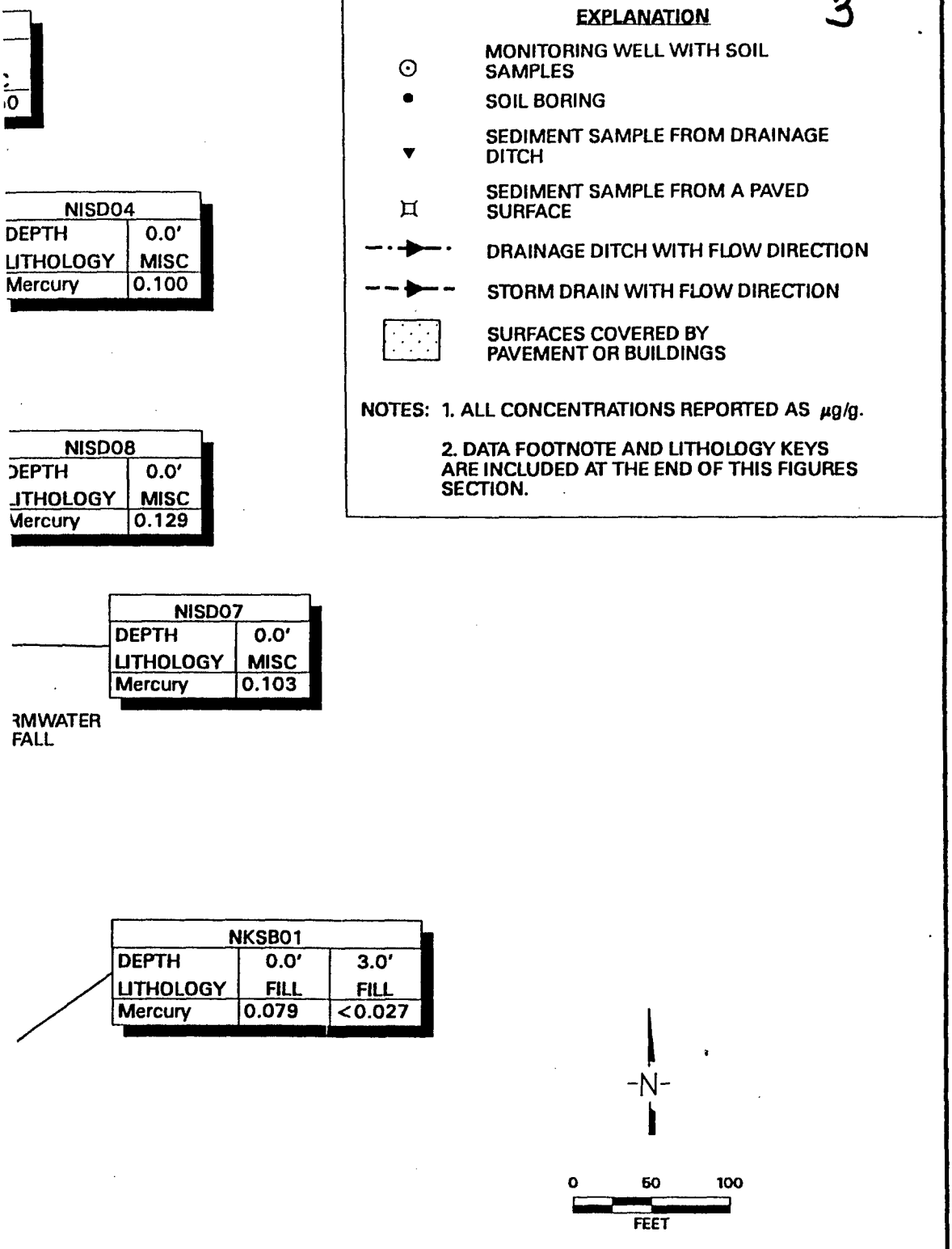


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

16 Sep 96 07:41:27 Monday, i... _v3.aml, plotfile base_NIKE_S_15.grs, PSF


1407
2
NKSB11
DEPTH 0.5' 4.5'
LITHOLOGY BE/DU BE/DU
Mercury <0.0590 <0.0590
NISD09
DEPTH 0.0'
LITHOLOGY MISC
Mercury <0.050
NISD04
DEPTH 0.0'
LITHOLOGY MISC
Mercury 0.100
NISD08
DEPTH 0.0'
LITHOLOGY MISC
Mercury 0.129
NISD07
DEPTH 0.0'
LITHOLOGY MISC
Mercury 0.103
NKSB01
DEPTH 0.0' 3.0'
LITHOLOGY FILL FILL
Mercury 0.079 <0.027
NKSB02
H 0.0' 2.0'
OLOGY FILL FILL
ury 0.045 <0.027
NKGW01
DEPTH 1.0' 10.5'
LITHOLOGY FILL FILL
Mercury 0.076 <0.027
FUEL
1
2
STORMWATER OUTFALL
STORMWATER OUTFALL
MISSILE SILOS
EXPLANATI
MONITORING WELL W SAMPLES
SOIL BORING
SEDIMENT SAMPLE FI DITCH
SEDIMENT SAMPLE FI SURFACE
DRAINAGE DITCH WIT
STORM DRAIN WITH F
SURFACES COVERED E PAVEMENT OR BUILDI
NOTES: 1. ALL CONCENTRATIONS R
2. DATA FOOTNOTE AND LIT ARE INCLUDED AT THE END SECTION.
-N-
0 50
FEET
DAMES & M
NIKE FACILIT
CONCENTRATIONS OF MER
PSF26199
Date: January 1997
Figu



DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF MERCURY IN SOIL

PSF26199

Date: January 1997 | Figure 4.5-6

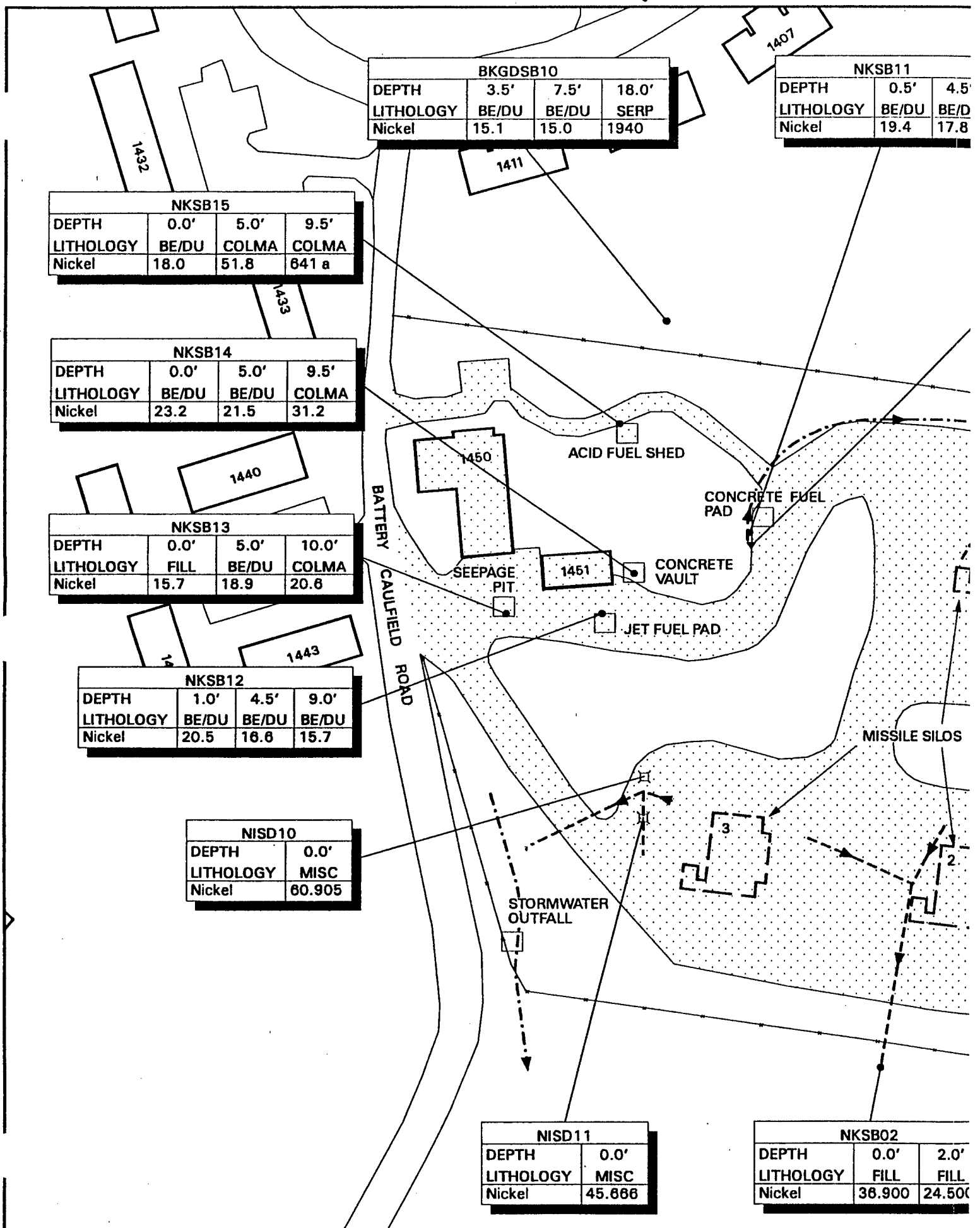
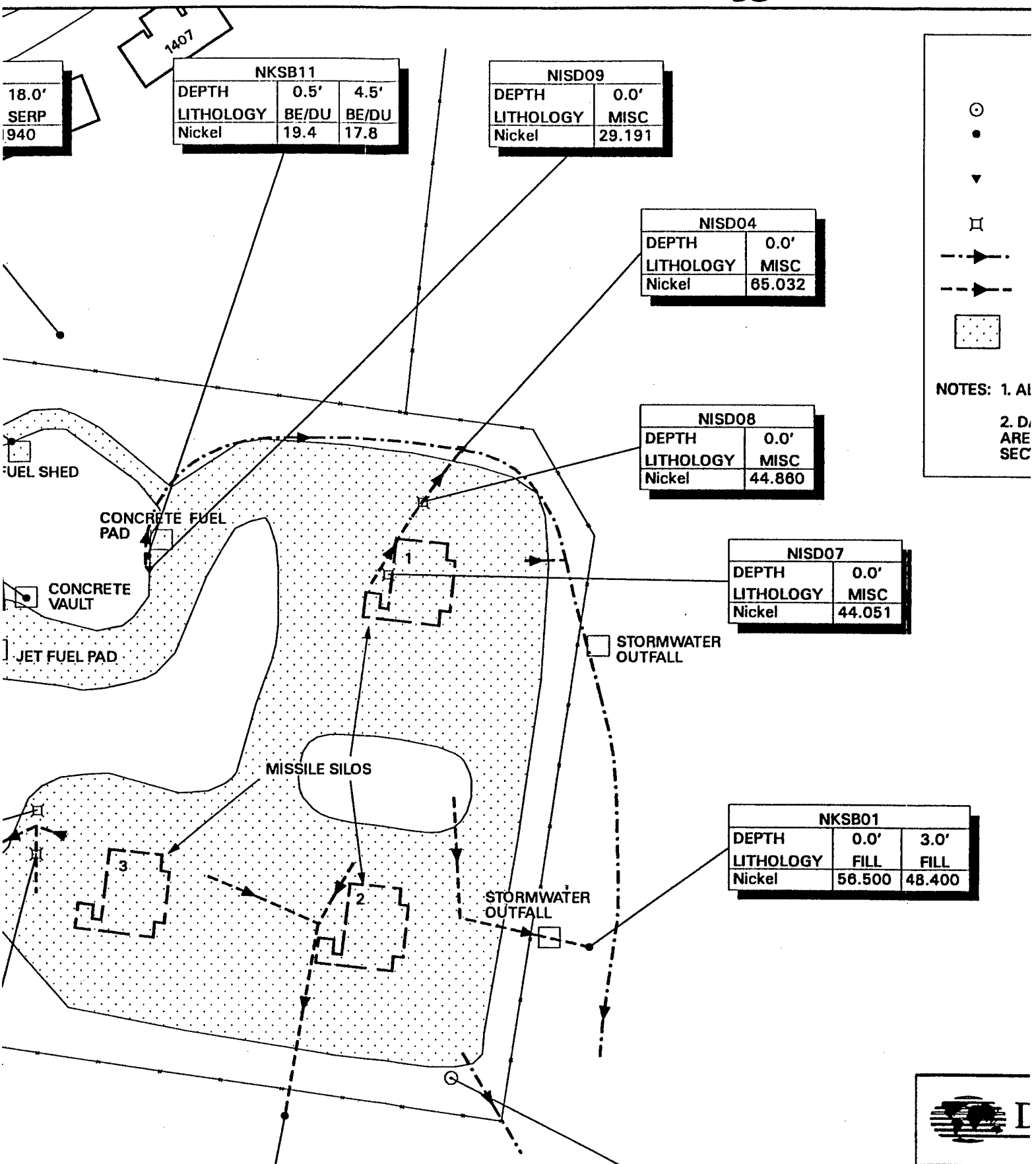
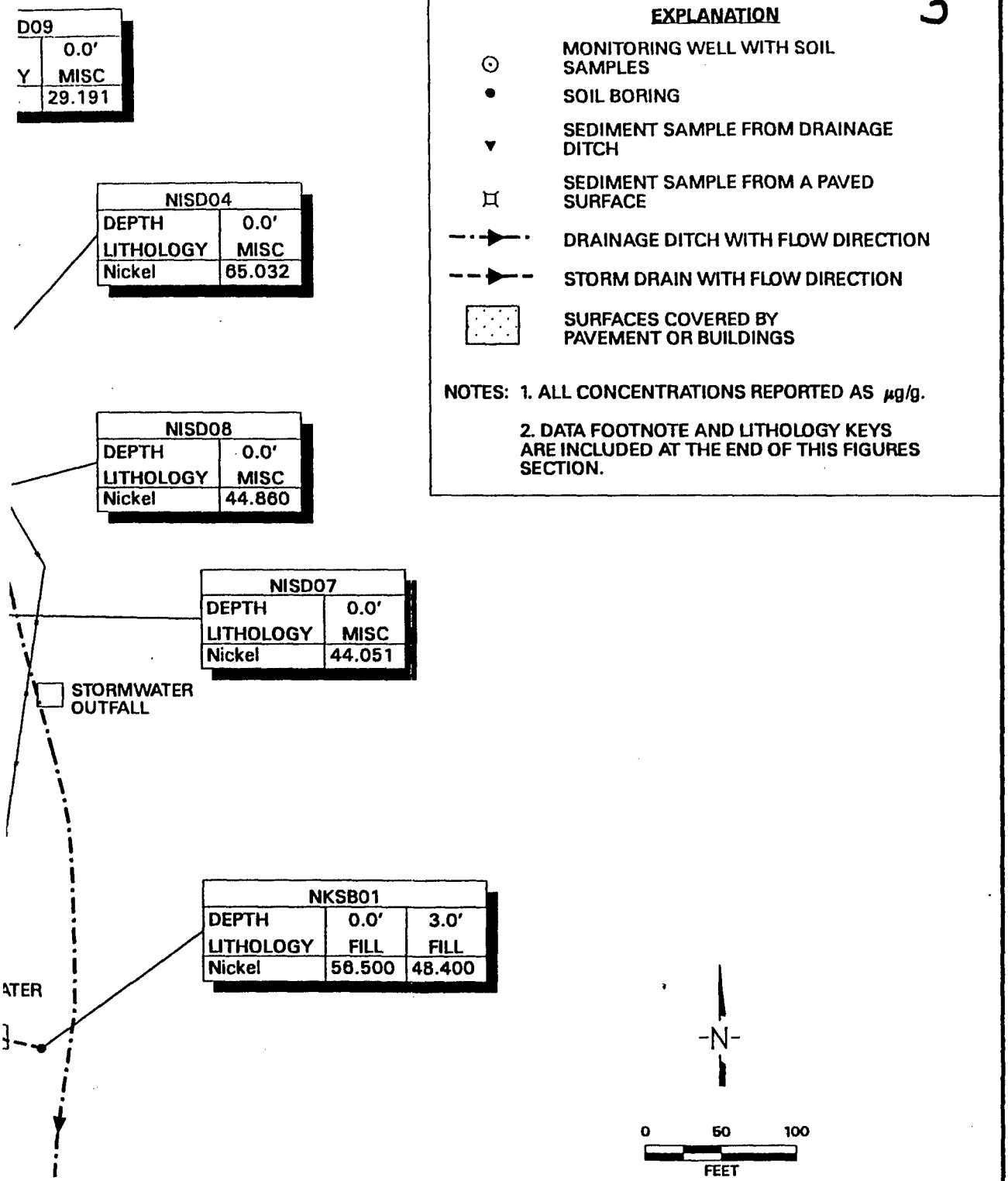


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE


1407
18.0'
SERP
940
NKSB11
DEPTH 0.5' 4.5'
LITHOLOGY BE/DU BE/DU
Nickel 19.4 17.8
NISD09
DEPTH 0.0'
LITHOLOGY MISC
Nickel 29.191
NISD04
DEPTH 0.0'
LITHOLOGY MISC
Nickel 65.032
NISD08
DEPTH 0.0'
LITHOLOGY MISC
Nickel 44.860
NISD07
DEPTH 0.0'
LITHOLOGY MISC
Nickel 44.051
NOTES: 1. Al
2. D
ARE
SEC
FUEL SHED
CONCRETE FUEL PAD
CONCRETE VAULT
JET FUEL PAD
STORMWATER OUTFALL
MISSILE SILOS
1
2
3
NKSB01
DEPTH 0.0' 3.0'
LITHOLOGY FILL FILL
Nickel 56.500 48.400
STORMWATER OUTFALL
.0'
ISC
666
NKSB02
DEPTH 0.0' 2.0'
LITHOLOGY FILL FILL
Nickel 36.900 24.500
NKGW01
DEPTH 1.0' 10.5'
LITHOLOGY FILL FILL
Nickel 95.000 21.600
CONCE
PSF26203
Date: Jan



DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF NICKEL IN SOIL

PSF26203

Date: January 1997

Figure 4.5-7

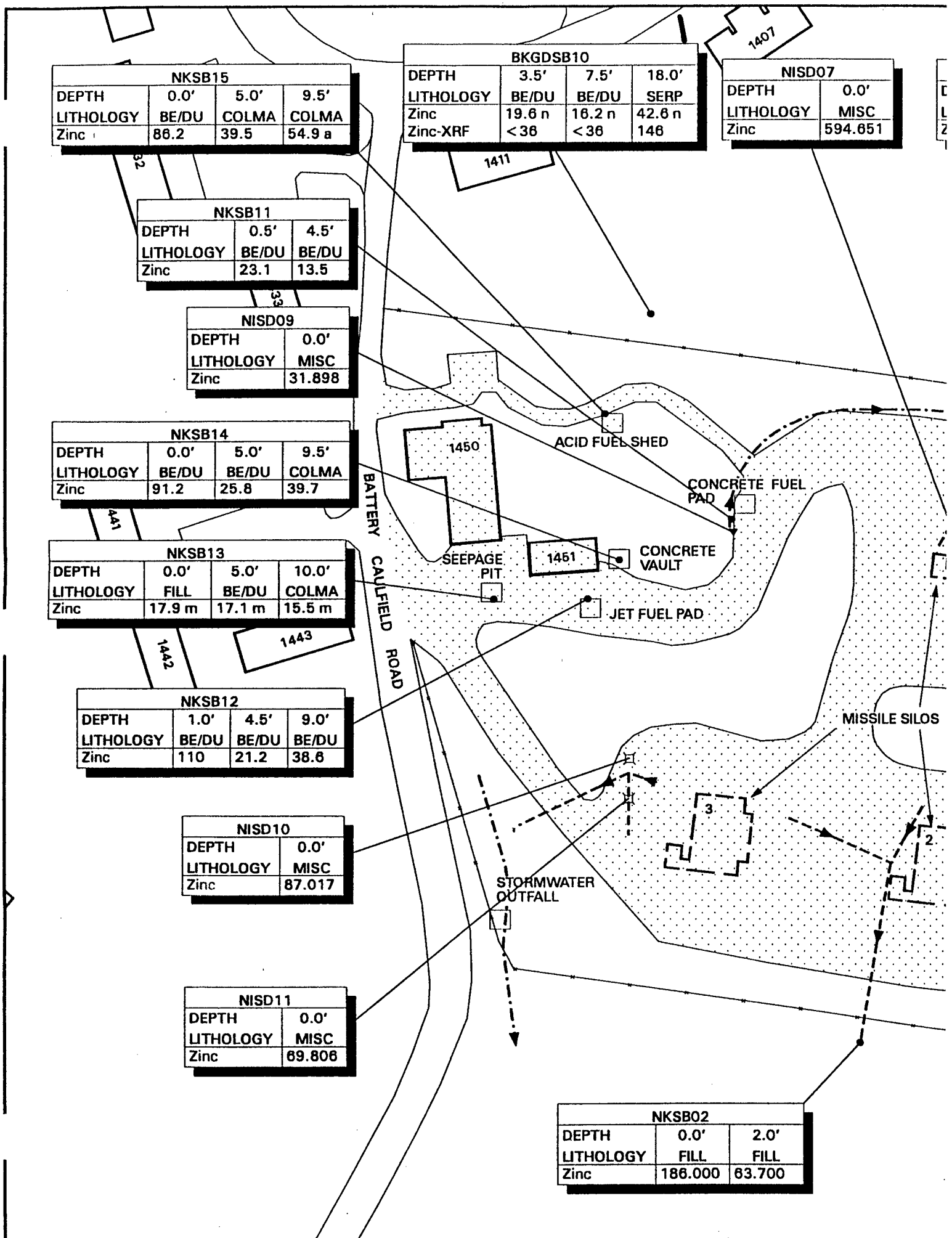
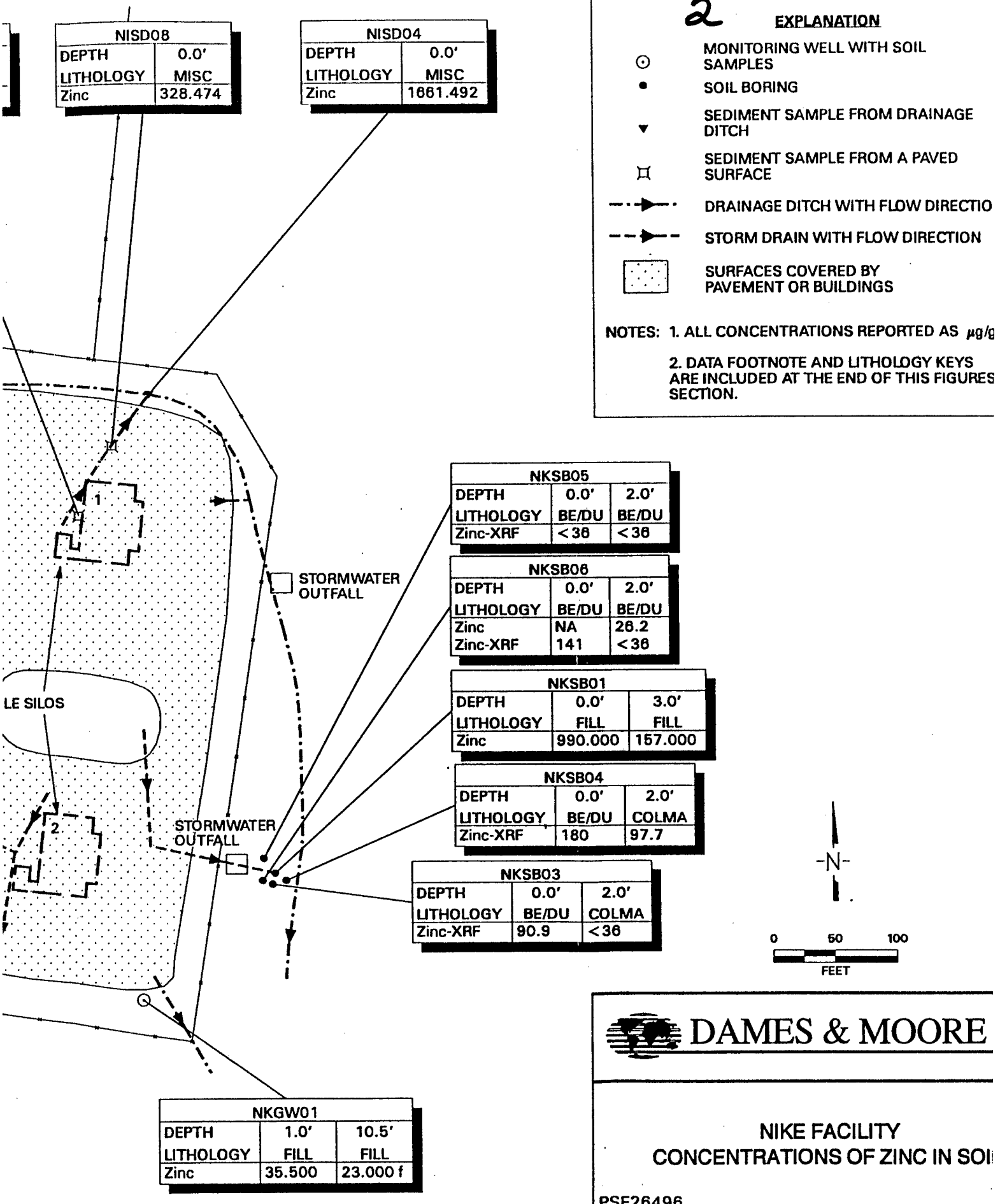


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF ZINC IN SOI

PSF26496

Date: January 1997 | Figure 4.5-8

3

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- • SOIL BORING
- ▼ SEDIMENT SAMPLE FROM DRAINAGE DITCH
- ⌑ SEDIMENT SAMPLE FROM A PAVED SURFACE
- —·→·— DRAINAGE DITCH WITH FLOW DIRECTION
- – – → – – STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

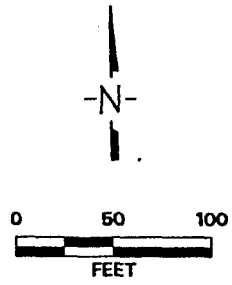
NKSB05		
)GY	0.0' BE/DU	2.0' BE/DU
:	<36	<36

NKSB06		
)GY	0.0' BE/DU	2.0' BE/DU
	NA	26.2
:	141	<36

NKSB01		
)GY	0.0' FILL	3.0' FILL
	990.000	157.000

NKSB04		
OGY	0.0' BE/DU	2.0' COLMA
RF	180	97.7

KSB03	
0.0' BE/DU	2.0' COLMA
90.9	<36

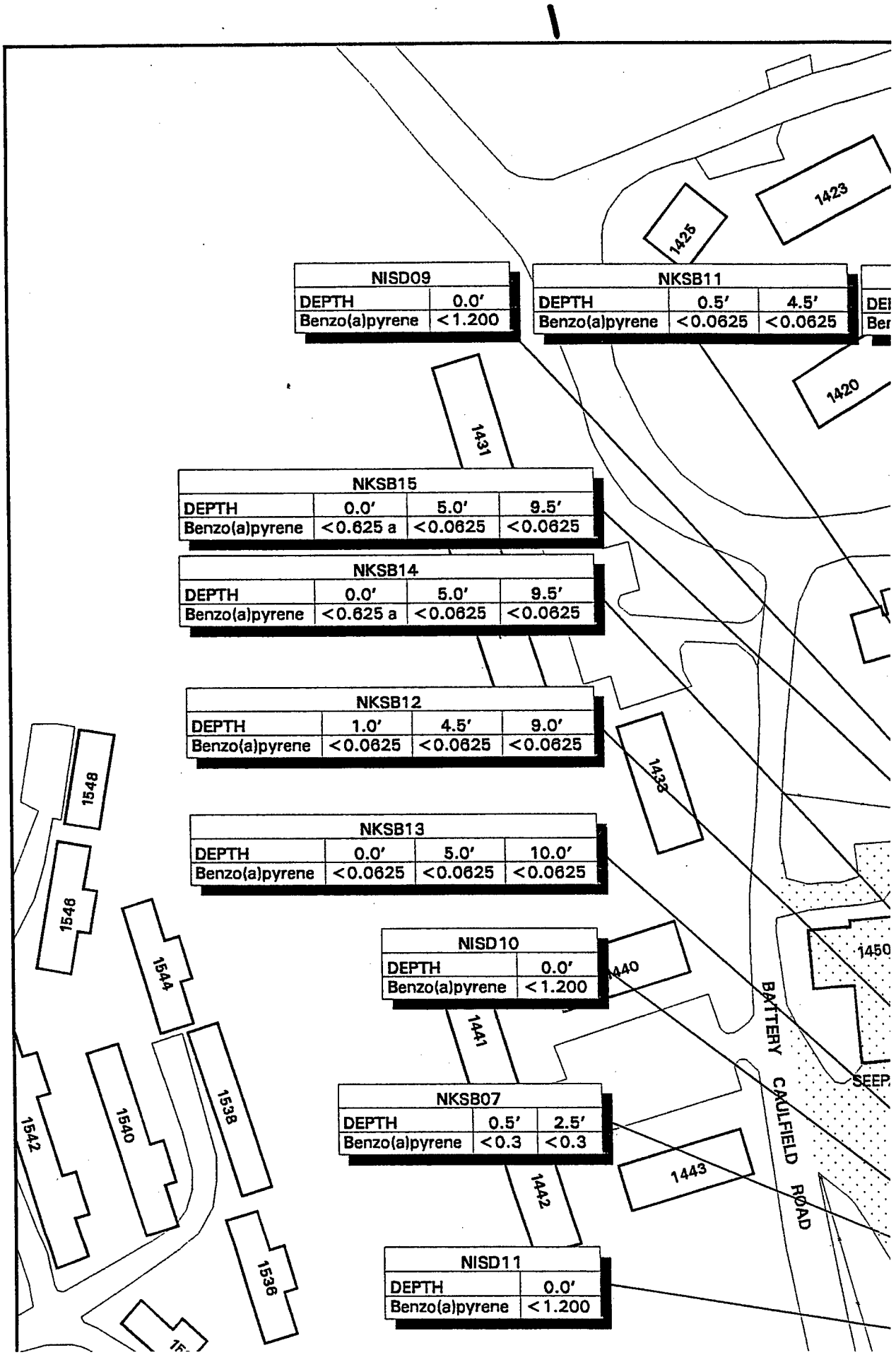


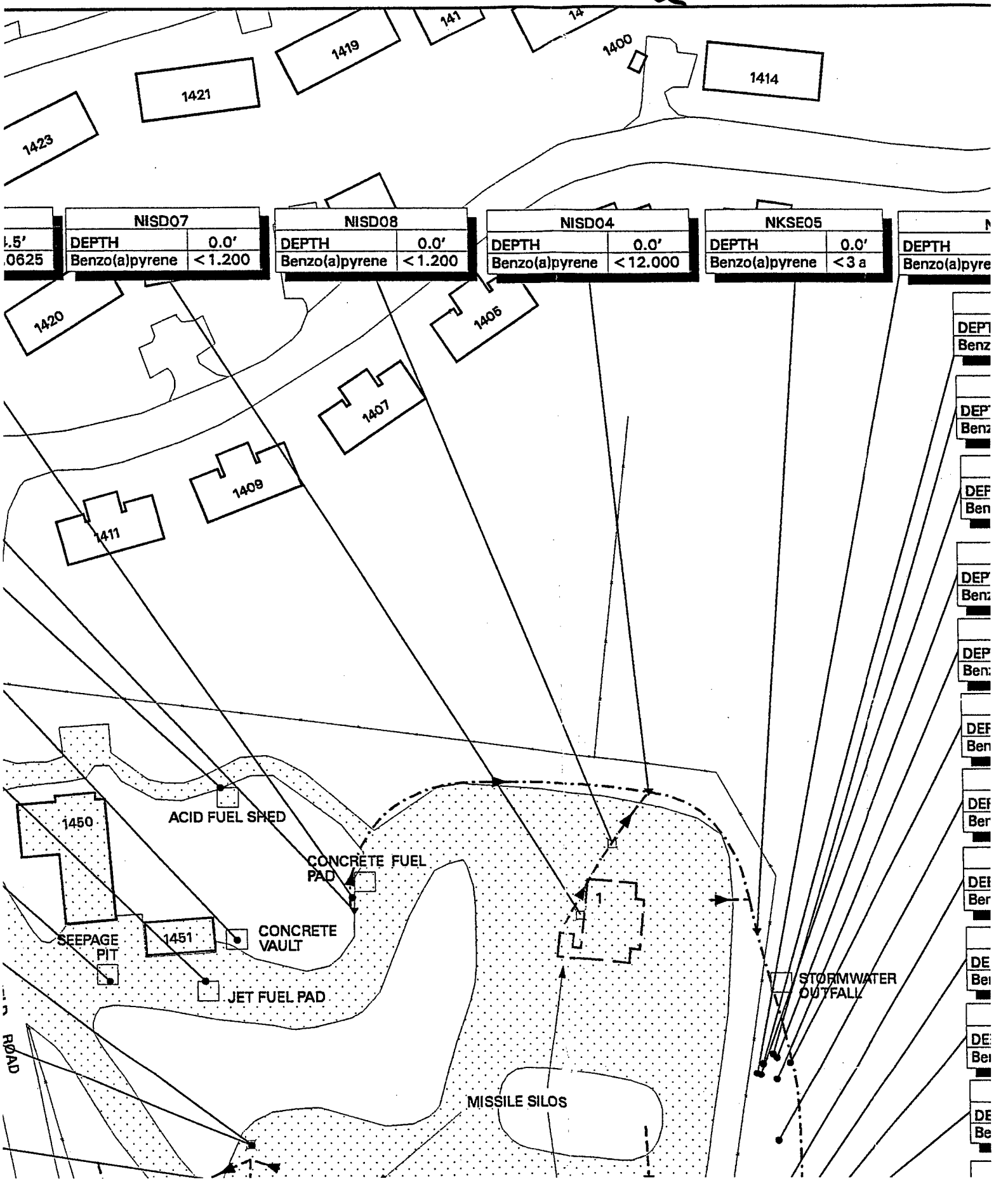
DAMES & MOORE

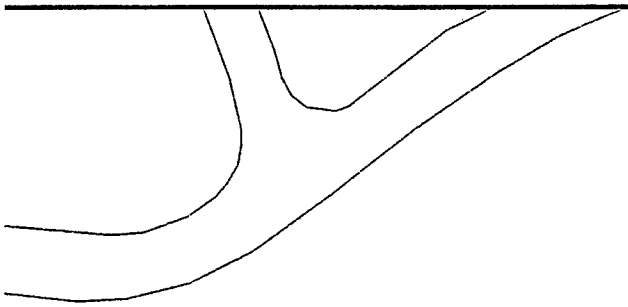
NIKE FACILITY
CONCENTRATIONS OF ZINC IN SOIL

PSF26496

Date: January 1997 | Figure 4.5-8


NISD09
DEPTH | 0.0′
Benzo(a)pyrene | <1.200
NKSB11
DEPTH | 0.5′ | 4.5′
Benzo(a)pyrene | <0.0625 | <0.0625
NKSB15
DEPTH | 0.0′ | 5.0′ | 9.5′
Benzo(a)pyrene | <0.625 a | <0.0625 | <0.0625
NKSB14
DEPTH | 0.0′ | 5.0′ | 9.5′
Benzo(a)pyrene | <0.625 a | <0.0625 | <0.0625
NKSB12
DEPTH | 1.0′ | 4.5′ | 9.0′
Benzo(a)pyrene | <0.0625 | <0.0625 | <0.0625
NKSB13
DEPTH | 0.0′ | 5.0′ | 10.0′
Benzo(a)pyrene | <0.0625 | <0.0625 | <0.0625
NISD10
DEPTH | 0.0′
Benzo(a)pyrene | <1.200
NKSB07
DEPTH | 0.5′ | 2.5′
Benzo(a)pyrene | <0.3 | <0.3
NISD11
DEPTH | 0.0′
Benzo(a)pyrene | <1.200
1423
1425
1420
1431
1433
1548
1548
1544
1542
1540
1538
1536
1440
1441
1442
1443
1450
BATTERY CAULFIELD ROAD
SEEP


1419
141
14
1400
1414
1421
1423
NISD07
DEPTH 0.0'
Benzo(a)pyrene <1.200
NISD08
DEPTH 0.0'
Benzo(a)pyrene <1.200
NISD04
DEPTH 0.0'
Benzo(a)pyrene <12.000
NKSE05
DEPTH 0.0'
Benzo(a)pyrene <3 a
1420
1406
1407
1409
1411
1450
ACID FUEL SHED
CONCRETE FUEL PAD
SEEPAGE PIT
1451
CONCRETE VAULT
JET FUEL PAD
STORMWATER OUTFALL
MISSILE SILOS
ROAD



NKSB28		
DEPTH	0.0'	2.0'
Benzo(a)pyrene	<0.3	<0.3

NKSB19		
DEPTH	0.0'	1.7'
Benzo(a)pyrene	<30 a	<0.3

NKSB21		
DEPTH	0.0'	1.7'
Benzo(a)pyrene	<30 a	<0.3

NKSB27		
DEPTH	0.0'	2.0'
Benzo(a)pyrene	1.6	<0.3

NKSB20		
DEPTH	0.0'	1.7'
Benzo(a)pyrene	<30 a	<3 a

NKSB26		
DEPTH	0.0'	2.0'
Benzo(a)pyrene	<0.3	<0.3

NKSB25		
DEPTH	0.0'	2.0'
Benzo(a)pyrene	<0.3	<0.3

NKSB29		
DEPTH	0.0'	2.0'
Benzo(a)pyrene	<0.3	<0.3

NKSB30		
DEPTH	0.0'	2.0'
Benzo(a)pyrene	<0.3	<0.3

NKSB05		
DEPTH	0.0'	2.0'
Benzo(a)pyrene	<0.3	<0.3

NKSB06		
DEPTH	0.0'	2.0'
Benzo(a)pyrene	<0.3	<0.3

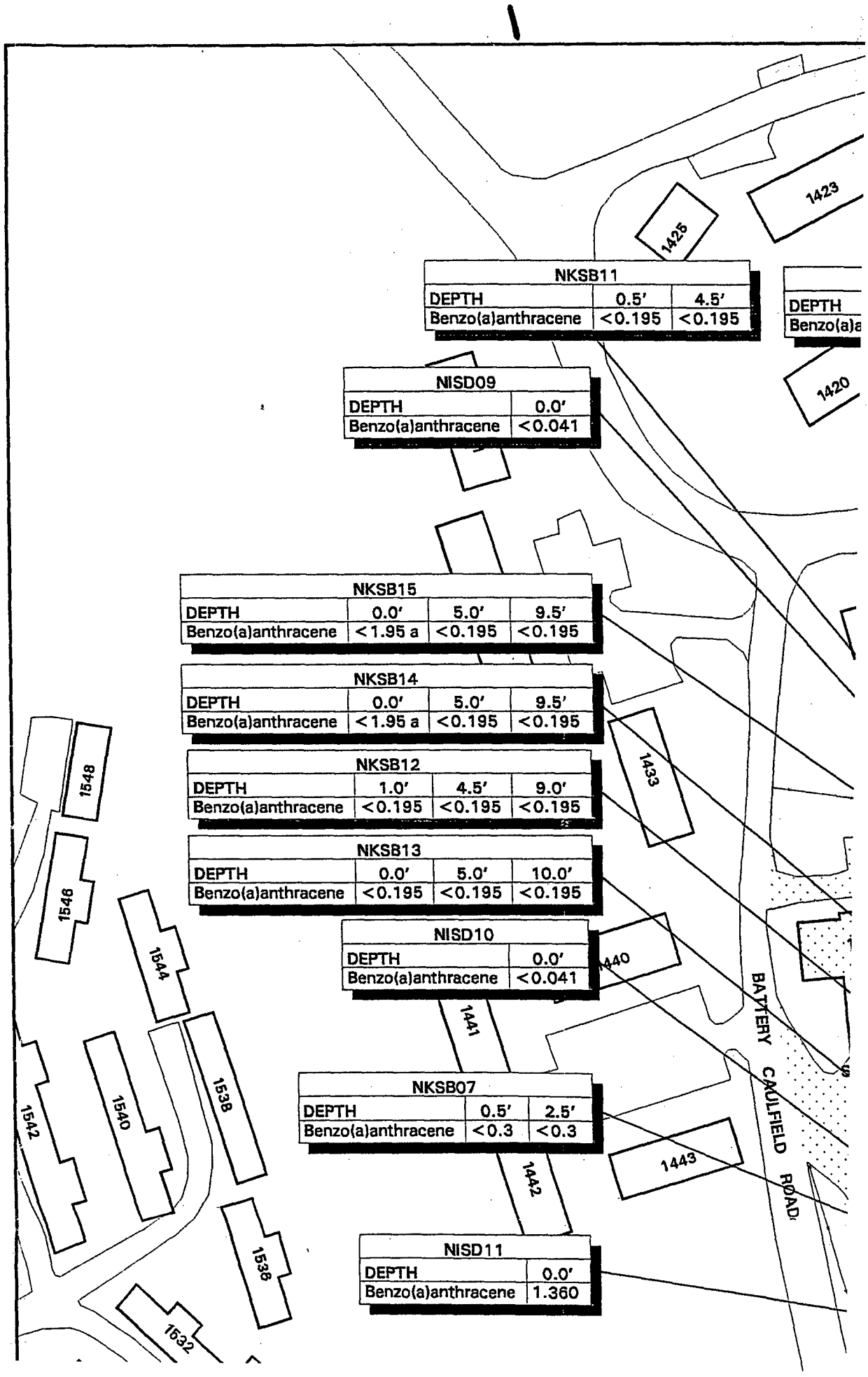
NKSB01

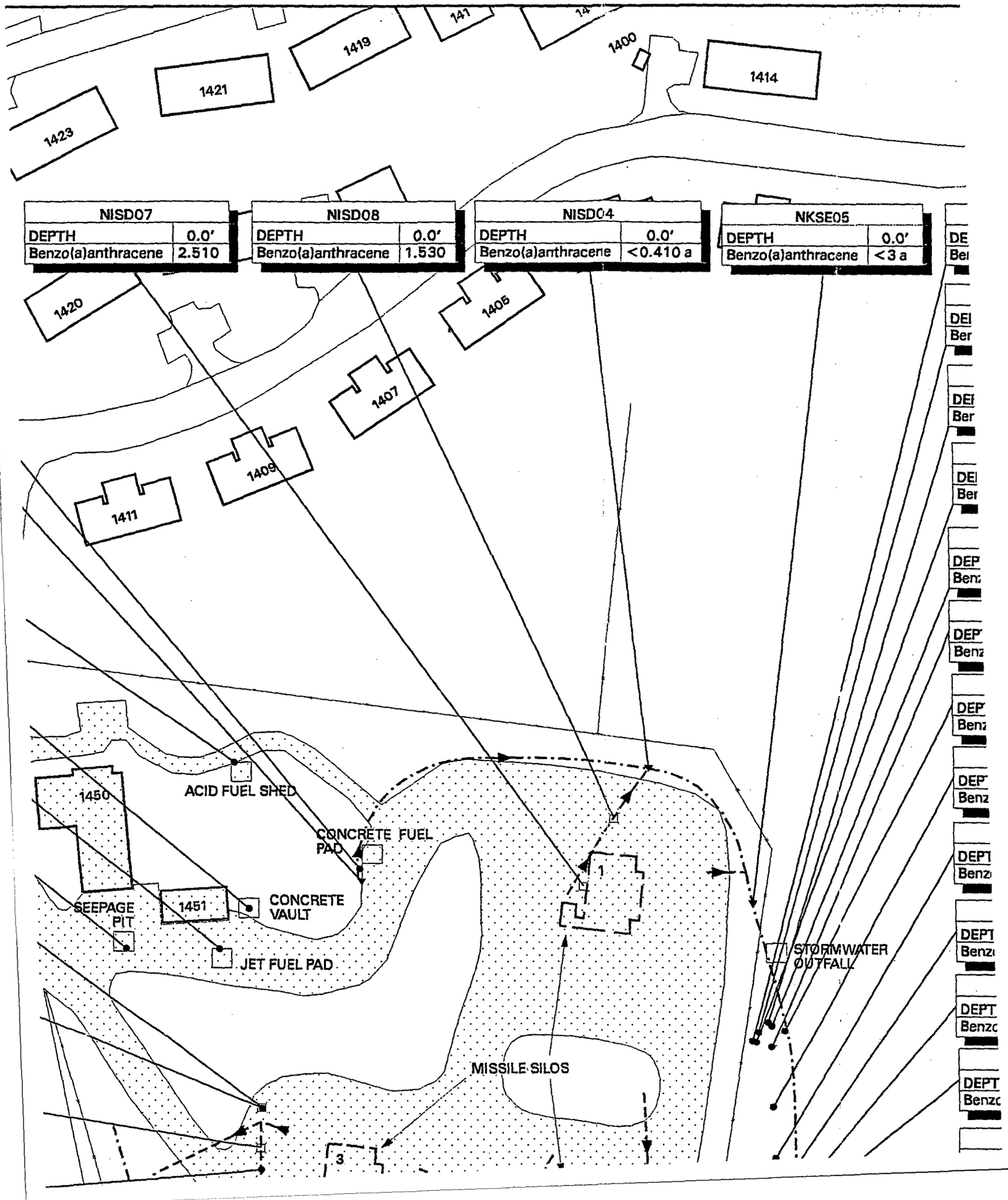
EXPLANATION

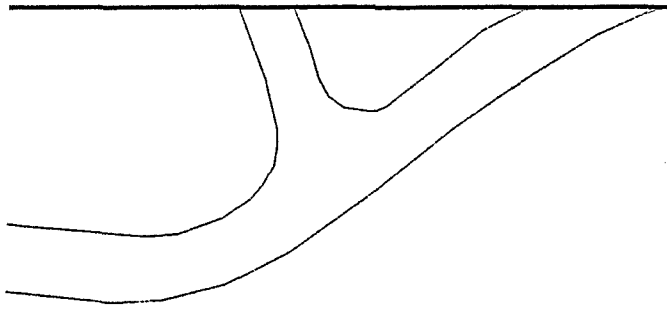
- ⊙ MONITORING WELL WITH SOIL SAMPLES
- • SOIL BORING
- ▼ SEDIMENT SAMPLE FROM DRAINAGE DITCH
- ⌑ SEDIMENT SAMPLE FROM A PAVED SURFACE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.


NKSB11
DEPTH | 0.5' | 4.5'
Benzo(a)anthracene | <0.195 | <0.195
NISD09
DEPTH | 0.0'
Benzo(a)anthracene | <0.041
NKSB15
DEPTH | 0.0' | 5.0' | 9.5'
Benzo(a)anthracene | <1.95 a | <0.195 | <0.195
NKSB14
DEPTH | 0.0' | 5.0' | 9.5'
Benzo(a)anthracene | <1.95 a | <0.195 | <0.195
NKSB12
DEPTH | 1.0' | 4.5' | 9.0'
Benzo(a)anthracene | <0.195 | <0.195 | <0.195
NKSB13
DEPTH | 0.0' | 5.0' | 10.0'
Benzo(a)anthracene | <0.195 | <0.195 | <0.195
NISD10
DEPTH | 0.0'
Benzo(a)anthracene | <0.041
NKSB07
DEPTH | 0.5' | 2.5'
Benzo(a)anthracene | <0.3 | <0.3
NISD11
DEPTH | 0.0'
Benzo(a)anthracene | 1.360
1423
1425
1420
1433
1440
1441
1442
1443
1548
1546
1544
1542
1540
1538
1536
1532
BATTERY CAULFIELD ROAD


1423
1421
1419
141
14
1400
1414
1420
1405
1407
1409
1411
NISD07
DEPTH 0.0'
Benzo(a)anthracene 2.510
NISD08
DEPTH 0.0'
Benzo(a)anthracene 1.530
NISD04
DEPTH 0.0'
Benzo(a)anthracene <0.410 a
NKSE05
DEPTH 0.0'
Benzo(a)anthracene < 3 a
1450
ACID FUEL SHED
CONCRETE FUEL PAD
SEEPAGE PIT
1451
CONCRETE VAULT
JET FUEL PAD
STORMWATER OUTFALL
MISSILE SILOS
1
3



EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- • SOIL BORING
- ▼ SEDIMENT SAMPLE FROM STORM DRAIN/DRAINAGE DITCH
- ⌑ SEDIMENT SAMPLE FROM A PAVED SURFACE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

0.0′	
<3 a	

NKSB28		
DEPTH	0.0′	2.0′
Benzo(a)anthracene	<0.3	<0.3

NKSB19		
DEPTH	0.0′	1.7′
Benzo(a)anthracene	<30 a	<0.3

NKSB21		
DEPTH	0.0′	1.7′
Benzo(a)anthracene	<30 a	<0.3

NKSB27		
DEPTH	0.0′	2.0′
Benzo(a)anthracene	1.35	<0.3

NKSB20		
DEPTH	0.0′	1.7′
Benzo(a)anthracene	<30 a	<3 a

NKSB26		
DEPTH	0.0′	2.0′
Benzo(a)anthracene	<0.3	<0.3

NKSB25		
DEPTH	0.0′	2.0′
Benzo(a)anthracene	<0.3	<0.3

NKSB29		
DEPTH	0.0′	2.0′
Benzo(a)anthracene	<0.3	<0.3

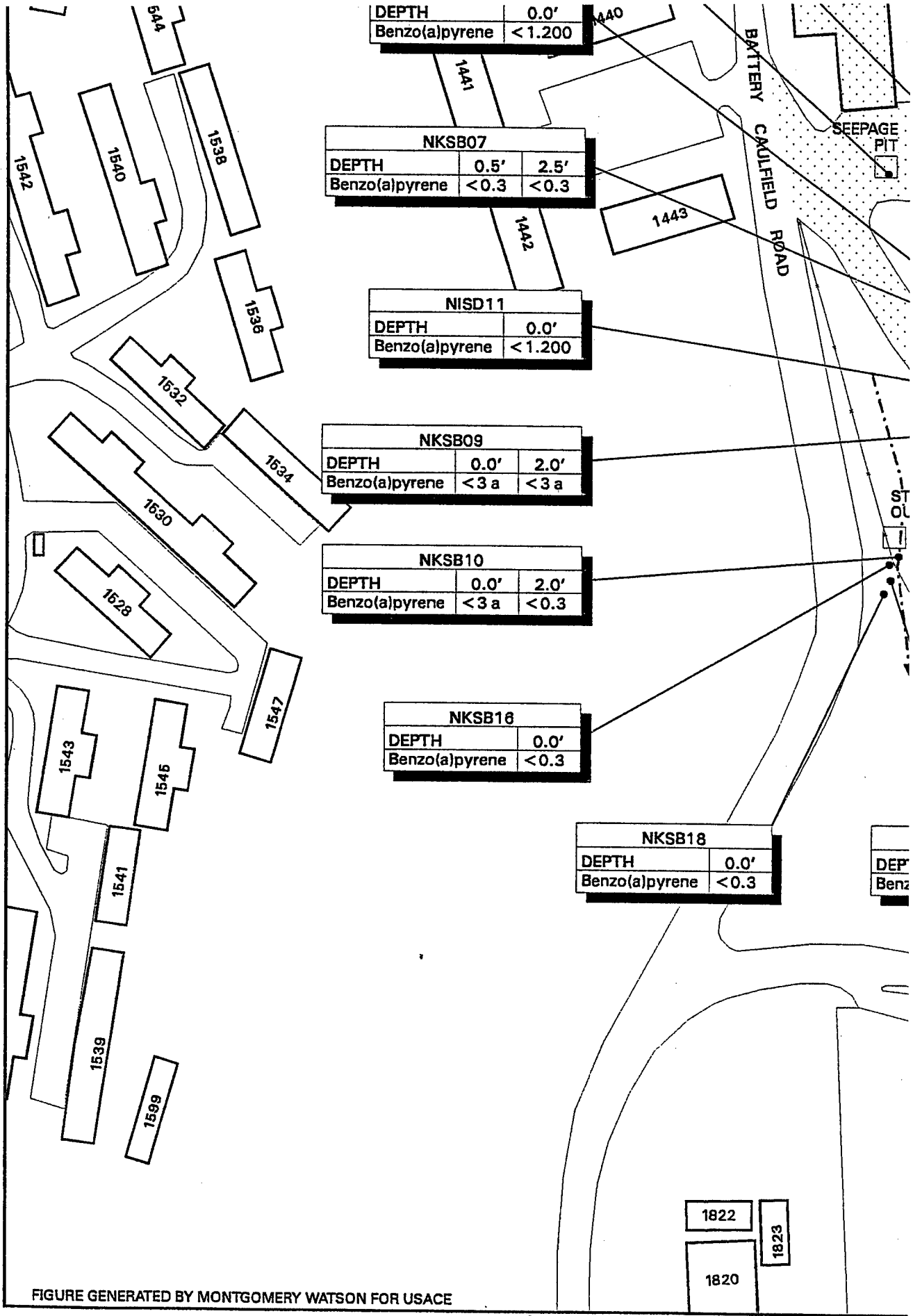
NKSB30		
DEPTH	0.0′	2.0′
Benzo(a)anthracene	<0.3	<0.3

NKSB05		
DEPTH	0.0′	2.0′
Benzo(a)anthracene	<0.3	<0.3

NKSB06		
DEPTH	0.0′	2.0′
Benzo(a)anthracene	<0.3	<0.3

NKSB01		
DEPTH	0.0′	3.0′
Benzo(a)anthracene	0.710	0.081

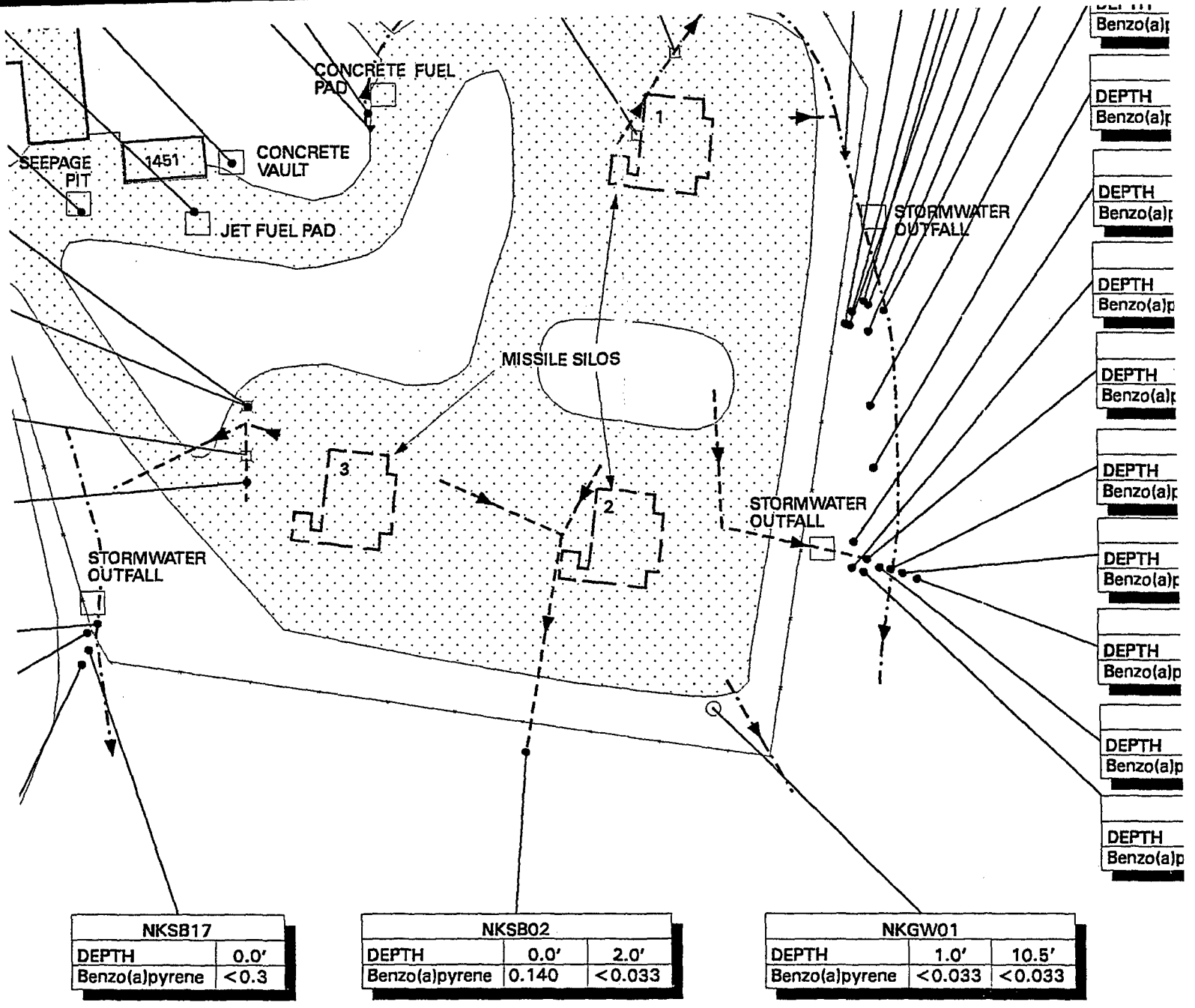
NKSB22



16 Sep 96 07:49:05 Mondby, base:_11x17_v3.mnt, plotfile base_NIKEL_S_34.gpn, PSP

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

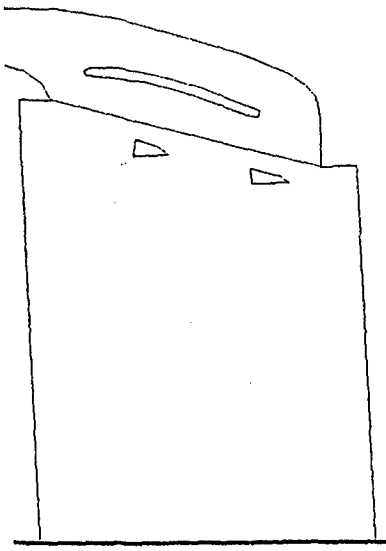
4



NKSB17	
DEPTH	0.0′
Benzo(a)pyrene	<0.3

NKSB02		
DEPTH	0.0′	2.0′
Benzo(a)pyrene	0.140	<0.033

NKGW01		
DEPTH	1.0′	10.5′
Benzo(a)pyrene	<0.033	<0.033



DEPTH	0.0′	2.0′
Benzo(a)pyrene	<0.3	<0.3

NKSB30		
DEPTH	0.0′	2.0′
Benzo(a)pyrene	<0.3	<0.3

NKSB05		
DEPTH	0.0′	2.0′
Benzo(a)pyrene	<0.3	<0.3

NKSB06		
DEPTH	0.0′	2.0′
Benzo(a)pyrene	<0.3	<0.3

NKSB01		
DEPTH	0.0′	3.0′
Benzo(a)pyrene	0.840	0.130

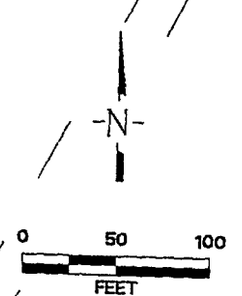
NKSB22		
DEPTH	0.0′	1.7′
Benzo(a)pyrene	<0.3	<0.3

NKSB23		
DEPTH	0.0′	1.7′
Benzo(a)pyrene	<0.3	<0.3

NKSB24		
DEPTH	0.0′	1.7′
Benzo(a)pyrene	<0.3	<0.3

NKSB04		
DEPTH	0.0′	2.0′
Benzo(a)pyrene	<3 a	<3 a

NKSB03		
DEPTH	0.0′	2.0′
Benzo(a)pyrene	<0.3	<0.3

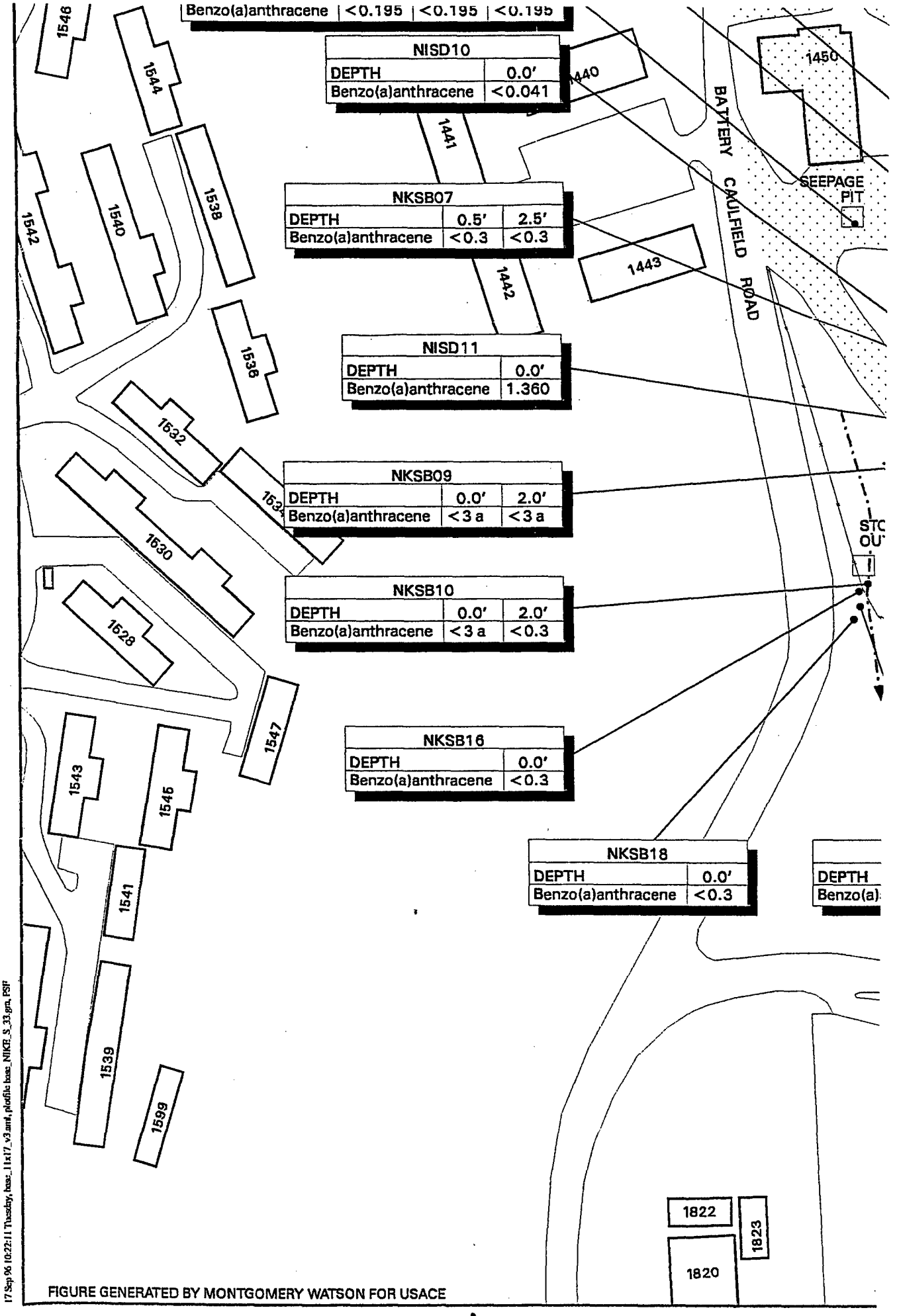


DAMES & MOORE

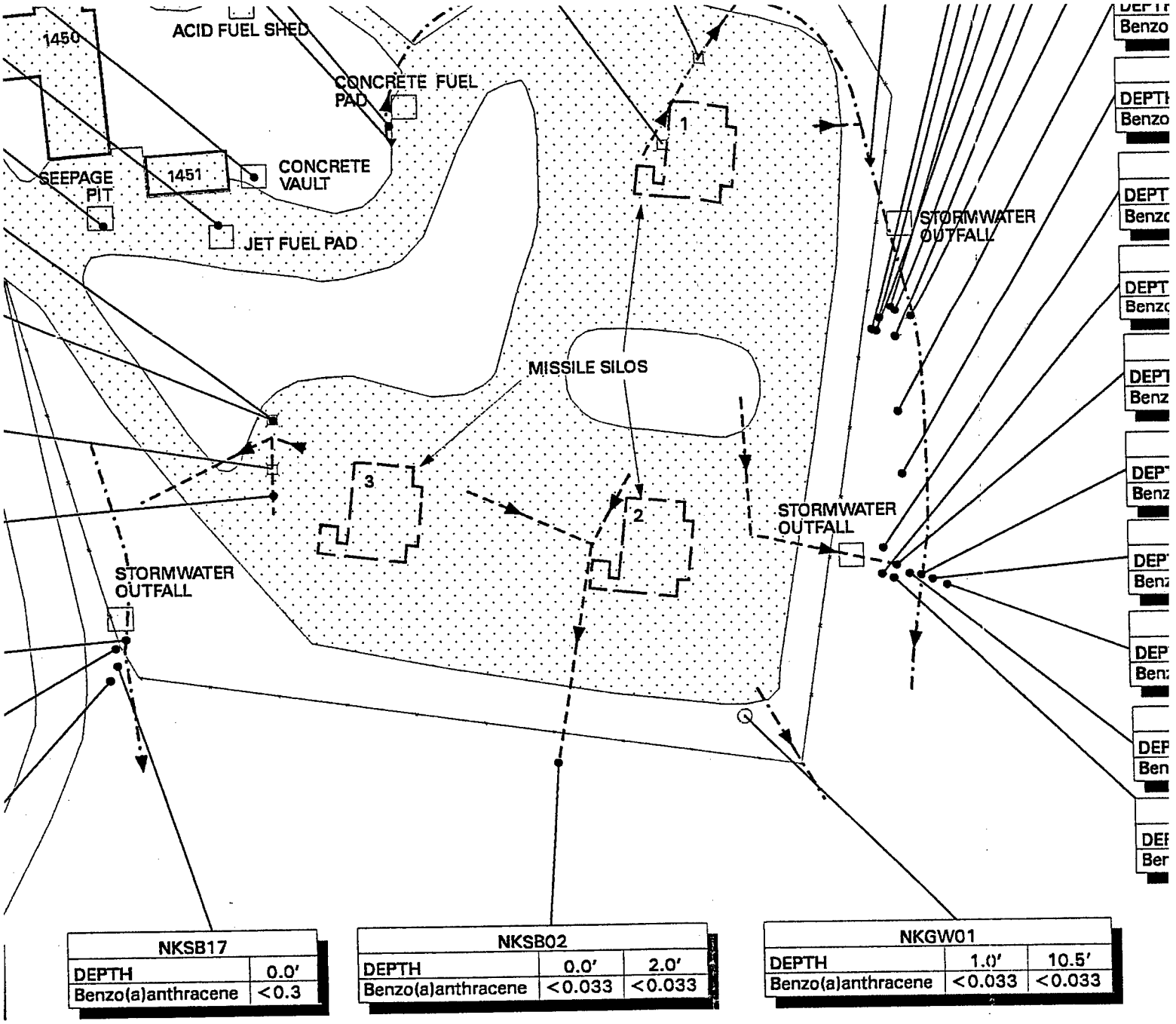
NIKE FACILITY
CONCENTRATIONS OF BENZO(A)PYRENE IN SOIL

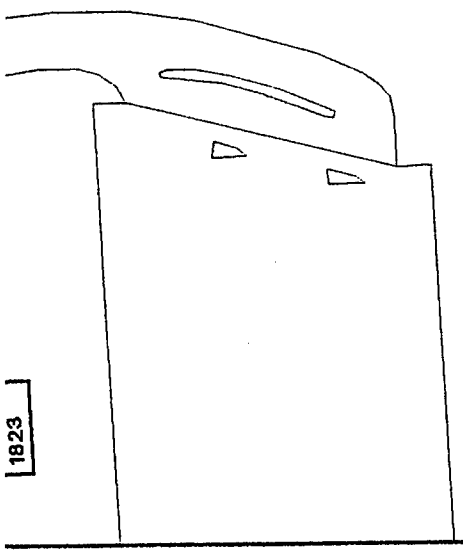
PSF26208

Date: January 1997 | Figure 4.5-9



17 Sep 96 10:22:11 Tuesday, base:_11x17_v3.amt, plotfile base_NIKE_S_33.gm, PSF


1450
ACID FUEL SHED
CONCRETE FUEL PAD
SEEPAGE PIT
1451
CONCRETE VAULT
JET FUEL PAD
1
STORMWATER OUTFALL
MISSILE SILOS
3
2
STORMWATER OUTFALL
STORMWATER OUTFALL
NKSB17
DEPTH 0.0'
Benzo(a)anthracene <0.3
NKSB02
DEPTH 0.0' 2.0'
Benzo(a)anthracene <0.033 <0.033
NKGW01
DEPTH 1.0' 10.5'
Benzo(a)anthracene <0.033 <0.033



1823

Benzo(a)anthracene	<0.3	<0.3

NKSB30		
DEPTH	0.0'	2.0'
Benzo(a)anthracene	<0.3	<0.3

NKSB05		
DEPTH	0.0'	2.0'
Benzo(a)anthracene	<0.3	<0.3

NKSB06		
DEPTH	0.0'	2.0'
Benzo(a)anthracene	<0.3	<0.3

NKSB01		
DEPTH	0.0'	3.0'
Benzo(a)anthracene	0.710	0.081

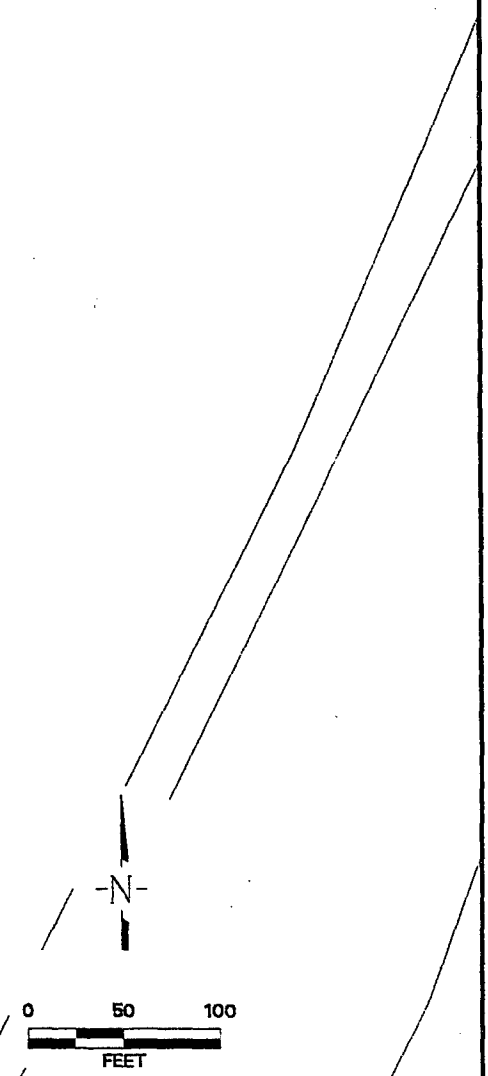
NKSB22		
DEPTH	0.0'	1.7'
Benzo(a)anthracene	<0.3	<0.3

NKSB23		
DEPTH	0.0'	1.7'
Benzo(a)anthracene	<0.3	<0.3

NKSB24		
DEPTH	0.0'	1.7'
Benzo(a)anthracene	<0.3	<0.3

NKSB04		
DEPTH	0.0'	2.0'
Benzo(a)anthracene	<3 a	<3 a

NKSB03		
DEPTH	0.0'	2.0'
Benzo(a)anthracene	<0.3	<0.3



DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF BENZO(A)ANTHRACENE IN SOIL

PSF26209

Date: January 1997

Figure 4.5-10

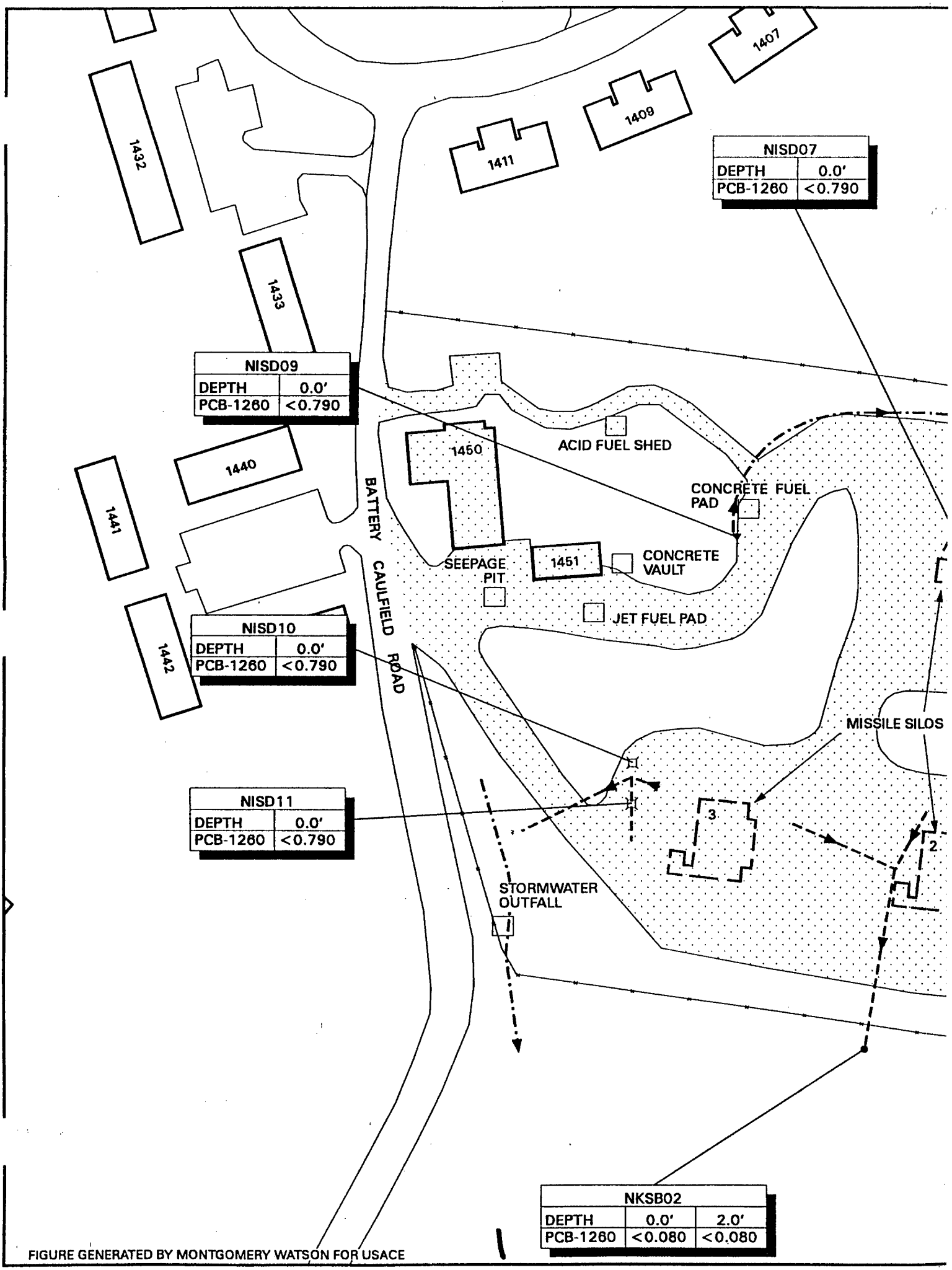
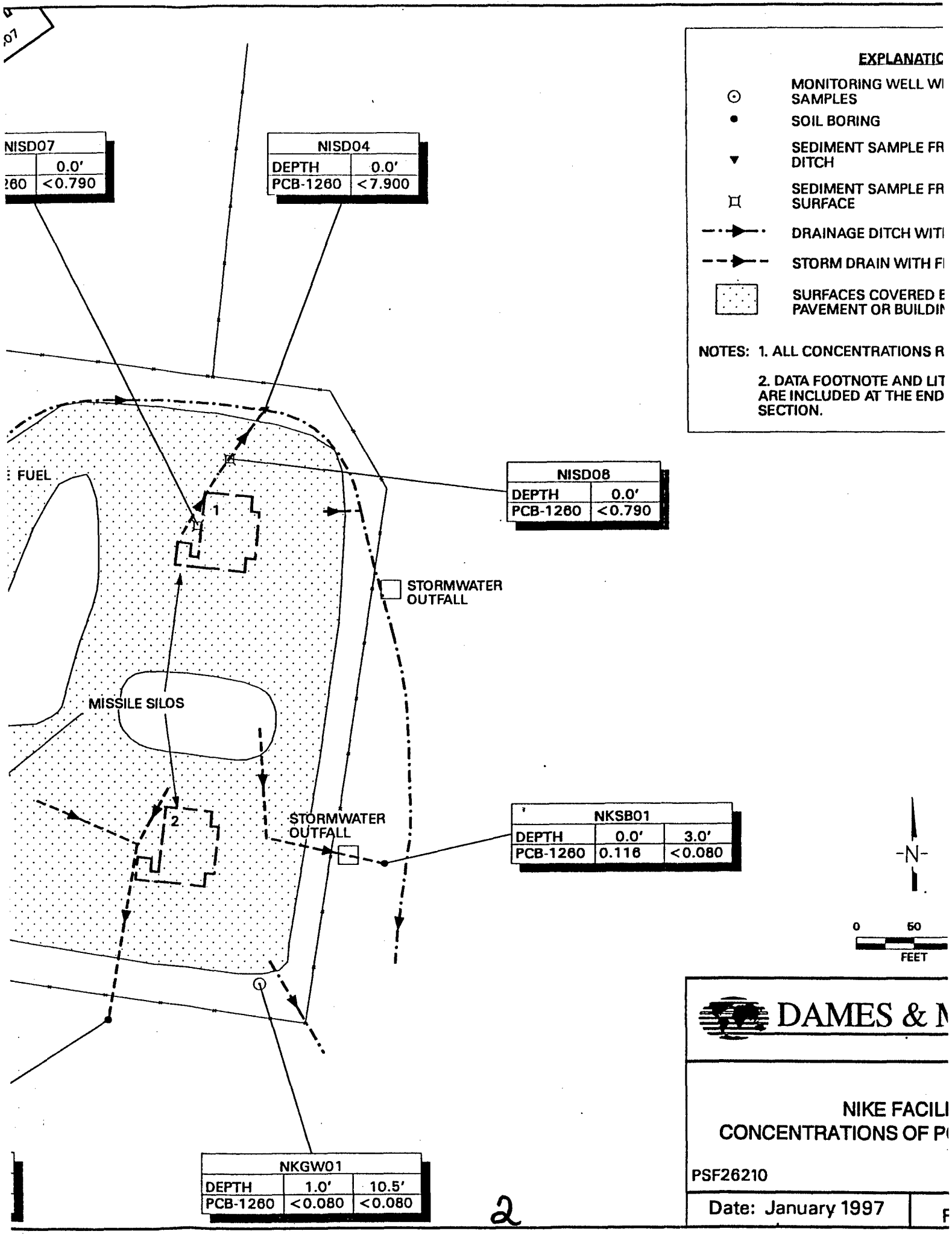


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

16 Sep 96 07:50:20 Monday, 7_v3.ami, pkstfile base_NIKE_S_46.grn, PSF


EXPLANATIC
MONITORING WELL WI SAMPLES
SOIL BORING
SEDIMENT SAMPLE FR DITCH
SEDIMENT SAMPLE FR SURFACE
DRAINAGE DITCH WITI
STORM DRAIN WITH FI
SURFACES COVERED E PAVEMENT OR BUILDI
NOTES: 1. ALL CONCENTRATIONS R
2. DATA FOOTNOTE AND LIT ARE INCLUDED AT THE END SECTION.
NISD07
0.0′
<0.790
NISD04
DEPTH 0.0′
PCB-1260 <7.900
NISD08
DEPTH 0.0′
PCB-1260 <0.790
FUEL
STORMWATER OUTFALL
MISSILE SILOS
STORMWATER OUTFALL
NKSB01
DEPTH 0.0′ 3.0′
PCB-1260 0.116 <0.080
NKGW01
DEPTH 1.0′ 10.5′
PCB-1260 <0.080 <0.080
-N-
0 50
FEET
DAMES & M
NIKE FACILI
CONCENTRATIONS OF P
PSF26210
Date: January 1997

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- • SOIL BORING
- ▼ SEDIMENT SAMPLE FROM DRAINAGE DITCH
- ⌑ SEDIMENT SAMPLE FROM A PAVED SURFACE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

NISD08	
DEPTH	0.0'
PCB-1260	<0.790

WATER
LL

NKSB01		
DEPTH	0.0'	3.0'
PCB-1260	0.116	<0.080

-N-

0 50 100
FEET

DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF PCB-1260 IN SOIL

PSF26210

3

Date: January 1997

Figure 4.5-11

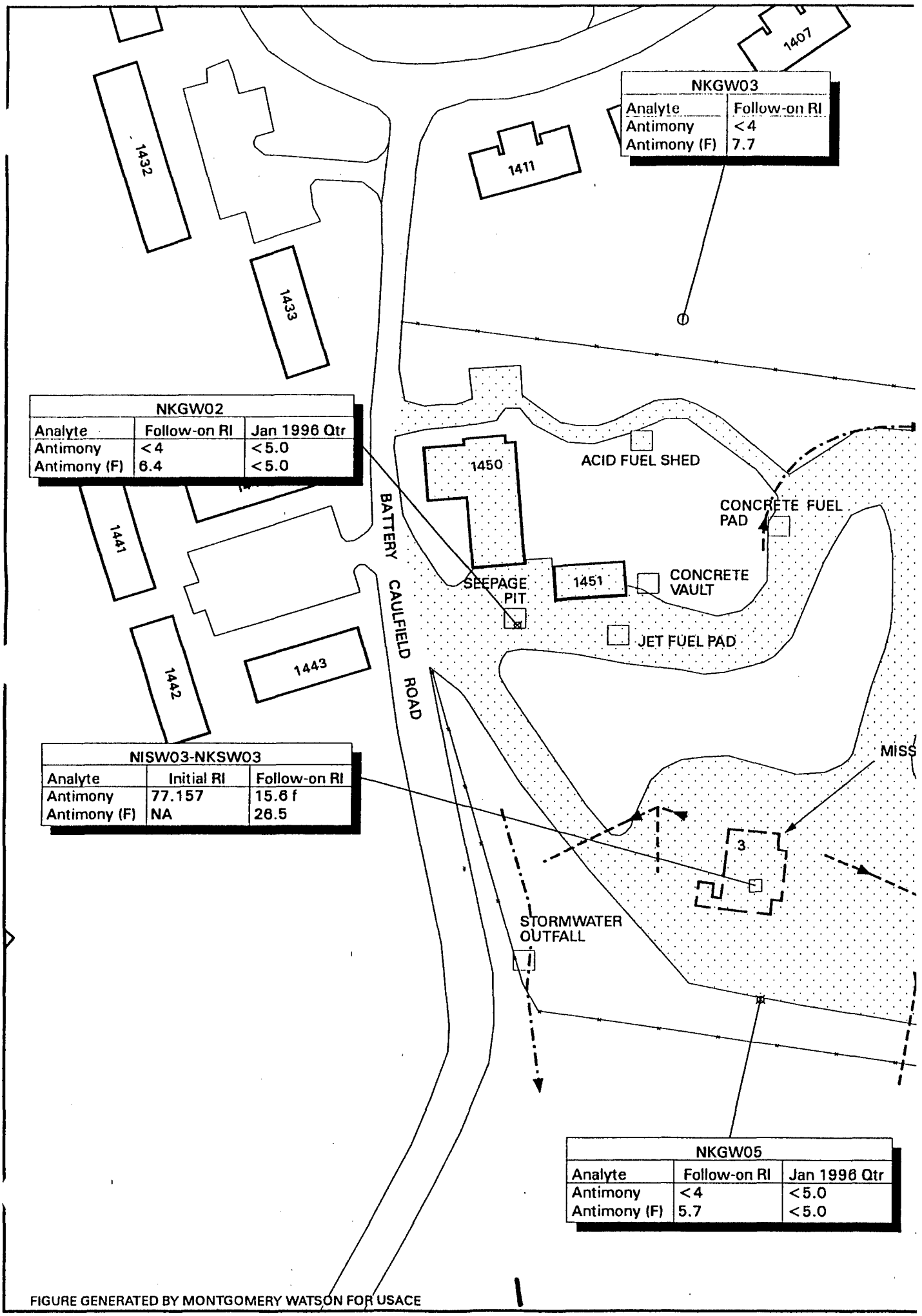
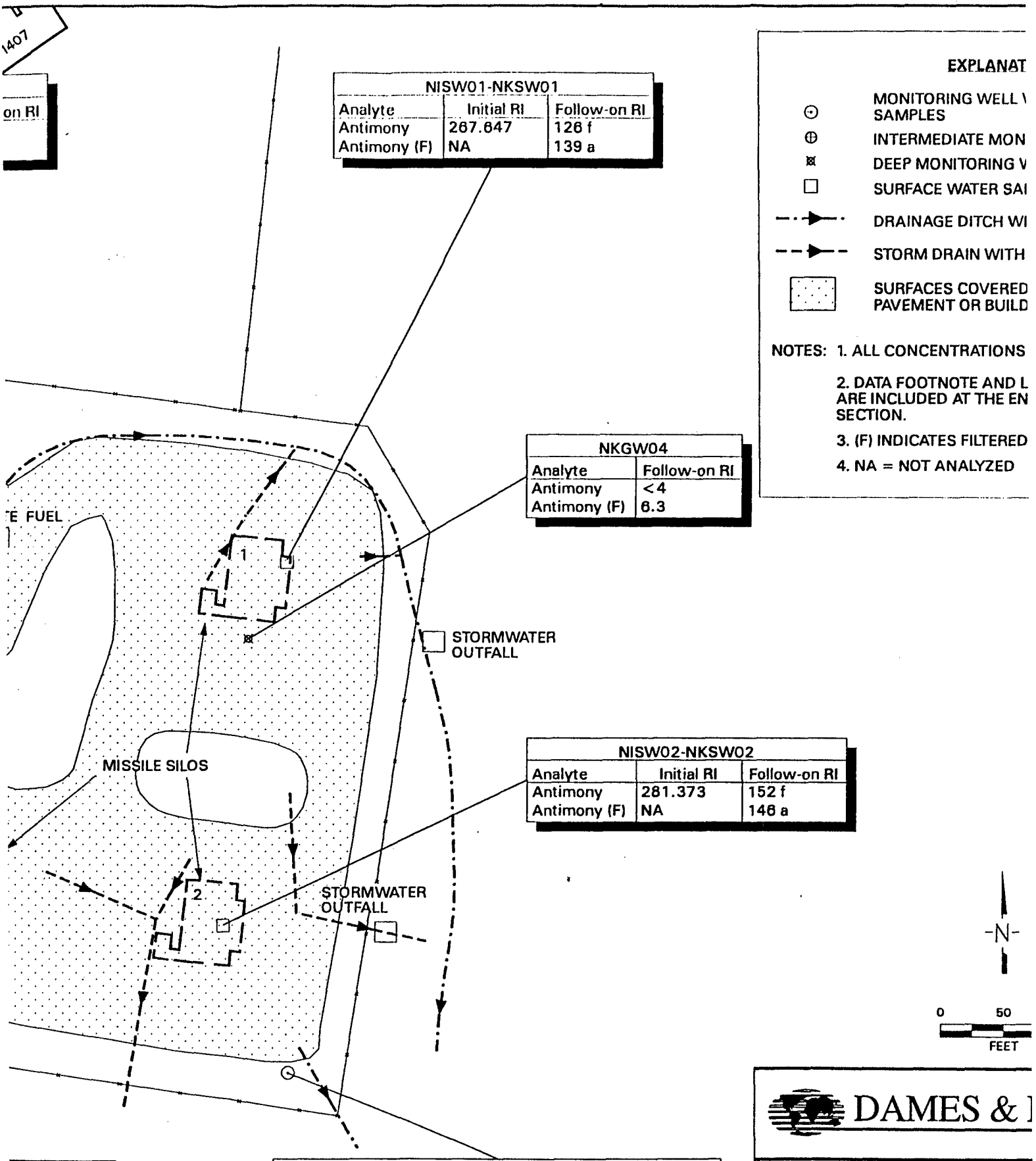


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

12-Jun-97 11:32:32 Sunday, c:\17_v3.amt, pltstyle base_NIKE_W_2.grs, PSF


1407
on RI
NISW01-NKSW01
Analyte | Initial RI | Follow-on RI
Antimony | 267.647 | 126 f
Antimony (F) | NA | 139 a
NKGW04
Analyte | Follow-on RI
Antimony | <4
Antimony (F) | 6.3
E FUEL
1
STORMWATER OUTFALL
MISSILE SILOS
NISW02-NKSW02
Analyte | Initial RI | Follow-on RI
Antimony | 281.373 | 152 f
Antimony (F) | NA | 146 a
2
STORMWATER OUTFALL
Jan 1996 Qtr
<5.0
<5.0
NKGW01
Analyte | Suppl. RI | Follow-on RI | Jan 1996 Qtr
Antimony | <38.000 | <1.11 | <5.0
Antimony (F) | <38.000 | 10.1 | <5.0
EXPLANAT
MONITORING WELL \ SAMPLES
INTERMEDIATE MON
DEEP MONITORING \
SURFACE WATER SAI
DRAINAGE DITCH WI
STORM DRAIN WITH
SURFACES COVERED PAVEMENT OR BUILD
NOTES: 1. ALL CONCENTRATIONS
2. DATA FOOTNOTE AND L ARE INCLUDED AT THE EN SECTION.
3. (F) INDICATES FILTERED
4. NA = NOT ANALYZED
-N-
0 50
FEET
DAMES &
NIKE FACIL
CONCENTRATIONS OF ANTIMO AND SURFACE
PSF26206
Date: January 1997

2

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- ⊕ INTERMEDIATE MONITORING WELL
- ⊠ DEEP MONITORING WELL
- □ SURFACE WATER SAMPLE
- —·→·— DRAINAGE DITCH WITH FLOW DIRECTION
- – – → – – STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

3. (F) INDICATES FILTERED SAMPLE.

4. NA = NOT ANALYZED

04
ollow-on RI
:4
.3

W02-NKSW02	
Initial RI	Follow-on RI
281.373	152 f
NA	146 a

-N-

0 50 100
FEET

DAMES & MOORE

1996 Qtr
0
0

NIKE FACILITY
CONCENTRATIONS OF ANTIMONY IN GROUNDWATER AND SURFACE WATER

PSF26206

3

Date: January 1997 | Figure 4.5-12

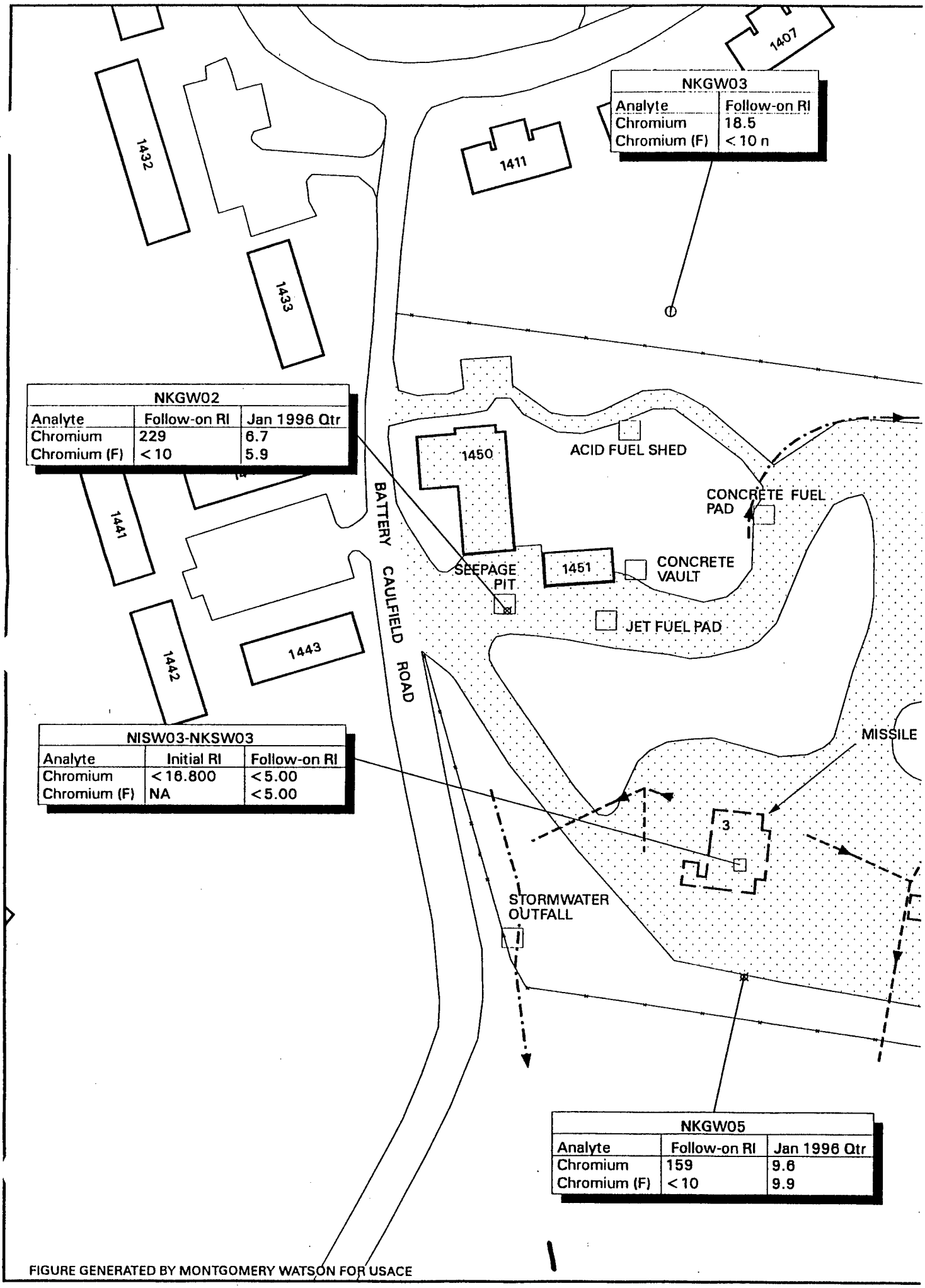
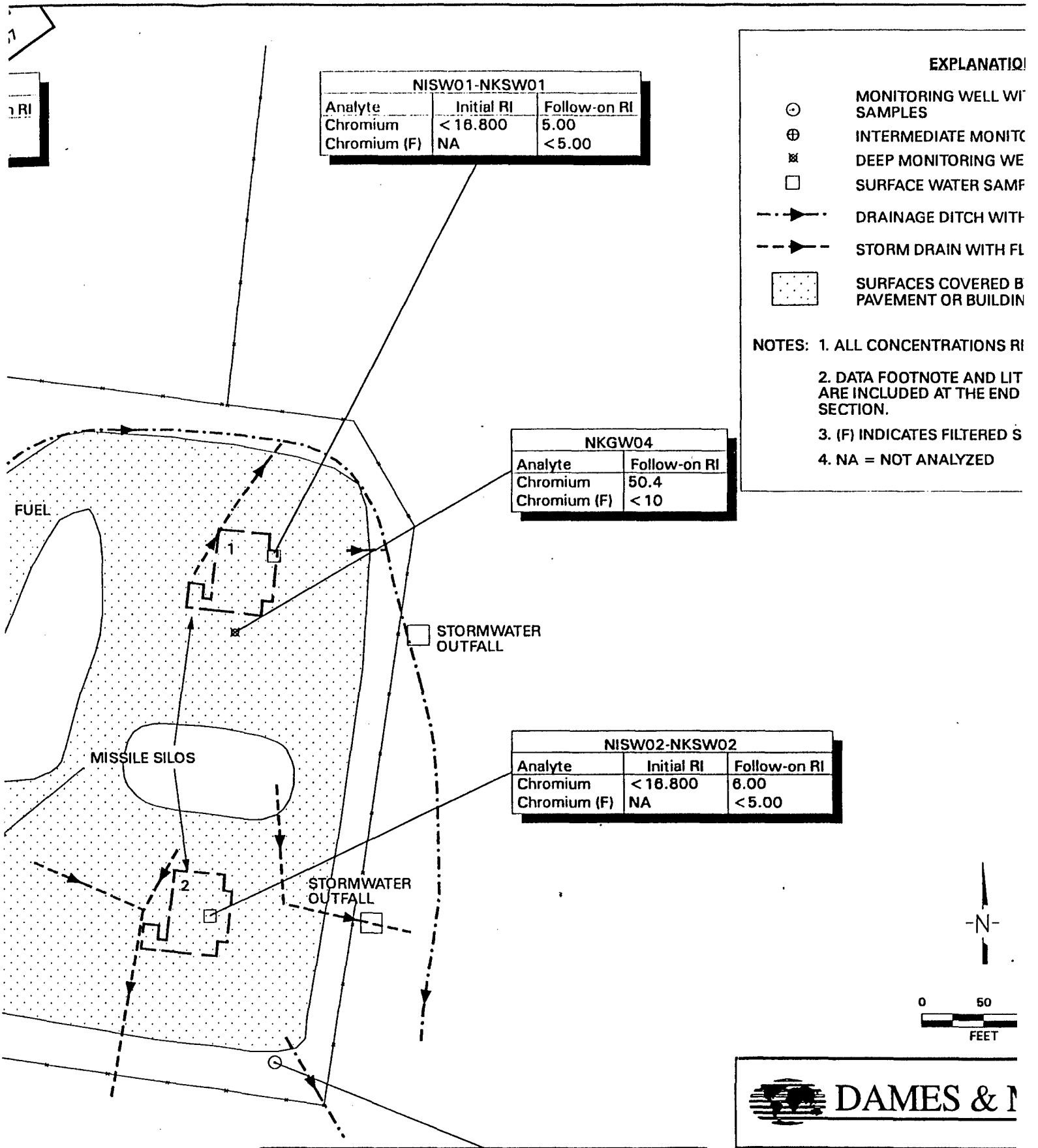


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

12 Jan 97 (8:34:5K Sunday) a17_v3.aml, plotfile base_NIKE_W_7.grn, PSF



DAMES & M

NIKE FACIL
CONCENTRATIONS OF CHROMI
AND SURFACE

PSF26195

Date: January 1997

KSW01	
l RI	Follow-on RI
00	5.00
	<5.00

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- ⊕ INTERMEDIATE MONITORING WELL
- ⊠ DEEP MONITORING WELL
- □ SURFACE WATER SAMPLE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES:
1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED

NKGW04	
Analyte	Follow-on RI
Chromium	50.4
Chromium (F)	<10

VATER

NISW02-NKSW02		
Analyte	Initial RI	Follow-on RI
Chromium	<16.800	6.00
Chromium (F)	NA	<5.00

-N-

0 50 100
FEET

1	
llow-on RI	Jan 1996 Qtr
.0	16.4
.0	4.1

3

DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF CHROMIUM IN GROUNDWATER AND SURFACE WATER

PSF26195

Date: January 1997 | Figure 4.5-13

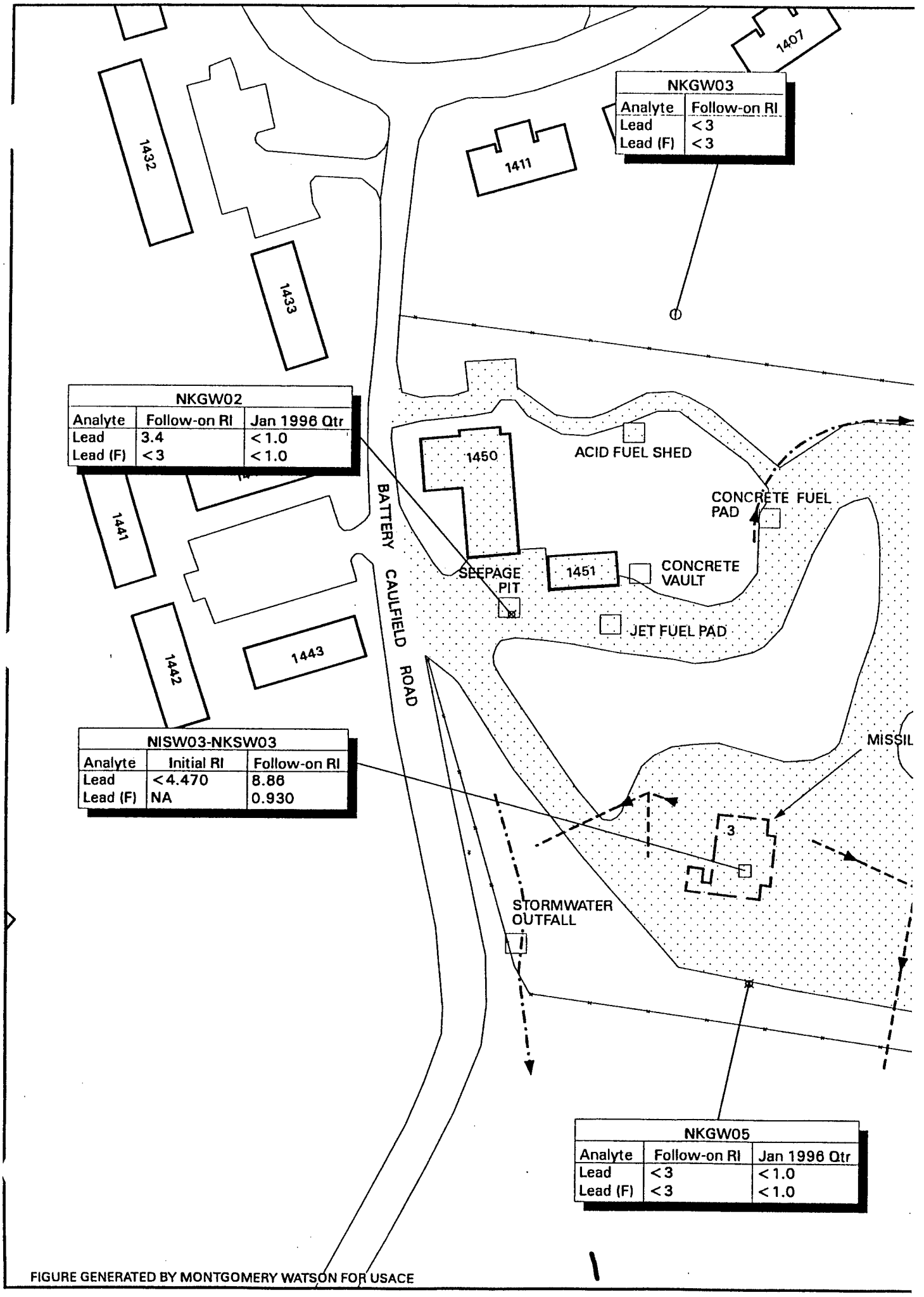
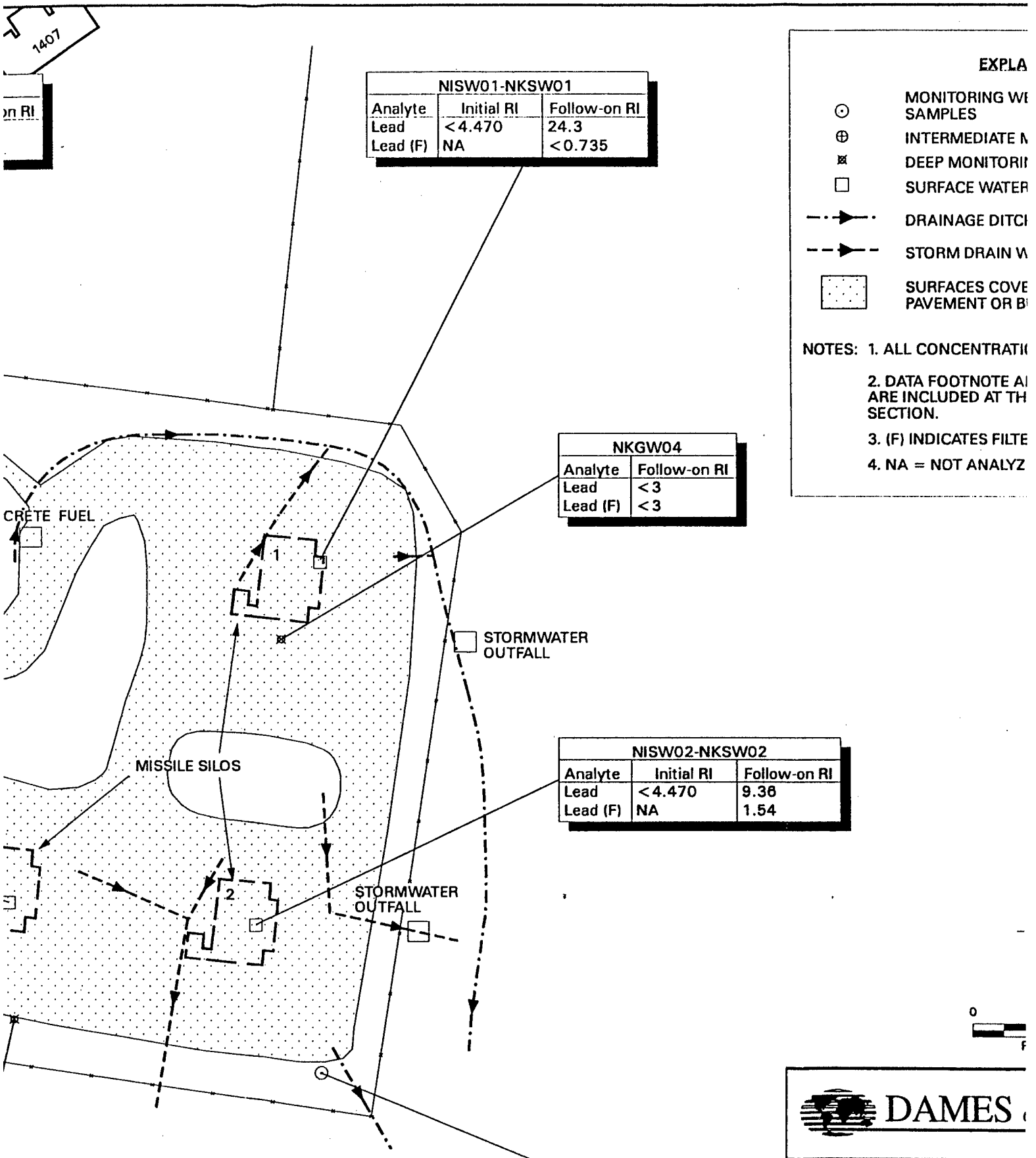


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

12 Jan 97 18:40:23 Sonda, x17_v3.aml, plotfile base_NIKE_W_12.gra, PSF


1407
NISW01-NKSW01
Analyte | Initial RI | Follow-on RI
Lead | <4.470 | 24.3
Lead (F) | NA | <0.735
NKGW04
Analyte | Follow-on RI
Lead | <3
Lead (F) | <3
CRETE FUEL
1
STORMWATER OUTFALL
NISW02-NKSW02
Analyte | Initial RI | Follow-on RI
Lead | <4.470 | 9.36
Lead (F) | NA | 1.54
MISSILE SILOS
2
STORMWATER OUTFALL
NKGW01
Analyte | Suppl. RI | Follow-on RI | Jan 1996 Qtr
Lead | 11 | 1.03 f | 2.0
Lead (F) | <1.260 | <0.735 | 1.7
Jan 1996 Qtr
<1.0
<1.0
EXPLA
MONITORING WE
SAMPLES
INTERMEDIATE M
DEEP MONITORI
SURFACE WATER
DRAINAGE DITCH
STORM DRAIN W
SURFACES COVE
PAVEMENT OR B
NOTES: 1. ALL CONCENTRATI
2. DATA FOOTNOTE AI
ARE INCLUDED AT TH
SECTION.
3. (F) INDICATES FILTE
4. NA = NOT ANALYZ
0
DAMES
NIKE F
CONCENTRATIONS OF L
AND SURFA
PSF26204
Date: January 1997

2

v-on RI

35

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- ⊕ INTERMEDIATE MONITORING WELL
- ⊠ DEEP MONITORING WELL
- □ SURFACE WATER SAMPLE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

3. (F) INDICATES FILTERED SAMPLE.

4. NA = NOT ANALYZED

NKGW04	
lyte	Follow-on RI
j	<3
j (F)	<3

NISW02-NKSW02		
lyte	Initial RI	Follow-on RI
j	<4.470	9.36
j (F)	NA	1.54

-N-

0 50 100

FEET

DAMES & MOORE

	Jan 1996 Qtr
	2.0
	1.7

NIKE FACILITY
CONCENTRATIONS OF LEAD IN GROUNDWATER AND SURFACE WATER

PSF26204

3

Date: January 1997 | Figure 4.5-14

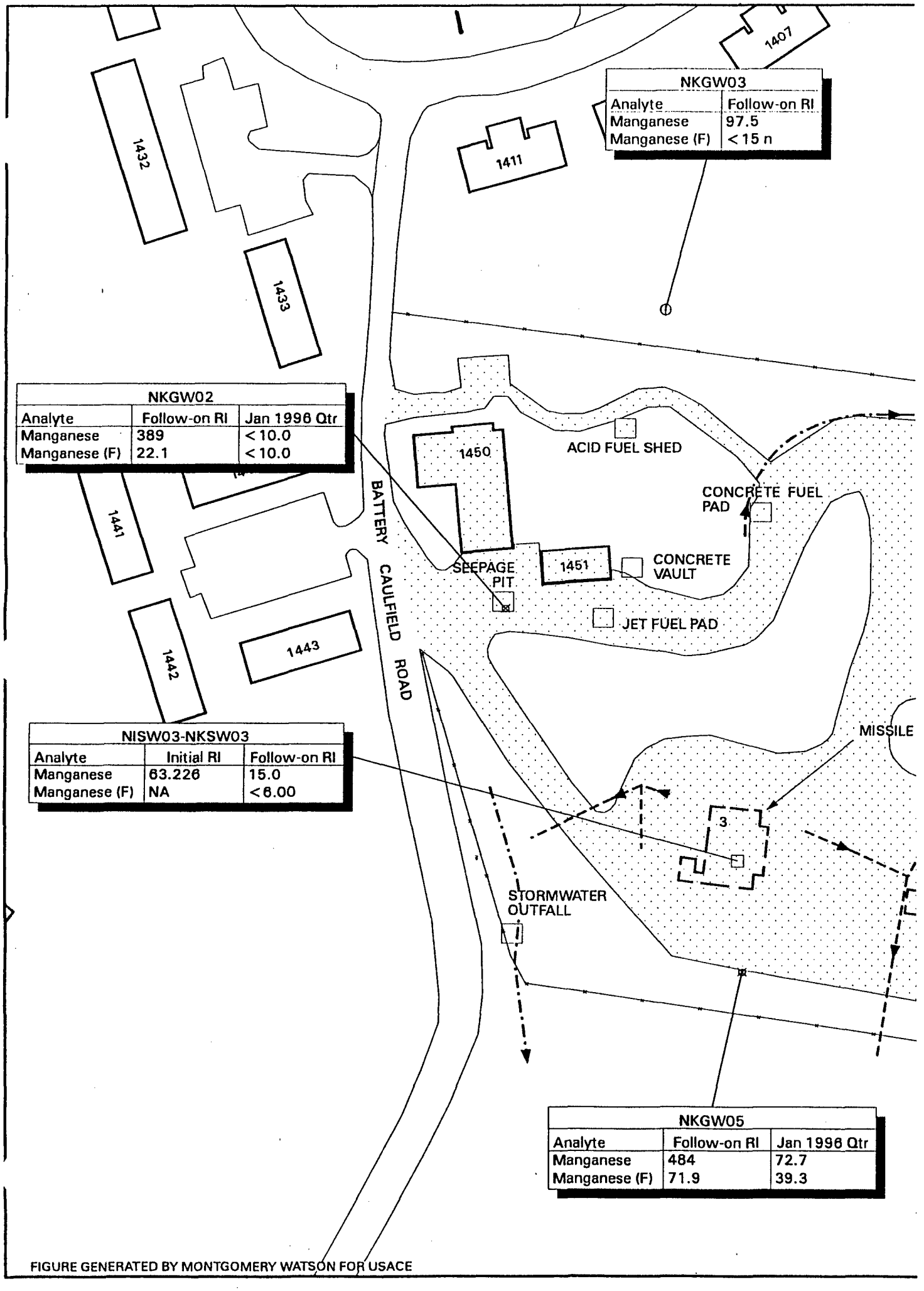
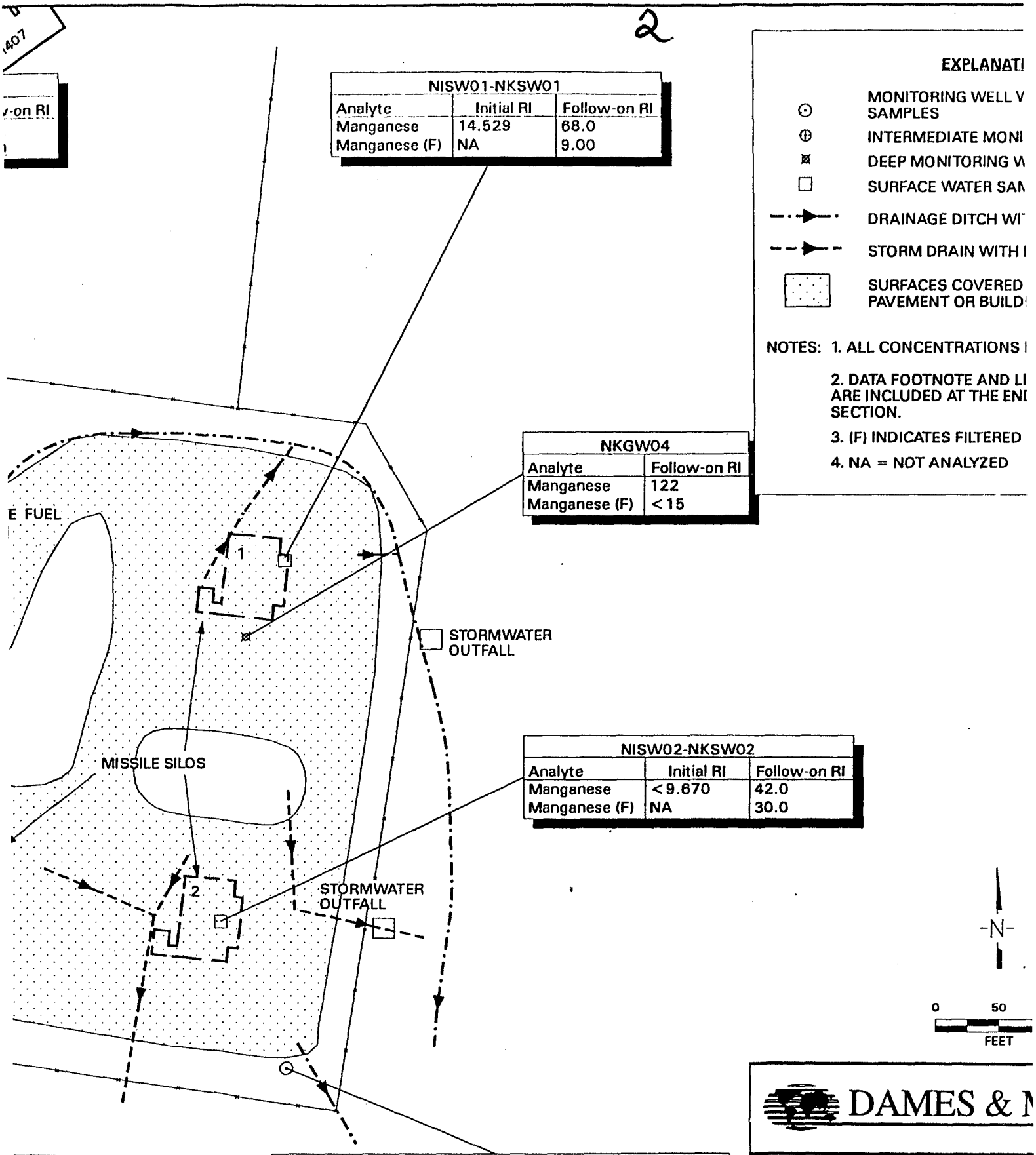


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

12-Jan-97 11:37:57 Sunday, .17_v3.aml, plotfile base_NIKE_W_14.grn, PSF


NISW01-NKSW01
Analyte | Initial RI | Follow-on RI
Manganese | 14.529 | 68.0
Manganese (F) | NA | 9.00
NKGW04
Analyte | Follow-on RI
Manganese | 122
Manganese (F) | < 15
NISW02-NKSW02
Analyte | Initial RI | Follow-on RI
Manganese | < 9.670 | 42.0
Manganese (F) | NA | 30.0
NKGW01
Analyte | Suppl. RI | Follow-on RI | Jan 1996 Qtr
Manganese | 1030.000 | 43.0 | 34.6
Manganese (F) | 81.900 | < 6.00 | < 10.0
Jan 1996 Qtr
72.7
39.3
EXPLANATI
MONITORING WELL V SAMPLES
INTERMEDIATE MONI
DEEP MONITORING W
SURFACE WATER SAM
DRAINAGE DITCH WI
STORM DRAIN WITH I
SURFACES COVERED PAVEMENT OR BUILDI
NOTES: 1. ALL CONCENTRATIONS I
2. DATA FOOTNOTE AND LI ARE INCLUDED AT THE ENI SECTION.
3. (F) INDICATES FILTERED
4. NA = NOT ANALYZED
E FUEL
1
2
STORMWATER OUTFALL
MISSILE SILOS
STORMWATER OUTFALL
-N-
0 50
FEET
DAMES & M
NIKE FACILI
CONCENTRATIONS OF MANGANE AND SURFACE W
PSF26200
Date: January 1997

w-on RI

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- ⊕ INTERMEDIATE MONITORING WELL
- ⊠ DEEP MONITORING WELL
- □ SURFACE WATER SAMPLE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES:
1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED

NKGW04	
	Follow-on RI
e	122
e (F)	<15

NISW02-NKSW02		
	Initial RI	Follow-on RI
e	<9.670	42.0
e (F)	NA	30.0

-N-

0 50 100
FEET

	Jan 1996 Qtr
	34.6
	<10.0

DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF MANGANESE IN GROUNDWATER AND SURFACE WATER

PSF26200

Date: January 1997 | Figure 4.5-15

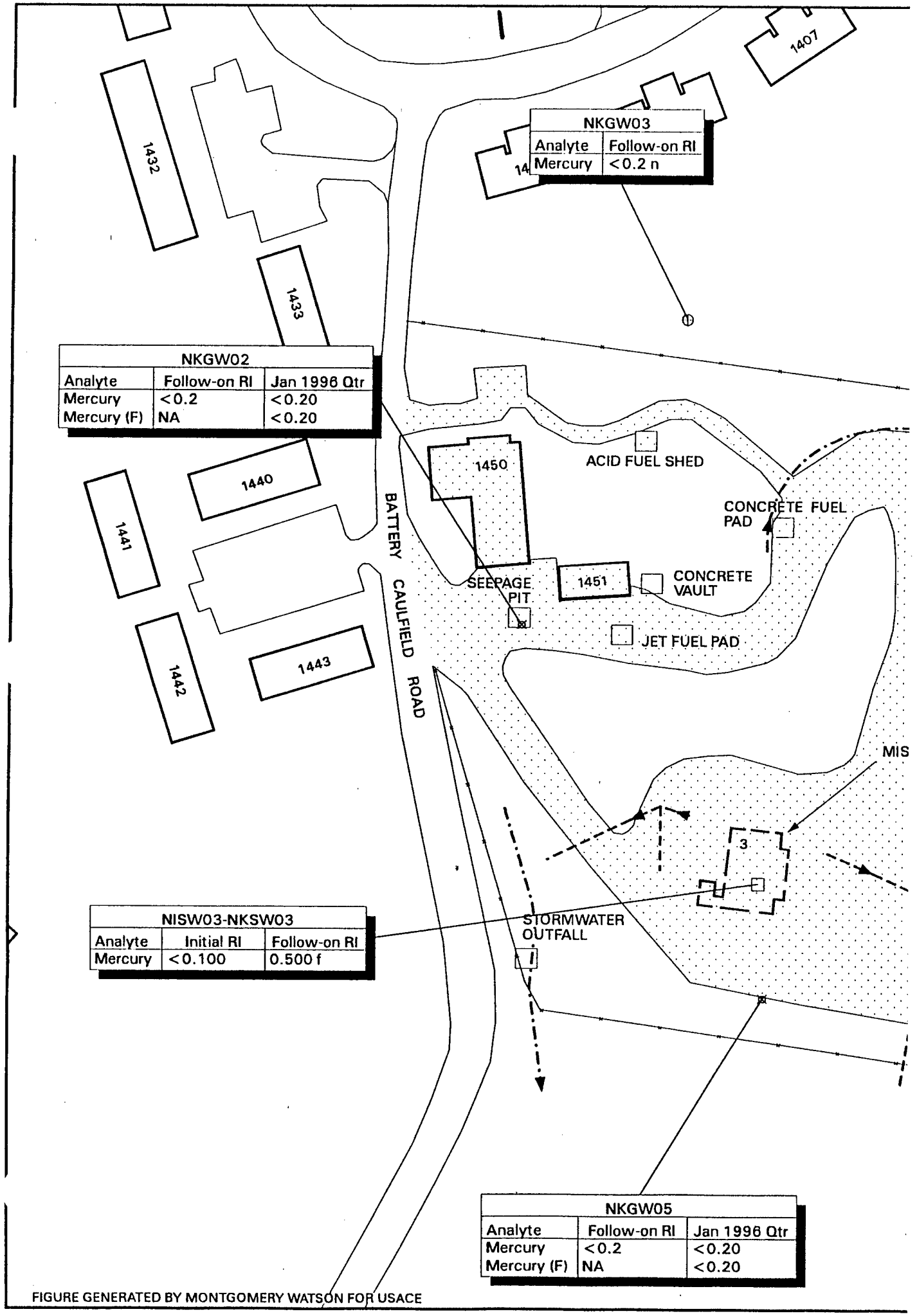
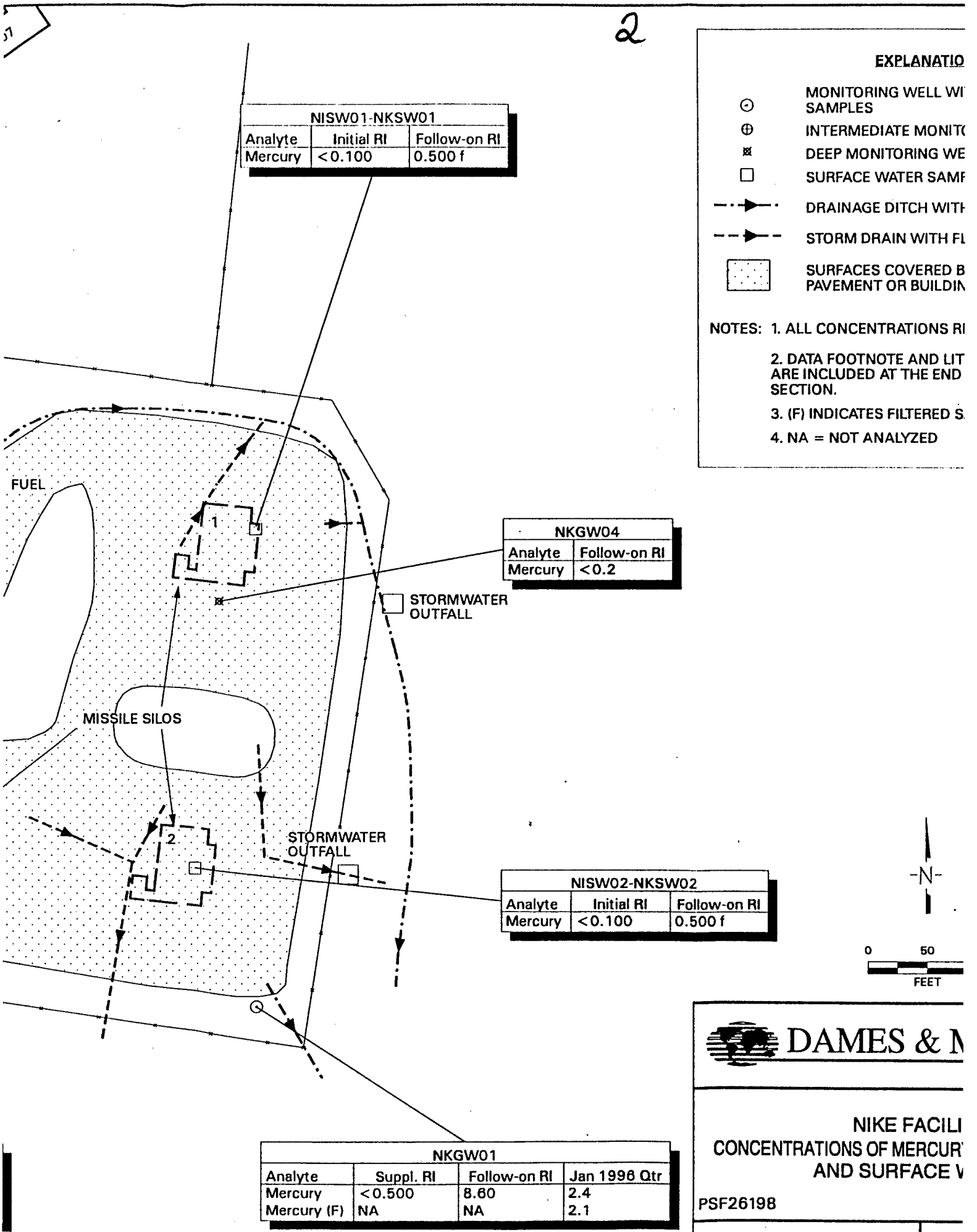


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

12 Jan 97 11:36:42 Sunda, x17_v3.aml, plotfile base_NIKE_W_15.grn, PSF


2
EXPLANATIO
MONITORING WELL WI
SAMPLES
INTERMEDIATE MONIT(
DEEP MONITORING WE
SURFACE WATER SAMF
DRAINAGE DITCH WITH
STORM DRAIN WITH FL
SURFACES COVERED B
PAVEMENT OR BUILDIN
NOTES: 1. ALL CONCENTRATIONS RI
2. DATA FOOTNOTE AND LIT
ARE INCLUDED AT THE END
SECTION.
3. (F) INDICATES FILTERED S.
4. NA = NOT ANALYZED
NISW01-NKSW01
Analyte | Initial RI | Follow-on RI
Mercury | <0.100 | 0.500 f
NKGW04
Analyte | Follow-on RI
Mercury | <0.2
NISW02-NKSW02
Analyte | Initial RI | Follow-on RI
Mercury | <0.100 | 0.500 f
NKGW01
Analyte | Suppl. RI | Follow-on RI | Jan 1996 Qtr
Mercury | <0.500 | 8.60 | 2.4
Mercury (F) | NA | NA | 2.1
FUEL
MISSILE SILOS
STORMWATER OUTFALL
STORMWATER OUTFALL
1
2
-N-
0
50
FEET
DAMES & M
NIKE FACILI
CONCENTRATIONS OF MERCUR
AND SURFACE V
PSF26198
Date: January 1997
F

ow-on RI
)0 f

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- ⊕ INTERMEDIATE MONITORING WELL
- ⊠ DEEP MONITORING WELL
- □ SURFACE WATER SAMPLE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

3. (F) INDICATES FILTERED SAMPLE.

4. NA = NOT ANALYZED

NKGW04	
Analyte	Follow-on RI
Mercury	<0.2

MWATER
ALL

NISW02-NKSW02		
Analyte	Initial RI	Follow-on RI
Mercury	<0.100	0.500 f

-N-

0 50 100
FEET

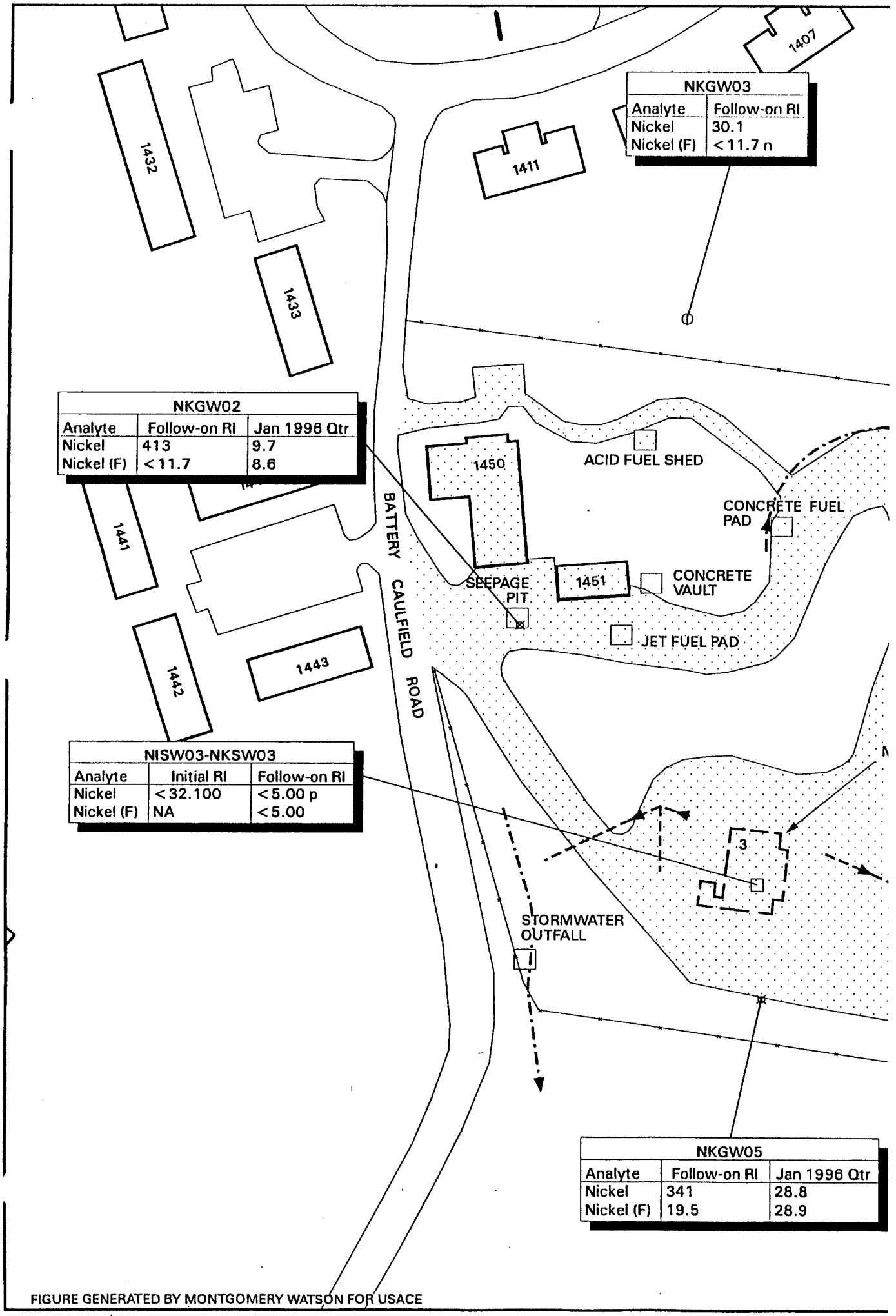
DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF MERCURY IN GROUNDWATER AND SURFACE WATER

PSF26198

Date: January 1997 | Figure 4.5-16

GW01	
Follow-on RI	Jan 1996 Qtr
8.60	2.4
NA	2.1



NKGW03	
Analyte	Follow-on RI
Nickel	30.1
Nickel (F)	< 11.7 n

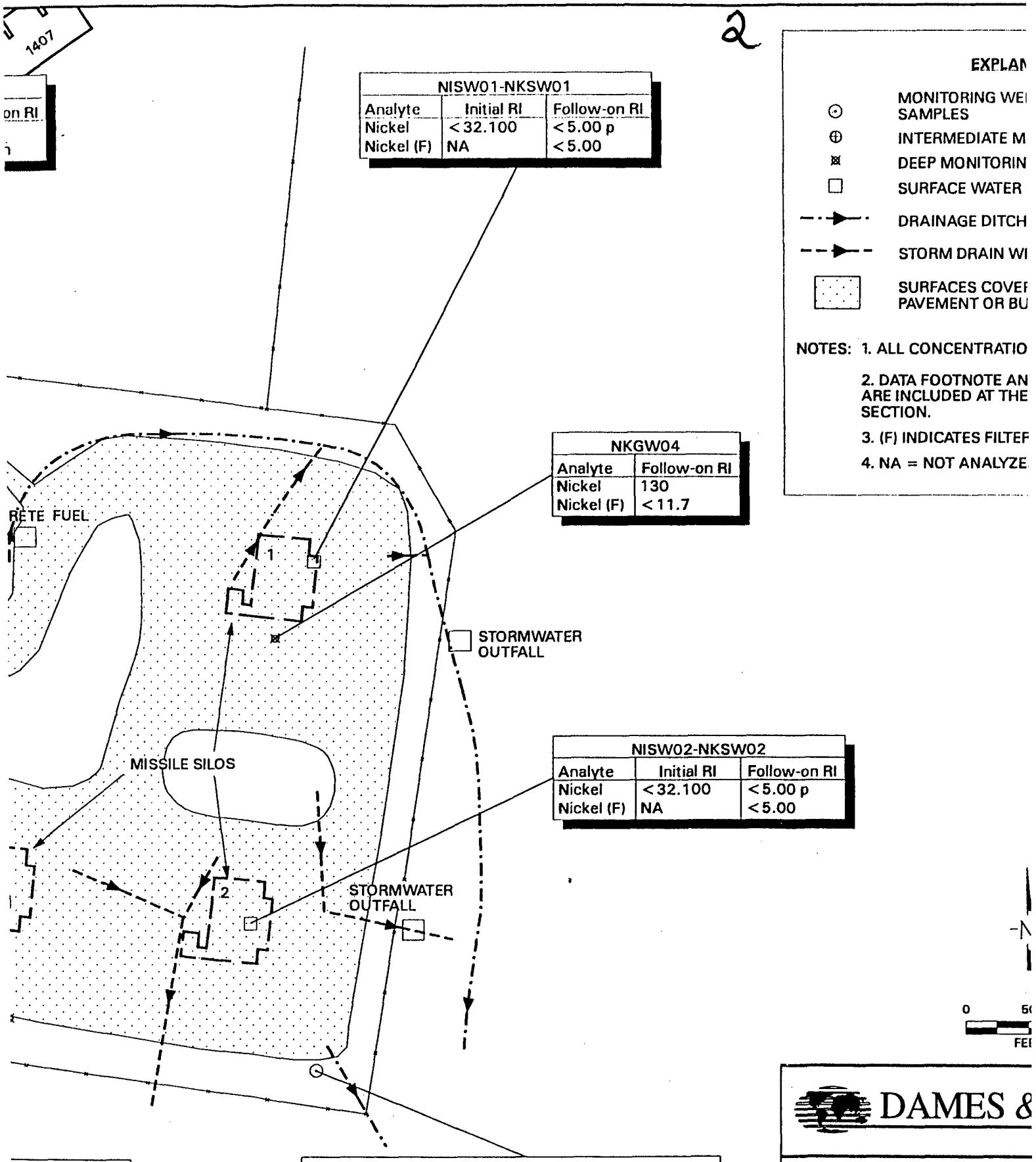
NKGW02		
Analyte	Follow-on RI	Jan 1996 Qtr
Nickel	413	9.7
Nickel (F)	< 11.7	8.6

NISW03-NKSW03		
Analyte	Initial RI	Follow-on RI
Nickel	< 32.100	< 5.00 p
Nickel (F)	NA	< 5.00

NKGW05		
Analyte	Follow-on RI	Jan 1996 Qtr
Nickel	341	28.8
Nickel (F)	19.5	28.9

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

12-Jun-97 18:39:10 Sunda... r17_v3.arm4, pltaflic base_NIKE_W_16.grn. PSF


1407
NISW01-NKSW01
Analyte | Initial RI | Follow-on RI
Nickel | <32.100 | <5.00 p
Nickel (F) | NA | <5.00
NKGW04
Analyte | Follow-on RI
Nickel | 130
Nickel (F) | <11.7
RETE FUEL
1
STORMWATER OUTFALL
MISSILE SILOS
NISW02-NKSW02
Analyte | Initial RI | Follow-on RI
Nickel | <32.100 | <5.00 p
Nickel (F) | NA | <5.00
2
STORMWATER OUTFALL
NKGW01
Analyte | Suppl. RI | Follow-on RI | Jan 1996 Qtr
Nickel | 943.000 | 166 an | 110
Nickel (F) | <34.300 | 78.3 | 71.7
Jan 1996 Qtr
28.8
28.9
EXPLAN
MONITORING WEI SAMPLES
INTERMEDIATE M
DEEP MONITORIN
SURFACE WATER
DRAINAGE DITCH
STORM DRAIN WI
SURFACES COVEI PAVEMENT OR BU
NOTES: 1. ALL CONCENTRATIO
2. DATA FOOTNOTE AN ARE INCLUDED AT THE SECTION.
3. (F) INDICATES FILTEF
4. NA = NOT ANALYZE
0
FEI
DAMES &
NIKE FA(
CONCENTRATIONS OF NIC AND SURFAC
PSF26202
Date: January 1997

3

EXPLANATION

- ⊙ MONITORING WELL WITH SOIL SAMPLES
- ⊕ INTERMEDIATE MONITORING WELL
- ⊠ DEEP MONITORING WELL
- □ SURFACE WATER SAMPLE
- DRAINAGE DITCH WITH FLOW DIRECTION
- STORM DRAIN WITH FLOW DIRECTION
- SURFACES COVERED BY PAVEMENT OR BUILDINGS

NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

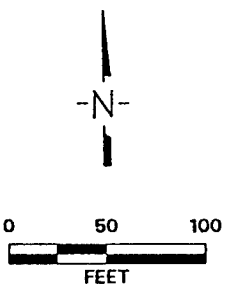
3. (F) INDICATES FILTERED SAMPLE.

4. NA = NOT ANALYZED

v-on RI

7

2-NKSW02	
ial RI	Follow-on RI
100	<5.00 p
	<5.00



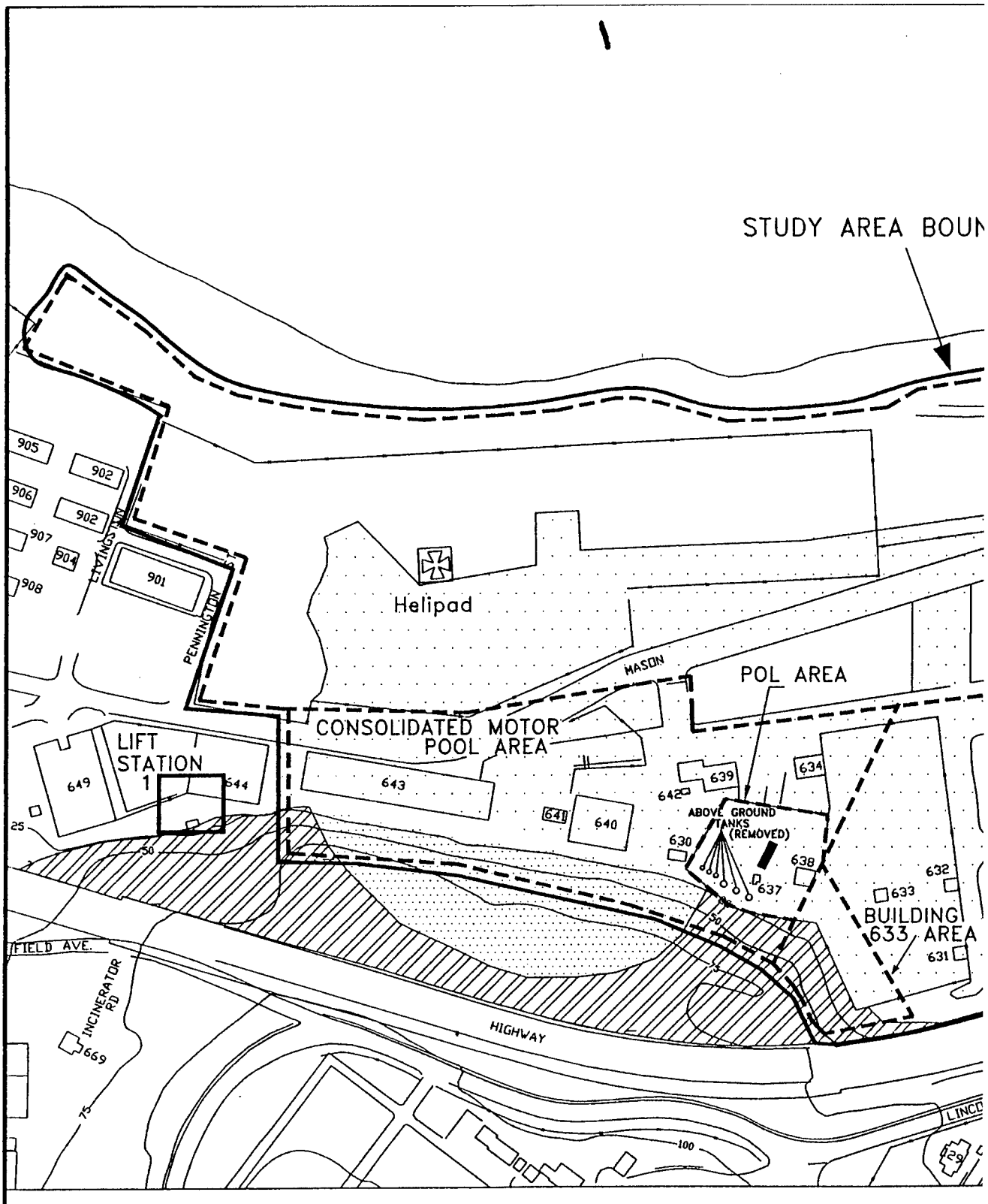
DAMES & MOORE

NIKE FACILITY
CONCENTRATIONS OF NICKEL IN GROUNDWATER AND SURFACE WATER

PSF26202

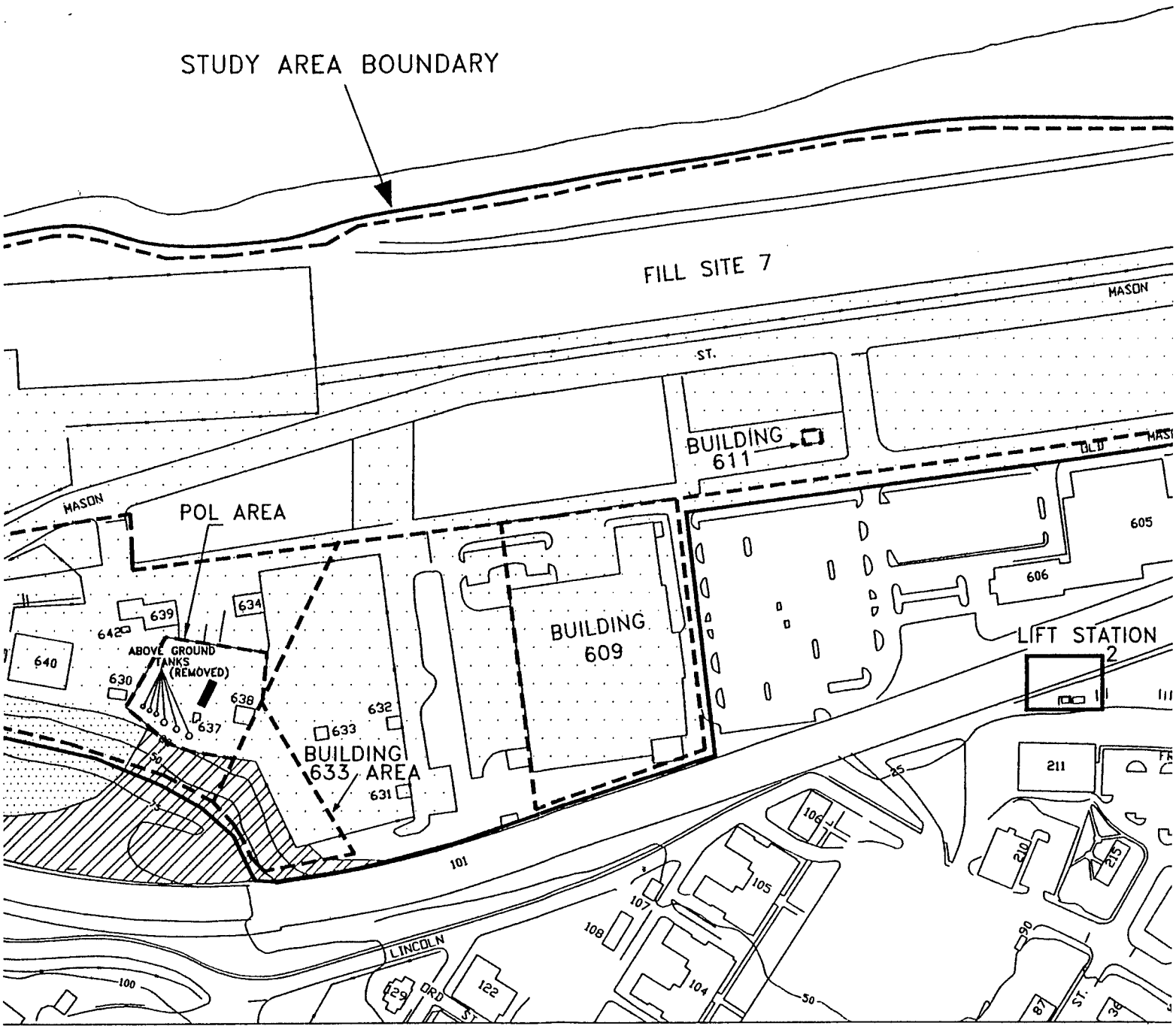
Date: January 1997 | Figure 4.5-17

3 Qtr



EXPLANATION

- SUBSECTION BOUNDARY
- OUTCROP OF SERPENTINITE BEDROCK
- OUTCROP OF COLMA FORMATION
- PUMPING ISLAND (REMOVED)
- SURFACES COVERED BY PAVEMENT OR BUILDINGS
- —75— TOPOGRAPHIC CONTOUR CONTOUR INTERVAL 25 FEET
- ELEVATIONS IN FEET—PRESIDIO LOWER LOW WATER

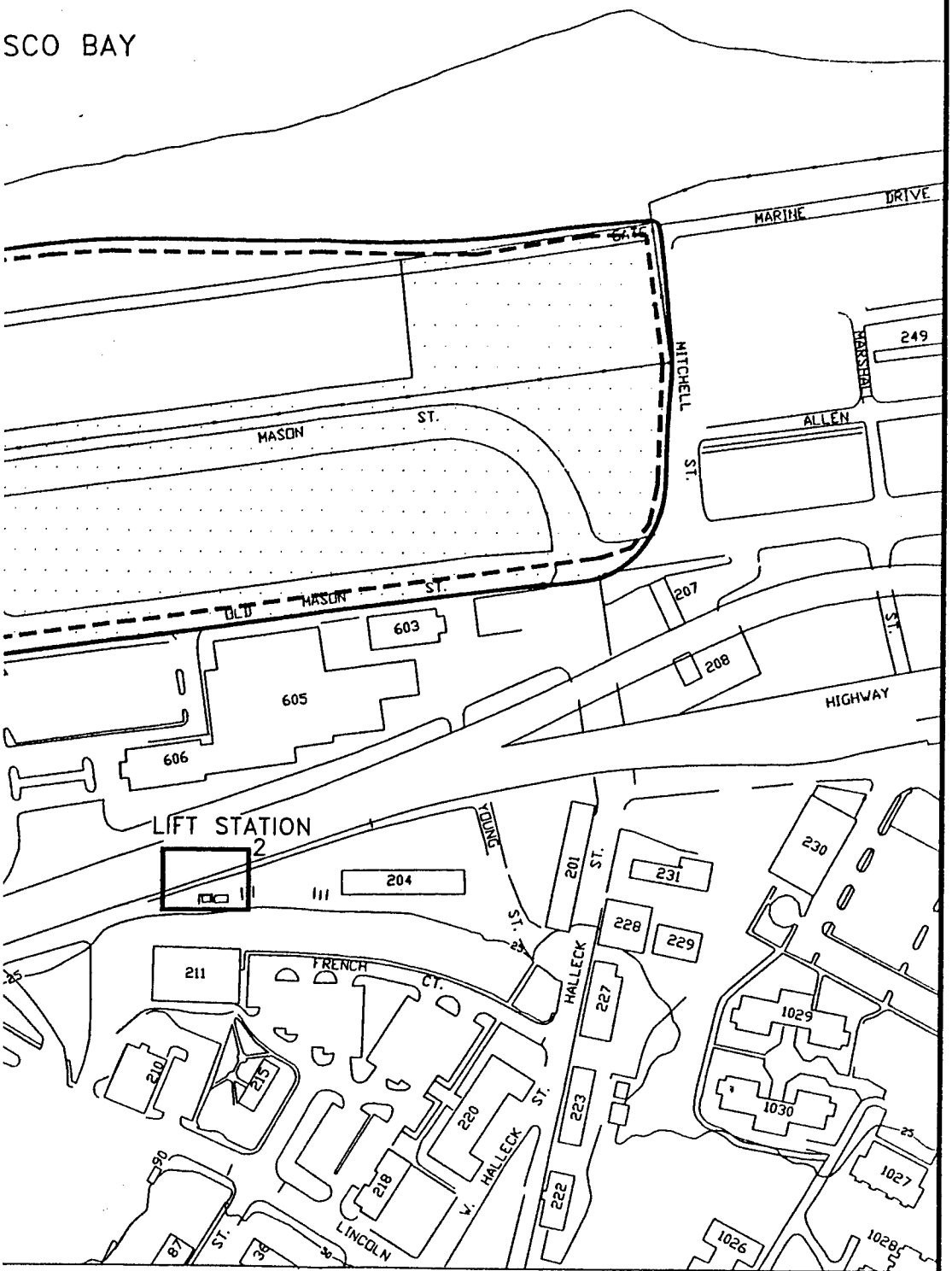


SURFACES COVERED BY PAVEMENT OR BUILDINGS

75 TOPOGRAPHIC CONTOUR
CONTOUR INTERVAL 25 FEET

ELEVATIONS IN FEET–PRESIDIO LOWER LOW WATER

NOTES: LITHOLOGIC INTERPRETATIONS BASED ON SCHLOCKER (1974)

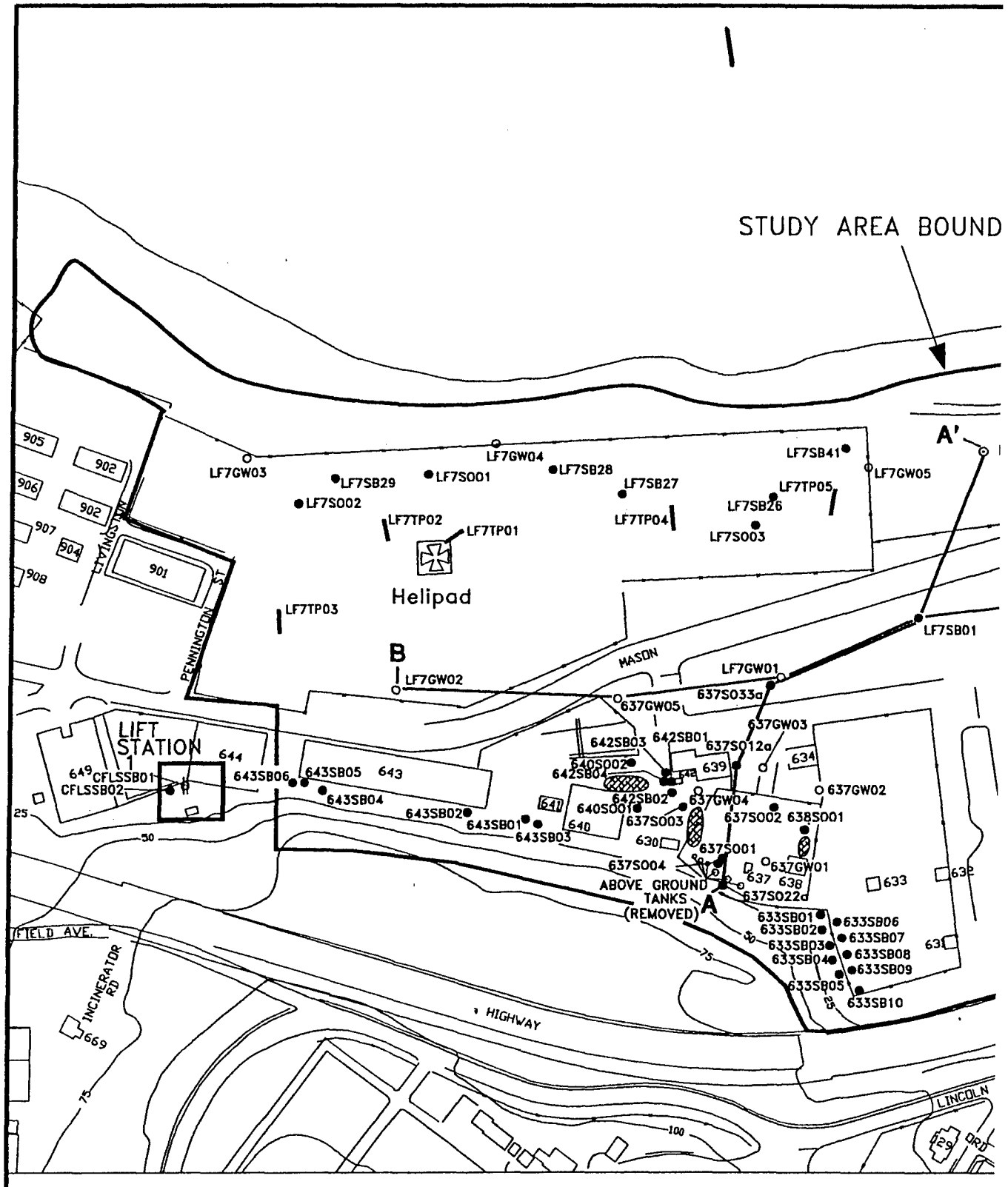


DAMES & MOORE

CRISSY FIELD
STUDY AREA

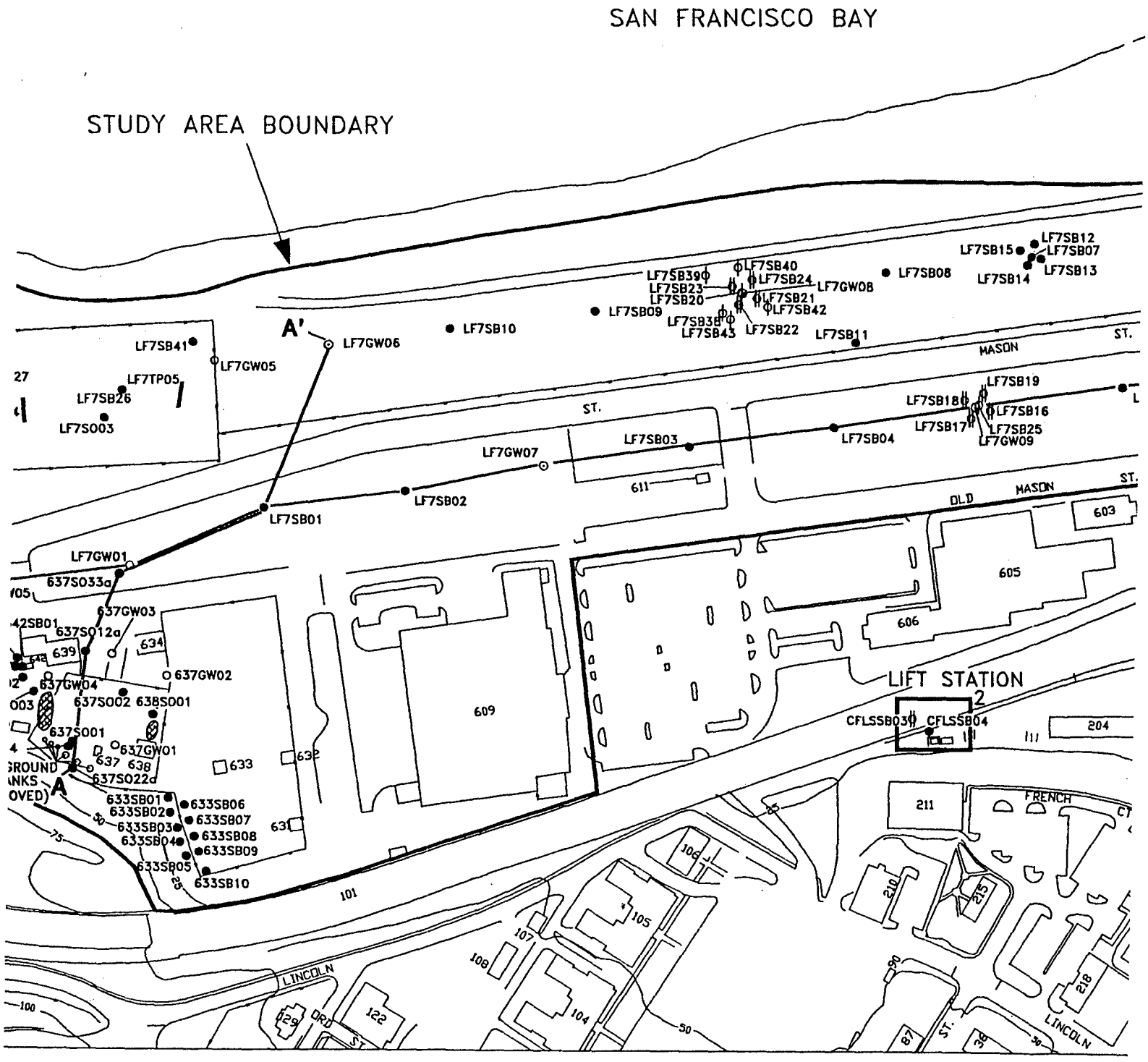
PSF25019/DV1

Date: January 1997 | Figure 5.1-1



EXPLANATION

- TEST PIT
- SOIL BORING
- SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
- DISCRETE GROUNDWATER SAMPLE
- MONITORING WELL
- MONITORING WELL WITH SOIL SAMPLES
- MONTGOMERY WATSON SOIL BORING (MONT. WATSON, 1994)
- STAINED AREAS
- A A' CROS
- 100 TOPO
- CONT
- ELEVA FEET-



LOCATION

A A' CROSS SECTION LOCATION

100 TOPOGRAPHIC CONTOUR

CONTOUR INTERVAL 25 FEET

ELEVATIONS IN FEET–PRESIDIO LOWER LOW WATER

NOTE: SURFACE AND SUBSURFACE SOIL SAMPLES WERE COLLECTED AT SOME SOIL BORING LOCATIONS. THE ANALYTICAL TABLES IN SECTION 5.4 INDICATE SAMPLE DEPTHS.

S

SON SOIL BORING
994)

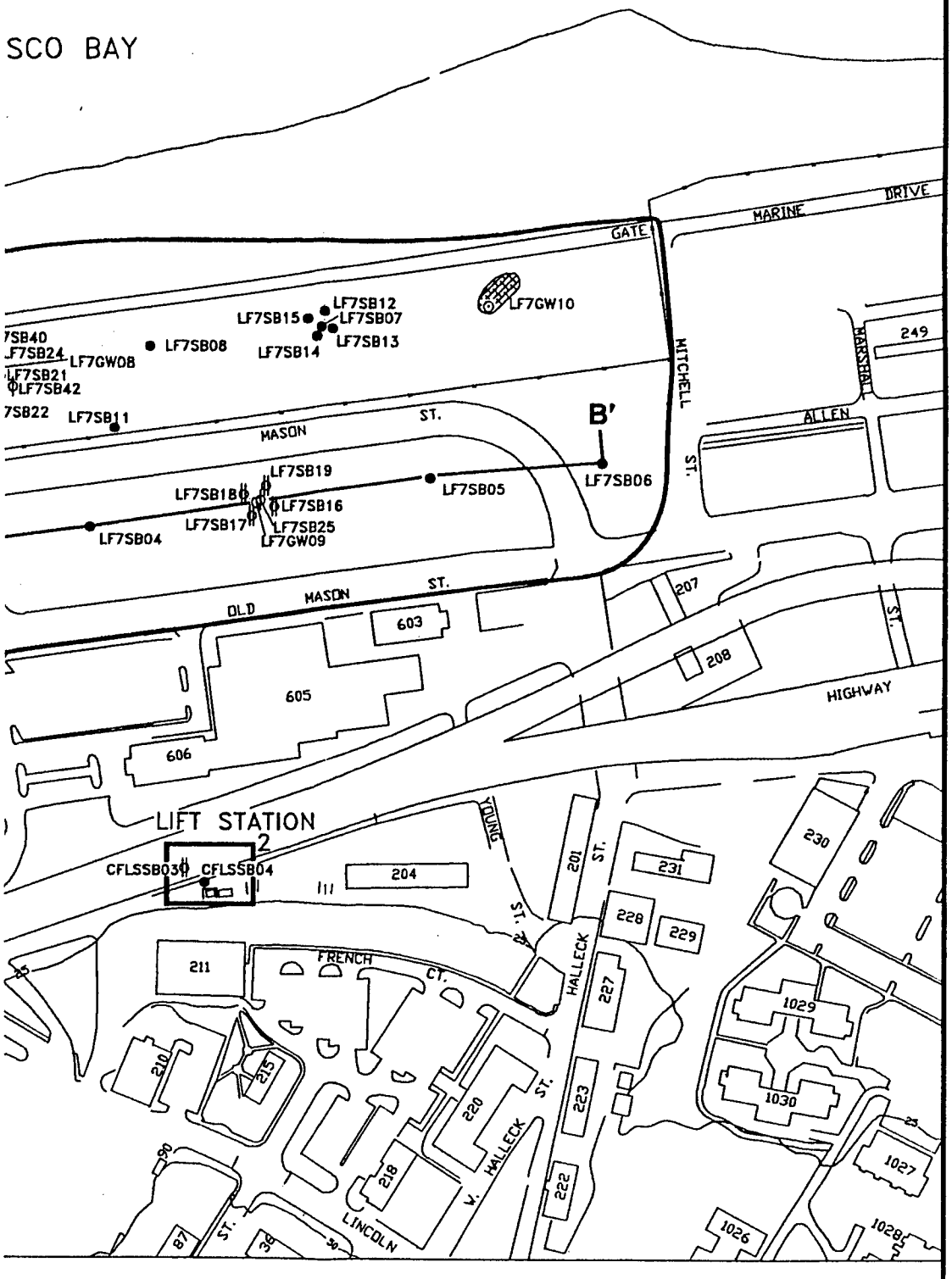
-N-

0 125 250

FEET

PSF

Dat

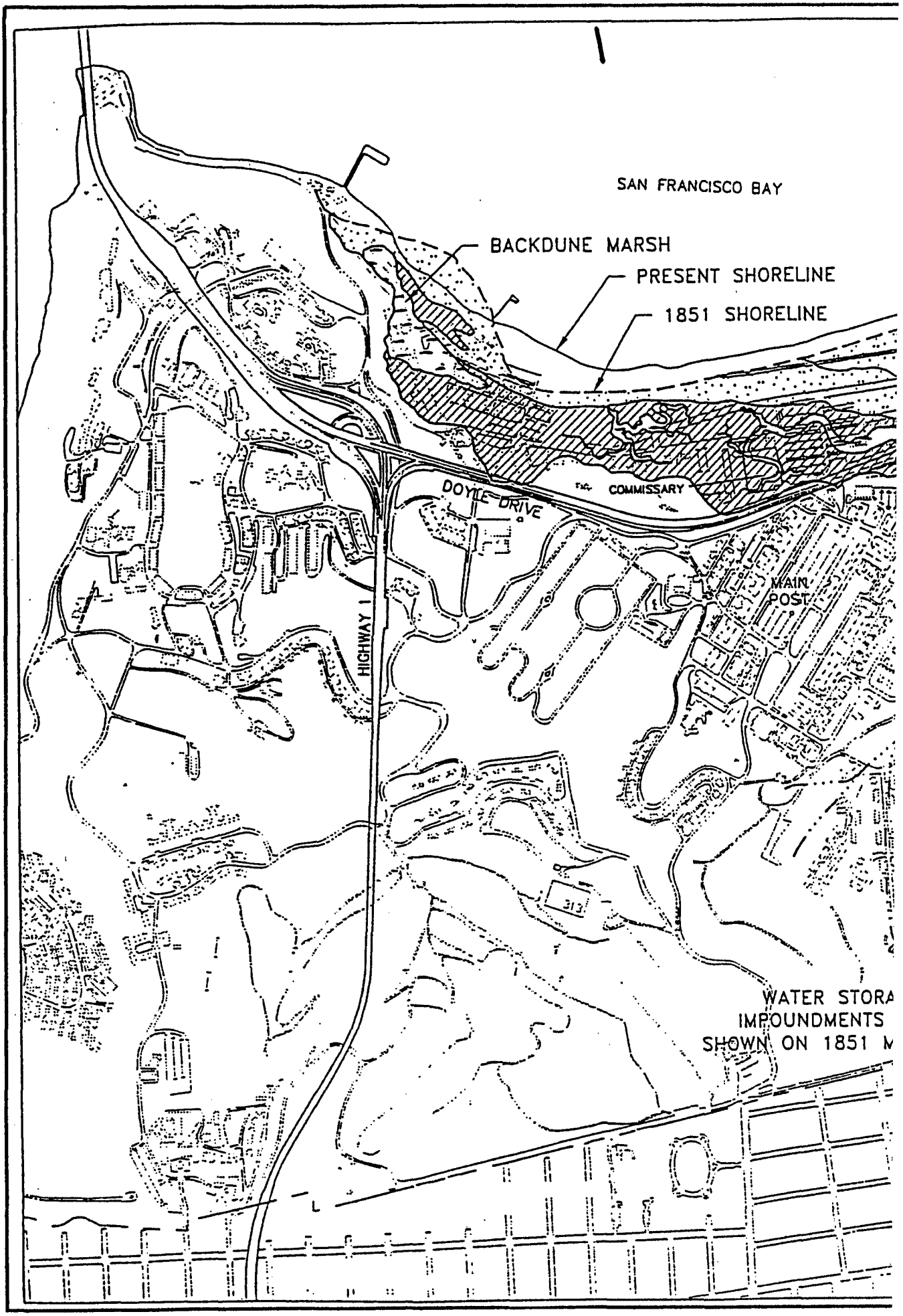


DAMES & MOORE

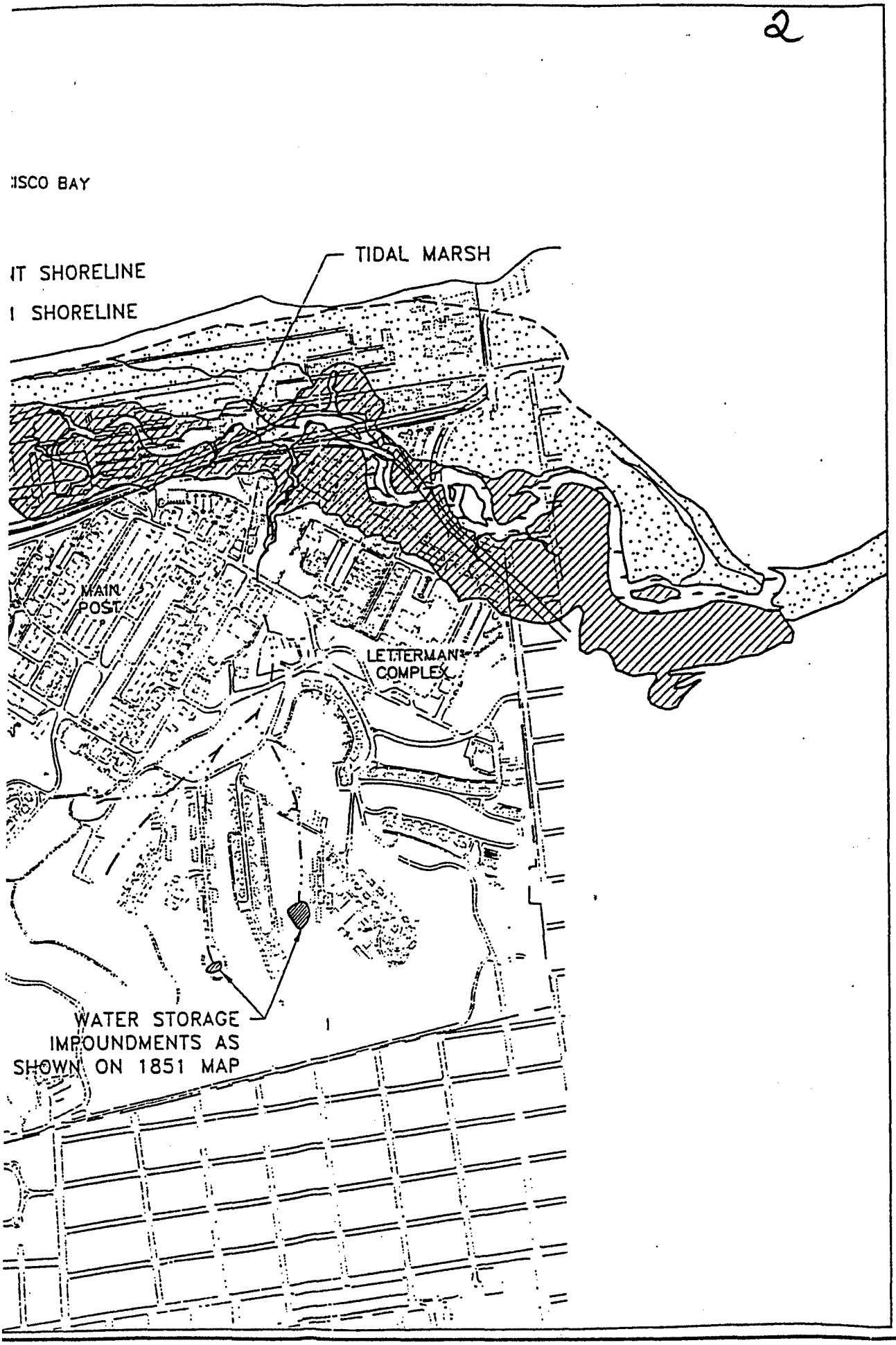
CRISSY FIELD STUDY AREA
TEST PIT, SOIL BORING,
MONITORING WELL, &
CROSS SECTION LOCATIONS

PSF25007/DV1

Date: January 1997 | Figure 5.1-2


SAN FRANCISCO BAY
BACKDUNE MARSH
PRESENT SHORELINE
1851 SHORELINE
COMMISSARY
DOYLE DRIVE
MAIN POST
HIGHWAY 1
313
WATER STORA
IMPOUNDMENTS
SHOWN ON 1851 M

2



LEGEN

U.S. C
AS AME

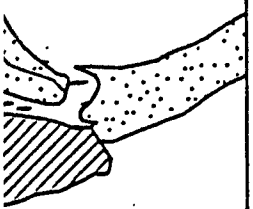
DAI

HIST
PRESID

PSF25052\DV1

Date: January

3



LEGEND:

SAND DUNE

WETLAND

OPEN WATER

1851 SHORELINE

SOURCE:
U.S. COAST SURVEY, 1851
AS AMENDED BY D&M, 1995

N

0 500 1000

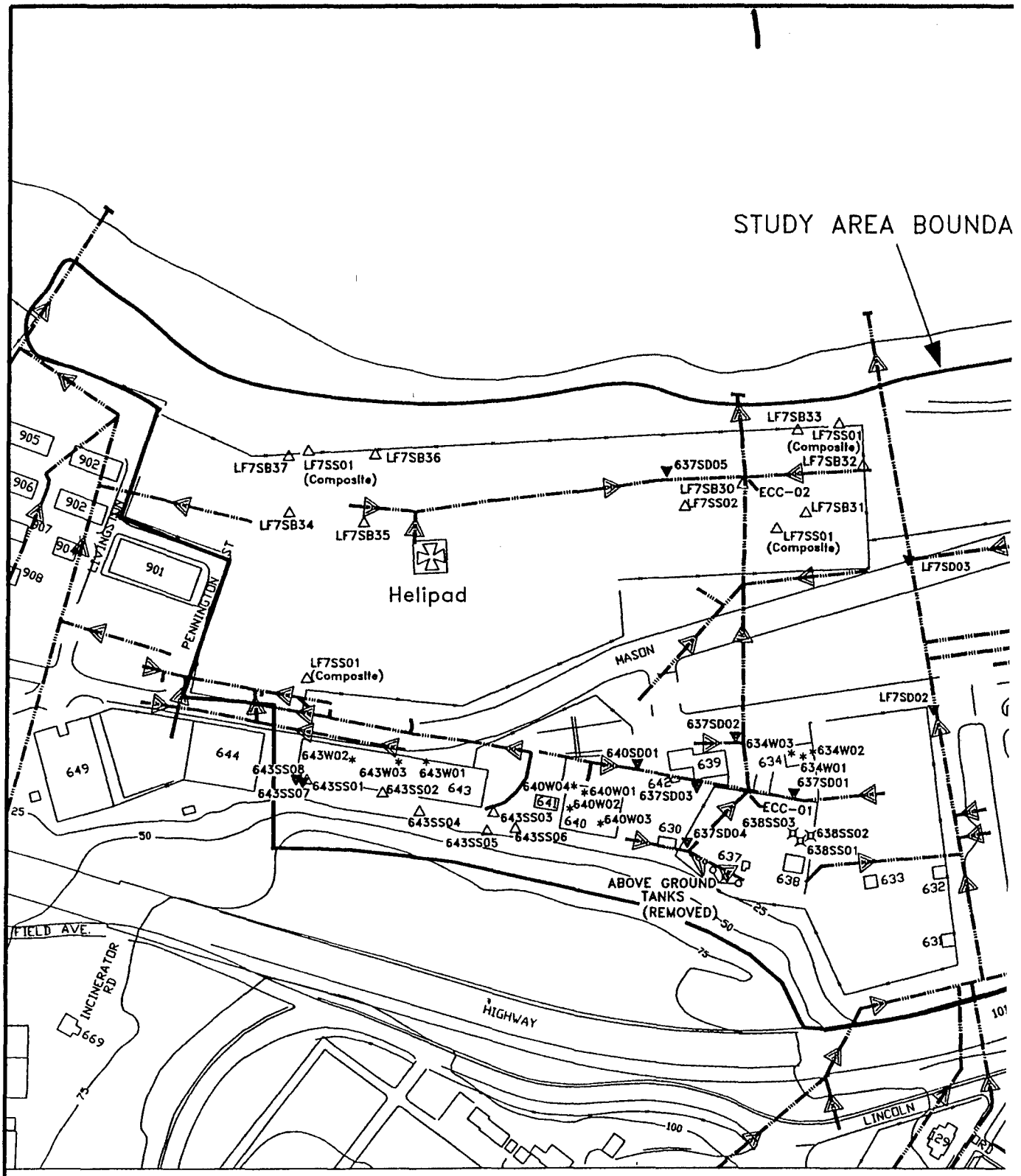
FEET

DAMES & MOORE

HISTORICAL WETLANDS
PRESIDIO OF SAN FRANCISCO

PSF25052\DV1

Date: January 1997 | Figure 5.1-3



EXPLANATION

- * WIPE SAMPLE
- ▼ SEDIMENT SAMPLE
- △ SURFACE SOIL SAMPLE
- ⌘ SURFACE SOIL SAMPLE FROM PAVED SURFACE
- STORM DRAIN WITH FLOW DIRECTION
- —100— TOPOGRAPHIC CONTOUR

CONTOUR INTERVAL 25 FEET

ELEVATIONS IN FEET–PRESIDIO LOWER LOW WATER

NOTES: ECC–01 AND ECC–02 ARE THE LOCATIONS OF STORM DRAIN WATER SAMPLES COLLECTED BY ECC.

2

SAN FRANCISCO BAY

DY AREA BOUNDARY

7SB33
LF7SS01
(Composite)
LF7SB32
-02
LF7SB31
LF7SS01
omposite)
LF7SD03
ST.
LF7SD04
MASON ST.
LF7SD05
611SS02
611SS03
611SS01
611
LF7SD02
609SS02
609SS01
LF7SD01
OLD MASON ST.
603
03
634W02
634W01
637SD01
C-01
03
638SS02
638SS01
538
633
632
631
609SS03
609
606
605
204
201
TOWNE
ST.
211
FRENCH CT.
HALLECK
101
LINCOLN
129
DRD ST
122
107
108
105
104
106
210
215
220
ST.
223
218
222
87
ST.
LINCOLN
W. HALLECK

VATER

HE
WATER

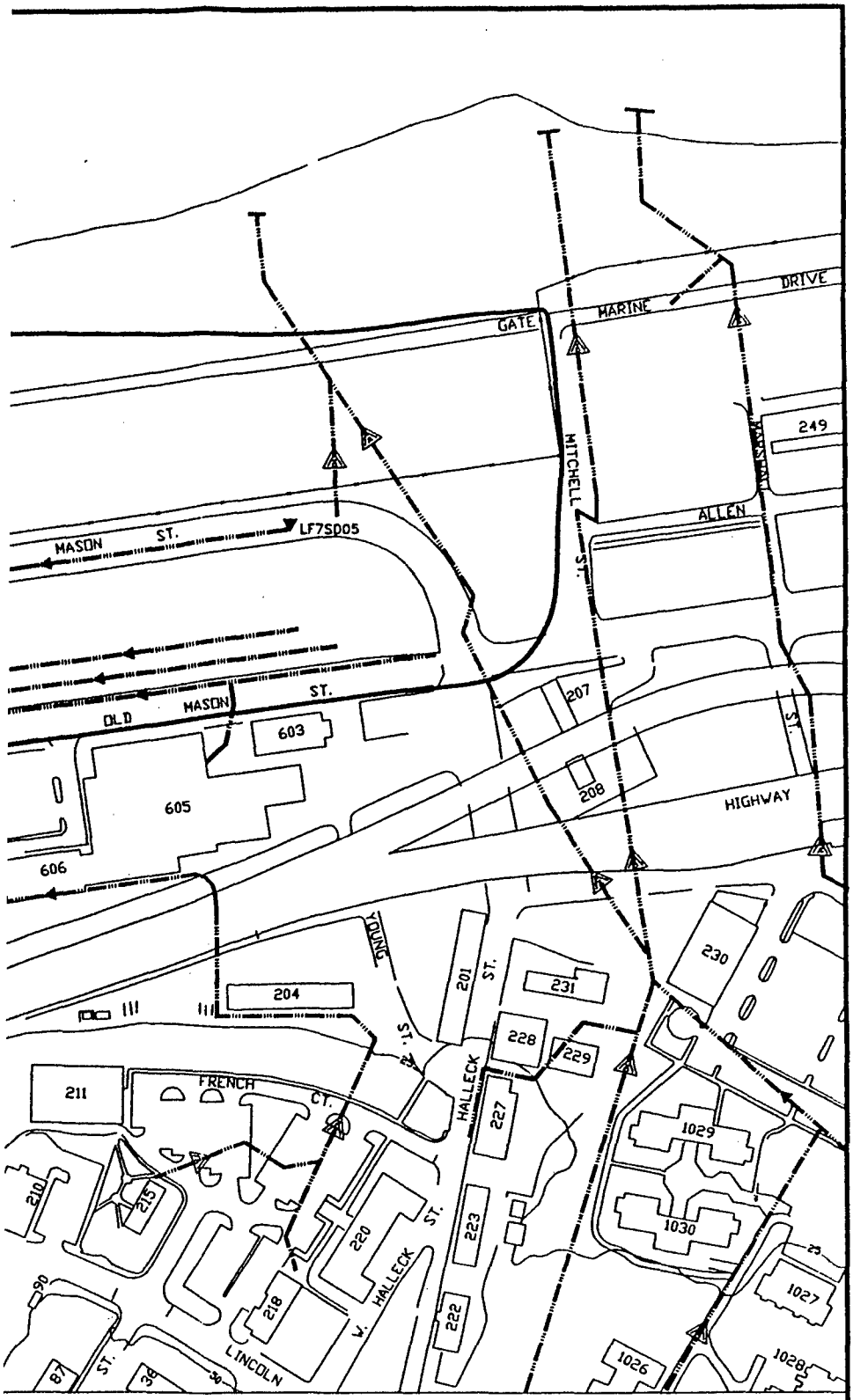
-N-

0 125 250
FEET

DAM

CRISSY
STORM DRA
AND SURFACE

PSF25020/DV1
Date: January 1



-N-

125 250

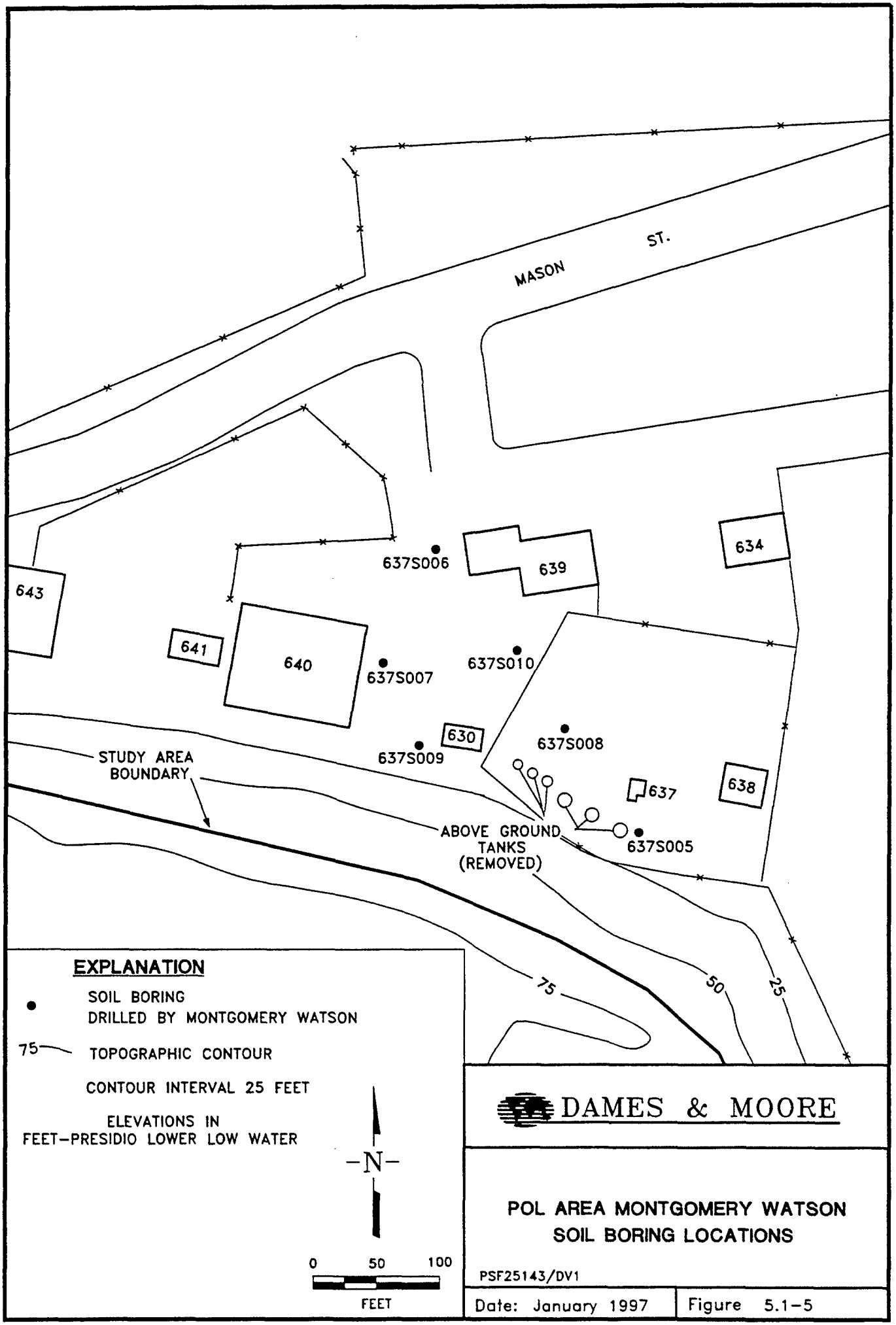
FEET

DAMES & MOORE

CRISSY FIELD STUDY AREA
STORM DRAIN AND SEDIMENT, WIPE,
AND SURFACE SOIL SAMPLE LOCATIONS

PSF25020/DV1

Date: January 1997 | Figure 5.1-4

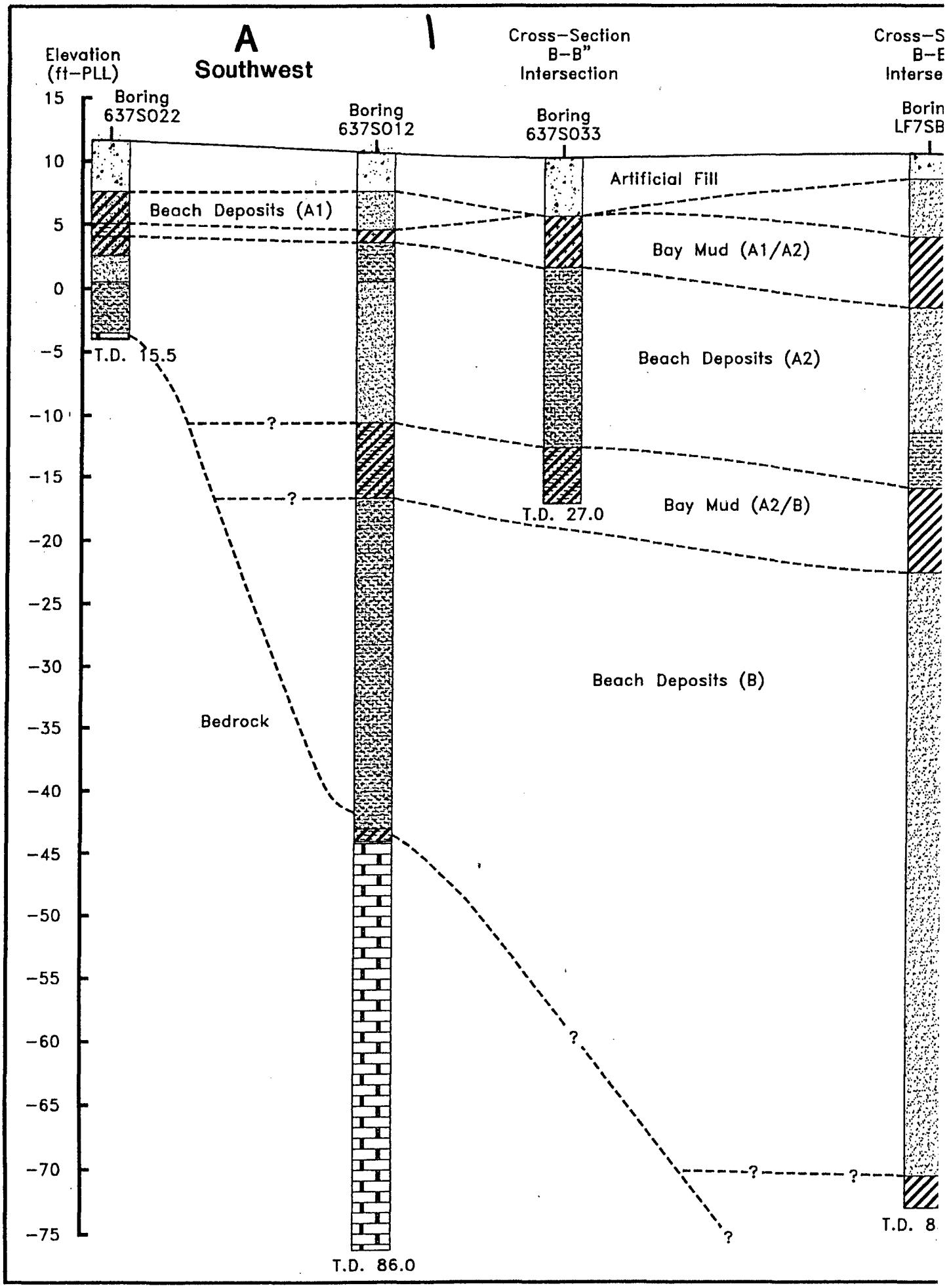


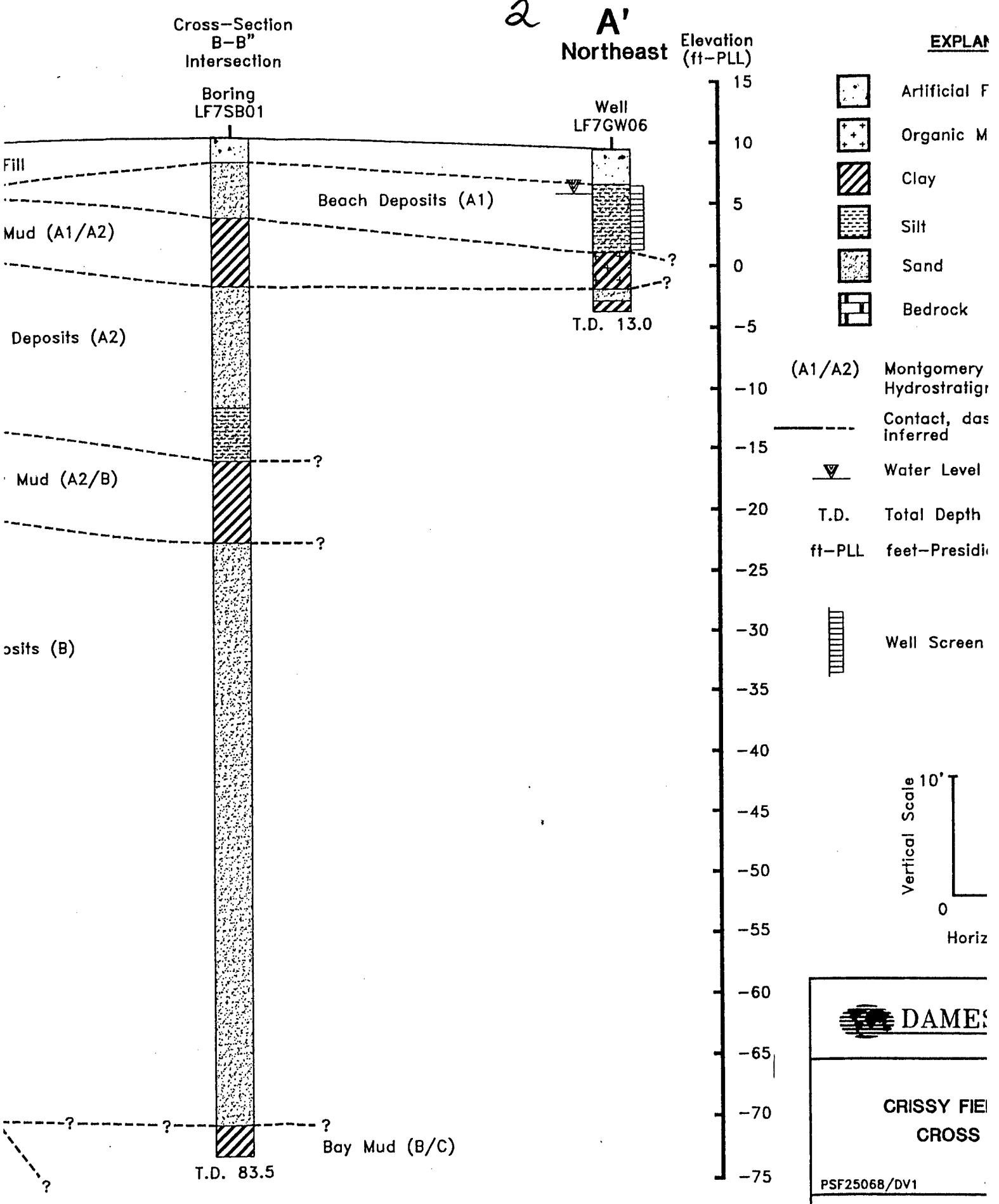
DAMES & MOORE

POL AREA MONTGOMERY WATSON SOIL BORING LOCATIONS

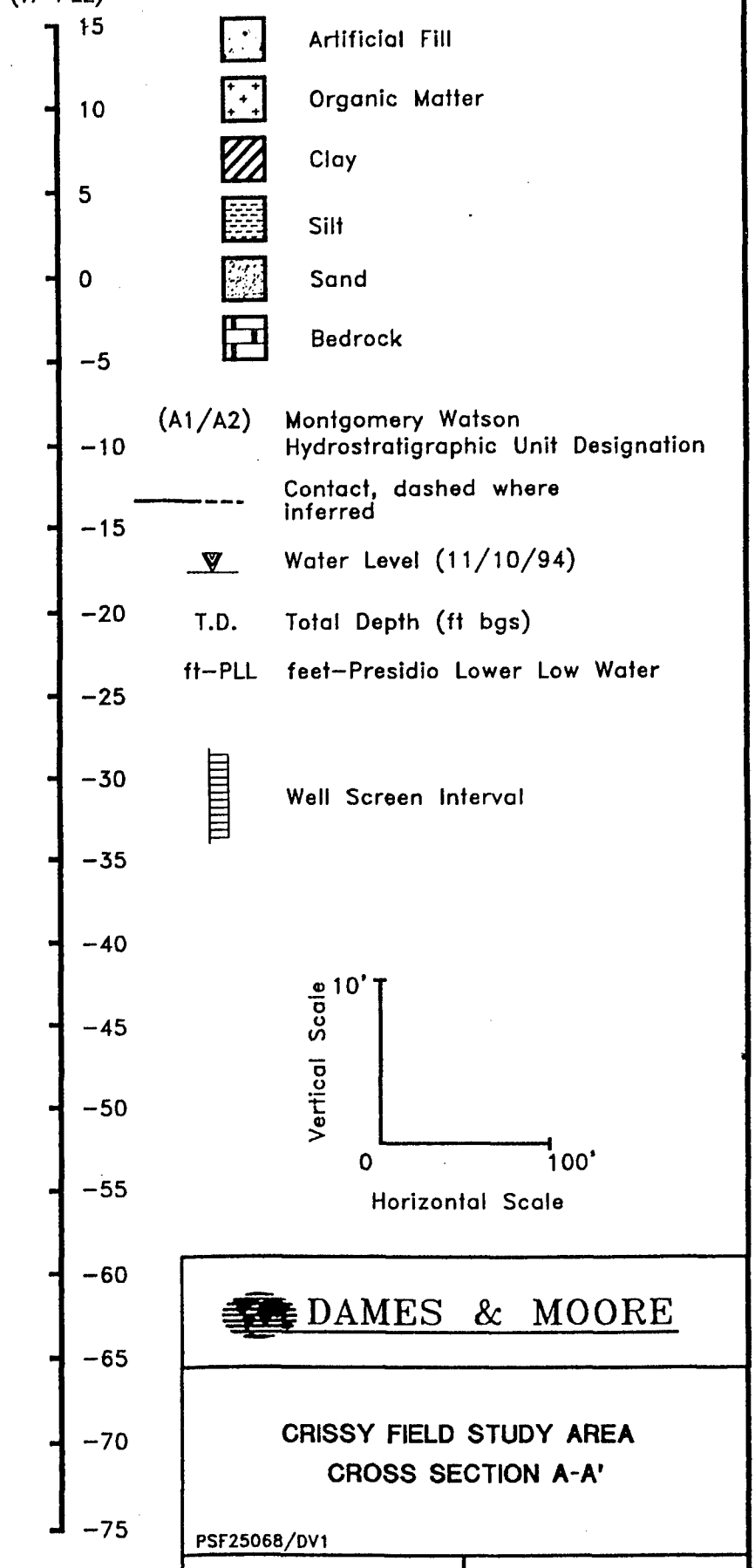
PSF25143/DV1

Date: January 1997 | Figure 5.1–5


A
Southwest
Elevation
(ft-PLL)
Boring
637S022
Boring
637S012
Cross-Section
B-B"
Intersection
Boring
637S033
Cross-S
B-E
Interse
Borin
LF7SB
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
-55
-60
-65
-70
-75
Artificial Fill
Beach Deposits (A1)
Bay Mud (A1/A2)
Beach Deposits (A2)
Bay Mud (A2/B)
Beach Deposits (B)
Bedrock
T.D. 15.5
T.D. 27.0
T.D. 86.0
T.D. 8
?


2
A'
Northeast
Cross-Section
B-B"
Intersection
Boring
LF7SB01
Well
LF7GW06
Elevation
(ft-PLL)
Fill
Beach Deposits (A1)
Mud (A1/A2)
Deposits (A2)
Mud (A2/B)
osits (B)
Bay Mud (B/C)
T.D. 13.0
T.D. 83.5
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
-55
-60
-65
-70
-75
EXPLAN
Artificial F
Organic M
Clay
Silt
Sand
Bedrock
(A1/A2)
Montgomery
Hydrostratigr
Contact, das
inferred
Water Level
T.D.
Total Depth
ft-PLL
feet-Presidi
Well Screen
Vertical Scale
10'
0
Horiz
DAME
CRISSY FIE
CROSS
PSF25068/DV1
Date: January 1997

3

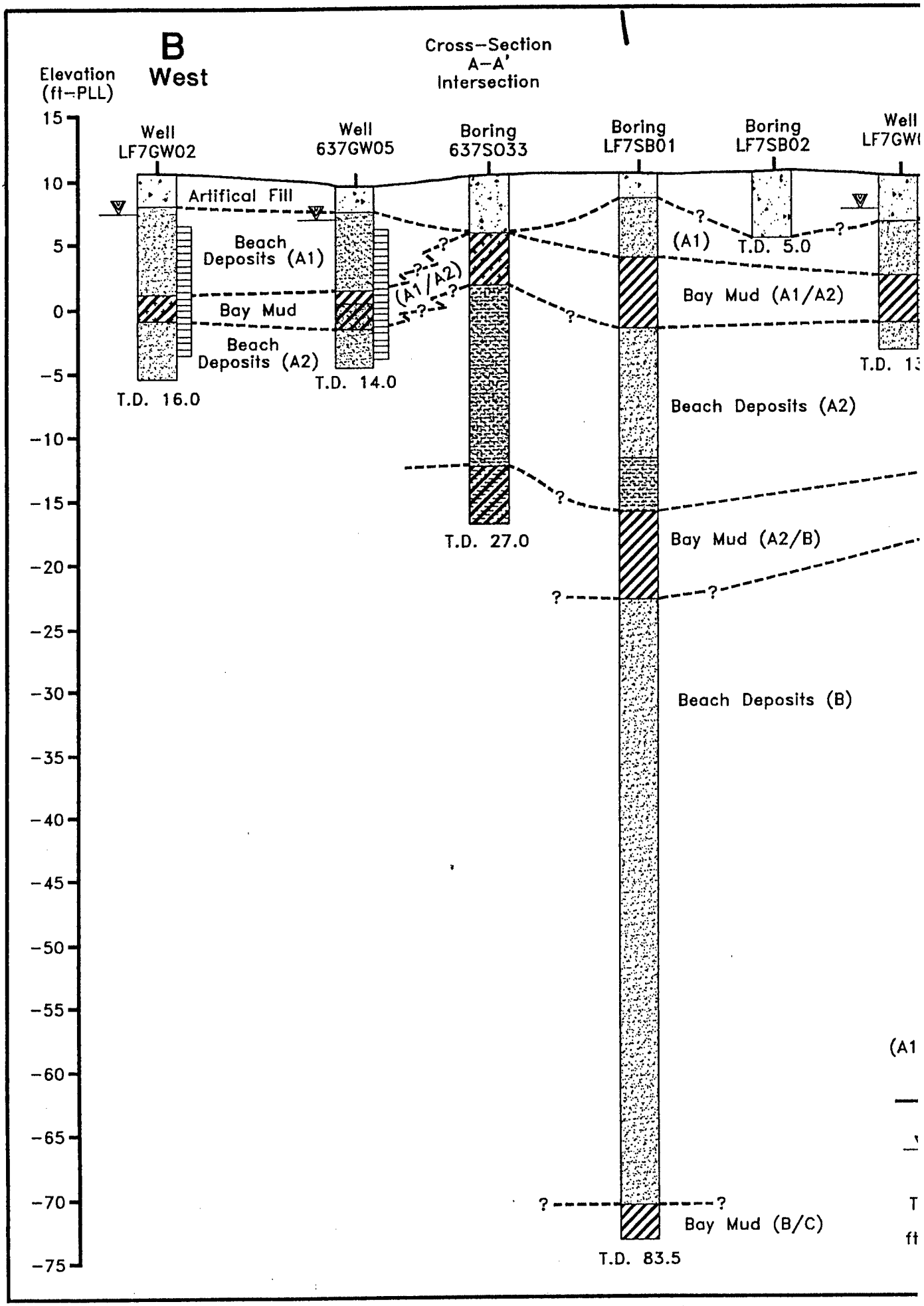


DAMES & MOORE

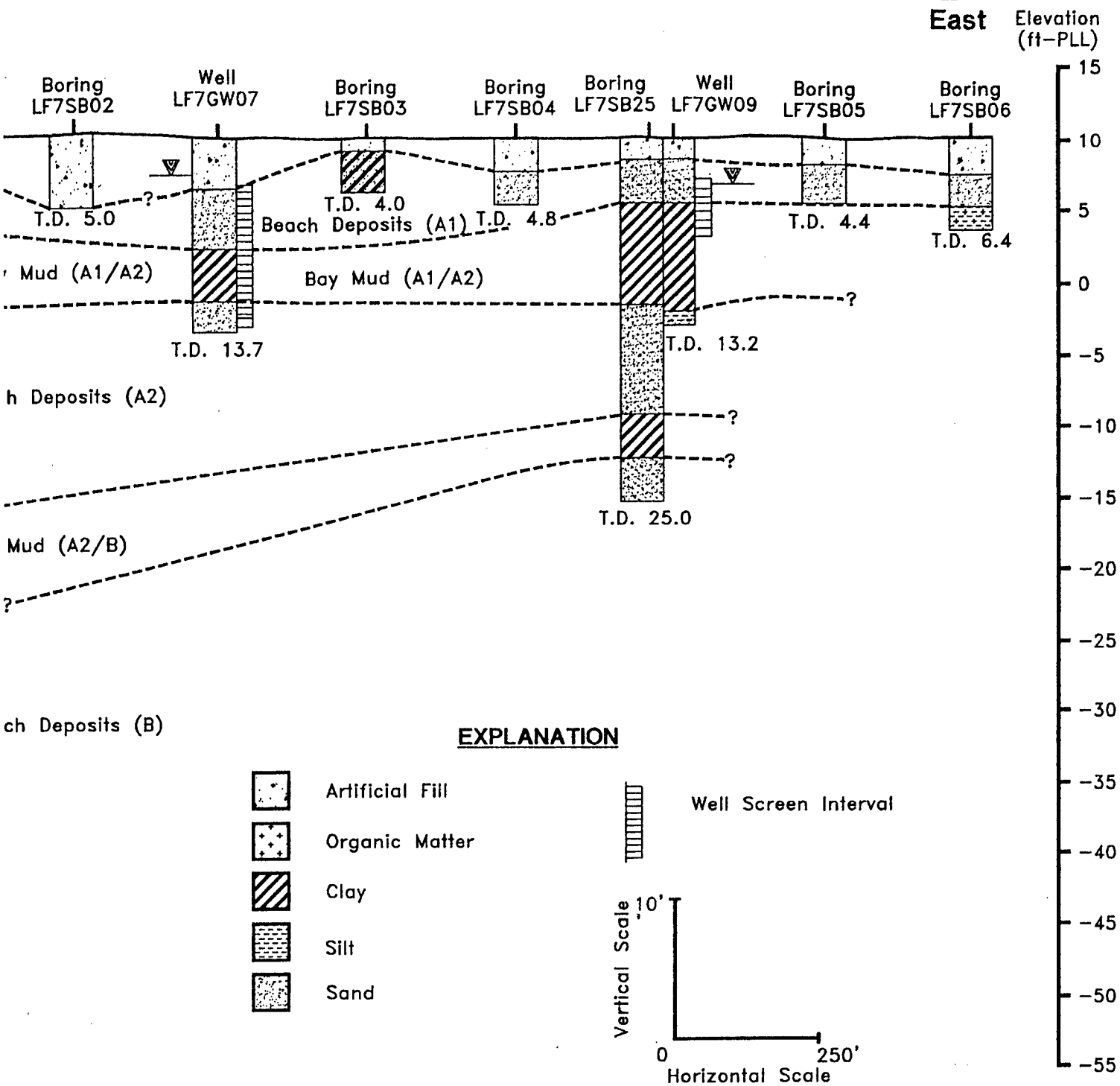
CRISSY FIELD STUDY AREA
CROSS SECTION A-A'

PSF25068/DV1

Date: January 1997 | Figure 5.3-1


B
West
Cross-Section
A-A'
Intersection
Elevation
(ft-PLL)
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
-55
-60
-65
-70
-75
Well
LF7GW02
Well
637GW05
Boring
637S033
Boring
LF7SB01
Boring
LF7SB02
Well
LF7GW
Artifical Fill
Beach
Deposits (A1)
Bay Mud
Beach
Deposits (A2)
T.D. 16.0
T.D. 14.0
(A1/A2)
T.D. 27.0
(A1)
T.D. 5.0
Bay Mud (A1/A2)
T.D. 13
Beach Deposits (A2)
Bay Mud (A2/B)
Beach Deposits (B)
Bay Mud (B/C)
T.D. 83.5
(A1
T
ft

2



EXPLANATION

- Artificial Fill
- Organic Matter
- Clay
- Silt
- Sand
- Well Screen Interval

Vertical Scale 10'
0 250'
Horizontal Scale

(A1/A2) Montgomery Watson Hydrostratigraphic Unit Designation

Contact, dashed where inferred

Water level (3/16/95, 0955-1023 PST
High Tide: 1050 PST, 5.4 ft-mll)

T.D. Total Depth (ft bgs)

ft-PLL feet-Presidio Lower Low Water

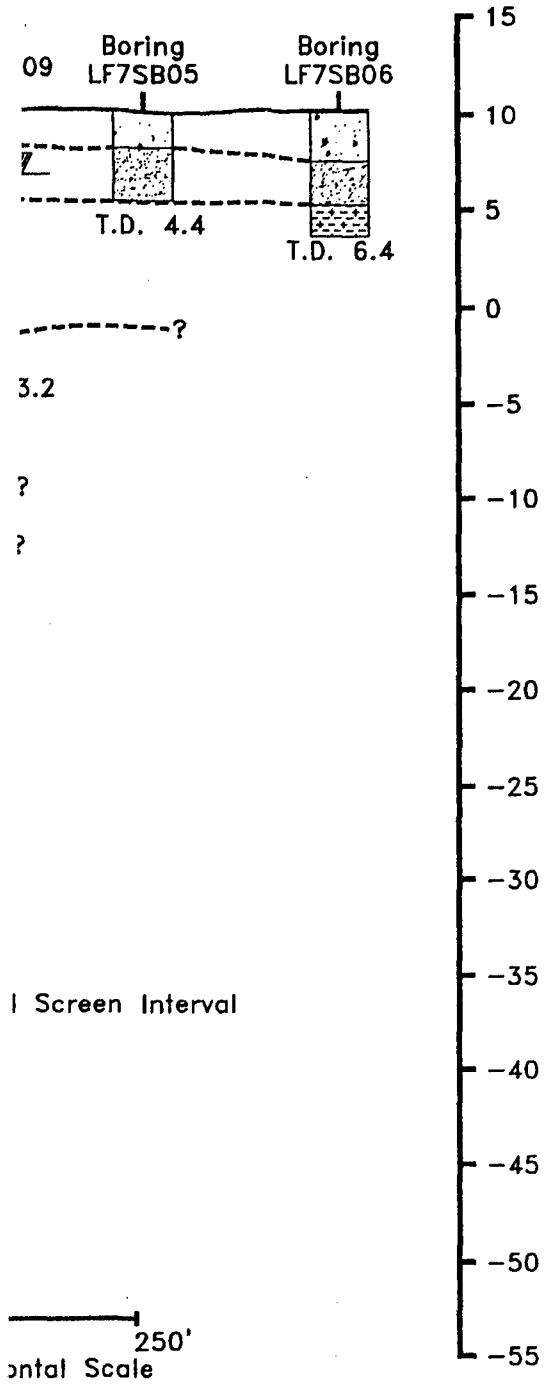
·?
/ Mud (B/C)

DAMES

CRISSY FIELD
CROSS SI

PSF25041/DV1

Date: January 1997



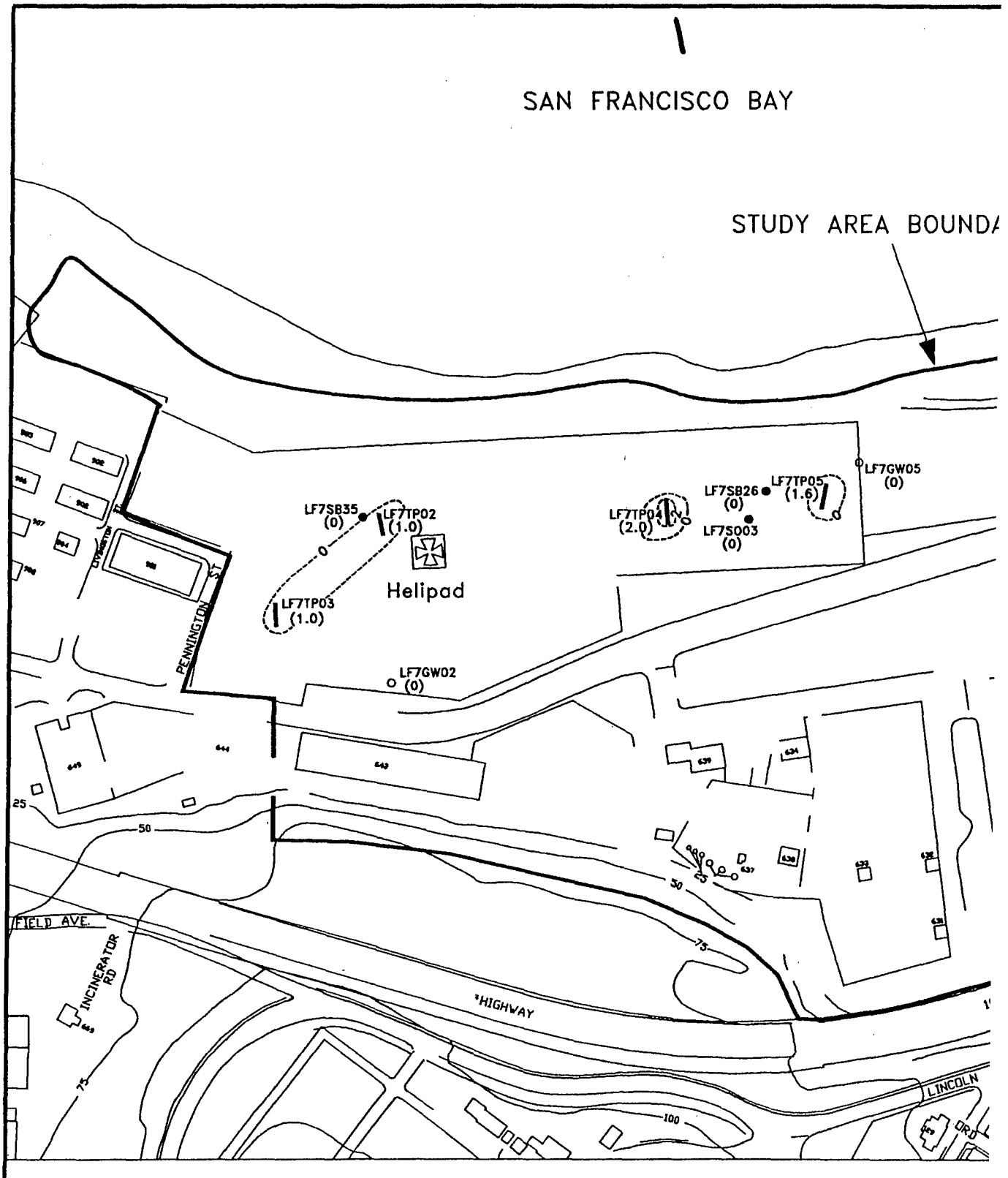
3

DAMES & MOORE

CRISSY FIELD STUDY AREA
CROSS SECTION B-B'

PSF25041/DV1

Date: January 1997 | Figure 5.3-2

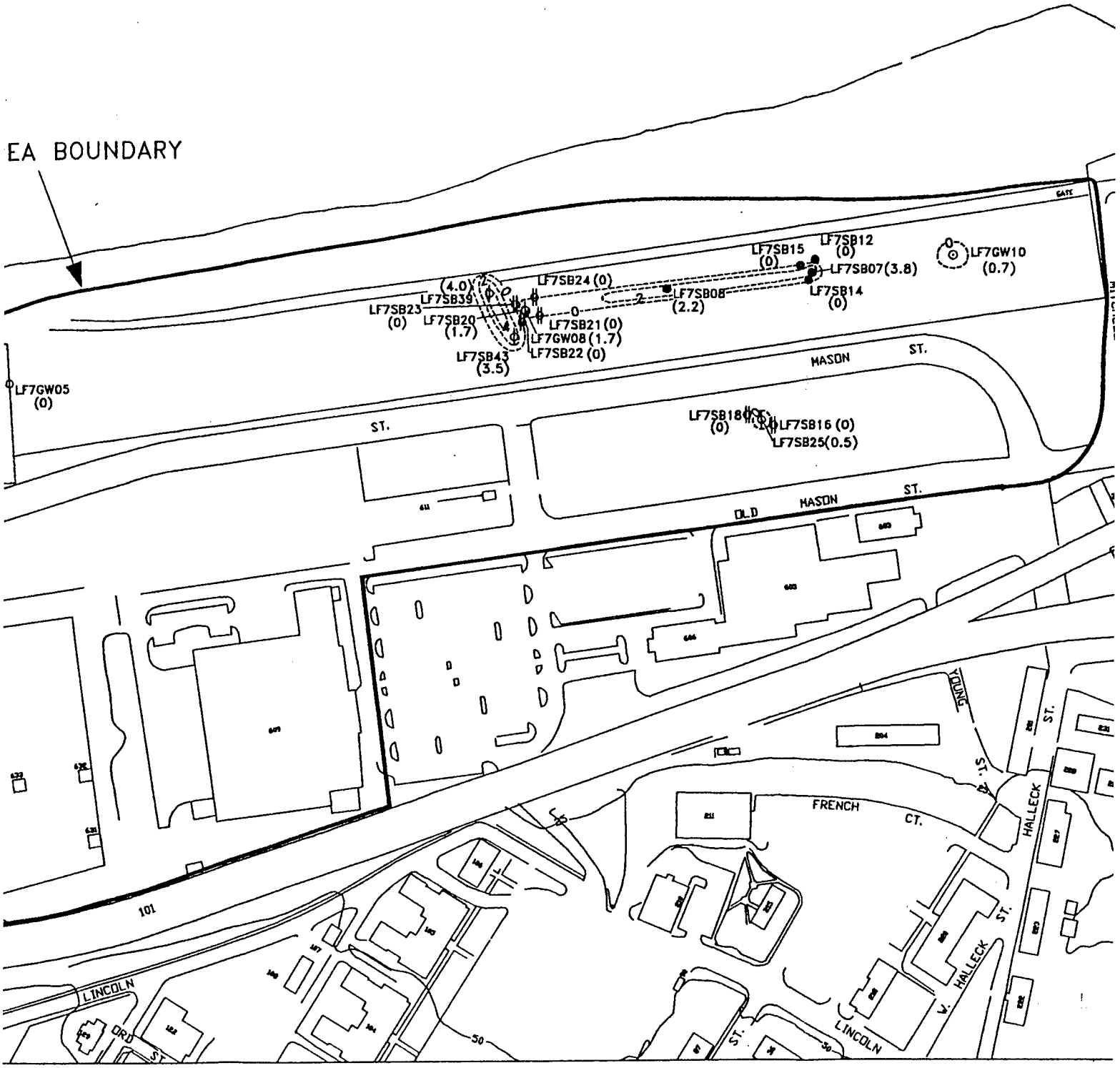


EXPLANATION

- TEST PIT
- SOIL BORING
- SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
- DISCRETE GROUNDWATER SAMPLE
- MONITORING WELL
- MONITORING WELL WITH SOIL SAMPLES
- 1.0 — DEBI DASI CON
- 100 — TOP(CON
- ELEV FEET

NOTE: DEBRIS FILL THICKNESS IS BASED ON LITHOLOGY LOGS IN APPENDIX C. ONLY BORINGS WITH DEBRIS FILL AND CLOSEST CONTROL POINT ARE SHOWN ON FIGURE ALL SOIL SAMPLE LOCATIONS ARE SHOWN ON FIGURE 5.1-2

2



--1.0-- DEBRIS FILL THICKNESS CONTOUR
DASHED WHERE INFERRED
CONTOUR INTERVAL 2 FEET

—100— TOPOGRAPHIC CONTOUR
CONTOUR INTERVAL 25 FEET

ELEVATIONS IN
FEET–PRESIDIO LOWER LOW WATER

-N-

0 125 250
FEET

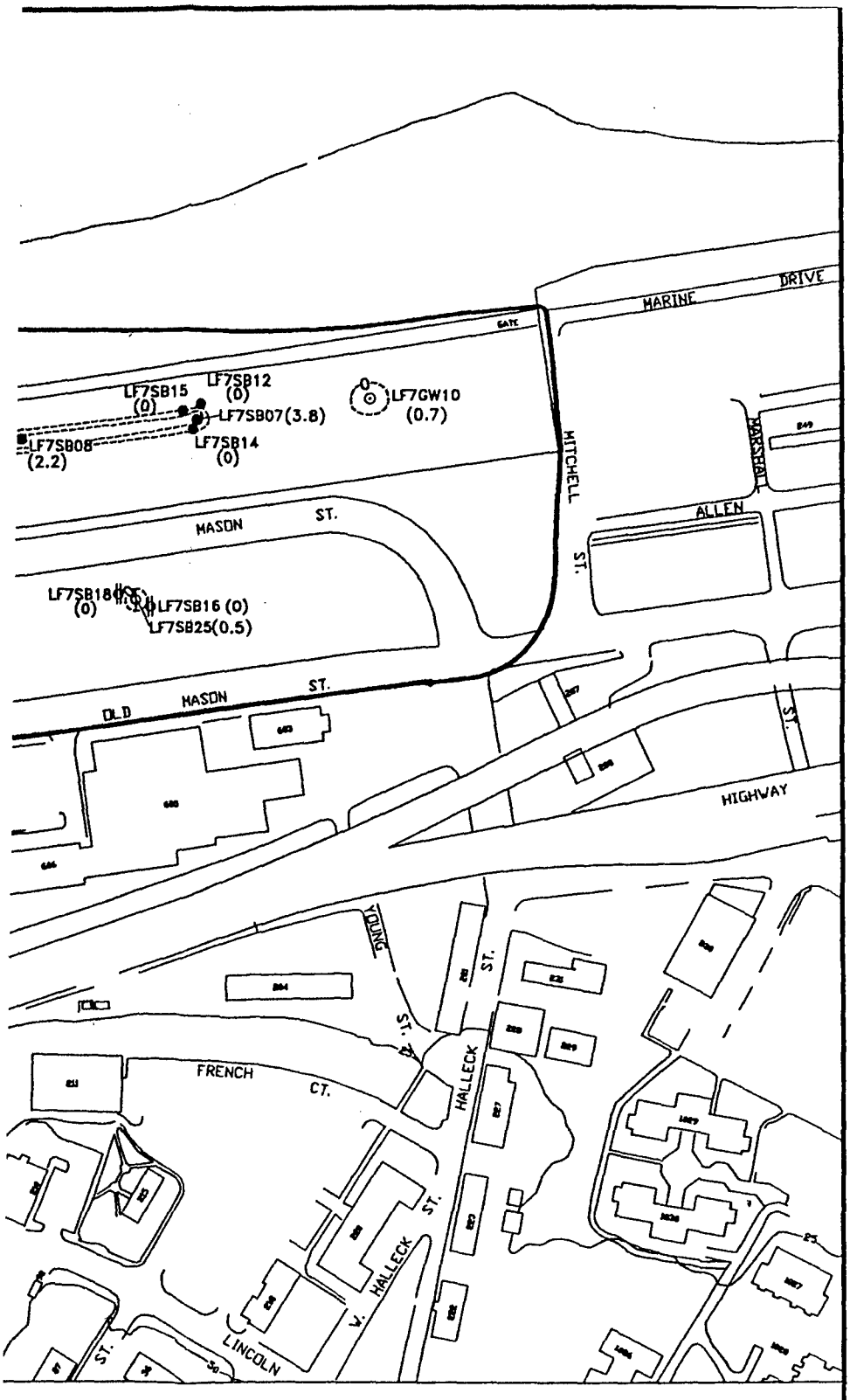
DAMES

CRISSY FIELD
DEBRIS FILL

PSF25058/DV1

Date: January 1997

5.1–2

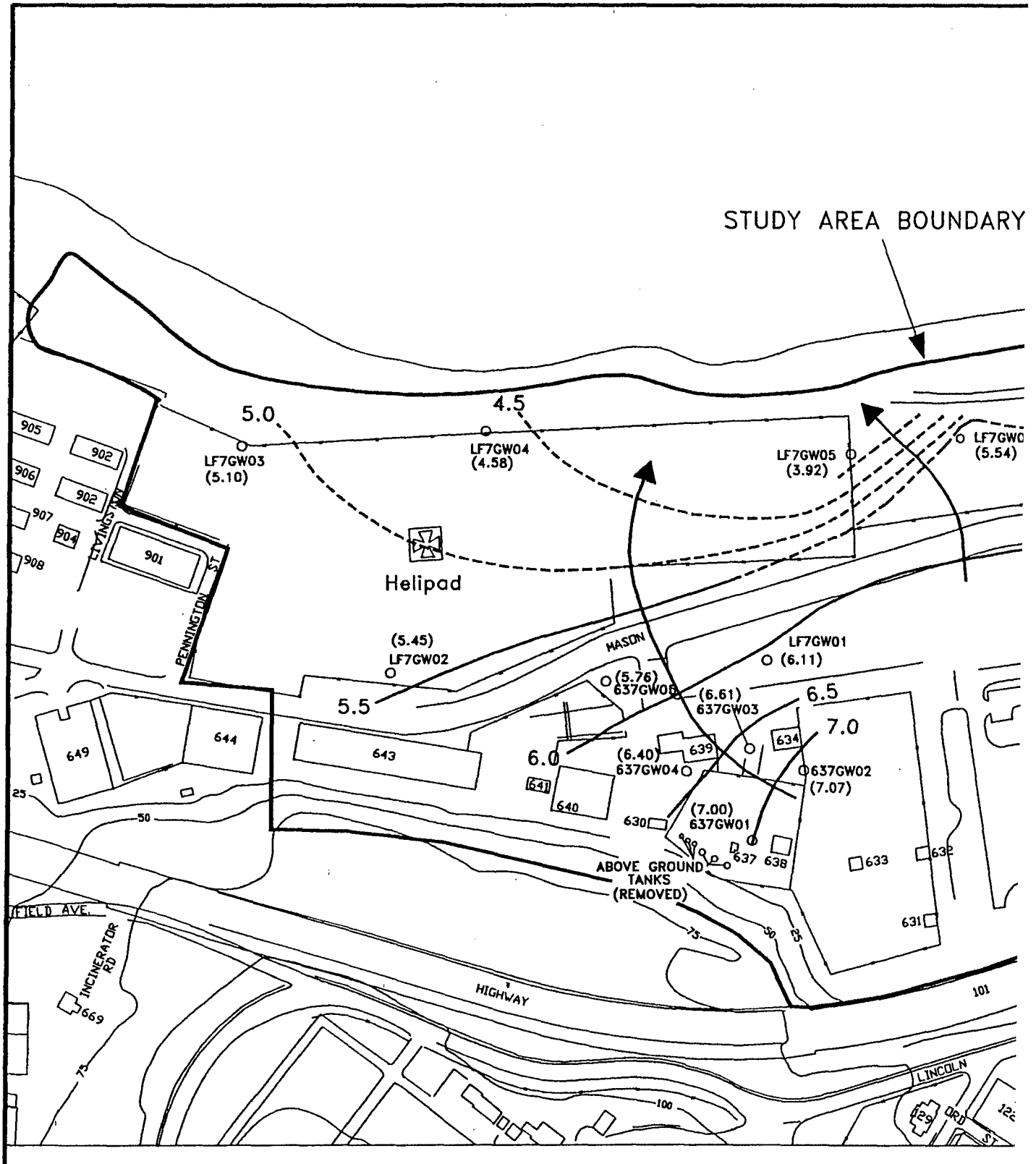


DAMES & MOORE

CRISSY FIELD STUDY AREA
DEBRIS FILL ISOPACH

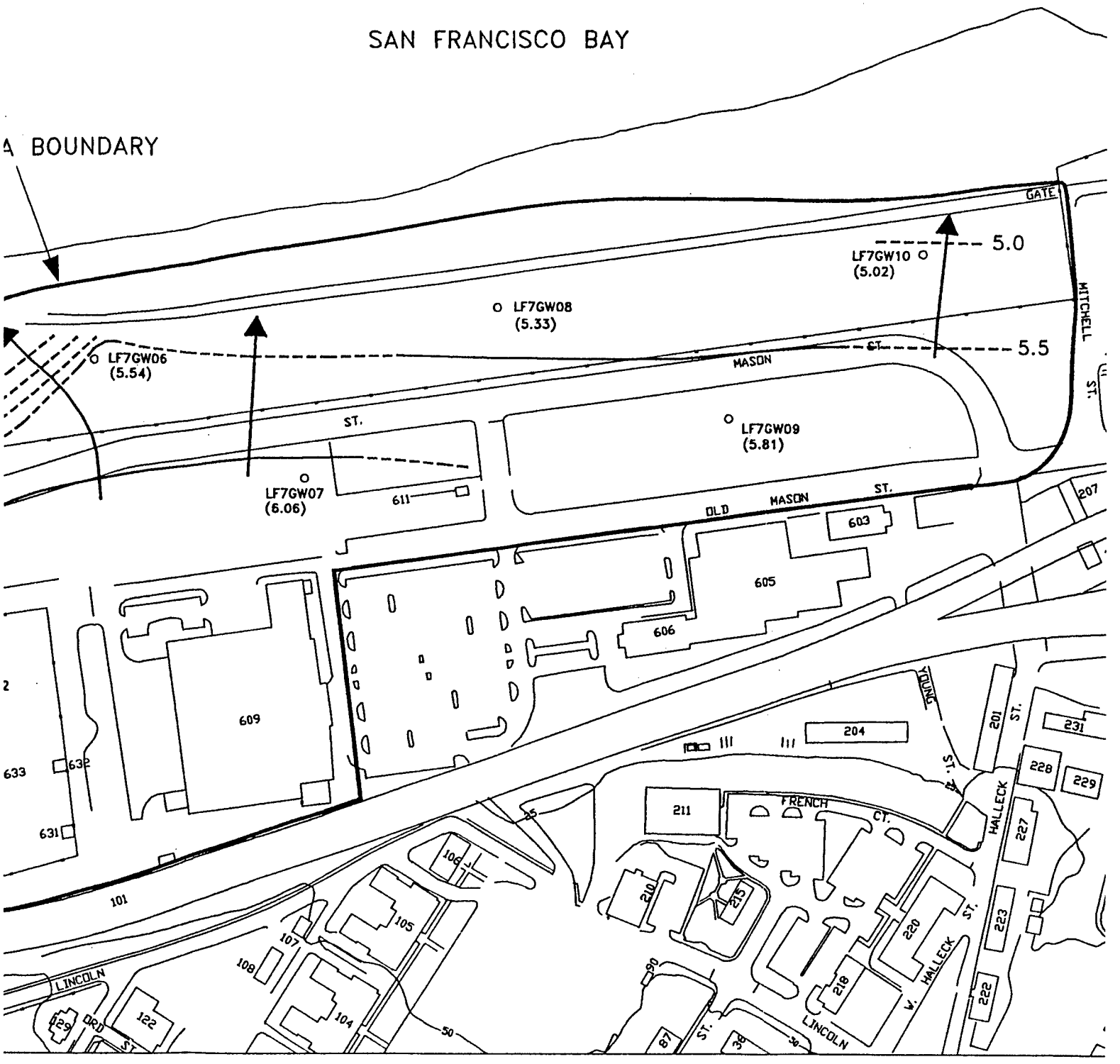
PSF25058/DV1

Date: January 1997 | Figure 5.3-3



EXPLANATION

- ○ MONITORING WELL
- (5.45) POTENTIOMETRIC SURFACE ELEVATION
- ——25—— TOPOGRAPHIC CONTOUR INTERVAL 25 FEET
- ———— EQUIPOTENTIAL CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL 0.5 FEET
- ELEVATIONS IN FEET–PRESIDIO LOWER LOW WATER
- → GROUNDWATER FLOW DIRECTION
- NOTE: WATER–LEVEL MEASUREMENTS TAKEN NOVEMBER 9, 1992, 1638–1732 PST LOW TIDE: 1638 PST, –0.4FT–PLLW



'S TAKEN
1732 PST
'T-PLLW

2

-N-

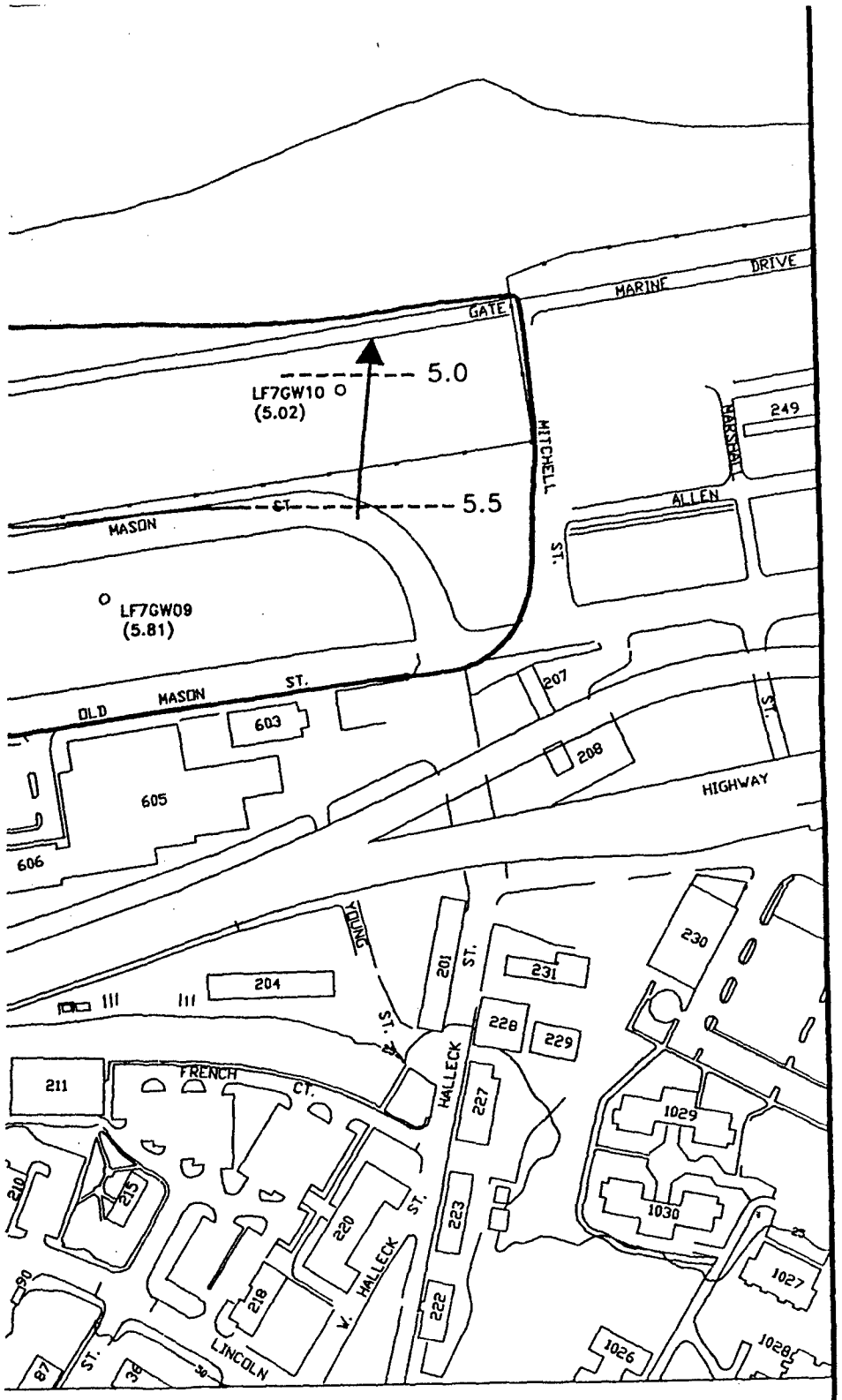
0 125 250
FEET

DAMES &

CRISSY FIELD STU
POTENTIOMETRIC SU
LOW TIDE, NOVEI

PSF25099/DV1

Date: January 1997 | Fig



-N-

0 125 250

FEET

3

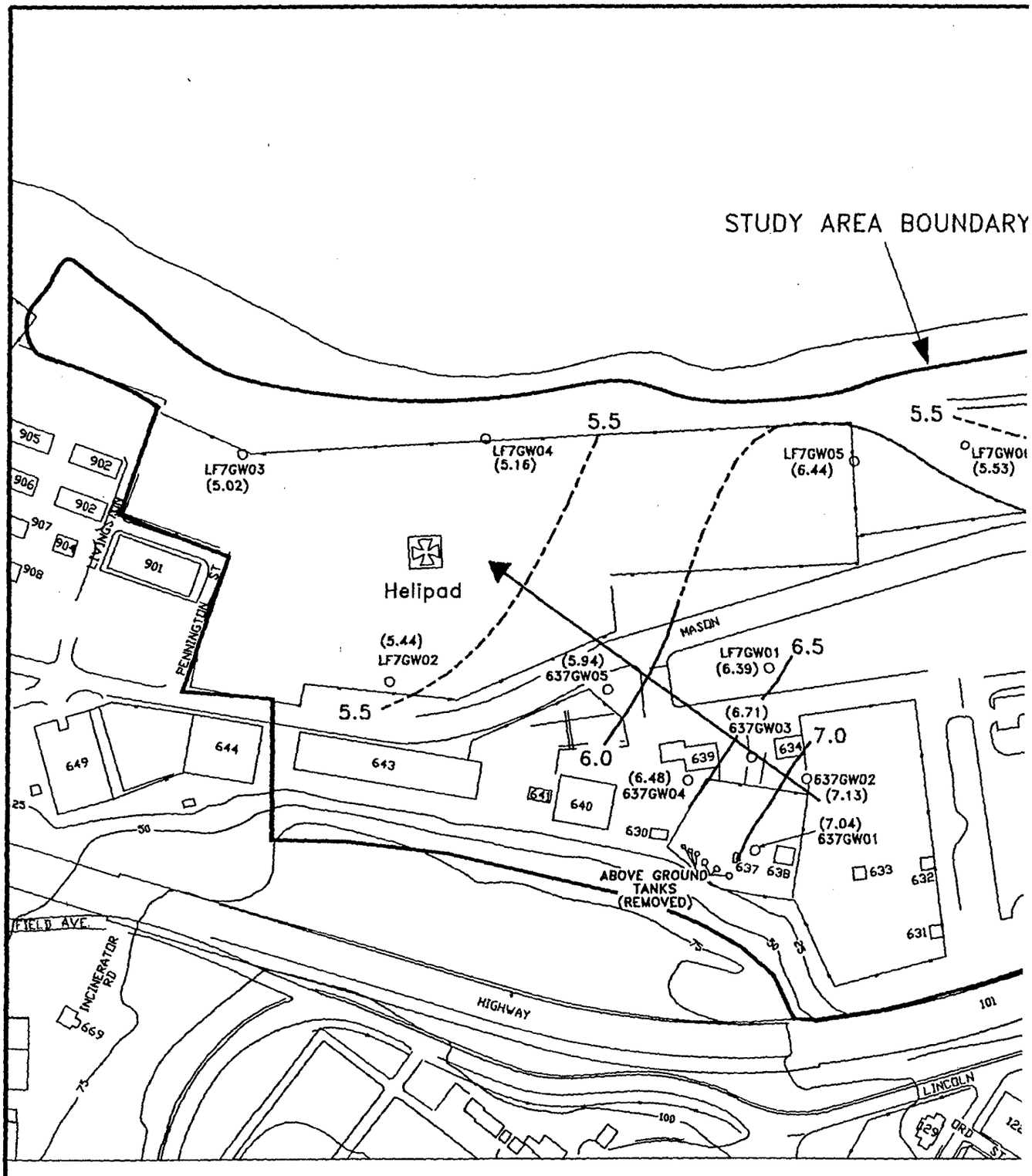
DAMES & MOORE

CRISSY FIELD STUDY AREA
POTENTIOMETRIC SURFACE MAP,
LOW TIDE, NOVEMBER 1992

PSF25099/DV1

Date: January 1997

Figure 5.3-4

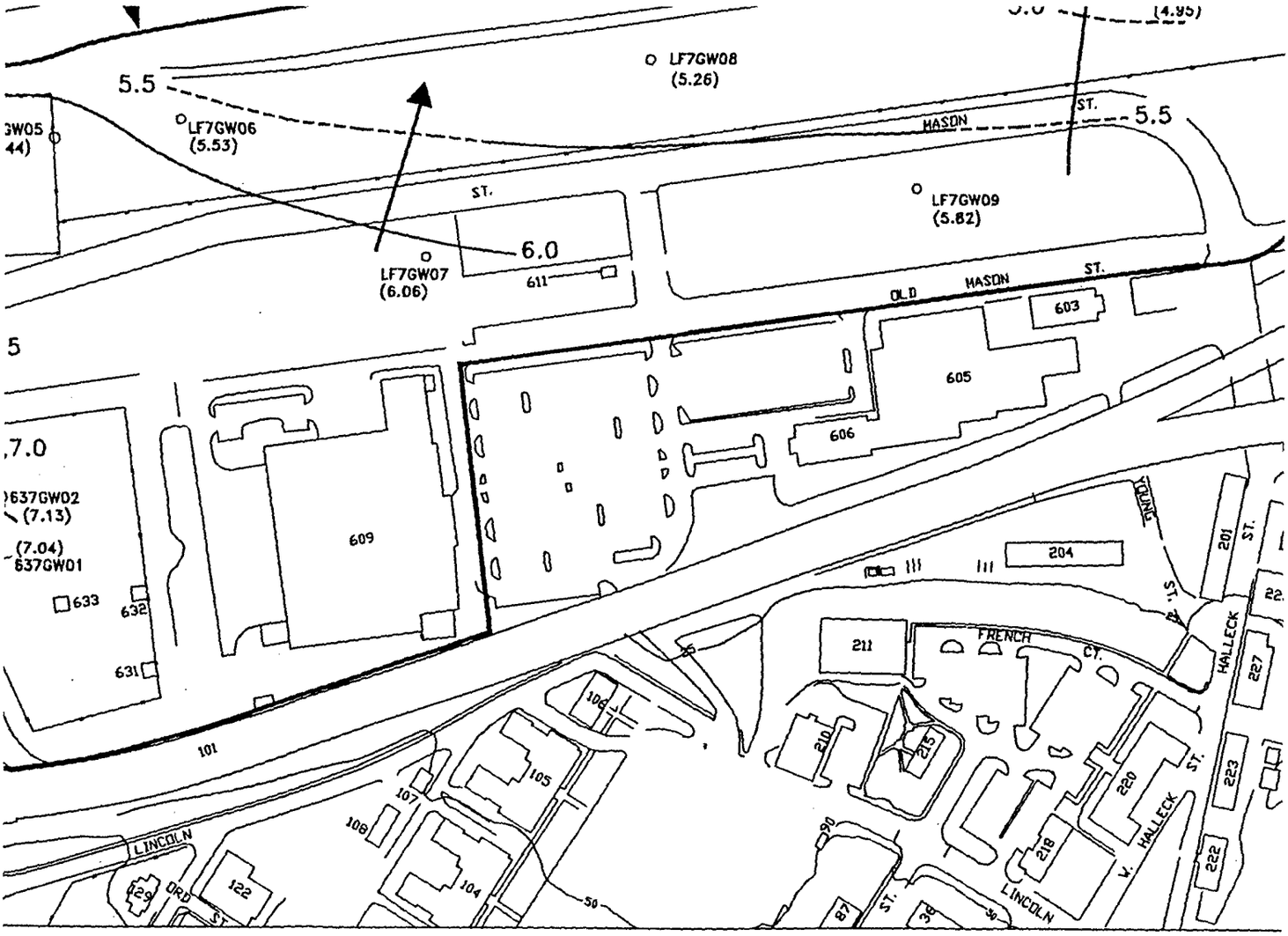


EXPLANATION

- ○ MONITORING WELL
- (5.44) POTENTIOMETRIC SURFACE ELEVATION
- ——— EQUIPOTENTIAL CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL 0.5 FEET
- → GROUNDWATER FLOW DIRECTION
- —75— TOPOGRAPHIC CONTOUR INTERVAL 25 FEET

ELEVATIONS IN FEET–PRESIDIO LOWER LOW WATER

NOTE: WATER–LEVEL MEASUREMENTS TAKEN NOVEMBER 9, 1992, 0945–1032 PST, HIGH TIDE: 1001 PST, 6.1 FT–PLLW



ATER

EMENTS TAKEN
945–1032 PST,
6.1 FT–PLLW

-N-

0 125 250
FEET

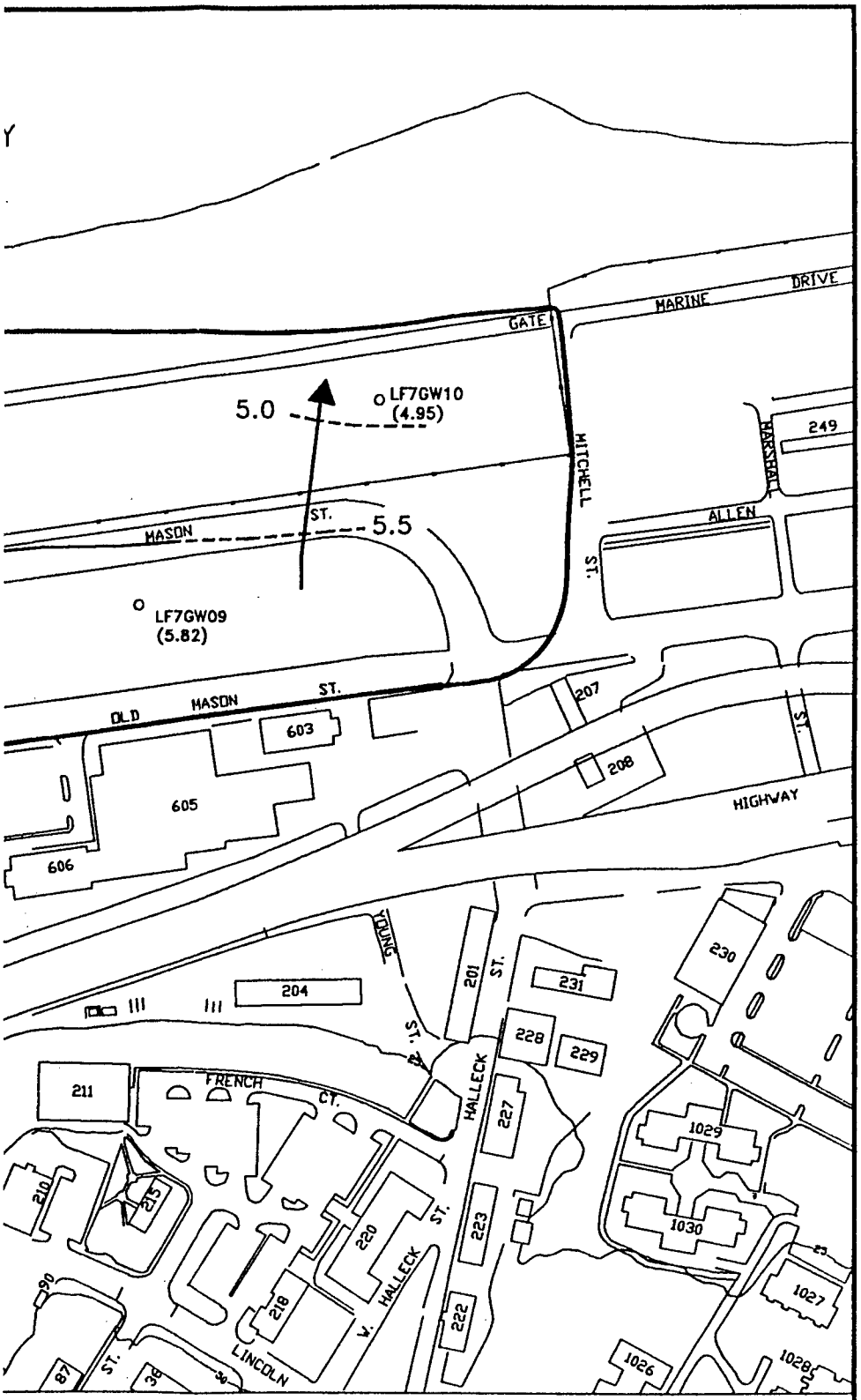
2

DAME

CRISSY FIEL
POTENTIOMETR
HIGH TIDE, N

PSF25100/DV1

Date: January 1997



-N-

125 250

FEET

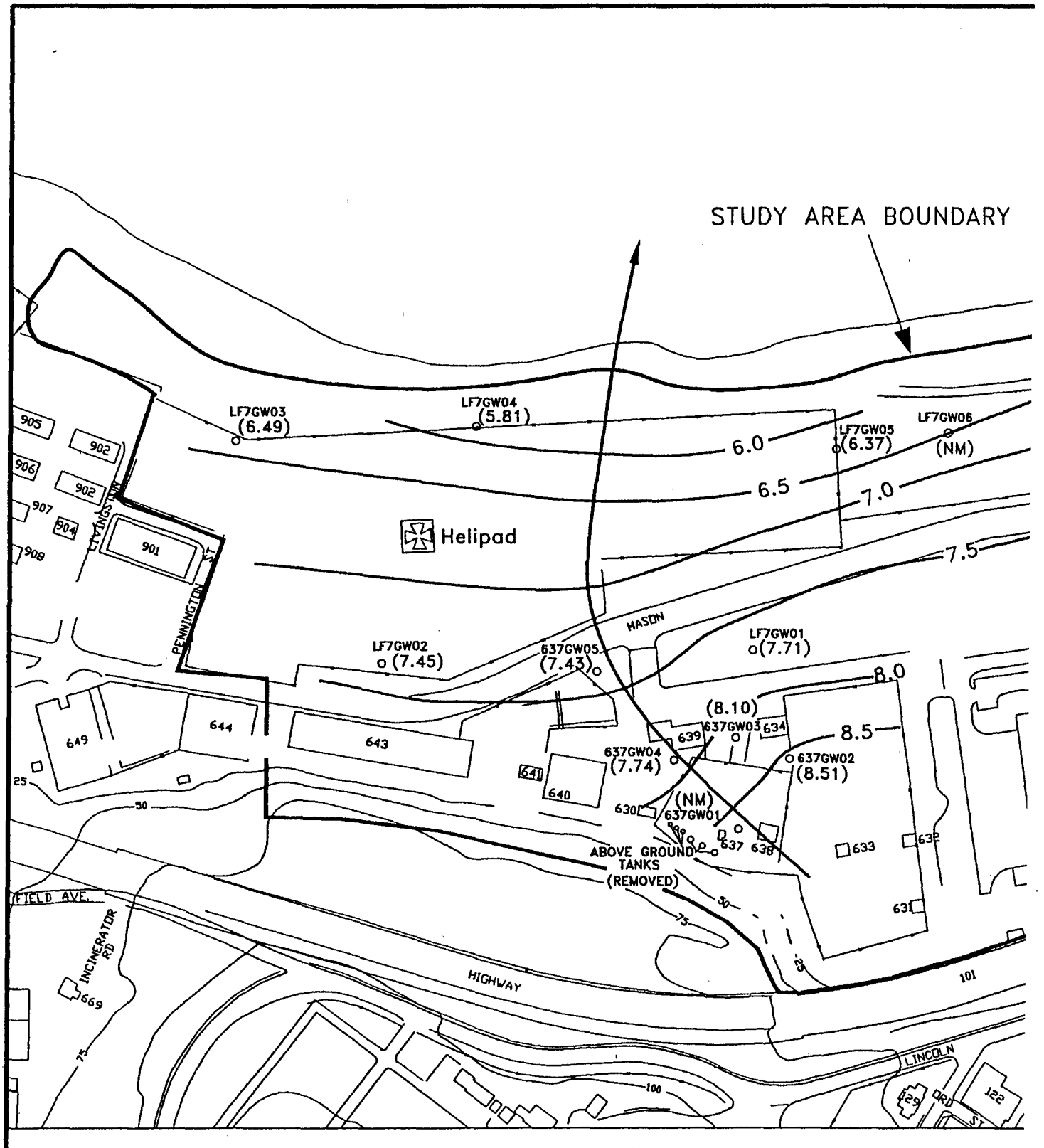
3

DAMES & MOORE

CRISSY FIELD STUDY AREA
POTENTIOMETRIC SURFACE MAP,
HIGH TIDE, NOVEMBER 1992

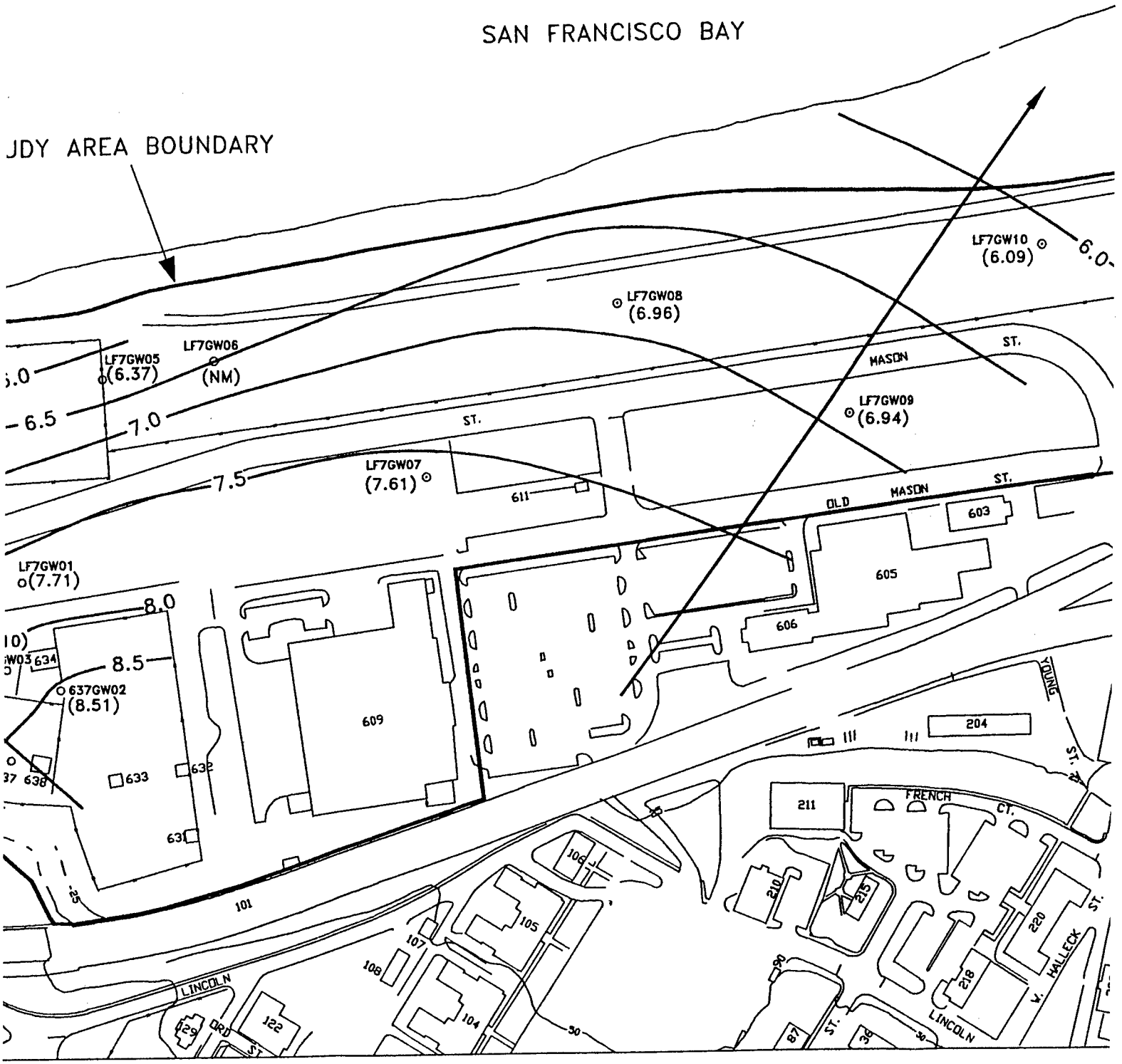
PSF25100/DV1

Date: January 1997 | Figure 5.3-5



EXPLANATION

- ○ MONITORING WELL
- ⊙ MONITORING WELL WITH SOIL SAMPLES
- (6.49) POTENTIOMETRIC SURFACE ELEVATION
  NM = NOT MEASURED
- —6.0— EQUIPOTENTIAL CONTOURS
  CONTOUR INTERVAL 0.5 FEET
- → GROUNDWATER FLOW DIRECTION
- —100— TOPOGRAPHIC CONTOUR
  CONTOUR INTERVAL 25 FEET
- ELEVATIONS IN FEET–PRESIDIO LOWER LOW WATER



JNDWATER FLOW DIRECTION

)GRAPHIC CONTOUR

TOUR INTERVAL 25 FEET

/ATIONS IN
T–PRESIDIO LOWER LOW WATER

NOTE: WATER–LEVEL MEASUREMENTS TAKEN MARCH 16, 1995, 0955–1023 PST, HIGH TIDE: 1050 PST, 5.4 FT–PLLW

–N–

0 125 250
FEET

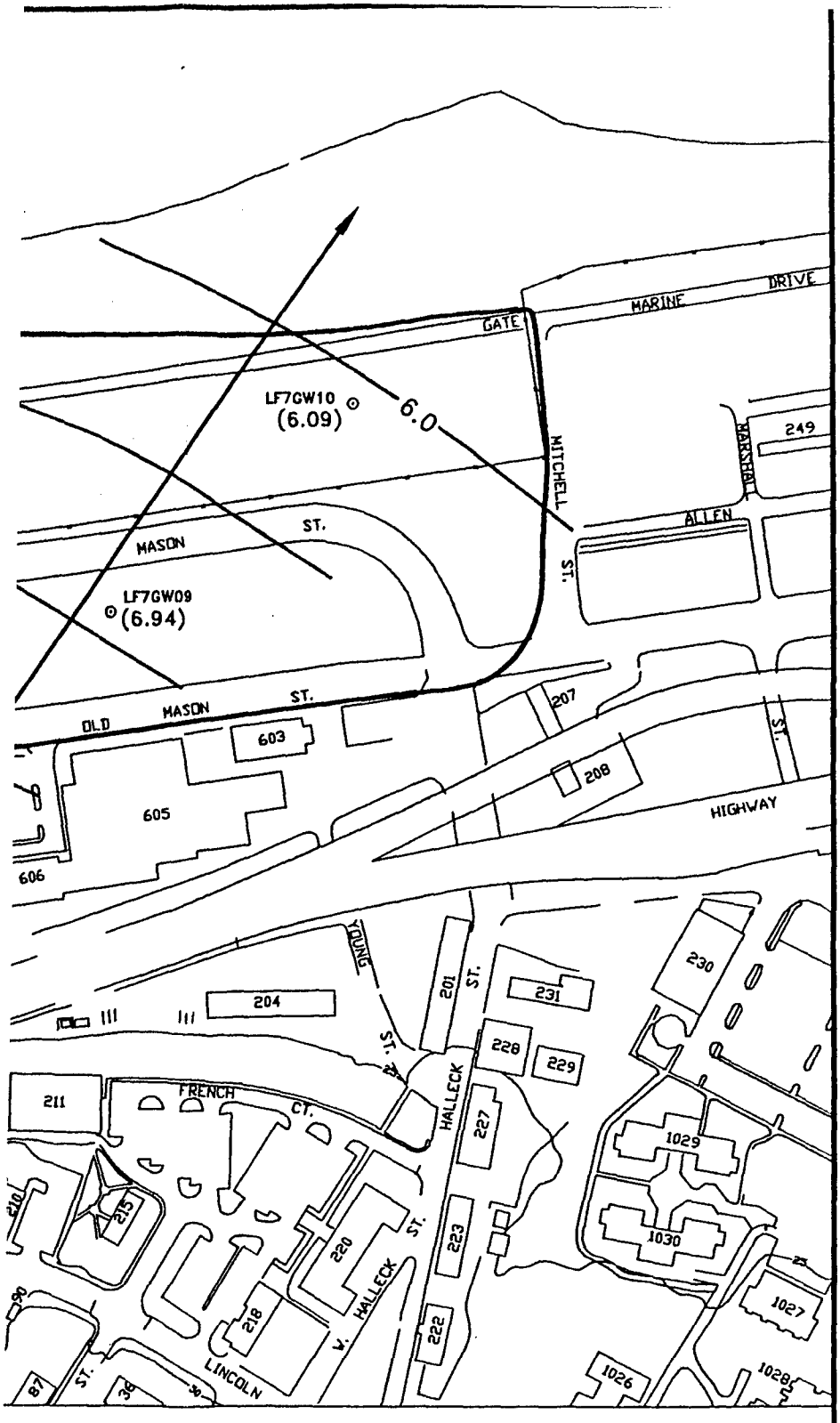
2

DA

CRIS
POTENT
HIG

PSF25065/DV1

Date: Januar



-N-

125 250

FEET

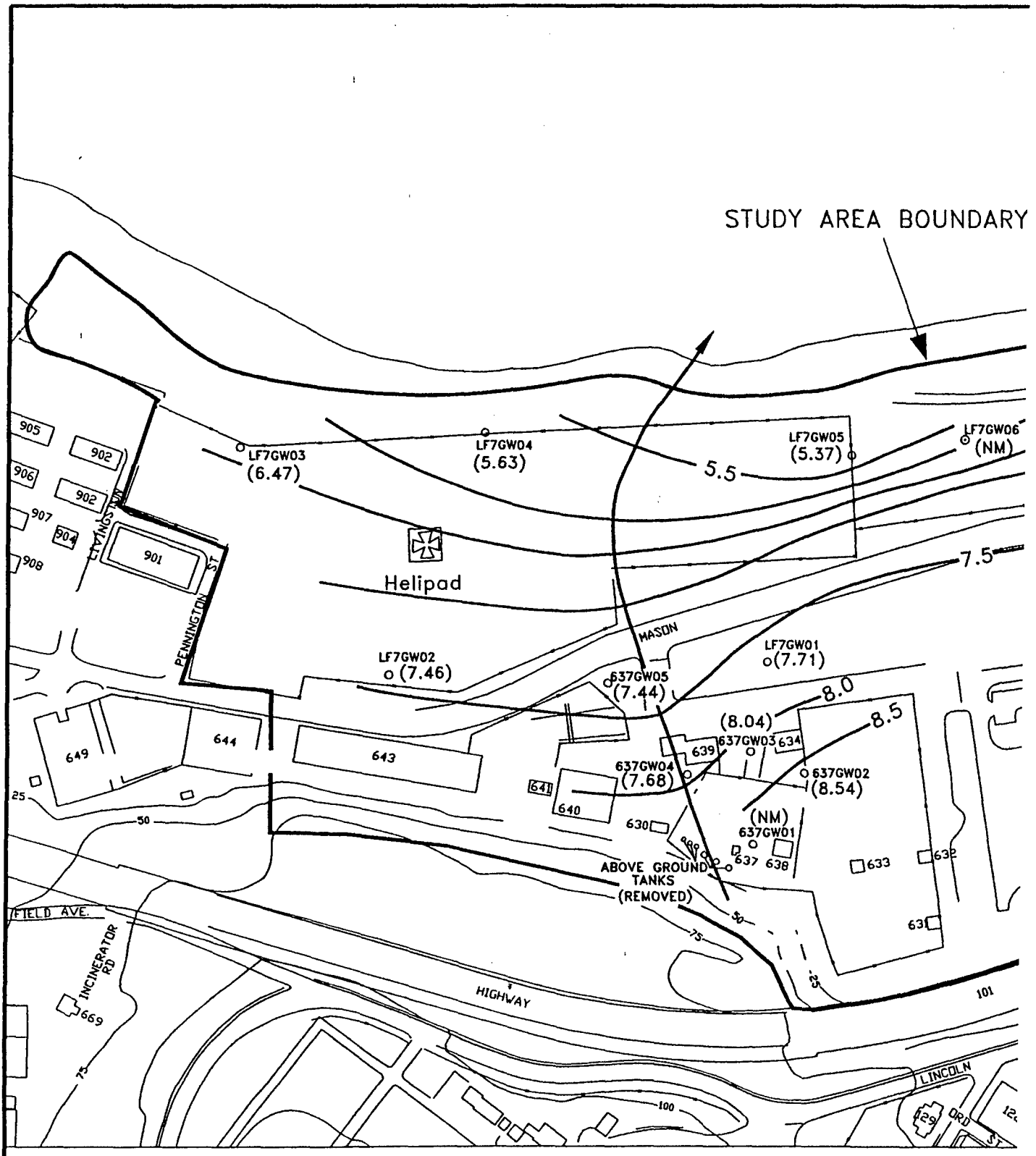
DAMES & MOORE

CRISSY FIELD STUDY AREA
POTENTIOMETRIC SURFACE MAP
HIGH TIDE, MARCH 1995

PSF25065/DV1

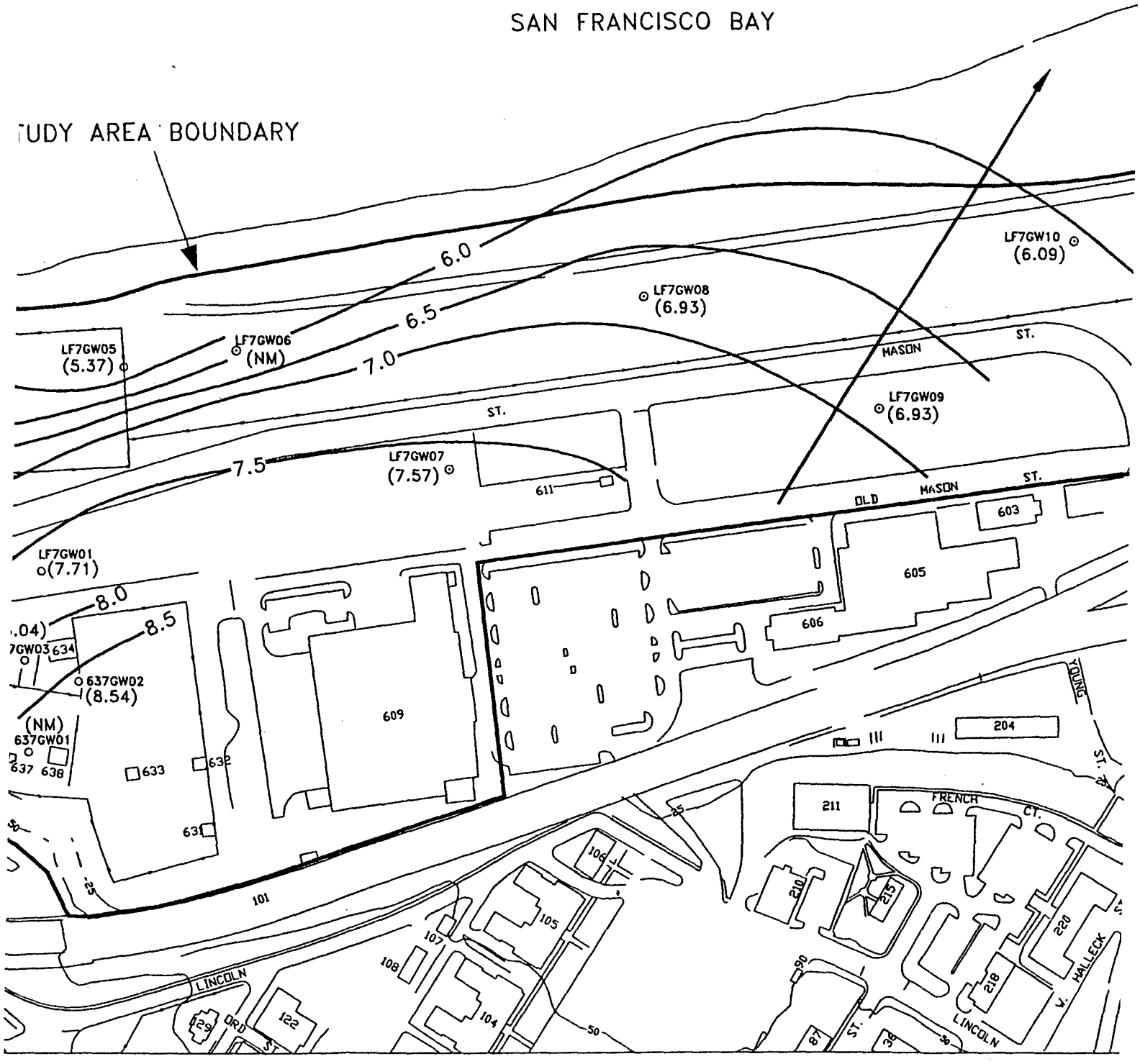
Date: January 1997 | Figure 5.3-6

3



EXPLANATION

- ○ MONITORING WELL
- ⊙ MONITORING WELL WITH SOIL SAMPLES
- (6.09) POTENTIOMETRIC SURFACE ELEVATION
  NM = NOT MEASURED
- —6.0— EQUIPOTENTIAL CONTOURS
  CONTOUR INTERVAL 0.5 FEET
- GROUNDWATER FLOW DIRECTION
- —100— TOPOGRAPHIC CONTOUR
  CONTOUR INTERVAL 25 FEET
- ELEVATIONS IN FEET–PRESIDIO LOWER LOW WATER



JUNDWATER FLOW DIRECTION

POGRAPHIC CONTOUR

NTOUR INTERVAL 25 FEET

EVATIONS IN
ET–PRESIDIO LOWER LOW WATER

NOTE: WATER–LEVEL MEASUREMENTS TAKEN
MARCH 16, 1995, 1650–1740 PST
LOW TIDE: 1650 PST, 0.2 FT–PLLW

–N–

0 125 250
FEET

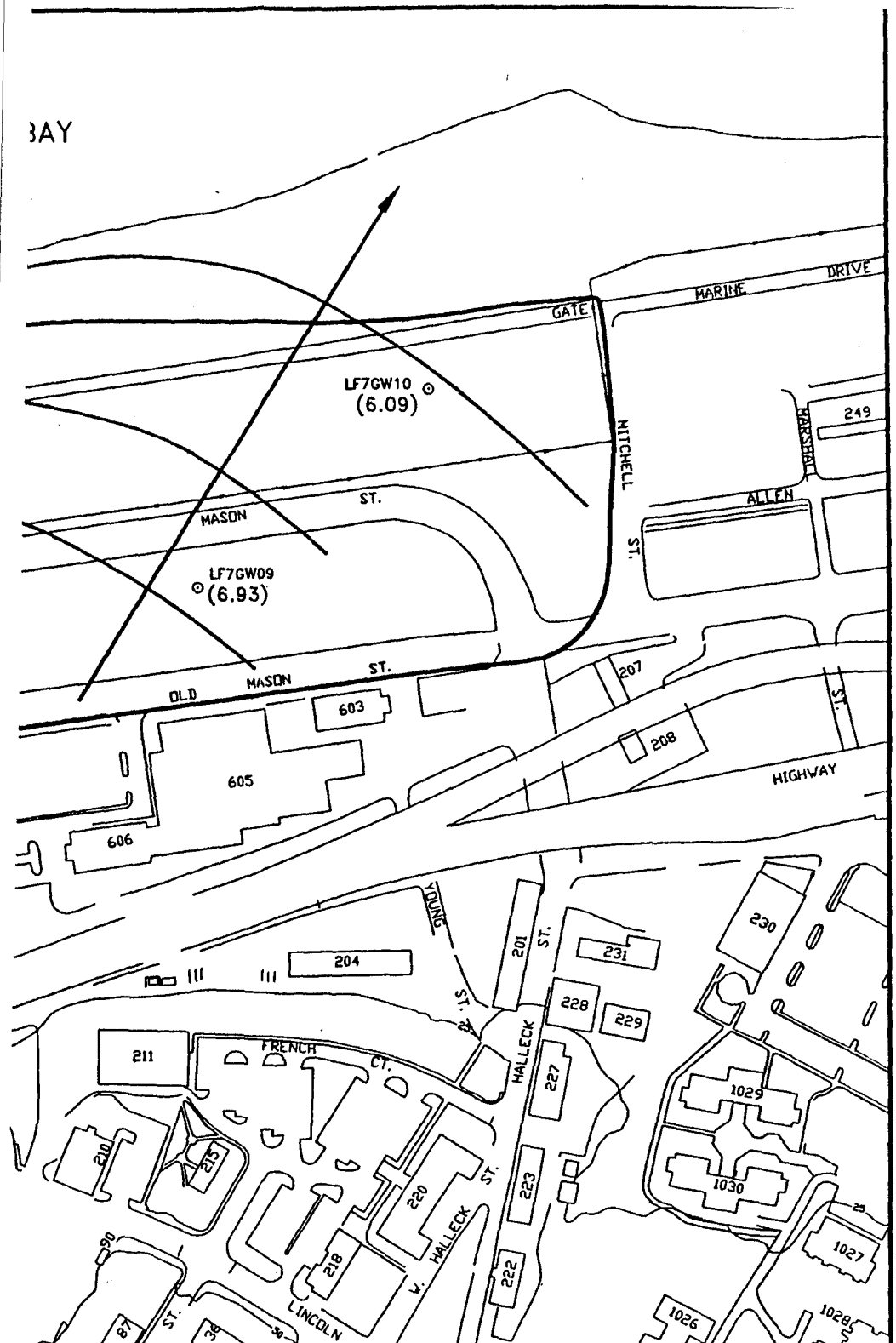
2

D

CRI
POTE
L

PSF25064/DV

Date: Janu



TAKEN
PST
PLLW

-N-

0 125 250

FEET

DAMES & MOORE

CRISSY FIELD STUDY AREA
POTENTIOMETRIC SURFACE MAP
LOW TIDE, MARCH 1995

PSF25064/DV2

Date: January 1997 | Figure 5.3-7

3

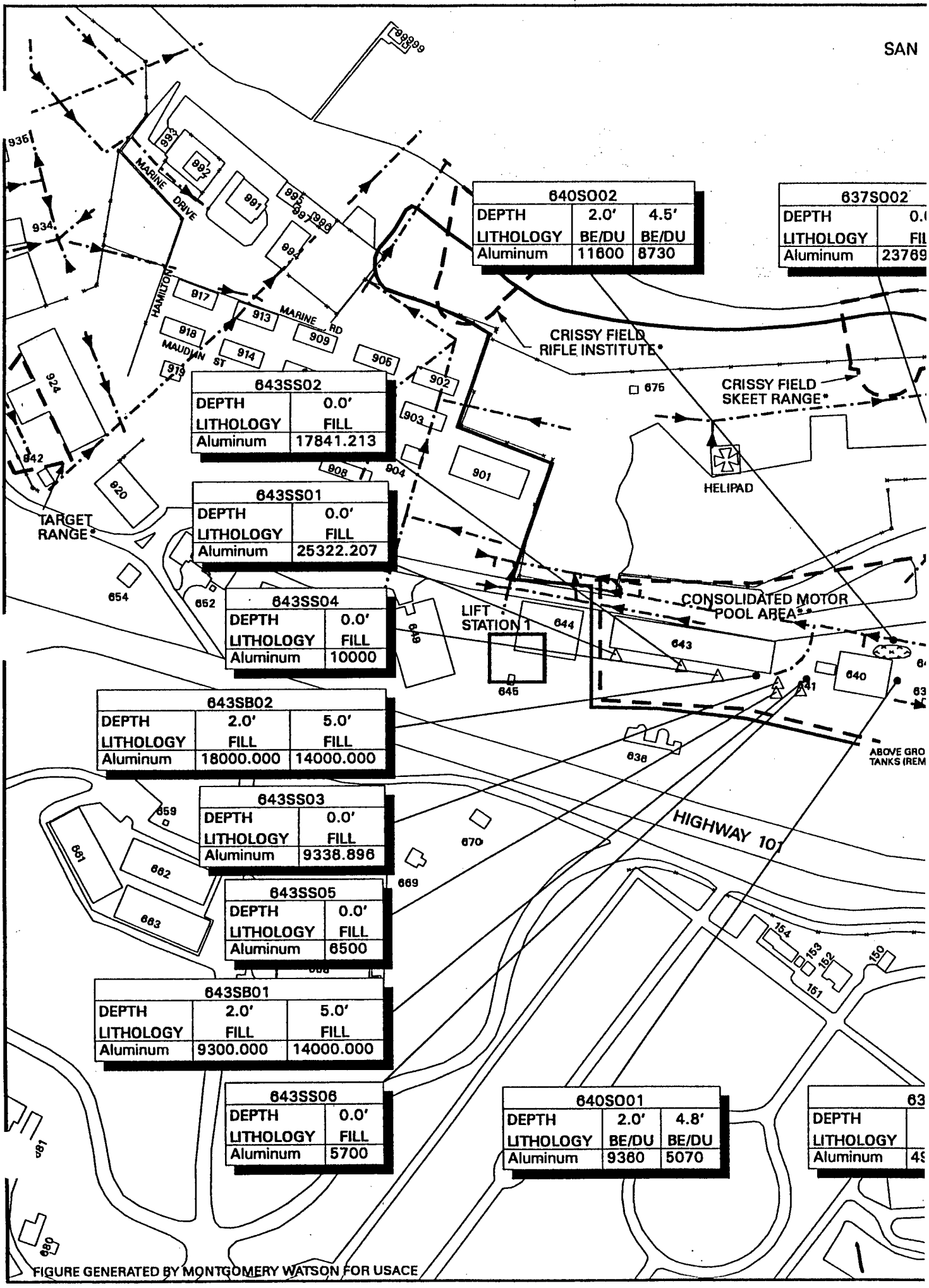
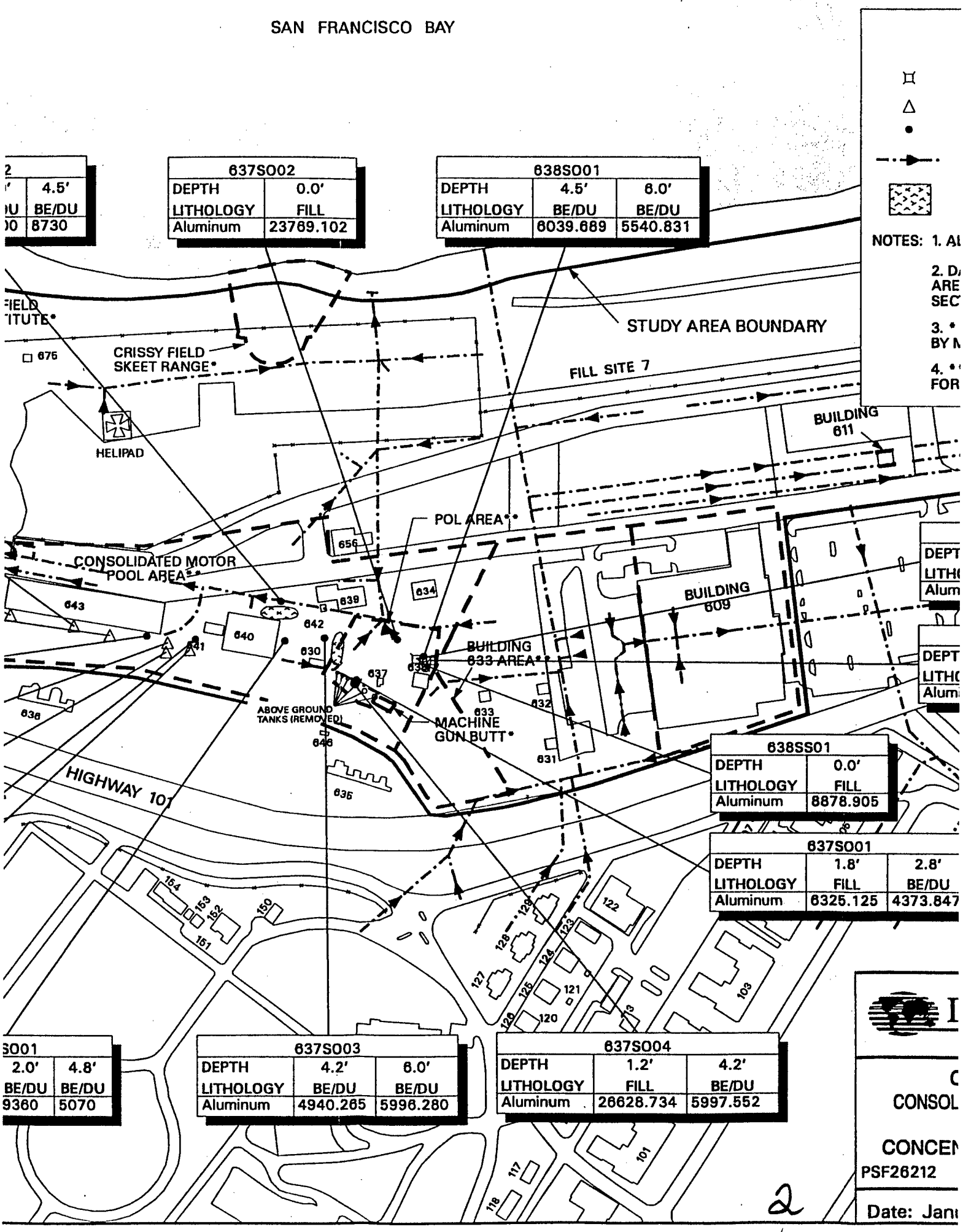
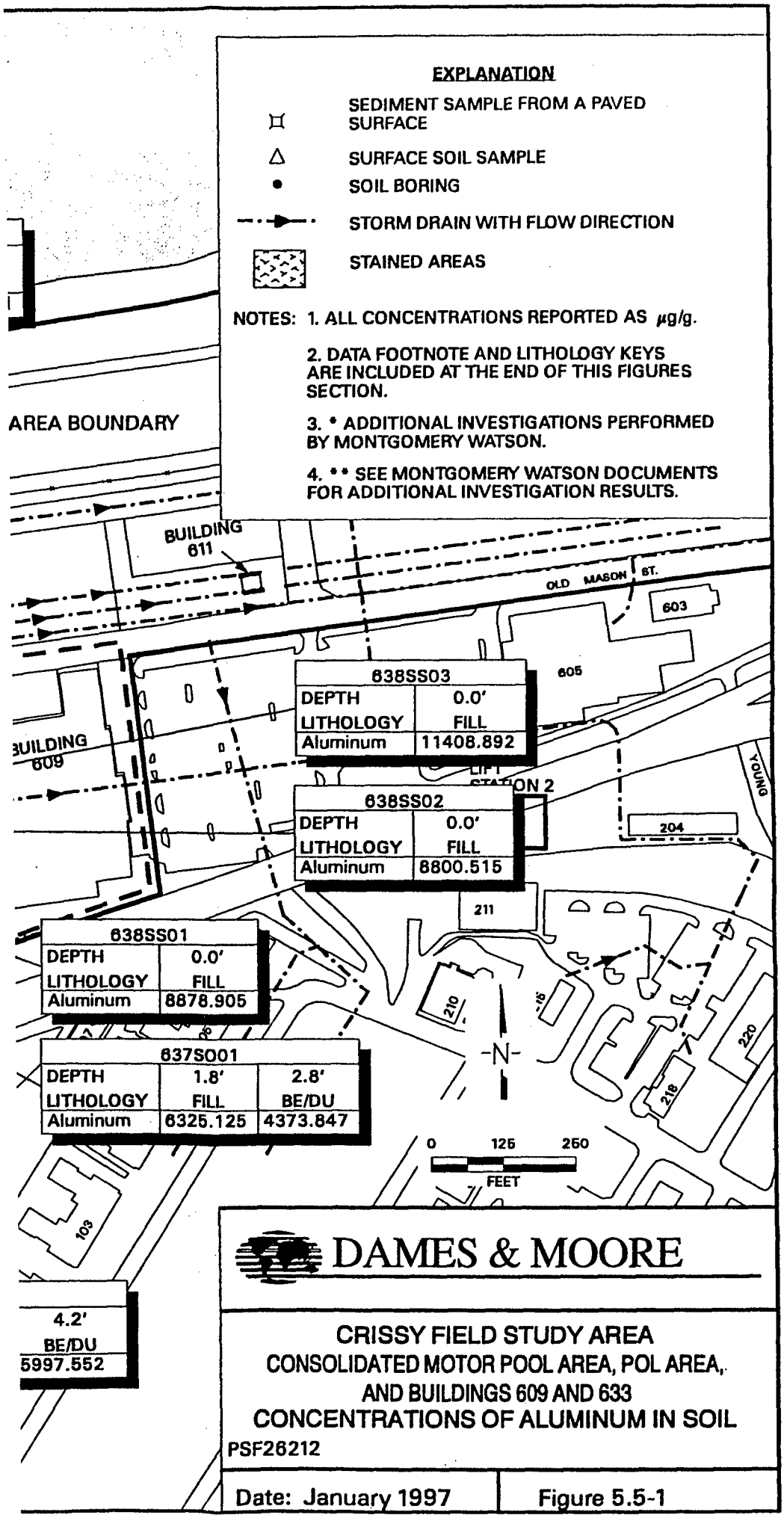


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

27 Dec 96 08:56:23 Friday, hamr ... y3.aml, plotfile base_CRISSY1_S_1.grn. PSF


SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Aluminum 23769.102
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Aluminum 6039.689 5540.831
4.5'
BE/DU
8730
STUDY AREA BOUNDARY
CRISSY FIELD SKEET RANGE*
FILL SITE 7
HELIPAD
BUILDING 611
POL AREA*
CONSOLIDATED MOTOR POOL AREA*
BUILDING 609
BUILDING 633 AREA*
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
HIGHWAY 101
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Aluminum 8878.905
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Aluminum 6325.125 4373.847
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Aluminum 4940.265 5996.280
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Aluminum 26628.734 5997.552
2.0' 4.8'
BE/DU BE/DU
9360 5070
NOTES: 1. AL
2. DA ARE SEC
3. * BY M
4. * FOR
CONSOL
CONCEI
PSF26212
Date: Jan
2



DAMES & MOORE

CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA, AND BUILDINGS 609 AND 633
CONCENTRATIONS OF ALUMINUM IN SOIL

PSF26212

Date: January 1997 | Figure 5.5-1

3

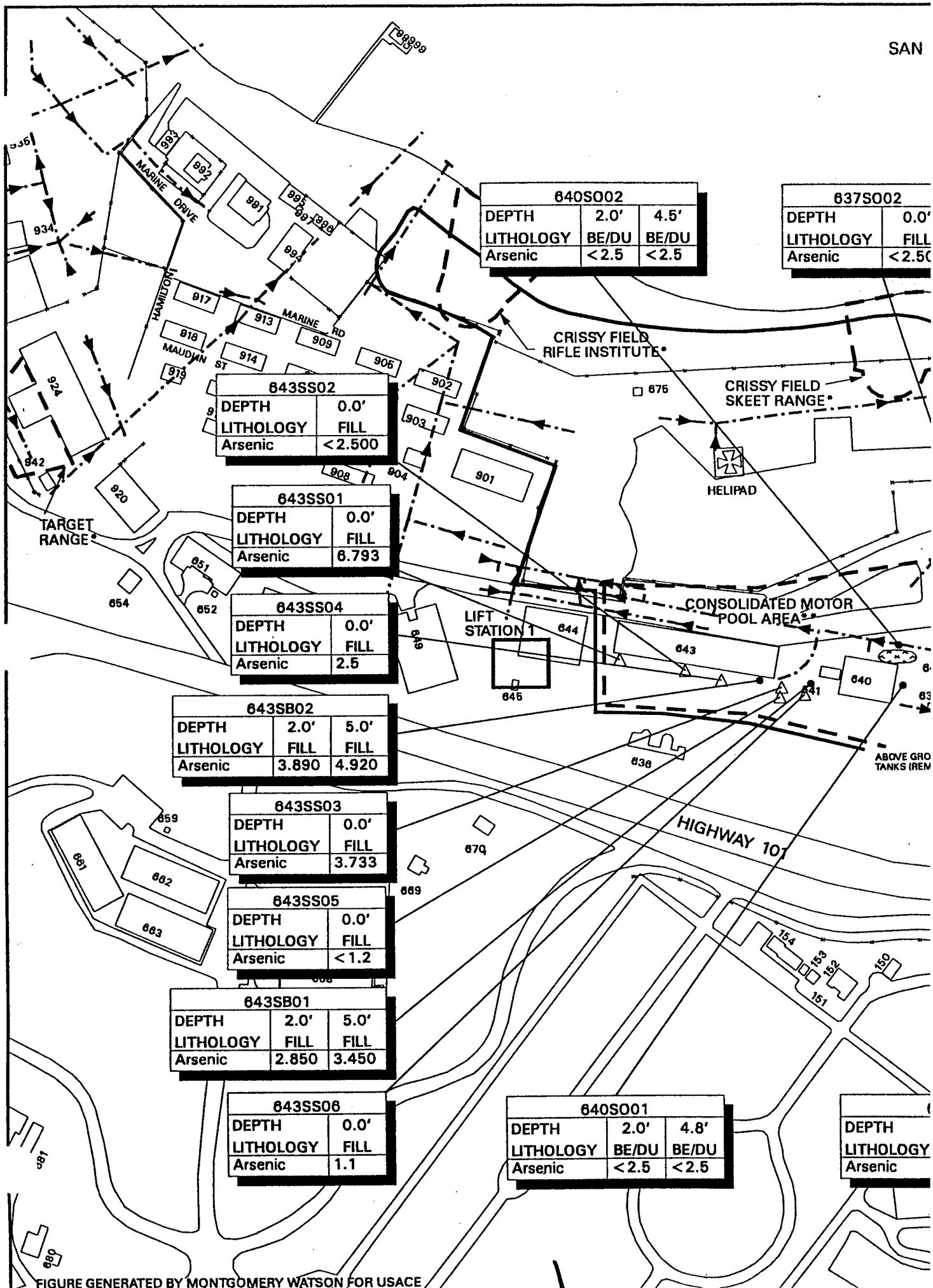
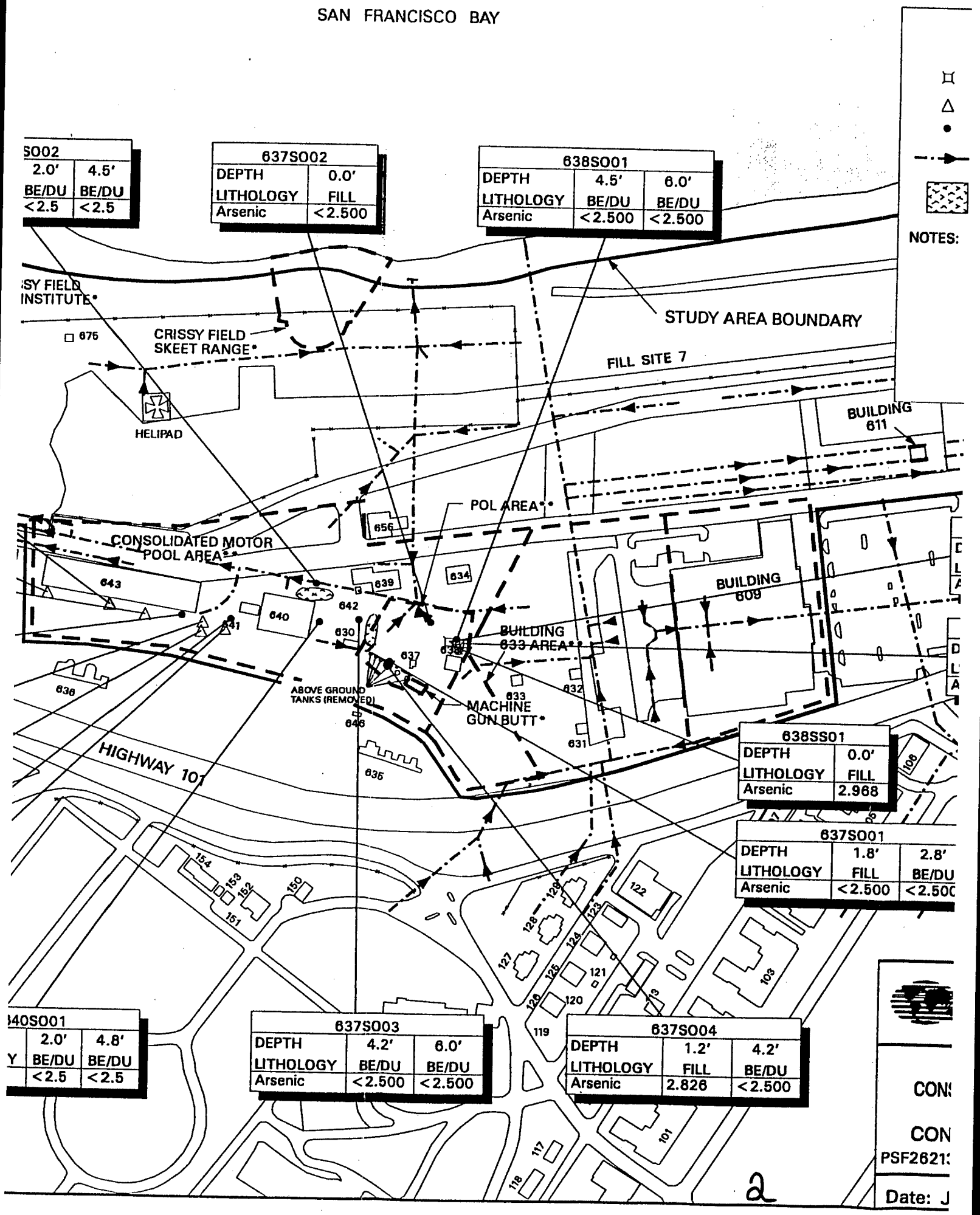
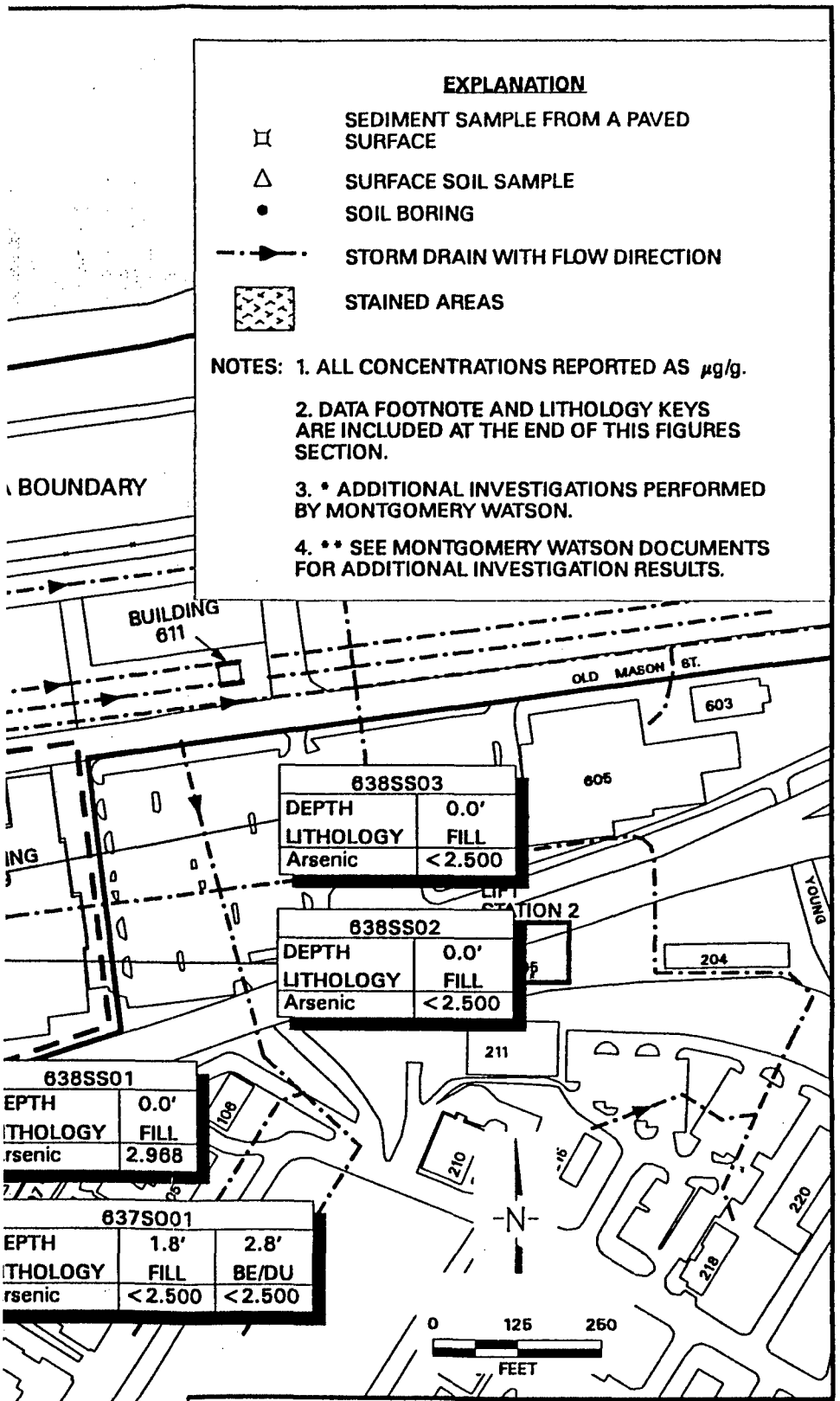


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

27 Dec 96 09:00:06 Friday, bar "7_v3.aml, plotfile base_CRISSY1_5_3.grn, PSF


SAN FRANCISCO BAY
SO02
2.0' 4.5'
BE/DU BE/DU
<2.5 <2.5
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Arsenic <2.500
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Arsenic <2.500 <2.500
NOTES:
SY FIELD
INSTITUTE
CRISSY FIELD
SKEET RANGE
675
STUDY AREA BOUNDARY
FILL SITE 7
HELIPAD
BUILDING
611
POL AREA
CONSOLIDATED MOTOR
POOL AREA
656
643
639
634
642
640
641
630
BUILDING
609
BUILDING
633 AREA
638
637
636
ABOVE GROUND
TANKS (REMOVED)
646
633
MACHINE
GUN BUTT
632
631
HIGHWAY 101
635
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Arsenic 2.968
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Arsenic <2.500 <2.50
154
153
152
151
150
129
128
123
122
124
127
125
121
126
120
119
103
101
117
118
40SO01
2.0' 4.8'
BE/DU BE/DU
<2.5 <2.5
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Arsenic <2.500 <2.500
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Arsenic 2.826 <2.500
CONS
CON
PSF2621
Date: J
2



DAMES & MOORE

CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA,
AND BUILDINGS 609 AND 633
CONCENTRATIONS OF ARSENIC IN SOIL

PSF26213

Date: January 1997 | Figure 5.5-2

3

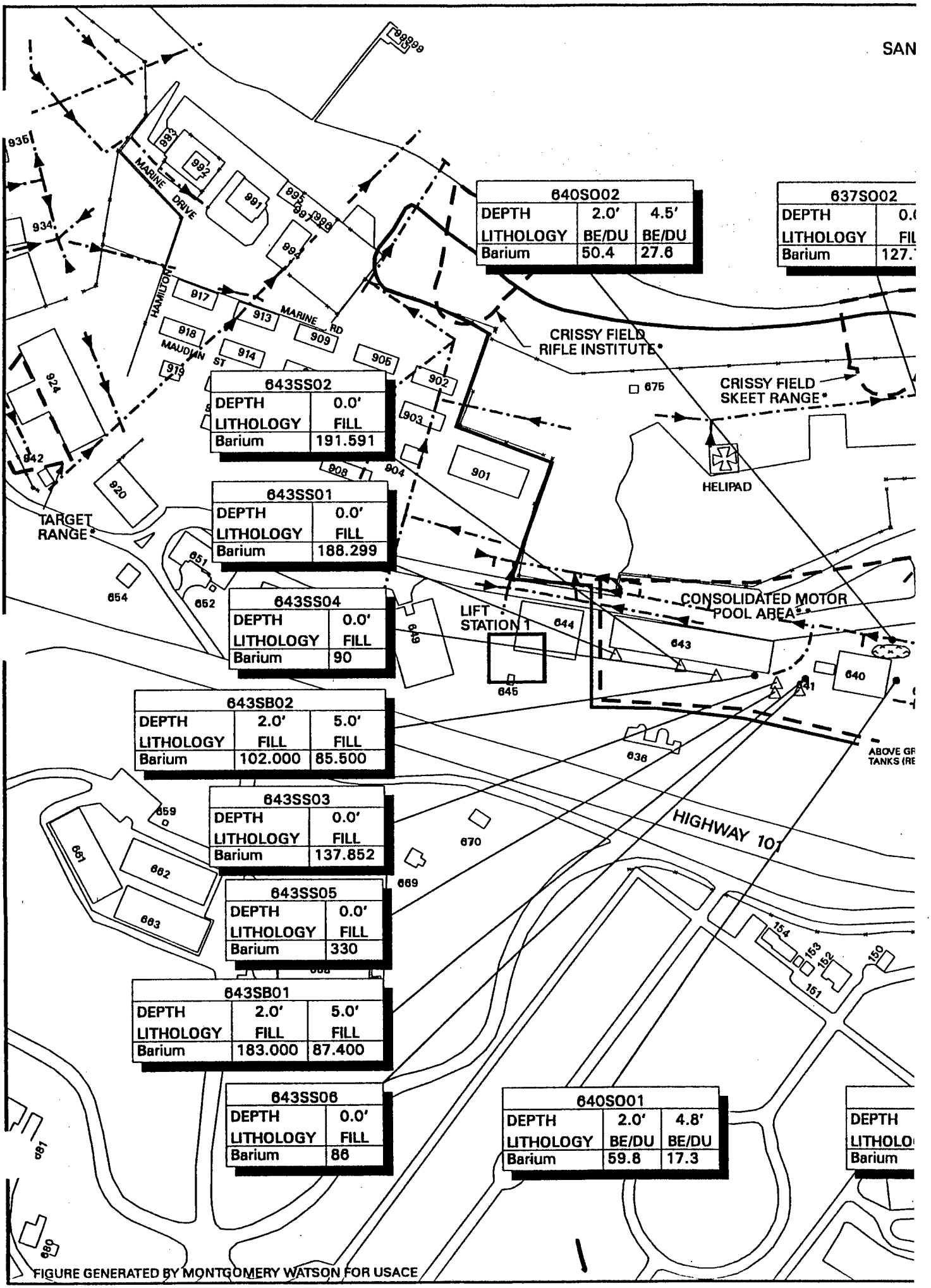
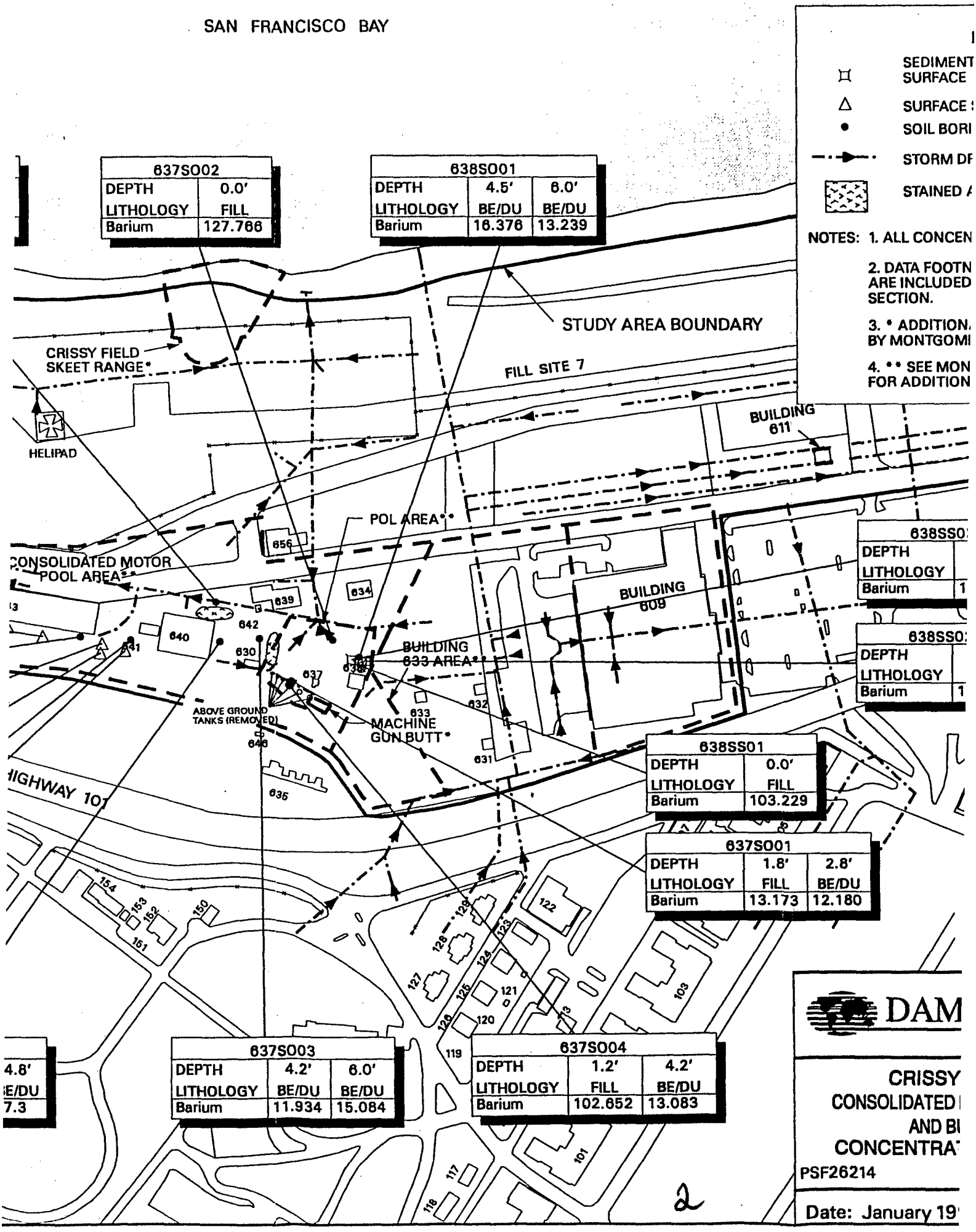
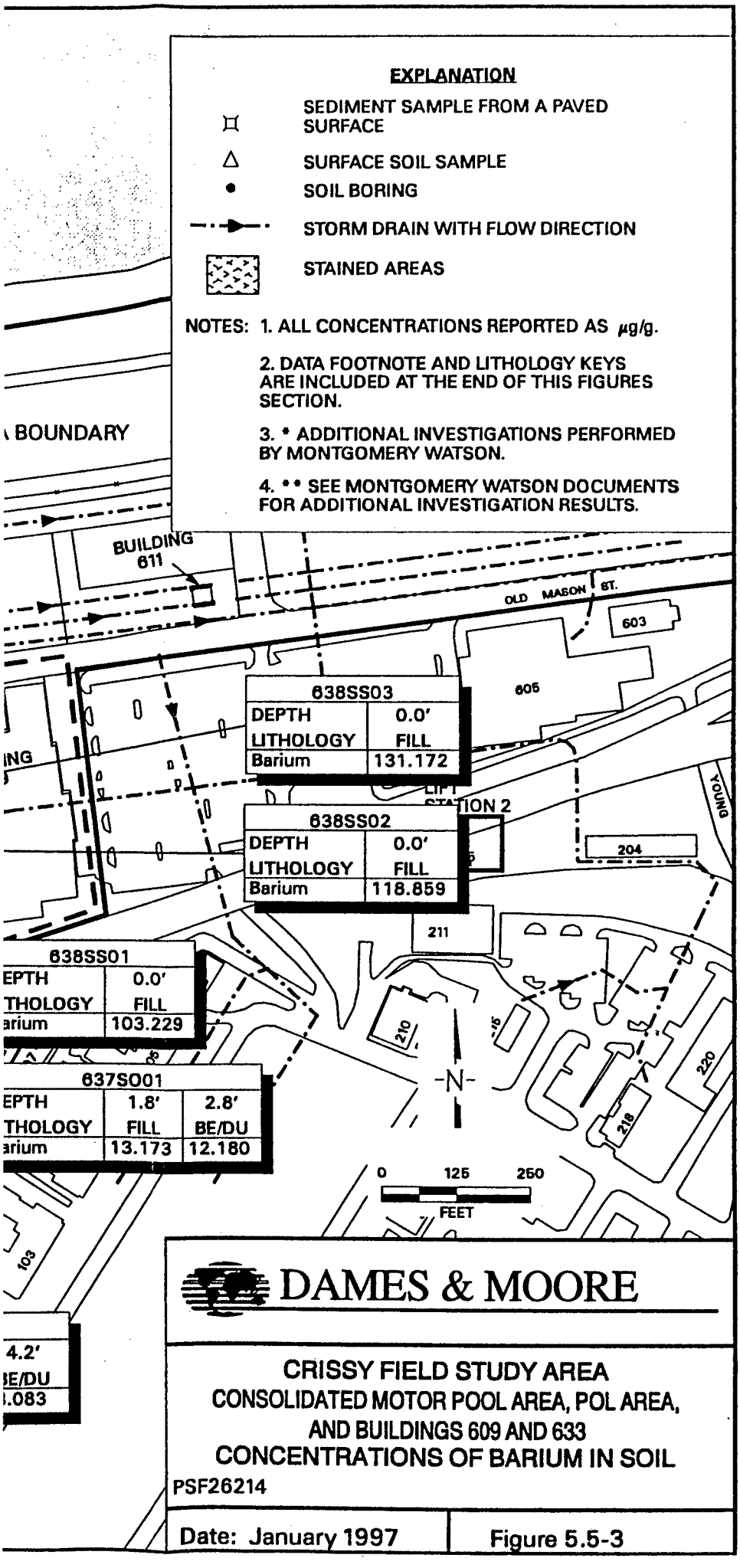


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

21 Dec 96 09:02:49 Friday, bar v3.aml, plotfile: base_CRISSY1_S_4.grn.PSF


SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Barium 127.766
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Barium 16.376 13.239
STUDY AREA BOUNDARY
CRISSY FIELD SKEET RANGE*
FILL SITE 7
HELIPAD
BUILDING 611
POL AREA**
CONSOLIDATED MOTOR POOL AREA**
BUILDING 609
BUILDING 633 AREA**
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
HIGHWAY 101
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Barium 103.229
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Barium 13.173 12.180
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Barium 11.934 15.084
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Barium 102.652 13.083
SEDIMENT SURFACE
SURFACE
SOIL BORI
STORM DF
STAINED A
NOTES: 1. ALL CONCEN
2. DATA FOOTN ARE INCLUDED SECTION.
3. * ADDITION BY MONTGOMI
4. ** SEE MON FOR ADDITION
DAM
CRISSY
CONSOLIDATED
AND BI
CONCENTRA
PSF26214
Date: January 19
2


EXPLANATION
SEDIMENT SAMPLE FROM A PAVED SURFACE
SURFACE SOIL SAMPLE
SOIL BORING
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
4. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
BOUNDARY
BUILDING 611
OLD MASON ST.
603
605
YOUNG
204
211
210
220
218
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Barium 131.172
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Barium 118.859
638SS01
EPTH 0.0'
THOLOGY FILL
arium 103.229
637SO01
EPTH 1.8' 2.8'
THOLOGY FILL BE/DU
arium 13.173 12.180
4.2'
BE/DU
.083
-N-
0 125 250
FEET
DAMES & MOORE
CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA, AND BUILDINGS 609 AND 633
CONCENTRATIONS OF BARIUM IN SOIL
PSF26214
Date: January 1997
Figure 5.5-3

3

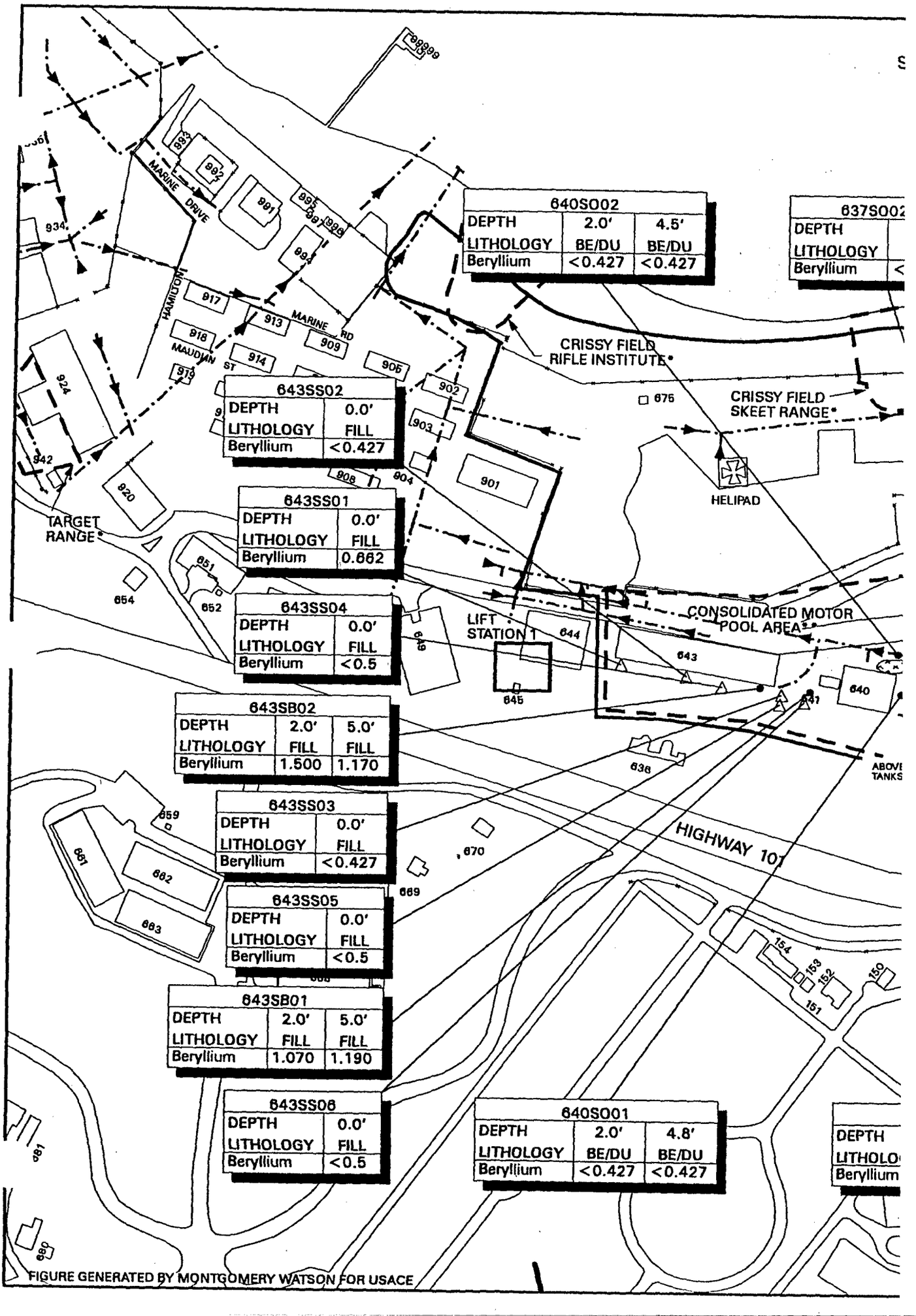
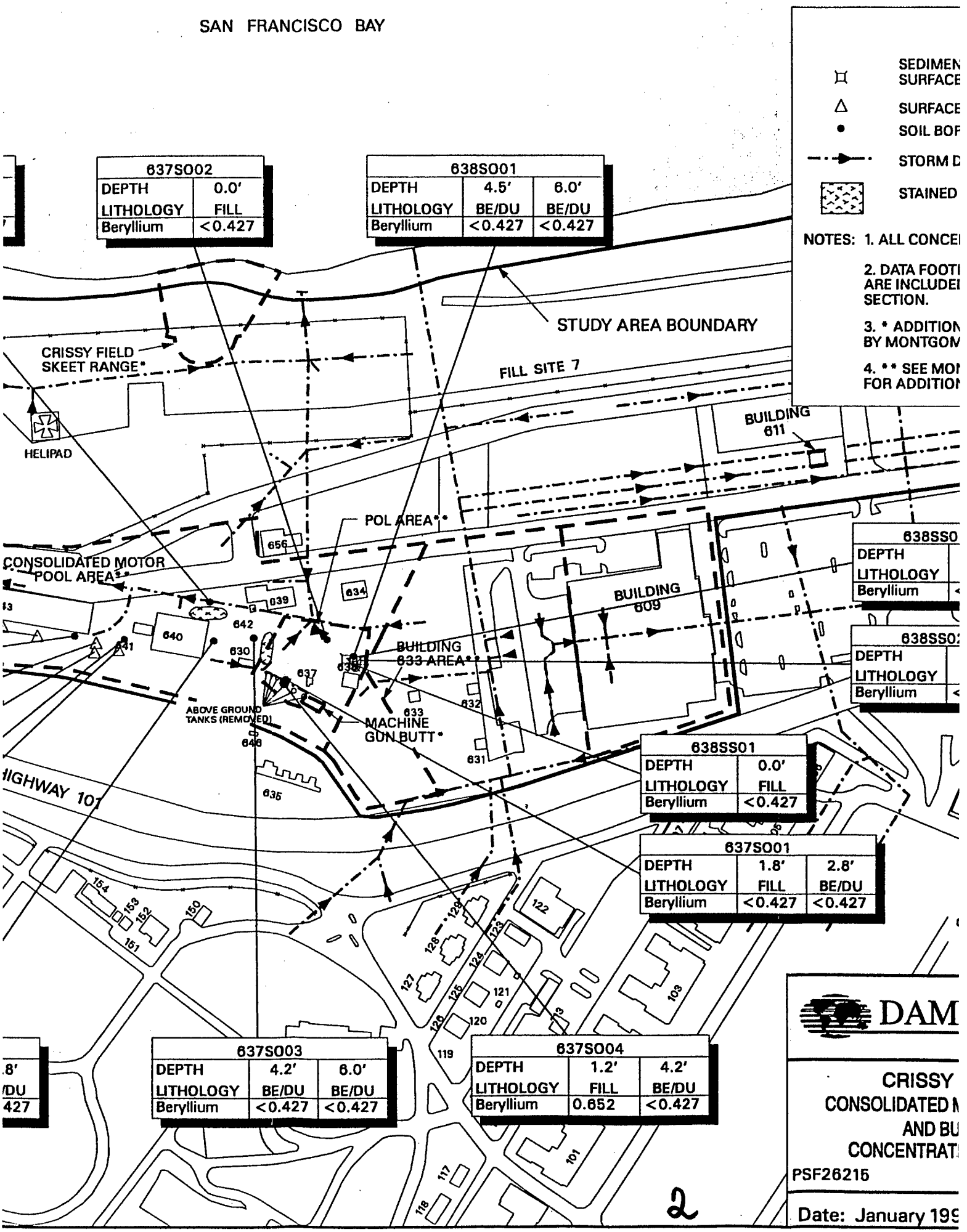
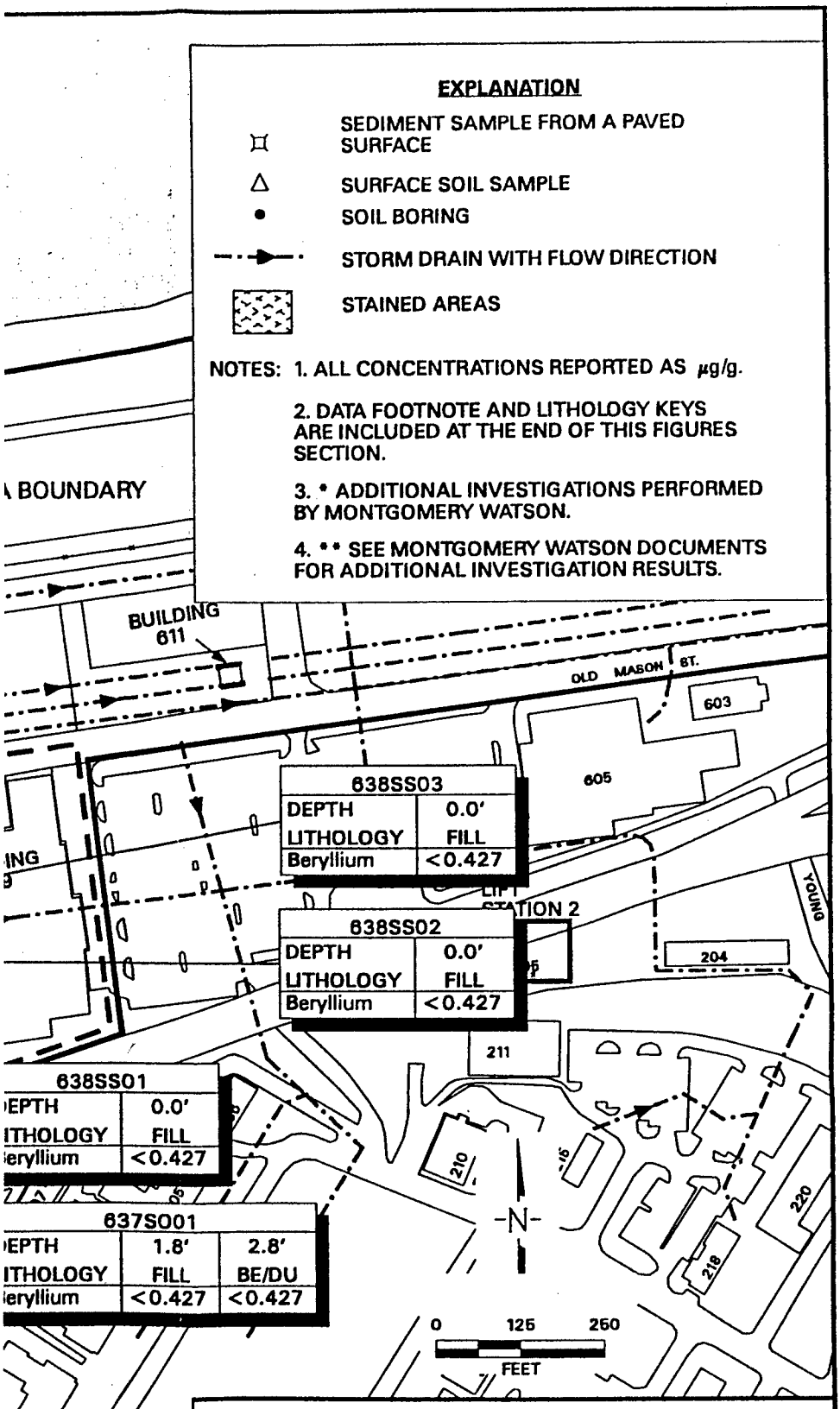


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE


SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Beryllium <0.427
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Beryllium <0.427 <0.427
SEDIMEN
SURFACE
SURFACE
SOIL BOF
STORM D
STAINED
NOTES: 1. ALL CONCE
2. DATA FOOT
ARE INCLUDE
SECTION.
3. * ADDITION
BY MONTGOM
4. ** SEE MO
FOR ADDITION
STUDY AREA BOUNDARY
CRISSY FIELD
SKEET RANGE*
FILL SITE 7
HELIPAD
BUILDING
611
POL AREA**
CONSOLIDATED MOTOR
POOL AREA**
BUILDING
609
BUILDING
633 AREA**
ABOVE GROUND
TANKS (REMOVED)
MACHINE
GUN BUTT*
HIGHWAY 101
638SS0
DEPTH
LITHOLOGY
Beryllium
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Beryllium <0.427
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Beryllium <0.427 <0.427
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Beryllium <0.427 <0.427
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Beryllium 0.652 <0.427
DAM
CRISSY
CONSOLIDATED M
AND BU
CONCENTRAT
PSF26215
Date: January 19
2



DAMES & MOORE

CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA,
AND BUILDINGS 609 AND 633
CONCENTRATIONS OF BERYLLIUM IN SOIL

PSF26215

Date: January 1997 | Figure 5.5-4

3

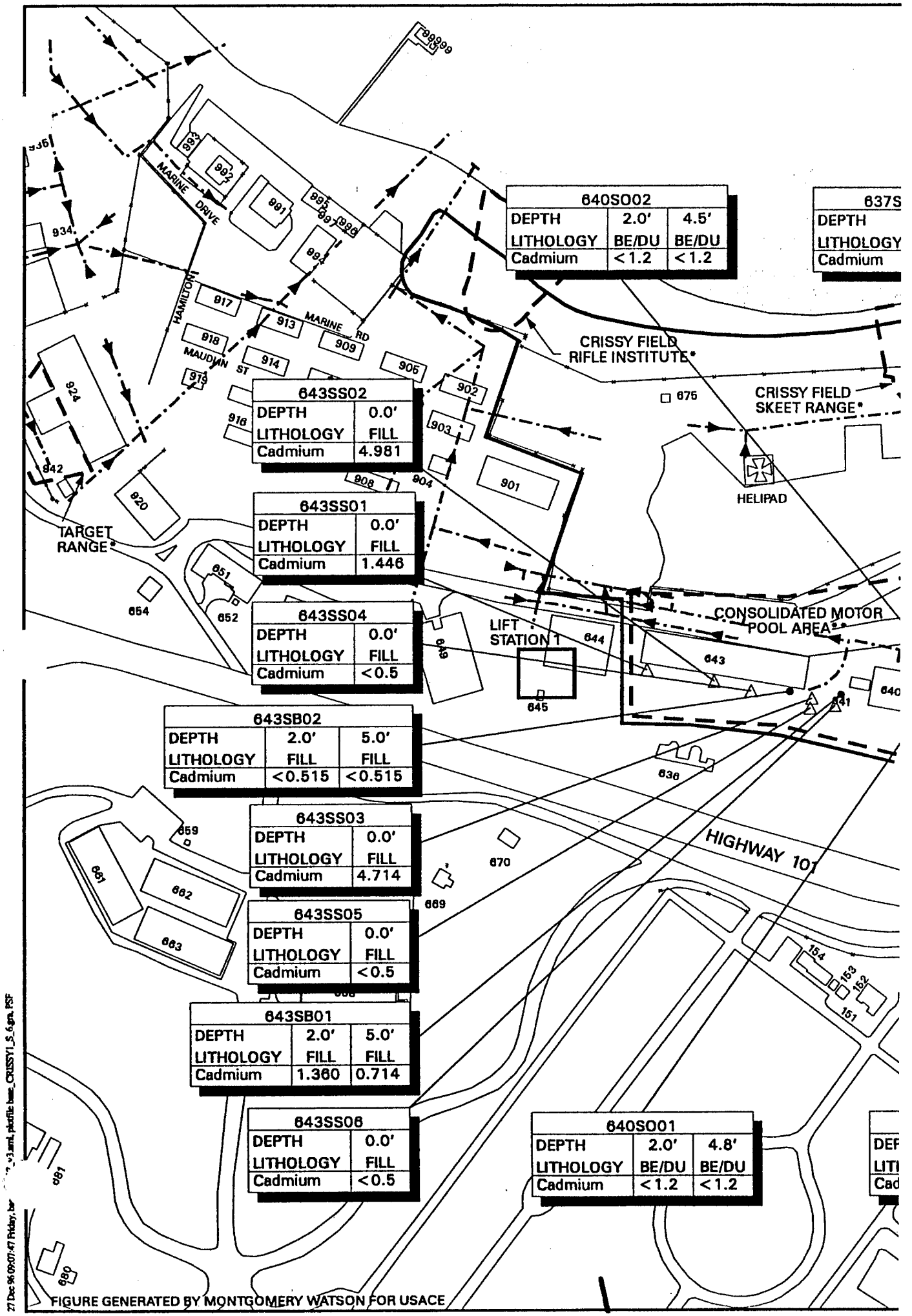
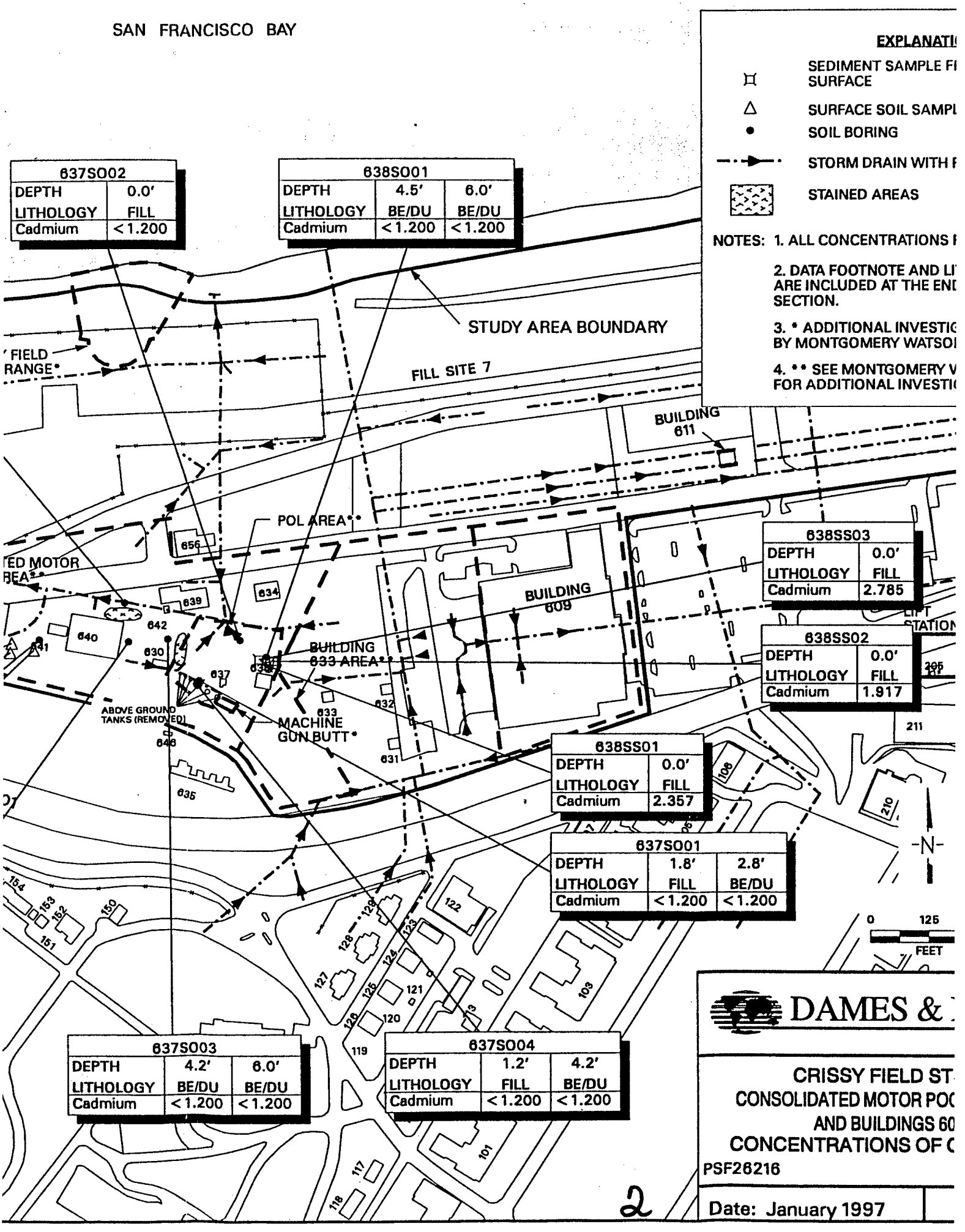
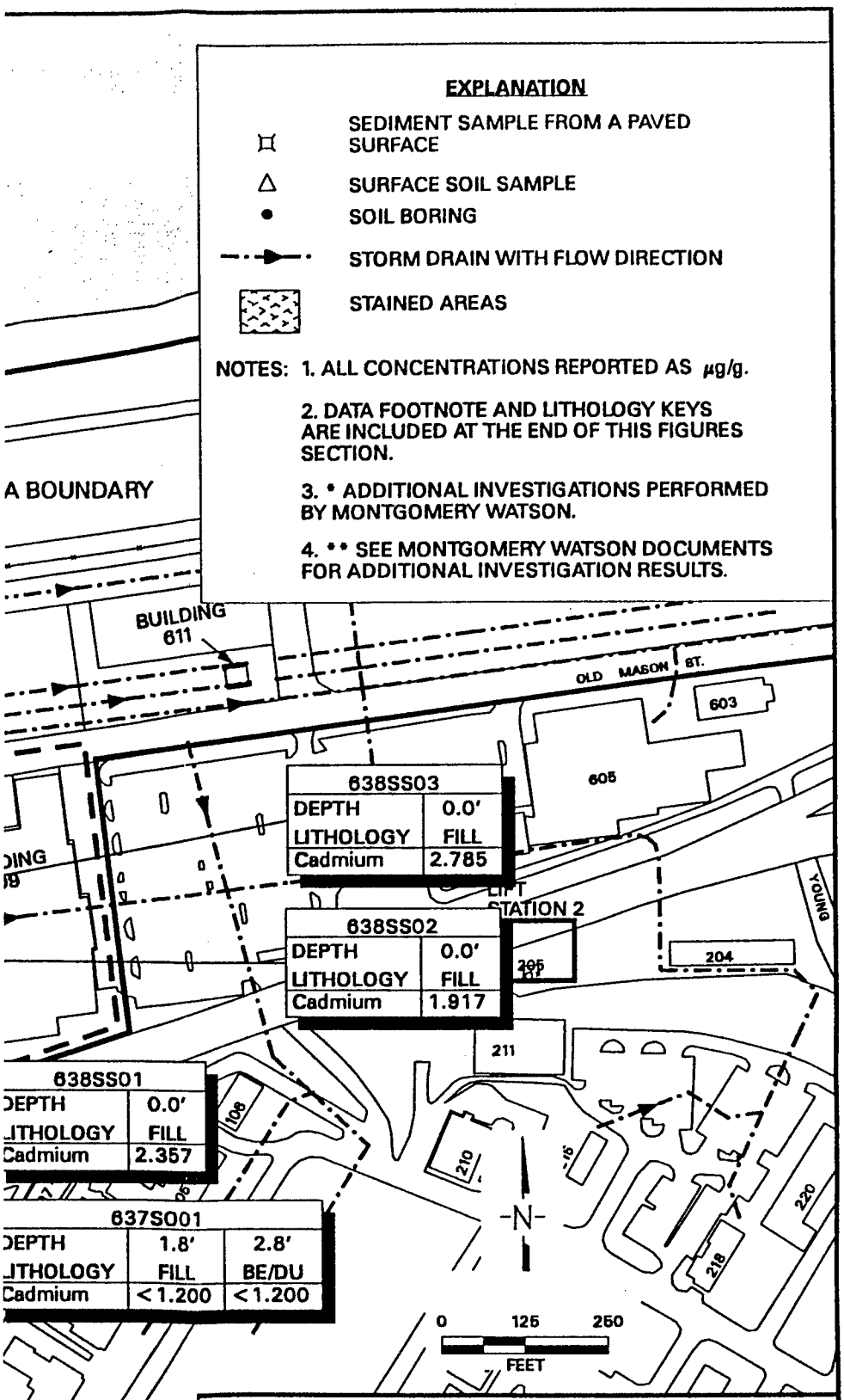


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

27 Dec 96 09:07:47 Friday, bar _v3.aml, plotfile base_CRISSY1_5_6.gra, PSF


SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Cadmium <1.200
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Cadmium <1.200 <1.200
STUDY AREA BOUNDARY
FILL SITE 7
BUILDING 611
POL AREA**
BUILDING 609
BUILDING 633 AREA**
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Cadmium 2.785
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Cadmium 1.917
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Cadmium 2.357
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Cadmium <1.200 <1.200
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Cadmium <1.200 <1.200
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Cadmium <1.200 <1.200
EXPLANATI
SEDIMENT SAMPLE FI
SURFACE
SURFACE SOIL SAMPL
SOIL BORING
STORM DRAIN WITH F
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS F
2. DATA FOOTNOTE AND LI
ARE INCLUDED AT THE END
SECTION.
3. * ADDITIONAL INVESTIG
BY MONTGOMERY WATSON
4. ** SEE MONTGOMERY W
FOR ADDITIONAL INVESTI
-N-
0 125
FEET
DAMES &
CRISSY FIELD ST
CONSOLIDATED MOTOR POO
AND BUILDINGS 60
CONCENTRATIONS OF C
PSF26216
Date: January 1997



DAMES & MOORE

CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA, AND BUILDINGS 609 AND 633
CONCENTRATIONS OF CADMIUM IN SOIL

PSF26216

Date: January 1997 | Figure 5.5-5

3

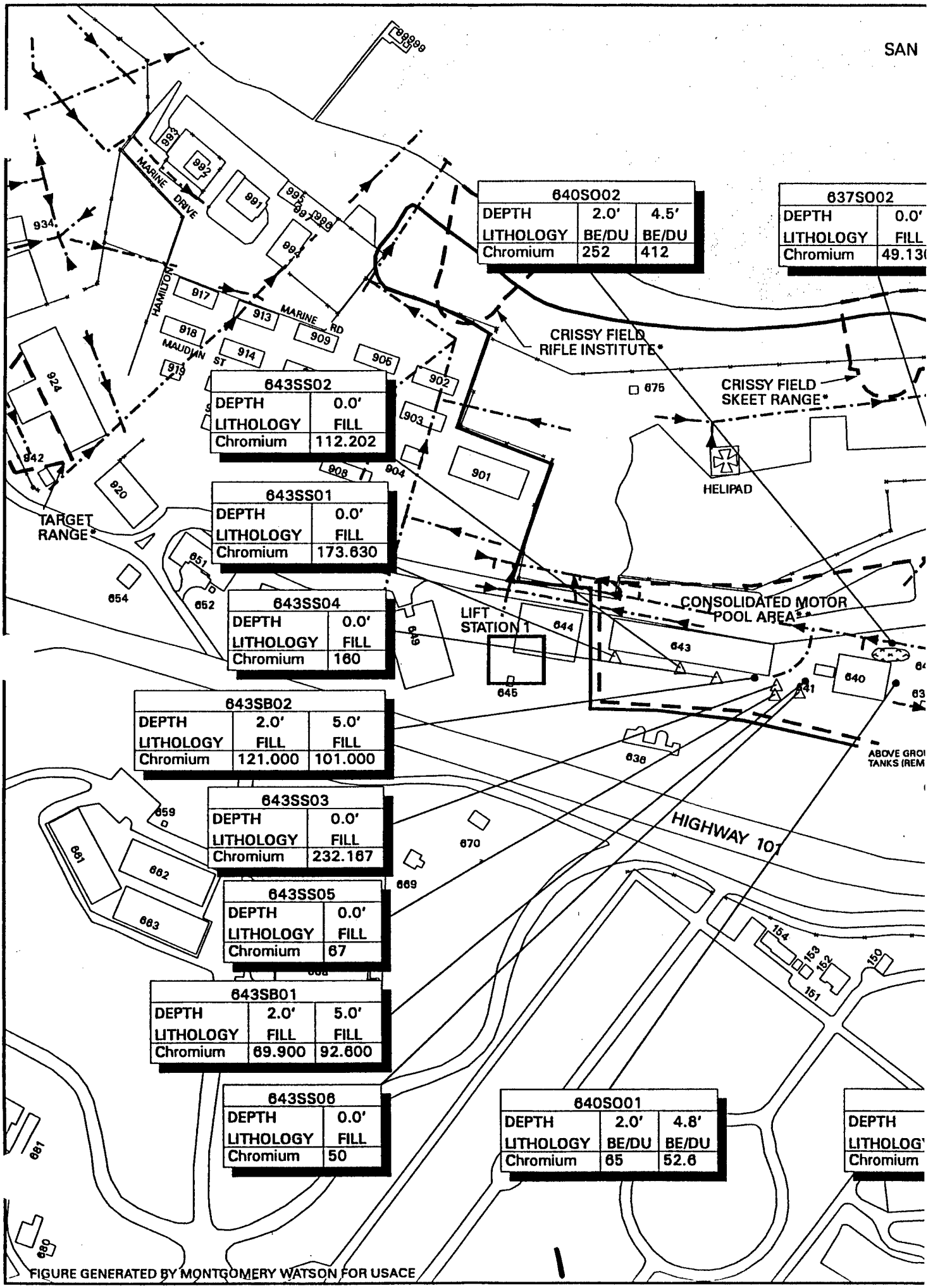
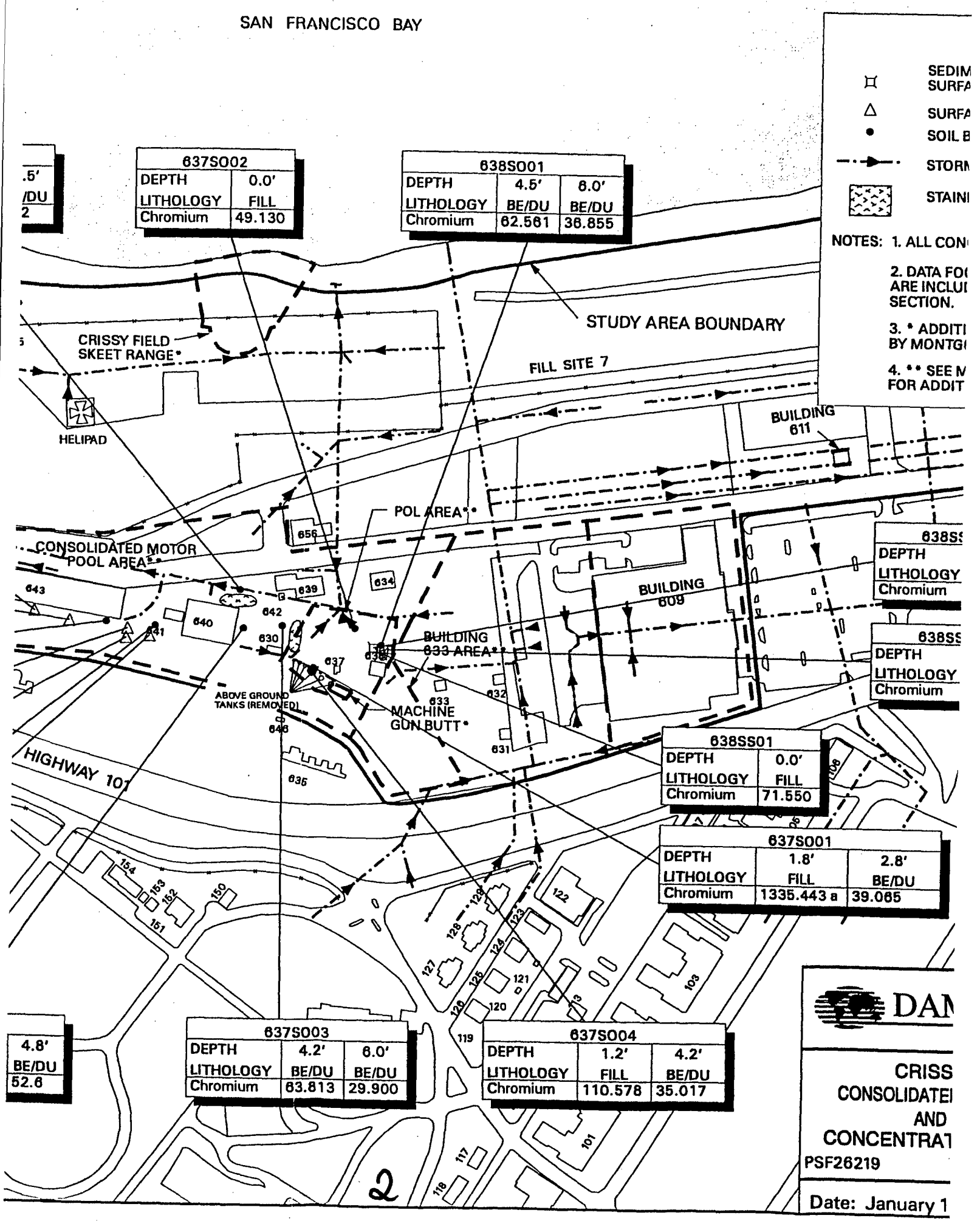
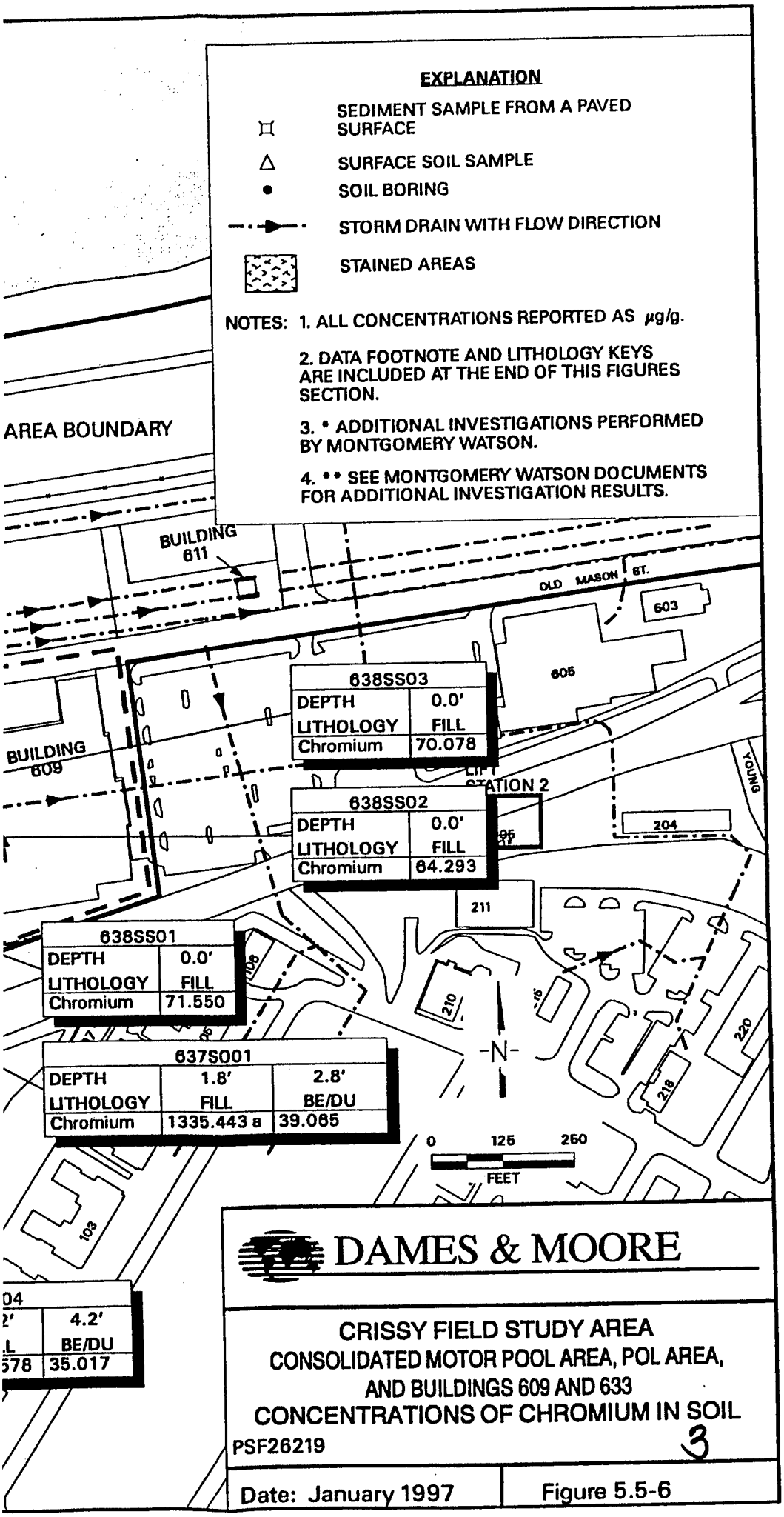


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

27 Dec 96 09:09:29 Friday ...17_v3.aml, plotfile base_CRISSY1_5_7.grn, PSF


SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Chromium 49.130
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Chromium 62.561 36.855
STUDY AREA BOUNDARY
CRISSY FIELD SKEET RANGE*
FILL SITE 7
HELIPAD
BUILDING 611
POL AREA**
CONSOLIDATED MOTOR POOL AREA**
BUILDING 609
BUILDING 633 AREA**
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
HIGHWAY 101
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Chromium 71.550
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Chromium 1335.443 a 39.065
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Chromium 83.813 29.900
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Chromium 110.578 35.017
4.8'
BE/DU
52.6
NOTES: 1. ALL CON
2. DATA FO
ARE INCLU
SECTION.
3. * ADDITI
BY MONTG
4. ** SEE M
FOR ADDIT
CRISS
CONSOLIDATE
AND
CONCENTRAT
PSF26219
Date: January 1
2



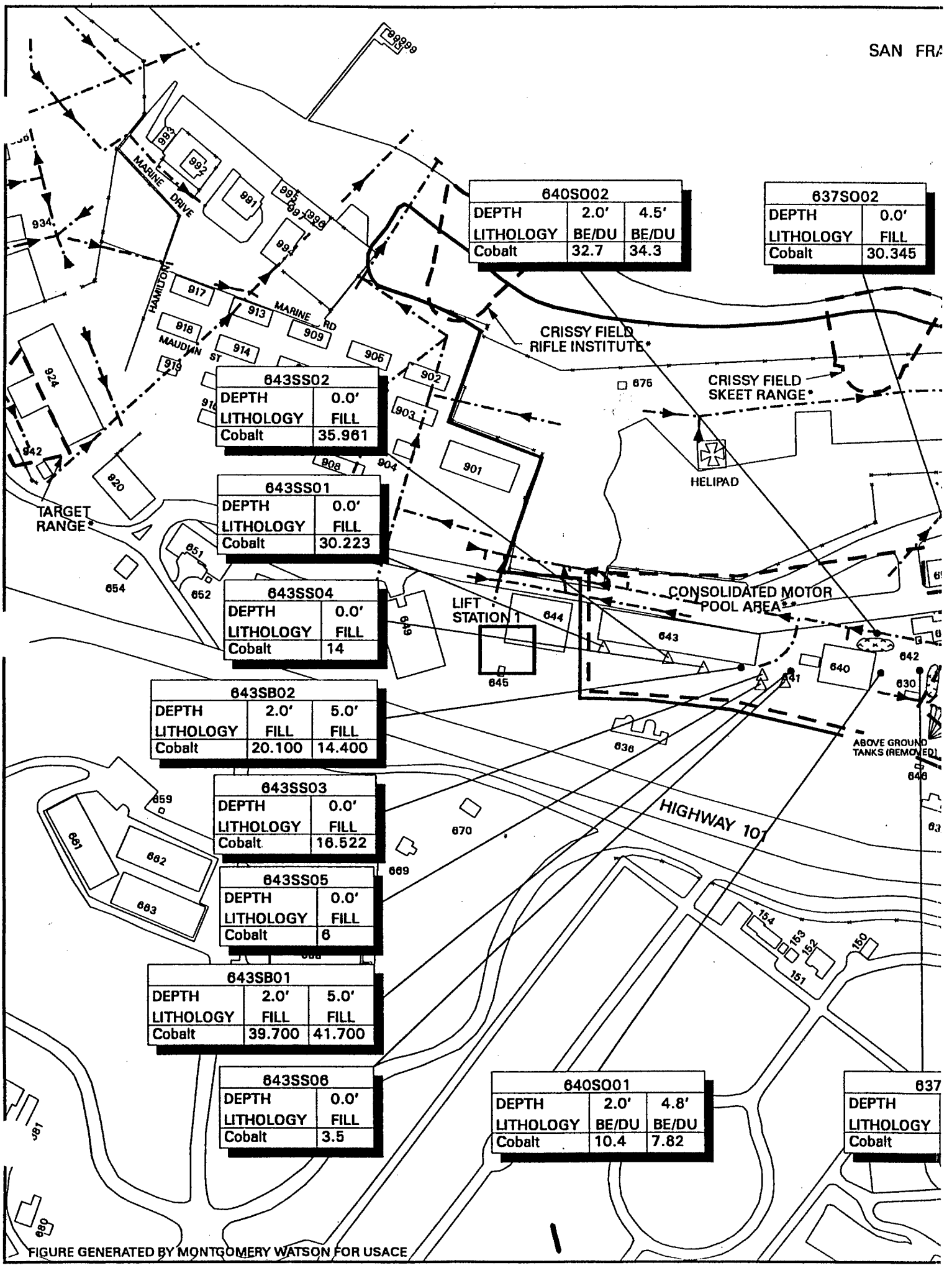
DAMES & MOORE

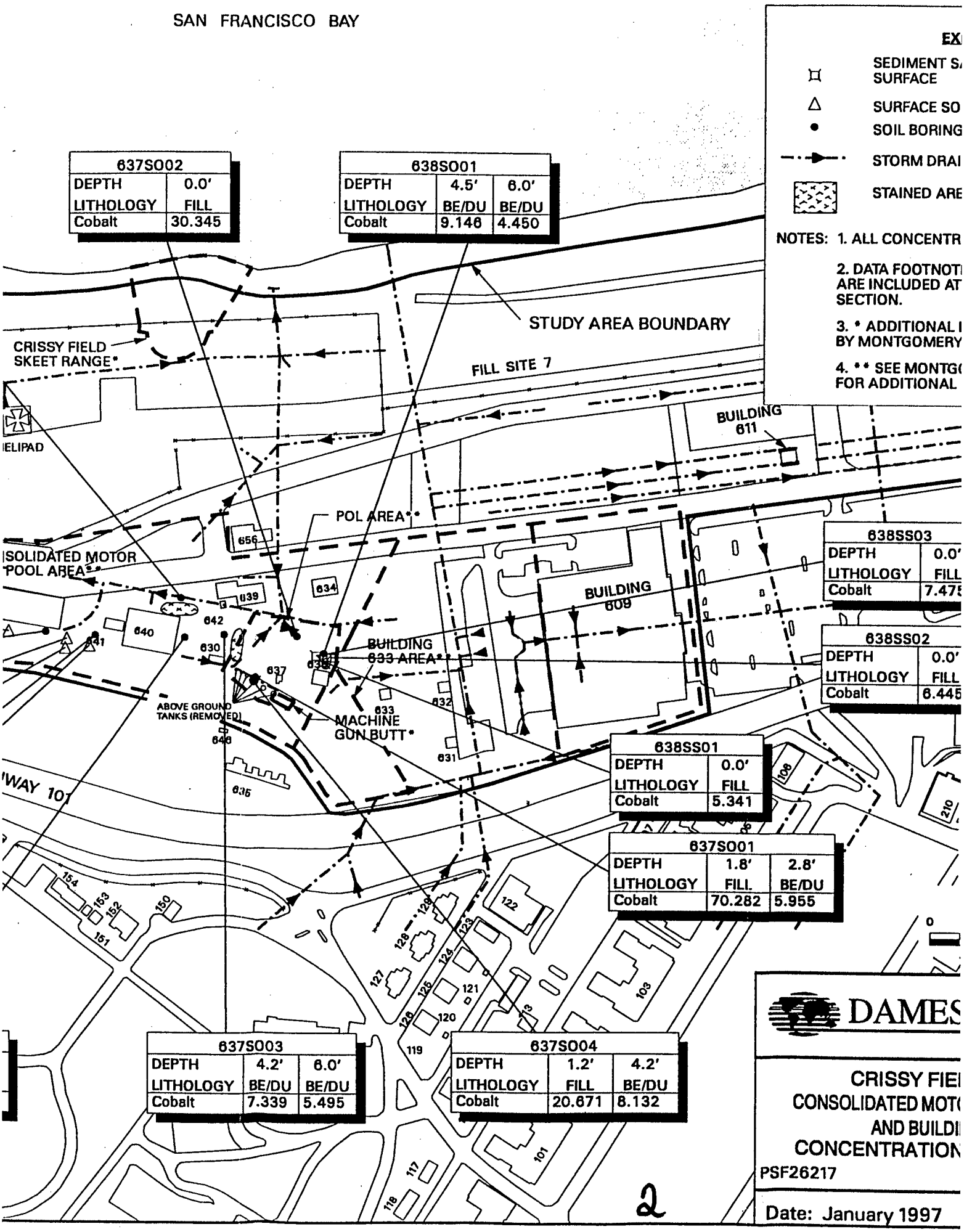
CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA,
AND BUILDINGS 609 AND 633
CONCENTRATIONS OF CHROMIUM IN SOIL

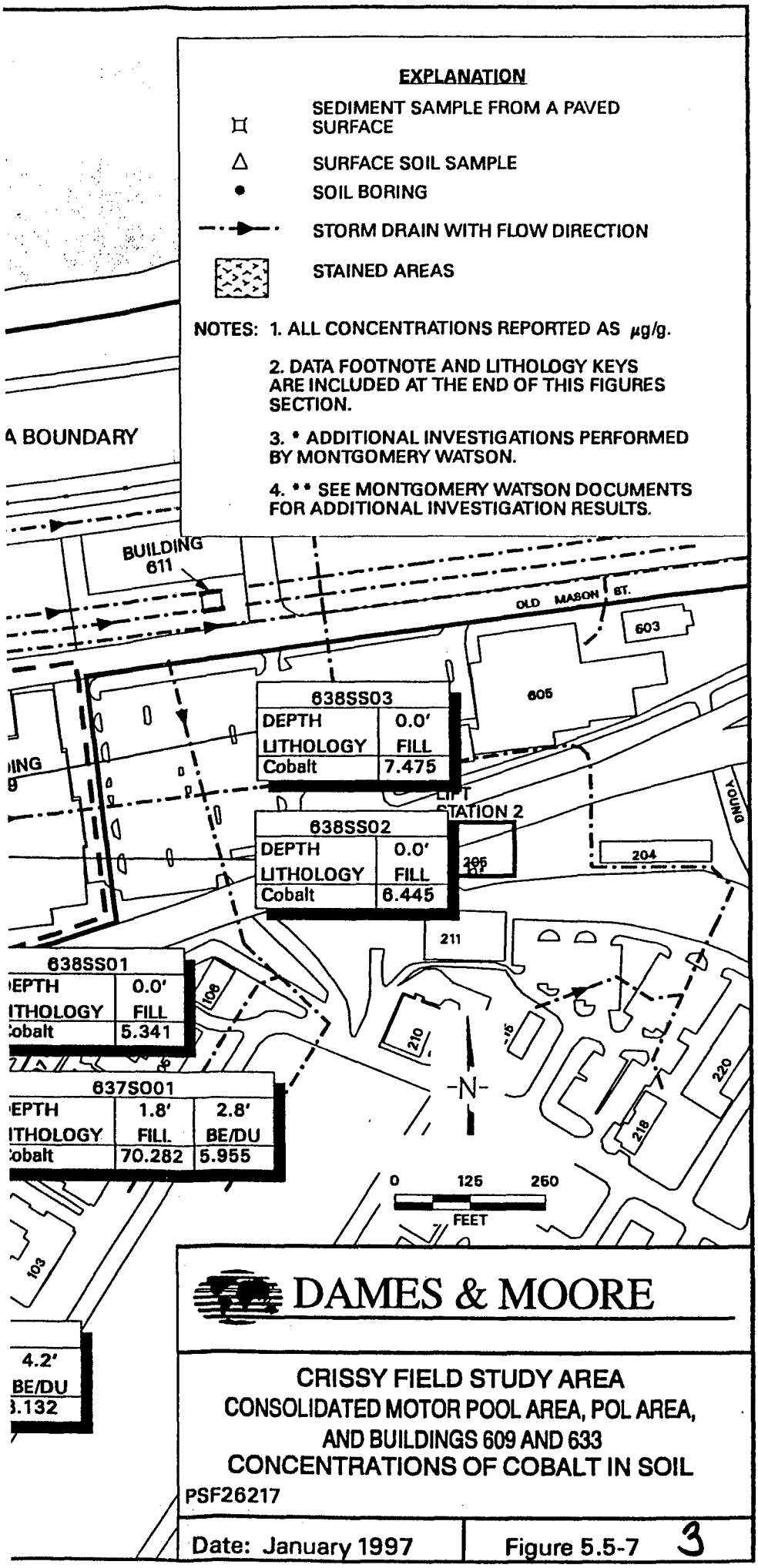
PSF26219

3

Date: January 1997 | Figure 5.5-6


SAN FRA
640SO02
DEPTH | 2.0' | 4.5'
LITHOLOGY | BE/DU | BE/DU
Cobalt | 32.7 | 34.3
637SO02
DEPTH | 0.0'
LITHOLOGY | FILL
Cobalt | 30.345
643SS02
DEPTH | 0.0'
LITHOLOGY | FILL
Cobalt | 35.961
643SS01
DEPTH | 0.0'
LITHOLOGY | FILL
Cobalt | 30.223
643SS04
DEPTH | 0.0'
LITHOLOGY | FILL
Cobalt | 14
643SB02
DEPTH | 2.0' | 5.0'
LITHOLOGY | FILL | FILL
Cobalt | 20.100 | 14.400
643SS03
DEPTH | 0.0'
LITHOLOGY | FILL
Cobalt | 16.522
643SS05
DEPTH | 0.0'
LITHOLOGY | FILL
Cobalt | 6
643SB01
DEPTH | 2.0' | 5.0'
LITHOLOGY | FILL | FILL
Cobalt | 39.700 | 41.700
643SS06
DEPTH | 0.0'
LITHOLOGY | FILL
Cobalt | 3.5
640SO01
DEPTH | 2.0' | 4.8'
LITHOLOGY | BE/DU | BE/DU
Cobalt | 10.4 | 7.82
637
DEPTH
LITHOLOGY
Cobalt
MARINE DRIVE
HAMILTON
MARINE RD
MAUDIAN ST
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
TARGET RANGE*
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
ABOVE GROUND TANKS (REMOVED)
HIGHWAY 101
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE
27 Dec 96 09:11:08 Friday, h
17_v3.arnl, plotfile base_CRISSY1_5_8.grn, PSF


SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Cobalt 30.345
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Cobalt 9.146 4.450
STUDY AREA BOUNDARY
CRISSY FIELD SKEET RANGE*
FILL SITE 7
BUILDING 611
POL AREA**
BUILDING 609
BUILDING 633 AREA**
MACHINE GUN BUTT*
ABOVE GROUND TANKS (REMOVED)
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Cobalt 7.475
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Cobalt 6.445
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Cobalt 5.341
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Cobalt 70.282 5.955
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Cobalt 7.339 5.495
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Cobalt 20.671 8.132
SEDIMENT SA
SURFACE
SURFACE SO
SOIL BORING
STORM DRAI
STAINED ARE
NOTES: 1. ALL CONCENTR
2. DATA FOOTNOTI ARE INCLUDED AT SECTION.
3. * ADDITIONAL I BY MONTGOMERY
4. ** SEE MONTG FOR ADDITIONAL
DAMES
CRISSY FIEI
CONSOLIDATED MOT
AND BUILDI
CONCENTRATION
PSF26217
Date: January 1997
2

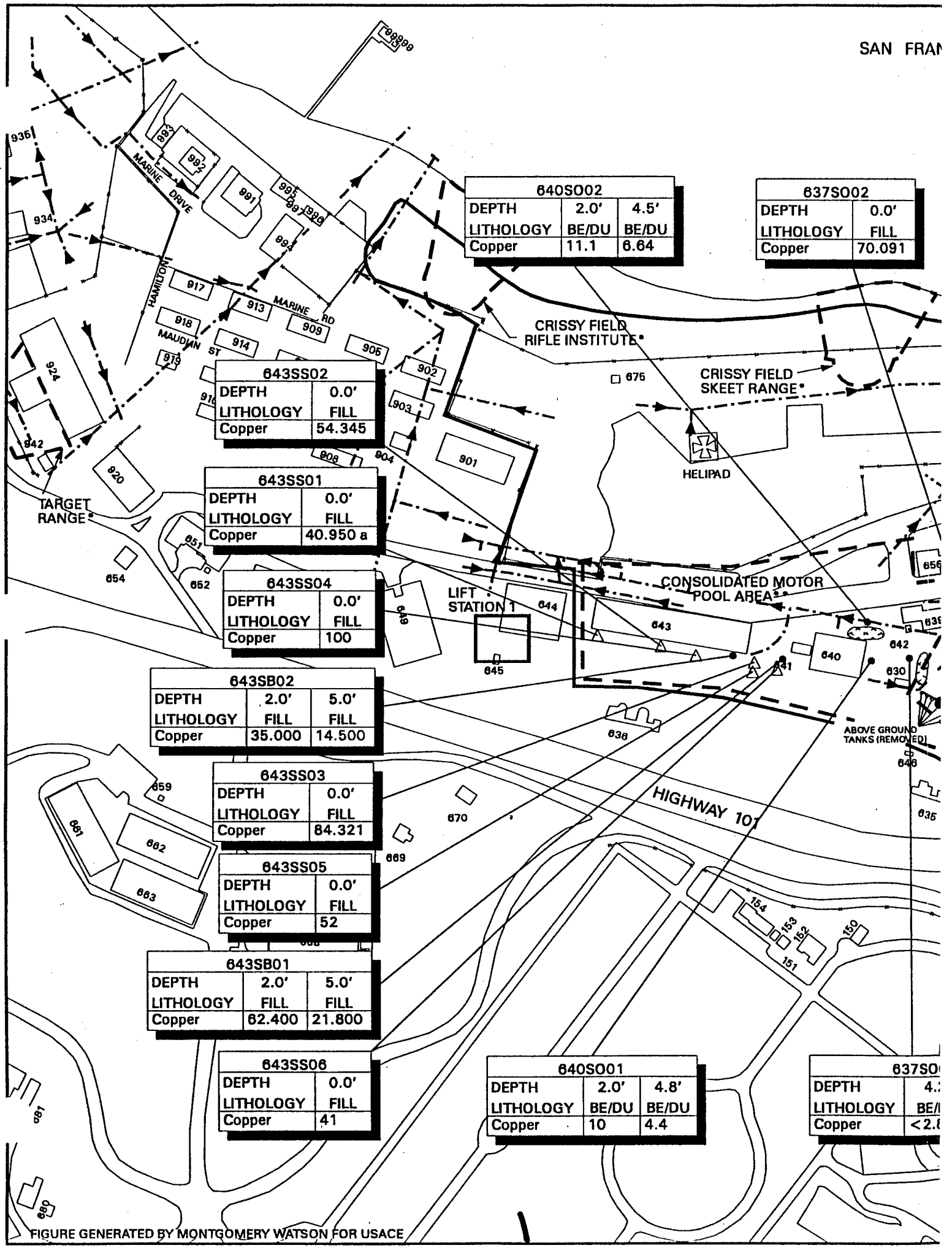


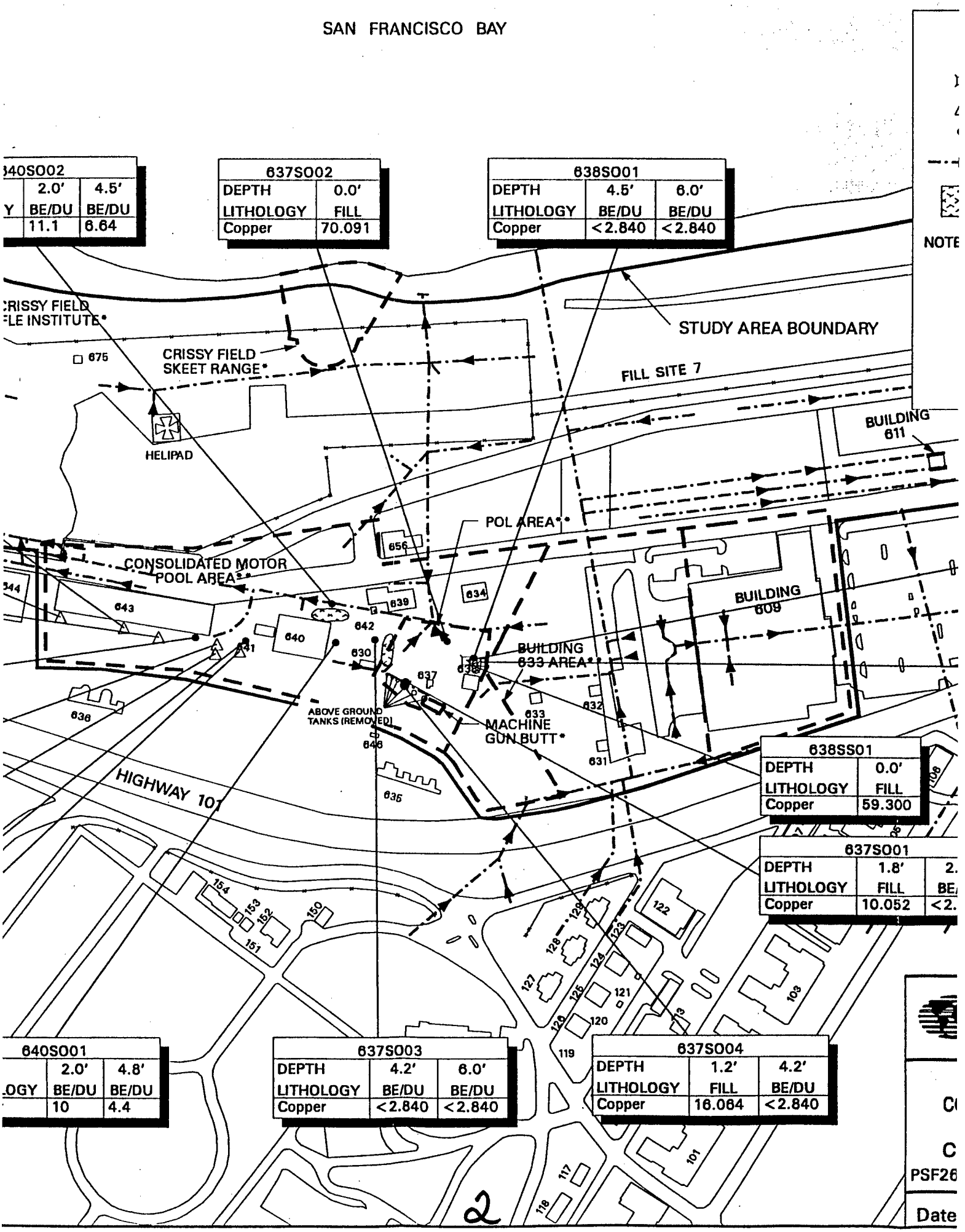
DAMES & MOORE

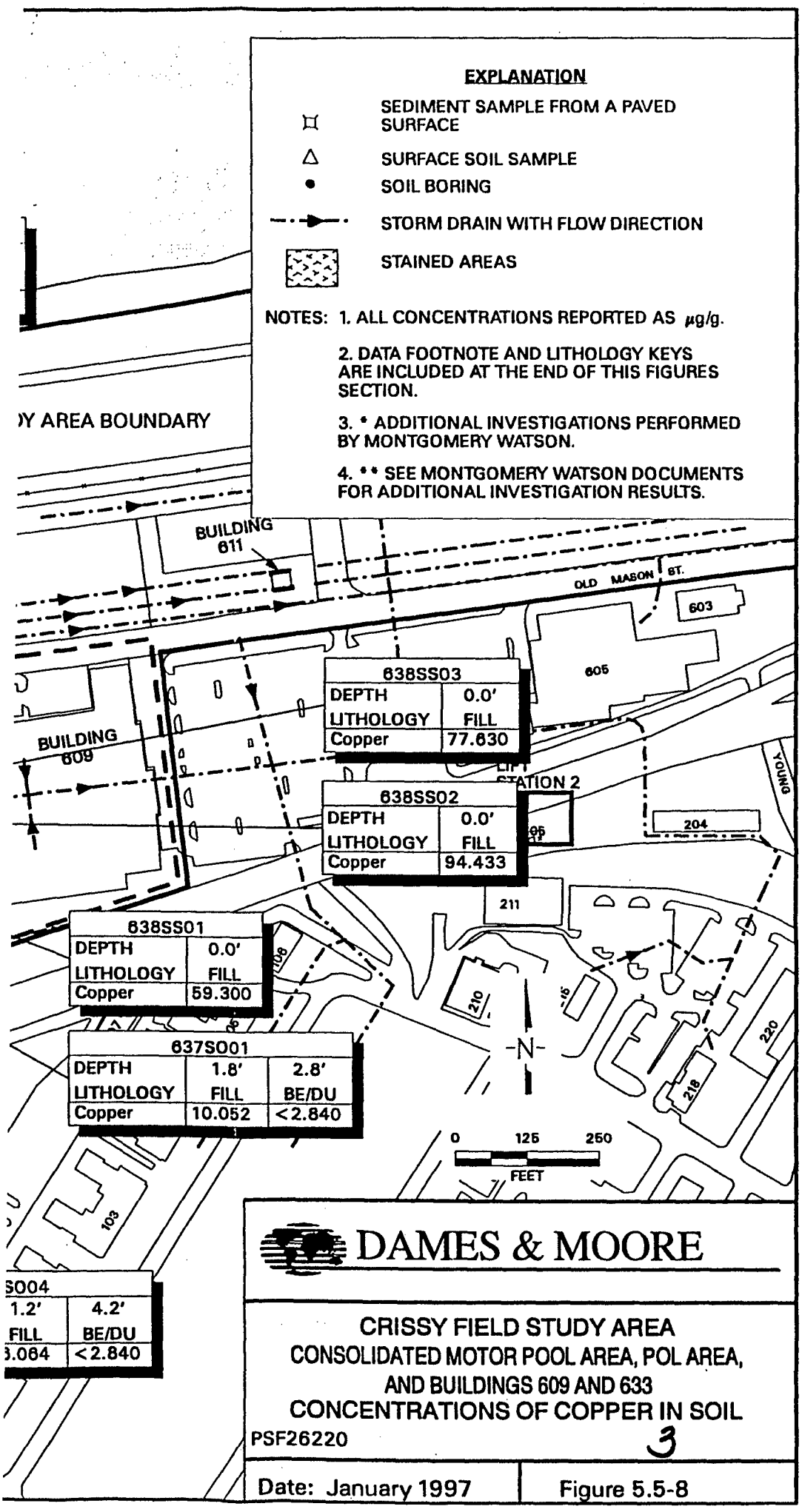
CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA, AND BUILDINGS 609 AND 633
CONCENTRATIONS OF COBALT IN SOIL

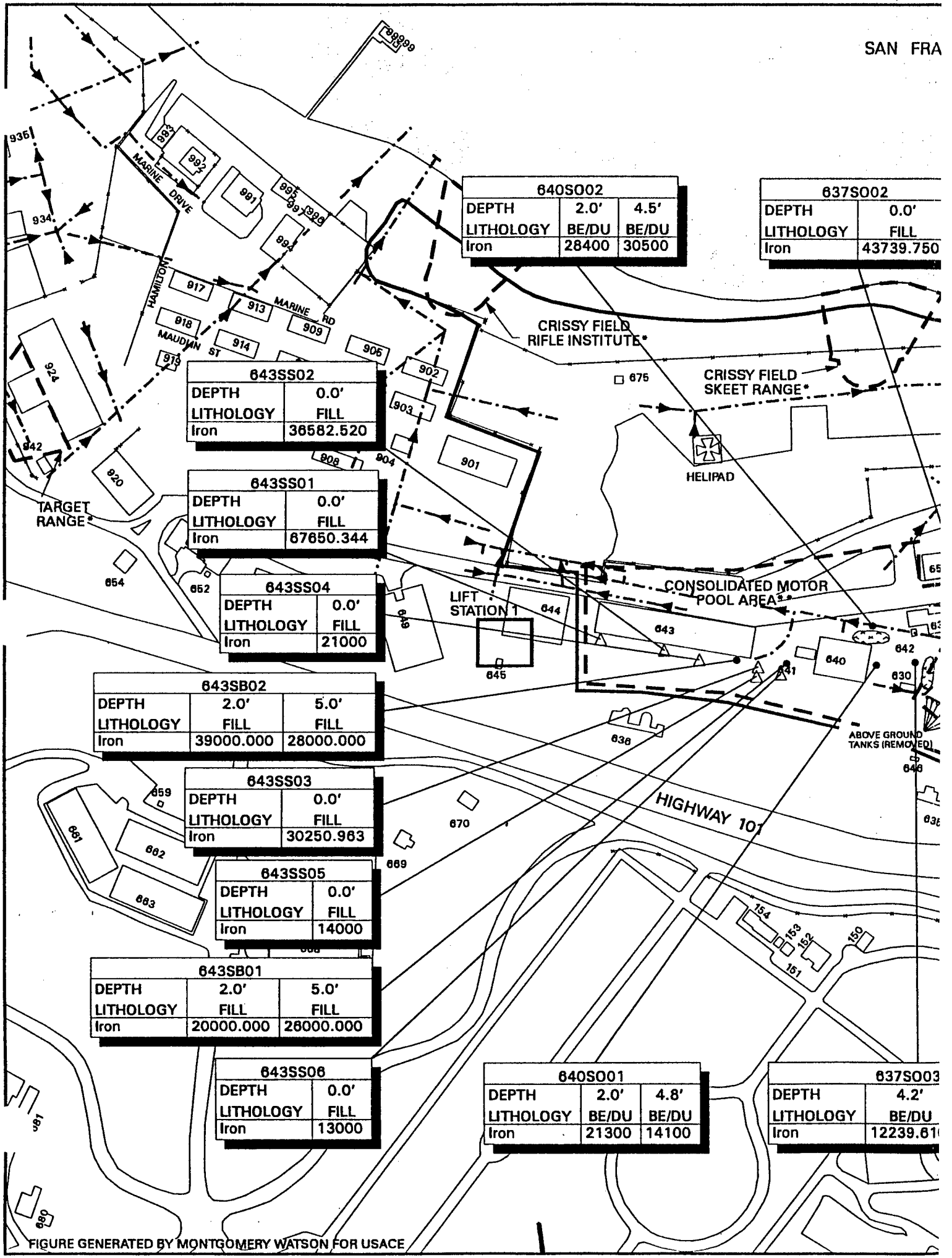
PSF26217

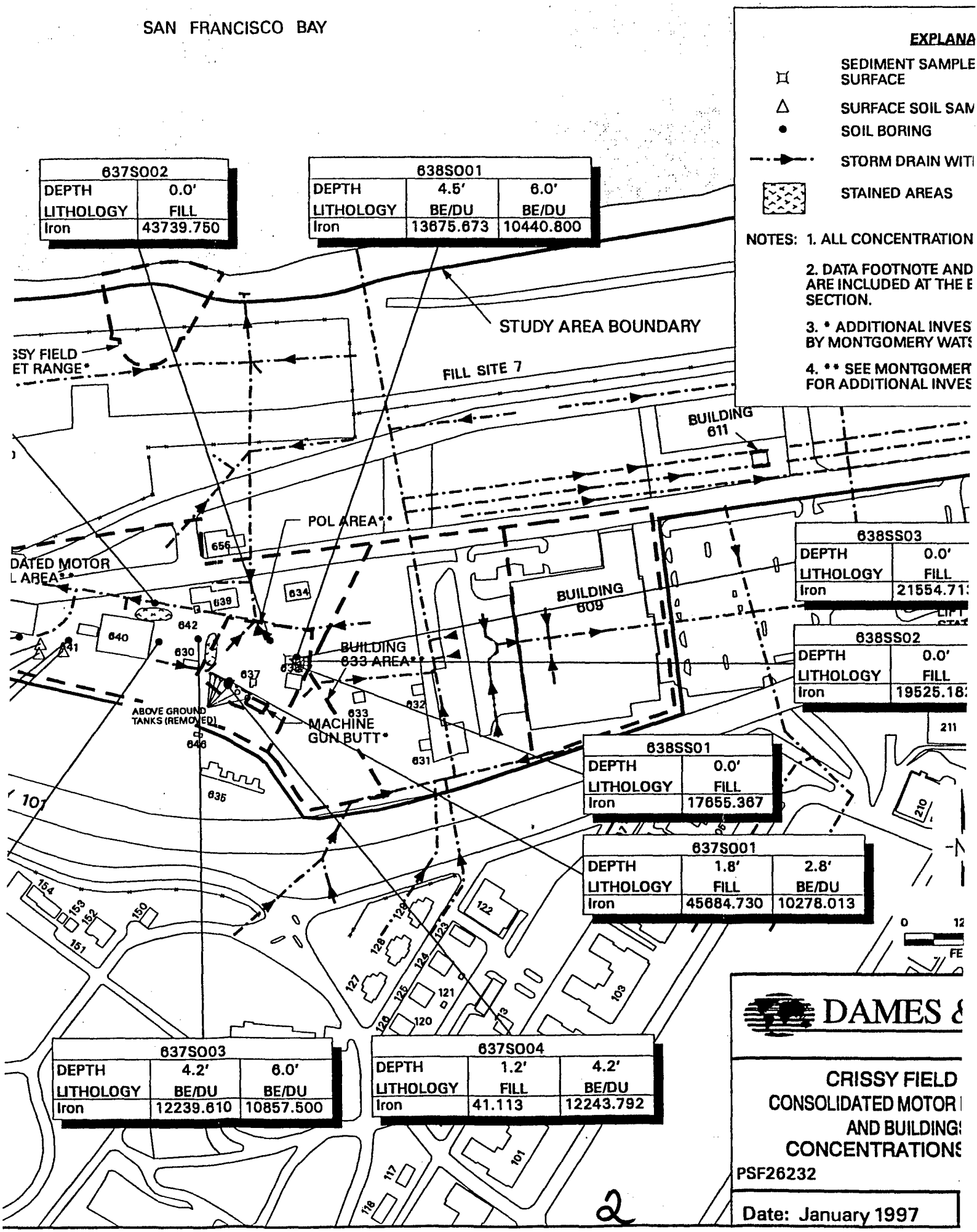
Date: January 1997 | Figure 5.5-7 3

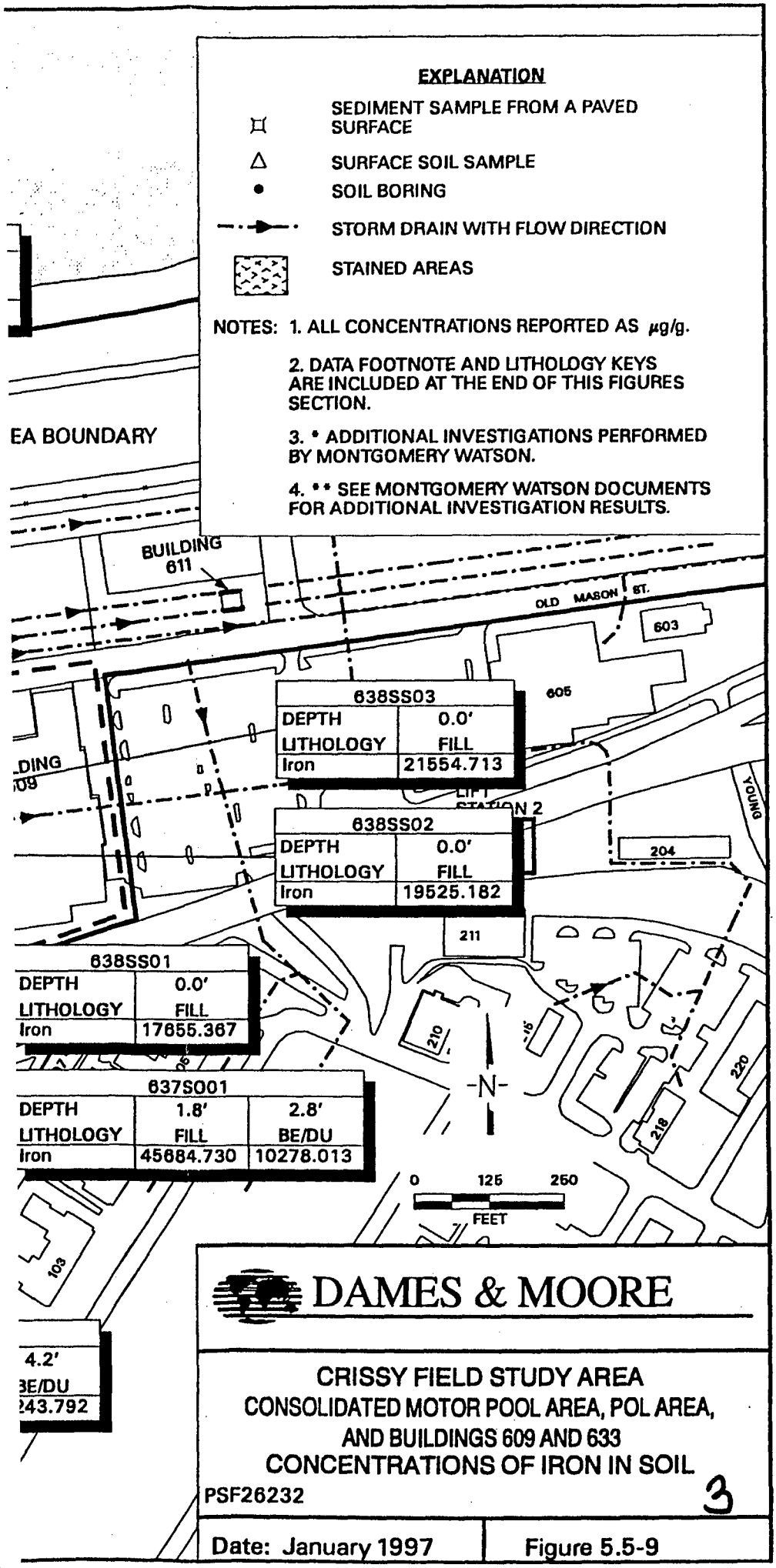

SAN FRAN
640SO02
DEPTH | 2.0' | 4.5'
LITHOLOGY | BE/DU | BE/DU
Copper | 11.1 | 6.64
637SO02
DEPTH | 0.0'
LITHOLOGY | FILL
Copper | 70.091
643SS02
DEPTH | 0.0'
LITHOLOGY | FILL
Copper | 54.345
643SS01
DEPTH | 0.0'
LITHOLOGY | FILL
Copper | 40.950 a
643SS04
DEPTH | 0.0'
LITHOLOGY | FILL
Copper | 100
643SB02
DEPTH | 2.0' | 5.0'
LITHOLOGY | FILL | FILL
Copper | 35.000 | 14.500
643SS03
DEPTH | 0.0'
LITHOLOGY | FILL
Copper | 84.321
643SS05
DEPTH | 0.0'
LITHOLOGY | FILL
Copper | 52
643SB01
DEPTH | 2.0' | 5.0'
LITHOLOGY | FILL | FILL
Copper | 62.400 | 21.800
643SS06
DEPTH | 0.0'
LITHOLOGY | FILL
Copper | 41
640SO01
DEPTH | 2.0' | 4.8'
LITHOLOGY | BE/DU | BE/DU
Copper | 10 | 4.4
637SO
DEPTH | 4.
LITHOLOGY | BE/
Copper | <2.
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
TARGET RANGE*
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA*
ABOVE GROUND TANKS (REMOVED)
HIGHWAY 101
MARINE DRIVE
MARINE RD
HAMILTON
MAUDAN ST
27 Dec 96 09:12:51 Friday, barr
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE


SAN FRANCISCO BAY
640SO02
2.0' BE/DU 11.1
4.5' BE/DU 6.64
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Copper 70.091
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Copper <2.840 <2.840
STUDY AREA BOUNDARY
CRISSY FIELD SKEET RANGE*
FILL SITE 7
HELIPAD
BUILDING 611
POL AREA**
CONSOLIDATED MOTOR POOL AREA**
BUILDING 609
BUILDING 633 AREA**
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
HIGHWAY 101
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Copper 59.300
637SO01
DEPTH 1.8'
LITHOLOGY FILL
Copper 10.052
640SO01
2.0' BE/DU 10
4.8' BE/DU 4.4
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Copper <2.840 <2.840
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Copper 16.064 <2.840
NOTE
PSF26
Date
2


EXPLANATION
SEDIMENT SAMPLE FROM A PAVED SURFACE
SURFACE SOIL SAMPLE
SOIL BORING
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
4. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
)Y AREA BOUNDARY
BUILDING 611
OLD MASON ST.
603
605
BUILDING 609
YOUNG
204
211
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Copper 77.630
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Copper 94.433
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Copper 59.300
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Copper 10.052 <2.840
SO04
1.2' 4.2'
FILL BE/DU
3.064 <2.840
-N-
0 125 250
FEET
DAMES & MOORE
CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA,
AND BUILDINGS 609 AND 633
CONCENTRATIONS OF COPPER IN SOIL
PSF26220
3
Date: January 1997
Figure 5.5-8


SAN FRA
640SO02
DEPTH | 2.0' | 4.5'
LITHOLOGY | BE/DU | BE/DU
Iron | 28400 | 30500
637SO02
DEPTH | 0.0'
LITHOLOGY | FILL
Iron | 43739.750
643SS02
DEPTH | 0.0'
LITHOLOGY | FILL
Iron | 36582.520
643SS01
DEPTH | 0.0'
LITHOLOGY | FILL
Iron | 67650.344
643SS04
DEPTH | 0.0'
LITHOLOGY | FILL
Iron | 21000
643SB02
DEPTH | 2.0' | 5.0'
LITHOLOGY | FILL | FILL
Iron | 39000.000 | 28000.000
643SS03
DEPTH | 0.0'
LITHOLOGY | FILL
Iron | 30250.963
643SS05
DEPTH | 0.0'
LITHOLOGY | FILL
Iron | 14000
643SB01
DEPTH | 2.0' | 5.0'
LITHOLOGY | FILL | FILL
Iron | 20000.000 | 26000.000
643SS06
DEPTH | 0.0'
LITHOLOGY | FILL
Iron | 13000
640SO01
DEPTH | 2.0' | 4.8'
LITHOLOGY | BE/DU | BE/DU
Iron | 21300 | 14100
637SO03
DEPTH | 4.2'
LITHOLOGY | BE/DU
Iron | 12239.61
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
TARGET RANGE*
CONSOLIDATED MOTOR POOL AREA*
LIFT STATION 1
ABOVE GROUND TANKS (REMOVED)
HIGHWAY 101
MARINE DRIVE
HAMILTON
MARINE RD
MAUDLIN ST
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE
27 Dec 96 09:14:50 Friday, bar


SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Iron 43739.750
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Iron 13675.673 10440.800
EXPLANA
SEDIMENT SAMPLE SURFACE
SURFACE SOIL SAM
SOIL BORING
STORM DRAIN WITI
STAINED AREAS
NOTES: 1. ALL CONCENTRATION
2. DATA FOOTNOTE AND ARE INCLUDED AT THE E SECTION.
3. * ADDITIONAL INVES BY MONTGOMERY WATS
4. ** SEE MONTGOMER FOR ADDITIONAL INVES
STUDY AREA BOUNDARY
FILL SITE 7
BUILDING 611
POL AREA**
BUILDING 609
BUILDING 633 AREA**
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Iron 21554.71
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Iron 19525.18
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Iron 17655.367
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Iron 45684.730 10278.013
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Iron 12239.610 10857.500
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Iron 41.113 12243.792
DAMES &
CRISSY FIELD
CONSOLIDATED MOTOR
AND BUILDING
CONCENTRATION
PSF26232
Date: January 1997
2



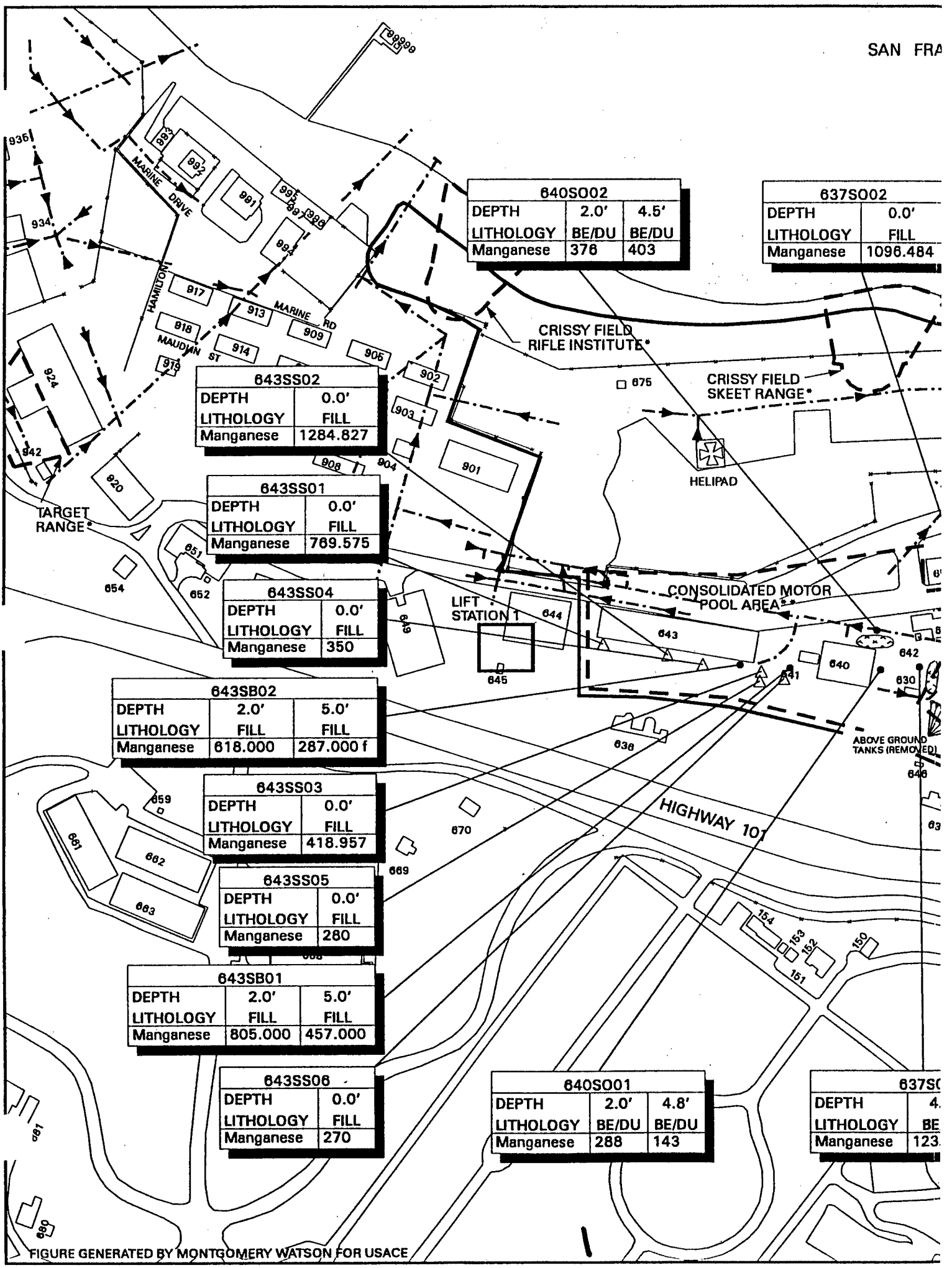
DAMES & MOORE

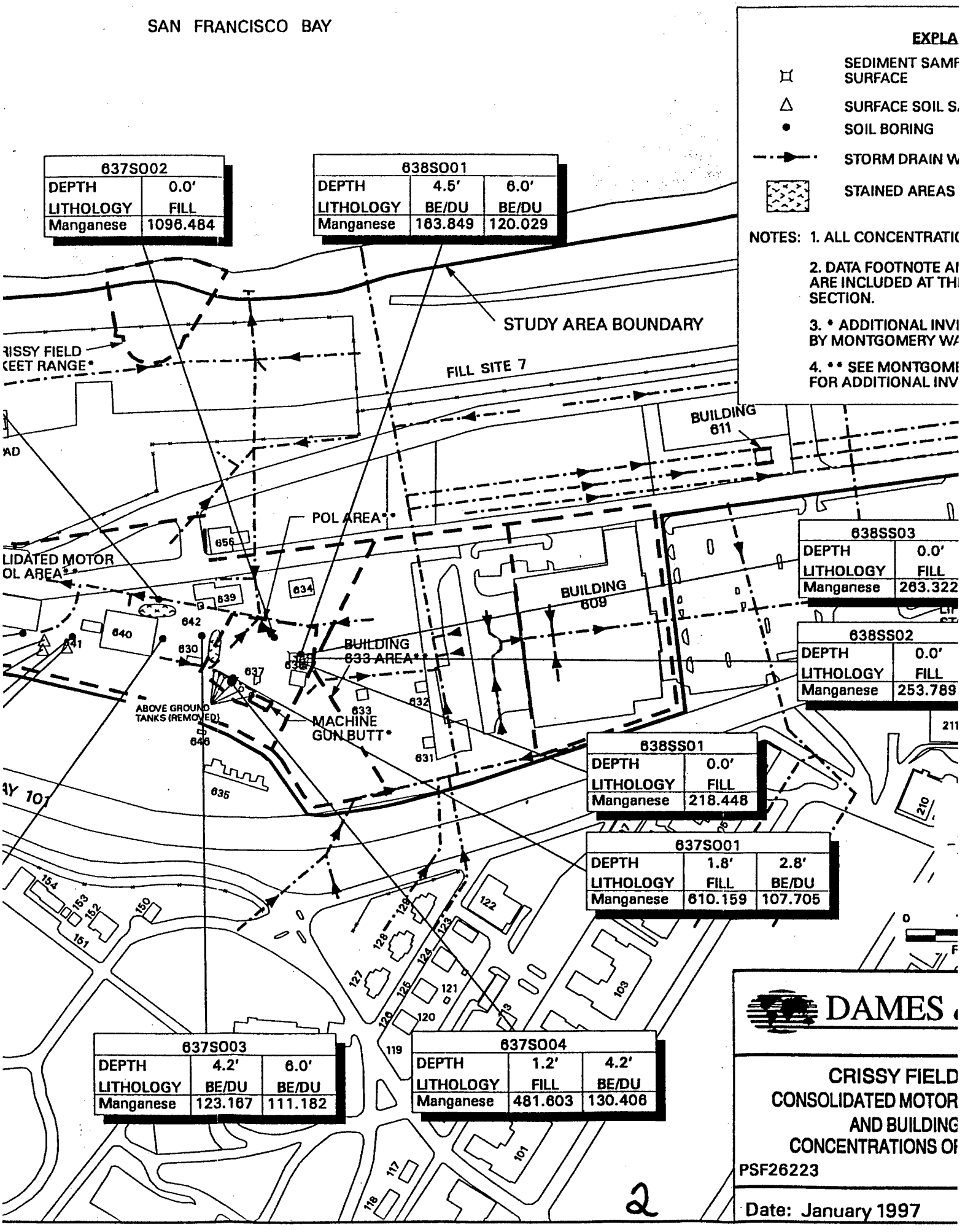
CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA, AND BUILDINGS 609 AND 633
CONCENTRATIONS OF IRON IN SOIL

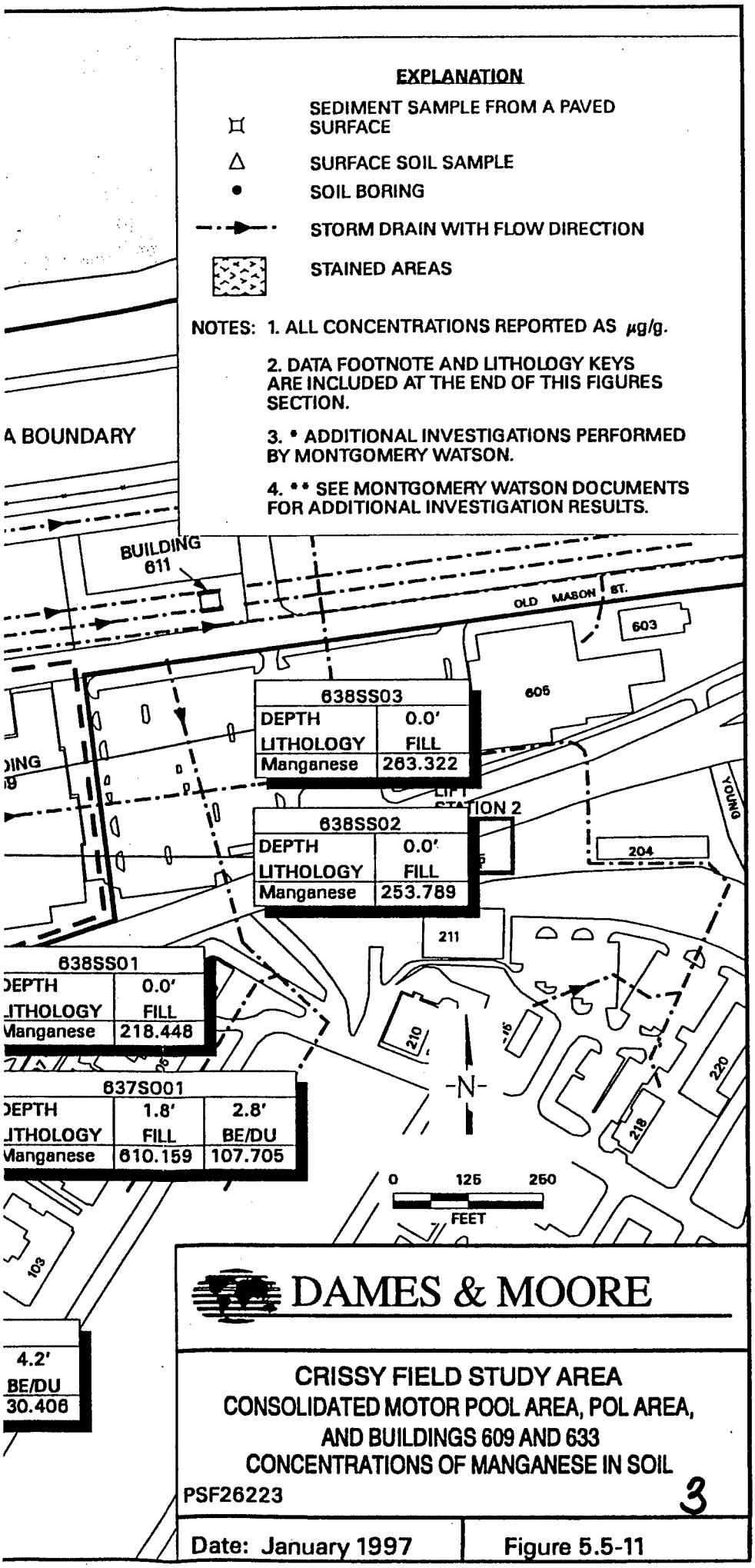
PSF26232

3

Date: January 1997 | Figure 5.5-9


SAN FRA
640SO02
DEPTH | 2.0' | 4.5'
LITHOLOGY | BE/DU | BE/DU
Manganese | 376 | 403
637SO02
DEPTH | 0.0'
LITHOLOGY | FILL
Manganese | 1096.484
643SS02
DEPTH | 0.0'
LITHOLOGY | FILL
Manganese | 1284.827
643SS01
DEPTH | 0.0'
LITHOLOGY | FILL
Manganese | 769.575
643SS04
DEPTH | 0.0'
LITHOLOGY | FILL
Manganese | 350
643SB02
DEPTH | 2.0' | 5.0'
LITHOLOGY | FILL | FILL
Manganese | 618.000 | 287.000 f
643SS03
DEPTH | 0.0'
LITHOLOGY | FILL
Manganese | 418.957
643SS05
DEPTH | 0.0'
LITHOLOGY | FILL
Manganese | 280
643SB01
DEPTH | 2.0' | 5.0'
LITHOLOGY | FILL | FILL
Manganese | 805.000 | 457.000
643SS06
DEPTH | 0.0'
LITHOLOGY | FILL
Manganese | 270
640SO01
DEPTH | 2.0' | 4.8'
LITHOLOGY | BE/DU | BE/DU
Manganese | 288 | 143
637SO
DEPTH | 4.
LITHOLOGY | BE
Manganese | 123
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
TARGET RANGE*
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
ABOVE GROUND TANKS (REMOVED)
HIGHWAY 101
MARINE DRIVE
MARINE RD
HAMILTON
MAUDAN ST
27 Dec 96 09:18:58 Friday, base * v3.aml, plotfile base_CRISSY1_S_14.grn, PSF
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE


SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Manganese 1096.484
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Manganese 163.849 120.029
STUDY AREA BOUNDARY
FILL SITE 7
BUILDING 611
POL AREA**
BUILDING 609
BUILDING 633 AREA**
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Manganese 263.322
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Manganese 253.789
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Manganese 218.448
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Manganese 610.159 107.705
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Manganese 123.167 111.182
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Manganese 481.603 130.406
EXPLA
SEDIMENT SAMF SURFACE
SURFACE SOIL S.
SOIL BORING
STORM DRAIN W
STAINED AREAS
NOTES: 1. ALL CONCENTRATI
2. DATA FOOTNOTE AI ARE INCLUDED AT TH SECTION.
3. * ADDITIONAL INVI BY MONTGOMERY WA
4. ** SEE MONTGOMI FOR ADDITIONAL INV
DAMES
CRISSY FIELD
CONSOLIDATED MOTOR
AND BUILDING
CONCENTRATIONS OF
PSF26223
Date: January 1997
2



DAMES & MOORE

CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA, AND BUILDINGS 609 AND 633
CONCENTRATIONS OF MANGANESE IN SOIL

PSF26223

3

Date: January 1997

Figure 5.5-11

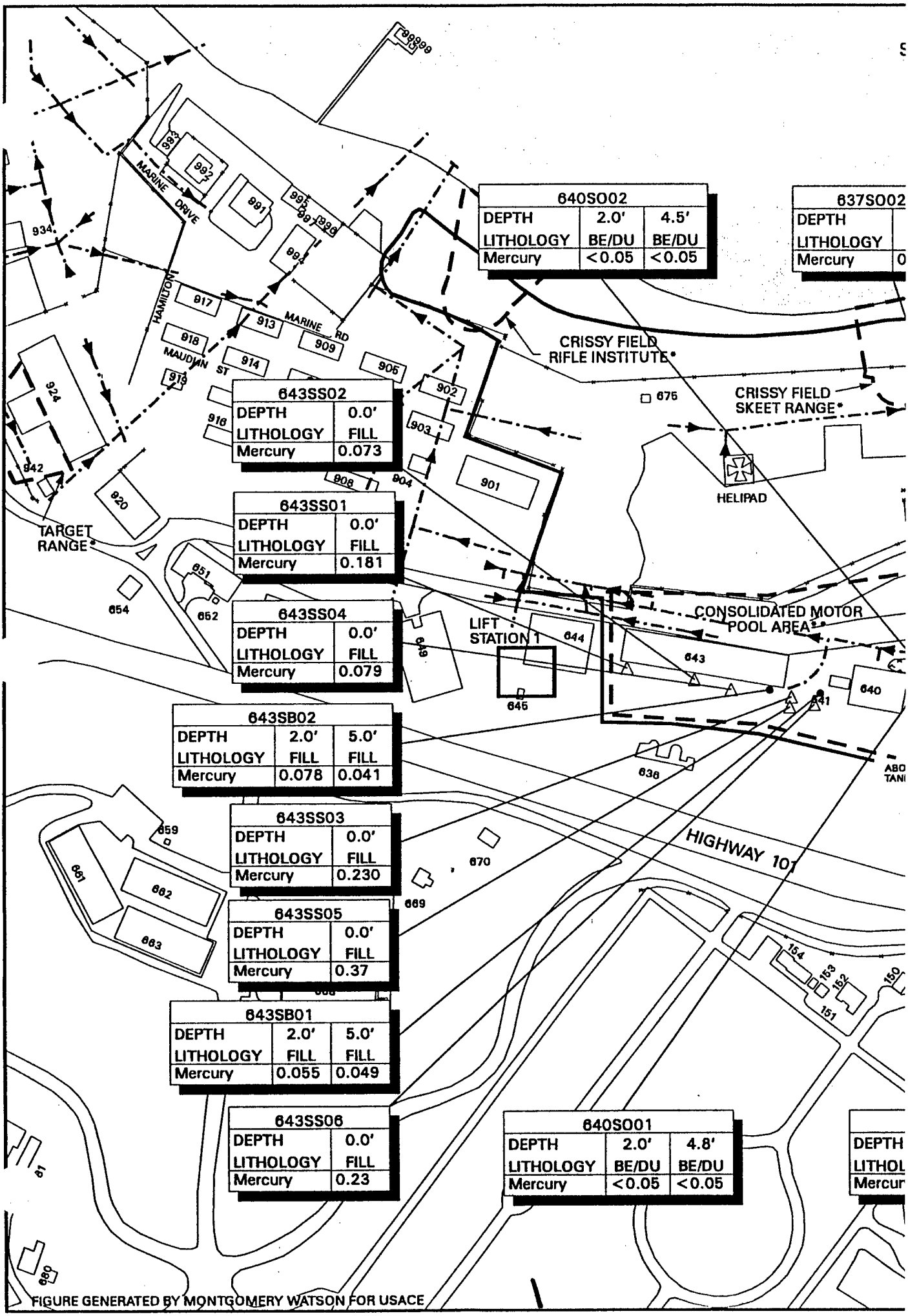
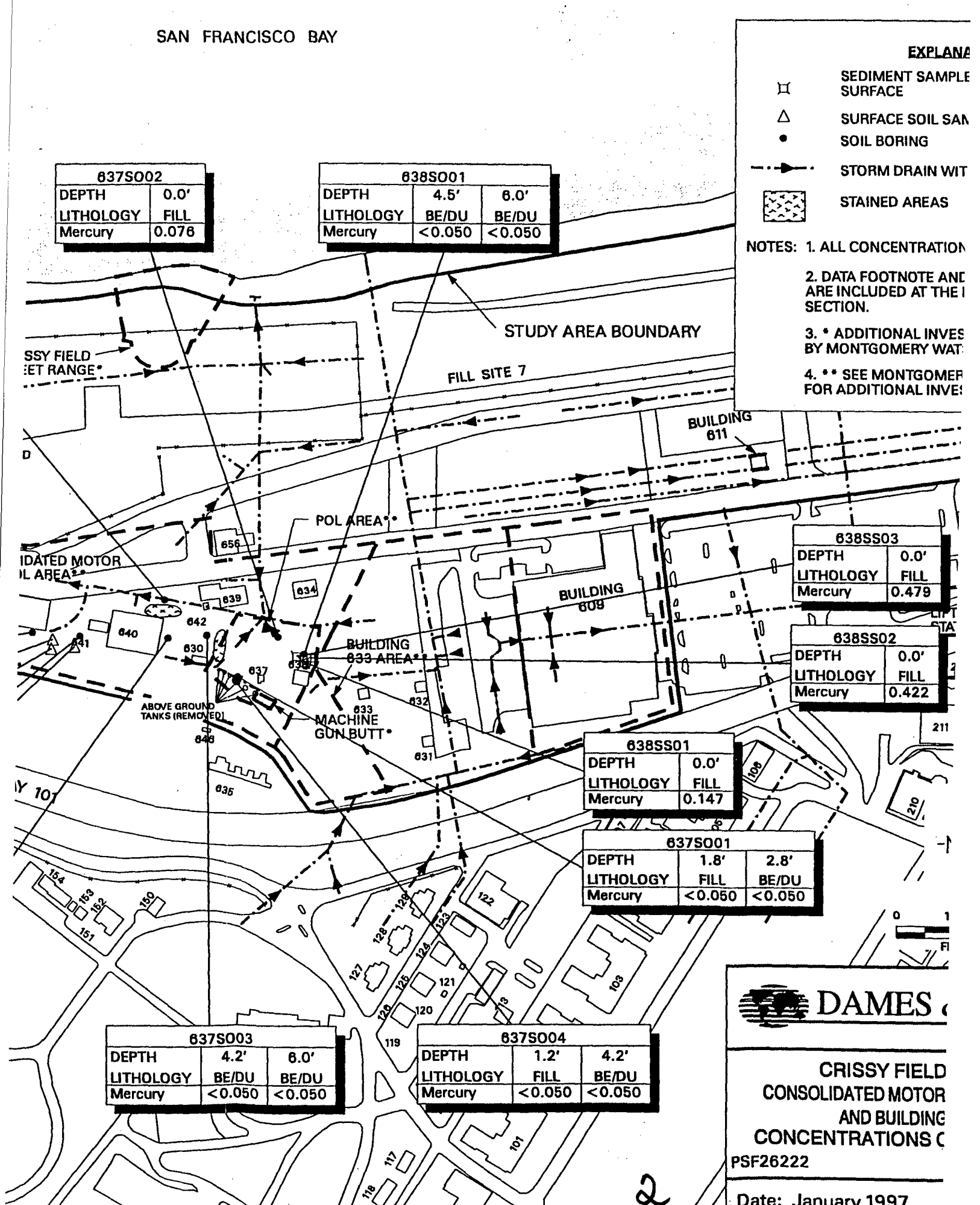
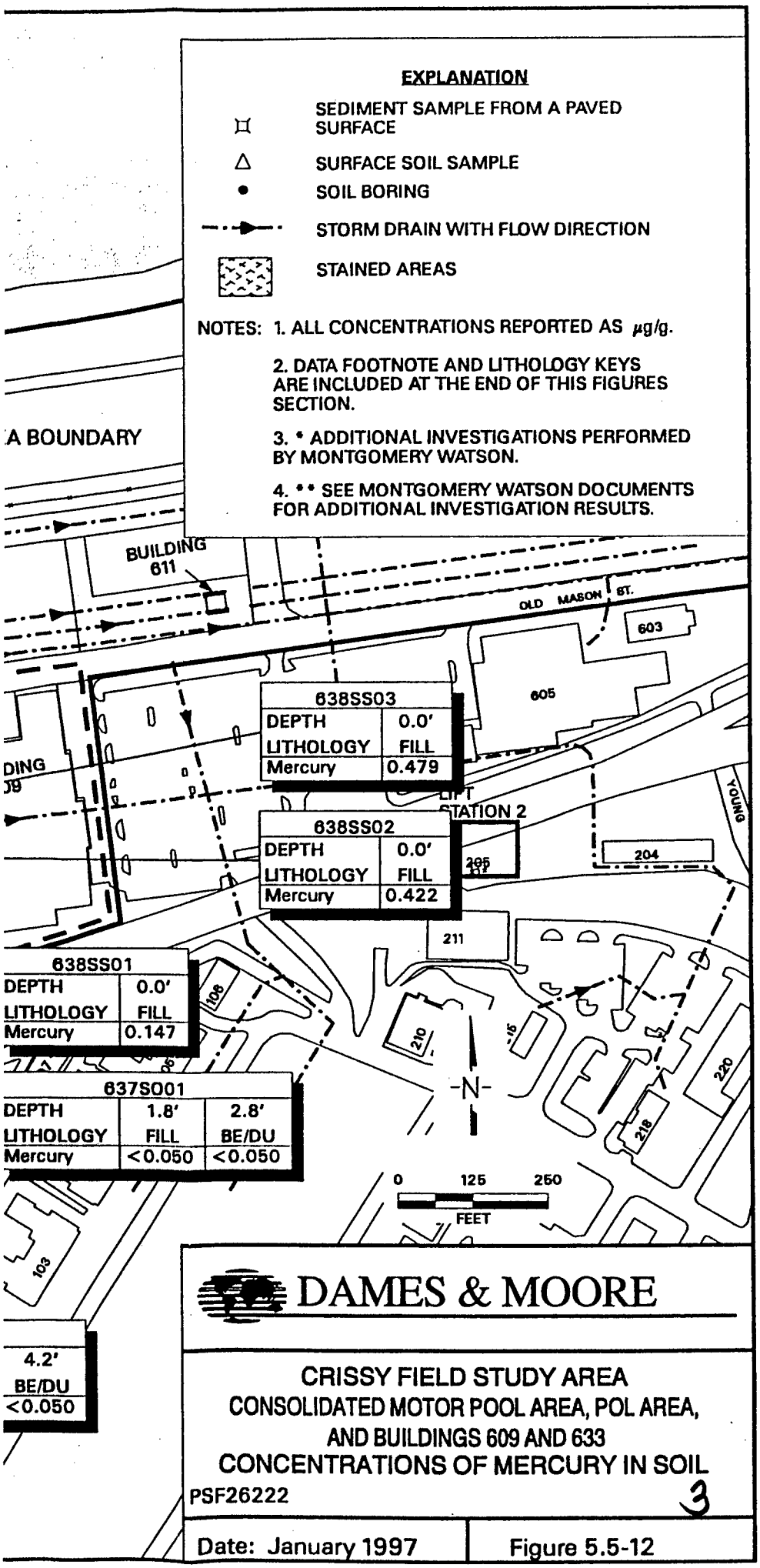


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

27 Dec 96 09:21:48 Friday, b... ...a17_v3.aml, plotfile base_CRISSY1_S_15.grn, PSF


SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Mercury 0.076
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Mercury <0.050 <0.050
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Mercury 0.479
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Mercury 0.422
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Mercury 0.147
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Mercury <0.050 <0.050
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Mercury <0.050 <0.050
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Mercury <0.050 <0.050
STUDY AREA BOUNDARY
FILL SITE 7
BUILDING 611
BUILDING 609
BUILDING 633 AREA**
POL AREA**
MACHINE GUN BUTT*
ABOVE GROUND TANKS (REMOVED)
CRISSY FIELD
CONSOLIDATED MOTOR
AND BUILDING
CONCENTRATIONS
PSF26222
Date: January 1997
2



DAMES & MOORE

CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA, AND BUILDINGS 609 AND 633
CONCENTRATIONS OF MERCURY IN SOIL

PSF26222

3

Date: January 1997 | Figure 5.5-12

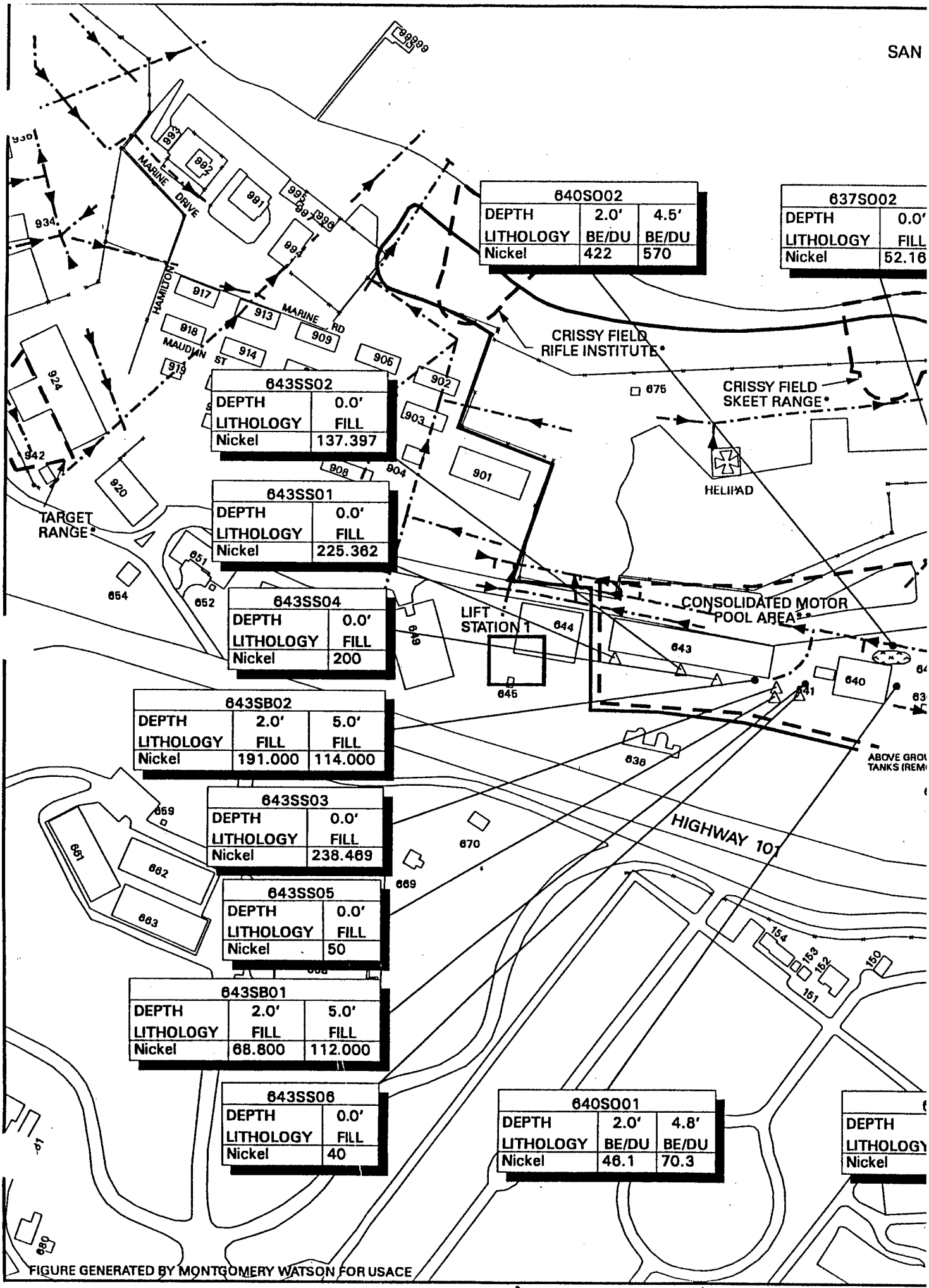
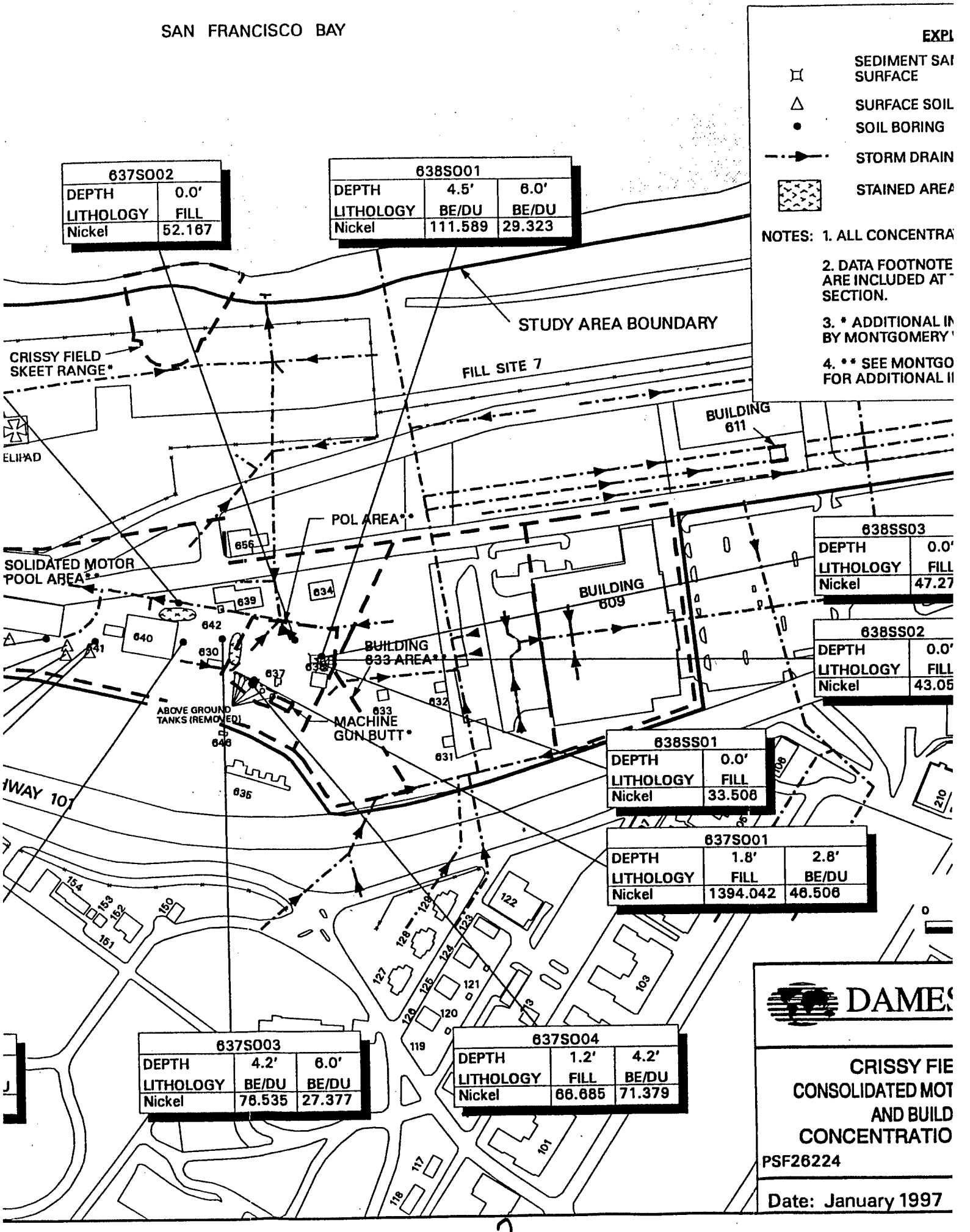
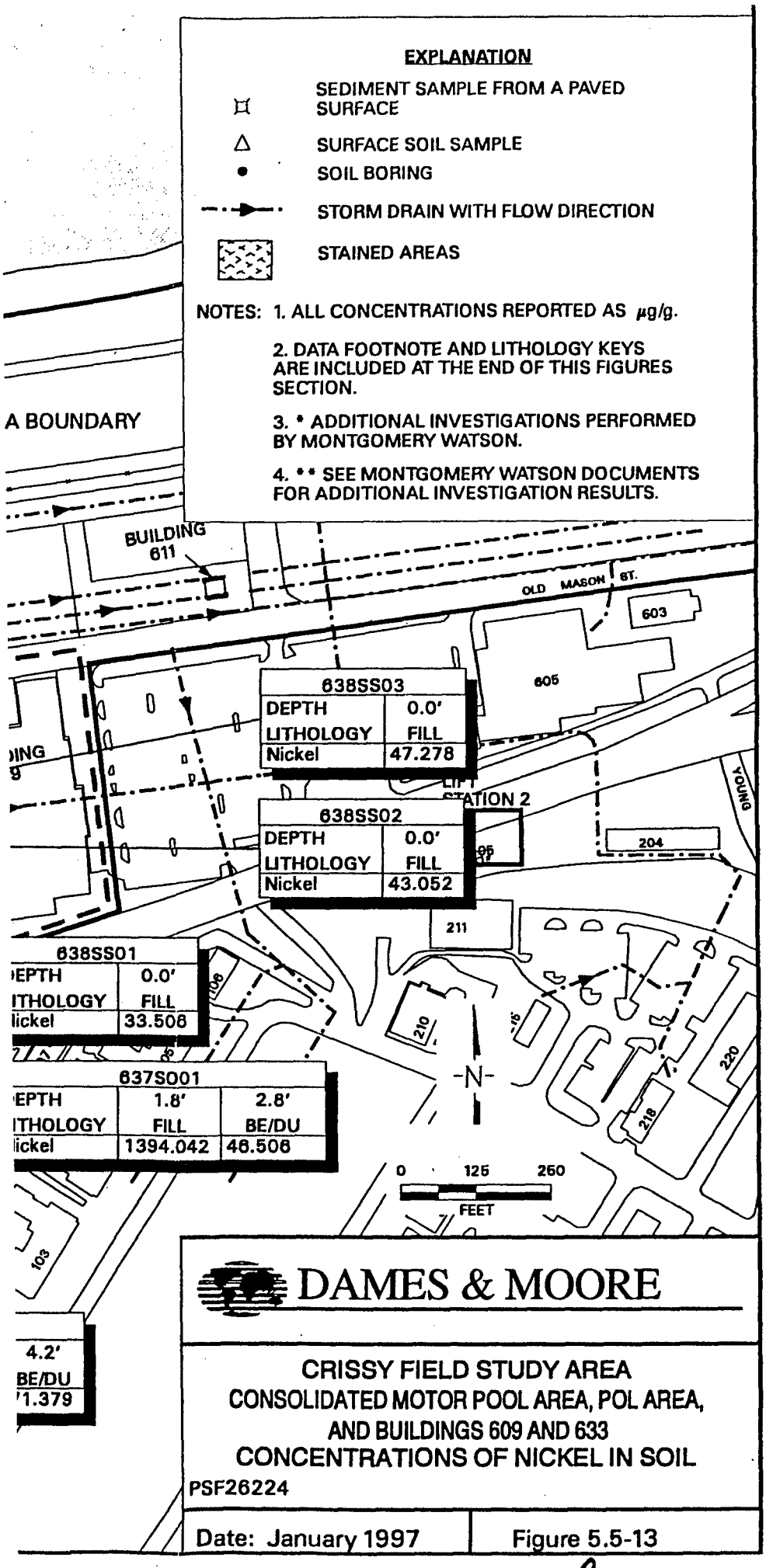


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

27 Dec 96 09:24:35 Friday, ha... ...17_v3.aml, plotfile base_CRISSY1_S_16.grn, PSF


SAN FRANCISCO BAY
EXPL
SEDIMENT SAI
SURFACE
SURFACE SOIL
SOIL BORING
STORM DRAIN
STAINED AREA
NOTES: 1. ALL CONCENTRA
2. DATA FOOTNOTE
ARE INCLUDED AT
SECTION.
3. * ADDITIONAL IN
BY MONTGOMERY
4. ** SEE MONTGO
FOR ADDITIONAL I
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Nickel 52.167
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Nickel 111.589 29.323
STUDY AREA BOUNDARY
CRISSY FIELD
SKEET RANGE*
FILL SITE 7
BUILDING
611
ELIPAD
POL AREA**
SOLIDATED MOTOR
POOL AREA**
BUILDING
609
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Nickel 47.27
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Nickel 43.05
BUILDING
633 AREA*
ABOVE GROUND
TANKS (REMOVED)
MACHINE
GUN BUTT*
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Nickel 33.506
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Nickel 1394.042 46.506
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Nickel 76.535 27.377
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Nickel 66.685 71.379
DAMES
CRISSY FIE
CONSOLIDATED MOT
AND BUILD
CONCENTRATIO
PSF26224
Date: January 1997



DAMES & MOORE

CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA, AND BUILDINGS 609 AND 633
CONCENTRATIONS OF NICKEL IN SOIL

PSF26224

Date: January 1997 | Figure 5.5-13

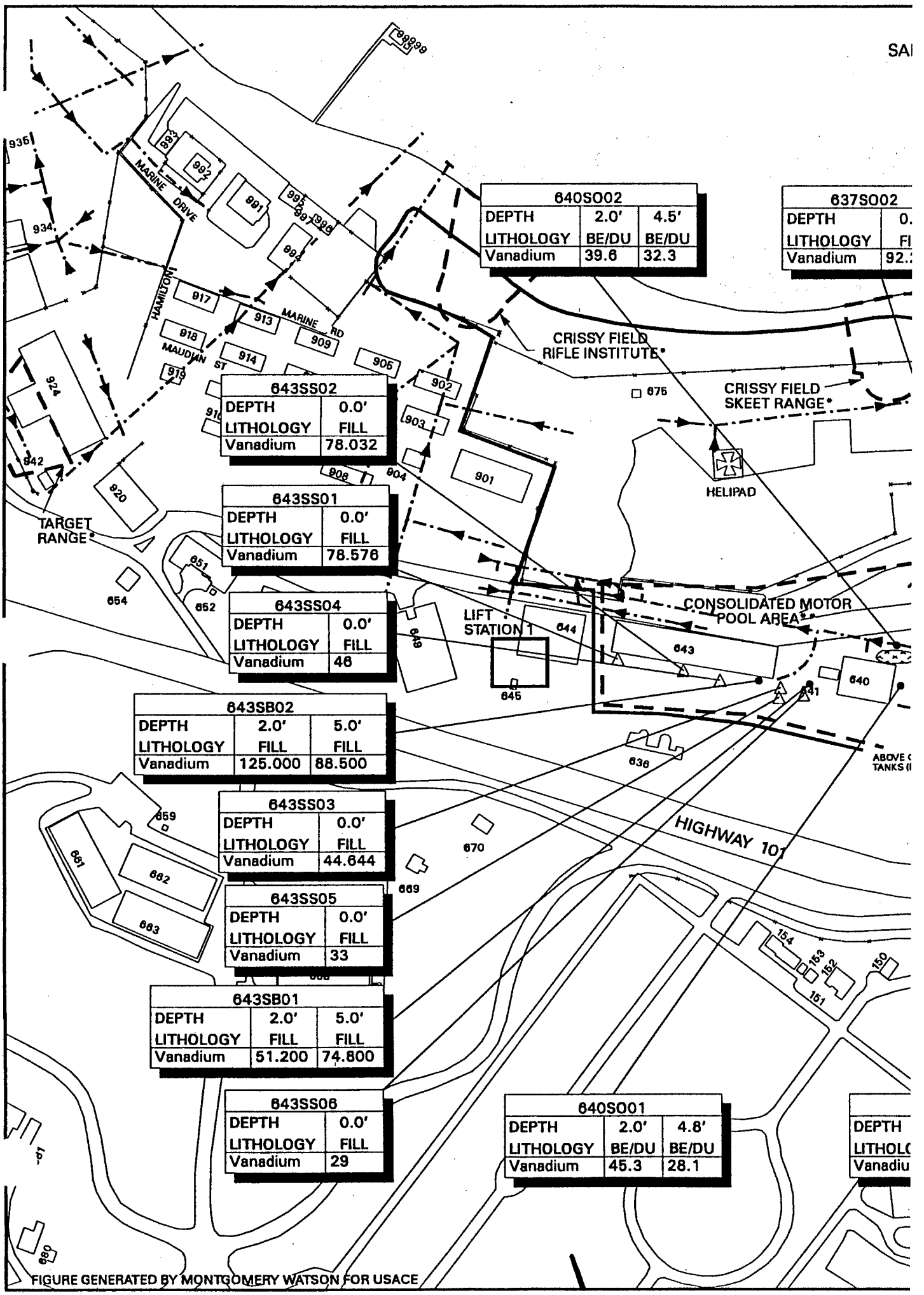
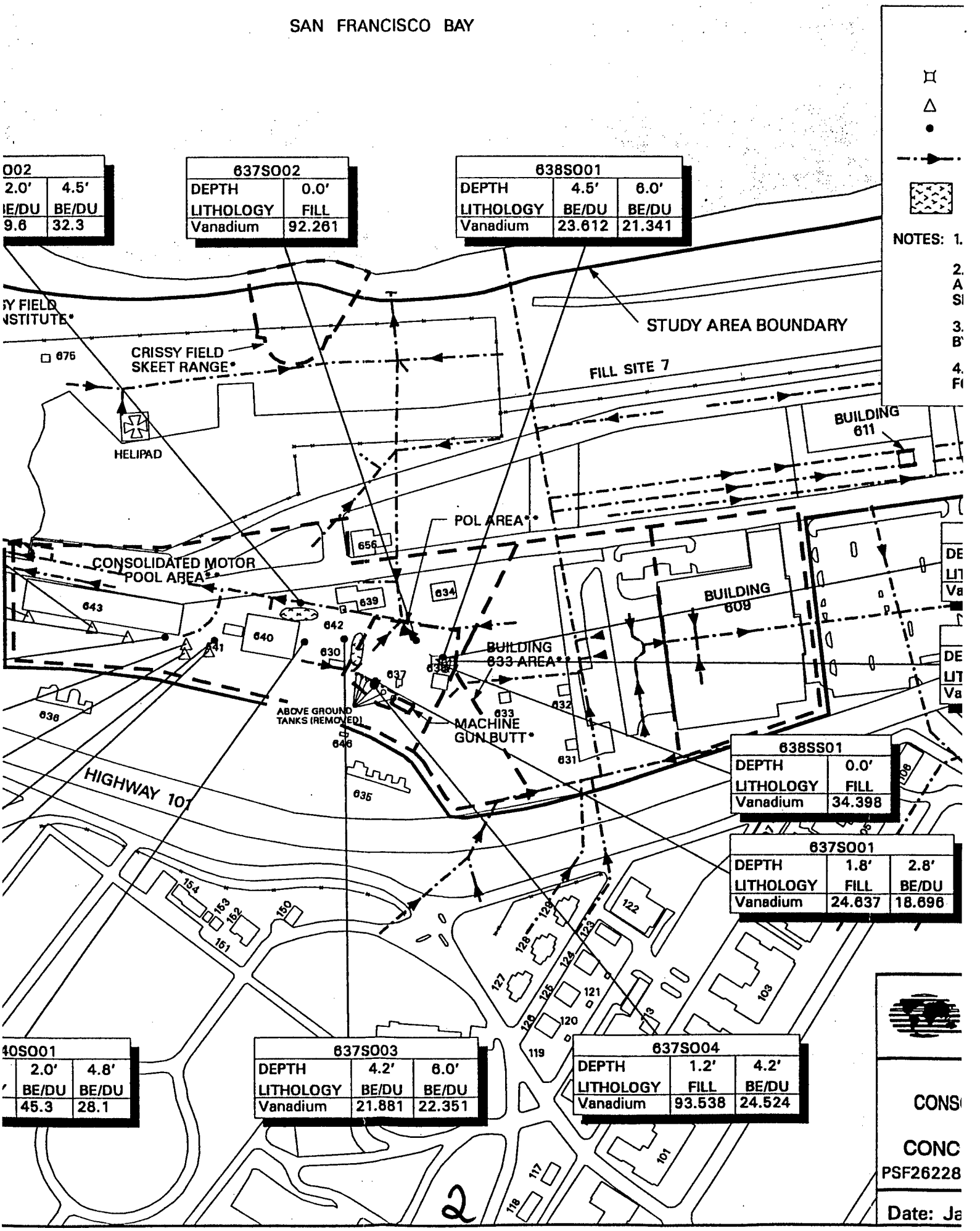
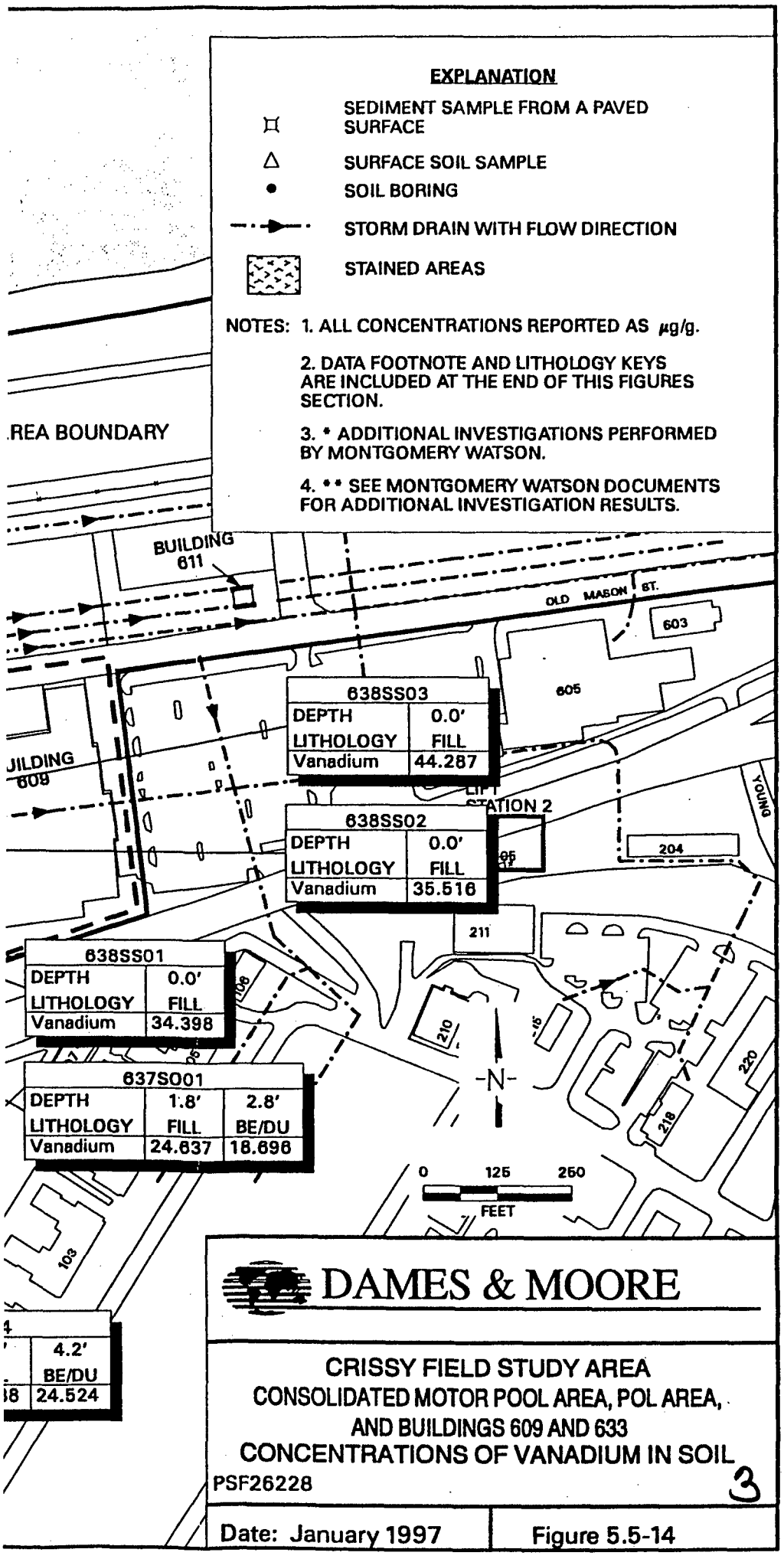


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

27 Dec 96 09:26:46 Friday, bar- -17_v3.aml, plotfile base_CRISSY1_S_20.grn, PSF


SAN FRANCISCO BAY
002
2.0' 4.5'
E/DU BE/DU
9.6 32.3
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Vanadium 92.261
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Vanadium 23.612 21.341
NOTES: 1.
STUDY AREA BOUNDARY
Y FIELD
NSTITUTE*
CRISSY FIELD
SKEET RANGE*
FILL SITE 7
HELIPAD
BUILDING
611
POL AREA**
CONSOLIDATED MOTOR
POOL AREA**
BUILDING
609
BUILDING
633 AREA**
ABOVE GROUND
TANKS (REMOVED)
MACHINE
GUN BUTT*
HIGHWAY 101
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Vanadium 34.398
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Vanadium 24.637 18.696
40SO01
2.0' 4.8'
BE/DU BE/DU
45.3 28.1
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Vanadium 21.881 22.351
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Vanadium 93.538 24.524
CONS
CONC
PSF26228
Date: Ja
2


EXPLANATION
SEDIMENT SAMPLE FROM A PAVED SURFACE
SURFACE SOIL SAMPLE
SOIL BORING
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
4. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
REA BOUNDARY
BUILDING 611
OLD MASON ST.
603
605
JILDING 609
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Vanadium 44.287
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Vanadium 35.516
204
211
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Vanadium 34.398
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Vanadium 24.637 18.698
4.2'
BE/DU
24.524
-N-
0 125 250
FEET
DAMES & MOORE
CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA,
AND BUILDINGS 609 AND 633
CONCENTRATIONS OF VANADIUM IN SOIL
PSF26228
3
Date: January 1997
Figure 5.5-14

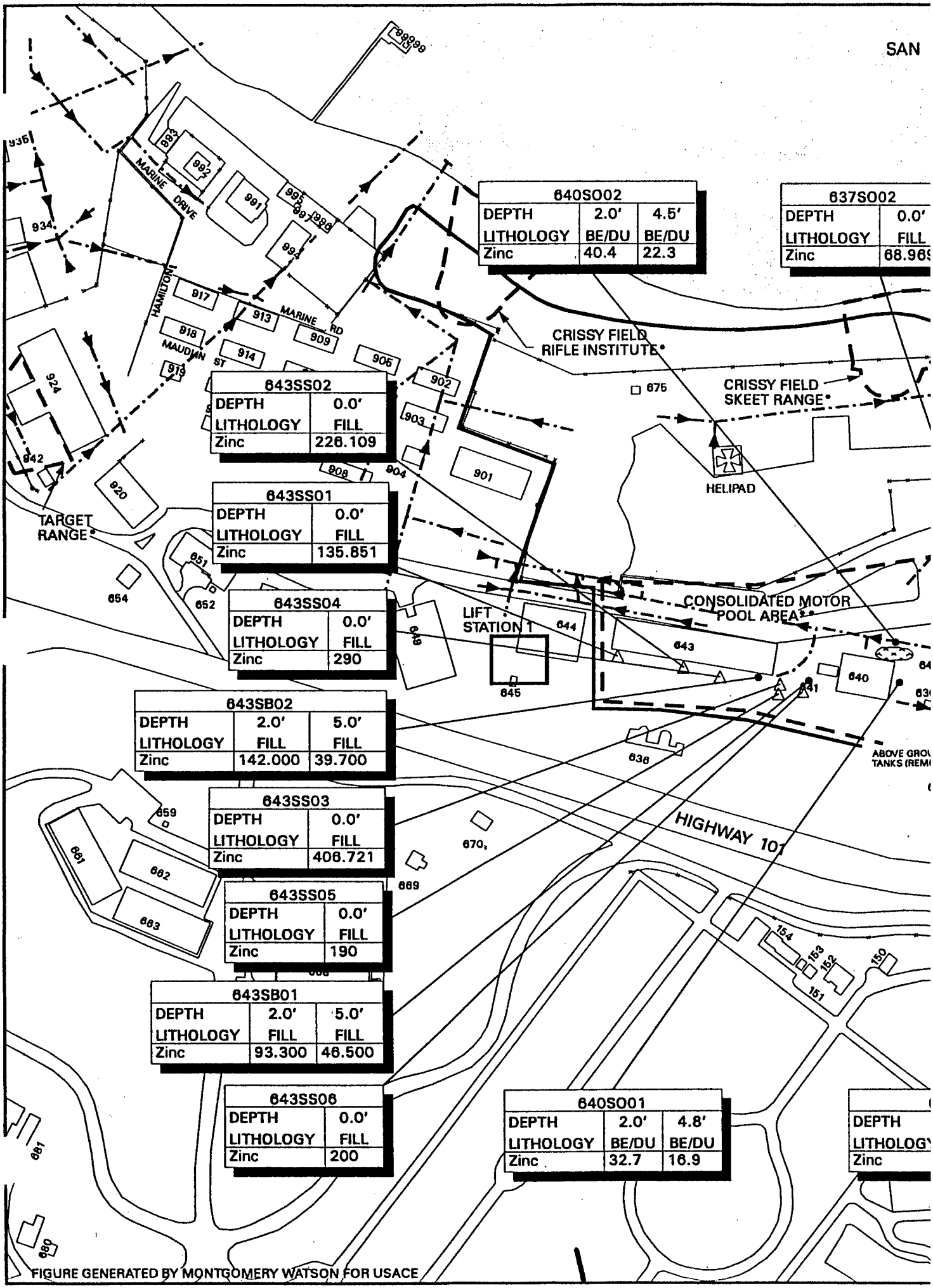
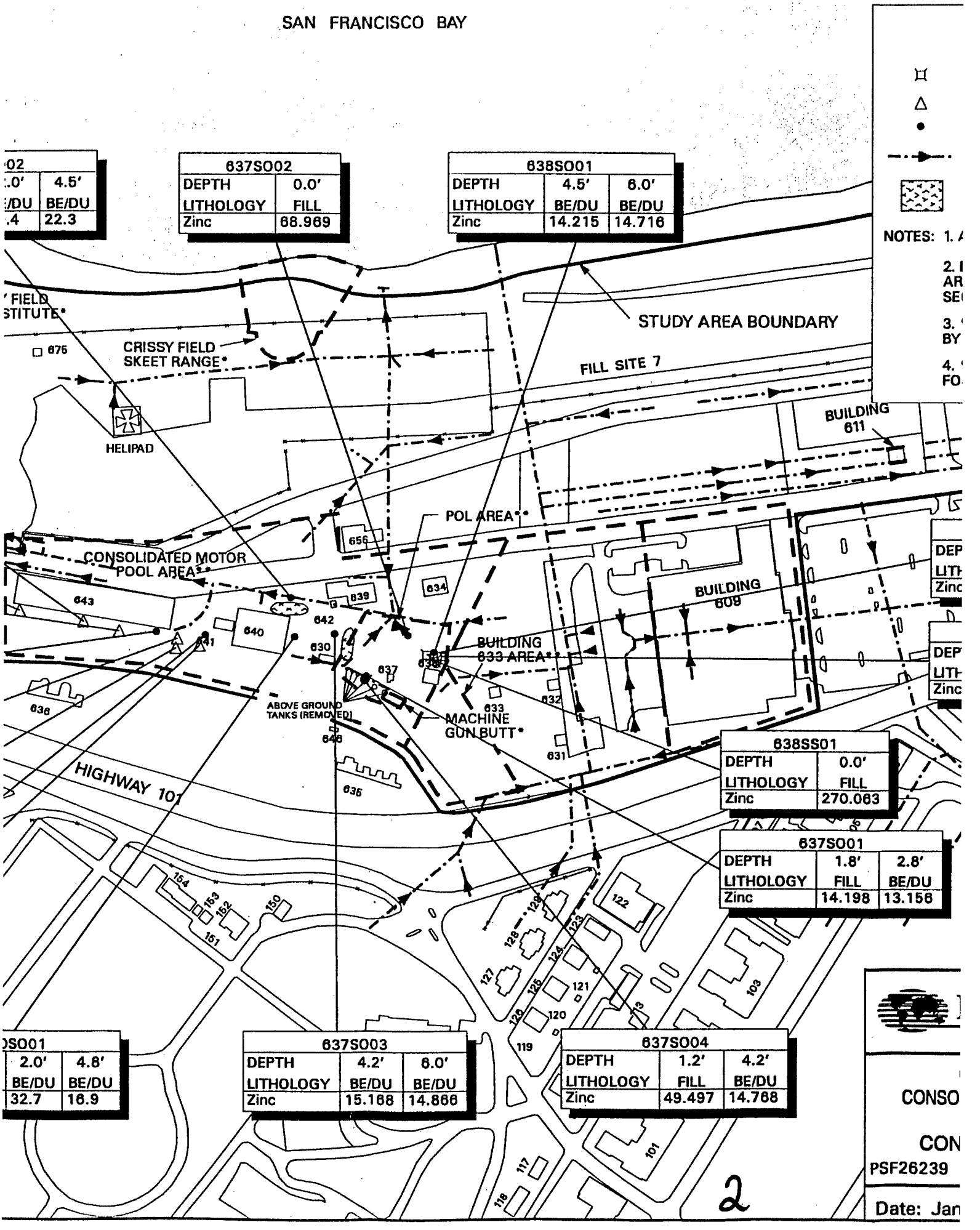
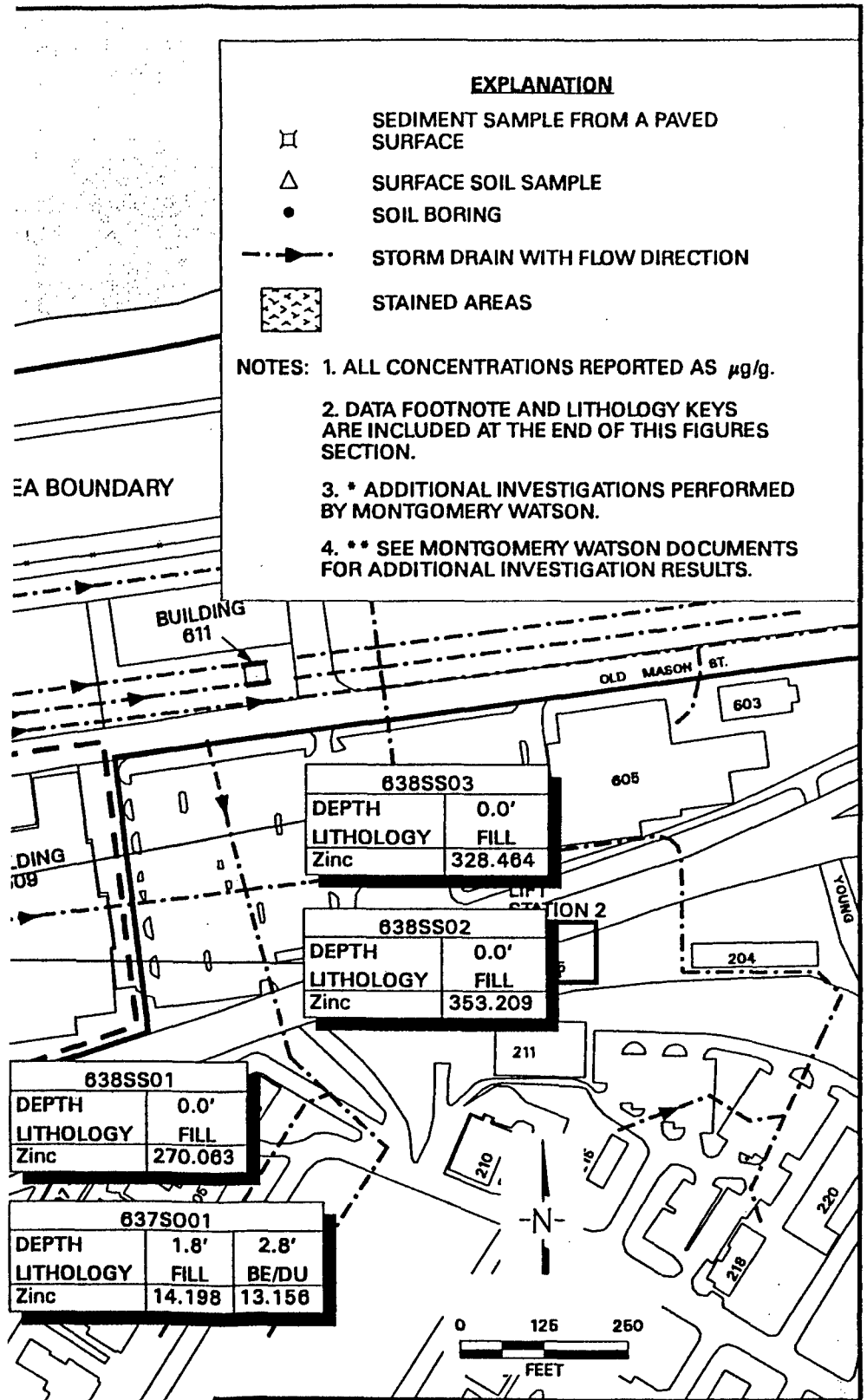
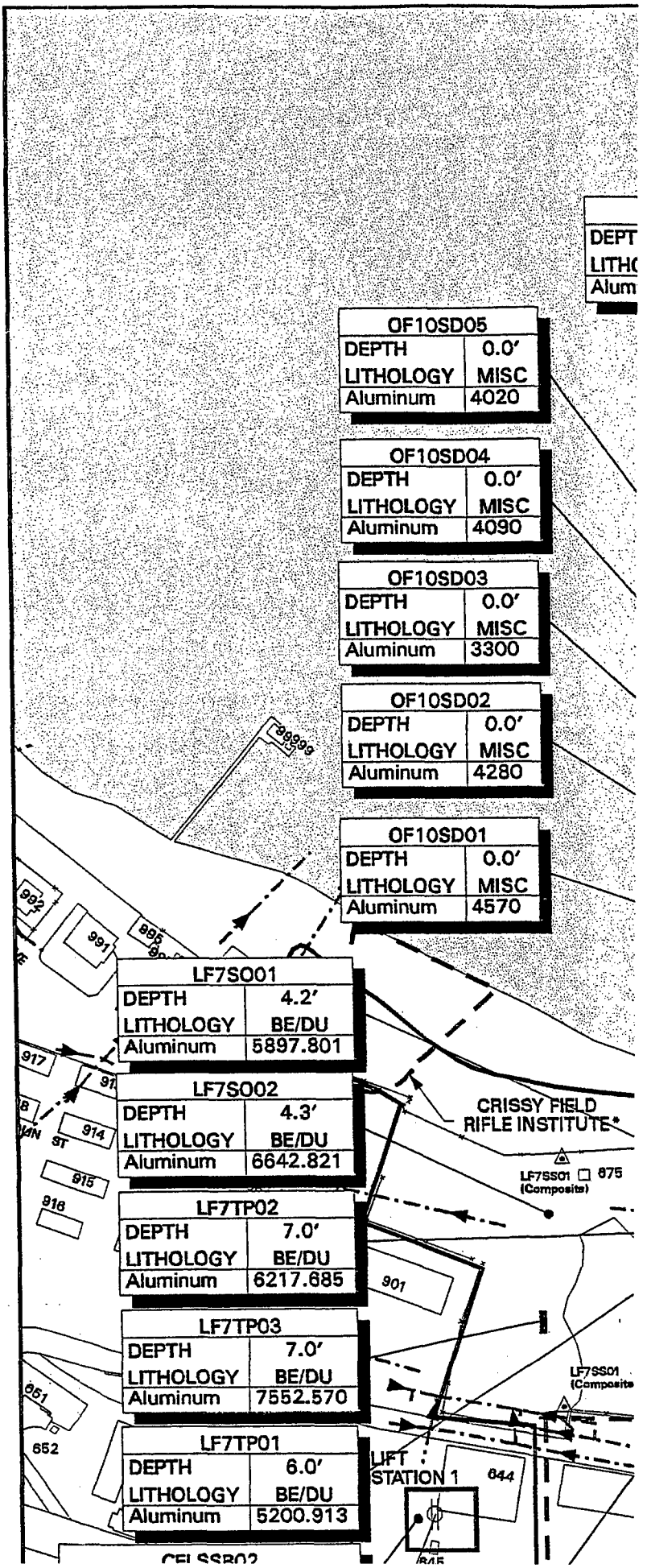


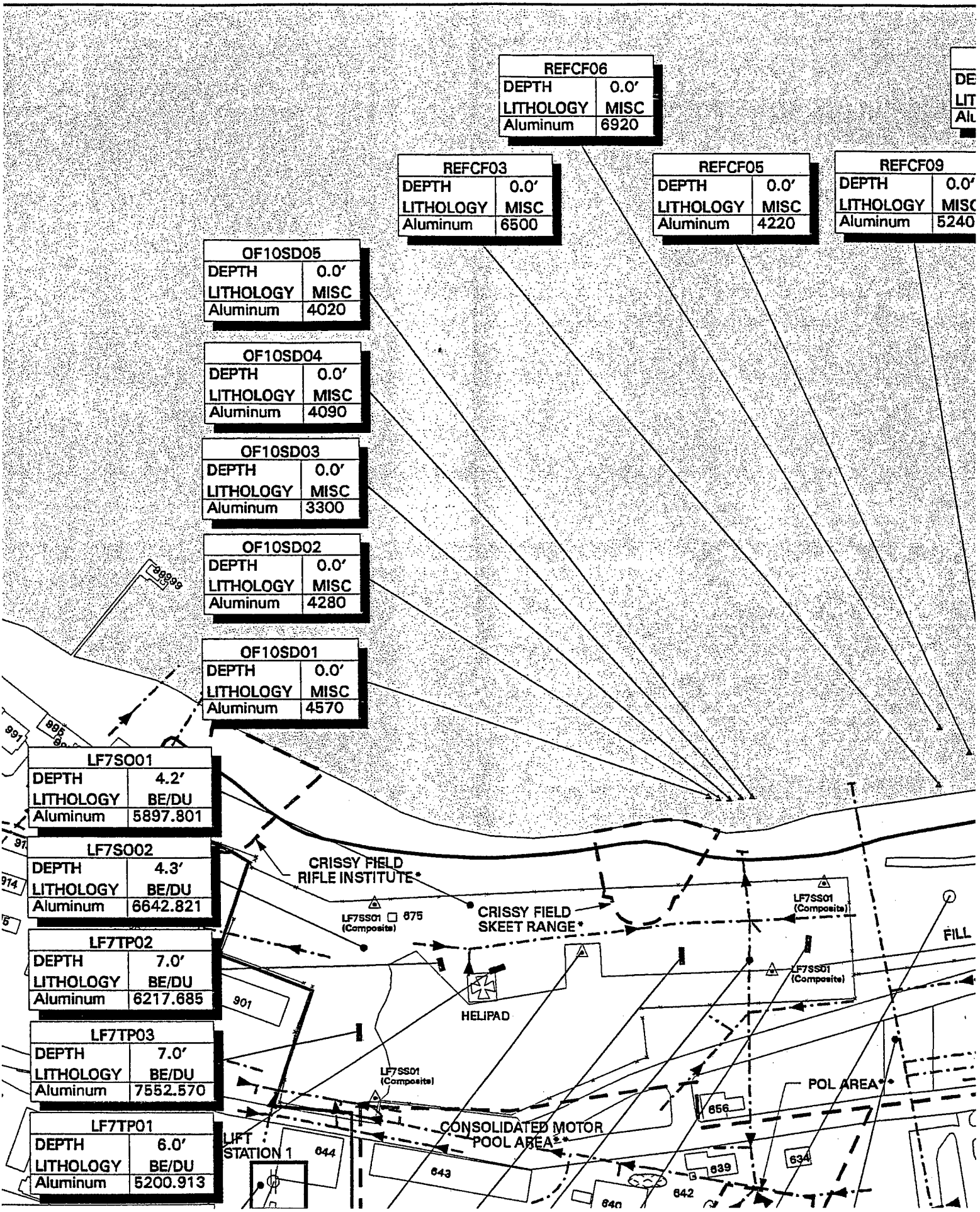
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

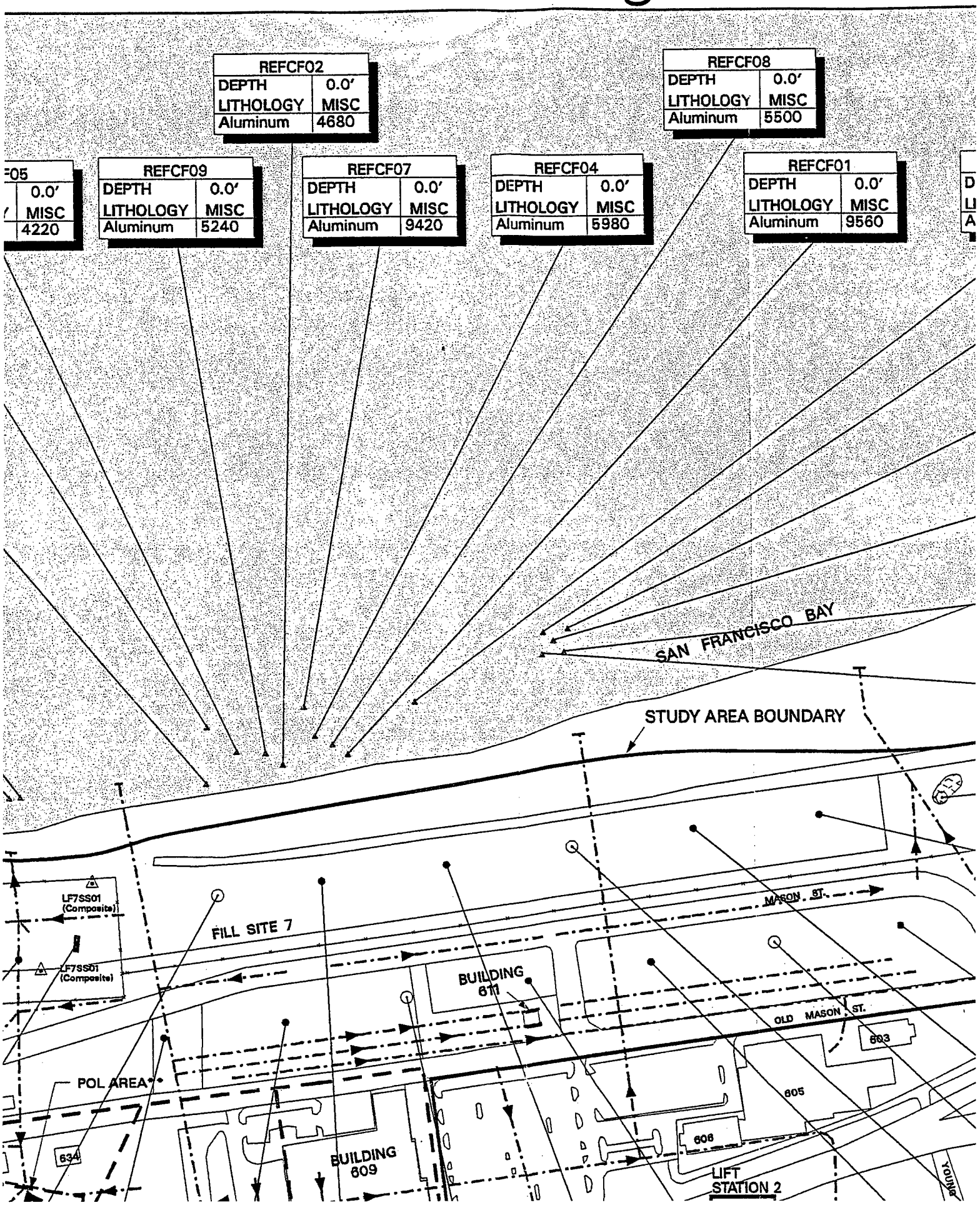
27 Dec 96 09:35:06 Friday, tw v3.aml, plotfile base_CRISSY1_S_21.grn, PSF

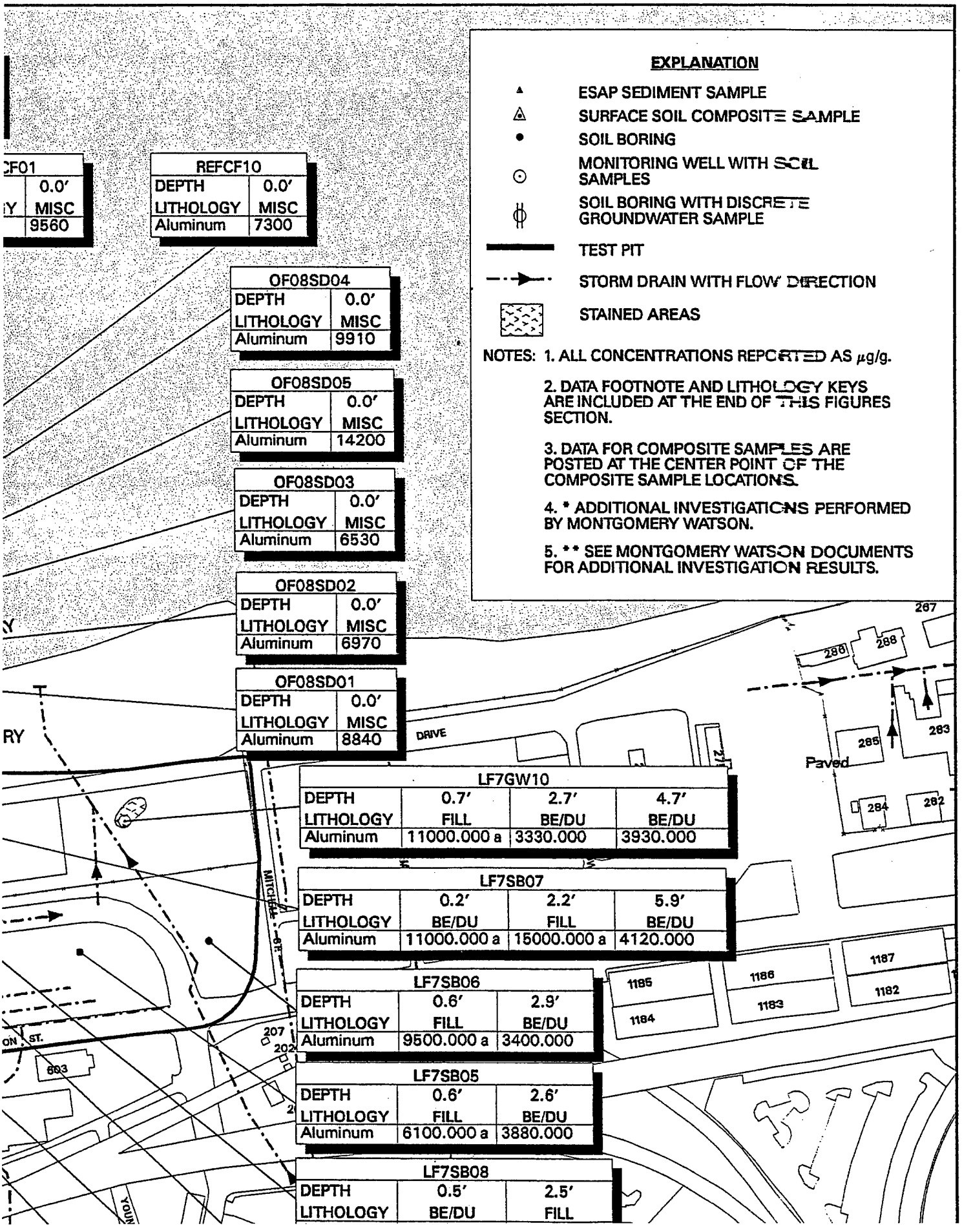

SAN FRANCISCO BAY
637SO02
DEPTH 0.0'
LITHOLOGY FILL
Zinc 68.969
638SO01
DEPTH 4.5' 6.0'
LITHOLOGY BE/DU BE/DU
Zinc 14.215 14.716
STUDY AREA BOUNDARY
CRISSY FIELD SKEET RANGE*
FILL SITE 7
HELIPAD
BUILDING 611
POL AREA**
CONSOLIDATED MOTOR POOL AREA**
BUILDING 609
BUILDING 633 AREA**
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
HIGHWAY 101
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Zinc 270.063
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Zinc 14.198 13.156
637SO03
DEPTH 4.2' 6.0'
LITHOLOGY BE/DU BE/DU
Zinc 15.168 14.866
637SO04
DEPTH 1.2' 4.2'
LITHOLOGY FILL BE/DU
Zinc 49.497 14.768
NOTES: 1.
CONSO
CON
PSF26239
Date: Jan
2


EXPLANATION
SEDIMENT SAMPLE FROM A PAVED SURFACE
SURFACE SOIL SAMPLE
SOIL BORING
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
4. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
EA BOUNDARY
BUILDING 611
OLD MASON ST.
603
605
638SS03
DEPTH 0.0'
LITHOLOGY FILL
Zinc 328.464
638SS02
DEPTH 0.0'
LITHOLOGY FILL
Zinc 353.209
204
211
638SS01
DEPTH 0.0'
LITHOLOGY FILL
Zinc 270.063
637SO01
DEPTH 1.8' 2.8'
LITHOLOGY FILL BE/DU
Zinc 14.198 13.156
4.2'
BE/DU
14.768
-N-
0 125 250
FEET
DAMES & MOORE
CRISSY FIELD STUDY AREA
CONSOLIDATED MOTOR POOL AREA, POL AREA, AND BUILDINGS 609 AND 633
CONCENTRATIONS OF ZINC IN SOIL
PSF26239
3
Date: January 1997
Figure 5.5-15


OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4020
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4090
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 3300
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4280
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4570
LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Aluminum 5897.801
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Aluminum 6642.821
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Aluminum 6217.685
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Aluminum 7552.570
LF7TP01
DEPTH 6.0'
LITHOLOGY BE/DU
Aluminum 5200.913
CRISSY FIELD
RIFLE INSTITUTE*
LF7SS01
(Composite)
LIFT
STATION 1
644
901
652
661
914
915
916
917
991
992
895
99999


REFCF06
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 6920
REFCF03
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 6500
REFCF05
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4220
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 5240
OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4020
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4090
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 3300
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4280
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4570
LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Aluminum 5897.801
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Aluminum 6642.821
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Aluminum 6217.685
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Aluminum 7552.570
LF7TP01
DEPTH 6.0'
LITHOLOGY BE/DU
Aluminum 5200.913
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
CONSOLIDATED MOTOR POOL AREA**
POL AREA**
LIFT STATION 1
FILL
901
644
643
642
640
639
634
656


REFCF02
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 4680
REFCF08
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 5500
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 5240
REFCF07
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 9420
REFCF04
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 5980
REFCF01
DEPTH 0.0'
LITHOLOGY MISC
Aluminum 9560
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603
605
606
POL AREA
634
BUILDING 609
LIFT STATION 2
YOUNG



CF01	
	0.0′
Y	MISC
	9560

REFCF10	
DEPTH	0.0′
LITHOLOGY	MISC
Aluminum	7300

OF08SD04	
DEPTH	0.0′
LITHOLOGY	MISC
Aluminum	9910

OF08SD05	
DEPTH	0.0′
LITHOLOGY	MISC
Aluminum	14200

OF08SD03	
DEPTH	0.0′
LITHOLOGY	MISC
Aluminum	6530

OF08SD02	
DEPTH	0.0′
LITHOLOGY	MISC
Aluminum	6970

OF08SD01	
DEPTH	0.0′
LITHOLOGY	MISC
Aluminum	8840

LF7GW10			
DEPTH	0.7′	2.7′	4.7′
LITHOLOGY	FILL	BE/DU	BE/DU
Aluminum	11000.000 a	3330.000	3930.000

LF7SB07			
DEPTH	0.2′	2.2′	5.9′
LITHOLOGY	BE/DU	FILL	BE/DU
Aluminum	11000.000 a	15000.000 a	4120.000

LF7SB06		
DEPTH	0.6′	2.9′
LITHOLOGY	FILL	BE/DU
Aluminum	9500.000 a	3400.000

LF7SB05		
DEPTH	0.6′	2.6′
LITHOLOGY	FILL	BE/DU
Aluminum	6100.000 a	3880.000

LF7SB08		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	FILL

EXPLANATION

- ESAP SEDIMENT SAMPLE
- SURFACE SOIL COMPOSITE SAMPLE
- SOIL BORING
- MONITORING WELL WITH SOIL SAMPLES
- SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
- TEST PIT
- STORM DRAIN WITH FLOW DIRECTION
- STAINED AREAS

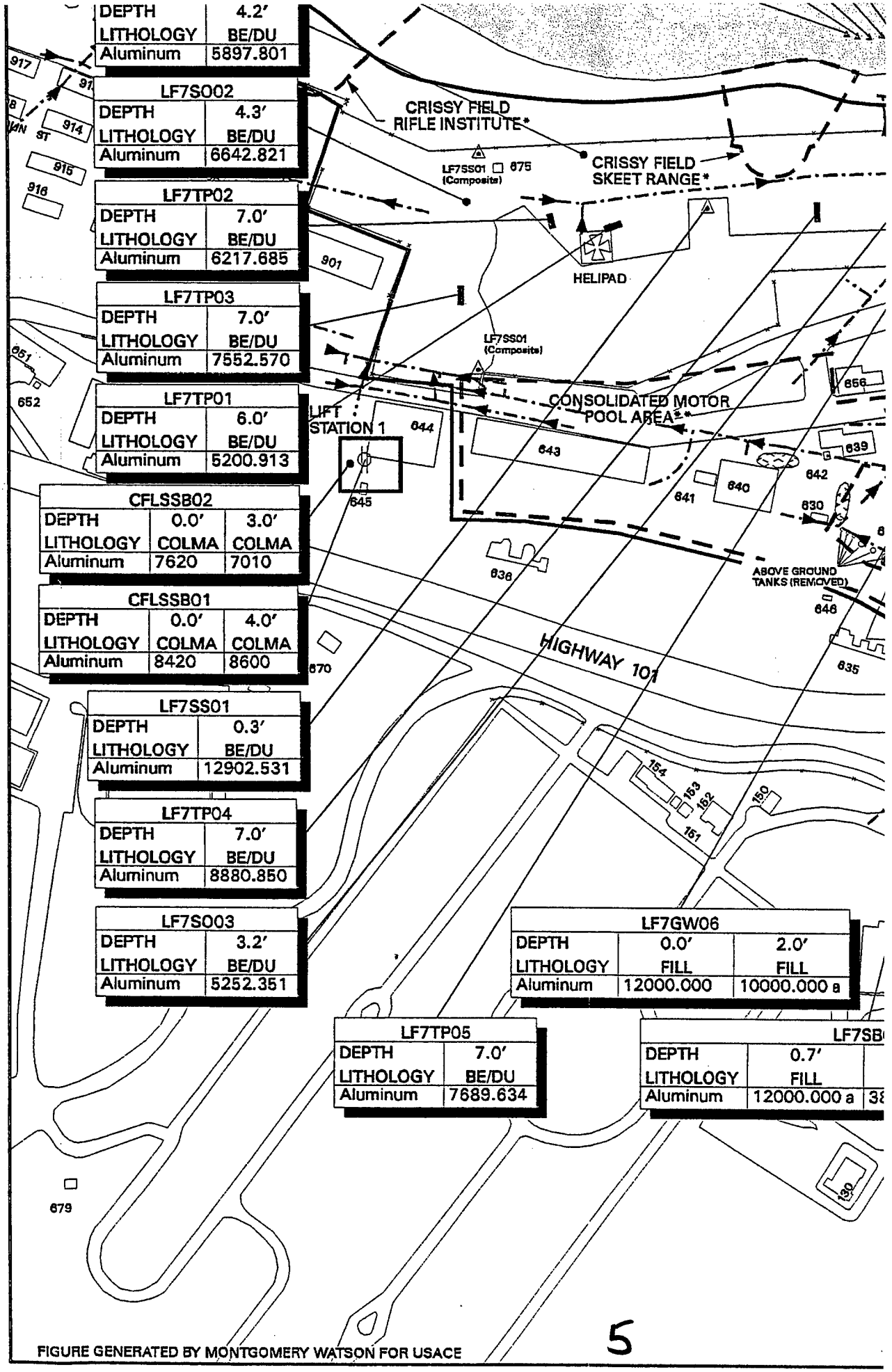
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.

2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.

3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.

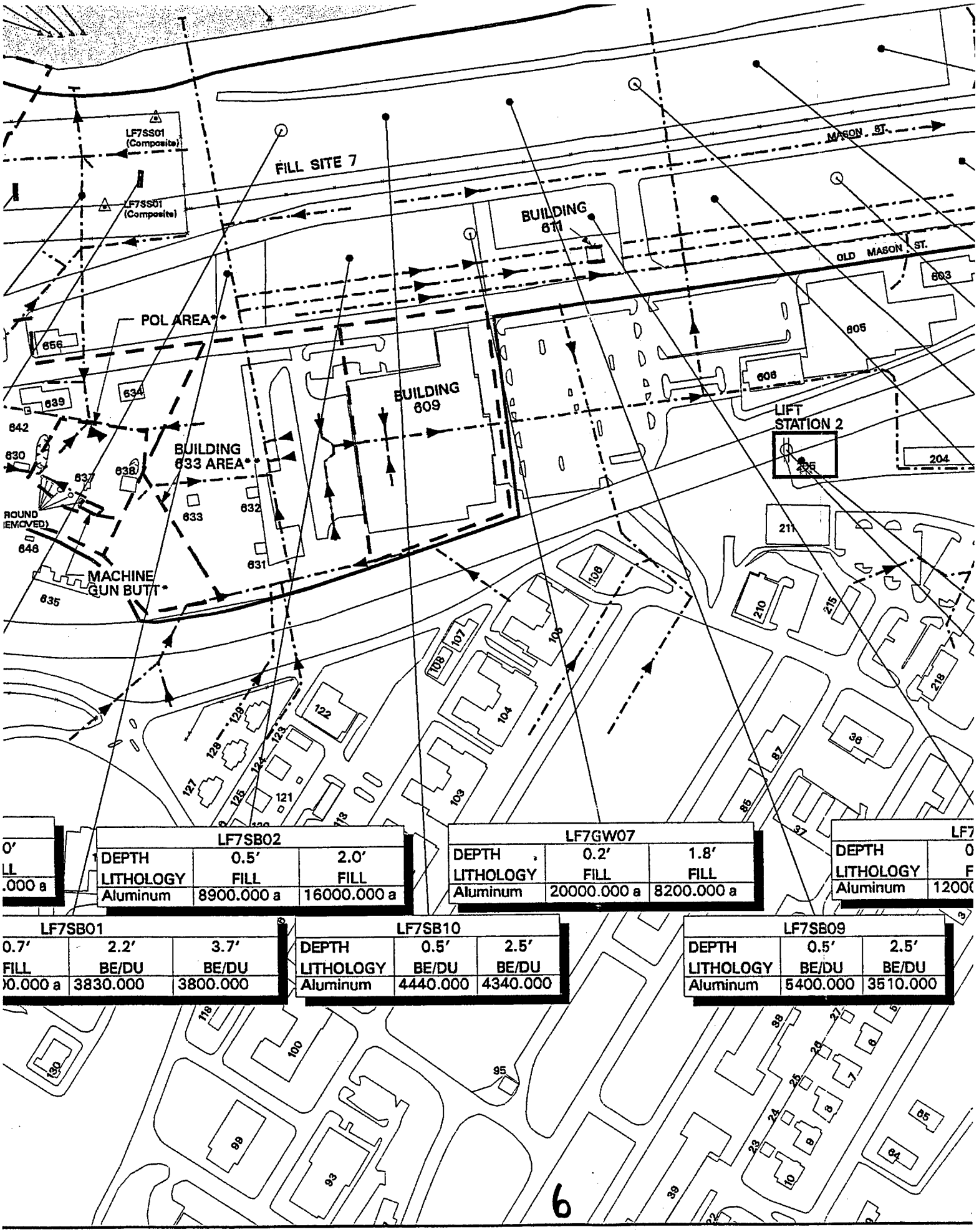
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.

5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.



23 Dec 96 11:48:40 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_S_1.gra, PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



LF7SB02		
DEPTH	0.5′	2.0′
LITHOLOGY	FILL	FILL
Aluminum	8900.000 a	16000.000 a

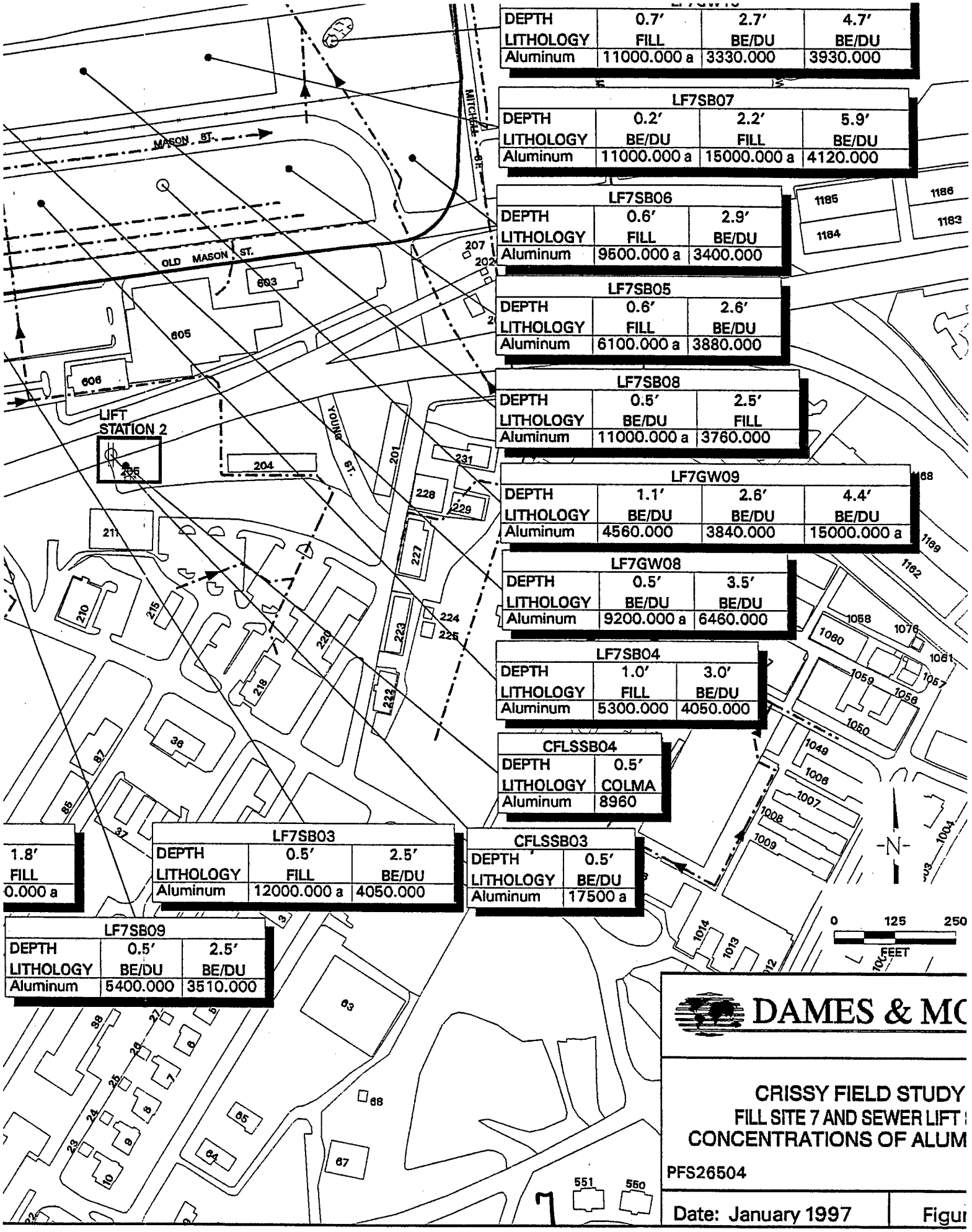
LF7GW07		
DEPTH	0.2′	1.8′
LITHOLOGY	FILL	FILL
Aluminum	20000.000 a	8200.000 a

LF7	
DEPTH	0
LITHOLOGY	F
Aluminum	12000

LF7SB01		
0.7′	2.2′	3.7′
FILL	BE/DU	BE/DU
0.000 a	3830.000	3800.000

LF7SB10		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Aluminum	4440.000	4340.000

LF7SB09		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Aluminum	5400.000	3510.000



DEPTH	0.7′	2.7′	4.7′
LITHOLOGY	FILL	BE/DU	BE/DU
Aluminum	11000.000 a	3330.000	3930.000

LF7SB07			
DEPTH	0.2′	2.2′	5.9′
LITHOLOGY	BE/DU	FILL	BE/DU
Aluminum	11000.000 a	15000.000 a	4120.000

LF7SB06		
DEPTH	0.6′	2.9′
LITHOLOGY	FILL	BE/DU
Aluminum	9500.000 a	3400.000

LF7SB05		
DEPTH	0.6′	2.6′
LITHOLOGY	FILL	BE/DU
Aluminum	6100.000 a	3880.000

LF7SB08		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	FILL
Aluminum	11000.000 a	3760.000

LF7GW09			
DEPTH	1.1′	2.6′	4.4′
LITHOLOGY	BE/DU	BE/DU	BE/DU
Aluminum	4560.000	3840.000	15000.000 a

LF7GW08		
DEPTH	0.5′	3.5′
LITHOLOGY	BE/DU	BE/DU
Aluminum	9200.000 a	6460.000

LF7SB04		
DEPTH	1.0′	3.0′
LITHOLOGY	FILL	BE/DU
Aluminum	5300.000	4050.000

CFLSSB04	
DEPTH	0.5′
LITHOLOGY	COLMA
Aluminum	8960

1.8′
FILL
0.000 a

LF7SB03		
DEPTH	0.5′	2.5′
LITHOLOGY	FILL	BE/DU
Aluminum	12000.000 a	4050.000

CFLSSB03	
DEPTH	0.5′
LITHOLOGY	BE/DU
Aluminum	17500 a

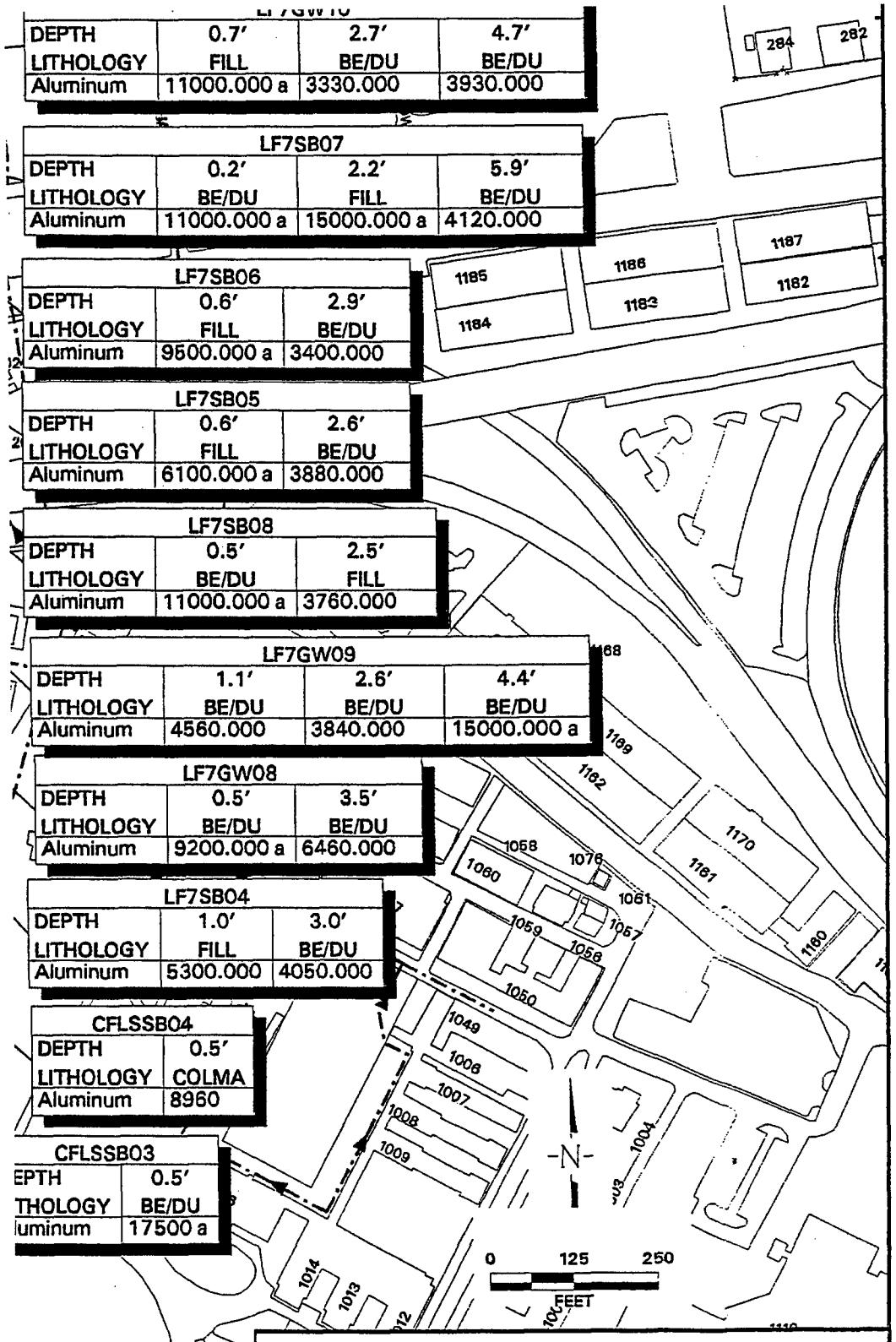
LF7SB09		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Aluminum	5400.000	3510.000

DAMES & MC

CRISSY FIELD STUDY
FILL SITE 7 AND SEWER LIFT
CONCENTRATIONS OF ALUM

PFS26504

Date: January 1997 | Figu



DAMES & MOORE

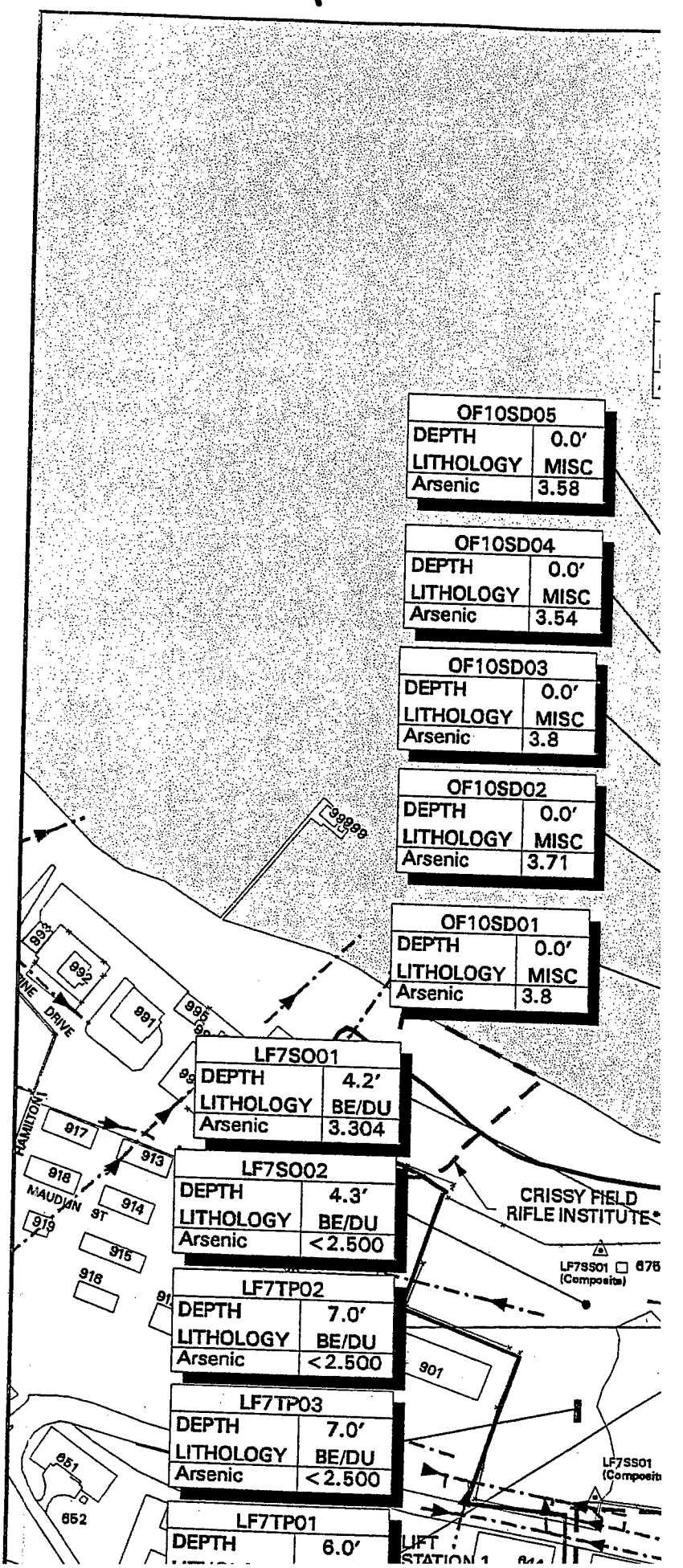
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF ALUMINUM IN SOIL

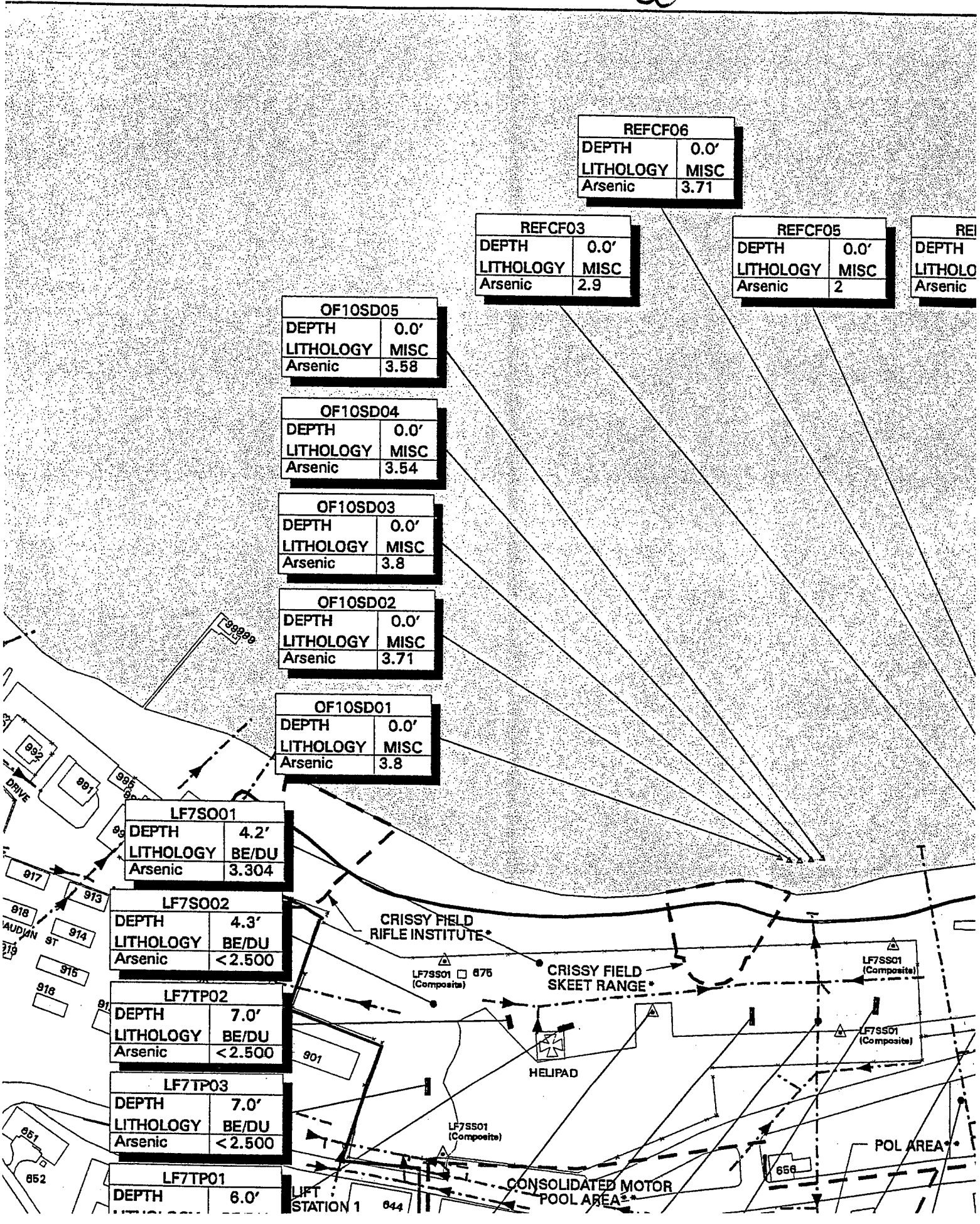
PFS26504

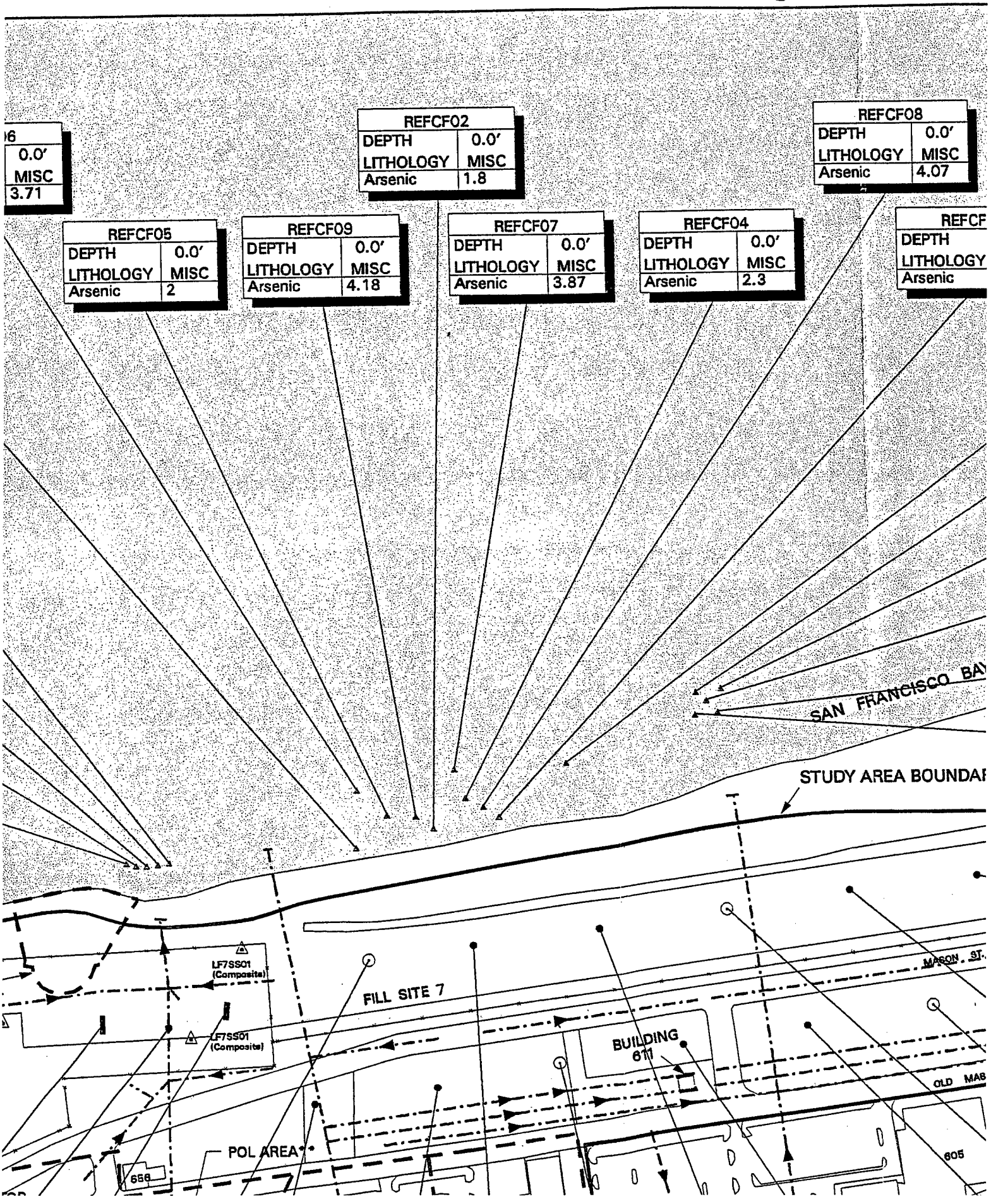
8

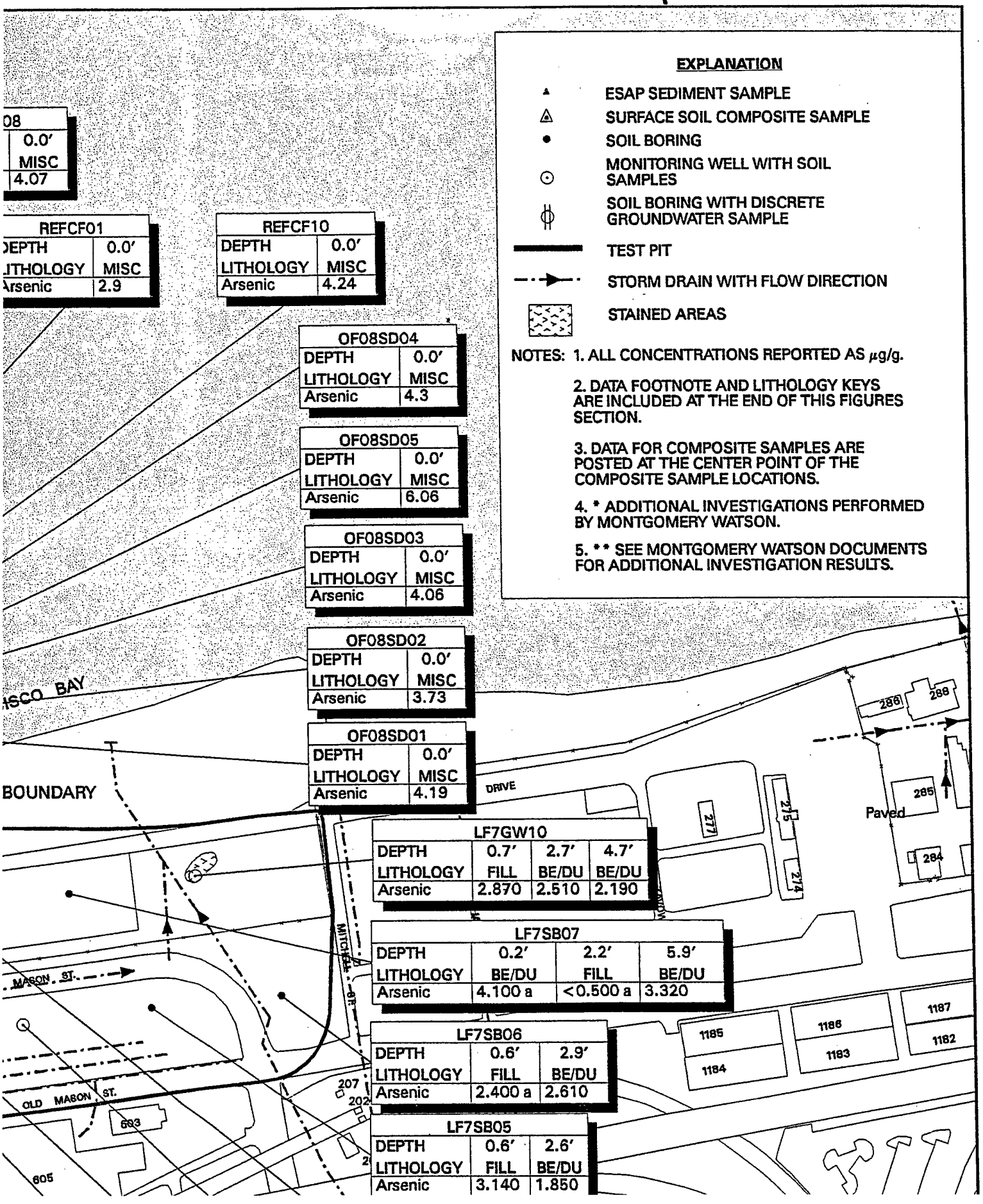
Date: January 1997

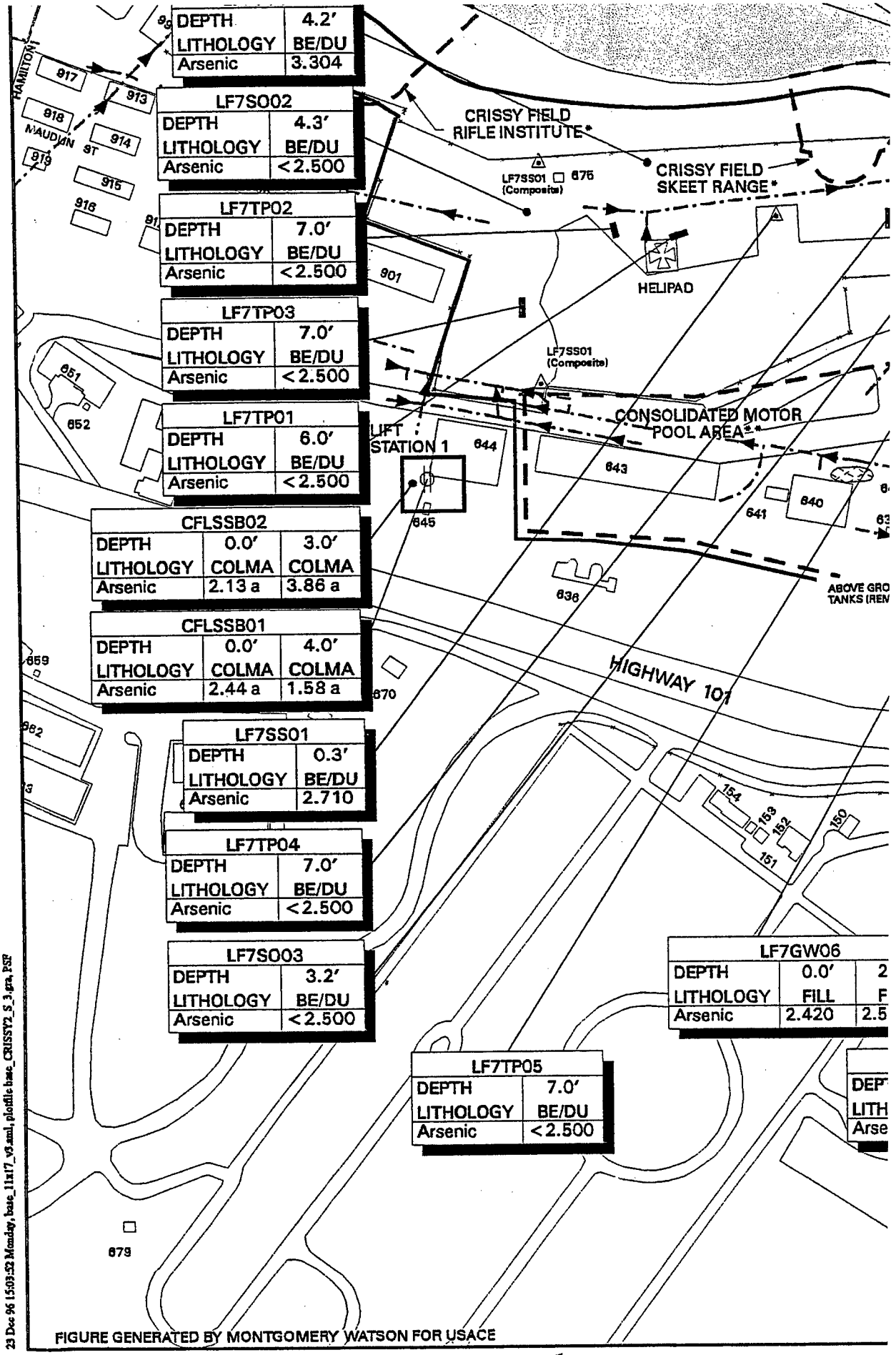
Figure 5.5-16

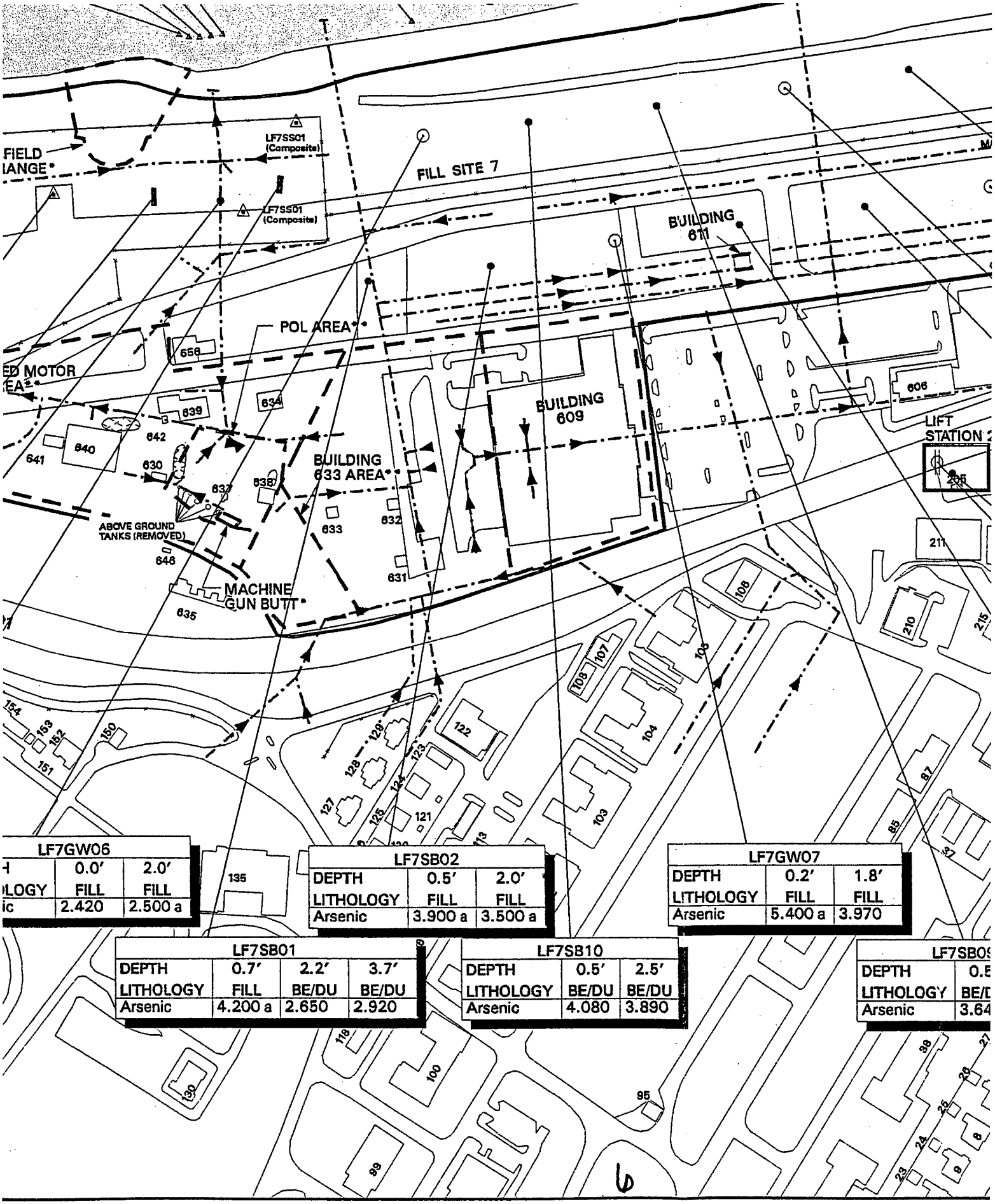

OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Arsenic 3.58
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Arsenic 3.54
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Arsenic 3.8
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Arsenic 3.71
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Arsenic 3.8
LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Arsenic 3.304
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Arsenic <2.500
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Arsenic <2.500
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Arsenic <2.500
LF7TP01
DEPTH 6.0'
HAMILTON
MAUDLIN ST
CRISSY FIELD
RIFLE INSTITUTE
LIFT STATION 1


REFCF06
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 3.71
REFCF03
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 2.9
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 2
OF10SD05
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 3.58
OF10SD04
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 3.54
OF10SD03
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 3.8
OF10SD02
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 3.71
OF10SD01
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 3.8
LF7SO01
DEPTH 4.2′
LITHOLOGY BE/DU
Arsenic 3.304
LF7SO02
DEPTH 4.3′
LITHOLOGY BE/DU
Arsenic <2.500
LF7TP02
DEPTH 7.0′
LITHOLOGY BE/DU
Arsenic <2.500
LF7TP03
DEPTH 7.0′
LITHOLOGY BE/DU
Arsenic <2.500
LF7TP01
DEPTH 6.0′
CRISSY FIELD RIFLE INSTITUTE
CRISSY FIELD SKEET RANGE
LF7SS01 (Composite)
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA
POL AREA
DRIVE
AUDUBON ST


6
0.0′
MISC
3.71
REFCF02
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 1.8
REFCF08
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 4.07
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 2
REFCF09
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 4.18
REFCF07
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 3.87
REFCF04
DEPTH 0.0′
LITHOLOGY MISC
Arsenic 2.3
REFCF
DEPTH
LITHOLOGY
Arsenic
SAN FRANCISCO BA
STUDY AREA BOUNDAR
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
BUILDING 611
MASON ST.
OLD MAS
POL AREA
656
605


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
08 | 0.0′ | MISC | 4.07
REFCF01 | DEPTH 0.0′ | LITHOLOGY MISC | Arsenic 2.9
REFCF10 | DEPTH 0.0′ | LITHOLOGY MISC | Arsenic 4.24
OF08SD04 | DEPTH 0.0′ | LITHOLOGY MISC | Arsenic 4.3
OF08SD05 | DEPTH 0.0′ | LITHOLOGY MISC | Arsenic 6.06
OF08SD03 | DEPTH 0.0′ | LITHOLOGY MISC | Arsenic 4.06
OF08SD02 | DEPTH 0.0′ | LITHOLOGY MISC | Arsenic 3.73
OF08SD01 | DEPTH 0.0′ | LITHOLOGY MISC | Arsenic 4.19
LF7GW10 | DEPTH 0.7′ FILL | 2.7′ BE/DU | 4.7′ BE/DU | Arsenic 2.870 | 2.510 | 2.190
LF7SB07 | DEPTH 0.2′ BE/DU | 2.2′ FILL | 5.9′ BE/DU | Arsenic 4.100 a | <0.500 a | 3.320
LF7SB06 | DEPTH 0.6′ FILL | 2.9′ BE/DU | Arsenic 2.400 a | 2.610
LF7SB05 | DEPTH 0.6′ FILL | 2.6′ BE/DU | Arsenic 3.140 | 1.850
ISCO BAY
BOUNDARY
DRIVE
MASON ST.
OLD MASON ST.
MITCHELL
Paved
277
275
274
286
288
285
284
1185
1186
1187
1184
1183
1182
207
202
603
605


DEPTH 4.2′
LITHOLOGY BE/DU
Arsenic 3.304
LF7SO02
DEPTH 4.3′
LITHOLOGY BE/DU
Arsenic <2.500
LF7TP02
DEPTH 7.0′
LITHOLOGY BE/DU
Arsenic <2.500
LF7TP03
DEPTH 7.0′
LITHOLOGY BE/DU
Arsenic <2.500
LF7TP01
DEPTH 6.0′
LITHOLOGY BE/DU
Arsenic <2.500
CFLSSB02
DEPTH 0.0′ 3.0′
LITHOLOGY COLMA COLMA
Arsenic 2.13 a 3.86 a
CFLSSB01
DEPTH 0.0′ 4.0′
LITHOLOGY COLMA COLMA
Arsenic 2.44 a 1.58 a
LF7SS01
DEPTH 0.3′
LITHOLOGY BE/DU
Arsenic 2.710
LF7TP04
DEPTH 7.0′
LITHOLOGY BE/DU
Arsenic <2.500
LF7SO03
DEPTH 3.2′
LITHOLOGY BE/DU
Arsenic <2.500
LF7GW06
DEPTH 0.0′
LITHOLOGY FILL
Arsenic 2.420
LF7TP05
DEPTH 7.0′
LITHOLOGY BE/DU
Arsenic <2.500
HAMILTON
MAUDAN ST
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
CONSOLIDATED MOTOR POOL AREA**
LIFT STATION 1
ABOVE GRO TANKS (REN
HIGHWAY 101
917
913
918
914
919
915
916
901
651
652
644
645
643
641
640
636
659
670
662
154
153
152
151
150
879
23 Dec 96 15:03:52 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_S_3.grn, PSF
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



LF7GW06		
H	0.0′	2.0′
LOGY	FILL	FILL
ic	2.420	2.500 a

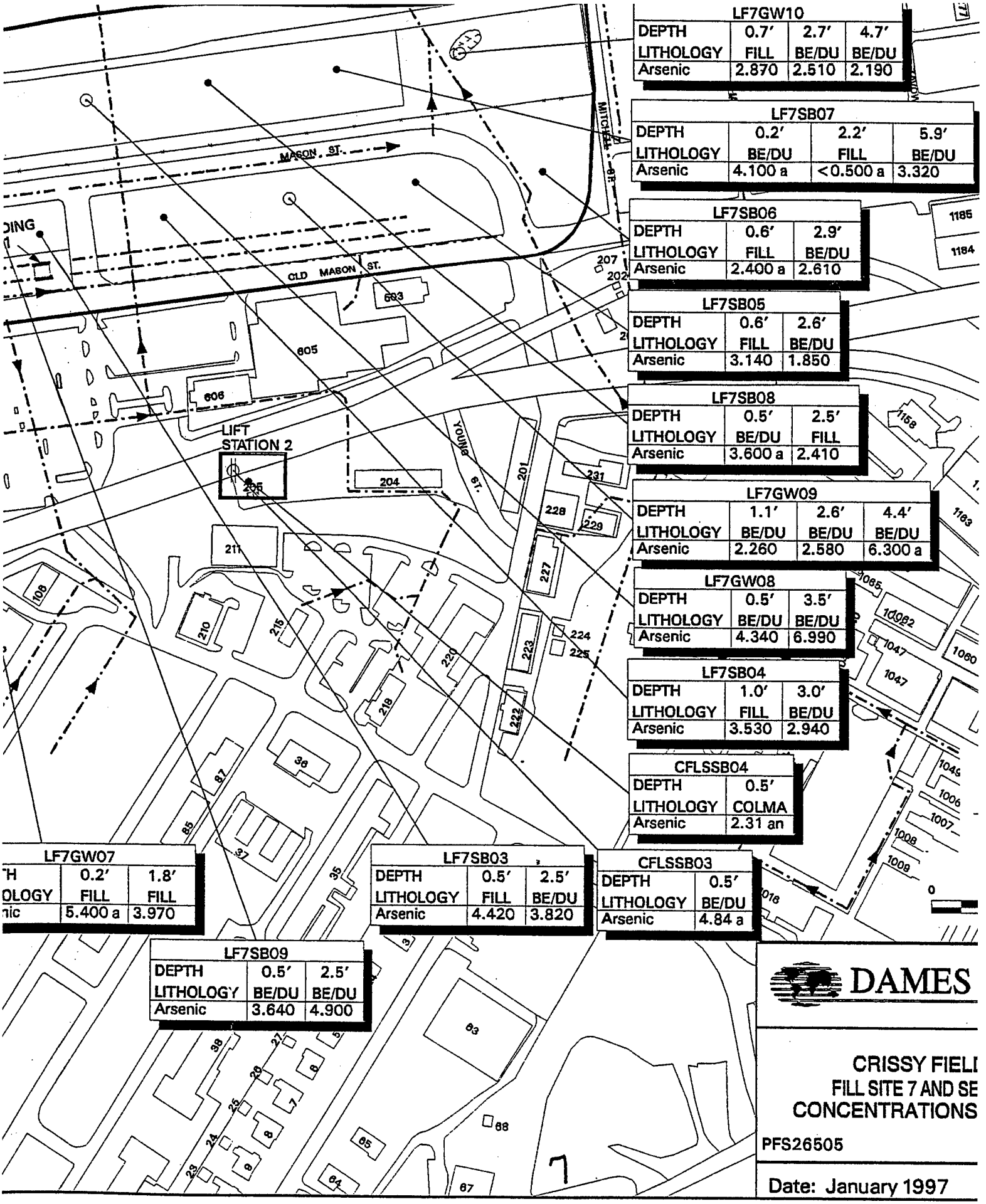
LF7SB02		
DEPTH	0.5′	2.0′
LITHOLOGY	FILL	FILL
Arsenic	3.900 a	3.500 a

LF7GW07		
DEPTH	0.2′	1.8′
LITHOLOGY	FILL	FILL
Arsenic	5.400 a	3.970

LF7SB01			
DEPTH	0.7′	2.2′	3.7′
LITHOLOGY	FILL	BE/DU	BE/DU
Arsenic	4.200 a	2.650	2.920

LF7SB10		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Arsenic	4.080	3.890

LF7SB0	
DEPTH	0.5
LITHOLOGY	BE/D
Arsenic	3.64



LF7GW10			
DEPTH	0.7′	2.7′	4.7′
LITHOLOGY	FILL	BE/DU	BE/DU
Arsenic	2.870	2.510	2.190

LF7SB07			
DEPTH	0.2′	2.2′	5.9′
LITHOLOGY	BE/DU	FILL	BE/DU
Arsenic	4.100 a	<0.500 a	3.320

LF7SB06		
DEPTH	0.6′	2.9′
LITHOLOGY	FILL	BE/DU
Arsenic	2.400 a	2.610

LF7SB05		
DEPTH	0.6′	2.6′
LITHOLOGY	FILL	BE/DU
Arsenic	3.140	1.850

LF7SB08		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	FILL
Arsenic	3.600 a	2.410

LF7GW09			
DEPTH	1.1′	2.6′	4.4′
LITHOLOGY	BE/DU	BE/DU	BE/DU
Arsenic	2.260	2.580	6.300 a

LF7GW08		
DEPTH	0.5′	3.5′
LITHOLOGY	BE/DU	BE/DU
Arsenic	4.340	6.990

LF7SB04		
DEPTH	1.0′	3.0′
LITHOLOGY	FILL	BE/DU
Arsenic	3.530	2.940

CFLSSB04	
DEPTH	0.5′
LITHOLOGY	COLMA
Arsenic	2.31 an

LF7GW07		
?H	0.2′	1.8′
OLOGY	FILL	FILL
nic	5.400 a	3.970

LF7SB03		
DEPTH	0.5′	2.5′
LITHOLOGY	FILL	BE/DU
Arsenic	4.420	3.820

CFLSSB03	
DEPTH	0.5′
LITHOLOGY	BE/DU
Arsenic	4.84 a

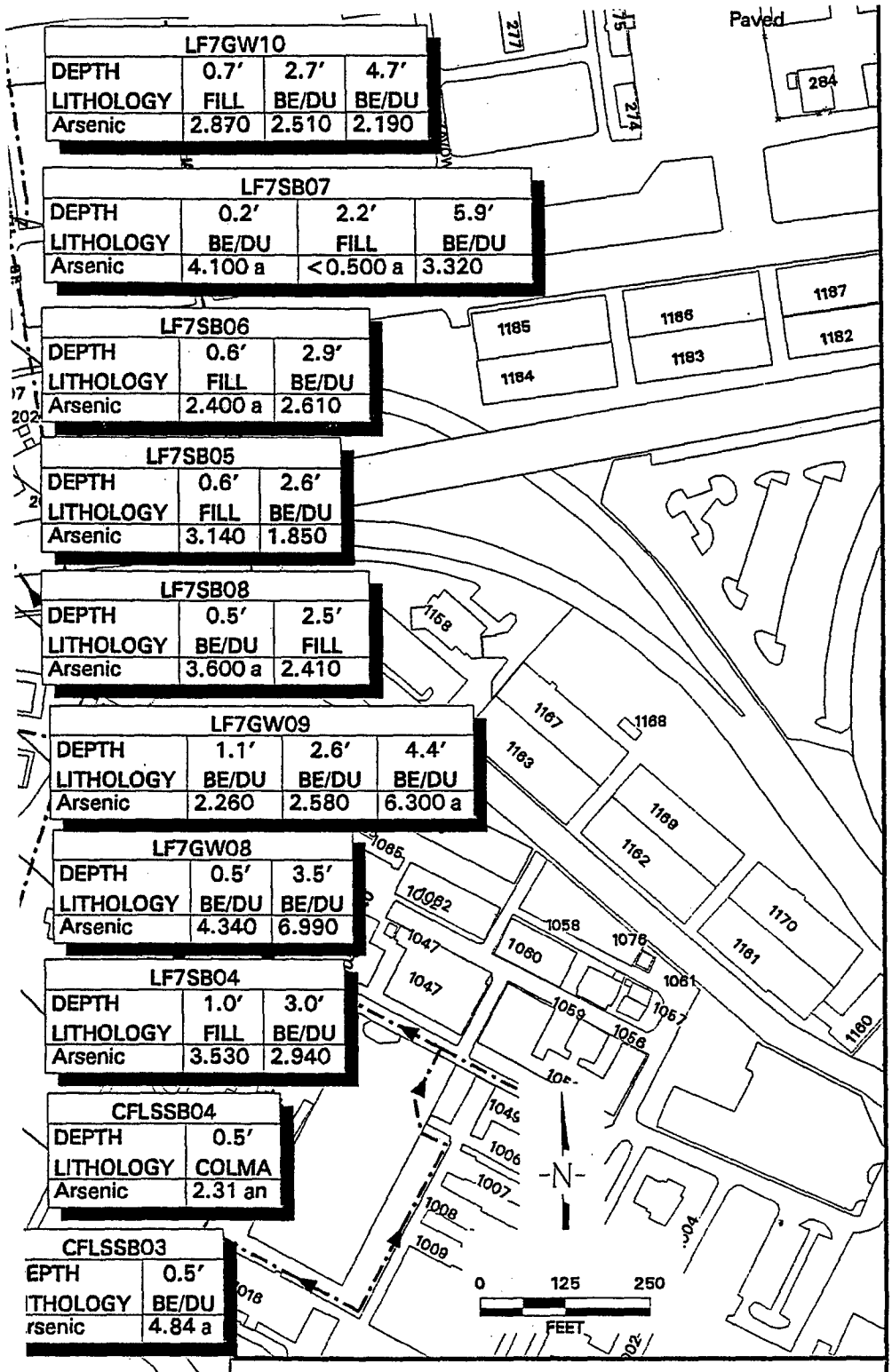
LF7SB09		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Arsenic	3.640	4.900

DAMES

CRISSY FIELI
FILL SITE 7 AND SE
CONCENTRATIONS

PFS26505

Date: January 1997

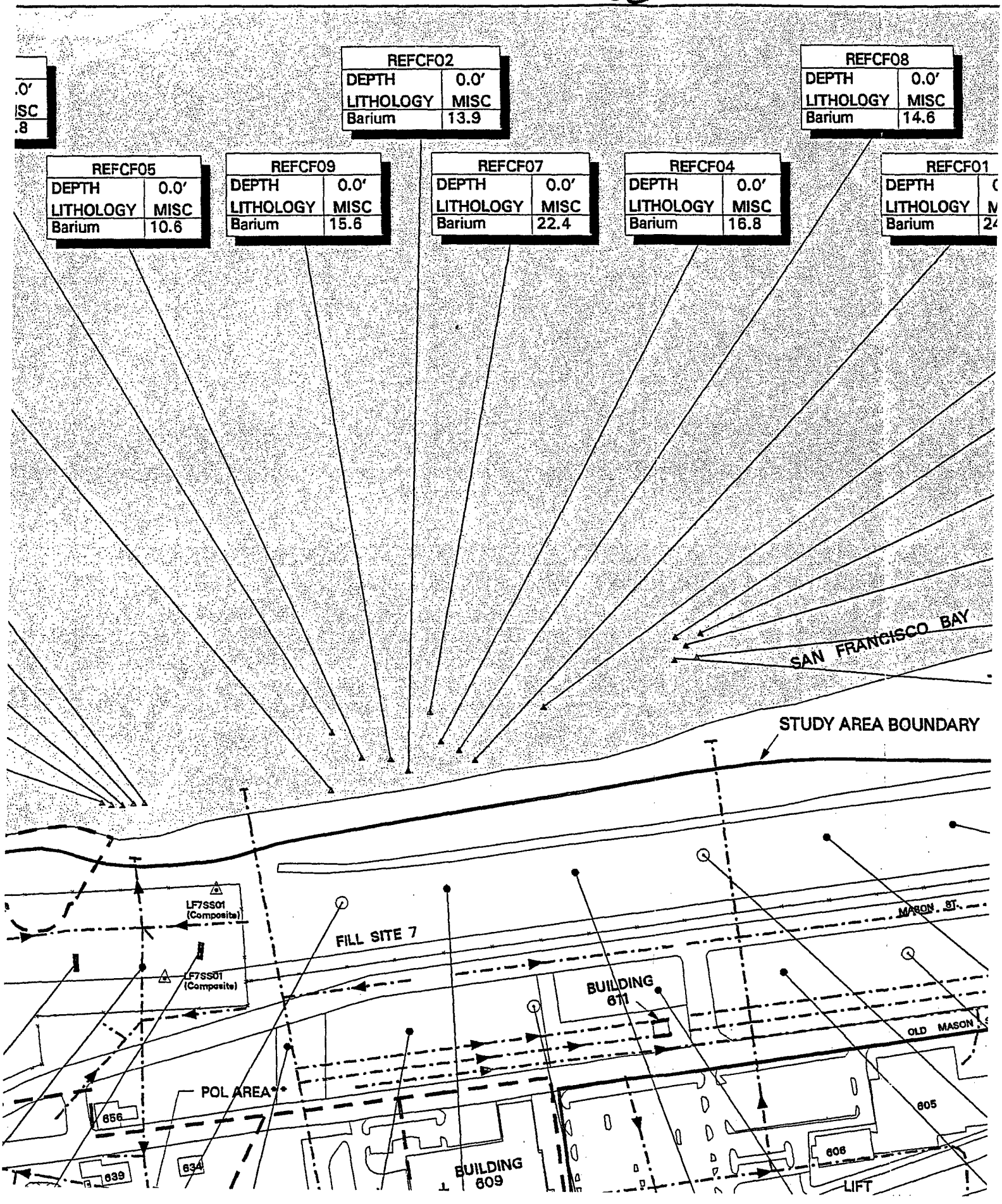


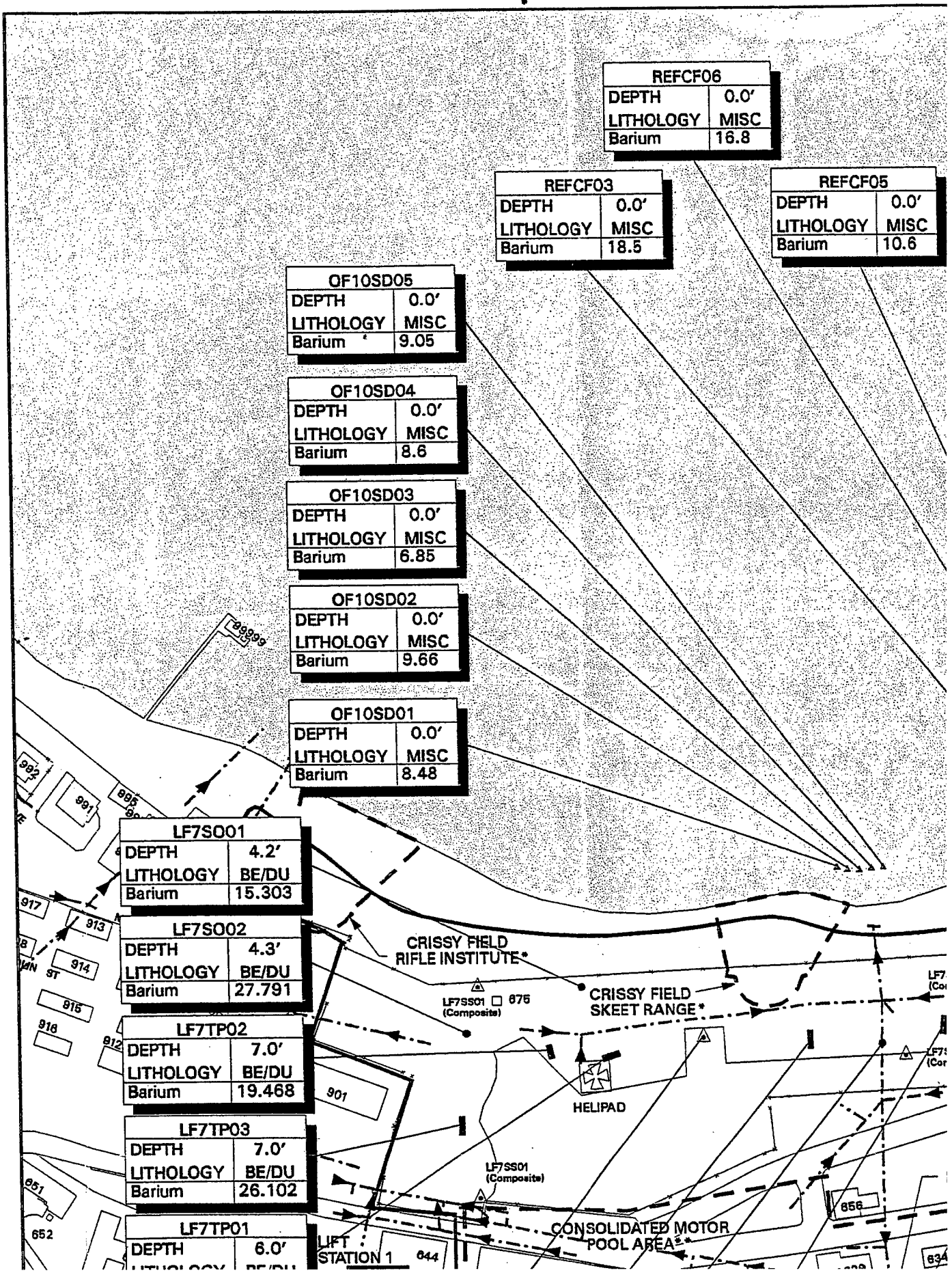
DAMES & MOORE

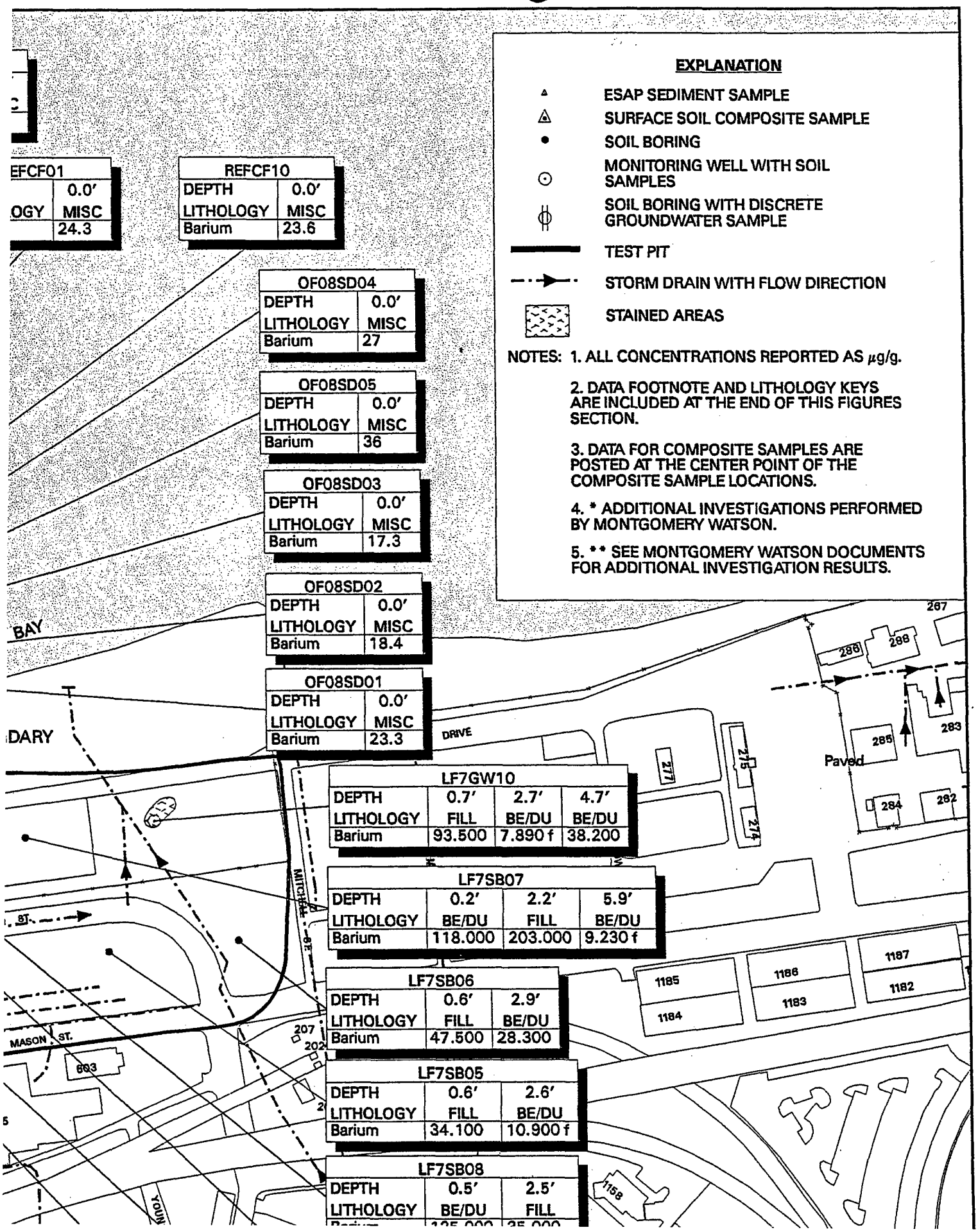
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF ARSENIC IN SOIL

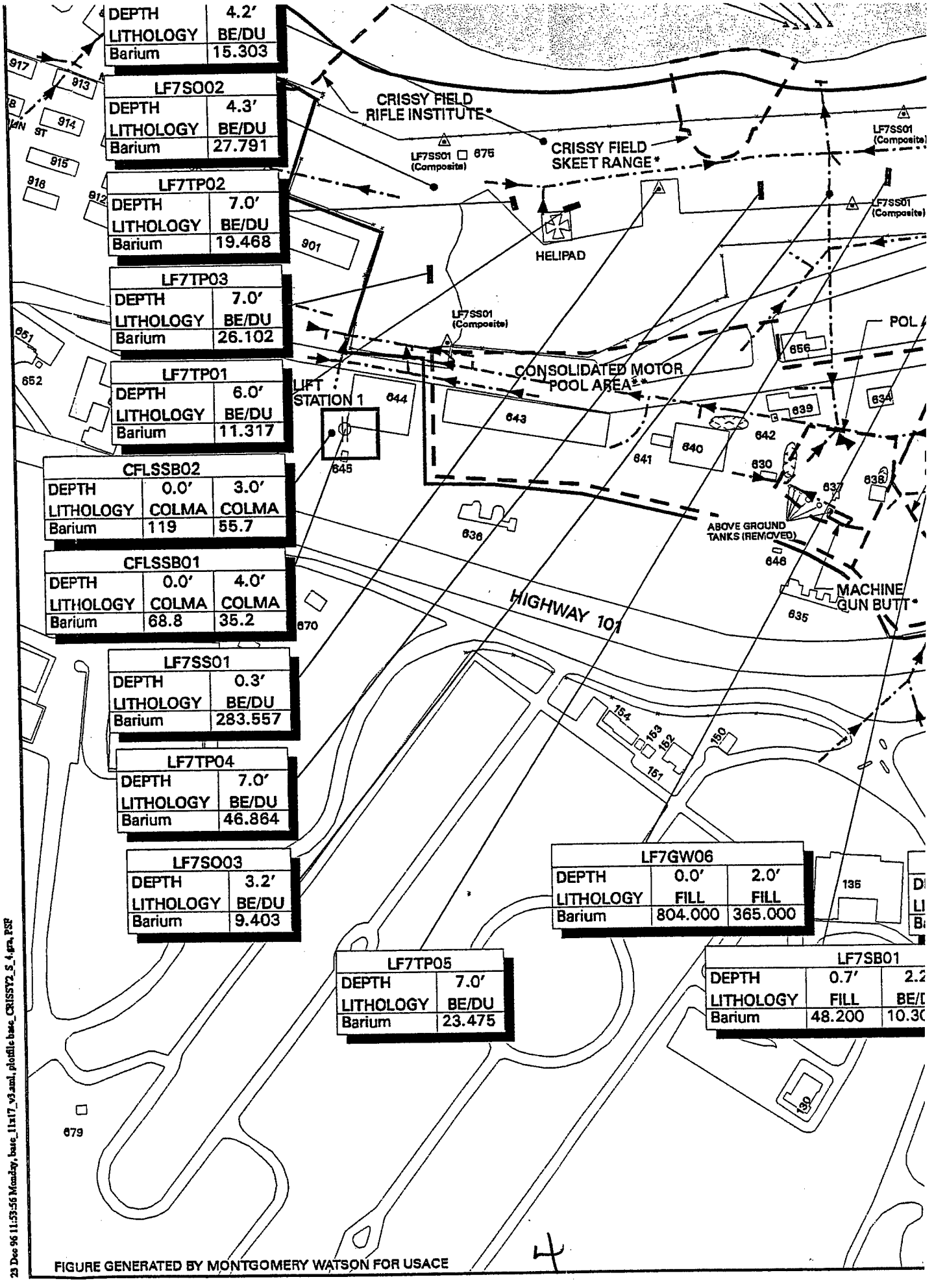
PFS26505 8

Date: January 1997 | Figure 5.5-17


REFCF02
DEPTH 0.0'
LITHOLOGY MISC
Barium 13.9
REFCF08
DEPTH 0.0'
LITHOLOGY MISC
Barium 14.6
REFCF05
DEPTH 0.0'
LITHOLOGY MISC
Barium 10.6
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Barium 15.6
REFCF07
DEPTH 0.0'
LITHOLOGY MISC
Barium 22.4
REFCF04
DEPTH 0.0'
LITHOLOGY MISC
Barium 16.8
REFCF01
DEPTH
LITHOLOGY
Barium
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON
POL AREA
656
639
634
BUILDING 609
605
606
LIFT

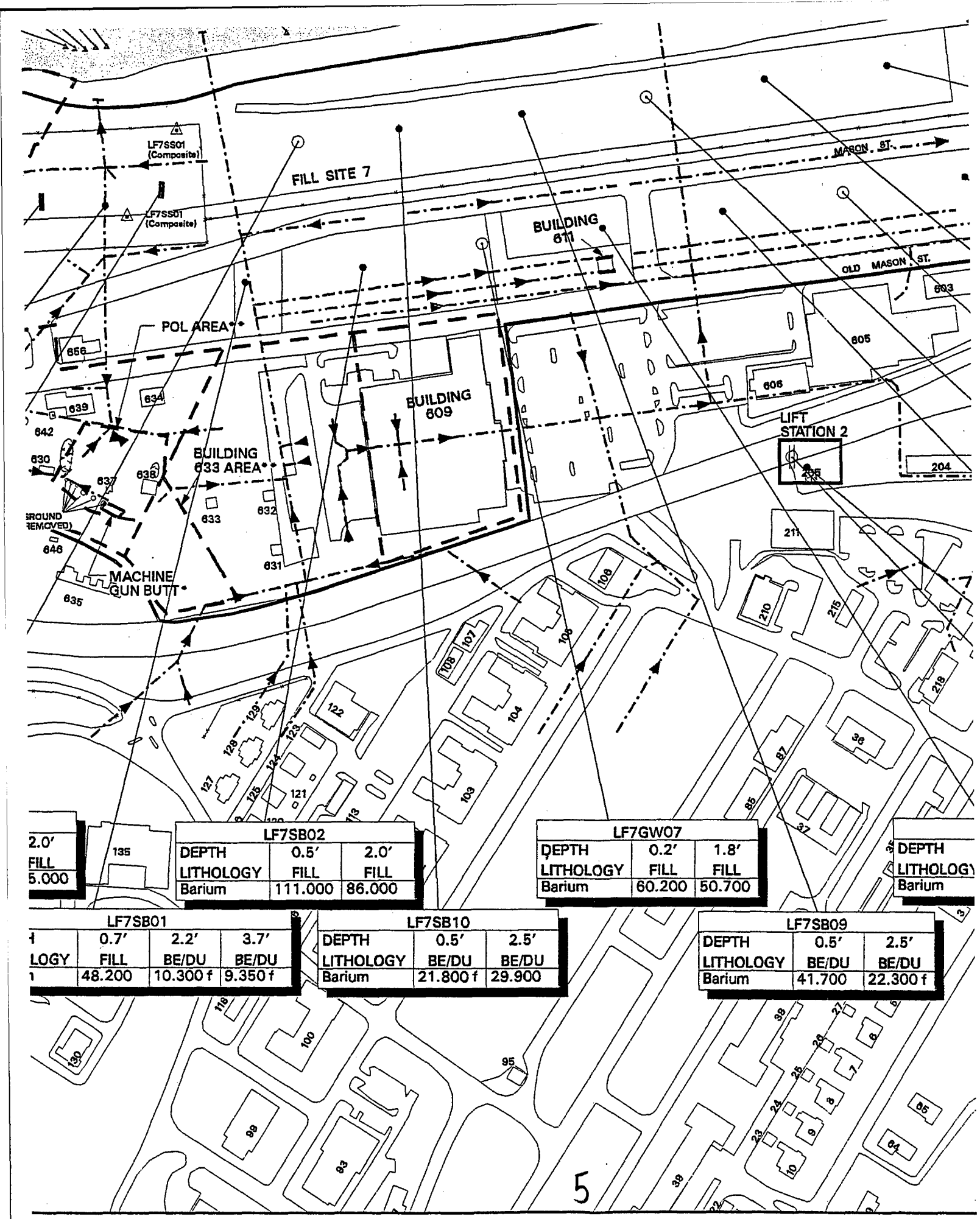

REFCF06
DEPTH 0.0'
LITHOLOGY MISC
Barium 16.8
REFCF03
DEPTH 0.0'
LITHOLOGY MISC
Barium 18.5
REFCF05
DEPTH 0.0'
LITHOLOGY MISC
Barium 10.6
OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Barium 9.05
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Barium 8.6
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Barium 6.85
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Barium 9.66
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Barium 8.48
LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Barium 15.303
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Barium 27.791
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Barium 19.468
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Barium 26.102
LF7TP01
DEPTH 6.0'
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
CONSOLIDATED MOTOR POOL AREA**
LIFT STATION 1
644
856
901
914
915
916
917
913
991
652
651


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
EFCF01
0.0′
OGY MISC
24.3
REFCF10
DEPTH 0.0′
LITHOLOGY MISC
Barium 23.6
OF08SD04
DEPTH 0.0′
LITHOLOGY MISC
Barium 27
OF08SD05
DEPTH 0.0′
LITHOLOGY MISC
Barium 36
OF08SD03
DEPTH 0.0′
LITHOLOGY MISC
Barium 17.3
OF08SD02
DEPTH 0.0′
LITHOLOGY MISC
Barium 18.4
OF08SD01
DEPTH 0.0′
LITHOLOGY MISC
Barium 23.3
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Barium 93.500 7.890 f 38.200
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Barium 118.000 203.000 9.230 f
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Barium 47.500 28.300
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Barium 34.100 10.900 f
LF7SB08
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU FILL
BAY
DARY
DRIVE
MASON ST.
MITCHELL
Paved
267
286
288
283
285
284
282
277
275
274
207
202
693
1185
1186
1187
1184
1183
1182
1158



23 Dec 96 11:53:56 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_S_4.gra, PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



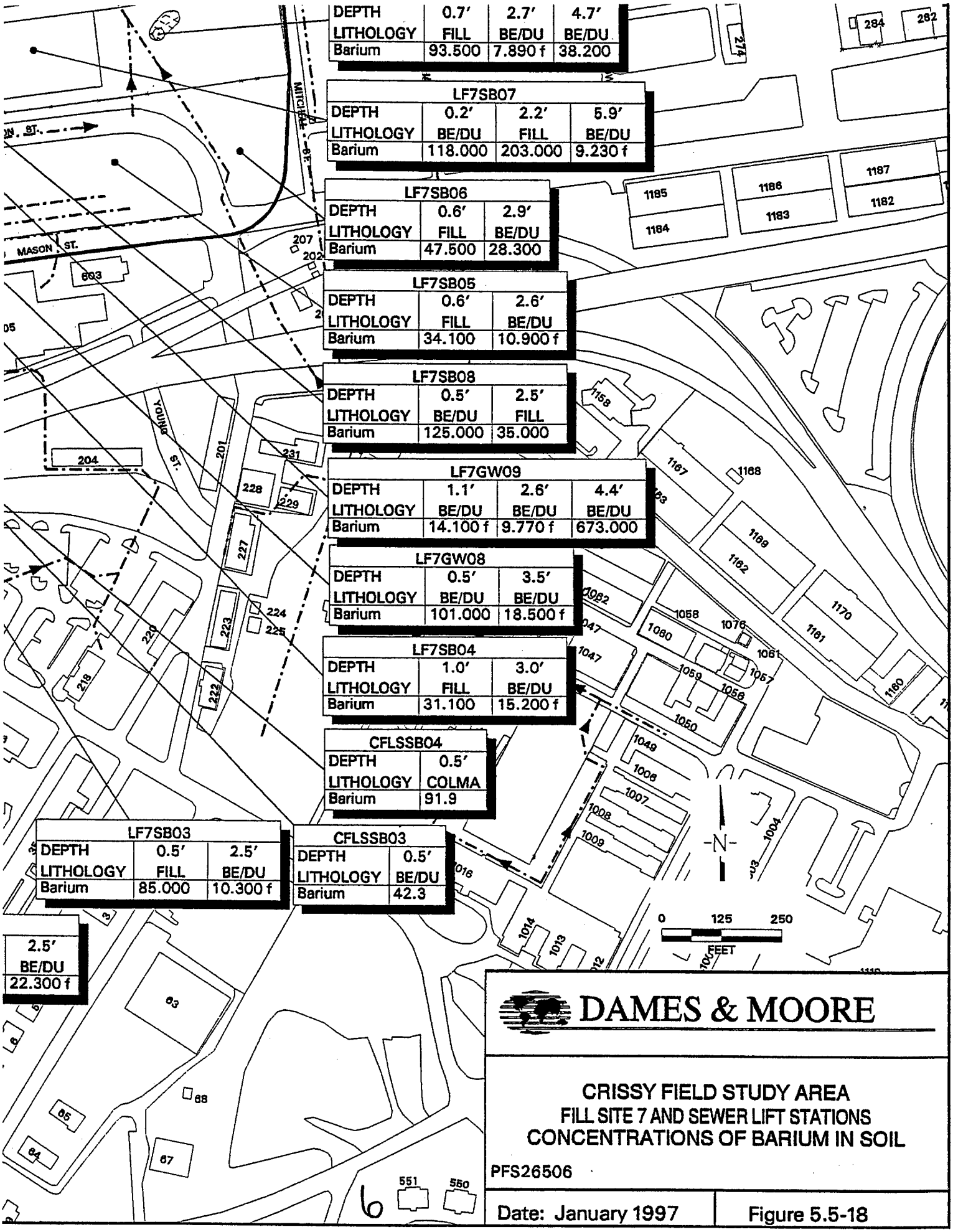
LF7SB02		
DEPTH	0.5′	2.0′
LITHOLOGY	FILL	FILL
Barium	111.000	86.000

LF7GW07		
DEPTH	0.2′	1.8′
LITHOLOGY	FILL	FILL
Barium	60.200	50.700

LF7SB01			
	0.7′	2.2′	3.7′
LOGY	FILL	BE/DU	BE/DU
	48.200	10.300 f	9.350 f

LF7SB10		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Barium	21.800 f	29.900

LF7SB09		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Barium	41.700	22.300 f

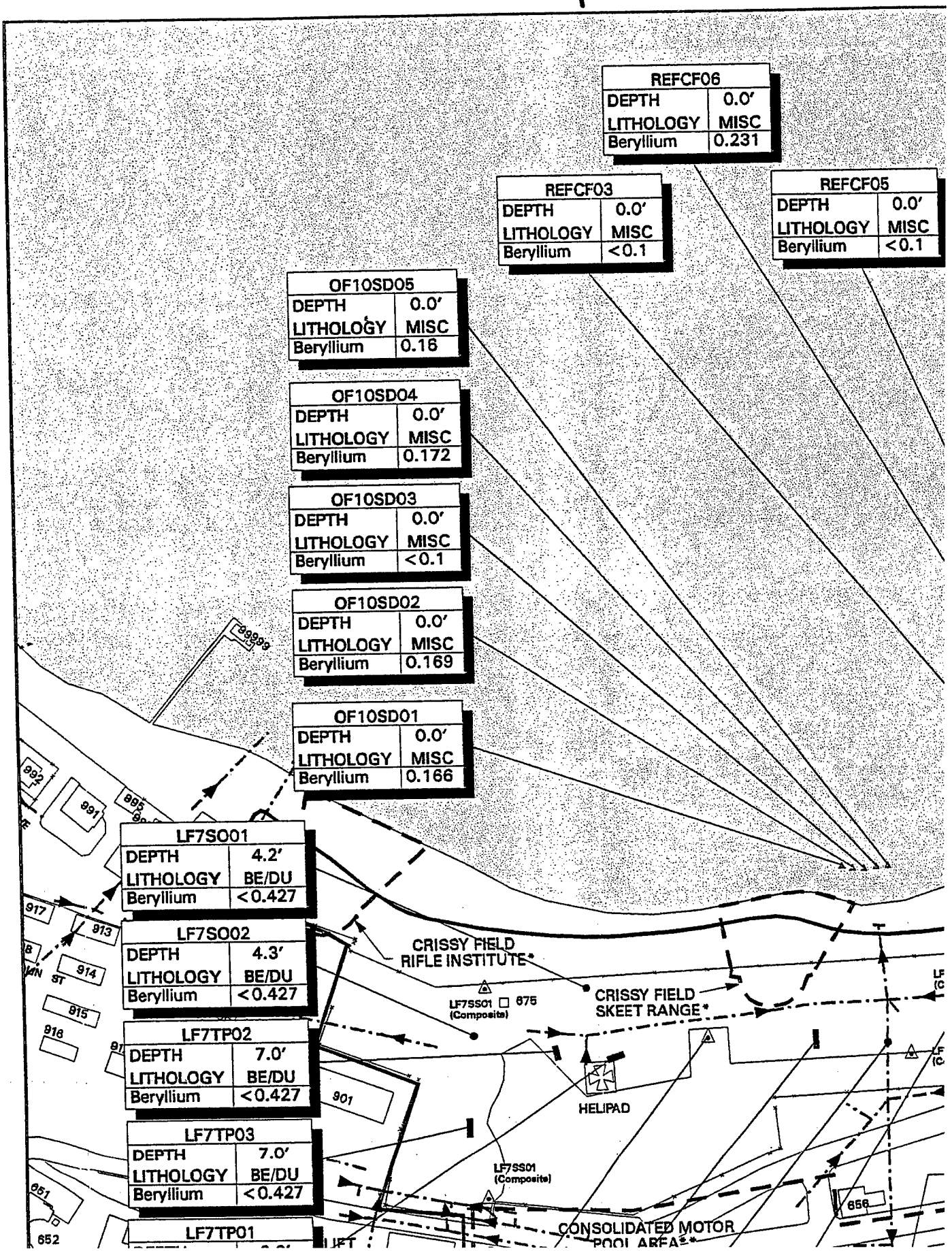


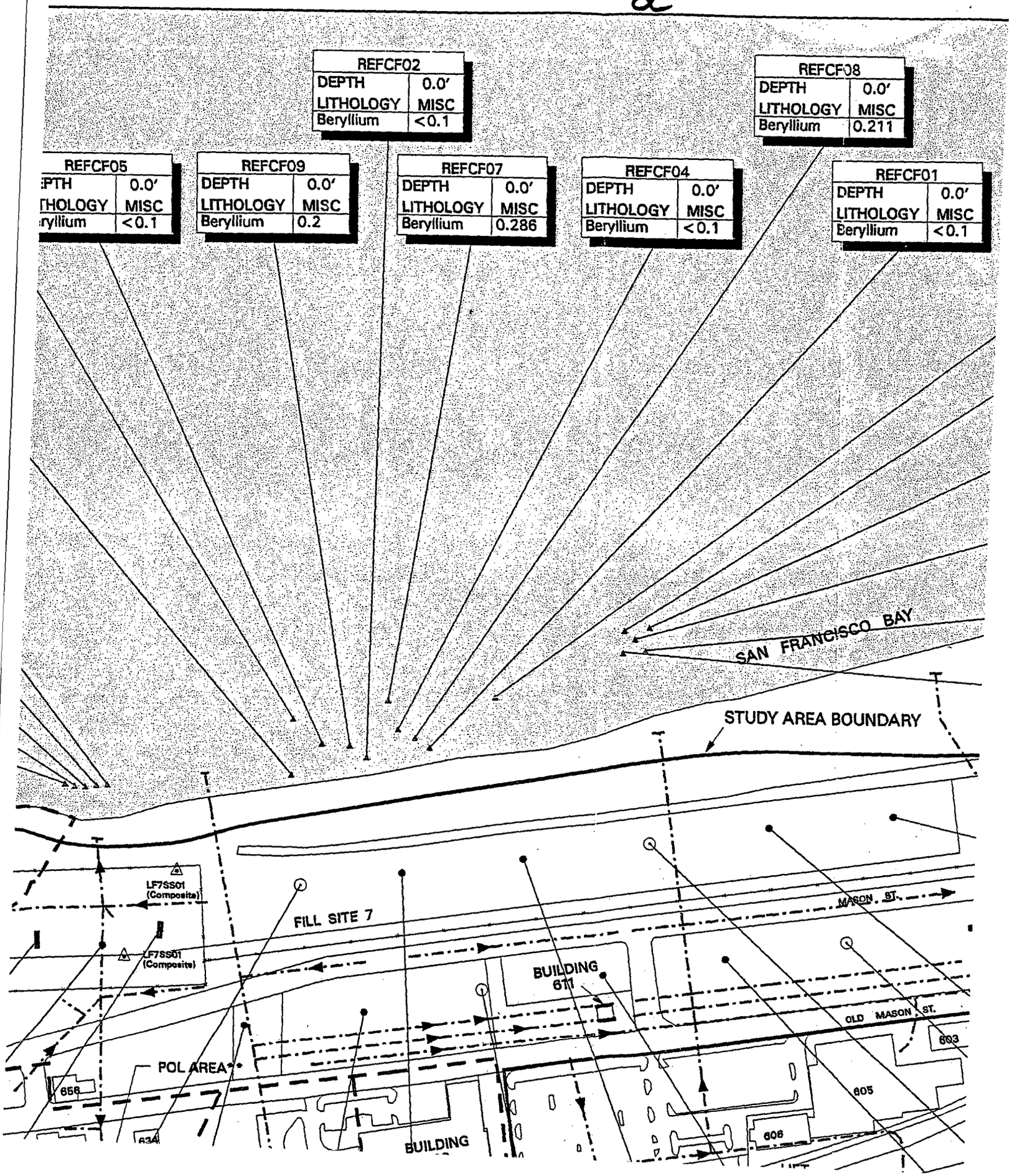
DAMES & MOORE

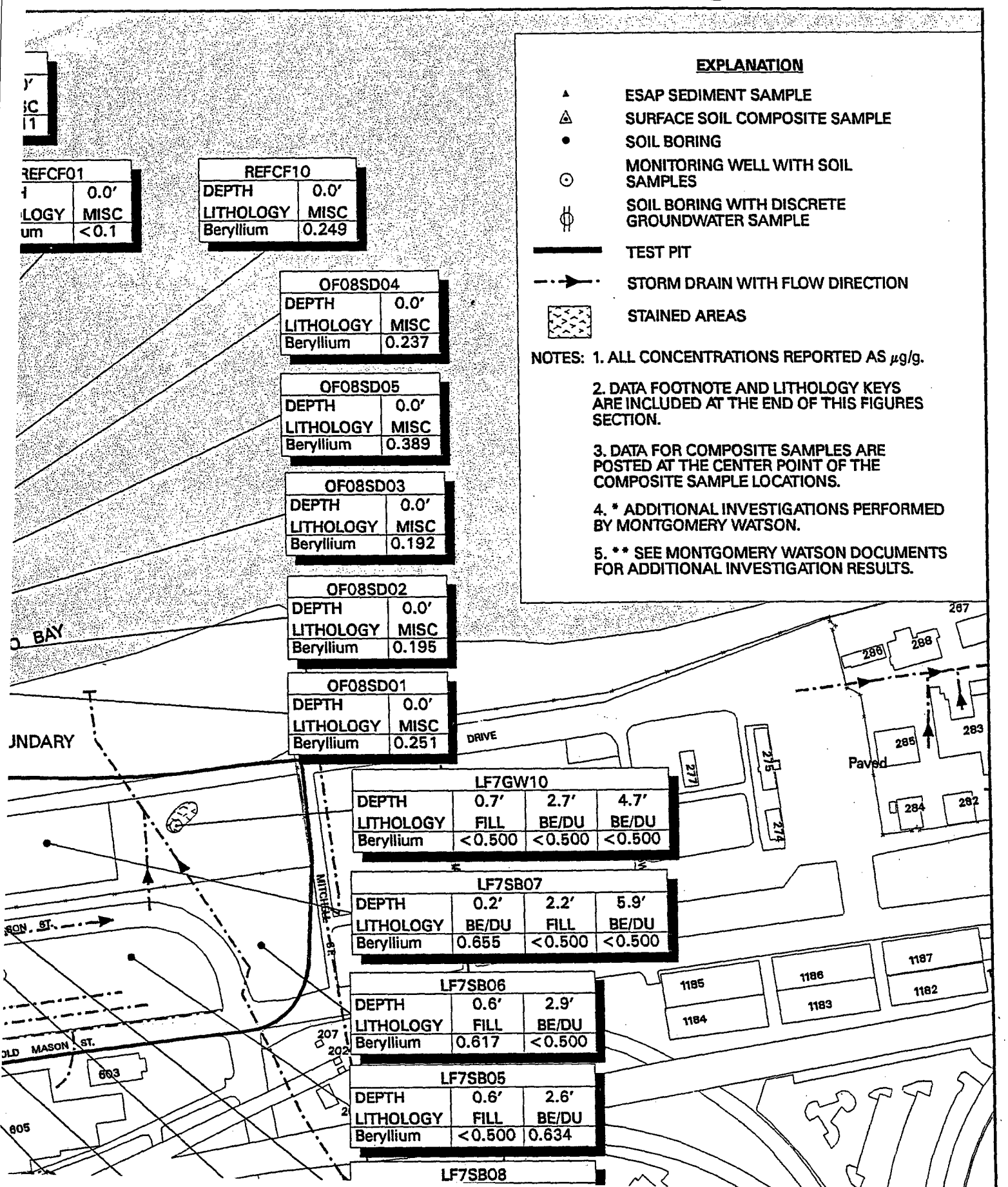
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF BARIUM IN SOIL

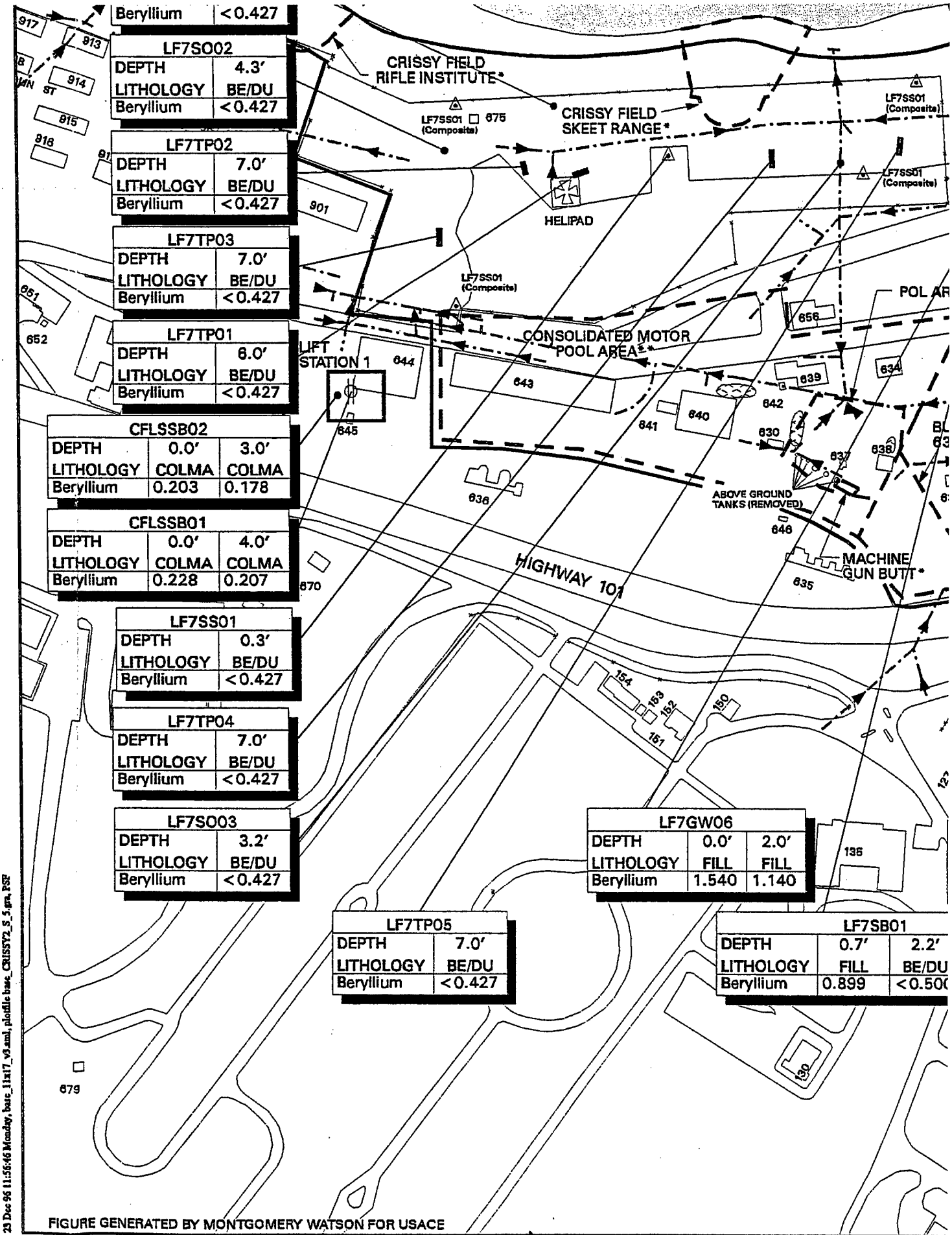
PFS26506

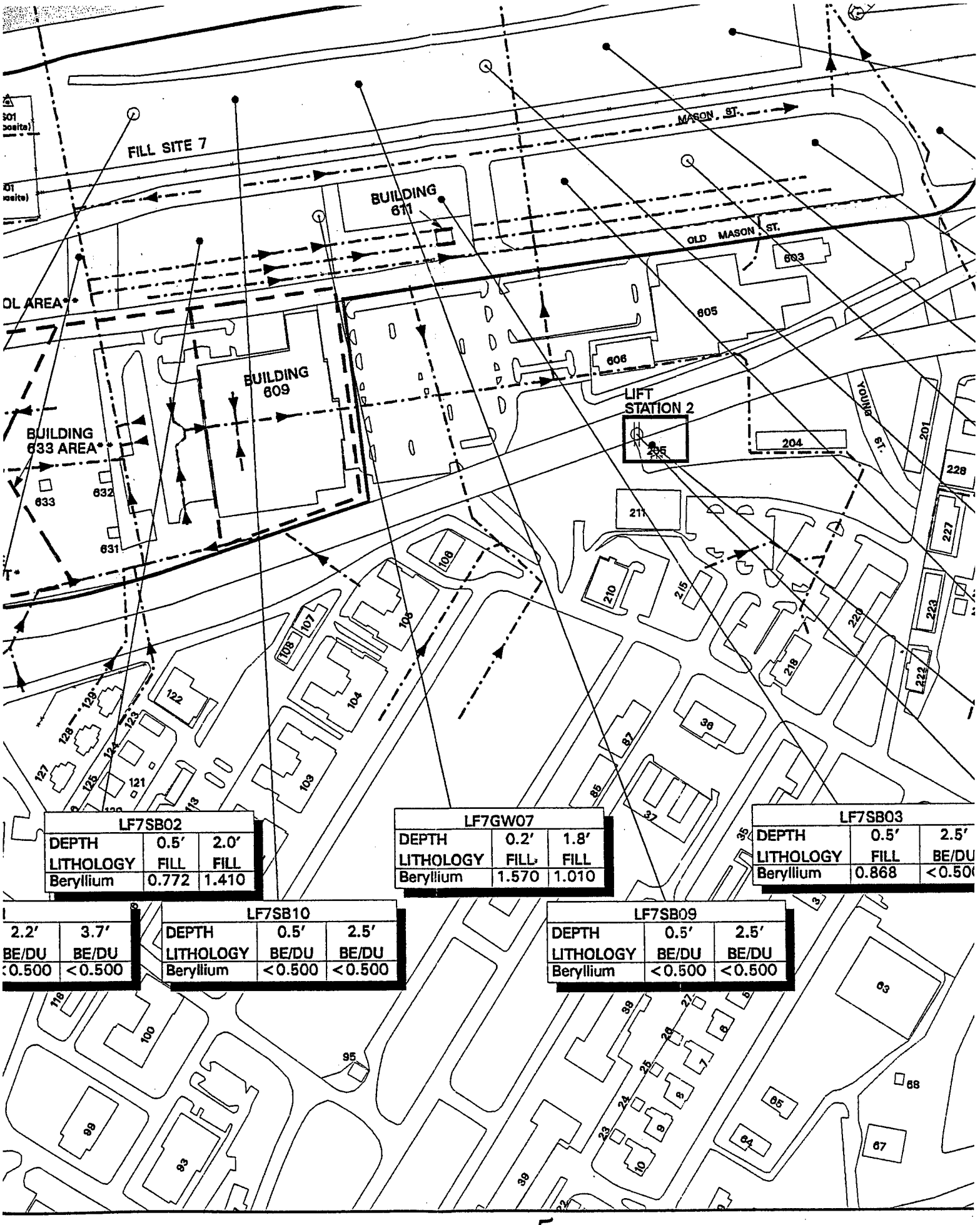
Date: January 1997 | Figure 5.5-18


REFCF06
DEPTH 0.0'
LITHOLOGY MISC
Beryllium 0.231
REFCF03
DEPTH 0.0'
LITHOLOGY MISC
Beryllium <0.1
REFCF05
DEPTH 0.0'
LITHOLOGY MISC
Beryllium <0.1
OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Beryllium 0.16
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Beryllium 0.172
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Beryllium <0.1
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Beryllium 0.169
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Beryllium 0.166
LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Beryllium <0.427
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Beryllium <0.427
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Beryllium <0.427
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Beryllium <0.427
LF7TP01
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
CONSOLIDATED MOTOR POOL AREA**
MASON ST
992
991
995
917
913
914
915
916
901
951
652
656


REFCF02
DEPTH 0.0'
LITHOLOGY MISC
Beryllium <0.1
REFCF08
DEPTH 0.0'
LITHOLOGY MISC
Beryllium 0.211
REFCF05
DEPTH 0.0'
LITHOLOGY MISC
Beryllium <0.1
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Beryllium 0.2
REFCF07
DEPTH 0.0'
LITHOLOGY MISC
Beryllium 0.286
REFCF04
DEPTH 0.0'
LITHOLOGY MISC
Beryllium <0.1
REFCF01
DEPTH 0.0'
LITHOLOGY MISC
Beryllium <0.1
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603
POL AREA
656
605
606
BUILDING


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
REFCF01 0.0′ LOGY MISC um <0.1
REFCF10 DEPTH 0.0′ LITHOLOGY MISC Beryllium 0.249
OF08SD04 DEPTH 0.0′ LITHOLOGY MISC Beryllium 0.237
OF08SD05 DEPTH 0.0′ LITHOLOGY MISC Beryllium 0.389
OF08SD03 DEPTH 0.0′ LITHOLOGY MISC Beryllium 0.192
OF08SD02 DEPTH 0.0′ LITHOLOGY MISC Beryllium 0.195
OF08SD01 DEPTH 0.0′ LITHOLOGY MISC Beryllium 0.251
LF7GW10 DEPTH 0.7′ 2.7′ 4.7′ LITHOLOGY FILL BE/DU BE/DU Beryllium <0.500 <0.500 <0.500
LF7SB07 DEPTH 0.2′ 2.2′ 5.9′ LITHOLOGY BE/DU FILL BE/DU Beryllium 0.655 <0.500 <0.500
LF7SB06 DEPTH 0.6′ 2.9′ LITHOLOGY FILL BE/DU Beryllium 0.617 <0.500
LF7SB05 DEPTH 0.6′ 2.6′ LITHOLOGY FILL BE/DU Beryllium <0.500 0.634
LF7SB08
BAY
JNDARY
DRIVE
MITCHELL
MASON ST.
OLD MASON ST.
Paved
267
288
286
283
285
284
282
277
275
274
207
202
603
605
1185
1186
1187
1184
1183
1182


Beryllium | <0.427
LF7SO02
DEPTH | 4.3'
LITHOLOGY | BE/DU
Beryllium | <0.427
LF7TP02
DEPTH | 7.0'
LITHOLOGY | BE/DU
Beryllium | <0.427
LF7TP03
DEPTH | 7.0'
LITHOLOGY | BE/DU
Beryllium | <0.427
LF7TP01
DEPTH | 6.0'
LITHOLOGY | BE/DU
Beryllium | <0.427
CFLSSB02
DEPTH | 0.0' | 3.0'
LITHOLOGY | COLMA | COLMA
Beryllium | 0.203 | 0.178
CFLSSB01
DEPTH | 0.0' | 4.0'
LITHOLOGY | COLMA | COLMA
Beryllium | 0.228 | 0.207
LF7SS01
DEPTH | 0.3'
LITHOLOGY | BE/DU
Beryllium | <0.427
LF7TP04
DEPTH | 7.0'
LITHOLOGY | BE/DU
Beryllium | <0.427
LF7SO03
DEPTH | 3.2'
LITHOLOGY | BE/DU
Beryllium | <0.427
LF7TP05
DEPTH | 7.0'
LITHOLOGY | BE/DU
Beryllium | <0.427
LF7GW06
DEPTH | 0.0' | 2.0'
LITHOLOGY | FILL | FILL
Beryllium | 1.540 | 1.140
LF7SB01
DEPTH | 0.7' | 2.2'
LITHOLOGY | FILL | BE/DU
Beryllium | 0.899 | <0.50
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
CONSOLIDATED MOTOR POOL AREA*
LIFT STATION 1
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
HIGHWAY 101
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE
23 Dec 96 11:56:46 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_S_5.gra, PSF



LF7SB02		
DEPTH	0.5′	2.0′
LITHOLOGY	FILL	FILL
Beryllium	0.772	1.410

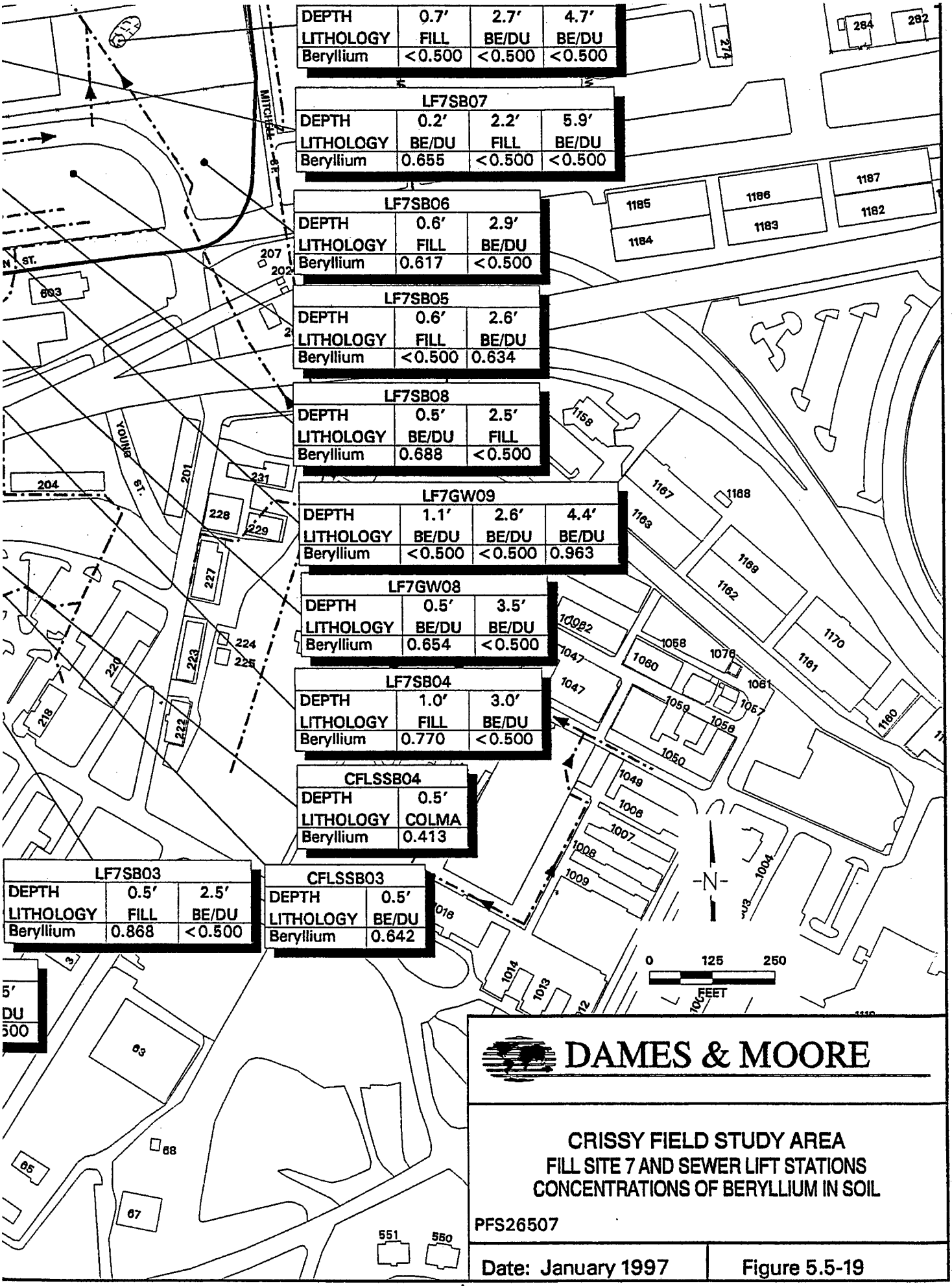
LF7GW07		
DEPTH	0.2′	1.8′
LITHOLOGY	FILL	FILL
Beryllium	1.570	1.010

LF7SB03		
DEPTH	0.5′	2.5′
LITHOLOGY	FILL	BE/DU
Beryllium	0.868	<0.50

2.2′	3.7′	
BE/DU	BE/DU	
<0.500	<0.500	

LF7SB10		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Beryllium	<0.500	<0.500

LF7SB09		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Beryllium	<0.500	<0.500

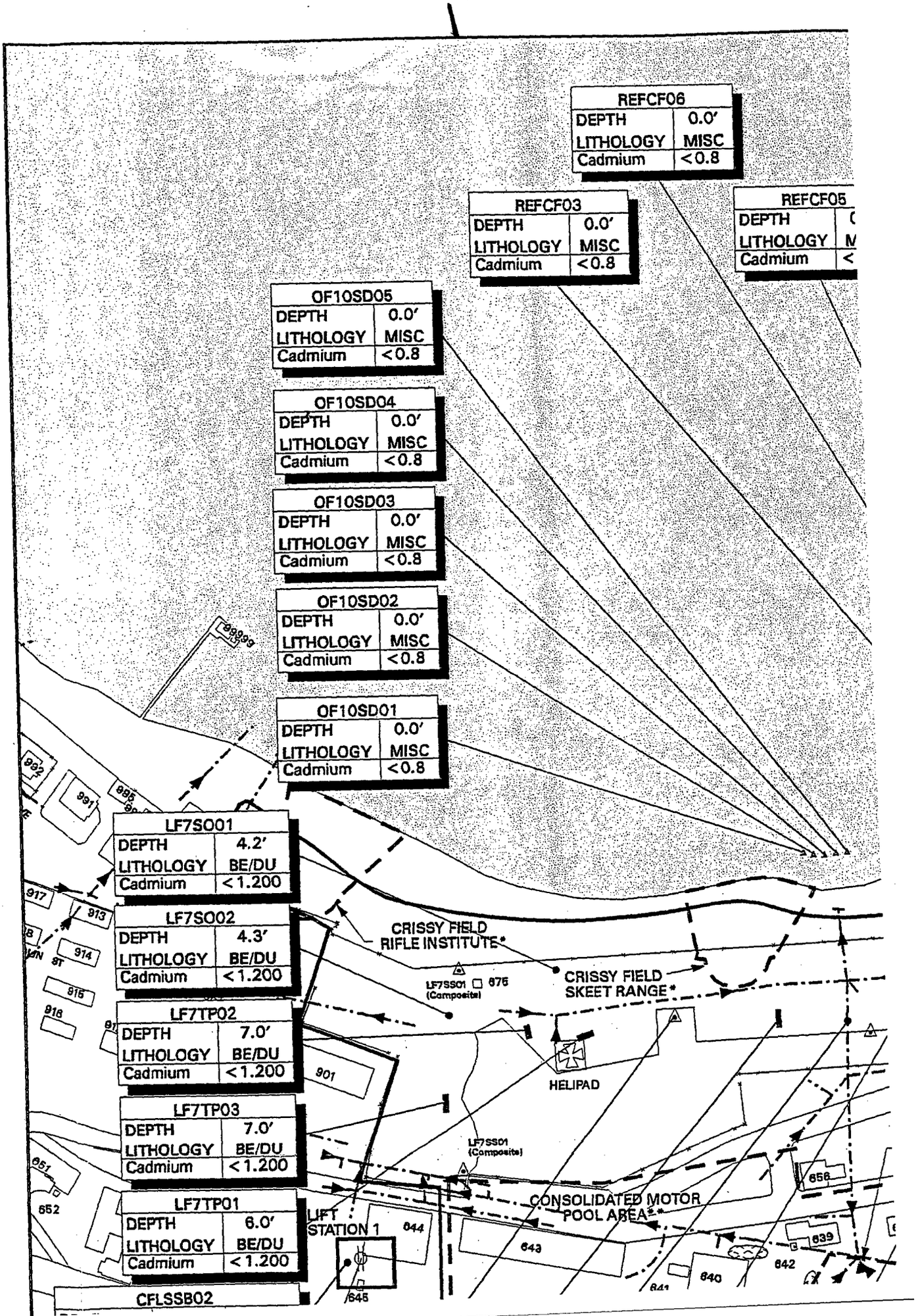


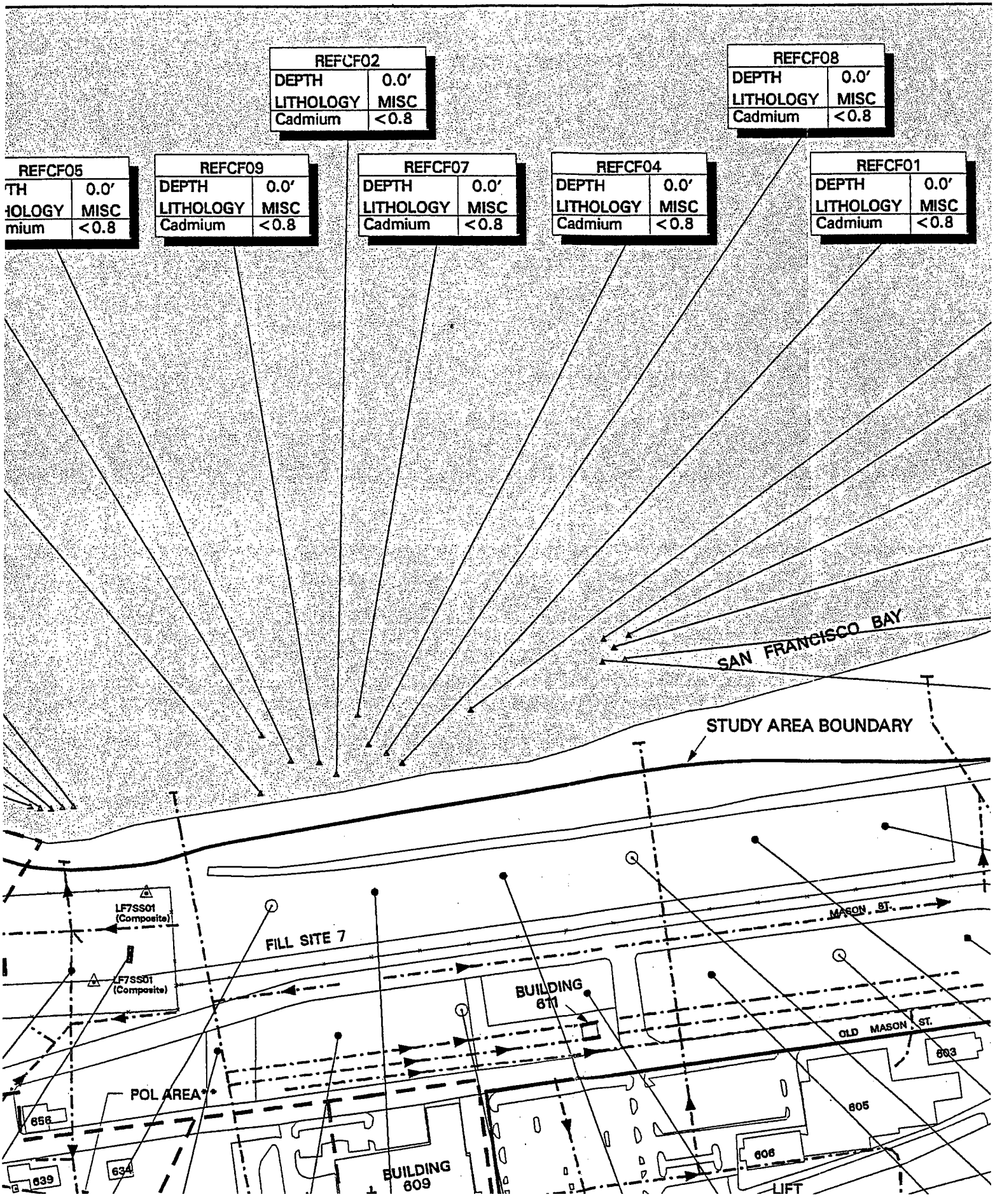
DAMES & MOORE

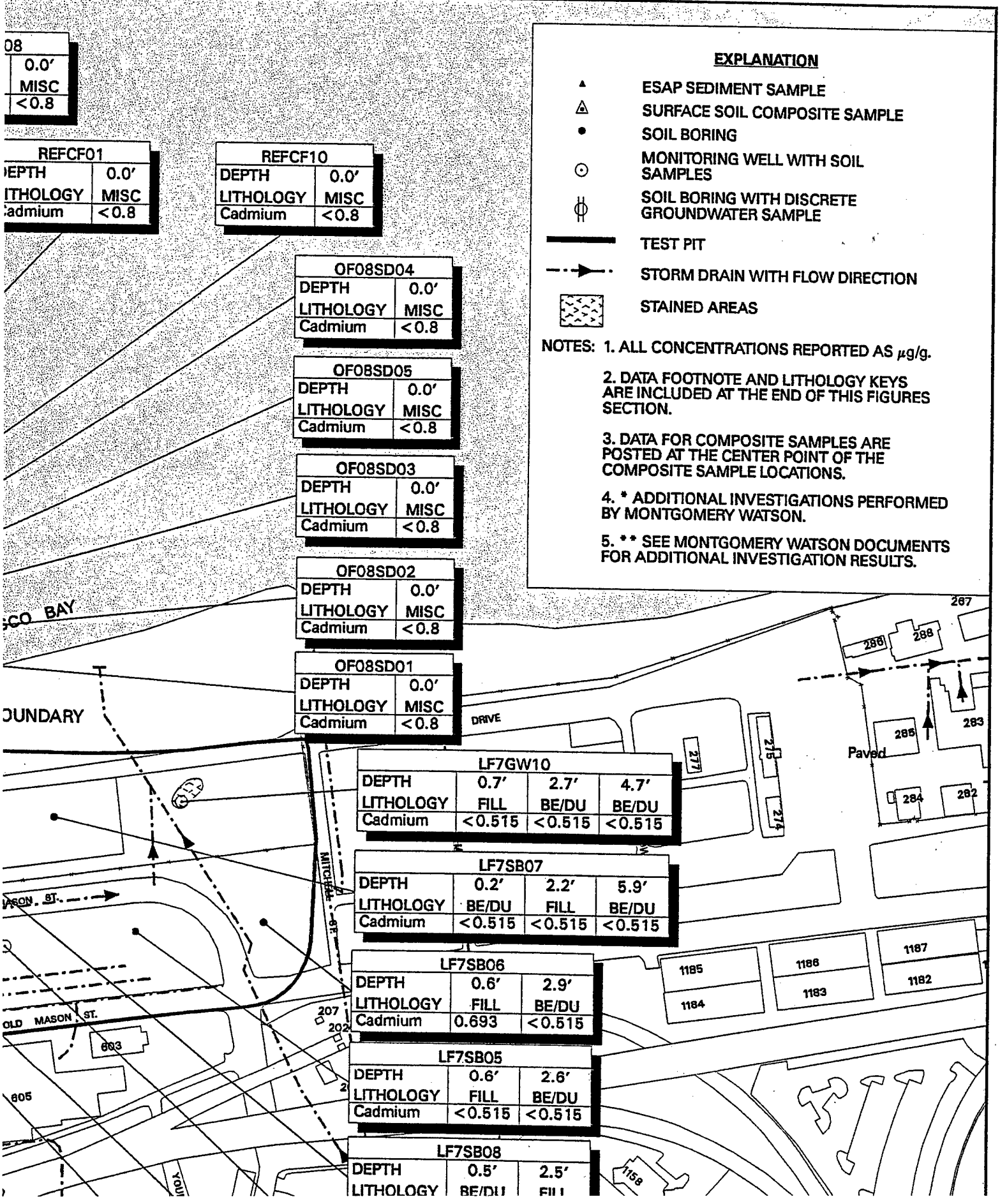
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF BERYLLIUM IN SOIL

PFS26507

Date: January 1997 | Figure 5.5-19


REFCF06
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
REFCF03
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
REFCF05
DEPTH
LITHOLOGY
Cadmium
OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Cadmium <1.200
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Cadmium <1.200
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Cadmium <1.200
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Cadmium <1.200
LF7TP01
DEPTH 6.0'
LITHOLOGY BE/DU
Cadmium <1.200
CFLSSB02
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite) 676
LF7SS01 (Composite)
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
99999
992
991
917
913
914
916
901
951
652
644
645
643
656
639
642
640
641


REFCF02
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
REFCF08
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
REFCF05
TH 0.0'
HOLOGY MISC
mium <0.8
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
REFCF07
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
REFCF04
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
REFCF01
DEPTH 0.0'
LITHOLOGY MISC
Cadmium <0.8
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603
POL AREA
856
605
606
634
639
BUILDING 609
LIFT


08
0.0′
MISC
<0.8
REFCF01
DEPTH 0.0′
ITHOLOGY MISC
Cadmium <0.8
REFCF10
DEPTH 0.0′
LITHOLOGY MISC
Cadmium <0.8
OF08SD04
DEPTH 0.0′
LITHOLOGY MISC
Cadmium <0.8
OF08SD05
DEPTH 0.0′
LITHOLOGY MISC
Cadmium <0.8
OF08SD03
DEPTH 0.0′
LITHOLOGY MISC
Cadmium <0.8
OF08SD02
DEPTH 0.0′
LITHOLOGY MISC
Cadmium <0.8
OF08SD01
DEPTH 0.0′
LITHOLOGY MISC
Cadmium <0.8
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Cadmium <0.515 <0.515 <0.515
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Cadmium <0.515 <0.515 <0.515
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Cadmium 0.693 <0.515
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Cadmium <0.515 <0.515
LF7SB08
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU FILL
EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
CO BAY
OUNDARY
DRIVE
MASON ST.
OLD MASON ST.
MITCHELL
Paved
267
286
288
283
285
284
282
277
275
274
207
202
603
605
1185
1186
1187
1184
1183
1182
1158

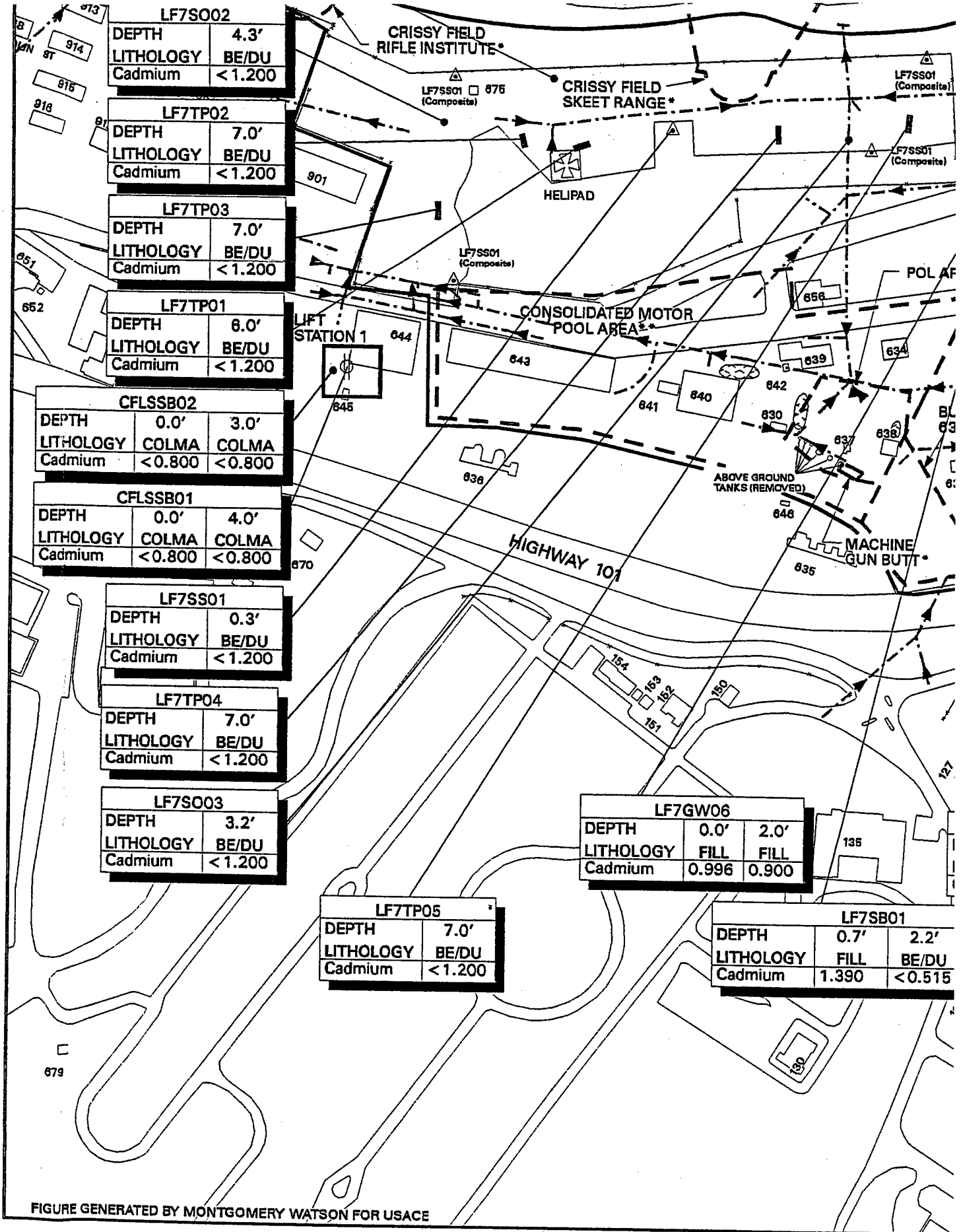
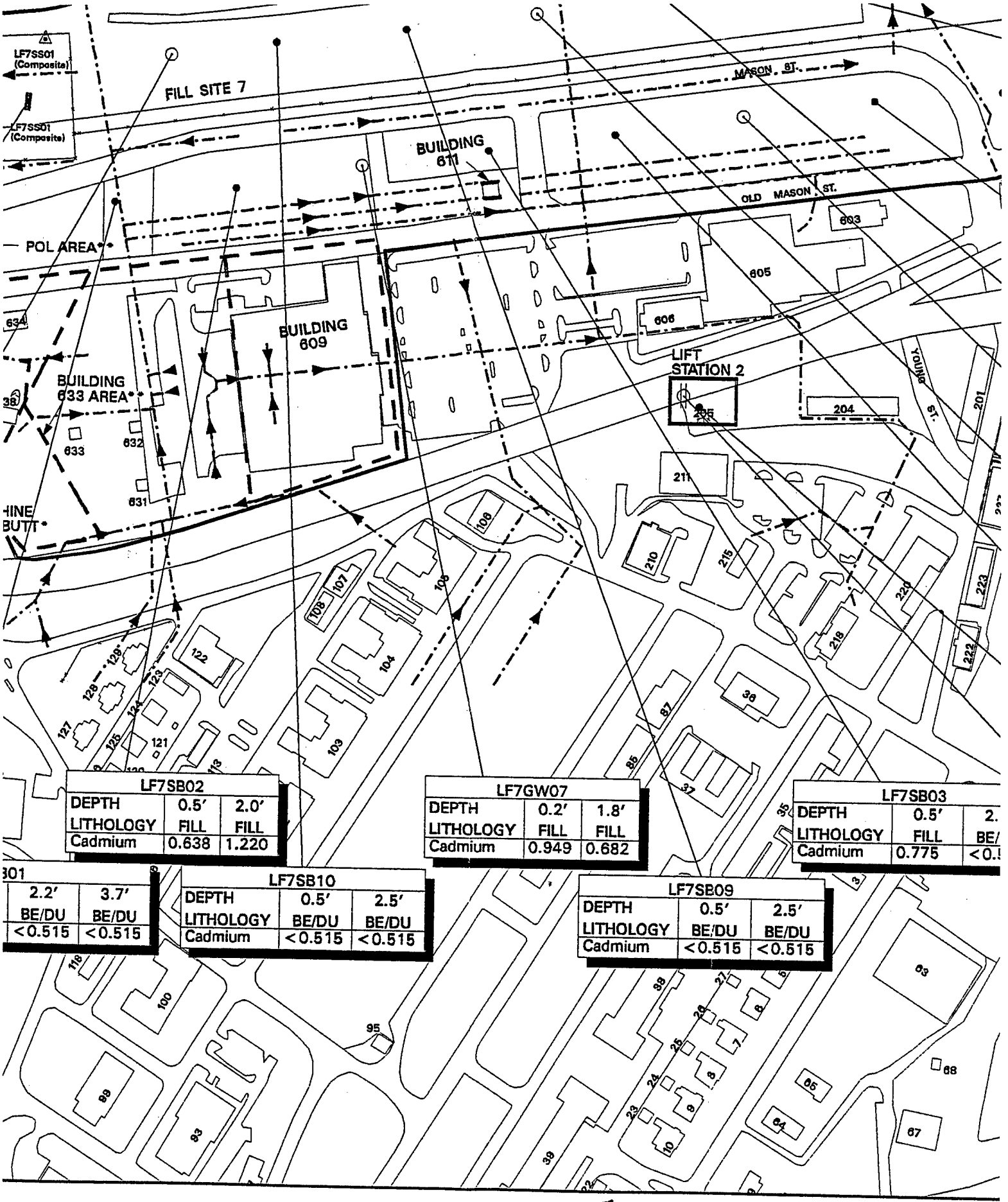
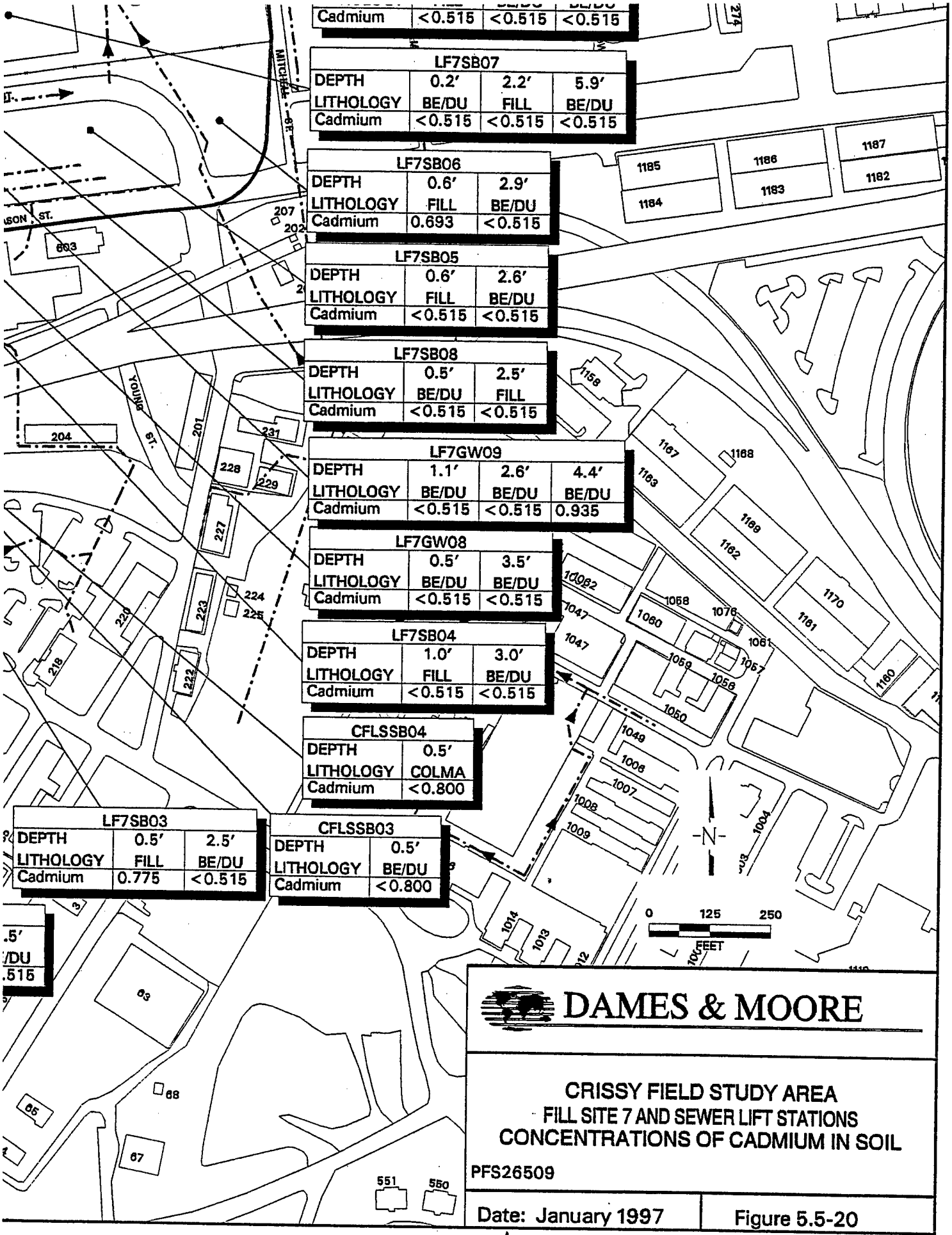


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

23 Dec 96 11:59:40 Monday, base_11x17_v3.aml, plotfile base_CRISST2_S_6.grn, PSF


LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
POL AREA
603
605
606
634
BUILDING 609
LIFT STATION 2
YOUNG ST.
204
201
BUILDING 633 AREA
633
632
631
211
210
215
220
223
218
222
108
107
106
104
103
122
128
123
124
127
125
121
87
85
37
38
35
LF7SB02
DEPTH | 0.5′ | 2.0′
LITHOLOGY | FILL | FILL
Cadmium | 0.638 | 1.220
LF7GW07
DEPTH | 0.2′ | 1.8′
LITHOLOGY | FILL | FILL
Cadmium | 0.949 | 0.682
LF7SB03
DEPTH | 0.5′ | 2.
LITHOLOGY | FILL | BE/
Cadmium | 0.775 | <0.
301
2.2′ | 3.7′
BE/DU | BE/DU
<0.515 | <0.515
LF7SB10
DEPTH | 0.5′ | 2.5′
LITHOLOGY | BE/DU | BE/DU
Cadmium | <0.515 | <0.515
LF7SB09
DEPTH | 0.5′ | 2.5′
LITHOLOGY | BE/DU | BE/DU
Cadmium | <0.515 | <0.515
118
100
95
98
93
99
27
26
25
24
23
10
9
8
7
6
3
63
68
65
64
67

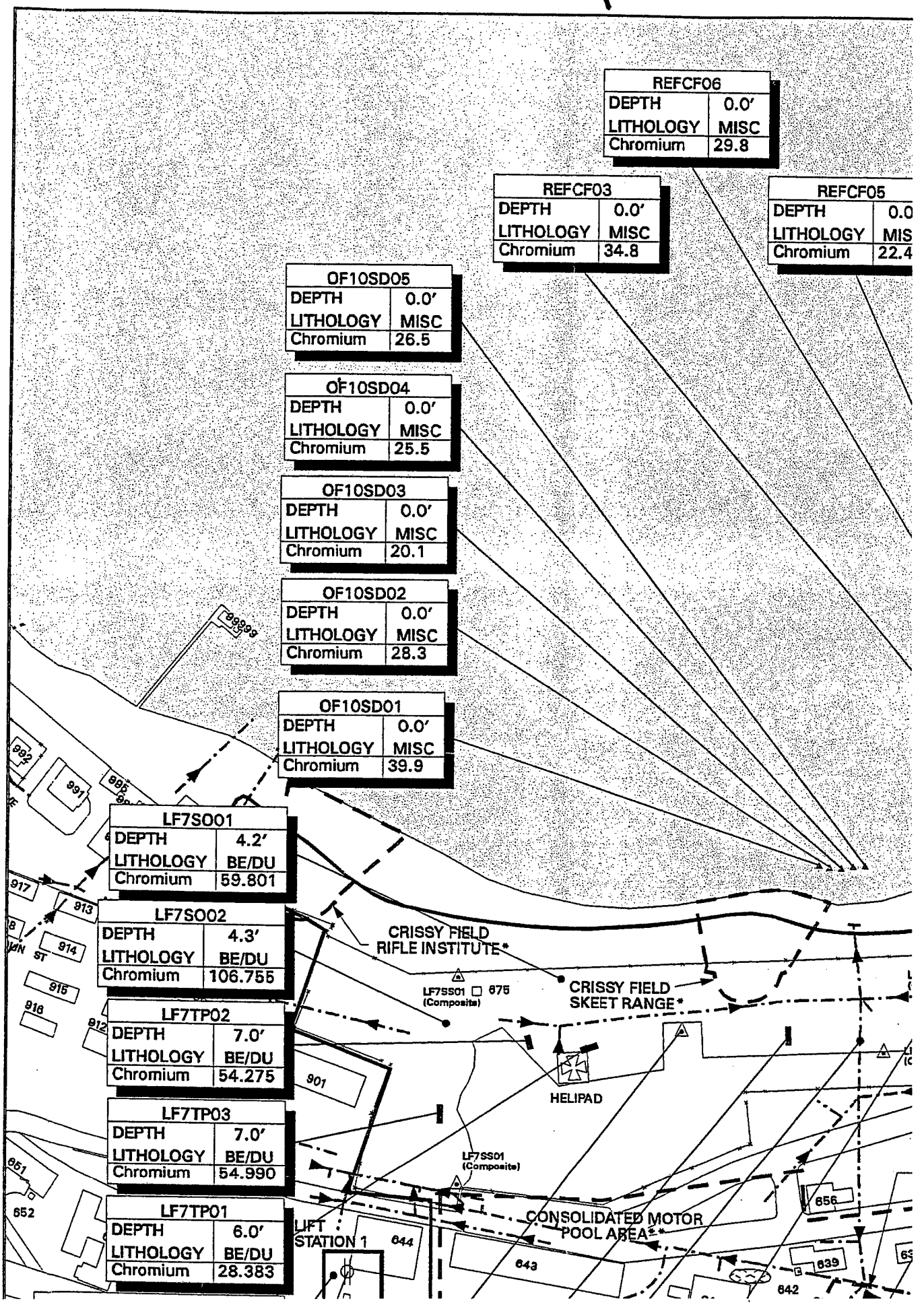


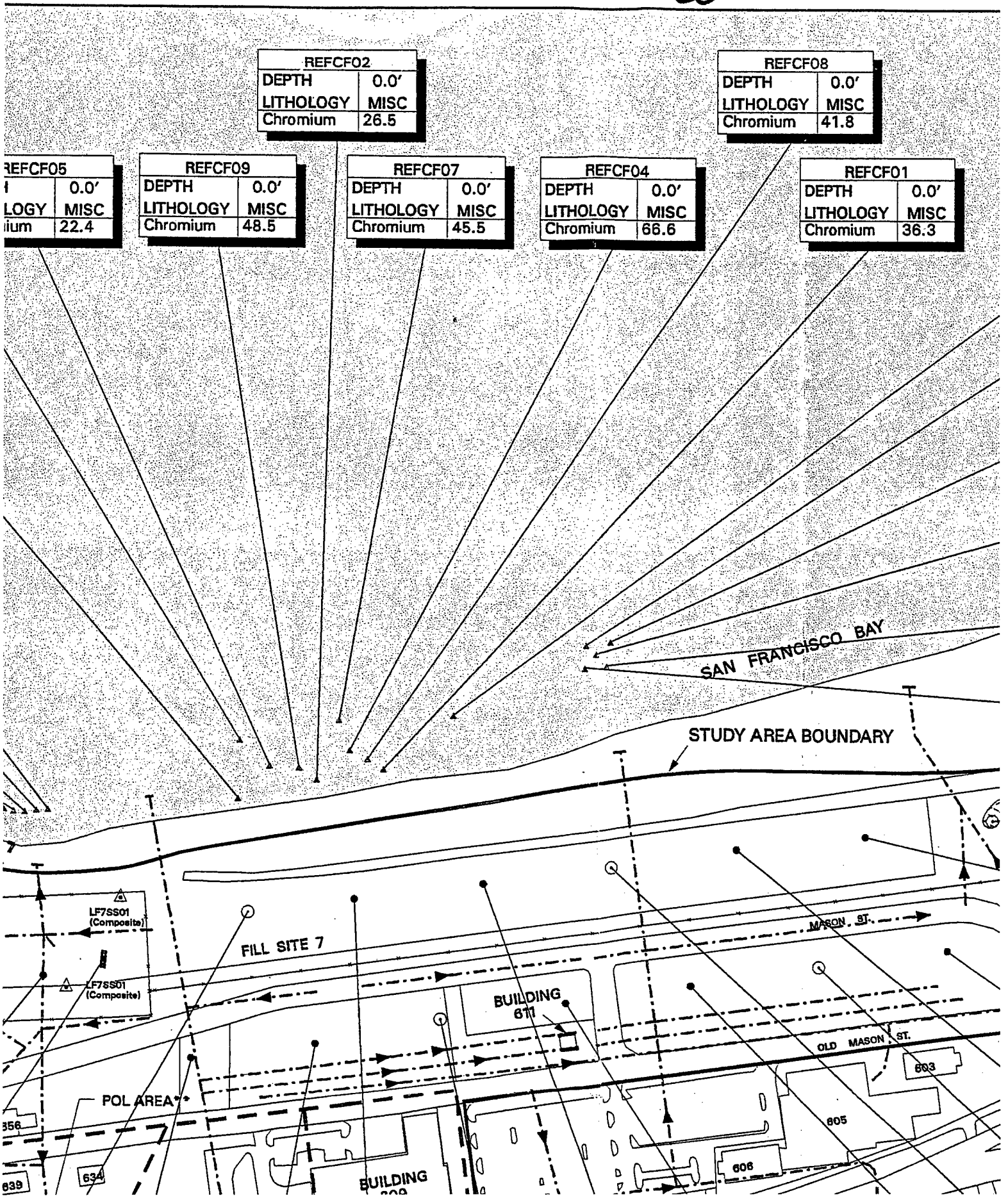
DAMES & MOORE

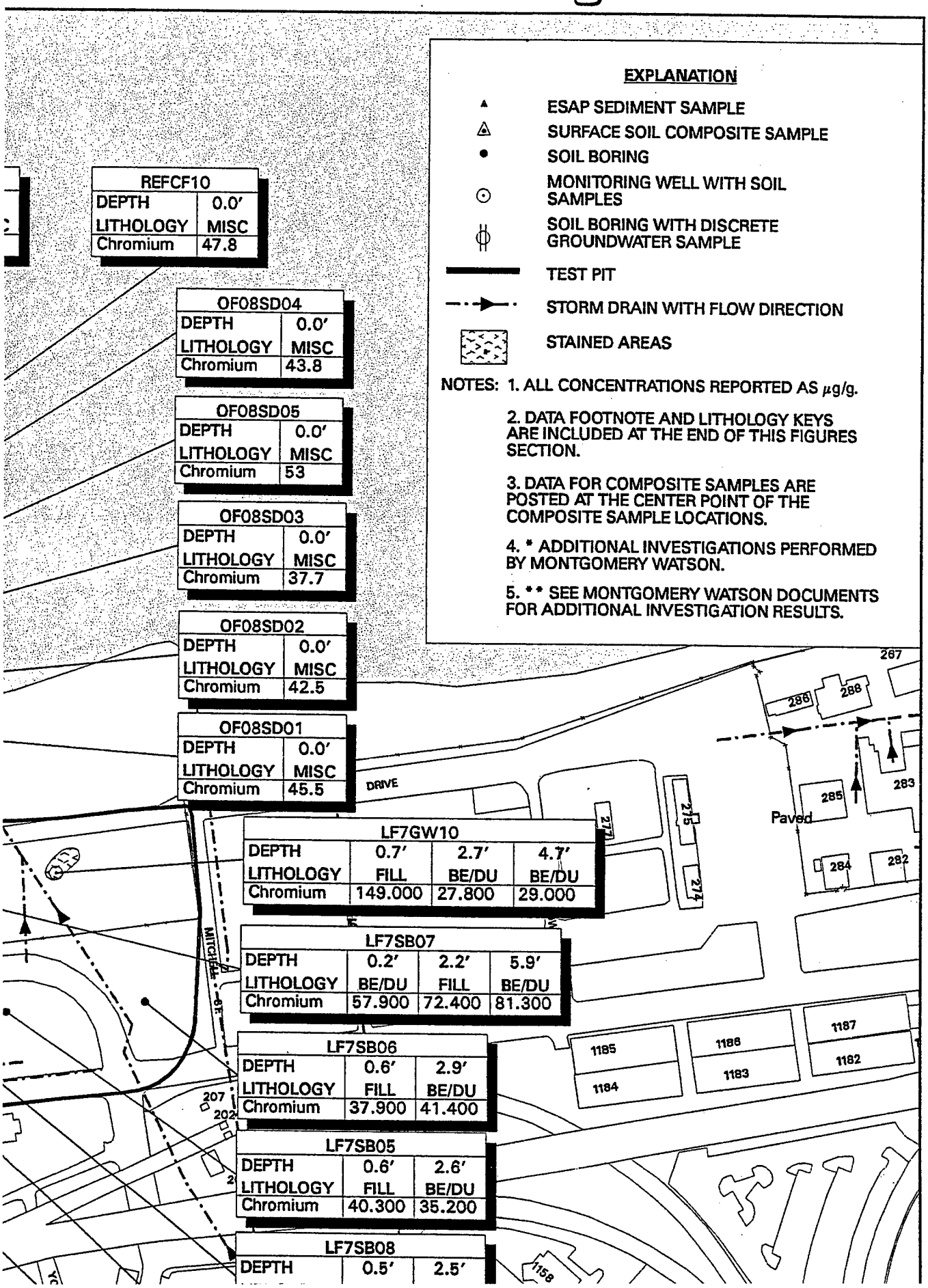
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF CADMIUM IN SOIL

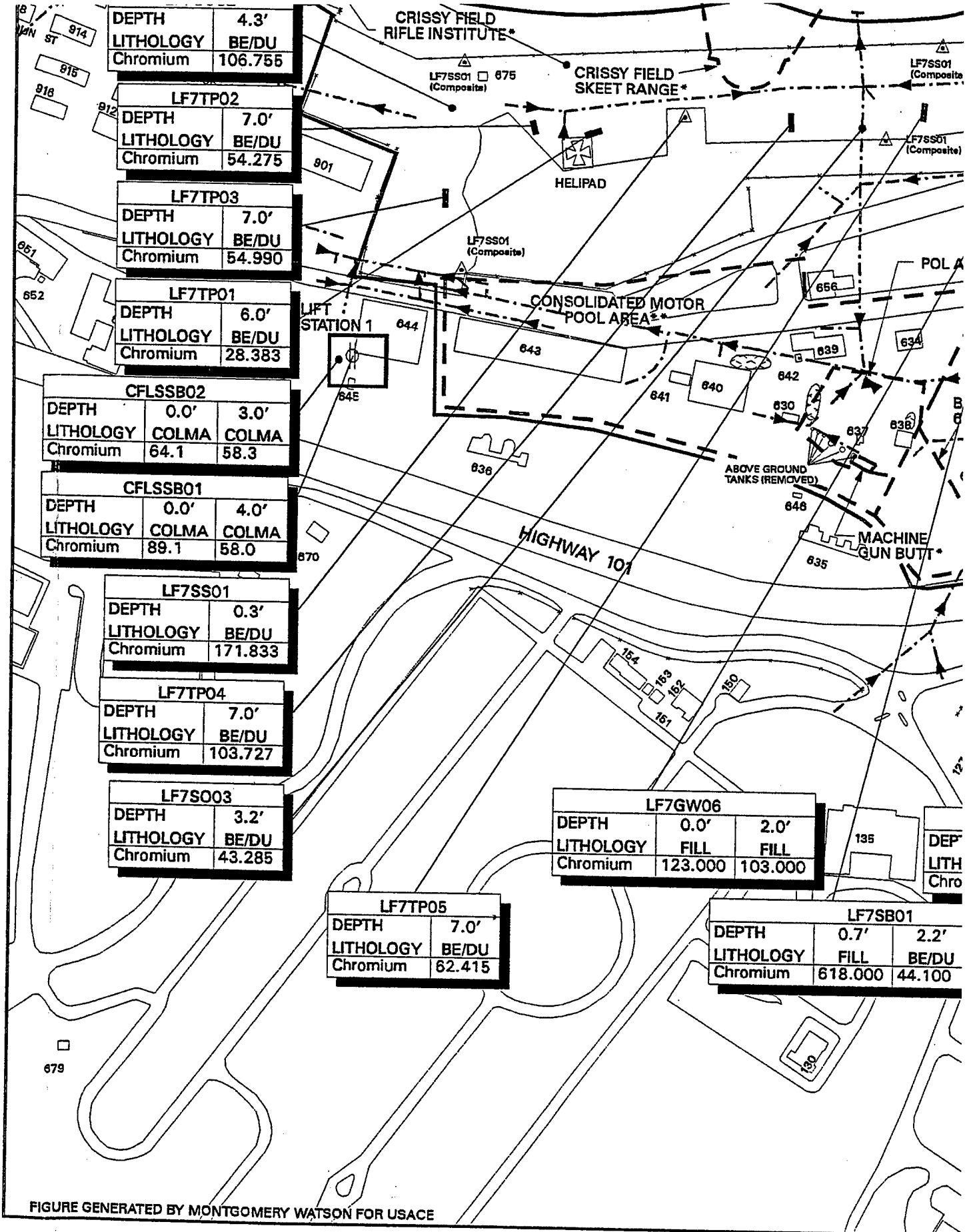
PFS26509

Date: January 1997 | Figure 5.5-20


REFCF06
DEPTH 0.0'
LITHOLOGY MISC
Chromium 29.8
REFCF03
DEPTH 0.0'
LITHOLOGY MISC
Chromium 34.8
REFCF05
DEPTH 0.0
LITHOLOGY MIS
Chromium 22.4
OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Chromium 26.5
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Chromium 25.5
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Chromium 20.1
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Chromium 28.3
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Chromium 39.9
LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Chromium 59.801
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Chromium 106.755
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Chromium 54.275
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Chromium 54.990
LF7TP01
DEPTH 6.0'
LITHOLOGY BE/DU
Chromium 28.383
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
992
991
917
913
914
915
916
912
901
651
652
644
643
656
639
642

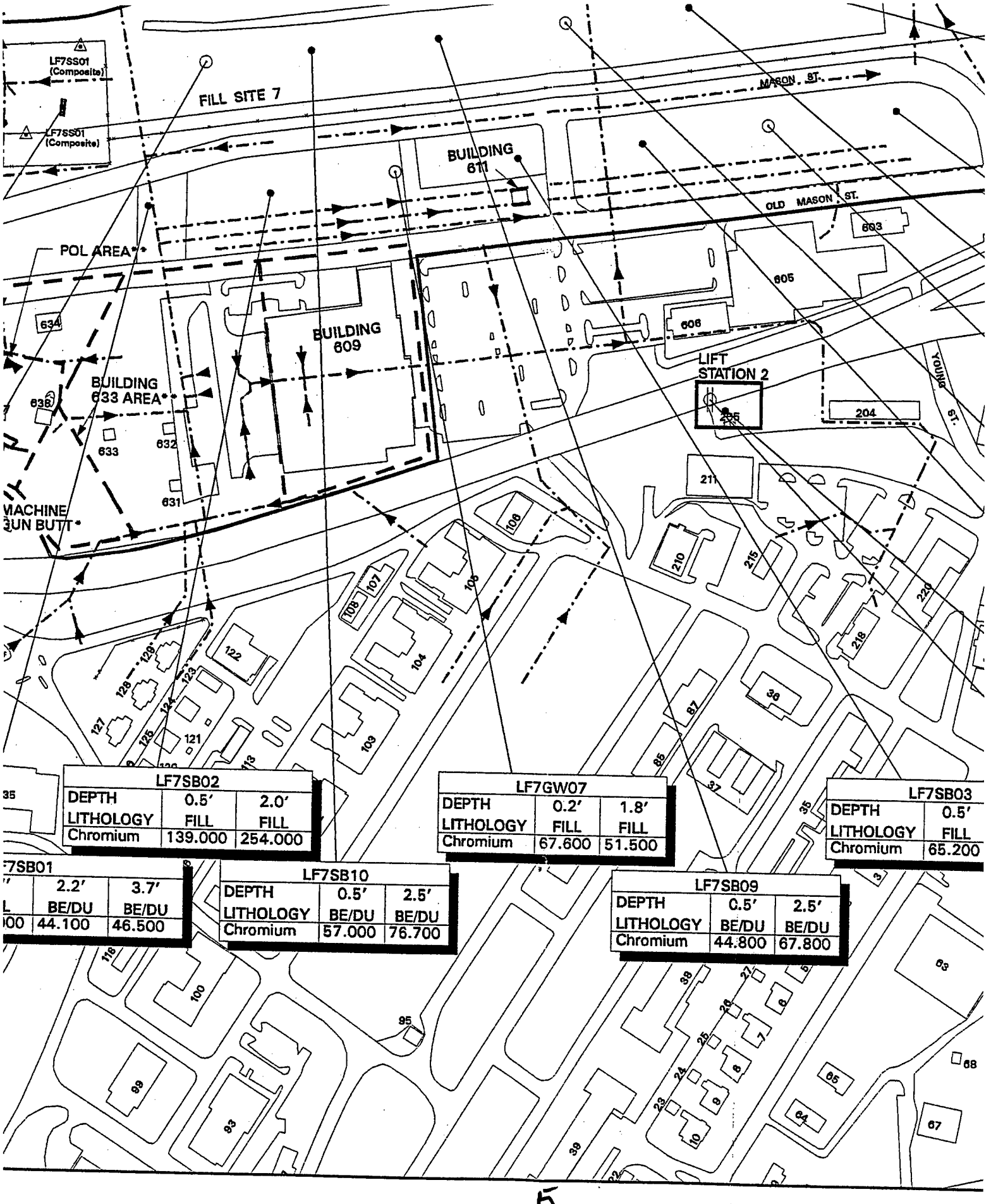

REFCF02
DEPTH 0.0′
LITHOLOGY MISC
Chromium 26.5
REFCF08
DEPTH 0.0′
LITHOLOGY MISC
Chromium 41.8
REFCF05
0.0′
LOGY MISC
ium 22.4
REFCF09
DEPTH 0.0′
LITHOLOGY MISC
Chromium 48.5
REFCF07
DEPTH 0.0′
LITHOLOGY MISC
Chromium 45.5
REFCF04
DEPTH 0.0′
LITHOLOGY MISC
Chromium 66.6
REFCF01
DEPTH 0.0′
LITHOLOGY MISC
Chromium 36.3
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603
POL AREA**
605
606
634
639
BUILDING

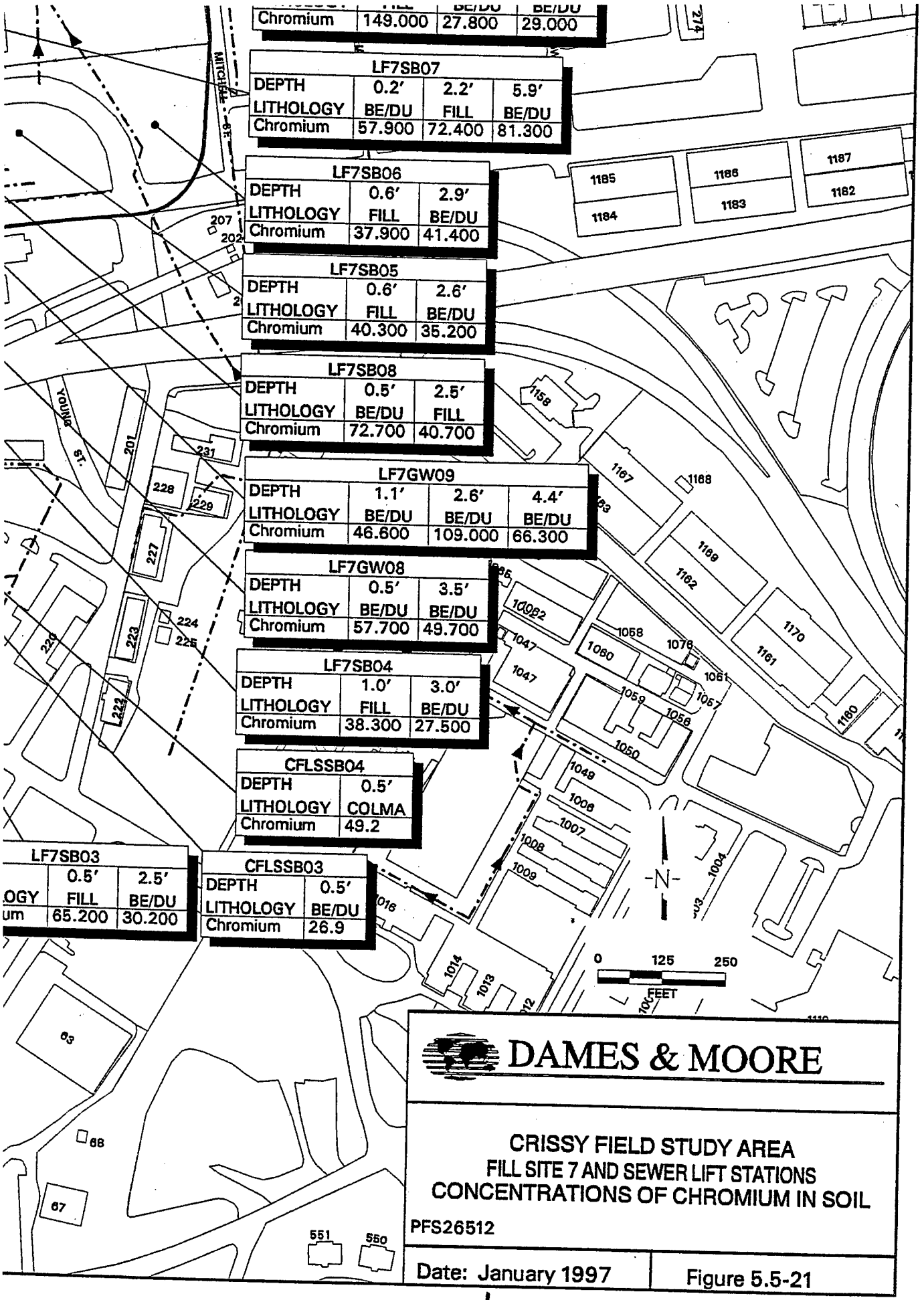

EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
REFCF10
DEPTH 0.0′
LITHOLOGY MISC
Chromium 47.8
OF08SD04
DEPTH 0.0′
LITHOLOGY MISC
Chromium 43.8
OF08SD05
DEPTH 0.0′
LITHOLOGY MISC
Chromium 53
OF08SD03
DEPTH 0.0′
LITHOLOGY MISC
Chromium 37.7
OF08SD02
DEPTH 0.0′
LITHOLOGY MISC
Chromium 42.5
OF08SD01
DEPTH 0.0′
LITHOLOGY MISC
Chromium 45.5
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Chromium 149.000 27.800 29.000
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Chromium 57.900 72.400 81.300
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Chromium 37.900 41.400
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Chromium 40.300 35.200
LF7SB08
DEPTH 0.5′ 2.5′
DRIVE
MITCHELL
Paved
267
286
288
283
285
284
282
277
275
274
1185
1186
1187
1184
1183
1182
207
202
1158

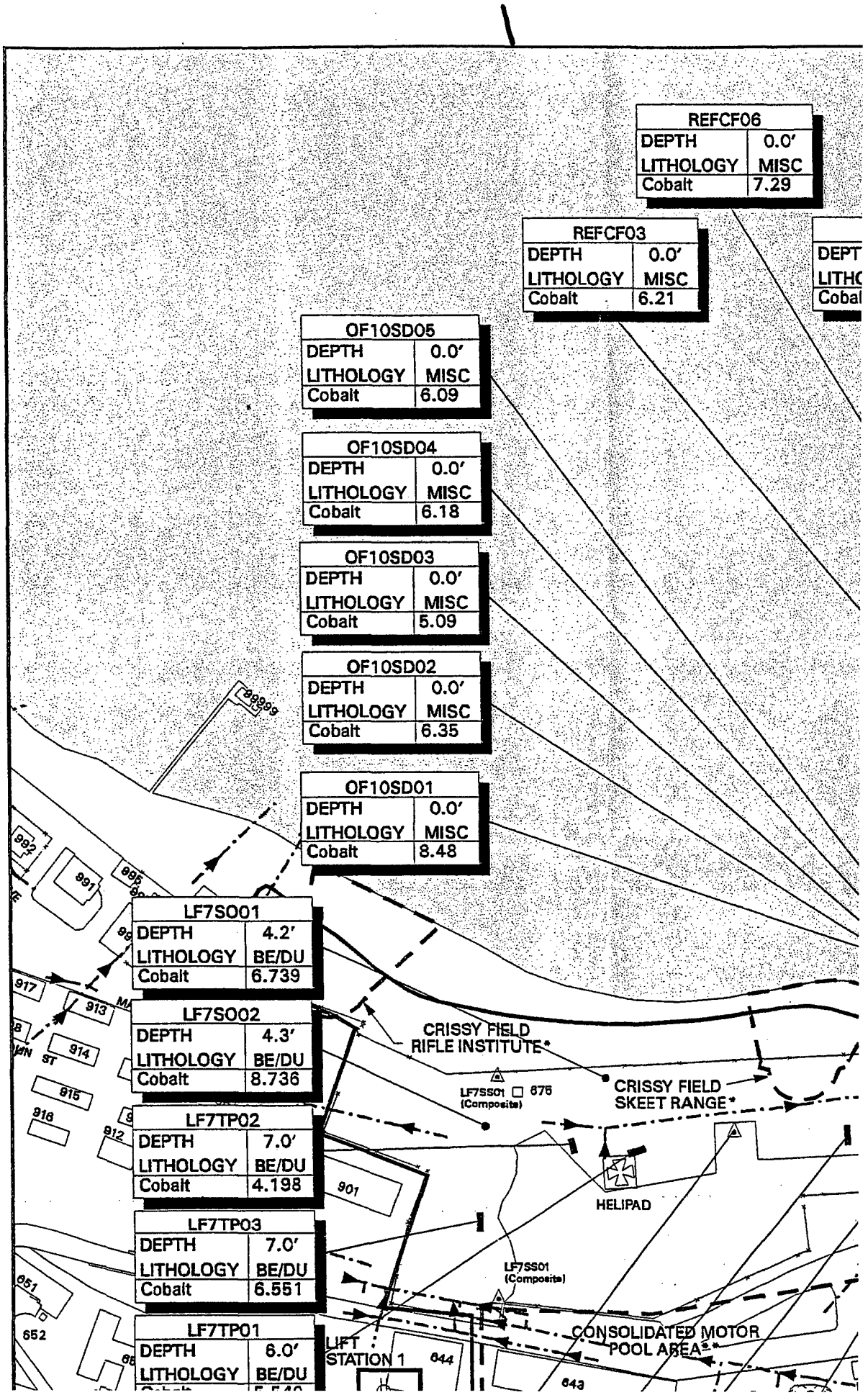


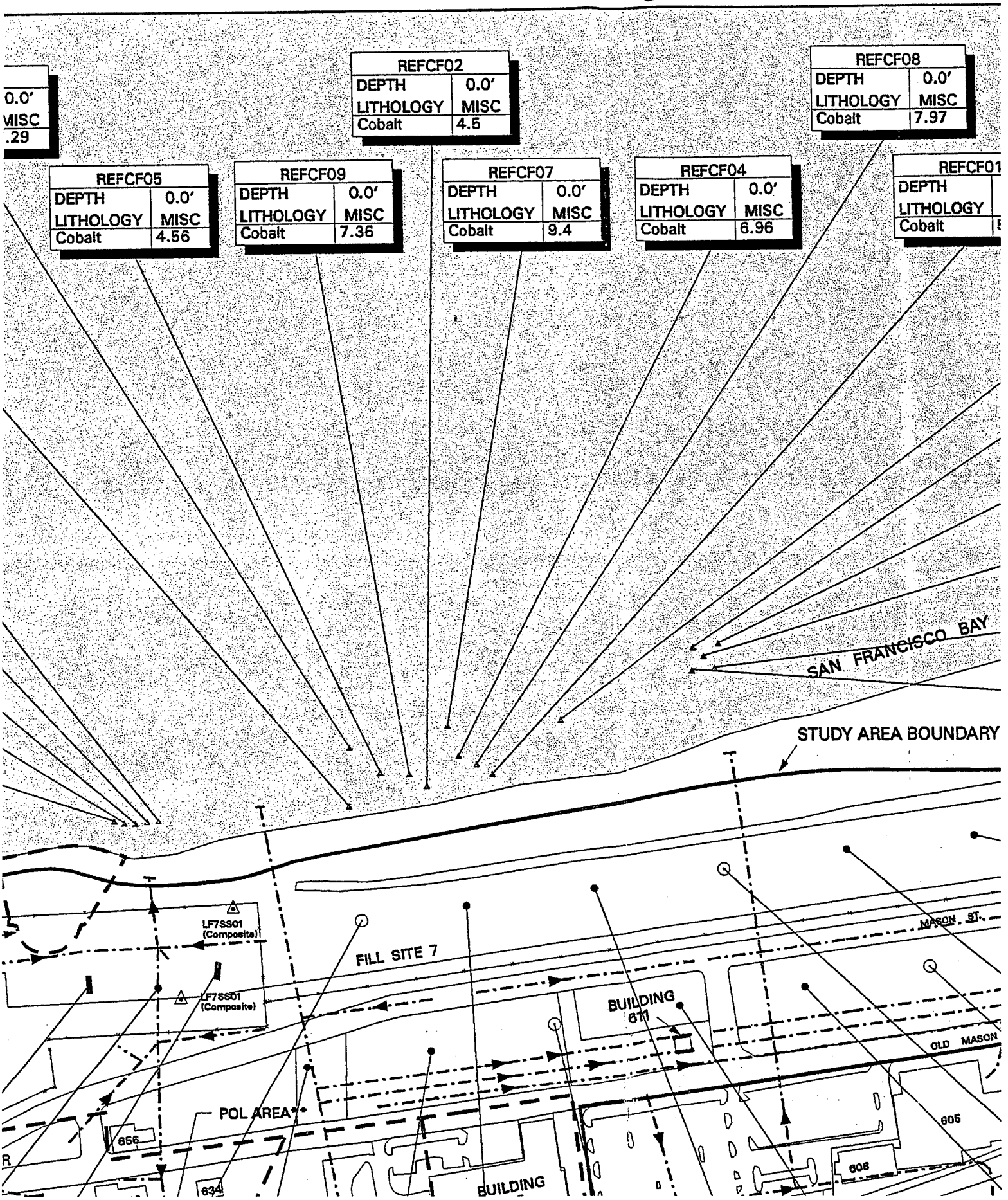
23 Dec 96 12:02:43 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_S_7.grn, PSF

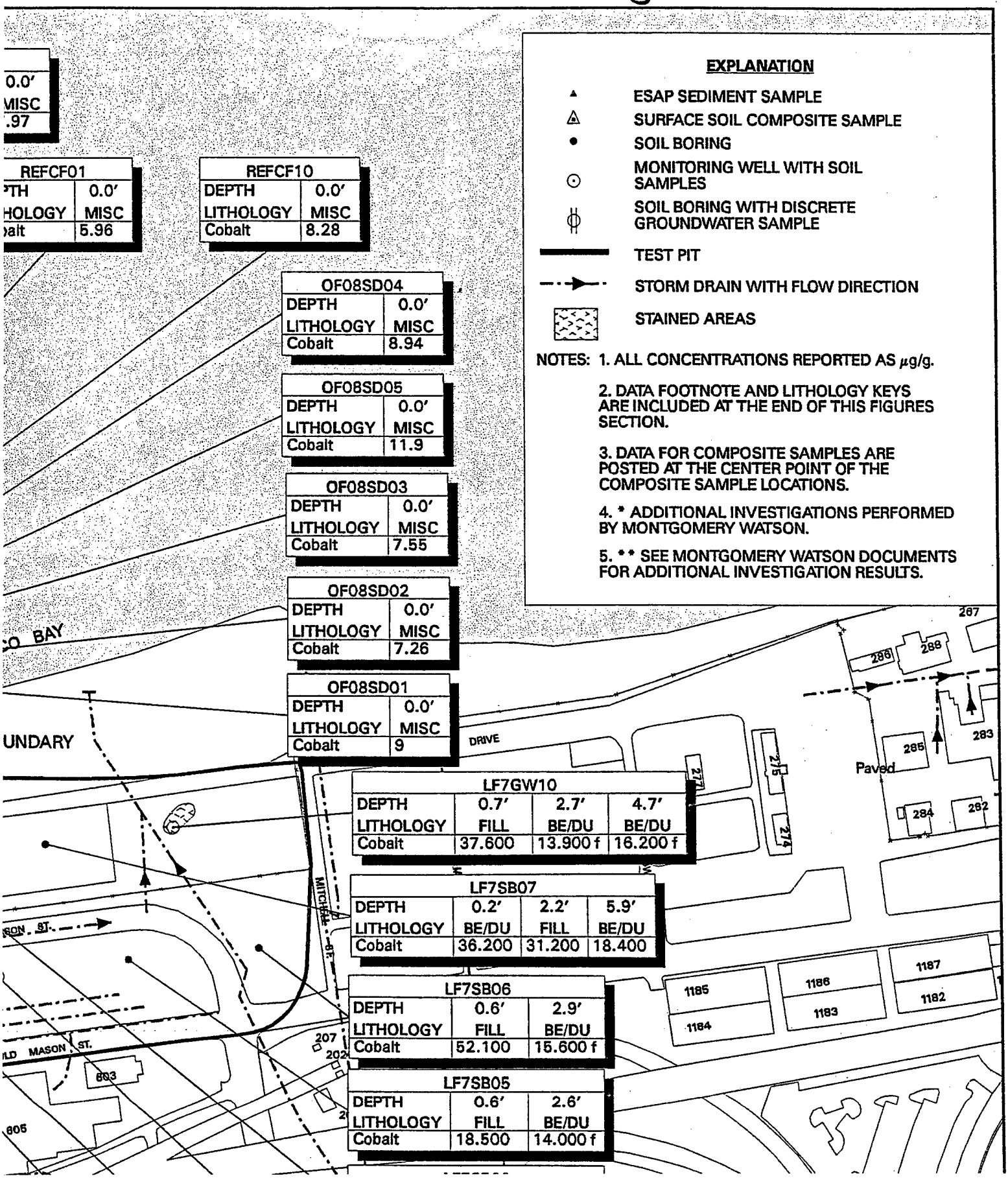
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

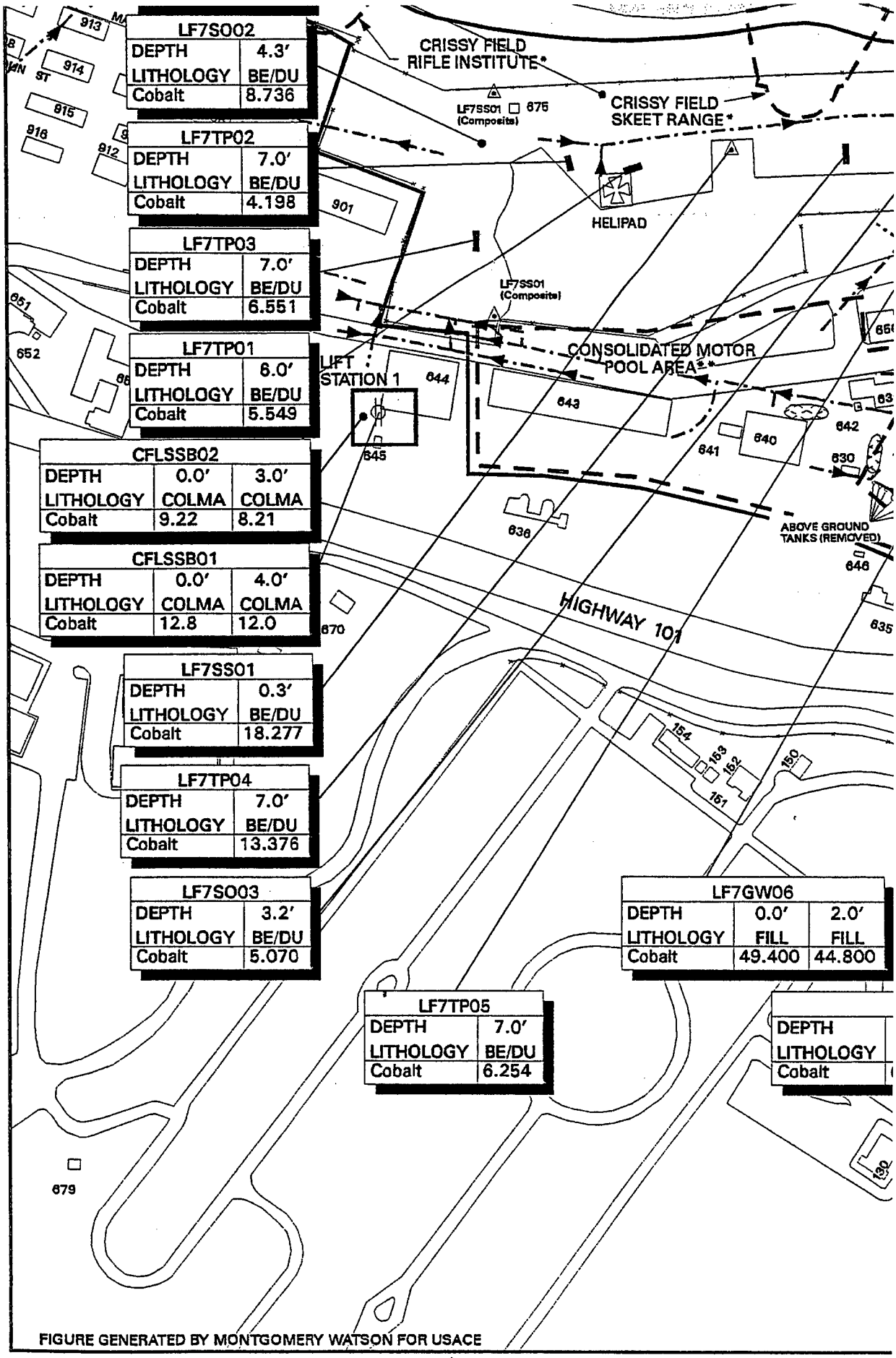

LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
POL AREA**
BUILDING 609
BUILDING 633 AREA*
LIFT STATION 2
MACHINE GUN BUTT*
LF7SB02
DEPTH | 0.5' FILL | 2.0' FILL
LITHOLOGY
Chromium | 139.000 | 254.000
LF7GW07
DEPTH | 0.2' FILL | 1.8' FILL
LITHOLOGY
Chromium | 67.600 | 51.500
LF7SB03
DEPTH | 0.5' FILL
LITHOLOGY
Chromium | 65.200
LF7SB01
2.2' BE/DU | 3.7' BE/DU
44.100 | 46.500
LF7SB10
DEPTH | 0.5' BE/DU | 2.5' BE/DU
LITHOLOGY
Chromium | 57.000 | 76.700
LF7SB09
DEPTH | 0.5' BE/DU | 2.5' BE/DU
LITHOLOGY
Chromium | 44.800 | 67.800


Chromium | 149.000 | 27.800 | 29.000
LF7SB07
DEPTH | 0.2′ | 2.2′ | 5.9′
LITHOLOGY | BE/DU | FILL | BE/DU
Chromium | 57.900 | 72.400 | 81.300
LF7SB06
DEPTH | 0.6′ | 2.9′
LITHOLOGY | FILL | BE/DU
Chromium | 37.900 | 41.400
LF7SB05
DEPTH | 0.6′ | 2.6′
LITHOLOGY | FILL | BE/DU
Chromium | 40.300 | 35.200
LF7SB08
DEPTH | 0.5′ | 2.5′
LITHOLOGY | BE/DU | FILL
Chromium | 72.700 | 40.700
LF7GW09
DEPTH | 1.1′ | 2.6′ | 4.4′
LITHOLOGY | BE/DU | BE/DU | BE/DU
Chromium | 46.600 | 109.000 | 66.300
LF7GW08
DEPTH | 0.5′ | 3.5′
LITHOLOGY | BE/DU | BE/DU
Chromium | 57.700 | 49.700
LF7SB04
DEPTH | 1.0′ | 3.0′
LITHOLOGY | FILL | BE/DU
Chromium | 38.300 | 27.500
CFLSSB04
DEPTH | 0.5′
LITHOLOGY | COLMA
Chromium | 49.2
LF7SB03
0.5′ | 2.5′
OGY | FILL | BE/DU
um | 65.200 | 30.200
CFLSSB03
DEPTH | 0.5′
LITHOLOGY | BE/DU
Chromium | 26.9
MITCHELL ST.
YOUNG ST.
1185
1186
1187
1184
1183
1182
1158
1167
1168
1169
1162
1170
1161
1160
1082
1080
1078
1058
1061
1057
1059
1056
1050
1049
1047
1006
1007
1008
1009
1004
1014
1013
1012
1016
-N-
0 125 250
FEET
DAMES & MOORE
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF CHROMIUM IN SOIL
PFS26512
Date: January 1997
Figure 5.5-21


REFCF06
DEPTH 0.0'
LITHOLOGY MISC
Cobalt 7.29
REFCF03
DEPTH 0.0'
LITHOLOGY MISC
Cobalt 6.21
OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Cobalt 6.09
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Cobalt 6.18
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Cobalt 5.09
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Cobalt 6.35
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Cobalt 8.48
LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Cobalt 6.739
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Cobalt 8.736
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Cobalt 4.198
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Cobalt 6.551
LF7TP01
DEPTH 6.0'
LITHOLOGY BE/DU
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
LF7SS01 (Composite)
CONSOLIDATED MOTOR POOL AREA**
LIFT STATION 1
644
643
901
917
913
914
915
916
912
651
652
991
995
982

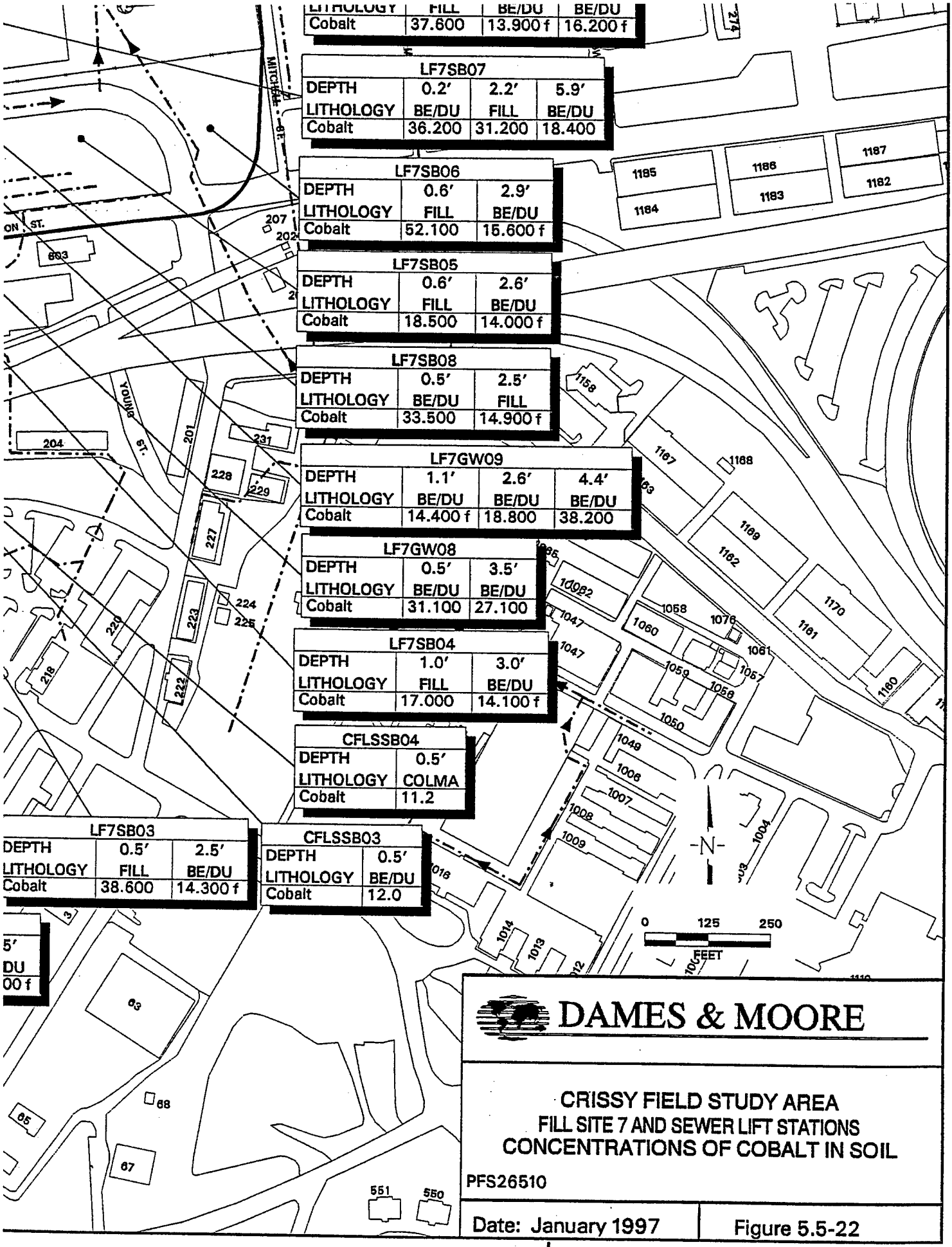

0.0′
MISC
.29
REFCF02
DEPTH 0.0′
LITHOLOGY MISC
Cobalt 4.5
REFCF08
DEPTH 0.0′
LITHOLOGY MISC
Cobalt 7.97
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Cobalt 4.56
REFCF09
DEPTH 0.0′
LITHOLOGY MISC
Cobalt 7.36
REFCF07
DEPTH 0.0′
LITHOLOGY MISC
Cobalt 9.4
REFCF04
DEPTH 0.0′
LITHOLOGY MISC
Cobalt 6.96
REFCF01
DEPTH
LITHOLOGY
Cobalt
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON
POL AREA
656
634
BUILDING
605
606


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
0.0′ MISC .97
REFCF01 DEPTH 0.0′ LITHOLOGY MISC Cobalt 5.96
REFCF10 DEPTH 0.0′ LITHOLOGY MISC Cobalt 8.28
OF08SD04 DEPTH 0.0′ LITHOLOGY MISC Cobalt 8.94
OF08SD05 DEPTH 0.0′ LITHOLOGY MISC Cobalt 11.9
OF08SD03 DEPTH 0.0′ LITHOLOGY MISC Cobalt 7.55
OF08SD02 DEPTH 0.0′ LITHOLOGY MISC Cobalt 7.26
OF08SD01 DEPTH 0.0′ LITHOLOGY MISC Cobalt 9
LF7GW10 DEPTH 0.7′ FILL 2.7′ BE/DU 4.7′ BE/DU Cobalt 37.600 13.900 f 16.200 f
LF7SB07 DEPTH 0.2′ BE/DU 2.2′ FILL 5.9′ BE/DU Cobalt 36.200 31.200 18.400
LF7SB06 DEPTH 0.6′ FILL 2.9′ BE/DU Cobalt 52.100 15.600 f
LF7SB05 DEPTH 0.6′ FILL 2.6′ BE/DU Cobalt 18.500 14.000 f
BAY
UNDARY
DRIVE
MASON ST.
MITCHELL
Paved
287
286
288
283
285
284
282
277
275
274
1185
1186
1187
1184
1183
1182
207
202
603
605



23 Dec 96 14:28:52 Monday, base_11x17_v9.aml, plotfile base_CRISSY2_S_8.grn.PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

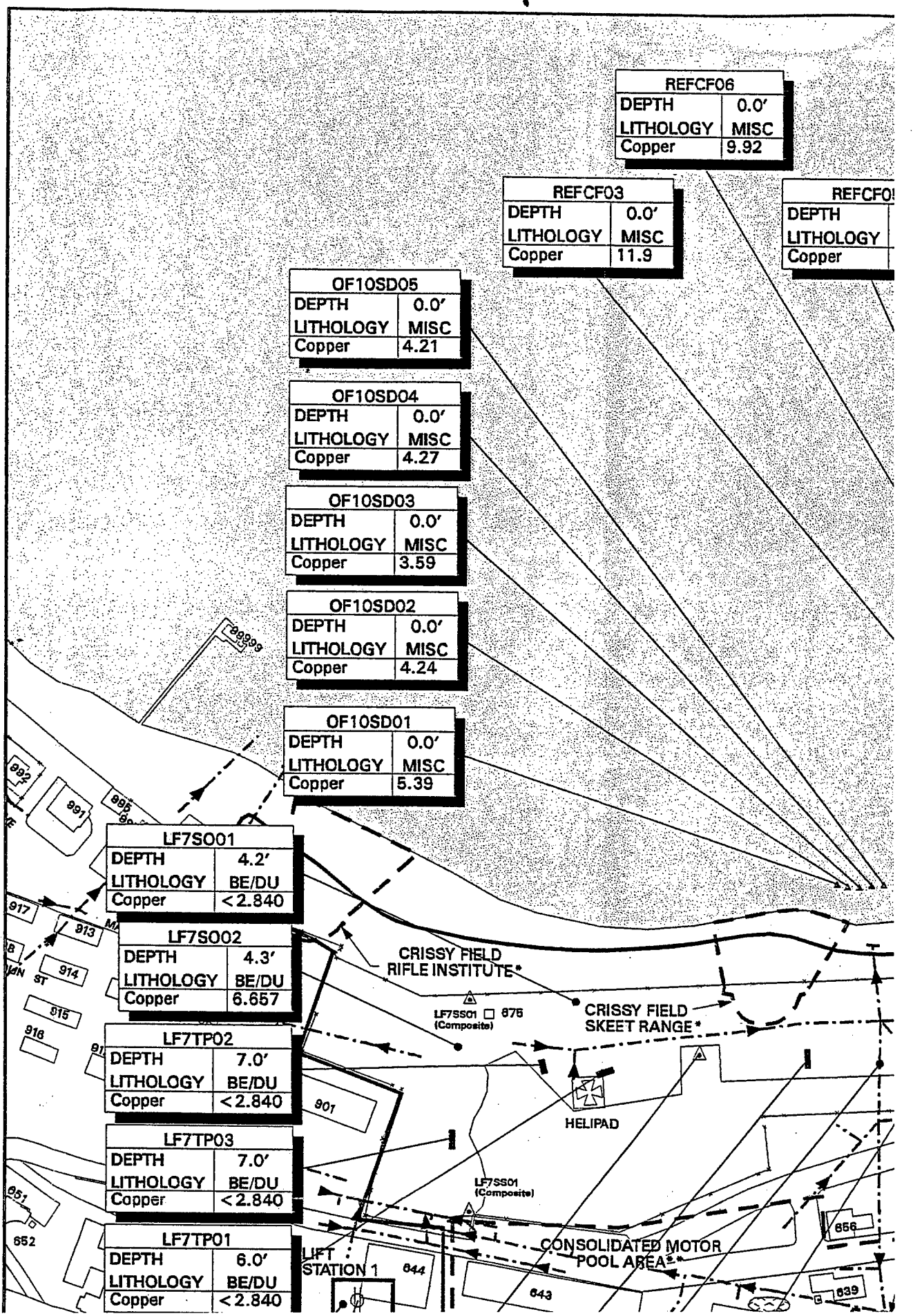


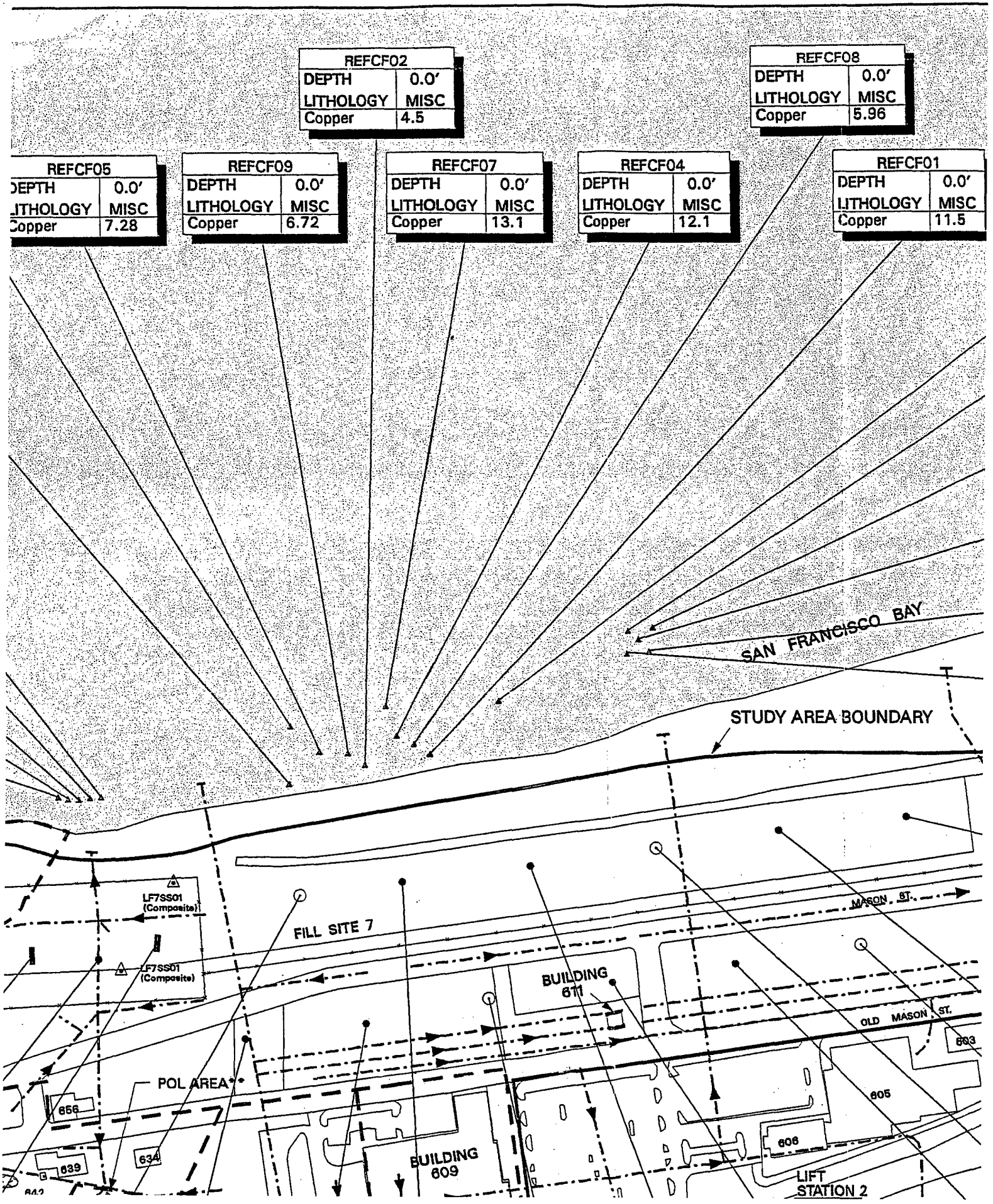
DAMES & MOORE

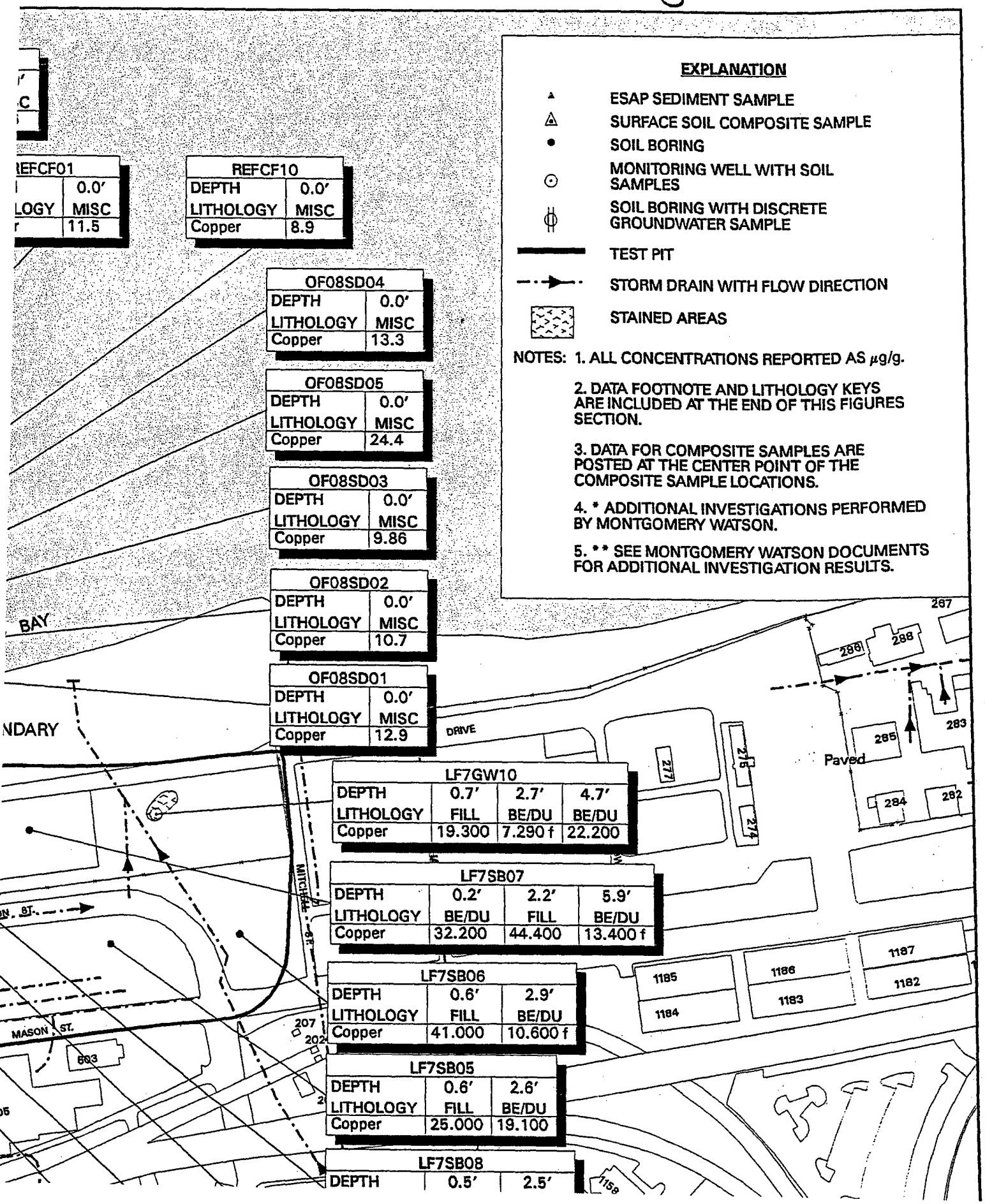
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF COBALT IN SOIL

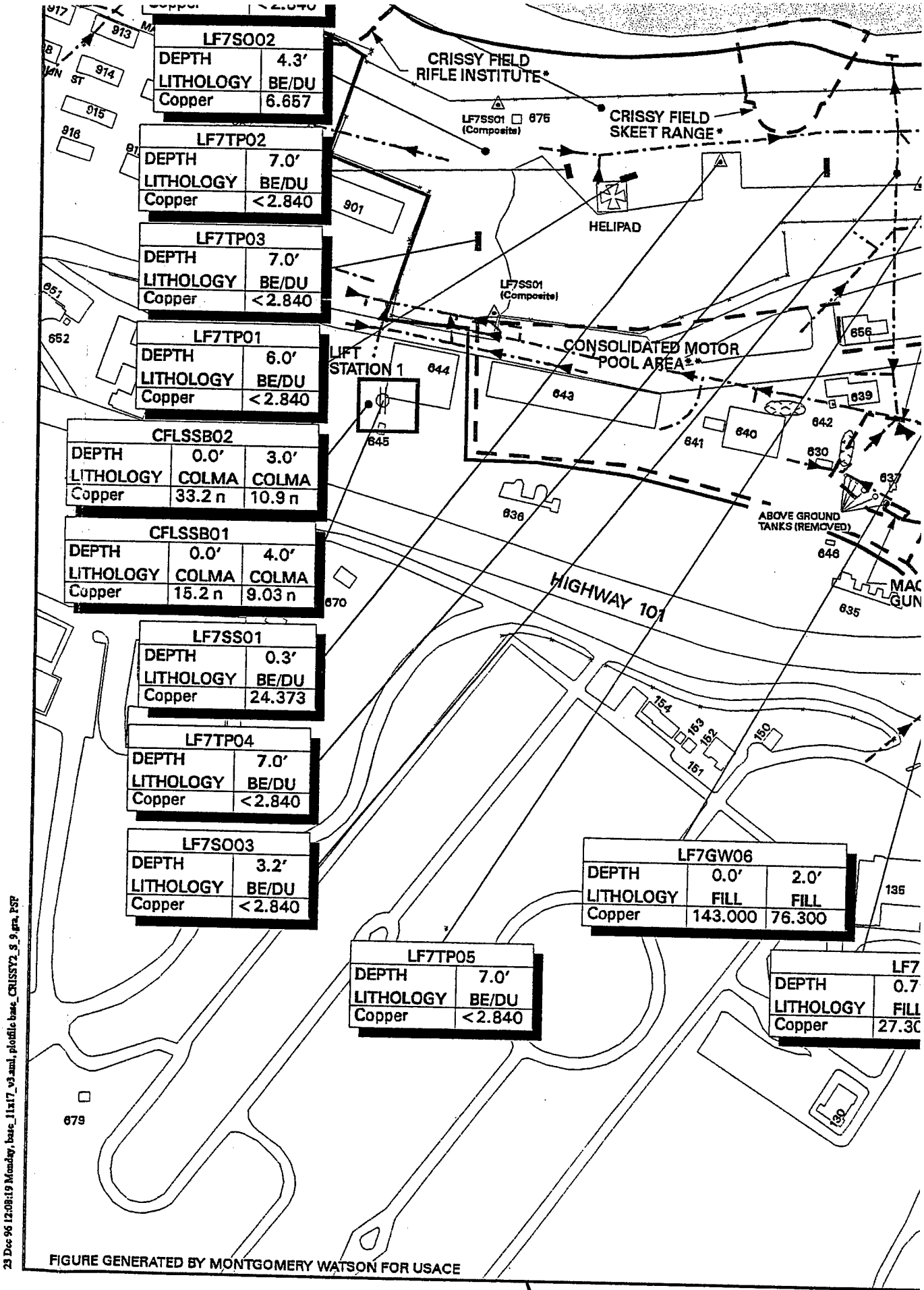
PFS26510

Date: January 1997 | Figure 5.5-22


REFCF06
DEPTH 0.0′
LITHOLOGY MISC
Copper 9.92
REFCF03
DEPTH 0.0′
LITHOLOGY MISC
Copper 11.9
REFCF0
DEPTH
LITHOLOGY
Copper
OF10SD05
DEPTH 0.0′
LITHOLOGY MISC
Copper 4.21
OF10SD04
DEPTH 0.0′
LITHOLOGY MISC
Copper 4.27
OF10SD03
DEPTH 0.0′
LITHOLOGY MISC
Copper 3.59
OF10SD02
DEPTH 0.0′
LITHOLOGY MISC
Copper 4.24
OF10SD01
DEPTH 0.0′
LITHOLOGY MISC
Copper 5.39
LF7SO01
DEPTH 4.2′
LITHOLOGY BE/DU
Copper <2.840
LF7SO02
DEPTH 4.3′
LITHOLOGY BE/DU
Copper 6.657
LF7TP02
DEPTH 7.0′
LITHOLOGY BE/DU
Copper <2.840
LF7TP03
DEPTH 7.0′
LITHOLOGY BE/DU
Copper <2.840
LF7TP01
DEPTH 6.0′
LITHOLOGY BE/DU
Copper <2.840
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
LF7SS01 (Composite)
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
644
643
639
856
901
991
992
913
914
915
916
917
651
652

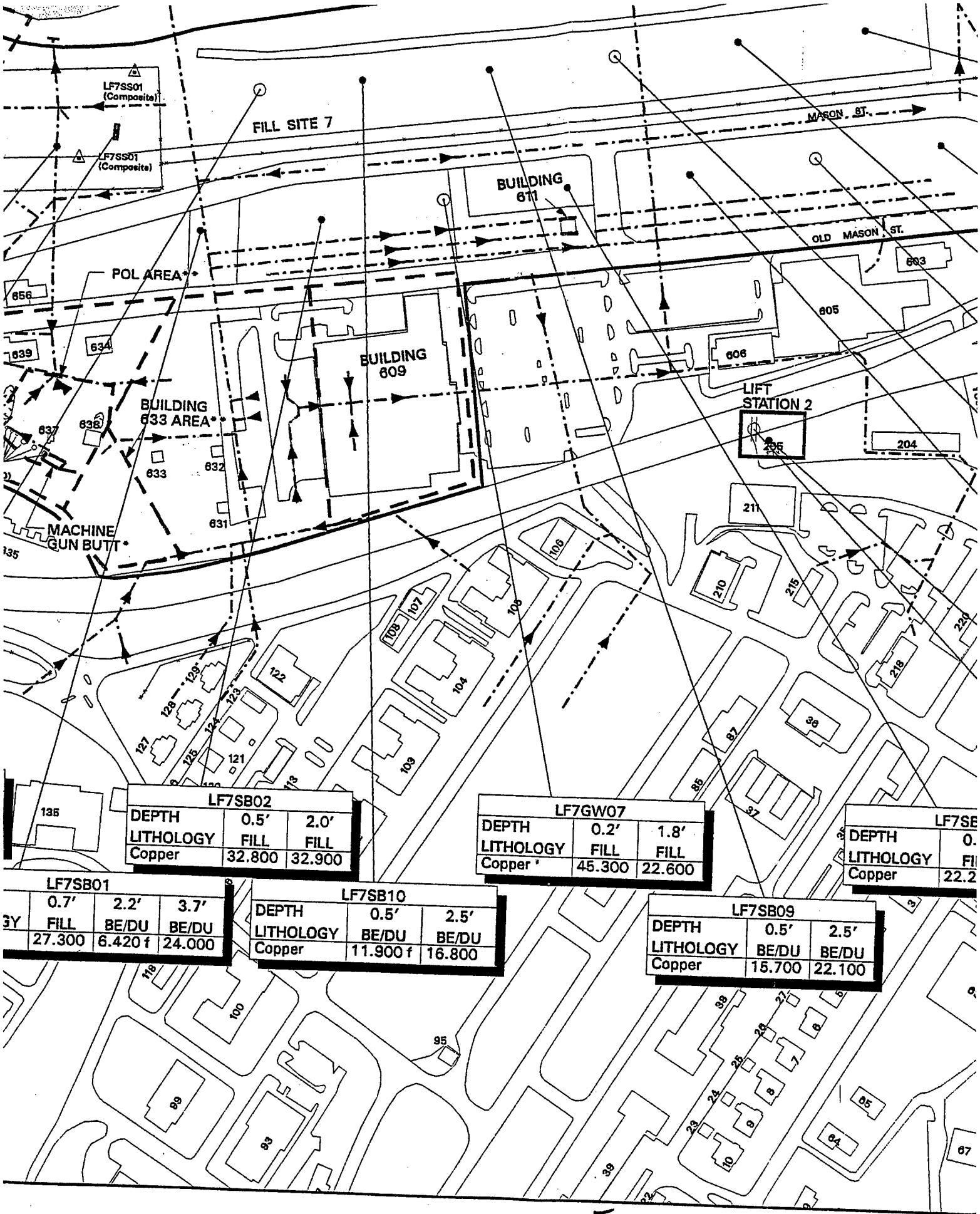

REFCF02
DEPTH 0.0'
LITHOLOGY MISC
Copper 4.5
REFCF08
DEPTH 0.0'
LITHOLOGY MISC
Copper 5.96
REFCF05
DEPTH 0.0'
LITHOLOGY MISC
Copper 7.28
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Copper 6.72
REFCF07
DEPTH 0.0'
LITHOLOGY MISC
Copper 13.1
REFCF04
DEPTH 0.0'
LITHOLOGY MISC
Copper 12.1
REFCF01
DEPTH 0.0'
LITHOLOGY MISC
Copper 11.5
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603
605
606
POL AREA**
656
639
634
BUILDING 609
LIFT STATION 2

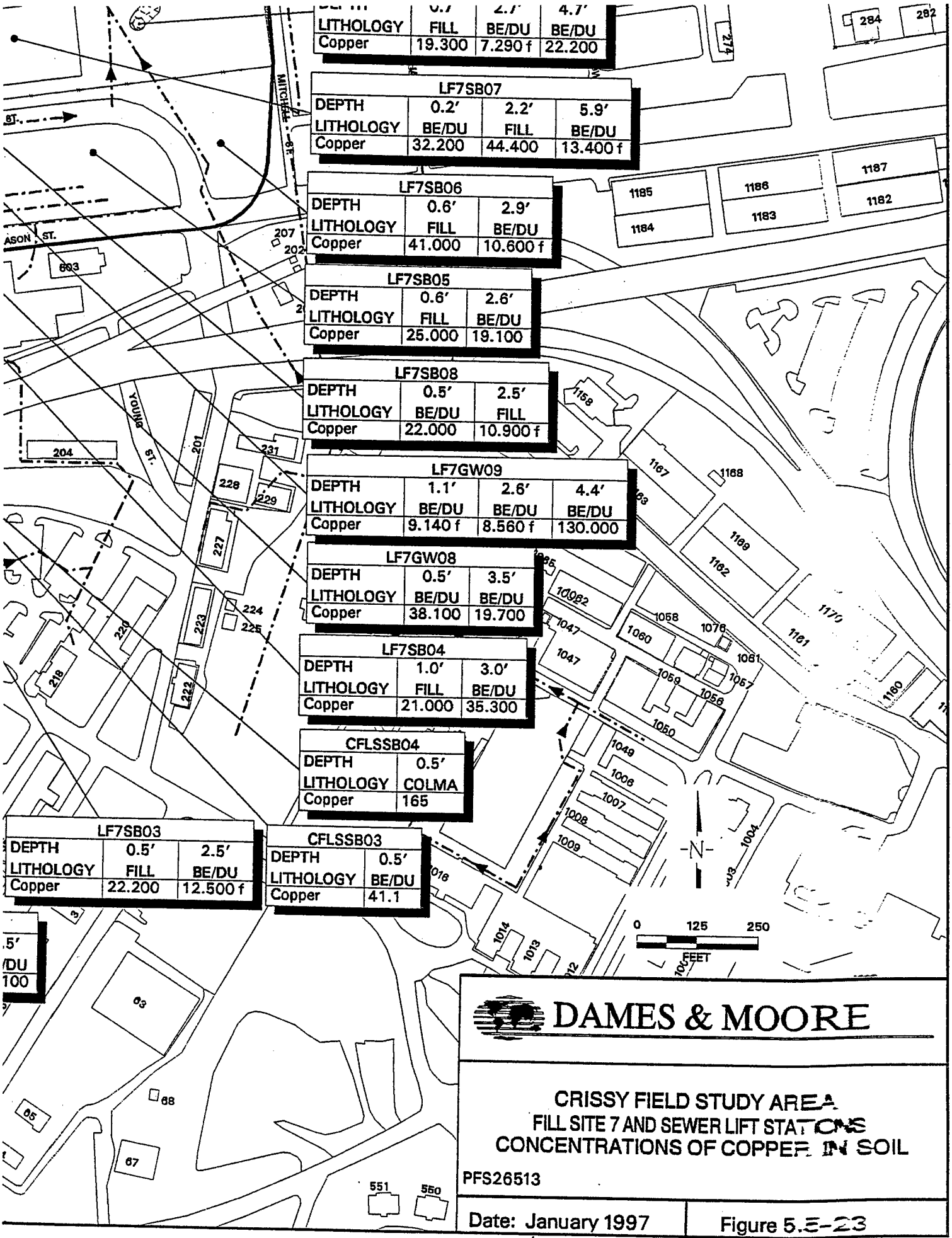

EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
REFCF01
DEPTH 0.0′
LITHOLOGY MISC
11.5
REFCF10
DEPTH 0.0′
LITHOLOGY MISC
Copper 8.9
OF08SD04
DEPTH 0.0′
LITHOLOGY MISC
Copper 13.3
OF08SD05
DEPTH 0.0′
LITHOLOGY MISC
Copper 24.4
OF08SD03
DEPTH 0.0′
LITHOLOGY MISC
Copper 9.86
OF08SD02
DEPTH 0.0′
LITHOLOGY MISC
Copper 10.7
OF08SD01
DEPTH 0.0′
LITHOLOGY MISC
Copper 12.9
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Copper 19.300 7.290 f 22.200
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Copper 32.200 44.400 13.400 f
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Copper 41.000 10.600 f
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Copper 25.000 19.100
LF7SB08
DEPTH 0.5′ 2.5′
BAY
NDARY
DRIVE
Paved
MASON ST.
MITCHELL
8ST.
267
288
286
283
285
284
282
277
275
274
1185
1186
1187
1184
1183
1182
207
202
603



23 Dec 96 12:08:19 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_8_9.gra, PSP

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE


LF7SS01
(Composite)
LF7SS01
(Composite)
FILL SITE 7
MASON ST.
BUILDING
611
OLD MASON ST.
POL AREA
BUILDING
609
BUILDING
633 AREA
LIFT
STATION 2
MACHINE
GUN BUTT
LF7SB02
DEPTH 0.5′ 2.0′
LITHOLOGY FILL FILL
Copper 32.800 32.900
LF7GW07
DEPTH 0.2′ 1.8′
LITHOLOGY FILL FILL
Copper 45.300 22.600
LF7SB01
0.7′ 2.2′ 3.7′
FILL BE/DU BE/DU
27.300 6.420 f 24.000
LF7SB10
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU BE/DU
Copper 11.900 f 16.800
LF7SB09
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU BE/DU
Copper 15.700 22.100

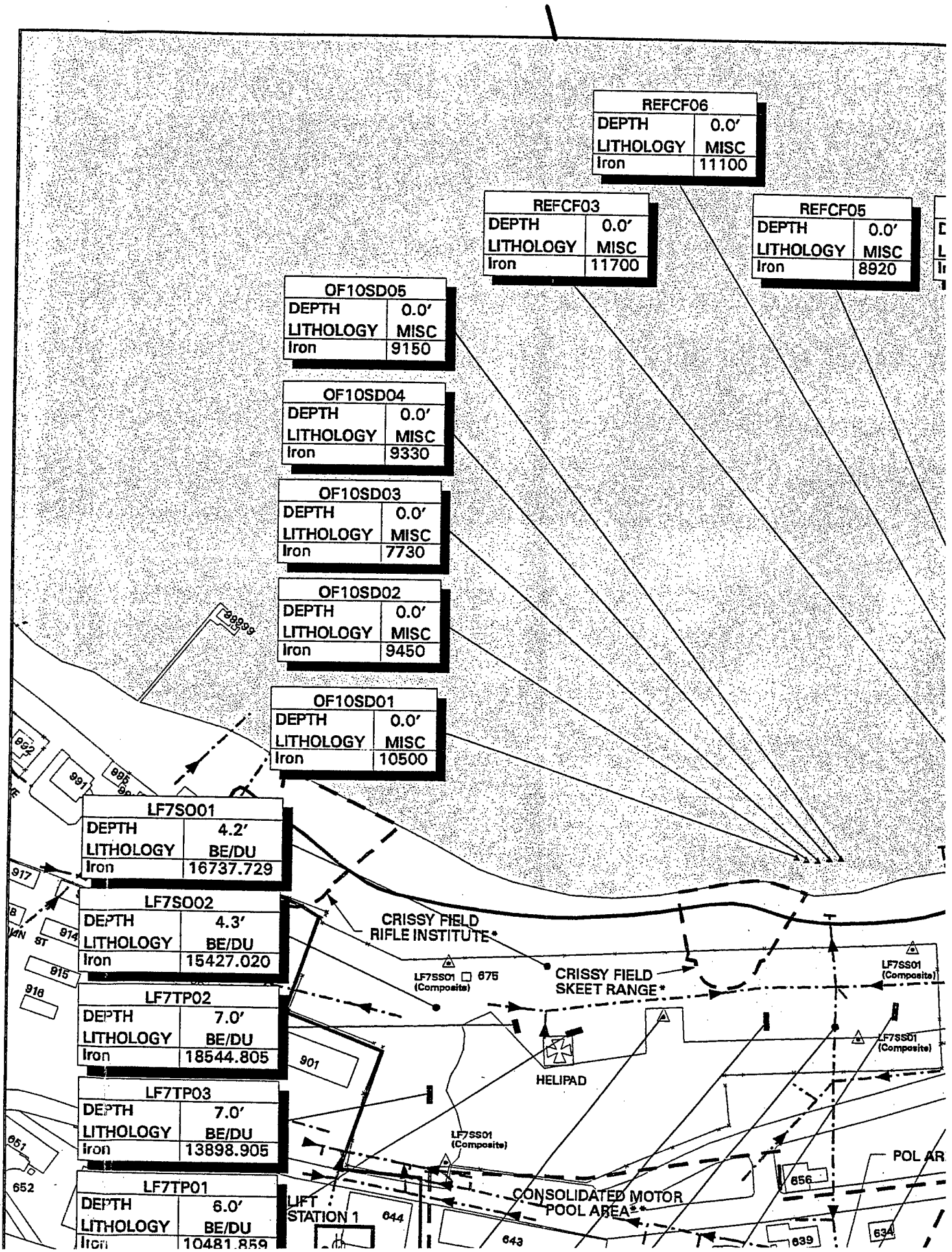


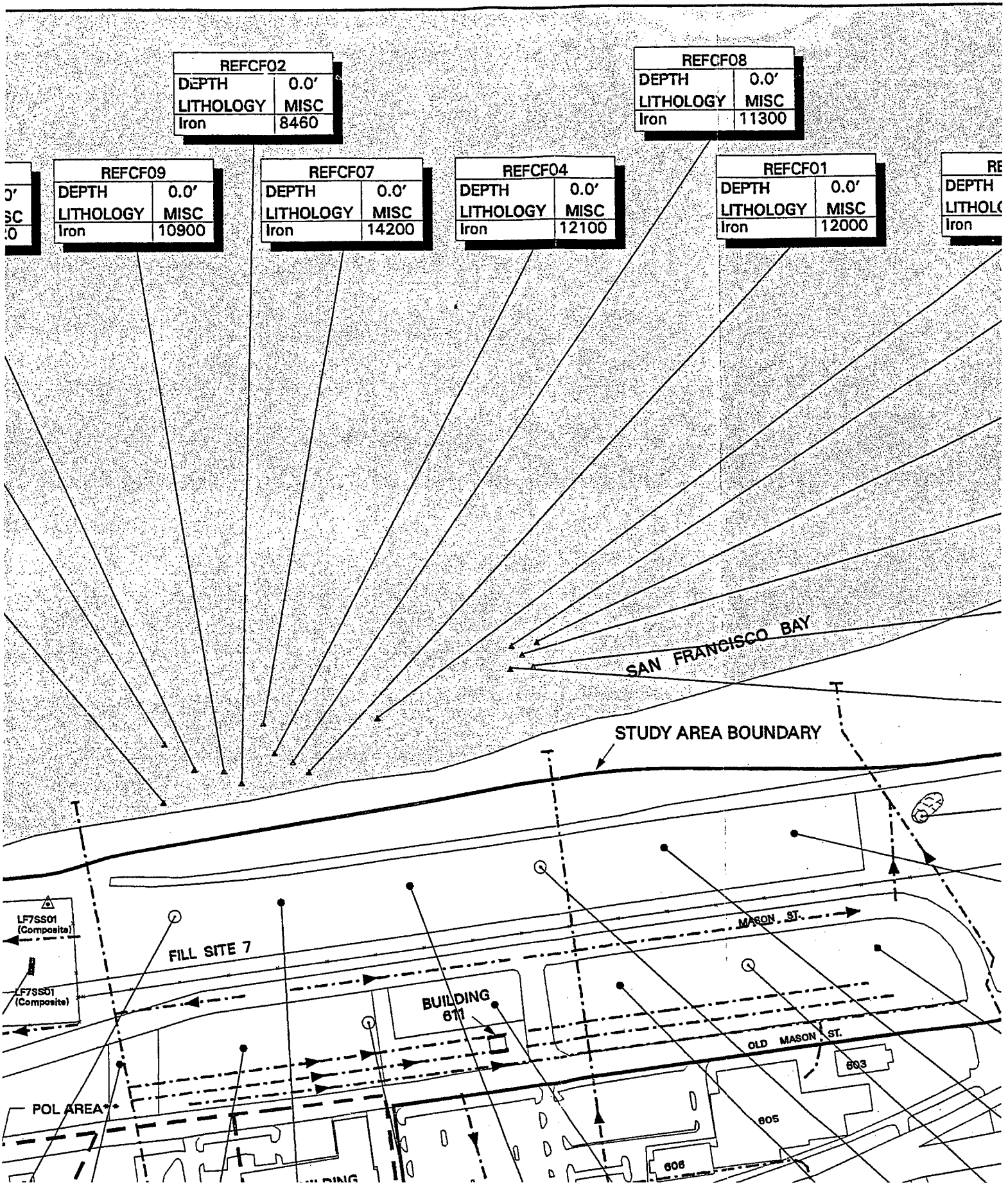
DAMES & MOORE

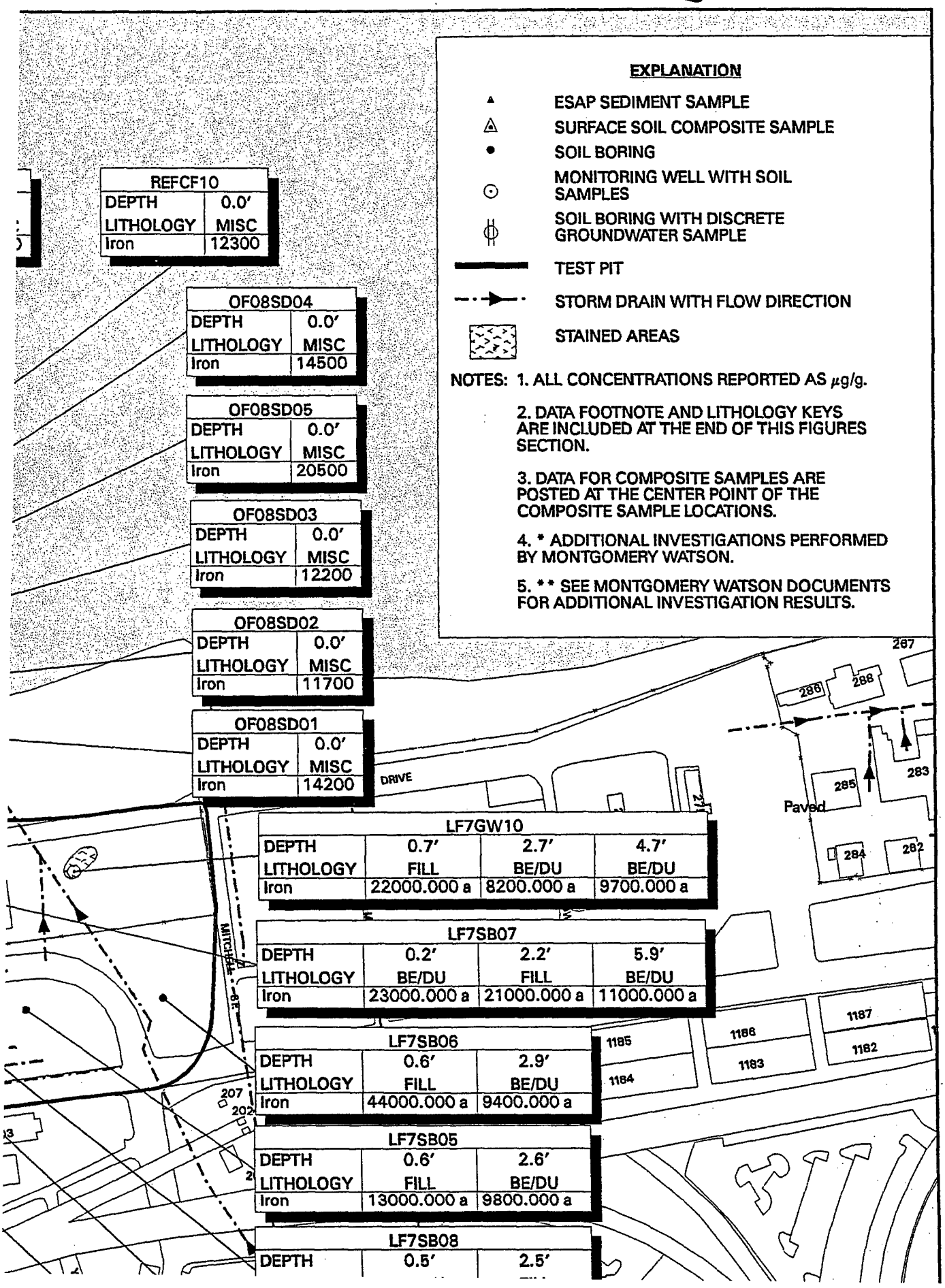
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF COPPER IN SOIL

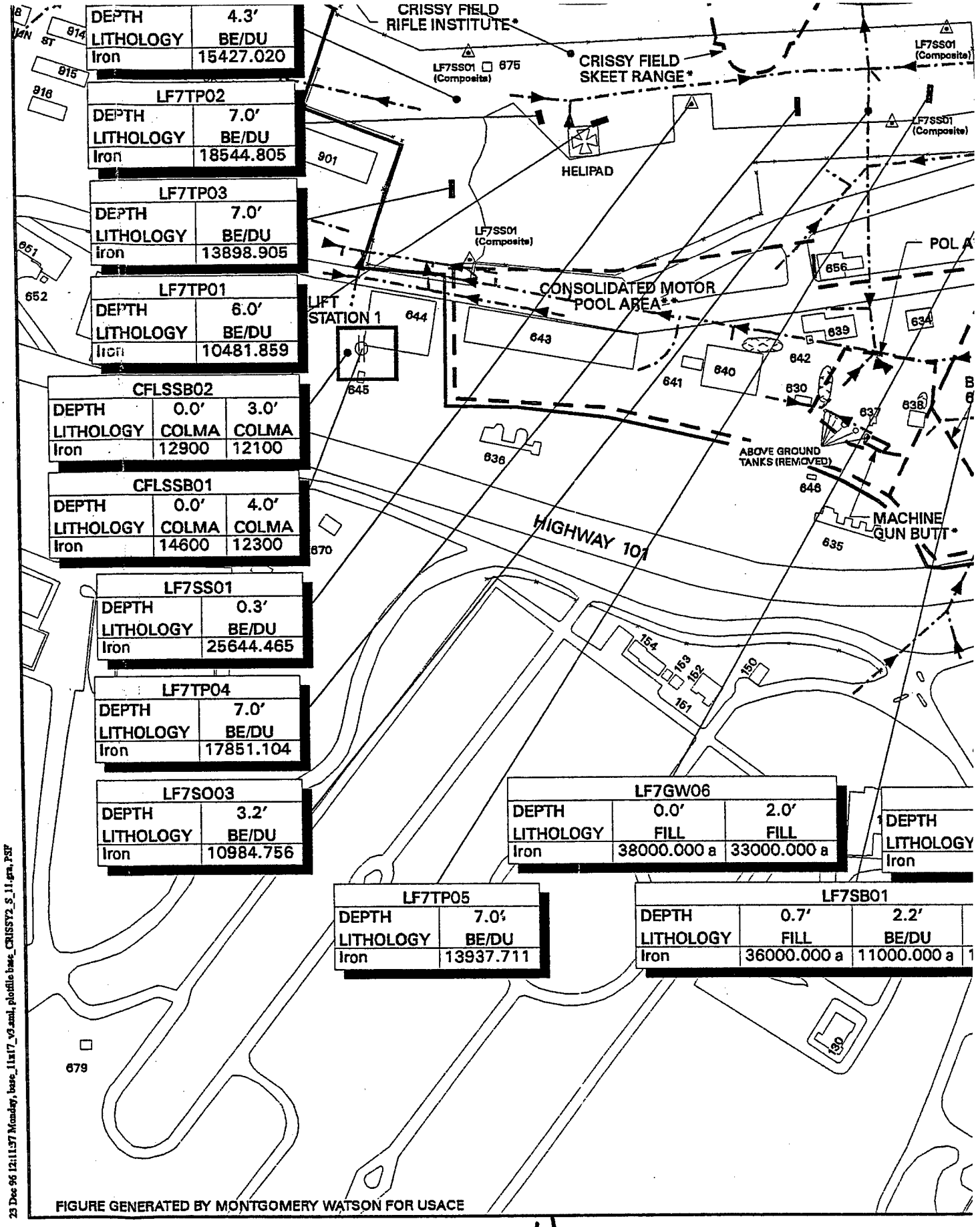
PFS26513

Date: January 1997 | Figure 5.E-23


REFCF06
DEPTH 0.0′
LITHOLOGY MISC
Iron 11100
REFCF03
DEPTH 0.0′
LITHOLOGY MISC
Iron 11700
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Iron 8920
OF10SD05
DEPTH 0.0′
LITHOLOGY MISC
Iron 9150
OF10SD04
DEPTH 0.0′
LITHOLOGY MISC
Iron 9330
OF10SD03
DEPTH 0.0′
LITHOLOGY MISC
Iron 7730
OF10SD02
DEPTH 0.0′
LITHOLOGY MISC
Iron 9450
OF10SD01
DEPTH 0.0′
LITHOLOGY MISC
Iron 10500
LF7SO01
DEPTH 4.2′
LITHOLOGY BE/DU
Iron 16737.729
LF7SO02
DEPTH 4.3′
LITHOLOGY BE/DU
Iron 15427.020
LF7TP02
DEPTH 7.0′
LITHOLOGY BE/DU
Iron 18544.805
LF7TP03
DEPTH 7.0′
LITHOLOGY BE/DU
Iron 13898.905
LF7TP01
DEPTH 6.0′
LITHOLOGY BE/DU
Iron 10481.859
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
CONSOLIDATED MOTOR POOL AREA**
LIFT STATION 1
POL AR
99999
992
991
995
917
914
915
916
901
651
652
644
643
656
639
634

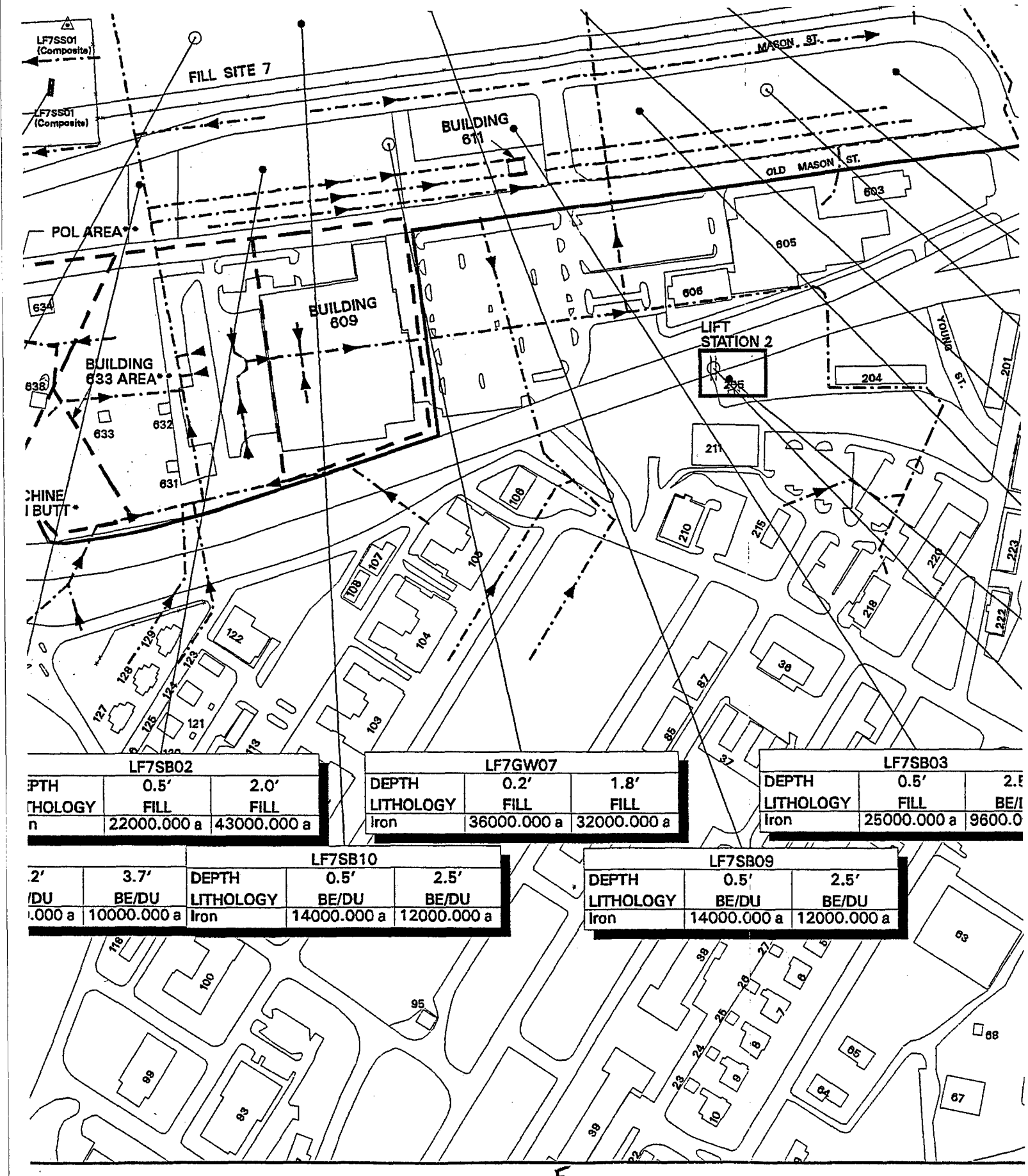

REFCF02
DEPTH 0.0'
LITHOLOGY MISC
Iron 8460
REFCF08
DEPTH 0.0'
LITHOLOGY MISC
Iron 11300
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Iron 10900
REFCF07
DEPTH 0.0'
LITHOLOGY MISC
Iron 14200
REFCF04
DEPTH 0.0'
LITHOLOGY MISC
Iron 12100
REFCF01
DEPTH 0.0'
LITHOLOGY MISC
Iron 12000
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603
605
606
POL AREA


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
REFCF10
DEPTH 0.0′
LITHOLOGY MISC
Iron 12300
OF08SD04
DEPTH 0.0′
LITHOLOGY MISC
Iron 14500
OF08SD05
DEPTH 0.0′
LITHOLOGY MISC
Iron 20500
OF08SD03
DEPTH 0.0′
LITHOLOGY MISC
Iron 12200
OF08SD02
DEPTH 0.0′
LITHOLOGY MISC
Iron 11700
OF08SD01
DEPTH 0.0′
LITHOLOGY MISC
Iron 14200
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Iron 22000.000 a 8200.000 a 9700.000 a
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Iron 23000.000 a 21000.000 a 11000.000 a
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Iron 44000.000 a 9400.000 a
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Iron 13000.000 a 9800.000 a
LF7SB08
DEPTH 0.5′ 2.5′
DRIVE
Paved
MITCHELL ST
287
286
286
283
285
284
282
1185
1186
1187
1184
1183
1182
207
202



23 Dec 96 12:11:37 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_S_11.grn, PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



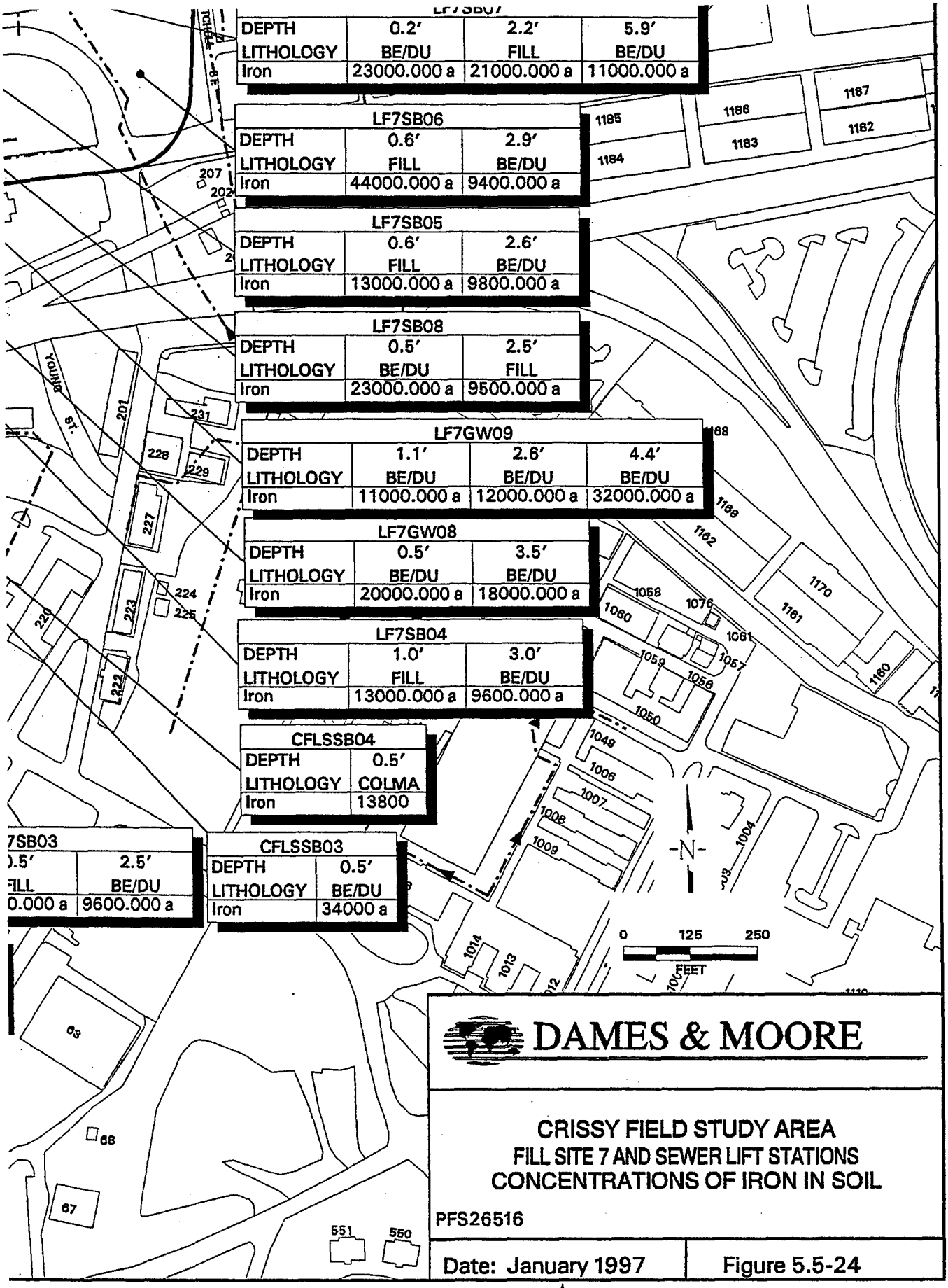
LF7SB02		
PTH	0.5′	2.0′
THOLOGY	FILL	FILL
n	22000.000 a	43000.000 a

LF7GW07		
DEPTH	0.2′	1.8′
LITHOLOGY	FILL	FILL
Iron	36000.000 a	32000.000 a

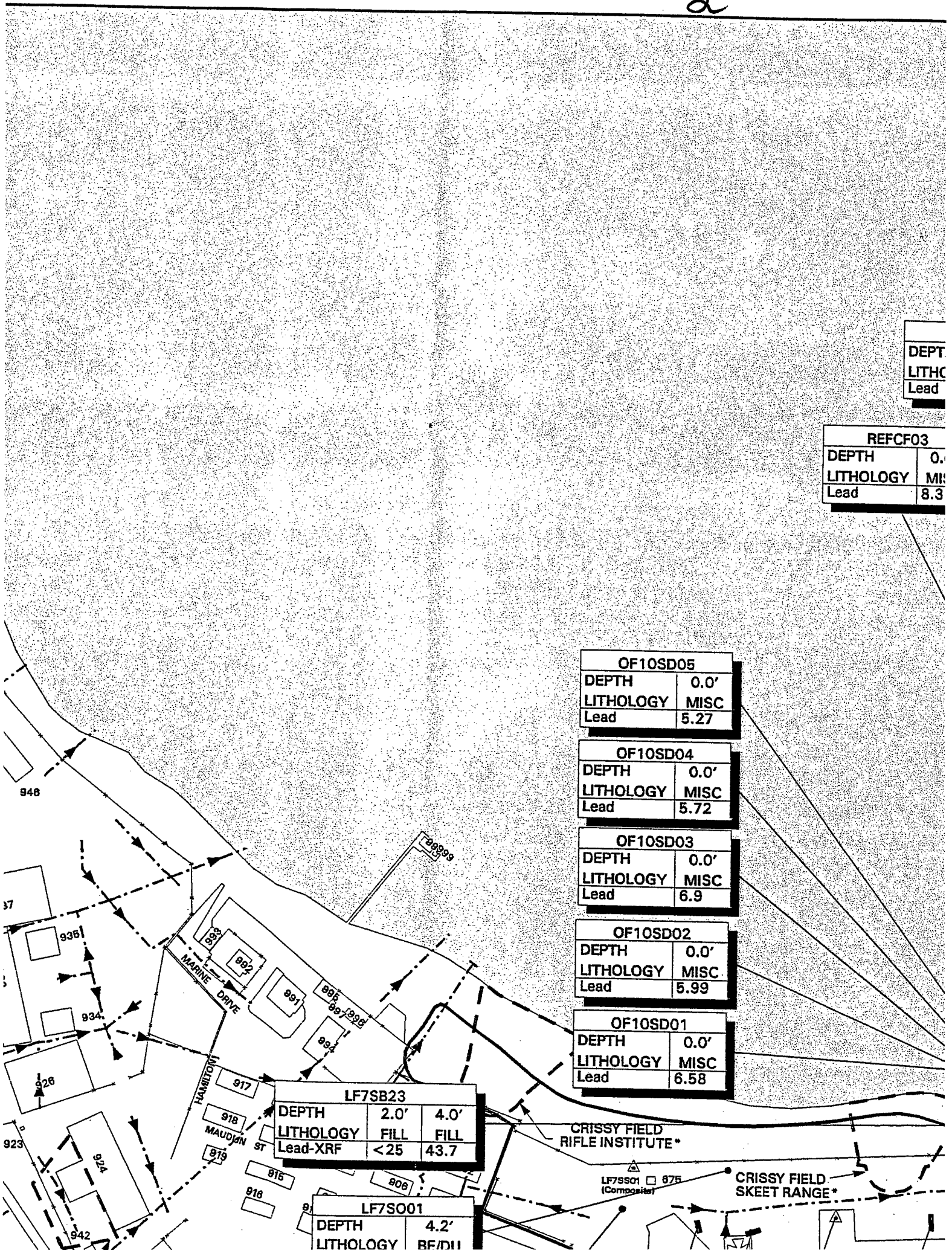
LF7SB03		
DEPTH	0.5′	2.5
LITHOLOGY	FILL	BE/I
Iron	25000.000 a	9600.0

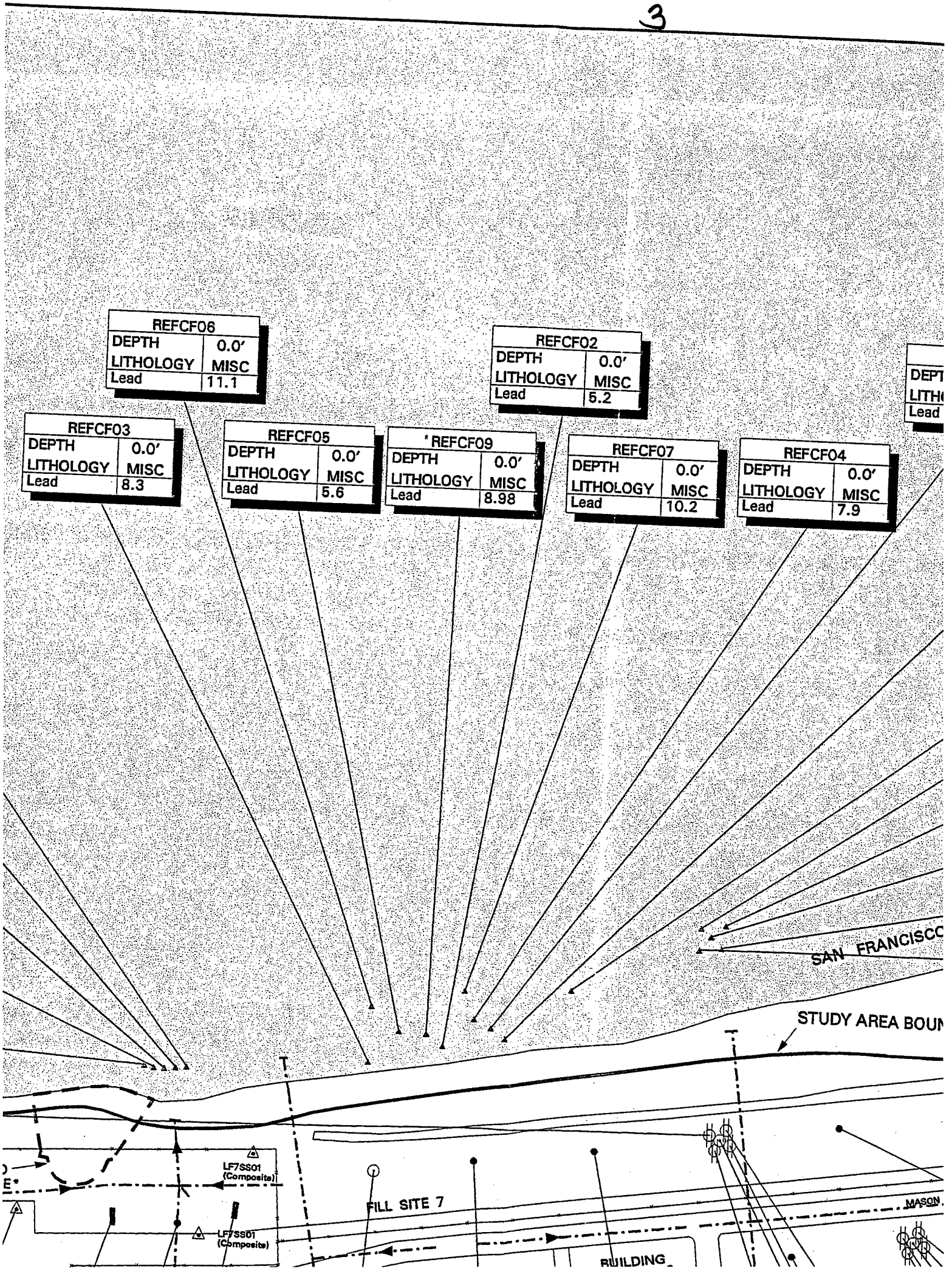
		LF7SB10		
.2′	3.7′	DEPTH	0.5′	2.5′
/DU	BE/DU	LITHOLOGY	BE/DU	BE/DU
.000 a	10000.000 a	Iron	14000.000 a	12000.000 a

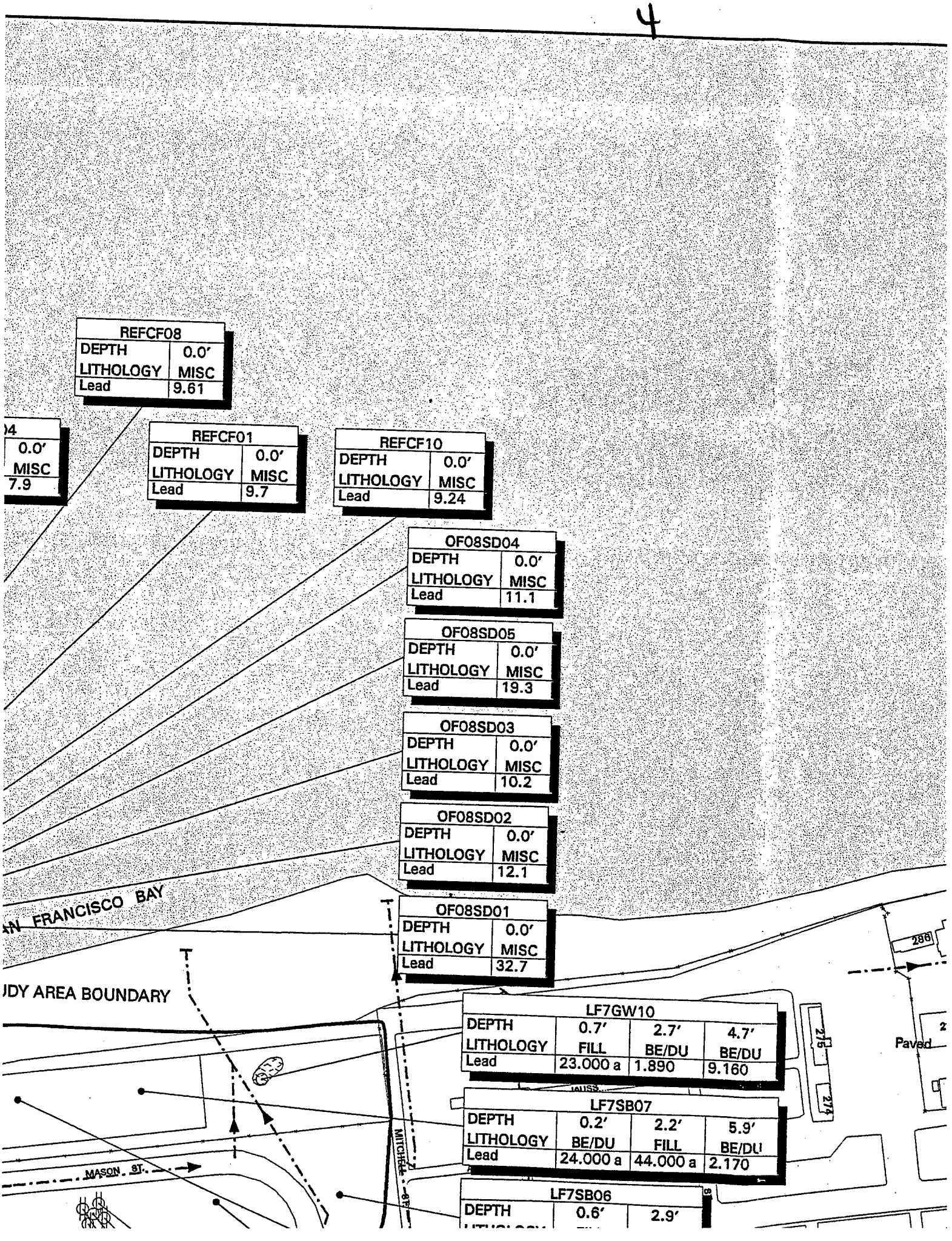
LF7SB09		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Iron	14000.000 a	12000.000 a

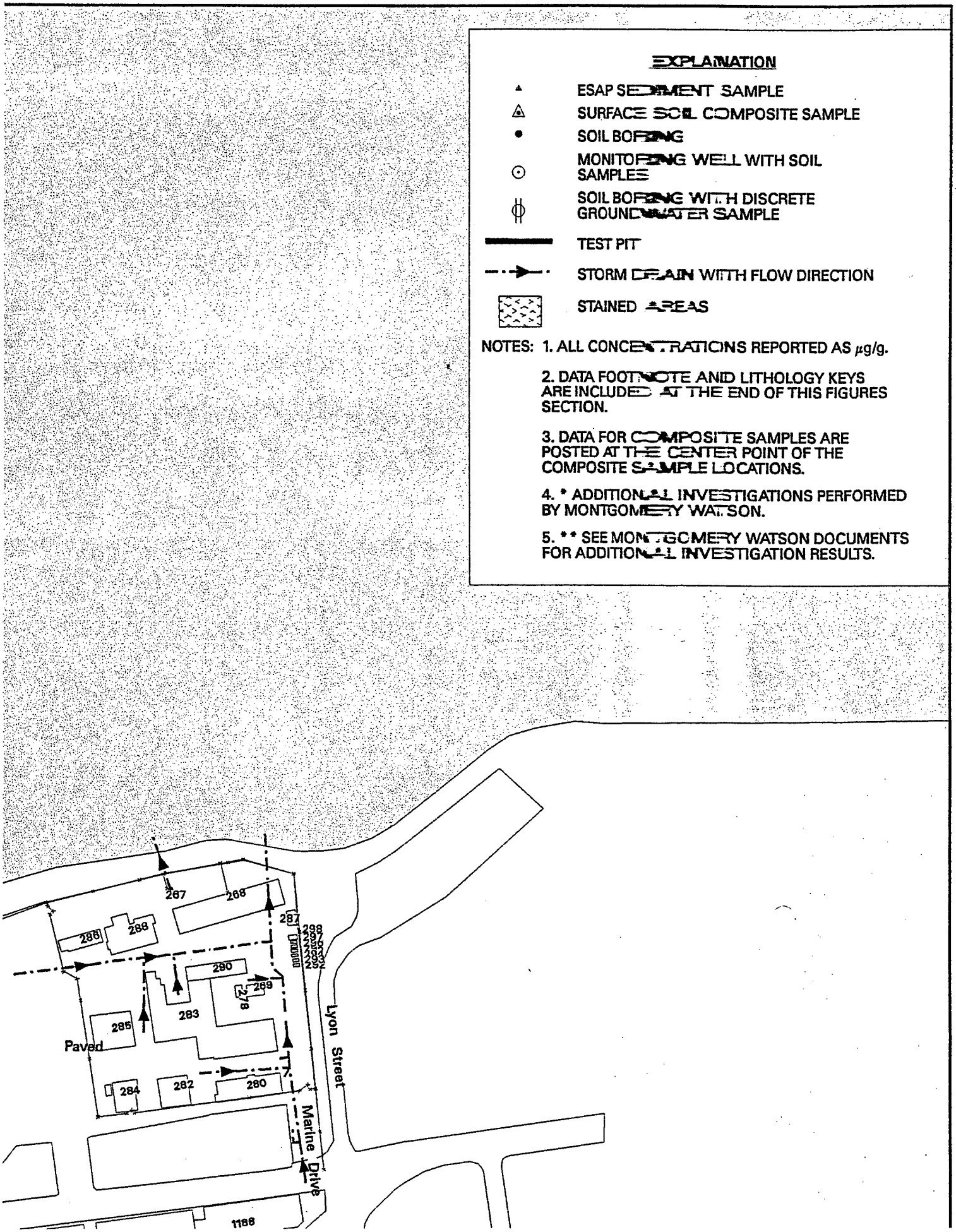

LF7SB07
DEPTH | 0.2′ | 2.2′ | 5.9′
LITHOLOGY | BE/DU | FILL | BE/DU
Iron | 23000.000 a | 21000.000 a | 11000.000 a
LF7SB06
DEPTH | 0.6′ | 2.9′
LITHOLOGY | FILL | BE/DU
Iron | 44000.000 a | 9400.000 a
LF7SB05
DEPTH | 0.6′ | 2.6′
LITHOLOGY | FILL | BE/DU
Iron | 13000.000 a | 9800.000 a
LF7SB08
DEPTH | 0.5′ | 2.5′
LITHOLOGY | BE/DU | FILL
Iron | 23000.000 a | 9500.000 a
LF7GW09
DEPTH | 1.1′ | 2.6′ | 4.4′
LITHOLOGY | BE/DU | BE/DU | BE/DU
Iron | 11000.000 a | 12000.000 a | 32000.000 a
LF7GW08
DEPTH | 0.5′ | 3.5′
LITHOLOGY | BE/DU | BE/DU
Iron | 20000.000 a | 18000.000 a
LF7SB04
DEPTH | 1.0′ | 3.0′
LITHOLOGY | FILL | BE/DU
Iron | 13000.000 a | 9600.000 a
CFLSSB04
DEPTH | 0.5′
LITHOLOGY | COLMA
Iron | 13800
7SB03
).5′ | 2.5′
FILL | BE/DU
0.000 a | 9600.000 a
CFLSSB03
DEPTH | 0.5′
LITHOLOGY | BE/DU
Iron | 34000 a
0 125 250
FEET
-N-
DAMES & MOORE
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF IRON IN SOIL
PFS26516
Date: January 1997
Figure 5.5-24

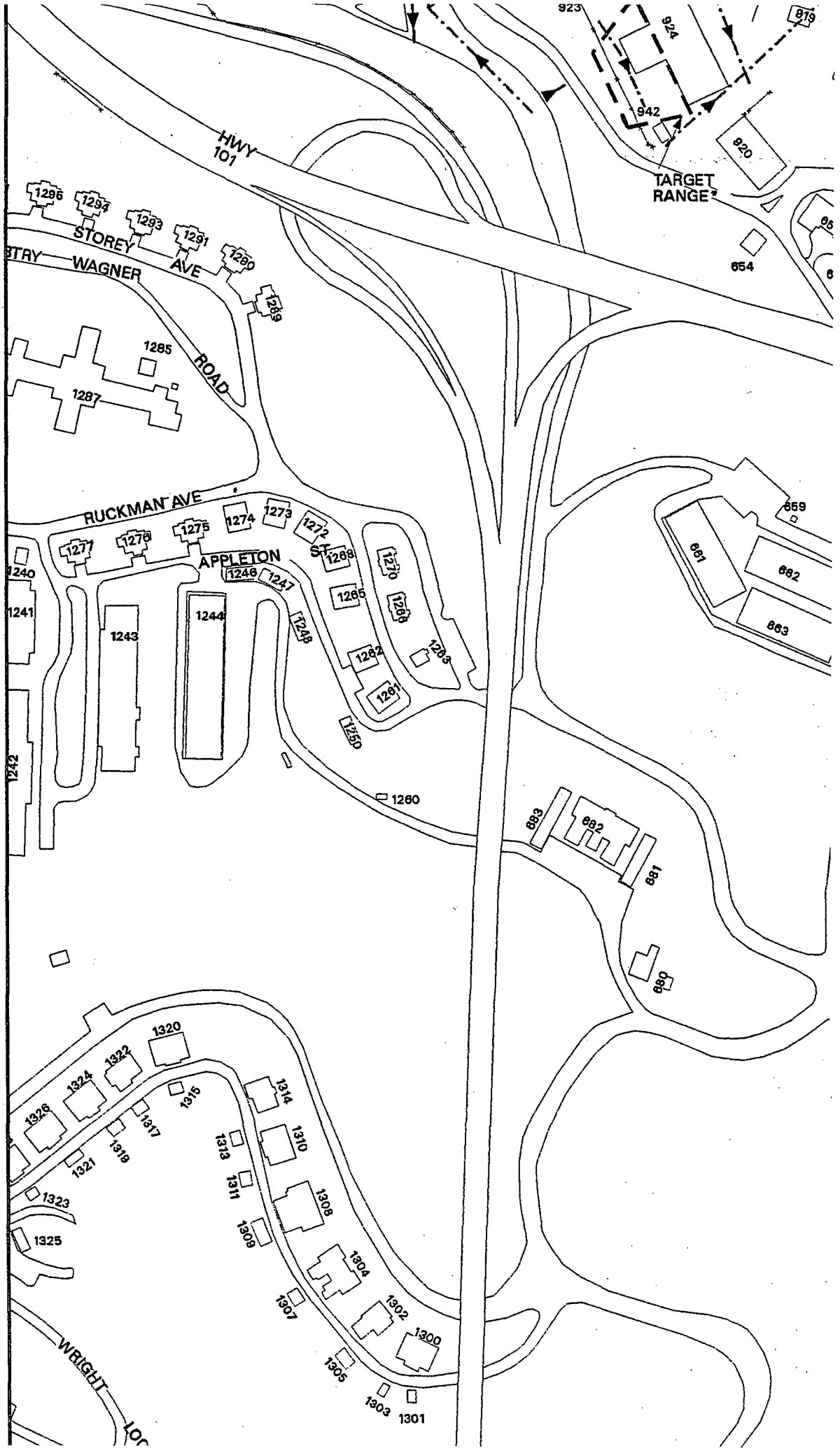
990
989
985
987
986
983
988
979
976
974
973
949
950
948
957
958
956
955
954
953
971
952
951
1236
1238
1282
1280
1254
1278
1255
1256
1257
1258
1259
937
936
935
933
934
931
930
929
926
923
924


DEPT
LITHO
Lead
REFCF03
DEPTH 0.
LITHOLOGY MI
Lead 8.3
OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Lead 5.27
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Lead 5.72
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Lead 6.9
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Lead 5.99
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Lead 6.58
LF7SB23
DEPTH 2.0' 4.0'
LITHOLOGY FILL FILL
Lead-XRF <25 43.7
LF7SO01
DEPTH 4.2'
LITHOLOGY BF/DU
LF7SS01 (Composite)
946
936
934
926
923
924
942
917
918
919
915
916
908
MARINE DRIVE
HAMILTON
MAUDLIN ST
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*

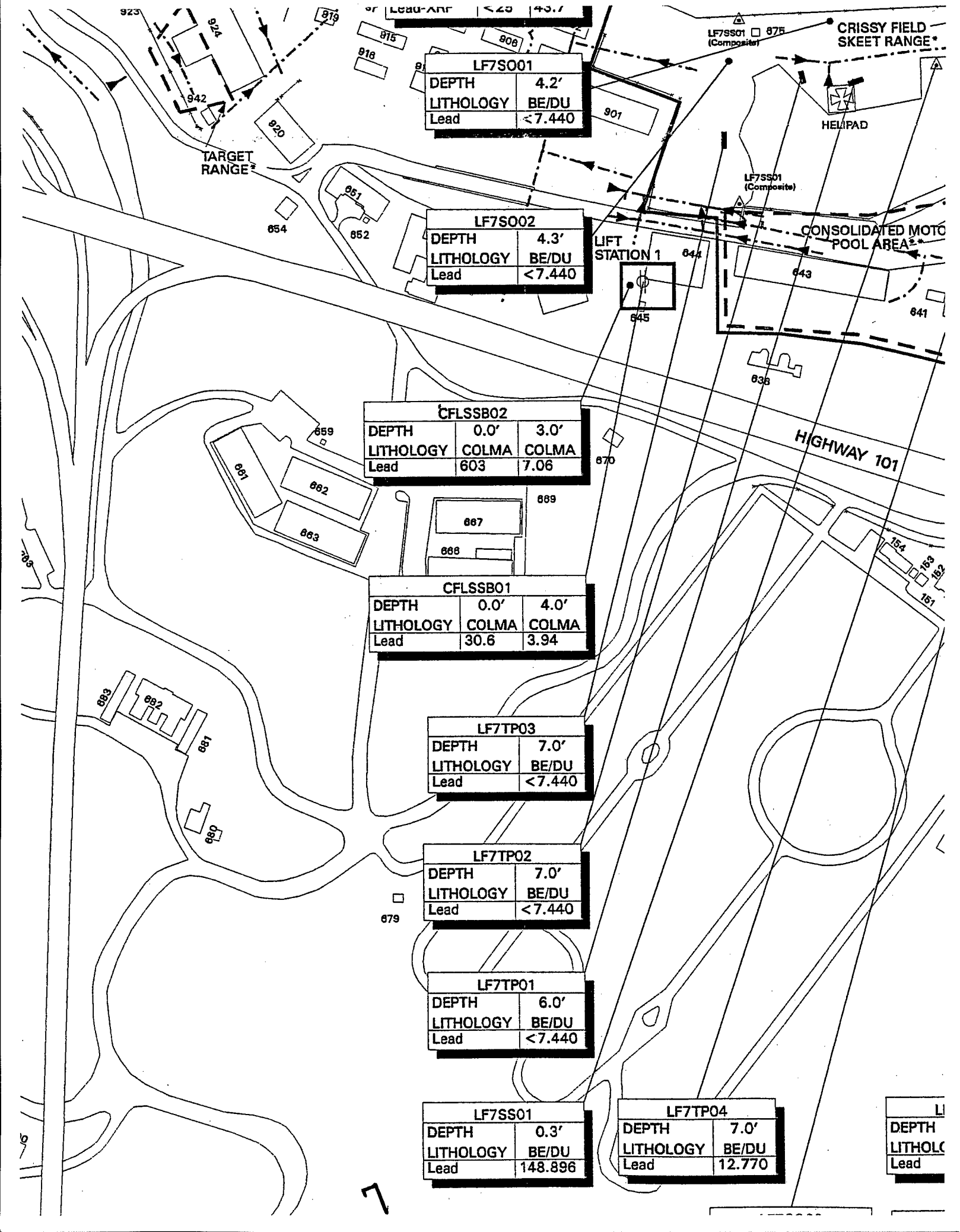

REFCF06
DEPTH 0.0'
LITHOLOGY MISC
Lead 11.1
REFCF02
DEPTH 0.0'
LITHOLOGY MISC
Lead 5.2
REFCF03
DEPTH 0.0'
LITHOLOGY MISC
Lead 8.3
REFCF05
DEPTH 0.0'
LITHOLOGY MISC
Lead 5.6
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Lead 8.98
REFCF07
DEPTH 0.0'
LITHOLOGY MISC
Lead 10.2
REFCF04
DEPTH 0.0'
LITHOLOGY MISC
Lead 7.9
SAN FRANCISCO
STUDY AREA BOUN
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON
BUILDING


REFCF08
DEPTH 0.0′
LITHOLOGY MISC
Lead 9.61
REFCF01
DEPTH 0.0′
LITHOLOGY MISC
Lead 9.7
REFCF10
DEPTH 0.0′
LITHOLOGY MISC
Lead 9.24
OF08SD04
DEPTH 0.0′
LITHOLOGY MISC
Lead 11.1
OF08SD05
DEPTH 0.0′
LITHOLOGY MISC
Lead 19.3
OF08SD03
DEPTH 0.0′
LITHOLOGY MISC
Lead 10.2
OF08SD02
DEPTH 0.0′
LITHOLOGY MISC
Lead 12.1
OF08SD01
DEPTH 0.0′
LITHOLOGY MISC
Lead 32.7
FRANCISCO BAY
JDY AREA BOUNDARY
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Lead 23.000 a 1.890 9.160
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Lead 24.000 a 44.000 a 2.170
LF7SB06
DEPTH 0.6′ 2.9′
MASON ST.
MITCHELL
Paved
286
275
274

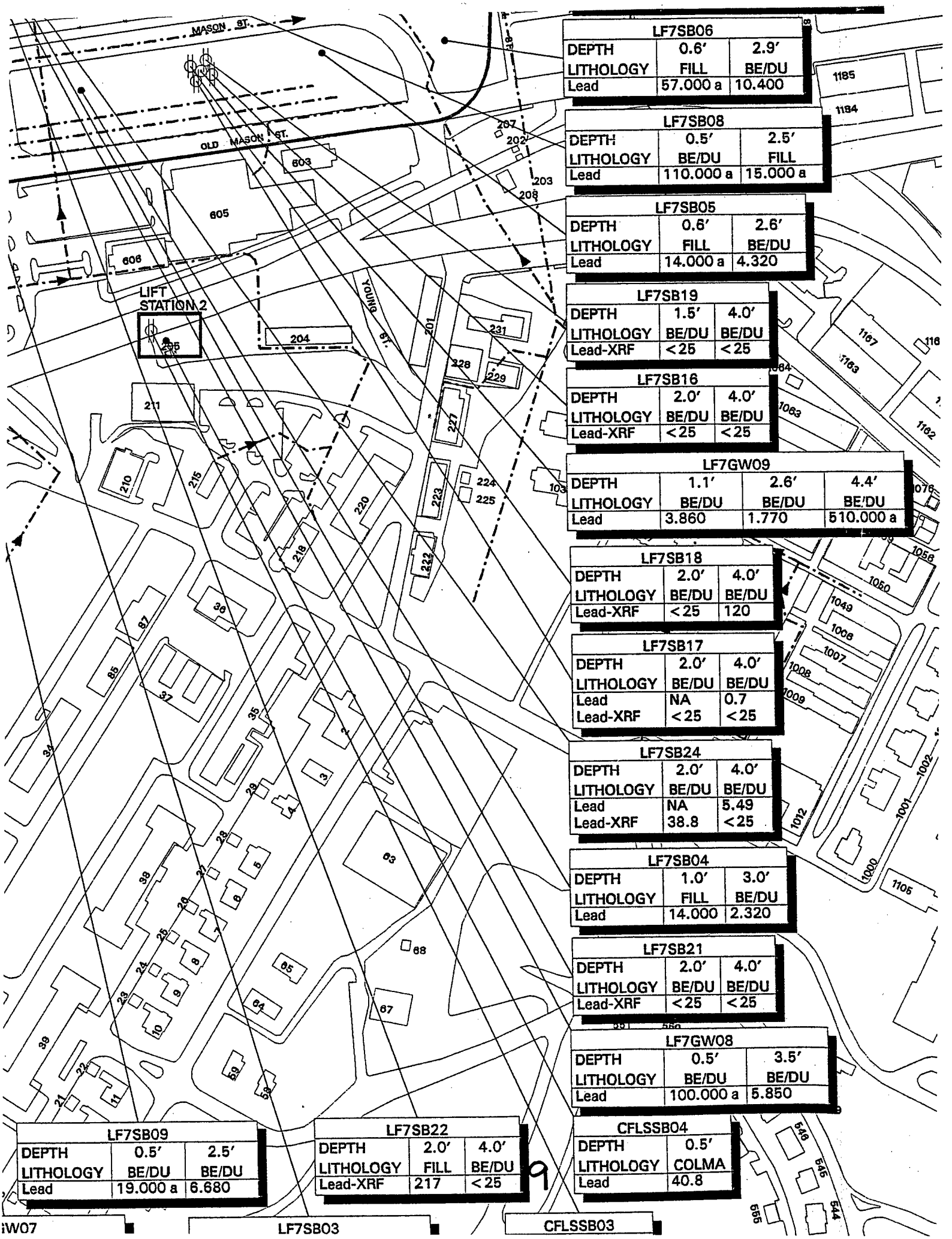

EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
267
268
286
288
287
290
269
278
283
285
Paved
284
282
280
Lyon Street
Marine Drive
1186

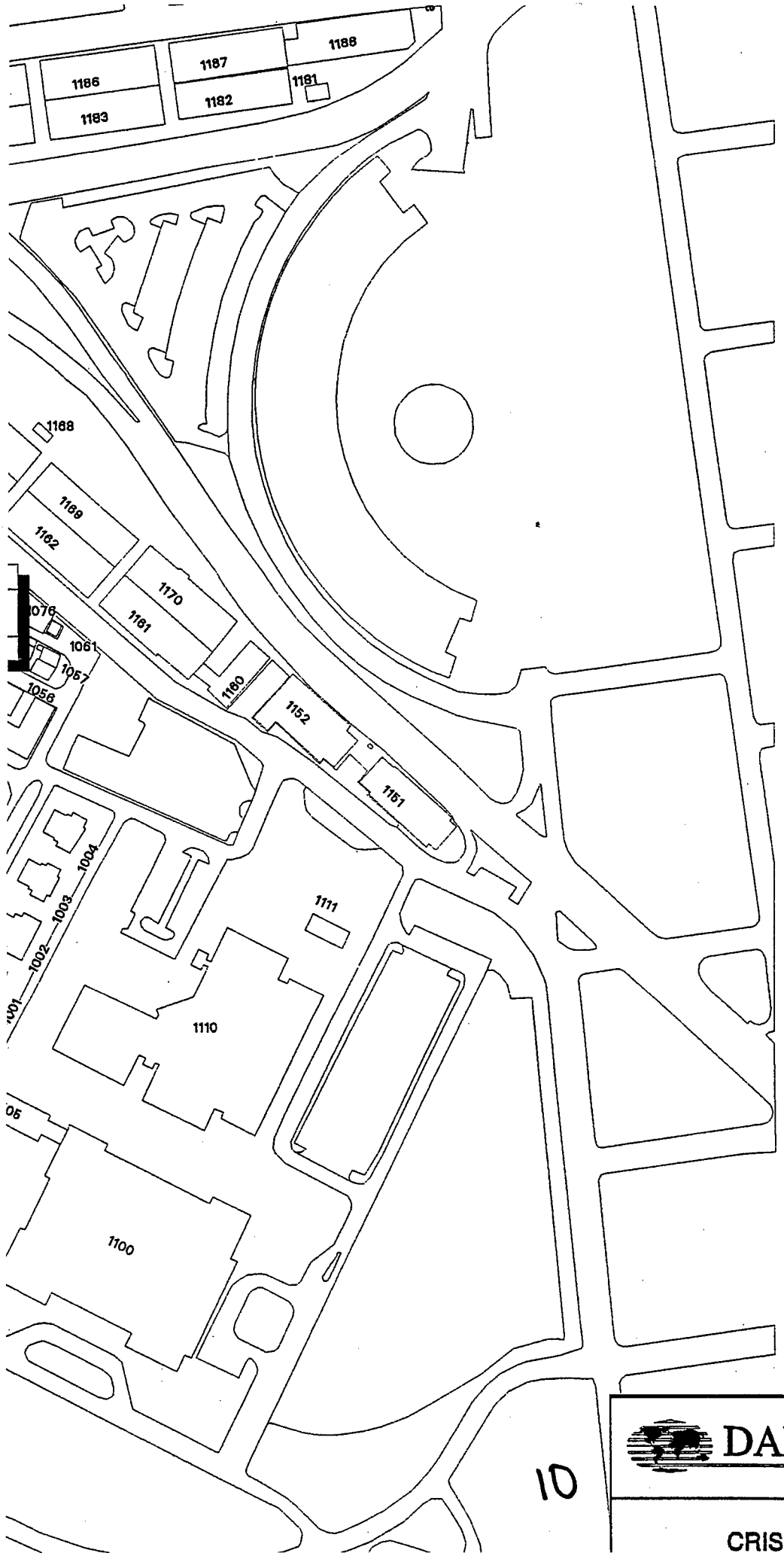


base_11x17_v3.aml, plotfile base_CRISSY2_S_12.grn, PSF


LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Lead <7.440
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Lead <7.440
CFLSSB02
DEPTH 0.0' 3.0'
LITHOLOGY COLMA COLMA
Lead 603 7.06
CFLSSB01
DEPTH 0.0' 4.0'
LITHOLOGY COLMA COLMA
Lead 30.6 3.94
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Lead <7.440
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Lead <7.440
LF7TP01
DEPTH 6.0'
LITHOLOGY BE/DU
Lead <7.440
LF7SS01
DEPTH 0.3'
LITHOLOGY BE/DU
Lead 148.896
LF7TP04
DEPTH 7.0'
LITHOLOGY BE/DU
Lead 12.770
LF7SS01 (Composite) 675
CRISSY FIELD SKEET RANGE*
HELIPAD
TARGET RANGE*
LIFT STATION 1
CONSOLIDATED MOTO POOL AREA*
HIGHWAY 101
LF7SS01 (Composite)
923
924
919
942
920
915
916
908
901
654
651
652
644
643
645
641
638
659
661
662
663
667
666
669
670
154
153
152
151
683
682
681
680
679

CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
HELIPAD
BUILDING 611
POL AREA*
NSOLIDATED MOTOR POOL AREA*
BUILDING 609
BUILDING 638 AREA*
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
HWAY 101
LF7TP05
DEPTH 7.0′
LITHOLOGY BE/DU
Lead <7.440
LF7GW06
DEPTH 0.0′ 2.0′
LITHOLOGY FILL FILL
Lead 41.000 a 24.000 a
LF7SB10
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU BE/DU
Lead 16.000 11.500
LF7SB01
LF7SB02
LF7GW07

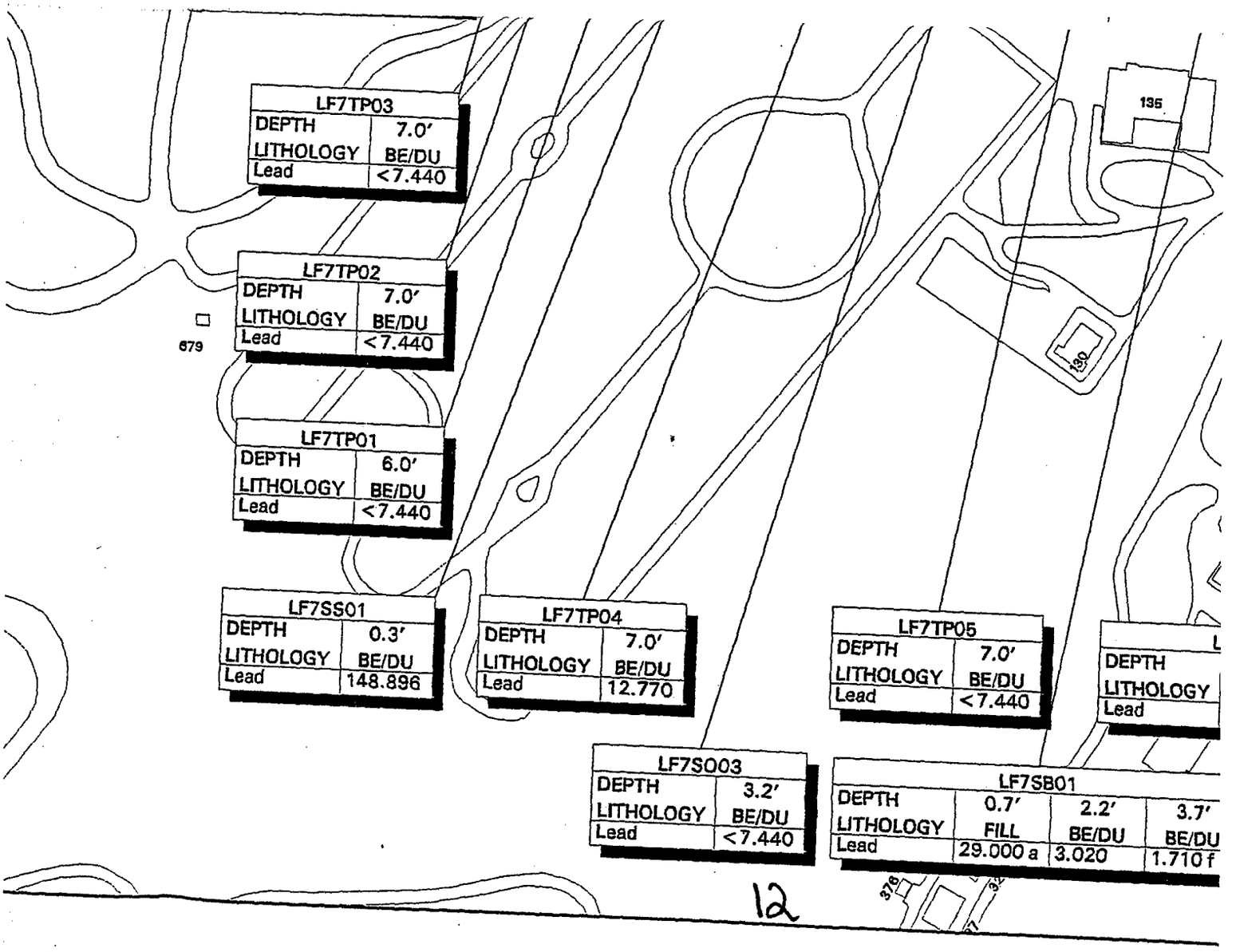

MASON ST.
OLD MASON ST.
YOUNG ST.
LIFT STATION 2
603
605
606
204
205
207
202
203
208
201
231
228
229
227
211
210
215
220
223
224
225
222
218
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Lead 57.000 a 10.400
LF7SB08
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU FILL
Lead 110.000 a 15.000 a
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Lead 14.000 a 4.320
LF7SB19
DEPTH 1.5′ 4.0′
LITHOLOGY BE/DU BE/DU
Lead-XRF <25 <25
LF7SB16
DEPTH 2.0′ 4.0′
LITHOLOGY BE/DU BE/DU
Lead-XRF <25 <25
LF7GW09
DEPTH 1.1′ 2.6′ 4.4′
LITHOLOGY BE/DU BE/DU BE/DU
Lead 3.860 1.770 510.000 a
LF7SB18
DEPTH 2.0′ 4.0′
LITHOLOGY BE/DU BE/DU
Lead-XRF <25 120
LF7SB17
DEPTH 2.0′ 4.0′
LITHOLOGY BE/DU BE/DU
Lead NA 0.7
Lead-XRF <25 <25
LF7SB24
DEPTH 2.0′ 4.0′
LITHOLOGY BE/DU BE/DU
Lead NA 5.49
Lead-XRF 38.8 <25
LF7SB04
DEPTH 1.0′ 3.0′
LITHOLOGY FILL BE/DU
Lead 14.000 2.320
LF7SB21
DEPTH 2.0′ 4.0′
LITHOLOGY BE/DU BE/DU
Lead-XRF <25 <25
LF7GW08
DEPTH 0.5′ 3.5′
LITHOLOGY BE/DU BE/DU
Lead 100.000 a 5.850
LF7SB09
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU BE/DU
Lead 19.000 a 6.680
LF7SB22
DEPTH 2.0′ 4.0′
LITHOLOGY FILL BE/DU
Lead-XRF 217 <25
CFLSSB04
DEPTH 0.5′
LITHOLOGY COLMA
Lead 40.8
LF7SB03
CFLSSB03
1185
1184
1167
1163
1162
1063
1058
1050
1049
1006
1007
1008
1009
1002
1001
1000
1012
1105
548
545
544
555

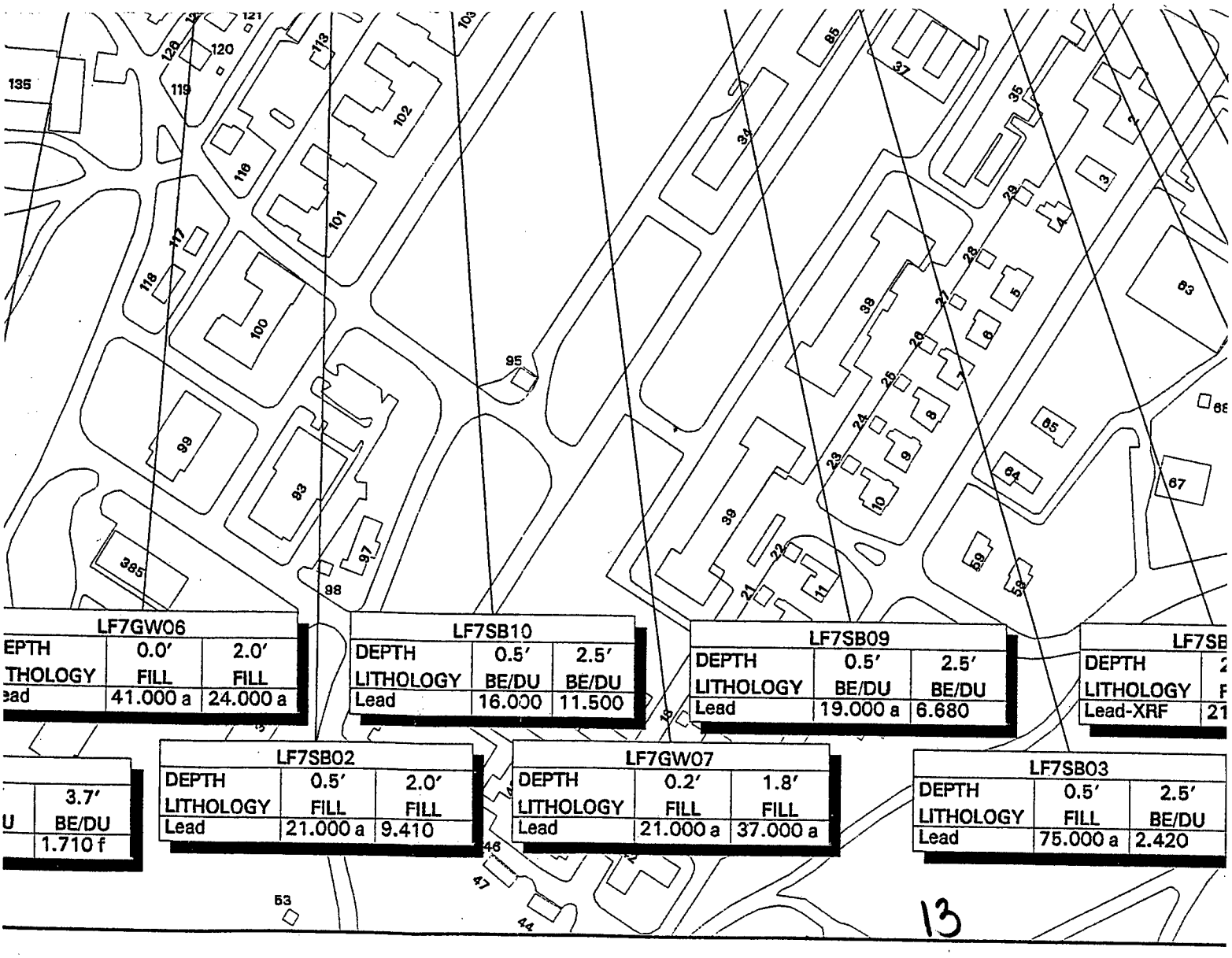


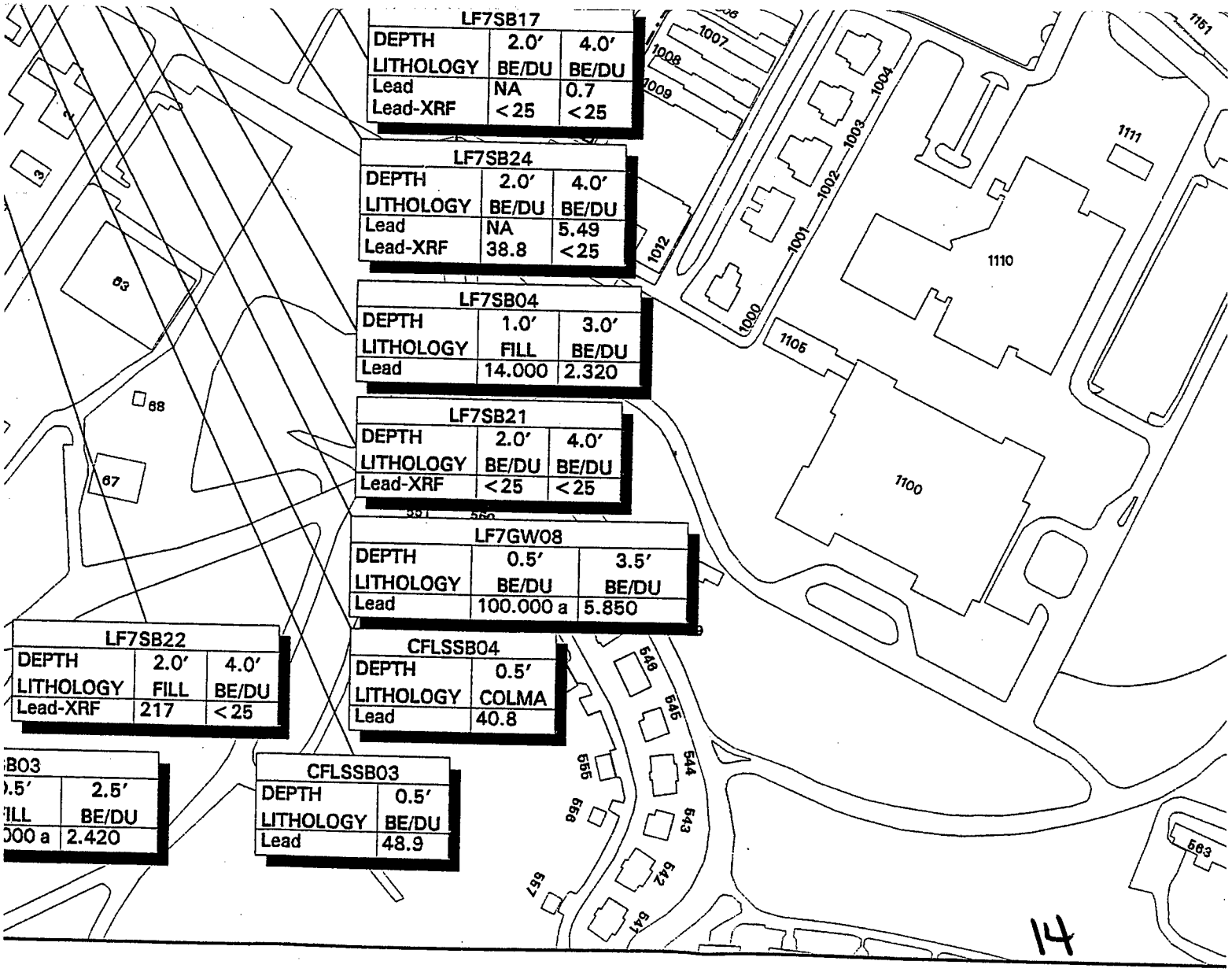
DAMES & MOORE

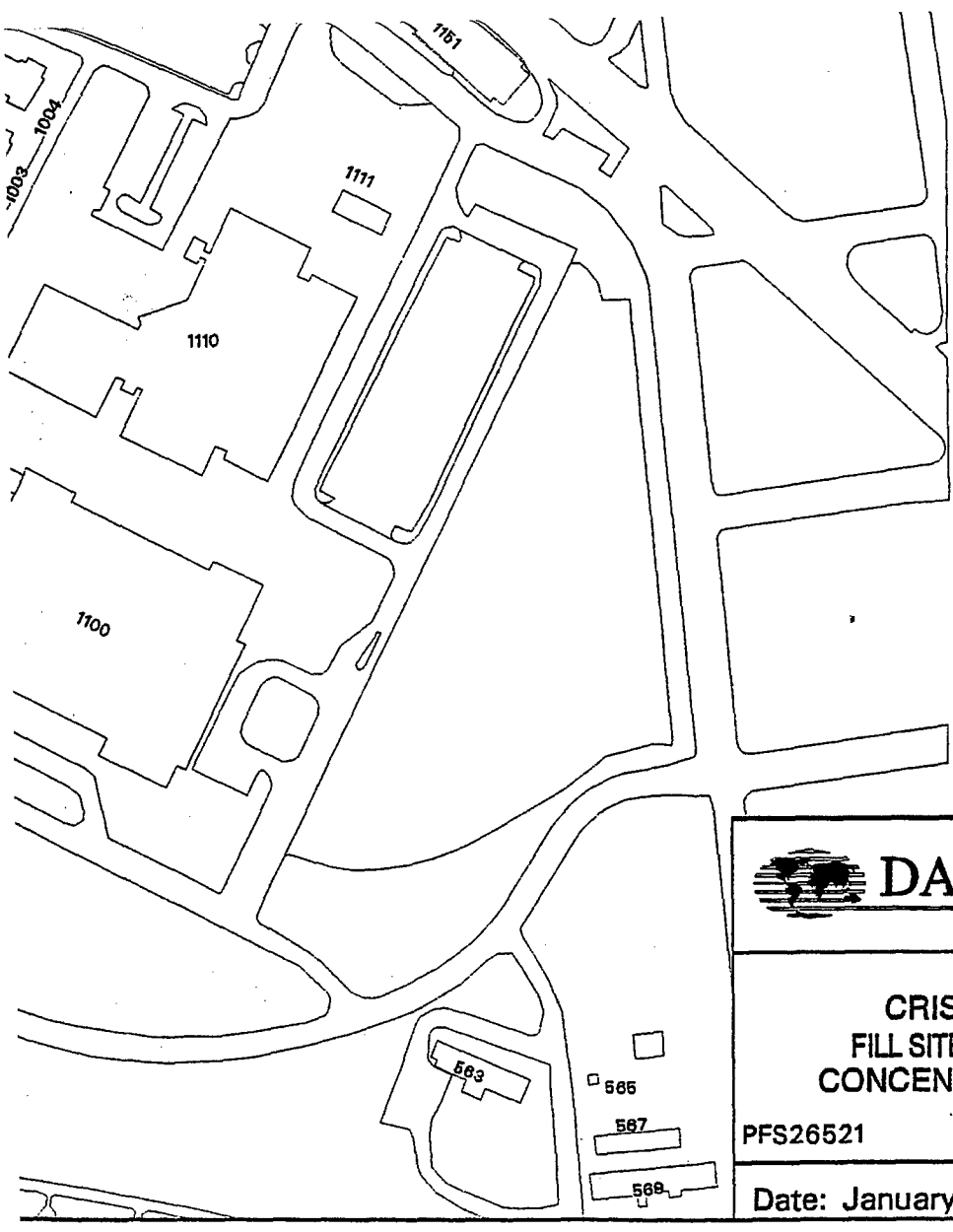
CRISSY FIELD STUDY AREA

1260
683
682
681
680
1320
1322
1324
1326
1315
1317
1319
1321
1323
1325
1314
1310
1313
1311
1309
1308
1304
1307
1302
1300
1305
1303
1301
WRIGHT
LOOP
23 Dec 96 12:15:29 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_S_12.grn, PSP
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE


LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Lead <7.440
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Lead <7.440
679
LF7TP01
DEPTH 6.0'
LITHOLOGY BE/DU
Lead <7.440
LF7SS01
DEPTH 0.3'
LITHOLOGY BE/DU
Lead 148.896
LF7TP04
DEPTH 7.0'
LITHOLOGY BE/DU
Lead 12.770
LF7TP05
DEPTH 7.0'
LITHOLOGY BE/DU
Lead <7.440
LF7SO03
DEPTH 3.2'
LITHOLOGY BE/DU
Lead <7.440
LF7SB01
DEPTH 0.7' 2.2' 3.7'
LITHOLOGY FILL BE/DU BE/DU
Lead 29.000 a 3.020 1.710 f
135
130
376
12


LF7GW06
EPTH 0.0′ 2.0′
THOLOGY FILL FILL
ead 41.000 a 24.000 a
3.7′
U BE/DU
1.710 f
LF7SB10
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU BE/DU
Lead 16.000 11.500
LF7SB09
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU BE/DU
Lead 19.000 a 6.680
LF7SB
DEPTH
LITHOLOGY
Lead-XRF
LF7SB02
DEPTH 0.5′ 2.0′
LITHOLOGY FILL FILL
Lead 21.000 a 9.410
LF7GW07
DEPTH 0.2′ 1.8′
LITHOLOGY FILL FILL
Lead 21.000 a 37.000 a
LF7SB03
DEPTH 0.5′ 2.5′
LITHOLOGY FILL BE/DU
Lead 75.000 a 2.420


LF7SB17
DEPTH 2.0′ 4.0′
LITHOLOGY BE/DU BE/DU
Lead NA 0.7
Lead-XRF <25 <25
LF7SB24
DEPTH 2.0′ 4.0′
LITHOLOGY BE/DU BE/DU
Lead NA 5.49
Lead-XRF 38.8 <25
LF7SB04
DEPTH 1.0′ 3.0′
LITHOLOGY FILL BE/DU
Lead 14.000 2.320
LF7SB21
DEPTH 2.0′ 4.0′
LITHOLOGY BE/DU BE/DU
Lead-XRF <25 <25
LF7GW08
DEPTH 0.5′ 3.5′
LITHOLOGY BE/DU BE/DU
Lead 100.000 a 5.850
LF7SB22
DEPTH 2.0′ 4.0′
LITHOLOGY FILL BE/DU
Lead-XRF 217 <25
CFLSSB04
DEPTH 0.5′
LITHOLOGY COLMA
Lead 40.8
B03
.5′ 2.5′
ILL BE/DU
000 a 2.420
CFLSSB03
DEPTH 0.5′
LITHOLOGY BE/DU
Lead 48.9
1007
1008
1009
1004
1003
1002
1001
1000
1012
1111
1110
1106
1100
1161
63
68
67
548
545
544
543
642
641
657
666
555
683

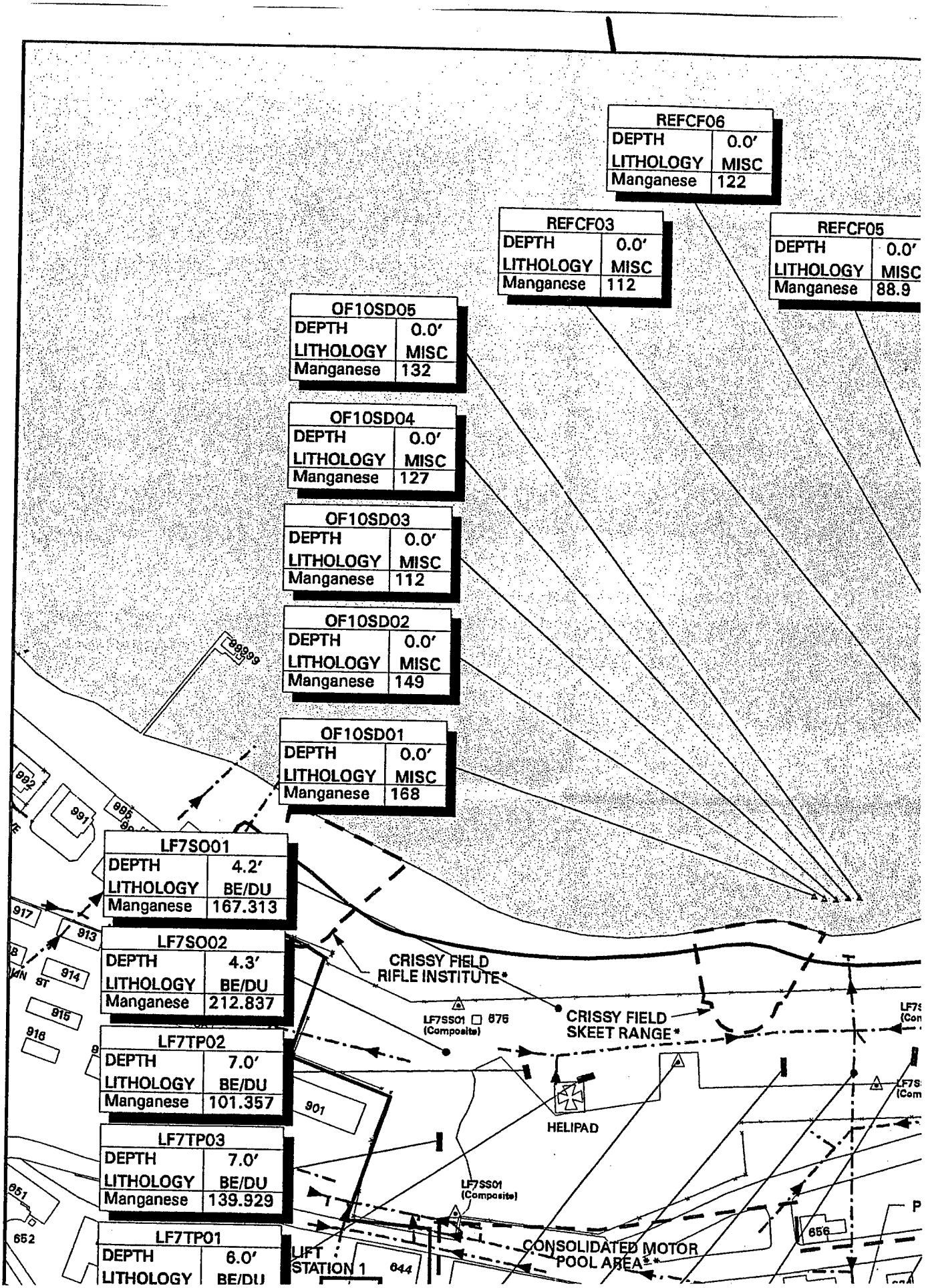


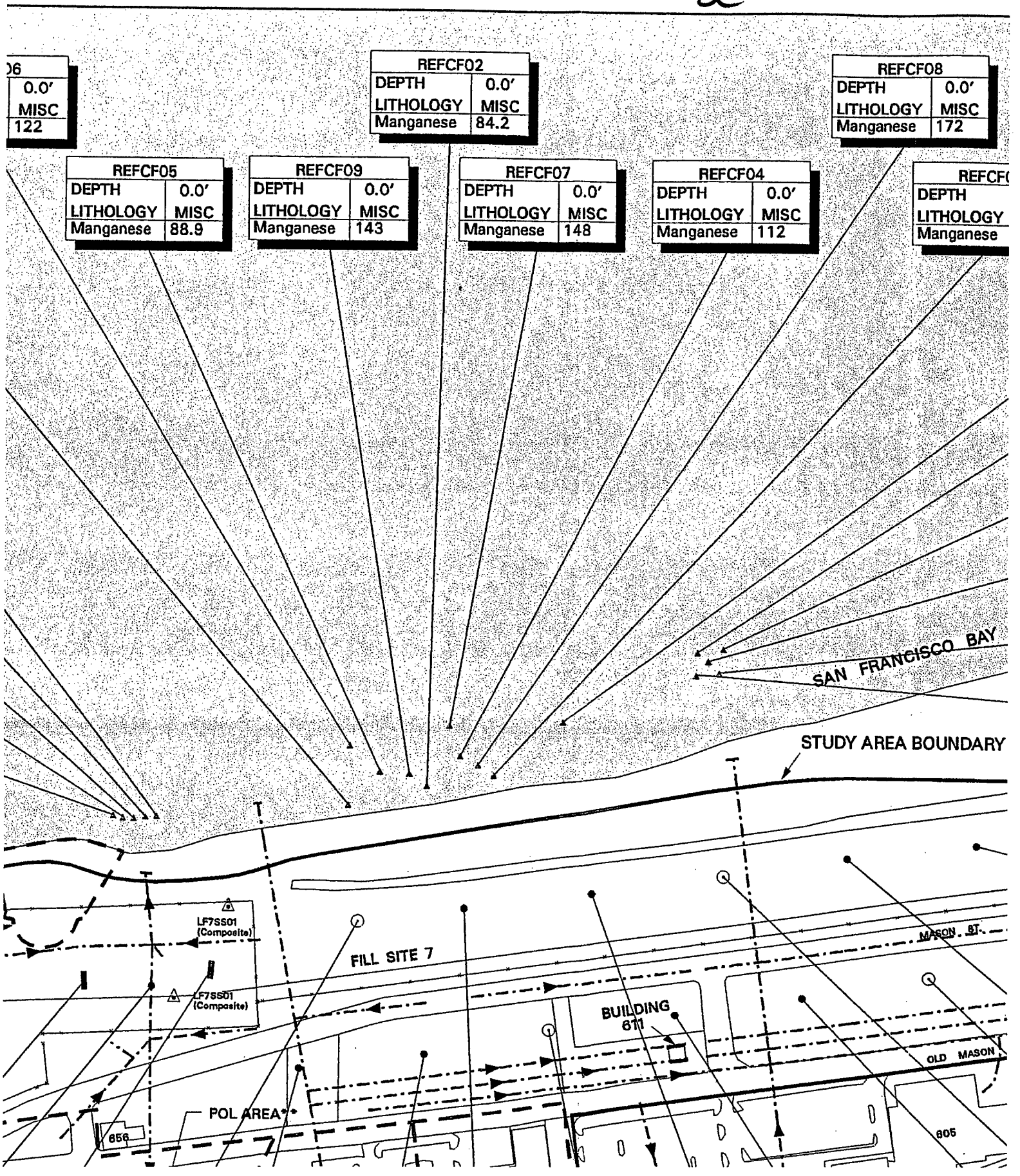
DAMES & MOORE

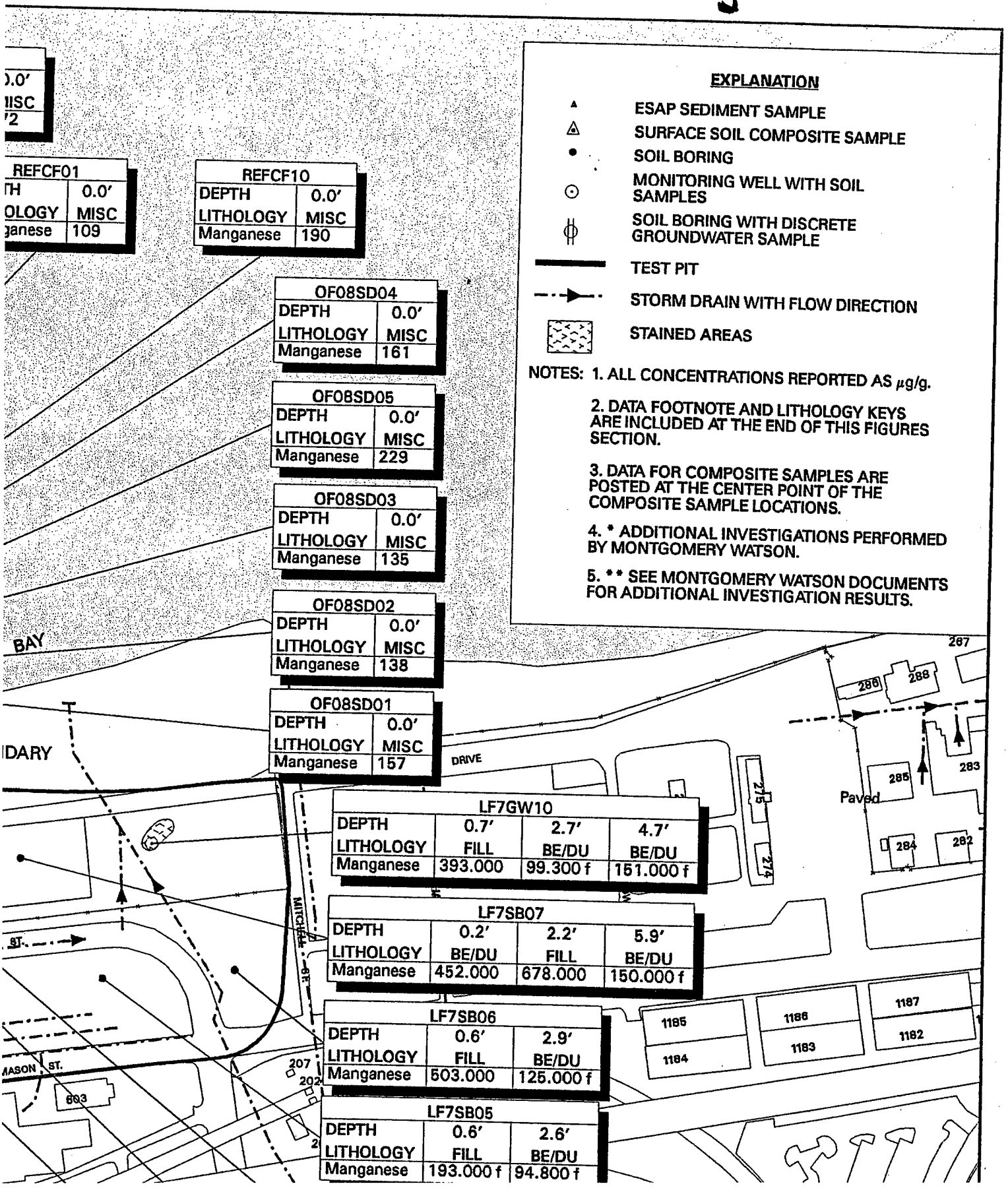
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF LEAD IN SOIL

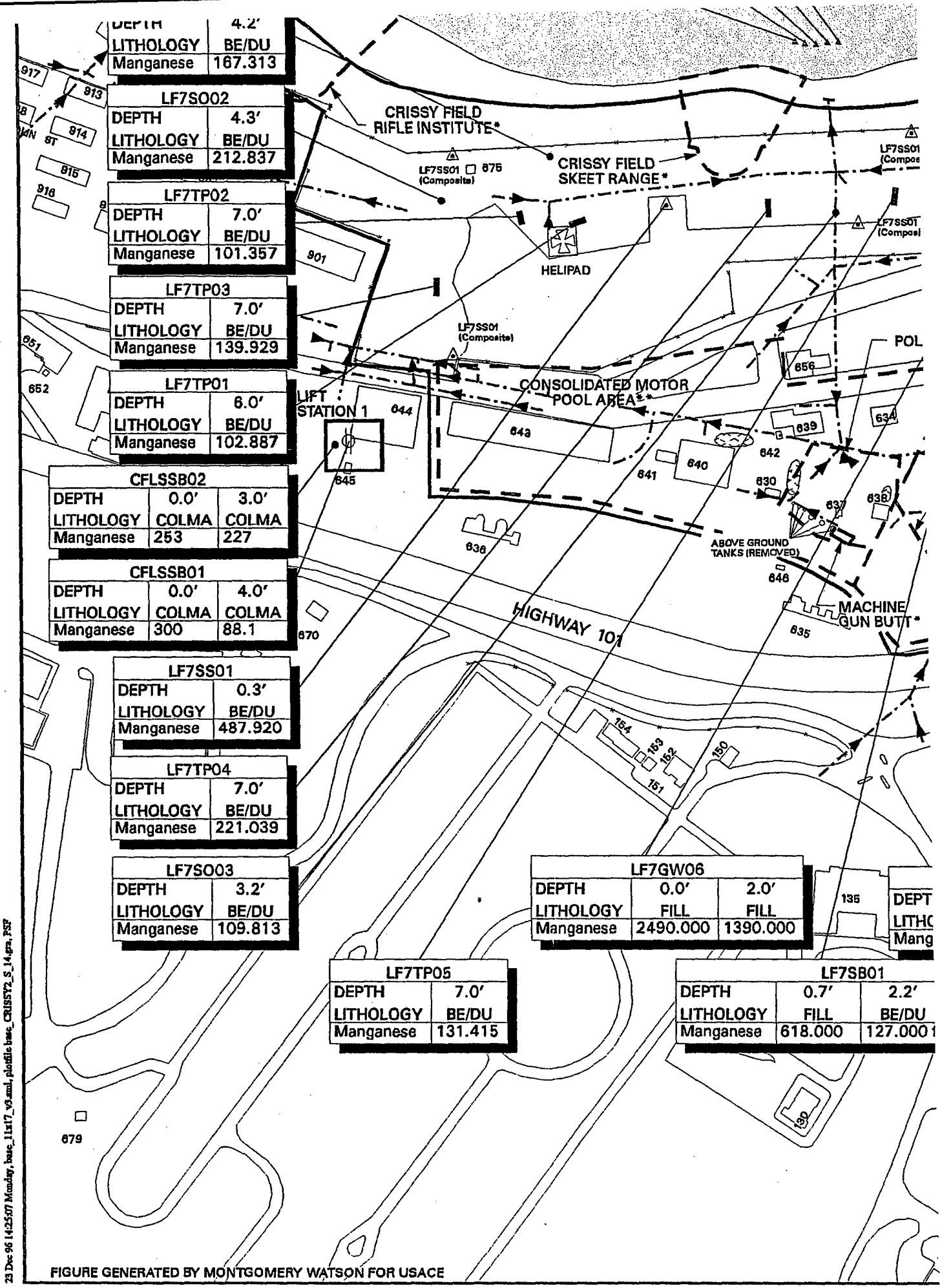
PFS26521

Date: January 1997 | Figure 5.5-25


REFCF06
DEPTH 0.0′
LITHOLOGY MISC
Manganese 122
REFCF03
DEPTH 0.0′
LITHOLOGY MISC
Manganese 112
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Manganese 88.9
OF10SD05
DEPTH 0.0′
LITHOLOGY MISC
Manganese 132
OF10SD04
DEPTH 0.0′
LITHOLOGY MISC
Manganese 127
OF10SD03
DEPTH 0.0′
LITHOLOGY MISC
Manganese 112
OF10SD02
DEPTH 0.0′
LITHOLOGY MISC
Manganese 149
OF10SD01
DEPTH 0.0′
LITHOLOGY MISC
Manganese 168
LF7SO01
DEPTH 4.2′
LITHOLOGY BE/DU
Manganese 167.313
LF7SO02
DEPTH 4.3′
LITHOLOGY BE/DU
Manganese 212.837
LF7TP02
DEPTH 7.0′
LITHOLOGY BE/DU
Manganese 101.357
LF7TP03
DEPTH 7.0′
LITHOLOGY BE/DU
Manganese 139.929
LF7TP01
DEPTH 6.0′
LITHOLOGY BE/DU
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
992
991
917
913
914
915
916
901
651
652
644
656

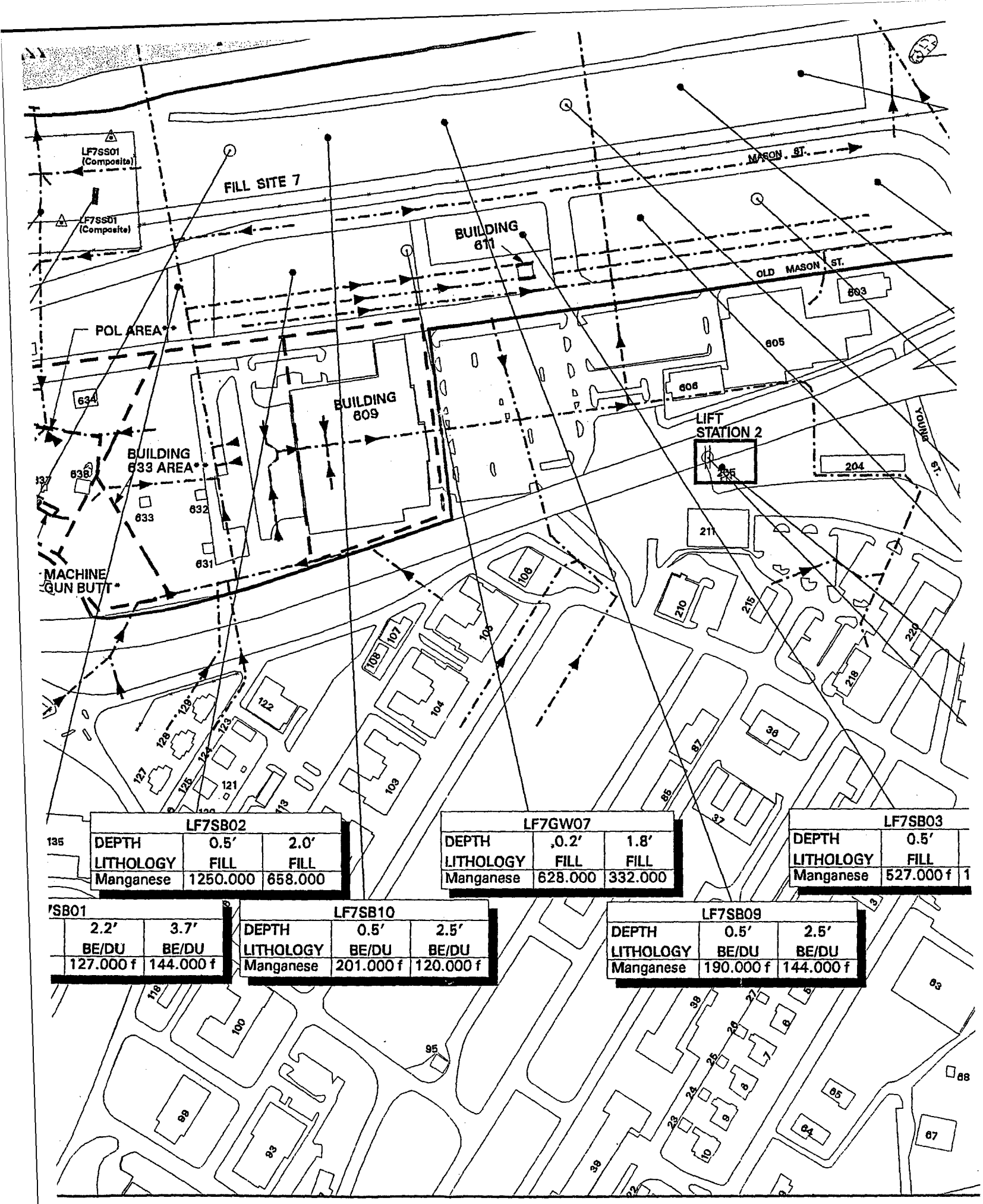

06
0.0′
MISC
122
REFCF02
DEPTH 0.0′
LITHOLOGY MISC
Manganese 84.2
REFCF08
DEPTH 0.0′
LITHOLOGY MISC
Manganese 172
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Manganese 88.9
REFCF09
DEPTH 0.0′
LITHOLOGY MISC
Manganese 143
REFCF07
DEPTH 0.0′
LITHOLOGY MISC
Manganese 148
REFCF04
DEPTH 0.0′
LITHOLOGY MISC
Manganese 112
REFCF
DEPTH
LITHOLOGY
Manganese
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON
POL AREA
656
605


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
REFCF01
DEPTH 0.0′
LITHOLOGY MISC
Manganese 109
REFCF10
DEPTH 0.0′
LITHOLOGY MISC
Manganese 190
OF08SD04
DEPTH 0.0′
LITHOLOGY MISC
Manganese 161
OF08SD05
DEPTH 0.0′
LITHOLOGY MISC
Manganese 229
OF08SD03
DEPTH 0.0′
LITHOLOGY MISC
Manganese 135
OF08SD02
DEPTH 0.0′
LITHOLOGY MISC
Manganese 138
OF08SD01
DEPTH 0.0′
LITHOLOGY MISC
Manganese 157
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Manganese 393.000 99.300 f 151.000 f
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Manganese 452.000 678.000 150.000 f
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Manganese 503.000 125.000 f
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Manganese 193.000 f 94.800 f
BAY
DRIVE
Paved
MITCHELL ST.
MASON ST.
267
286
288
283
285
284
282
275
274
1185
1186
1187
1184
1183
1182
207
202
603



23 Dec 96 14:25:07 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_S_14.grs, PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



LF7SB02		
DEPTH	0.5′	2.0′
LITHOLOGY	FILL	FILL
Manganese	1250.000	658.000

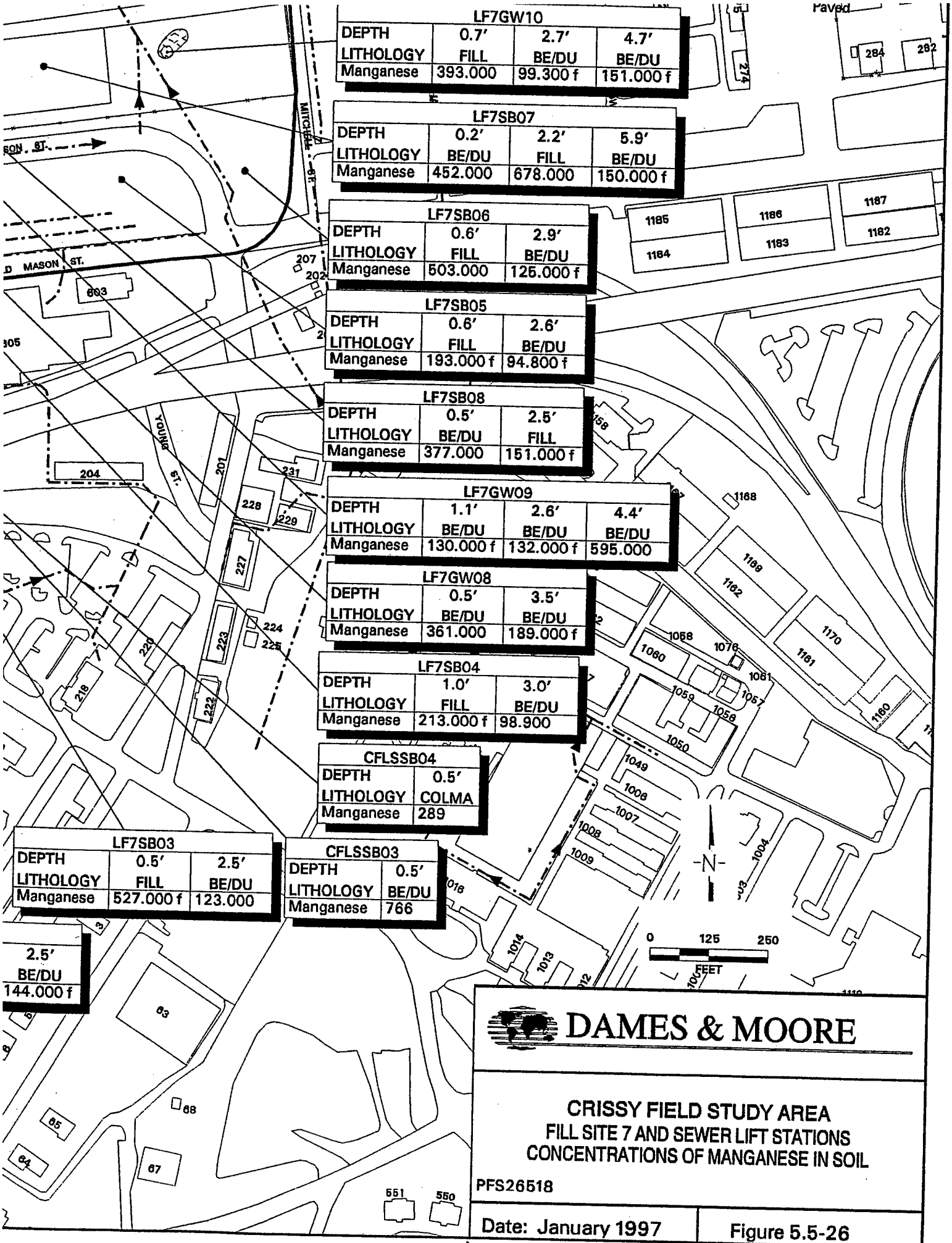
LF7GW07		
DEPTH	,0.2′	1.8′
LITHOLOGY	FILL	FILL
Manganese	628.000	332.000

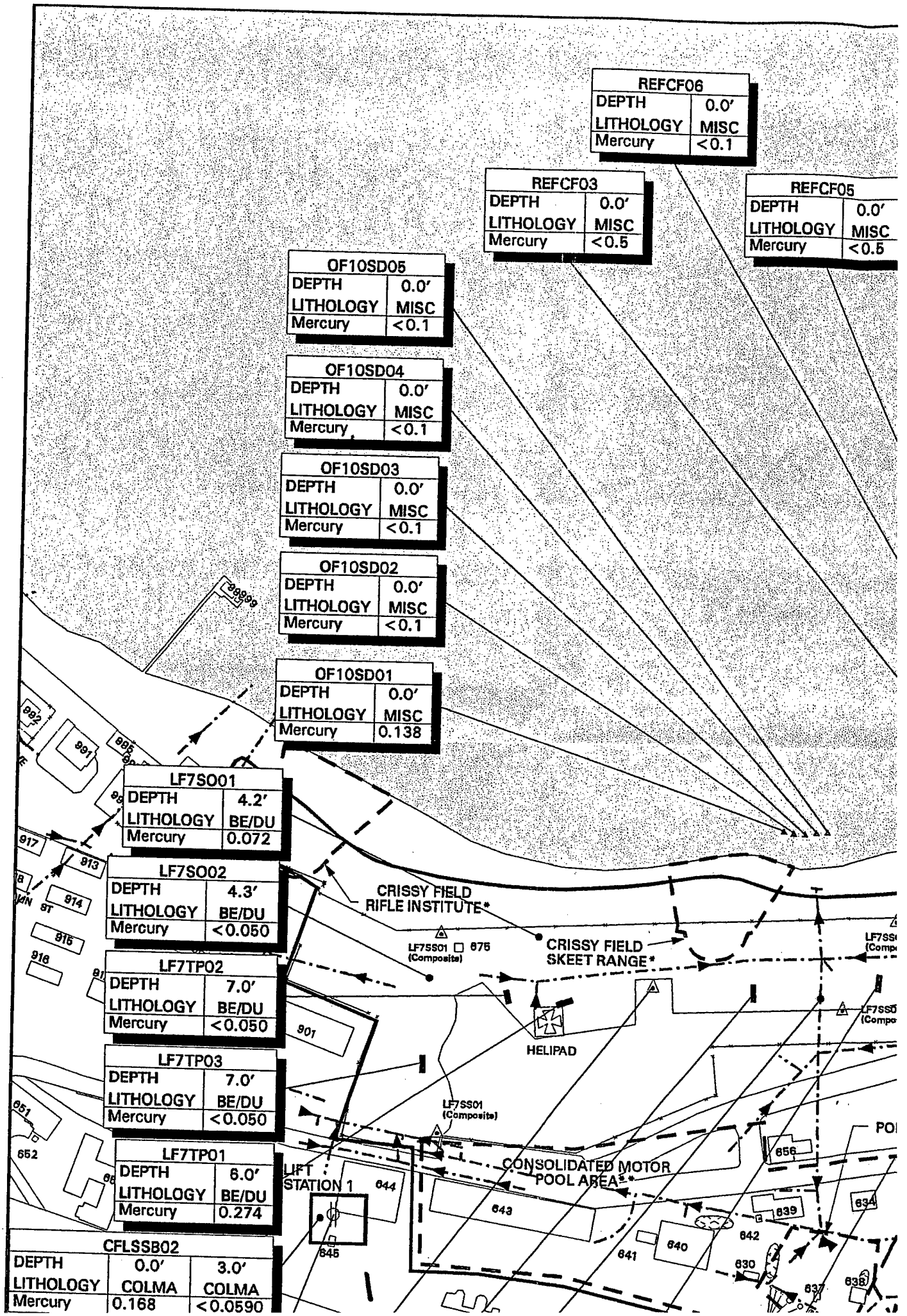
LF7SB03		
DEPTH	0.5′	
LITHOLOGY	FILL	
Manganese	527.000 f	1

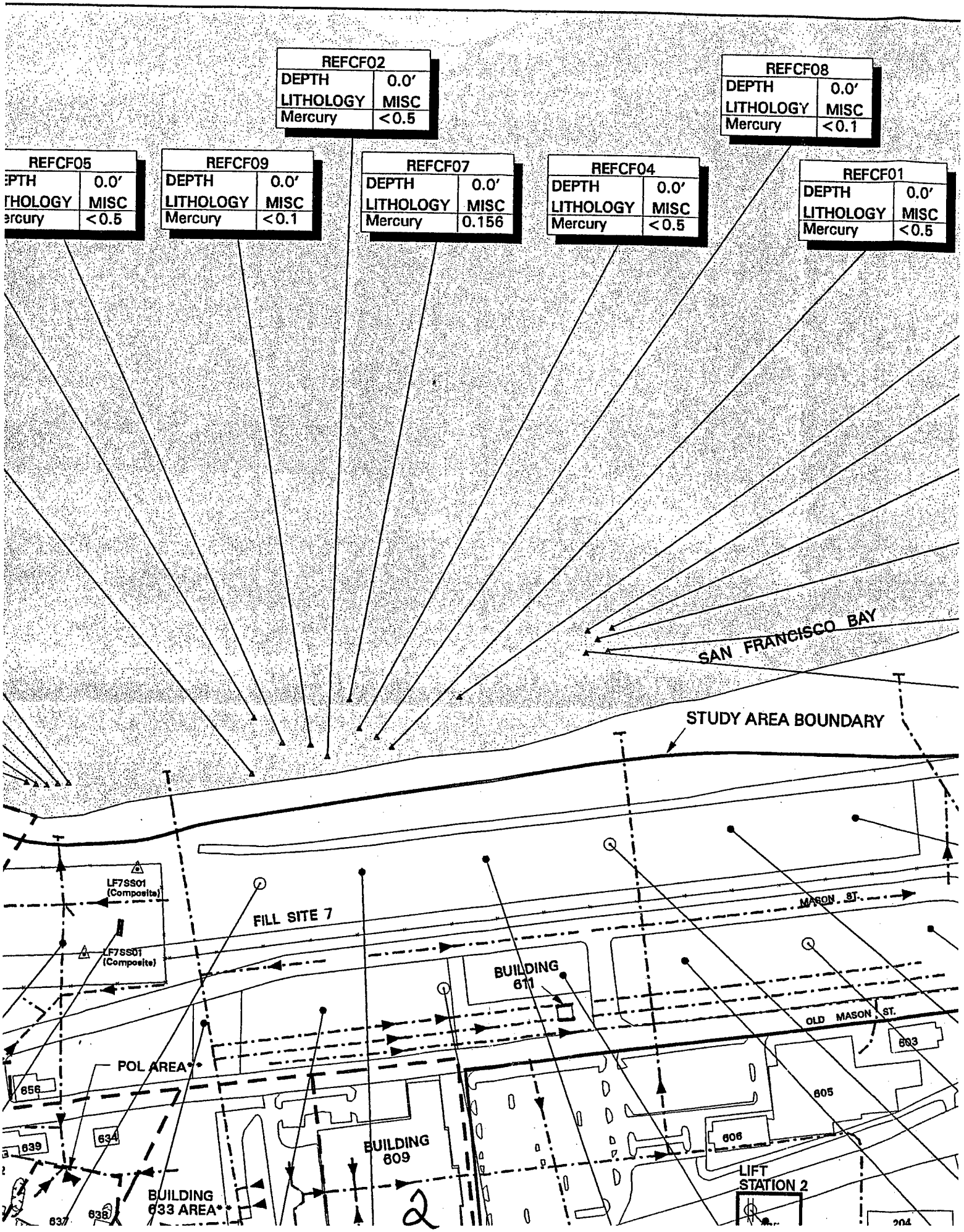
SB01		
	2.2′	3.7′
	BE/DU	BE/DU
	127.000 f	144.000 f

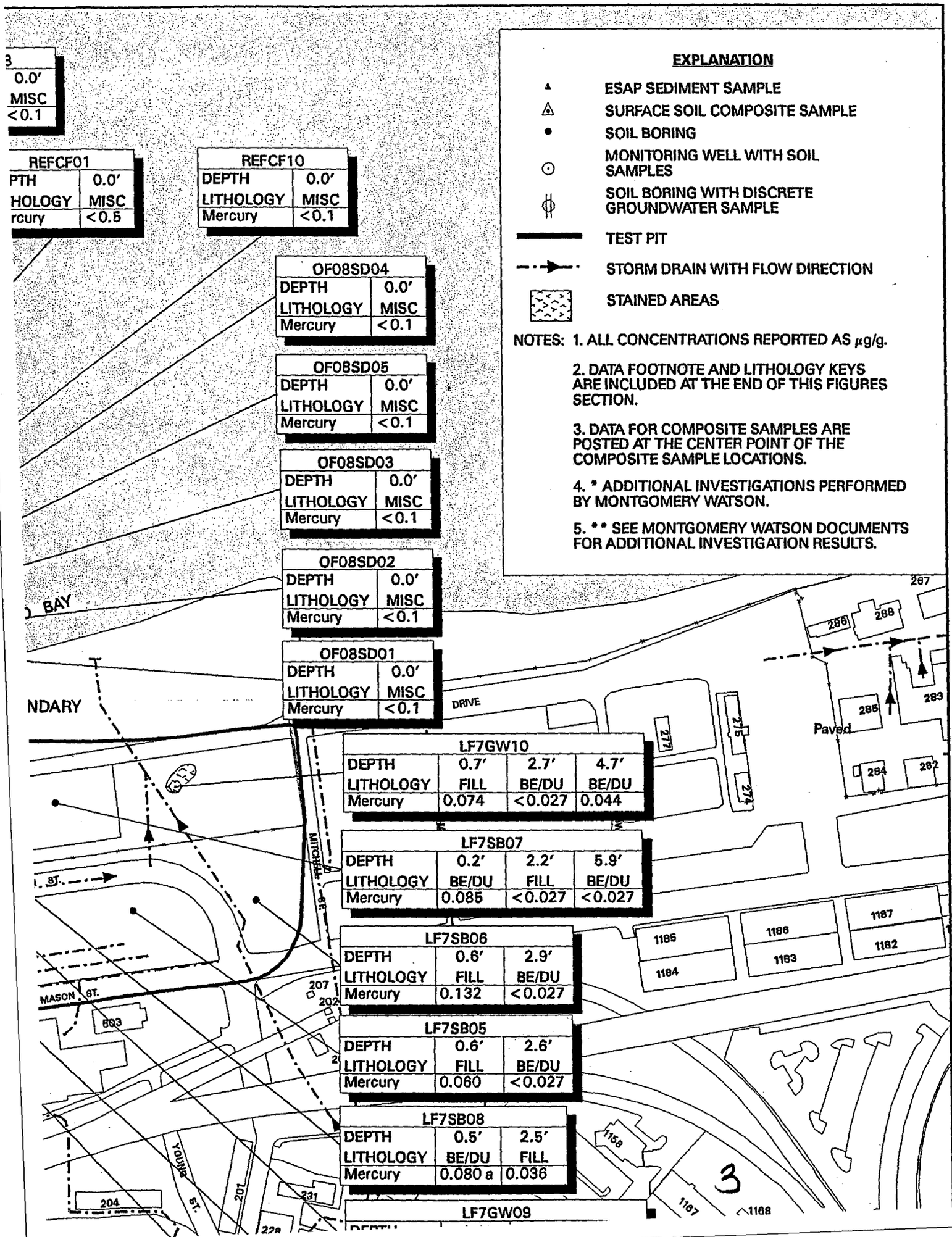
LF7SB10		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Manganese	201.000 f	120.000 f

LF7SB09		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Manganese	190.000 f	144.000 f


LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Manganese 393.000 99.300 f 151.000 f
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Manganese 452.000 678.000 150.000 f
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Manganese 503.000 125.000 f
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Manganese 193.000 f 94.800 f
LF7SB08
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU FILL
Manganese 377.000 151.000 f
LF7GW09
DEPTH 1.1′ 2.6′ 4.4′
LITHOLOGY BE/DU BE/DU BE/DU
Manganese 130.000 f 132.000 f 595.000
LF7GW08
DEPTH 0.5′ 3.5′
LITHOLOGY BE/DU BE/DU
Manganese 361.000 189.000 f
LF7SB04
DEPTH 1.0′ 3.0′
LITHOLOGY FILL BE/DU
Manganese 213.000 f 98.900
CFLSSB04
DEPTH 0.5′
LITHOLOGY COLMA
Manganese 289
LF7SB03
DEPTH 0.5′ 2.5′
LITHOLOGY FILL BE/DU
Manganese 527.000 f 123.000
CFLSSB03
DEPTH 0.5′
LITHOLOGY BE/DU
Manganese 766
2.5′
BE/DU
144.000 f
MITCHELL ST.
MASON ST.
YOUNG ST.
Paved
1185
1186
1187
1184
1183
1182
1188
1189
1162
1170
1161
1160
1058
1076
1060
1081
1059
1057
1056
1050
1049
1006
1007
1008
1009
1004
1014
1013
1012
1005
1110
284
282
274
207
202
603
305
204
201
231
228
229
227
224
225
223
222
220
218
158
N
0 125 250
FEET
DAMES & MOORE
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF MANGANESE IN SOIL
PFS26518
Date: January 1997
Figure 5.5-26


REFCF06
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
REFCF03
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.5
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.5
OF10SD05
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
OF10SD04
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
OF10SD03
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
OF10SD02
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
OF10SD01
DEPTH 0.0′
LITHOLOGY MISC
Mercury 0.138
LF7SO01
DEPTH 4.2′
LITHOLOGY BE/DU
Mercury 0.072
LF7SO02
DEPTH 4.3′
LITHOLOGY BE/DU
Mercury <0.050
LF7TP02
DEPTH 7.0′
LITHOLOGY BE/DU
Mercury <0.050
LF7TP03
DEPTH 7.0′
LITHOLOGY BE/DU
Mercury <0.050
LF7TP01
DEPTH 6.0′
LITHOLOGY BE/DU
Mercury 0.274
CFLSSB02
DEPTH 0.0′ 3.0′
LITHOLOGY COLMA COLMA
Mercury 0.168 <0.0590
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
CONSOLIDATED MOTOR POOL AREA*
LIFT STATION 1
644
645
643
641
640
642
639
634
656
630
637
638
901
914
915
916
917
913
991
992
651
652


REFCF02
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.5
REFCF08
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
REFCF05
ɛPTH 0.0′
ΓHOLOGY MISC
ɛrcury <0.5
REFCF09
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
REFCF07
DEPTH 0.0′
LITHOLOGY MISC
Mercury 0.156
REFCF04
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.5
REFCF01
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.5
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603
605
606
POL AREA
656
639
634
BUILDING 609
LIFT STATION 2
BUILDING 633 AREA
637
638
204
2


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
3
0.0′
MISC
<0.1
REFCF01
PTH 0.0′
HOLOGY MISC
rcury <0.5
REFCF10
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
OF08SD04
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
OF08SD05
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
OF08SD03
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
OF08SD02
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
OF08SD01
DEPTH 0.0′
LITHOLOGY MISC
Mercury <0.1
BAY
NDARY
DRIVE
MITCHELL ST.
MASON ST.
YOUNG ST.
Paved
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Mercury 0.074 <0.027 0.044
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Mercury 0.085 <0.027 <0.027
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Mercury 0.132 <0.027
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Mercury 0.060 <0.027
LF7SB08
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU FILL
Mercury 0.080 a 0.036
LF7GW09
267
286
288
283
285
284
282
277
275
274
1185
1186
1187
1184
1183
1182
1158
1167
1168
207
202
204
201
231
603

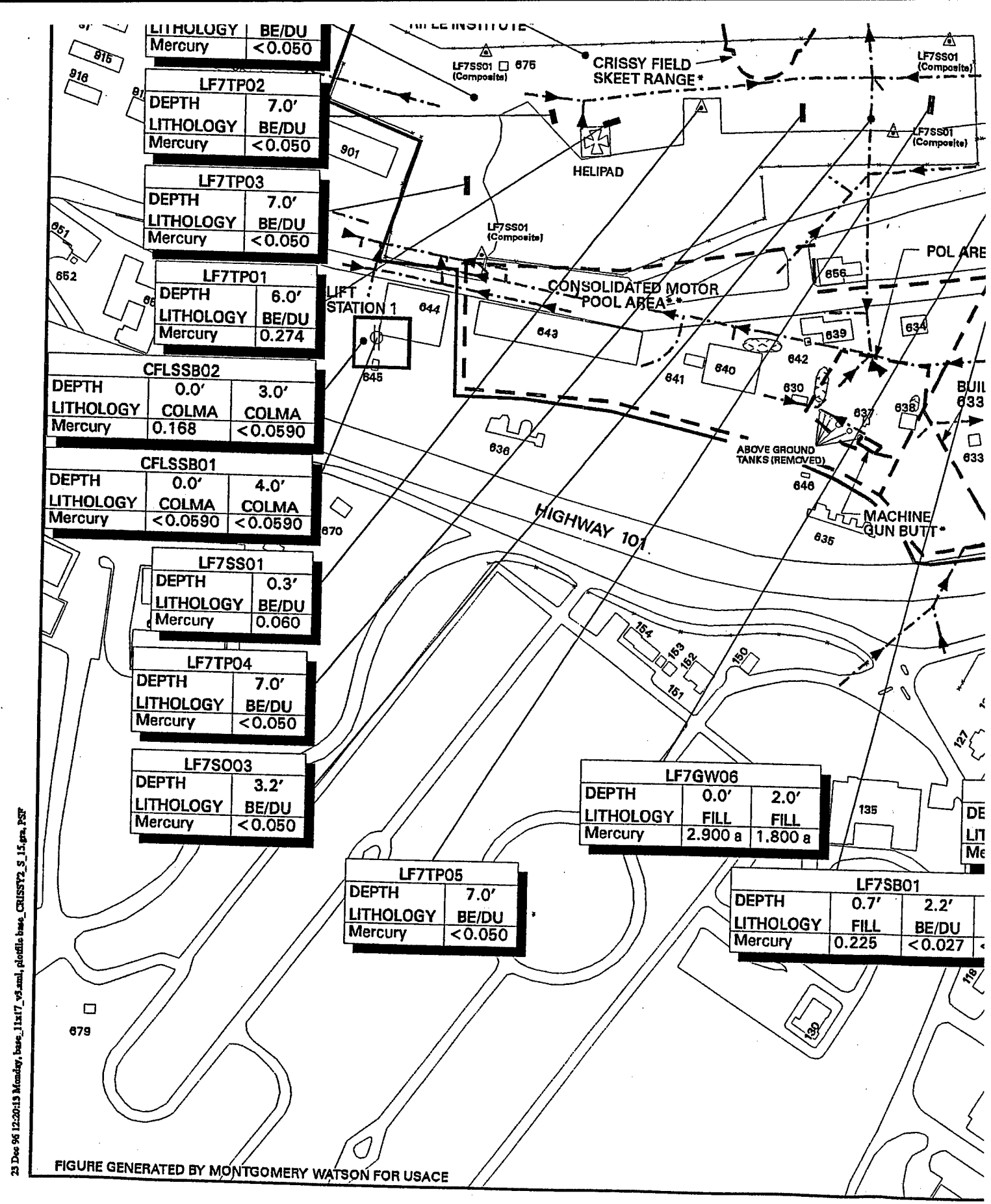
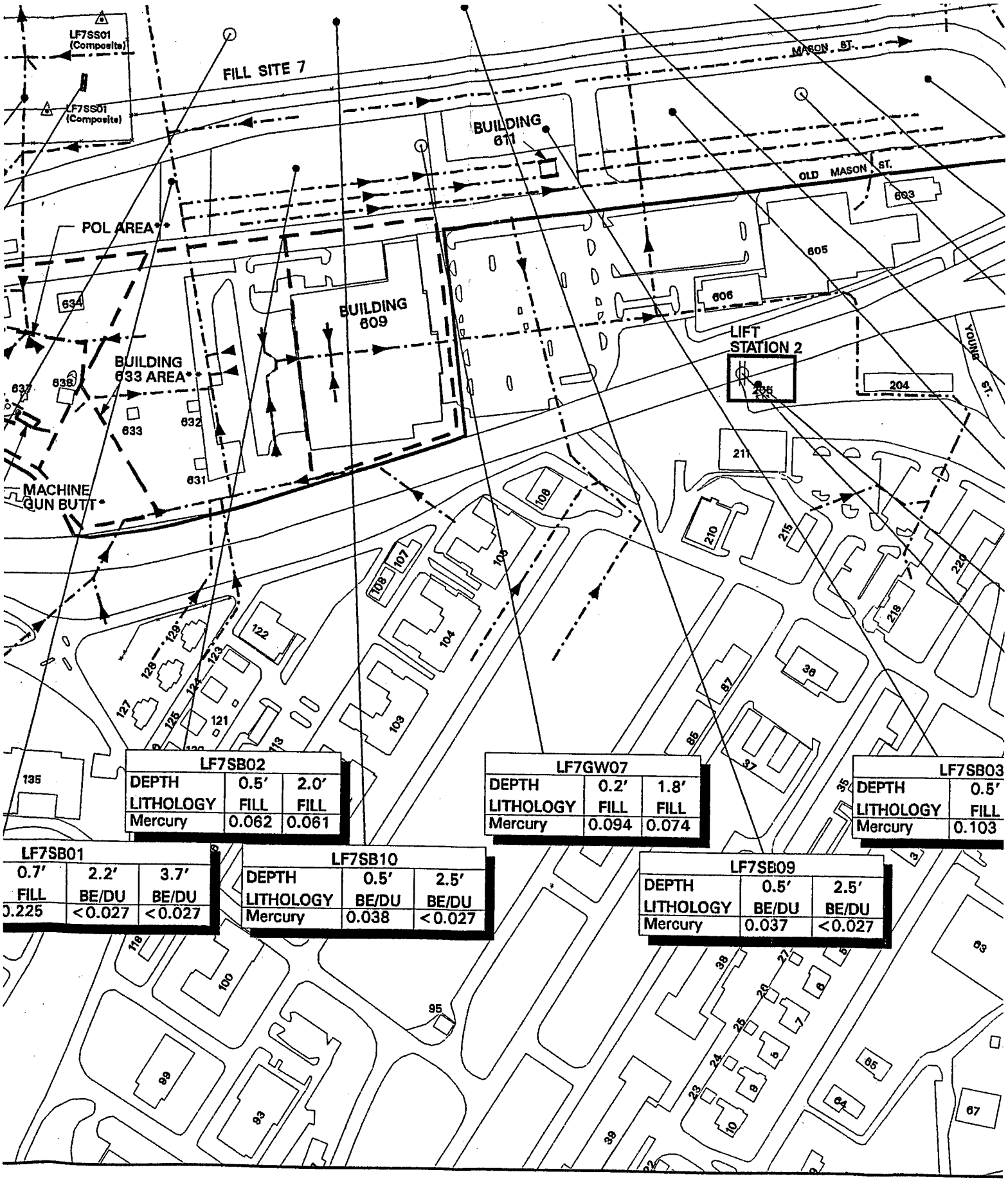


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



LF7SB02		
DEPTH	0.5′	2.0′
LITHOLOGY	FILL	FILL
Mercury	0.062	0.061

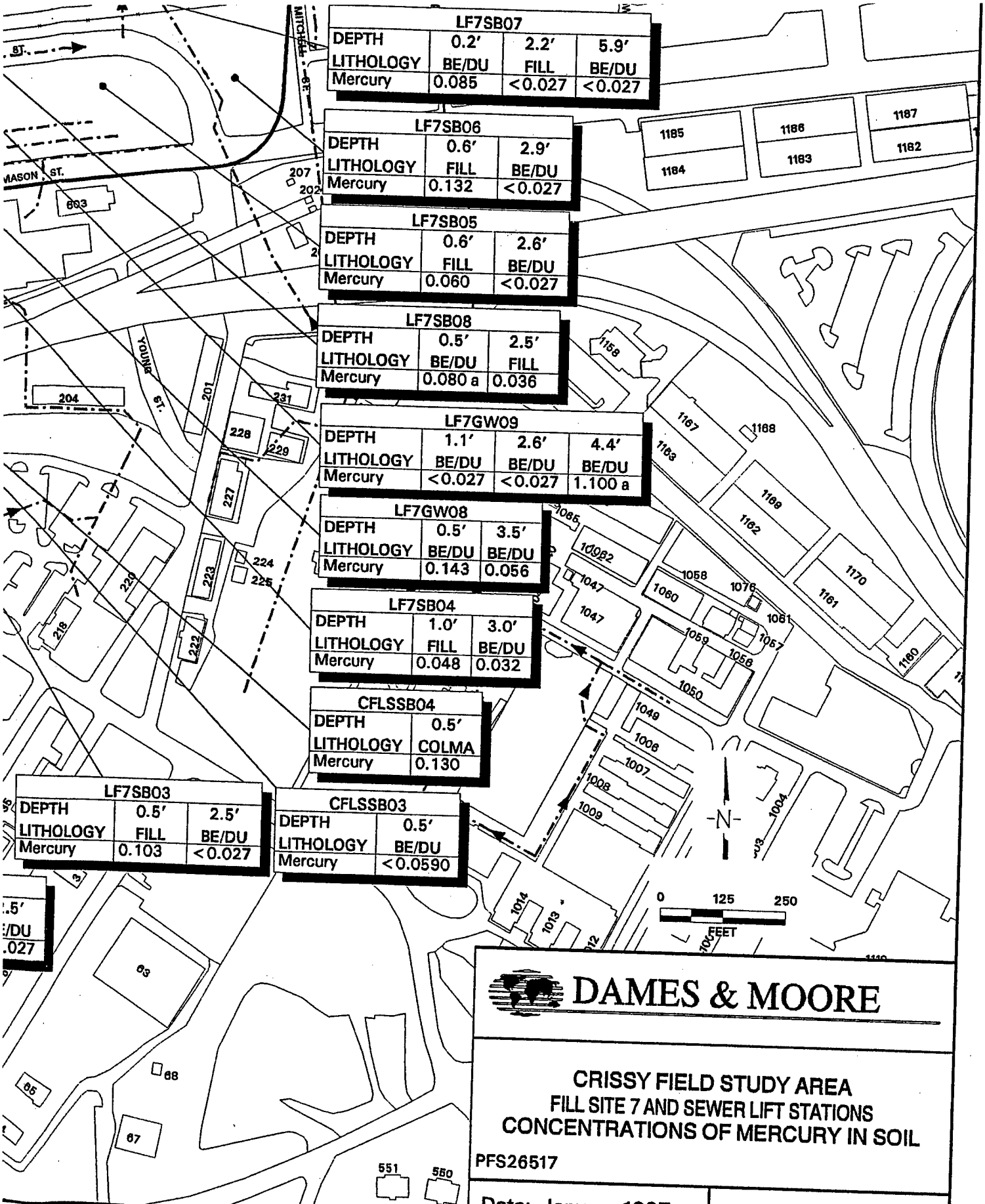
LF7GW07		
DEPTH	0.2′	1.8′
LITHOLOGY	FILL	FILL
Mercury	0.094	0.074

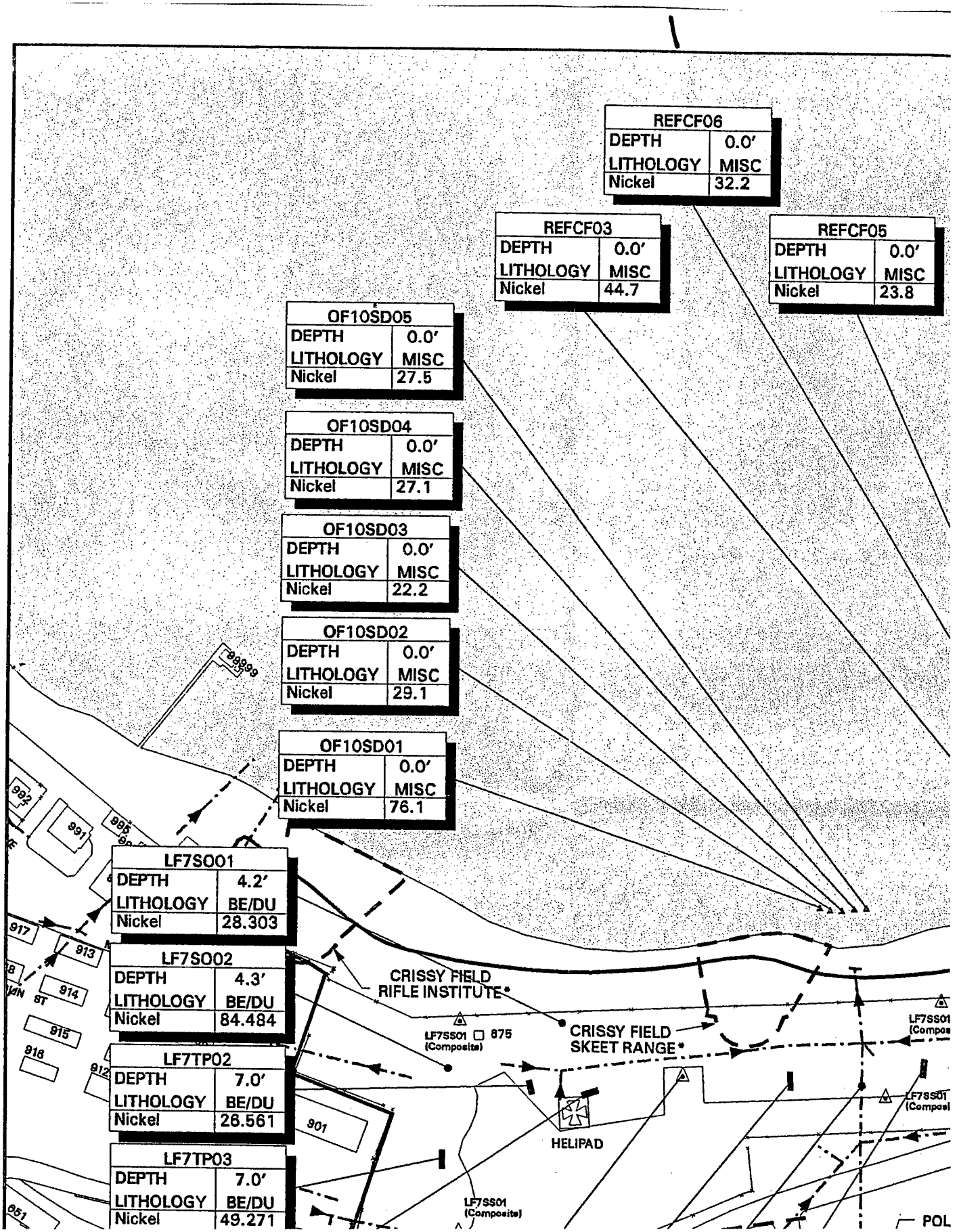
LF7SB03	
DEPTH	0.5′
LITHOLOGY	FILL
Mercury	0.103

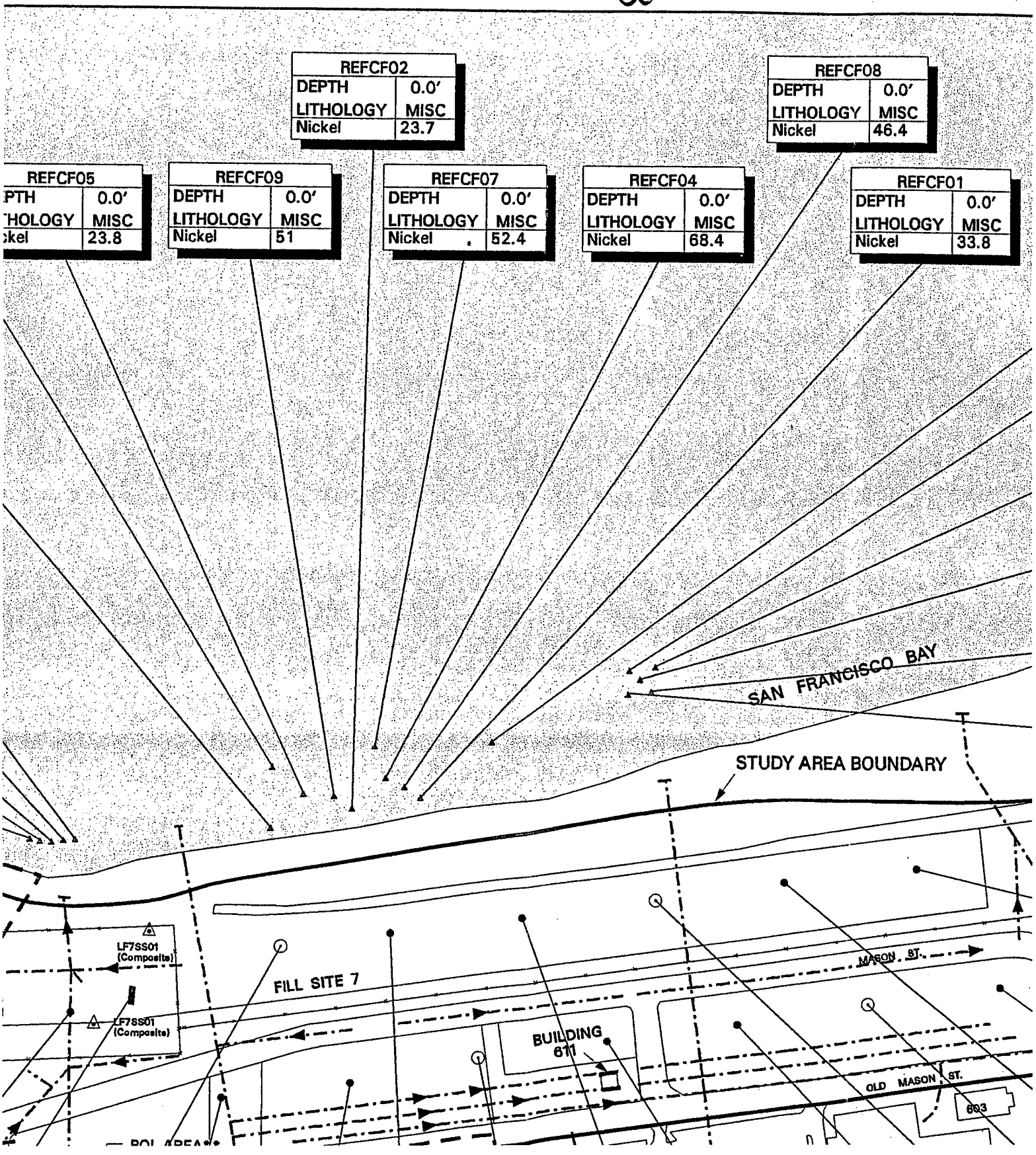
LF7SB01		
0.7′	2.2′	3.7′
FILL	BE/DU	BE/DU
0.225	<0.027	<0.027

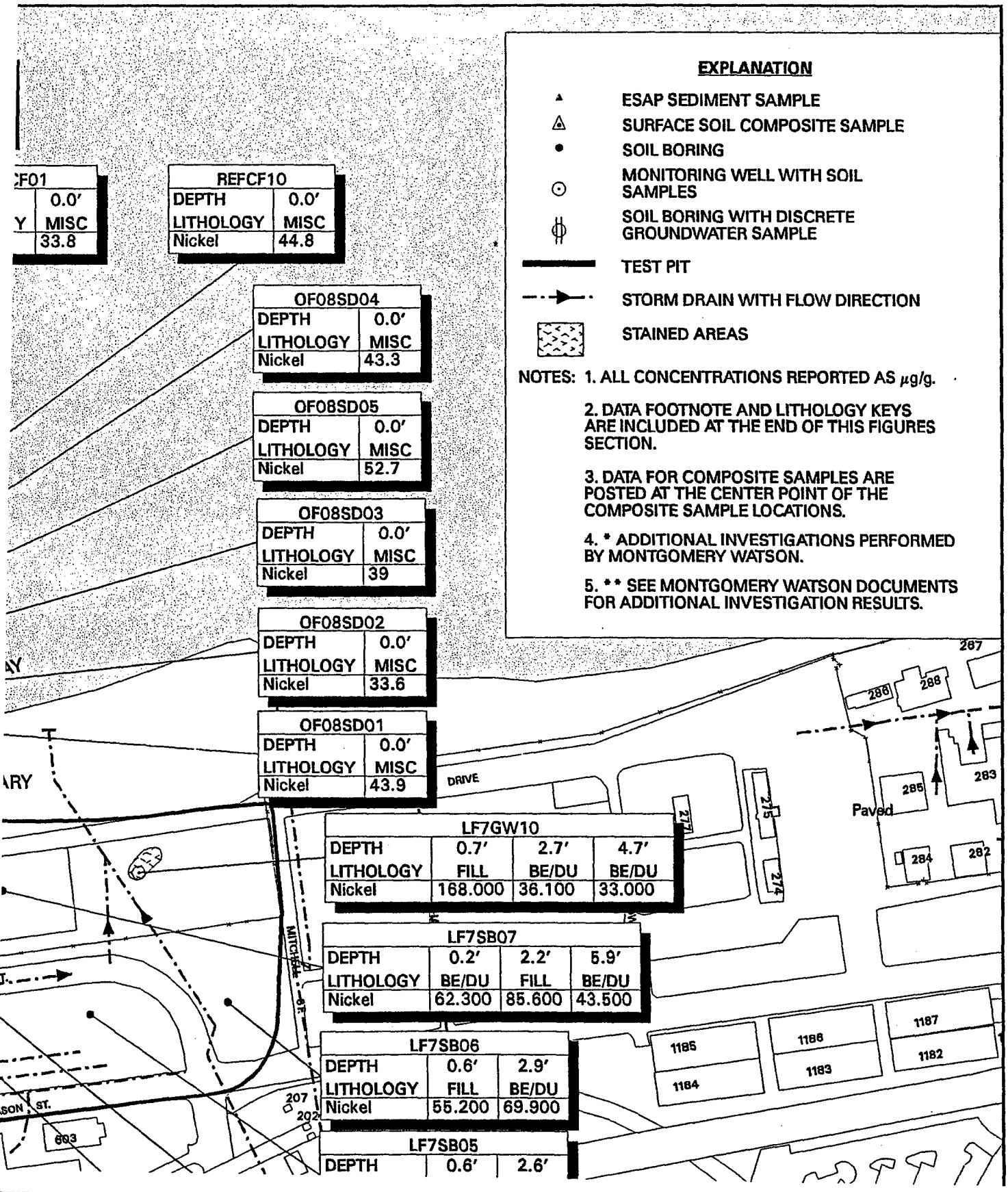
LF7SB10		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Mercury	0.038	<0.027

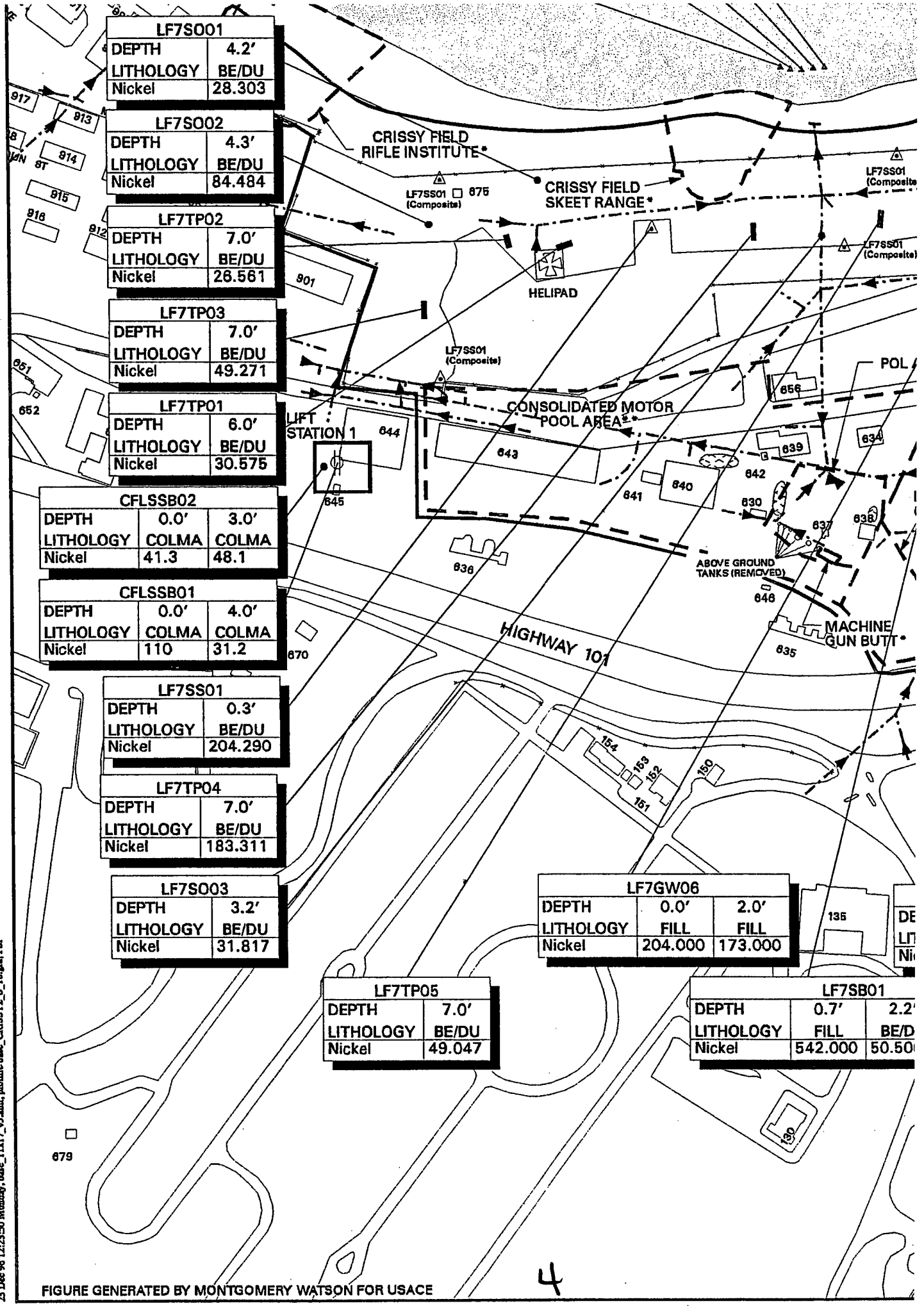
LF7SB09		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Mercury	0.037	<0.027


LF7SB07
DEPTH | 0.2′ | 2.2′ | 5.9′
LITHOLOGY | BE/DU | FILL | BE/DU
Mercury | 0.085 | <0.027 | <0.027
LF7SB06
DEPTH | 0.6′ | 2.9′
LITHOLOGY | FILL | BE/DU
Mercury | 0.132 | <0.027
LF7SB05
DEPTH | 0.6′ | 2.6′
LITHOLOGY | FILL | BE/DU
Mercury | 0.060 | <0.027
LF7SB08
DEPTH | 0.5′ | 2.5′
LITHOLOGY | BE/DU | FILL
Mercury | 0.080 a | 0.036
LF7GW09
DEPTH | 1.1′ | 2.6′ | 4.4′
LITHOLOGY | BE/DU | BE/DU | BE/DU
Mercury | <0.027 | <0.027 | 1.100 a
LF7GW08
DEPTH | 0.5′ | 3.5′
LITHOLOGY | BE/DU | BE/DU
Mercury | 0.143 | 0.056
LF7SB04
DEPTH | 1.0′ | 3.0′
LITHOLOGY | FILL | BE/DU
Mercury | 0.048 | 0.032
CFLSSB04
DEPTH | 0.5′
LITHOLOGY | COLMA
Mercury | 0.130
LF7SB03
DEPTH | 0.5′ | 2.5′
LITHOLOGY | FILL | BE/DU
Mercury | 0.103 | <0.027
CFLSSB03
DEPTH | 0.5′
LITHOLOGY | BE/DU
Mercury | <0.0590
MASON ST.
MITCHELL
YOUNG ST.
0 125 250
FEET
DAMES & MOORE
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF MERCURY IN SOIL
PFS26517
Date: January 1997
Figure 5.5-27


REFCF06
DEPTH 0.0'
LITHOLOGY MISC
Nickel 32.2
REFCF03
DEPTH 0.0'
LITHOLOGY MISC
Nickel 44.7
REFCF05
DEPTH 0.0'
LITHOLOGY MISC
Nickel 23.8
OF10SD05
DEPTH 0.0'
LITHOLOGY MISC
Nickel 27.5
OF10SD04
DEPTH 0.0'
LITHOLOGY MISC
Nickel 27.1
OF10SD03
DEPTH 0.0'
LITHOLOGY MISC
Nickel 22.2
OF10SD02
DEPTH 0.0'
LITHOLOGY MISC
Nickel 29.1
OF10SD01
DEPTH 0.0'
LITHOLOGY MISC
Nickel 76.1
LF7SO01
DEPTH 4.2'
LITHOLOGY BE/DU
Nickel 28.303
LF7SO02
DEPTH 4.3'
LITHOLOGY BE/DU
Nickel 84.484
LF7TP02
DEPTH 7.0'
LITHOLOGY BE/DU
Nickel 26.561
LF7TP03
DEPTH 7.0'
LITHOLOGY BE/DU
Nickel 49.271
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
LF7SS01 (Composite)
LF7SS01 (Composite)
LF7SS01 (Composite)
992
991
985
917
913
914
915
916
912
901
651
99999

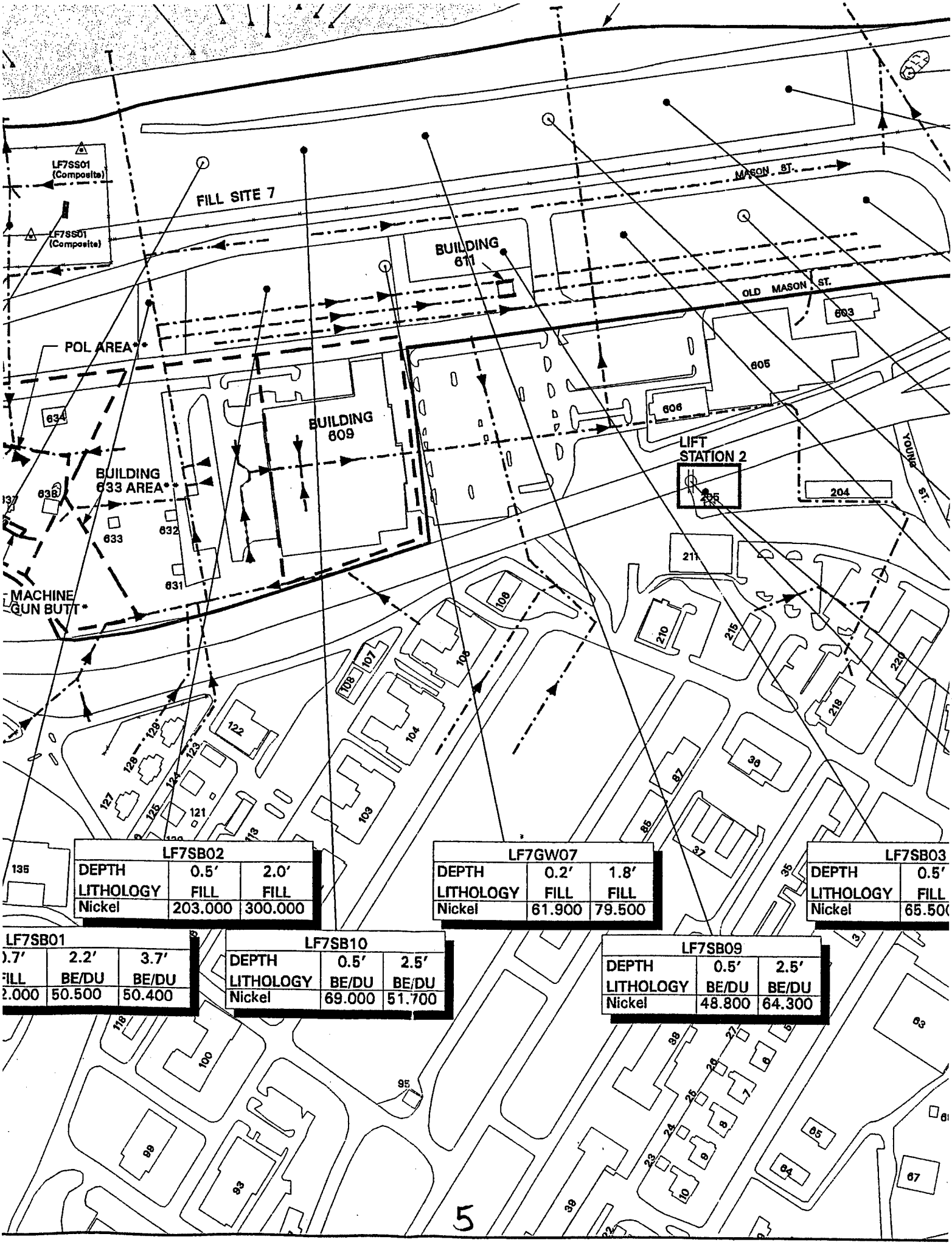

REFCF02
DEPTH 0.0'
LITHOLOGY MISC
Nickel 23.7
REFCF08
DEPTH 0.0'
LITHOLOGY MISC
Nickel 46.4
REFCF05
PTH 0.0'
HOLOGY MISC
kel 23.8
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Nickel 51
REFCF07
DEPTH 0.0'
LITHOLOGY MISC
Nickel 52.4
REFCF04
DEPTH 0.0'
LITHOLOGY MISC
Nickel 68.4
REFCF01
DEPTH 0.0'
LITHOLOGY MISC
Nickel 33.8
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
CF01 0.0′ Y MISC 33.8
REFCF10 DEPTH 0.0′ LITHOLOGY MISC Nickel 44.8
OF08SD04 DEPTH 0.0′ LITHOLOGY MISC Nickel 43.3
OF08SD05 DEPTH 0.0′ LITHOLOGY MISC Nickel 52.7
OF08SD03 DEPTH 0.0′ LITHOLOGY MISC Nickel 39
OF08SD02 DEPTH 0.0′ LITHOLOGY MISC Nickel 33.6
OF08SD01 DEPTH 0.0′ LITHOLOGY MISC Nickel 43.9
LF7GW10 DEPTH 0.7′ 2.7′ 4.7′ LITHOLOGY FILL BE/DU BE/DU Nickel 168.000 36.100 33.000
LF7SB07 DEPTH 0.2′ 2.2′ 5.9′ LITHOLOGY BE/DU FILL BE/DU Nickel 62.300 85.600 43.500
LF7SB06 DEPTH 0.6′ 2.9′ LITHOLOGY FILL BE/DU Nickel 55.200 69.900
LF7SB05 DEPTH 0.6′ 2.6′
DRIVE
MITCHELL ST.
Paved
267
286
288
283
285
284
282
277
275
274
1185
1186
1187
1184
1183
1182
207
202
603



23 Dec 96 12:23:50 Monday, base_11x17_v3.ami, plotfile base_CRISSY2_S_16.prn, PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



LF7SB02		
DEPTH	0.5′	2.0′
LITHOLOGY	FILL	FILL
Nickel	203.000	300.000

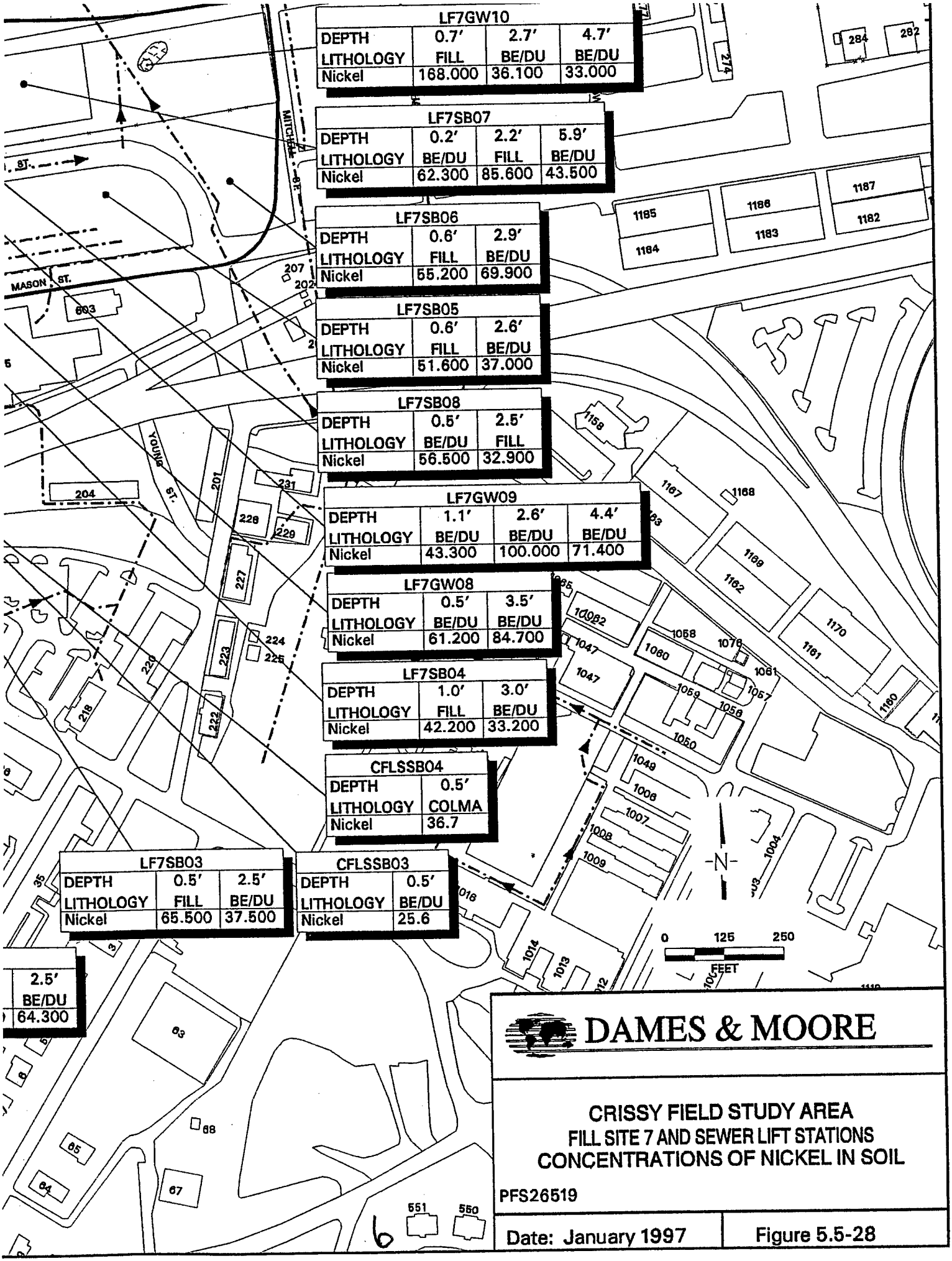
LF7GW07		
DEPTH	0.2′	1.8′
LITHOLOGY	FILL	FILL
Nickel	61.900	79.500

LF7SB03	
DEPTH	0.5′
LITHOLOGY	FILL
Nickel	65.50(

LF7SB01		
.7′	2.2′	3.7′
ILL	BE/DU	BE/DU
2.000	50.500	50.400

LF7SB10		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Nickel	69.000	51.700

LF7SB09		
DEPTH	0.5′	2.5′
LITHOLOGY	BE/DU	BE/DU
Nickel	48.800	64.300



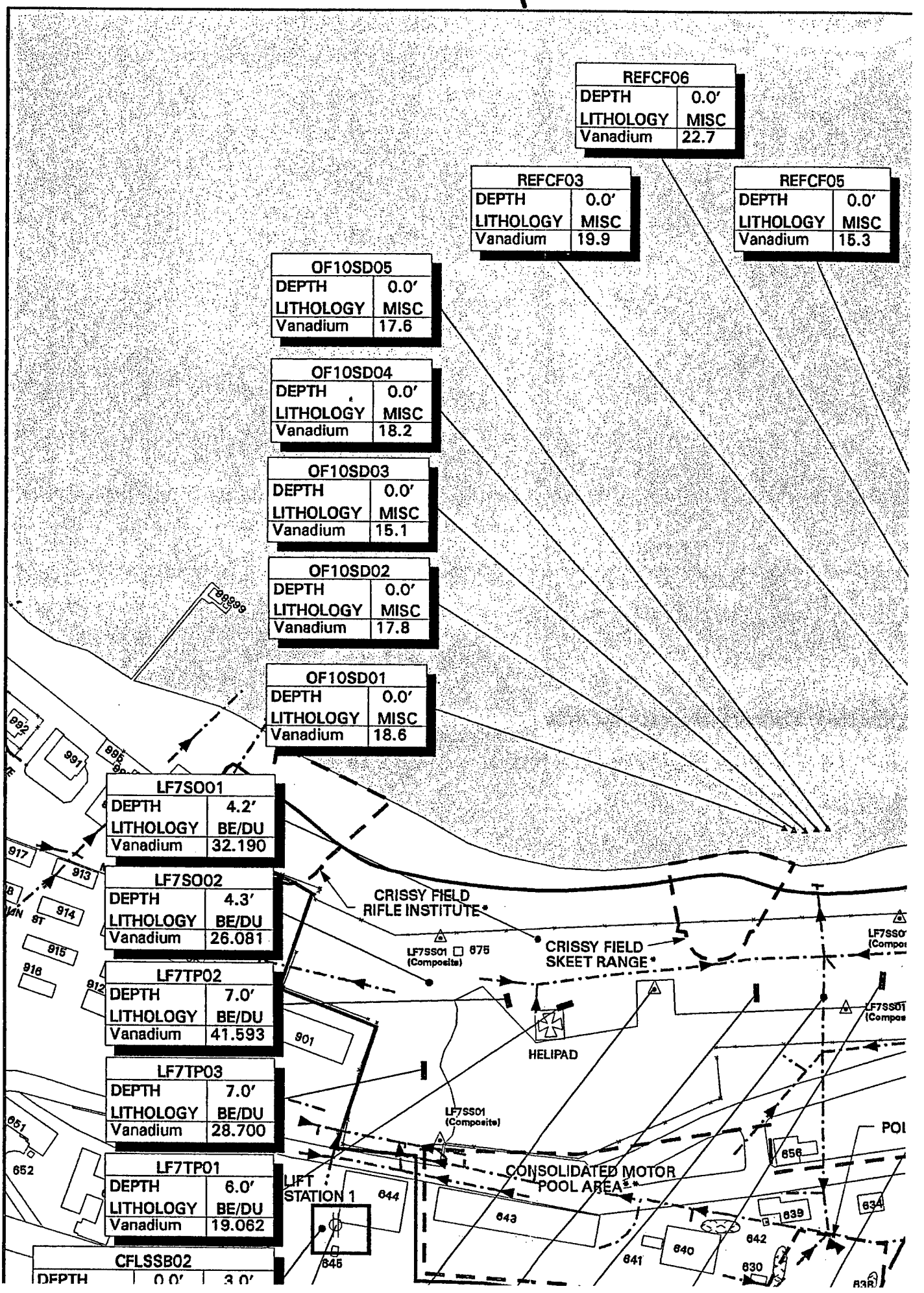
DAMES & MOORE

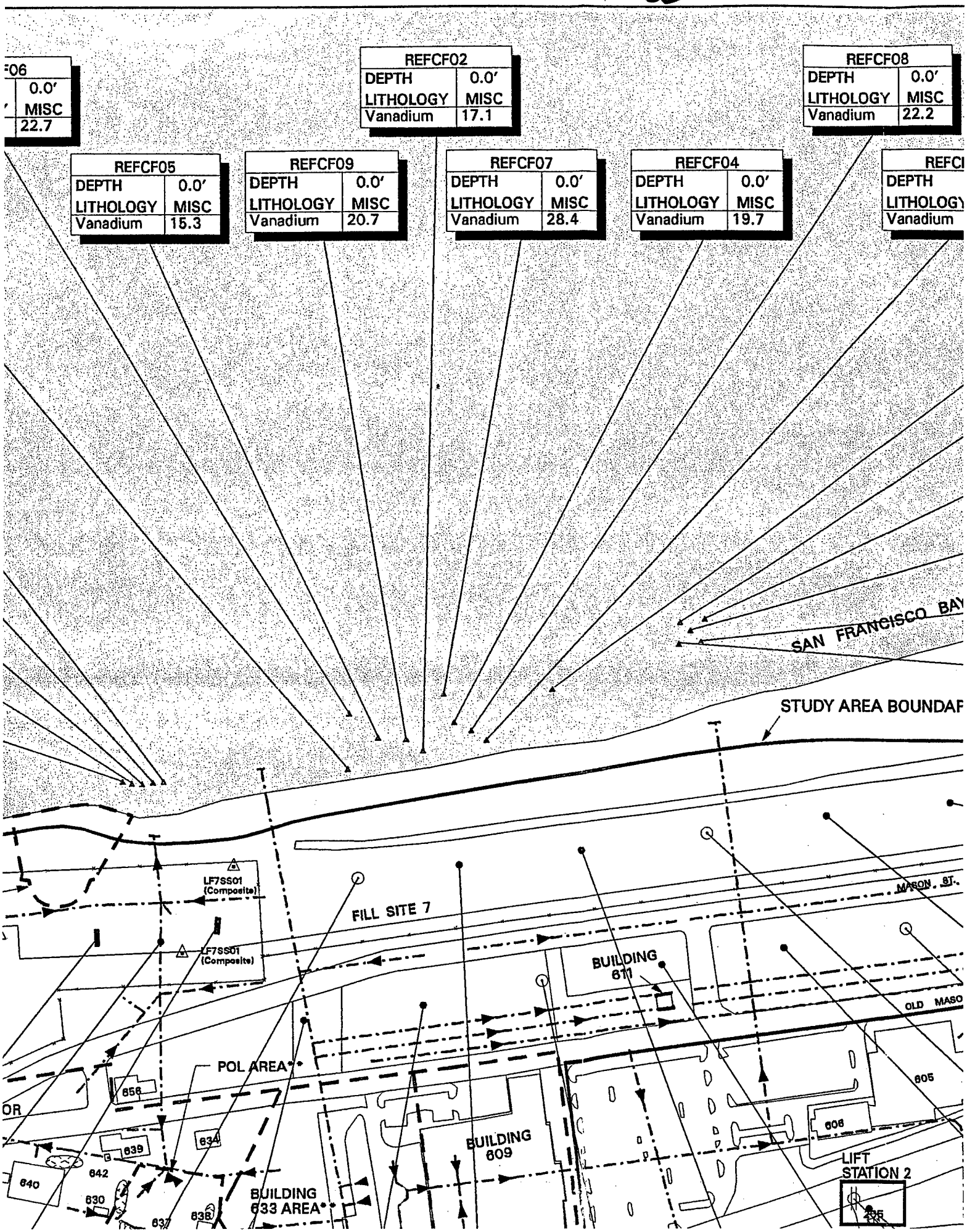
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF NICKEL IN SOIL

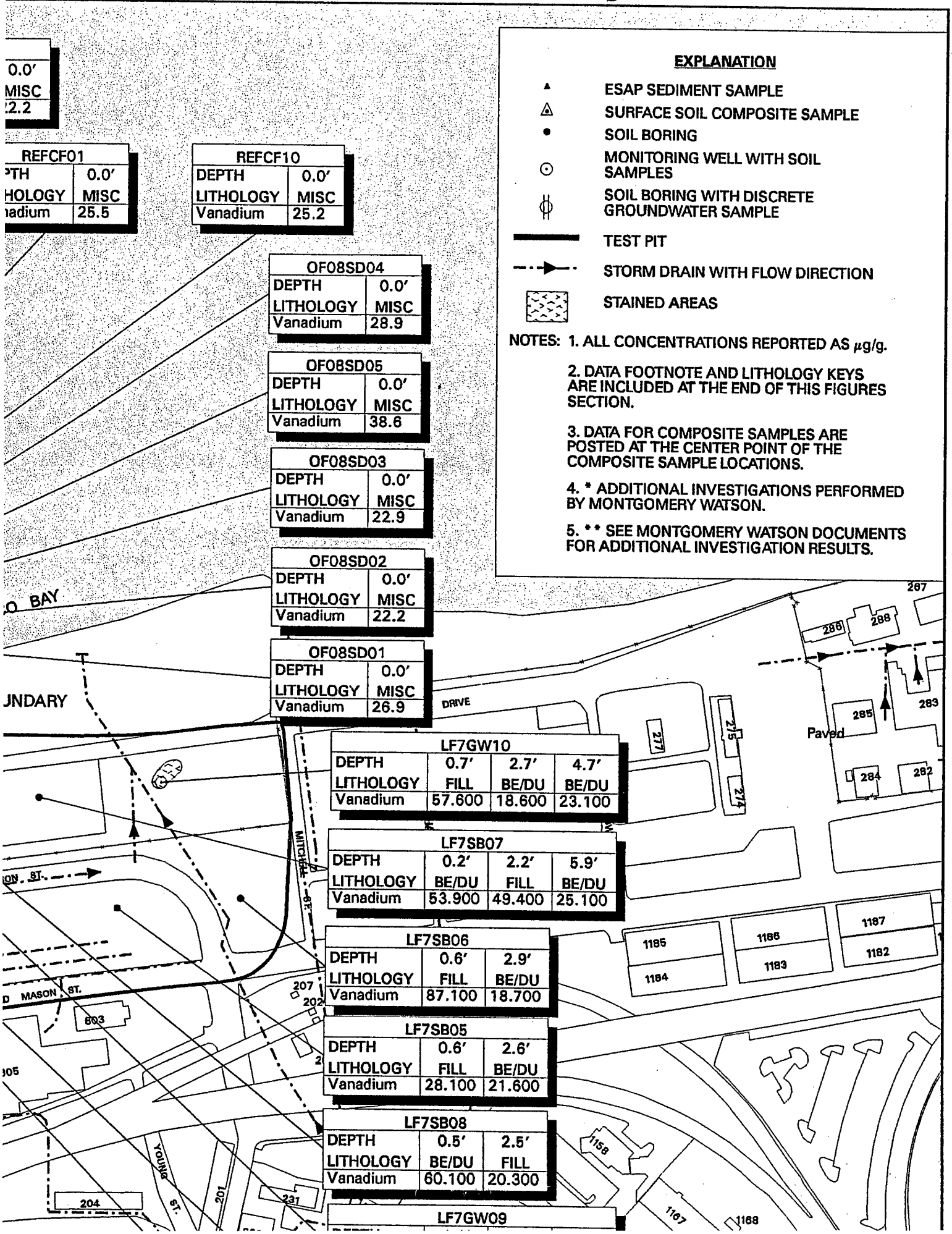
PFS26519

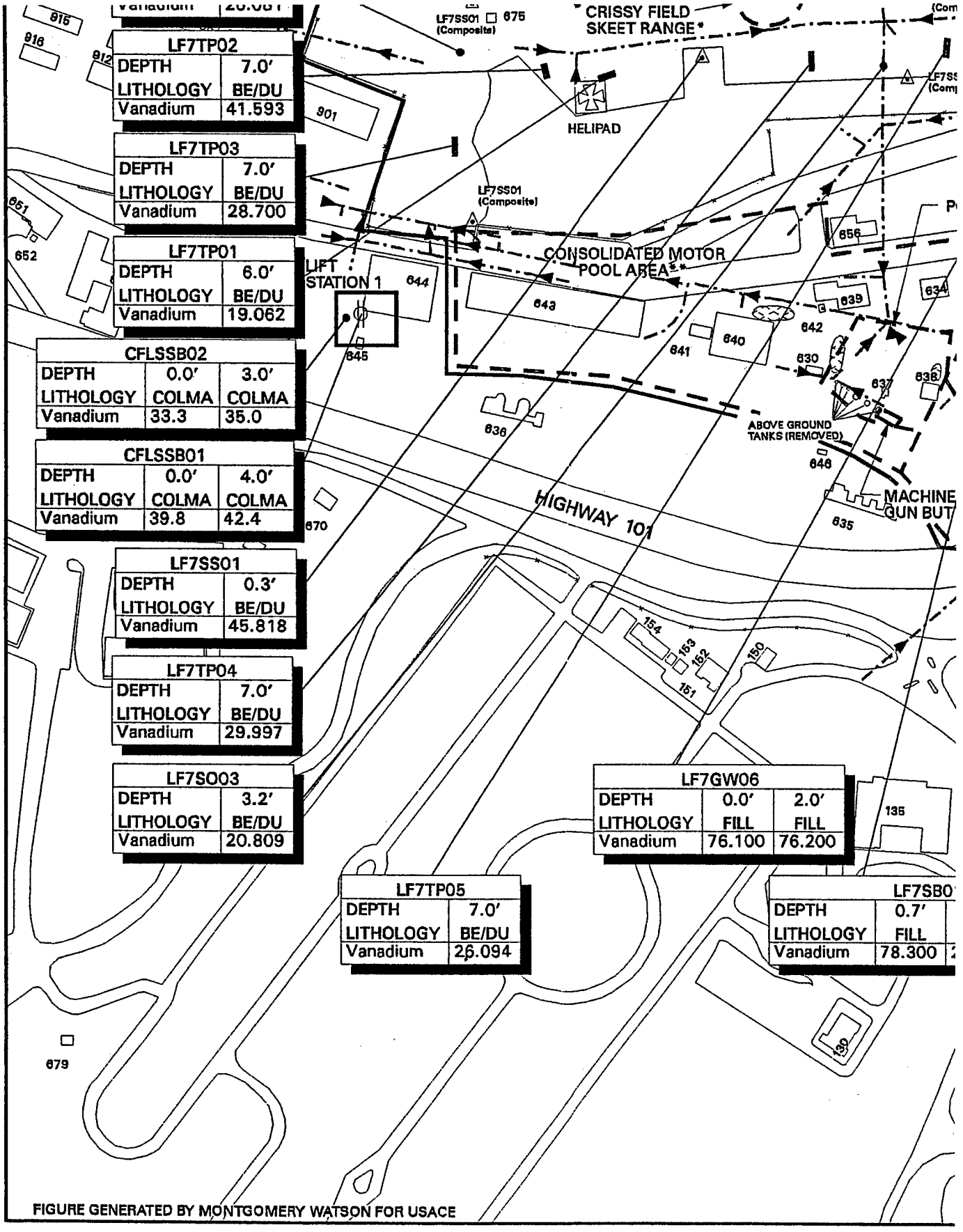
Date: January 1997

Figure 5.5-28


REFCF06
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 22.7
REFCF03
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 19.9
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 15.3
OF10SD05
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 17.6
OF10SD04
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 18.2
OF10SD03
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 15.1
OF10SD02
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 17.8
OF10SD01
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 18.6
LF7SO01
DEPTH 4.2′
LITHOLOGY BE/DU
Vanadium 32.190
LF7SO02
DEPTH 4.3′
LITHOLOGY BE/DU
Vanadium 26.081
LF7TP02
DEPTH 7.0′
LITHOLOGY BE/DU
Vanadium 41.593
LF7TP03
DEPTH 7.0′
LITHOLOGY BE/DU
Vanadium 28.700
LF7TP01
DEPTH 6.0′
LITHOLOGY BE/DU
Vanadium 19.062
CFLSSB02
DEPTH 0.0′ 3.0′
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA*
991
917
913
914
915
916
912
901
651
652
644
643
645
656
639
634
642
640
641
630

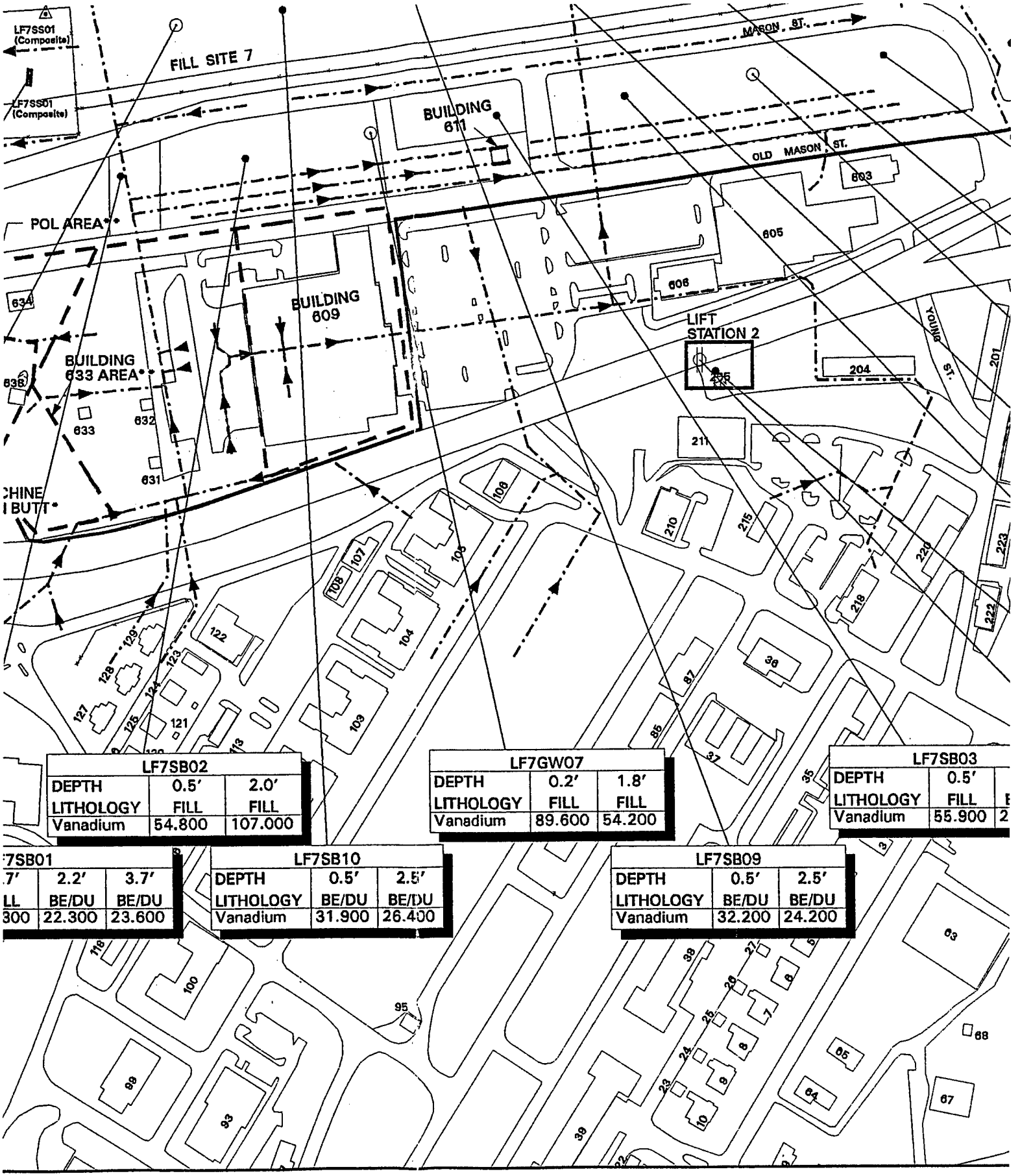

:06
0.0′
MISC
22.7
REFCF02
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 17.1
REFCF08
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 22.2
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 15.3
REFCF09
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 20.7
REFCF07
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 28.4
REFCF04
DEPTH 0.0′
LITHOLOGY MISC
Vanadium 19.7
REFCI
DEPTH
LITHOLOGY
Vanadium
SAN FRANCISCO BA
STUDY AREA BOUNDAR
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASO
POL AREA**
856
OR
639
634
642
640
630
637
638
BUILDING 633 AREA**
BUILDING 609
605
606
LIFT STATION 2
495

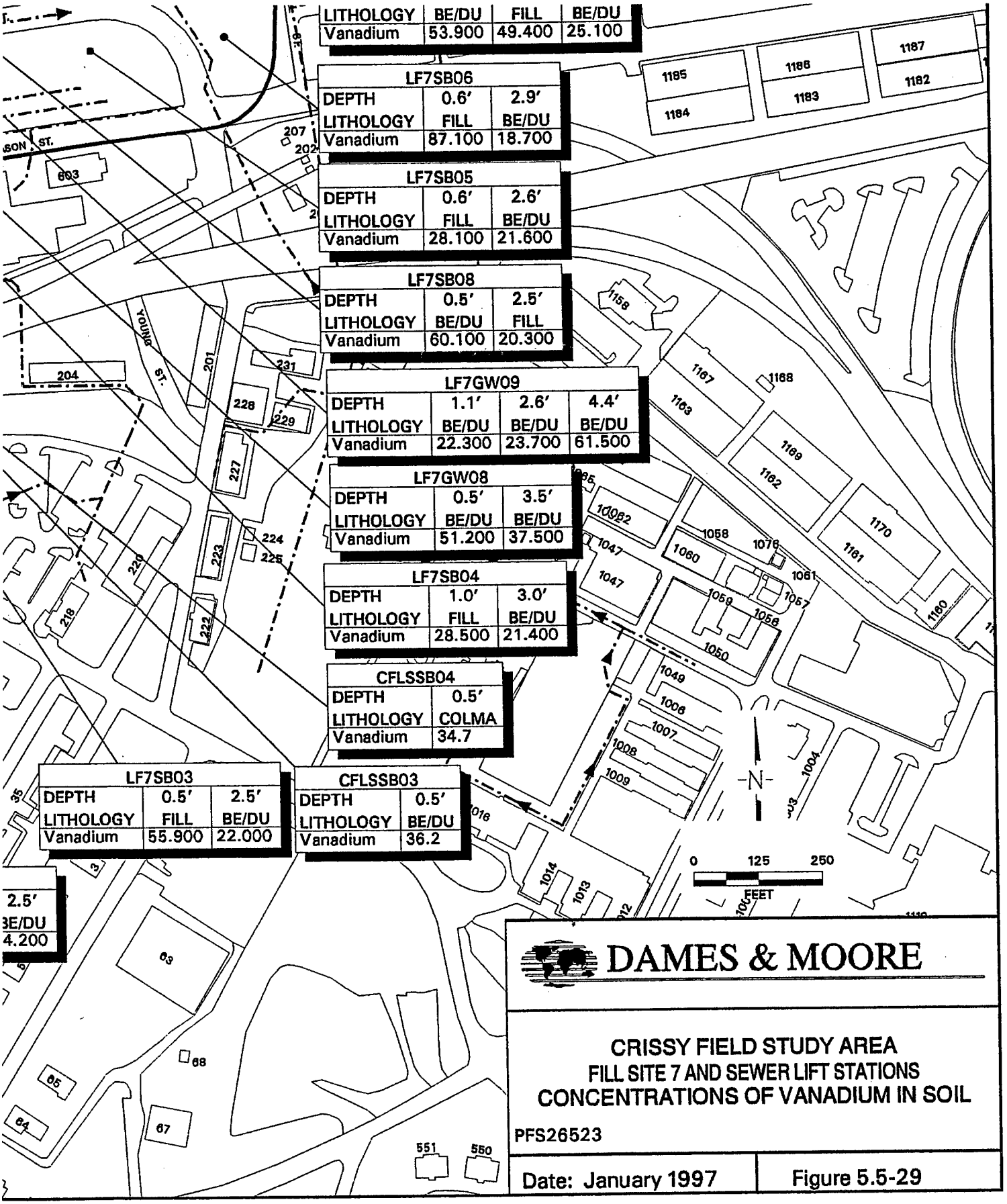

0.0'
MISC
2.2
REFCF01
DEPTH 0.0'
LITHOLOGY MISC
Vanadium 25.5
REFCF10
DEPTH 0.0'
LITHOLOGY MISC
Vanadium 25.2
OF08SD04
DEPTH 0.0'
LITHOLOGY MISC
Vanadium 28.9
OF08SD05
DEPTH 0.0'
LITHOLOGY MISC
Vanadium 38.6
OF08SD03
DEPTH 0.0'
LITHOLOGY MISC
Vanadium 22.9
OF08SD02
DEPTH 0.0'
LITHOLOGY MISC
Vanadium 22.2
OF08SD01
DEPTH 0.0'
LITHOLOGY MISC
Vanadium 26.9
LF7GW10
DEPTH 0.7' 2.7' 4.7'
LITHOLOGY FILL BE/DU BE/DU
Vanadium 57.600 18.600 23.100
LF7SB07
DEPTH 0.2' 2.2' 5.9'
LITHOLOGY BE/DU FILL BE/DU
Vanadium 53.900 49.400 25.100
LF7SB06
DEPTH 0.6' 2.9'
LITHOLOGY FILL BE/DU
Vanadium 87.100 18.700
LF7SB05
DEPTH 0.6' 2.6'
LITHOLOGY FILL BE/DU
Vanadium 28.100 21.600
LF7SB08
DEPTH 0.5' 2.5'
LITHOLOGY BE/DU FILL
Vanadium 60.100 20.300
LF7GW09
EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
O BAY
JNDARY
DRIVE
MITCHELL ST.
MASON ST.
YOUNG ST.
Paved
267
286
288
285
283
284
282
277
275
274
1185
1186
1187
1184
1183
1182
1158
1167
1168
207
202
603
204
201
231



23 Dec 96 12:27:30 Monday, base_11x17_v9.aml, plotfile base_CRISSY2_5_20.gm, PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE


LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
693
POL AREA**
605
606
634
BUILDING 609
LIFT STATION 2
YOUNG ST.
201
204
BUILDING 633 AREA**
638
633
632
631
211
108
107
105
210
215
220
223
218
222
104
122
129
128
123
124
127
125
121
103
38
87
85
37
35
3
LF7SB02
DEPTH 0.5′ 2.0′
LITHOLOGY FILL FILL
Vanadium 54.800 107.000
LF7GW07
DEPTH 0.2′ 1.8′
LITHOLOGY FILL FILL
Vanadium 89.600 54.200
LF7SB03
DEPTH 0.5′
LITHOLOGY FILL
Vanadium 55.900
7SB01
.7′ 2.2′ 3.7′
LL BE/DU BE/DU
300 22.300 23.600
LF7SB10
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU BE/DU
Vanadium 31.900 26.400
LF7SB09
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU BE/DU
Vanadium 32.200 24.200
118
100
95
99
93
39
38
27
28
25
24
23
10
9
8
7
6
5
63
68
65
64
67

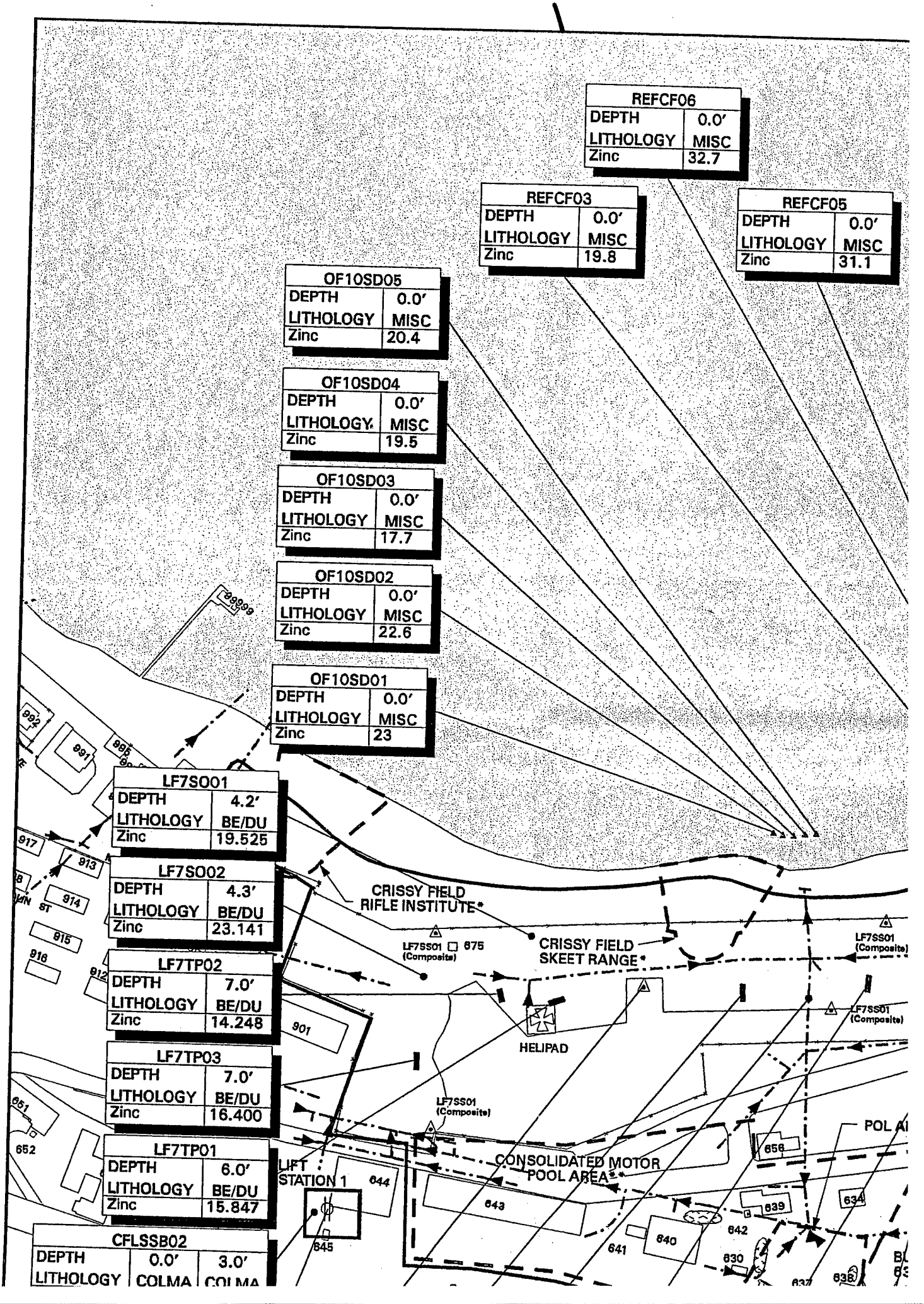


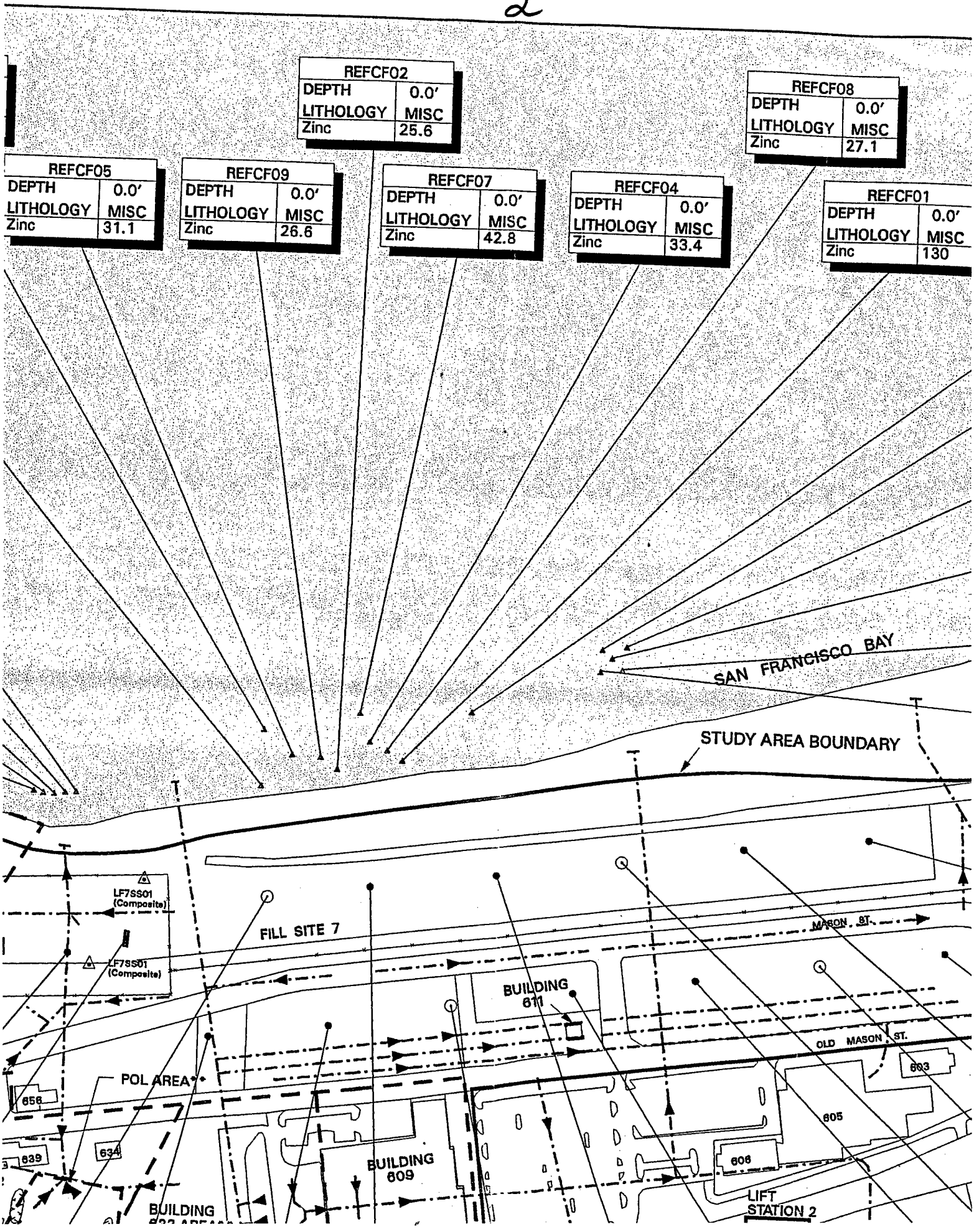
DAMES & MOORE

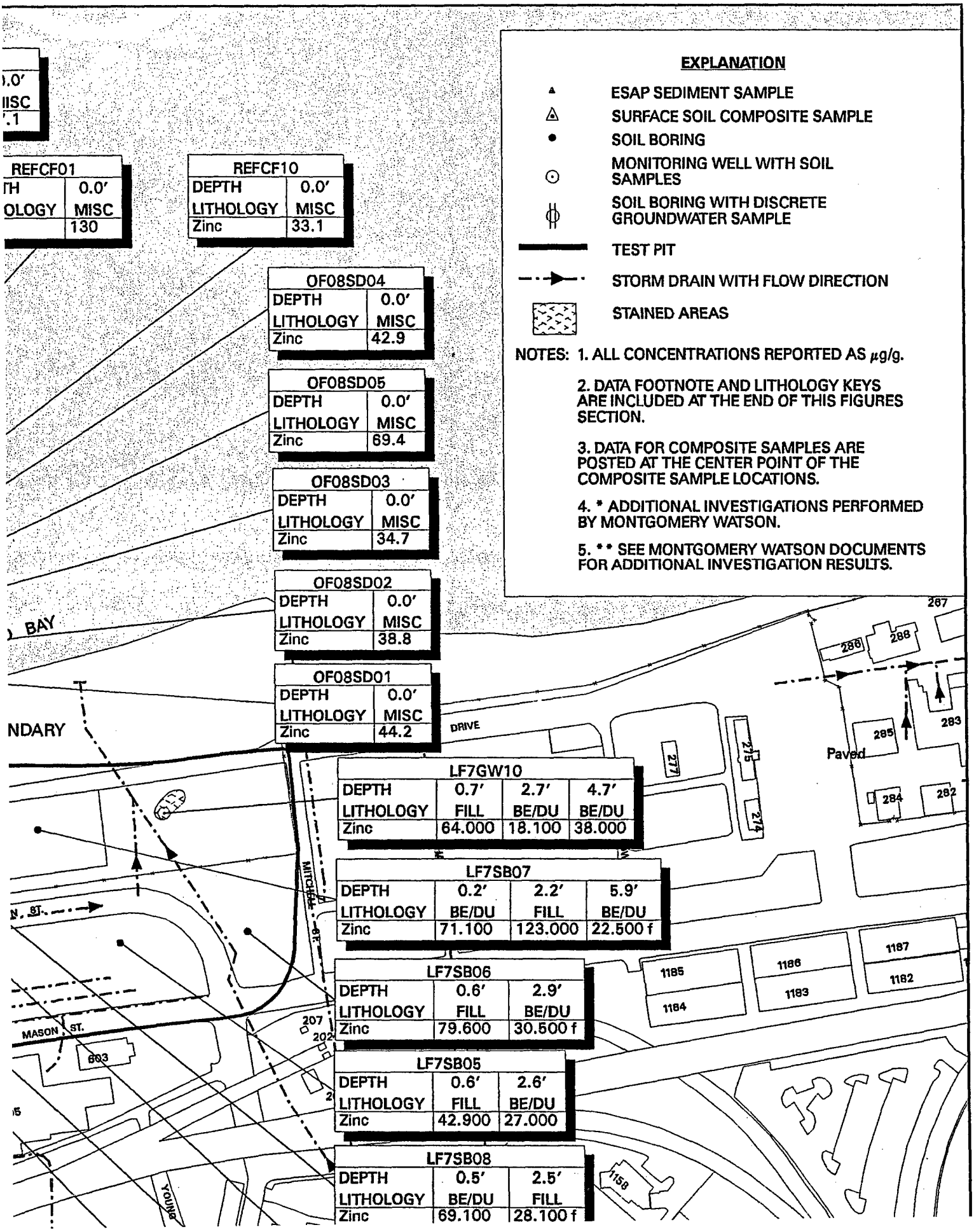
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF VANADIUM IN SOIL

PFS26523

Date: January 1997 | Figure 5.5-29


REFCF06
DEPTH 0.0′
LITHOLOGY MISC
Zinc 32.7
REFCF03
DEPTH 0.0′
LITHOLOGY MISC
Zinc 19.8
REFCF05
DEPTH 0.0′
LITHOLOGY MISC
Zinc 31.1
OF10SD05
DEPTH 0.0′
LITHOLOGY MISC
Zinc 20.4
OF10SD04
DEPTH 0.0′
LITHOLOGY MISC
Zinc 19.5
OF10SD03
DEPTH 0.0′
LITHOLOGY MISC
Zinc 17.7
OF10SD02
DEPTH 0.0′
LITHOLOGY MISC
Zinc 22.6
OF10SD01
DEPTH 0.0′
LITHOLOGY MISC
Zinc 23
LF7SO01
DEPTH 4.2′
LITHOLOGY BE/DU
Zinc 19.525
LF7SO02
DEPTH 4.3′
LITHOLOGY BE/DU
Zinc 23.141
LF7TP02
DEPTH 7.0′
LITHOLOGY BE/DU
Zinc 14.248
LF7TP03
DEPTH 7.0′
LITHOLOGY BE/DU
Zinc 16.400
LF7TP01
DEPTH 6.0′
LITHOLOGY BE/DU
Zinc 15.847
CFLSSB02
DEPTH 0.0′ 3.0′
LITHOLOGY COLMA COLMA
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
POL A
99999
992
991
985
917
913
914
915
916
912
901
651
652
644
645
643
658
639
634
642
641
640
630
638


REFCF02
DEPTH 0.0'
LITHOLOGY MISC
Zinc 25.6
REFCF08
DEPTH 0.0'
LITHOLOGY MISC
Zinc 27.1
REFCF05
DEPTH 0.0'
LITHOLOGY MISC
Zinc 31.1
REFCF09
DEPTH 0.0'
LITHOLOGY MISC
Zinc 26.6
REFCF07
DEPTH 0.0'
LITHOLOGY MISC
Zinc 42.8
REFCF04
DEPTH 0.0'
LITHOLOGY MISC
Zinc 33.4
REFCF01
DEPTH 0.0'
LITHOLOGY MISC
Zinc 130
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
POL AREA
656
603
605
639
634
BUILDING 609
606
BUILDING
LIFT STATION 2


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
REFCF01
TH 0.0′
OLOGY MISC
130
REFCF10
DEPTH 0.0′
LITHOLOGY MISC
Zinc 33.1
OF08SD04
DEPTH 0.0′
LITHOLOGY MISC
Zinc 42.9
OF08SD05
DEPTH 0.0′
LITHOLOGY MISC
Zinc 69.4
OF08SD03
DEPTH 0.0′
LITHOLOGY MISC
Zinc 34.7
OF08SD02
DEPTH 0.0′
LITHOLOGY MISC
Zinc 38.8
OF08SD01
DEPTH 0.0′
LITHOLOGY MISC
Zinc 44.2
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
LITHOLOGY FILL BE/DU BE/DU
Zinc 64.000 18.100 38.000
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
LITHOLOGY BE/DU FILL BE/DU
Zinc 71.100 123.000 22.500 f
LF7SB06
DEPTH 0.6′ 2.9′
LITHOLOGY FILL BE/DU
Zinc 79.600 30.500 f
LF7SB05
DEPTH 0.6′ 2.6′
LITHOLOGY FILL BE/DU
Zinc 42.900 27.000
LF7SB08
DEPTH 0.5′ 2.5′
LITHOLOGY BE/DU FILL
Zinc 69.100 28.100 f
BAY
NDARY
DRIVE
Paved
MASON ST.
MITCHELL ST.
YOUNG
267
286
288
285
283
284
282
277
275
274
1185
1186
1187
1184
1183
1182
1158
207
202
603

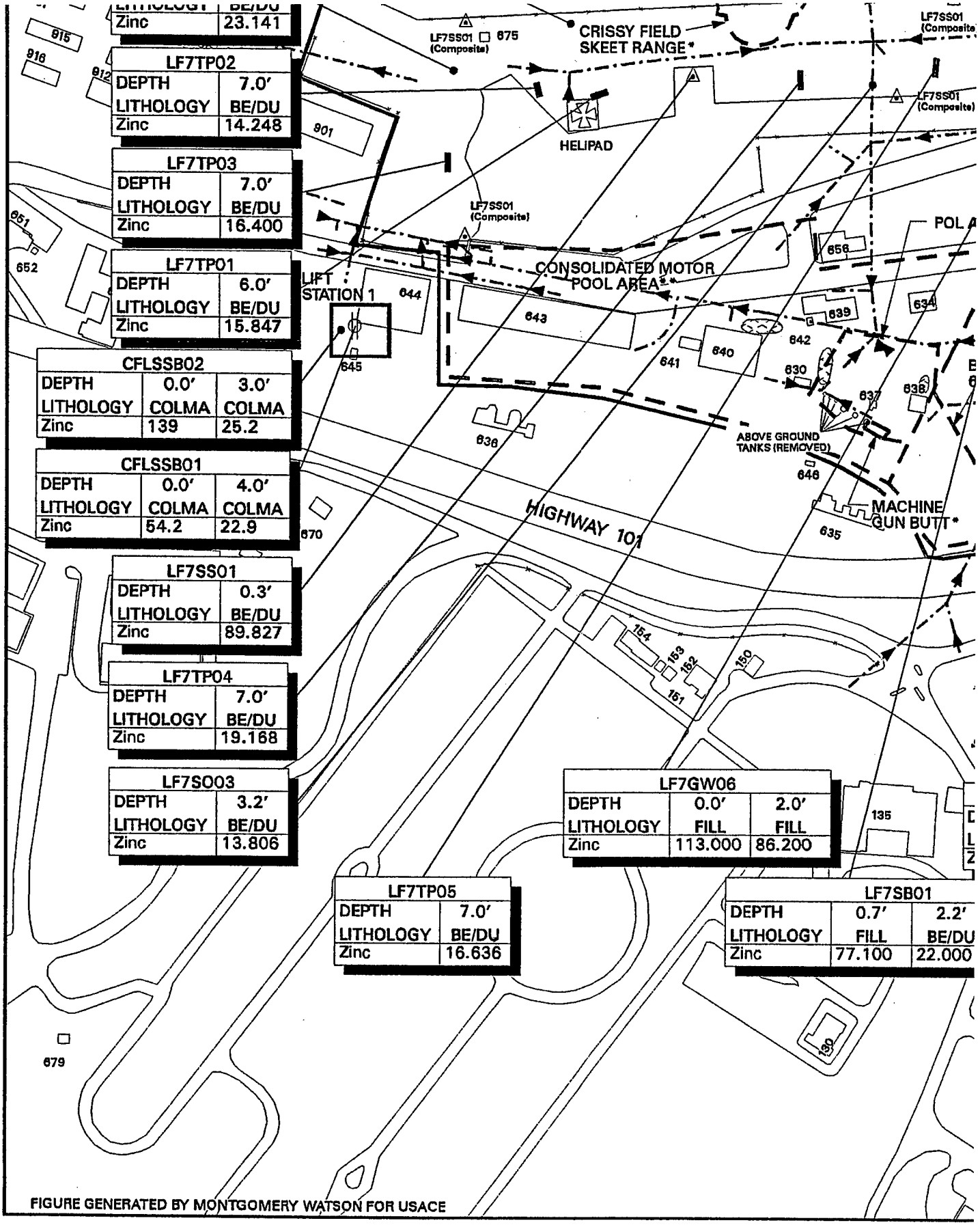
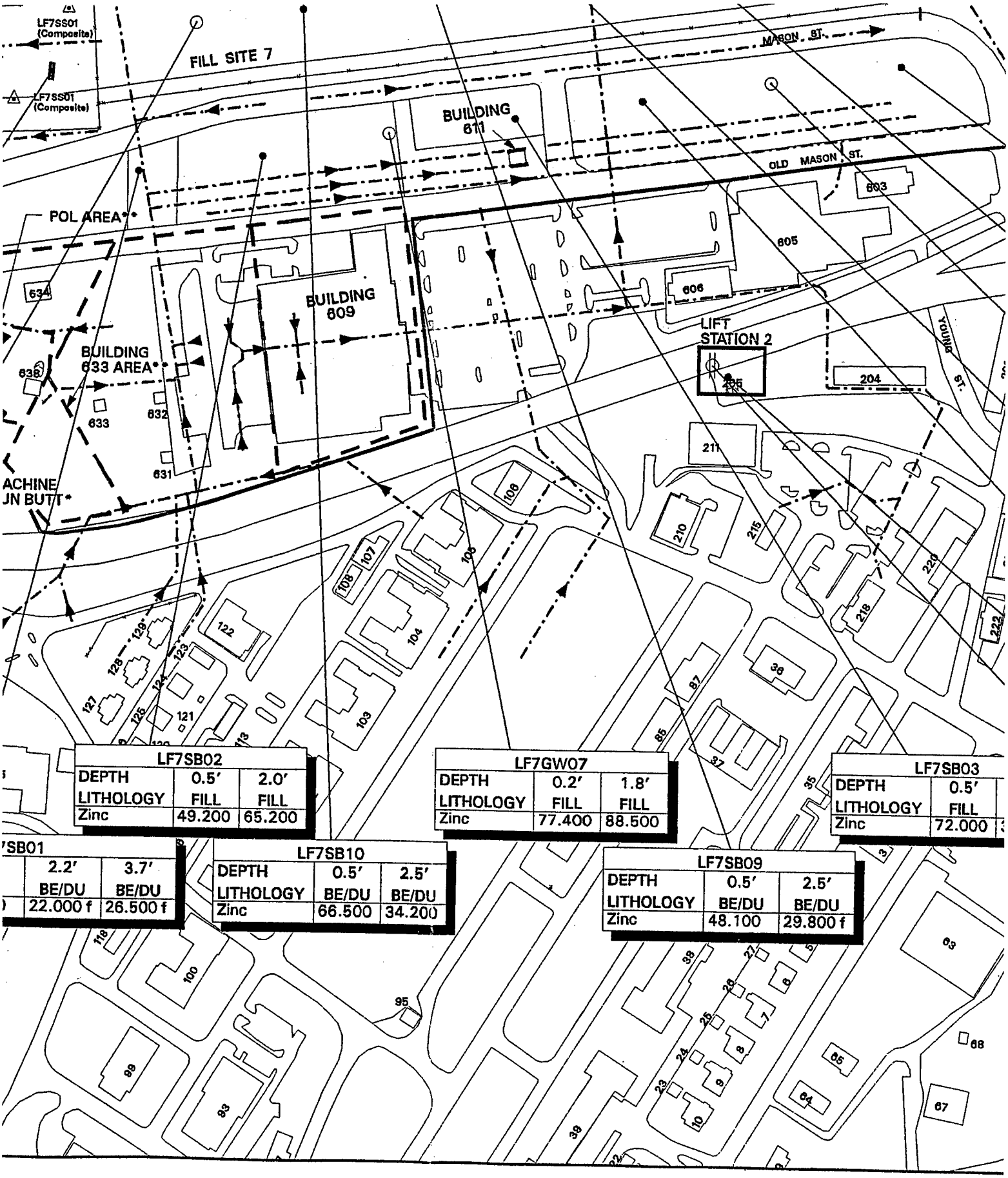
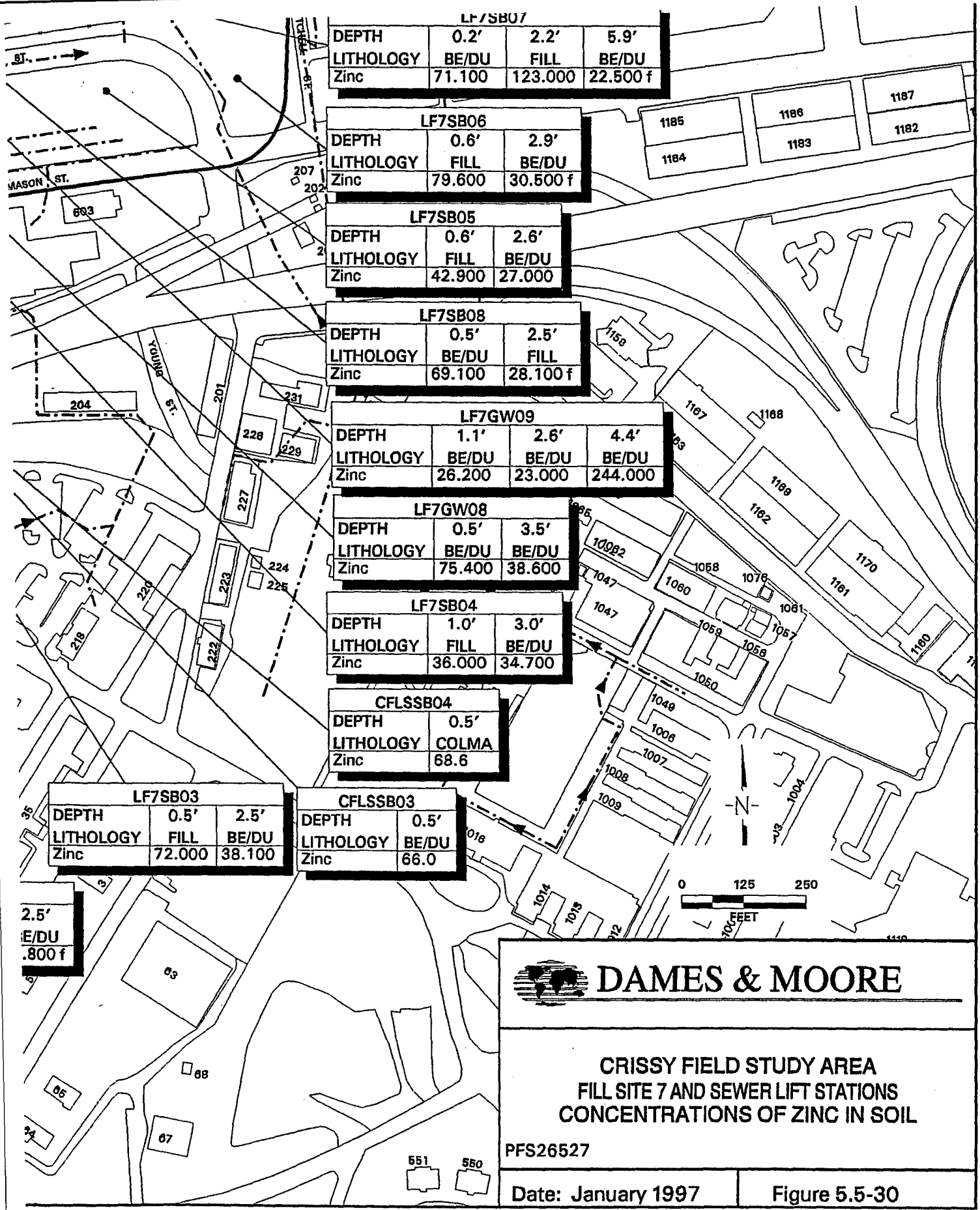


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

23 Dec 96 12:31:16 Monday, base_11x17_v3.aml, plotfile base_CRISSY2_S_21.ps, PSF


LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603
POL AREA**
605
606
634
BUILDING 609
LIFT STATION 2
638
BUILDING 633 AREA*
633
632
631
204
211
ACHINE JN BUTT*
106
107
108
105
104
103
210
215
220
218
222
122
128
123
124
127
125
121
38
87
85
37
35
3
118
100
95
99
83
39
22
33
27
26
25
24
23
10
9
8
7
6
5
63
68
65
64
67
LF7SB02
DEPTH | 0.5' | 2.0'
LITHOLOGY | FILL | FILL
Zinc | 49.200 | 65.200
LF7GW07
DEPTH | 0.2' | 1.8'
LITHOLOGY | FILL | FILL
Zinc | 77.400 | 88.500
LF7SB03
DEPTH | 0.5'
LITHOLOGY | FILL
Zinc | 72.000
'SB01
2.2' BE/DU | 3.7' BE/DU
22.000 f | 26.500 f
LF7SB10
DEPTH | 0.5' | 2.5'
LITHOLOGY | BE/DU | BE/DU
Zinc | 66.500 | 34.200
LF7SB09
DEPTH | 0.5' | 2.5'
LITHOLOGY | BE/DU | BE/DU
Zinc | 48.100 | 29.800 f

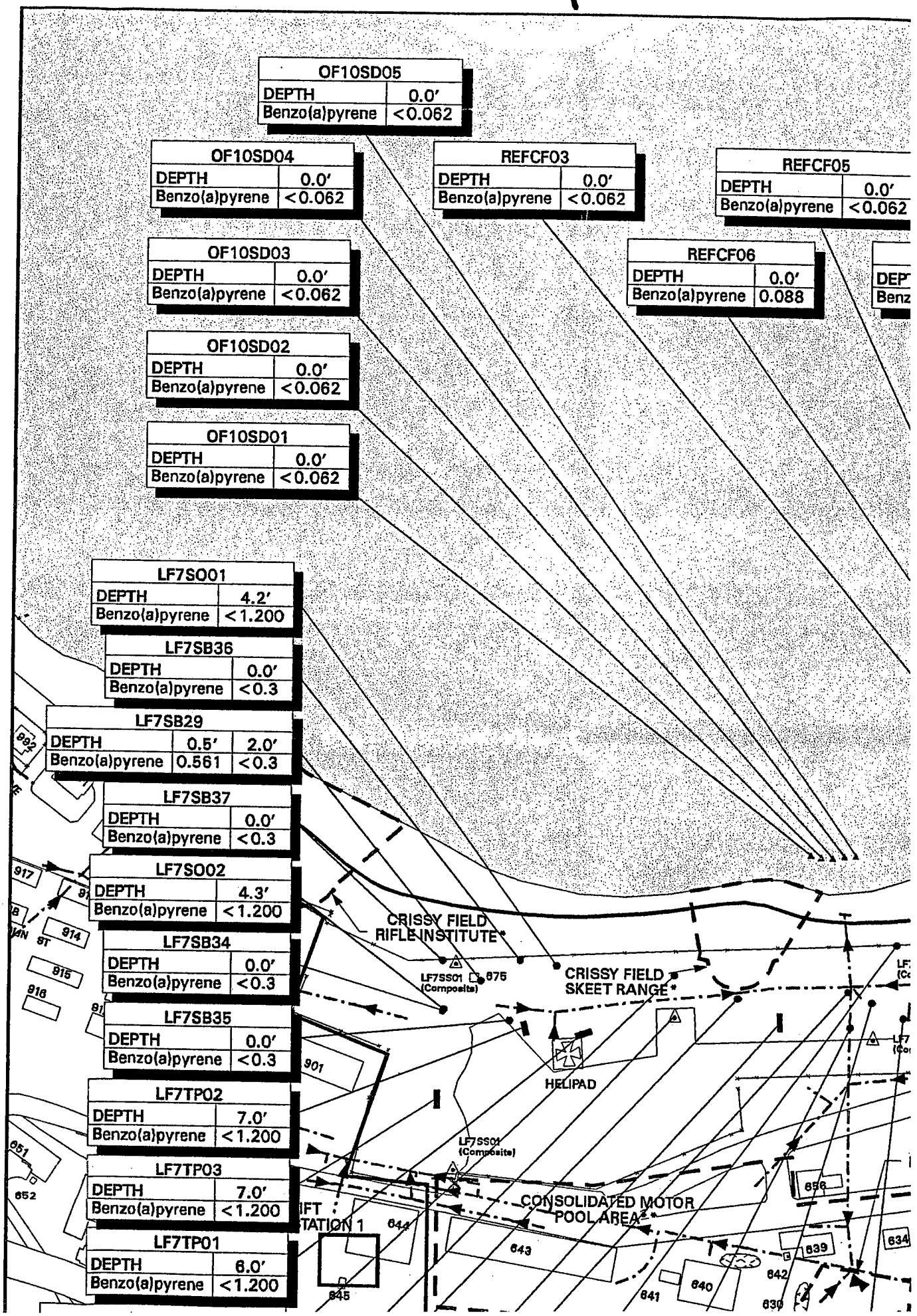


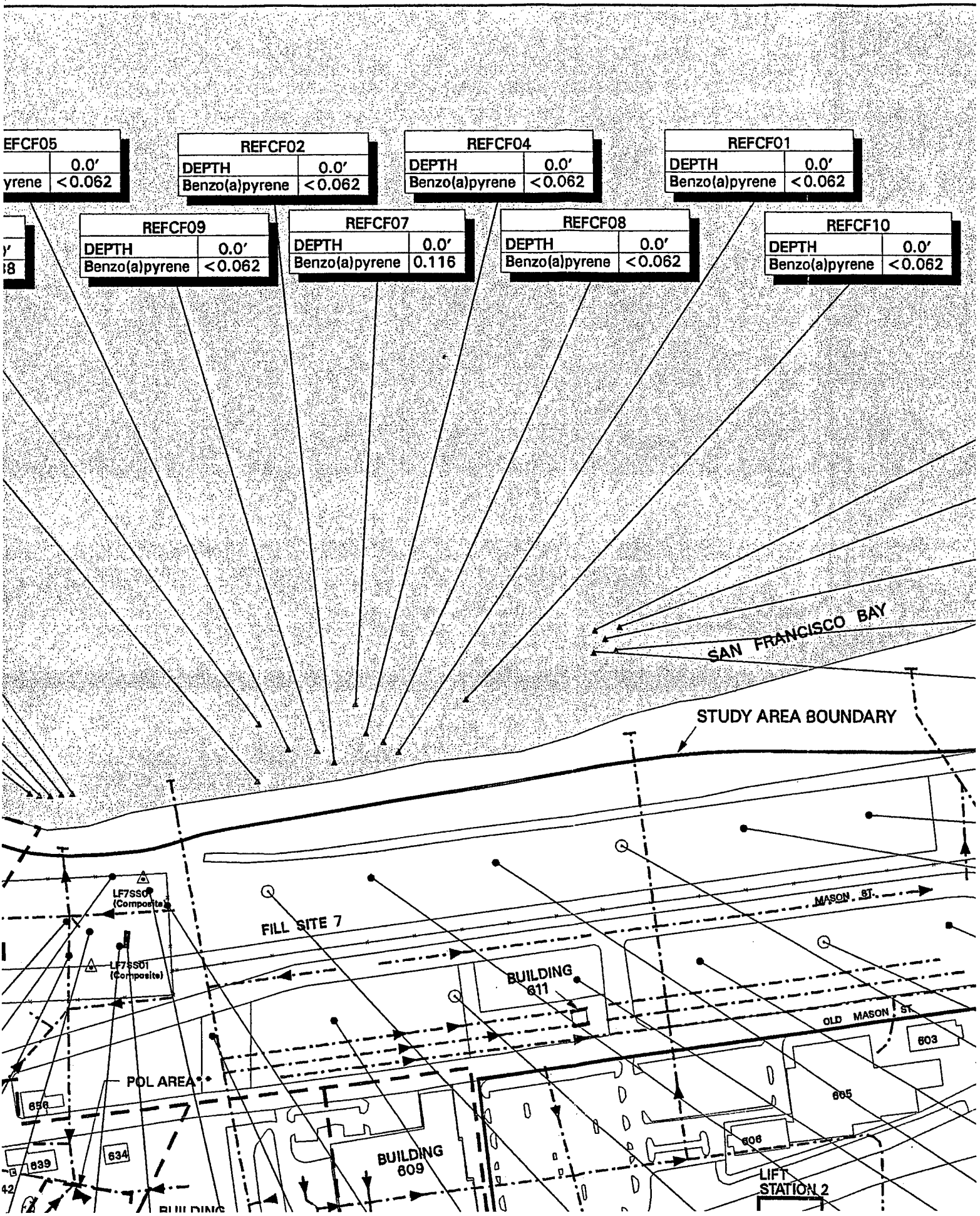
DAMES & MOORE

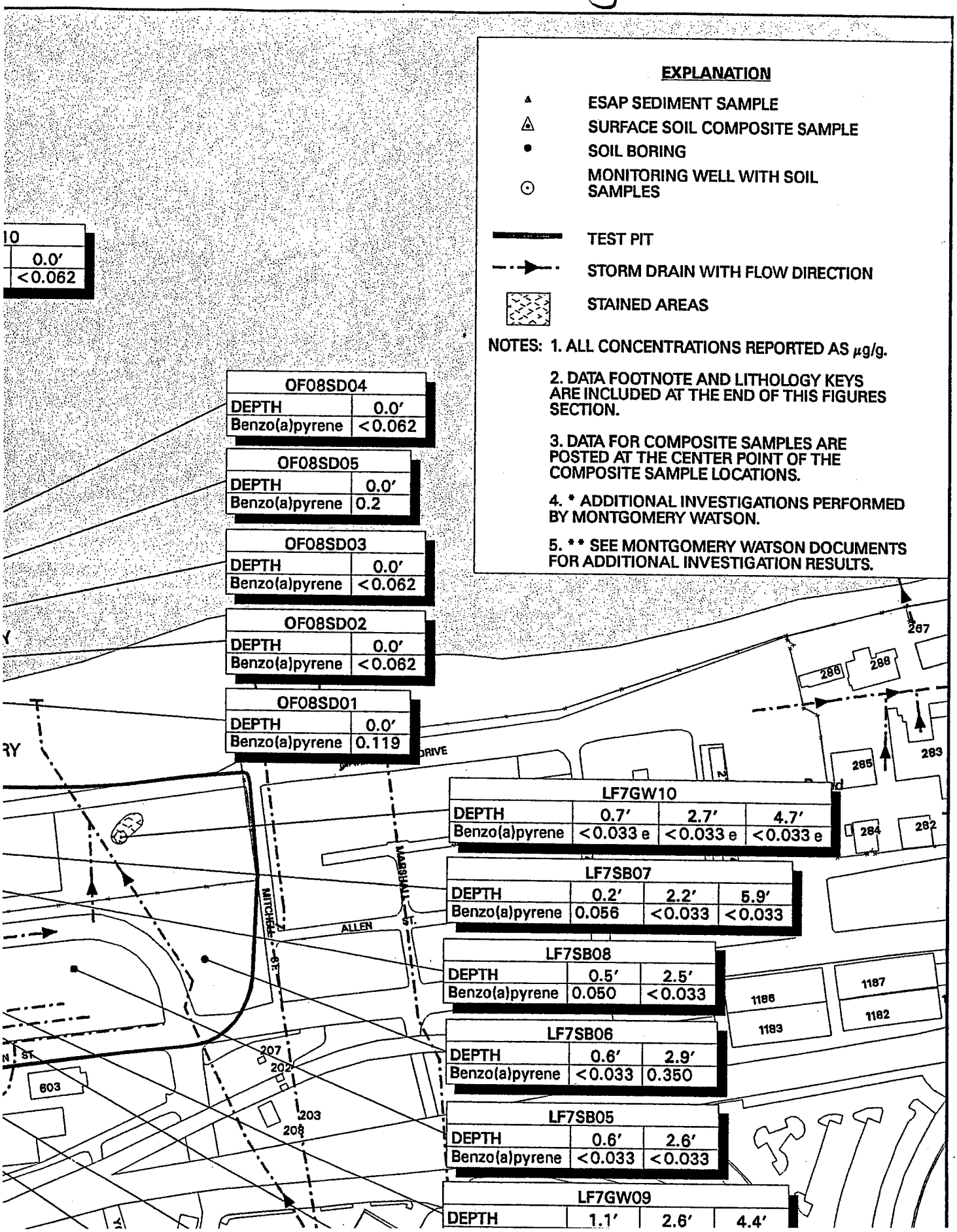
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF ZINC IN SOIL

PFS26527

Date: January 1997 | Figure 5.5-30


OF10SD05
DEPTH 0.0′
Benzo(a)pyrene <0.062
OF10SD04
DEPTH 0.0′
Benzo(a)pyrene <0.062
REFCF03
DEPTH 0.0′
Benzo(a)pyrene <0.062
REFCF05
DEPTH 0.0′
Benzo(a)pyrene <0.062
OF10SD03
DEPTH 0.0′
Benzo(a)pyrene <0.062
REFCF06
DEPTH 0.0′
Benzo(a)pyrene 0.088
OF10SD02
DEPTH 0.0′
Benzo(a)pyrene <0.062
OF10SD01
DEPTH 0.0′
Benzo(a)pyrene <0.062
LF7SO01
DEPTH 4.2′
Benzo(a)pyrene <1.200
LF7SB36
DEPTH 0.0′
Benzo(a)pyrene <0.3
LF7SB29
DEPTH 0.5′ 2.0′
Benzo(a)pyrene 0.561 <0.3
LF7SB37
DEPTH 0.0′
Benzo(a)pyrene <0.3
LF7SO02
DEPTH 4.3′
Benzo(a)pyrene <1.200
LF7SB34
DEPTH 0.0′
Benzo(a)pyrene <0.3
LF7SB35
DEPTH 0.0′
Benzo(a)pyrene <0.3
LF7TP02
DEPTH 7.0′
Benzo(a)pyrene <1.200
LF7TP03
DEPTH 7.0′
Benzo(a)pyrene <1.200
LF7TP01
DEPTH 6.0′
Benzo(a)pyrene <1.200
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
CONSOLIDATED MOTOR POOL AREA**
LF7SS01 (Composite)
675
914
915
916
917
901
651
652
644
643
645
641
640
639
634
656
842
630


EFCF05
0.0′
yrene
<0.062
REFCF02
DEPTH
0.0′
Benzo(a)pyrene
<0.062
REFCF04
DEPTH
0.0′
Benzo(a)pyrene
<0.062
REFCF01
DEPTH
0.0′
Benzo(a)pyrene
<0.062
REFCF09
DEPTH
0.0′
Benzo(a)pyrene
<0.062
REFCF07
DEPTH
0.0′
Benzo(a)pyrene
0.116
REFCF08
DEPTH
0.0′
Benzo(a)pyrene
<0.062
REFCF10
DEPTH
0.0′
Benzo(a)pyrene
<0.062
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS02
(Composite)
LF7SS01
(Composite)
FILL SITE 7
MASON ST.
BUILDING
611
OLD MASON ST.
603
POL AREA
656
605
606
634
639
BUILDING
609
LIFT
STATION 2


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
OF08SD04
DEPTH 0.0′
Benzo(a)pyrene <0.062
OF08SD05
DEPTH 0.0′
Benzo(a)pyrene 0.2
OF08SD03
DEPTH 0.0′
Benzo(a)pyrene <0.062
OF08SD02
DEPTH 0.0′
Benzo(a)pyrene <0.062
OF08SD01
DEPTH 0.0′
Benzo(a)pyrene 0.119
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
Benzo(a)pyrene <0.033 e <0.033 e <0.033 e
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
Benzo(a)pyrene 0.056 <0.033 <0.033
LF7SB08
DEPTH 0.5′ 2.5′
Benzo(a)pyrene 0.050 <0.033
LF7SB06
DEPTH 0.6′ 2.9′
Benzo(a)pyrene <0.033 0.350
LF7SB05
DEPTH 0.6′ 2.6′
Benzo(a)pyrene <0.033 <0.033
LF7GW09
DEPTH 1.1′ 2.6′ 4.4′
ALLEN
MARSHALL ST.
MITCHELL ST.
DRIVE
287
286
288
285
283
284
282
1186
1187
1183
1182
207
202
203
208
603

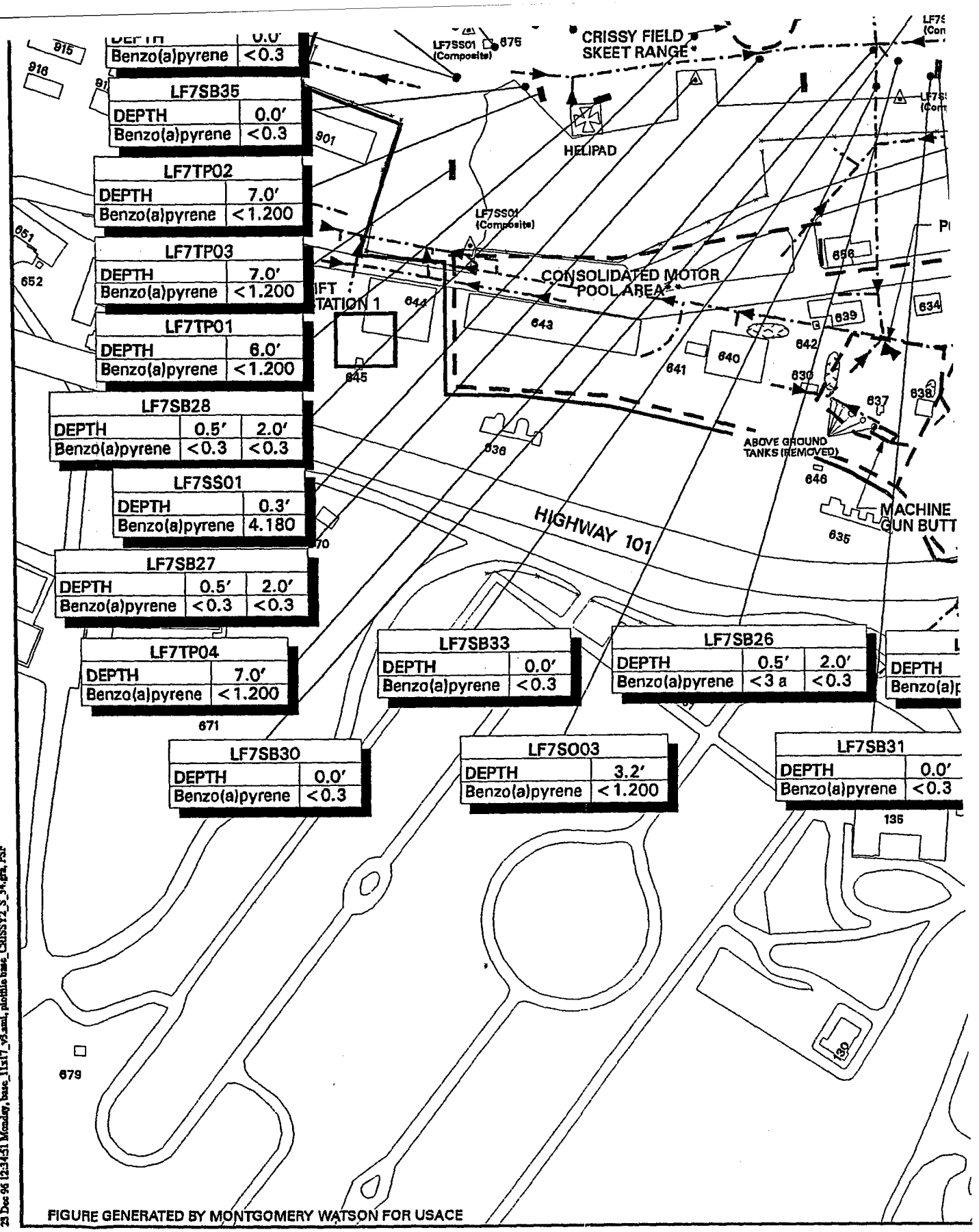
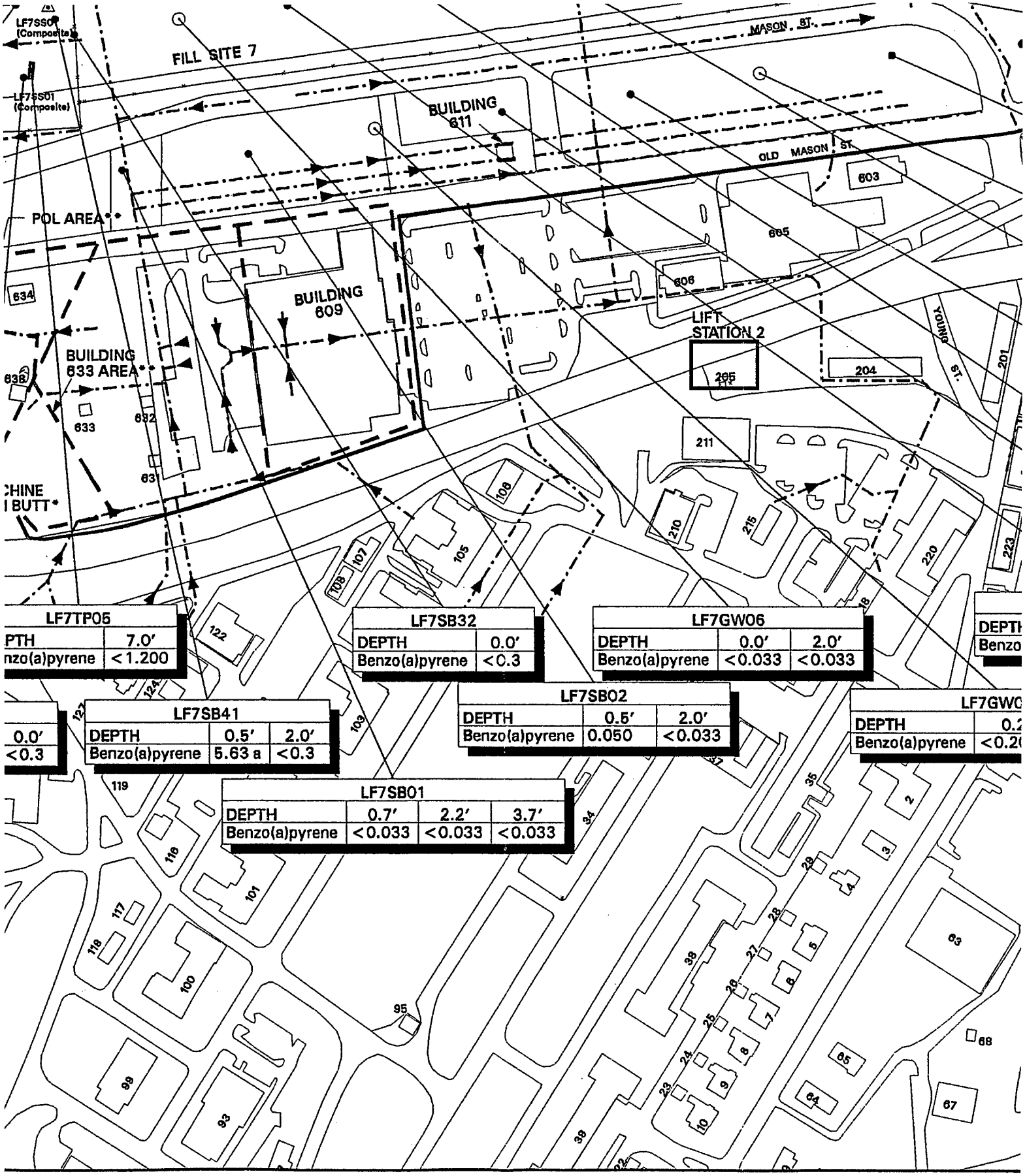


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE



LF7TP05	
PTH	7.0′
nzo(a)pyrene	<1.200

LF7SB32	
DEPTH	0.0′
Benzo(a)pyrene	<0.3

LF7GW06		
DEPTH	0.0′	2.0′
Benzo(a)pyrene	<0.033	<0.033

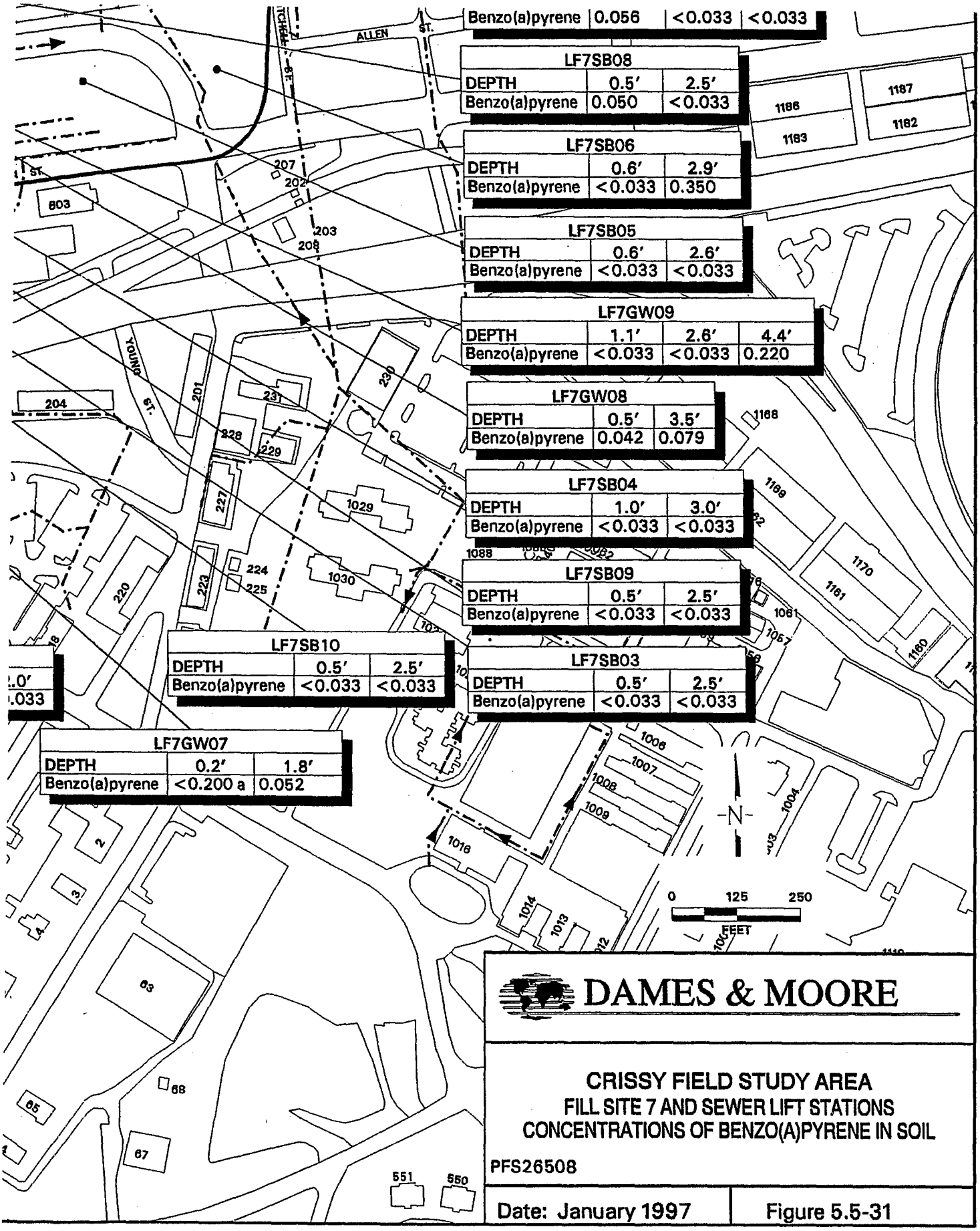
0.0′	
<0.3	

LF7SB41		
DEPTH	0.5′	2.0′
Benzo(a)pyrene	5.63 a	<0.3

LF7SB02		
DEPTH	0.5′	2.0′
Benzo(a)pyrene	0.050	<0.033

LF7GW0	
DEPTH	0.2
Benzo(a)pyrene	<0.2(

LF7SB01			
DEPTH	0.7′	2.2′	3.7′
Benzo(a)pyrene	<0.033	<0.033	<0.033

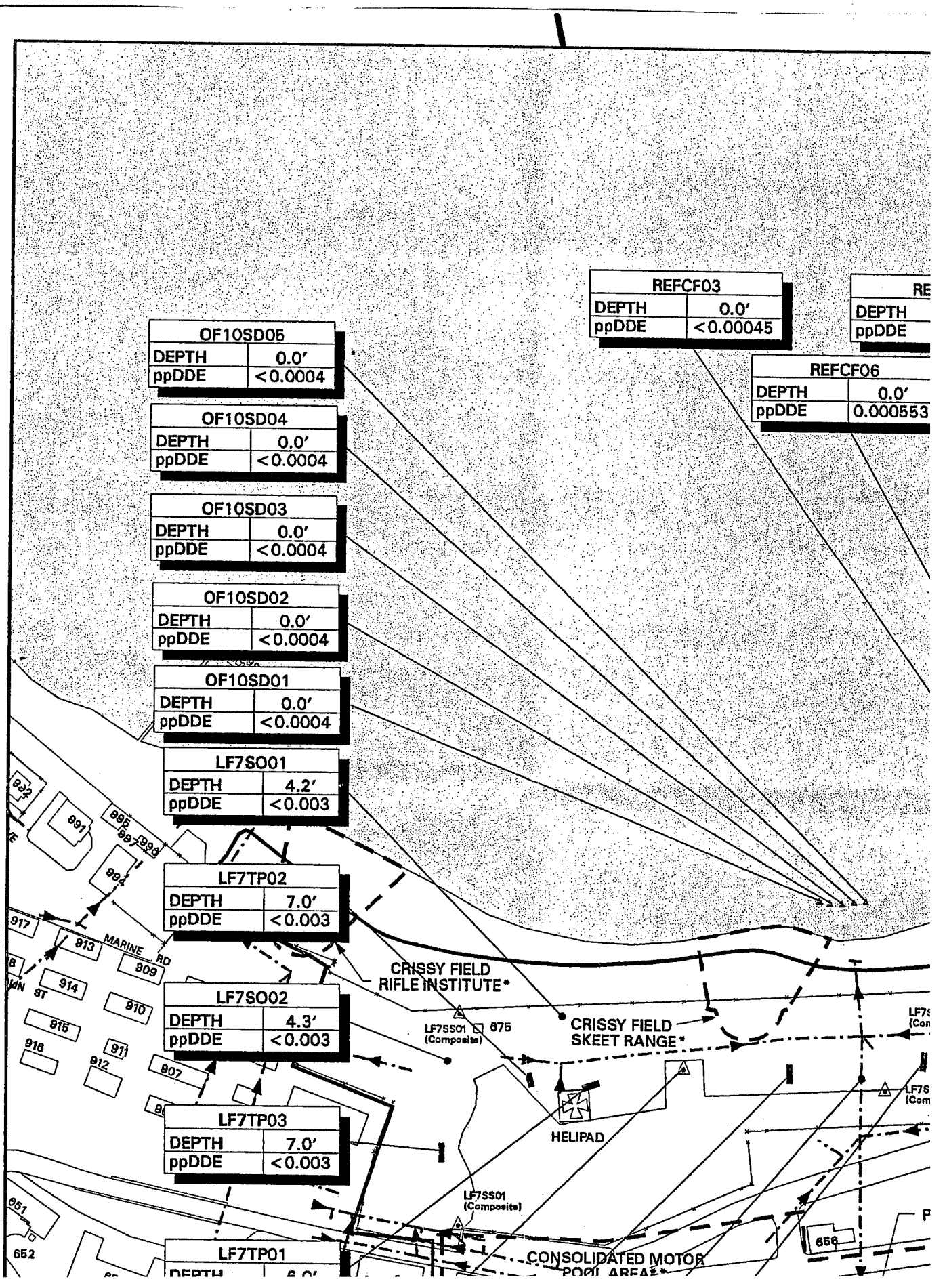


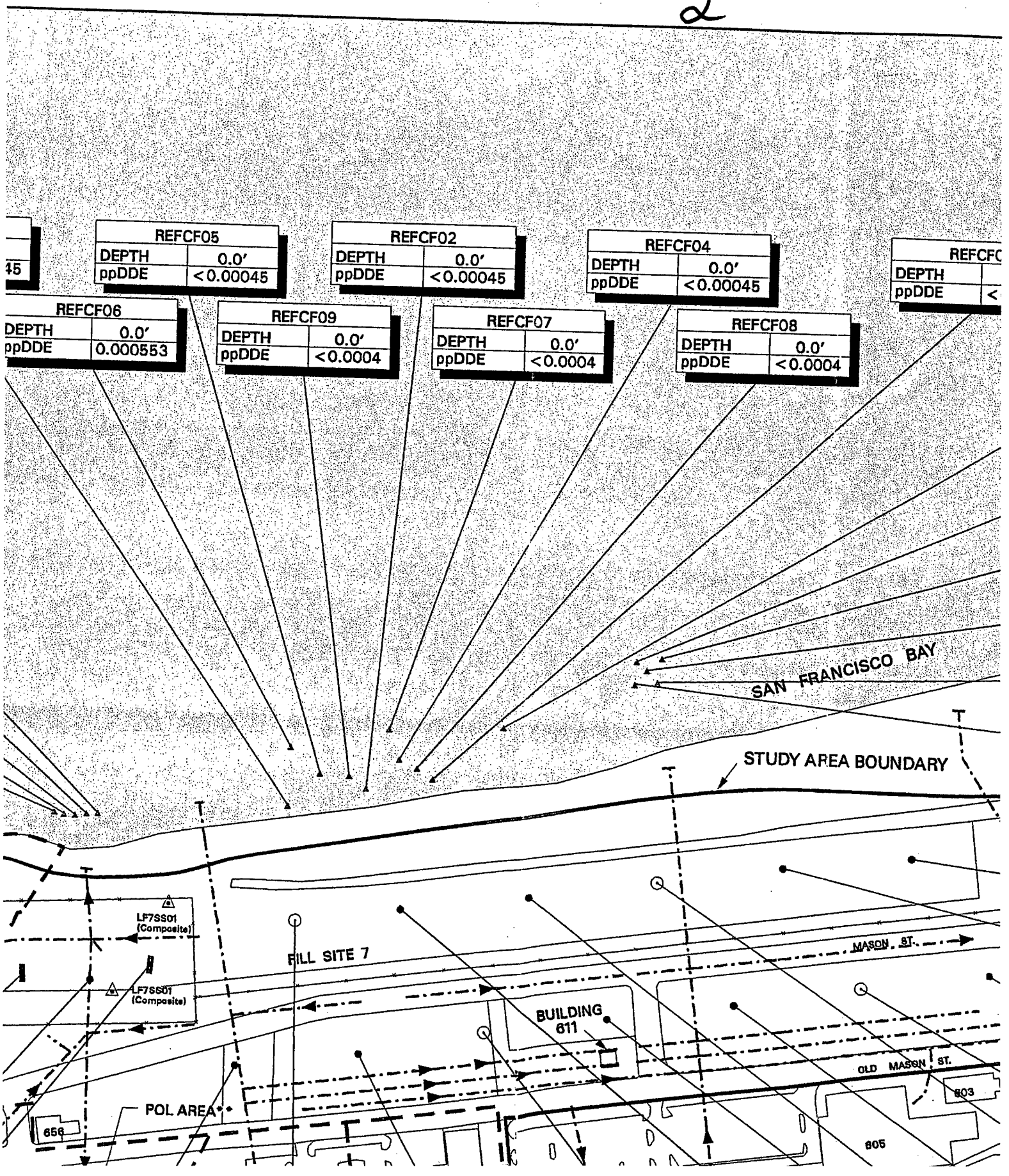
DAMES & MOORE

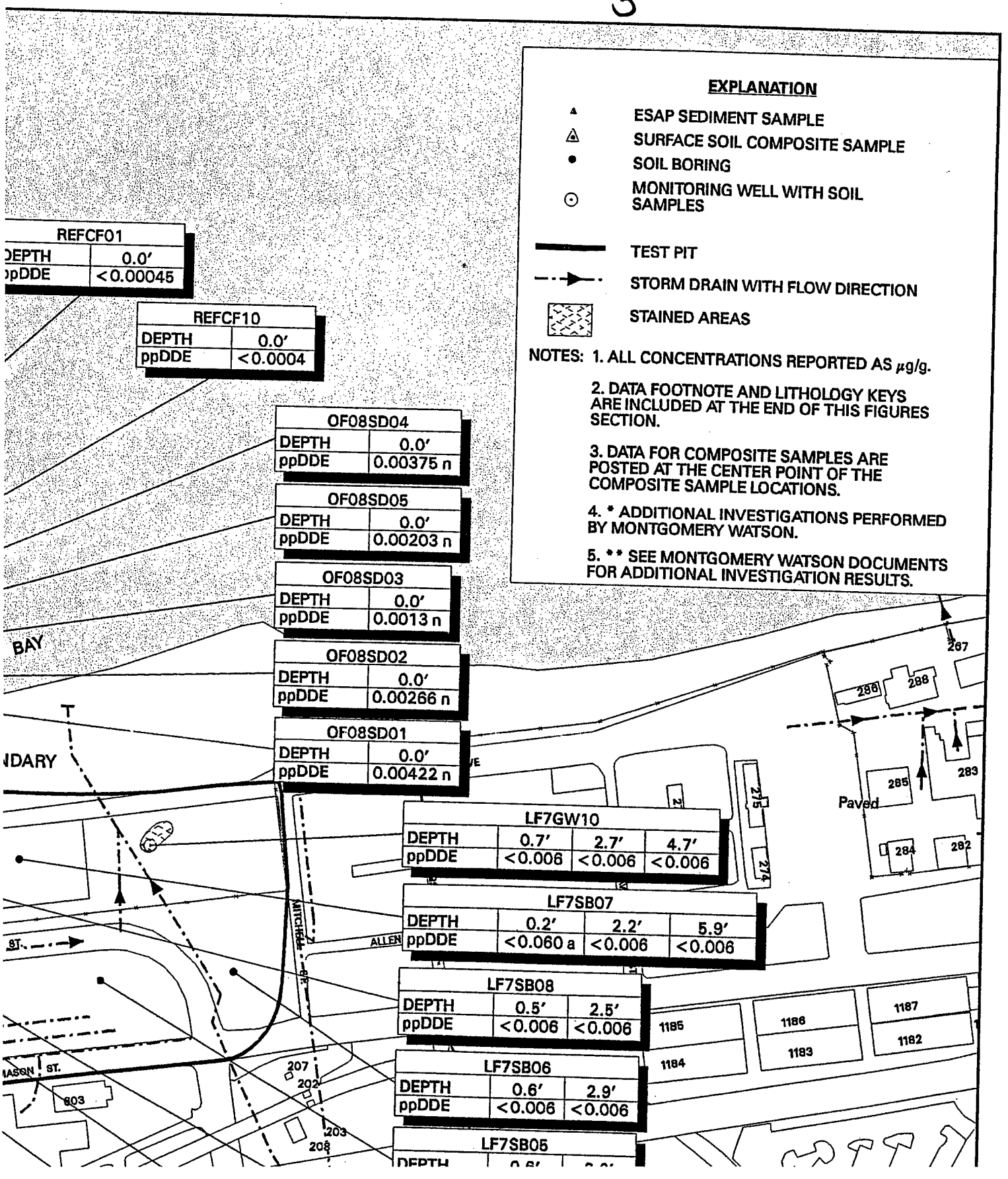
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF BENZO(A)PYRENE IN SOIL

PFS26508

Date: January 1997 | Figure 5.5-31


REFCF03
DEPTH 0.0′
ppDDE <0.00045
REFCF06
DEPTH 0.0′
ppDDE 0.000553
OF10SD05
DEPTH 0.0′
ppDDE <0.0004
OF10SD04
DEPTH 0.0′
ppDDE <0.0004
OF10SD03
DEPTH 0.0′
ppDDE <0.0004
OF10SD02
DEPTH 0.0′
ppDDE <0.0004
OF10SD01
DEPTH 0.0′
ppDDE <0.0004
LF7SO01
DEPTH 4.2′
ppDDE <0.003
LF7TP02
DEPTH 7.0′
ppDDE <0.003
LF7SO02
DEPTH 4.3′
ppDDE <0.003
LF7TP03
DEPTH 7.0′
ppDDE <0.003
LF7TP01
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
CONSOLIDATED MOTOR POOL AREA*
MARINE RD
ST
931
909
914
910
915
911
912
907
916
917
913
652
656


REFCF05
DEPTH 0.0′
ppDDE <0.00045
REFCF02
DEPTH 0.0′
ppDDE <0.00045
REFCF04
DEPTH 0.0′
ppDDE <0.00045
REFCF06
DEPTH 0.0′
ppDDE 0.000553
REFCF09
DEPTH 0.0′
ppDDE <0.0004
REFCF07
DEPTH 0.0′
ppDDE <0.0004
REFCF08
DEPTH 0.0′
ppDDE <0.0004
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
POL AREA
656
603
605


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
REFCF01
DEPTH 0.0′
ppDDE <0.00045
REFCF10
DEPTH 0.0′
ppDDE <0.0004
OF08SD04
DEPTH 0.0′
ppDDE 0.00375 n
OF08SD05
DEPTH 0.0′
ppDDE 0.00203 n
OF08SD03
DEPTH 0.0′
ppDDE 0.0013 n
OF08SD02
DEPTH 0.0′
ppDDE 0.00266 n
OF08SD01
DEPTH 0.0′
ppDDE 0.00422 n
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
ppDDE <0.006 <0.006 <0.006
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
ppDDE <0.060 a <0.006 <0.006
LF7SB08
DEPTH 0.5′ 2.5′
ppDDE <0.006 <0.006
LF7SB06
DEPTH 0.6′ 2.9′
ppDDE <0.006 <0.006
LF7SB05
BAY
NDARY
ST.
MASON ST.
ALLEN
MITCHELL PL
Paved
267
286
288
285
283
284
282
275
274
207
202
203
208
603
1185
1184
1186
1183
1187
1182

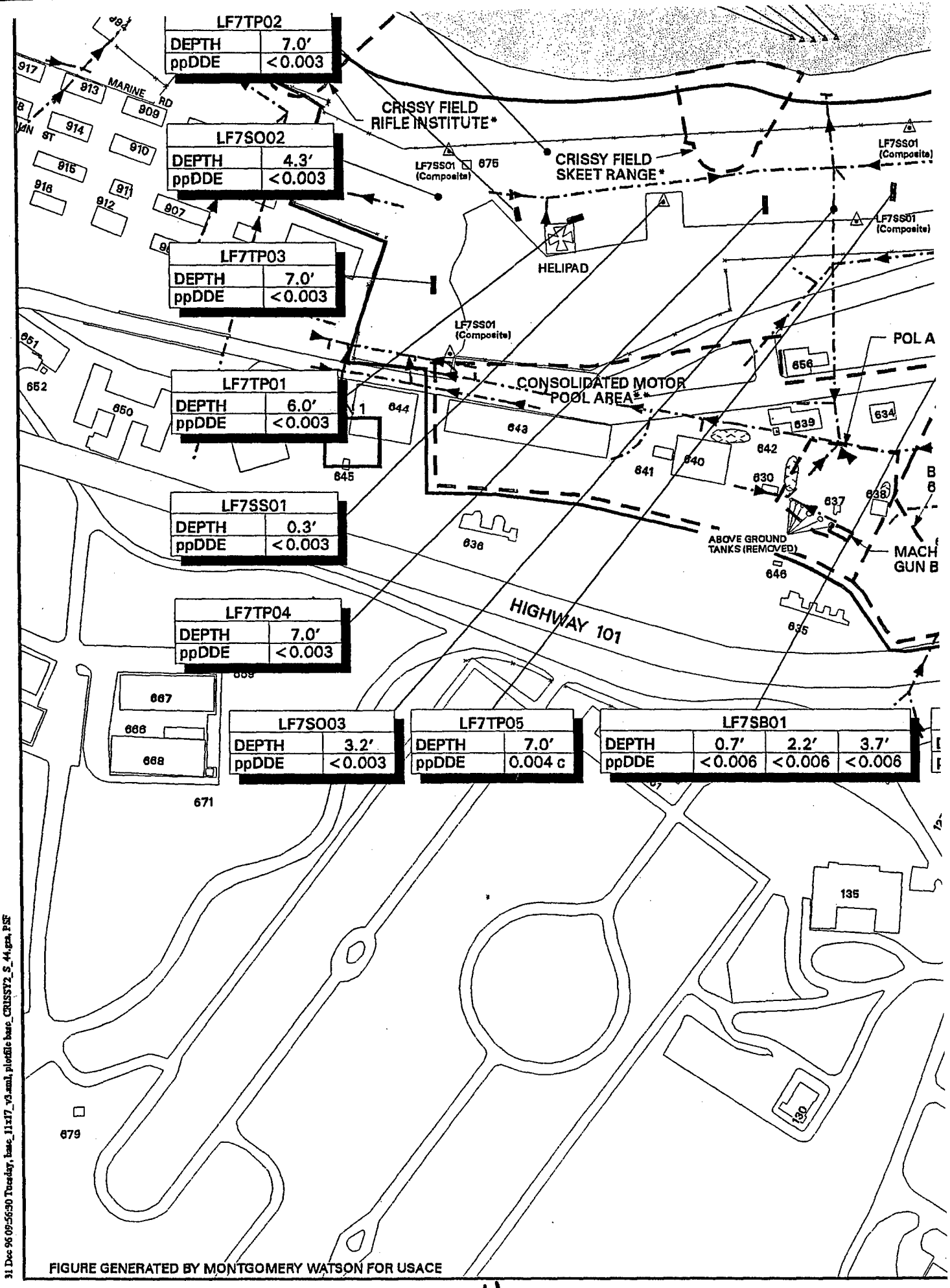
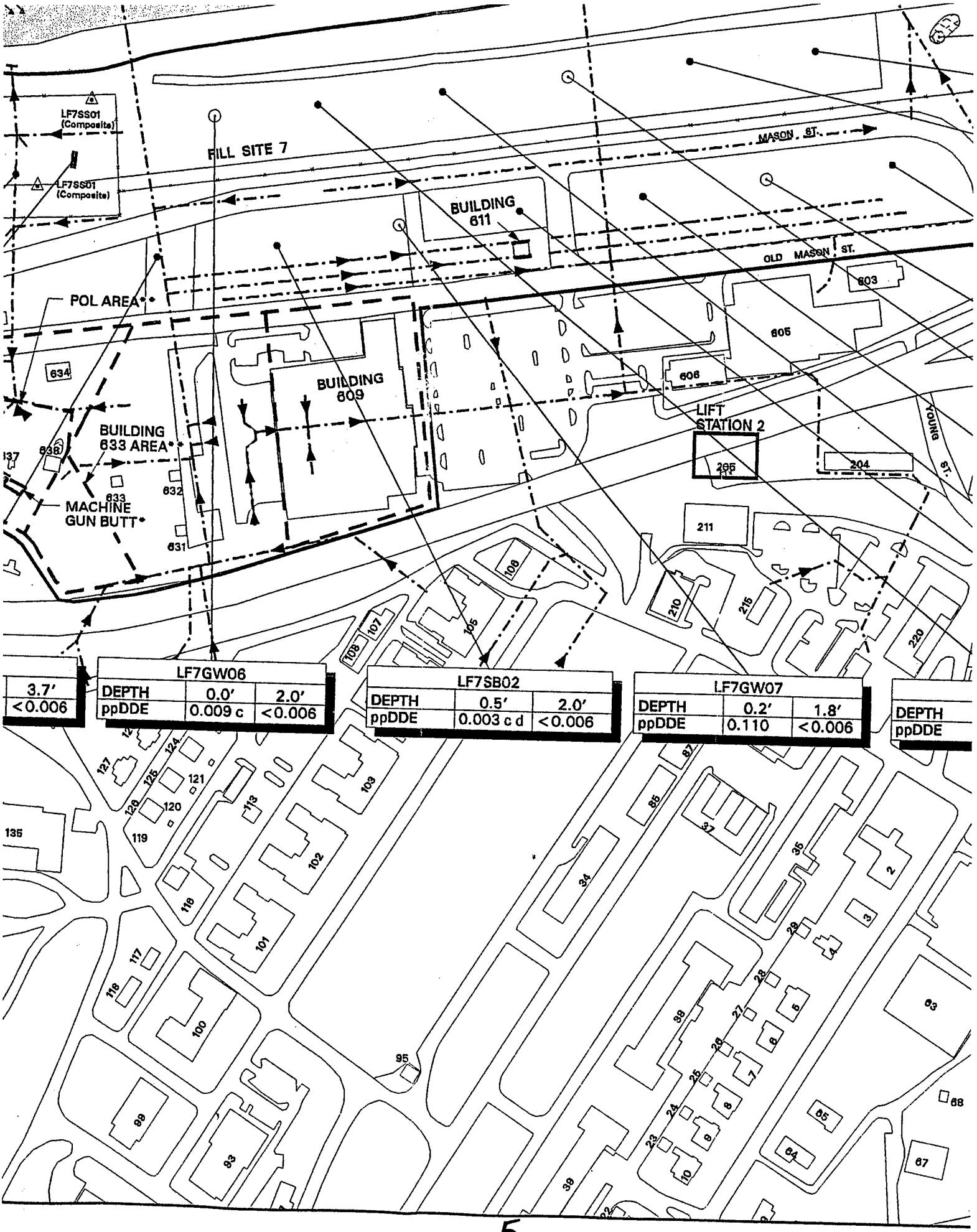
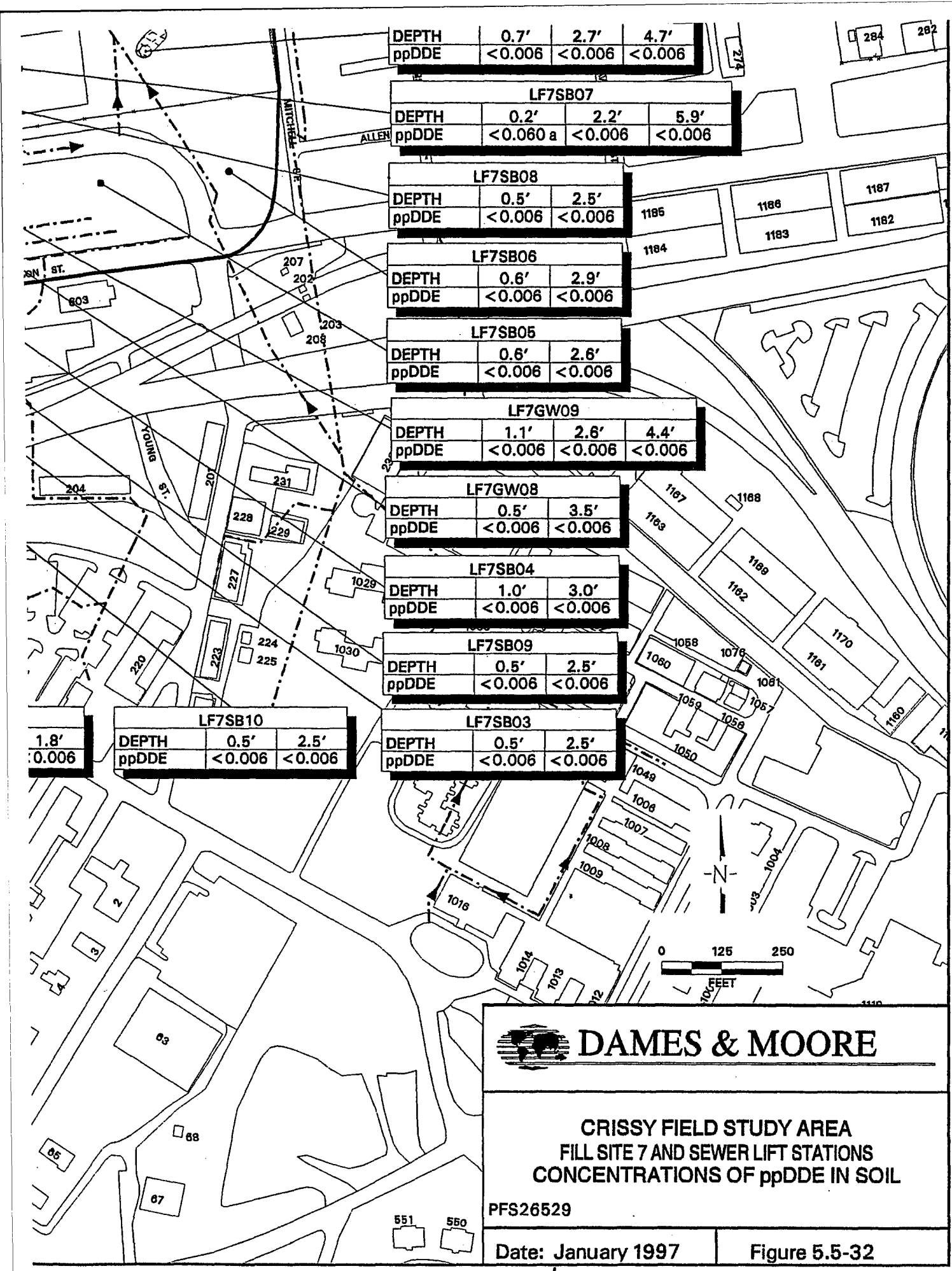


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

31 Dec 96 09:56:30 Tuesday, base_11x17_v3.aml, plotfile base_CRISSY2_S_44.cgm, PSF


LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
POL AREA*
BUILDING 609
BUILDING 633 AREA*
MACHINE GUN BUTT*
LIFT STATION 2
YOUNG ST.
634
638
633
632
631
603
605
606
295
204
211
108
107
105
210
215
220
135
119
120
121
124
125
127
102
103
101
100
99
98
95
93
87
86
37
35
34
2
3
28
4
5
6
7
8
9
10
23
24
25
26
27
38
39
63
64
65
67
68
LF7GW06
DEPTH 0.0′ 2.0′
ppDDE 0.009 c <0.006
3.7′
<0.006
LF7SB02
DEPTH 0.5′ 2.0′
ppDDE 0.003 c d <0.006
LF7GW07
DEPTH 0.2′ 1.8′
ppDDE 0.110 <0.006
DEPTH
ppDDE

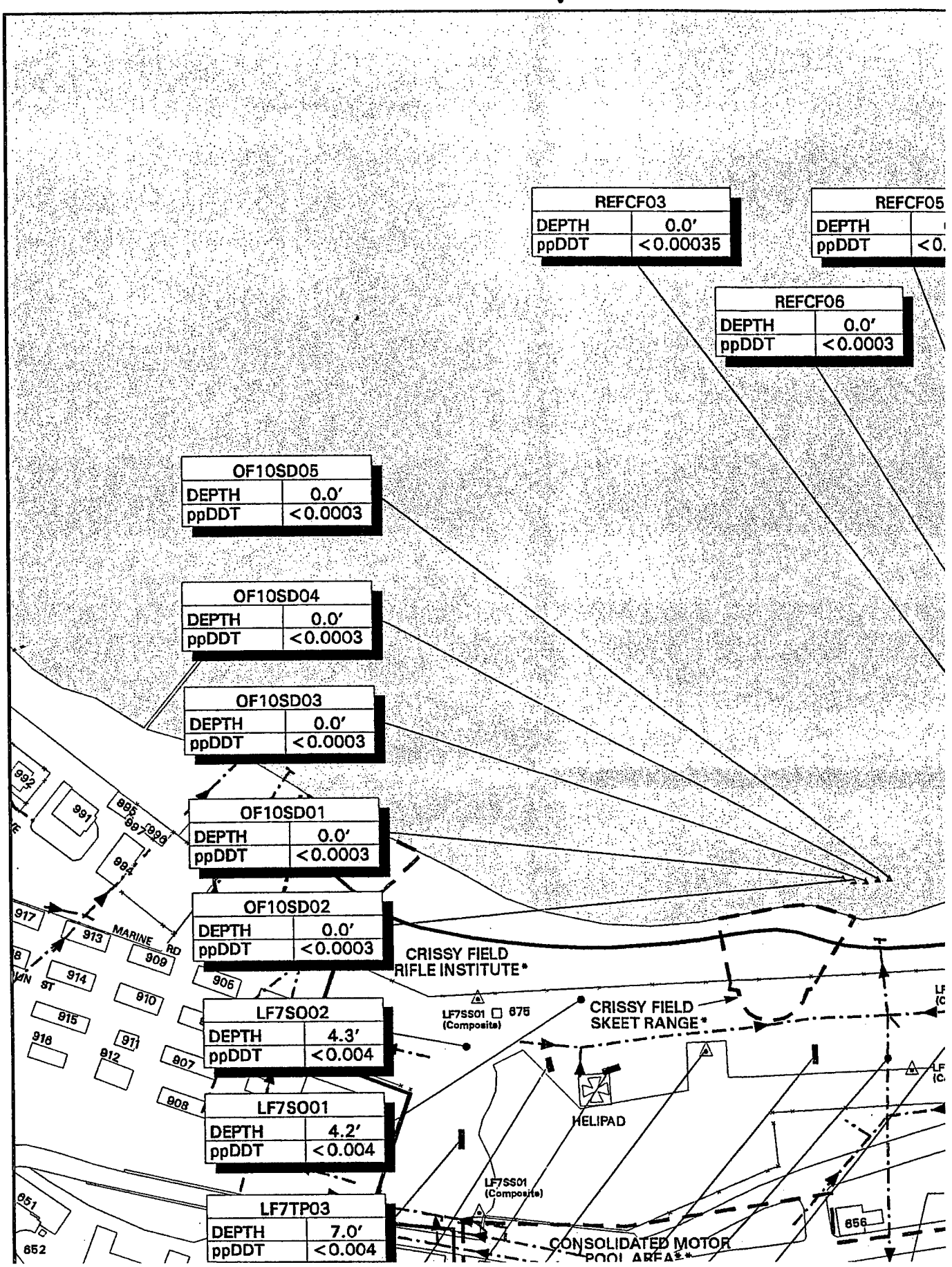


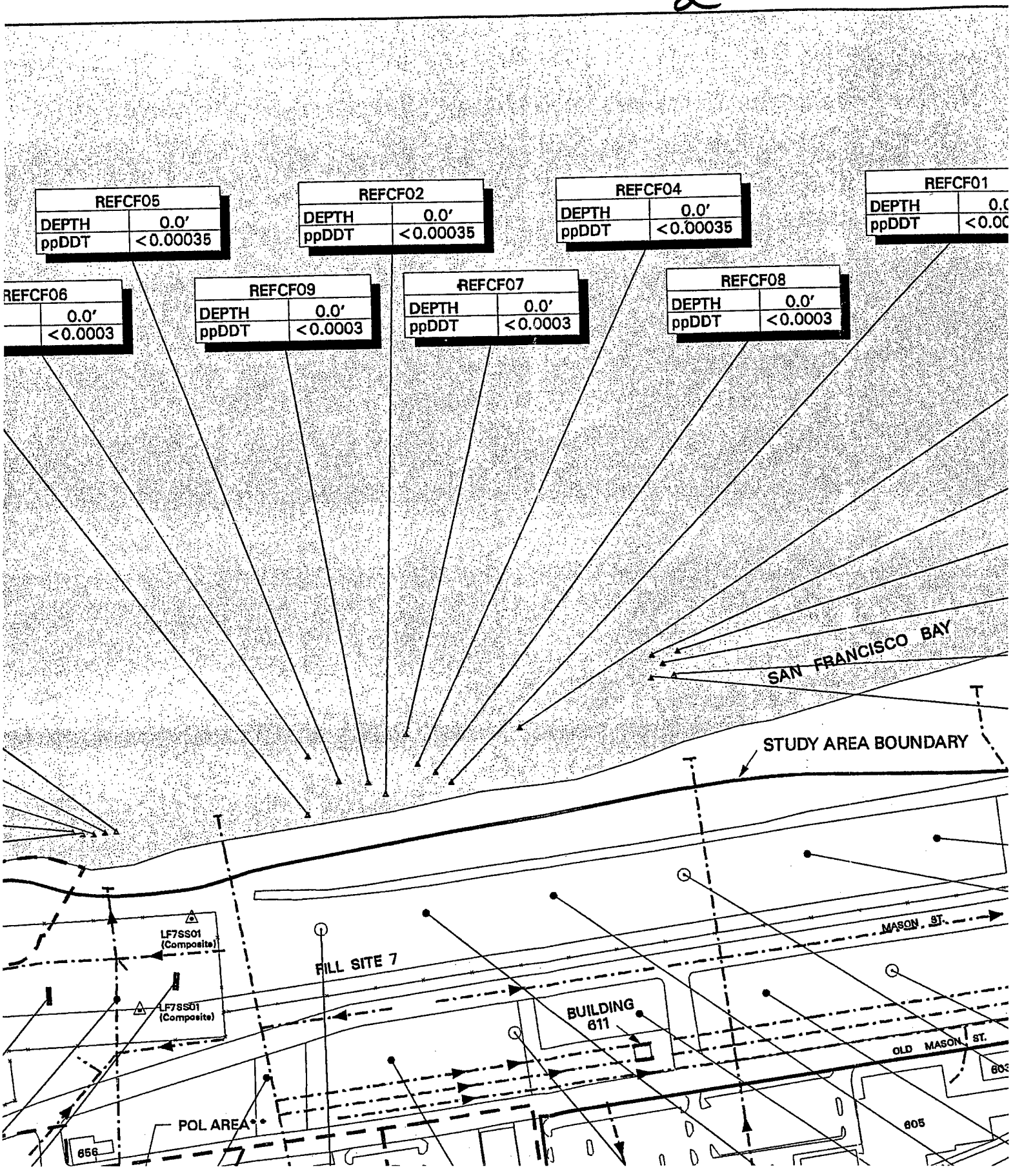
DAMES & MOORE

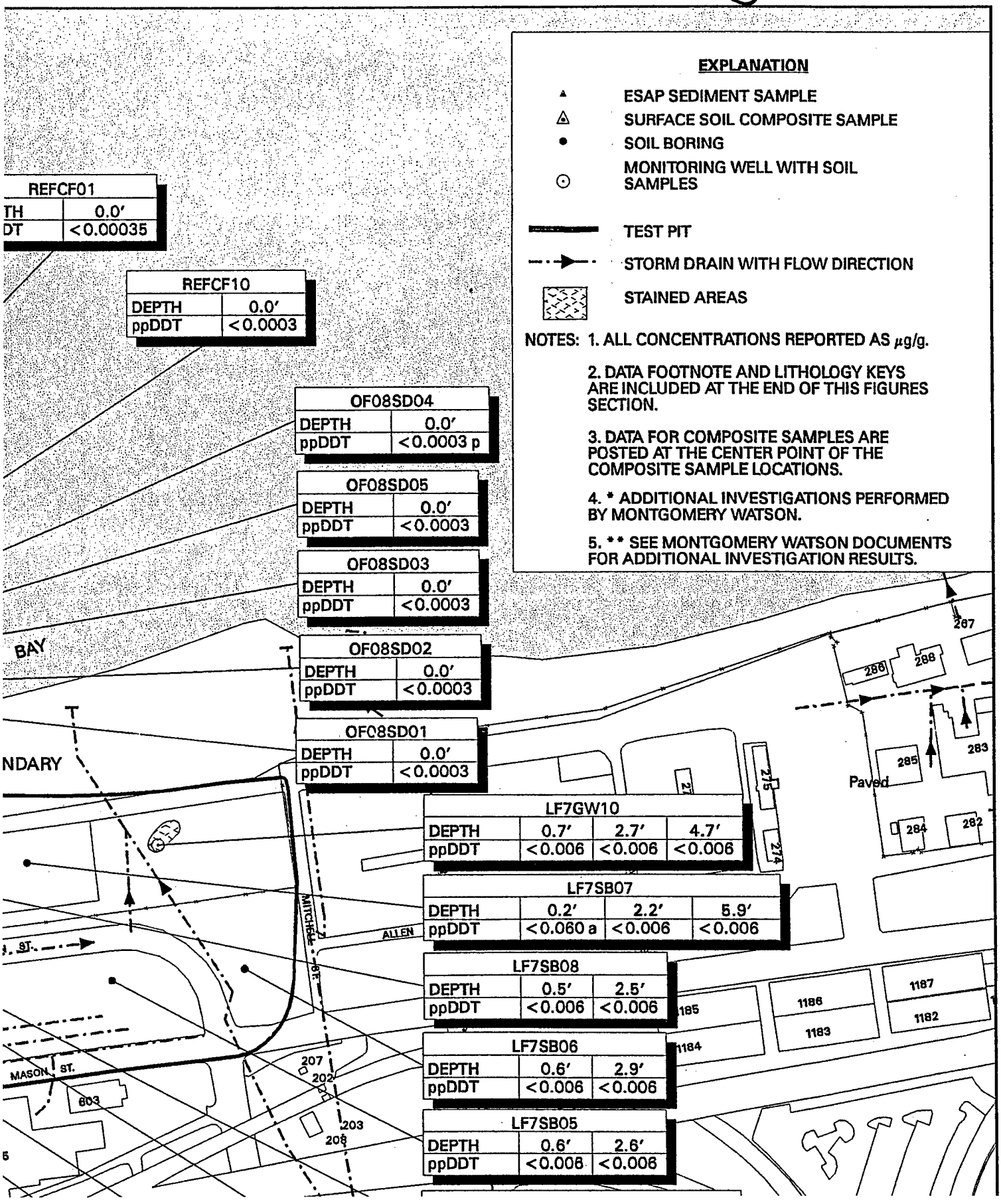
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF ppDDE IN SOIL

PFS26529

Date: January 1997 | Figure 5.5-32


REFCF03
DEPTH 0.0'
ppDDT <0.00035
REFCF05
DEPTH
ppDDT <0.
REFCF06
DEPTH 0.0'
ppDDT <0.0003
OF10SD05
DEPTH 0.0'
ppDDT <0.0003
OF10SD04
DEPTH 0.0'
ppDDT <0.0003
OF10SD03
DEPTH 0.0'
ppDDT <0.0003
OF10SD01
DEPTH 0.0'
ppDDT <0.0003
OF10SD02
DEPTH 0.0'
ppDDT <0.0003
LF7SO02
DEPTH 4.3'
ppDDT <0.004
LF7SO01
DEPTH 4.2'
ppDDT <0.004
LF7TP03
DEPTH 7.0'
ppDDT <0.004
MARINE RD
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
CONSOLIDATED MOTOR POOL AREA**
992
991
995
997
998
984
917
913
909
914
906
910
915
916
911
912
907
908
651
652
856


REFCF05
DEPTH 0.0'
ppDDT <0.00035
REFCF02
DEPTH 0.0'
ppDDT <0.00035
REFCF04
DEPTH 0.0'
ppDDT <0.00035
REFCF01
DEPTH 0.0
ppDDT <0.00
REFCF06
0.0'
<0.0003
REFCF09
DEPTH 0.0'
ppDDT <0.0003
REFCF07
DEPTH 0.0'
ppDDT <0.0003
REFCF08
DEPTH 0.0'
ppDDT <0.0003
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
POL AREA
656
605


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
REFCF01
TH 0.0′
DT <0.00035
REFCF10
DEPTH 0.0′
ppDDT <0.0003
OF08SD04
DEPTH 0.0′
ppDDT <0.0003 p
OF08SD05
DEPTH 0.0′
ppDDT <0.0003
OF08SD03
DEPTH 0.0′
ppDDT <0.0003
OF08SD02
DEPTH 0.0′
ppDDT <0.0003
OF08SD01
DEPTH 0.0′
ppDDT <0.0003
LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
ppDDT <0.006 <0.006 <0.006
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
ppDDT <0.060 a <0.006 <0.006
LF7SB08
DEPTH 0.5′ 2.5′
ppDDT <0.006 <0.006
LF7SB06
DEPTH 0.6′ 2.9′
ppDDT <0.006 <0.006
LF7SB05
DEPTH 0.6′ 2.6′
ppDDT <0.006 <0.006
BAY
NDARY
MASON ST.
ALLEN
MITCHELL
Paved
207
286
288
283
285
284
282
275
274
185
1184
1186
1187
1183
1182
603
207
202
203
208

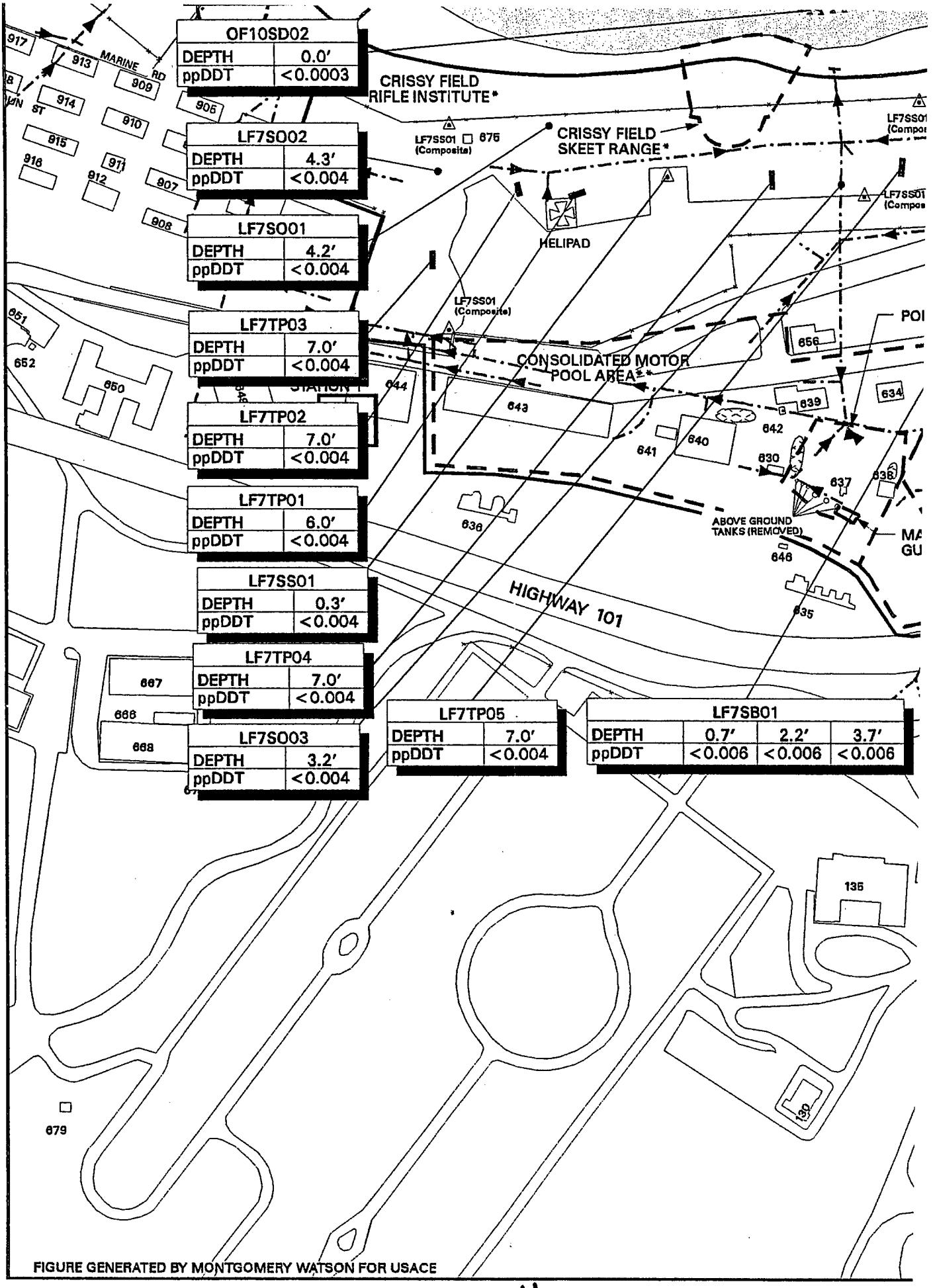
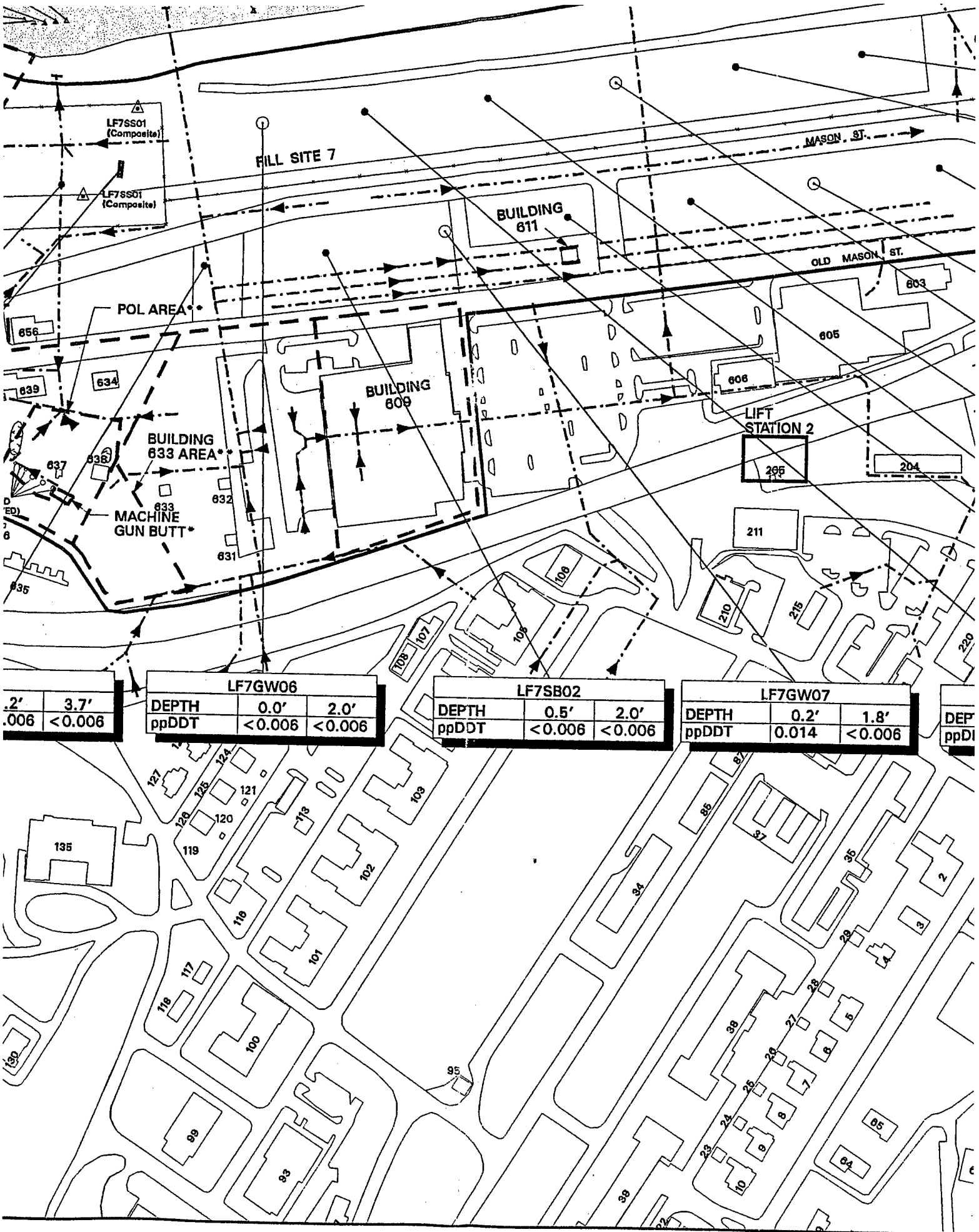


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

31 Dec 96 09:11:00 Tuesday, base_11x17_v3.aml, plotfile base_CRISSY2_S_45.gra, PSF



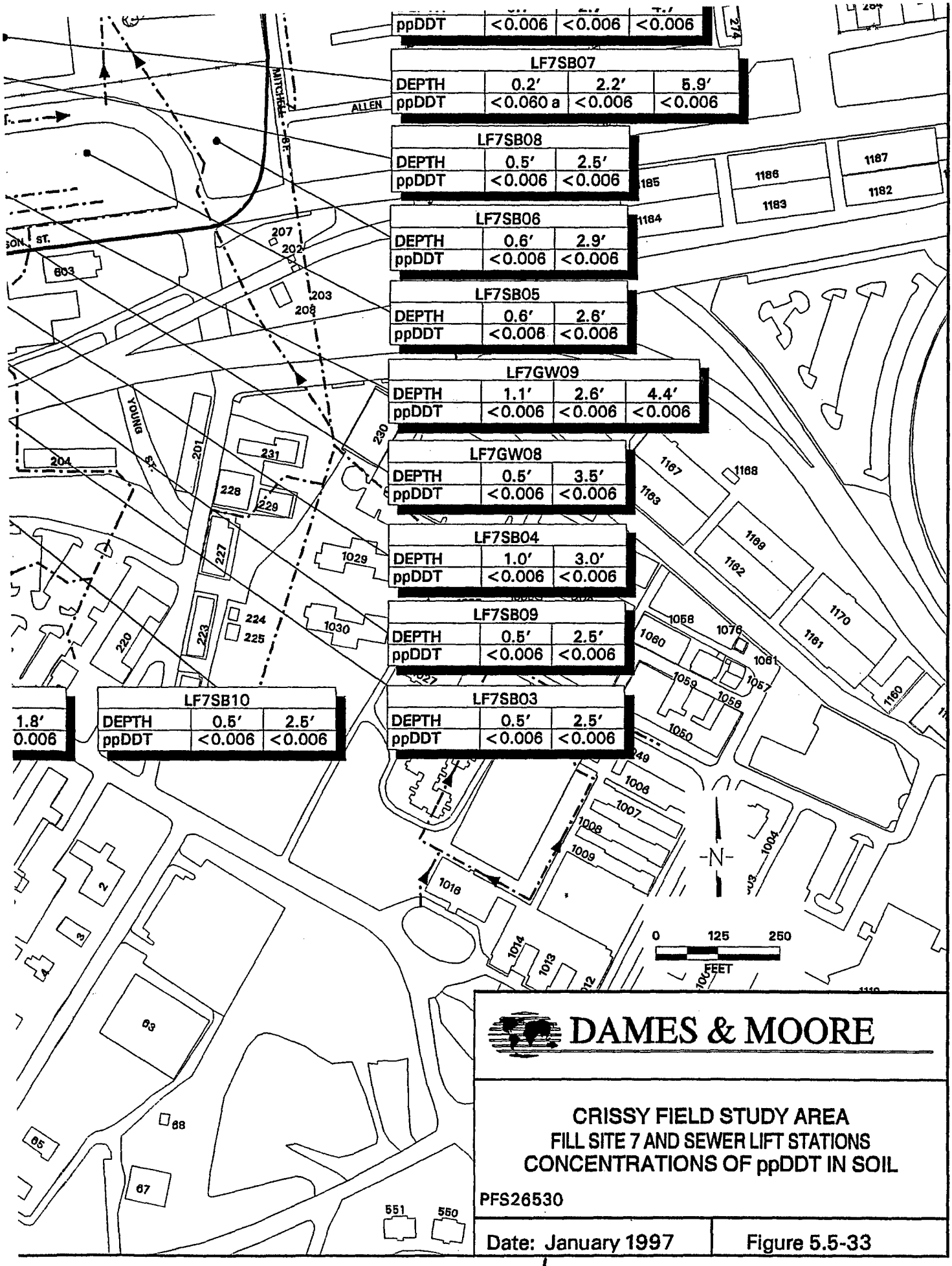
.2′	3.7′	
.006	<0.006	

LF7GW06		
DEPTH	0.0′	2.0′
ppDDT	<0.006	<0.006

LF7SB02		
DEPTH	0.5′	2.0′
ppDDT	<0.006	<0.006

LF7GW07		
DEPTH	0.2′	1.8′
ppDDT	0.014	<0.006

DEP	
ppDI	

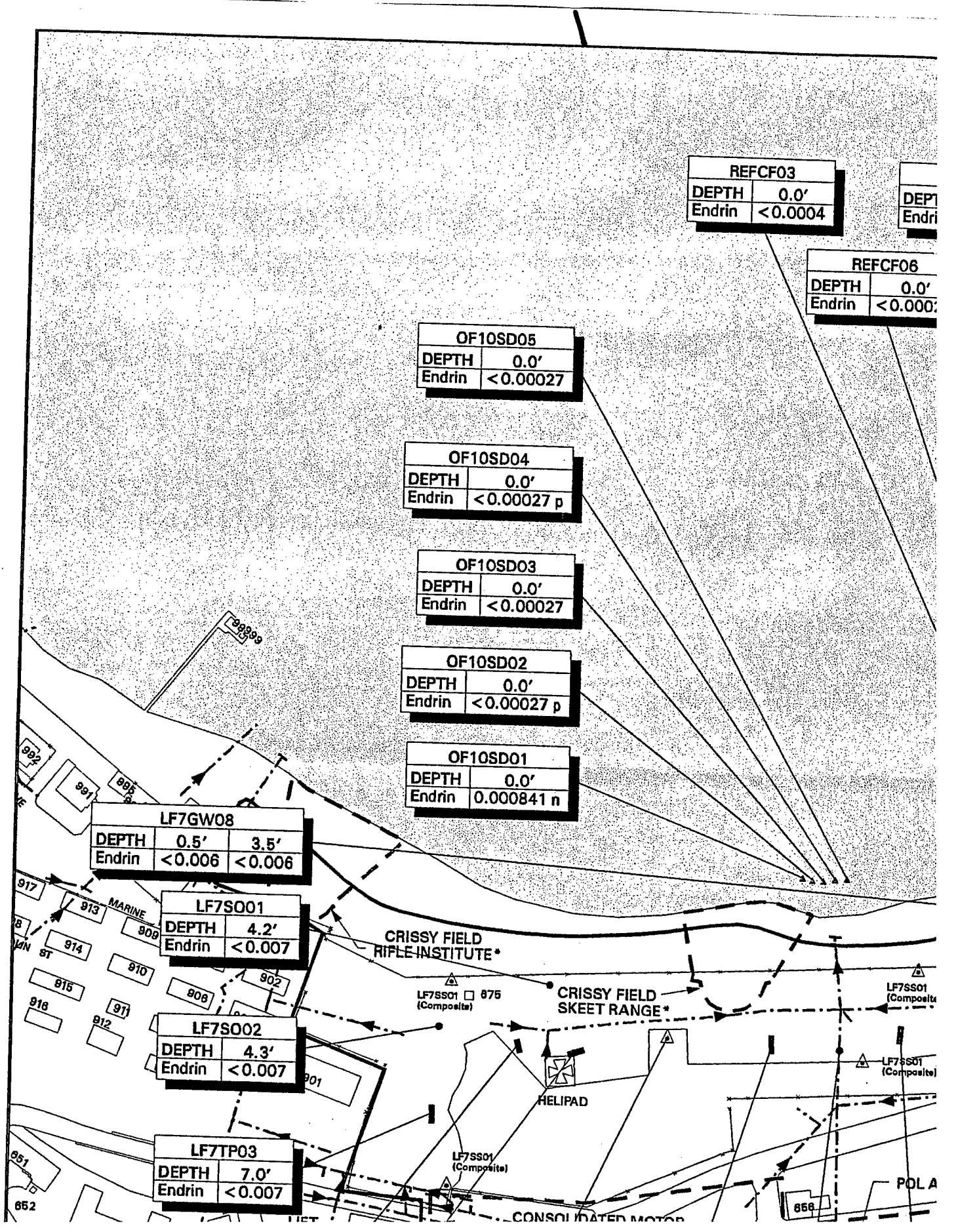


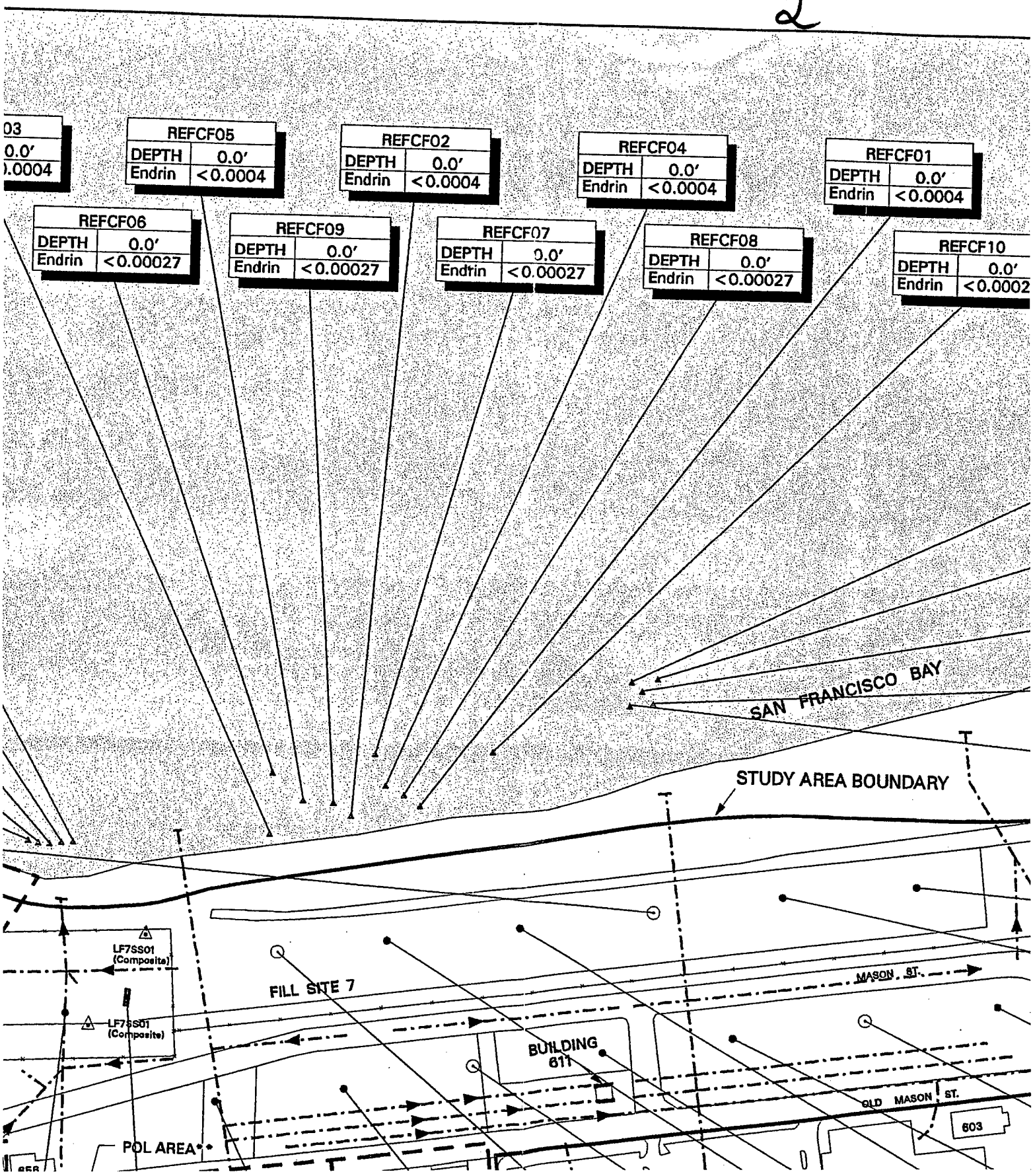
DAMES & MOORE

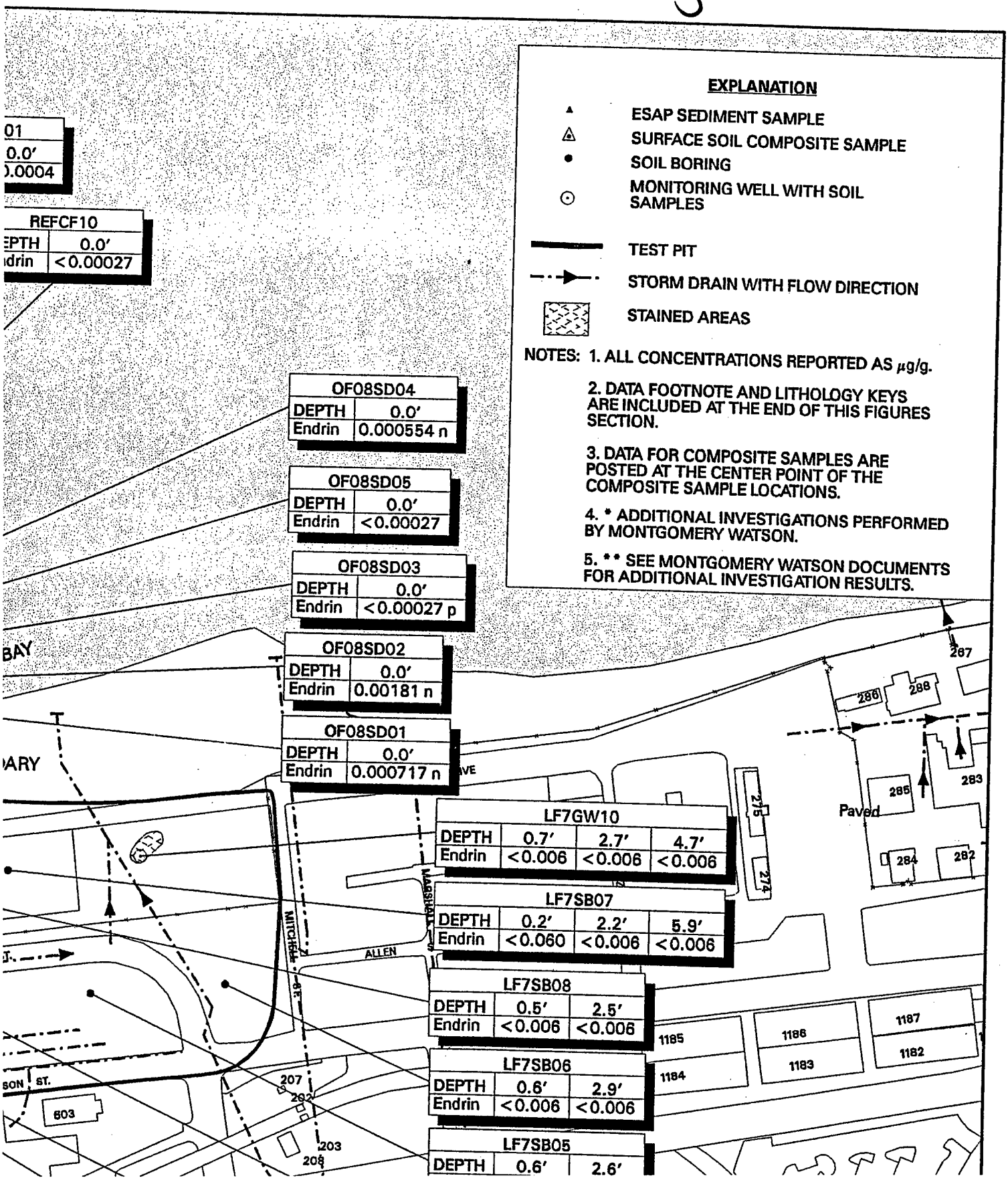
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF ppDDT IN SOIL

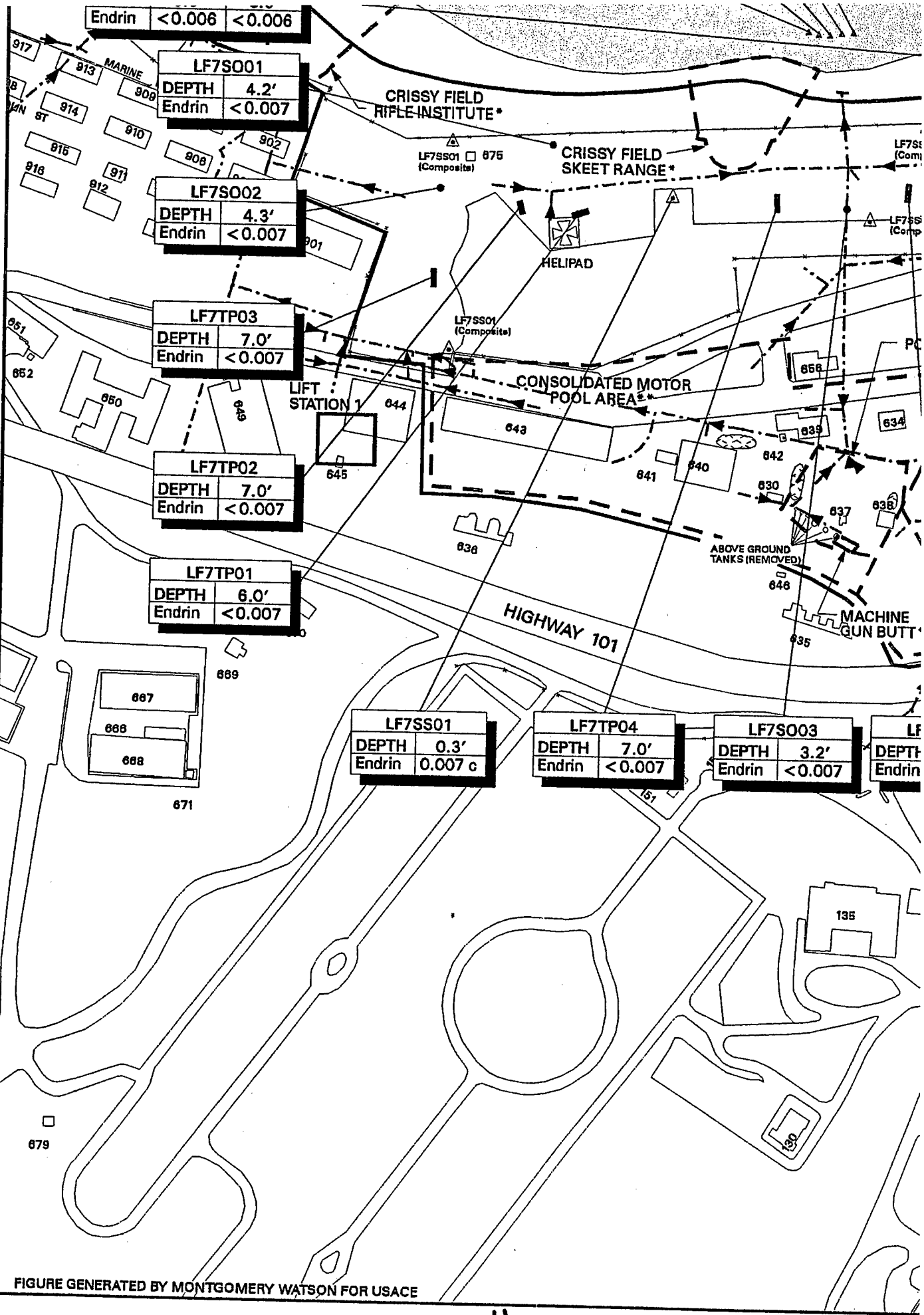
PFS26530

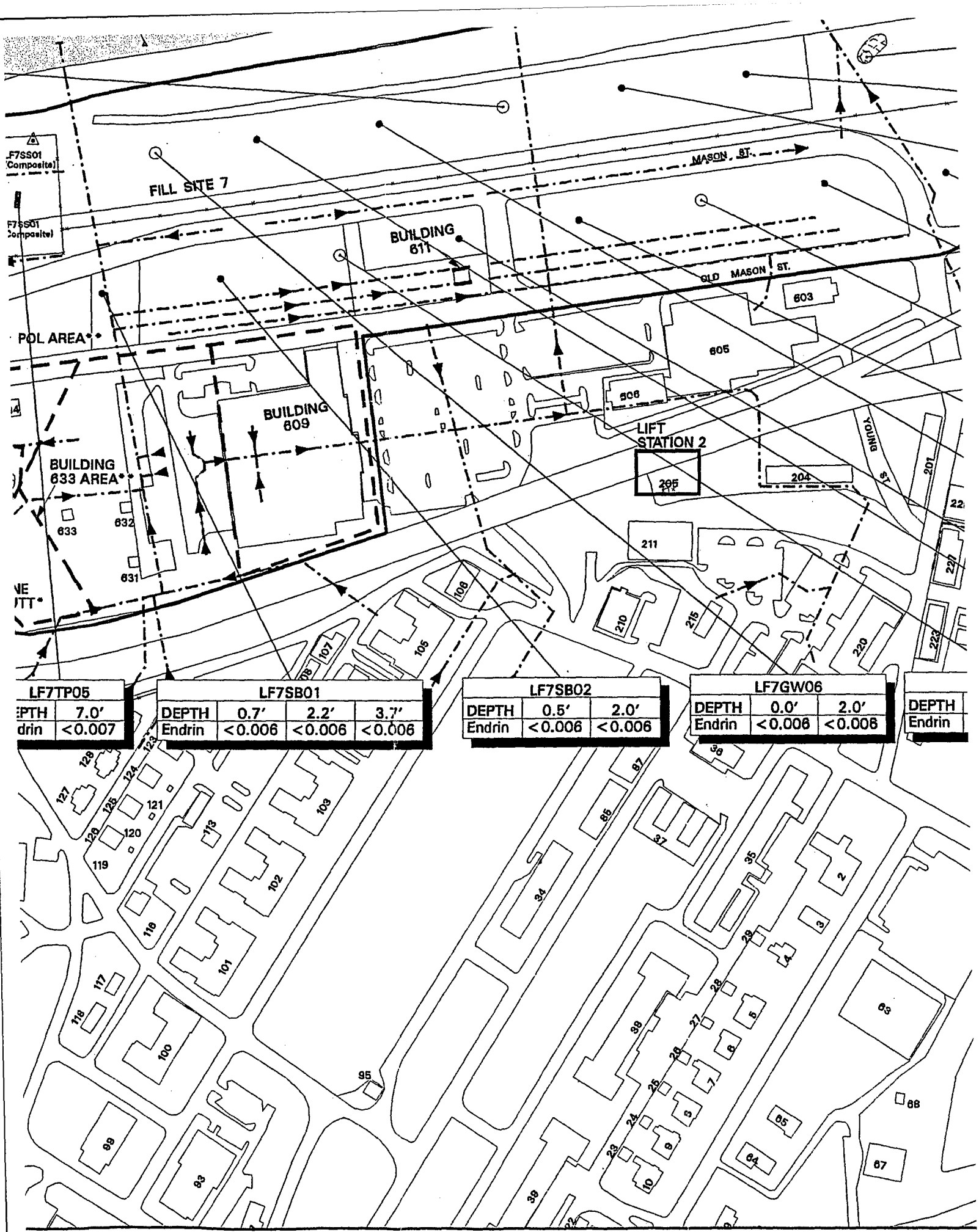
Date: January 1997 | Figure 5.5-33

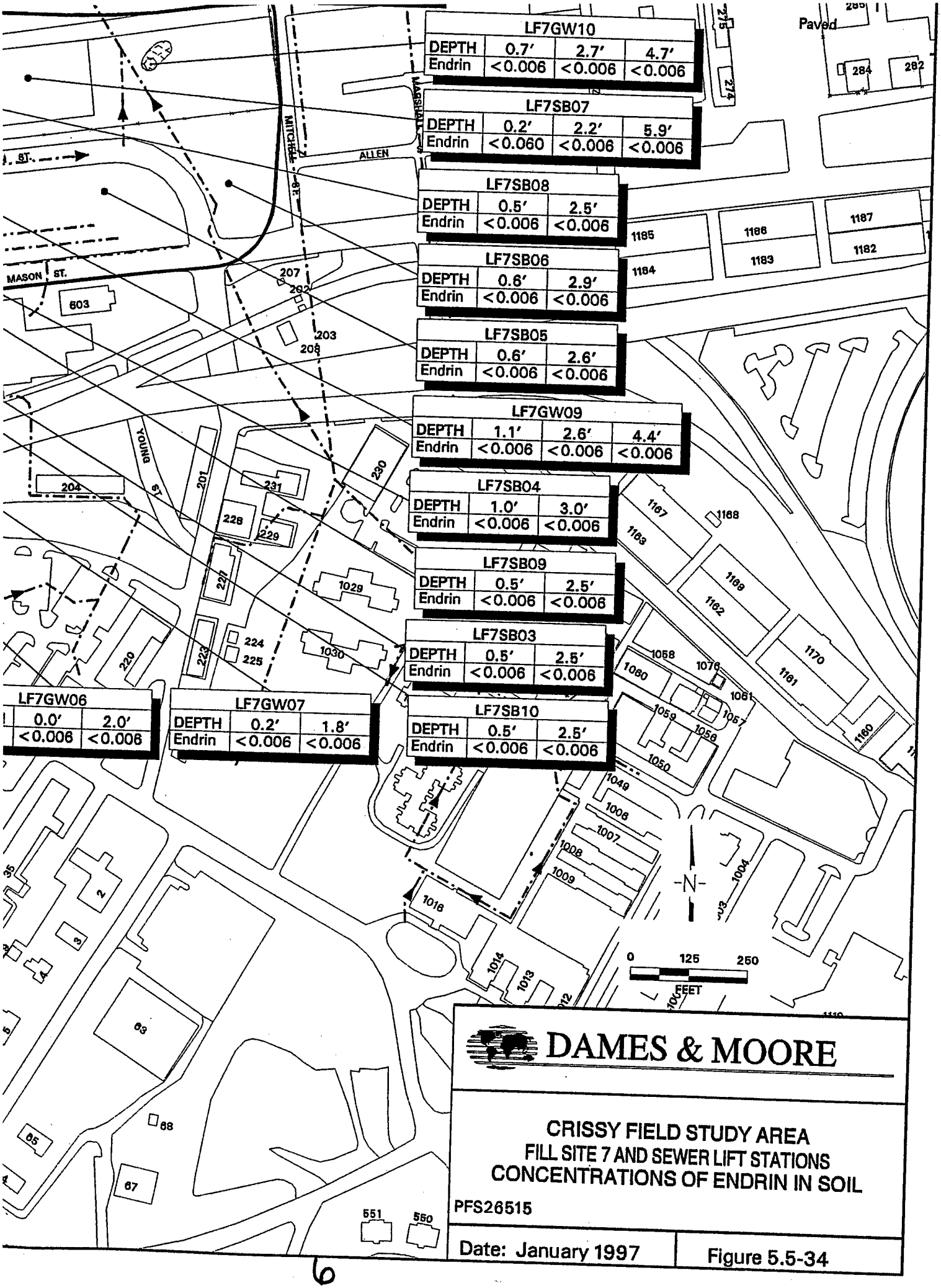

REFCF03
DEPTH 0.0′
Endrin <0.0004
REFCF06
DEPTH 0.0′
Endrin <0.000
OF10SD05
DEPTH 0.0′
Endrin <0.00027
OF10SD04
DEPTH 0.0′
Endrin <0.00027 p
OF10SD03
DEPTH 0.0′
Endrin <0.00027
OF10SD02
DEPTH 0.0′
Endrin <0.00027 p
OF10SD01
DEPTH 0.0′
Endrin 0.000841 n
LF7GW08
DEPTH 0.5′ 3.5′
Endrin <0.006 <0.006
LF7SO01
DEPTH 4.2′
Endrin <0.007
LF7SO02
DEPTH 4.3′
Endrin <0.007
LF7TP03
DEPTH 7.0′
Endrin <0.007
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
MARINE
CONSOLIDATED MOTOR
POL A

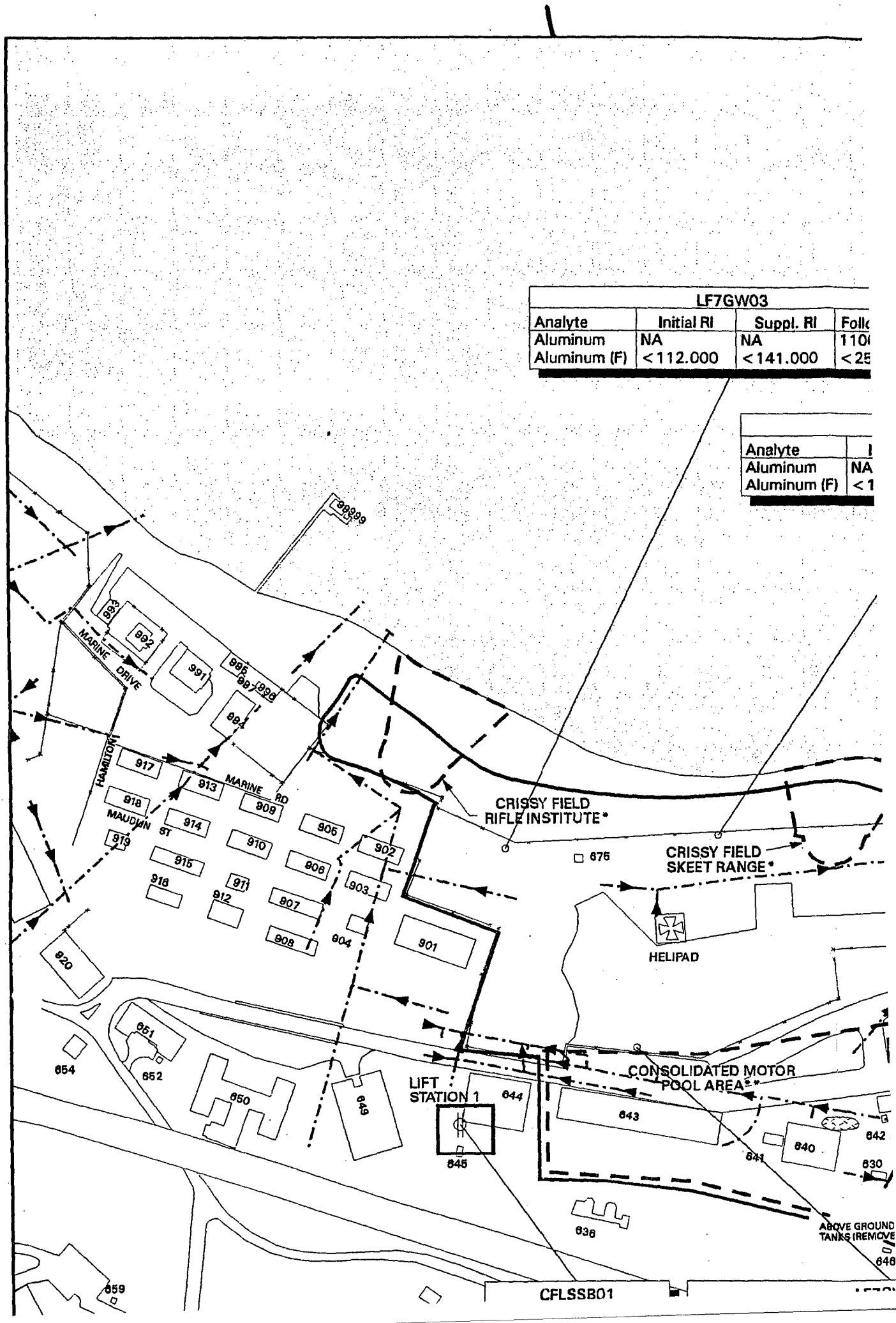

03
0.0′
.0004
REFCF05
DEPTH 0.0′
Endrin <0.0004
REFCF02
DEPTH 0.0′
Endrin <0.0004
REFCF04
DEPTH 0.0′
Endrin <0.0004
REFCF01
DEPTH 0.0′
Endrin <0.0004
REFCF06
DEPTH 0.0′
Endrin <0.00027
REFCF09
DEPTH 0.0′
Endrin <0.00027
REFCF07
DEPTH 0.0′
Endrin <0.00027
REFCF08
DEPTH 0.0′
Endrin <0.00027
REFCF10
DEPTH 0.0′
Endrin <0.0002
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
LF7SS01 (Composite)
LF7SS01 (Composite)
FILL SITE 7
MASON ST.
BUILDING 611
OLD MASON ST.
603
POL AREA


EXPLANATION
ESAP SEDIMENT SAMPLE
SURFACE SOIL COMPOSITE SAMPLE
SOIL BORING
MONITORING WELL WITH SOIL SAMPLES
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/g.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. DATA FOR COMPOSITE SAMPLES ARE POSTED AT THE CENTER POINT OF THE COMPOSITE SAMPLE LOCATIONS.
4. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
5. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
01
0.0'
0.0004
REFCF10
EPTH 0.0'
drin <0.00027
OF08SD04
DEPTH 0.0'
Endrin 0.000554 n
OF08SD05
DEPTH 0.0'
Endrin <0.00027
OF08SD03
DEPTH 0.0'
Endrin <0.00027 p
OF08SD02
DEPTH 0.0'
Endrin 0.00181 n
OF08SD01
DEPTH 0.0'
Endrin 0.000717 n
LF7GW10
DEPTH 0.7' 2.7' 4.7'
Endrin <0.006 <0.006 <0.006
LF7SB07
DEPTH 0.2' 2.2' 5.9'
Endrin <0.060 <0.006 <0.006
LF7SB08
DEPTH 0.5' 2.5'
Endrin <0.006 <0.006
LF7SB06
DEPTH 0.6' 2.9'
Endrin <0.006 <0.006
LF7SB05
DEPTH 0.6' 2.6'
BAY
ARY
MITCHELL
ALLEN
MARSHALL
Paved
603
207
282
203
208
267
286
288
283
285
284
282
275
274
1185
1184
1186
1183
1187
1182


Endrin | <0.006 | <0.006
LF7SO01
DEPTH | 4.2'
Endrin | <0.007
LF7SO02
DEPTH | 4.3'
Endrin | <0.007
LF7TP03
DEPTH | 7.0'
Endrin | <0.007
LF7TP02
DEPTH | 7.0'
Endrin | <0.007
LF7TP01
DEPTH | 6.0'
Endrin | <0.007
LF7SS01
DEPTH | 0.3'
Endrin | 0.007 c
LF7TP04
DEPTH | 7.0'
Endrin | <0.007
LF7SO03
DEPTH | 3.2'
Endrin | <0.007
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
LF7SS01 (Composite)
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
HIGHWAY 101
MARINE
23 Dec 96 12:37:54 Monday, base_11x17_v5.aml, plotfile base_CRISST2_S_39.gra, PSF
FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE


FILL SITE 7
MASON ST.
OLD MASON ST.
BUILDING 611
BUILDING 609
POL AREA
BUILDING 633 AREA
LIFT STATION 2
YOUNG ST.
603
605
606
204
295
211
633
632
631
LF7TP05
DEPTH 7.0'
Endrin <0.007
LF7SB01
DEPTH 0.7' 2.2' 3.7'
Endrin <0.006 <0.006 <0.006
LF7SB02
DEPTH 0.5' 2.0'
Endrin <0.006 <0.006
LF7GW06
DEPTH 0.0' 2.0'
Endrin <0.006 <0.006
DEPTH
Endrin


LF7GW10
DEPTH 0.7′ 2.7′ 4.7′
Endrin <0.006 <0.006 <0.006
LF7SB07
DEPTH 0.2′ 2.2′ 5.9′
Endrin <0.060 <0.006 <0.006
LF7SB08
DEPTH 0.5′ 2.5′
Endrin <0.006 <0.006
LF7SB06
DEPTH 0.6′ 2.9′
Endrin <0.006 <0.006
LF7SB05
DEPTH 0.6′ 2.6′
Endrin <0.006 <0.006
LF7GW09
DEPTH 1.1′ 2.6′ 4.4′
Endrin <0.006 <0.006 <0.006
LF7SB04
DEPTH 1.0′ 3.0′
Endrin <0.006 <0.006
LF7SB09
DEPTH 0.5′ 2.5′
Endrin <0.006 <0.006
LF7SB03
DEPTH 0.5′ 2.5′
Endrin <0.006 <0.006
LF7SB10
DEPTH 0.5′ 2.5′
Endrin <0.006 <0.006
LF7GW06
0.0′ 2.0′
<0.006 <0.006
LF7GW07
DEPTH 0.2′ 1.8′
Endrin <0.006 <0.006
MASON ST.
ALLEN
MITCHELL ST.
MARSHALL ST.
YOUNG ST.
Paved
0 125 250
FEET
N
DAMES & MOORE
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF ENDRIN IN SOIL
PFS26515
Date: January 1997
Figure 5.5-34


LF7GW03
Analyte | Initial RI | Suppl. RI | Follc
Aluminum | NA | NA | 110
Aluminum (F) | < 112.000 | < 141.000 | < 25
Analyte | I
Aluminum | NA
Aluminum (F) | < 1
MARINE DRIVE
HAMILTON
MAUDLIN ST
MARINE RD
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
CONSOLIDATED MOTOR POOL AREA**
LIFT STATION 1
ABOVE GROUND TANKS (REMOVE
CFLSSB01
999999
993
992
991
996
997
998
994
917
913
909
918
914
906
919
910
902
915
906
916
911
903
912
907
908
904
901
920
875
654
651
652
650
649
644
645
643
642
641
640
630
636
659
646

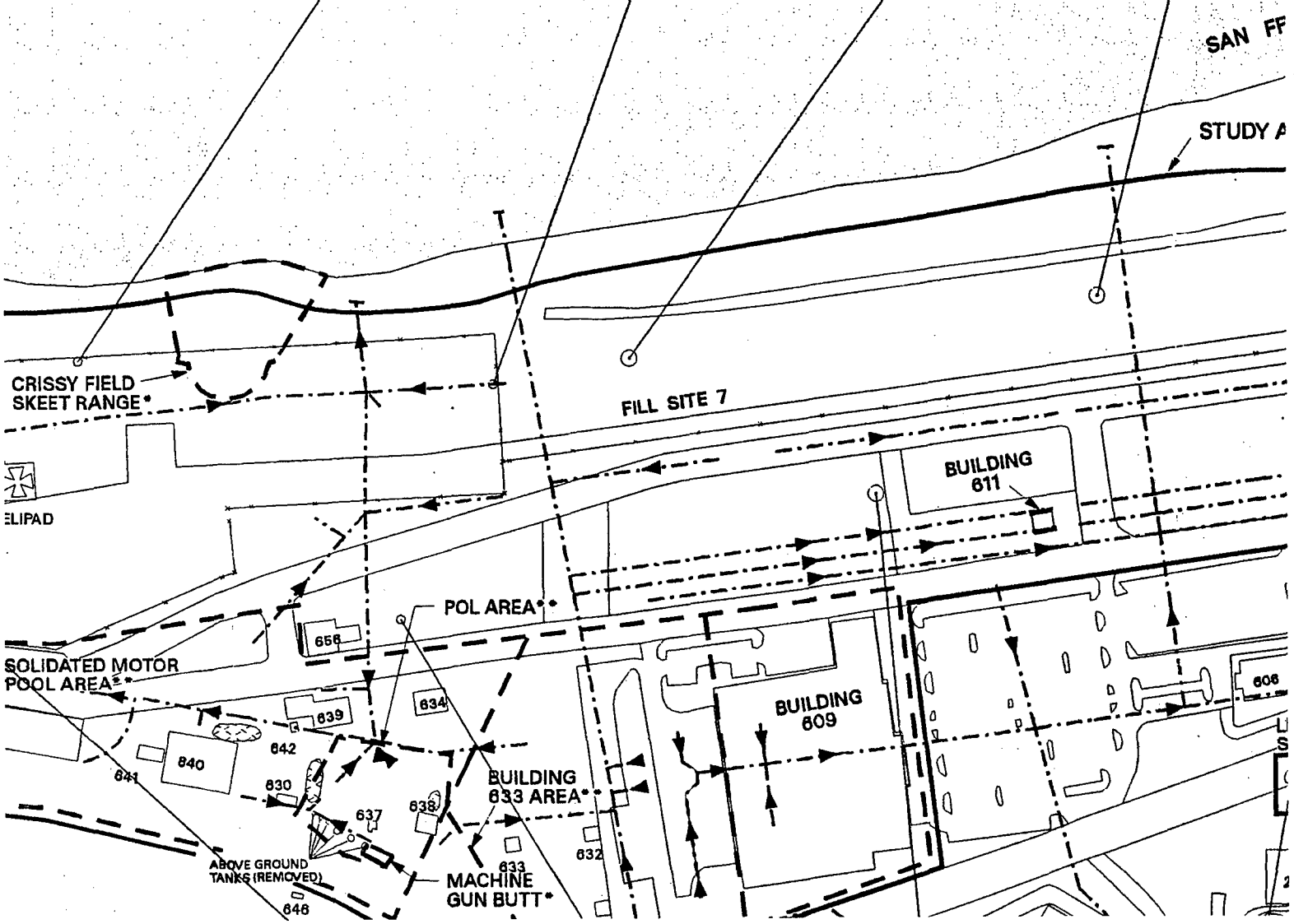
LF7GW03		
Initial RI	Suppl. RI	Follow-on RI
	NA	1100
12.000	< 141.000	< 25.0

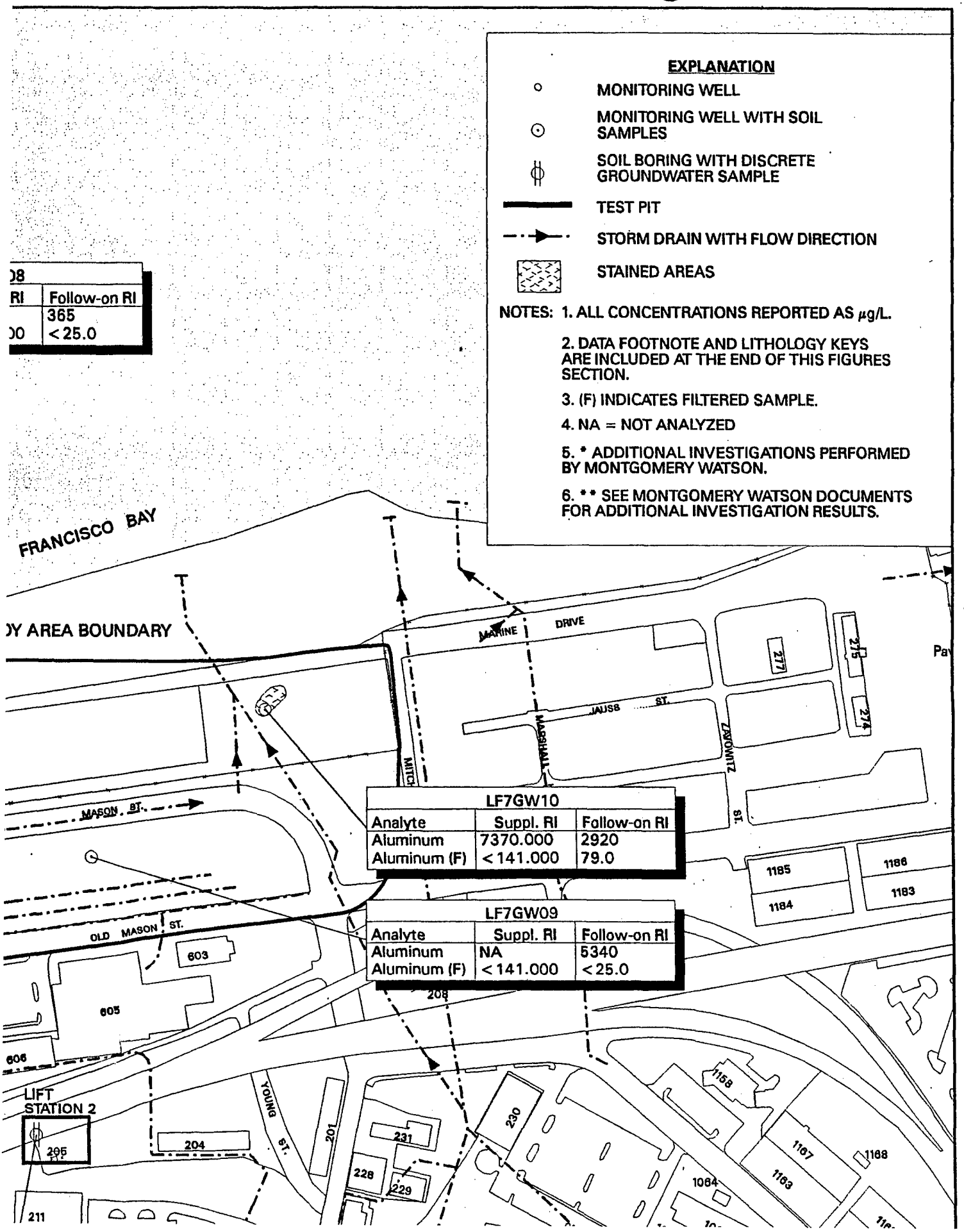
LF7GW05			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Aluminum	NA	NA	122 f
Aluminum (F)	< 112.000	< 141.000	< 25.0

LF7GW08	
Analyte	Suppl. RI
Aluminum	249.000
Aluminum (F)	< 141.000

LF7GW04			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Aluminum	NA	NA	328 f
Aluminum (F)	< 112.000	< 141.000	< 25.0

LF7GW06		
Analyte	Suppl. RI	Follow-on RI
Aluminum	1140.000	2130
Aluminum (F)	< 141.000	< 25.0




EXPLANATION
MONITORING WELL
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED
5. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
6. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
)8
RI | Follow-on RI
365
)0 | < 25.0
FRANCISCO BAY
)Y AREA BOUNDARY
MARINE DRIVE
JAUSS ST.
MARSHALL
ZAVOMITZ ST.
MITCH
MASON ST.
OLD MASON ST.
LF7GW10
Analyte | Suppl. RI | Follow-on RI
Aluminum | 7370.000 | 2920
Aluminum (F) | < 141.000 | 79.0
LF7GW09
Analyte | Suppl. RI | Follow-on RI
Aluminum | NA | 5340
Aluminum (F) | < 141.000 | < 25.0
LIFT STATION 2
YOUNG ST.
603
605
606
204
295
211
201
231
228
229
230
208
1158
1167
1168
1163
1064
1185
1186
1184
1183
277
275
274

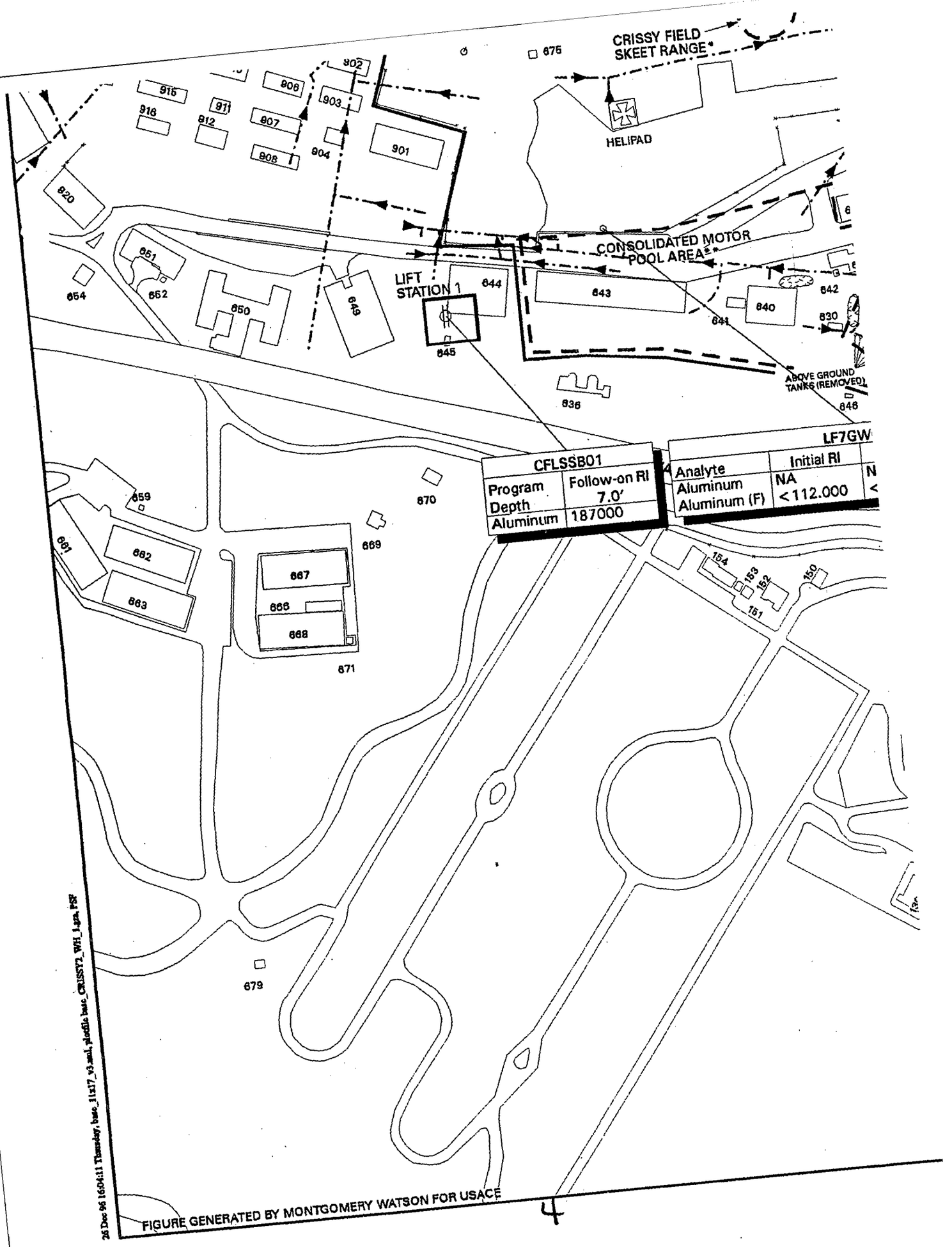
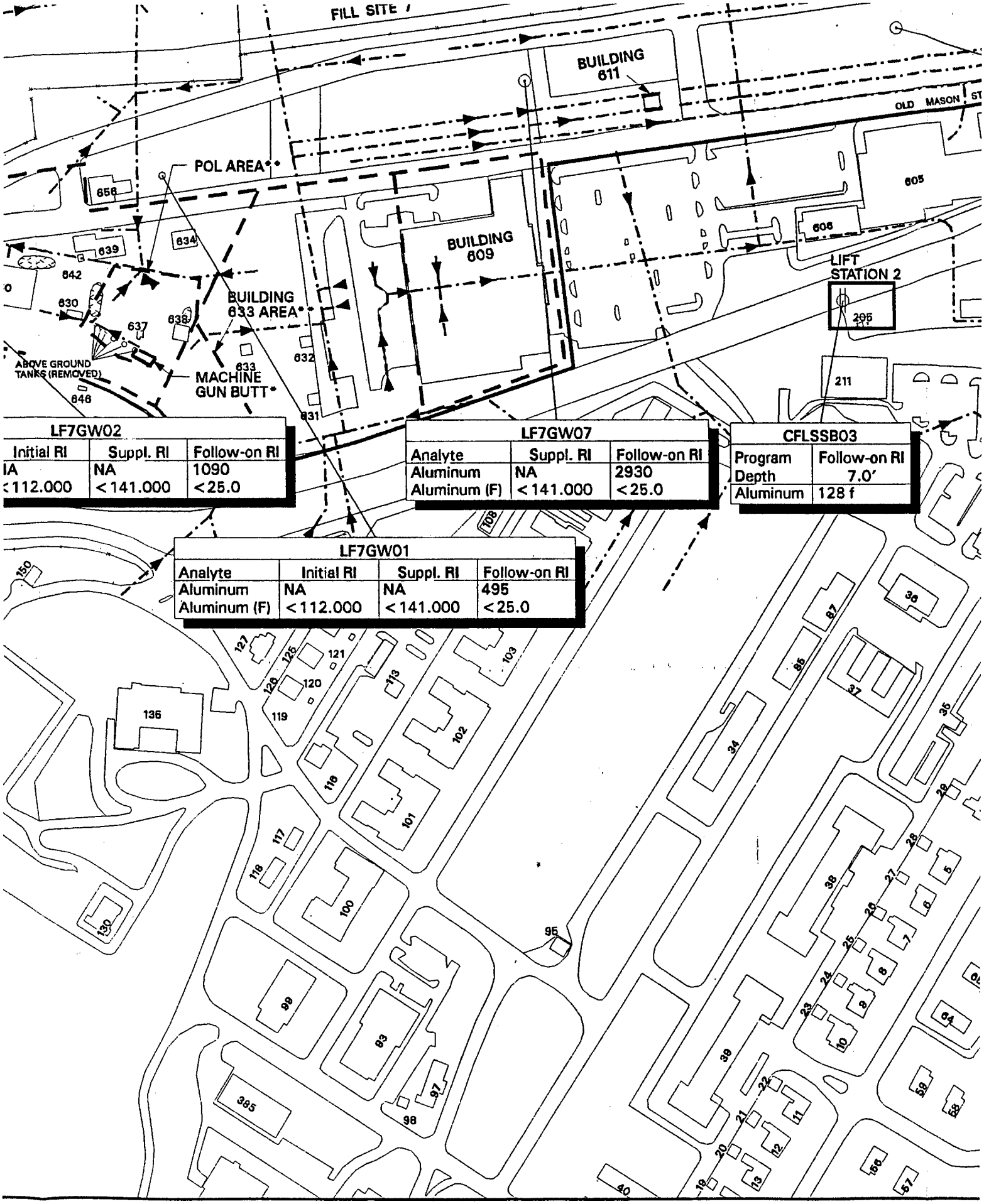
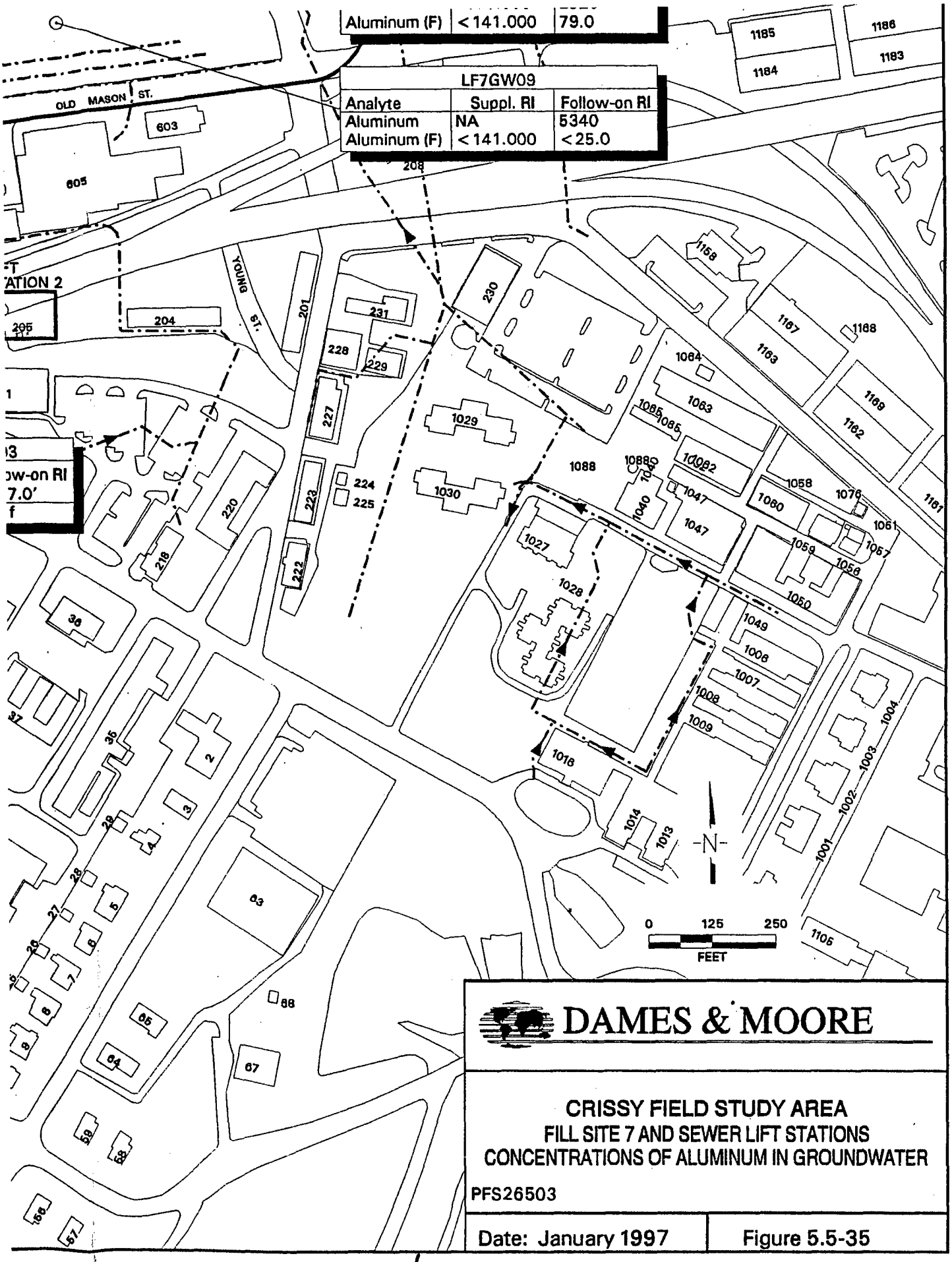


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE


FILL SITE
BUILDING 611
OLD MASON
POL AREA
656
634
639
642
630
637
638
BUILDING 633 AREA
633
632
631
646
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT
BUILDING 609
606
605
LIFT STATION 2
205
211
LF7GW02
Initial RI | Suppl. RI | Follow-on RI
IA | NA | 1090
<112.000 | <141.000 | <25.0
LF7GW07
Analyte | Suppl. RI | Follow-on RI
Aluminum | NA | 2930
Aluminum (F) | <141.000 | <25.0
CFLSSB03
Program | Follow-on RI
Depth | 7.0'
Aluminum | 128 f
LF7GW01
Analyte | Initial RI | Suppl. RI | Follow-on RI
Aluminum | NA | NA | 495
Aluminum (F) | <112.000 | <141.000 | <25.0
150
127
126
128
121
120
119
113
103
102
116
101
117
118
100
130
135
95
99
93
97
98
385
87
86
37
35
34
38
28
27
26
25
24
23
22
21
20
19
13
12
11
10
9
8
7
6
5
64
59
58
57
56
40

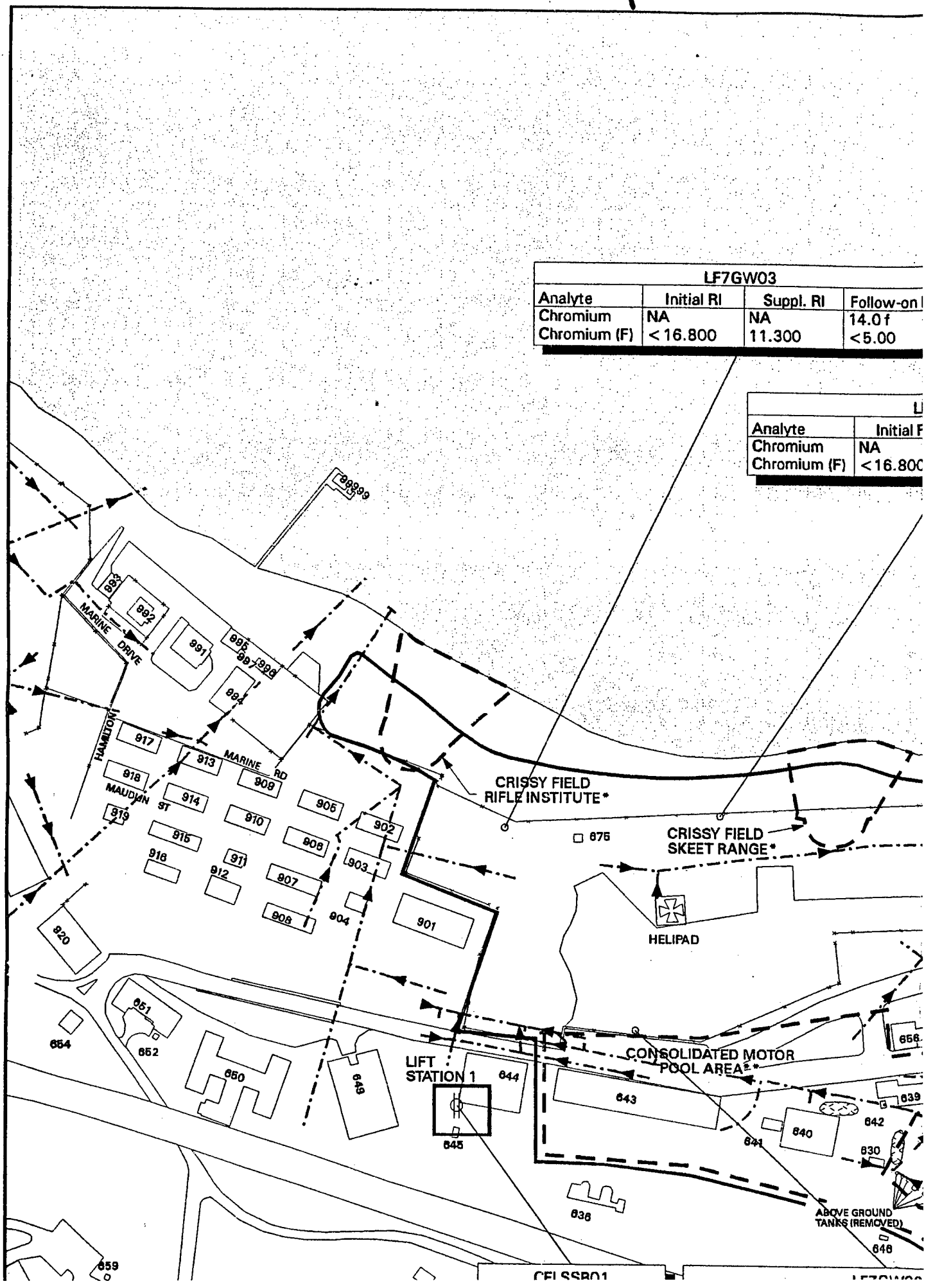


DAMES & MOORE

CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF ALUMINUM IN GROUNDWATER

PFS26503

Date: January 1997 | Figure 5.5-35


LF7GW03
Analyte | Initial RI | Suppl. RI | Follow-on
Chromium | NA | NA | 14.0 f
Chromium (F) | < 16.800 | 11.300 | < 5.00
Analyte | Initial F
Chromium | NA
Chromium (F) | < 16.800
MARINE DRIVE
HAMILTON
MAUDLIN ST
MARINE RD
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
ABOVE GROUND TANKS (REMOVED)
CELSSB01
675
645
636
646
659

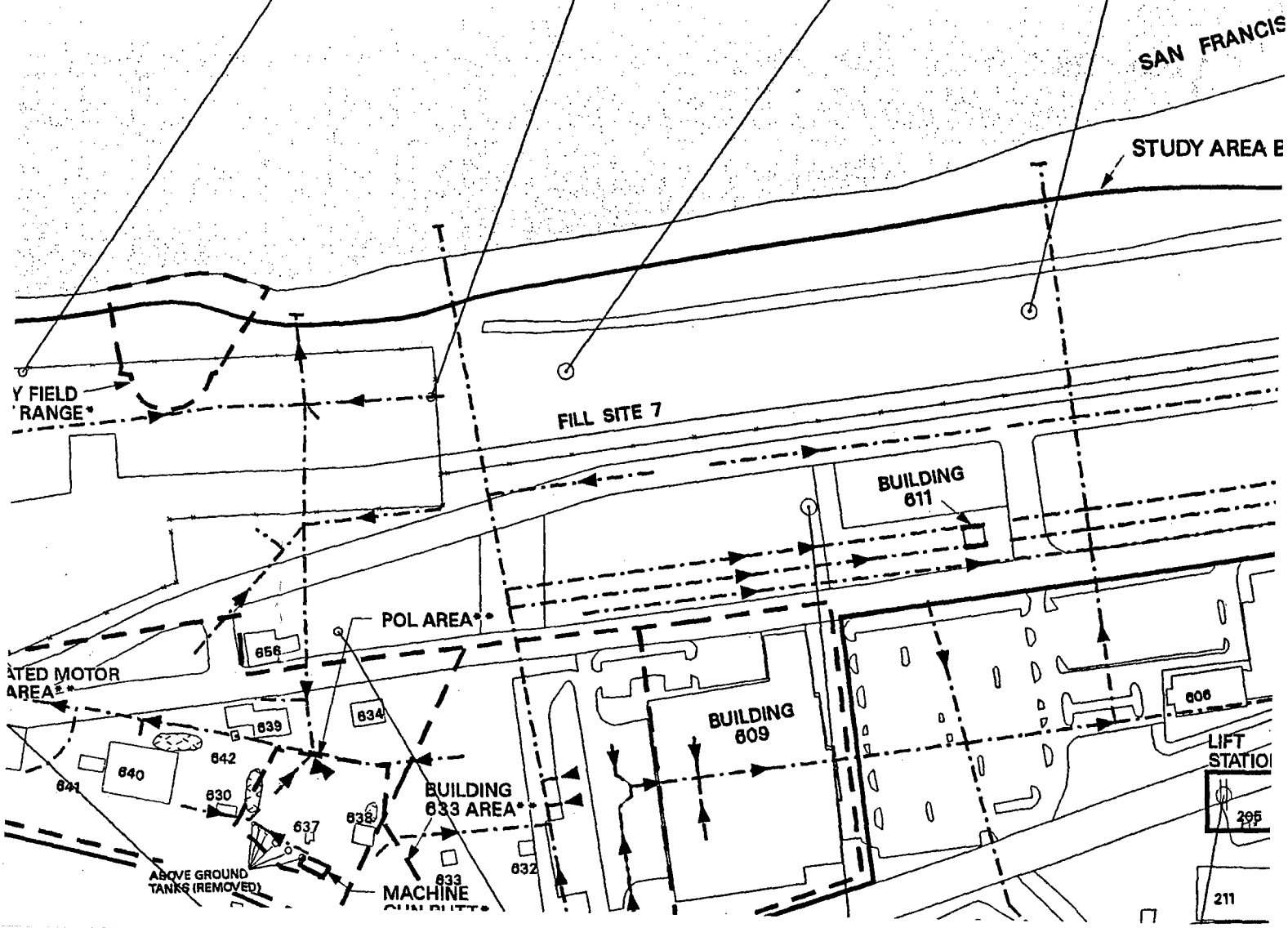
GW03		
	Suppl. RI	Follow-on RI
	NA	14.0 f
	11.300	<5.00

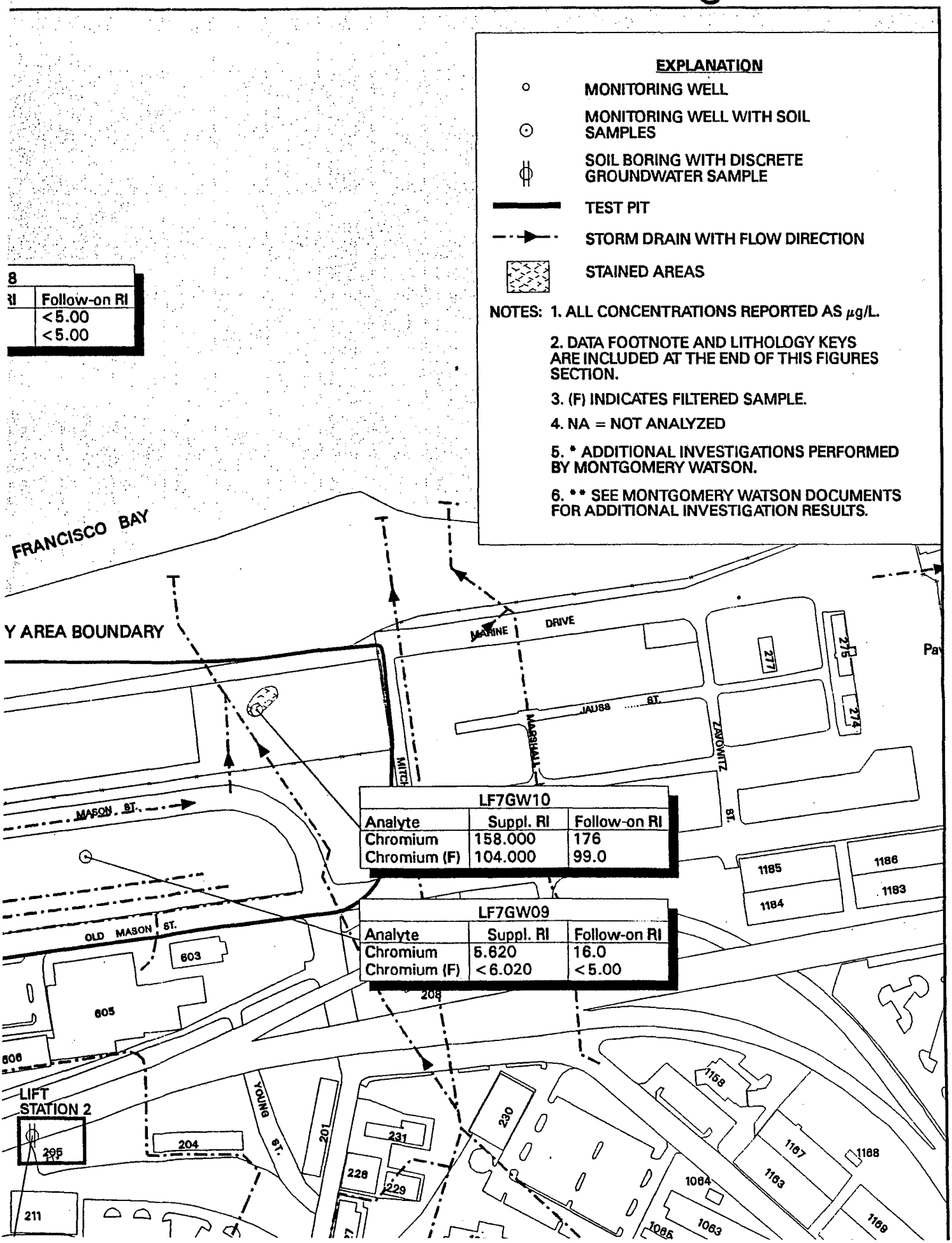
LF7GW05			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Chromium	NA	NA	14.0
Chromium (F)	<16.800	<6.020	5.00

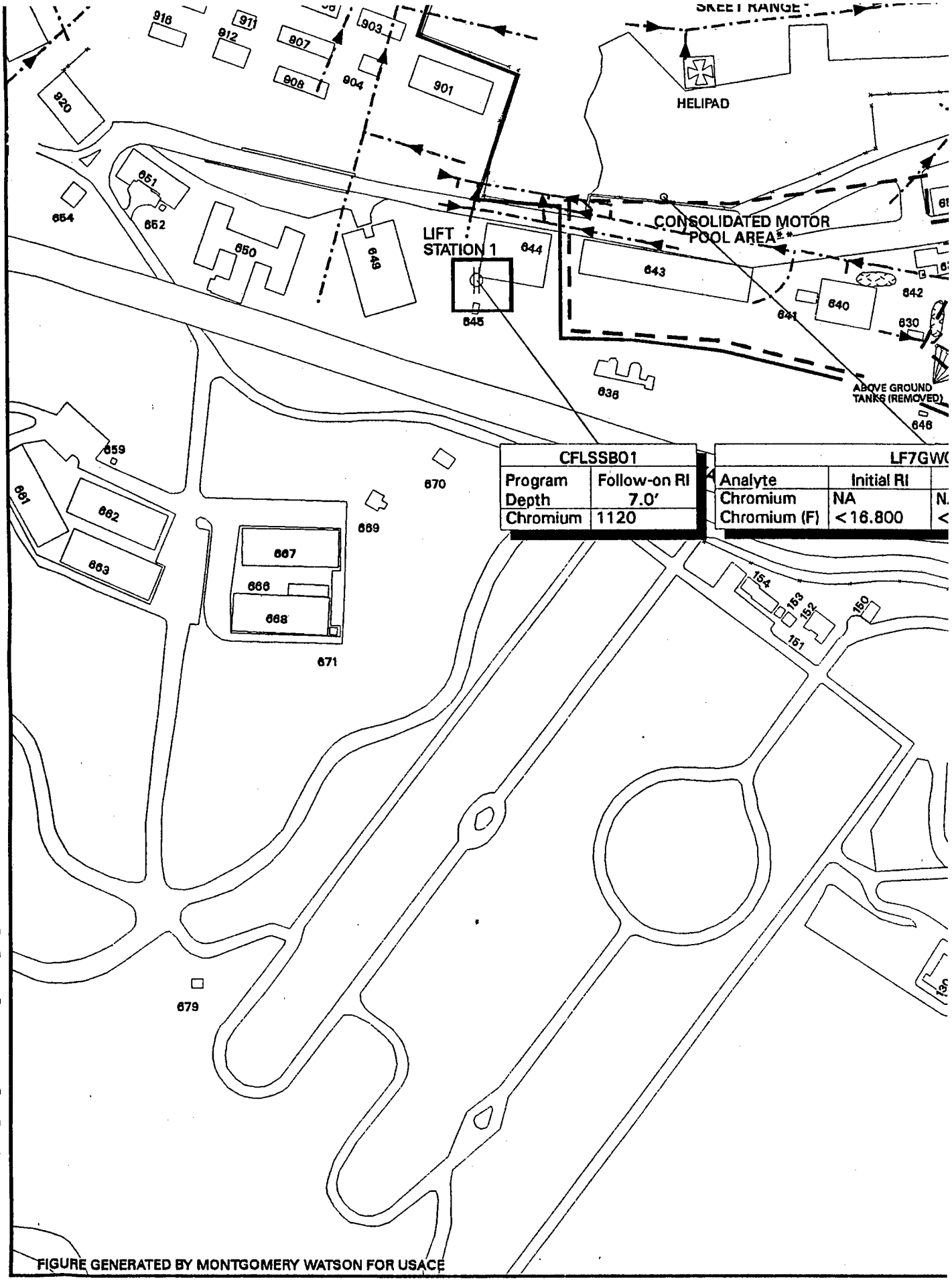
LF7GW08		
Analyte	Suppl. RI	Follow
Chromium	<6.020	<5.0
Chromium (F)	<6.020	<5.0

LF7GW04			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Chromium	NA	NA	16.0
Chromium (F)	<16.800	<6.020	<5.00

LF7GW06		
Analyte	Suppl. RI	Follow-on RI
Chromium	5.320	9.00
Chromium (F)	<6.020	<5.00

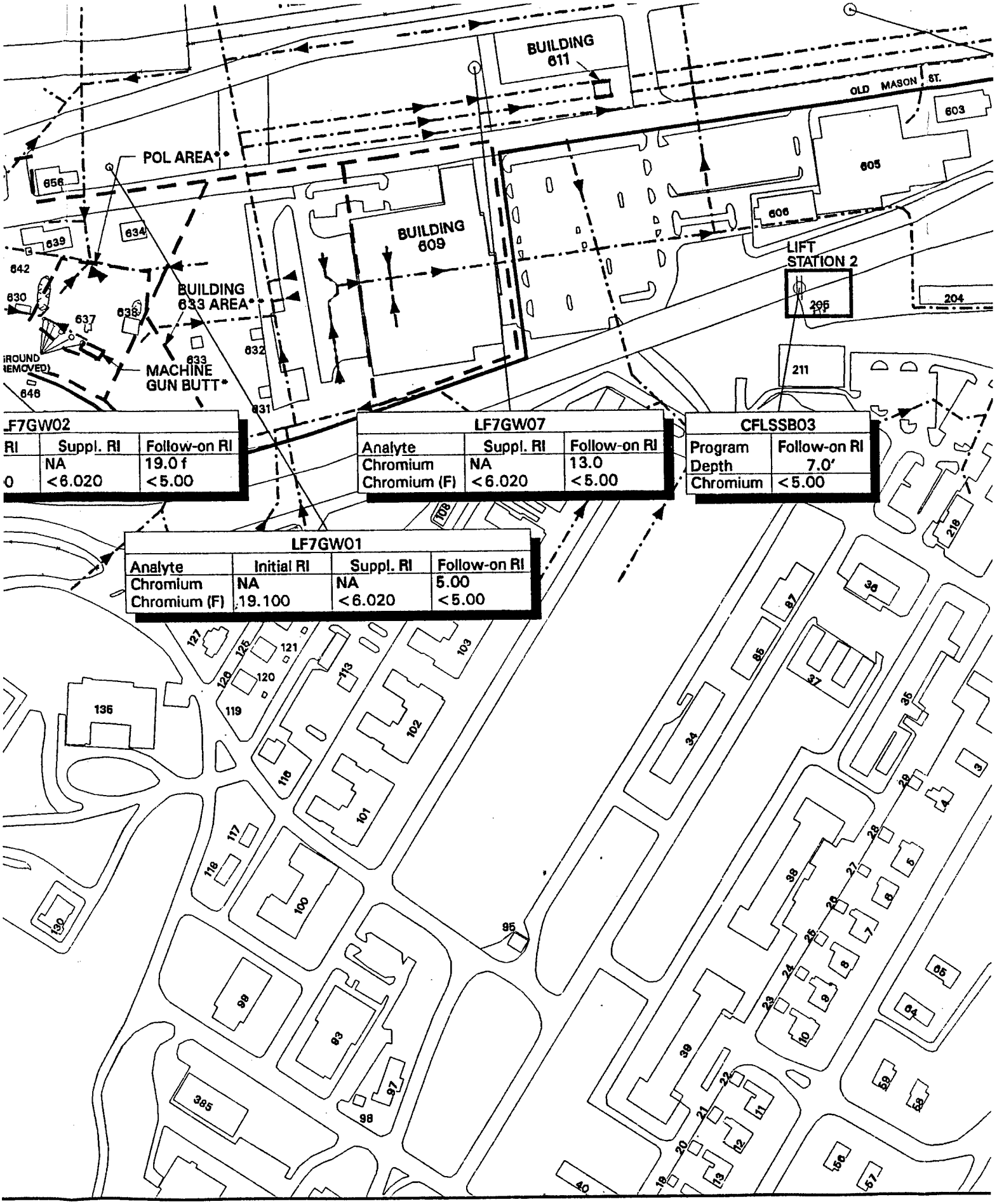



EXPLANATION
MONITORING WELL
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED
5. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
6. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
8
RI | Follow-on RI
<5.00
<5.00
FRANCISCO BAY
Y AREA BOUNDARY
MARINE DRIVE
JAUSS ST.
MARSHALL
ZAWOWITZ ST.
MASON ST.
OLD MASON ST.
LF7GW10
Analyte | Suppl. RI | Follow-on RI
Chromium | 158.000 | 176
Chromium (F) | 104.000 | 99.0
LF7GW09
Analyte | Suppl. RI | Follow-on RI
Chromium | 5.620 | 16.0
Chromium (F) | <6.020 | <5.00
LIFT STATION 2
YOUNG ST.
603
605
606
204
201
231
228
229
230
208
211
295
1158
1167
1168
1163
1164
1165
1063
1169
1185
1186
1184
1183
277
275
274



26 Dec 96 16:06:31 Thursday, base_11x17_v3.mxd, plotfile base_CRUSSY2_WH_7.grn, PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

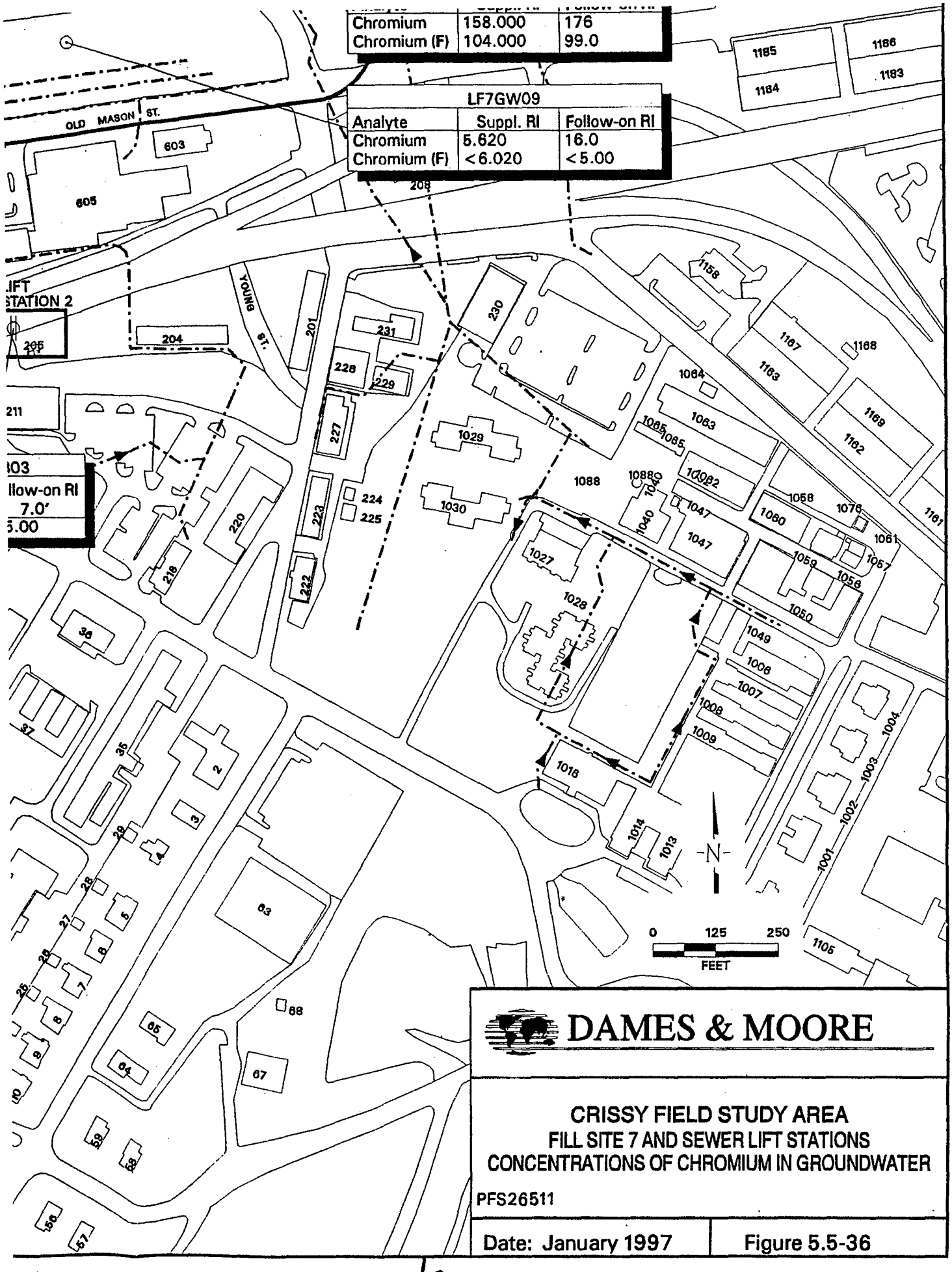


LF7GW02		
RI	Suppl. RI	Follow-on RI
0	NA	19.0 f
	<6.020	<5.00

LF7GW07		
Analyte	Suppl. RI	Follow-on RI
Chromium	NA	13.0
Chromium (F)	<6.020	<5.00

CFLSSB03	
Program	Follow-on RI
Depth	7.0'
Chromium	<5.00

LF7GW01			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Chromium	NA	NA	5.00
Chromium (F)	19.100	<6.020	<5.00

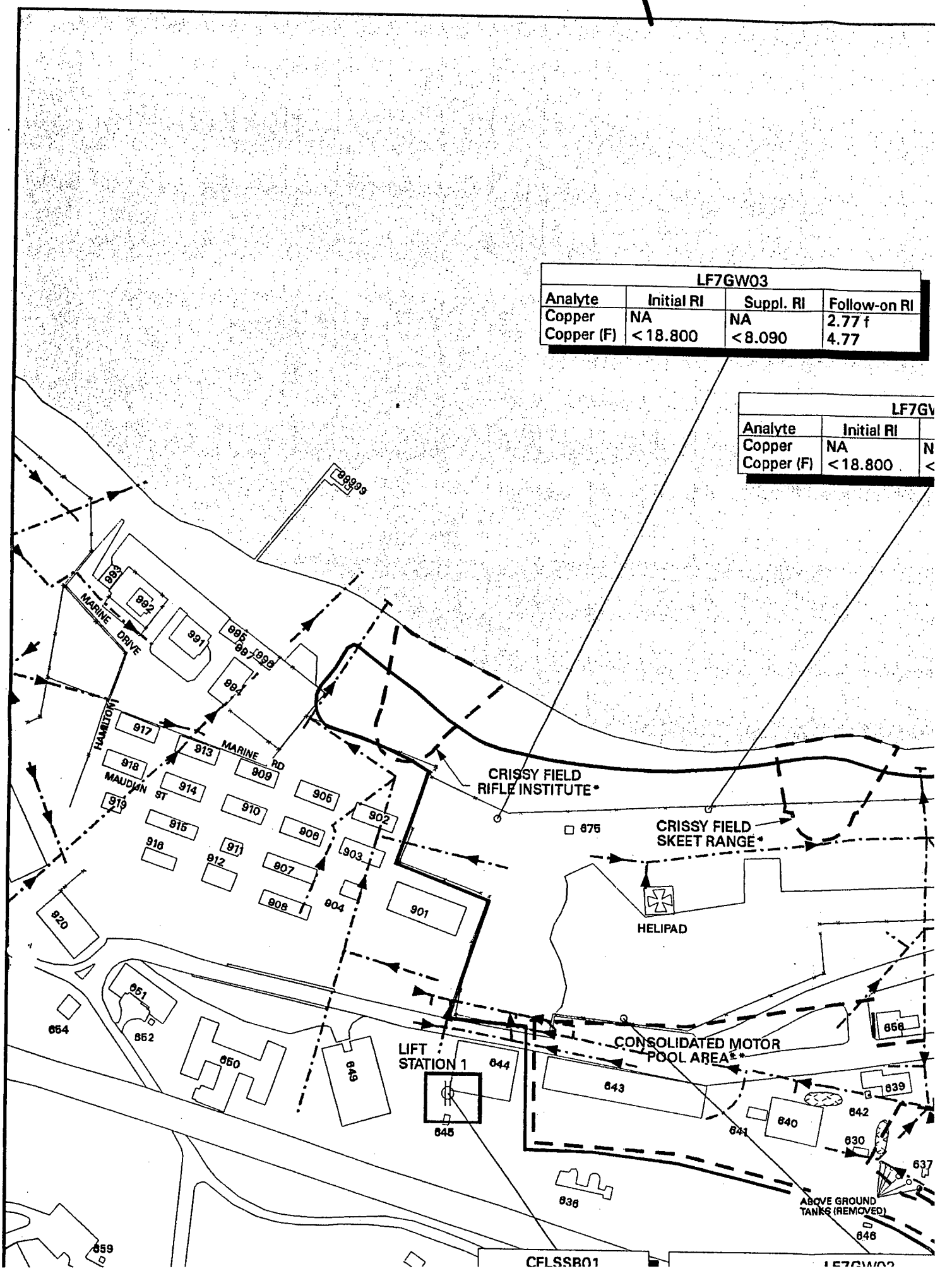


DAMES & MOORE

CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF CHROMIUM IN GROUNDWATER

PFS26511

Date: January 1997 | Figure 5.5-36


LF7GW03
Analyte | Initial RI | Suppl. RI | Follow-on RI
Copper | NA | NA | 2.77 f
Copper (F) | < 18.800 | < 8.090 | 4.77
LF7GW
Analyte | Initial RI
Copper | NA
Copper (F) | < 18.800
MARINE DRIVE
HAMILTON
MARINE RD
MAUDLIN ST
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
ABOVE GROUND TANKS (REMOVED)
CFLSSB01
675
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
991
992
993
994
995
997
998
999
630
636
637
639
640
641
642
643
644
645
646
649
650
651
652
654
656
659

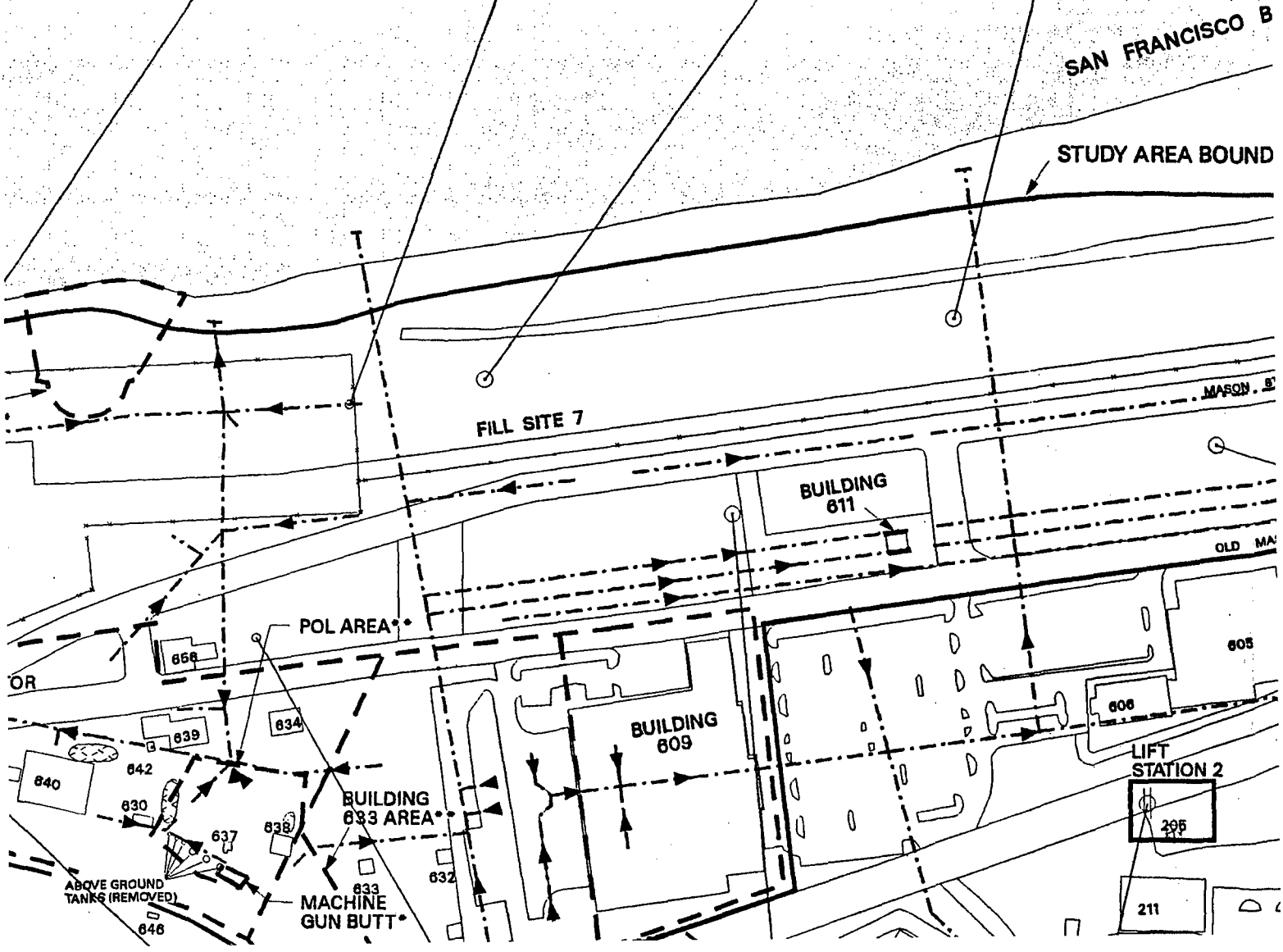
ppl. RI	Follow-on RI
	2.77 f
)90	4.77

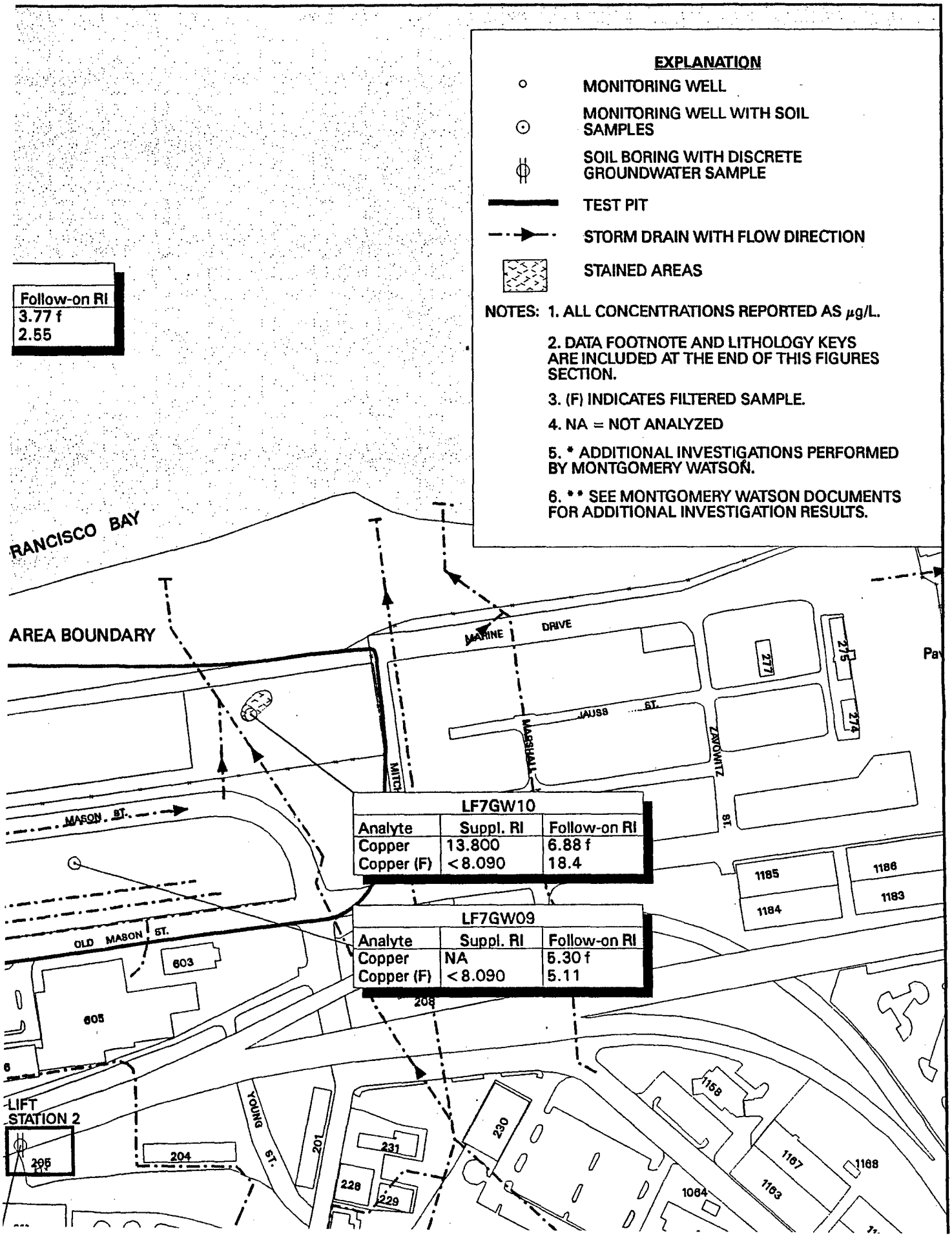
LF7GW05			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Copper	NA	NA	< 1.00 n
Copper (F)	< 18.800	< 8.090	5.80

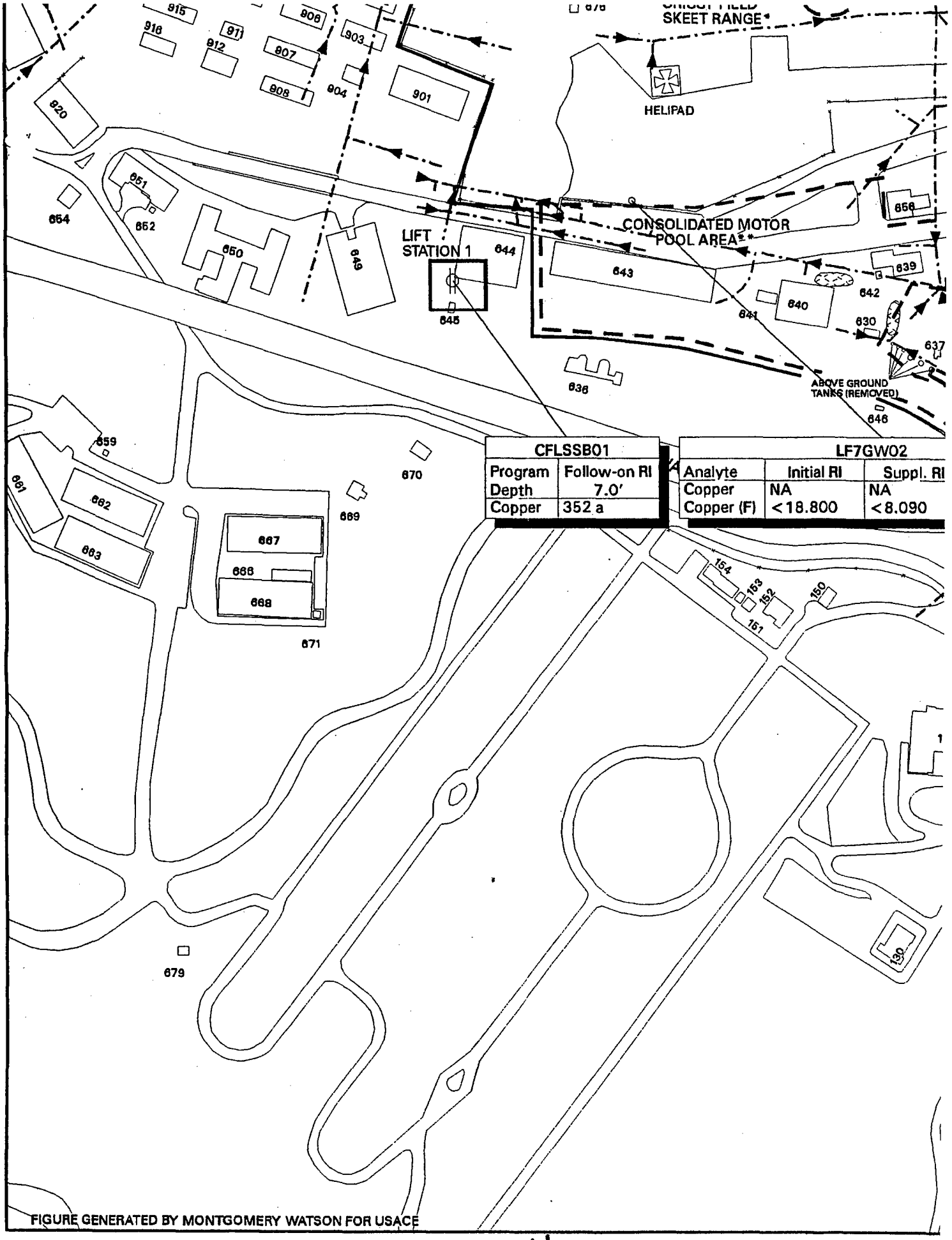
LF7GW08		
Analyte	Suppl. RI	Follow-on RI
Copper	< 8.090	3.77 f
Copper (F)	< 8.090	2.55

LF7GW04			
alyte	Initial RI	Suppl. RI	Follow-on RI
pper	NA	NA	< 1.00 n
pper (F)	< 18.800	< 8.090	5.20

LF7GW06		
Analyte	Suppl. RI	Follow-on RI
Copper	< 8.090	3.86 f
Copper (F)	< 8.090	1.57




EXPLANATION
MONITORING WELL
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED
5. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
6. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
Follow-on RI
3.77 f
2.55
RANCISCO BAY
AREA BOUNDARY
MARINE DRIVE
JAUSS ST.
MARSHALL
ZAWOWITZ ST.
MASON ST.
OLD MASON ST.
LF7GW10
Analyte | Suppl. RI | Follow-on RI
Copper | 13.800 | 6.88 f
Copper (F) | < 8.090 | 18.4
LF7GW09
Analyte | Suppl. RI | Follow-on RI
Copper | NA | 5.30 f
Copper (F) | < 8.090 | 5.11
LIFT STATION 2
YOUNG ST.
603
605
204
205
201
231
228
229
230
208
277
275
274
1185
1186
1184
1183
1158
1167
1168
1163
1064

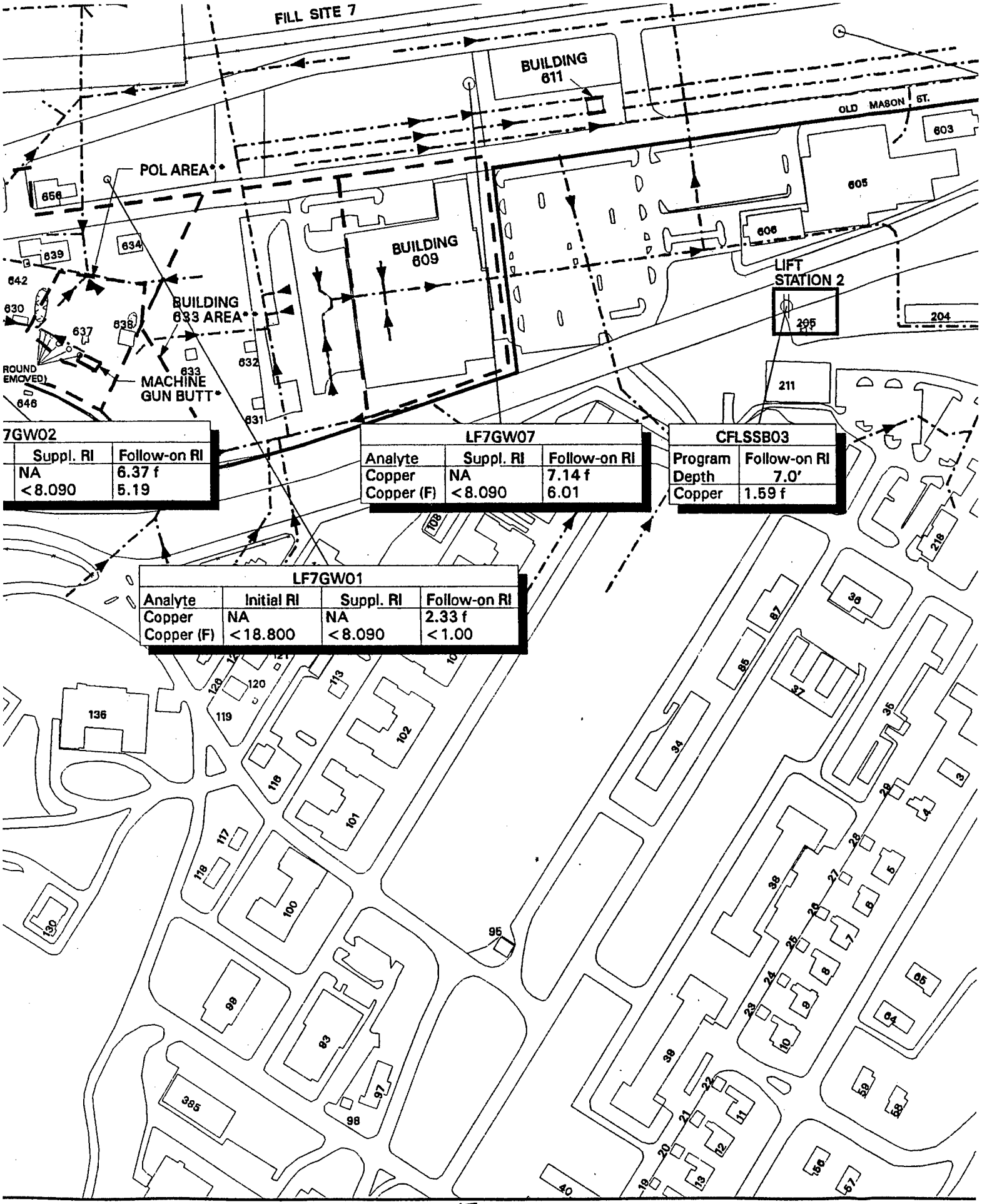


CFLSSB01	
Program	Follow-on RI
Depth	7.0'
Copper	352 a

LF7GW02		
Analyte	Initial RI	Suppl. RI
Copper	NA	NA
Copper (F)	<18.800	<8.090

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

26 Dec 96 16:08:54 Thursday, base_11x17_v3.scr, plotfile base_CRISST2_WH_9.grn, PSF


FILL SITE 7
BUILDING 611
OLD MASON ST.
POL AREA
BUILDING 609
LIFT STATION 2
BUILDING 633 AREA
MACHINE GUN BUTT
656
639
634
642
630
637
638
633
632
631
646
603
605
606
295
204
211
218
136
120
119
102
116
101
117
118
100
130
95
98
63
97
385
64
65
59
58
57
56
40
7GW02

	Suppl. RI	Follow-on RI
	NA	6.37 f
	< 8.090	5.19

LF7GW07

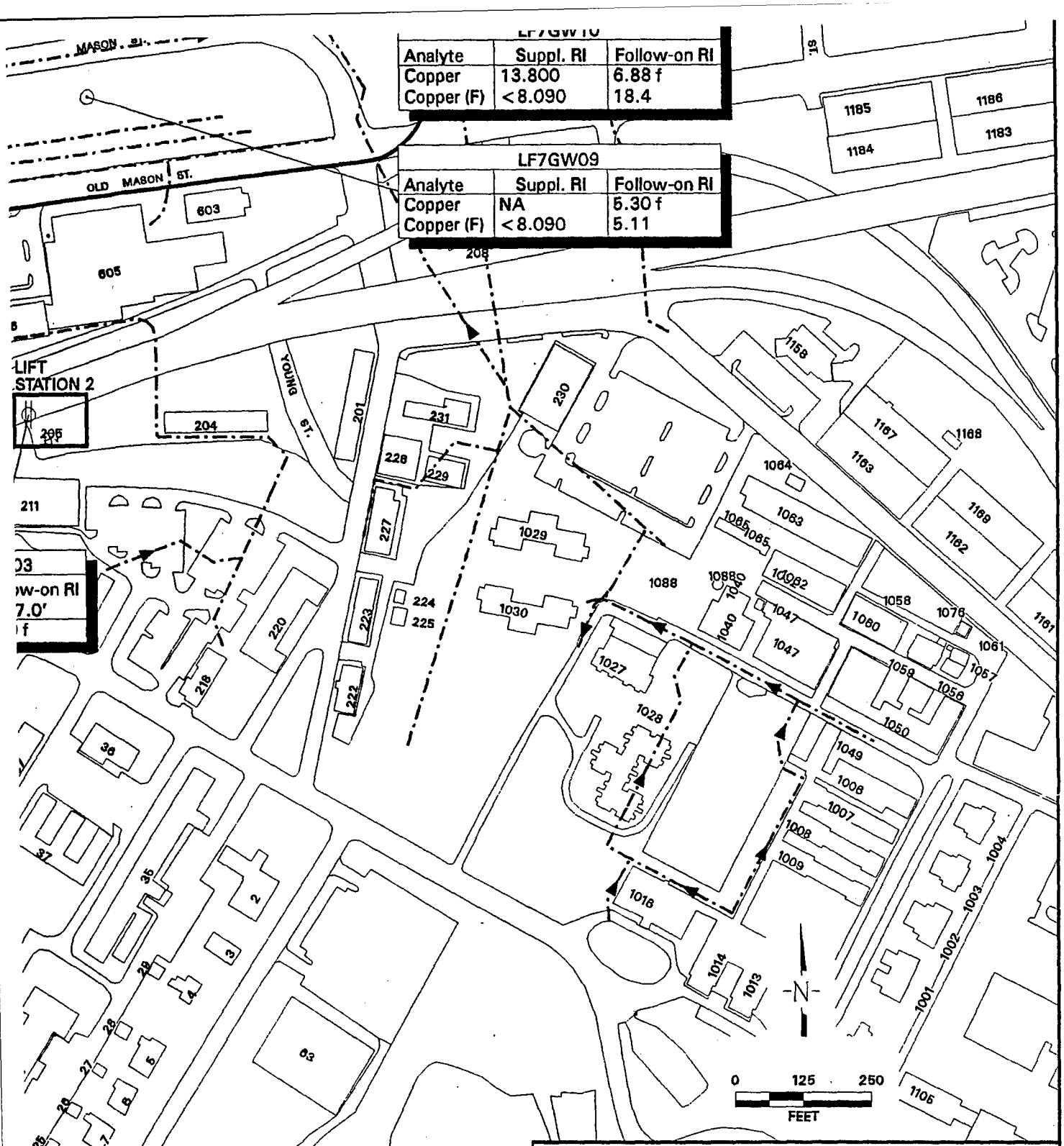
Analyte	Suppl. RI	Follow-on RI
Copper	NA	7.14 f
Copper (F)	< 8.090	6.01

CFLSSB03

Program	Follow-on RI
Depth	7.0'
Copper	1.59 f

LF7GW01

Analyte	Initial RI	Suppl. RI	Follow-on RI
Copper	NA	NA	2.33 f
Copper (F)	< 18.800	< 8.090	< 1.00

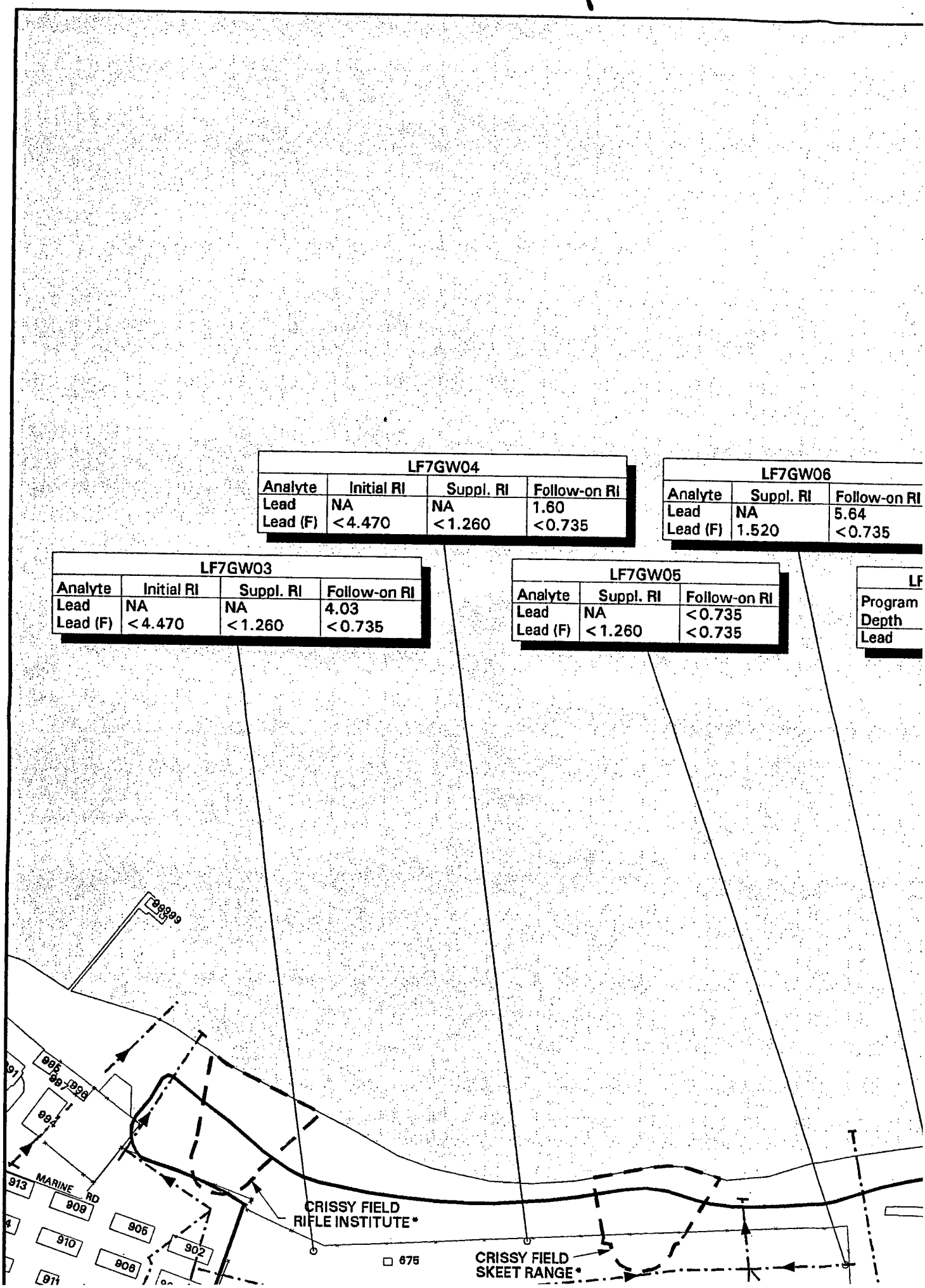


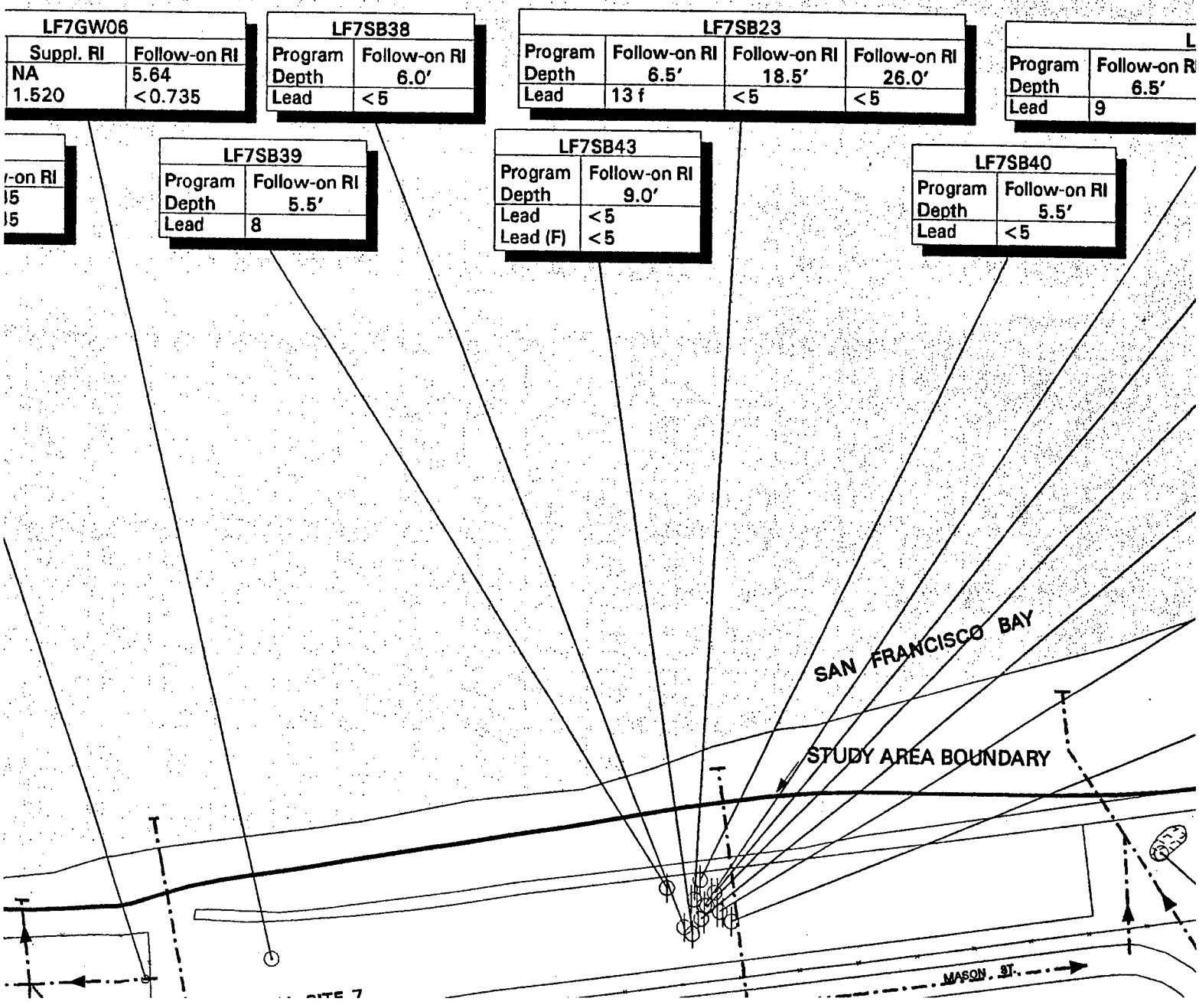
DAMES & MOORE

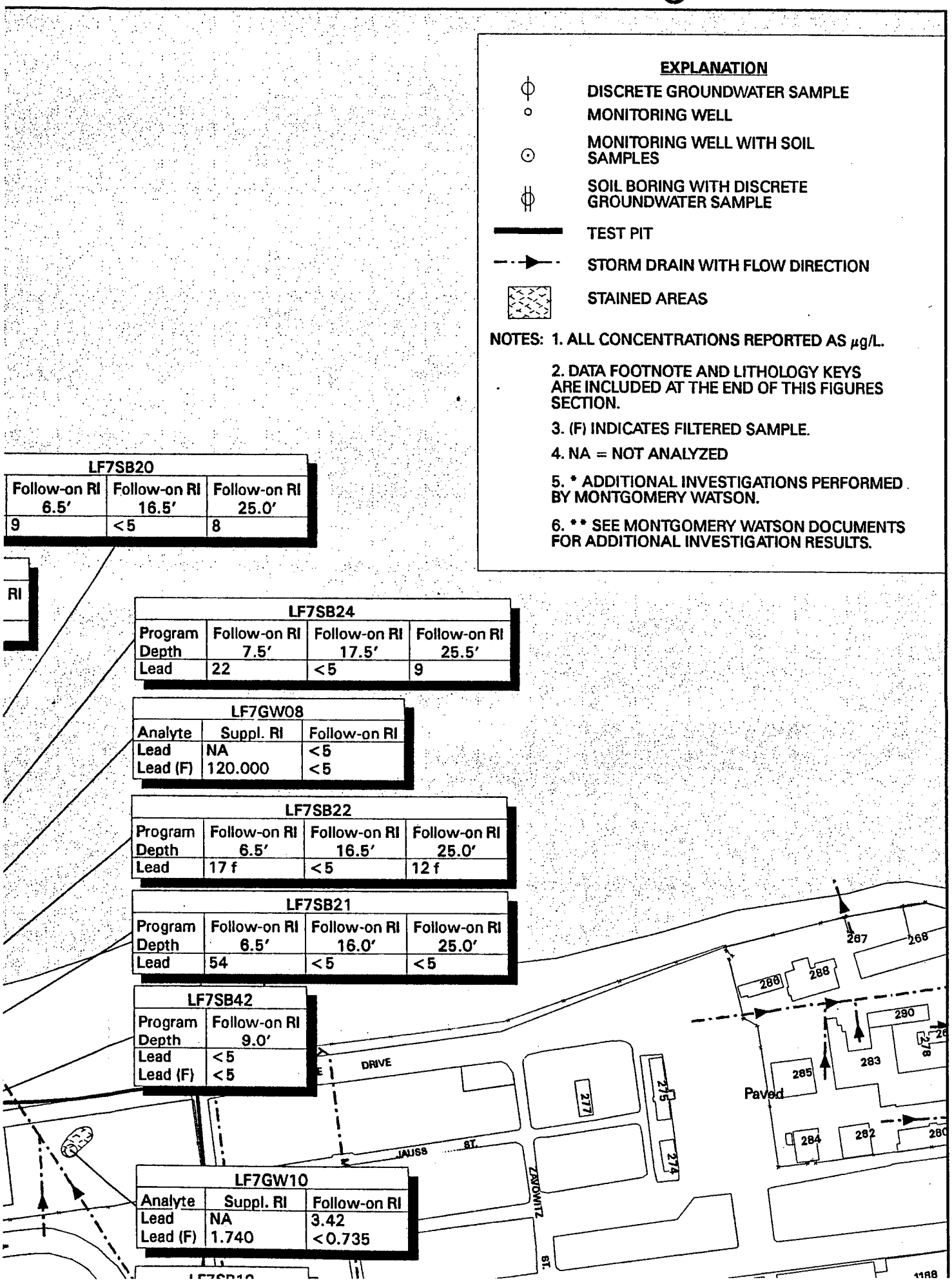
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF COPPER IN GROUNDWATER

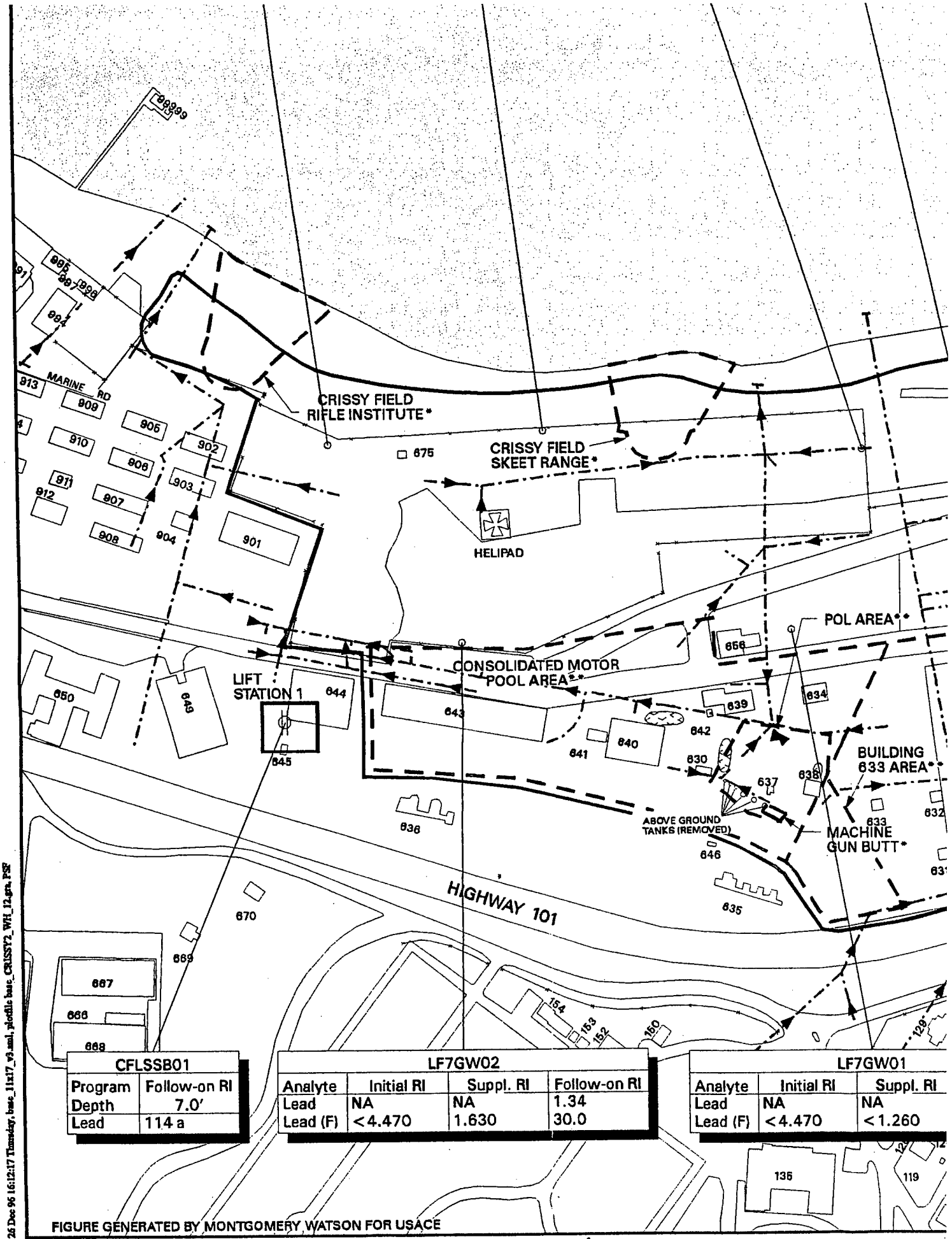
PFS26514

Date: January 1997 | Figure 5.5-37


LF7GW04
Analyte | Initial RI | Suppl. RI | Follow-on RI
Lead | NA | NA | 1.60
Lead (F) | <4.470 | <1.260 | <0.735
LF7GW06
Analyte | Suppl. RI | Follow-on RI
Lead | NA | 5.64
Lead (F) | 1.520 | <0.735
LF7GW03
Analyte | Initial RI | Suppl. RI | Follow-on RI
Lead | NA | NA | 4.03
Lead (F) | <4.470 | <1.260 | <0.735
LF7GW05
Analyte | Suppl. RI | Follow-on RI
Lead | NA | <0.735
Lead (F) | <1.260 | <0.735
LF
Program
Depth
Lead
99999
995
997
999
994
913
MARINE RD
909
906
910
902
908
911
CRISSY FIELD RIFLE INSTITUTE*
675
CRISSY FIELD SKEET RANGE*


LF7GW06
Suppl. RI | Follow-on RI
NA | 5.64
1.520 | <0.735
LF7SB38
Program Depth | Follow-on RI 6.0′
Lead | <5
LF7SB23
Program Depth | Follow-on RI 6.5′ | Follow-on RI 18.5′ | Follow-on RI 26.0′
Lead | 13 f | <5 | <5
Program Depth | Follow-on R 6.5′
Lead | 9
LF7SB39
Program Depth | Follow-on RI 5.5′
Lead | 8
LF7SB43
Program Depth | Follow-on RI 9.0′
Lead | <5
Lead (F) | <5
LF7SB40
Program Depth | Follow-on RI 5.5′
Lead | <5
SAN FRANCISCO BAY
STUDY AREA BOUNDARY
MASON ST.


EXPLANATION
DISCRETE GROUNDWATER SAMPLE
MONITORING WELL
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED
5. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
6. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
LF7SB20
Follow-on RI 6.5′ | Follow-on RI 16.5′ | Follow-on RI 25.0′
9 | <5 | 8
RI
LF7SB24
Program Depth | Follow-on RI 7.5′ | Follow-on RI 17.5′ | Follow-on RI 25.5′
Lead | 22 | <5 | 9
LF7GW08
Analyte | Suppl. RI | Follow-on RI
Lead | NA | <5
Lead (F) | 120.000 | <5
LF7SB22
Program Depth | Follow-on RI 6.5′ | Follow-on RI 16.5′ | Follow-on RI 25.0′
Lead | 17 f | <5 | 12 f
LF7SB21
Program Depth | Follow-on RI 6.5′ | Follow-on RI 16.0′ | Follow-on RI 25.0′
Lead | 54 | <5 | <5
LF7SB42
Program Depth | Follow-on RI 9.0′
Lead | <5
Lead (F) | <5
LF7GW10
Analyte | Suppl. RI | Follow-on RI
Lead | NA | 3.42
Lead (F) | 1.740 | <0.735
DRIVE
JAUSS ST.
ZAWOWITZ ST.
Paved
267
268
288
288
290
283
285
284
282
277
275
274
1188



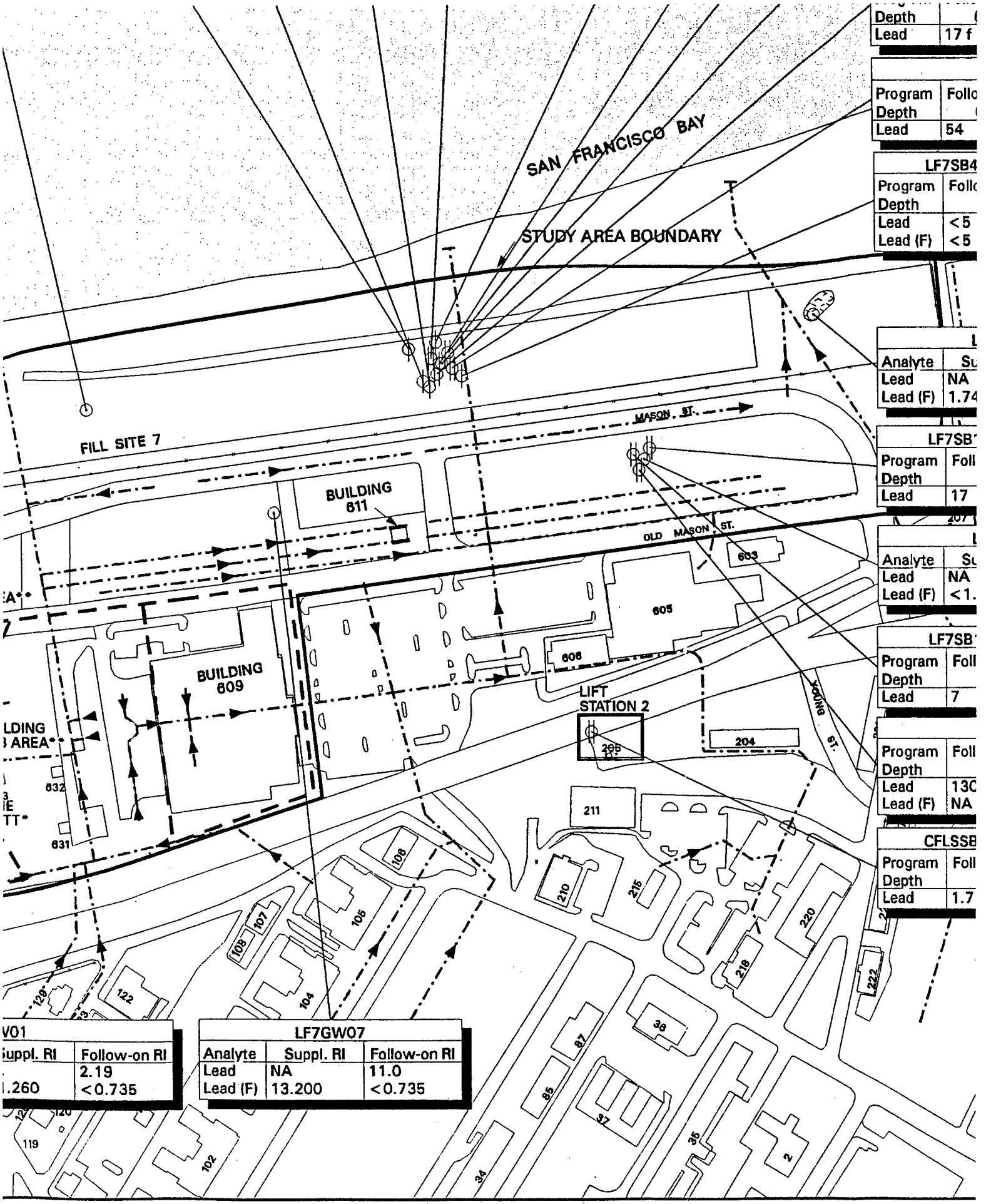
CFLSSB01	
Program	Follow-on RI
Depth	7.0'
Lead	114 a

LF7GW02			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Lead	NA	NA	1.34
Lead (F)	< 4.470	1.630	30.0

LF7GW01		
Analyte	Initial RI	Suppl. RI
Lead	NA	NA
Lead (F)	< 4.470	< 1.260

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

26 Dec 96 16:12:17 Thursday, base_11x17_v3.mxd, plotfile base_CRISSY2_WH_12.grn, PSF



Depth	
Lead	17 f

Program	Follo
Depth	
Lead	54

LF7SB4	
Program	Follo
Depth	
Lead	< 5
Lead (F)	< 5

Analyte	Su
Lead	NA
Lead (F)	1.74

LF7SB	
Program	Foll
Depth	
Lead	17

Analyte	Su
Lead	NA
Lead (F)	< 1.

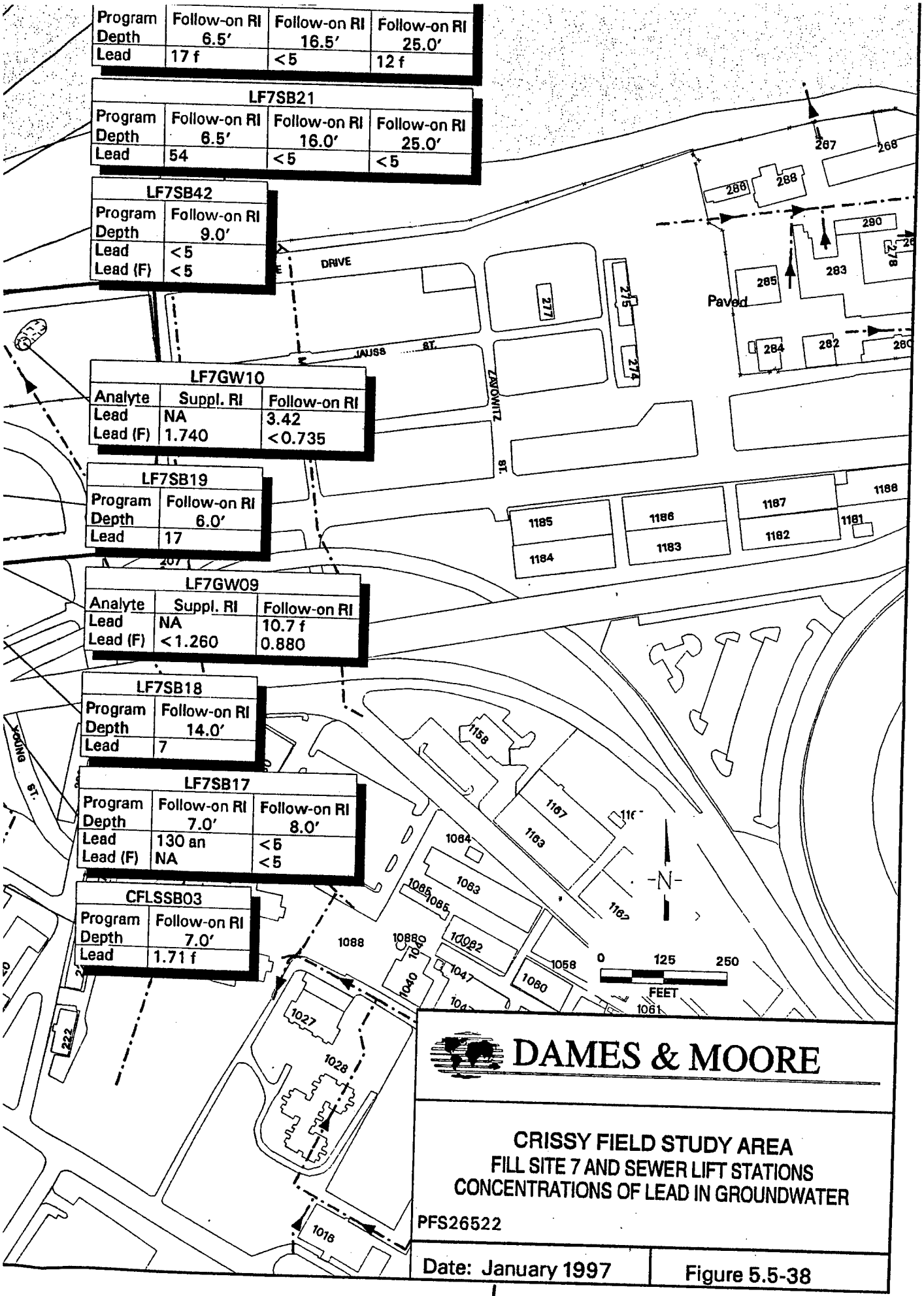
LF7SB	
Program	Foll
Depth	
Lead	7

Program	Foll
Depth	
Lead	13C
Lead (F)	NA

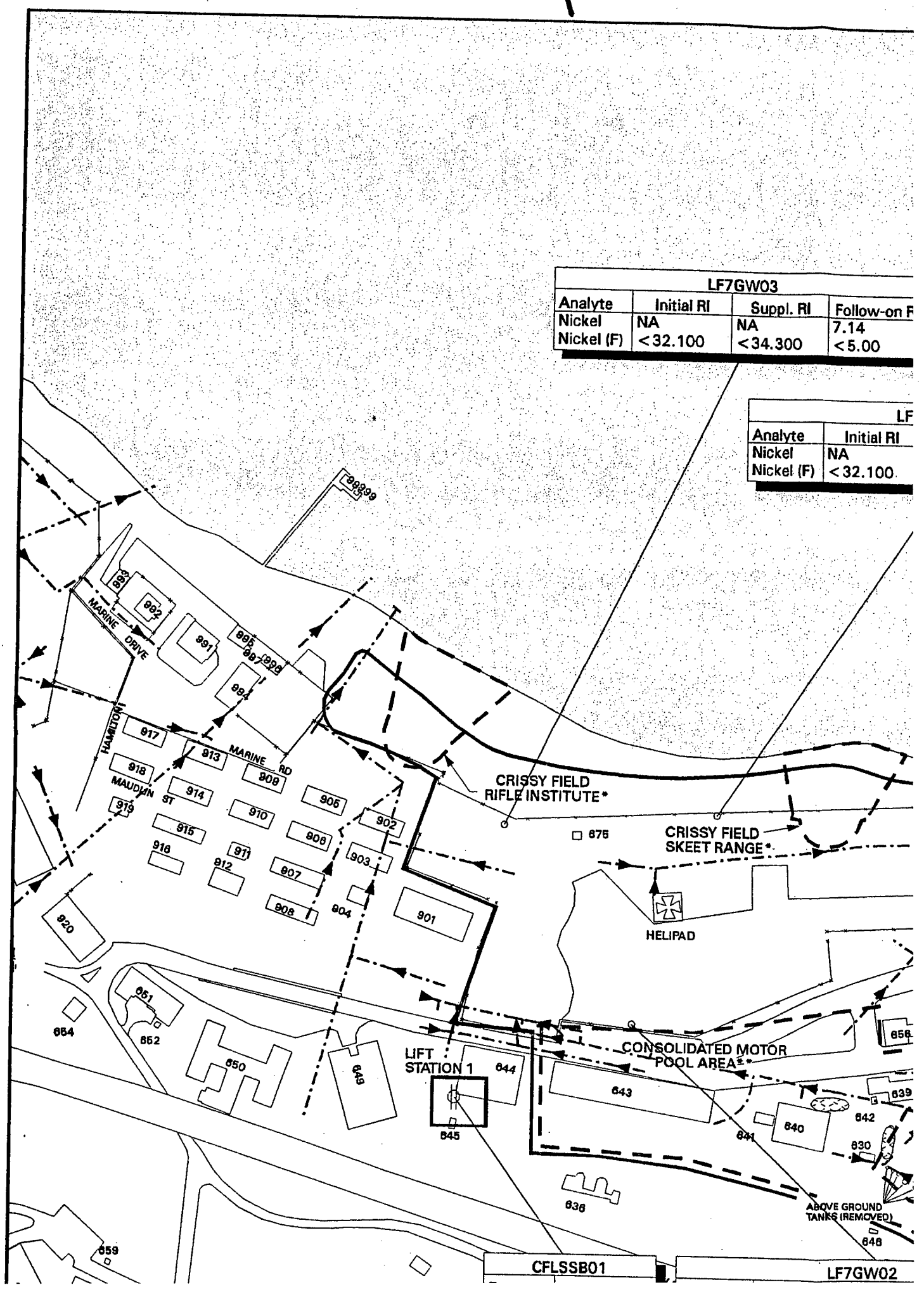
CFLSSB	
Program	Foll
Depth	
Lead	1.7

V01		
Suppl. RI	Follow-on RI	
	2.19	
1.260	< 0.735	

LF7GW07		
Analyte	Suppl. RI	Follow-on RI
Lead	NA	11.0
Lead (F)	13.200	< 0.735


Program Depth Lead
Follow-on RI 6.5′ 17 f
Follow-on RI 16.5′ <5
Follow-on RI 25.0′ 12 f
LF7SB21
Program Depth Lead
Follow-on RI 6.5′ 54
Follow-on RI 16.0′ <5
Follow-on RI 25.0′ <5
LF7SB42
Program Depth Lead Lead (F)
Follow-on RI 9.0′ <5 <5
LF7GW10
Analyte Lead Lead (F)
Suppl. RI NA 1.740
Follow-on RI 3.42 <0.735
LF7SB19
Program Depth Lead
Follow-on RI 6.0′ 17
LF7GW09
Analyte Lead Lead (F)
Suppl. RI NA <1.260
Follow-on RI 10.7 f 0.880
LF7SB18
Program Depth Lead
Follow-on RI 14.0′ 7
LF7SB17
Program Depth Lead Lead (F)
Follow-on RI 7.0′ 130 an NA
Follow-on RI 8.0′ <5 <5
CFLSSB03
Program Depth Lead
Follow-on RI 7.0′ 1.71 f
DRIVE
JAUSS ST.
ZANOWITZ ST.
YOUNG ST.
Paved
-N-
0 125 250
FEET
DAMES & MOORE
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF LEAD IN GROUNDWATER
PFS26522
Date: January 1997
Figure 5.5-38

6


LF7GW03
Analyte | Initial RI | Suppl. RI | Follow-on R
Nickel | NA | NA | 7.14
Nickel (F) | <32.100 | <34.300 | <5.00
LF
Analyte | Initial RI
Nickel | NA
Nickel (F) | <32.100
99999
893
892
891
895
897
896
894
MARINE DRIVE
HAMILTON
917
913
MARINE RD
909
918
MAUDLIN ST
914
910
905
919
915
906
902
916
911
912
907
903
908
904
901
920
CRISSY FIELD RIFLE INSTITUTE*
676
CRISSY FIELD SKEET RANGE*
HELIPAD
651
664
652
650
649
LIFT STATION 1
644
645
CONSOLIDATED MOTOR POOL AREA**
643
656
639
642
640
641
630
636
ABOVE GROUND TANKS (REMOVED)
646
659
CFLSSB01
LF7GW02

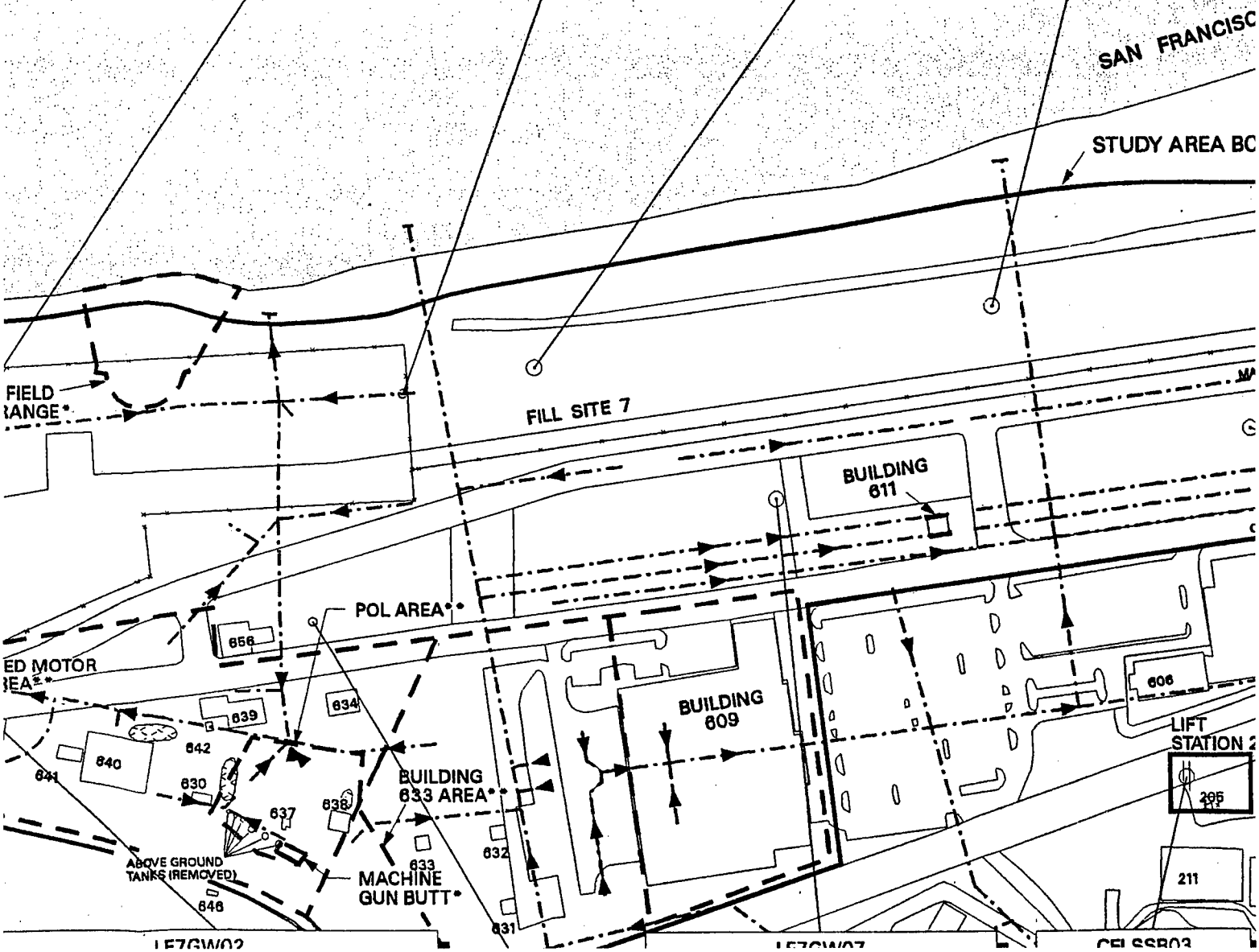
GW03	
Suppl. RI	Follow-on RI
NA	7.14
<34.300	<5.00

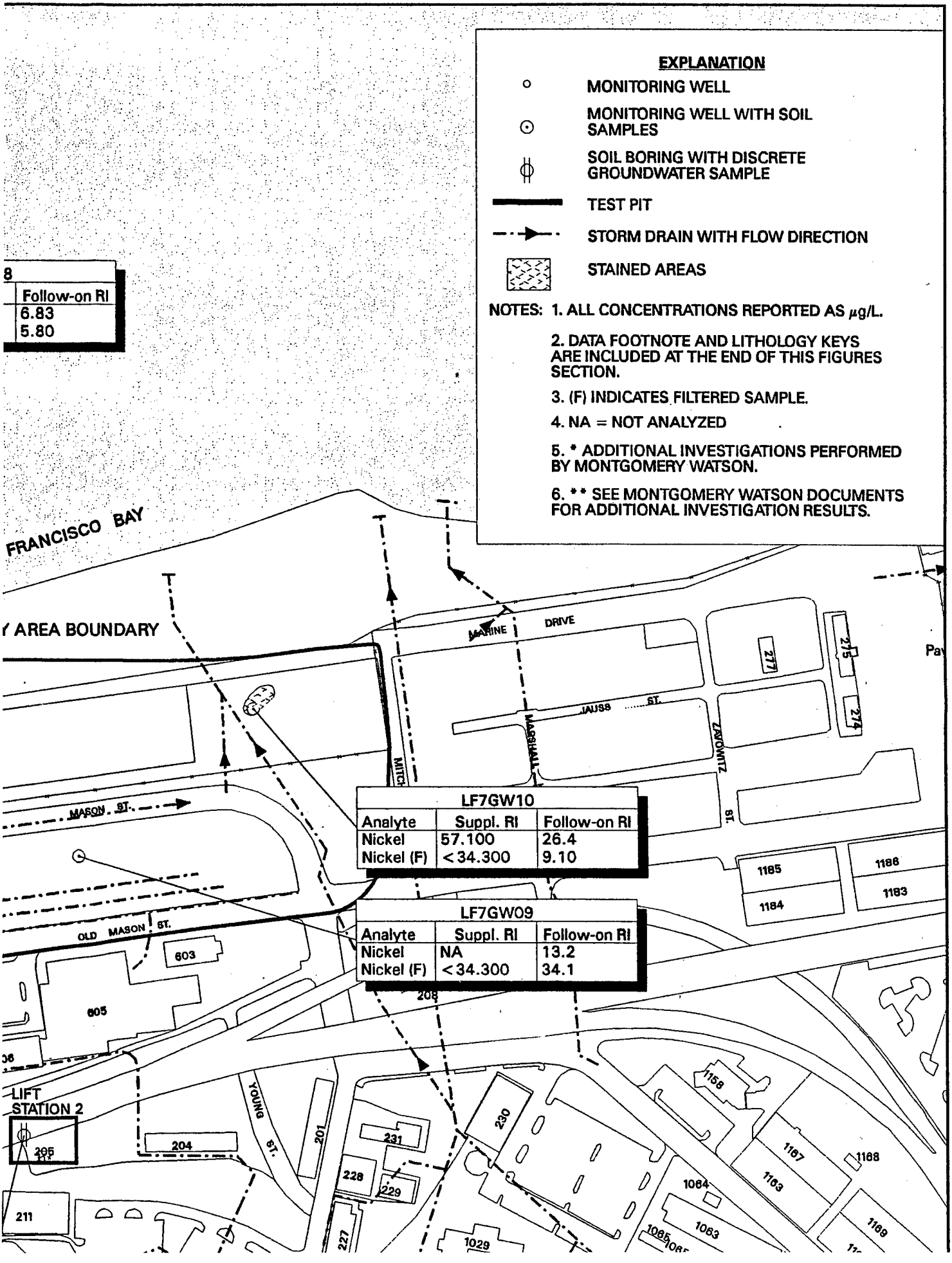
LF7GW05			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Nickel	NA	NA	10.9
Nickel (F)	<32.100	<34.300	15.4

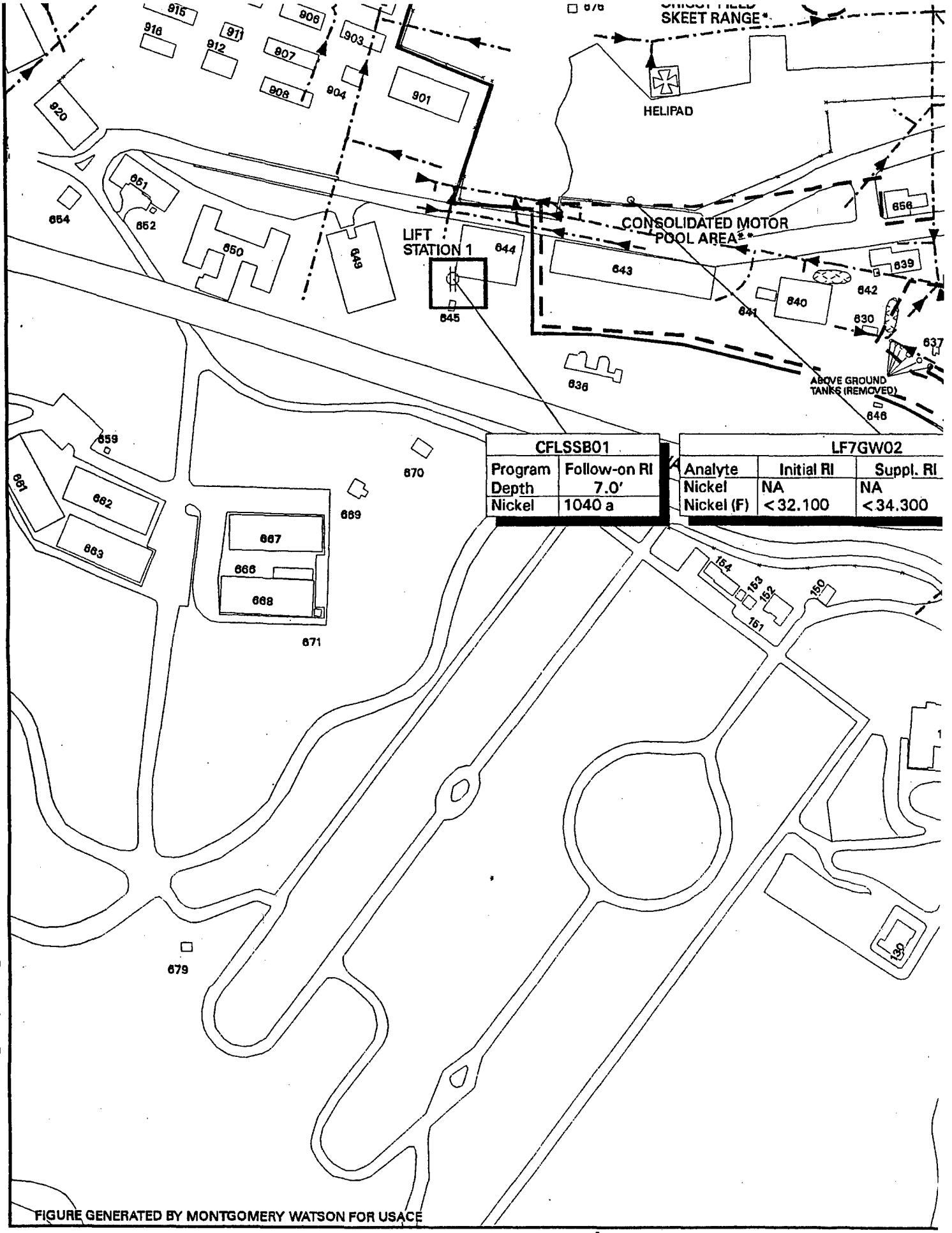
LF7GW08		
Analyte	Suppl. RI	Follow-on
Nickel	<34.300	6.83
Nickel (F)	<34.300	5.80

LF7GW04			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Nickel	NA	NA	34.1
Nickel (F)	<32.100	<34.300	<5.00

LF7GW06		
Analyte	Suppl. RI	Follow-on RI
Nickel	<34.300	11.2
Nickel (F)	<34.300	<5.00




EXPLANATION
MONITORING WELL
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED
5. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
6. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
8
Follow-on RI
6.83
5.80
FRANCISCO BAY
Y AREA BOUNDARY
MARINE DRIVE
JAUSS ST.
MARSHALL
ZAWOWITZ ST.
MASON ST.
OLD MASON ST.
LF7GW10
Analyte | Suppl. RI | Follow-on RI
Nickel | 57.100 | 26.4
Nickel (F) | <34.300 | 9.10
LF7GW09
Analyte | Suppl. RI | Follow-on RI
Nickel | NA | 13.2
Nickel (F) | <34.300 | 34.1
LIFT STATION 2
YOUNG ST.
603
605
204
201
231
228
229
230
211
227
1029
1158
1167
1163
1168
1064
1063
1169
1185
1186
1184
1183
277
275
274

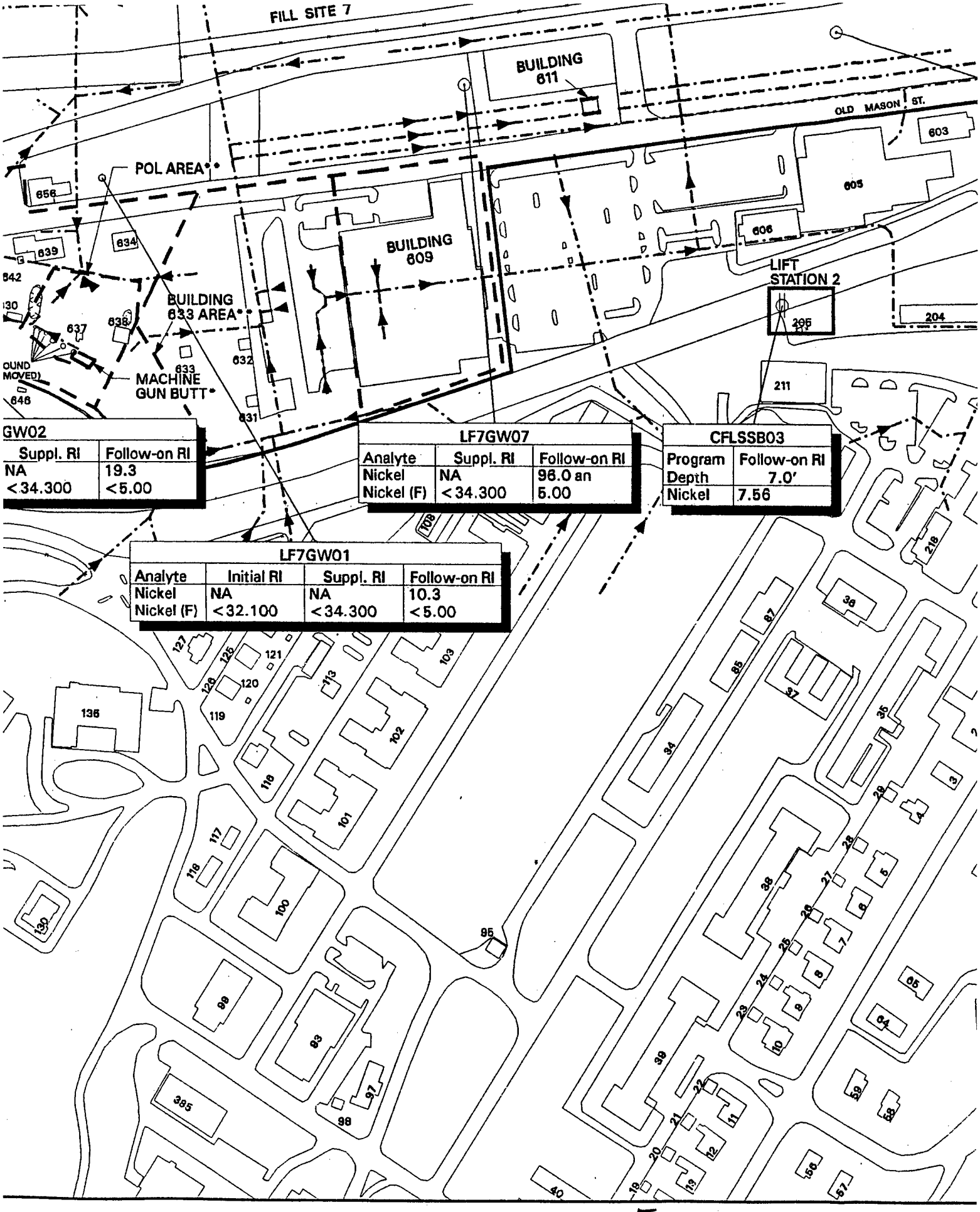


CFLSSB01	
Program	Follow-on RI
Depth	7.0'
Nickel	1040 a

LF7GW02		
Analyte	Initial RI	Suppl. RI
Nickel	NA	NA
Nickel (F)	< 32.100	< 34.300

26 Dec 96 16:14:57 Thursday, base_11x17_v3.aml, plotfile base_CRUSST2_WH_16.grn, PSF

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

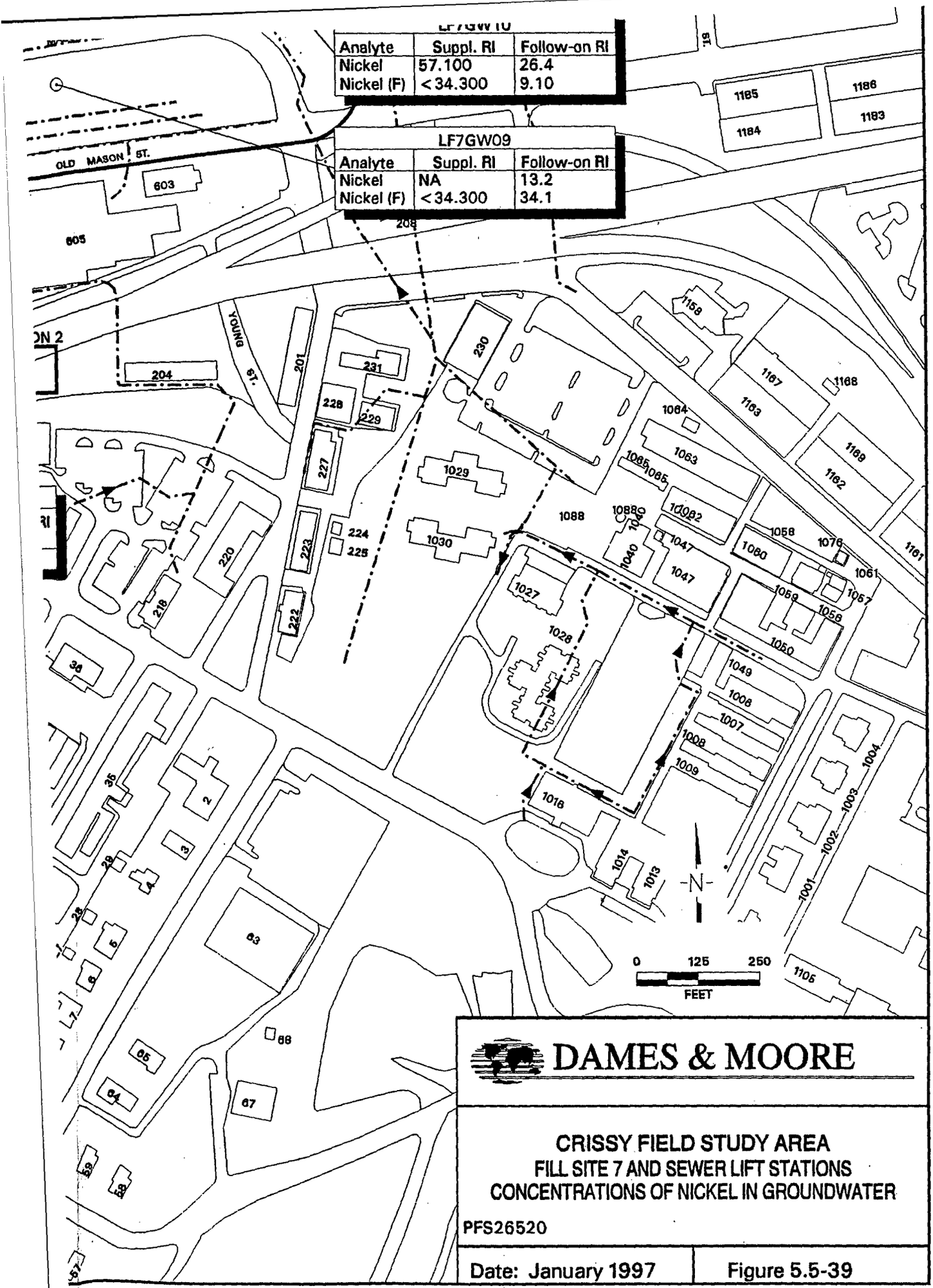


GW02	
Suppl. RI	Follow-on RI
NA	19.3
<34.300	<5.00

LF7GW07		
Analyte	Suppl. RI	Follow-on RI
Nickel	NA	96.0 an
Nickel (F)	<34.300	5.00

CFLSSB03	
Program	Follow-on RI
Depth	7.0'
Nickel	7.56

LF7GW01			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Nickel	NA	NA	10.3
Nickel (F)	<32.100	<34.300	<5.00

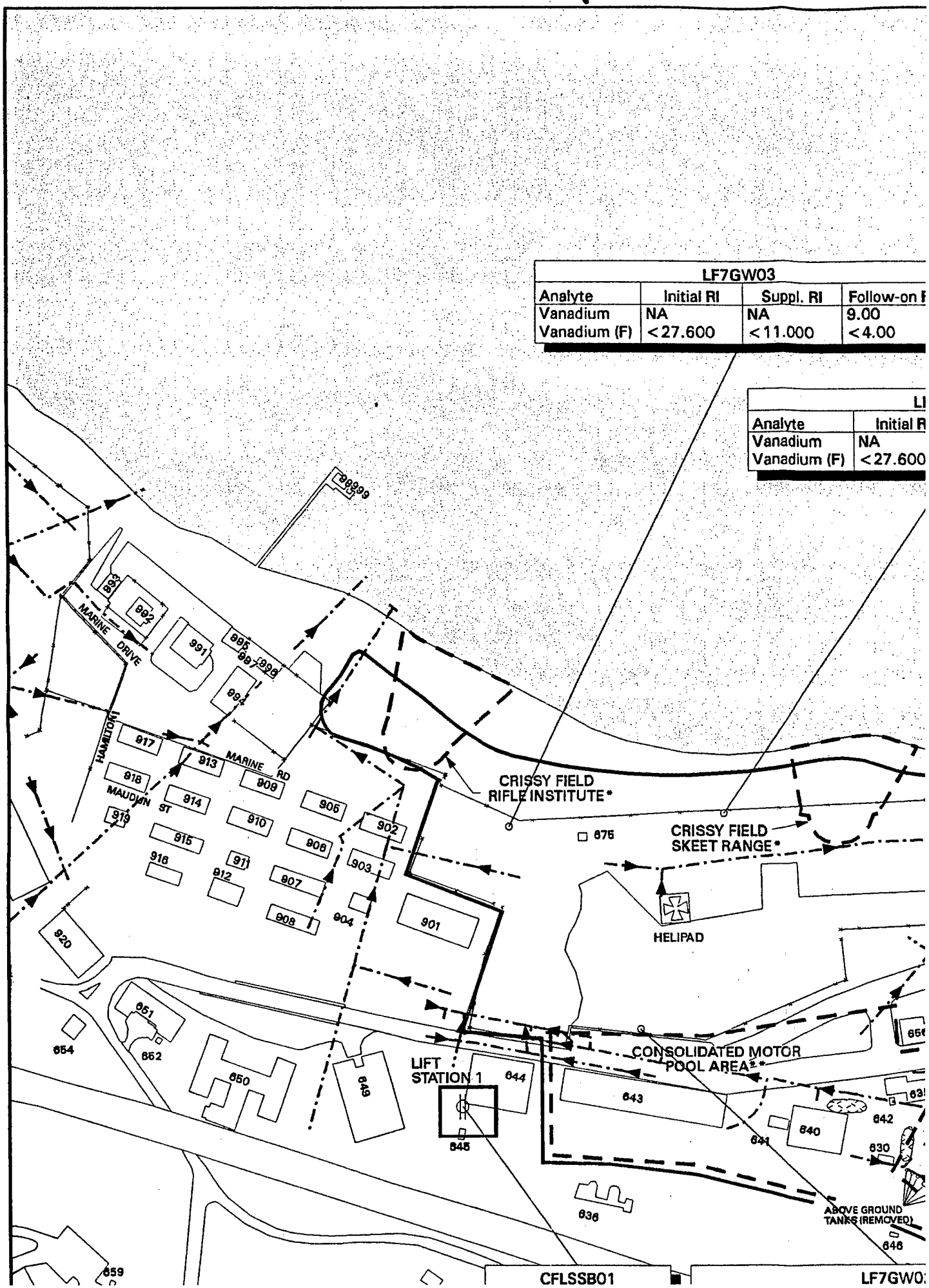


DAMES & MOORE

CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF NICKEL IN GROUNDWATER

PFS26520

Date: January 1997 | Figure 5.5-39


LF7GW03
Analyte | Initial RI | Suppl. RI | Follow-on R
Vanadium | NA | NA | 9.00
Vanadium (F) | <27.600 | <11.000 | <4.00
Analyte | Initial R
Vanadium | NA
Vanadium (F) | <27.600
MARINE DRIVE
HAMILTON
MARINE RD
MAUDLIN ST
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
ABOVE GROUND TANKS (REMOVED)
CFLSSB01
LF7GW0

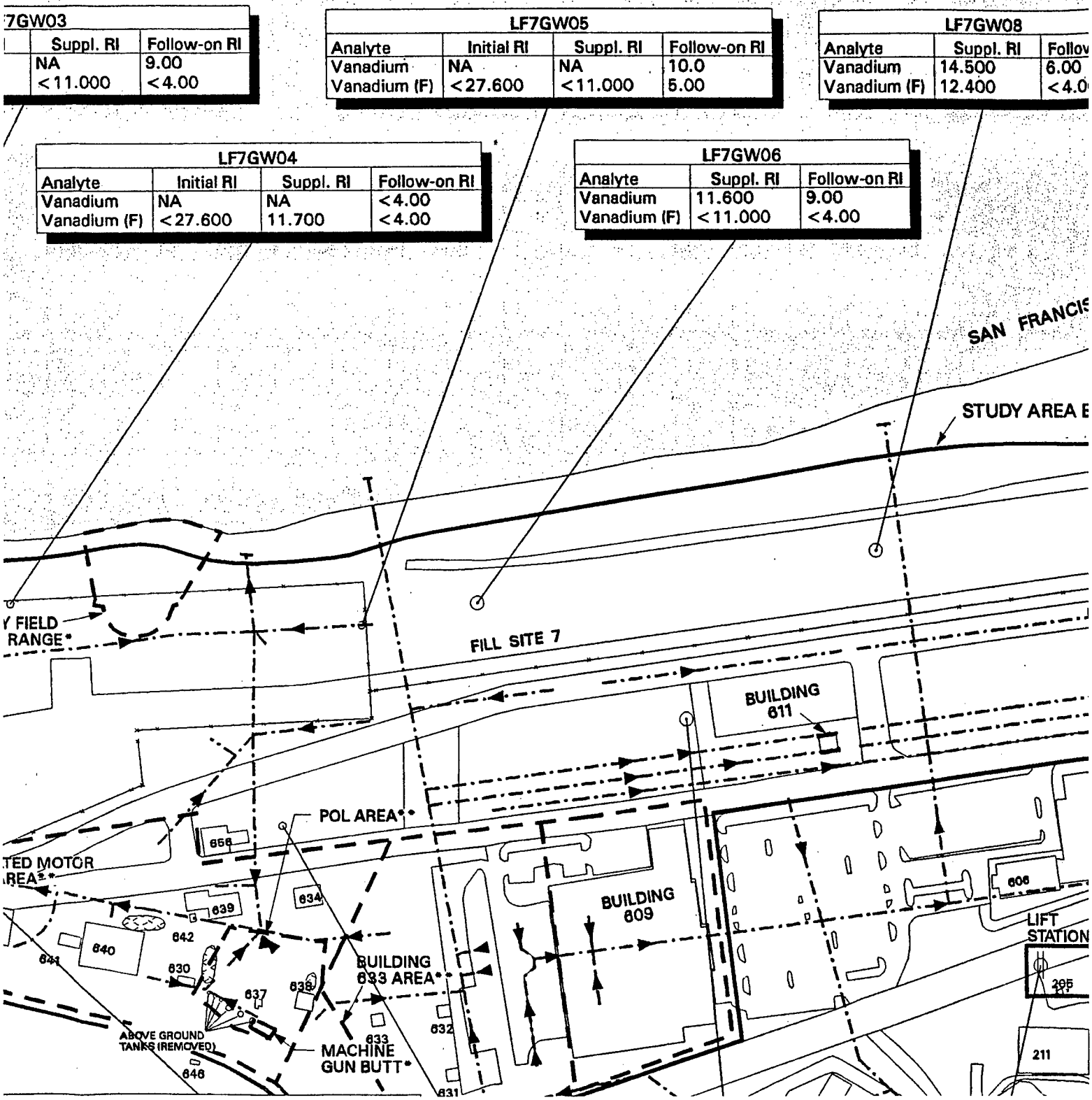
7GW03		
	Suppl. RI	Follow-on RI
	NA	9.00
	<11.000	<4.00

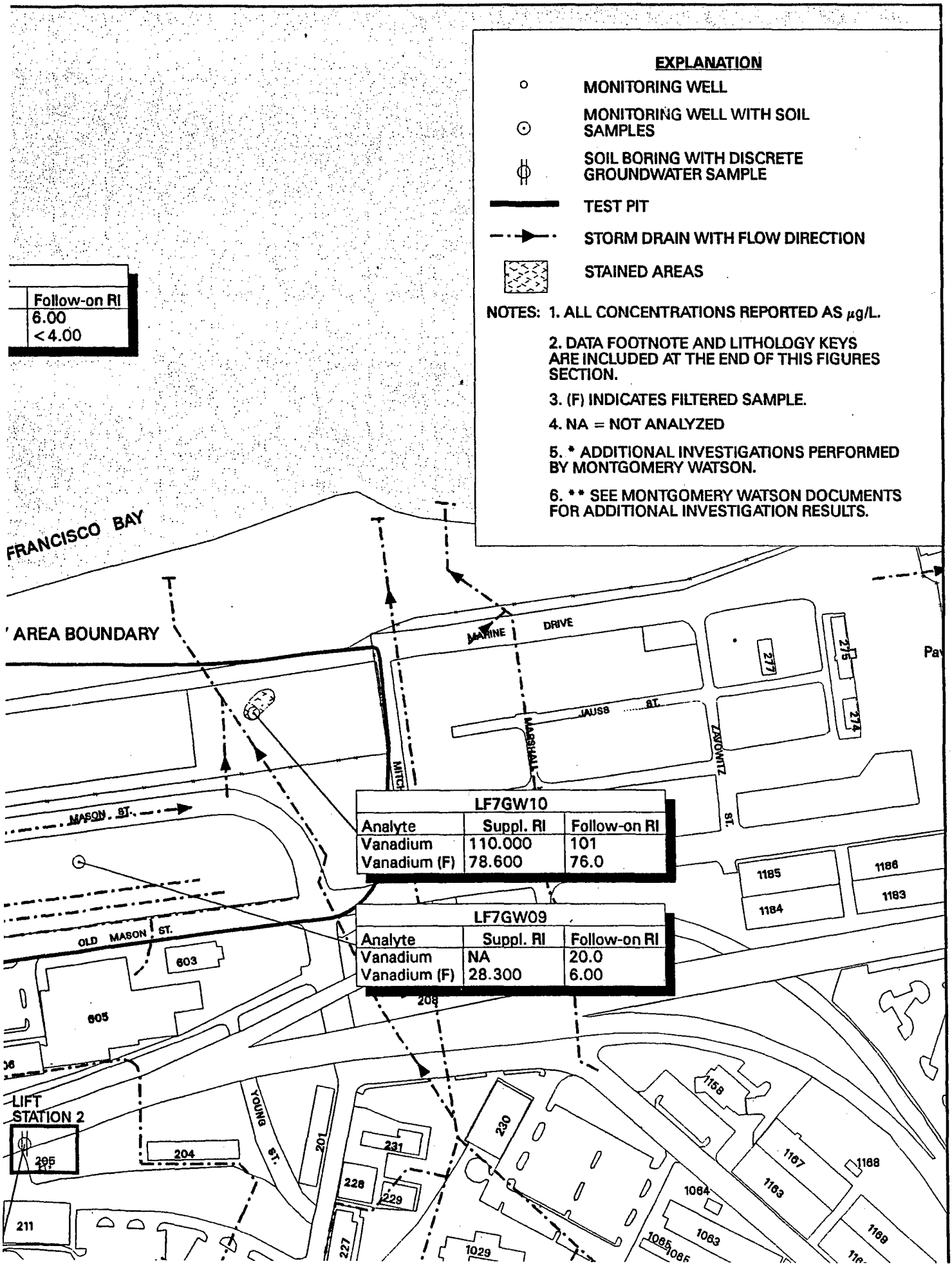
LF7GW05			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Vanadium	NA	NA	10.0
Vanadium (F)	<27.600	<11.000	5.00

LF7GW08		
Analyte	Suppl. RI	Follov
Vanadium	14.500	6.00
Vanadium (F)	12.400	<4.0

LF7GW04			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Vanadium	NA	NA	<4.00
Vanadium (F)	<27.600	11.700	<4.00

LF7GW06		
Analyte	Suppl. RI	Follow-on RI
Vanadium	11.600	9.00
Vanadium (F)	<11.000	<4.00




EXPLANATION
MONITORING WELL
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED
5. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
6. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
Follow-on RI
6.00
< 4.00
FRANCISCO BAY
AREA BOUNDARY
MARINE DRIVE
MASON ST.
OLD MASON ST.
MARSHALL
ZAWOWITZ ST.
MITCH
YOUNG ST.
LIFT STATION 2
LF7GW10
Analyte | Suppl. RI | Follow-on RI
Vanadium | 110.000 | 101
Vanadium (F) | 78.600 | 76.0
LF7GW09
Analyte | Suppl. RI | Follow-on RI
Vanadium | NA | 20.0
Vanadium (F) | 28.300 | 6.00
603
605
204
201
208
211
227
228
229
230
231
1029
1063
1064
1158
1163
1167
1168
1183
1184
1185
1186
274
275
277

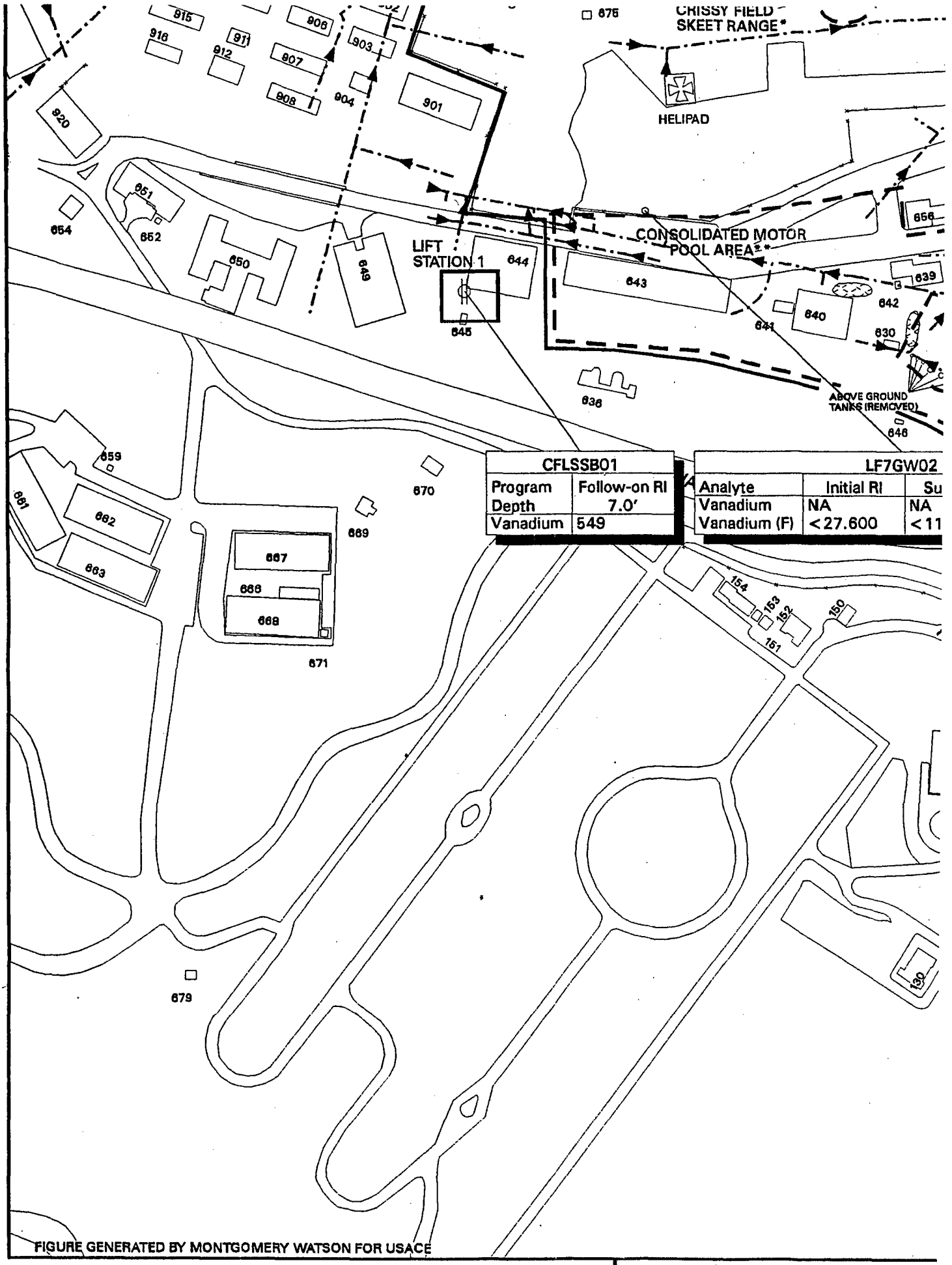
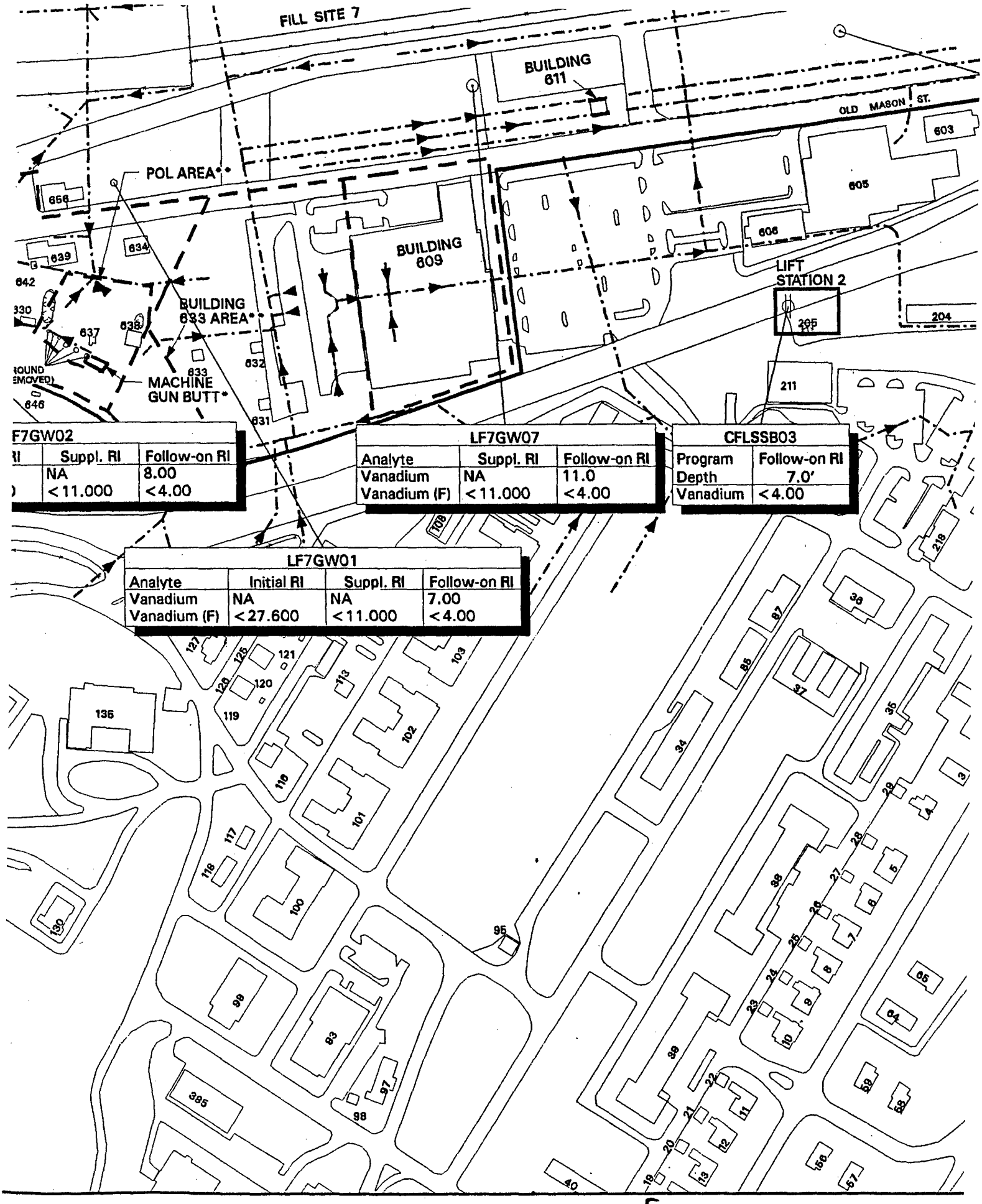


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

26 Dec 96 16:16:59 Thursday, base_11x17_v3.aml, plotfile base_CRISSY2_WH_20.grn. PSF

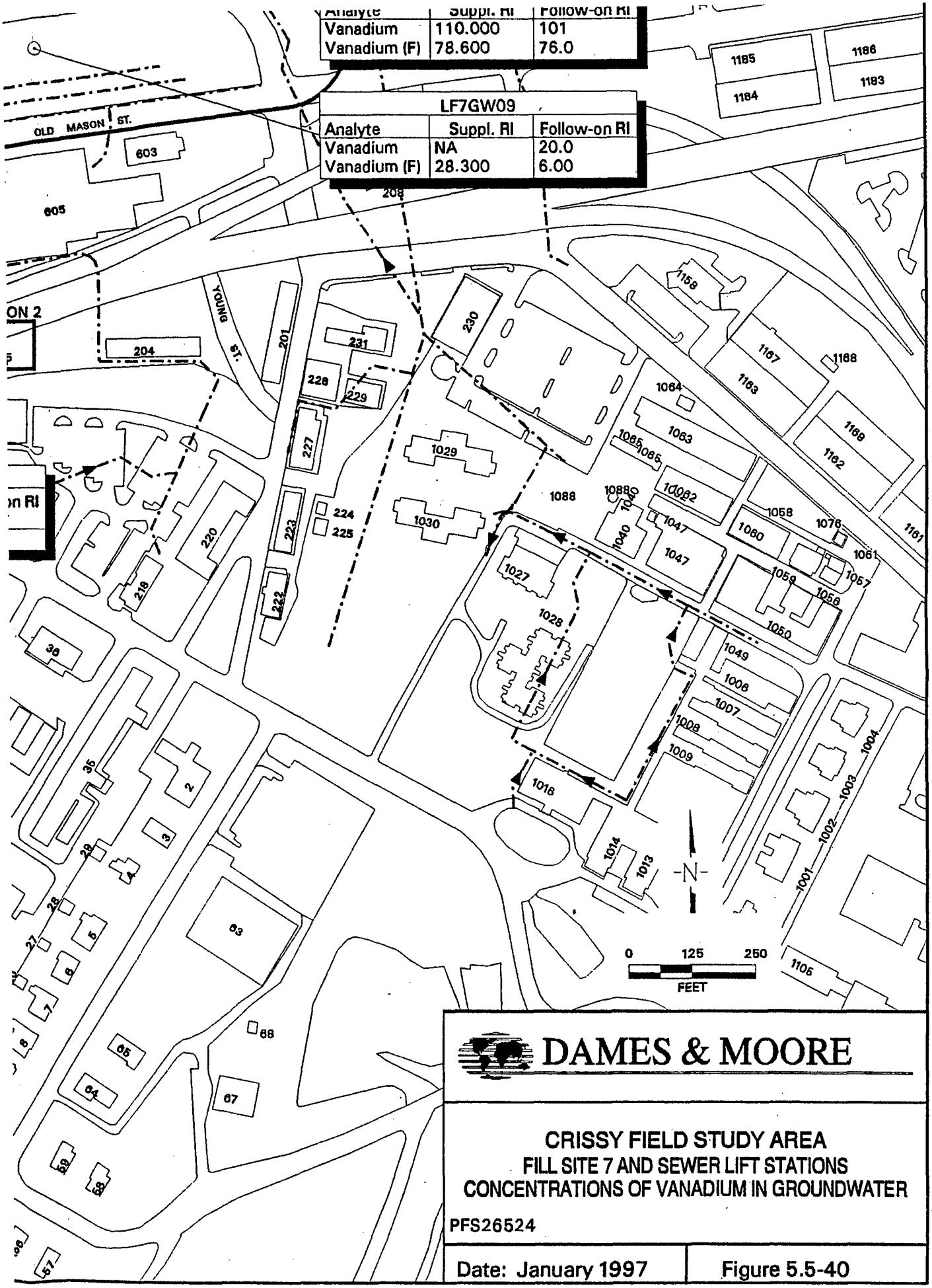


F7GW02		
tl	Suppl. RI	Follow-on RI
)	NA	8.00
	<11.000	<4.00

LF7GW07		
Analyte	Suppl. RI	Follow-on RI
Vanadium	NA	11.0
Vanadium (F)	<11.000	<4.00

CFLSSB03	
Program	Follow-on RI
Depth	7.0'
Vanadium	<4.00

LF7GW01			
Analyte	Initial RI	Suppl. RI	Follow-on RI
Vanadium	NA	NA	7.00
Vanadium (F)	<27.600	<11.000	<4.00



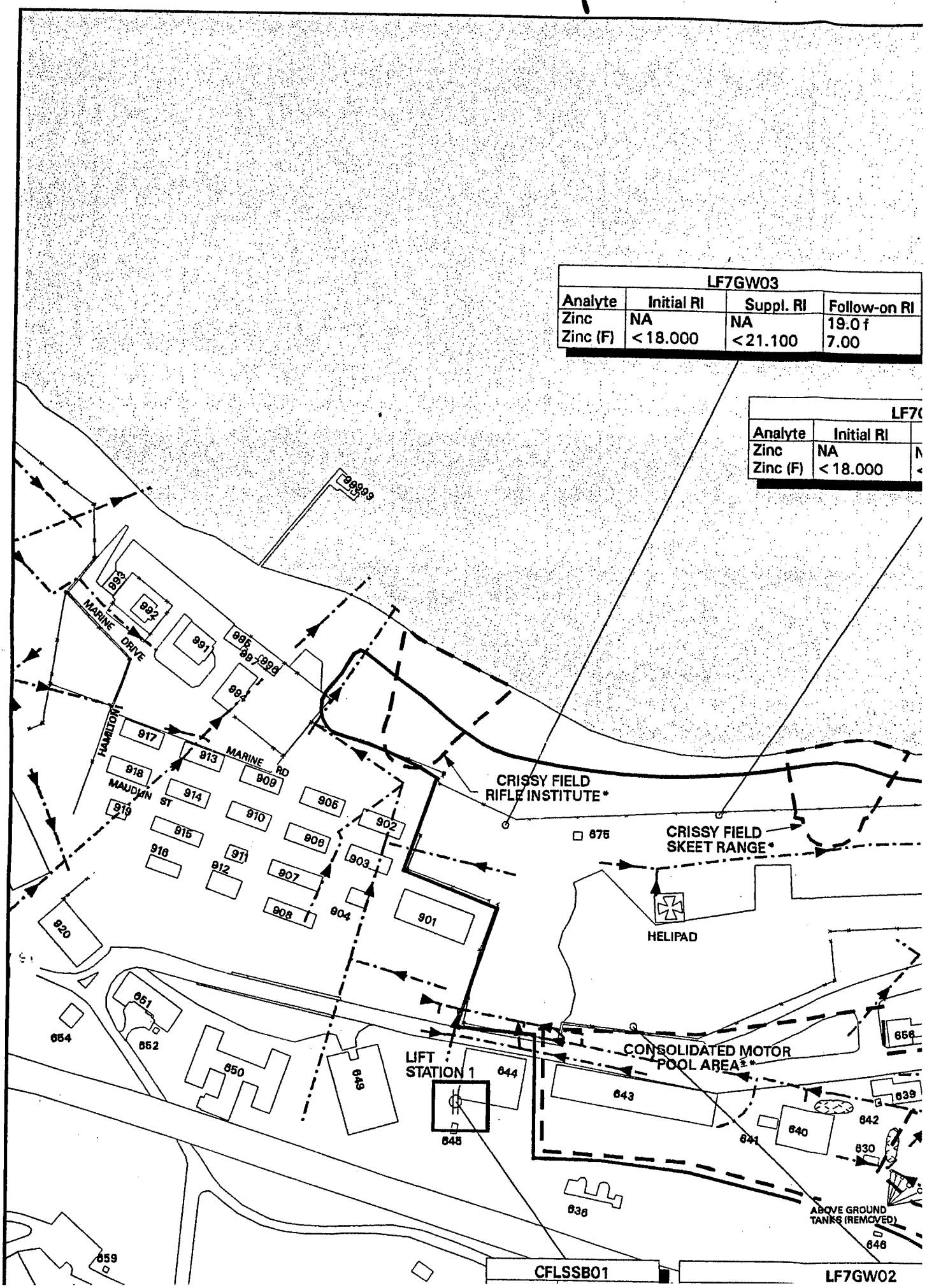
DAMES & MOORE

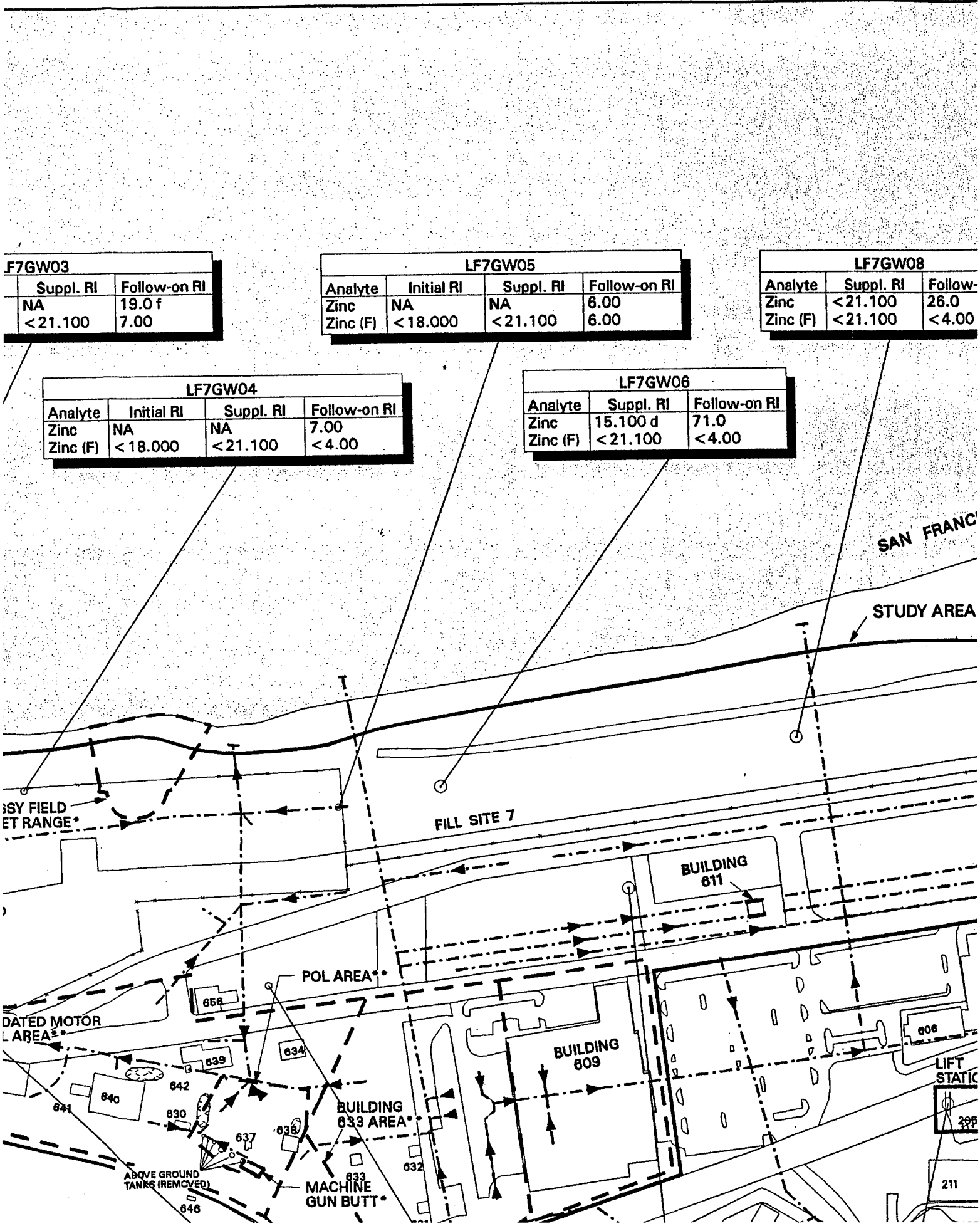
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF VANADIUM IN GROUNDWATER

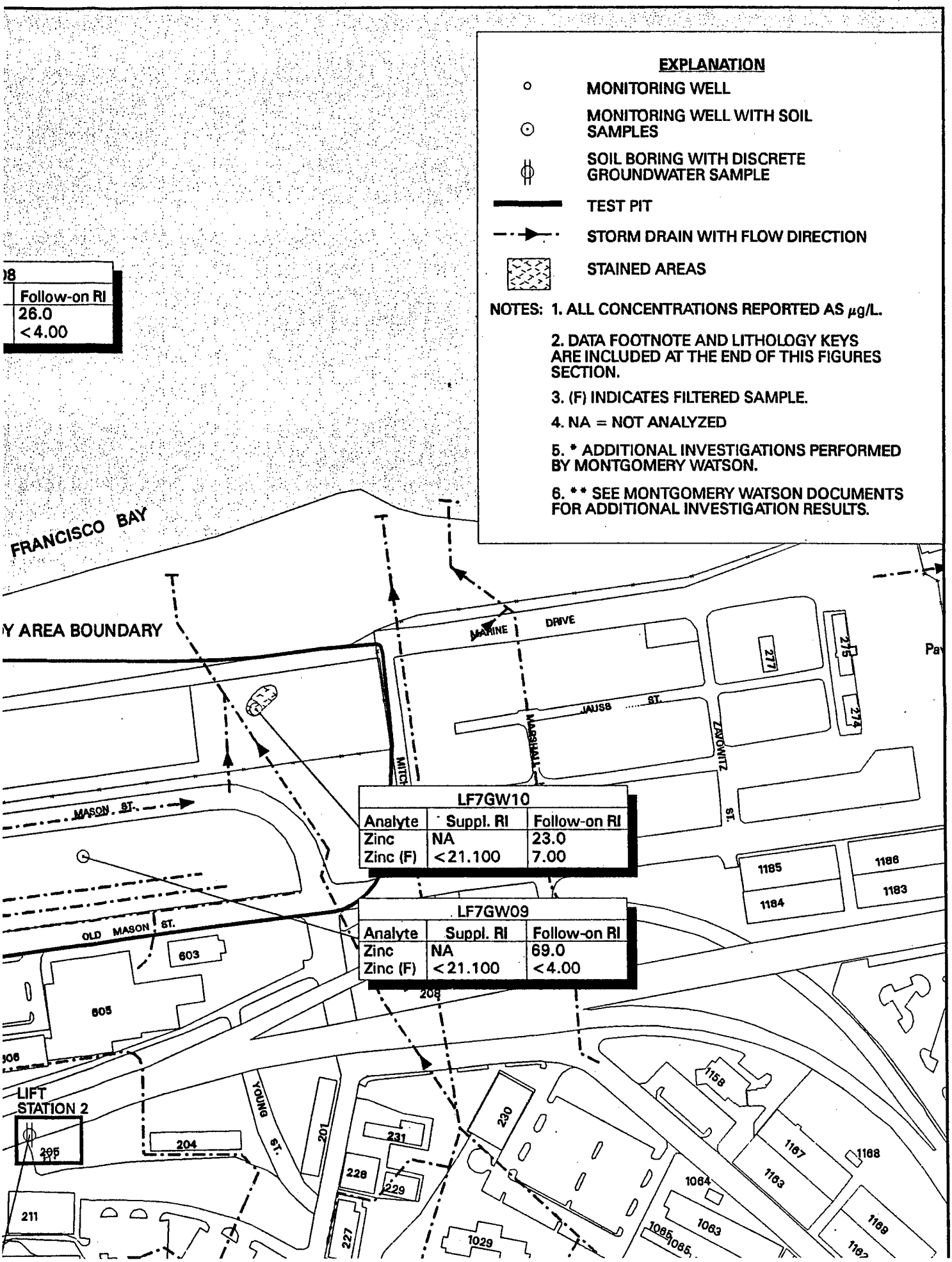
PFS26524

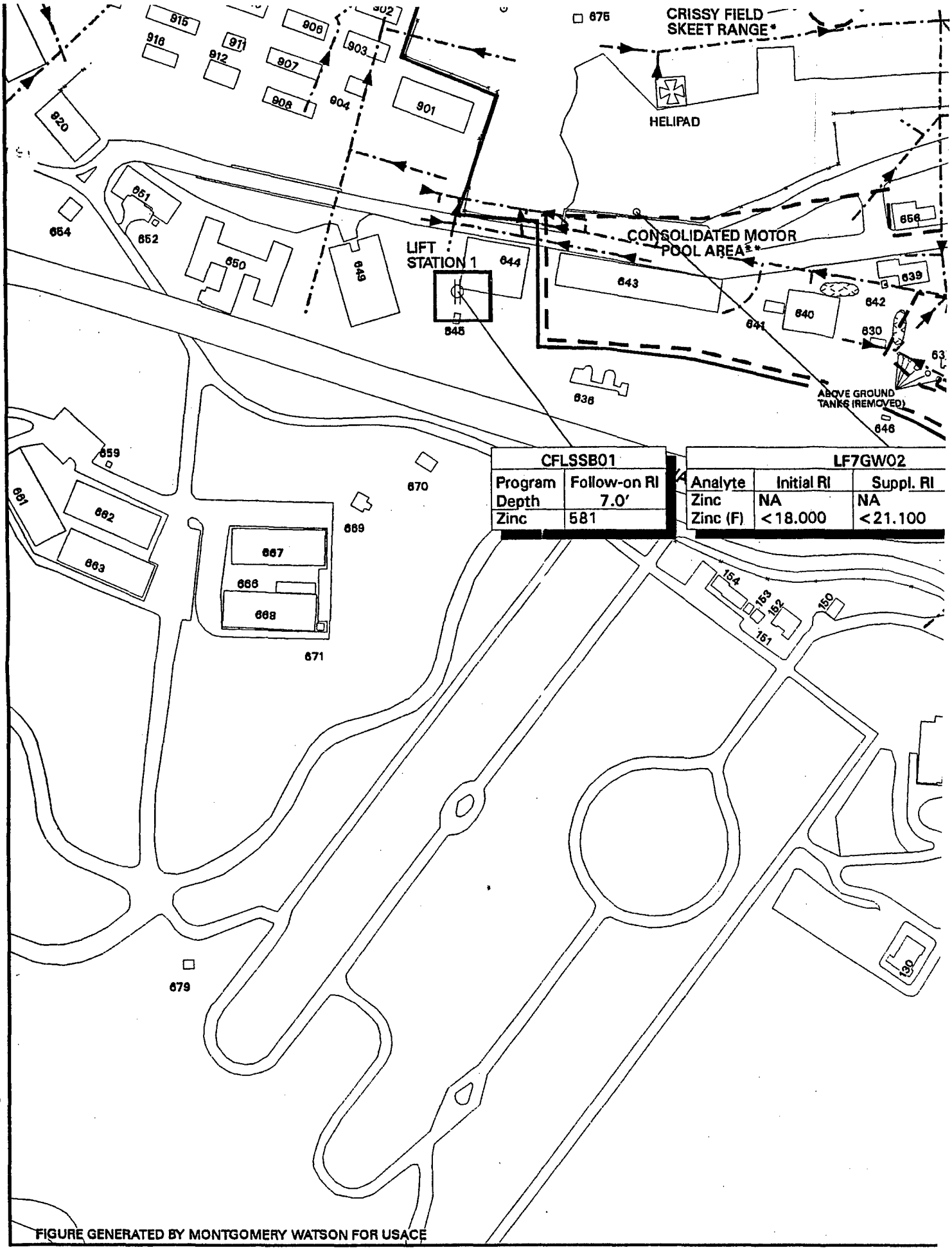
Date: January 1997 | Figure 5.5-40

6


LF7GW03
Analyte | Initial RI | Suppl. RI | Follow-on RI
Zinc | NA | NA | 19.0 f
Zinc (F) | < 18.000 | < 21.100 | 7.00
LF7(
Analyte | Initial RI
Zinc | NA
Zinc (F) | < 18.000
MARINE DRIVE
HAMILTON
MARINE RD
MAUDLIN ST
CRISSY FIELD RIFLE INSTITUTE*
CRISSY FIELD SKEET RANGE*
HELIPAD
LIFT STATION 1
CONSOLIDATED MOTOR POOL AREA**
ABOVE GROUND TANKS (REMOVED)
CFLSSB01
LF7GW02


LF7GW03
Suppl. RI | Follow-on RI
NA | 19.0 f
<21.100 | 7.00
LF7GW05
Analyte | Initial RI | Suppl. RI | Follow-on RI
Zinc | NA | NA | 6.00
Zinc (F) | <18.000 | <21.100 | 6.00
LF7GW08
Analyte | Suppl. RI | Follow-
Zinc | <21.100 | 26.0
Zinc (F) | <21.100 | <4.00
LF7GW04
Analyte | Initial RI | Suppl. RI | Follow-on RI
Zinc | NA | NA | 7.00
Zinc (F) | <18.000 | <21.100 | <4.00
LF7GW06
Analyte | Suppl. RI | Follow-on RI
Zinc | 15.100 d | 71.0
Zinc (F) | <21.100 | <4.00
SAN FRANC
STUDY AREA
FILL SITE 7
BUILDING 611
POL AREA**
BUILDING 609
BUILDING 633 AREA*
ABOVE GROUND TANKS (REMOVED)
MACHINE GUN BUTT*
LIFT STATIC
656
634
639
642
640
641
630
637
638
633
632
646
606
211


EXPLANATION
MONITORING WELL
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED
5. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
6. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
)8
Follow-on RI
26.0
<4.00
FRANCISCO BAY
Y AREA BOUNDARY
MARINE DRIVE
JAUSS ST.
MARSHALL
ZAWOWITZ ST.
MASON ST.
OLD MASON ST.
LF7GW10
Analyte | Suppl. RI | Follow-on RI
Zinc | NA | 23.0
Zinc (F) | <21.100 | 7.00
LF7GW09
Analyte | Suppl. RI | Follow-on RI
Zinc | NA | 69.0
Zinc (F) | <21.100 | <4.00
LIFT STATION 2
YOUNG ST.
603
605
204
211
227
228
229
231
230
1158
1167
1168
1163
1064
1063
1029
1184
1185
1186
1183
277
275
274

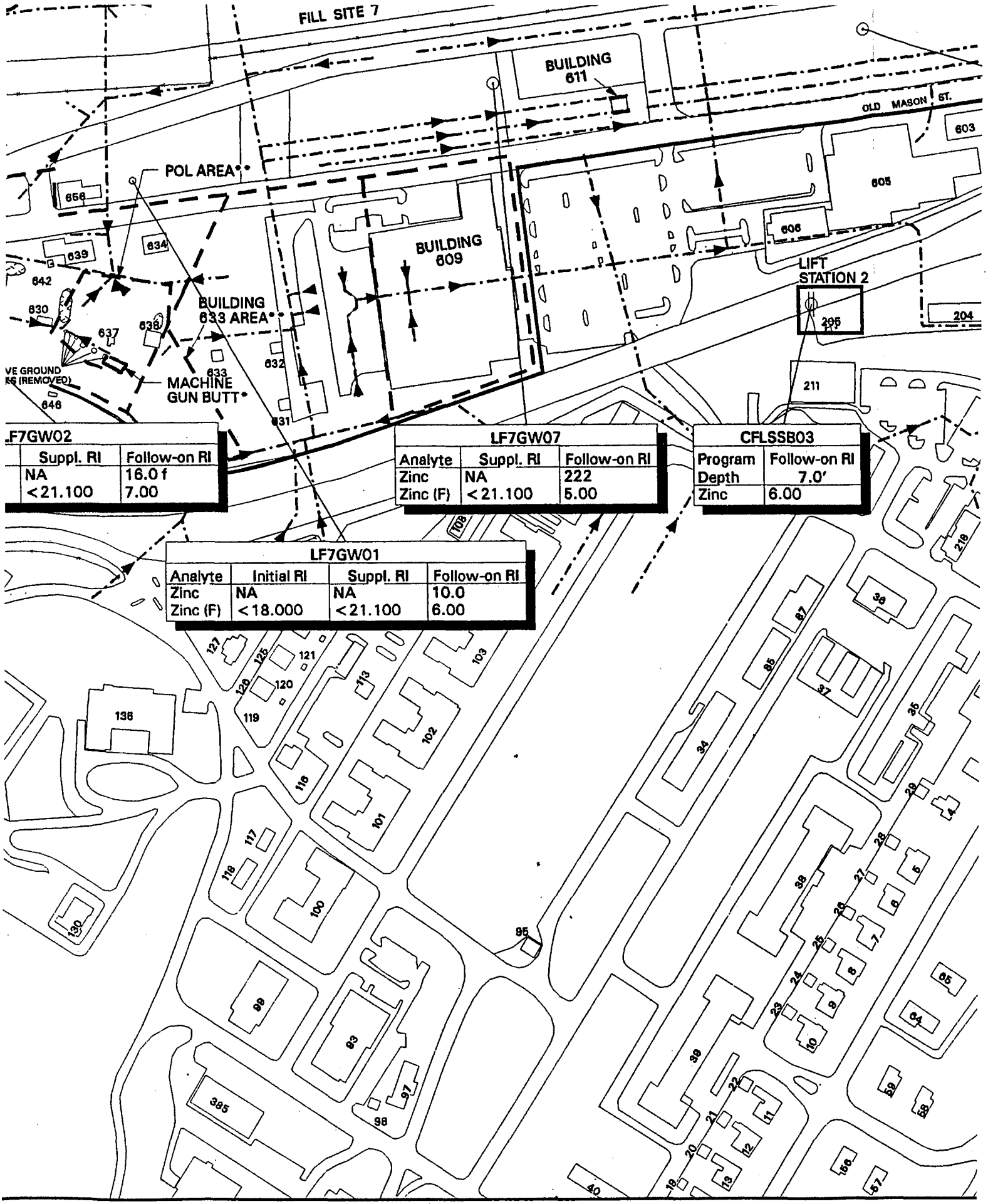


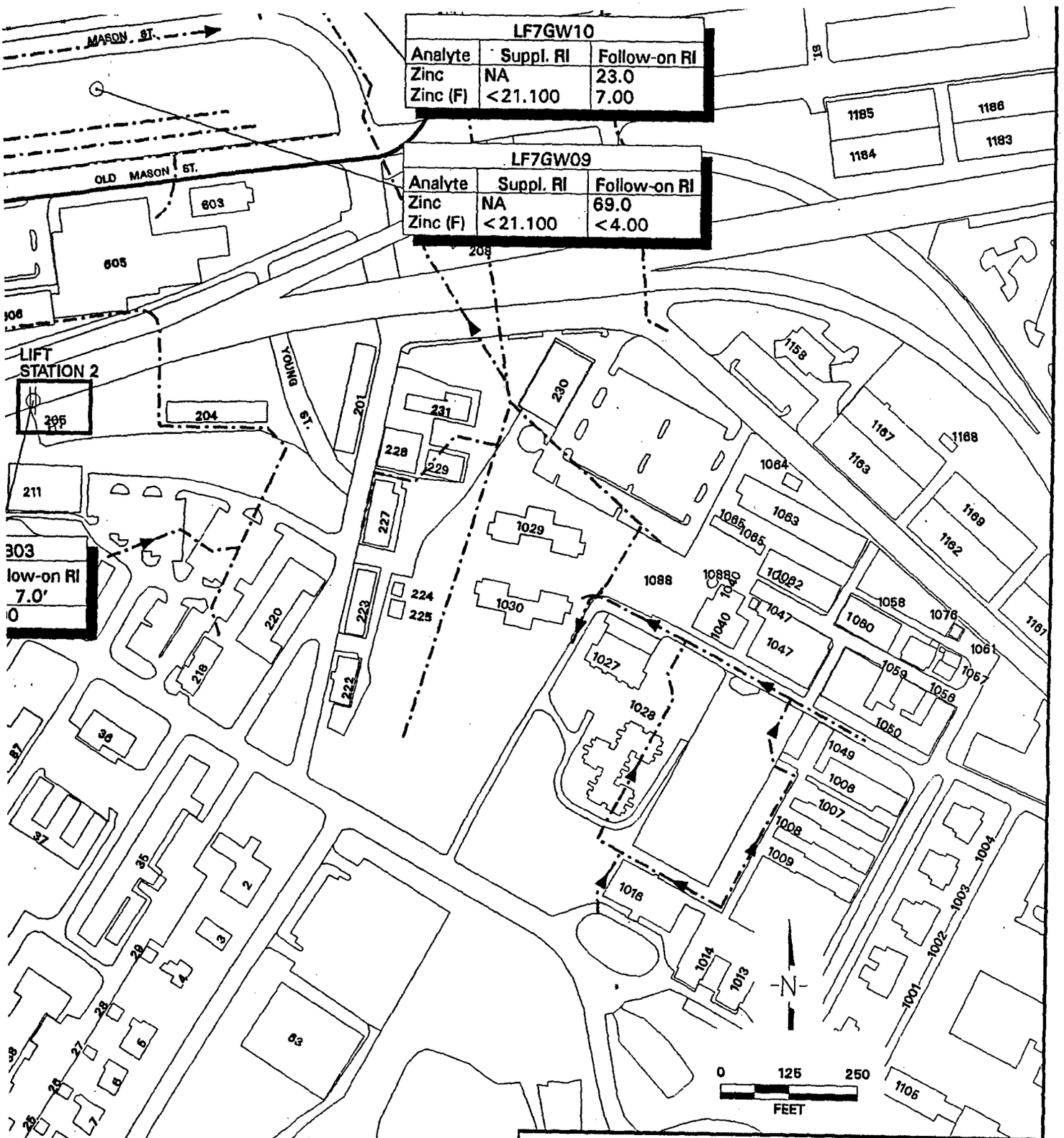
CFLSSB01	
Program	Follow-on RI
Depth	7.0'
Zinc	581

LF7GW02		
Analyte	Initial RI	Suppl. RI
Zinc	NA	NA
Zinc (F)	<18.000	<21.100

FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

26 Dec 96 16:19:23 Thursday, base_11x17_v3.mnl, plotfile base_CRISSY2_WH_21.grn, PSP


FILL SITE 7
BUILDING 611
OLD MASON ST.
POL AREA
BUILDING 609
BUILDING 633 AREA
MACHINE GUN BUTT
LIFT STATION 2
VE GROUND
KS (REMOVED)
656
639
834
642
830
637
638
633
632
631
646
603
605
606
295
204
211
218
LF7GW02
Suppl. RI
Follow-on RI
NA
16.0 f
<21.100
7.00
LF7GW07
Analyte
Suppl. RI
Follow-on RI
Zinc
NA
222
Zinc (F)
<21.100
5.00
CFLSSB03
Program
Follow-on RI
Depth
7.0'
Zinc
6.00
LF7GW01
Analyte
Initial RI
Suppl. RI
Follow-on RI
Zinc
NA
NA
10.0
Zinc (F)
<18.000
<21.100
6.00

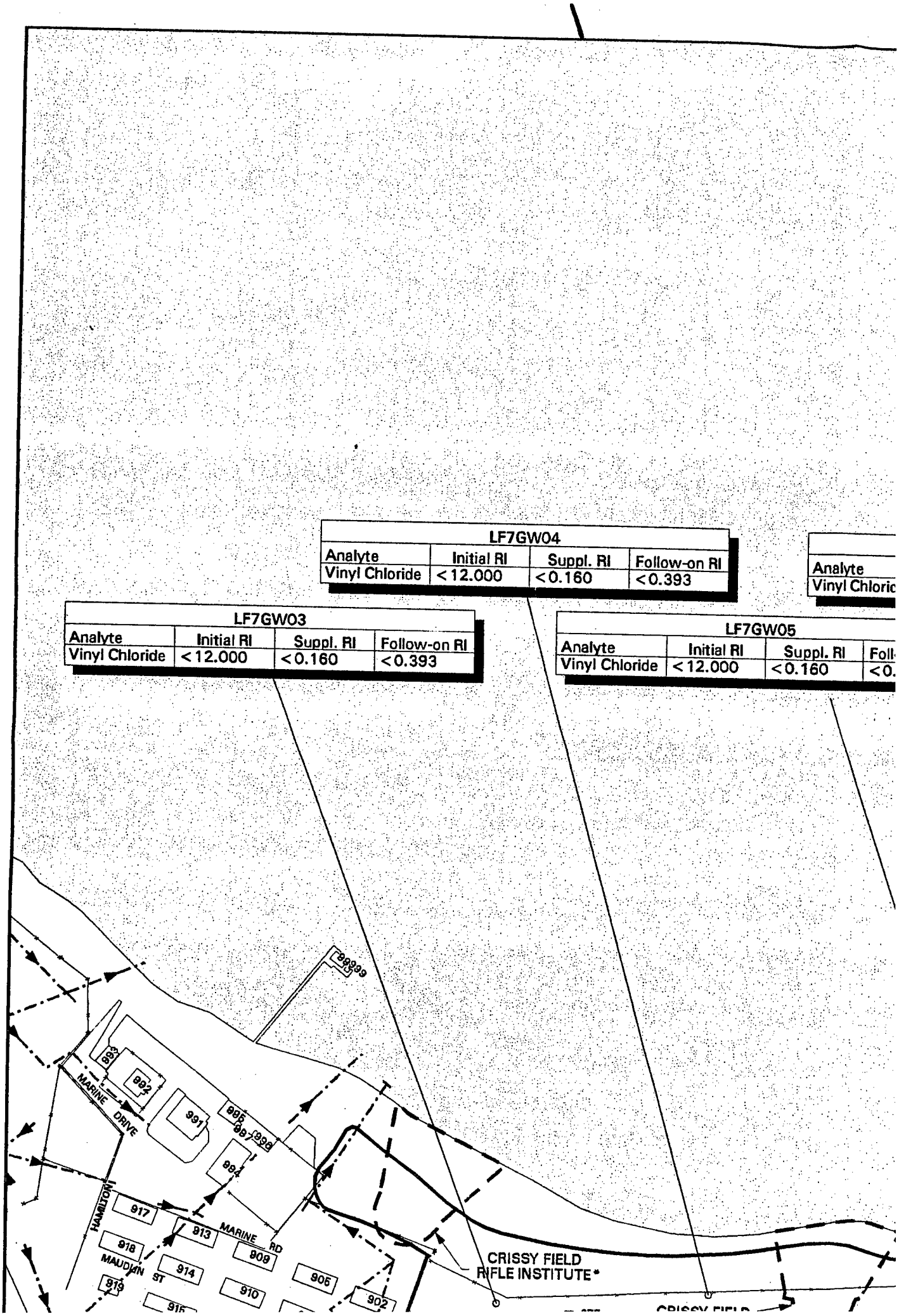


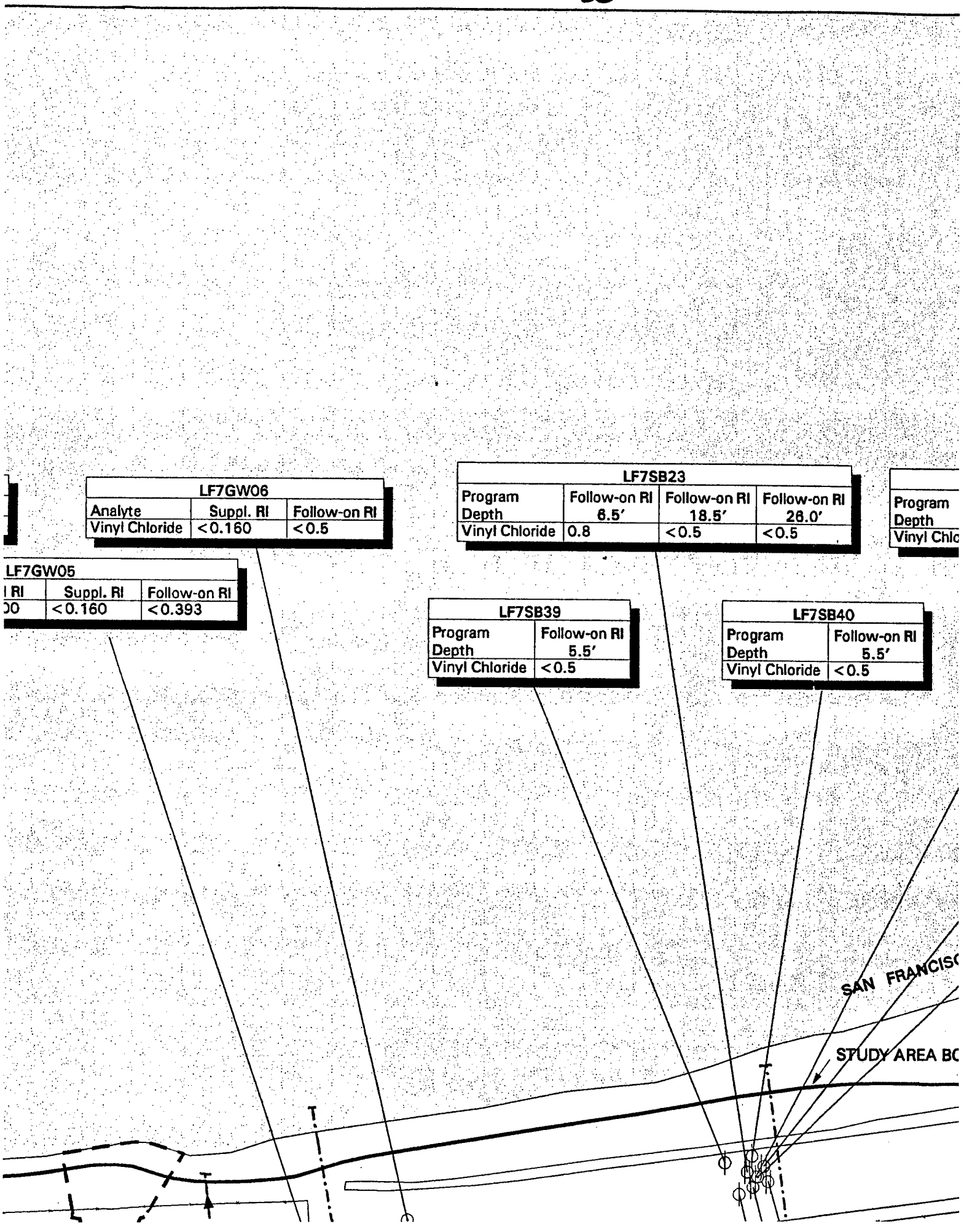
DAMES & MOORE

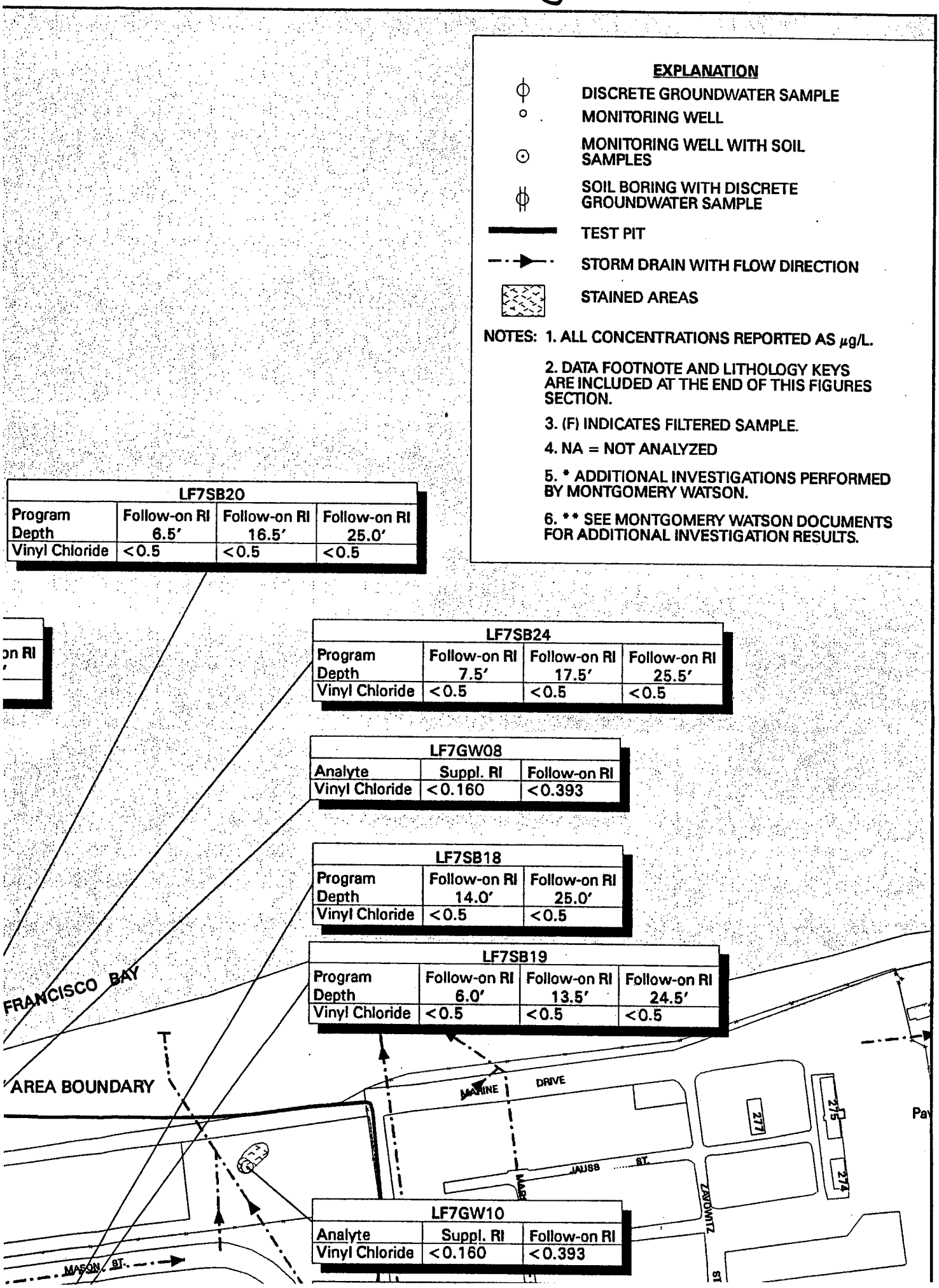
CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF ZINC IN GROUNDWATER

PFS26528

Date: January 1997 | Figure 5.5-41


LF7GW04
Analyte | Initial RI | Suppl. RI | Follow-on RI
Vinyl Chloride | < 12.000 | < 0.160 | < 0.393
LF7GW03
Analyte | Initial RI | Suppl. RI | Follow-on RI
Vinyl Chloride | < 12.000 | < 0.160 | < 0.393
LF7GW05
Analyte | Initial RI | Suppl. RI | Foll
Vinyl Chloride | < 12.000 | < 0.160 | < 0.
Analyte
Vinyl Chloric
MARINE DRIVE
HAMILTON
MARINE RD
MAUDLIN ST
CRISSY FIELD
RIFLE INSTITUTE*
883
882
991
995
997
998
994
917
913
918
914
909
919
910
906
902
915


LF7GW06
Analyte | Suppl. RI | Follow-on RI
Vinyl Chloride | <0.160 | <0.5
LF7GW05
RI | Suppl. RI | Follow-on RI
00 | <0.160 | <0.393
LF7SB23
Program | Follow-on RI | Follow-on RI | Follow-on RI
Depth | 6.5′ | 18.5′ | 26.0′
Vinyl Chloride | 0.8 | <0.5 | <0.5
Program
Depth
Vinyl Chlo
LF7SB39
Program | Follow-on RI
Depth | 5.5′
Vinyl Chloride | <0.5
LF7SB40
Program | Follow-on RI
Depth | 5.5′
Vinyl Chloride | <0.5
SAN FRANCISC
STUDY AREA BC


EXPLANATION
DISCRETE GROUNDWATER SAMPLE
MONITORING WELL
MONITORING WELL WITH SOIL SAMPLES
SOIL BORING WITH DISCRETE GROUNDWATER SAMPLE
TEST PIT
STORM DRAIN WITH FLOW DIRECTION
STAINED AREAS
NOTES: 1. ALL CONCENTRATIONS REPORTED AS µg/L.
2. DATA FOOTNOTE AND LITHOLOGY KEYS ARE INCLUDED AT THE END OF THIS FIGURES SECTION.
3. (F) INDICATES FILTERED SAMPLE.
4. NA = NOT ANALYZED
5. * ADDITIONAL INVESTIGATIONS PERFORMED BY MONTGOMERY WATSON.
6. ** SEE MONTGOMERY WATSON DOCUMENTS FOR ADDITIONAL INVESTIGATION RESULTS.
LF7SB20
Program | Follow-on RI | Follow-on RI | Follow-on RI
Depth | 6.5′ | 16.5′ | 25.0′
Vinyl Chloride | <0.5 | <0.5 | <0.5
LF7SB24
Program | Follow-on RI | Follow-on RI | Follow-on RI
Depth | 7.5′ | 17.5′ | 25.5′
Vinyl Chloride | <0.5 | <0.5 | <0.5
LF7GW08
Analyte | Suppl. RI | Follow-on RI
Vinyl Chloride | <0.160 | <0.393
LF7SB18
Program | Follow-on RI | Follow-on RI
Depth | 14.0′ | 25.0′
Vinyl Chloride | <0.5 | <0.5
LF7SB19
Program | Follow-on RI | Follow-on RI | Follow-on RI
Depth | 6.0′ | 13.5′ | 24.5′
Vinyl Chloride | <0.5 | <0.5 | <0.5
FRANCISCO BAY
AREA BOUNDARY
MARINE DRIVE
JAUSS ST.
ZAWOWITZ ST.
MASON ST.
277
275
274
LF7GW10
Analyte | Suppl. RI | Follow-on RI
Vinyl Chloride | <0.160 | <0.393

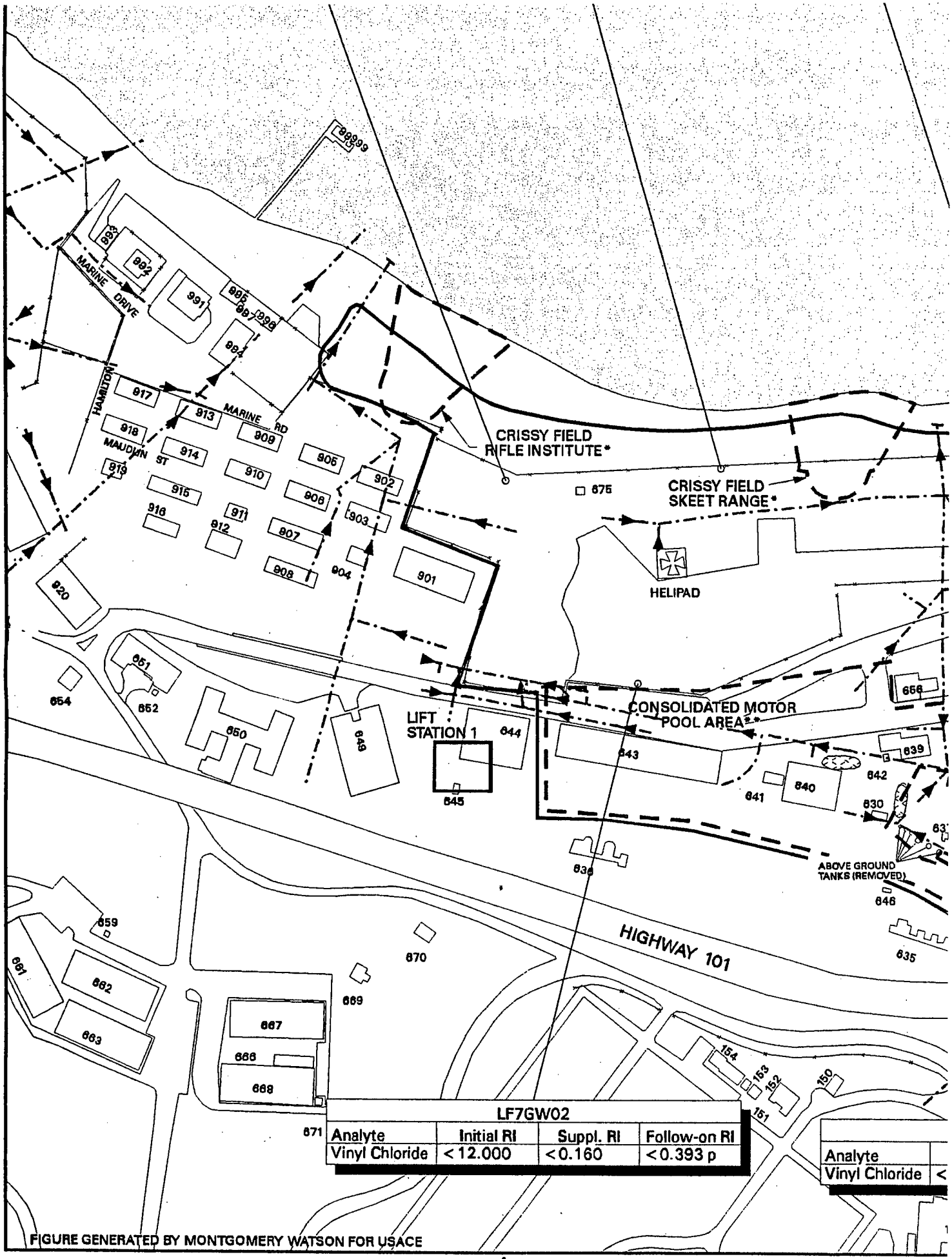
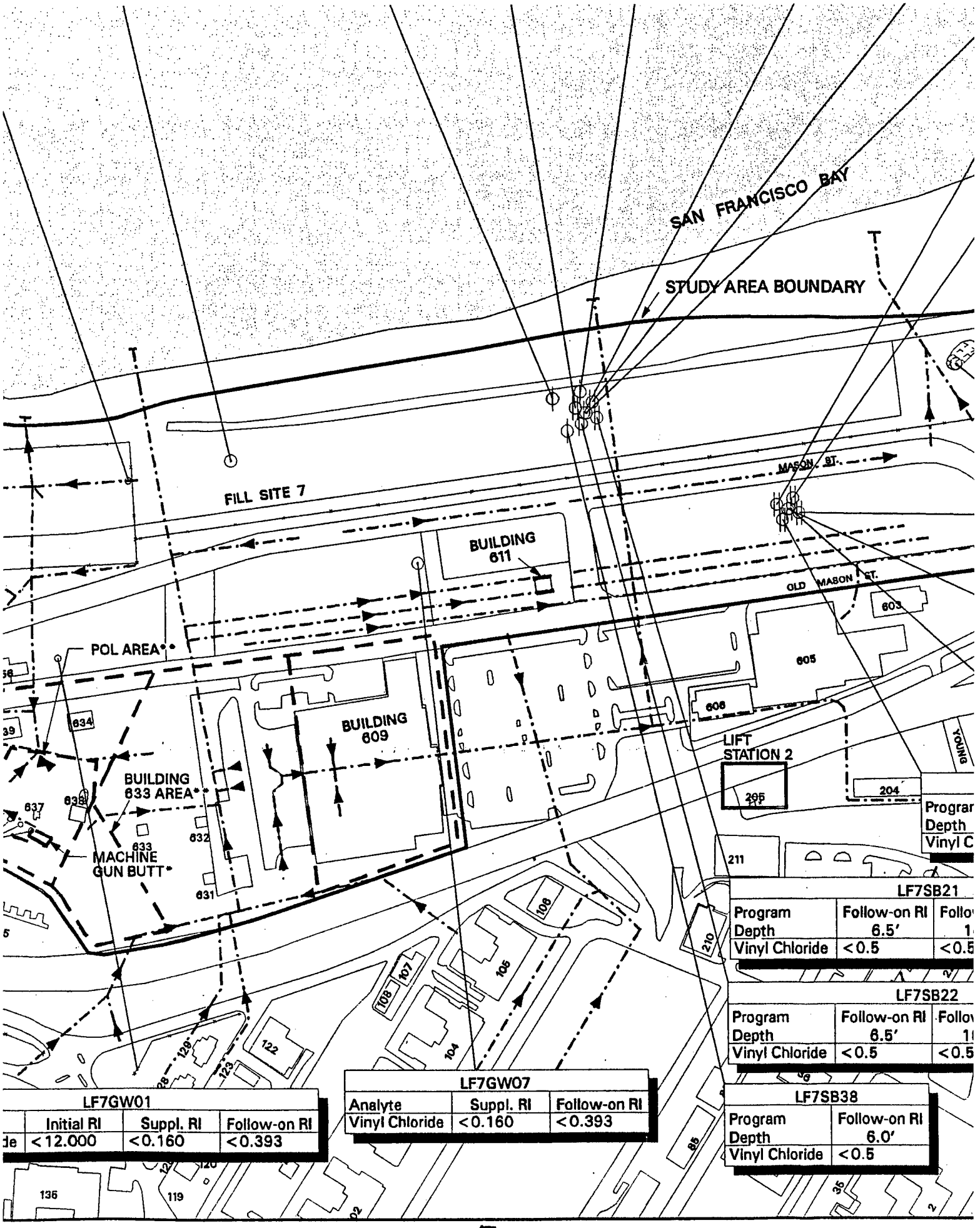


FIGURE GENERATED BY MONTGOMERY WATSON FOR USACE

26 Dec 96 16:22:41 Thursday, base_11x17_v3.aml, plotfile base_CRISSY2_WH_48.grn.PSF



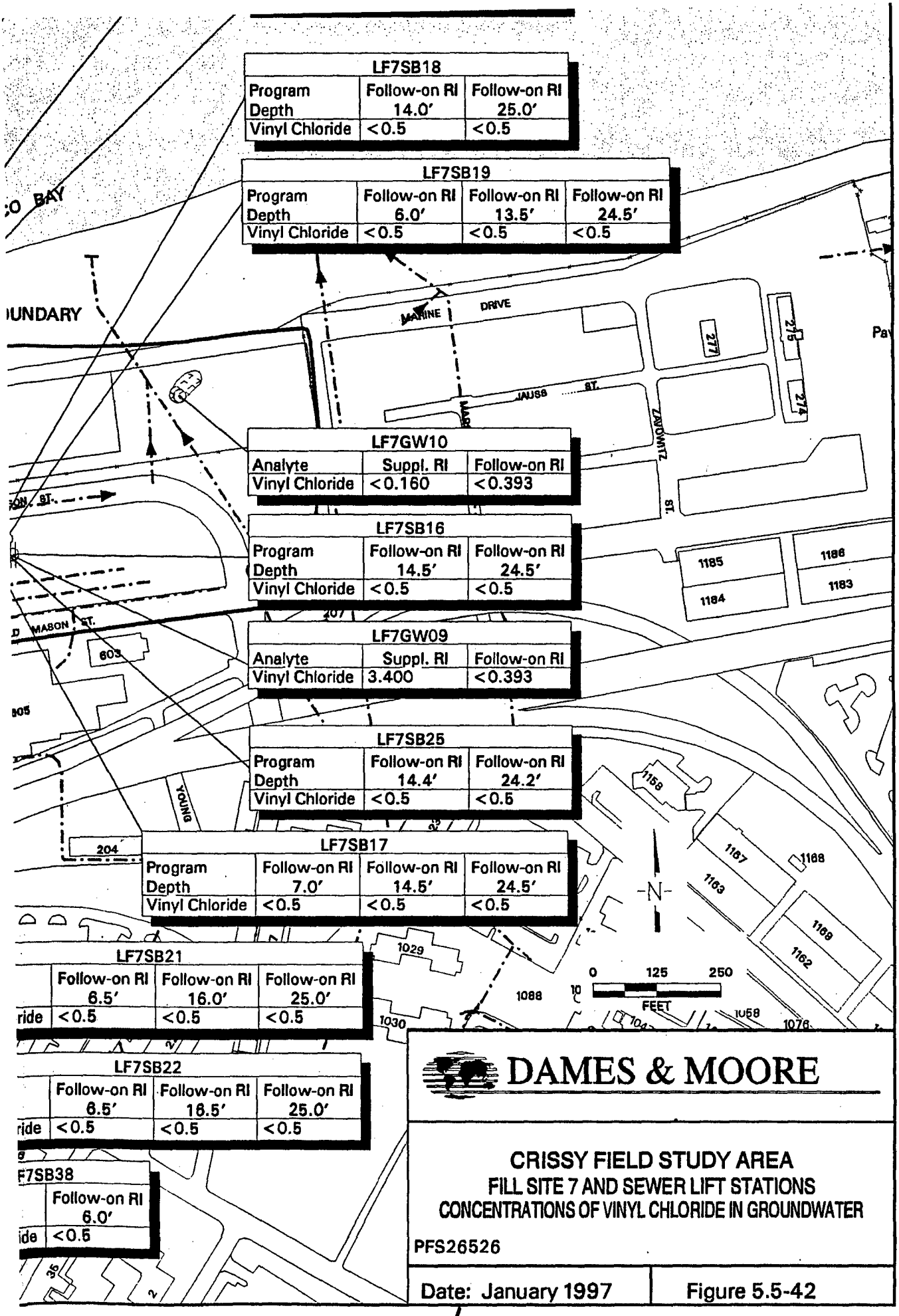
LF7GW01			
	Initial RI	Suppl. RI	Follow-on RI
de	< 12.000	< 0.160	< 0.393

LF7GW07		
Analyte	Suppl. RI	Follow-on RI
Vinyl Chloride	< 0.160	< 0.393

LF7SB21		
Program	Follow-on RI	Follo
Depth	6.5′	1
Vinyl Chloride	< 0.5	< 0.5

LF7SB22		
Program	Follow-on RI	Follo
Depth	6.5′	1
Vinyl Chloride	< 0.5	< 0.5

LF7SB38	
Program	Follow-on RI
Depth	6.0′
Vinyl Chloride	< 0.5



DAMES & MOORE

CRISSY FIELD STUDY AREA
FILL SITE 7 AND SEWER LIFT STATIONS
CONCENTRATIONS OF VINYL CHLORIDE IN GROUNDWATER

PFS26526

Date: January 1997 | Figure 5.5-42