N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION
NAS MOFFETT FIELD, CALIFORNIA

VOLUME 6 APPENDICES F AND G

APRIL 1991

Prepared by:

IT Corporation
312 Directors Drive
Knoxville, Tennessee 37923

Submitted by:

Hazardous Waste Remedial Actions Program
Martin Marietta Energy Systems, Inc.
Oak Ridge, Tennessee 37831

for:

U.S. Department of Energy
Contract DE-AC05-84OR21400

Submitted to:

Department of the Navy
Western Division
Naval Facilities Engineering Command
San Bruno, California 94066-0727

CEE2798COV6
03/21/91 F4

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

THIS RECORD CONTAINS MULTIPLE VOLUMES
WHICH HAVE BEEN ENTERED SEPARATELY

VOLUME 1 OF 6 IS FILED AS ADMINISTRATIVE
RECORD NO. **N00296.001071**

VOLUME 2 OF 6 IS FILED AS ADMINISTRATIVE
RECORD NO. **N00296.001072**

VOLUME 3 OF 6 IS FILED AS ADMINISTRATIVE
RECORD NO. **N00296.001073**

VOLUME 4 OF 6 IS FILED AS ADMINISTRATIVE
RECORD NO. **N00296.001074**

VOLUME 5 OF 6 IS FILED AS ADMINISTRATIVE
RECORD NO. **N00296.001075**

CONTENTS VOLUME 1 - TEXT

	Page
ACRONYMS	xxxv
EXECUTIVE SUMMARY	xxxix
1.0 INTRODUCTION	1-1
1.1 Purpose of Report	1-1
1.2 Organization	1-3
1.3 Project Background	1-4
1.3.1 NAS Moffett Field Location and Description	1-4
1.3.2 NAS Moffett Field Environs	1-6
1.4 Previous Studies	1-7
1.4.1 Initial Assessment Study	1-7
1.4.2 Confirmation Study	1-8
1.4.2.1 Verification Step (Step I)	1-9
1.4.2.2 Characterization Step (Step II) Work Plan	1-9
1.4.3 Potential Vertical Conduits	1-10
1.4.4 Tank and Sump Testing	1-11
1.4.5 Hydrogeologic Assessment Study of Wastewater Flux Ponds	1-11
2.0 PHASE I REMEDIAL INVESTIGATION ACTIVITIES	2-1
2.1 Introduction	2-1
2.2 Review of Historical Photography	2-1
2.2.1 Sites 1 and 2	2-2
2.2.2 Site 3 Marriage Road Ditch	2-2
2.3 Field Investigation Activities	2-3
2.3.1 Surface Geophysics	2-3
2.3.2 Borehole Geophysics	2-3
2.3.3 Surface Water and Sediment Investigations	2-4
2.3.4 Soil Gas Surveys	2-5
2.3.5 Soil Sampling	2-6
2.3.6 Well Installation	2-7
2.3.7 Permeability Tests	2-11
2.3.8 Water Level Measurements	2-11
2.3.9 Ground Water Sampling	2-13
2.3.10 Surveying	2-15
2.4 Chemical Analyses	2-15
3.0 STATION OVERVIEW	3-1
3.1 Topography and Physiography	3-1
3.2 Soils	3-2
3.2.1 Soil Types	3-2
3.2.2 Soil Composition	3-3
3.3 Local Alluvial Geology	3-4
3.4 Geohydrology	3-9
3.4.1 Regional Geohydrology	3-9
3.4.2 Local Geohydrology	3-10

CONTENTS VOLUME 1 (Continued)

		Page
3.5	General Water Quality	3-14
3.5.1	Regional Water Quality	3-14
3.5.2	Local Water Quality	3-15
3.6	Biota	3-16
3.6.1	Vegetation	3-16
3.6.2	Wildlife	3-17
3.6.3	Endangered, Threatened, and Rare Species	3-17
4.0	RUNWAY LANDFILL - SITE 1	4-1
4.1	Description and History	4-1
4.2	Field Investigation	4-2
4.2.1	Surface Geophysical Surveys	4-3
4.2.2	Geophysical Borings	4-4
4.2.3	Soil Borings	4-4
4.2.4	Ground Water Monitoring Wells	4-5
4.2.5	Laboratory Physical Parameters	4-6
4.2.6	Soil Samples	4-6
4.2.7	Ground Water Samples	4-7
4.2.8	Surface Water and Sediment Samples	4-7
4.2.9	Water Level Measurements	4-7
4.3	Hydrogeology	4-8
4.3.1	Site Geology	4-8
4.3.2	Hydrology	4-9
4.4	Nature and Extent of Contamination	4-11
4.4.1	Sources	4-11
4.4.2	Review of Chemical Analyses	4-12
5.0	GOLF COURSE LANDFILL - SITE 2	5-1
5.1	Description and History	5-1
5.2	Field Investigation	5-2
5.2.1	Geophysical Survey	5-3
5.2.2	Geophysical Borings	5-5
5.2.3	Soil Borings	5-5
5.2.4	Ground Water Monitoring Wells	5-5
5.2.5	Laboratory Physical Parameters	5-6
5.2.6	Soil Samples	5-7
5.2.7	Ground Water Samples	5-7
5.2.8	Surface Water and Sediment Samples	5-7
5.2.9	Water Level Measurements	5-8
5.3	Hydrogeology	5-8
5.3.1	Site Geology	5-8
5.3.2	Hydrology	5-9
5.4	Nature and Extent of Contamination	5-10
5.4.1	Sources	5-10
5.4.2	Review of Chemical Analyses	5-10

CONTENTS VOLUME 1 (Continued)

		Page
6.0	MARRIAGE ROAD DITCH - SITE 3	6-1
6.1	Description and History	6-1
6.2	Field Investigation	6-1
6.2.1	Geophysical Borings	6-2
6.2.2	Soil Gas Survey	6-2
6.2.3	Soil Borings	6-3
6.2.4	Ground Water Monitoring Wells	6-3
6.2.5	Soil Samples	6-3
6.2.6	Ground Water Samples	6-4
6.2.7	Water Level Measurements	6-4
6.3	Hydrogeology	6-4
6.3.1	Site Geology	6-4
6.3.2	Hydrology	6-5
6.4	Nature and Extent of Contamination	6-7
6.4.1	Sources	6-7
6.4.2	Review of Chemical Analyses	6-8
7.0	ABANDONED WASTE WATER HOLDING PONDS - SITE 4	7-1
7.1	Description and History	7-1
7.2	Field Investigation	7-2
7.2.1	Geophysical Borings	7-2
7.2.2	Ground Water Monitoring Wells	7-2
7.2.3	Soil Samples	7-3
7.2.4	Ground Water Samples	7-3
7.2.5	Water Level Measurements	7-4
7.3	Hydrogeology	7-4
7.3.1	Site Geology	7-4
7.3.2	Hydrology	7-4
7.4	Nature and Extent of Contamination	7-7
7.4.1	Sources	7-7
7.4.2	Review of Chemical Analyses	7-7
8.0	FUEL FARM AREA - SITE 5	8-1
8.1	Description and History	8-1
8.2	Field Investigation	8-1
8.2.1	Geophysical Borings	8-2
8.2.2	Monitoring Wells	8-2
8.2.3	Soil Gas Survey	8-3
8.2.4	Soil Boring	8-4
8.2.5	Soil Samples	8-4
8.2.6	Ground Water Samples	8-4
8.2.7	Water Level Measurements	8-4
8.3	Hydrogeology	8-4
8.3.1	Site Geology	8-4
8.3.2	Hydrology	8-8
8.4	Nature and Extent of Contamination	8-9
8.4.1	Sources	8-9
8.4.2	Review of Chemical Analyses	8-10

CONTENTS VOLUME 1 (Continued)

		Page
9.0	RUNWAY APRON - SITE 6	9-1
	9.1 Description and History	9-1
	9.2 Field Investigation	9-1
	9.2.1 Ground Water Samples	9-1
	9.2.2 Water Level Measurements	9-2
	9.3 Hydrogeology	9-2
	9.3.1 Site Geology	9-2
	9.3.2 Hydrology	9-2
	9.4 Nature and Extent of Contamination	9-3
	9.4.1 Sources	9-3
	9.4.2 Review of Chemical Analyses	9-4
10.0	HANGARS 2 AND 3 - SITE 7	10-1
	10.1 Description and History	10-1
	10.2 Field Investigation	10-1
	10.2.1 Geophysical Borings	10-2
	10.2.2 Ground Water Monitoring Wells	10-2
	10.2.3 Soil Samples	10-2
	10.2.4 Ground Water Samples	10-2
	10.2.5 Water Level Measurements	10-3
	10.3 Hydrogeology	10-3
	10.3.1 Site Geology	10-3
	10.3.2 Hydrology	10-4
	10.4 Nature and Extent of Contamination	10-6
	10.4.1 Sources	10-6
	10.4.2 Review of Chemical Analyses	10-7
11.0	WASTE OIL TRANSFER AREA - SITE 8	11-1
	11.1 Description and History	11-1
	11.2 Field Investigation	11-1
	11.2.1 Geophysical Borings	11-1
	11.2.2 Ground Water Monitoring Wells	11-2
	11.2.3 Soil Samples	11-2
	11.2.4 Ground Water Samples	11-3
	11.2.5 Water Level Measurement	11-3
	11.3 Hydrogeology	11-3
	11.3.1 Site Geology	11-3
	11.3.2 Hydrology	11-5
	11.4 Nature and Extent of Contamination	11-6
	11.4.1 Sources	11-6
	11.4.2 Review of Chemical Analyses	11-7
12.0	OLD FUEL FARM - SITE 9	12-1
	12.1 Description and History	12-1
	12.2 Field Investigation	12-2
	12.2.1 Geophysical Borings	12-2
	12.2.2 Ground Water Monitoring Wells	12-3
	12.2.3 Soil Gas Survey	12-4
	12.2.4 Soil Samples	12-4

CONTENTS VOLUME 1 (Continued)

	Page
12.2.5 Ground Water Samples	12-4
12.2.6 Water Level Measurements	12-4
12.3 Hydrogeology	12-4
12.3.1 Site Geology	12-4
12.3.2 Hydrology	12-7
12.4 Nature and Extent of Contamination	12-9
12.4.1 Sources	12-9
12.4.2 Review of Chemical Analyses	12-10
13.0 CHASE PARK AREA AND RUNWAYS - SITE 10	13-1
13.1 Description and History	13-1
13.2 Field Investigation	13-1
13.2.1 Geophysical Borings	13-2
13.2.2 Ground Water Monitoring Wells	13-2
13.2.3 Soil Gas Survey	13-3
13.2.4 Soil Samples	13-3
13.2.5 Ground Water Samples	13-3
13.2.6 Water Level Measurements	13-3
13.3 Hydrogeology	13-4
13.3.1 Site Geology	13-4
13.3.2 Hydrology	13-6
13.4 Nature and Extent of Contamination	13-8
13.4.1 Sources	13-8
13.4.2 Review of Chemical Analyses	13-9
14.0 ENGINE TEST AREA - SITE 11	14-1
14.1 Description and History	14-1
14.2 Field Investigation	14-1
14.2.1 Ground Water Monitoring Wells	14-1
14.2.2 Soil Samples	14-2
14.2.3 Ground Water Samples	14-2
14.2.4 Water Level Measurements	14-2
14.3 Hydrogeology	14-2
14.3.1 Site Geology	14-2
14.3.2 Hydrology	14-3
14.4 Nature and Extent of Contamination	14-4
14.4.1 Sources	14-4
14.4.2 Review of Chemical Analyses	14-4
15.0 FIRE FIGHTING TRAINING AREA - SITE 12	15-1
15.1 Description and History	15-1
15.2 Field Investigation	15-1
15.2.1 Ground Water Monitoring Wells	15-2
15.2.2 Soil Borings	15-2
15.2.3 Soil Gas Survey	15-2
15.2.4 Soil Samples	15-2
15.2.5 Ground Water Samples	15-3
15.2.6 Water Level Measurements	15-3

CONTENTS VOLUME 1 (Continued)

		Page
	15.3 Hydrogeology	15-3
	15.3.1 Site Geology	15-3
	15.3.2 Hydrology	15-4
	15.4 Nature and Extent of Contamination	15-5
	15.4.1 Sources	15-5
	15.4.2 Review of Chemical Analyses	15-5
16.0	EQUIPMENT PARKING AREA - SITE 13	16-1
	16.1 Description and History	16-1
	16.2 Field Investigation	16-1
	16.2.1. Soil Borings	16-1
	16.2.2 Soil Samples	16-1
	16.3 Hydrogeology	16-2
	16.3.1 Site Geology	16-2
	16.3.2 Hydrology	16-2
	16.4 Nature and Extent of Contamination	16-2
	16.4.1 Sources	16-2
	16.4.2 Review of Chemical Analyses	16-3
17.0	ABANDONED TANKS 19, 20, 67, AND 68 - SITE 14	17-1
	17.1 Description and History	17-1
	17.2 Field Investigation	17-1
	17.2.1 Ground Water Monitoring Wells	17-2
	17.2.2 Soil Samples	17-2
	17.2.3 Ground Water Samples	17-3
	17.3 Hydrogeology	17-3
	17.3.1 Site Geology	17-3
	17.3.2 Hydrology	17-3
	17.4 Nature and Extent of Contamination	17-4
	17.4.1 Sources	17-4
	17.4.2 Review of Chemical Analyses	17-4
18.0	SUMPS AND OIL/WATER SEPARATORS - SITE 15	18-1
	18.1 Description and History	18-1
	18.2 Field Investigation	18-1
	18.3 Hydrogeology	18-2
	18.4 Nature and Extent of Contamination	18-2
19.0	PUBLIC WORKS STEAM CLEANING RACK SUMP NO. 60 - SITE 16	19-1
	19.1 Description and History	19-1
	19.2 Field Investigation	19-1
	19.3 Hydrogeology	19-2
	19.4 Nature and Extent of Contamination	19-2
20.0	PUBLIC WORKS PAINT SHOP SUMP NO. 61 - SITE 17	20-1
	20.1 Description and History	20-1
	20.2 Field Investigation Objectives	20-1
	20.3 Hydrogeology	20-1
	20.4 Nature and Extent of Contamination	20-2

CONTENTS VOLUME 1 (Continued)

		Page
21.0	DRY CLEANERS SUMP NO. 66 - SITE 18	21-1
	21.1 Description and History	21-1
	21.2 Field Investigation	21-1
	21.3 Hydrogeology	21-1
	21.3.1 Site Geology	21-1
	21.3.2 Hydrology	21-2
	21.4 Nature and Extent of Contaminants	21-2
	21.4.1 Sources	21-2
	21.4.2 Review of Chemical Analyses	21-3
22.0	LEAKING TANKS 2, 14, 43, AND 53 - SITE 19	22-1
	22.1 Description and History	22-1
	22.2 Field Investigation	22-1
	22.2.1 Geophysical Borings	22-2
	22.2.2 Ground Water Monitoring Wells and Soil Borings	22-2
	22.2.3 Soil Samples	22-3
	22.2.4 Ground Water Samples	22-3
	22.2.5 Aquifer Testing	22-3
	22.2.6 Water Level Measurements	22-4
	22.3 Hydrogeology	22-4
	22.3.1 Site Geology	22-4
	22.3.2 Hydrology	22-4
	22.4 Nature and Extent of Contamination	22-5
	22.4.1 Sources	22-5
	22.4.2 Review of Chemical Analyses	22-6
23.0	CHEMICAL BEHAVIOR AND PERSISTENCE	23-1
	23.1 Organics	23-1
	23.2 Inorganics	23-5
	23.3 Chemical Requirements of Transport Modeling	23-9
24.0	PRELIMINARY RISK EVALUATION	24-1
	24.1 Introduction and Approach	24-1
	24.2 Identification of Chemicals of Potential Concern	24-2
	24.2.1 Data Evaluation Methods	24-2
	24.2.2 Chemicals of Potential Concern	24-5
	24.2.2.1 Evaluating Areas East of the Runways	24-5
	24.2.2.2 Evaluation of Areas West of the Runways	24-6
	24.2.3 Summary	24-7
	24.2.4 Uncertainities	24-7
	24.3 Preliminary Exposure Evaluation	24-8
	24.3.1 Receptor Survey	24-8
	24.3.1.1 Land Use	24-9
	24.3.1.2 Identification of Potential Receptor Populations	24-10
	24.3.2 Migration Pathway Analysis	24-11
	24.3.2.1 Air Pathway	24-12
	24.3.2.2 Surface Water Runoff	24-12
	24.3.2.3 Landfill Leachate	24-13
	24.3.2.4 Ground Water	24-13

CONTENTS VOLUME 1 (Continued)

	Page
24.3.3 Identification of Exposure Pathways	24-15
24.3.3.1 Primary Pathways	24-15
24.3.3.2 Secondary Pathways	24-18
24.4 Identification of ARARs	24-19
24.5 Hazard Evaluation	24-21
24.6 Environmental Evaluation	24-23
24.6.1 Identification of Environmental Population	24-23
24.6.1.1 Flora	24-23
24.6.1.2 Fauna	24-25
24.6.1.3 Endangered, Threatened and Rare Species	24-26
24.6.2 Environmental Hazard Assessment	24-29
24.7 Conclusions and Recommendations	24-30
25.0 CONCLUSIONS AND RECOMMENDATIONS	25-1
25.1 Geology and Hydrogeology	25-1
25.2 Risk Assessment	25-3
25.3 Site Specific Findings and Recommendations	25-6
25.3.1 Site 1 - Runway Landfill	25-6
25.3.2 Site 2 - Golf Course Landfill	25-9
25.3.3 Site 3 - Marriage Road Ditch	25-12
25.3.4 Site 4 - Abandoned Wastewater Holding Ponds	25-14
25.3.5 Site 5 - Fuel Farm Area	25-15
25.3.6 Site 6 - Runway Apron	25-17
25.3.7 Site 7 - Hangars 2 and 3	25-18
25.3.8 Site 8 - Waste Oil Transfer Area	25-19
25.3.9 Site 9 - Old Fuel Farm	25-21
25.3.10 Site 10 - Chase Park Area and Runways	25-23
25.3.11 Site 11 - Engine Test Area	25-25
25.3.12 Site 12 - Fire Fighting Training Area	25-27
25.3.13 Site 13 - Equipment Parking Area	25-28
25.3.14 Site 14 - Abandoned Tanks 19,20,67, and 68	25-29
25.3.15 Site 15 - Sumps and Oil/Water Separators	25-31
25.3.16 Site 16 - Public Works Steam Cleaning Rack Sump No. 60	25-32
25.3.17 Site 17 - Public Works Paint Shop Sump No. 61	25-32
25.3.18 Site 18 - Dry Cleaners Sump No. 66	25-33
25.3.19 Site 19 - Leaking Tanks 2,14,43, and 53	25-34
26.0 REFERENCES	26-1

CONTENTS VOLUME 2 - TABLES

		Follows Tab
1.4-1	Status of Underground Tanks Being Investigated Under the IRP at NAS Moffett Field	1.0
1.4-2	Status of Sumps and Ponds Being Investigated Under the IRP at NAS Moffett Field	1.0
1.4-3	List of Potentially Contaminated Sites for Remedial Investigation at NAS Moffett Field	1.0
2.3-1	Unified Soil Classification System	2.0
2.3-2	Boring and Well Construction Information, NAS Moffett Field	2.0
2.3-3	Existing Wells Used In Monthly Water Level Program, NAS Moffett Field	2.0
2.3-4	Monitoring Well Completion and Sampling Summary, NAS Moffett Field	2.0
2.4-1	Sample Analytical Methods	2.0
3.2-1	Baseline Inorganic Chemistry of Soils in the NAS Moffett Field Area	3.0
3.3-1	Generalized Local Geologic Column, NAS Moffett Field	3.0
3.4-1	Typical Depth Intervals of Hydrogeologic Units	3.0
3.5-1	Background Inorganic Chemistry of Ground Water in the NAS Moffett Area	3.0
3.5-2	Average Composition of Seawater	3.0
3.5-3	Inorganic Chemistry of Surface Water at Jagel Slough and Devils Slough, NAS Moffett Field	3.0
4.3-1	Summary of Site 1 Geotechnical Test Results, NAS Moffett Field	4.0
4.4-1	Detected Analytes - F Wells Site 1 Soil Samples 1-Foot Depth NAS Moffett Field	4.0
4.4-2	Detected Analytes - F Wells Site 1 Soil Samples 3-Foot Depth NAS Moffett Field	4.0
4.4-3	Detected Analytes - F Wells Site 1 Soil Samples 5-Foot Depth NAS Moffett Field	4.0

CONTENTS VOLUME 2 - TABLES (Continued)

		Follows Tab
4.4-4	Detected Analytes - F Wells Site 1 Soil Samples >5-Foot Depth NAS Moffett Field	4.0
4.4-5	Detected Analytes - A Wells Site 1 Soil Samples 1 Foot Depth NAS Moffett Field	4.0
4.4-6	Detected Analytes - A Wells Site 1 Soil Samples 3 Foot Depth NAS Moffett Field	4.0
4.4-7	Detected Analytes - A Wells Site 1 Soil Samples 5 Foot Depth NAS Moffett Field	4.0
4.4-8	Detected Analytes - A Wells Site 1 Soil Samples >5 Foot Depth NAS Moffett Field	4.0
4.4-9	Detected Analytes - F Wells Site 1 Water Samples NAS Moffett Field	4.0
4.4-10	Detected Analytes - A Wells Site 1 Water Samples NAS Moffett Field	4.0
5.2-1	Summary of Site 2 Geotechnical Test Results NAS Moffett Field	5.0
5.4-1	Detected Analytes - F Wells Site 2 Soil Samples 1-Foot Depth NAS Moffett Field	5.0
5.4-2	Detected Analytes - F Wells Site 2 Soil Samples 3-Foot Depth NAS Moffett Field	5.0
5.4-3	Detected Analytes - F Wells Site 2 Soil Samples 5-Foot Depth NAS Moffett Field	5.0
5.4-4	Detected Analytes - F Wells Site 2 Soil Samples >5-Foot Depth NAS Moffett Field	5.0
5.4-5	Detected Analytes - A Wells Site 2 Soil Samples 1 Foot Depth NAS Moffett Field	5.0
5.4-6	Detected Analytes - A Wells Site 2 Soil Samples 3 Foot Depth NAS Moffett Field	5.0
5.4-7	Detected Analytes - A Wells Site 2 Soil Samples 5 Foot Depth NAS Moffett Field	5.0
5.4-8	Detected Analytes - A Wells Site 2 Soil Samples >5 Foot Depth NAS Moffett Field	5.0

CONTENTS VOLUME 2 - TABLES (Continued)

		Follows Tab
5.4-9	Detected Analytes - F Wells Site 2 Water Samples NAS Moffett Field	5.0
5.4-10	Detected Analytes - A Wells Site 2 Water Samples NAS Moffett Field	5.0
6.4-1	Detected Analytes Site 3 Soil Samples 1-Foot Depth NAS Moffett Field	6.0
6.4-2	Detected Analytes Site 3 Soil Samples 3-Foot Depth NAS Moffett Field	6.0
6.4-3	Detected Analytes Site 3 Soil Samples 5-Foot Depth NAS Moffett Field	6.0
6.4-4	Detected Analytes Site 3 Soil Samples >5-Foot Depth NAS Moffett Field	6.0
6.4-5	Detected Analytes Site 3 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	6.0
6.4-6	Detected Analytes Site 3 Water Samples Aquifer B Monitoring Wells NAS Moffett Field	6.0
6.4-7	Detected Analytes Site 3 Water Samples Aquifer C Monitoring Wells NAS Moffett Field	6.0
6.4-8	GC and TIP Results for Site 3 Soil Gas Survey NAS Moffett Field	6.0
7.4-1	Detected Analytes Site 4 Soil Samples 1-Foot Depth NAS Moffett Field	7.0
7.4-2	Detected Analytes Site 4 Soil Samples 3-Foot Depth NAS Moffett Field	7.0
7.4-3	Detected Analytes Site 4 Soil Samples 5-Foot Depth NAS Moffett Field	7.0
7.4-4	Detected Analytes Site 4 Soil Samples >5-Foot Depth NAS Moffett Field	7.0
7.4-5	Detected Analytes Site 4 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	7.0
7.4-6	Detected Analytes Site 4 Water Samples Aquifer B Monitoring Wells NAS Moffett Field	7.0

CONTENTS VOLUME 2 - TABLES (Continued)

		Follows Tab
7.4-7	Detected Analytes Site 4 Water Samples Aquifer C Monitoring Wells NAS Moffett Field	7.0
8.2-1	GC and TIP Results for Site 5 Soil Gas Survey NAS Moffett Field	8.0
8.4-1	Detected Analytes Site 5 Soil Samples 1-Foot Depth NAS Moffett Field	8.0
8.4-2	Detected Analytes Site 5 Soil Samples 3-Foot Depth NAS Moffett Field	8.0
8.4-3	Detected Analytes Site 5 Soil Samples 5-Foot Depth NAS Moffett Field	8.0
8.4-4	Detected Analytes Site 5 Soil Samples >5-Foot Depth NAS Moffett Field	8.0
8.4-5	Detected Analytes Site 5 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	8.0
8.4-6	Detected Analytes Site 5 Water Samples Aquifer C Monitoring Wells NAS Moffett Field	8.0
9.4-1	Detected Analytes Site 6 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	9.0
10.4-1	Detected Analytes Site 7 Soil Samples 1-Foot Depth NAS Moffett Field	10.0
10.4-2	Detected Analytes Site 7 Soil Samples 3-Foot Depth NAS Moffett Field	10.0
10.4-3	Detected Analytes Site 7 Soil Samples 5-Foot Depth NAS Moffett Field	10.0
10.4-4	Detected Analytes Site 7 Soil Samples >5-Foot Depth NAS Moffett Field	10.0
10.4-5	Detected Analytes Site 7 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	10.0
10.4-6	Detected Analytes Site 7 Water Samples Aquifer C Monitoring Wells NAS Moffett Field	10.0
11.4-1	Detected Analytes Site 8 Soil Samples 1-Foot Depth NAS Moffett Field	11.0

CONTENTS VOLUME 2 - TABLES (Continued)

		Follows Tab
11.4-2	Detected Analytes Site 8 Soil Samples 3-Foot Depth NAS Moffett Field	11.0
11.4-3	Detected Analytes Site 8 Soil Samples 5-Foot Depth NAS Moffett Field	11.0
11.4-4	Detected Analytes Site 8 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	11.0
11.4-5	Detected Analytes Site 8 Water Samples Aquifer B Monitoring Wells NAS Moffett Field	11.0
11.4-6	Detected Analytes Site 8 Water Samples Aquifer C Monitoring Wells NAS Moffett Field	11.0
12.4-1	Detected Analytes Site 9 Soil Samples 1-Foot Depth NAS Moffett Field	12.0
12.4-2	Detected Analytes Site 9 Soil Samples 3-Foot Depth NAS Moffett Field	12.0
12.4-3	Detected Analytes Site 9 Soil Samples 5-Foot Depth NAS Moffett Field	12.0
12.4-4	Detected Analytes Site 9 Soil Samples >5-Foot Depth NAS Moffett Field	12.0
12.4-5	GC and TIP Results for Site 9 Soil Gas Survey NAS Moffett Field	12.0
12.4-6	Detected Analytes Site 9 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	12.0
12.4-7	Detected Analytes Site 9 Water Samples Aquifer B Monitoring Wells NAS Moffett Field	12.0
12.4-8	Detected Analytes Site 009 Water Samples Aquifer C Monitoring Wells NAS Moffett Field	12.0
13.4-1	Detected Analytes Site 10 Soil Samples 1-Foot Depth NAS Moffett Field	13.0
13.4-2	Detected Analytes Site 10 Soil Samples 3-Foot Depth NAS Moffett Field	13.0
13.4-3	Detected Analytes Site 10 Soil Samples 5-Foot Depth NAS Moffett Field	13.0

CONTENTS VOLUME 2 - TABLES (Continued)

		Follows Tab
13.4-4	Detected Analytes Site 10 Soil Samples >5-Foot Depth NAS Moffett Field	13.0
13.4-5	Detected Analytes Site 10 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	13.0
13.4-6	Detected Analytes Site 10 Water Samples Aquifer B Monitoring Wells NAS Moffett Field	13.0
13.4-7	Detected Analytes Site 010 Water Samples Aquifer C Monitoring Wells NAS Moffett Field	13.0
14.4-1	Detected Analytes Site 11 Soil Samples 1-Foot Depth NAS Moffett Field	14.0
14.4-2	Detected Analytes Site 11 Soil Samples 3-Foot Depth NAS Moffett Field	14.0
14.4-3	Detected Analytes Site 11 Soil Samples 5-Foot Depth NAS Moffett Field	14.0
14.4-4	Detected Analytes Site 11 Soil Samples >5-Foot Depth NAS Moffett Field	14.0
14.4-5	Detected Analytes Site 11 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	14.0
15.4-1	Detected Analytes Site 12 Soil Samples 1-Foot Depth NAS Moffett Field	15.0
15.4-2	Detected Analytes Site 12 Soil Samples 3-Foot Depth NAS Moffett Field	15.0
15.4-3	Detected Analytes Site 12 Soil Samples 5-Foot Depth NAS Moffett Field	15.0
15.4-4	GC and TIP Results for Site 12 Soil Gas Survey NAS Moffett Field	15.0
15.4-5	Detected Analytes Site 12 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	15.0
16.4-1	Detected Analytes Site 13 Soil Samples 1-Foot Depth NAS Moffett Field	16.0
16.4-2	Detected Analytes Site 13 Soil Samples 5-Foot Depth NAS Moffett Field	16.0

CONTENTS VOLUME 2 - TABLES (Continued)

		Follows Tab
17.4-1	Detected Analytes Site 14 Soil Samples 1-Foot Depth NAS Moffett Field	17.0
17.4-2	Detected Analytes Site 14 Soil Samples 3-Foot Depth NAS Moffett Field	17.0
17.4-3	Detected Analytes Site 14 Soil Samples 5-Foot Depth NAS Moffett Field	17.0
17.4-4	Detected Analytes Site 14 Soil Samples >5-Foot Depth NAS Moffett Field	17.0
17.4-5	GC and TIP Results for Site 14 Soil Gas Survey NAS Moffett Field	17.0
17.4-6	Detected Analytes Site 14 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	17.0
22.4-1	Detected Analytes Site 19 Soil Samples 1-Foot Depth NAS Moffett Field	22.0
22.4-2	Detected Analytes Site 19 Soil Samples 3-Foot Depth NAS Moffett Field	22.0
22.4-3	Detected Analytes Site 19 Soil Samples 5-Foot Depth NAS Moffett Field	22.0
22.4-4	Detected Analytes Site 19 Soil Samples >5-Foot Depth NAS Moffett Field	22.0
22.4-5	Detected Analytes Site 19 Water Samples Aquifer A Monitoring Wells NAS Moffett Field	22.0
23.1-1	Physical and Chemical Characteristics of Organic Compounds Detected in Ground Water NAS Moffett Field	23.0
24.2-1	Baseline Element Concentrations of Soils in the NAS Moffett Field Area	24.0
24.2-2	Background Mineral Content of Ground Water in the NAS Moffett Area	24.0
24.2-3	Inorganic Chemistry of Ground Water East of Runways	24.0
24.2-4	Inorganic Chemistry of Ground Water West of Runways	24.0
24.2-5	Chemicals of Potential Concern Present in Ground Water East of the Runways	24.0

CONTENTS VOLUME 2 - TABLES (Continued)

		Follows Tab
24.2-6	Chemicals of Potential Concern Present in Soil East of the Runways	24.0
24.2-7	Chemicals of Potential Concern Present in Ground Water West of the Runways	24.0
24.2-8	Chemicals of Potential Concern Present in Soil West of the Runways	24.0
24.2-9	Summary of Chemicals of Potential Concern at NAS Moffett Field	24.0
24.4-1	Standards, Requirements, Criteria, or Limitations Evaluated for ARARs Determination	24.0
24.4-2	Source Listing for Chemical-Specific ARARs Naval Air Station Moffett Field	24.0
24.4-3	Source Listing for Location-Specific ARARs Naval Air Station Moffett Field	24.0
24.5-1	Clean Water Act Ambient Water Quality Criteria for Consumption of Fish	24.0
24.6-1	Clean Water Act Ambient Water Quality Criteria for Protection of Aquatic Life	24.0

CONTENTS VOLUME 2 - FIGURES

		Follows Tab
1.3-1	Vicinity Map	1.0
1.3-2	NAS Moffett Field Vicinity Map	1.0
1.4-1	Study Sites Locations	1.0
1.4-2	Site 4 Former Industrial Wastewater Flux Ponds	1.0
2.2-1	Site 1 Landfill Boundary	2.0
2.2-2	Site 2 Landfill Boundary (1988)	2.0
2.3-1	Site 1 Surface Water and Sediment Sampling Locations Runway Landfill	2.0
2.3-2	Site 2 Surface Water and Sediment Sampling Location	2.0
2.3-3	Typical Monitoring Well Construction	2.0
3.1-1	Flood Prone Area	3.0
3.1-2	Surface and Storm Drainage Map	3.0
3.2-1	General Soil Associations	3.0
3.3-1	Generalized Surface Geology	3.0
3.3-1a	Location Map for Geologic Cross Sections	3.0
3.3-2	Geological Cross Section A-A'	3.0
3.3-3	Geological Cross Section B-B'	3.0
3.3-4	Geological Cross Section C-C'	3.0
3.3-5	Geological Cross Section D-D'	3.0
3.3-6	Conceptual Model of Prograding Estuarine System	3.0
3.3-7	Conceptual Model of Paleo-Depositional Environments in the Moffett Field/Mountain View Area	3.0
3.4-1	Generalized Geologic Cross Section Showing Aquifers	3.0
3.5-1	Total Dissolved Solids Concentration Contour Map, A1 - Aquifer 1st Quarter 1989	3.0

CONTENTS VOLUME 2 - FIGURES (Continued)

		Follows Tab
3.5-2	Total Dissolved Solids Concentration Contour Map, A2 - Aquifer 1st Quarter 1989	3.0
3.5-3	Chloride Concentration Contour Map, A1-Aquifer 1st Quarter 1989	3.0
3.5-4	Chloride Concentration Contour Map, A2-Aquifer 1st Quarter 1989	3.0
3.5-5	Total Dissolved Solids Concentration Map, B-Aquifer, 1st Quarter 1989	3.0
3.5-6	Chloride Concentration Map, B-Aquifer, 1st Quarter 1989	3.0
3.5-7	Total Dissolved Solids Concentration Map, C-Aquifer, 1st Quarter 1989	3.0
3.5-8	Chloride Concentration Map, C-Aquifer, 1st Quarter 1989	3.0
4.1-1	Site 1 Runway Landfill	4.0
4.2-1	Site 1 Former Trench Boundaries	4.0
4.2-2	Site 1 Location of Conductivity Traverses and Vertical Electrical Soundings	4.0
4.2-3	Site 1 Terrain Conductivity Contours	4.0
4.2-4	Site 1 Geoelectric Profiles A-A' & B-B'	4.0
4.2-5	Site 1 Runway Landfill Monitoring Well, Boring and Sampling Locations	4.0
4.2-6	Sites 1, 2, and 11 Fence Diagram	4.0
4.3-1	Site 1 Buried Trench	4.0
5.1-1	Site 2 Golf Course Landfill	5.0
5.2-1	Site 2 Location of Conductivity Traverses and Vertical Electrical Soundings	5.0
5.2-2	Site 2 Terrain Conductivity Contours	5.0
5.2-3	Site 2 Terrain Conductivity Orthagonal Projection	5.0
5.2-4	Site 2 Geoelectric Profiles A-A' & B-B'	5.0
5.2-5	Site 2 Limits of Landfill	5.0

CONTENTS VOLUME 2 - FIGURES (Continued)

		Follows Tab
6.1-1	Site 3 Marriage Road Ditch	6.0
6.2-1	Site 3 Soil Gas Survey Transect Lines	6.0
6.3-1	Site 3 Fence Diagram	6.0
6.4-1	Site 3 Soil Gas Survey Concentration Contours	6.0
7.1-1	Site 4 Former Wastewater Surface Impoundment	7.0
7.2-1	Site 4 Monitoring Well and Boring Locations	7.0
8.1-1	Site 5 Location Map	8.0
8.2-1	Site 5 Monitoring Well and Boring Locations	8.0
8.2-2	Site 5 Soil Gas Survey Transect Lines	8.0
8.4-1	Site 5 Soil Gas Survey Concentration Contours	8.0
9.1-1	Site 6 Monitoring Well and Boring Locations	9.0
10.1-1	Site 7 Monitoring Well and Boring Locations	10.0
10.3-1	Site 7 Locations of Storm Drains	10.0
11.1-1	Site 8 Waste Oil Transfer Area	11.0
11.2-1	Site 8 Waste Oil Transfer Area Monitoring Well and Boring Locations	11.0
12.1-1	Site 9 Old Fuel Farm	12.0
12.2-1	Site 9 Monitoring Well and Boring Locations	12.0
12.3-1	Site 9 Fence Diagram	12.0
12.4-1	Sites 8 and 9 Soil Gas Survey Transect Lines	12.0
12.4-2	Sites 8 and 9 Soil Gas Survey Concentration Contours	12.0
13.1-1	Site 10 Monitoring Well and Boring Locations	13.0
13.2-1	Site 10 Soil Gas Survey Transect Lines	13.0
14.1-1	Site 11 Engine Test Area Monitoring Well and Boring Locations	14.0

CONTENTS VOLUME 2 - FIGURES (Continued)

		Follows Tab
15.1-1	Site 12 Fire Fighting Training Area	15.0
15.4-1	Site 12 Soil Gas Survey Transect Map	15.0
16.1-1	Site 13 Equipment Parking Area	16.0
17.1-1	Site 14 Tanks 19 and 20 Monitoring Well and Boring Locations	17.0
17.1-2	Site 14 Tanks 67 and 68 Monitoring Well and Boring Locations	17.0
17.4-1	Site 14 Soil Gas Survey Transect Lines	17.0
18.1-1	Site 15 Sumps and Oil/Water Separators	18.0
19.1-1	Site 16 Public Works Steam Cleaning Rack, Sump No. 60 Monitoring Well and Boring Locations	19.0
19.1-2	Site 16 Public Works Steam Cleaning Rack, Sump No. 60	19.0
20.1-1	Site 17 Public Works Paint Shop Sump No. 61	20.0
21.1-1	Site 18 Location Map Dry Cleaner's Sump No. 66	21.0
22.1-1	Site 19 Location Map Tank Nos. 2 and 43	22.0
22.1-2	Site 19 Location Map Leaking Tank No. 14	22.0
22.1-3	Site 19 Location Map Leaking Tank No. 53	22.0
24.3-1	General Land Use Map	24.0

CONTENTS VOLUME 3 - APPENDIX A

	Follows Tab
APPENDIX A - HYDROGRAPHS	
Graph A-1 Hydrograph of Site 01 A-Aquifer Well(s)	Site 1
Graph A-2 Hydrograph of Site 01 A-Aquifer Well(s)	Site 1
Graph A-3 Hydrograph of Site 01 Leachate Well(s)	Site 1
Monthly Water Level Measurements	Site 1
Graph A-4 Hydrograph of Site 02 A-Aquifer Well(s)	Site 2
Graph A-5 Hydrograph of Site 02 Leachate Well(s)	Site 2
Monthly Water Level Measurements	Site 2
Graph A-6 Hydrograph of Site 03 A-Aquifer Well(s)	Site 3
Graph A-7 Hydrograph of Site 03 A-Aquifer Well(s)	Site 3
Graph A-8 Hydrograph of Site 03 B-Aquifer Well(s)	Site 3
Monthly Water Level Measurements	Site 3
Graph A-9 Hydrograph of Site 04 A-Aquifer Well(s)	Site 4
Graph A-10 Hydrograph of Site 04 B-Aquifer Well(s)	Site 4
Monthly Water Level Measurements	Site 4
Graph A-11 Hydrograph of Site 05 A-Aquifer Well(s)	Site 5
Graph A-12 Hydrograph of Site 05 A-Aquifer Well(s)	Site 5
Graph A-13 Hydrograph of Site 05 A-Aquifer Well(s)	Site 5
Graph A-14 Hydrograph of Site 05 B-Aquifer Well(s)	Site 5
Monthly Water Level Measurements	Site 5
Graph A-15 Hydrograph of Site 06 A-Aquifer Well(s)	Site 6
Monthly Water Level Measurements	Site 6
Graph A-16 Hydrograph of Site 07 A-Aquifer Well(s)	Site 7
Graph A-17 Hydrograph of Site 07 A-Aquifer Well(s)	Site 7
Graph A-18 Hydrograph of Site 07 B-Aquifer Well(s)	Site 7

CONTENTS VOLUME 3 - APPENDIX A (Continued)

	Follows Tab
Monthly Water Level Measurements	Site 7
Graph A-19 Hydrograph of Site 08 A-Aquifer Well(s)	Site 8
Graph A-20 Hydrograph of Site 08 B-Aquifer Well(s)	Site 8
Monthly Water Level Measurements	Site 8
Graph A-21 Hydrograph of Site 09 A-Aquifer Well(s)	Site 9
Graph A-22 Hydrograph of Site 09 A-Aquifer Well(s)	Site 9
Graph A-23 Hydrograph of Site 09 B-Aquifer Well(s)	Site 9
Monthly Water Level Measurements	Site 9
Graph A-24 Hydrograph of Site 10 A-Aquifer Well(s)	Site 10
Graph A-25 Hydrograph of Site 10 B-Aquifer Well(s)	Site 10
Monthly Water Level Measurements	Site 10
Graph A-26 Hydrograph of Site 11 A-Aquifer Well(s)	Site 11
Monthly Water Level Measurements	Site 11
Graph A-27 Hydrograph of Site 12 A-Aquifer Well(s)	Site 12
Monthly Water Level Measurements	Site 12
No Hydrographs	Site 13
Graph A-28 Hydrograph of Site 14 A-Aquifer Well(s)	Site 14
Monthly Water Level Measurements	Site 14
No Hydrographs	Site 15
No Hydrographs	Site 16
No Hydrographs	Site 17
No Hydrographs	Site 18
Graph A-29 Hydrograph of Site 19 A-Aquifer Well(s)	Site 19
Monthly Water Level Measurements	Site 19

CONTENTS VOLUME 3 - APPENDIX B, APPENDIX C

	Follows Tab
APPENDIX B - POTENTIOMETRIC SURFACE MAPS	
Plate 1 Potentiometric Surface Contour Map A1-Aquifer September 1989	Appendix B
Plate 2 Potentiometric Surface Contour Map A1-Aquifer, West September 1989	Appendix B
Plate 3 Potentiometric Surface Contour Map A1-Aquifer, East September 1989	Appendix B
Plate 4 Potentiometric Surface Contour Map A1-Aquifer, Sites 1 and 2 September 1989	Appendix B
Plate 5 Potentiometric Surface Contour Map A2-Aquifer September 1989	Appendix B
Plate 6 Potentiometric Surface Contour Map A2-Aquifer, West September 1989	Appendix B
Plate 7 Potentiometric Surface Contour Map A2-Aquifer, East September 1989	Appendix B
Plate 8 Potentiometric Surface Contour Map A2-Aquifer, Sites 1 and 2 September 1989	Appendix B
Plate 9 Potentiometric Surface Elevations Map B-Aquifer September 1989	Appendix B
Plate 10 Potentiometric Surface Elevations Map C-Aquifer September 1989	Appendix B
APPENDIX C - ANALYTICAL DATA SUMMARIES - SOILS	
Summary of Detected Chemicals:	
Organic Data - Site 1 Soil Samples	Site 1
Inorganic Data - Site 1 Soil Samples	Site 1
Organic Data - Site 2 Soil Samples	Site 2
Inorganic Data - Site 2 Soil Samples	Site 2
Organic Data - Site 3 Soil Samples	Site 3
Inorganic Data - Site 3 Soil Samples	Site 3
Organic Data - Site 4 Soil Samples	Site 4

CONTENTS VOLUME 3, APPENDIX C (Continued)

	Follows Tab
Inorganic Data - Site 4 Soil Samples	Site 4
Organic Data - Site 5 Soil Samples	Site 5
Inorganic Data - Site 5 Soil Samples	Site 5
Organic Data - No soil samples collected from Site 6	Site 6
Inorganic Data - No soil samples collected from Site 6	Site 6
Organic Data - Site 7 Soil Samples	Site 7
Inorganic Data - Site 7 Soil Samples	Site 7
Organic Data - Site 8 Soil Samples	Site 8
Inorganic Data - Site 8 Soil Samples	Site 8
Organic Data - Site 9 Soil Samples	Site 9
Inorganic Data - Site 9 Soil Samples	Site 9
Organic Data - Site 10 Soil Samples	Site 10
Inorganic Data - Site 10 Soil Samples	Site 10
Organic Data - Site 11 Soil Samples	Site 11
Inorganic Data - Site 11 Soil Samples	Site 11
Organic Data - Site 12 Soil Samples	Site 12
Inorganic Data - Site 12 Soil Samples	Site 12
Organic Data - Site 13 Soil Samples	Site 13
Inorganic Data - Site 13 Soil Samples	Site 13
Organic Data - Site 14 Soil Samples	Site 14
Inorganic Data - Site 14 Soil Samples	Site 14
Organic Data - No soil samples collected from Site 15	Site 15
Inorganic Data - No soil samples collected from Site 15	Site 15
Organic Data - No soil samples collected from Site 16	Site 16
Inorganic Data - No soil samples collected from Site 16	Site 16

CONTENTS VOLUME 3, APPENDIX C (Continued)

	Follows Tab
Organic Data - No soil samples collected from Site 17	Site 17
Inorganic Data - No soil samples collected from Site 17	Site 17
Organic Data - No soil samples collected from Site 18	Site 18
Inorganic Data - No soil samples collected from Site 18	Site 18
Organic Data - Site 19 Soil Samples	Site 19
Inorganic Data -Site 19 Soil Samples	Site 19

CONTENTS VOLUME 4, APPENDIX D

	Follows Tab
APPENDIX D - ANALYTICAL DATA SUMMARIES - WATERS	
Summary of Detected Chemicals:	
Organic Data - Site 1 Water Samples	Site 1
Inorganic Data - Site 1 Water Samples	Site 1
Organic Data - Site 2 Water Samples	Site 2
Inorganic Data - Site 2 Water Samples	Site 2
Organic Data - Site 3 Water Samples	Site 3
Inorganic Data - Site 3 Water Samples	Site 3
Organic Data - Site 4 Water Samples	Site 4
Inorganic Data - Site 4 Water Samples	Site 4
Organic Data - Site 5 Water Samples	Site 5
Inorganic Data - Site 5 Water Samples	Site 5
Organic Data - Site 6 Water Samples	Site 6
Inorganic Data - Water Samples for Site 6 were not analyzed for inorganics	Site 6
Organic Data - Site 7 Water Samples	Site 7
Inorganic Data - Site 7 Water Samples	Site 7
Organic Data - Site 8 Water Samples	Site 8
Inorganic Data - Site 8 Water Samples	Site 8
Organic Data - Site 9 Water Samples	Site 9
Inorganic Data - Site 9 Water Samples	Site 9
Organic Data - Site 10 Water Samples	Site 10
Inorganic Data - Site 10 Water Samples	Site 10
Organic Data - Site 11 Water Samples	Site 11
Inorganic Data - Site 11 Water Samples	Site 11

CONTENTS VOLUME 4, APPENDIX D (Continued)

	Follows Tab
Organic Data - Site 12 Water Samples	Site 12
Inorganic Data - Site 12 Water Samples	Site 12
Organic Data - Water samples were not collected from Site 13	Site 13
Inorganic Data - Water samples were not collected from Site 13	Site 13
Organic Data - Site 14 Water Samples	Site 14
Inorganic Data - Site 14 Water Samples	Site 14
Organic Data - Water samples were not collected from Site 15	Site 15
Inorganic Data - Water samples were not collected from Site 15	Site 15
Organic Data - Water samples were not collected from Site 16	Site 16
Inorganic Data - Water samples were not collected from Site 16	Site 16
Organic Data - Water samples were not collected from Site 17	Site 17
Inorganic Data - Water samples were not collected from Site 17	Site 17
Organic Data - Water samples were not collected from Site 18	Site 18
Inorganic Data - Water samples were not collected from Site 18	Site 18
Organic Data - Site 19 Water Samples	Site 19
Inorganic Data - Site 19 Water Samples	Site 19

CONTENTS VOLUME 5 - APPENDIX E

APPENDIX E - CHEMICAL CONCENTRATION MAPS

SOIL PLATES

E-1 Sites 1, 2, and 11
Soil Summary of Organic Compounds

E-2 Sites 1, 2, and 11
Soil Summary of Inorganic Compounds

E-3 Sites 3, 4, and 6
Soil Summary of Organic Compounds

E-4 Sites 3, 4, and 6
Soil Summary of Inorganic Compounds

E-5 Sites 5, 7, 10, 13, and 19
Soil Summary of Organic Compounds

E-6 Sites 5, 7, 10, 13, and 19
Soil Summary of Inorganic Compounds

E-7 Sites 9 and 14
Soil Summary of Organic Compounds

E-8 Sites 9 and 14
Soil Summary of Inorganic Compounds

E-9 Sites 8 and 12
Soil Summary of Organic Compounds

E-10 Sites 8 and 12
Soil Summary of Inorganic Compounds

WATER PLATES

E-11 Sites 1, 2, and 11
Surface and Ground Water Summary of Organic Compounds

E-12 Sites 1, 2, and 11
Surface and Ground Water Summary of Inorganic Compounds

E-13 Sites 3, 4, 5, 6, 7, 10, 13, and 19
Ground Water Summary of Organic Compounds

E-14 Sites 3, 4, 5, 7, 10, 13, and 19
Ground Water Summary of Inorganic Compounds

E-15 Sites 8, 9, 12, and 14
Ground Water Summary of Organic Compounds

E-16 Sites 8, 9, 12, and 14
Ground Water Summary of Inorganic Compounds

CONTENTS VOLUME 6 - APPENDIX F

APPENDIX F - BORING LOGS

	Follows Tab
SITE 1	
GB-4	Site 1
GB-5	
GB-6	
W1-5(A1)	
W1-6(A1)	
W1-7(A2)	
W1-8(A1)	
W1-9(F)	
W1-10(F)(ABANDONED)	
W1-10(F)	
W1-11(F)	
W1-12(A1)	
W1-13(F)	
SB1-1	
SB1-2	
SITE 2	Site 2
GB-1	
GB-2	
GB-3	
W2-5(A1)	
W2-6(A1)	
W2-7(A2)	
W2-8(F)	
W2-9(A1)	
W2-10(F)	
W2-11(F)	
SB2-1	
SITE 3	Site 3
GB-13	
GB-14	
GB-15	
GB-16	
GB-17	
W3-12(A2)	
W3-13(A2)	
W3-14(B2)	
W3-15(B2)	
W3-16(C)	
W3-22(A2)	
W3-23(A1) (Abandoned)	
W3-23(A1)	

CONTENTS VOLUME 6, APPENDIX F (Continued)

	Follows Tab
SITE 4	Site 4
GB-18	
GB-19	
GB-20	
W4-7(C)	
W4-8(C)	
W4-9(B2)	
W4-11(A) (Abandoned)	
Site 5	Site 5
GB-21	
GB-22	
GB-23	
W5-4(A2)	
W5-5(C)	
W5-6(A1)	
W5-7(A1)	
W5-8(A1)	
W5-9(A1)	
W5-10(A1)	
W5-14(A1)	
W5-15(A1)	
W5-16(A1)	
W5-17(A1)	
W5-18(A1)	
W5-19(A1)	
SB5-1	
SITE 6	Site 6
SITE 7	Site 7
GB-24	
W7-16(C)	
W7-18(A1)	
W7-19(A1)	
W7-20(A1)	
W7-21(A1)	
SITE 8	Site 8
GB-25	
GB-26	
W8-2(A2)	
W8-3(C)	
W8-4(A1)	

CONTENTS VOLUME 6, APPENDIX F (Continued)

	Follows Tab
W8-5(A1)	
W8-6(A1)	
SITE 9	Site 9
GB-7	
GB-8	
GB-9	
GB-10	
GB-11	
GB-12	
W9-3(C)	
W9-4(B2)	
W9-5(B3)	
W9-6(A1)	
W9-7(A1)	
W9-13(A2)	
W9-14(A2)	
W9-15(B2)	
W9-27(A2)	
SITE 10	Site 10
GB-27	
GB-30	
W10-5(A1)	
W10-6(C)	
SITE 11	Site 11
W11-1(A1)	
W11-2(A1)	
SITE 12	Site 12
W12-1(A1)	
W12-2(A1)	
W12-3(A1)	
SITE 13	Site 13
SITE 14	Site 14
GB-28	
W14-1(A2)	
W14-2(A1)	
W14-3(A1)	
W14-4(A1)	
W14-5(A2)	

CONTENTS VOLUME 6, APPENDIX F (Continued)

	Follows Tab
W14-6(A2)	
SB14-1	
SB14-2	
SB14-3	
SITE 15	Site 15
SITE 16	Site 16
SITE 17	Site 17
SITE 18	Site 18
SITE 19	Site 19
GB-29	
W19-1(A1)	
W19-2(A2)	
W19-3(A2)	
W19-4(A1)	
SB19-1	
SB19-2	
SB19-3	
SB19-4	
SB19-5	

CONTENTS VOLUME 6, APPENDIX G

	Follows Tab
APPENDIX G - GEOPHYSICAL LOGS	
LEGEND FOR LOG OF BORING AND TEST PITS	G
SITE 1	Site 1
GB-4	
GB-5	
GB-6	
SITE 2	Site 2
GB-1	
GB-2	
GB-3	
SITE 3	Site 3
GB-13	
GB-14	
GB-15	
GB-16	
GB-17	
SITE 4	Site 4
GB-18	
GB-19	
GB-20	
SITE 5	Site 5
GB-21	
GB-22	
GB-23	
SITE 6	Site 6
SITE 7	Site 7
GB-24	
SITE 8	Site 8
GB-25	
GB-26	

CONTENTS VOLUME 6, APPENDIX G (Continued)

	Follows Tab
SITE 9	Site 9
GB-7	
GB-8	
GB-9	
GB-10	
GB-11	
GB-12	
SITE 10	Site 10
GB-27	
GB-30	
SITE 11	Site 11
SITE 12	Site 12
SITE 13	Site 13
SITE 14	Site 14
GB-28	
SITE 15	Site 15
SITE 16	Site 16
SITE 17	Site 17
SITE 18	Site 18
SITE 19	Site 19
GB-29	

VOLUME 6, APPENDIX F

BORING LOGS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 1

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#4

FIELD GEOLOGIST D. H. Cox
EDITED BY S. Logon
CHECKED BY J. Hodsall
TOTAL DEPTH 212.0 ft.

COORDINATES N 343,376.8 E 1,949,580.7
DATE BEGAN 5/31/88
DATE FINISHED 6/8/88
GROUND SURFACE EL. 2.5 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SANDY CLAY; sandy loam, dark brown, dry, soft.
					CH		5 1/2" casing installed from 0 to 5 feet. SILTY SANDY CLAY; blue gray, wet, stic.ky, plastic.
5	#1	2/60					SANDY SILTY CLAY; slightly sandy, dark gray to dark brown, moist, plastic.
10	#2	3/60			OL		SILTY CLAY; medium to dark gray, moderately wet, plastic, moderate organic matter.
15	#3	11/60					SANDY CLAY; silty, medium to dark gray, moist, stiff, abundant coarse shell fragments, whole mollusca. Trace of rounded coarse sand. SILTY CLAY; medium to dark brown, stiff, moderately plastic.
20	#4	42/60			CL		SANDY CLAY; light to medium brown, moist, stiff to hard, non-plastic, sand; fine to coarse, subangular, poorly sorted.
25	#5	4/60					SILTY CLAY; light to medium brown, moderately dry, stiff, interbedded with sand; fine to coarse, subrounded, poorly sorted.
30	#6	4/60					SANDY CLAY; medium brown, moderately dry, stiff, medium to coarse rock fragments (gravel).
35	#7	NO REC.					Coarse angular sand and gravel over shaker.
40	#8	7/60					
45	#9	8/60			SW		SAND; medium to dark gray-brown, wet, fine to medium, moderate to well sorted.
50	#10	10/60			CL		SANDY CLAY; light to medium brown, moist, stiff. SANDY CLAY; medium to dark gray, moist, stiff, slightly plastic, minor coarse gravels.
55	#11	7/60					SILTY SANDY CLAY; medium brown, moist, stiff.
60	#12	20/60					SILTY CLAY; medium gray to medium brown, moist, stiff, slightly plastic. SANDY CLAY, medium gray to medium brown, moist, stiff, slightly plastic, minor coarse gravel.
65	#13	13/60					SILTY CLAY, medium brown, moist, stiff, slightly plastic.
70	#14	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#4

FIELD GEOLOGIST D. H. Cox
EDITED BY S. Logan
CHECKED BY J. Hadsall
TOTAL DEPTH 212.0 ft.

COORDINATES N 343,376.8 E 1,549,580.7
DATE BEGAN 5/31/88
DATE FINISHED 6/8/88
GROUND SURFACE EL. 2.5 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#14	0/60					SILTY CLAY; medium brown, moist, stiff, slightly plastic.
75	#15	0/60					
80	#16	6/60					SANDY CLAY; medium gray brown, moist, stiff, moderately plastic.
85	#17	9/60					
90	#18	6/60					SILTY CLAY; medium gray, moist, stiff, moderately plastic.
95	#19	8/60					
100	#20	6/60					SANDY CLAY; medium brown, moist, stiff, slightly plastic.
105	#21	7/60			CL		SILTY CLAY, medium gray, moist, stiff, slightly plastic, homogeneous.
110	#22	10/60					
115	#23	9/60					
120	#24	12/60					
125	#25	8/60					
130	#26	46/60					SANDY SILTY CLAY; medium to dark gray interbedded with medium brown clay, dry to moist, stiff, slightly plastic, homogeneous. SILTY CLAY; medium to dark gray, dry, very stiff, slightly plastic, homogeneous.
135	#27	9/60					
140	#28	18/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#4

FIELD GEOLOGIST D. H. Cox
EDITED BY S. Logan
CHECKED BY J. Hadsell
TOTAL DEPTH 212.0 ft.

COORDINATES N 343,376.8 E 1,549,580.7
DATE BEGAN 5/31/88
DATE FINISHED 6/8/88
GROUND SURFACE EL. 2.5 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#28	18/60			CL		SILTY CLAY; medium to dark gray, dry, stiff, slightly plastic, homogeneous.
145	#29	13/60					
150	#30	31/60					SANDY CLAY; medium brown, pred. dry, stiff, slightly plastic, homogeneous.
155	#31	40/60					SILTY CLAY; blue gray, dry, stiff, slightly plastic.
160	#32	32/60					
165	#33	28/60					
170	#34	50/60					SILTY CLAY; medium to dark gray, dry, stiff, non-plastic, homogeneous.
175	#35	49/60					SANDY CLAY; medium to dark gray, blue gray, dry, stiff, abundant shell fragments.
180	#36	44/60					
185	#37	0/60			CL-GC		GRAVELLY SANDY SILTY CLAY; medium to dark blue gray, medium stiff, slightly plastic, interbedded with coarse angular gravels.
190	#38	18/60					Driller reports hard drilling, "chattering", possibly gravels.
195	#39	0/60					Sands and gravel over shaker.
200	#40	7/60			CL		SANDY CLAY; medium gray, moist, stiff, slightly plastic, associated coarse angular gravels.
205	#41	2/60					SANDY CLAY; medium gray brown, moist, stiff, slightly plastic.
210	#42	0/60					Sands and gravel over shaker.

(TOTAL DEPTH 212 FEET)
4-1/2" diameter boring

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE ME-GB4.DWG

BORING NO. GB#5

FIELD ENGINEER Q. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadsell
TOTAL DEPTH 253 feet

COORDINATES N 342,514.2 E 1,548,942.5
DATE BEGAN 6/20/88
DATE FINISHED 8/22/88
GROUND SURFACE EL. 0.2 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					ML		LOAM; light brown, dry, silty, fine sand, non plastic. 5 1/2" casing installed from 0 to 6 1/2 feet.
5	#1	0/60			CL		CLAY; dark gray, soft, sticky.
10	#2	2/60			CH		SANDY CLAY; dark gray to gray brown, wet, soft, with sandstone fragments, light brown.
15	#3	11/60					SILTY CLAY; dark gray, wet, soft, sticky, plastic, with occasional shell fragments.
20	#4	12/60					SANDY CLAY; light gray, moist, soft to stiff, sticky, plastic.
25	#5	10/60					SILTY CLAY; medium brown to brown gray, moist, stiff, plastic.
30	#6	9/60			CL		SANDY CLAY; medium brown to brown gray, moist to dry, stiff, slightly plastic.
35	#7	9/60					SILTY CLAY; light to medium brown, dry, stiff, slightly plastic, increasing sand.
40	#8	0/60			GW		Shaker sample: sand; coarse, subangular to subround, moderately well sorted quartz, with sandstone; medium brown and dark gray fragments, rounded coarse gravel.
45	#9	0/60					
50	#10	0/60					
55	#11	0/60					
60	#12	0/60					Shaker sample: sand; medium to coarse, subangular to subround, moderately sorted quartz, with light brown to dark gray, siltstone and sandstone fragments.
65	#13	0/60					
70	#14	7/60			CH		SILTY CLAY; medium gray brown, moist, stiff, plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#5

FIELD ENGINEER D. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadsell
TOTAL DEPTH 253 feet

COORDINATES N 342,514.2 E 1,548,942.5
DATE BEGAN 8/20/88
DATE FINISHED 8/22/88
GROUND SURFACE EL. 0.2 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#14	7/60					SILTY CLAY; light brown, gray brown, moderately dry, stiff, slightly plastic with sand; medium–coarse, subangular to subround, moderately sorted quartz, and gravel.
75	#15	1/60			CL		
80	#16	15/60					SILTY CLAY; medium gray, moderately dry, stiff, slightly plastic.
85	#17	10/60			CH		SANDY CLAY; medium gray brown, moist, stiff, plastic.
90	#18	10/60					
95	#19	42/60					SILTY CLAY; medium–dark gray, moderately dry, stiff, plastic. SILTY CLAY; medium gray to brown gray, dry, stiff, brittle, non–plastic.
100	#20	22/60					
105	#21	42/60					
110	#22	15/60					
115	#23	40/60			CL		SILTY CLAY; minor sand, medium gray to brown gray, dry, stiff, brittle, non–plastic.
120	#24	56/60					
125	#25	60/60					
130	#26	29/60					SILTY CLAY; dark gray, moderately dry, stiff, sticky, slightly plastic.
135	#27	60/60					SILTY CLAY; dark gray, dry, stiff, brittle, non–plastic.
140	#28	56/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#5

FIELD ENGINEER D. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 342,514.2 E 1,546,942.5
DATE BEGAN 6/20/88
DATE FINISHED 8/22/88
GROUND SURFACE EL. 0.2 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#28	56/60			CL		SILTY CLAY; medium to dark gray, dry, stiff, non to slightly plastic.
145	#29	26/60					
150	#30	60/60		3.0			SILTY CLAY; dark gray, dry, very stiff, brittle, non-plastic.
155	#31	60/60		1.5	CH		SILTY CLAY; gray brown, soft, moist, plastic.
					CL		SILTY CLAY; dark gray, dry, stiff, non-plastic.
160	#32	60/60		3.5			
165	#33	30/60		3.0			
170	#34	60/60		3.0			SILTY CLAY; light to medium gray, moderately dry, stiff, non to slightly plastic.
175	#35	27/60		1.8			CLAY/SILTY CLAY; dark gray, dry, stiff, brittle, non to slightly plastic.
180	#36	7/60					SANDY SILTY CLAY; minor sand, dark gray, moist, stiff, slightly plastic, shell fragments, incr. sand.
185	#37	27/60		2.5	CH		SANDY CLAY; brown gray, moist to wet, very stiff, plastic, sand; fine to coarse, subangular subround, moderately to poorly sorted quartz with siltstone and sandstone fragments, shell fragments..
190	#38	34/60		3.0	CL		SANDY CLAY; brown to gray brown, predominantly dry, very stiff, non to slightly plastic..
195	#39	49/60		4.0			SILTY CLAY; minor sand, brown to gray brown, moist to dry, very stiff-hard, slightly plastic to non-plastic..
200	#40	24/60		2.0-3.5			SANDY CLAY; brown to gray brown, moist, very stiff, slightly plastic.
205	#41	22/60		1.5			SANDY CLAY; gray to brown gray, moist, stiff, slightly plastic with sand; coarse, angular to subangular, moderately sorted quartz and angular gravels.
210	#42	19/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#5

FIELD ENGINEER D. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 342,514.2 E 1,548,942.5
DATE BEGAN 6/20/88
DATE FINISHED 8/22/88
GROUND SURFACE EL. 0.2 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#42	19/60		4.0	CL		SILTY CLAY; dark gray, predominantly dry, very stiff-hard,, brittle, slightly to non-plastic.
215	#43	35/60		3.0			
220	#44	54/60		3.0-4.0			
225	#45	26/60		3.0			SILTY CLAY; light to medium gray, predominantly dry, very stiff, slightly plastic.
230	#46	28/60		3.0			
235	#47	60/60		3.5-4.5			
240	#48	52/60		3.5-4.0			
245	#49	19/60		2.5			SANDY CLAY; medium gray, moist to wet, stiff, slightly plastic.
250	#50	10/60		2.5			
255							TOTAL DEPTH 253 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

AUTOCAD FILE: MF-GB5.DWG

BORING NO. GB#6

FIELD ENGINEER D.H. Cox
EDITED BY E. Wessner
CHECKED BY R. Sorbo
TOTAL DEPTH 153.0 ft.

COORDINATES N 342,233.0 E 1,549,873.7
DATE BEGAN 6-10-88
DATE FINISHED 6-14-88
GROUND SURFACE EL. 3.0 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SANDY CLAY; sandy loam, dark brown, dry, soft. 5 1/2" casing installed from 0 to 8 feet.
5					CH		SANDY CLAY; blue gray to dark brown, moist, plastic. SILTY CLAY; dark gray to dark brown, moist, plastic.
10	#1	0/60			SC-GC		CLAYEY SAND; gray, wet, soft, fine to coarse, subround to angular, moderate to poorly sorted quartz, interbedded with assorted angular gravels.
15	#2	0/60					
20	#3	0/60					CLAYEY SAND; dark gray, soft, sticky.
					CL		SANDY CLAY; light brown, soft, sticky.
25	#4	8/60			GC		SANDY CLAYEY GRAVEL; medium gray to blue-gray, moist, soft, with sand; fine to coarse, subangular to subround, moderate to poorly sorted quartz.
30	#5	25/60			CL		GRAVELLY SANDY CLAY; light brown, moist, soft, sticky, slightly plastic, abundant coarse sand and assorted gravels. SANDY CLAY; light gray to light brown, moist, stiff, slightly plastic.
35	#6	16/60					
40	#7	21/60					GRAVELLY SANDY CLAY; brown gray, moist, stiff, slightly plastic, interbedded with assorted coarse sands and angular gravels.
45	#8	4/60					
50	#9	4/60					
55	#10	2/60			SC		CLAYEY SAND; medium brown, wet, soft, interbedded with minor coarse angular gravels, sands are fine to coarse, subangular to subround, moderate to poorly sorted.
60	#11	1/60					
65	#12	0/60			CL		SANDY CLAY; fine to coarse, subangular to subround, moderate to poorly sorted quartz with siltstone and sandstone grains assorted, predominately dark gray in clay; medium to dark gray, wet, soft. Also fine to medium fragments of chert, feldspar.
70	#13	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#6

FIELD ENGINEER D.H. Cox
EDITED BY E. Wessner
CHECKED BY R. Sorbo
TOTAL DEPTH 153.0 ft.

COORDINATES N 342,233.0 E 1,549,873.7
DATE BEGAN 6-10-88
DATE FINISHED 6-14-88
GROUND SURFACE EL. 3.0 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	0/60			CL		SANDY CLAY; fine to coarse, subangular to subround, moderate to poorly sorted quartz with siltstone and sandstone grains associated, predominately dark gray. In clay; medium to dark gray, soft, wet. Also fine to medium fragments of chert, feldspar.
75	#14	0/60					
80	#15	0/60			GC		SANDY CLAYEY GRAVEL; dark gray, wet, soft, organic matter; sticks, and sand; fine grain, well sorted quartz with assorted fragments of medium gray sandstone and siltstone.
85	#16	20/60			CL		SILTY CLAY; medium gray to gray-green, moist, stiff, slightly plastic.
90	#17	20/60					
95	#18	7/60					SANDY CLAY; medium gray brown, soft to moist, stiff slightly plastic, moist.
100	#19	24/60			SC		CLAYEY SAND, medium gray to gray brown, moist, stiff slightly plastic.
105	#20	12/60					
110	#21	42/60			CL		SANDY CLAY; medium gray to green gray, flecks of brown interbedded, moist, stiff, slightly plastic.
115	#22	20/60					SANDY CLAY; light to medium brown, stiff, slightly plastic.
120	#23	16/60					SANDY CLAY; medium gray to gray brown, moist, stiff slightly plastic.
125	#24	43/60					SANDY CLAY; interbedded with coarse sands and assorted angular gravels, moisture content increasing.
130	#25	0/60					SILTY CLAY; blue gray with browns, moderately dry, stiff slightly plastic.
135	#26	59/60					
140	#27	40/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#6

FIELD ENGINEER D.H. Cox
EDITED BY E. Wessner
CHECKED BY R. Sorbo
TOTAL DEPTH 153.0 ft.

COORDINATES N 342,233.0 E 1,549,873.7
DATE BEGAN 6-10-88
DATE FINISHED 6-14-88
GROUND SURFACE EL. 3.0 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	40/60			CL		SILTY CLAY; blue gray with browns, moderately dry, stiff, slightly plastic. Color is predominantly blue-gray.
145	#28	5/60					
150	#29	53/60					
155							TOTAL DEPTH 153.0 FEET 4-1/2" diameter boring
160							
165							
170							
175							
180							
185							
190							
195							
200							
205							
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-GB6.DWG

BORING NO. W1-5(A1)

FIELD ENGINEER W. Hopkins
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 21.5 feet

COORDINATES N 343,385.2 E 1,549,579.4
DATE BEGAN 6/24/88
DATE FINISHED 6/27/88
GROUND SURFACE EL. 2.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	8/18	8"x5' standpipe 2.4' stick-up top of casing	3,4,6	CL		SILTY CLAY; tan, moist, soft, medium plasticity.
	MD#2	10/18		1,3	CH		SILTY CLAY; brown mottled red, wet, soft, high plasticity.
5	MD#3	18/18	4" sch. 40 PVC casing	ND			▼ 16:30, 6-24-88 CLAY; gray, soft, wet, high plasticity.
	S	ND	Bentonite/ cement grout				
10	MD#4	18/18	Bentonite pellets 10.4 to 12.2 ft.	ND			
	S	42/42					
15	S	36/60	4" .010 PVC screen, 14.5 to 19.5 ft.		GW		SANDY SILTY GRAVEL; gray, wet (saturated), loose.
					CL		SANDY SILTY CLAY; gray, wet, soft, low plasticity.
20			#1C sand				SILTY CLAY; brown mottled gray with fibers of white, moist, stiff, moderately plastic.
	ND	ND		6,8,9			
			12"				TOTAL DEPTH 21.5 FEET
25							NOTE: Water standing in hole at end of day at 5'-10".
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF W1-5A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

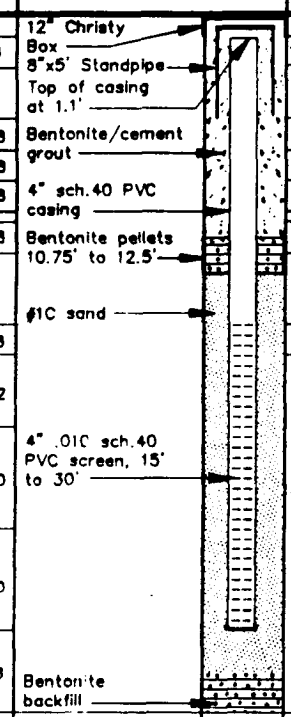
BORING NO. W1-6(A1)

FIELD ENGINEER J. Hadsall
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 34 ft.

COORDINATES N 342,228.3 E 1,549,584.4
DATE BEGAN 7-18-88
DATE FINISHED 7-18-88
GROUND SURFACE EL. 1.2 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLE (PER 6")	USCS SYMBOL	DESCRIPTION
0					ASPHALT
	MD#1	8/18	11,11,12	FILL	SILTY SANDY GRAVEL FILL; medium dense, moist, fine grained to medium grained sand, gravel clasts, subrounded to subangular (1/4 to 1/2").
5	dup	12/18	3,2,2		
	MD#3	15/18	1,1,1	CH CL	SILTY CLAY; dark brown/gray, moist, very soft, moderately plastic, organic odor, grass roots interspersed thoughout.
	MD#2	12/18	1,1,1		
10	MD#4	14/18	1,1,1		Mixture of slough from upper fill, undistiguishable. Water first encountered at 15 feet, 7-18-88, 12:15
15	MD#5	18/18	6,8,8		SILTY CLAY; medium brown, very moist, stiff, mod. plastic, grading to sandy silty clay.
	S	30/42		SM-GW	SILTY SAND, medium brown, saturated fine grained sand, grades to clean fine grained sand. Grading to medium grained clean sand.
20	S	36/60			Grading to coarse grained clean sand.
25	S	36/60			Grades to pebbley gravel..
30	S	48/48		CH CL	SILTY CLAY; tan brown-orangish brown, moist, very stiff, moderately plastic.
35					TOTAL DEPTH 34 FEET
40					
45					
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME-55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-W16A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W1-7(A2)

FIELD GEOLOGIST J. Hadsall
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 75 ft.

COORDINATES N 342,492.2 E 1,548,950.5
DATE BEGAN 6/28/88
DATE FINISHED 6/29/88
GROUND SURFACE EL.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	9/18	8"x5' standpipe 1' stick-up top of casing	5,3,3	SM		SILTY SAND; light brown, dry, loose, loam, fine grained sand.
	MD#2	8/18		1,1,1	OL		CLAY; dark gray, moist, very soft, sticky, organic appearance, grass roots thoughout.
5	MD#3	13/18		1			
10	MD#4	15/18		1,1,2			SILTY CLAY; dark gray, very soft, low plasticity, organic odor.
	S	42/42	Bentonite/ cement grout				▽ Water first encountered at 13', 6/28/88, 12:00.
					GC		CLAYEY GRAVEL; low plasticity, silty & fine grained sand.
					OL		SILTY CLAY; dark gray, very soft, low plasticity.
15	MD#5	18/18					SANDY SILTY CLAY; mottled brown, slightly moist, stiff, low plasticity, very fine grained sand.
	S	20/42	4" sch.40 PVC casing				
20	S	48/60					SILTY CLAY; brown, moist, stiff, moderately plastic.
							SILTY SANDY CLAY; brown, moist, stiff, low plasticity, pebbley.
25	S	0/60			CL		SILTY CLAY; brown, mottled tan, moist, stiff, moderately plastic.
30	MD#6	16/18		5,7,7			Geotech sample.
	S	3/42					
35	S	32/60	Bentonite pellets 35 to 37 ft.				
40	S	30/60	4" .010 PVC screen, 40 to 70 ft.				SILTY SAND; medium brown, wet, loose, fine grained sand, fully saturated sand at 41 feet.
45	S	24/60			SM		
50	MD#7	10/18	#1C sand	5,5,4	SW		Geotech sample; grades into clean, fine grained sand.
	S	24/42			SM		SILTY GRAVELLY SAND; medium brown, wet, loose, medium grained sand.
55	S	30/60					
60	S	0/60			SP		SAND; gray brown, wet, loose, clean medium grained sand.
65	S	18/60					Grading from medium grained sand to coarse grained sand with gravel in last 2 inches. 70.0'
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Hollow Stem Auger - CME 55

IT ...Creating a Safer Tomorrow

PROJECT NO. 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-W17A.DWG

BORING NO. W1-7(A2)

FIELD GEOLOGIST J. Hadsall
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 75 ft.

COORDINATES N 342,492.2 E 1,548,950.5
DATE BEGAN 6/28/88
DATE FINISHED 6/29/88
GROUND SURFACE EL. 2.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70	S	54/60	Bentonite slurry used to backfill clay aquitard		CL		CLAY; medium brown, moist, stiff, moderately plastic.
75			12"				TOTAL DEPTH 75 FEET
80							
85							
90							
95							
100							
105							
110							
115							
120							
125							
130							
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Hollow Stem Auger -- CME 55

IT ...Creating a Safer Tomorrow

PROJECT NO. 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-W17A DWG

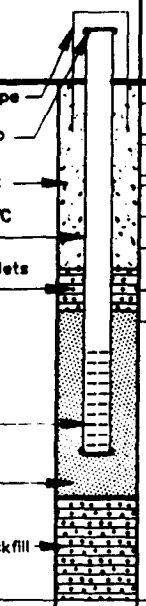
BORING NO. W1-8 (A1)

FIELD ENGINEER J. Hadsell
EDITED BY E. Wessner
CHECKED BY J. Hadsell
TOTAL DEPTH 25 ft.

COORDINATES N 342,987.9 E 1,549,752.4
DATE BEGAN 7-8-88
DATE FINISHED 7-11-88
GROUND SURFACE EL 1.6 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	10/18	2,4,4	CL	SILTY CLAY; dark brown, mottled red, moist, soft, medium plasticity.
	MD#2	16/18	1		SILTY CLAY; dark brown, mottled black, moist, soft, sticky, strong organic odor, grass roots.
5	dup MD#3	17/18	1		Grading to a dark gray color.
		18/18	1	OH	
10	MD#4	18/18	1		
	S	42/42			09:45, 7/11/88 Water first encountered at ~15 ft..
15				GW	SILTY SANDY GRAVEL; gray, fine grained sand and silt mixture, subrounded gravel.
	S	60/60		CL	SILTY CLAY; brown, moist, stiff, moderate plasticity
20	S	60/60			
25					TOTAL DEPTH 25 FEET
30					
35					
40					
45					
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow-Stem Auger

PROJECT NO. 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-W1BA.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W1-9(FILL)

FIELD ENGINEER E. Wessner
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 44 ft.

COORDINATES N 342,934.3 E 1,549,596.1
DATE BEGAN 7-1-88
DATE FINISHED 7-6-88
GROUND SURFACE EL. 17.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	6/18	12/12/5	FILL	FILL: silty clay; light gray-black, dry, stiff, non-plastic, trash (paper wood metal), strong organic odor.
5					
10	MD#2	6/18	6/7/6		FILL: silty clay; black, moderately moist, very soft, plastic organic with garbage (wood, glass, paper).
15					
20					Water level, 7-6-88, 07:30. Water first encountered, 7-5-88, 09:00.
25					FILL: silty clay; black, moist, soft, plastic, organic with wood, paper and some gravel, smell of sludge oil. few gravels.
30	MD#3	18/18	3/3/8	CH	SILTY CLAY; gray, moist, soft, plastic, some gravel.
	MD#4	18/18	3/4/8	CL	SANDY CLAY; gray, wet, slightly plastic.
	MD#5	18/18	2/3/8		SILTY CLAY; gray to dark gray, wet, plastic, sticky, slight sludge odor.
35				SP	SAND/GRAVEL; dark gray, fine grained sand, unconsolidated, subrounded, some siltstone.
					SILTY CLAY; gray to dark gray, wet, plastic, sticky.
				SP	SAND; gray, unconsolidated, well rounded, fine grained.
40				CL	SILTY CLAY; gray to black, wet, sticky, soft to very soft, plastic
	MD#6	12/18	5/6/5		SILTY CLAY; brown to light gray, wet, soft, slightly plastic, some oxide stains.
45					TOTAL DEPTH 44 FEET
50					
55					
60					
65					
70					

WELL SUMMARY:
- 8"x5' standpipe
- 2.0' stick-up top of casing
- 4" sch. 40 PVC casing
- Bentonite/cement grout
- Bentonite pellets 15 to 17 ft.
- #1C sand
- 4" C10 PVC screen, 19 to 29 feet
- Bentonite backfill

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary, SS16

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-W1-9.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W1-10(F)
(ABANDONED)

FIELD ENGINEER E. Wessner
EDITED BY J. Hodsoll
CHECKED BY J. Hodsoll
TOTAL DEPTH 13 ft.

COORDINATES N 342,387.9 E 1,549,542
DATE BEGAN 7/6/88
DATE FINISHED 7/6/88
GROUND SURFACE EL. 0.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0							SILTY CLAY; brown to light brown, dry to slightly moist, non-plastic.
	MD#1	6/18		3,3,8	CL		SILTY CLAY; gray, moderately moist, soft, plastic to mod. plastic.
	MD#2	6/18		1,2,3			
5	MD#3	12/18		1,1,1	OH		SILTY CLAY/CLAY; gray, moist, soft, plastic, organic (weeds).
					OL		CLAY/SILTY CLAY; gray, wet, soft to very soft, sticky, low plasticity, few organics, strong organic odor.
10	MD#4	18/18		0,1,1			
	MD#5	18/18		4,5,11			Borehole abandoned @ 13 ft. No well installed.
15							
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

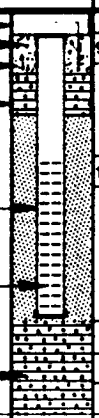
BORING NO. W1-10(F)

FIELD ENGINEER E. Wessner
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 19.5 ft.

COORDINATES N 342,552.4 E 1,549,695.1
DATE BEGAN 7-7-88
DATE FINISHED 7-8-88
GROUND SURFACE EL. 7.3 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0					ASPHALT first 6".
	MD#1	6/18	9/9/12	FILL	FILL: silty clay; light gray to brown, slightly moist, soft, non-plastic with gravels. Shoe of sampler contained wire and cardboard.
5					
	MD#2	12/18	12/7/5		Color grades from gray/brown to gray, moisture content increases from slightly moist to wet at a depth of 7 ft. Trash, gravels and fibers throughout (cardboard, wood, plastic, concrete).
10					
15					SILTY CLAY; gray to black, moist, soft, plastic, slight odor, lenses of organics mixed in.
	dup MD#3	12/18	2/3/4	CH	
			1/2/3		Water level at 17'4", 7-8-88, 09:00.
	MD#4	14/18	1/1/4		SILTY CLAY-CLAY; gray, moist, soft, plastic, some lenses of organics.
20					TOTAL DEPTH 19.5 FEET (6" due to purging of hole with air for slug test)
25					
30					
35					
40					
45					
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-W1-10.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

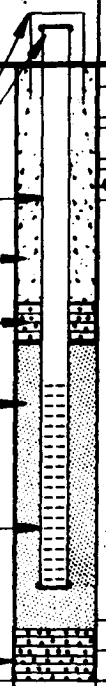
BORING NO. W1-11(F)

FIELD ENGINEER E. Wessner
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 30.0 ft.

COORDINATES N 342,833.1 E 1,549,349.4
DATE BEGAN 7/11/88
DATE FINISHED 7/12/88
GROUND SURFACE EL. 13.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0				FILL	FILL: silty clay; tan to light brown, dry, non-plastic, gravels
	MD#1	6/18	1,1,2		
					Trash (wood and glass ● 3 ft.)
	MD#2	6/18	5,3,4		
5	MD#3	6/18	4/23/38		FILL: silty clay/clay; gray-black, moist, moderately plastic, inclusions of gravel, petroleum odor, some cardboard & glass.
10					FILL: silty clay; brown-black, slightly moist, moderately plastic, trash with some glass.
15					Trash (paper, wood, plastic and glass) moist to slightly moist, strong odor. ▼ Water level at 16.44', 7-12-88, 07:48. ● 17 ft. hit wood (black, tar like odor) with possible incinerated metals (cans).
20					▽ Initial water from drilling ● 19 ft.
25					FILL: clay; dark gray to black, moist very sticky, soft, still some wood and trash.
	MD#4	12/18	3,7,7	CH	SILTY CLAY; brown with patches of gray, moist to mod. moist, soft, plastic.
30	MD#5	18/18	3,5,7		
					TOTAL DEPTH 30.0 FEET
35					
40					
45					
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE MF-W1-11.DWG

BORING NO. W1-12(A1)

FIELD GEOLOGIST S. Logan
EDITED BY E. Wessner
CHECKED BY J. Hadsell
TOTAL DEPTH 40.0 feet

COORDINATES N 342,979.1 E 1,549,346.4
DATE BEGAN 8/30/88
DATE FINISHED 9/2/88
GROUND SURFACE EL ~3.0 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	6/18	Standpipe; 5' stick-up top of casing	1,0,0	CL		SILTY CLAY; top soil, significant decomposed organic fraction.
	S	36/36	4" sch. 40 steel casing		CH		CLAY; with trace of silts, dark gray, very extremely soft, wet high plasticity, highly decomposed organic fraction, sulfurous odor, organic fraction decreases with depth. Homogeneous
5	S	60/60	Bentonite/cement grout; Bentonite pellets 7.5 to 8.5 ft.				
					SC		CLAYEY SAND; coarse, dk gry & blk, wet, soft, non-plastic.
					CH		SILTY CLAY; light and dark gray, very moist, soft, high plasticity.
10	S	30/30	4" .010 S.S. screen from 12.5 to 22.5 ft.		CL/CH		GRAVELLY SANDY CLAY, dark gray, very moist, soft, medium to high plasticity, sand is uniformly fine grained, trace of coarse sands, gravels.
	MD#2	18/18	Centralizer	19,21,23			
15	S	28/60					GRAVELLY SILTY SANDS, medium gray and black, hard, wet, non-plastic, sand grades from fine at 12.5' to medium and coarse with depth. Increasing gravel fraction with depth, trace of shell fragments, fairly clean.
20	S	28/60	Centralizer		SM/SW		Grades to finer sands at 17 ft. saturated. Grades to silty sand (coarse to fine) at 19 ft. Grades to cleaner, coarser sands with trace of gravel and shell fragments.
			#1C sand				
25	S	60/60					Grades to coarse silty sands.
30			Bentonite backfill				Very fine silty sand, moderate brown, firm, moist.
	S	40/60			SW		Poorly sorted sands, moderate to grayish brown, soft to firm, wet saturated, uniformly fine grained. Clean.
35	S	44/60	Hole slough 35 to 40 ft. flowing sands				
40					SM		Grades to very fine silty sand, moderately stiff, brown, moist uniformly fine and very fine grained.
							TOTAL DEPTH 40.0 FEET
45			12"				
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: TR-4000 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

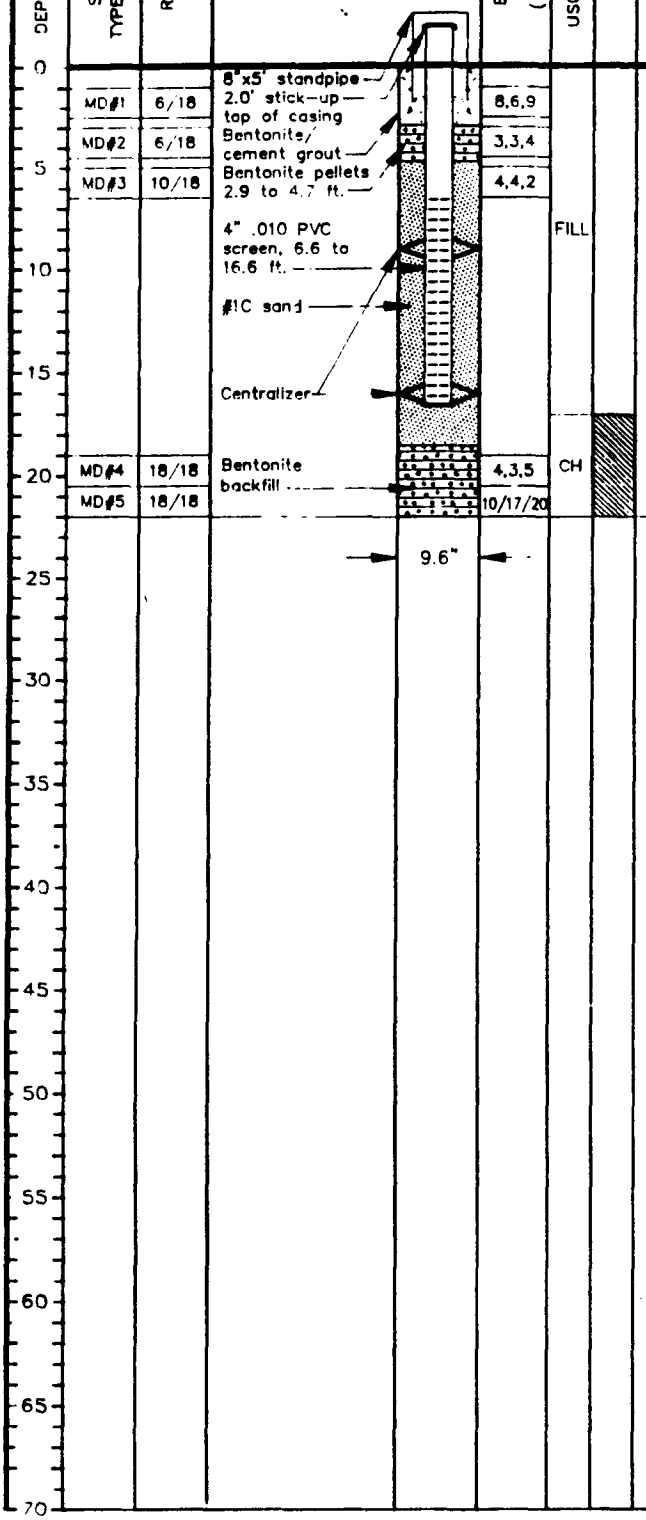
AutoCAD FILE MFW1-12A.DWG

BORING NO. W1-13(F)

FIELD ENGINEER E. Wessner
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 22.0 feet

COORDINATES N 342,564.5 E 1,549,062.2
DATE BEGAN 8/9/88
DATE FINISHED 8/10/88
GROUND SURFACE EL. 4.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0						Wire and foil trash with light brown dry fill.
	MD#1	6/18	8,6,9			FILL: silty clay; light gray, slightly moist, slightly plastic, with gravel inclusions.
	MD#2	6/18	3,3,4			Trash with light brown fill turning into silty clay, moist, moderately plastic, strong odor.
5	MD#3	10/18	4,4,2			FILL: silty clay; moist, black, moderately plastic, stiff, strong odor with plastic, cardboard, paper, sticks and glass.
				FILL		▼Water level at 8.05', 8-10-88, 08:30.
10						FILL: silty clay; black, fiberous, moist, very soft, moderately plastic, possible decomposition, very strong odor. Very moist @ 12 ft.
15						
						SILTY CLAY; olive brown, moist, soft, very plastic.
20	MD#4	18/18	4,3,5	CH		
	MD#5	18/18	10/17/20			
						TOTAL DEPTH 22.0 FEET
25						
30						
35						
40						
45						
50						
55						
60						
65						
70						



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MFW1-13F.DWG

IT ...Creating a Safer Tomorrow

EE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB1-1

FIELD GEOLOGIST J. Hadsall
EDITED BY S. Bartling
CHECKED BY J. Hadsall
TOTAL DEPTH 25 feet

COORDINATES N 342,458.6 E 1,549,818.9
DATE BEGAN 7/15/88
DATE FINISHED 7/15/88
GROUND SURFACE EL. 6.2 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	#1	36/60			FILL		FILL: silty sandy gravel; gray brown with black mottling, dry, loose, subangular, 1/4 to 1/2" gravels.
5	#2	60/60			FILL		FILL: gravelly silty clay; varied color, brown, black, mottled red, stiff, grass roots and organic matter, no odor.
10	#3	60/60			FILL		FILL: clayey silt; moist, soft, non-plastic, grass roots throughout.
15	#4	60/60			FILL		FILL: clayey silt; dark gray, moist, soft, non-plastic. FILL: silty clay; gray brown, stiff, moist, moderate plasticity.
20	#5	60/60			CL		SILTY CLAY; brown with mottled gray, moist, stiff, moderate plasticity.
25							TOTAL DEPTH 25 FEET 8" diameter boring
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: SB1-1(MF18)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB1-2

FIELD GEOLOGIST J. Hadsall
EDITED BY S. Bartling
CHECKED BY J. Hadsall
TOTAL DEPTH 26.5 feet

COORDINATES N 342,564.5 E 1,549,062.2
DATE BEGAN 7/22/88
DATE FINISHED 7/25/88
GROUND SURFACE EL. 4.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	#1	18/60			FILL		FILL: refuse and debris, (angular cobles, pebbles, silty sand, trash; bottle caps, plastic, etc.).
5	#2	0/60					FILL: clay; black, very stiff, highly plastic, intermixed with refuse.
10	#3	0/60					
15	#4	0/60					▽ Gound water first encountered. Hole abandoned 7-22-88, hit pocket of methane gas at 15 feet. Drilling resumed 7-25-88.
20	#5	0/60					
25		0/18		18,20,28			Abandoned at 26.5 feet due to lack of recovery.
30							TOTAL DEPTH 26.5 FEET 8" diameter boring
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: S31 2(MF18)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 2

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#1

FIELD GEOLOGIST D.H. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 157.0 ft.

COORDINATES N 340,763.7 E 1,550,917.3
DATE BEGAN 6-15-88
DATE FINISHED 6-17-88
GROUND SURFACE EL. 0.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SANDY CLAY; loam, medium to dark brown, stiff, brittle.
							5 1/2" casing installed from 0 to 6 1/2 feet.
5							
10	#1	0/60			SC		Shaker: CLAYEY SAND; medium to dark gray, coarse, moderately round to angular quartz, with sandstone and siltstone fragments.
15	#2	7/60			CL		SANDY CLAY; light to medium brown, wet, moderately soft, sticky, slightly plastic.
20	#3	30/60					SANDY CLAY; light to medium brown, moderately dry, stiff, non-plastic, with coarse angular gravels.
25	#4	4/60					SILTY CLAY; gray brown, moderately dry, stiff, non-plastic.
30	#5	47/60					
35	#6	11/60					SANDY CLAY; medium brown, moderately dry, stiff, slightly plastic, with sandstone fragments, dark gray, medium to coarse.
40	#7	31/60					
45	#8	0/60					
50	#9	29/60					SANDY CLAY; gray brown, moderately dry, stiff, slightly plastic.
55	#10	10/60					
60	#11	27/60					SANDY CLAY; brown gray, moderately dry, stiff, slightly plastic.
65	#12	5/60					
70	#13	10/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#1

FIELD GEOLOGIST D.H. Cox
EDITED BY F. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 157.0 ft.

COORDINATES N 340,763.7 E 1,550,917.3
DATE BEGAN 6-15-88
DATE FINISHED 6-17-88
GROUND SURFACE EL. 0.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	10/60			CL		SANDY CLAY; gray brown, moist, moderately plastic, sticky.
75	#14	3/60					
80	#15	20/60					
85	#16	10/60			SC		CLAYEY SAND; medium gray, moist, soft to stiff, slightly plastic.
90	#17	3/60					
95	#18	24/60			CL		SANDY CLAY; gray, minor brown, moist, stiff, slightly plastic.
100	#19	42/60			SC		CLAYEY SAND; gray-graybrown, moist to wet, stiff, slightly plastic.
105	#20	21/60			CL		SANDY CLAY; gray-graybrown, moist-dry, stiff, slightly plastic.
110	#21	33/60			SC		CLAYEY SAND; gray-graybrown, moist, soft, moderately plastic.
115	#22	12/60			CL		SANDY CLAY; medium-dark gray, bluegray, dry, stiff, non-plastic.
120	#23	34/60					SILTY CLAY; medium-dark gray-blue gray, dry, stiff, non-plastic.
125	#24	19/60					SILTY CLAY; light to medium gray, brown gray, moist, stiff, very sticky, slightly plastic.
130	#25	43/60					
135	#26	18/60					SILTY CLAY; dark gray, dry, very stiff, slightly to non-plastic.
140	#27	60/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AUTOCAD FILE: MF-GB1.DWG

BORING NO. GB#1

FIELD GEOLOGIST D.H. Cox
EDITED BY E. Wessner
CHECKED BY J. Hodsoll
TOTAL DEPTH 157.0 ft.

COORDINATES N 340,763.7 E 1,550,917.3
DATE BEGAN 6-15-88
DATE FINISHED 6-17-88
GROUND SURFACE EL. 0.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	60/60			CL		SILTY CLAY; medium-dark gray-gray brown, dry, very stiff, slightly to non-plastic.
145	#28	52/60					SANDY CLAY; medium-dark gray-gray brown, moderately dry, stiff, slightly plastic.
150	#29	0/60					
155	#30	38/60					
160							TOTAL DEPTH 157.0 FEET 4-1/2" diameter boring
165							
170							
175							
180							
185							
190							
195							
200							
205							
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#2

FIELD GEOLOGIST D.H. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 157.0 ft.

COORDINATES N 340,190.1 E 1,550,859.7
DATE BEGAN 6-28-88
DATE FINISHED 6-29-88
GROUND SURFACE EL. 2.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SANDY SILTY CLAY, dark gray-black, dry, stiff to hard, non-plastic.
5							
10	#1	2/60		.25			GRAVELLY SANDY CLAY; dark gray-black, wet, soft, non-plastic with pebbles, angular gravels.
15	#2	8/60		1.5			GRAVELLY SANDY CLAY; light medium brown-gray brown moist, stiff, slightly plastic, minor gravels.
							SILTY CLAY; light medium brown-gray brown, moist, stiff, slightly plastic.
20	#3	17/60		2.0			SANDY CLAY; gray brown, moist to dry, stiff, slightly plastic.
25	#4	29/60		3.0			
30	#5	46/60		4.0			
35	#6	15/60		4.0			SANDY CLAY; brown-gray brown, moist, stiff, slightly to non-plastic.
40	#7	60/60		2.0 3.0 4.0			SANDY CLAY/SILTY CLAY; gray brown, pred. dry, stiff non-plastic.
45	#8	38/60		2.0 3.0			SILTY CLAY; medium gray brown, moist-dry, stiff, slightly plastic.
50	#9	20/60		.5	CH		CLAY-SILTY CLAY; medium gray, moist to wet, soft, very plastic.
55	#10	41/60		2.0 4.0 3.0	CL		SILTY CLAY; medium gray brown, moist to dry, stiff, slightly plastic.
60	#11	40/60		2.5			
65	#12	10/60		1.5			SILTY CLAY; dark gray-gray brown, moist, stiff, moderately plastic.
70	#13	14/60		.5 1.5	CH		CLAY; medium gray-brown gray, moist, soft, moderately to very plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AUTOCAD FILE MF-GB2.DWG

BORING NO. GB#2

FIELD GEOLOGIST D.H. Cox
EDITED BY E. Wessner
CHECKED BY J. Hodgall
TOTAL DEPTH 157.0 ft.

COORDINATES N 340,190.1 E 1,550,859.7
DATE BEGAN 6-28-88
DATE FINISHED 6-29-88
GROUND SURFACE EL. 2.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	14/60					
75	#14	20/60		.5 1.0			SANDY CLAY; medium gray-gray brown, moist, soft to stiff, moderately plastic.
80	#15	12/60		.5			SILTY CLAY; gray brown, moist, stiff, moderately plastic.
85	#16	35/60		1.5	CL		
90	#17	15/60		1.0			
95	#18	8/60		.25			
100	#19	12/60		1.0			
105	#20	10/60		.5	SC		CLAYEY SAND-SANDY CLAY; gray brown, moist to wet, stiff, plastic.
110	#21	21/60		1.0	CH		SILTY CLAY; medium brown, soft to moist, stiff, plastic.
115	#22	60/60		2.0 2.5	CL		CLAY-SILTY CLAY; medium gray, moist to dry, stiff to brittle, slightly plastic.
120	#23	56/60		2.5			SILTY CLAY; medium gray, moist to dry, stiff, slightly plastic.
125	#24	60/60		2.5			CLAY-SILTY CLAY; gray-brown gray, pred. dry, stiff, non-plastic.
130	#25	34/60		1.0 1.25			
135	#26	46/60		2.0 3.5			CLAY-SILTY CLAY; light medium gray, moist to dry, stiff, non-plastic.
140	#27	60/60		3.5 4.0			CLAY; medium-dark gray, pred. dry, stiff to hard, non-plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB2.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#2

FIELD GEOLOGIST D.H. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 157.0 ft.

COORDINATES N 340,190.1 E 1,550,859.7
DATE BEGAN 6-28-88
DATE FINISHED 6-29-88
GROUND SURFACE EL. 2.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY	WELL SUMMARY	MEASURED CONSISTENCY	USCS SYMBOL	PROFILE	DESCRIPTION
110	#27	60/60		2.5	CL		CLAY; medium-dark gray-gray brown, pred. dry, stiff to hard non-plastic to slightly plastic.
115	#28	49/60		2.5			
150	#29	20/60		3.0	SC		CLAYEY SAND; medium gray-brown gray, wet, soft, non-plastic to slightly plastic, fine to medium, subangular-subround, moderate-well sorted sand.
155	#30	28/60		3.0	CL		CLAY--SILTY CLAY, brown-gray brown, soft to stiff, moist, slightly plastic.
160							TOTAL DEPTH 157.0 FEET 4-1/2" diameter boring
165							
170							
175							
180							
185							
190							
195							
200							
205							
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#3

FIELD GEOLOGIST D.H. Cox
EDITED BY E. Wessner
CHECKED BY J. Hedsall
TOTAL DEPTH 243.0 ft.

COORDINATES N341,038.2 E1,550,380.7
DATE BEGAN 6-24-88
DATE FINISHED 6-27-88
GROUND SURFACE EL. 0.24

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					MH		SANDY LOAM; topsoil, medium brown, dry, soft to stiff non-plastic. 5 1/2" casing installed from 0 to 6.5 feet. 6.5'
5		0/18			CL		SANDY CLAY; medium brown, wet, soft, moderately plastic with coarse sand and gravel fragments.
10	#1	7/60		.5			
15	#2	8/60		1.0			Moisture content decreasing with depth. Color varies from medium brown to gray.
20	#3	43/60		1.5			Minor sand.
25	#4	28/60		1.0			
30	#5	9/60		1.0–1.5	CH		GRAVELLY SANDY CLAY; medium brown, wet, soft, plastic with moderate to well rounded gravels (pred. dark gray siltstone, angular to round, poorly sorted).
35	#6	16/60		2.0	CL		SANDY CLAY; medium brown, moist, stiff, non-plastic to slightly plastic.
40	#7	12/60		1.0			
					CH		SILTY CLAY; medium brown, moist, stiff, plastic.
45	#8	35/60		2.0	CL		SANDY CLAY; gray brown, moist, stiff, slightly plastic.
50	#9	31/60		1.0–2.5			
55	#10	55/60		2.5			SILTY CLAY; gray brown, dry to moist, stiff, slightly to non-plastic.
60	#11	48/60		1.0–2.0			
65	#12	14/60		0.5–1.0			SANDY CLAY; medium brown, dry to moist, soft to stiff, brittle, non-plastic.
70	#13	8/60		.5	CH		SANDY CLAY; gray brown, moist, soft, plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

IT ...Creating a Safer Tomorrow

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-GB3.DWG

BORING NO. GB#3

FIELD GEOLOGIST D.H. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadsell
TOTAL DEPTH 243.0 ft.

COORDINATES N 341,038.2 E 1,550,380.7
DATE BEGAN 6-24-88
DATE FINISHED 6-27-88
GROUND SURFACE EL. 0.24

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	8/60		.5	CH		SANDY CLAY; gray brown, moist, soft, plastic.
75	#14	12/60		.5			
80	#15	12/60		1.0			
85	#16	29/60		1.0–1.5			SILTY CLAY; medium to dark gray, moist, soft, very plastic.
90	#17	18/60		.5			
95	#18	42/60		3.0–3.5	CL		SILTY CLAY; gray to brown gray, dry, stiff, slightly plastic.
100	#19	16/60		.5	SC		CLAYEY SAND; medium brown to gray brown, moist, soft, non-plastic, fine, subangular, subround, moderate-well sorted sand.
105	#20	60/60		2.0	CL		SILTY CLAY; brown to gray brown, moist, stiff, moderately plastic.
110	#21	48/60		3.0–4.5			SANDY CLAY-CLAYEY SAND; light to medium gray, moist, stiff, non-plastic.
115	#22	0/60			SC		SAND; fine to medium, subangular-subround, moderate to well sorted quartz.
120	#23	60/60		1.0	CH		CLAY-SILTY CLAY; dark gray, moist to dry, stiff, plastic.
125	#24	34/60		1.5	CL		SANDY CLAY-CLAYEY SAND; dark gray, moist, stiff to soft, non-plastic to slightly plastic, minor shell fragments.
130	#25	24/60		2.0–2.5	CL		CLAY-SILTY CLAY; dark gray, moist to dry, stiff, slightly to non-plastic, minor shell fragments.
135	#26	60/60		2.0			SILTY CLAY-CLAY; dark gray, moderately dry, stiff, slightly to non-plastic.
140	#27	60/60		2.5			SILTY CLAY; gray to brown gray, moderately dry, stiff, slightly plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

IT ...Creating a Safer Tomorrow

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-GB3.DWG

BORING NO. GB#3

FIELD GEOLOGIST D.H. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadzell
TOTAL DEPTH 243.0 ft.

COORDINATES N 341,038.2 E 1,550,380.7
DATE BEGAN 6-24-88
DATE FINISHED 6-27-88
GROUND SURFACE EL. 0.24

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	60/60		2.5	CL		SILTY CLAY; brown to gray brown; moderately dry, stiff, non-plastic to slightly plastic.
145	#28	40/60		2.0-2.5			
150	#29	38/60		1.5-2.5			
155	#30	53/60		2.5			SILTY CLAY; dark gray, dry, stiff, non-plastic.
160	#31	60/60		2.0-2.5			SILTY CLAY; light to medium gray, moist, stiff, slightly plastic.
165	#32	50/60		2.5			
170	#33	53/60		2.5	CH		SANDY-SILTY CLAY; dark gray, moist, stiff, plastic, trace shell fragments.
175	#34	24/30		2.0	CL		SILTY CLAY; medium gray, dry to moist, stiff, slightly plastic.
180	#35	32/60		2.5			
185	#36	58/60		3.5			
190	#37	40/60		2.5			SILTY CLAY; light to medium brown, dry, stiff, non-plastic.
195	#38	40/60		4.0			
200	#39	60/60		3.0			
205	#40	32/60		3.5			SILTY CLAY; light gray to gray brown, dry, stiff, non-plastic.
210	#41	11/60		2.5			GRAVELLY SILTY CLAY-SANDY CLAY; gray brown, moist to dry, stiff, slightly plastic with gravel, pred. coarse angular siltstone fragments.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

IT ...Creating a Safer Tomorrow

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-GB3.DWG

BORING NO. GB#3

FIELD GEOLOGIST D.H. Cox
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 243.0 ft.

COORDINATES N 341,038.2 E 1,550,380.7
DATE BEGAN 6-24-88
DATE FINISHED 6-27-88
GROUND SURFACE EL. 0.24

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	11/60		2.5	CL		GRAVELLY SILTY CLAY–SANDY CLAY; gray brown, dry to moist, stiff, slightly plastic with gravel, pred. coarse angular siltstone fragments.
215	#42	31/60		2.0			SILTY CLAY; dark gray, moist, soft to stiff, moderately plastic.
220	#43	44/60		2.5–3.5			
225	#44	58/60		3.0			
230	#45	29/60		1.5			SANDY CLAY; gray brown, moist, soft to stiff, slightly plastic.
235	#46	40/60		3.5–4.0			SILTY CLAY; dark gray, dry, stiff, slightly to non-plastic.
240	#47	58/60		4.5			GRAVELLY SANDY CLAY; light to medium gray to brown gray, moist to dry, stiff, slightly to non-plastic, coarse sand and gravel
245							TOTAL DEPTH 243.0 FEET 4-1/2" diameter boring
250							
255							
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

IT ...Creating a Safer Tomorrow

PROJECT NO.: 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-GB3.DWG

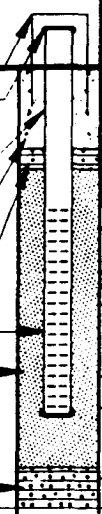
BORING NO. W2-5(A1)

FIELD ENGINEER W. Hopkins
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 21.5 feet

COORDINATES N 340,610.3 E 1,550,345.9
DATE BEGAN 7/12/88
DATE FINISHED 7/13/88
GROUND SURFACE EL. -0.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	8/18	18,22,32	CL	GRAVELLY CLAY at surface, medium brown SILTY SANDY CLAY; medium brown to dark brown, dry, stiff, slight to non-plastic, some gravel.
	MD#2	NO REC.	5,5,7	CL/SC	SANDY CLAY, medium brown, wet, medium stiff, slightly plastic.
5	dup MD#3	18/36	3,2,3 / 4,6,6		▼ Water standing at 7 ft. 7/12/88.
10	MD#4	15/18	6,10,11	SM	SILTY SAND; pebbly, medium brown, wet, loose, fine to medium grained, grading into clean sand.
15	MD#5	ND	8,17,8	SW	CLEAN SAND; well graded, wet, loose, little or no fines.
20	MD#6	ND	12,17,28	CL	SILTY CLAY, medium orange brown, moist, stiff, low to mod. plastic, mottled with white silty clay.
					TOTAL DEPTH 21.5 FEET
25					Hit water again at 21.5 ft. standing at 17.5 ft.

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MF-W2-5A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

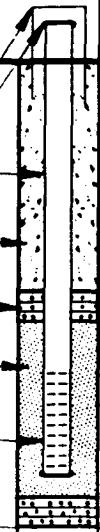
BORING NO. W2-6(A1)

FIELD ENGINEER J. Hadsall
EDITED BY E. Wessner
CHECKED BY J. Hadsall
TOTAL DEPTH 22.5 feet.

COORDINATES N 340,883.6 E 1,550,506.5
DATE BEGAN 7/14/88
DATE FINISHED 7/14/88
GROUND SURFACE EL. -0.3 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	10/18	9,9,20	FILL	FILL: silty sand; dark brown, dry, medium dense, subangular gravel organic appreearance, glass fragments between 1 and 3 ft.
	MD#2	9/18	4,4,6		
5	dup	18/18	3,3,4		
	MD#3	18/18	2,2,2	MH	SANDY SILT; gray brown, moist, soft, medium plasticity, trace of grass roots. Ground water first encountered, minimal amount (7/14/88).
10	MD#4	10/18	5,6,6	CL	SILTY CLAY; medium brown to orangish brown, moist, soft, medium plasticity, trace of gravels inclusions. Water level, 7-14-88, 11:00.
15	MD#5	18/18	5,7,5	SM	SILTY SAND; orange brown, fine to coarse grained sand, saturated, medium dense.
20				CL	SILTY CLAY; medium brown to orangish brown, stiff, moderate plasticiy, with fine gravel inclusions grading to a light tan silty clay.
25					TOTAL DEPTH 22.5 FEET
30					
35					
40					
45					
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-W2-6A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

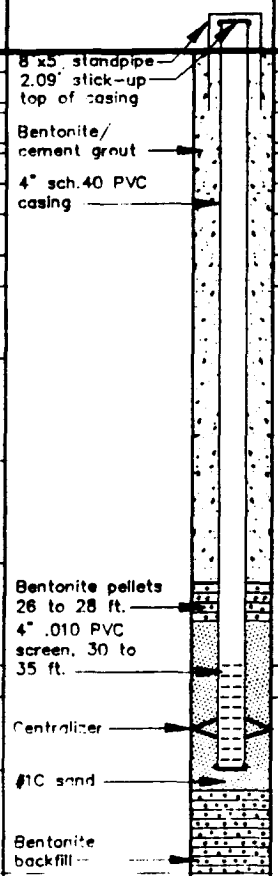
BORING NO. W2-7(A2)

FIELD ENGINEER J. Hadsall
EDITED BY S. Logan
CHECKED BY J. Hadsall
TOTAL DEPTH 40 ft.

COORDINATES N 340,756.6 E 1,550,917.8
DATE BEGAN 7-6-88
DATE FINISHED 7-7-88
GROUND SURFACE EL. 0.6 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS	DESCRIPTION
0	MD#1	10/18	17,9,8	CL	SANDY CLAY; medium to dark brown, dry, stiff, brittle with some gravel.
	MD#2	11/18	6,12,23		
5	MD#3	14/18	4,7,9		Moistens at 5 feet.
	MD#4	15/18	4,4,4	ML	CLAYEY SANDY SILT; medium brown, wet, soft, fine grained sand.
10	MD#5	12/18	8,12,15		
	S	42/42		CL	SANDY SILTY CLAY; medium brown, moist, stiff, slightly plastic.
15					Water level at 15', 7-7-88, 08:00.
	S	60/60			Isolated areas of different hued browns.
20	S	60/60			
25	S	60/60			Trace of fine sands (with depth).
					SANDY CLAY with gravel (10%); medium brown, moist, stiff.
30	MD#6	12/18	5,6,6		
	S	42/42		SM	SILTY SAND; medium brown, loose, saturated.
35				SW-GW	SAND; gray brown, saturated, loose, medium/coarse grained w/ pebbles & gravel, subrounded gravels, subrounded to angular quartz in sand.
	S	60/60		CL	SANDY CLAY; medium brown, moist, stiff, slightly plastic.
40					TOTAL DEPTH 40 FEET
45					
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Hollow-Stem Auger-CME 55

PROJECT NO. 409616
LOCATION: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-W27A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W2-8(FILL)

FIELD ENGINEER E. Wessner
EDITED BY J. Hudsell
CHECKED BY J. Hudsell
TOTAL DEPTH 15.25 feet

COORDINATES N 340,526.8 ft. E 1,550,689 ft.
DATE BEGAN 6/29/88
DATE FINISHED 6/30/88
GROUND SURFACE EL 3.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY	WELL CONSTRUCTION	BLOWS ON SAMPLER PER 6"	USCS SYMBOL	PROFILE	DESCRIPTION
	MD#1	8/16	8"x5' standpipe; 2.5' stick-up; top of casing; Bentonite, cement grout	3,3,5			FILL: silty clay; dark gray, dry, stiff, non-plastic, angular gravel fill.
	MD#2	3/16	Bentonite pellets; 2 to 5 ft; 4" sch. 40 PVC casing; Centralizer	19,7,5	FILL		FILL: silty clay; reddish brown, dry, non-plastic, metal glass and garbage, some silt gravels.
							FILL: clayey silt; black, slightly moist, non-plastic, garbage
							FILL: silty sandy clay; tan, moist, soft, moderately plastic, organics and gravels, some lead and metals.
	MD#3	12/16	#4 .010 PVC screen, 7 to 12 ft; #10 sand	3,5,5	CH		SILTY CLAY; tan to brown, moist, soft, plastic, some tan-brown alternation, some inclusions of gravel siltstone. Natural material.
	MD#4	12/16	Bentonite backfill	3,4,5			

9.6'

TOTAL DEPTH 15.25 FEET

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

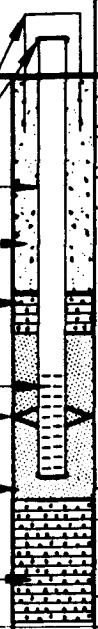
BORING NO. W2-9(A1)

FIELD GEOLOGIST E. Wessner
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 26.75 ft.

COORDINATES N 340,506.8 ft. E 1,550,675.6 ft.
DATE BEGAN 6/28/88
DATE FINISHED 6/28/88
GROUND SURFACE EL. 1.3 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0					FILL: sandy clay/silty clay; light gray, dry, moderately soft, no plasticity, some asphalt in sample.
	MD#1	8/16	55		Drilled without casing for 5 feet.
	MD#2	8/16	7,6,11	FILL	FILL: silty clay; black organic, moderately dry, low plasticity, with angular inclusions of sandstone, moistens and grades to light gray color with depth.
5	MD#3	7/16	3,5,9		▼ Water level, 6-29-88.
10				CL	SILTY CLAY; tan - light gray, moist, soft, mod. plastic, inclusions of fine grained sandstone.
15					SILTY CLAY; tan - light gray, moist, soft, mod. plastic.
					▽ Water first encountered.
					SANDY CLAY; very fine grain, tan - brown, moist, soft, mod. plastic.
20	MD#4	16/16	3,7,28	CH	CLAY; tan to light gray, moist, mod. soft, plastic, laminated. SILTY CLAY; light brown, moist, stiff, plastic, slickenslides with tan siltstone inclusions.
25	MD#5	16/16	6,12,18		SILTY CLAY; light brown, moist, soft, plastic. Inclusions of siltstone; stiff, rounded, medium grain size.
					TOTAL DEPTH 26.75 FEET

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MFW2-9F1.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

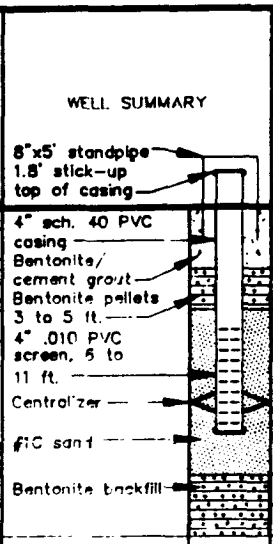
BORING NO. W2-10(F)

FIELD ENGINEER E. Wessner
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 16.0 feet

COORDINATES N 340,872.7 E 1,550,636.6
DATE BEGAN 7/12/88
DATE FINISHED 7/13/88
GROUND SURFACE EL. 1.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	12/18	12,20,30	FILL	FILL: silty clay; brown to light gray, dry, hard, non-plastic, gravel.
	MD#2	12/18	12,15,10		FILL: clayey silt; brown to light gray, dry, non-plastic, trash (glass, metal), grades to dark brown, slightly moist.
5	MD#3	12/18	7,2,7		FILL: silty clay; reddish brown, moist, non-plastic, gravels, iron oxide stains, trash (wire, glass, metal). Water level at 7.16', 7-12-88, 07:50.
10					FILL: clayey silt; dark brown, moist, moderately plastic, glass, gravel - metal inclusions, tar, petroleum odor.
				CH	SILTY CLAY; reddish brown with gray areas, moist, soft, plastic, inclusions of gravels. (Natural)
	MD#4	12/18	4,6,10		
15	MD#5	18/18	7,5,10		
			9.6"		TOTAL DEPTH 16.0 FEET

WELL SUMMARY



DRILLING CO.: Water Developement Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MFW2-10F.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W2-11(F)

FIELD ENGINEER E. Wessner
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 24.0 feet

COORDINATES N 340,875.91 ft. E 1,550,744.3 ft.
DATE BEGAN 7/14/88
DATE FINISHED 7/14/88
GROUND SURFACE EL. 7.2 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER PER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	12/18	11/12/14	FILL	FILL: silty clay; light brown, dry, non-plastic, with gravel.
	MD#2	12/18	9/11/9		Grades to a reddish brown and moistens with depth.
5	MD#3	6/12	7/10/10		FILL: clayey silt; tanish gray, slightly moist, moderately soft, slightly plastic, some gravels. Grades to light brown and moistens with depth.
10					FILL: silty clay; dark brown to black, moist, soft, plastic, some gravel.
					▽ 7-14-88 Water observed on sampler and cuttings.
15					FILL: sandy clay; lt. brown-tan, moist, soft, plastic to mod. plastic, some gravels.
					FILL: gravelly sand; dark tan, rounded moderately sorted, abundant gravel, fine grained sand.
					FILL: clayey sand; tan to light brown, wet, soft, slightly plastic, fine grained with gravels.
20	MD#4	18/18	3/7/6		
	MD#5	18/18	5,6,9	CL	SILTY CLAY; tan to brown gray, moist, soft, plastic, to moderately plastic, some inclusions of gravel.
25					TOTAL DEPTH 24.0 FEET
30					
35					
40					
45					
50					
55					
60					
65					
70					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MFW2-11F.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB2-1

FIELD GEOLOGIST J. Hadsell
EDITED BY S. Bartling
CHECKED BY J. Hadsell
TOTAL DEPTH 25 feet

COORDINATES N 340,550 E 1,550,680
DATE BEGAN 8/1/88
DATE FINISHED 8/1/88
GROUND SURFACE EL.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	#1	36/60			CL		SANDY SILTY CLAY; light gray, mottled orange oxidation, dry, moderately soft, non-plastic. SILTY CLAY; black, dry, non-plastic, brittle, grass roots.
5	#2	60/60			CL		SILTY CLAY; light gray-tan, moist, moderate plasticity with sandstone inclusions.
					MH		CLAYEY SANDY SILT; tan, wet, slight plasticity.
10	#3	60/60			CL		SILTY CLAY; tan, moist, medium stiff, moderate plasticity.
					MH		SANDY SILT; tan, wet.
15	#4	60/60			CL		SILTY CLAY; tan, moist, medium stiff, moderate plsticity. SILTY CLAY; tan, moist, soft, moderate to low plasticity, highly fractured with some water in fractures.
20	#5	60/60					SILTY CLAY; tan, slightly moist, stiff, moderate plasticity. SILTY CLAY; light brown, moist, stiff, fractured zones with sandstone inclusions.
25							TOTAL DEPTH 25 FEET 8" diameter boring
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: SB2-1(MF21)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 3

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#13

FIELD GEOLOGIST Joel Hodgell
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 341,152.1 E 1,552,413.7
DATE BEGAN 8/29/88
DATE FINISHED 8/30/88
GROUND SURFACE EL. -2.09 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0	#1	0/60			SM		SILTY SAND; medium brown, slightly moist. Logged from cuttings.
5							
10	#2	0/60					No recovery
15	#3	24/60			CL		SANDY SILTY CLAY; light brown, moist, very stiff, moderate plasticity.
20	#4	36/60					SANDY SILTY CLAY; light brown, moist, stiff, moderate plasticity, with mudstone fragments.
25	#5	34/60					SANDY SILTY CLAY; light brown, moist, stiff, low plasticity, brittle, with mudstone fragments.
30	#6	0/60			GW		SANDY GRAVEL; 80% angular lithics (mudstone), 10% calcium carbonate seashell clasts, sand is coarse.
35	#7	14/60			CL		SANDY SILTY CLAY; light brown, moist, stiff, moderate plasticity, 30% sand.
40	#8	18/60					SANDY SILTY CLAY; light brown, moist, stiff, moderate plasticity, mudstone fragments.
45	#9	0/60					No recovery
50	#10	2/60			SC		SILTY CLAYEY SAND; medium brown, moist, loose.
55	#11	0/60			SP		SAND; fine grained. Logged from shaker.
60	#12	0/60					
65	#13	6/60			CH		SILTY CLAY; gray brown, moist, very stiff, plastic.
70	#14	0/60					No recovery.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB13.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#13

FIELD GEOLOGIST Joel Hadsell
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 341,152.1 E 1,552,413.7
DATE BEGAN 8/29/88
DATE FINISHED 8/30/88
GROUND SURFACE EL. -2.09 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#14	0/60					
75	#15	30/60			CL-CH		SILTY CLAY; gray green, moist, soft, sticky, with sand lenses.
80	#16	12/60					SILTY CLAY; pale brown, moist, very stiff, low plasticity, 40% silt.
85	#17	18/60					SILTY CLAY; pale to medium brown, moist, stiff, plastic.
90	#18	10/60					SILTY CLAY; medium brown – dark yellow brown, moist, soft, low plasticity.
95	#19	18/60					SILTY CLAY; dark yellow brown, moist, very stiff, plastic.
100	#20	6/60					SILTY CLAY; gray green mottled brown, moist, very stiff, very plastic.
105	#21	0/60			SP		No recovery. Sand; 30% quartz, 50% lithics, 20% feldspar, fine grained. Logged from shaker.
110	#22	0/60			SM		No recovery. Silt; dark gray. Logged from shaker.
115	#23	0/60					
120	#24	0/60			GP		No recovery. Gravel; dark, subangular. Logged from shaker.
125	#25	18/60			CH		SILTY CLAY; gray green, moist, medium stiff, plastic, sticky.
130	#26	22/60					SILTY CLAY; gray green, moist, very stiff, very plastic.
135	#27	60/60					SILTY CLAY; gray green, mottled red brown, hard, brittle, moderate plasticity.
140	#28	0/60					No recovery. Medium to coarse grained sand with 50% subangular lithics.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB13.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#13

FIELD GEOLOGIST Joel Hadsell
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet
COORDINATES N 341,152.1 E 1,552,413.7
DATE BEGAN 8/29/88
DATE FINISHED 8/30/88
GROUND SURFACE EL. -2.09 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#28	0/60			ML		CLAYEY SILT/SILTY CLAY; medium brown, medium stiff, moderate plasticity.
145	#29	23/60					CLAYEY SILT/SILTY CLAY; pale brown, stiff, moderate plasticity.
150	#30	10/60			CH		SILTY CLAY; gray green, moist, hard, very plastic. plasticity.
155	#31	40/60					
160	#32	48/60					SILTY CLAY; gray green, moist, hard, plastic, highly fractured with slickenside surfaces.
165	#33	48/60					SILTY CLAY; gray green, moist, hard, very fractured, with glossy slickenside surfaces.
170	#34	24/60					SILTY CLAY; medium gray, hard, plastic, ~25% slickenside surfaces, small dark gray sand lenses.
175	#35	36/60					SILTY CLAY; medium gray, hard, plastic, small dark gray sand lenses with seashells.
180	#36	40/60					SANDY CLAY; medium gray, moist, very stiff, plastic, 20% sand.
185	#37	18/60			CL		SANDY SILTY CLAY; light brown, mottled red and gray, moist, very stiff, moderate plasticity.
190	#38	44/60					SANDY SILTY CLAY; light brown, moist, very stiff, moderate plasticity, light gray sand lenses.
195	#39	44/60					SANDY SILTY CLAY; light brown, mottled tan, hard, slightly plastic, brittle, sand lenses.
200	#40	10/60					SANDY CLAY; light brown, mottled red, medium stiff, slightly plastic.
205	#41	18/60			CH		SANDY SILTY CLAY; gray, moist, hard, plastic.
210	#42	20/60					SILTY CLAY; medium brown, moist, hard, plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE MF-GB13.DWG

BORING NO. GB#13

FIELD GEOLOGIST Joel Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 341,152.1 E 1,552,413.7
DATE BEGAN 8/29/88
DATE FINISHED 8/30/88
GROUND SURFACE EL. -2.09 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#42	20/60			CH		SILTY CLAY; medium brown, moist, hard, plastic.
215	#43	48/60					SILTY CLAY; gray green, moist, very stiff, plastic, mudstone fragments.
220	#44	24/60					SILTY CLAY; medium brown, moist, stiff, plastic.
225	#45	24/60					
230	#46	24/60					
235	#47	60/60			CL		SILTY CLAY; light brown, moist, hard, slightly plastic.
240	#48	30/60					
245	#49	36/60			CH		SILTY CLAY; light brown, moist, hard, plastic, large 2" dia. mudstone clast at 247 feet.
250	#50	48/60					
255							TOTAL DEPTH 252 FEET **4-1/2" diameter boring**
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB13.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#14

FIELD GEOLOGIST J. Hadsall
EDITED BY D.H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,680.7 E 1,552,418.9
DATE BEGAN 8/31/88
DATE FINISHED 9/1/88
GROUND SURFACE EL. 3.05 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0	#1	0/84			SM		CLAYEY SANDY LOAM; brown, moist, medium dense.
5							
10	#2	8/60		0.5	CL		SANDY CLAY; medium brown, moist, soft, sticky.
15	#3	16/60		2.0			SANDY CLAY; medium brown, moist, stiff, moderate plasticity.
20	#4	7/60		2.75	CH		SILTY CLAY; medium brown, moist, very stiff, plastic, sticky with mudstone fragments.
25	#5	36/60		3.0			
30	#6	12/60		2.0			
35	#7	10/60		2.0	CL		SANDY CLAY; medium brown, moist, stiff, moderate plasticity.
40	#8	12/60		3.25	CH		SILTY CLAY; medium brown, moist, very stiff, highly plastic.
45	#9	0/60			GW		SANDY GRAVEL; subrounded, formation took ~200 gallons of drill fluid.
50	#10	6/60		0.5	CL-CH		SILTY CLAY; medium brown, moist, soft, sticky.
55	#11	5/60		0.75			SILTY CLAY; medium brown, moist, medium stiff, sticky.
60	#12	7/60		0.75			SILTY CLAY; medium brown, moist, medium stiff, plastic.
65	#13	22/60		0.75			SANDY CLAY; moderate brown, moist, medium stiff, plastic. SILTY CLAY; moderate brown, moist, medium stiff, plastic.
70	#14	14/60		0.60			SILTY CLAY; moderate brown, moist, soft, sticky.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB14.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
~~FOR EXPLANATION OF SYMBOLS AND TERMS~~

BORING NO. GB#14

FIELD GEOLOGIST J. Hadsall
EDITED BY D.H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,680.7 E 1,552,418.9
DATE BEGAN 8/31/88
DATE FINISHED 9/1/88
GROUND SURFACE EL 3.05 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#14	14/60		0.60	CL		SILTY CLAY; medium brown, moist, soft, sticky.
75	#15	7/60		0.50	CL		
80	#16	3/60		0.25	CL		
85	#17	18/60		0.75	CL		SILTY CLAY; moderate brown, moist, medium stiff, sticky.
90	#18	5/60		0.75	CL		
95	#19	18/60		0.30	CL		SILTY CLAY; medium brown, moist, soft, sticky.
100	#20	28/60		0.25	CL		SILTY CLAY; medium brown, moist, soft, non-plastic..
					SM		SILTY SAND; medium brown, moist, loose.
105	#21	12/60		1.75	CH-CL		SILTY CLAY/CLAY; medium brown, moist, stiff, very plastic.
110	#22	12/60		1.75	CH-CL		CLAY; gray brown, moist, stiff, very plastic.
115	#23	12/60		1.75	CH-CL		CLAY; gray green, moist, stiff, very plastic.
120	#24	14/60		1.75	CH-CL		SANDY SILTY CLAY; gray green mottled brown, moist, stiff, plastic.
125	#25	4/60		1.75	CH-CL		SILTY SANDY CLAY; brown mottled gray, moist, stiff, low plasticity.
130	#26	32/60		4.1	CH-CL		SILTY CLAY; gray green, mottled brown, moist, hard, plastic.
135	#27	16/60		2.5	CH-CL		SILTY CLAY/CLAY; gray green, moist, very stiff, very plastic.
140	#28	38/60		2.75	CH-CL		SILTY CLAY; dark brown, moist, very stiff, moderate plasticity, sea shell fragments.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB14.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#14

FIELD GEOLOGIST J. Hadsall
EDITED BY D.H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,680.7 E 1,552,418.9
DATE BEGAN 8/31/88
DATE FINISHED 9/1/88
GROUND SURFACE EL. 3.05 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#28	38/60		2.75	CH		SILTY CLAY; medium dark brown, moist, very stiff, plastic.
145	#29	19/60		3.75			
150	#30	10/60		3.5			
					SC		CLAYEY SAND; medium brown, moist, medium dense, sticky, with angular mudstone fragments.
155	#31	18/60		3.5	CH-CL		SILTY CLAY; dark gray brown, moist, very stiff, very plastic.
160	#32	17/60		3.5-4.5			SILTY CLAY; gray green, moist, hard, very plastic.
165	#33	38/60		3.5			
170	#34	48/60		2.0			
175	#35	28/60		2.5-0.5	CL		SANDY CLAY; gray, moist, very stiff, moderate plasticity.
					ML		CLAYEY SILT; gray, moist, soft, non-plastic, subangular mudstone fragments.
180	#36	22/60		2.5	CH		SANDY CLAY; gray, moist, very stiff, plastic, mudstone fragments.
185	#37	26/60		2.75			SILTY CLAY; gray, moist, very stiff, plastic, grass roots.
190	#38	18/60		2.75			
195	#39	23/60		3.5			SANDY CLAY; gray brown, moist, hard, moderate plasticity, grades to silty clay; brown, moist, hard, plastic.
200	#40	19/60		4.0			
205	#41	30/60		4.25	CL-CH		SANDY CLAY; brown, moist, hard, non-plastic. SILTY CLAY; brown, moist, very stiff, very plastic.
210	#42	18/60		3.25			

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB14.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#14

FIELD GEOLOGIST J. Hadsall
EDITED BY D.H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,880.7 E 1,552,418.9
DATE BEGAN 8/31/88
DATE FINISHED 9/1/88
GROUND SURFACE EL. 3.05 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#42	18/60		3.25	CH		SILTY CLAY; brown, moist, very stiff, very plastic.
215	#43	18/60		3.25	SM		SILTY SAND; medium brown, moist, loose, fine to medium grained, 20% quartz, 40% lithics.
220	#44	52/60		4.25	CH		SILTY CLAY; gray brown, moist, hard, plastic.
225	#45	44/60		3.5			
230	#46	36/60		3.0			
235	#47	60/60		4.25			
240	#48	54/60		4.5			
245	#49	60/60		4.5			
250	#50	0/60		4.5			
255							TOTAL DEPTH 252 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB14.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#15

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 340,339.0 E 1,552,260.7
DATE BEGAN 9/14/88
DATE FINISHED 9/15/88
GROUND SURFACE EL. -0.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0		0/84			CL		No recovery. SILTY SANDY CLAY; moderate brown, grass and vegetation fragments, moist, soft, sticky. Logged from shaker.
5							
10	#1	0/60					SILTY CLAY; moderate brown, soft, sticky.
15	#2	0/60					
20	#3	3/60		0.75			SILTY CLAY; moderate brown, mottled tan, moist, stiff, low plasticity, 5% sand, increasing sand content.
25	#4	30/60		1.5			
30	#5	0/60					No recovery. SAND and GRAVEL; subangular, coarse, 10% qtz, 90% lithics. Logged from shaker.
35	#6	0/60					
40	#7	20/60		3.5	CH		SILTY CLAY; moderate brown, moist, very stiff, plastic.
45	#8	0/60					No recovery.
50	#9	14/60		0.75	CL		SILTY CLAY; moderate brown, moist, soft, sticky.
55	#10	0/60					No recovery. SAND and SILT; sand is fine grained. Logged from shaker.
60	#11	0/60					
65	#12	0/60					
70	#13	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB15.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#15

FIELD GEOLOGIST J. Hadsell
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet
COORDINATES N 340,339.0 E 1,552,260.7
DATE BEGAN 9/14/88
DATE FINISHED 9/15/88
GROUND SURFACE EL. -0.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	0/60					No recovery. SAND and SILT; fine grained sand. Logged from shaker.
75	#14	23/60		0.25	CL		SANDY SILTY CLAY; medium brown, moist, soft, non-plastic, sticky.
80	#15	0/60					No recovery. SAND and SILT; fine grained sand. Logged from shaker.
85	#16	0/60					
90	#17	0/60					
95	#18	24/60		1.75	CH		SILTY CLAY; dark brown, stiff, moist, plastic, sticky.
100	#19	0/60					No recovery. SAND and SILT; fine grained sand. Logged from shaker.
105	#20	0/60					
110	#21	0/60					
115	#22	20/60		2.25	CH		SILTY CLAY; gray green, moist, very stiff, plastic.
120	#23	0/60					No recovery. SAND and SILT; fine grained sand. Logged from shaker.
125	#24	0/60					
130	#25	44/60		2.25	CH		SILTY CLAY; gray green, moist, very stiff, very plastic. Increasing consistency.
135	#26	7/60		4.5			
140	#27	50/60		4.25			

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB15.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#15

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 340,339.0 E 1,552,260.7
DATE BEGAN 9/14/88
DATE FINISHED 9/15/88
GROUND SURFACE EL. -0.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	50/60		4.25	CH		SILTY CLAY; gray green, moist, very stiff, very plastic.
145	#28	0/60					No recovery. SAND and SILT; fine grained sand. Logged from shaker.
150	#29	0/60					
155	#30	0/60					
160	#31	0/60					
165	#32	22/60		4.25	CH		SILTY CLAY; gray brown, moist, hard, very plastic.
170	#33	0/60					No recovery. GRAVEL; dark, angular, pea sized, with shell fragments. Logged from shaker.
175	#34	0/60					
180	#35	4/60		2.0	GC		CLAYEY GRAVEL; gray, moist, stiff, plastic, 1/4 to 1/2" subangular gravels.
185	#36	0/60					No recovery. SILTY SAND; fine grained. Logged from shaker.
190	#37	60/60		3.25	CH		SANDY SILTY CLAY; moderate brown, moist, very stiff, moderate plasticity.
195	#38	0/60			SM		No recovery. SAND; fine grained. Logged from shaker.
200	#39	0/60					
205	#40	0/60					SAND; gray brown, silty.
210	#41	56/60		3.75	CH		SILTY CLAY; dark gray, moist, very stiff, very plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB15.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#15

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 340,339.0 E 1,552,260.7
DATE BEGAN 9/14/88
DATE FINISHED 9/15/88
GROUND SURFACE EL. -0.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	55/60		3.75	CH		SILTY CLAY; dark gray, moist, very stiff, very plastic.
215	#42	6/60		3.75			
220	#43	6/60		3.75			No recovery.
225	#44	42/60		4.5	CL		SILTY CLAY; gray brown, moist, hard, brittle.
230	#45	48/60		4.5			
235	#46	0/60					No recovery. SAND and SILT; fine grained. Logged from shaker.
240	#47	0/60					
245	#48	0/60					
250	#49	0/60					
255							TOTAL DEPTH 252 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB15.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#16

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 340,212.8 E 1,552,577.1
DATE BEGAN 9/6/88
DATE FINISHED 9/7/88
GROUND SURFACE EL. 0.49 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					SM		SILTY SAND; medium dark brown, moist, medium dense.
5					CL		SANDY SILTY CLAY; medium brown, moist, stiff, moderate plasticity.
10	#1	0/60			SC		No recovery. SAND/SANDY CLAY; fine to medium grained sand and medium brown, stiff, clay. Logged from shaker.
15	#2	0/60					
20	#3	10/60		0.25	CL		SANDY CLAY; medium brown, moist, soft, low plasticity, brittle, with gravel inclusions.
25	#4	20/60		0.25–1.0			SILTY CLAY; medium brown, moist, soft, sticky, small percent sand.
30	#5	14/60		1.0			SANDY SILTY CLAY; medium brown, moist, stiff, moderate plasticity, mudstone fragments.
35	#6	5/60		1.0			
40	#7	0/60					No recovery.
45	#8	48/60		1.5	CH		SILTY CLAY/CLAY; medium brown, moist, stiff, very plastic.
50	#9	19/60		0.75			
55	#10	48/60		2.25			
60	#11	0/60					No recovery. SAND; fine grained. Logged from shaker.
65	#12	12/60		2.5	CH		SILTY CLAY; medium to dark brown, moist, very stiff, plastic.
70	#13	19/60		1.0			

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-GB16(MF17)

BORING NO. GB#16

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 340,212.8 E 1,552,577.1
DATE BEGAN 9/6/88
DATE FINISHED 9/7/88
GROUND SURFACE EL. 0.49 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	19/60		1.0	CL		SILTY CLAY; medium dark brown, moist, stiff, moderate plasticity.
75	#14	18/60		0.75			SANDY CLAY/CLAYEY SAND; medium brown, moist, soft, low plasticity.
80	#15	20/60		.075			SILTY CLAY; gray brown, moist, medium stiff, sticky, moderate plasticity.
85	#16	20/60		0.75			
90	#17	0/60					No recovery. SAND/SILT; fine grained. Logged from shaker.
95	#18	0/60					
100	#19	0/60					
105	#20	52/60		1.5	CH		CLAY; gray green, moist, stiff, very plastic.
110	#21	16/60		2.0			Increasing consistency.
115	#22	4/60		2.5			
120	#23	10/60		1.5			SILTY CLAY; gray brown, moist, stiff, plastic.
125	#24	18/60		2.5			Increasing silt content.
130	#25	40/60		1.75			SILTY CLAY; gray brown, moist, stiff, plastic.
135	#26	48/60		2.75			Increasing plasticity and consistency.
140	#27	52/60		3.0			SILTY CLAY; dark gray brown, moist, very stiff, very plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB16(MF17)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#16

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 340,212.8 E 1,552,577.1
DATE BEGAN 9/6/88
DATE FINISHED 9/7/88
GROUND SURFACE EL. 0.49 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	52/60		3.0	CH		SILTY CLAY; dark gray brown, moist, very stiff, very plastic.
145	#28	14/60		3.5	CL		SANDY CLAY; gray brown, moist, very stiff, non-plastic, brittle.
150	#29	3/60		0.50			SILTY CLAY; medium brown, moist, soft, sticky.
					CH		SILTY CLAY; medium brown, moist, soft, sticky.
155	#30	44/60		3.0–			SILTY CLAY; gray brown, moist, very stiff, plastic. CLAY; blue gray, moist, very stiff, very plastic.
160	#31	40/60		4.0	CL		CLAY; brown gray, moist, hard, non-plastic, brittle, with slickensides.
165	#32	60/60		4.5			
170	#33	0/60					No recovery. GRAVEL; angular to subangular, mudstone clasts (1/16–1/4"). Logged from shaker.
175	#34	22/60		3.25	CL–CH		SILTY SANDY CLAY; gray brown, moist, very stiff, non-plastic, gravel inclusions.
180	#35	40/60		3.0			SILTY CLAY; medium brown, moist, very stiff, plastic.
185	#36	18/60		3.5			SILTY CLAY; gray brown, moist, very stiff, moderate plasticity.
190	#37	36/60		3.0			SANDY SILTY CLAY; tan to brown, moist, very stiff, moderate plasticity.
195	#38	0/60					No recovery.
200	#39	14/60		3.5	CH		SILTY CLAY; gray brown, moist, very stiff, plastic.
					SC		CLAYEY SAND; gray, moist, medium dense, medium grained.
205	#40	0/60					No recovery. SAND; fine to medium grained. Logged from shaker.
210	#41	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB16(MF17)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#16

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 340,212.8 E 1,552,577.1
DATE BEGAN 9/6/88
DATE FINISHED 9/7/88
GROUND SURFACE EL. 0.49 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	0/60					No recovery. SAND; fine to medium grained. Logged from shaker.
215	#42	32/60		2.75	CH		SILTY CLAY; dark brown, moist, very stiff, plastic.
220	#43	45/60		3.5			Increasing consistency.
225	#44	0/60			SM		No recovery. SILTY SAND; fine grained. Logged from shaker.
230	#45	0/60			ML		CLAYEY SILT/SILTY CLAY; dark brown, moist, very stiff, sticky.
235	#46	54/60		3.0	CL		CLAY; gray, moist, hard, brittle.
240	#47	44/60		3.5			Increasing sand content. SANDY SILTY CLAY; tan brown, moist, very stiff, moderate plasticity, with mudstone fragments.
245	#48	14/60		3.75			
250	#49	0/60					No recovery.
255							TOTAL DEPTH 252 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB16(MF17)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#17

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 340,942.0 E 1,552,822.9
DATE BEGAN 9/9/88
DATE FINISHED 9/13/88
GROUND SURFACE EL. 0.40 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SANDY SILTY CLAY; dark brown/black, moist, very soft, sticky.
5					GP		GRAVEL; loose, angular, 1/8 to 1/4" clasts, some sand and silt (5%), multi colored, sandstone/mudstone clasts.
10	#1	0/60					
15	#2	0/60					
20	#3	0/60					
25	#4	44/60		3.25 3.75	CL-CH		SANDY CLAY; tan to brown, moist, very stiff, low plasticity.
30	#5	10/60		1.0			SILTY SANDY CLAY; tan to brown, moist, medium stiff, sticky.
35	#6	12/60		3.0			SILTY CLAY; tan to brown, moist, very stiff, plastic, sandstone inclusions.
40	#7	8/60		2.0			SANDY CLAY; tan to brown, moist, stiff, moderate plasticity, fine grained sand, sandstone fragments.
45	#8	0/60					No recovery. SAND/SILT; fine grained, grading to coarse sand and gravels. dark. Logged from shaker.
50	#9	18/60		0.75	CL		SILTY CLAY; medium brown, moist, medium stiff, sticky, 10% sand.
55	#10	0/60					No recovery. SAND and GRAVEL; coarse sand, dark, angular, predominantly sandstone and mudstone clasts, some shells. Logged from shaker.
60	#11	0/60					
65	#12	0/60					
70	#13	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB17(MF17)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#17

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 340,942.0 E 1,552,822.9
DATE BEGAN 9/9/88
DATE FINISHED 9/13/88
GROUND SURFACE EL. 0.40 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	0/60					No recovery. SAND/GRAVEL; dark, angular, predominantly sandstone and mudstone clasts, some shells, clay seams interbedded. Logged from shaker.
75	#14	0/60					
80	#15	0/60					Grades to sand; dark gray, fine to medium grained.
85	#16	0/60					
90	#17	0/60					
95	#18	18/60		0.25	CL		SILTY CLAY; medium to dark brown, moist, soft, sticky, increasing consistency/plasticity with depth.
100	#19	18/60		1.25			
105	#20	8/60		1.25			
110	#21	40/60		2.75	CH		SANDY SILTY CLAY; gray brown, moist, very stiff, plastic.
115	#22	24/60		1.75			Increasing sand content.
120	#23	24/60		2.25	CL		SILTY CLAY; medium brown, mottled gray, moist, very stiff, moderate plasticity, decreasing consistency with depth.
125	#24	12/60		1.25			
130	#25	30/60		1.5–2.75	CH		SILTY CLAY/CLAY; gray green, moist, very stiff, plastic, increasing consistency.
135	#26	22/60		4.25			
140	#27	25/60		1.75			SILTY CLAY; gray brown, moist, stiff, plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB17(MF17)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#17

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 340,942.0 E 1,552,822.9
DATE BEGAN 9/9/88
DATE FINISHED 9/13/88
GROUND SURFACE EL. 0.40 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	25/60		1.75	CH		SILTY CLAY; gray brown, moist, stiff, plastic.
145	#28	10/60		2.0			
150	#29	0/60					No recovery. SAND; fine to medium grained. Logged from shaker.
155	#30	24/60		1.5	CL		SILTY CLAY; gray brown, moist, stiff, plastic.
160	#31	0/60					No recovery.
165	#32	52/60		4.25	CL		CLAY; gray, dry, hard, non-plastic, brittle.
170	#33	42/60		4.0			SANDY CLAY; dark gray, moist, very stiff, moderate plasticity, dark gray sand inclusions.
175	#34	24/60		2.0			SILTY CLAY; moderate brown, moist, very stiff, moderate plasticity.
180	#35	50/60		3.75			SANDY CLAY; moderate brown, moist, very stiff, brittle. SANDY SILTY CLAY; gray brown, moist, very stiff, moderate plasticity.
185	#36	10/60		3.0			SILTY CLAY; medium brown, mottled gray, very stiff, moderate plasticity.
190	#37	10/60		2.5			SANDY CLAY; tan to brown, moist, very stiff, moderate plasticity, angular calcite cemented sandstone clasts (1/4 to 1/2"), off-white in color.
195	#38	50/60		4.0			
200	#39	0/60					No recovery. SAND; fine to medium grained. Logged from shaker.
205	#40	58/60		2.0–4.5	CL		SANDY CLAY; gray, moist, increasing consistenecy (stiff to hard), moderate plasticity, varying sandy zones.
210	#41	0/60			SW		No recovery. SAND; tan and black, medium to very coarse, subangular, well graded. Logged from shaker.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MF-GB17(MF17)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#17

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 340,942.0 E 1,552,822.9
DATE BEGAN 9/9/88
DATE FINISHED 9/13/88
GROUND SURFACE EL. 0.40 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	0/60			SW		No recovery. Logged from shaker. SAND; tan and black, medium to very coarse, subangular.
215	#42	18/60		3.5	CL		SANDY CLAY; light gray, moist, soft, slightly plastic, with fine grained sand. SILTY CLAY; gray mottled olive brown, moderately moist, stiff, moderate plasticity.
220	#43	60/60		2.8			SILTY CLAY/CLAY; dark gray, moderately moist, stiff, moderate plasticity.
225	#44	0/60			SW		No recovery. SAND; tan and black, medium grained, subangular, well graded, with medium grained gravels. Logged from shaker.
230	#45	0/60					
235	#46	0/60					No recovery. SAND; black and tan, medium to coarse grained, sub-angular to subrounded, poorly sorted. Logged from shaker.
240	#47	0/60					
245	#48	52/60		1.5–2.0	CL		SILTY SANDY CLAY; light gray, mottled orange brown, moist, stiff, moderately plastic to plastic. SILTY CLAY; less sand.
250	#49	60/60		4.5–4.0			SILTY SANDY CLAY; orangish brown mottled gray, slightly to moderately moist, stiff, moderate plasticity, inclusions of fine to medium grained sands.
255							5 ft. of overdrill.
260							TOTAL DEPTH 257 FEET 4-1/2" diameter boring
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB17(MF17)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

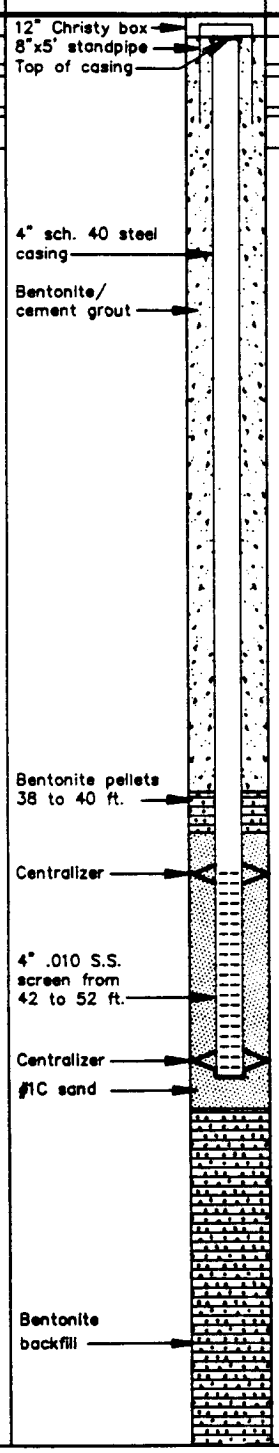
BORING NO. W3-12(A2)

FIELD GEOLOGIST D. H. Cox
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 80.5 feet

COORDINATES N 341,114.2 E 1,552,411.0
DATE BEGAN 9/20/88
DATE FINISHED 9/20/88
GROUND SURFACE EL. -2.00 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	8/18	2,3,4	CL	SILTY CLAY; dark gray-black, dry, soft, non-plastic, minor sand.
	MD#2	18/18	2,3,5		SANDY CLAY; dark gray, moist, stiff, slightly plastic.
5	MD#3	12/18	2,3,3	GC	GRAVEL/SAND/CLAY; interbedded, predominantly fine to medium round, assorted gravels, with medium subangular subround poorly to moderately graded sand and clay; medium gray, wet, soft, non-plastic.
10				CL	CLAY/SILTY CLAY; medium dark brown, moist, stiff, moderate plasticity.
15					SANDY SILTY CLAY; medium dark brown, moist, stiff, moderate plasticity, sticky.
20					CLAY/SILTY CLAY; medium dark brown, moist, stiff-hard, moderate to very plastic, sticky.
25				CL-SC	SANDY CLAY/CLAYEY SAND; light to medium brown, wet, stiff, slightly plastic, with sand; predominantly coarse, subangular to subround, moderately graded, minor medium gravel.
30				GC	SANDY CLAYEY GRAVEL; predominantly fine to medium rounded gravel with sand; medium coarse, subround, moderately graded, in clay; light brown, moist-wet, slightly to moderately plastic.
35				CL	SANDY CLAY; medium brown, moist, stiff, moderate plasticity. SANDY CLAY; medium brown, moist, stiff, slightly to moderately plastic, abundant medium coarse, subangular sand, minor fine to medium grained gravel.
40				SC	CLAYEY SAND; medium coarse, angular, poorly to moderately graded sand in clay; medium dark brown, moist-wet, stiff, slightly plastic, minor, fine to medium, angular-subround assorted gravel.
45					
50					
55				CL	CLAY/SILTY CLAY; gray brown, moist, stiff, moderate to high plasticty.
60					SANDY CLAY; gray brown, moist, stiff, moderate plasticity.
65					CLAY/SILTY CLAY; medium dark gray brown, moist, stiff, moderate plasticity.
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-12B1(MF23)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W3-12(A2)

FIELD GEOLOGIST D. H. Cox
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 80.5 feet

COORDINATES N 341,114.2 E 1,552,411.0
DATE BEGAN 9/20/88
DATE FINISHED 9/20/88
GROUND SURFACE EL. ~2.0 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70							SANDY CLAY; medium dark gray brown, moist, stiff, moderate plasticity.
75			Bentonite backfill		CL		CLAY/SILTY CLAY; medium dark gray brown, moist, stiff, moderate plasticity.
80							TOTAL DEPTH 80.5 FEET
85			9.6"				
90							
95							
100							
105							
110							
115							
120							
125							
130							
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-12B1(MF23)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W3-13(A2)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 68.5 feet

COORDINATES N 340,320.3 E 1,552,252.2
DATE BEGAN 10/11/88
DATE FINISHED 10/12/88
GROUND SURFACE EL. -1.06 ft.

SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")
MD#1	6/18	2,2,2
MD#2	18/18	2,3,1
MD#3	18/18	3,3,4

WELL SUMMARY: 12" Christy box; 8"x5' standpipe; Top of casing; 4" sch. 40 steel casing; Bentonite/cement grout; Bentonite pellets 36.8 to 41.1 ft.; Centralizer; 4" .010 S.S. screen from 43 to 53 ft.; Centralizer; #1C sand; Bentonite backfill; 9.6"

USCS SYMBOL	DESCRIPTION
CL	SANDY CLAY; yellowish brown, moist, very soft, plastic with coarse inclusions.
	SILTY SANDY CLAY; dusky yellow, mottled gray, moist, soft, moderate plasticity, calcite inclusions.
	SILTY CLAY; yellowish brown, moderately moist, soft, moderate plasticity.
	SILTY CLAY; dusky yellow, moderately moist, stiff, moderate plasticity.
SW	GRAVELLY SAND; medium-coarse grained sand with fine to coarse gravels, very well graded, sub angular, very wet, black, unconsolidated.
	Grading to more fine grained sand with some silt, flowing sands.
CL	SILTY SANDY CLAY; yellowish brown, soft, moderate plasticity.
SW	GRAVELY SAND; very fine to coarse grained sand with some fine gravels, unconsolidated, subangular, well to moderately graded.
CH	SILTY CLAY; medium brown, moist, soft, high plasticity.
	SILTY CLAY/CLAY; medium brown, moist, very soft, high plasticity, very sticky.
SM-SP	SAND; very fine to fine grained, very wet, unconsolidated, flowing, some silts.
SC	SAND/CLAYEY SAND; very fine grained, with some coarse sand, unconsolidated, clay; soft, sticky.
	Grading into silty clay, but still high content of sand.
CL	SILTY CLAY; light brown, moist, soft, moderate plasticity, some medium grained sand inclusions.

TOTAL DEPTH 68.5 FEET

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-13B1(MF23)

IT ...Creating a Safer Tomorrow

SITE I: S AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

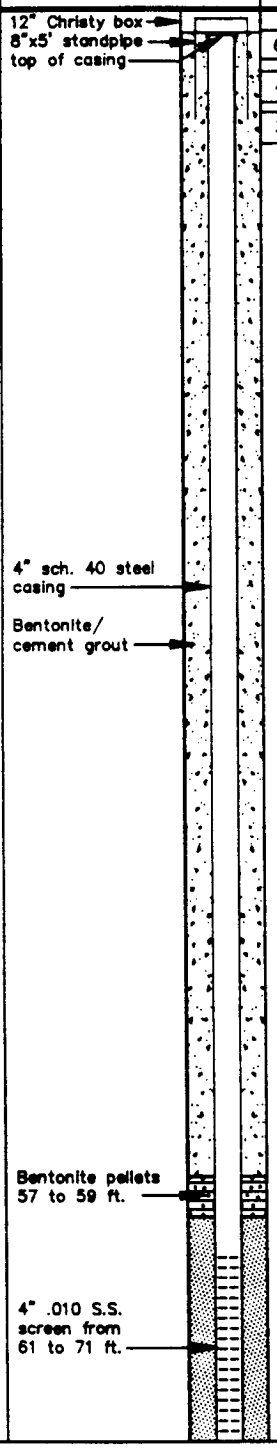
BORING NO. W3-14(B2)

FIELD GEOLOGIST D. H. Cox
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 79 feet

COORDINATES N 339,885.7 E 1,552,414.4
DATE BEGAN 9/21/88
DATE FINISHED 9/23/88
GROUND SURFACE EL. 3.32 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	10/18	6,5,11	CL	SANDY CLAY/CLAY; black, moist to dry, stiff, slightly to non-plastic, minor organic material, minor gravel.
	MD#2	9/18	4,5,5	SM	SILTY SAND/SANDY CLAY; light brown gray, moist to dry, soft, slightly to non-plastic.
5	MD#3	12/18	3,3,2	CL	SANDY CLAY; medium dark gray brown, moist, stiff, slightly to moderately plastic.
10					SANDY CLAY; medium gray brown, moist, soft, moderate plasticity, sticky.
					SANDY CLAY; medium brown, moist, stiff, moderate plasticity.
15				GC	GRAVEL/SAND/CLAY; interbedded, predominantly medium well rounded assorted gravels with sand; medium, sub-angular, subrounded, moderately graded, in clay; medium brown, moist, stiff, moderate plasticity.
20				CL	SANDY CLAY; medium brown, moist, stiff, moderate plasticity.
				GC	GRAVEL/SAND/CLAY; interbedded, fine to medium, rounded assorted gravels with sand; fine to medium, minor coarse, predominantly rounded sand in clay; medium brown, moist stiff, plastic.
25				CH	SANDY CLAY; medium brown, moist, stiff, plastic.
				GC	GRAVEL/CLAYEY GRAVEL; fine to medium, rounded, assorted gravel, predominantly sandstone, with sand and clay; medium brown, moist, stiff, plastic.
30				CH	SANDY CLAY; medium dark brown, moist, stiff, plastic.
35					CLAY/SILTY CLAY; medium dark brown, moist, stiff, moderate to very plastic.
40				CL	CLAY/SILTY CLAY; medium dark brown, moist, stiff, moderate plasticity.
45					SANDY CLAY; medium brown gray, moist, stiff, moderate to very plastic, with fine to medium gravel and fine to medium sand.
					CLAY/SILTY CLAY; medium brown gray, moist, stiff, moderate plasticity.
50					
55					CLAY/SILTY CLAY; gray brown, moist, stiff, moderate plasticity.
60				SC	CLAYEY SAND/SANDY CLAY; gray brown, wet, soft, abundant siltstone and sandstone fragments, minor gravel.
					CLAYEY SAND/SANDY CLAY; gray brown, wet, soft, with coarse sand and fine to medium gravel, increasing gravel and sand.
65					CLAYEY SAND; gray brown, wet, soft, moderate assorted gravel.
70					CLAYEY SAND; predominantly medium grained, subrounded, moderately graded sand, fine to medium angular assorted gravel, with clay; gray brown, wet, soft, moderate plasticity.

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-14B1(MF23)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W3-14(B2)

FIELD GEOLOGIST D. H. Cox
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 79 feet

COORDINATES N 339,665.7 E 1,552,414.4
DATE BEGAN 9/21/88
DATE FINISHED 9/23/88
GROUND SURFACE EL. 3.32 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70			4" .010 S.S. screen from 61 to 71 ft.		SC		CLAYEY SAND.
75			#1C sand Bentonite backfill		CL-CH		CLAY/SILTY CLAY; gray brown, moist, stiff, moderate plasticity. CLAY/SILTY CLAY; gray brown, moist, stiff, plastic.
80			9.6"				TOTAL DEPTH 79 FEET
85							
90							
95							
100							
105							
110							
115							
120							
125							
130							
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-1481(MF23)

IT ...Creating a Safer Tomorrow

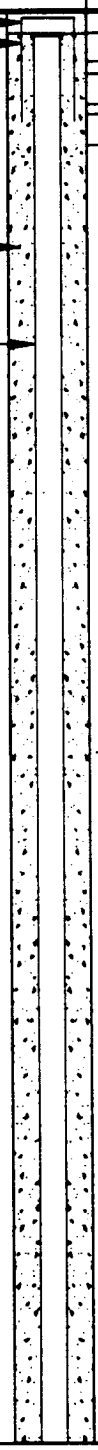
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W3-15(B2)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 130 feet

COORDINATES N 340,303.5 E 1,552,603.0
DATE BEGAN 9/26/88
DATE FINISHED 9/27/88
GROUND SURFACE EL. -0.13 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	10/18	2,2,5	CL	SANDY CLAY; brown gray, dry, stiff, non-plastic.
	MD#2	9/18	2,1,1		
5	MD#3	18/18	1,2,4		SANDY CLAY; medium dark gray, moist, stiff, moderate plasticity, with gravel; fine to medium, round to subangular, and sand; fine to medium, subangular to subround, moderately sorted.
10				GC	CLAYEY SANDY GRAVEL; fine to medium, angular to subround, moderately sorted, assorted gravels with sand; fine to medium, subangular to subround, moderately sorted, in clay; medium to dark gray, moist, stiff, plastic.
15				CL-CH	SANDY CLAY; medium brown gray brown, moist, stiff, slightly plastic with gravel inclusions, rounded, fine to medium gravels.
20					CLAY/SILTY CLAY; medium dark brown, moist, stiff, plastic.
25				GC	CLAYEY SANDY GRAVEL; fine to medium, round assorted gravels; interbedded dark brown clay with sand.
30				CL-CH	CLAY/SILTY CLAY; dark brown, moist, stiff, moderately plastic.
35					CLAY/SILTY CLAY; medium dark brown, moist, stiff, moderately plastic, increasing sand.
40					SANDY CLAY; medium brown-gray brown, moist, stiff, plastic, minor assorted gravels.
45					CLAY/SILTY CLAY; gray brown, moist, stiff, moderate plasticity.
50					Grades in and out of silty clays and sandy clays.
55					
60					
65					CLAY/SILTY CLAY; medium brown, moist, stiff, plastic, sticky.
70					



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-15B2(MF17)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W3-15(B2)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 130 feet

COORDINATES N 340,303.5 E 1,552,603.0
DATE BEGAN 9/26/88
DATE FINISHED 9/27/88
GROUND SURFACE EL. -0.13 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70					CH		CLAY/SILTY CLAY; medium brown, moist, stiff, plastic, sticky.
			4" sch. 40 steel casing		SC		CLAYEY SAND; fine to medium, subangular with fine to medium assorted gravel in clay; medium dark gray brown.
75			Bentonite/cement grout		CH		SANDY CLAY/SILTY CLAY; medium dark gray brown-olive, moist, stiff, plastic, sticky.
80			Bentonite pellets 79 to 81 ft.				
			4" .010 S.S. screen from 83 to 88 ft.				
85			Centralizer		GC		CLAYEY SANDY GRAVEL; interbedded, moderate amount of medium grained, subangular gravel and medium to coarse, angular sand in clay; dark brown, soft to stiff, moderate plasticity.
			#1C sand		CH		CLAY/SILTY CLAY; medium gray brown, moist, stiff, plastic.
90			Bentonite backfill				
95							SANDY CLAY; medium brown gray, moist, stiff, plastic, sticky.
100							CLAY/SILTY CLAY; dark gray, moist, stiff, plastic, very sticky.
105							
110							SANDY CLAY; dark gray, moist, stiff, plastic, sticky.
115							
120							Increasing sand. SANDY CLAY; medium brown gray, moist, stiff, plastic.
125					CL		CLAY/SILTY CLAY; brown gray, moist to dry, stiff, moderate to slightly plastic.
130			9.6"				TOTAL DEPTH 130 FEET
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-15B2(MF17)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

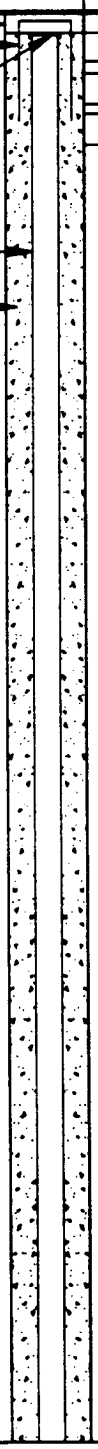
BORING NO. W3-16(C)

FIELD GEOLOGIST D. H. Cox
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 178 feet

COORDINATES N 340,925.4 E 1,552,823.9
DATE BEGAN 9/30/88
DATE FINISHED 10/7/88
GROUND SURFACE EL. 0.04 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	8/18	2,4,4	CL	SANDY CLAY; black-dark gray, dry to slightly moist, stiff-hard, non-plastic, minor gravel; medium grained, rounded.
	MD#2	12/18	1,3,2		
5	MD#3	0/18	7,2,2		
10					
15					SANDY CLAY; gray brown, moist, stiff, moderate plasticity, moderate coarse sand, minor assorted medium rounded gravels.
20					CLAY/SILTY CLAY; medium brown, moist, stiff, moderate plasticity.
25					
30					CLAY/SILTY CLAY; medium brown, moist, stiff, moderate plasticity, sticky.
35					SANDY CLAY; medium dark brown, some gray, moist, stiff, moderate plasticity, with sand; predominantly sandstone fragments, brown gray, hard, brittle, fine, subangular-subround, moderate to well sorted quartz.
40				SC	CLAYEY SAND; predominantly medium to coarse, subangular-subround, moderately sorted, variegated sand in clay; gray brown, moist, stiff, moderate plasticity.
45				CL	CLAY/SILTY CLAY; medium dark brown, moist, stiff, moderate plasticity.
50				GC	GRAVEL/SAND/CLAY; interbedded, gravel; siltstone, sandstone and chert, medium coarse, subround, with sand; predominantly medium grained subround-angular, moderate to poorly sorted in clay; medium gray, wet, stiff, moderate plasticity.
55				CL	SANDY CLAY; gray, moist to wet, soft to stiff, moderate plasticity.
60				GC	GRAVEL/SAND/CLAY; interbedded, gravel; fine to medium, sub angular subround, moderately sorted sandstone and siltstone, minor cherts, in clay; gray, moist, stiff, moderate plasticity.
65				CL	CLAY/SILTY CLAY; medium gray, moist, stiff, plastic, sticky.
					SANDY CLAY; medium gray, moist, stiff, moderate plasticity.
					CLAY/SILTY CLAY; medium gray, moist, slightly plastic.
70					CLAY/SILTY CLAY; medium gray, moist, stiff, moderate plasticity.

WELL SUMMARY



PROFILE

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-16C(MF23)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W3-16(C)

FIELD GEOLOGIST D. H. Cox
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 178 feet

COORDINATES N 340,925.4 E 1,552,823.9
DATE BEGAN 9/30/88
DATE FINISHED 10/7/88
GROUND SURFACE EL. 0.04 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70					CL		SANDY CLAY; brown gray, moist, stiff, moderate plasticity, minor medium subangular gravels.
75							
80							
85							SANDY CLAY; brown gray, moist, stiff, moderate plasticity, minor fine to medium subround gravels, predominantly sandstone clasts.
90							CLAY/SILTY CLAY; gray-brown gray, moist, stiff, moderate plasticity.
95							SANDY CLAY; medium gray, moist, stiff, moderate plasticity, minor medium, subround gravels.
100							CLAY/SILTY CLAY; medium gray, moist, stiff, moderate plasticity.
105			4" sch. 40 steel casing Bentonite/ cement grout				SANDY CLAY; medium dark gray, moist, stiff, moderate to very plastic. CLAY/SILTY CLAY; medium-dark gray, moist, stiff, moderate to very plastic.
110							SANDY CLAY; medium to dark gray, moist, stiff, moderate plasticity. CLAY/SILTY CLAY; dark gray, moist, stiff, moderate plasticity.
115							SANDY CLAY; medium-dark gray, moist-slightly dry, very stiff, moderate to slightly plastic. CLAY/SILTY CLAY; medium dark gray, stiff, plastic.
120					CL-CH		SANDY CLAY; dark gray, moist, stiff, moderate to very plastic.
125							CLAY/SILTY CLAY; dark gray, moist to slightly dry, moderate to very plastic.
130							CLAY/SILTY CLAY; dark gray, moist, stiff, moderate to very plastic.
135					CL		CLAY/SILTY CLAY; dark gray, slightly moist to dry, stiff, moderate plasticity, sticky.
140							CLAY/SILTY CLAY; dark gray, slightly moist to dry, very stiff, moderate plasticity, sticky.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-16C(MF23)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W3-16(C)

FIELD GEOLOGIST D. H. Cox
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 178 feet

COORDINATES N 340,925.4 E 1,552,823.9
DATE BEGAN 9/30/88
DATE FINISHED 10/7/88
GROUND SURFACE EL. 0.04 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
140–165			4" sch. 40 steel casing; Bentonite/cement grout; Bentonite pellets 160.5 to 164.5 ft.		CL		SANDY CLAY; light to dark gray, slightly dry to moist, very stiff, moderate plasticity.
165–168					CL		CLAY/SILTY CLAY; blue gray, dry to slightly moist, very stiff, slightly to moderately plastic.
168–173			4" .010 S.S. screen from 168 to 173 ft.; Centralizer; #1C sand		GC		GRAVEL/SAND/CLAY; interbedded, gravel; abundant blue green, gray green, medium to coarse, rounded to angular, with sand; green–dark gray, fine to medium, predominantly angular, poorly sorted quartz and rock fragments, in clay; blue green, wet, slightly to non plastic, abundant shell fragments.
173–178			Bentonite backfill		CL		CLAY/SILTY CLAY; blue gray, slightly moist, very stiff, slightly to moderately plastic.
178							TOTAL DEPTH 178 FEET

9.6"

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-16C(MF23)

IT ...Creating a Safer Tomorrow.

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

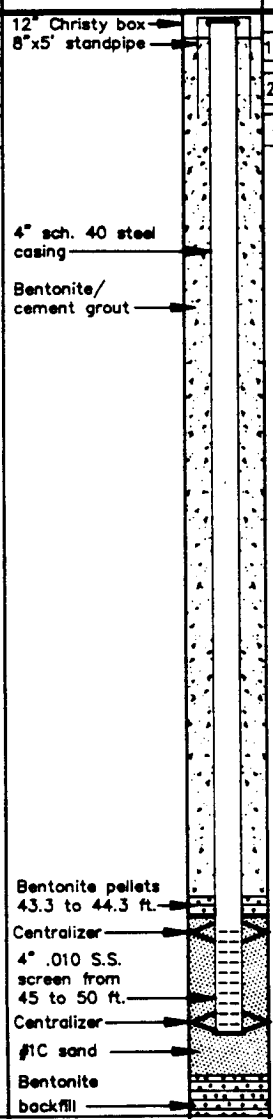
BORING NO. W3-22(A2)

FIELD GEOLOGIST G. L. Williams
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 54 feet

COORDINATES N 340,923.8 E 1,554,609.5
DATE BEGAN 8/30/88
DATE FINISHED 9/2/88
GROUND SURFACE EL. 2.44 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0					Asphalt.
	MD#1	6/18	11,16,28	GM	SAND/GRAVEL; fine to medium sand, some gravel and pebbles, trace cobbles, silt and clay; yellowish brown, dry, dense to medium dense, non-plastic.
	MD#2	12/18	28,30,34		
5	MD#3	9/18	6,9,13	OL	SILTY SANDY CLAY; yellowish brown, moist, soft, non-plastic, little gravel.
					▽ SILTY CLAY; grayish-black, moist, stiff, low to moderate plasticity, with trace of gravel and some cobbles.
				CL	CLAY; greenish gray, moist, soft to medium stiff, medium to high plasticity, little silt.
10				SM	SILTY SAND; olive green-gray, wet, soft, loose.
				CL-ML	SILTY CLAY; orange reddish brown, moist, very stiff, low to non-plastic.
15					
20				ML	SILTY/SILTY CLAY; orange brown, wet, soft to stiff, medium to non plastic, trace pebbles, fine sand.
				SM-SC	SAND; fine to medium, trace gravel and clay, with silt, yellow brown, wet(saturated), soft, loose.
25				ML-SM	SILT; yellowish brown, wet, stiff to very stiff, dense, non- to low plasticity, trace clay.
					SILTY SAND; fine, loose, silt; yellowish brown, wet(saturated), very soft, non-plastic.
30					SANDY CLAY; yellowish brown, wet, soft ot very soft, low plasticity.
				CL	SANDY CLAY; yellowish brown, damp, stiff to very stiff, low plasticity.
35					CLAY; olive gray green, damp, stiff, low plasticity, with silt.
40					CLAYEY SILT; dark greenish gray, medium stiff, low to non-plastic, inclusions of fine sand.
45				SM	SAND; orange brown, wet, medium dense, non-plastic.
				CL	SILTY CLAY; yellowish brown, damp, very stiff to hard, medium plasticity.
50					SANDY SILTY CLAY; yellowish brown, wet(saturated), soft, low plasticity.
					SILTY CLAY; yellowish brown, damp, stiff, medium plasticity.
55					TOTAL DEPTH 54 FEET
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-22A

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W3-23(A1)
(abandoned)

FIELD GEOLOGIST G. L. Williams
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 23 feet

COORDINATES @ 10 ft. north of W3-23(A)
DATE BEGAN 8/22/88
DATE FINISHED 8/23/88
GROUND SURFACE EL. -

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0							
	MD#1	12/18		4,6,9	FILL		FILL: clay; moderate brown, moist, stiff, moderate plasticity, trace pebbles.
	MD#2	9/18		4,4,6	OL		SILTY CLAY; very dark brown-black, moist, stiff, low plasticity.
5	MD#3	12/18		4,5,6	CL		SILTY SANDY CLAY; yellowish brown, damp, soft, low plasticity, with gravel.
	MD#4	18/18		2,2,3	SM		SILTY SAND; gray-brown, wet, soft, ~40% gravel.
					SC		CLAYEY SILTY SAND; gray and yellow brown, wet, soft, low plasticity.
10					GM		SILTY SANDY GRAVEL; poorly sorted, loose.
							No recovery.
15					CL		SILTY CLAY; grayish light brown, wet, very soft, low plasticity.
					SM		SILTY SAND; wet, medium dense to dense.
20					CL		SILTY CLAY; yellowish brown, damp to moist, medium stiff, low plasticity.
25							TOTAL DEPTH 23 FEET (abandoned)
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-23AN(MF25)

IT ...Creating a Safer Tomorrow

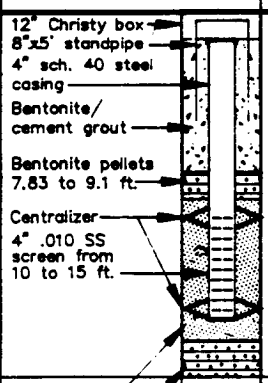
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W3-23(A1)

FIELD GEOLOGIST G. L. Williams
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 17.8 ft.

COORDINATES N 341,149.5 E 1,552,892.9
DATE BEGAN 8/22/88
DATE FINISHED 88/29/88
GROUND SURFACE EL 0.75 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	S1	36/36		CL	GRAVELY CLAY; yellowish gray-brown, moist, very stiff, moderate plasticity, trace of cobbles.
				CL-ML	SILTY CLAY; grayish green and orange brown, moist, stiff, low plasticity.
5	S2	30/60		CL	SILT; dark brown-black, moist, soft, no- to low plasticity. CLAY; dark grayish-brown, moist, medium stiff, modecate to low plasticity, trace pebbles.
10	S3	18/60		ML	CLAYEY SILT; yellowish brown, wet, loose, low to non-plastic, fine sand, little gravel and cobbles.
				GC	CLAYEY SILTY GRAVEL; with cobbles, grayish brown, wet, loose, no- to low plasticity.
15	S4	57/60		CL	SILTY CLAY; yellowish brown, damp, medium stiff, low to non-plastic, little gravel.
20					TOTAL DEPTH 17.8 FEET
25					
30					
35					
40					
45					
50					
55					
60					
65					
70					



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W3-23A(MF25)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 4

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#18

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,027.7 E 1,552,291.4
DATE BEGAN 9/27/88
DATE FINISHED 9/28/88
GROUND SURFACE EL. 4.39 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0				2.0	CL		SANDY CLAY; dark brown, slightly moist, stiff, low plasticity.
5							
10	#1	0/60			GM		GRAVEL; dark, angular, 1/4"–1/2" clasts, clean, coarse.
15	#2	0/60					Gravel with alternating zones of sandy clay.
20	#3	0/60					
25	#4	0/60		1.0	CL		SANDY CLAY; moderate brown, moist, medium stiff, sticky. CLAYEY SAND/SANDY CLAY; dark gray/black, moist, non-plastic, brittle, organic appearance.
30	#5	0/60					No recovery. SANDY CLAY/GRAVEL; angular gravel. Logged from shaker.
35	#6	0/60					
40	#7	16/60		3.2	CL		SANDY CLAY; moderate brown, moist, very stiff, moderate plasticity, some coarse sand and gravel, (minor amount 2–5%).
45	#8	20/60		1.0	CH		SILTY CLAY; moderate brown, moist, medium stiff, plastic.
50	#9	0/60					No recovery. SAND and SILT. Logged from shaker.
55	#10	28/60		2.25	CL		SANDY CLAY; moderate brown, moist, very stiff, moderate plasticity.
60	#11	0/60					SANDY CLAY; moderate brown, soft, sticky.
65	#12	0/60					
70	#13	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB18(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#18

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,027.7 E 1,552,291.4
DATE BEGAN 9/27/88
DATE FINISHED 9/28/88
GROUND SURFACE EL. 4.39 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	0/60			CL		SANDY CLAY; moderate gray brown, soft, sticky.
75	#14	0/60					
80	#15	0/60					
85	#16	0/60					
90	#17	0/60					
95	#18	0/60					
100	#19	0/60					
105	#20	4/60		2.0	CH		SILTY CLAY; dark brown, moist, stiff, very plastic.
110	#21	40/60		2.5			
115	#22	28/60		2.25			
120	#23	0/60			CL		No recovery. SANDY CLAY/SILTY CLAY; brown, moist, sticky. Logged from shaker.
125	#24	60/60		3.0	CH		SILTY CLAY; gray brown, moist, very stiff, plastic.
130	#25	36/60		2.0			
135	#26	0/60			SM		No recovery. SILTY SAND; moderate brown, fine grained. Logged from shaker.
140	#27	48/60		3.25	CH		SILTY CLAY; gray brown, moist, very stiff, plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-GB18(MF24)

BORING NO. GB#18

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,027.7 E 1,552,291.4
DATE BEGAN 9/27/88
DATE FINISHED 9/28/88
GROUND SURFACE EL 4.39 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	48/60		3.25	CH		SILTY CLAY; green brown, moist, very stiff, plastic.
145	#28	20/60		3.75			
150	#29	16/60		3.25			
155	#30	0/60			SP		No recovery. SAND; dark, coarse, angular, mudstone fragments. Logged from shaker.
160	#31	0/60					
165	#32	60/60		4.5	CL		CLAY; brownish gray, dry, hard, non-plastic, blocky fractured slickensided.
170	#33	24/60		4.25			
175	#34	0/60					No recovery. SAND; dark gray, coarse, angular with shells and gravel. Logged from shaker.
180	#35	0/60					
185	#36	0/60					
190	#37	60/60		4.25	CL		CLAY; brown gray, slightly moist, hard, non-plastic, blocky and fractured with slickensides.
195	#38	0/60					No recovery. SAND and GRAVEL; coarse, angular. Logged from shaker.
200	#39	60/60		3.0	CL		SANDY CLAY; tan brown, moist, very stiff, low plasticity.
					CH		SILTY CLAY; moderate gray brown, moist, very stiff, plastic.
205	#40	0/60					No recovery. SANDY CLAY; brown gray. Logged from shaker.
210	#41	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB18(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#18

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,027.7 E 1,552,291.4
DATE BEGAN 9/27/88
DATE FINISHED 9/28/88
GROUND SURFACE EL. 4.39 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	0/60					No recovery. SANDY CLAY/SILTY SAND; brown gray. Logged from shaker.
215	#42	0/60					
220	#43	54/60		3.0	CL		SANDY CLAY; gray brown, moist, very stiff, non-plastic.
225	#44	0/60					No recovery. SILTY CLAY; gray brown. Logged from shaker.
230	#45	0/60					
235	#46	60/60		2.75	CH		SILTY CLAY; gray, moist, very stiff, plastic, grades to a moderate brown, silty clay.
240	#47	0/60					No recovery.
245	#48	60/60		2.0	CL		SANDY CLAY; yellowish brown, moist, low plasticity, with minor gravel.
250	#49	0/60			SM		No recovery. SILTY SAND. Logged from shaker.
255							TOTAL DEPTH 252 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE MF-GB18(MF24)

BORING NO. GB#19

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,004.7 E 1,552,974.3
DATE BEGAN 9/22/88
DATE FINISHED 9/26/88
GROUND SURFACE EL. 4.03 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SILTY SANDY CLAY; dark brown, moist, soft, sticky.
5							SILTY SANDY CLAY; tan-brown, moist, soft, sticky.
10	#1	0/60			SM		No recovery. SILTY SAND/SANDY CLAY; tan brown to moderate brown, moist, soft, sticky. Logged from shaker.
15	#2	0/60					
20	#3	0/60					
25	#4	0/60					
30	#5	0/60					
35	#6	0/60					
40	#7	0/60					
45	#8	32/60		3.25	CL		SILTY CLAY; tan brown to moderate brown, moist, very stiff, plastic.
50	#9	24/60		3.25			
55	#10	0/60			CL		No recovery. SILTY CLAY; gray brown, stiff, plastic, sticky, minor amounts of sand (5%). Logged from shaker.
60	#11	0/60					
65	#12	0/60					
70	#13	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB19(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#19

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,004.7 E 1,552,974.3
DATE BEGAN 9/22/88
DATE FINISHED 9/26/88
GROUND SURFACE EL 4.03 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	0/60			CL		No recovery. SILTY CLAY; gray brown, stiff, plastic, increasing sands (10%). Logged from shaker.
75	#14	0/60					
80	#15	0/60					
85	#16	0/60					
90	#17	0/60			SM		No recovery. SILTY SAND; moderate brown, subangular, 25% lithics. Logged from shaker.
95	#18	28/60		2.0	CH		SILTY CLAY; moderate/dark brown, moist, stiff, plastic.
100	#19	0/60					
105	#20	26/60		1.5			SILTY CLAY; gray brown, moist, medium stiff to stiff, sticky.
110	#21	0/60					
115	#22	24/60		2.25			SILTY CLAY; gray to brown gray, moist, very stiff, plastic.
120	#23	20/60		0.25			SILTY CLAY; gray brown, moist, soft, sticky, angular tan-brown, sandstone fragments.
125	#24	48/60		3.25			SILTY CLAY/CLAY; gray brown, slightly moist, very stiff, high plasticity.
130	#25	48/60		3.25			
135	#26	54/60		4.0			SILTY CLAY; brown gray, moist, hard, plastic.
140	#27	0/60					No recovery.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB19(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#19

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,004.7 E 1,552,974.3
DATE BEGAN 9/22/88
DATE FINISHED 9/26/88
GROUND SURFACE EL 4.03 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTNCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	0/60					No recovery.
145	#28	56/60		3.5	CL-CH		SILTY CLAY; brown gray, moist, very stiff, plastic.
150	#29	46/60		4.25			SILTY CLAY; dark brown, moist, hard, moderate plasticity. Large angular sandstone clasts.
155	#30	60/60		4.25			SILTY CLAY; gray, moist, hard, very plastic.
160	#31	0/60					No recovery.
165	#32	60/60		4.25	CL		CLAY; grading from gray brown to dark gray brown, hard, moderate plasticity.
170	#33	46/60		3.75			SANDY CLAY; dark gray, moist, very stiff, moderate plasticity, some pebbles near 172 feet.
175	#34	0/60					No recovery. GRAVEL; 1/8" subangular, dark, lithic.
180	#35	0/60					
185	#36	60/60		3.25	CL		SILTY CLAY; dark gray, moist, very stiff, plastic.
190	#37	0/60			SM		No recovery. SILTY SAND; fine grained, subrounded, 25% lithics.
195	#38	60/60		3.0	CL		SANDY CLAY; gray brown to moderate brown, very stiff, moist, moderate plasticity, increasing sand 10–30%.
200	#39	60/60		3.25			
205	#40	60/60		3.0			Decreasing sand content, increasing silt.
210	#41	40/60		3.0			Increasing sand content.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB19(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#19

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 252 feet

COORDINATES N 339,004.7 E 1,552,974.3
DATE BEGAN 9/22/88
DATE FINISHED 9/26/88
GROUND SURFACE EL. 4.03 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	40/60		3.0	CL		SANDY CLAY; moderate brown, moist, very stiff, moderate to low plasticity.
215	#42	0/60			SM		No recovery. SILTY SAND. Logged from shaker.
220	#43	60/60		3.5	CH-CL		SILTY CLAY; dark gray brown, moist, very stiff, very plastic.
225	#44	60/60		3.0			
230	#45	29/60		3.0-1.5			
235	#46	60/60		4.25			SILTY CLAY; dark gray brown, grading to moderate brown, moist, hard, brittle.
240	#47	60/60		4.0			SILTY CLAY; moderate brown, moist, very stiff to hard, high plasticity.
245	#48	0/60					
250	#49	0/60					
255							TOTAL DEPTH 252 FEET **4-1/2" diameter boring**
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB19(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#20

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 339,443.4 E 1,552,021.4
DATE BEGAN 10/5/88
DATE FINISHED 10/6/88
GROUND SURFACE EL. 2.65 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0–5					CL		SILTY CLAY/SANDY CLAY; grayish orange, moderately moist, very soft, medium to low plasticity.
10	#1	0/60			SC		SAND/SANDY CLAY; medium to coarse grained, angular.
15	#2	0/60			SM		SAND; very fine, unconsolidated, some silt.
20	#3	0/60					
25	#4	30/60		1.5	CH–CL		CLAY/SILTY CLAY; moderate yellowish brown, moist, soft, high plasticity. SILTY CLAY; yellowish gray, moist, soft, medium plasticity.
30	#5	0/60			SP		SAND; black and tan, coarse grained, angular to sub-angular, unconsolidated.
35	#6	0/60					
40	#7	0/60			SM		SAND/SILT; medium grained, sub-angular.
45	#8	0/60					
50	#9	0/60			SM–SC		No Recovery. SILTY SAND; medium grained, sub-angular. Logged from shaker.
55	#10	0/60					
60	#11	14/60		1.0–2.5	CL		SILTY CLAY; light olive gray, moist, soft/stiff, medium plasticity, with clacite inclusions.
65	#12	0/60			SC		No recovery. SAND; medium to coarse. Logged from shaker.
70	#13	0/60			CL–SC		SANDY CLAY; tan, moist, soft, medium plasticity.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB20(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#20

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 339,443.4 E 1,552,021.4
DATE BEGAN 10/5/88
DATE FINISHED 10/6/88
GROUND SURFACE EL. 2.65 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	0/60			CL-SC		No recovery. SANDY CLAY; tan, moist, soft, medium plasticity. Logged from shaker.
75	#14	0/60					
80	#15	0/60					No recovery. SANDY CLAY; with sand throughout. Logged from shaker.
85	#16	40/60		0.5	CH-CL		CLAY/SILTY CLAY; light olive gray, moist, very soft, high plasticity. SANDY CLAY; yellow/brown, moist, very soft, moderate plasticity.
90	#17	0/60			SC		No recovery. SAND; medium grained, with clay. Logged from shaker.
95	#18	0/60					SILTY SAND; medium and fine grained.
100	#19	0/60					CLAYEY SAND; gray, medium to fine grained, very soft.
105	#20	27/60		1.5-0.5	CL		SILTY CLAY; medium olive brown, moist, soft, moderate plasticity. Grading into silty sandy clay; very soft.
110	#21	0/60		0.5	CH		No recovery. CLAY/SILTY CLAY; olive gray, moist, soft, high plasticity. Logged from shaker.
115	#22	56/60		2.0-3.0	CL		SILTY CLAY; medium light gray, moderately moist, soft, low plasticity. SILTY CLAY; yellow and gray, slightly moist, stiff, low to medium plasticity.
120	#23	0/60					No recovery. SAND; medium to coarse, angular to subangular. Logged from shaker.
125	#24	60/60		1.5-3.5	CL		SILTY CLAY; yellow gray, moderately moist, soft, medium plasticity. CLAY/SILTY CLAY; light gray, moderately moist, hard, low to medium plasticity.
130	#25	36/60		3.0			SILTY CLAY; grayish green, slightly to moderately moist, stiff, low to medium plasticity.
135	#26	0/60			SC		No recovery. CLAYEY SAND; medium coarse grained, angular. Logged from shaker.
140	#27	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB20(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#20

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 339,443.4 E 1,552,021.4
DATE BEGAN 10/5/88
DATE FINISHED 10/6/88
GROUND SURFACE EL 2.65 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	0/60			SC		No recovery. CLAYEY SAND; medium to coarse grained, angular. Logged from shaker.
145	#28	0/60					
150	#29	9/60		1.5–2.0	CL		SILTY CLAY; greenish gray, moderately moist, stiff, moderate plasticity.
155	#30	12/60		2.5			SANDY CLAY; light gray with mottled light olive brown, stiff, moist, low plasticity.
160	#31	41/60		3.0–4.0			SILTY CLAY; grayish green, slightly to moderately moist, hard, low plasticity.
165	#32	60/60		3.0			
170	#33	60/60		2.5			SANDY CLAY; greenish gray, moist, stiff, low plasticity, grading to dark greenish gray.
175	#34	0/60			SM–SP		No recovery. SAND; medium coarse. Logged from shaker.
180	#35	18/60		2.5	CL		SANDY CLAY; dark greenish gray, moist, stiff, slightly plastic, massive shell fragments, lenses of clayey sand.
185	#36	15/60		3.0–1.5			SILTY CLAY; greenish gray, moderately moist, stiff, medium plasticity.
					CH		SANDY SILTY CLAY; yellow green, moist, soft, high plasticity.
190	#37	30/60		2.0–2.5	CL		SANDY CLAY; light gray mottled yellow, moist, soft, low plasticity, coarse, subround sand inclusions.
195	#38	0/60			SP–SW		No recovery. SAND; fine to medium grained, subangular to subround. Logged from shaker.
200	#39	0/60					SAND; medium to coarse grained, angular, some clay.
205	#40	0/60					
210	#41	14/60		4.0	CL		SILTY CLAY; grayish green, moderately moist, hard, low plasticity.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB20(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#20

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 339,443.4 E 1,552,021.4
DATE BEGAN 10/5/88
DATE FINISHED 10/6/88
GROUND SURFACE EL. 2.65 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	14/60		4.0	CL		SILTY CLAY; grayish green, moderately moist, hard, low plasticity.
215	#42	0/60			SP		No recovery. SAND; medium coarse, some fine gravels. Logged from shaker.
220	#43	38/60		3.0–4.0	CL		SILTY SANDY CLAY; dark greenish gray, moderately moist, hard, low plasticity. SANDY CLAY; moist–wet, very soft, low plasticity, (6" bed).
225	#44	0/60			ML–SC		No recovery. CLAYEY SAND/SAND; fine grained. Logged from shaker.
230	#45	0/60			SP		No recovery. SAND; coarse, angular. Logged from shaker.
235	#46	60/60		2.0–3.0 1.0–2.0	CL		SILTY CLAY; light olive gray–mottled gray, stiff, moderately moist, moderate plasticity. SANDY CLAY; olive gray, moist, soft, moderate plasticity.
240	#47	60/60		4.0	CL		SILTY CLAY; light olive gray, moderately moist, hard, low plasticity, nodules of siltstone throughout.
245	#48	60/60		3.0	CL		SILTY SANDY CLAY; dark yellowish orange with gray, moderately moist, stiff, moderate plasticity, grading into.
250	#49	60/60		3.0	CL		SANDY SILTY CLAY; grayish green, slightly moist, stiff, low plasticity.
255	#50	0/60			SP		No recovery. SAND; fine to coarse. Logged from shaker.
260							TOTAL DEPTH 257 FEET 4–1/2" diameter boring
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-2B20(M524)

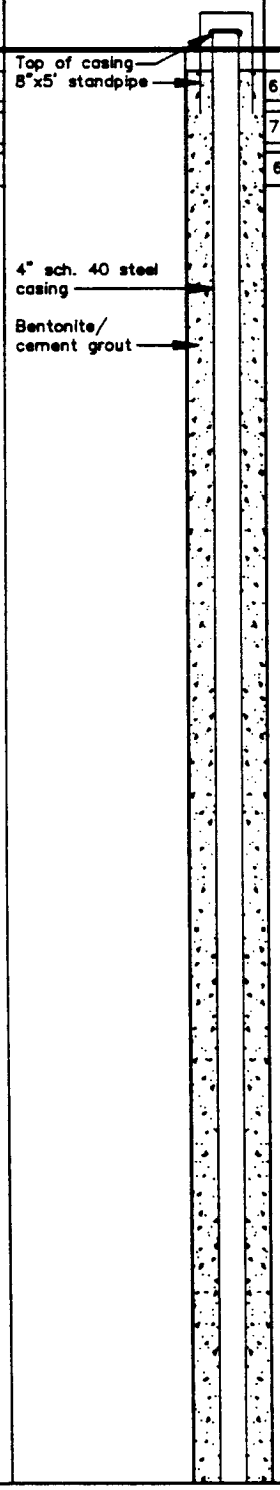
BORING NO. W4-7C

FIELD GEOLOGIST R. Duncan
EDITED BY S. Bartling
CHECKED BY J. Hadsall
TOTAL DEPTH 186 feet

COORDINATES N 339,015.3 E 1,552,299.7
DATE BEGAN 10/4/88
DATE FINISHED 10/7/88
GROUND SURFACE EL. 4.34 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	12/18	6/6/10	SM	SAND/SILT; light brown, dry, loose, with trace of gravel.
	MD#2	12/18	7/9/12		
5	MD#3	8/18	6/5/4	SC	CLAYEY SAND; yellowish olive green, moist, loose to medium dense.
				CL-ML	CLAY/SILT. Trace of gravels at 8 ft.
10				SM	SILTY SAND; light to medium brown, loose, trace of clay, slightly plastic.
15					
20				CL	CLAY; light yellowish brown, medium plasticity, trace of silt and coarse grained sand lenses in section.
25					
				GC	GRAVEL/SAND/CLAY; interbedded.
30				CL	SILTY CLAY; light brown, moist, medium stiff, slightly plastic.
35					
40				GM	SILTY GRAVEL; light brown.
45				CL	SILTY CLAY; grayish olive, moist, medium stiff, moderately plastic.
50					
55					
60					
65				GC	GRAVEL/SAND/CLAY; interbedded.
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W4-7C(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W4-7C

FIELD GEOLOGIST R. Duncan
EDITED BY S. Bartling
CHECKED BY J. Hadsall
TOTAL DEPTH 186 feet

COORDINATES N 339,015.3 E 1,552,299.7
DATE BEGAN 10/4/88
DATE FINISHED 10/7/88
GROUND SURFACE EL. 4.34 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70					GC		GRAVEL/SAND/CLAY; interbedded.
75					CL		SILTY CLAY; grayish olive, moist, medium stiff, moderately plastic.
85			4" sch. 40 steel casing		SC		SAND with clay stringers.
90			Bentonite/cement grout		CL		CLAY; grayish olive, medium plasticity, with 1/2 to 2 foot thick sand and gravel stringers.
95					SC		SANDS; flowing.
100					CL		SILTY CLAY; grayish olive, moderate plasticity.
110							SILTY CLAY; grayish olive-grayish blue, moderate plasticity.
120							CLAY; grayish olive, moderate plasticity, with sand stringers up to 1 foot thick.
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W4-7C(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W4-7C

FIELD GEOLOGIST R. Duncan
EDITED BY S. Bartling
CHECKED BY J. Hadsall
TOTAL DEPTH 186 feet

COORDINATES N 339,015.3 E 1,552,299.7
DATE BEGAN 10/4/88
DATE FINISHED 10/7/88
GROUND SURFACE EL. 4.34 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
140–145					CL		SILTY CLAY; grayish olive, moderate plasticity.
145–150					CL-ML		CLAY/SILT; grayish olive, wet, non-plastic.
150			4" sch. 40 steel casing		SM		SILTY SAND; light olive gray.
			Bentonite/ cement grout		SP		SILTY SAND; predominantly black, coarse sand with trace of gravel.
155–165					CL-CH		CLAY; blueish gray, medium to high plasticity, trace of silt, oxidation staining on possible fracture surfaces.
165			Bentonite pellets 164 to 167 ft.				
			4" .010 S.S. screen from 169 to 174 ft.				Grading coarser with trace of calcium carbonate material, shells.
170					GP		SANDY GRAVEL; greenish black, subangular to subrounded, platy, some shells.
			Centralizer				Artesian flow in aquifer from 169 to 180 ft.
175					SW		GRAVELLY SAND; subangular to subrounded.
180			#1C sand				
185					CL		CLAY; light yellowish brown, medium plasticity, trace of silt.
			9.6"				TOTAL DEPTH 186 FEET
190–210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W4-7C(MF24)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

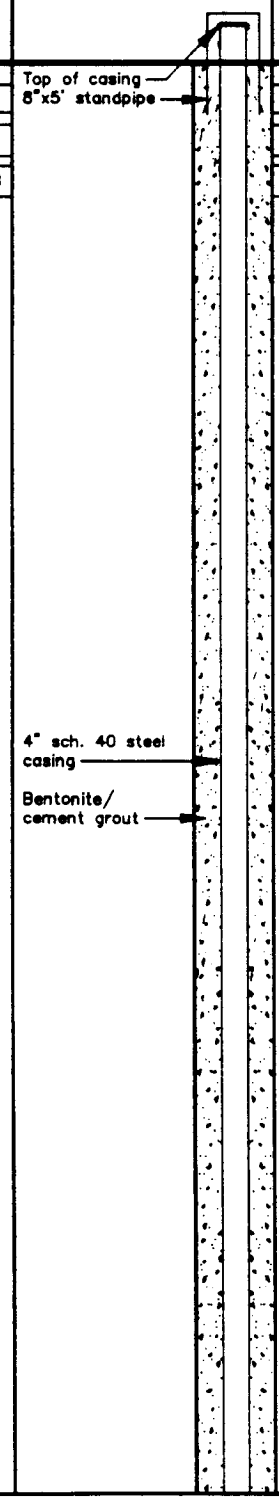
BORING NO. W4-8C

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 160 feet

COORDINATES N 338,989.5 E 1,552,975.3
DATE BEGAN 11/2/88
DATE FINISHED 11/4/88
GROUND SURFACE EL. 4.11 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	6/18	2,2,2		SILTY CLAY; black, moderately moist, very soft, high plasticity.
	MD#2	6/18	2,4,2		
5	MD#3	18/18	1,1,1		SANDY CLAY; yellow brown, moist, very soft, high plasticity, some inclusions, coarse gravel calcite.
10					
15					SILTY SANDY CLAY; light gray, medium moist, very soft, medium plasticity.
20					
25					SILTY SANDY CLAY; dusky yellow, moist, very soft, medium plasticity.
30					SANDY CLAY; dusky yellow, moist, soft, medium plasticity, coarse inclusions.
35				CH-CL	SILTY CLAY/CLAY; dusky yellow, moist, very soft, high plasticity.
40					CLAY/SILTY CLAY; light gray, moist, very soft, high plasticity.
45					
50					SILTY CLAY/CLAY; light gray-greenish gray, moist, medium to high plasticity, some medium grained sand inclusions.
55					
60					SANDY CLAY; greenish gray, moist, very soft, high plasticity, with small 6" interbeds of coarse sand, angular, poorly sorted, silty clay stringers throughout.
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W4-8C(MF25)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W4-8C

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 160 feet

COORDINATES N 338,989.5 E 1,552,975.3
DATE BEGAN 11/2/88
DATE FINISHED 11/4/88
GROUND SURFACE EL. 4.11 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70							SANDY CLAY; greenish gray, moist, very soft, high plasticity, with sand and silty clay.
75							
80							
85							
90							SANDY CLAY; light gray–green gray, moist, very soft, high plasticity, stringers of sand throughout.
95							
100							SILTY CLAY/CLAY; light gray–dusky yellow, moist, very soft, high plasticity.
105			4" sch. 40 steel casing; Bentonite/ cement grout		CH		SILTY CLAY; olive gray, moist, soft, medium plasticity.
110							
115							
120							
125							SILTY CLAY/CLAY; olive gray, moist, high to medium plasticity, a few sandy clay stringers.
130			Centralizer				
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W4-8C(MF25)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W4-8C

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 160 feet

COORDINATES N 338,989.5 E 1,552,975.3
DATE BEGAN 11/2/88
DATE FINISHED 11/4/88
GROUND SURFACE EL. 4.11 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
140–160			Bentonite/ cement grout; Bentonite pellets 142.9 to 144 ft.; #1C sand; 4" .010 S.S. screen from 147 to 152 ft.; Centralizer; Cave in to 152.5 ft.; 9.6"		CL		SILTY CLAY/CLAY; olive gray, moderately moist, stiff, moderate to low plasticity.
					GW		GRAVEL; fine to coarse, wet, angular, unconsolidated, poorly sorted.
					SW-SC		SAND/CLAYEY SAND; fine, poorly sorted, with fine gravels, slurry.
					CL		SILTY CLAY; olive gray, moderately moist, stiff-hard, medium plasticity.
160–210							TOTAL DEPTH 160 FEET

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W4-8C(MF25)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

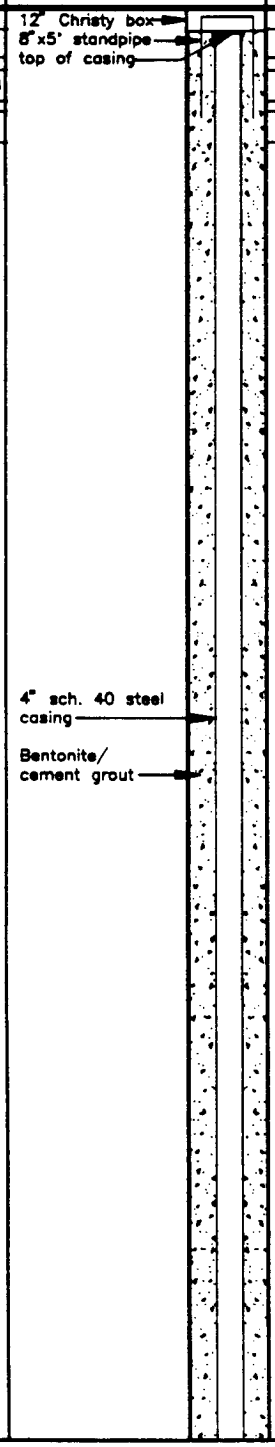
BORING NO. W4-9(B2)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 111 feet

COORDINATES N 339,427.4 E 1,552,031.7
DATE BEGAN 10/17/88
DATE FINISHED 10/20/88
GROUND SURFACE EL 3.19 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	6/18	3,4,7	CL	SANDY CLAY; dark gray, dry, soft-friable, non-plastic.
	MD#2	10/18	4,4,4		SANDY SILTY CLAY; dark gray, slightly moist, soft, slightly plastic.
5	MD#3		2,1,1		SILTY SANDY CLAY; brown gray, moderately moist, soft, medium to high plasticity.
					SANDY CLAY; dusky yellow, moist, very soft, high plasticity, coarse sand inclusions, with intermixed gravels; fine, subangular.
10				GC	GRAVEL; fine, loose, subangular, some clays.
15				CH-CL	SILTY CLAY; yellowish brown, moist, soft, high plasticity.
25				GC-GW	GRAVEL; poorly sorted, subangular with sand, unconsolidated, wet, some clay.
30				CL	SILTY CLAY; moist, stiff, medium plasticity.
35				SM	SAND; very fine, some silts, wet, unconsolidated.
40				CL	SILTY CLAY; gray, moist, stiff, medium plasticity.
45				SC-SP	CLAYEY SAND; yellowish brown, very soft, slurry, grading into:
50					SAND; very fine, unconsolidated, wet, subround.
55				CL	SILTY CLAY; dusky yellow, moist, very soft, high plasticity.
65					SILTY CLAY; olive gray, moist, medium plasticity.
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: W4-9B2(MF25)

BORING NO. W4-9(B2)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 111 feet

COORDINATES N 339,427.4 E 1,552,031.7
DATE BEGAN 10/17/88
DATE FINISHED 10/20/88
GROUND SURFACE EL. 3.19 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70					SP		SAND; medium to coarse, unconsolidated, angular.
75			Centralizer; 4" sch. 40 steel casing; Bentonite/cement grout		CH-CL		CLAY/SILTY CLAY; light brown, moist, very soft, high plasticity.
80							
85			Bentonite pellets 84.1 to 89.2 ft.		SP		SAND; medium to coarse, unconsolidated, subangular to angular.
					CH-CL		CLAY/SILTY CLAY; light gray-brown, very soft, high plasticity, sticky.
90					CL		SILTY SANDY CLAY; light gray, moist, very soft, medium to slight plasticity.
95			Centralizer; 4" .010 S.S. screen from 94 to 99 ft.; Centralizer		SM-SC		CLAYEY SILTY SAND; brown, very soft, slurry, unconsolidated, very fine grained sand.
100			#1C sand; Bentonite backfill		CL		SILTY CLAY; light gray, moist, medium plasticity. SILTY CLAY; olive gray, very dry, hard, non-plastic, friable.
105					CH-CL		CLAY/SILTY CLAY; light gray, moderately moist, soft, high plasticity.
110							
			9/6"				TOTAL DEPTH 111 FEET
115							
120							
125							
130							
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W4-9B2(MF25)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W4-11A
(Abandoned)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 99 feet

COORDINATES N 339,000.2 E 1,552,963.7
DATE BEGAN 9/29/88
DATE FINISHED 10/1/88
GROUND SURFACE EL. 4.04 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEAN CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					OL		SILTY CLAY; black, dry, very stiff, non-plastic, w/ roots.
	MD#1	8/18		7,10,19			SILTY CLAY; black, dry, very stiff, non-plastic, some inclusions, coarse.
	MD#2	7/18		7,9,12			
5	MD#3	18/18		3,4,5			SILTY SANDY CLAY; grayish yellow, mottled gray, moderately moist, medium stiff, medium plastic, few roots, grading more moist and less plastic.
	MD#4	18/18		2,2,4			
10	#1	60/60	MEAN CONSISTENCY (TSF)	1.0			SILTY CLAY; moderate yellow-gray yellow, moist, medium stiff, moderately plastic, very broken. Contains very angular gravels. More plastic, lacking broken appearance.
15	#2	60/60		1.0			SILTY CLAY; light olive brown/moderate yellow with mottled gray, moist, medium stiff, moderate plasticity, broken in appearance, fracture surfaces are wet.
							SANDY SILTY CLAY; moderate yellow gray, soft, moderate to slightly plastic.
20	#3	60/60		1.5			SILTY CLAY; light olive mottled yellow, slightly moist, slightly to moderately plastic.
							SILTY CLAY; moderate yellow mottled light gray, slightly moist, stiff, slightly to moderately plastic.
25	#4	60/60		3.5			SILTY SANDY CLAY; dusky yellow, moist, moderately stiff, plastic, few medium grained inclusions.
							SILTY CLAY; moderate yellowish brown, moist, slightly stiff, slightly plastic, broken platy appearance.
30	#5	60/60		1.5			
35	#6	60/60		2.0	CL		
40	#7	60/60		1.0			Light gray mottled yellowish brown.
45	#8	60/60		2.0			SILTY CLAY; dusky brown, mottled gray, moderately moist, stiff, moderate plasticity.
	#9	24/24		3.0			SILTY CLAY; dark yellowish brown, mottled gray, moderately moist, moderate plasticity.
50	#10	60/60		2.0 1.0 2.0			SILTY CLAY/CLAY; light olive gray, moderately moist, medium stiff, medium plastic to plastic.
55	#11	60/60		1.0			SILTY CLAY/CLAY; gray-olive-gray, moderately moist, slightly stiff.
60	#12	60/60		0.5			SILTY CLAY/CLAY; dusky yellow, mottled gray, moderately moist, medium stiff, moderately plastic.
							SILTY SANDY CLAY; dusky yellow, mottled gray, moist, soft slightly plastic.
65	#13	60/60		1.0-2.0			
70	#13	60/60					SILTY CLAY; dusky yellow, mottled gray, moderately moist, medium stiff, moderate plasticity.

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W4-11A(MF23)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W4-11A
(Abandoned)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 99 feet

COORDINATES N 339,000.2 E 1,552,963.7
DATE BEGAN 9/29/88
DATE FINISHED 10/1/88
GROUND SURFACE EL. 4.04 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEAN CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#14	60/60			CL		SILTY SANDY CLAY; light olive gray, soft, moist, plastic, very sticky.
75	#15	60/60		1.0			SILTY CLAY; pale olive, mottled olive brown, moderately moist, medium, plastic.
80	#16	36/60					SILTY SANDY CLAY; dark olive, moist, soft, moderate plasticity.
85	#17	0/60					
90	#18	32/60					
95	#19	32/60					SILTY CLAY; olive, medium moist, medium stiff, plastic, few coarse inclusions.
100							TOTAL DEPTH 99 FEET 12.0" diameter boring
105							
110							
115							
120							
125							
130							
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W4-11A(MF23)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 5

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB-21

FIELD ENGINEER J. Hadsell
EDITED BY D.H. Cox
CHECKED BY J. Hadsell
TOTAL DEPTH 232 ft.

COORDINATES N 338,458.4 E 1,553,646.6
DATE BEGAN 8/23/88
DATE FINISHED 8/23/88
GROUND SURFACE EL. 6.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (PER 6")	USCS	PROFILE	DESCRIPTION
0					CL		SANDY CLAY; medium brown, moist, stiff, grass roots and gravel.
5							
10	#1	4/60					SANDY CLAY; medium/dark brown, moist, very stiff, moderate plasticity, some gravel.
15	#2	6/60					
20	#3	20/60					SANDY CLAY; medium brown, moist, stiff, moderate plasticity, mudstone fragments.
25	#4	36/60					
30	#5	10/60			GC		SANDY CLAYEY GRAVEL; medium brown, moist, stiff, moderate plasticity, 50% gravel, 10% sand. Gravel from shaker.
35	#6	0/60					* No recovery
40	#7	0/60					Angular gravels 1/8-1/2" clasts, clert and mudstone. Drill bit is grinding on gravels.
45	#8	20/60			CL/CH		SANDY CLAY; medium tan brown, moist, very stiff, moderate plasticity, mudstone fragments.
50	#9	6/60					SANDY SILTY CLAY; medium tan brown, moist, very stiff, moderate plasticity, medstone fragments and grass roots.
55	#10	32/60					SILTY CLAY; medium/dark brown, moist, very stiff, high plasticity.
60	#11	4/60					
65	#12	30/60					SANDY SILTY CLAY; medium brown, moist, stiff, moderate-high plasticity.
70	#13	5/60					SILTY CLAY; medium brown, moist, stiff, moderate-high plasticity, mudstone fragments.

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB21.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-21

FIELD ENGINEER J. Hadsall
EDITED BY D.H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 232 ft.

COORDINATES N 338,458.4 E 1,553,646.6
DATE BEGAN 8/23/88
DATE FINISHED 8/23/88
GROUND SURFACE EL 6.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (6")	USCS	PROFILE	DESCRIPTION
70	#13	5/60			CH		SILTY CLAY; medium brown, moist, stiff, high plasticity.
75	#14	24/60					
80	#15	0/60					No Recovery – Fine grained sand and silt coming from the shaker.
85	#16	0/60					
90	#17	0/60					
95	#18	22/60			CH		SILTY CLAY; medium brown, soft, moist, sticky.
100	#19	12/60					SILTY CLAY; medium brown, moist, very stiff, high plasticity.
105	#20	6/60					SILTY CLAY; medium brown, moist, stiff, high plasticity.
110	#21	2/60					SILTY CLAY; medium brown, soft, moist, sticky.
115	#22	0/60					No Recovery
120	#23	0/60					
125	#24	10/60			CH		SILTY CLAY; gray brown, moist, stiff, very plastic.
130	#25	0/60					No Recovery
135	#26	30/60			CH		SILTY CLAY; gray brown, moist, very stiff, very plastic.
140	#27	44/60					

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB21.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-21

FIELD ENGINEER J. Hadsall
EDITED BY D.H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 232 ft.

COORDINATES N 338,458.4 E 1,553,846.6
DATE BEGAN 8/23/88
DATE FINISHED 8/23/88
GROUND SURFACE EL. 6.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (PER 6")	USCS	PROFILE	DESCRIPTION
140	#27	44/60			CH		SILTY CLAY; medium brown, mottled gray, moist, very stiff, very plastic.
145	#28	60/60					
150	#29	54/60			CL		SILTY SANDY CLAY; medium brown, mottled gray, moist, very stiff, moderate plasticity.
					SM		SILTY SAND; medium brown, moist, medium dense.
					CH		SANDY SILTY CLAY; medium brown, moist, stiff, very plastic.
155	#30	40/60			SM		SILTY SAND; medium brown, moist, loose.
160	#31	0/60					No recovery
165	#32	48/60			CH		SILTY CLAY; medium brown gray, moist, very stiff, highly plastic.
					GP		GRAVEL; large angular clasts, 1"-2" in length.
170	#33	12/60					No recovery: Probably gravels (inferred from bit behavior).
175	#34	0/60					
180	#35	0/60					Losing water to formation, probably still in gravels. Split gravels (1/4" inch, angular from shaker.
185	#36	0/60					
190	#37	0/60					
195	#38	0/60					
200	#39	0/60					No recovery: appears to be fine gravel and coarse sand, (from shaker).
205	#40	0/60					
210	#41	0/60					

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB21.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-21

FIELD ENGINEER J. Hadsall
EDITED BY D.H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 232 ft.

COORDINATES N 338,458.4 E 1,553,646.8
DATE BEGAN 8/23/88
DATE FINISHED 8/23/88
GROUND SURFACE EL. 6.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (PER 6")	USCS	PROFILE	DESCRIPTION
210	#41	0/60					No recovery; appears to be coarse sand and angular gravels, (shaker).
215	#42	60/60			CL		SILTY CLAY; tan brown, moist, very stiff, moderate plasticity.
220	#43	0/60					No recovery; bit behavior indicates gravel.
225	#44	28/60			CH		SILTY CLAY; gray green, moist, stiff, plastic.
230	#45	60/60					
235	#46	0/60					TOTAL DEPTH 232 FEET 4-1/2" diameter boring
240	#47	0/60					
245							
250							
255							
260							
265							
270							
275							
280							

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB21.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-22

FIELD ENGINEER D.H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 248 ft.

COORDINATES N 337,159.6 E 1,553,394.6
DATE BEGAN 6/30/88
DATE FINISHED 7/5/88
GROUND SURFACE EL. 12.78 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS	PROFILE	DESCRIPTION
0							CLAY-SILTY CLAY; light brown, dry, non-plastic, hard.
5					OL		CLAY; dark gray-black, dry-slightly moist, stiff, hard, slightly plastic.
10	#1	9/60					SANDY CLAY; light-medium gray brown, stiff, wet, slightly plastic.
15	#2	28/60					
20	#3	22/60					SANDY CLAY; medium brown-dark brown, moist, very stiff, slightly plastic, abundant coarse sand, subangular-rounded, moderately-well sorted, quartz & milky quartz with angular gravel, predominantly siltstone & sandstone, medium dark brown-dark brown, chert fragments.
25	#4	0/60					
30		0/60					
35	#5	54/60					SANDY CLAY; gray brown, very stiff, moist, slight-moderate plasticity, with coarse sand and gravel associated.
40	#6	60/60			CL		SILTY CLAY; light-medium gray, moist, very stiff, moderate plasticity. SANDY CLAY; blue gray- brown gray, moist-dry, stiff-hard, slightly-non-plastic.
45	#7	23/60					SILTY CLAY; minor sand, gray brown, predominantly dry, very stiff, slightly to non-plastic.
50	#8	35/60					
55	#9	19/60					
60	#10	17/60					SANDY CLAY; medium gray, brown gray, moist, very stiff, slight plasticity.
65	#11	7/60					
70	#12	15/60					

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.. 409616
CLIENT. Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: 0.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-22

FIELD ENGINEER D.H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 248 ft.

COORDINATES N 337,159.6 E 1,553,394.6
DATE BEGAN 6/30/88
DATE FINISHED 7/5/88
GROUND SURFACE EL. 12.78 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS	PROFILE	DESCRIPTION
70	#12	15/60			CL		SILTY CLAY; minor sand, medium brown-gray brown, moist, very stiff, slight plasticity.
							CLAY-SILTY CLAY; medium brown, moist, very stiff, plastic.
75	#13	20/60			CH		
80	#14	26/60					
							SILTY CLAY; gray brown, firm, moist, slight plasticity.
85	#15	55/60					
90	#16	16/60					SANDY CLAY; medium gray, moist-wet, soft-stiff, slight plasticity.
							SILTY CLAY-SANDY CLAY; stiff, moist, slight plasticity.
95	#17	27/60					
							SILTY CLAY; gray brown, moist, very stiff, slight plasticity
100	#18	32/60					
105	#19	27/60					
							CLAY; dark brown, predominantly dry, very stiff, non-plastic.
110	#20	60/60			CL		
115	#21	20/60					
120	#22	60/60					SILTY CLAY; medium gray, moist, very stiff, slight to moderate plasticity.
125	#23	60/60					
							CLAY; medium-dark gray, slightly moist - dry, very stiff, slight to non-plastic.
130	#24	60/60					
135	#25	60/60					
140	#26	60/60					

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE 2.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-22

FIELD ENGINEER D.H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 248 ft.

COORDINATES N 337,159.6 E 1,553,394.6
DATE BEGAN 6/30/88
DATE FINISHED 7/5/88
GROUND SURFACE EL. 12.78 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS	PROFILE	DESCRIPTION
140	#26	60/60			CL		Consistency increases to hard.
145	#27	20/60			SC		CLAYEY SAND; medium gray-brown gray, moist-wet, stiff, slight plasticity.
150	#28	43/60			CL		CLAY-SILTY CLAY; medium gray-blue gray, predominantly dry, very stiff, slight to non-plastic.
155	#29	60/60					
160	#30	22/60					
165		0/60					No recovery
170	#31	4/60			GC		CLAYEY GRAVEL; pebbles, angular fragments.
175	#32	4/60			CL		SANDY CLAY; medium-dark gray-blue gray, moist, stiff, slight plasticity with pebbles and angular fragments.
180	#33	43/60					SILTY CLAY; medium gray-blue gray, predominantly dry, slight plasticity.
185		0/60					
190	#34	30/60					
195	#35	60/60					SANDY CLAY; medium-dark gray-blue gray, moist, very stiff hard, slight plasticity, grading to clayey sand.
200	#36	58/60					
205	#37	20/60					Consistency decreases to stiff-very stiff.
210	#38	45/60					CLAY-SILTY CLAY; dark gray-blue gray, moist, very stiff, slight plasticity.

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: 0.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-22

FIELD ENGINEER D.H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 248 ft.

COORDINATES N 337,159.6 E 1,553,394.6
DATE BEGAN 6/30/88
DATE FINISHED 7/5/88
GROUND SURFACE EL. 12.78 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS	PROFILE	DESCRIPTION
210	#38	58/60			CL		CLAY-SILTY CLAY; dark gray-blue gray, moist, very stiff, slight plasticity.
215	#39	45/60			SC		CLAYEY SAND; dark gray, moist, stiff-very stiff, non-plastic, very fine-fine, well sorted, subangular-subrounded, grading to sandy clay.
220	#40	60/60			CL		SANDY CLAY; dark gray, very stiff, moist-wet, slight to non-plastic.
225	#41	33/60					
230	#42	53/60					Color grades to light-medium gray.
235	#43	47/60					Color grades to medium brown-gray brown.
240	#44	48/60			SC		CLAYEY SAND-SANDY CLAY; medium brown, moist, very stiff-hard, non-plastic.
245	#45	7/60			CL		SANDY CLAY; light-medium gray brown, moist, very stiff, non-plastic.
250							TOTAL DEPTH 248 FEET 4-1/2" diameter boring
255							
260							
265							
270							
275							
280							

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE 0.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-23

FIELD ENGINEER D.H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 252 ft.

COORDINATES N 336,115.1 E 1,553,082.2
DATE BEGAN 8/16/88
DATE FINISHED 8/17/88
GROUND SURFACE EL. 13.76 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (PER 6")	USCS	PROFILE	DESCRIPTION
0							Asphalt
5					CL		SANDY GRAVELLY CLAY; dark gray-black, predominantly dry, stiff, slight to non-plastic.
10							
15	#1	2/60					SANDY CLAY; dark gray-brown, moist, stiff, slight-moderate plasticity.
20	#2	0/60			GC		CLAYEY GRAVEL; medium to coarse, subangular to round, clay; light to medium brown, wet, soft, (logged from shaker).
25	#3	9/60			CL		SILTY CLAY; medium brown, minor gray, moist, stiff, slight-moderate plasticity.
30	#4	16/60					
35	#5	21/60					SILTY CLAY; moderate yellowish brown, predominantly dry-moist, moderate plasticity.
40	#6	0/60					No recovery
45	#7	25/60			CL		CLAY-SILTY CLAY; medium brown (yellow brown), moist, stiff, moderate plasticity.
50	#8	27/60			CH		SANDY CLAY; moderate-dark yellow brown, moist, stiff-very stiff, plastic.
55	#9	17/60					SILTY CLAY; moderate yellow brown, moist, soft, plastic.
60	#10	7/60			CL		CLAY-SILTY CLAY; dark yellow brown, moist, soft-stiff, moderate plasticity.
65	#11	60/60					SILTY CLAY; moderate yellow brown-gray brown, predominant dry, very stiff-hard, slight plasticity.
70	#12	56/60					SILTY CLAY, minor sand, dark brown-gray brown, moderately dry, slight plasticity.

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB23.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-23

FIELD ENGINEER D.H. Cox
EDITED BY J. Hodsoll
CHECKED BY J. Hodsoll
TOTAL DEPTH 252 ft.

COORDINATES N 336,115.1 E 1,553,062.2
DATE BEGAN 8/16/88
DATE FINISHED 8/17/88
GROUND SURFACE EL. 13.76 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE, RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (6")	USCS	PROFILE	DESCRIPTION
70	#12	56/60					
75	#13	60/60					SILTY CLAY; gray brown–brown gray, predominantly dry, very stiff, moderate–slight plasticity.
80	#14	15/60			CL		SILTY CLAY; minor sand, dark yellow brown, moist, very stiff, moderate plasticity.
85	#15	27/60					
90	#16	16/60			CH		SILTY CLAY; dark gray brown, moist, stiff, plastic.
95	#17	24/60			CL		SANDY CLAY; medium gray, moist–wet, stiff, slight plasticity.
100	#18	8/60			CH		SANDY CLAY, dark yellowish brown, moist, soft, plastic.
105	#19	11/60					SILTY CLAY; dark gray–brown gray, moist–dry, very stiff, plastic.
110	#20	60/60			CL		SILTY CLAY; gray brown, minor blue gray, moist–dry, very stiff, moderate plasticity.
115	#21	8/60					
120	#22	10/60					CLAY–SITLY CLAY; medium–dark gray, moist, stiff, plastic.
125	#23	60/60					CLAY–SILTY CLAY; dark gray, moist–moderately dry, very stiff–hard, moderate–slight plasticity.
130	#24	60/60					
135	#25	60/60					CLAY; brown gray–gray, dry, very stiff, slight plasticity.
140	#26	18/60					

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-23

FIELD ENGINEER D.H. Cox
EDITED BY J. Hodsoll
CHECKED BY J. Hodsoll
TOTAL DEPTH 252 ft.

COORDINATES N 336,115.1 E 1,553,062.2
DATE BEGAN 8/16/88
DATE FINISHED 8/17/88
GROUND SURFACE EL. 13.76 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE, RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (PER 6")	USCS	PROFILE	DESCRIPTION
140	#26	18/60		0.5–1.0	CL		CLAY/SILTY CLAY; medium to dark gray, brown gray, dry, very stiff – hard, non-plastic.
145	#27	60/60		3.5–3.0			
150	#28	60/60		3.5–4.5			
155	#29	60/60		4.0–4.5			CLAY/SILTY CLAY; dark gray, dry, hard, non-plastic, brittle.
160	#30	60/60		3.5			
165	#31	55/60		4.0–3.0			
170	#32	14/60		4.5			
175	#33	60/60		3.5–4.5			
180	#34	8/60		3.0			SILTY CLAY; dark gray, dry to moist, very stiff, slightly to non-plastic, increasing sand.
185	#35	4/60		1.0	CH		SILTY SANDY CLAY; medium brown, moist, stiff, plastic.
190	#36	0/60			GC		Shaker; sand and gravel in clay; wet, soft.
195	#37	48/60		4.0–3.0	CL		SANDY CLAY; medium gray – brown gray, moist, very stiff – hard, slightly plastic with increasing plasticity.
200	#38	25/60		4.0–4.5			SILTY CLAY; gray brown, dry, hard, non-plastic, minor sand.
205	#39	15/60		3.0			SANDY CLAY; medium brown, moist, very stiff, moderately plastic.
210	#40	60/60		3.0–3.5			SANDY CLAY: brown gray; moist to dry, very stiff, slightly to non-plastic.

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB-23

FIELD ENGINEER D.H. Cox
EDITED BY J. Hodsoll
CHECKED BY J. Hodsoll
TOTAL DEPTH 252 ft.

COORDINATES N 338,118.1 E 1,563,082.2
DATE BEGAN 8/16/88
DATE FINISHED 8/17/88
GROUND SURFACE EL. 13.76 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	DRIVE/RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (PER 6")	USCS	PROFILE	DESCRIPTION
210	#40	60/60		3.0	CL		SANDY CLAY; blue gray, predominantly dry, very stiff – hard, slightly to non-plastic.
215	#41	60/60		3.5–4.5			
					SC		CLAYEY SAND; gray brown, wet, soft, plastic.
220	#42	60/60		1.0–4.5	CL		SILTY CLAY; dark gray, moist to dry, stiff to very stiff – hard, slightly to non-plastic.
225	#43	11/60		3.0			
230	#44	40/60		3.5			SILTY CLAY; dark gray, moist, very stiff, slightly plastic.
235	#45	60/60		4.5–3.5			CLAY/SILTY CLAY; predominantly hard, very stiff – hard, slightly to non-plastic.
240	#46	60/60		4.5			
245	#47	60/60		3.5–4.5			SILTY CLAY; medium dark gray, dry, very stiff – hard, non-plastic.
250	#48	50/60		4.5			SANDY CLAY; brown – gray brown, predominantly dry, hard, slightly to non-plastic.
255							TOTAL DEPTH 252 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Developement Co.
DRILLING METHOD: Mud Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD File: MF-6323.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

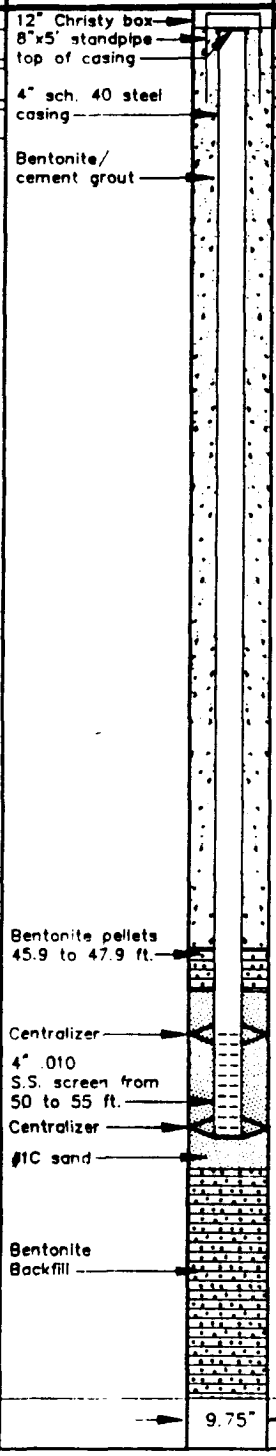
BORING NO. W5-4(A2)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 67.5 feet

COORDINATES N 338,498.7 E 1,553,744.2
DATE BEGAN 9/7/88
DATE FINISHED 9/8/88
GROUND SURFACE EL. 6.55 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	7/18	5,6,5	OL	SANDY SILTY GRAVELLY CLAY; dark brown black, dry, stiff, non-plastic, organic.
	MD#2	8/18	6,6,7	CH	SILTY CLAY; light to medium gray brown, moist, soft, plastic.
	MD#3	14/18	6,7,7		
10				CL	SILTY CLAY; medium brown, moist, stiff, moderate plasticity.
15				CL-SC	SANDY CLAY; medium brown, moist, stiff, moderate plasticity.
20				CL	SILTY CLAY; medium brown, moist, stiff, moderate plasticity.
25					GRAVELLY SANDY CLAY; medium brown, wet, soft, medium subangular gravel with fine to medium subangular to sub-rounded sand.
30					SANDY CLAY; medium brown, moist, soft to stiff, moderate plasticity.
					CLAY/SILTY CLAY; medium dark brown, moist, stiff, moderate plasticity.
35				GC	SANDY SILTY CLAYEY GRAVEL; predominantly coarse gravels with sand; fine to coarse, subangular to subrounded, mod. to poorly sorted in clay; medium brown, wet, soft, moderate plasticity.
				SC	SANDY CLAY/CLAYEY SAND; medium gray, wet, soft.
40				CL	CLAY/SILTY CLAY; medium gray, moist to wet, soft, slightly to moderately plastic.
					CLAYEY SAND/GRAVEL; fine to medium, subangular to sub-round, moderately to poorly sorted sand with predominantly medium angular gravel in clay; medium gray, wet, soft moderate plasticity.
45				SC	CLAY/SILTY CLAY; medium gray, moist, stiff, slightly plastic.
50				GC	CLAYEY SANDY GRAVEL; medium to coarse gravel and sand in clay; medium gray, stiff to hard, indurated, slightly to non-plastic.
55				CH	SANDY CLAY; medium gray brown, moist, stiff, plastic.
60				CL	SILTY CLAY; olive to brown gray, moist to dry, stiff, moderate plasticity.
65					Grading to sandy clay.
70					TOTAL DEPTH 67.5 FEET

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE ... 181.DWG

BORING NO. W5-5(C)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 160 feet

COORDINATES N 338,477.8 E 1,553,704.9
DATE BEGAN 9/13/88
DATE FINISHED 9/15/88
GROUND SURFACE EL. 6.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	6/18	12" Christy box; 8"x5' standpipe; top of casing	5,5,6	OL		SILTY CLAY; dark gray black, moist to dry, stiff, slightly to non-plastic, root material.
	MD#2	10/18		6,6,8	CL		SANDY CLAY; light to medium gray, moist, stiff, minor gravels, slightly plastic.
5	MD#3	9/18		2,2,3			
			4" sch. 40 steel casing; Bentonite/cement grout		CL-CH		SILTY CLAY; medium to dark brown, moist, stiff, plastic. Grades to gray brown - olive. Grades to medium gray with increasing sand.
15					GC		CLAYEY GRAVEL; medium to coarse, subround angular gravel with sand and clay, medium brown-olive, moist to wet, slightly to non-plastic.
					CL		CLAY/SILTY CLAY; medium brown, moist, stiff, moderate plasticity with minor sand; fine to medium, subangular to subround, moderately sorted quartz and gravel; medium to coarse, angular to subrounded.
					CL-SC		SANDY CLAY/CLAYEY SAND; medium to brown, moist to wet, stiff, moderate plasticity.
					GC-SC		SANDY GRAVEL; interbedded clay, medium to coarse, angular to subrounded, predominant composition: siltstone and sandstone with serpentine and chert, sand; medium to coarse, subangular to subround, moderate to poorly sorted, quartz and milky quartz grains.
					CL		CLAY/SILTY CLAY; medium brown, moist, stiff, moderate plasticity.
					GC-SC		SANDY GRAVEL; interbedded clay, medium to coarse, angular to subrounded, predominant composition: siltstone and sandstone with serpentine and chert, sand; medium to coarse, subangular to subround, moderate to poorly sorted, quartz and milky quartz grains, clay; medium brown, wet, soft, slightly to non-plastic.
					CL		SANDY CLAY; medium gray brown, moist, soft, slightly to non-plastic.
					GC-CL		SANDY GRAVEL; interbedded clay, as above.
					CL		CLAY/SILTY CLAY; medium brown, moist, stiff, moderate plasticity.
					GC-SC		SANDY GRAVEL; interbedded clay, as above.
					CL		SANDY CLAY; medium brown, moist, soft to stiff, slightly to moderate plasticity, becoming increasingly sticky. SANDY CLAY; medium gray-brown gray, moist, stiff, moderate plasticity, sticky.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W5-5C.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W5-5(C)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 160 feet

COORDINATES N 338,477.9 E 1,553,704.9
DATE BEGAN 9/13/88
DATE FINISHED 9/15/88
GROUND SURFACE EL. 6.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70–75					SC		CLAYEY SAND; predominantly fine to medium, subangular–subround, moderately to poorly sorted quartz in clay; med. brown gray, moist, stiff, moderate plasticity, sticky.
75–80					CL		SANDY CLAY; medium brown gray, moist, stiff, moderate plasticity.
80–85					CH		CLAY/SILTY CLAY; gray brown, gray, moist, soft, very plastic.
85–90					CL		SANDY CLAY; gray brown, gray, moist, soft, moderate plas. with fine sorted sand.
90–95					SC		CLAYEY SAND; fine to medium, subangular to subround, mod. to well sorted in clay; brown gray, moist to wet, slightly to non–plastic, minor gravel.
95–100					CL		SANDY CLAY; brown gray, moist–wet, soft, slightly to non–plastic.
100–105					GC		SANDY GRAVEL; clay interbed, abundant, gravel, pred. medium, round, moderately sorted, sandstone, siltstone and cherts, sand; medium to coarse, subangular subround, moderately sorted in clay; brown gray, wet, soft, non to slightly plastic.
					CL		SANDY CLAY; medium brown gray, moist, stiff, mod. plas. with sand; medium coarse, subround, moderately sorted.
					CH		CLAYEY SAND; medium coarse, subround, moderately sorted with clay; gray brown, moist, stiff, mod. plas., minor gravel.
105–110							SANDY CLAY; gray brown, moist, stiff, plastic.
110–115					CL		SANDY CLAY/SILTY CLAY; dark gray brown, moist, stiff, mod. plastic, minor coarse sand.
115–130					CH		CLAY/SILTY CLAY; medium gray brown, moist, stiff, very plastic, sticky.
130–135					SC		CLAYEY SAND; predominantly medium, rounded, moderate to well sorted quartz in clay; gray brown, moist, plastic, sticky.
135–140					CH		CLAY/SILTY CLAY; medium gray, moist, stiff, plastic, sticky.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W5-5(C)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 160 feet

COORDINATES N 338,477.9 E 1,553,704.9
DATE BEGAN 9/13/88
DATE FINISHED 9/15/88
GROUND SURFACE EL. 6.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
140			Bentonite pellets 140.5 to 142.5'		CH		CLAY/SILTY CLAY; medium gray, moist, stiff, plastic, sticky.
145			Centralizer				
150			4" .010 S.S. screen from 145 to 155 ft.		GC		GRAVEL/SAND/CLAY; gravel clasts predominantly sandstone and siltstone fragments, brown, fine, hard, with assorted fine to medium, subround, moderately sorted gravel and fine to medium, subangular to subround, moderately sorted sand in clay; blue gray, moist, stiff to soft, plastic, water production.
155			Centralizer				
			#10 sand		CL		CLAY/SILTY CLAY; dark gray-blue gray, moist to dry, stiff, moderate to slightly plastic.
160			Hole plug				TOTAL DEPTH 160 FEET
			7.9"				
165							
170							
175							
180							
185							
190							
195							
200							
205							
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE W5-5C.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W5-6(A1)

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 20 feet

COORDINATES N 337,751.8 E 1,553,628.1
DATE BEGAN 8/16/88
DATE FINISHED 8/16/88
GROUND SURFACE EL. 9.66 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	#1	60/60	Christy box; 8"x5' standpipe; top of casing; 4" sch. 40 steel casing		CL		SILTY CLAY; dark brown, dry, stiff, non-plastic.
5	#2	60/60	Bentonite/cement grout; Bentonite pellets 6.5 to 8.5 ft.				SILTY SANDY CLAY; medium brown, mottled gray, (discoloration with strong petroluem odor), slightly moist, medium stiff, slight to medium plasticity. ▽ 09:20, 8-16-88
10	#3	60/60	4" .010 S.S. screen from 10 to 15 ft.; Centralizer		GC		SANDY CLAYEY GRAVEL; gray brown, wet, soft, 30% gravel, 1/4-1/2" clasts, clay is moderatly plastic.
					SM		CLAYEY SILTY SAND; wet, very soft, sticky.
15	#4	60/60	#10 sand; Bentonite backfill		CL		SILTY CLAY; medium brown, moist, medium stiff, moderate plasticity.
20							TOTAL DEPTH 20 FEET

12"

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W5-6A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W5-7(A1)

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 70 feet

COORDINATES N 336,816.8 E 1,353,377.6
DATE BEGAN 8/9/88
DATE FINISHED 8/10/88
GROUND SURFACE EL. 13.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0			12" Christy box		SM		SILTY SAND; with gravel, medium brown, dry, medium dense, angular to subrounded, gravel lenses.
	MD#1	7/18	8"x5' standpipe	26,10,16			
			top of casing				SILTY CLAY; brownish black, slightly moist, very stiff, grass roots, moistens and softens, large angular-subrounded gravel clasts throughout.
	MD#2	8/18		4,5,8			
5	MD#3	18/18		5,11,11			SILTY CLAY; medium brown with mottled gray, slightly moist, soft, slight to moderate plasticity. Strong product odor increasing with depth - gray discoloration has gas odor.
	MD#4	12/18		6,12,18	CL		
	S	24/24					
10							▽ 14:30, 8-9-88
	S	60/60	4" sch 40 steel casing				Clay is fractured, discolored gray, with water and odiferous petroleum odor.
					ML		CLAYEY SILT; moderate brown with light gray discoloration, very moist, soft, petroleum odor.
15			Bentonite/ cement grout				SILTY CLAY; moderate brown with mottled gray, discoloration, medium stiff, moderate plasticity, very slight petroleum odor.
	S	60/60					
20							Fractured zone with increasing silt.
	S	60/60			CL		Small sand seam - sand seen along sides of core but not in core.
25							
	S	60/60	Bentonite pellets 26.75 to 28.25'				
30			4" .010 S.S. screen from 31 to 41 ft.				SILTY CLAY; moderate brown, moist, medium stiff, 1/8-1/4" gravel clasts, mudstone.
	S	60/60			GC		SILTY CLAYEY GRAVEL; wet, loose, 1"-1/4" gravels.
35					CL		SILTY SANDY CLAY; moderate brown, moist, medium stiff, slightly plastic.
	S	60/60			GC		SILTY CLAYEY GRAVEL; wet, loose, 1/2-1/4" clasts.
40					CL		SANDY CLAY; moderate brown, moist, medium stiff, slightly plastic.
	S	60/60	#10 sand		GM		SILTY SANDY GRAVEL; moderate brown, wet, loose.
45			Bentonite backfill		CH		SILTY CLAY; gray, moist, very stiff, high plasticity.
	S	60/60			SM		SILTY CLAYEY SAND; gray brown, very moist, medium dense.
50					CL		SILTY CLAY; moderate brown, moist, medium stiff, plastic.
	S	60/60					
55					SM		SILTY SAND; moderate brown, moist(saturated), medium dense, loose.
	S	36/60					SANDY CLAY; with gravel, mottled gray brown, stiff, moderate plasticity.
60							SILTY CLAY; moderate brown, very moist, moderatly stiff, plastic.
	S	60/60			CL-CH		
65							
	S	60/60	12"				
70							

TOTAL DEPTH 70 FEET

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE W5-7A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

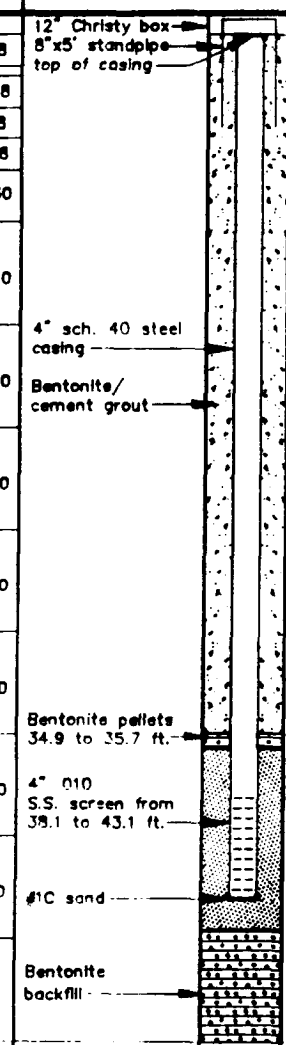
BORING NO. W5-8(A1)

FIELD GEOLOGIST J. Hadsell
EDITED BY D. H. Cox
CHECKED BY J. Hadsell
TOTAL DEPTH 50 ft.

COORDINATES N 337,193.8 E 1,553,499.5
DATE BEGAN 8/5/88
DATE FINISHED 8/8/88
GROUND SURFACE EL. 13.47 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	8/18	10,6,4	GM	SILTY SANDY GRAVEL; medium brown, moist, subangular gravel clasts, 1/4-1/2" diameter clasts.
	MD#2	14/18	4,9,17	CL-CH	SILTY CLAY; dark brown/black, slightly moist, stiff, medium to high plasticity.
5	MD#3	7/18	4,8,10		
	MD#4	11/18	4,5,8		
	S	30/30			SILTY CLAY; brown (showing gray discoloration), moist, low plasticity, mudstone fragments, petroleum odor.
10	S	60/60		SM	SILTY SAND; gray (discolored appearance), wet, fine to medium grained sand, petroleum odor.
				CL	SILTY CLAY; gray brown, moist, soft, moderate plasticity. Grades to a medium brown color at 14 ft.
15	S	60/60			
20	S	60/60		SC	CLAYEY SILTY SAND; gray brown, fine to medium grained, very moist-wet, very soft grades to a loose, silt sand, medium grained.
25	S	60/60		CL	SILTY CLAY; medium brown, moist, medium stiff, moderate plasticity.
30	S	60/60			
35	S	30/60		GW	SANDY GRAVEL; gray brown, medium to coarse grained sand, loose, wet, subrounded gravels 1/8-1/2" clasts.
40	S	60/60		CL	SILTY CLAY; medium brown, moist, stiff, moderate plasticity.
45	S	ND			
50					TOTAL DEPTH 50 FEET
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AUTOCAD FILE: WS-8A.DWG

BORING NO. W5-9(A1)

FIELD GEOLOGIST W. Hopkins
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 28 feet

COORDINATES N 336,107.9 E 1,553,067.7
DATE BEGAN 8/2/88
DATE FINISHED 8/2/88
GROUND SURFACE EL. 13.47

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0			12" Christy box				
	MD#1	9/18	8"x5' standpipe top of casing	6,9,14	OL		SILTY CLAY; dark brown, moist, stiff, low to moderate plasticity, organic-rich.
	MD#2	10/18	4" sch 40 steel casing	6,12,16			PEBBLY CLAY; dark brown, dry to moist, very stiff, low plasticity, organic-rich.
5	MD#3	12/18	Bentonite/ cement grout	9,12,10	CL		SILTY CLAY; med. to lt. brn., wet, med. stiff, low pl. pebbly.
	MD#4	0/18	Bentonite pellets 8.5 to 9.9 ft.	6,9,10	SW		SAND; light brown, wet (saturated), loose, with gravel clasts, medium to coarse grained.
10	S	36/36			CL		SANDY CLAY; medium to light brown, wet(saturated), stiff, low plasticity.
	S	6/24	Centralizer		SM		CLAYEY SILTY SAND; medium brown, wet(saturated), soft, loose, low plasticity.
15	S	60/60	4" .010 S.S. screen from 11.9 to 16.9 ft. Centralizer		CL		SILTY SAND; medium brown, wet, loose. SANDY CLAY; medium brown, wet, medium stiff, low to moderate plasticity.
			#1C sand		SM		CLAYEY SILTY SAND; orange brown, wet, soft, low plasticity.
20	S	60/60			CL		SANDY CLAY; orange brown, wet, medium stiff, low plasticity.
					GW		SILTY SANDY GRAVEL; medium brown, wet, loose.
					CL		SILTY CLAY; medium brown, wet, stiff, moderate plasticity.
25	S	12/60	Bentonite backfill		SM		SILTY SAND; medium brown, wet, loose.
					CL		SANDY CLAY; medium brown, wet, stiff, moderate plasticity.
30			12"				TOTAL DEPTH 28 FEET
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

A:\MOAD FILE W5 9A.DWG

BORING NO. W5-10(A1)

FIELD GEOLOGIST Williams/Hopkins
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 28 feet

COORDINATES N 337,143.2 E 1,553,410.7
DATE BEGAN 8/19/88
DATE FINISHED 8/22/88
GROUND SURFACE EL. 13.47

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	7/18	4,7,9	OH-OL	CLAY; dark brown, moist, medium stiff, moderate plasticity, trace pebbles.
	MD#2	12/18	4,3,5		CLAY; medium brown, moist, very stiff, low to moderate plasticity.
5	MD#3	10/18	6,9,10		SANDY SILTY CLAY; yellow brown, moist, soft, non-plastic.
10	S	60/60		CL	GRAVELLY SILTY CLAY; grayish green, wet, stiff, non-plastic, low plastic.
				SM	SILTY SAND; greenish gray, wet, soft, non-plastic, trace pebbles and cobbles.
15	S	60/60		CL	GRAVELLY SILTY CLAY; greenish gray, wet, soft, low to moderate plasticity.
20	S	42/42		SP	SAND; moderate brown, wet(saturated), loose, fine to medium grained.
				GW	SANDY GRAVEL; grayish brown, wet(saturated), very loose, sand coarsens with depth.
25	S	60/60		CL	SILTY CLAY; yellowish brown, wet, stiff, low plasticity.
30					TOTAL DEPTH 28 FEET
35					
40					
45					
50					
55					
60					
65					
70					

WELL SUMMARY

PROFILE

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W5-10A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

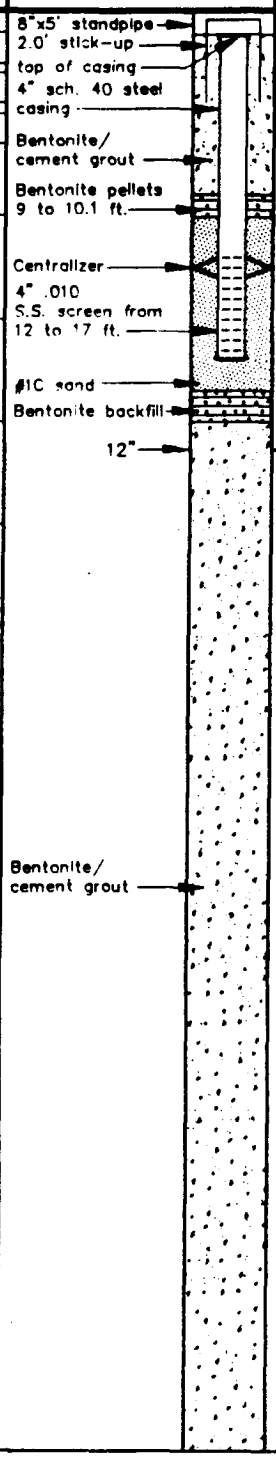
BORING NO. W5-14(A1)

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 70 feet

COORDINATES N 338,214.1 E 1,553,410.7
DATE BEGAN 8/12/88
DATE FINISHED 8/15/88
GROUND SURFACE EL. 7.6 FT.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	6/18	4,5,9	CL	SANDY SILTY CLAY; medium brown, mottled brown black, slightly moist, soft to medium stiff, moderate plasticity.
	MD#2	12/18	4,10,7		
5	MD#3	11/18	4,5,6		
	S	42/42			
10	S	60/60			SANDY SILTY CLAY; gray brown, discolored appearance, petroluem odor, slightly moist, medium stiff, moderate plasticity.
				SP	SAND; gray, wet, loose, medium grained, petroleum odor.
15	S	60/60		CL	SANDY SILTY CLAY; medium brown, mottled gray, moist, medium stiff, moderate plasticity, slight petroleum odor. 3" lens of sand; gray, wet, petroleum odor. SILTY CLAY; moderate brown, moist, medium stiff, moderate plasticity.
20	S	60/60			
25	S	60/60		CL	SANDY SILTY CLAY; moderate brown, moist, medium stiff, moderate plasticity, mudstone fragments.
30	S	60/60			
35	S	60/60			
40	S	60/60		CH	SILTY CLAY; gray brown, moist, very stiff, plastic.
45	S	60/60		CL	SANDY CLAY; gray brown, moist, soft, moderate plasticity.
				CH	SILTY CLAY; gray brown, mottled gray with red oxidation, moist, stiff, plastic.
50	S	60/60			
55	S	60/60		CL	SANDY SILTY CLAY; brown with gray red mottles, moist, soft to very soft, low plasticity.
60	S	60/60		CH	SILTY CLAY; moderate brown, gray mottling, moist, medium stiff, highly plastic.
65	S	60/60			
70					

WELL SUMMARY



PROFILE

TOTAL DEPTH 70 FEET

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

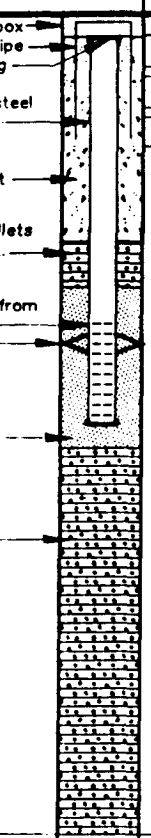
BORING NO. W5-15(A1)

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 40 feet

COORDINATES N 337,958.3 E 1,553,451.5
DATE BEGAN 8/16/88
DATE FINISHED 8/17/88
GROUND SURFACE EL. 10.3 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	9/18	4,4,7	GM	SILTY SANDY GRAVEL; mottled tan, dark brown, dry, loose, non-plastic.
	MD#2	9/18	5,7,12		SILTY CLAY; dark brown, slightly moist, moderate plasticity.
5	MD#3	10/18	5,9,11		
	S	40/40			
10	S	60/60		CL	SILTY CLAY; with gravel, tan brown, moist, small pockets of water, moderate plasticity.
15	S	60/60			SANDY CLAY; medium brown, moist, soft, sticky, moderately plastic.
				SM	SILTY SAND; moderate brown, wet, loose.
20	S	60/60			SILTY SANDY CLAY; medium brown, moist, medium stiff, moderate plasticity.
25	S	60/60			
30	S	60/60		CL	SANDY CLAY; with gravel (10%), tan-gray brown, moist, stiff, moderate plasticity.
35	S	60/60			SANDY SILTY CLAY; tan brown, moist, soft to medium stiff, moderate plasticity. Sand content decreases and grades to a silty clay from 35-40 ft.
40	S	60/60			
					TOTAL DEPTH 40 FEET

WELL SUMMARY



PROFILE

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W5-15A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

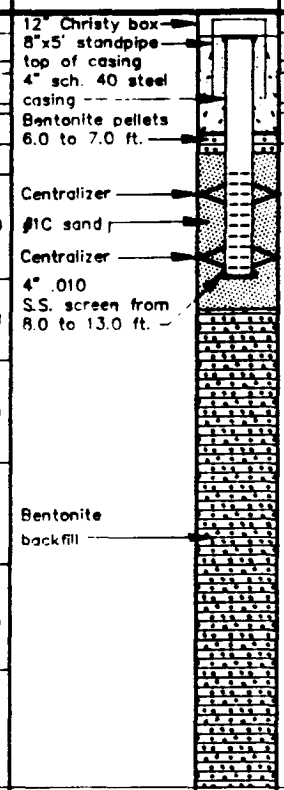
BORING NO. W5-16(A1)

FIELD GEOLOGIST W. Hopkins
EDITED BY J. Hodsoll
CHECKED BY J. Hodsoll
TOTAL DEPTH 37.7 feet

COORDINATES N 336,630.8 E 1,553,299.6
DATE BEGAN 8/15/88
DATE FINISHED 8/16/88
GROUND SURFACE EL 12.05 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	12/16	6,11,20	OH	SILTY CLAY; dark brown, dry to moist, stiff, moderate to high plasticity.
	MD#2	12/16	7,12,14	CL	SILTY CLAY; light brown, dry to moist, stiff, low to moderate plasticity.
5	MD#3	12/16	4,5,8		
	S	18/18			
10	S	28/60		GC	CLAYEY GRAVEL; medium brown, wet(saturated).
15	S	48/48		CL	GRAVELLY SANDY CLAY; medium brown, wet(saturated), stiff low to moderate plasticity.
				SM	SILTY SAND; medium brown, wet(saturated).
20	S	52/60		CL	SANDY CLAY; medium brown, wet, stiff, moderate plasticity.
				SM	SILTY SAND; medium brown, wet, very loose.
25	S			CL	SANDY CLAY; medium gray brown, wet, stiff to very stiff, low plasticity.
30	S	60/60			SANDY GRAVELLY SILTY CLAY; medium brown, wet(saturated), low to moderate plasticity.
35	S	48/60			
40					TOTAL DEPTH 37.7 FEET
45					
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W5-16A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W5-17(A1)

FIELD GEOLOGIST G. Williams
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 26.2 feet

COORDINATES N 338,692.9 E 1,553,138.6
DATE BEGAN 8/17/88
DATE FINISHED 8/18/88
GROUND SURFACE EL. 12.6

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	9/18	9,10,21	OH	SILTY CLAY; dark brown, dry to moist, hard, moderate to high plasticity.
	MD#2	ND	5,12,17		
5	MD#3	ND	4,3,4	CL	SILTY CLAY; light to moderate brown, wet, soft, low plas.
				SM	SAND; light to moderate brown, wet, loose, fine to medium, with silt.
10				CL	SILTY CLAY; olive gray, stiff, moderate plasticity, some pebbles, trace cobbles.
				SM	SAND; light to moderate brown, wet, loose, fine to medium.
15				CL	SANDY SILTY CLAY; greenish gray, wet(saturated), soft, low plasticity.
				SM	SILTY SAND; moderate to orange brown, wet(saturated).
20				CL-CH	SILTY CLAY; orange brown, wet, stiff, moderate to high plasticity.
25				SM	CLAYEY SILTY SAND; yellowish brown, wet, soft.
					TOTAL DEPTH 26.2 FEET

WELL SUMMARY

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE W5-17A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W5-18(A1)

FIELD GEOLOGIST W. Hopkins
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 22.5 ft.

COORDINATES N 336,525.1 E 1,553,246.1
DATE BEGAN 8/10/88
DATE FINISHED 8/10/88
GROUND SURFACE EL. 12.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	12/18	12" Christy box; 8"x5' standpipe top of casing	5,9,15	OH		CLAY; dark brown, moist, medium stiff, high plasticity.
	MD#2	12/18	4" sch. 40 steel casing	6,9,15	CL		SILTY CLAY; medium brown, dry to moist, medium stiff, low plasticity.
5	MD#3	14/18	Bentonite/cement grout	4,7,12	ML		CLAYEY SILT; orange brown, dry to moist, low plasticity.
	S	36/36	Bentonite pellets 8.7 TO 9.9 ft.		CL		GRAVELLY SANDY CLAY; light brown, wet(saturated), medium stiff to soft, low plasticity.
10	S	36/60	4" .010 S.S. screen from 11 TO 16 ft.		ML		SILTY SANDY GRAVELLY SILT; medium to light brown, wet (saturated), soft, non-plastic.
					SM-SW		SILTY SAND/GRAVELLY SAND; medium orange brown, wet (saturated), loose.
15	S	52/60	Centralizer; #10 sand		SW		SAND; medium brown, wet(saturated), loose, fine to medium and coarse grained.
					CL		SANDY SILTY CLAY; medium brown, wet, medium stiff, moderate plasticity.
20	S	42/42	Bentonite backfill		SC		CLAYEY GRAVELLY SAND; medium brown, wet, low plasticity.
					SP		SAND; medium brown, wet, loose, medium to coarse grained.
					CL		SANDY GRAVELLY SILTY CLAY; medium brown, wet, stiff, moderate plasticity.
							TOTAL DEPTH 22.5 FEET

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

A:\McCAD FILE\ [illegible] 18A.DWG

BORING NO. W5-19(A1)

FIELD GEOLOGIST W. Hopkins
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 41 feet

COORDINATES N 338,583.0 E 1,553,093.2
DATE BEGAN 8/3/88
DATE FINISHED 8/4/88
GROUND SURFACE EL. 12.5 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	6/18	12" Christy box; top of casing; 8"x5' standpipe	5,9,12	OH	PEBBLY CLAY; black, moist, stiff, high plasticity, organic-rich.
	MD#2 MD#4 dup	12/18		3,12,14		
5	MD#3	12/18	4" sch. 40 steel casing	5,7,10	SM	SILTY CLAYEY SAND; light brown, moist to wet, with pebbles.
10	S	48/60	Bentonite/cement grout		CL	SANDY SILTY CLAY; light greenish brown with red, wet, medium stiff, moderately plasticity. SANDY PEBBLY SILTY CLAY; medium gray, wet (saturated), strong petroleum odor.
					SM	SILTY SAND; medium gray, wet, loose.
15	S	60/60			CL	SILTY CLAY; medium gray with orange mottling, wet, very soft, moderate plasticity, strong petroleum odor.
					SM	SILTY SAND; orange brown mottled, moist to wet, medium dense.
20	S	60/60			CL	SANDY SILTY CLAY; orange to brown mottled, wet, very stiff, low plasticity.
			Bentonite pellets 22.8 to 24.2 ft		SC	CLAYEY SAND; medium orange brown, wet (saturated)
25	S	60/60	Centralizer		CL	SANDY SILTY CLAY; medium orange brown, wet, stiff, low plasticity.
					ML	CLAYEY SILT; medium orange brown, wet, stiff, low plasticity.
30	S	30/60	4" .010 S.S screen from 27 to 37 ft		SM	SILTY SAND; medium orange brown, wet (saturated), dense. SILTY SAND; orange brown and gray, wet (saturated), fine to medium grained sand.
35	NO REC.	0/36			SW	SAND; medium brown, wet (saturated), medium dense, fine to coarse.
	S	60/60	Centralizer; #10 sand; Bentonite backfill		CL	SILTY CLAY; medium brown with gray and orange spots, wet, stiff, moderate plasticity.
40						TOTAL DEPTH 41 FEET
45						
50						
55						
60						
65						
70						

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB5-1

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 45 feet

COORDINATES N 337,745.0 E 1,553,637.4
DATE BEGAN 8/2/88
DATE FINISHED 8/2/88
GROUND SURFACE EL. 9.6 ft.

WELL SUMMARY: (NO WELL COMPLETED)

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	10/18	4,8,16	CH	SILTY CLAY; dark brown, moist, stiff, high plasticity.
	MD#2	11/18	4,6,8	ML	CLAYEY SILT; tan, moist, stiff, low plasticity.
5	MD#3	15/18	4,6,9		
	MD#4	18/18	4,6,9	CL	SILTY CLAY; gray brown with discolored gray patches, moist, soft, medium plasticity, fuel odor.
	S	24/24			
10				SM	SILTY SAND; gray, discolored, wet, med. dense, fuel odor.
	S	60/60		CL	SILTY CLAY; tan gray, grading to brown, moist, medium soft, moderate plasticity.
				SM	SILTY SAND; tan, wet, medium dense.
15	S	60/60		CL	SILTY CLAY; brown medium, moist, medium stiff, moderate plasticity.
20				ML	SANDY SILT; medium brown, very moist, very stiff.
	S	60/60		CL-CH	SILTY CLAY; medium brown, moist, stiff, moderate to high plasticity.
25	S	60/60			
30	S	60/60			
35	S	60/60			
40	S	60/60			
				SM	SILTY SAND; very moist, soft, medium grained.
45				CL-CH	SILTY CLAY; gray brown, moist, stiff, moderate to high plasticity.
					TOTAL DEPTH 45 FEET 8" diameter boring
50					
55					
60					
65					
70					

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: SB5-1.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 6

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO BORINGS OR WELLS WERE DRILLED AT SITE 6

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 7

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#24

FIELD GEOLOGIST J. Hodzali
EDITED BY D. H. Cox
CHECKED BY E. Wessner
TOTAL DEPTH 257 ft.

COORDINATES N 336,753.9 E 1,551,962.9
DATE BEGAN 9/30/88
DATE FINISHED 10/4/88
GROUND SURFACE EL. 11.19 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0							FILL: silty sand, gravels and clay; dark brown to black, moist, solvent odor, clay; very stiff and plastic, sand; coarse and angular. Description based on auger cuttings.
5							
10	#1	0/60			CL		No recovery. SANDY CLAY; tan brown, moist, soft, sticky. Logged from shaker.
15	#2	0/60					No recovery. Gravel and coarse sand; dark gray/multicolored, angular, loose, multilithic, seashell fragments. Logged from shaker.
20	#3	0/60					
25	#4	0/60					
30	#5	0/60					
35	#6	0/60					
40	#7	0/60					
45	#8	0/60					
50	#9	0/60			CL		No recovery. SANDY CLAY; tan brown, moist, soft, sticky. Logged from shaker.
55	#10	24/60			CH		SILTY CLAY; tan brown, moist, stiff, very plastic.
60	#11	0/60			CL		No recovery. SILTY CLAY. Logged from shaker.
65	#12	38/60			CL		SANDY CLAY; gray brown, moist, very stiff, moderate plasticity.
70	#13	0/60			SC		No recovery. CLAYEY SAND/SAND. Logged from shaker.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB24(MF28)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#24

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY E. Wessner
TOTAL DEPTH 257 ft.

COORDINATES N 336,753.9 E 1,551,962.9
DATE BEGAN 9/30/88
DATE FINISHED 10/4/88
GROUND SURFACE EL. 11.19 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	0/60			SC		No recovery. SANDY CLAY/SAND; medium grained. Logged from shaker.
75	#14	0/60					
80	#15	0/60					No Recovery. CLAYEY SAND/SAND; medium grained, some coarse grained. Logged from shaker.
85	#16	0/60					
90	#17	0/60					No recovery. CLAYEY SAND/SAND; medium grained. Logged from shaker.
95	#18	0/60					Fine sands in desander.
100	#19	0/60					
105	#20	0/60					No recovery. CLAYEY SAND/SAND; medium coarse grained. Logged from shaker.
110	#21	0/60					
115	#22	0/60					
120	#23	33/60		2.0–2.5	CL		SILTY CLAY; light olive gray, mottled gray, moderately moist, moderately stiff, moderate plasticity.
125	#24	33/60					SILTY CLAY; dark greenish gray, moderately moist, moderately stiff, moderate plasticity.
130	#25	60/60		3.0–3.5			SILTY CLAY; light gray with mottled olive brown, moderately moist, stiff, moderate plasticity.
135	#26	60/60		3.0–3.5			
140	#27	0/60			SC		No recovery. SAND/CLAY; medium grained, some gravel. Logged from shaker.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB24(MF28)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#24

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY E. Wessner
TOTAL DEPTH 257 ft.

COORDINATES N 336,753.9 E 1,551,962.9
DATE BEGAN 9/30/88
DATE FINISHED 10/4/88
GROUND SURFACE EL. 11.19 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	0/60			SC		
145	#28	32/60		2.0–3.0	CL		SILTY SANDY CLAY; medium gray, blueish gray, moderately moist, moderatetly stiff, moderate plasticity.
150	#29	60/60					
155	#30	0/60			SC		No recovery. CLAYEY SAND. Logged from shaker.
160	#31	0/60					
165	#32	36/60		3.5	CL		SILTY CLAY; light gray, mottled olive brown, moist to moderately moist, stiff, moderate plasticity.
170	#33	0/60			SC–SW		No recovery. CLAYEY SAND/SAND; medium to coarse grained, angular. Logged from shaker.
175	#34	0/60					
180	#35	0/60					No recovery. SAND; medium to coarse grained, angular. Logged from shaker.
185	#36	0/60					
190	#37	0/60					
195	#38	50/60		2.0	CL–CH		SILTY CLAY; dark greenish gray, moderately moist, moderately stiff, moderate plasticity. SILTY CLAY; light gray, mottled moderate yellow, moderately moist, moderate to slightly stiff, plastic. SILTY CLAY/CLAY; medium dark gray, moist, moderately stiff, plastic. SILTY CLAY; grayish green, moderately moist, stiff to very stiff, moderate plasticity.
200	#39	46/60		3.0–4.0			
205	#40	0/60			SC–SW		No recovery. SAND; medium grained, angular to subangular, some silty clay content. Logged from shaker.
210	#41	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB24(MF28)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#24

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY E. Wessner
TOTAL DEPTH 257 ft.

COORDINATES N 338,753.9 E 1,551,962.9
DATE BEGAN 9/30/88
DATE FINISHED 10/4/88
GROUND SURFACE EL. 11.19 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	0/60			SW-SC		No recovery. SAND; medium grained, subangular, some fine gravels. Logged from shaker.
215	#42	0/60					
220	#43	0/60					
225	#44	0/60					
230	#45	20/60		3.5-4.0	CL		SILTY CLAY; dark greenish gray, slightly moist, very stiff, slightly plastic. SANDY CLAY; dark greenish gray, moist, very soft, moderate plasticity.
235	#46	60/60		3.5			SILTY CLAY; medium light gray, moderately moist, stiff, slightly plastic.
240	#47	0/60			SW		No recovery. SAND; fine to coarse, poorly sorted. Logged from shaker.
245	#48	60/60		3.5	CL		SILTY CLAY; medium gray, slightly moist, very stiff, slightly plastic.
250	#49	0/60			SC		No recovery. SAND/CLAYEY SAND. Logged from shaker.
255	#50	60/60		4.0-5.0	CL		SILTY CLAY; moderate yellow, mottled gray, moderately moist, stiff, slightly plastic.
260							TOTAL DEPTH 257 FEET 4-1/2" diameter boring
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB24(MF28)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

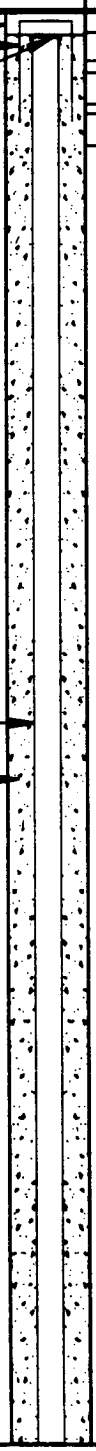
BORING NO. W7-16(C)

FIELD GEOLOGIST E. Wessner
EDITED BY J. B. Owen
CHECKED BY S. Bartling
TOTAL DEPTH 167 feet

COORDINATES N 336,745.1 E 1,551,965.7
DATE BEGAN 11/7/88
DATE FINISHED 11/9/88
GROUND SURFACE EL. 11.15 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0					Asphalt.
	MD#1	9/18	7,6,5	CL	SANDY CLAY; light brown, slightly moist, stiff, low plasticity.
	MD#2	18/18	5,4,4		SILTY SANDY CLAY; black, slightly moist, hard, low plasticity.
5	MD#3	18/18	4,3,4	SC	CLAYEY SAND; yellowish brown, moist, unconsolidated, moderately sorted.
				CL	GRAVELLY SILTY CLAY; dusky yellow, moist, soft, medium to high plasticity, gravel size calcite inclusions.
10				GW	GRAVEL; wet, poorly sorted, fine to coarse.
				CL	SANDY CLAY; dusky yellow, moist, very soft, high plasticity.
15					
20				SC	CLAYEY SAND/GRAVEL; wet, slurry, medium grained sand with some fine sand and gravel.
25				CL	SILTY CLAY; dusky yellow, moist, very soft, medium plasticity, inclusions of sand.
30				SW	SAND/GRAVEL; poorly sorted, angular, wet, medium grained sand, fine gravels.
35				CL-CH	SANDY CLAY; dusky yellow, mottled gray, moist, very stiff, slightly plastic, fine to coarse sands, with coarse sand and fine gravel interbeds.
40					
45					
50					
55					SILTY CLAY; brown, moist, soft, high plasticity.
					SILTY CLAY/CLAY; medium gray, moist, stiff, high plasticity.
60				SW	GRAVELLY SAND; wet, poorly sorted, sand; fine grained, gravel; coarse to fine, angular.
65				CH	SILTY CLAY/CLAY; light gray, moist, soft, high plasticity.
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W7-16C(MF25)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W7-16(C)

FIELD GEOLOGIST E. Wessner
EDITED BY J. B. Owen
CHECKED BY S. Bartling
TOTAL DEPTH 167 feet

COORDINATES N 336,745.1 E 1,551,965.7
DATE BEGAN 11/7/88
DATE FINISHED 11/9/88
GROUND SURFACE EL. 11.15 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70–80					CH		SILTY CLAY/CLAY; light gray, moist, soft, high plasticity. Some interbedded sands.
80–90					SC		SAND; wet, flowing mixture, some angular gravels.
90–95					CL		SILTY CLAY; olive gray, moist, very soft, low plasticity.
95–100			4" sch. 40 steel casing; Bentonite/ cement grout		SP		SAND; very wet, moderately sorted, subround, very fine to medium grained.
100–140			Bentonite pellets 130 to 139 ft.; #1C sand		CL–CH		SILTY SANDY CLAY; light brown, moderately moist, very soft, low plasticity. SILTY CLAY; yellowish brown, moist, very soft, medium plasticity, stringers of fine sand. CLAY/SILTY CLAY; greenish gray, moist, very soft, high plasticity, very sticky. CLAY/SILTY CLAY; olive gray to gray, moist, very soft, high plasticity. CLAY/SILTY CLAY; olive gray to gray, moist, stiff, high plasticity. CLAY/SILTY CLAY; dark greenish gray, moderately moist, hard, medium plasticity.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: W7-16C(MF25)

BORING NO. W7-16(C)

FIELD GEOLOGIST E. Wessner
EDITED BY J. B. Owen
CHECKED BY S. Bartling
TOTAL DEPTH 167 feet

COORDINATES N 336,745.1 E 1,551,965.7
DATE BEGAN 11/7/88
DATE FINISHED 11/9/88
GROUND SURFACE EL. 11.15 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
140–165			Centralizer; 4" .010 S.S. screen from 159.2 to 164.2 ft.; Centralizer; #1C sand	9.6"	CL		CLAY/SILTY CLAY; dark greenish gray, moderately moist, hard, medium plasticity.
					SW		SAND; very wet, poorly sorted, very fine grained, with medium grained, unconsolidated, subangular to subround sand.
					CH		CLAY/SILTY CLAY; dusky yellow to green, moist, soft, high plasticity.
165–210							TOTAL DEPTH 167 FEET

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W7-16C(MF25)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

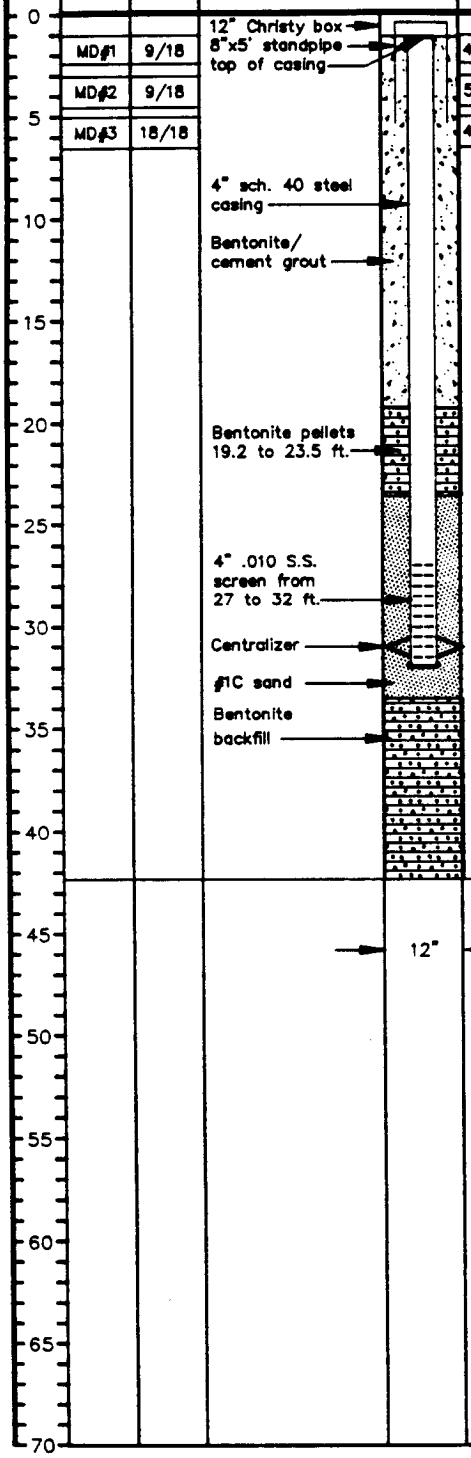
BORING NO. W7-18(A1)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 42.3 feet

COORDINATES N 336,879.2 E 1,552,435.3
DATE BEGAN 09/27/88
DATE FINISHED 09/27/88
GROUND SURFACE EL. 11.19 ft.

SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
			FILL	9" of runway concrete with 1" of gravel fill.
MD#1	9/18	4/9/10	CL-CH	SILTY CLAY; black, moist, stiff, plastic to very plastic.
MD#2	9/18	5/7/12	CL-ML	SILTY SANDY CLAY; dusky yellow, slightly moist, soft and crumbly, slight plasticity, angular gravels.
MD#3	18/18	4/6/12	CL-ML	SILTY SANDY CLAY; dusky yellow, mottled gray, slightly moist, moderately stiff, slight plasticity, abundant gravel, angular inclusions, grading into
				SANDY CLAY; dusky yellow, moist, soft, small 6" bed of fine to medium grained sands.
			SP	SAND; grey to black in overall color, fine to medium grained, moderately well sorted, moist to wet, abundant gravel inclusions.
			CL	SILTY CLAY; dusky yellow, moist, soft, moderately plastic, slightly sandy. SANDY CLAY; olive grey, moist, soft, slightly plastic. SILTY CLAY; olive grey, moderately moist, soft, moderately plastic, rounded gravel inclusions, grading into a more broken and disturbed zone, more crumbly.
				SILTY CLAY; olive grey, moderately moist, stiff, moderately plastic with sandy oxidized nodules, grading into sandy clay.
			CL-GM	SANDY CLAY; dark yellowish orange mottled grey, moist, moderately stiff, slightly to moderately plastic, increasing gravels with depth.
			GM	SANDY SILTY GRAVEL; subangular to subrounded gravels, wet, very poorly sorted, medium grained sand.
			CL	SILTY CLAY; mottled light grey to medium yellow, moist, stiff, moderately plastic, few coarse inclusions. SILTY SANDY CLAY; light olive brown, moderately moist, soft, slightly plastic with stringers of sand, grading into a more broken soil, moist to wet, more silty clay, plastic, moderately firm. At 36-37' less broken silty clay.
			SC	SILTY CLAY; medium olive brown, medium moist, moderately stiff, moderately plastic.
			CL	CLAYEY SAND; moist to wet, very soft, fine to medium grained.
				SILTY CLAY; moderately olive brown, moderately moist, firm, moderately plastic.

TOTAL DEPTH 42.3 FEET.



DRILLING CO.: Water Development Co.
DRILLING METHOD: Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

'EE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: W7-18A(MF-27)

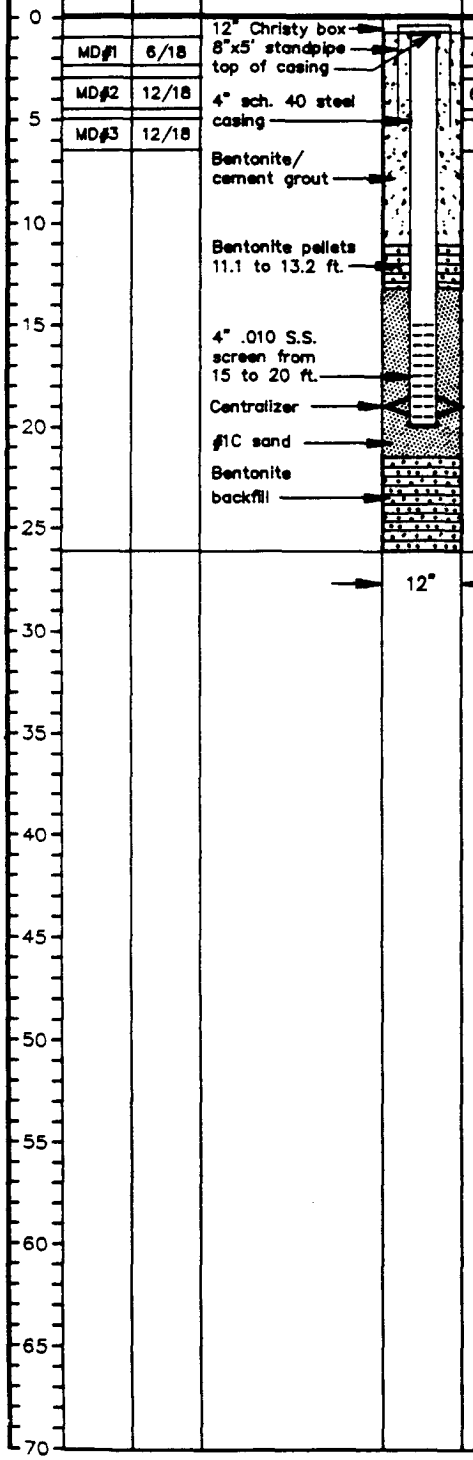
BORING NO. W7-19(A1)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 26.1 feet

COORDINATES N 337,991.9 E 1,552,000.7
DATE BEGAN 09/23/88
DATE FINISHED 09/26/88
GROUND SURFACE EL. 9.40 ft.

SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
			FILL	concrete (8") FILL: gravels. SANDY CLAY; medium brown, slightly moist, slightly firm.
MD#1	6/18	4,10,11		
MD#2	12/18	6,11,12	SC	CLAYEY SAND; blueish grey to orangish brown, moist, moderately stiff, non plastic, some gravels.
MD#3	12/18	4,7,11	CH	SANDY GRAVELLY CLAY; black to olive grey, moderately moist, stiff, plastic.
			GM-SC	SANDY GRAVEL/CLAYEY SAND; olive grey, wet, clear quartz, fine to medium grained with gravels.
			CL-CH	SILTY CLAY; dusky yellow, moist, soft, plastic to very plastic, coarse angular siltstone inclusions.
			CL	SILTY CLAY; dusky yellow, very moist to wet, stiff, non-plastic, very fractured, no slickensides.
			GC	SANDY GRAVEL; medium yellowish brown, wet, very poorly sorted, subrounded, minor clay content.
			SW	SAND; tan, wet, very fine to medium grained with interbedded gravel zones; black subrounded and subangular.
			CH-SC	CLAY/SILTY CLAY; yellowish brown, moderately moist, moderately stiff, plastic, grading into CLAYEY SAND; moist, very soft, fine to medium grained.
			CL	SILTY CLAY; olive brown, moist, moderately stiff, low plasticity, coarse siltstone inclusions throughout.

TOTAL DEPTH 26.1 FEET



DRILLING CO.: Water Development Co.
DRILLING METHOD: Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

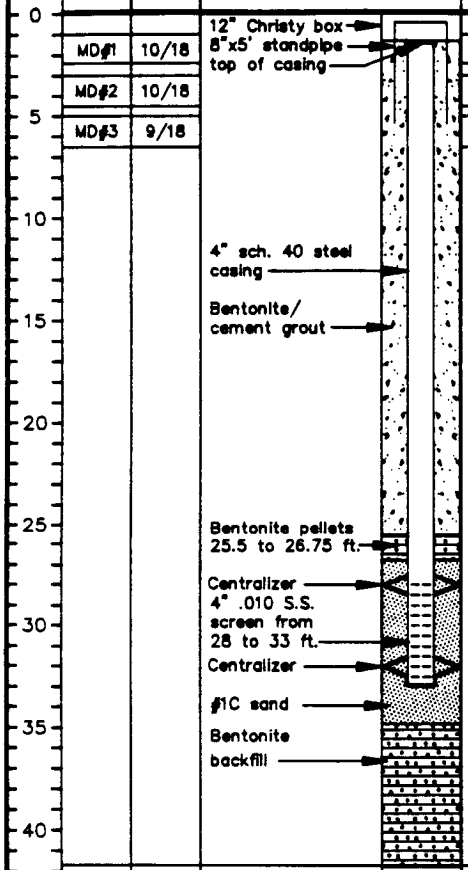
AutoCAD FILE W7-19A(MF-26)

BORING NO. W7-20(A1)

FIELD GEOLOGIST G. L. Williams
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 41.7 feet

COORDINATES N 337,581.6 E 1,552,681.1
DATE BEGAN 9/16/88
DATE FINISHED 9/20/88
GROUND SURFACE EL. 10.51 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0				SC	CLAYEY SAND; moist to dry, loose, fine to medium with gravel, pebbles and some cobbles.
	MD#1	10/18	4,6,8	CL-CH	SANDY SILTY CLAY; dusky yellowish brown, moist to dry, loose, low plasticity.
	MD#2	10/18	4,6,2		SILTY CLAY; brownish black, moist, stiff, medium to high plasticity.
5	MD#3	9/18	4,1,3	CL	SILTY SANDY CLAY; pale yellowish brown, moist, stiff, low to medium plasticity.
10					SILTY SANDY CLAY; grayish orange, wet, stiff, low plasticity, trace cobbles.
15				SM	SILTY SAND; yellowish brown to grayish orange, wet, soft, loose, medium to fine grained.
				CL	SILTY SANDY CLAY; grayish orange, damp, very stiff, low plasticity.
				SM	SILTY SAND; dark yellowish brown, wet, soft, medium to fine.
20				CL	SILTY SANDY CLAY; light olive gray to light brown, damp, soft to stiff, low plasticity.
					SILTY SANDY CLAY; moist, stiff.
				SM	SILTY SAND; dark yellowish brown, wet, soft, loose, medium to fine.
25				CL	SILTY SANDY CLAY; moist, soft to stiff, low plastic, trace gravel. SILTY CLAY; light olive brown, mottled tan, moist, stiff, moderate plasticity, inclusions of medium grained sandy material.
30				GW	SANDY GRAVEL; wet, fine to coarse, sand; subangular, poorly sorted, medium to very coarse.
				CL	SILTY CLAY; light tan-brown, moderately moist, stiff, moderately plastic, gravel inclusions, grading to clayey sand.
35				SC	CLAYEY SAND; tan brown, orange tint, moist, slightly stiff, slightly plastic.
40				CL	SILTY CLAY; gray mottled orangish brown, moist, very stiff, slightly plastic, coarse sand inclusions.
45					TOTAL DEPTH 41.7 FEET
50					
55					
60					
65					
70					



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W7-20A(MF26)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

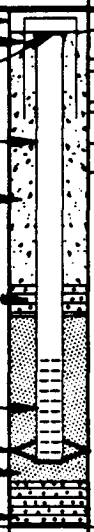
BORING NO. W7-21(A1)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 25.3 feet

COORDINATES N 337,678.1 E 1,551,472.9
DATE BEGAN 09/21/88
DATE FINISHED 09/22/88
GROUND SURFACE EL 7.86 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0				FILL	4" asphalt then a gravelly fill material.
	MD#1	6/18	4,9,16	CL	SILTY CLAY; grey black, slightly moist, moderately stiff, moderately plastic, with light gray, moderately stiff to slightly stiff, medium grained inclusions.
	MD#2	10/18	6,10,15		
5	MD#3	18/18	4,6,9		SILTY SANDY CLAY; dusky yellow, moist, soft, moderately plastic, medium grained inclusions.
	MD#4	15/18	3,5,8		
10					SILTY CLAY; medium yellow to brown, mottled gray, moist to wet around inclusions, plastic, soft, inclusions of coarse to medium grained material.
15				CL-SW	SANDY CLAY; dark yellowish orange, mottled light grey, moist to very moist, moderately firm, moderately plastic, several 6" interbedded sand zones, wet, fine to medium grained clean, sub rounded, wet.
20				SW-GM	SAND; tan, wet, fine to medium grained, subrounded, grading into gravelly sand, angular to subangular.
25				CL	SILTY CLAY; pale yellowish orange, moderately moist, firm to very firm, moderately plastic, siltstone inclusions throughout.
					TOTAL DEPTH 25.3 FEET

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: W7-21A(MF27)

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 8

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#25

FIELD GEOLOGIST R. Duncan
EDITED BY E. Weisner
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 338,975.3 E 1,547,877.4
DATE BEGAN 10/11/88
DATE FINISHED 10/12/88
GROUND SURFACE EL. 7.72 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					FILL		Asphalt, fill and gravel.
5					CL		CLAY; greenish black, soft, dense, slight hydrocarbon odor.
					GM		GRAVEL; medium gray, loose.
10	#1	0/60			CL		CLAY; pale yellowish brown, low to medium plasticity.
15	#2	0/60					
20	#3	9/60		1.5			CLAY; medium dark gray, stiff, medium plasticity, trace, sand.
25	#4	0/60					
30	#5	0/60			GM		GRAVEL; dark gray, subangular to subround, predominantly 1/8" with some 1/4" up to 3/4" diameter, some sand and silt.
35	#6	0/60					
40	#7	0/60			CL		CLAY; pale yellowish brown, medium stiff, medium plasticity, trace silt and sand.
45	#8	23/60		2.25			Increasing sand content.
50	#9	0/60			GM		GRAVEL; brownish black, loose, some silt and sand.
55	#10	19/60		2.0–2.5	CL		CLAY; pale yellowish brown with medium gray patches, medium stiff, medium to low plasticity, some silt.
60	#11	0/60			GM		No recovery. GRAVEL; brownish black, loose, subround, predominantly 1/4" diameter. Logged from shaker.
65	#12	0/60					
70	#13	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB25(MF-28)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#25

FIELD GEOLOGIST R. Duncan
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 338,975.3 E 1,547,877.4
DATE BEGAN 10/11/88
DATE FINISHED 10/12/88
GROUND SURFACE EL. 7.72 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	0/60			GM		No recovery. GRAVEL; brownish black, loose, subround, predominantly 1/4" diameter, some shell fragments, interbedded clay layers. Logged from shaker.
75	#14	0/60					
80	#15	0/60					
85	#16	0/60					
90	#17	0/60					No recovery. GRAVEL; brownish black with some redish, brown, and white loose, gravels predominantly 1/4" to 1/2", subangular, trace of shell fragments. Logged from shaker.
95	#18	0/60					
100	#19	0/60					
105	#20	0/60					No recovery. GRAVEL with 30% silt and sand. Logged from shaker.
110	#21	0/60					
					CL		SILTY CLAY; yellowish brown, trace sand, interbedded with gravel.
115	#22	21/60			GM		No recovery. GRAVEL; brownish black, loose, with clay; yellowish brown to light olive brown, silty.
120	#23	0/60					
125	#24	36/60			CL		CLAY; dark greenish gray, soft to medium stiff, medium plasticity.
130	#25	41/60					
135	#26	60/60					CLAY; dark greenish gray, soft to medium stiff, medium plasticity, trace gravel, clay becomes stiffer.
140	#27	0/60					No recovery. CLAY; gravel lenses. Logged from shaker.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB25(MF-28)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#25

FIELD GEOLOGIST R. Duncan
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 338,975.3 E 1,547,877.4
DATE BEGAN 10/11/88
DATE FINISHED 10/12/88
GROUND SURFACE EL. 7.72 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	0/60			CL		No recovery. CLAY; medium blueish gray. Logged from shaker.
145	#28	0/60					
150	#29	60/60					CLAY; medium blueish gray, medium stiff, medium plasticity, very sticky.
155	#30	0/60					No recovery. CLAY; medium blueish gray, medium stiff, medium plasticity, very sticky. Logged from shaker.
160	#31	28/60			CL		SILTY CLAY; olive gray, medium stiff, low plasticity, trace sand to clayey sand.
165	#32	60/60					CLAY; medium blueish gray, medium stiff, medium plasticity, very sticky.
170	#33	40/60					
175	#34	0/60					No recovery. CLAY; sand lenses. Logged from shaker.
180	#35	0/60			SC-SM		No recovery. SAND; brownish black, loose, coarse sand, trace gravels, some silt and clay. Logged from shaker.
185	#36	0/60					
190	#37	0/60					
195	#38	0/60					No recovery. SAND/GRAVEL; subangular to subrounded. Logged from shaker.
200	#39	0/60					
205	#40	60/60			CL		CLAY; medium blueish gray, soft, medium plasticity.
210	#41	0/60					No recovery. CLAY; sand and gravel lenses. Logged from shaker.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#25

FIELD GEOLOGIST R. Duncan
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 338,975.3 E 1,547,877.4
DATE BEGAN 10/11/88
DATE FINISHED 10/12/88
GROUND SURFACE EL. 7.72 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	0/60			CL		No recovery. CLAY; olive gray, soft, low plasticity, trace silt. Logged from shaker.
215	#42	60/60					
220	#43	0/60			SC-GM		No recovery. CLAYEY SAND AND GRAVEL. Logged from shaker.
225	#44	0/60					
230	#45	0/60					
235	#46	0/60					
240	#47	0/60					No recovery. SAND/GRAVEL; brownish black, loose, coarse, trace silt and clay. Logged from shaker.
245	#48	0/60					
250	#49	60/60			CL		CLAY; olive gray to medium blueish gray, medium stiff, medium plasticity, trace sand.
255							Stop coring @ 252 ft.
260							TOTAL DEPTH 257 FEET 4-1/2" diameter boring
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB25(MF-28)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#26

FIELD GEOLOGIST R. Duncan
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 338,741.2 E 1,547,844.5
DATE BEGAN 10/7/88
DATE FINISHED 10/10/88
GROUND SURFACE EL 7.64

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					ML		SANDY SILT; medium brown, dry, low plasticity.
5					CL		No recovery. CLAY; grayish black, slightly moist, medium stiff, medium plasticity. Logged from shaker.
10	#1	0/60			SC		No recovery. SILTY CLAYEY SAND; moderate yellowish brown, soft, low plasticity. Logged from shaker.
15	#2	0/60					
20	#3	0/60					No recovery. SILTY CLAYEY SAND; moderate yellowish brown, soft, low plasticity. Logged from shaker.
25	#4	0/60					
30	#5	0/60					
35	#6	0/60					No recovery. SAND; moderate yellowish brown, coarse, trace silt and clay. Logged from shaker.
40	#7	0/60					
45	#8	0/60					
50	#9	34/60		4.5	CL		CLAY; yellowish brown, medium plasticity, trace silt and sand.
55	#10	0/60			CL		No recovery. CLAY; light olive gray, medium stiff, medium plasticity. Logged from shaker.
60	#11	0/60					
65	#12	32/60		3.5	CL		CLAY; light olive gray, medium stiff, medium plasticity.
70	#13	0/60			CL		No recovery. CLAY; light olive gray, medium stiff, medium plasticity. Logged from shaker.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE MF-GB26(MF-28)

BORING NO. GB#26

FIELD GEOLOGIST R. Duncan
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 338,741.2 E 1,547,844.5
DATE BEGAN 10/7/88
DATE FINISHED 10/10/88
GROUND SURFACE EL. 7.64

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	0/60			CL		No recovery. CLAY; light olive gray, very soft, medium plasticity, trace silt. Logged from shaker.
75	#14	0/60					
80	#15	0/60					
85	#16	0/60					
90	#17	0/60					No recovery. CLAY; light olive gray, very soft, medium plasticity, trace silt. Logged from shaker.
95	#18	0/60			SM		No recovery. SAND; olive gray, loose, trace of coarse sand and silt, subanguiar. Logged from shaker.
100	#19	0/60					Increasing coarse sand.
105	#20	24/60		0.5	CH		CLAY; blue gray, very soft, very plastic.
110	#21	33/60		1.5			CLAY; olive gray, very soft, very plastic.
115	#22	60/60		1.6			
120	#23	60/60		2.75			
125	#24	20/60		2.25			SILTY CLAY; olive gray, very soft, very plastic.
130	#25	0/60			CH		No recovery. CLAY; olive gray, very soft, very plastic. Logged from shaker.
135	#26	0/60					
140	#27	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#26

FIELD GEOLOGIST R. Duncan
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 338,741.2 E 1,547,844.5
DATE BEGAN 10/7/88
DATE FINISHED 10/10/88
GROUND SURFACE EL. 7.64

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	0/60					No recovery. CLAY; olive gray, very soft, very plastic. Logged from shaker.
145	#28	51/60		2.0–3.0	CH		CLAY; olive gray, very soft, very plastic.
150	#29	50/60		2.0–3.0			
155	#30	56/60		2.5	CL		CLAY; olive gray, very soft to medium stiff, moderately plastic.
160	#31	1/60		1.0			
165	#32	3/60		4.5			SILTY CLAY; medium stiff, non-plastic; becoming stiffer.
170	#33	54/60		2.25			CLAY; olive gray, very soft to medium stiff, moderately plastic.
175	#34	0/60			GM		No recovery. SANDY GRAVEL; greenish black, subangular to subrounded, up to 1/8" diameter, loose, trace shell fragments. Logged from shaker.
180	#35	0/60					
185	#36	39/66					No recovery. SANDY GRAVEL; greenish black, loose, gravels up to 1" diameter. Logged from shaker.
190	#37	0/60					
195	#38	0/60		2.0	CL		CLAY; olive gray, medium stiff, moderately plastic.
200	#39	0/60			GM		SANDY GRAVEL with 1 foot thick clay interbeds.
205	#40	10/66		3.7			
210	#41	54/60		3.0	CL		CLAY; olive gray, medium stiff, moderate plasticity.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB25(MF-28)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#26

FIELD GEOLOGIST R. Duncan
EDITED BY E. Wessner
CHECKED BY S. Bartling
TOTAL DEPTH 257 feet

COORDINATES N 338,741.2 E 1,547,844.5
DATE BEGAN 10/7/88
DATE FINISHED 10/10/88
GROUND SURFACE EL. 7.64

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	54/60		3.0	CL		CLAY; olive gray, medium stiff, moderate plasticity.
215	#42	0/60					No recovery. CLAY. Logged from shaker.
220	#43	28/60		3.0	CL		CLAY; olive gray, medium stiff, low to moderate plasticity, trace silt, sand lenses.
225	#44	59/60		2.0–3.0			
230	#45	58/60		2.0			
235	#46	53/60		3.2			
240	#47	26/60		1.7			CLAY; olive gray, medium stiff, low to moderate plasticity, trace silt, sand and gravel lenses.
245	#48	49/60		3.5			
250	#49	45/60		2.5			
255							
260							TOTAL DEPTH 257 FEET 4-1/2" diameter boring
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB25(MF-28)

IT ...Creating a Safer Tomorrow

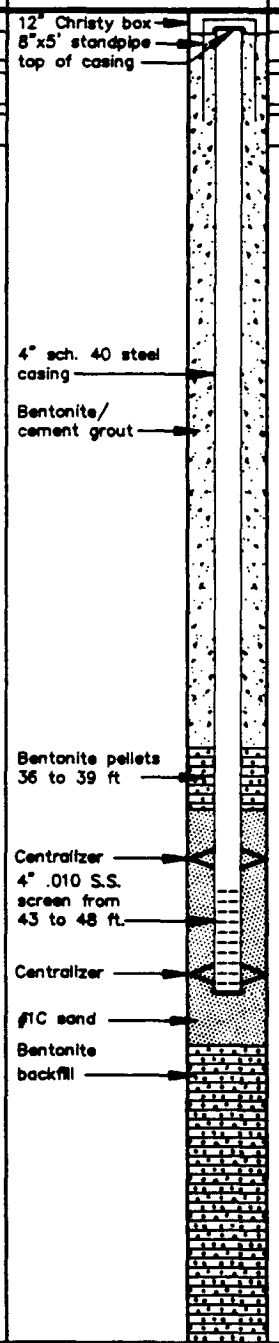
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W8-2(A2)

FIELD GEOLOGIST E. Wessner
EDITED BY D.H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 65 feet

COORDINATES N 338,964.9 E 1,547,887.0
DATE BEGAN 10/24/88
DATE FINISHED 10/25/88
GROUND SURFACE EL. 7.79 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0				FILL	Asphalt.
	MD#1	6/18	2,3,2	CL	SANDY CLAY; black to dark gray, moist, very soft, low plasticity, coarse inclusions.
	MD#2	12/18	3,3,3		
5	MD#3	12/18	3,9,9		SANDY CLAY; olive gray, moist, soft, non plastic, coarse inclusions with a 1' bed of coarse to fine gravel and sand.
10					SILTY CLAY; dark gray to black, moist, stiff to soft, low plasticity, some sand stringers.
15				SC	CLAYEY SAND; fine to coarse grained, angular to subangular, poorly sorted, unconsolidated.
20				SM-SC	CLAYEY SILTY SAND; fine grained, moderately sorted, unconsolidated.
25				CL	SANDY CLAY; dusky yellow, moist, very soft, low to moderately plastic.
30				GW	SANDY GRAVEL; moist, coarse, angular to subangular, poorly sorted, unconsolidated.
				SW	SAND; fine to medium grained.
35				CL-CH	SILTY CLAY; dusky yellow, moist, very soft, medium plasticity.
40				SW	SAND; coarse, poorly sorted, subangular.
				CH	SILTY CLAY; dusky yellow, moist, soft, high plasticity.
45				GC	CLAYEY GRAVEL; wet, coarse, angular, unconsolidated.
50				CH-CL	SILTY SANDY CLAY; light gray, moist, soft, high plasticity.
				SW	SAND; medium to coarse, angular, poorly sorted.
55				CH	SILTY CLAY; dark olive brown, moist, soft, high plasticity.
				GW	SANDY GRAVEL; poorly sorted, unconsolidated, angular coarse sands, fine grained gravels.
60				CL	SILTY SANDY CLAY; dusky yellow, moist, very soft, medium plasticity.
				CH	SILTY CLAY; olive gray, moist, soft, medium to high plasticity.
65				GW	SANDY GRAVEL; fine grained gravels, angular, poorly sorted.
70					TOTAL DEPTH 65 FEET



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE W8-2B1(MF27)

BORING NO. W8-3(C)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S.Bartling
TOTAL DEPTH 166.6 feet

COORDINATES N 338,725.9 E 1,547,848.6
DATE BEGAN 10/28/88
DATE FINISHED 11/1/88
GROUND SURFACE EL. 7.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0			Top of casing; 8"x5' standpipe		FILL		SANDY CLAY; top soil.
					CL		SILTY CLAY; dark grey, moderately moist, very soft, very high plasticity.
5							SILTY, SANDY CLAY; dusky yellow, moist, very soft, medium plasticity.
10							SANDY CLAY; dusky yellow, moist, very soft, low plasticity.
15					CL		SILTY CLAY; light dusky yellow, moist, very soft, medium plasticity, some coarse inclusions.
20							
25							SANDY CLAY; orange brown, moderately moist, very soft, high plasticity.
30							SILTY CLAY; reddish brown, moderately moist, hard, low plasticity, some coarse siltstone inclusions.
			4" sch. 40 steel casing				SANDY CLAY; light brown, moist, very soft, very low plasticity.
35			Bentonite/ cement grout				
40							SILTY CLAY; light grey, moist, soft, medium to low plasticity.
45					GC		CLAYEY GRAVEL; light grey, wet, subangular, appreciable amount of fines.
50					CL		SILTY CLAY; light grey, moist, soft, low plasticity, some coarse inclusions.
55							SILTY CLAY; olive grey, moderately moist, soft, low to medium plasticity, sticky, coarse inclusions.
60							SILTY CLAY; light grey, moist, soft, moderately plastic, coarse inclusions.
65							
70					SC		CLAYEY SAND; very fine grained, wet, slurry.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W8-3C(MF-26)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W8-3(C)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S.Bartling
TOTAL DEPTH 166.6 feet

COORDINATES N 338,725.9 E 1,547,848.6
DATE BEGAN 10/28/88
DATE FINISHED 11/1/88
GROUND SURFACE EL. 7.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70					SC		CLAYEY SAND; wet, slurry, very fine grained.
75, 80					CL-CH		SILTY CLAY/CLAY; light grey, moist, soft to very soft, medium plasticity, sticky.
85, 90, 95					SC-SM		SAND/CLAYEY SAND; wet, loose, fine to medium grained, subrounded, silty clay stringers throughout.
100					CL		SILTY CLAY; grey, moderately moist, stiff, medium plasticity, platy.
105			4" sch. 40 steel casing; Bentonite/ cement grout		SP-CL		SAND; clean, wet, unconsolidated with silty clay stringers, very fine grained.
110, 115					CL		SILTY CLAY; greenish grey, moist, soft to stiff, high plasticity, medium grained inclusions.
120, 125					CL-CH		SILTY CLAY / CLAY; greenish grey, moderately moist, hard, medium plasticity.
130			Centralizer		ML-CL		SANDY SILTY CLAY; light grey, very soft, non plastic, slurry.
135, 140					CL		SILTY CLAY; greenish grey, moderately moist, hard to stiff, medium plasticity, some coarse inclusions.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: WB-3C/MF-26)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W8-3(C)

FIELD GEOLOGIST E. Wessner
EDITED BY D. H. Cox
CHECKED BY S.Bartling
TOTAL DEPTH 166.6 feet

COORDINATES N 338,725.9 E 1,547,848.6
DATE BEGAN 10/28/88
DATE FINISHED 11/1/88
GROUND SURFACE EL. 7.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
140–165			Bentonite pellets 144.1 to 148.1 ft.; Centralizer; 4" .010 S.S. screen from 152 to 162 ft.; Centralizer; #1C sand; Bentonite backfill; 9.6"		CL		SILTY CLAY; light grey, moist, soft, medium plasticity, inclusions of firm crumbly sandy clay nodules.
					SC		CLAYEY SAND; very wet, fine to very fine grained, some gravels; angular, fine grained.
					CL		SILTY CLAY; olive green, moist, soft, medium plasticity.
					GW		GRAVEL; wet, subangular, fine grained with fine sands.
					CL		SILTY CLAY; olive grey, moist, stiff to hard, medium plasticity.
165–210							TOTAL DEPTH 166.6 FEET

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: W8-3C(WE-26)

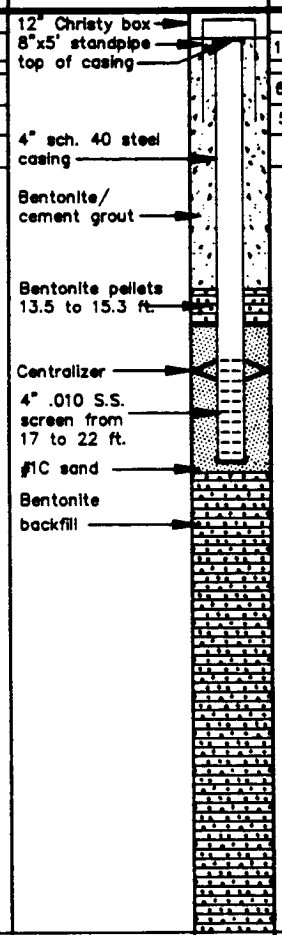
BORING NO. W8-4(A1)

FIELD GEOLOGIST S.Logan
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 45 feet

COORDINATES N 338,701.9 E 1,547,853.3
DATE BEGAN 08/18/88
DATE FINISHED 08/18/88
GROUND SURFACE EL. 7.91 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	8/18	10,7,10	SM	SILTY SAND; brown with black fragments, dry, stiff to very stiff, non plastic.
	MD#2	10/18	6,11,15	ML	SANDY SILT; black, moist, very stiff, low plasticity.
5	MD#3	18/18	5,9,14		SANDY SILT; light gray, dry, stiff to very stiff, non plastic, moisture increases with depth.
	MD#4	15/18	4,8,9		
10					CLAYEY SILT; mottled light brown and light gray, moist, stiff, low to medium plasticity.
				SC	CLAYEY SAND; light and dark brown, wet, fine to medium grained.
15				ML	CLAYEY SILT; mottled light brown and light gray, moist, stiff, moisture increases with depth, mottling grades to include cream coloring with depth.
				SC	CLAYEY SAND; saturated, medium plasticity, fine to medium grained.
20				ML-CH	CLAYEY SILT; grading to sandy silty clay, tan with light gray spots, moist, stiff to very stiff, clay has high to medium plasticity.
25					Some fine quartz gravel..
30				CH	SANDY CLAY; light brown and light gray, very moist, very soft to soft, high plasticity, sand is fine grained with trace of medium grained.
35					
40					SILTY CLAY; light brown and grey, moist, stiff to very stiff high plasticity, trace of sands at 40 ft.
				ML	CLAYEY SILT; light brown with light and dark gray spots, dry to slightly moist, stiff to very stiff, low to no plasticity, trace of medium grained rounded sands throughout.
45					TOTAL DEPTH 45 FEET
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W8-4A(MF-27)

IT ...Creating a Safer Tomorrow

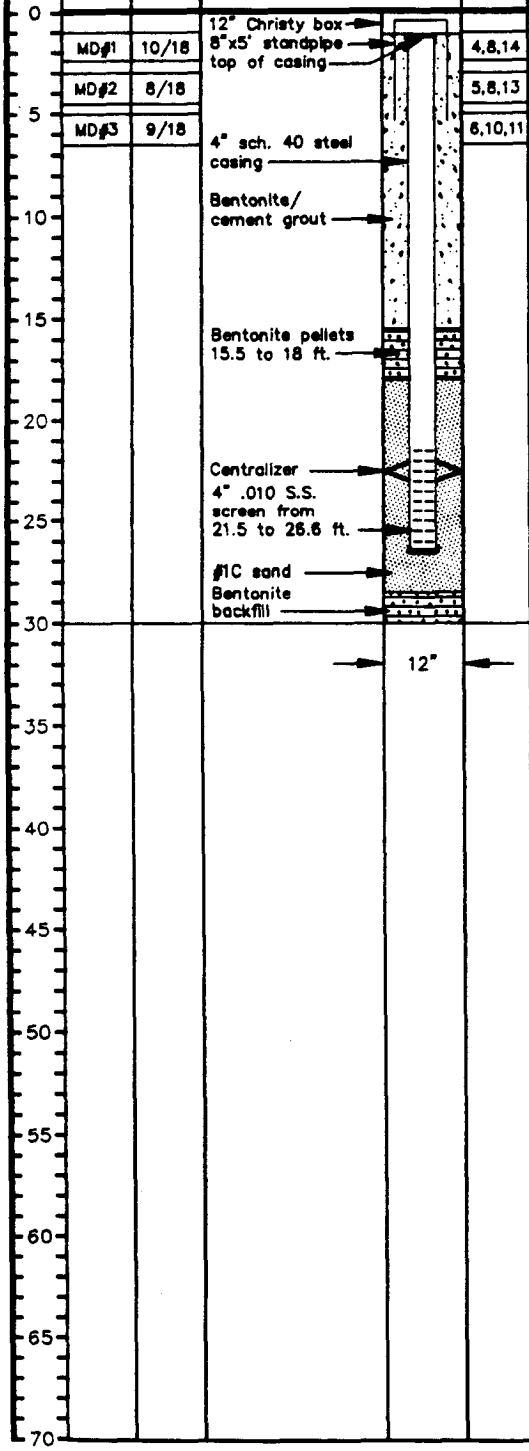
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W8-5(A1)

FIELD GEOLOGIST S.Logan
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 30 feet

COORDINATES N 339,182.4 E 1,547,850.4
DATE BEGAN 08/19/88
DATE FINISHED 08/22/88
GROUND SURFACE EL. 6.55 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0				GM	Top soil, silty gravel.
	MD#1	10/18	4,8,14	ML	SANDY SILT; black and grey, dry to slightly moist, stiff to very stiff, non plastic, sand is medium to fine grained.
	MD#2	8/18	5,8,13		
5	MD#3	9/18	6,10,11		
				CH	SILTY CLAY; light brown to brown grey, slightly moist to dry, stiff, high plasticity, trace of fine gravels and coarse sands.
10				SC	CLAYEY SANDS; light brown and dark grey, sand is fine to very fine, non plastic, wet-saturated, trace of coarse sand.
				ML	CLAYEY SILT; brown and grey, moist, stiff to very stiff, low plasticity, trace of sands (medium and coarse).
15				CL	SANDY CLAY; brown, wet, soft, high plasticity, trace of gravel, sandy gravelly clay; very moist to wet, low to medium plasticity.
20				CH	SILTY CLAY; brown and light grey, moist, stiff, high plasticity.
				SC	CLAYEY GRAVELLY SAND; very wet, sand is coarse to fine grained, gravel is fine, low plasticity, trace of shells.
25				CH	SILTY SANDY CLAY; light brown and grey, moist, soft, high plasticity.
				SC	CLAYEY GRAVELLY SANDS; about 6" thick.
				CH	SANDY SILTY CLAY; brown and grey, very moist, stiff, high plasticity, trace of gravels and coarse sand. (gravel bed at 28 to 28.25 ft.)
30					TOTAL DEPTH 30 FEET.
35					
40					
45					
50					
55					
60					
65					
70					



DRILLING CO.: Water Development Co.
DRILLING METHOD: Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W8-5A(MF-27)

IT ...Creating a Safer Tomorrow

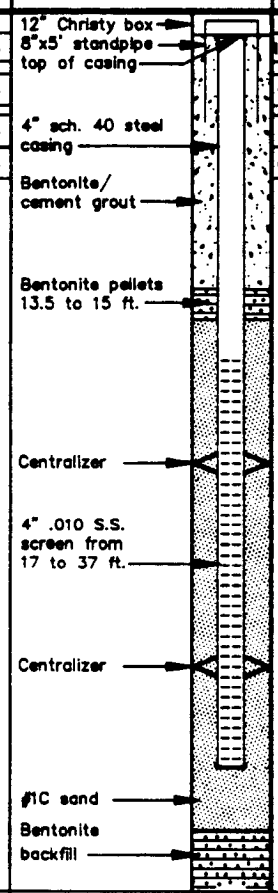
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W8-6(A1)

FIELD GEOLOGIST S.Logan
EDITED BY D. H. Cox
CHECKED BY S. Bartling
TOTAL DEPTH 43 feet

COORDINATES N 338,986.4 E 1,547,845.8
DATE BEGAN 08/23/88
DATE FINISH 08/23/88
GROUND SURFACE EL. 7.42 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0				FILL	Fill; silty sandy gravel.
	MD#1	10/18	12,20,10	GM	SANDY SILTY GRAVEL; dark brown, dry.
	MD#2	10/18	6,10,16		
5	MD#3	15/18	5,9,14	ML	CLAYEY SILT; dark gray to black, moist, very stiff, medium plasticity, trace of sand.
	MD#4	12/18	6,10,10		
				CH	SANDY SILTY CLAY; light brown with gray spots, moist, soft, high plasticity, sand is medium to coarse grained.
10				SM	SILTY SAND; light to dark brown and gray, wet to saturated, non plastic, sand is fine to very fine grained.
				CH	SILTY CLAY; light brown with gray spots, moist, soft, high plasticity, sand is medium to coarse grained. SILTY SANDY CLAY; light brown, moist to very moist, soft to stiff, medium to high plasticity, sand is fine to very fine grn.
15				SM-SW	SILTY SAND; black and dark brown, saturated, plastic, sand is coarse to very fine grained, rounded and subangular, trace of shell fragments, dirty, becomes cleaner with depth, well graded sands.
20				SW-SP	SAND; black and dark brown, wet to saturated, medium to very fine grained, some coarse grained, clean, fine sands and fine gravels, saturated, angular to subrounded, small fraction of silts.
25					
30				GP	SANDY GRAVEL; brown, grey and black, coarse & med grained.
				ML	CLAYEY SILT; gray with brown spots, very moist, very soft to soft, low plasticity, trace of coarse sands.
35				SM	SILTY SAND; gray, wet to saturated, sand is fine to very fine, with trace of medium grained sand.
40				CL	SILTY CLAY; mottled grayish brown, light brown, and light gray, dry to slightly moist, very stiff to hard, medium plasticity, trace of rounded coarse sand, becomes softer and lighter in color with depth.
45					TOTAL DEPTH 43 FEET
50					
55					
60					
65					
70					



DRILLING CO.: Water Development Co.
DRILLING METHOD: Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W8-6A(MF-27)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 9

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#7

FIELD GEOLOGIST C. Wallace
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 260 feet

COORDINATES N 336,983.7 E 1,548,070.6
DATE BEGAN 7/18/88
DATE FINISHED 7/20/88
GROUND SURFACE EL. 14.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SILTY CLAY; light to medium brown, moist, medium stiff, low to medium plastic, top – highly organic.
							Logged from shaker
5	#1	20/60					SILTY SANDY CLAY; medium gray, moist, stiff, medium plastic.
10	#2	4/60			CH		SILTY CLAY; mottled medium brown and light gray, very moist, medium stiff, high plasticity.
15	#3	5/60					
20	#4	2/60			CL		SILTY CLAY; medium gray, moist, low plasticity.
25	#5	17/60					SILTY SANDY CLAY; medium gray, moist, stiff, low to medium plasticity.
30	#6	0/60			SP		SAND; medium to coarse grained.
							Logged from shaker.
35	#7	13/60			CL		SANDY SILTY CLAY; medium brown, wet, medium stiff, low plasticity.
40	#8	8/60					SANDY SILTY CLAY; grayish brown, very moist, medium stiff, low to medium plasticity.
45	#9	20/60					SANDY SILTY CLAY; mottled medium brown and gray, very moist, medium stiff, low to medium plasticity.
50	#10	0/60			SC		CLAYEY SAND; medium grained.
55	#11	14/60			CL-CH		SILTY CLAY; medium brown, very moist, medium stiff, medium to high plasticity.
60	#12	20/60					SILTY CLAY; mottled medium brown and gray, very moist, medium stiff, medium to high plasticity.
65	#13	22/60			CH		SILTY CLAY; medium gray, moist, medium stiff, high plasticity.
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB7.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#7

FIELD GEOLOGIST C. Wallace
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 260 feet

COORDINATES N 336,983.7 E 1,548,070.8
DATE BEGAN 7/18/88
DATE FINISHED 7/20/88
GROUND SURFACE EL. 14.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (BLOWS/FT)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#14	22/60			CL-CH		SILTY CLAY; medium to dark gray, moist, medium stiff, medium to high plasticity.
75	#15	25/60					
80	#16	15/60					SANDY SILTY CLAY; medium gray, wet, medium stiff, medium plasticity.
85	#17	10/60					
90	#18	7/60					SILTY CLAY; medium gray, moist, stiff, medium plasticity.
95	#19	35/60					
100	#20	4/60					SILTY SANDY CLAY; olive gray, wet, medium stiff, low plasticity.
105	#21	0/60			SW		SAND; and gravel, medium to coarse grained.
110	#22	0/60			SC-GC		SAND/GRAVEL; medium to coarse grained, some clayey sands.
115	#23	0/60			SW		SAND; some gravel, medium to coarse grained.
120	#24	0/66			SP		SAND; scattered gravel, medium grained sand.
125	#25	44/60			CH		SILTY CLAY; medium gray, moist, very stiff, high plasticity.
130	#26	60/60					SILTY CLAY; dark gray, moist, very stiff, high plasticity.
135	#27	60/60					SILTY CLAY; mottled dark gray and olive brown, moist, stiff, high plasticity.
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF GB7.DWG

BORING NO. GB#7

FIELD GEOLOGIST C. Wallace
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 260 feet

COORDINATES N 336,983.7 E 1,548,070.8
DATE BEGAN 7/18/88
DATE FINISHED 7/20/88
GROUND SURFACE EL. 14.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#28	56/60			CH		SILTY CLAY; mottled medium gray and olive brown, moist, stiff, high plasticity.
145	#29	60/60					
150	#30	60/60					
155	#31	60/60					
160	#32	60/60					
165	#33	55/60			CL-CH		SILTY CLAY; trace sand, medium gray, very moist, soft, medium plasticity.
170	#34	57/60					SILTY CLAY; medium to dark gray, moist, stiff, medium plasticity, trace rootlets.
175	#35	0/60			GW		SAND/GRAVEL; medium to coarse grained sand, small to large gravel.
180	#36	0/60			SP		SAND; medium to coarse grained sand, scattered gravel.
185	#37	0/60					
190	#38	0/60			SW		SAND; coarse grained sand with scattered gravel.
195	#39	0/60					
200	#40	8/60			ML		SANDY SILT; mottled medium brown and olive gray, very moist to wet, soft, low plasticity, scattered gravel.
205	#41	29/60			CH		SILTY CLAY; dark gray, moist, very stiff, high plasticity, scattered gravel.
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MF-GB7.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#7

FIELD GEOLOGIST C. Wallace
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 260 feet

COORDINATES N 336,983.7 E 1,548,070.8
DATE BEGAN 7/18/88
DATE FINISHED 7/20/88
GROUND SURFACE EL. 14.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#42	36/60			ML		CLAYEY SANDY SILT; olive brown, very moist, medium stiff, low plasticity.
215	#43	25/60					CLAYEY SILT; medium gray, very moist, soft, low plasticity, trace sand.
220	#44	30/60			CL		SANDY SILTY CLAY; medium gray, moist, stiff, medium plasticity.
225	#45	4/60			ML		SANDY CLAYEY SILT; olive brown, wet, soft, low plasticity.
230	#46	55/60			CL		SILTY CLAY; dark gray, moist, meidum stiff, low to medium plasticity.
235	#47	44/60			ML		CLAYEY SILT; dark gray, very moist, medium stiff, low plasticity.
240	#48	43/60			CL		SILTY CLAY; dark gray, moist, stiff, low to medium plasticity, trace sand.
245	#49	54/60					
250	#50	60/60			ML		CLAYEY SILT; dark gray, very moist to wet, medium stiff, low plasticity.
255	#51	28/60			CL		SILTY CLAY; mottled brown and gray, moist, stiff, medium plasticity.
260							TOTAL DEPTH 260 FEET 4-1/2" diameter boring
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: ML GB7.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#8

FIELD GEOLOGIST C. Wallace
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 336,699.7 E 1,548,645.9
DATE BEGAN 7/13/88
DATE FINISHED 7/15/88
GROUND SURFACE EL. 16.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SILTY CLAY; dark gray to black, moist, medium stiff, medium plasticity.
5	#1	14/60					
10	#2	0/60			SP		SAND; dark gray with scattered white, medium to coarse grained, angular to subangular.
15	#3	0/60					SAND; black to dark gray, medium grained, subrounded.
20	#4	0/60					No recovery in sampler, no cuttings on shaker.
25	#5	12/60			CL-SP		SILTY CLAY; greenish gray, moist, medium stiff, medium plasticity.
30	#6	3/60					SILTY CLAY; greenish gray, very moist, medium stiff, medium plasticity, with interbedded sand, dark gray, medium grained subangular.
35	#7	3/60			GP-CH		GRAVEL; dark gray to black with black sand, medium grained, sub to well rounded with interbedded buff silty clay.
40	#8	4/60			CL		SANDY SILTY CLAY; buff to brown, moist, soft, low plasticity.
45	#9	30/60					SILTY SANDY CLAY; buff to grayish brown, very moist, stiff, low to medium plasticty with scattered gravel.
50	#10	26/60			CH		SILTY CLAY; olive brown, wet, medium stiff, medium to high plasticity.
55	#11	0/60			SC		SAND; dark gray, medium grained rounded, scattered white with fines.
60	#12	0/60			SP		SAND; dark gray, medium to coarse grained, rounded.
65	#13	22/60			CH		SILTY CLAY, brown to gray, wet, medium stiff, high plasticity.
70	#14	34/60					SILTY CLAY; brownish gray, moist, medium stiff, high plasticity.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE MF-GB8.DWG

BORING NO. GB#8

FIELD GEOLOGIST C. Wallace
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 336,899.7 E 1,548,645.9
DATE BEGAN 7/13/88
DATE FINISHED 7/15/88
GROUND SURFACE EL. 16.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#14	34/60			CH		SILTY CLAY; brownish gray, moist, medium stiff, high plasticity.
75	#15	0/60			SP		SAND; gray to black, medium to coarse grained, rounded.
80	#16	18/60			CL		SILTY SANDY CLAY; olive brown, moist, stiff, medium plasticity.
85	#17	0/60			SP		SAND; dark gray, medium grained, subrounded.
90	#18	2/60			CL		SILTY CLAY; brown, moist, stiff, medium plasticity.
95	#19	15/60			CH		SILTY CLAY; olive brown, wet, stiff, medium to high plasticity.
100	#20	28/60					
105	#21	6/60			CL-CH		SANDY SILTY CLAY; olive brown, moist, stiff, medium plasticity.
110	#22	15/60					
115	#23	21/60					SANDY SILTY CLAY; medium gray, moist, stiff, low to medium plasticity.
120	#24	22/60					SILTY CLAY; medium to dark gray, very moist, medium stiff, medium plasticity.
125	#25	14/60					SILTY CLAY; dark gray, moist, stiff, medium to high plasticity.
130	#26	56/60					
135	#27	48/60			CH		SILTY CLAY; dark gray and olive brown, moist, stiff, medium to high plasticity.
140	#28	30/60					SILTY CLAY; dark gray, moist, stiff, high plasticity.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB8.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#8

FIELD GEOLOGIST: C. Wallace
LOGGED BY: J. Hadsall
CHECKED BY: J. Hadsall
TOTAL DEPTH: 253 feet

COORDINATES: N 336,699.7 E 1,548,645.9
DATE BEGAN: 7/13/88
DATE FINISHED: 7/15/88
GROUND SURFACE EL: 16.7 ft.

DEPTH	SAMPLE TYPE & NUMBER	RECOVERY	WELL SUMMARY	MEASURED CONSISTENCY	USCS SYMBOL	PROFILE	DESCRIPTION
110	#28	30/60			CH		SILTY CLAY; dark gray, moist, stiff, high plasticity.
115	#29	40/60					SILTY CLAY; medium gray, moist, stiff, low plasticity.
125	#30	60/60					SILTY CLAY; dark gray, moist, hard, low to medium plasticity.
135	#31	58/60			CL		SANDY SILTY CLAY; dark gray, moist, stiff to hard, low plasticity.
160	#32	14/60					
165	#33	0/60					SAND; medium to coarse grained, scattered gravel and shell fragments.
170	#34	0/60					
175	#35	0/60					
180	#36	0/60			SW-SP		SAND; coarse, with gravel and scattered shell fragments.
185	#37	0/60					
190	#38	0/60					SAND; medium to coarse, with scattered gravel and shell fragments.
195	#39	58/60			CH		SILTY CLAY; dark gray, moist, hard, high plasticity, trace of sand.
200	#40	49/60			CL		SILTY CLAY; dark gray, moist, hard, medium plasticity.
205	#41	0/60			SP		SAND; medium to coarse, scattered gravel.
210	#42	60/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5" Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#8

FIELD GEOLOGIST C. Wallace
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N336,899.7 E1,548,645.9
DATE BEGAN 7/13/88
DATE FINISHED 7/15/88
GROUND SURFACE EL. 16.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (BLOWS/FT)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#42	60/60			CH		SILTY CLAY; dark gray, moist, hard, medium to high plasticity.
215	#43	48/60			ML		CLAYEY SILT; dark gray, very moist, very stiff to hard, low plasticity, trace sand.
220	#44	23/60					
225	#45	48/60					CLAYEY SILT; dark gray, moist, very stiff, low plasticity, some sand.
230	#46	50/60			CL		SILTY CLAY; dark gray, moist, very stiff, medium plastic.
235	#47	38/60					SILTY CLAY; dark gray, moist, hard, low plasticity.
240	#48	0/60			SP		SAND; medium to coarse with gravel.
245	#49	0/60					
250	#50	60/60			CL		SILTY SANDY CLAY; dark to medium gray, moist, stiff, low to medium plasticity.
255							TOTAL DEPTH 253 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MF-GB8.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#9

FIELD GEOLOGIST D. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 336,157.4 E 1,546,016.0
DATE BEGAN 7/7/88
DATE FINISHED 7/12/88
GROUND SURFACE EL 19.6 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SANDY LOAM; light brown, dry, soft.
5							SILTY CLAY; dark gray, moist, stiff, minor sand.
10	#1	0/60			GC		SANDY CLAYEY GRAVEL; light to medium gray, wet, coarse angular pebbles and loose sand.
15	#2	15/60		1.0	CL		SANDY CLAY; light to medium gray, moist to wet, soft, moderately plastic, grading to silty clay.
20	#3	0/60					
25	#4	0/60					SANDY CLAY; light to medium gray, wet, soft, interbedded with coarse sand.
30	#5	14/60		1.5			SILTY CLAY; medium to dark gray, moist, soft, moderate plasticity.
35	#6	23/60		0.5–3.0			SANDY CLAY; light to medium gray, moist, soft, slightly plastic. SILTY CLAY; brown gray, moist, soft, slightly plastic.
40	#7	0/60					
45	#8	8/60		0.5–1.5			
50	#9	27/60		0.5			SANDY CLAY; medium brown, wet, soft, increasing sand.
55	#10	31/60					
60	#11	17/60		0.5–1.5			CLAY/SILTY CLAY; gray brown, moist, stiff, slightly plastic.
65	#12	6/60		2.0			SANDY CLAY; medium brown, moist, stiff, moderately plastic.
70	#13	20/60					CLAY; medium brown, moist, stiff, moderately plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB9.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#9

FIELD GEOLOGIST D. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 336,157.4 E 1,548,016.0
DATE BEGAN 7/7/88
DATE FINISHED 7/12/88
GROUND SURFACE EL. 19.6 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	20/60		3.5–2.5	CL		SANDY CLAY; gray brown, moist, stiff, slightly plastic.
75	#14	21/60		2.5	CL		SILTY CLAY; light to medium gray, moist, medium to slightly plastic, increasing sand.
80	#15	13/60		3.0–1.5	CL		SANDY CLAY; light to medium gray, moist, stiff, moderately plastic, minor gravels assoc.
85	#16	27/60		3.5–4.0	CL		SILTY CLAY; brown gray, moist to slightly dry, stiff, slightly to non-plastic, becoming sandy, increasing moisture content.
90	#17	24/60		3.0–1.5	ML		SANDY CLAYEY SILT; brown gray, moist, stiff, modrately to slightly plastic.
95	#18	3/60		0.5	CL		SANDY CLAY; medium brown, moist, stiff, slightly plastic.
100	#19	16/20		1.5	CL		SILTY CLAY; medium browm gray, moist, stiff, slightly plastic.
105	#20	22/60		1.0–1.5	CL		
110	#21	48/60		3.5–1.0	CL		SILTY CLAY; gray brown, moderately hard, dry to moist, non-plastic.
115	#22	53/60		3.5	CL		
120	#23	24/60		2.5	CH		SANDY CLAY; gray with brown mottles, wet, stiff, highly plastic, rounded pebbles and coarse sand.
125	#24	0/60			SP		SAND; coarse.
130	#25	60/60		2.0–3.0	CL		SILTY CLAY; medium gray, moist to wet, stiff, moderately plastic.
135	#26	60/60		2.5–3.0	CL		
140	#27	60/60			CL		

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB9.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#9

FIELD GEOLOGIST D. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 336,157.4 E 1,548,016.0
DATE BEGAN 7/7/88
DATE FINISHED 7/12/88
GROUND SURFACE EL. 19.6 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	60/60		2.0	CL		SILTY CLAY; medium gray, moist to wet, very stiff, non to moderately plastic.
145	#28	ND		2.0–4.0	CL		
150	#29	60/60		2.5	CL		
155	#30	60/60		2.0	CL		
160	#31	60/60		2.0–4.5	CL		
165	#32	40/60		3.0–2.5	CL		
170	#33	60/60		3.0–2.5	CL		
175	#34	48/60		3.0	CH		SILTY CLAY; dark gray, moist to wet, very stiff, highly plastic.
180	#35	48/60		4.5–3.5	CL		SILTY CLAY; pebbly, olive gray, moist to wet, very stiff, low plasticity, angular 1" diameter pebbles.
185	#36	0/60			SC		SAND; coarse grained. Description made from shaker sample. Sand is probably the derivative of a clayey sand.
190	#37	0/60			SC		
195	#38	8/60		1.0	CL		GRAVELLY SILTY CLAY; dark gray, wet, stiff, slightly to moderately plastic.
200	#39	6/60		1.0	ML		SANDY CLAYEY SILT; medium brown, wet, stiff, slightly plastic, with clasts up to 1" diameter (minor).
205	#40	18/60		1.5–4.5	CL		SILTY CLAY; dark gray, moist, very stiff, slightly to moderately plastic, with minor coarse grained sand and pebbles.
210	#41	60/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MF-GB9.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#9

FIELD GEOLOGIST D. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 338,157.4 E 1,546,016.0
DATE BEGAN 7/7/88
DATE FINISHED 7/12/88
GROUND SURFACE EL. 19.6 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#41	60/60		3.5	CL		SILTY CLAY; gray with brown mottles, moist, very stiff, moderately plastic.
215	#42	60/60		3.5			
220	#43	30/60		3.0-			
					ML		CLAYEY SILT; medium gray, wet, slightly plastic, sandy.
225	#44	8/60		0.5	SM		SILTY SAND; medium gray, wet (saturated), loose, some pebbles.
230	#45	0/60					
					ML		SANDY SILT; medium gray, wet (saturated), loose.
235	#46	3/60					
240	#47	0/60			GM		SANDY GRAVEL.
245	#48	18/60			CL		SILTY CLAY; dark gray, moist to wet, stiff, moderately to slightly plastic, with angular pebbles to 1" diameter.
250	#49	30/60					SILTY CLAY; dark gray, moist to wet, stiff, low to moderate plasticity, trace sand.
255							TOTAL DEPTH 253 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB9.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#10

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 250 feet

COORDINATES N 335,503.7 E 1,548,645.3
DATE BEGAN 7/27/88
DATE FINISHED 7/28/88
GROUND SURFACE EL. 20.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0							Top soil and subgrade; logged from auger cuttings.
5	#1	0/60			GM		SANDY GRAVEL; black to tan, loose, angular to subrounded silty, clayey. Logged from hand sieves.
10	#2	14/60			CH		SANDY SILTY CLAY; grading to sandy clay, mottled gray and dark and light gray gray, very soft to soft, high plasticity, sand is fine to very fine, trace of gravel.
15	#3	0/60			SW		GRAVELLY SANDS; black to tan to white, loose, sand is medium to fine grained, subangular to subrounded. Gravel is angular to subangular, relatively clean. Logged from shaker and hand sieve.
20	#4	0/60			SC		CLAYEY GRAVELLY SANDS; black to tan to white, some fines, sand is coarse to fine grained, angular to subrounded, gravel is angular to subangular. Logged from shaker and hand sieve.
25	#5	16/60			CH		SANDY SILTY CLAY; dark gray, moist, very soft to stiff, high plasticity, moist, sand is fine to very fine grained.
30	#6	14/60			CH		SILTY CLAY; dark and light gray with brown, moist, soft, high to moderate plasticity, trace of fine sands.
35	#7	12/60			CH		SANDY SILTY CLAY; dark gray with light gray spots, slightly moist, stiff, medium to high plasticity, sand is fine to very fine, trace of green/gray organic fibers.
40	#8	0/60			SW		SAND; some clay, trace of gravel, sand is rounded to subangular, black to tan, coarse to medium grained.
45	#9	0/60			GC		CLAYEY SANDY GRAVEL; gray to light brown, sand and gravel angular to subrounded, sand is coarse to fine grained, many cemented particles. Logged from hand sieves.
50	#10	0/60			GM		SANDY GRAVEL; with some fines, brown to light brown/tan sand is coarse to fine grained, subangular to subrounded, gravel is angular to subangular, few particle cementations.
55	#11	0/60			GM		Logged from hand sieve and shaker.
60	#12	0/60			SW		GRAVELLY SAND; with some fines, black to light brown, sand is coarse to fine, subangular to rounded, gravel is black to gray, angular to subrounded.
65	#13	0/60			SW		Logged from hand sieve.
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB10.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#10

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 250 feet

COORDINATES N 335,503.7 E 1,548,645.3
DATE BEGAN 7/27/88
DATE FINISHED 7/28/88
GROUND SURFACE EL. 20.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70					SW		GRAVELLY SAND.
	#14	10/60			CH		SANDY CLAY; grading to sandy gravelly clay, brown with tan spots, moist, soft, high plasticity, sand is fine, black, gravel is angular, black, 1/4" in size.
75	#15	60/60			ML		CLAYEY SILT; grading to sandy clayey silt, brown with gray spots, slightly moist, soft to stiff, moderate to low plasticity, sand is fine to very fine.
80	#16	32/60					Moisture and plasticity increase with depth.
85	#17	0/60			SM		SILTY GRAVELLY SAND; black to brown, sand and gravel is subangular, sand is coarse to medium, frequent particle cementation. Logged from hand sieve.
90	#18	20/60			CH		SILTY SANDY CLAY; mottled gray and brown, moist, very soft to soft, high plasticity, sand is fine grained.
95	#19	0/60			SM		SILTY GRAVELLY SAND; black to light brown, sand is coarse to fine grained, angular to rounded, gravel is angular to subangular, dirty. Logged from hand sieve and shaker.
100	#20	30/60			CH		SILTY CLAY; mottled gray and red brown, slighty moist, soft, high plasticity, trace of sand and gravel.
105	#21	60/60			ML-SM		CLAYEY SILT; grading to silty sand, dark gray with brown, patches, slightly moist to dry, soft to stiff,, low to no plasticity, sand is fine to very fine.
110	#22	18/60			SM		SILTY SAND; grading to almost pure clay, sand is black-gray, fine to very fine grained, moist, low plasticity.
					CH		CLAY; gray, very stiff, dry, high to very high plasticity.
115	#23	12/60			SW		GRAVELLY SAND; black to gray, coarse to fine grained, angular to subangular.
120	#24	52/60			ML		CLAYEY SILT; gray with brown patches, slightly moist to dry, stiff, medium plasticity, trace of fine to very fine sands.
125	#25	28/60			CH		SILTY CLAY; dark gray, soft to dry, stiff, high plasticity, trace of fine sand.
130	#26	60/60			CL		SILTY CLAY; dark gray, slightly moist, soft to stiff, medium plasticity.
135	#27	55/60			CH		SILTY CLAY; grading to sandy silty clay, mottled dark gray and brown, slightly moist, stiff, medium to high plasticity, sand is medium to fine grained, black.
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB10.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#10

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 250 feet

COORDINATES N 335,503.7 E 1,548,645.3
DATE BEGAN 7/27/88
DATE FINISHED 7/28/88
GROUND SURFACE EL. 20.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#28	60/60			ML-CL		SILTY CLAY; light and dark gray with brown spots, slightly moist, soft to stiff, medium to high plasticity.
145	#29	36/60					CLAYEY SILT; grading to sandy clay, clayey silt is light and dark gray with brown spots, slightly moist to dry, stiff, low plasticity. Sandy clay is dark gray, stiff, medium plasticity, sand is fine to very fine.
150	#30	60/60			CL-CH		SANDY CLAY; grading to clay-silty clay, sandy clay is dark gray, moist, soft to stiff, medium plastic. Sand is fine to very fine grained. Silty clay is mottled dark gray and dark brown, stiff, slightly moist, high plasticity.
155	#31	60/60			ML-CH		CLAYEY SILT; grading to sandy clay, clayey silt is mottled light and dark gray and dark brown, slightly moist to dry, stiff to very stiff, low plasticity. Sandy clay is light brown, soft to stiff, moist, high plasticity, sand is medium to very fine grained.
160	#32	0/60			SM-SC		CLAYEY SILTY SAND; dirty, some gravel, black to gray, coarse to fine, subangular to rounded, some gravel.
165	#33	0/60			SW		SAND; black to gray to tan, coarse to fine grained, sub-angular to rounded, predominantly clean, trace of gravels.
170	#34	34/60			CH		CLAY/SILTY CLAY; dark, steel gray, slightly moist, stiff to very stiff, medium to high plasticity.
175	#35	0/60			SW		SANDS; black to gray, coarse to fine grained, somewhat clayey, subangular to subrounded, obvious shell fragments, (>10%)
180	#36	0/60			SM		CLAYEY SILTY SAND; dirty, black to tan, coarse to fine grained, angular to subrounded, trace of gravel, some shell fragments. Logged from shaker and sieves.
185	#37	36/60			CL-CH		GRAVELLY SANDY SILT/CLAY; grading to silty clay, dark gray, slightly moist, stiff to very stiff, medium to high plasticity, sand is fine grained, gravel is rounded, trace of shell fragments and organic fibers.
190	#38	0/60					SANDS; somewhat dirty, black to light brown, medium to fine grained, subangular to subrounded, some shell fragments, somewhat silty, clayey.
195	#39	0/60			SW-SM		
200	#40	0/60					SANDS; clean, black to light brown, coarse to fine grained, subrounded to rounded, trace of gravel and shell fragments.
205	#41	10/60			ML		CLAYEY SANDY SILT; medium brown, stiff, very moist, low to medium plasticity, sand is fine to very fine grained.
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MF-GB10.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#10

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 250 feet

COORDINATES N 335,503.7 E 1,548,645.3
DATE BEGAN 7/27/88
DATE FINISHED 7/28/88
GROUND SURFACE EL. 20.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#42	0/60			GP		SANDY GRAVEL; clean, black to tan, sand is coarse to medium grained, subrounded to rounded, gravel is angular to subrounded.
215	#43	0/60			SW		GRAVELLY SAND; mostly clean, black to light brown, sand is coarse to medium grained, subrounded to rounded, gravel is angular to subrounded, trace of shell fragments. Logged from shaker and sieves.
220	#44	0/60					
225	#45	0/60					
230	#46	0/60					
235	#47	60/60			CL		SANDY CLAY; light brown, moist, stiff, medium plasticity.
					ML		CLAYEY SILT; gray with brown spots, dry, stiff to very stiff low plasticity, blocky, trace of mica.
240	#48	60/60			CL		SANDY CLAY; light brown, moist, stiff, medium plasticity.
					ML		CLAYEY SILT; mottled dark gray and dark greenish brown, very stiff, slightly moist to dry, low plasticity, blocky stucture.
245	#49	50/60					
250							TOTAL DEPTH 250 FEET 4-1/2" diameter boring
255							
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 4096'6
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB10.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#11

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 255 feet

COORDINATES N 335,839.0 E 1,549,801.0
DATE BEGAN 7/21/88
DATE FINISHED 7/25/88
GROUND SURFACE EL. 18.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0					SW		First 5 ft. sandy gravelly silt, brownish gray, slightly moist, fill material, gravel is gray, from 1" to 1/4".
5							4 to 4.5 ft. casing stopped; gravel fill lens.
	#1	0/60					GRAVELLY SAND; sand is coarse to medium grained, black to white, gravel is gray and black, clean sands and gravels.
10	#2	0/60					
15	#3	0/60			SM		SILTY GRAVELLY SAND; sand is fine to very fine grained, black and dark gray, trace of silt and gravel.
20	#4	0/60					SILTY SAND: sand is fine to very fine grained, black and dark gray.
25	#5	10/60					
30					ML		CLAYEY SILT; mottled gray and lt. brown, moist, mod. plas.
	#6	10/60			CH		SILTY CLAY; tan and light gray, moist, soft to stiff, high plasticity.
35	#7	0/60			SW		SAND; very fine to coarse grained, well graded, dirty-trace of silts, black to dark gray and tan.
40	#8	0/60					GRAVELLY SILTY SAND; sand is somewhat dirty, well graded, coarse to very fine grained, black and gray, gravel is coarse angular, black and dark gray.
45	#9	5/60			ML		CLAYEY SILT; tan to brown, soft, moderate plasticity.
50	#10	0/60			SW		GRAVELLY SAND; clean, coarse to medium grained sand, angular, black and gray, gravel is angular, black to light gray.
55	#11	0/60			SM		SILTY SAND; sand is medium to very fine grained, black to dark gray, with fines.
60	#12	18/60			CH		SILTY CLAY; tan with some light gray, very moist, soft to stiff, high plasticity, some fine sand cemented fragments interspersed.
65	#13	0/60			SW		GRAVELLY SANDS; sands coarse to fine grained, angular, and subangular, black to gray, gravel is interspersed but not prevalent, dark to light gray.
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB11.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#11

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 255 feet

COORDINATES N 335,839.0 E 1,548,601.0
DATE BEGAN 7/21/88
DATE FINISHED 7/25/88
GROUND SURFACE EL 18.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#14	18/60			ML		CLAYEY SILT; dark gray to light gray, moist, stiff, low plasticity.
75	#15	48/60					CLAYEY SILT; tan with some light gray and brown, dry to slightly moist, very stiff, low plasticity.
80	#16	0/60			SP		SAND; clean, black and brown to black, medium to very grained, subangular.
85	#17	0/60					
90	#18	0/60			SW		SAND; well graded, coarse to very fine grained, subrounded, to rounded, black to gray, some cementation of smaller grain sizes, predominantly clean, some shell fragments.
95	#19	0/60					
100	#20	0/60			SP		SAND; black to dark brown, poorly graded with trace of fines, sand is medium to fine grained, mostly clean.
105	#21	0/60					
110	#22	0/60					GRAVELLY SAND; black to dark brown, sand is coarse to fine grained, angular to subrounded, gravel is angular.
115	#23	0/60			SW		SAND; with some gravel, black to tan, sand is coarse to medium grained, angular to subangular to subrounded, clean.
120	#24	0/60			SP		GRAVELLY SAND; traces of fines, sand is coarse to fine grained, angular to subrounded, black to tan, gravel is black to gray, angular to subangular.
125	#25	0/60					Traces of shell fragments-sand sized.
130	#26	0/60			ML		CLAYEY SILT; dark solid gray, slightly moist, stiff, moderately plastic.
135	#27	60/60					CLAYEY SILT; mottled dark gray and brown, slightly moist, stiff to very stiff, moderate plasticity.
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB11.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#11

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 255 feet

COORDINATES N 335,838.0 E 1,548,801.0
DATE BEGAN 7/21/88
DATE FINISHED 7/25/88
GROUND SURFACE EL. 18.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#28	55/60			ML		CLAYEY SILT; mottled dark gray brown and tan, slightly moist, stiff, low plasticity.
145	#29	60/60					CLAYEY SANDY SILT; solid dark gray, mottled brown in some zones, moist, stiff to very stiff, low to moderate plasticity, <5% sand.
150	#30	60/60			CL		SILTY CLAY; dark gray throughout, dry to slightly moist, stiff, moderately plastic.
155	#31	54/60			ML		CLAYEY SILT; grading to sandy clayey silt, mottled dark and light gray and dark brown, grading to light and dark gray, moist, very stiff, low to moderate plasticity.
160	#32	20/60					
165	#33	55/60					CLAYEY SANDY SILT, grading to clayey silt, mottled light and dark gray, slightly moist, moderate plasticity, some sand nodules (Mn/Fe?), blocky stucture. Thin gravel/sand layer at 165'.
170	#34	46/60					SANDY SILT; grading to gravelly sandy silt, dark gray, moist, low plasticity, stiff to very stiff, sand is medium to fine grained, black, prevalent shell fragments in last 2'.
175	#35	4/60			GM		SANDY SILTY GRAVEL; gravel from 3" to 1/4", sand is coarse to medium, some cementation, sand is black and gray, gravel is black, gray to tan.
180	#36	0/60			SW		GRAVELLY SANDS; black and tan, dirty, sand is medium grained, angular to subangular, gravel is subangular to subrounded, prevalent shell fragments.
185	#37	24/60			CH		SANDY CLAY; grading to gravelly sandy clay, wet, soft, high plasticity, sand is medium to fine grained black, gravel is gray, subrounded.
190	#38	0/60			SM		SILTY SAND; to silty sandy gravel, black to light gray, sand is coarse to fine grained, dirty, subangular to rounded, gravel is black to tan, some shell fragments.
195	#39	54/60			CH		SILTY CLAY; grading to sandy silty clay, mottled dark gray and dark brown, moist to very moist, high plasticity, sand from 10 to 1mm in diameter, subrounded brown to light gray.
200	#40	60/60			CL		SILTY CLAY; mottled dark gray and brown, medium plasticity, moist, blocky structure, grades to a clayey silt, mottled light and dark gray, stiff, low plasticity.
205	#41	60/60			ML		CLAYEY SILT; mottled brownish gray, cream gray, dark gray, slightly moist to dry, thin gravelly layer (~212 ft. – 2" thick).
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB11.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#11

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 255 feet

COORDINATES N 335,839.0 E 1,548,001.0
DATE BEGAN 7/21/88
DATE FINISHED 7/25/88
GROUND SURFACE EL. 18.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#42	42/60			CH		SILTY CLAY; grading to sandy silty clay with depth, streaked light brown in dark gray to plain dark gray with depth, very moist, soft to stiff, medium to high plasticity, sand is black, fine to very fine, not more than 10% sand in last 2 ft..
215	#43	50/60			CH-ML		SANDY SILTY CLAY; (1 ft. thick) grading to clayey silt, sandy silty clay is dark gray, very moist, high plasticity, sand is fine to very fine grained, clayey silt is mottled light gray and dark brown, slightly moist, low plasticity, trace of sand.
220	#44	48/60			ML		CLAYEY SILT; mottled dark and light gray and dark brown, dry to slightly moist, trace of black sand nodules (2mm) <1% sand
225	#45	40/60					CLAYEY SILT; with interbedded gravelly sandy silt layers to 3" thick, moist to very moist, stiff to very stiff, low plasticity gravel is subrounded, black and brown, sand is medium to fine grained, black to tan, clayey silt is mottled gray and light brown, some particle cementation present.
230	#46	4/60			SM-ML		GRAVELLY SILTY SAND; with sandy silt lens, sandy silt is dark gray, very moist, soft, gravelly sand is dirty, black to tan, sand is coarse to medium grained.
235	#47	36/40			ML		SANDY SILT; grading to clayey silt, mottled dark gray and brown grading to dark, deep gray, dry to moist, stiff, sand is fine to very fine grained, black.
240	#48	20/60			CL		SILTY CLAY; thinly bedded, dark gray, dry, stiff, medium plasticity.
245	#49	60/60					SILTY CLAY; dark gray to mottled dark and light gray, trace of sand, moist to slightly moist, medium plasticity.
250	#50	60/60					Same as above except with medium to high plasticity.
255							TOTAL DEPTH 255 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MF-GB11.DWG

BORING NO. GB#12

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 335,819.1 E 1,548,307.5
DATE BEGAN 8/1/88
DATE FINISHED 8/3/88
GROUND SURFACE EL. 20.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0	#1	0/60			GM		FILL; gravel and fill material, 1.0–1.5 ft. lens of quartz, feldspar, rock material.
5	#2	0/60					SILTY SANDY GRAVEL; poorly sorted gravel, gray rounded, sand is coarse to medium grained.
10	#3	0/60			SM		GRAVELLY SILTY SAND; black to gray, poorly sorted, coarse to medium grained, rounded to subrounded, quartz feldspar rock lens at 14–14.5 ft..
15	#4	0/60			GW		SANDY GRAVEL; clean, black to light gray, gravel is angular to subrounded, sand is coarse to fine grained.
20	#5	0/60			GC		SANDY CLAYEY GRAVEL; black to gray, soft, high plasticity, sand is coarse to fine grained, gravel is well sorted, rounded to subangular, some shell fragments.
25	#6	30/60		1.25	CH		SANDY SILTY CLAY; grading to silty clay, mottled gray and light brown to dark gray, slightly moist, soft, high to very high plasticity, sand is medium to fine grained.
30	#7	0/60			CL		GRAVELLY SAND CLAY; gray, very soft, medium to high plasticity, sand is coarse to fine grained, black and gray, gravel is well sorted, angular to subround.
35	#8	0/60			SW		SANDS; trace of gravel and fines, all earthen colors, coarse to very fine grained, angular to subrounded, some cementation of particles.
40	#9	0/60			SC–GC		CLAYEY SANDS AND GRAVELS; black to tan, sand is coarse to medium grained, angular to subangular, gravel angular to subangular.
45	#10	22/60		1.0	CH		SANDY SILTY CLAY; light brown, slightly moist, soft to stiff, high plasticity, sand is fine to very fine grained.
50	#11	24/60		3.7	ML		CLAYEY SILT; light brown with dark and light gray spots, dry, stiff to very stiff, low plasticity, trace of rounded gravel.
55	#12	26/60		1.05	CH		SILTY CLAY; brown, slightly moist to moist, stiff, high to very high plasticity, trace of fine sand.
60	#13	18/60		0.30			SANDY SILTY CLAY; light brown, moist, very soft to soft, very high plasticity, sand is fine to very fine grained, trace of medium grained sand.
65	#14	10/60		2.3	ML		CLAYEY SILT; mottled light brown and light gray, moist, very stiff, low to medium plasticity, sticky.
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB12.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#12

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 335,819.1 E 1,548,307.5
DATE BEGAN 8/1/88
DATE FINISHED 8/3/88
GROUND SURFACE EL. 20.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#15	24/60		0.75–2.0	ML		CLAYEY SILT; with gravel, grading to silty clay, mottled gray and brown, dry, stiff, low to high plasticity, gravel is gray, angular to subangular.
75	#16	44/60		2.0–2.6			SANDY CLAYEY SILT; brown with light gray spots, dry, stiff to very stiff, dry, low to medium plasticity, sand is fine to very fine grained.
80	#17	0/60			SW		SANDS; black and brown, subrounded to rounded, coarse to fine grained, clean.
85	#18	10/60		0.50	SM–Cl		SILTY SAND; grading to silty clay, sand is medium to fine grained, black, dirty, clay is dark gray with brown spots, dry, soft, high plasticity.
90	#19	0/60			SC		GRAVELLY CLAYEY SAND; light brown to black, sand is coarse to fine grained, angular to rounded, gravel is angular to subrounded.
95	#20	0/60					
100	#21	0/60					GRAVELLY CLAYEY SAND; brown medium plastic, sand is black to gray, subangular to rounded, coarse to fine grained, gravel is poorly sorted, angular to subangular.
105	#22	0/60					
110	#23	60/60		3.0	CL		SILTY CLAY; mottled light gray, dark gray and dark brown, moist, very stiff, medium to high plasticity.
115	#24	0/60			SC		CLAYEY SANDS; black to gray, coarse to fine grained, angular to subangular, trace of gravel.
120	#25	0/60					GRAVELLY SAND; with some fines, black to gray, coarse to fine grained sands, subangular to subrounded, gravel is angular to subrounded.
125	#26	54/60		1.5	ML		CLAYEY SILT; grading to clay, silt is light brown with gray spots, slightly moist to dry, stiff, low plasticity.
130	#27	54/60		3.0–3.75	CH		CLAY; grading to silty clay, dark gray with dark brown spots moist to slightly moist, very stiff, high to medium plasticity.
135	#28	60/60		2.25–3.70	ML		CLAYEY SILT; mottled dark gray and dark brown, slightly moist, very stiff, low to no plasticity.
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409615
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB12.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#12

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 335,819.1 E 1,548,307.5
DATE BEGAN 8/1/88
DATE FINISHED 8/3/88
GROUND SURFACE EL. 20.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#29	60/60		1.5–2.5	CL		SILTY CLAY; mottled dark gray and brown, moist, stiff to very stiff, medium plasticity, some cream colored patches also.
145	#30	48/60		1.5–2.0			SILTY CLAY; mottled dark gray and dark brown with some dark green gray, slightly moist, stiff, medium plastic.
150	#31	60/60		2.6–2.8	ML		CLAYEY SILT; dark and darker gray grading to mottled dark gray and dark brown, dry to slightly moist, very stiff, low plasticity, shear zones.
155	#32	47/60		4.5			
160	#33	0/60			SW		SANDS; black to tan, coarse to fine grained (predominantly fine), subrounded to rounded, trace of gravels and fines.
165	#34	24/60		2.6–2.8	CL		SILTY CLAY; mottled light and dark gray, slightly moist, stiff to very stiff, medium to high plasticity, trace of coarse, rounded sands and gravels.
170	#35	58/60		2.25–2.5	ML		CLAYEY SILT; dark (steel) gray, slightly moist, very stiff, low to medium plasticity, shear zones (slickensides).
175	#36	0/60			SM		GRAVELLY SILTY SAND; black to light brown, coarse to fine grained, angular to subrounded, gravel is rounded.
180	#37	0/60					GRAVELLY SILTY SAND; light gray to brown, coarse to fine grained (predominantly medium grained), angular to sub-angular, gravel is angular and poorly sorted (small sizes).
185	#38	44/60		1.0–1.5	CH–CL		First 8" SILTY CLAY; gray, moist, soft to stiff, high plasticity 36" sandy clay, tan, very moist, stiff, high plasticity sand is fine to very fine, with trace of rounded, medium grained.
190	#39	10/60		2.25–2.5			GRAVELLY SILTY CLAY; whitish gray to gray, medium grained, dry, very stiff, medium plasticity, gravel is sparse but apparent; 5–15mm in size.
195	#40	60/60		1.5–1.8			SILTY CLAY; grading to sandy silt, gray to dark gray, moist, to very moist, stiff, clay has high plasticity, silt has low plasticity, sand is fine to very fine grained with trace of medium grained.
200	#41	30/60		2.7–3.6	ML–CL		CLAYEY SILT; dark gray, with whitish gray streaks, dry, very stiff, low plasticity.
205	#42	54/60		1.5			SILT/SILTY CLAY; dark brown with light gray and whitish gray streaks and patches, dry to slightly moist, hard, medium plasticity, some rounded coarse sand in isolated zones.
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB12.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#12

FIELD GEOLOGIST S. Logan
ENTERED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 253 feet

COORDINATES N 335,819.1 E 1,548,307.5
DATE BEGAN 8/1/88
DATE FINISHED 8/3/88
GROUND SURFACE EL. 20.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (%)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#43	60/60		3.6–4.3	ML		CLAYEY SILT; dark gray and brown grading to brown only, slightly moist, very stiff to hard, low to medium plasticity, trace of fine sands.
215	#44	0/60			SM		SILTY SANDS; black to gray to white, coarse to fine grained, angular to subrounded, dirty, trace of fine gravel.
220	#45	0/60					SILTY SANDS; gray to tan, coarse to fine grained, sub-rounded to rounded, dirty.
225	#46	0/60			SW		SANDS; black to tan, coarse to very fine grained, sub-rounded to rounded, trace of silts.
230	#47	0/60			SP		SANDS; black and brown to tan, medium to fine grained, subangular to subrounded, trace of fines and rounded coarse grained sand.
235	#48		Core barrel unable to be retrieved on this run. From 235 to 255 feet logged as one sample.	0.25–1.25	CH		Alternating layers of gravelly clays and clays, gray to dark gray, moist, soft to medium stiff, high to very high plasticity, gravel is coarse grained, rounded, black and gray trace of fine sand.
240							
245							
250							
255							TOTAL DEPTH 253 FEET **4-1/2" diameter boring**
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MF-GB12.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-3(C)

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hodgell
TOTAL DEPTH 174.7 feet

COORDINATES N 335,811.3 E 1,548,305.4
DATE BEGAN 8/15/88
DATE FINISHED 8/18/88
GROUND SURFACE EL 20.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER PER (PER 6")	USCS SYMBOL	DESCRIPTION
0				FILL	FILL: sandy clay; black-dark brown.
	MD#1	6/18	5,7,9		SILTY CLAY; dark brown, slightly moist, soft, very plastic, gravel inclusions.
	MD#2	6/18	3,6,7		
5	MD#3	10/18	3,5,4		SANDY SILTY CLAY; olive gray, slightly to moderately moist, soft, slightly to moderately plastic.
10				CL-CH	SILTY CLAY; gray, moderately moist, moderately plastic.
15					
20				GW	SANDY GRAVEL; fine grained, saturated, very poorly sorted, angular gravels.
					SILTY SAND, CLAY; olive gray, moist, moderately plastic.
25					
					Small sand stringers throughout. SILTY CLAY; orange brown, moist, soft, moderately plastic.
30					Continued stringers of coarse angular, poorly sorted sand.
35					
				CL-SW	
40					SILTY CLAY; brownish gray, moist, soft to very soft, plastic.
					Stringers of sands
45					SILTY CLAY; light brown, moderately moist, stiff, slightly plastic.
50					SAND; fine to coarse, black to clear, unsorted, angular stringers.
					SILTY CLAY; brown-gray, moist, soft, moderately plastic.
55					
60				SW	SAND; coarse, black and tan, subangular, poorly sorted.
				CL	CLAY/SILTY CLAY; brown-tan, moist, soft, plastic.
65				SP-CL	CLAY/SAND; interbedded, black and tan, sand is fine to coarse, angular. No noticable, water during drilling.
70					

WELL SUMMARY:
- 12" Christy box
- 8"x5' standpipe
- 4" sch. 40 steel casing
- Bentonite/cement grout
- Centralizer

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-W9-3C.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-3(C)

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hodsoll
TOTAL DEPTH 174.7 feet

COORDINATES N 335,811.3 E 1,548,305.4
DATE BEGAN 8/15/88
DATE FINISHED 8/18/88
GROUND SURFACE EL. 20.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70					CH-CL		CLAY/SILTY CLAY; gray-brown, moist, stiff, very plastic.
75					SP		Sand stringer
					CH-CL		CLAY/SILTY CLAY; gray brown, moist, soft, very plastic.
80					SP		SAND; very fine to medium grained, subround, unconsolidated inclusions of fine gravel.
85					CL-SP		SANDY SILTY CLAY; light brown, moist, very soft, moderately plastic, interbedded with fine sands.
90					SW		SANDS; very fine to medium grained, black and clear, sub-round, poorly sorted. Making water, flowing.
95							Sand is clayey silty, "flowing sands" (unconsolidated, saturated, very fine) Very loose flowing sands.
100							
105			Centralizer		CL-SW		SILTY CLAY/CLAY; gray, moist, stiff, moderatly to slightly plastic. A few sand stringers.
110							
115							SILTY CLAY; orangish brown, moist, soft, very plastic.
120							CLAY/SILTY CLAY; gray brown, moderately moist, stiff, moderately to slightly plastic. CLAY/SILTY CLAY; gray and brown, moist, soft to stiff, moderately plastic, with 1-2' sand; very fine grained, poorly sorted, subrounded, "flowing sand" with roots and fibers (organics). Making water.
125							
130					CH-CL		CLAY/SILTY CLAY; gray, moist, stiff, very plastic. Grading into very firm- CLAY/SILTY CLAY; olive gray, moderately moist, very stiff, moderate plasticity.
135							
140			Bentonite pellets				

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-W9-3C.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-3(C)

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 174.7 feet

COORDINATES N 335,811.3 E 1,548,305.4
DATE BEGAN 8/15/88
DATE FINISHED 8/18/88
GROUND SURFACE EL. 20.1 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
140							CLAY/SILTY CLAY; gray, moist, stiff, plastic to very plastic.
145			Bentonite pellets 137.9 to 154.8 feet		CL-CH		
150							
155							
			Centralizer		SW		SILTY SAND; medium coarse, subangular, moderately sorted.
160			4" .010 S.S. screen from 157.2 to 167.2 feet		GW		GRAVELLY SAND; medium coarse with gravels fine grained, black-opaque, angular, poorly sorted, clean.
					CL-SW		SILTY CLAY; gray, moist to moderately moist, soft-stiff, moderately plastic, fine gravel inclusions.
165			Centralizer #1C sand				Stringers of coarse sand, black angular, moderately sorted.
170					CL-CH		CLAY/SILTY CLAY; moist to moderately moist, stiff, very plastic.
			Bentonite backfill				
175							TOTAL DEPTH 174.6 FEET
			9.6"				
180							
185							
190							
195							
200							
205							
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-W9-3C.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-4(B2)

FIELD GEOLOGIST E. Weagner
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 94.3 feet

COORDINATES N 336,979.6 E 1,848,121.6
DATE BEGAN 7/21/88
DATE FINISHED 7/21/88
GROUND SURFACE EL. 14 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	10/18	3,4,10	CL	SILTY CLAY; dark gray, slightly moist, stiff, moderately plastic.
	MD#2	10/18	5,7,11		SILTY CLAY; olive green, slightly moist, soft, moderately plastic.
5	MD#3	18/18	3,5,7		
	MD#4	18/18	5,5,5	CL-ML	SILTY SANDY CLAY; olive to gray, moist, soft, low plasticity, oxidized stains with few coarse sands. Adding water to drill
10					
15					SILTY CLAY; gray, moist, soft, moderately plastic.
20				GW	GRAVEL; fine gravel, black, subangular, poorly sorted.
25				CL	SILTY CLAY; brown, moderately moist, soft, slightly plastic.
30					
35				GW	SANDY GRAVEL; tan to light brown, subround, poorly sorted, fine gravel grading to coarse sandy gravel.
40				CL	SILTY SANDY CLAY; light brown, moist, soft, moderately plastic.
45				GW	SAND/GRAVEL; black and gray, subangular, poorly sorted coarse sand and fine gravel.
				CL	SILTY CLAY; light brown, moist, soft, moderately plastic.
50				SC-CL	CLAYEY SAND; tan, wet, loose, very fine grained, interbedded 1-2' with silty clays.
55					
60				CL-ML	SILTY CLAY; light brown, moist, stiff, moderately plastic, interbedded with sandy silty clay.
65					
70					

WELL SUMMARY:
- 12" Christy box
- 8"x5' standpipe
- Bentonite/cement grout
- 4" sch. 40 steel casing

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MFW9-4B2.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-4(B2)

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 94.3 feet

COORDINATES N 336,979.8 E 1,548,121.6
DATE BEGAN 7/21/88
DATE FINISHED 7/21/88
GROUND SURFACE EL. 14 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70			Bentonite pellets 72.5 to 75.9 ft.		CH		CLAY/SILTY CLAY; gray, moist, stiff, very plastic to mod. plastic. Possibly top of B2 Aquifer.
75			4" .010 S.S. screen from 78.3 to 83.3 feet		SM-SC		SILTY CLAYEY SAND; light gray, wet, very loose, grading to a coarse sand, black, moderately sorted, sub-angular.
80			Centralizer				
85			#1C sand		CL		SILTY CLAY; gray, moist, stiff, moderately plastic.
90			Bentonite backfill				
95			9.6"				TOTAL DEPTH 94.3 FEET
100							
105							
110							
115							
120							
125							
130							
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MFW9-4B2.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-5B3

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hodsoll
TOTAL DEPTH 124.1 feet

COORDINATES N 338,993.2 E 1,548,115.8
DATE BEGAN 7/26/88
DATE FINISHED 7/26/88
GROUND SURFACE EL. 13.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER PER (6")	USCS SYMBOL	DESCRIPTION
0	MD#1	10/18	2,5,8	CH	CLAY-SILTY CLAY; dark gray, slightly moist, soft, very plastic.
	MD#2	10/18	7,14,13	CL	SILTY CLAY; light gray, slightly moist, stiff, mod. plastic.
5	MD#3	18/18	4,5,7	ML	CLAYEY SILT; olive gray, moist, very soft, mod. plastic. Moisture increase.
	MD#4	12/18	7,5,2		
10				CL-CH	SILTY CLAY; brown-gray, moderately moist, very soft, plastic, mottled light gray brown.
15					Made connection at 20' and had water blow out after connection.
20				GM-GC	SILTY GRAVELS; wet, black, fine grained, angular, moderately sorted.
25				CL-CH	SILTY CLAY; brown-gray, moist, soft, plastic.
30				MH	CLAYEY SILT; brown, moist, soft, plastic.
35				GW	FINE GRAVEL; brown, subangular, moderately to poorly sorted.
				CH	SILTY CLAY; brown, moist, soft, plastic.
40				GW-GC	FINE GRAVEL; brown to black, angular, poorly sorted.
				CH	GRAVELLY SILTY CLAY; brown, moist, soft, plastic, inclusions of gravel.
				GW	FINE GRAVEL; wet, angular, poorly sorted.
45				CH	SILTY CLAY; brown, moist, soft, plastic, mottled with slightly platey structure.
50				GW	FINE GRAVEL; poorly sorted, angular.
				ML	CLAYEY SILT; interbedded, brown, moist, soft, moderately plastic, interbedded with small fine gravel. Water producing
55					
60				CL-CH	SILTY CLAY; brown, soft, moist, very plastic, interbedded with a gray silty clay.
65					
70					

WELL SUMMARY: 12" Christy box; 8"x5' standpipe; Bentonite cement grout; 4" sch. 40 steel casing

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MFW9-5B3.DWG

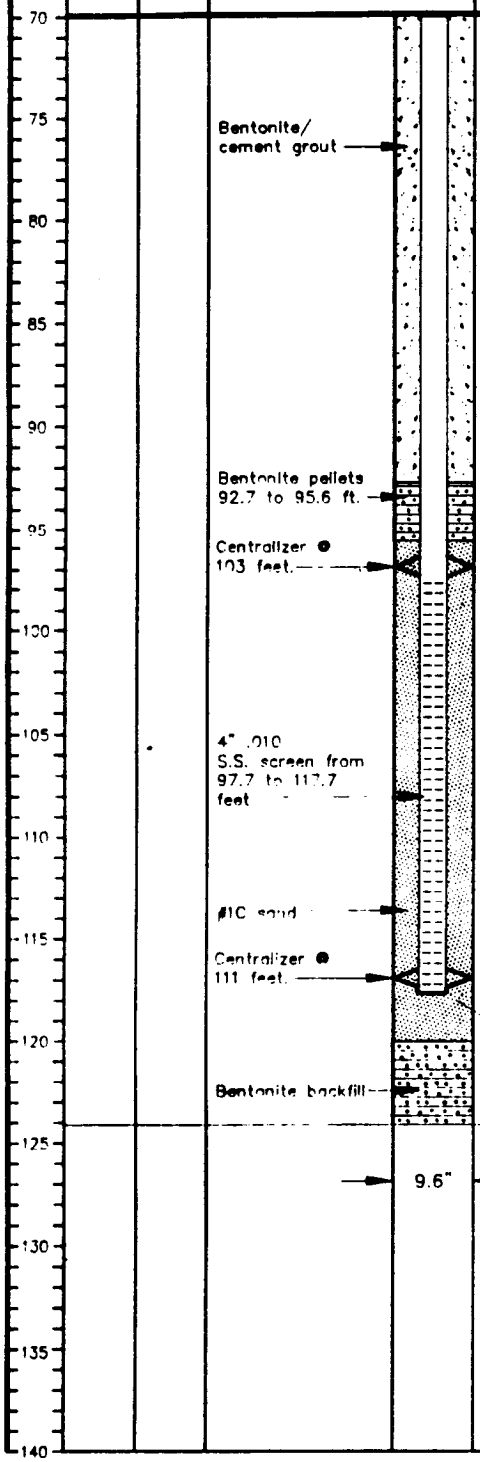
IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-5B3

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 124.1 feet

COORDINATES N 336,993.2 E 1,548,115.8
DATE BEGAN 7/26/88
DATE FINISHED 7/26/88
GROUND SURFACE EL. 13.8 ft.



USCS SYMBOL	DESCRIPTION
CL	SILTY CLAY; gray, stiff, moderately moist, moderately plastic, interbedded with a brown silty clay.
SC	CLAYEY SAND; coarse grain-fine gravel, subangular, mod. sorted, grading to medium to fine sand. Water bearing
ML	CLAYEY SILT; brown-light gray, moist, soft, moderately plastic.
CH	SILTY CLAY; brown, moist, soft, very plastic. SILTY CLAY; brown-light gray, moist to moderately moist, plastic, 1' interbedding of sand. SILTY CLAY; gray-brown, soft, moist, very plastic.
SC	CLAYEY SAND; fine grained, brown with black specs, well sorted, loose, wet. Making water
CH	SILTY CLAY; dark brown, moist, soft, very plastic.
SC-SM	CLAYEY SAND; fine grained, brown-gray, wet, well sorted, loose.
CH/CL	SILTY CLAY; dark brown-gray, moist, soft, very plastic.
SC-SM	CLAYEY SAND; fine grained, brown-gray, wet, moderately sorted, loose, some coarse sands. Making water
CH-CL	SILTY CLAY; dark brown-gray, moist, soft.

TOTAL DEPTH 124.1 FEET

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MFW9-5B3.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

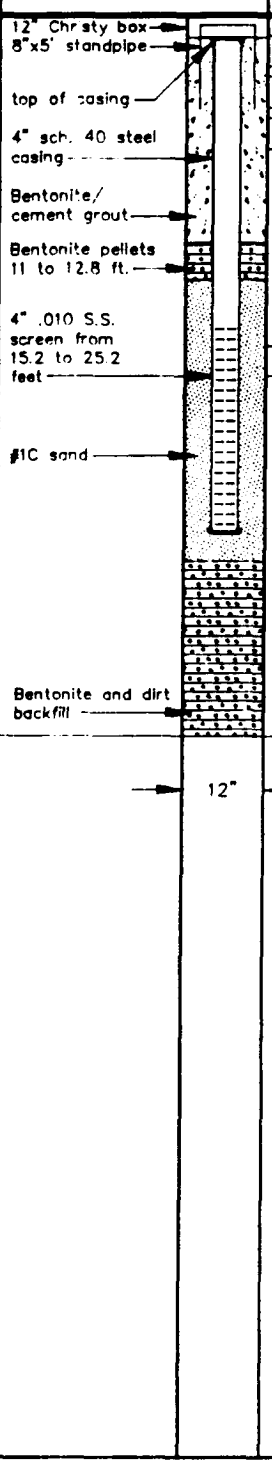
BORING NO. W9-6(A1)

FIELD GEOLOGIST W. Hopkins
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 35 feet

COORDINATES N 336,389.7 E 1,548,272.7
DATE BEGAN 7/18/88
DATE FINISHED 7/18/88
GROUND SURFACE EL. 18.5 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	6/18	5,4,15	OL	SILTY CLAY; dark gray to black, dry, soft, slightly plastic. Organic-rich
	MD#2	9/18	7,14,24		SILTY CLAY; black, moist-dry(damp), stiff, moderately plastic.
5	MD#3	10/18	7,10,14	ML-CL	CLAYEY SILT; light brown, dry-moist(damp), stiff, slightly plastic. SILTY CLAY; light olive brown, moist, medium stiff, mod. plastic. At 12.5 to 13.5 ft. clayey silt to silt.
	S	42/42			
10	S	60/60			CLAYEY SILT; medium gray, wet, medium stiff to soft, slightly plastic. Small amount of water at 13.0 ft. Silt has solvent odor, no reading on Hnu
15	MD#4	13/18	2,2,3		
				SM/SP	SILTY SAND; dark gray, wet(saturated), medium dense.
20	S	36/60		ML	CLAYEY SILT; dark gray, wet, very soft to medium stiff, slightly plastic, minor sand. Water standing at 20-21 ft.
25	S	36/60		CL	SILTY CLAY; light gray brown, wet, medium stiff, moderately plastic, minor pebbles.
30	S	30/60		ML-SP	CLAYEY SANDY SILT/SILTY SAND; medium gray brown, wet, medium stiff. No odor in this aquifer.
35					TOTAL DEPTH 35 FEET
40					
45					
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

ROJECT NO.: 409616
'JENT: Moffett Naval Air Station
Moffett Field, California

'AD FILE: MF-W9-6A.DWG

IT ...Creating a Safer Tomorrow

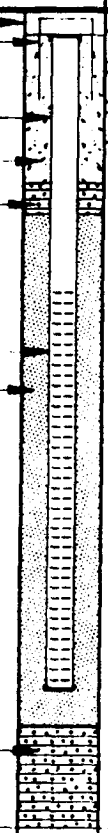
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-7(A1)

FIELD GEOLOGIST W. Hopkins
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 40 feet

COORDINATES N 336,168.7 E 1,548,103.2
DATE BEGAN 7/21/88
DATE FINISHED 7/21/88
GROUND SURFACE EL 19.66 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0				FILL	FILL: sandy gravel; moderate brown, dry, medium dense.
	MD#1	6/18	1	OH	SILTY CLAY; black, moist, stiff, high plasticity.
	MD#2	5/18	1	ML	CLAYEY SILT; light gray, moist, stiff, moderate plasticity, thin layer of pebbly sand (4-4.2 ft.)
5	MD#3	9/18	1	CL	SILTY CLAY; medium gray with medium brown spots, moist to wet, stiff, moderately plastic.
	S	42/42			
10					
	S	60/60			
15					▽ Ground water first encountered.
	S	40/60		ML	CLAYEY SILT/SILT; dark gray, wet (saturated), very soft, low plasticity.
20				SW	PEBBLY SAND; with clay and silt, dark greenish gray, wet, medium dense.
	S	16/60			
25				GC	SANDY GRAVEL; with clay, gray, wet, low plasticity.
	S	10/60			
30	S	15/18		SP	SILTY SAND; medium brownish gray, wet, dense, poorly graded.
	S	0/18			
	S	0/18			
35				CL	SANDY CLAY; medium brown, wet, stiff, low plasticity.
	S	24/60			
40					TOTAL DEPTH 40 FEET
45					
50					
55					
60					
65					
70					



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MF-W9-7A.DWG

IT ...Creating a Safer Tomorrow

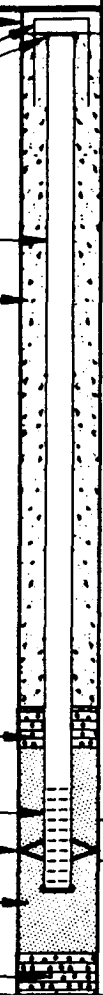
EE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-13(A2)

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hodgell
TOTAL DEPTH 48 feet

COORDINATES N 336,152.5 E 1,548,014.9
DATE BEGAN 7/18/88
DATE FINISHED 7/19/88
GROUND SURFACE EL. 19.6 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	10/18	9,5,6	CL	SILTY CLAY; reddish brown, dry, non-plastic, gravel inclusions. SILTY CLAY; black-dark gray, moist to moderately moist, moderately plastic.
	MD#2	8/18	4,7,10		
5	MD#3	ND	3,7,9		Color grading to a light gray.
10					SILTY CLAY; lt. gray, moist, soft, moderately plastic, platy (slickensides)
15				CH	SILTY CLAY; light gray, moist to wet, soft to very soft, plastic. ▽ 7-18-88, 15:00.
20				GC	CLAYEY GRAVELS; gray, angular, to subround, moderately sorted.
25				SC	CLAYEY SAND; rounded, fine grained, moderately sorted.
30				CH	SANDY CLAY; light gray, soft, wet, plastic, inclusions of gravel.
35				GW	GRAVEL; poorly sorted, subround.
40	MD#4	12/12	7,10	CH	SILTY CLAY; light-reddish brown, moist, soft, plastic. Stop to take drive sample just up hole from expected aquifer. GRAVELLY SILTY CLAY; gray, moist, plastic, very soft, inclusions of gravel.
				GW	GRAVEL; poorly sorted, subrounded. B1 Aquifer
45				CH	SILTY CLAY; light brown, moist, plastic, sticky, sand inclusions.
				CL	SILTY CLAY; light brown, moderately moist, soft, moderately plastic.
50					TOTAL DEPTH 48 FEET
55					
60					
65					
70					



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

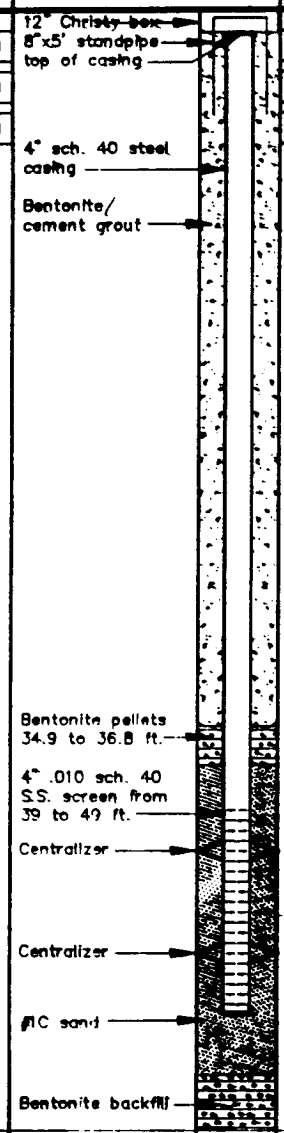
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-14(A2)

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 54.7 feet

COORDINATES N 335,498.3 E 1,548,847.7
DATE BEGAN 8/5/88
DATE FINISHED 8/8/88
GROUND SURFACE EL. 20.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0			12" Christy box				3" of asphalt pavement.
	MD#1	12/18	8"x5' standpipe top of casing	5,5,7	CL		TOPSOIL; light gray, silty clay, slightly moist, stiff, slightly plastic.
	MD#2	12/18		3,3,9			SILTY CLAY; tan-light brown, slightly moist, stiff, slightly plastic, orange oxidized layers.
5	MD#3	12/18	4" sch. 40 steel casing	5,6,11			SANDY SILTY CLAY; with fine gravels, orange brown, slightly moist, soft, non-plastic.
			Bentonite/ cement grout		SP		GRAVELY SAND; black and clear, fine gravels, slightly moist, sub-angular.
10					CL		SANDY CLAY; gray, moist, very soft, moderately plastic.
					CH		Graded to a silty clay, moist, very soft, very plastic. SILTY CLAY; orangish brown, moist, very soft, very plastic.
15					GP		COARSE SAND/COARSE GRAVEL, slightly moist, angular, black-gray.
20					CL		SANDY-SILTY CLAY; light gray, moist, soft, moderately plastic. Hit water @21'
					SP-GP		COARSE SAND and FINE GRAVELS; black-tan, wet, angular.
25					CL		SILTY CLAY; light gray, moist, soft, moderately plastic. SANDY CLAY; light brown, moist-wet, very soft, moderately plastic.
					CH		CLAY-SILTY CLAY; gray, moist, soft, plastic, sticky.
30					SC		CLAYEY SAND; gray, medium-coarse grained, sub-angular. Drill bit suddenly fell to 34' but we made little water.
35			Bentonite pellets 34.9 to 36.8 ft.		CH		SILTY CLAY; gray, moist, soft, plastic, inclusions of coarse sand. Making water
			4" .010 sch. 40 S.S. screen from 39 to 49 ft.				
40			Centralizer		SW		SAND; clear-tan, fine-coarse, poorly sorted, sub-rounded, some gravels, no fines.
					CL		SILTY CLAY; gray, moist, soft, moderately plastic.
45			Centralizer		GW		SANDY GRAVEL; very poorly, sorted, sub angular, fine grained sand to coarse gravel. Grading into coarse gravel. Making water
50			#1C sand		CL		SILTY CLAY; orangish brown, moist, soft, medium plastic.
			Bentonite backfill		SW		CLAYEY SILTY GRAVELLY SAND; black and brown, medium grained sand; fine gravels with fines interbedded.
55							TOTAL DEPTH 54.7 FEET
			9.6"				
60							
65							
70							



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: MW9 14B1.DWG

BORING NO. W9-15(B2)

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 108 feet

COORDINATES N 335,826.0 E 1,548,605.0
DATE BEGAN 8/1/88
DATE FINISHED 8/4/88
GROUND SURFACE EL. 18.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0			12" Christy box				
	MD#1	6/10	8"x5' standpipe	3,5,5	CL		SILTY CLAY; light brown-gray, slightly moist, soft, mod. plastic, inclusions of gravel.
	MD#2	18/18		3,7,18			SILTY CLAY; yellow brown, slight moist, soft, slightly plastic.
5	MD#3	18/18		12,24,25	SP		GRAVELLY SAND; yellow tan, slightly moist, medium grained, moderately sorted.
10			Bentonite/ cement grout		CL		SILTY CLAY; brown-light gray, moist, very soft, moderate to slightly plastic. Moisture is picking up @ 10', water table must be close but have not seen water.
15					CH MH		SILTY CLAY; light gray, moist, very soft, plastic. SILTY CLAY/CLAYEY SILT; gray, moist, very soft, plastic, inclusions of gravel. 20' connection had water in hole. ▽ Ground water first encountered.
20					SM		SILTY SAND; gray, very fine to fine grained, wet, loose, moderately sorted with some coarse sand. Mostly opaque with black minerals. Adding water to drill. Making water.
25			4" sch. 40 S.S. casing		CH		SILTY CLAY; gray, moist, soft, plastic. SILTY SANDY CLAY; gray and orange, soft, moist, moderately plastic, gravel inclusions.
30					SC-GC		CLAYEY SAND & GRAVEL; brown-tan, moderately sorted sand and gravel, fine to very fine sand and gravels.
35					SM		SILTY SAND; brown, moist, very soft, very fine grained sand, loose.
40					GW		SANDY GRAVELS; fine gravels, coarse sands, poorly sorted, angular to sub-angular, light gray-black, clear quartz, stringers of silty clay; gray, soft, moderately plastic. Making lots of water
45							
50					CL		SILTY CLAY; reddish brown, moist, soft, moderately plastic.
55					SM		SILTY SAND/SANDY CLAY; light brown, wet, loose, fine to medium grained.
60					GW		GRAVEL; with coarse sand, black and opaque, fine gravels, angular poorly sorted.
65					CL		SILTY SANDY CLAY; brown, moist, soft, moderately plastic. Making water
70					SM-SP		SILTY SAND; light brown, wet, very fine grained, moderately sorted, loose, with some medium grained sands, black minerals.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

A:\CAD FILE MW9-15B2.DWG

BORING NO. W9-15(B2)

FIELD GEOLOGIST E. Wessner
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 108 feet

COORDINATES N 335,826.0 E 1,548,605.0
DATE BEGAN 8/1/88
DATE FINISHED 8/4/88
GROUND SURFACE EL. 18.8 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70					SC-CH		SILTY CLAY; gray, moist, soft, moderate to very plastic. Stinger of coarse sand at 74' angular, moderately sorted, black.
75					CL		SILTY CLAY; gray, moderately moist, stiff, slightly plastic to plastic.
80			Bentonite pellets 77.3 to 81.2 ft.		SM-SP		Fine gravels grading to a fine-medium silty sand, moderately sorted, runny, with some coarse grains of sand and gravel. Making water
85			4" .010 sch. 40 S.S. screen from 87.3 to 97.3 feet		CH-CL		SILTY CLAY; light brown, moist, soft, very plastic to moderately plastic. Drive samples from 86-89 ft.
90			Centralizer		SM-SW		SILTY SAND; fine to medium grained, opaque with black minerals, moderately sorted, loose. SILTY SAND; very fine grained to medium grained, grading to a cleaner sand with less water but still wet to 100'.
95			Centralizer				
			#1C sand				
100					CH		SILTY CLAY; gray, moist, very soft, very plastic.
105					SW-GW		Very fine grained to medium grained sands with fine gravels very poorly sorted, clear and black sands and gravel. Making water. Hole backfilled with flowing sand to 102' (base of clay)
110			9.6"				TOTAL DEPTH 108 FEET
115							
120							
125							
130							
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MW9-15B2.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W9-27(A2)

FIELD GEOLOGIST E. Wessner
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 53.2 feet

COORDINATES N 336,676.4 E 1,548,653.8
DATE BEGAN 8/19/88
DATE FINISHED 8/22/88
GROUND SURFACE EL. 16.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER (6")	USCS SYMBOL	PROFILE	DESCRIPTION
0			12" Christy box; 8"x5' standpipe; top of casing		FILL		FILL: coarse gravels and silty clay.
5					CL		SILTY SANDY CLAY; dark gray-black, slightly moist, medium stiff, moderately plastic. SILTY CLAY; light gray to mottled brown gray, moderate to slightly moist, slightly to moderately plastic.
10			4" sch. 40 steel casing; Bentonite/cement grout		GW		GRAVELS; black and gray, very coarse to fine, angular, poorly sorted. Fuel odor, (3-4ppm in mud bin), no water.
15					CL		SILTY CLAY; brown-gray, moderately moist, medium stiff to soft, moderately plastic.
20					SP-CH		Slight inflow of water. SILTY COARSE SANDS; angular to subangular, medium grained and some gravels, poorly sorted. Stringers of silty clay, light olive gray, moist, soft, plastic.
25							
30					CH		SILTY CLAY; olive gray, moist, moderately plastic to plastic. SILTY CLAY; orange brown, moist, soft to medium stiff, plastic, mottled brown gray.
35			Bentonite pellets 33.8 to 35.8; 4" .010 S.S. screen from 37.8 to 47.8 feet				SILTY CLAY; mottled gray brown, moist, stiff, moderately plastic.
40			Centralizer		SP-CL		SANDY SILTY CLAY; with fine to medium sands, subangular, poorly sorted.
45			Centralizer; #1C sand		CL		SANDY CLAY; gray brown, wet, slightly plastic. SILTY CLAY; gray brown, moist, stiff, moderately plastic, minor sand.
50			Bentonite Backfill				
55			9.6"				TOTAL DEPTH 53.2 FEET
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

NOTE: Redrill of W9-27(B1), (7-19-88)
No samples taken while drilling this well. Samples taken during the drilling of the original W9-27(B1-abandoned) will be used as sample data.

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MW3-27B1.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 10

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#27

FIELD GEOLOGIST J. Hodsoll
EDITED BY D. H. Cox
CHECKED BY J. Hodsoll
TOTAL DEPTH 252 feet

COORDINATES N 337,167.5 E 1,551,008.7
DATE BEGAN 8/18/88
DATE FINISHED 8/19/88
GROUND SURFACE EL. 9.72 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0							SANDY CLAY; dark brown, dry, hard, non-plastic, brittle.
5	#1	0/84					
10	#2	24/60					SANDY CLAY; dark brown, dry, hard, slightly plastic, orange oxidation, mudstone fragments.
15	#3	0/60					
20	#4	10/60					SILTY SANDY CLAY; medium brown, moist, soft, non-plastic, sticky.
25	#5	12/60					SILTY SANDY CLAY; medium brown, moist, very stiff, plastic.
30	#6	12/60					SILTY SANDY CLAY; medium brown, moist, stiff, medium plasticity.
35	#7	0/60			CL		
40	#8	24/60					SILTY CLAY; medium brown, moist, stiff, plastic.
45	#9	18/60					SILTY CLAY; medium brown, moist, very stiff, highly plastic.
50	#10	48/60					
55	#11	24/60					SANDY CLAY; medium brown, moist, very stiff, plastic, with mudstone fragments. SILTY CLAY; medium brown, moist, soft, plastic.
60	#12	60/60					SANDY CLAY; gray brown, moist, very stiff, moderate plasticity, with iron oxidation stains.
65	#13	10/60					SANDY CLAY; medium brown, moist, very stiff, plastic with mudstone fragments.
70	#14	12/60					SILTY CLAY; medium brown, moist, medium stiff, plastic.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB27.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#27

FIELD GEOLOGIST J. Hodsoll
EDITED BY D. H. Cox
CHECKED BY J. Hodsoll
TOTAL DEPTH 252 feet

COORDINATES N 337,187.5 E 1,561,008.7
DATE BEGAN 8/18/88
DATE FINISHED 8/19/88
GROUND SURFACE EL. 9.72 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#14	12/60			CL		SILTY CLAY; medium brown, moist, soft, moderate plasticity.
75	#15	20/60					
80	#16	24/60					SILTY CLAY; dark brown, mottled gray, moist, soft, sticky.
85	#17	12/60					SANDY CLAY; medium brown, moist, soft, moderate plasticity.
90	#18	4/60			ML		SANDY SILT; medium brown, very moist, very soft, sticky.
95	#19	12/60			CL		SANDY SILTY CLAY; medium brown, very moist, very soft, sticky.
100	#20	16/60					SANDY SILTY CLAY; medium brown, very moist, very soft, sticky.
105	#21	0/60			SP		SAND; coarse grained.
110	#22	0/60					
115	#23	0/60					
120	#24	18/60			ML		CLAYEY SILT; dark gray brown, very moist, very soft, sticky.
125	#25	0/60			SP		SAND; coarse grained.
130	#26	60/60			CL		SANDY CLAY; medium brown, slightly moist, stiff, very plastic.
135	#27	27/60					
140	#28	30/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB27.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#27

FIELD GEOLOGIST J. Hodsoll
EDITED BY D. H. Cox
CHECKED BY J. Hodsoll
TOTAL DEPTH 252 feet

COORDINATES N 337,187.5 E 1,551,008.7
DATE BEGAN 8/18/88
DATE FINISHED 8/19/88
GROUND SURFACE EL. 9.72 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (SF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#28	30/60			CL		SILTY CLAY; gray brown, stiff, plastic.
145	#29	60/60			CL		
150	#30	60/60			CL		SILTY CLAY; gray, moist, very stiff, plastic.
155	#31	60/60			CL		SANDY CLAY; gray brown, moist, very stiff, moderate plasticity.
160	#32	20/60			CL		SANDY SILTY CLAY; medium brown, moist, stiff, sticky.
165	#33	8/60			CL		SANDY CLAY; gray brown, moist, hard, non-plastic, brittle.
170	#34	54/60			CL		SANDY SILTY; gray brown, moist, very stiff, moderate plasticity, iron oxidation staining.
175	#35	6/60			SC		CLAYEY SAND; gray, moist, very stiff, 40% sand, 10% gravel and seashells.
180	#36	12/60			GC		SANDY CLAYEY GRAVEL; gray, moist, stiff, angular mudstone clasts.
185	#37	10/60			CL		SANDY CLAY; gray, moist, very stiff, moderate plasticity, with coarse angular, lithic fragments.
190	#38	12/60			SC		CLAYEY SAND; moist, very stiff, brittle, (50% sand).
195	#39	24/60			CL		SANDY CLAY; medium brown, moist, very stiff, moderate plasticity, with coarse grained sand.
200	#40	0/60			CL		
205	#41	31/60			CL		
210	#42	0/60			CL		

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB27.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#27

FIELD GEOLOGIST J. Hodsoll
EDITED BY D. H. Cox
CHECKED BY J. Hodsoll
TOTAL DEPTH 252 feet

COORDINATES N 337,167.5 E 1,561,006.7
DATE BEGAN 8/18/88
DATE FINISHED 8/19/88
GROUND SURFACE EL. 9.72 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#42	0/60			SC		CLAYEY SAND; fine grained.
215	#43	0/60					
220	#44	3/60			CL		SANDY CLAY; medium brown, moist, stiff, plastic, with gravel clasts.
225	#45	30/60					SILTY CLAY; dark brown, moist, very stiff, plastic.
230	#46	24/60			ML		SANDY CLAYEY SILT; dark brown, moist, very stiff, moderate plasticity, 50% silt, 5% sand.
235	#47	26/60			CL		SILTY CLAY; dark gray brown, moist, very stiff, hard, plastic.
240	#48	30/60			ML		CLAYEY SANDY SILT; moist, dark brown, very stiff, plastic.
245	#49	2/60			CL		SANDY CLAY; dark gray brown, moist, very stiff, moderate plasticity.
250	#50	30/60					SANDY CLAY; dark gray brown, moist, very stiff, low plasticity.
255							TOTAL DEPTH 252 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB27.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#30

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY T. Ault
TOTAL DEPTH 252 feet

COORDINATES N 334,869.1 E 1,553,159.5
DATE BEGAN 9/19/88
DATE FINISHED 9/20/88
GROUND SURFACE EL. 19.05 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0							Asphalt
5					CH		CLAY; dark brown, slightly moist, very stiff, very plastic.
10	#1	0/60			GW		SANDY GRAVEL; multicolored, wet, loose, subangular, multilithic, coarse sand.
15	#2	0/60					
20	#3	0/60					
25	#4	0/60					
30	#5	36/60		0.25–4.25	CL		SILTY CLAY; dark gray, moist, soft, non-plastic.
35	#6	0/60					
40	#7	0/60					
45	#8	0/60					
50	#9	12/60		1.0			SANDY CLAY; medium brown, moist, hard, moderate plasticity.
55	#10	0/60			GW		SANDY GRAVEL; coarse, multilithic, subangular.
60	#11	0/60					
65	#12	0/60					
70	#13	36/60		4.0	CL		SANDY CLAY; medium brown, moist, hard, brittle, coarse sand and gravel dispersal throughout.

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB30.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#30

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY T. Ault
TOTAL DEPTH 252 feet

COORDINATES N 334,869.1 E 1,553,159.5
DATE BEGAN 9/19/88
DATE FINISHED 9/20/88
GROUND SURFACE EL. 19.05 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#13	36/60			CL		SANDY CLAY; medium brown.
75	#14	0/60					
80	#15	0/60					
85	#16	0/60					
90	#17	0/60					
95	#18	0/60			SP		SAND; coarse, angular.
100	#19	0/60			SM		SILTY SAND; fine grained.
105	#20	0/60					
110	#21	0/60					
115	#22	0/60					
120	#23	0/60					
125	#24	0/60					
130	#25	0/60					
135	#26	0/60					
140	#27	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB30.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#30

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY T. Ault
TOTAL DEPTH 252 feet

COORDINATES N 334,869.1 E 1,553,159.5
DATE BEGAN 9/19/88
DATE FINISHED 9/20/88
GROUND SURFACE EL. 19.05 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#27	0/60			SM		SILTY SAND; fine grained.
145	#28	60/60					
150	#29	60/60		2.75	CL		SILTY CLAY; gray brown, moist, very stiff, plastic.
155	#30	60/60		4.5			
160	#31	60/60		4.5			
165	#32	14/60		4.5			
170	#33	40/60		3.75			
175	#34	60/60		3.5–2.75			SANDY CLAY/CLAYEY SAND; gray brown, very stiff, non-plastic, medium grained.
180	#35	36/60		3.25			SILTY CLAY/CLAY; gray, moist, very stiff, very plastic.
185	#36	60/60		4.5			SILTY CLAY; gray to moderate brown, moist very stiff, sticky.
190	#37	60/60		3.0			
195	#38	50/60		3.75			SANDY SILTY CLAY; light gray, moist, very stiff, moderate plasticity, 10% coarse angular mudstone fragments, dark gray.
200	#39	60/60		2.75–4.5			SILTY CLAY; dark gray, moist, hard, low plasticity.
205	#40	46/60		0.25–2.0			Grades to dark gray, dense, moist, soft, non-plastic. SILTY CLAY; dark gray, moist, hard, low plasticity.
210	#41	0/60					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB30.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#30

FIELD GEOLOGIST J. Hadsall
EDITED BY D. H. Cox
CHECKED BY T. Ault
TOTAL DEPTH 252 feet

COORDINATES N 334,869.1 E 1,553,159.5
DATE BEGAN 9/19/88
DATE FINISHED 9/20/88
GROUND SURFACE EL. 19.05 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210					CL		SILTY CLAY; medium brown, moist, stiff, low plasticity.
215	#42	48/60		2.25			
220	#43	12/60		4.5			
225	#44	60/60		4.5			
230	#45	60/60		4.25			Grades to dark brown color, small 1/4" sand zones intersersed throughout, increasing plasticity.
235	#46	0/60			SM		SILTY SAND; fine to medium grained.
240	#47	20/60		3.75	CL		SANDY SILTY CLAY; dark brown, moist, very stiff, moderate plasticity, some sand (5–10%).
245	#48	4/60		3.75			
250	#49	30/60		3.75			
255							TOTAL DEPTH 252 FEET 4-1/2" diameter boring
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF GB30.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W10-5(A1)

FIELD GEOLOGIST J. Hadsall
DRILLED BY D. H. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 20 feet

COORDINATES N 337,187.5 E 1,551,008.7
DATE BEGAN 8/3/88
DATE FINISHED 8/3/88
GROUND SURFACE EL. 9.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	6/18	7,7,13	CL	SILTY CLAY; dark-brown, dry, non-plastic, trace of grass roots.
	MD#2	8/18	10,15,24		
5	MD#3	6/18	14,26,30		
	MD#4	12/18	5,8,8		08:30, 8/4/88 ▼ SANDY SILTY CLAY; gray brown, moist, with oxidized mudstone fragments.
	S	18/24			
10	S	34/60		SC-SM	SILTY CLAYEY SAND; brown, moist, soft, orange oxidation with mudstone fragments. SILTY SAND; gray brown, wet (saturated), loose, medium, grained, (10% silt).
15	S	60/60		CL	SILTY CLAY; brown, moist, soft, sticky, no plasticity.
20					TOTAL DEPTH 20 FEET

WELL SUMMARY

PROFILE

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

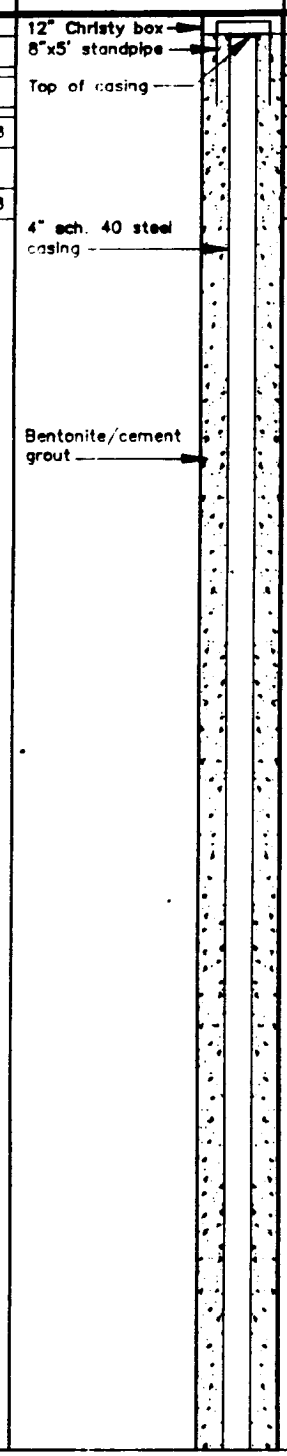
BORING NO. W10-6(C)

FIELD GEOLOGIST R. Duncan
EDITED BY D. Cox
CHECKED BY J. Hadsell
TOTAL DEPTH 178 feet

COORDINATES N 334,869.4 E 1,553,189.6
DATE BEGAN 9/29/88
DATE FINISHED 10/3/88
GROUND SURFACE EL. 18.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	7/18	7,11,14	FILL	Asphalt 0- 4". FILL: light olive gray sand with trace of silt and gravel, dry. Strong hydrocarbon odor.
	MD#2	8/18	6,6,7		
5	MD#3	17/18	5,7,15	CL	SILTY CLAY; pale yellowish brown, slightly moist to moist, medium plasticity, trace of gravel.
	MD#4	12/18	5,7,5	SM	SAND; light olive gray, moist, loose to medium dense, trace of silt and gravels.
10				GW	SAND/GRAVEL; light olive gray, very moist to wet, loose, sand is subangular, predominantly quartz and feldspar, gravels are subangular to subrounded, metamorphic. Increasing clay, color change to moderate brown.
15				CL	SANDY CLAY; brownish black, moist, soft, medium plastic.
20				GW	GRAVEL; loose, with sand.
25				GC	CLAYEY GRAVEL; light olive gray, loose. Gravels grading finer.
30				CL	SANDY CLAY; light olive gray.
35				GP	GRAVEL; olive black, loose, angular.
40					Clay with sand and gravel layers.
45					GRAVEL; olive black, loose, pea size, very angular.
50				CL	CLAY; moderate yellowish brown, with trace of sand and occasional lens of sand and gravel.
55					Increase in sand content.
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MFW10-6C.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W10-6(C)

FIELD GEOLOGIST R. Duncan
EDITED BY D. Cox
CHECKED BY J. Hodgall
TOTAL DEPTH 178 feet

COORDINATES N 334,869.4 E 1,553,189.6
DATE BEGAN 9/29/88
DATE FINISHED 10/3/88
GROUND SURFACE EL. 18.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0					CL		SANDY CLAY; light brown, moist, soft, slightly plastic.
80			4" sch. 40 steel casing		SC		CLAYEY SAND; coarse, subangular to subround, moderately sorted, clay; light brown, moist, soft, plastic.
85					CL		CLAY; light olive gray and yellowish brown, moderately plastic, with stringers of coarse sand. Coarse sand with trace of pea-size gravel lenses are present in section.
90			Bentonite/cement grout				
95							
100							
105							SANDY CLAY; yellowish brown, light olive gray, moist, soft, slightly plastic.
110							
115					SP		GRAVELLY SAND; coarse, subangular, subround, moderately sorted.
120					CL		CLAY; light olive gray, medium plasticity, coarse sand, pea sized gravel lenses.
125							SILTY CLAY; light olive gray, moist, stiff, slightly plastic.
130							
135							CLAY/SILTY CLAY; olive gray, moist, stiff, slightly plastic.
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MFW10-6C.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W10-6(C)

FIELD GEOLOGIST R. Duncan
EDITED BY D. Cox
CHECKED BY J. Hadsall
TOTAL DEPTH 178 feet

COORDINATES N 334,869.4 E 1,553,189.6
DATE BEGAN 9/29/88
DATE FINISHED 10/3/88
GROUND SURFACE EL. 18.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
140					CL		CLAY; light olive gray, medium plasticity, occasional sand stringers.
145			4" sch. 40 steel casing				
150			Bentonite/ cement grout				
155			Bentonite pellets 154.5 to 163 feet.				
160							SILTY CLAY; olive gray, moist, stiff, moderate plasticity.
165			4" .010 S.S. screen from 166 to 171 feet.		GW		GRAVEL; medium gray to dark greenish black, loose, poorly graded, trace coarse sand, gravels predominantly subrounded.
170			Centralizer				
			#1C sand		CL		CLAY; light olive gray, medium plasticity.
			Bentonite and 1C sand				CLAY; brownish black, soft, medium plasticity.
			10"				TOTAL DEPTH 178 FEET
180							
185							
190							
195							
200							
205							
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MEW10-6C.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 11

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. W11-1(A1)

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 25.0 feet

COORDINATES N 341,246.4 E 1,550,374.8
DATE BEGAN 8/24/88
DATE FINISHED 8/24/88
GROUND SURFACE EL. 1.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	6/18	8"x5' standpipe 2.0' stick-up top of casing	11,11,10	SW/SM		GRAVELLY SILTY SAND; dark brown, light green, to brown, dry, very stiff, non-plastic.
5	MD#2	8/18	4" sch. 40 steel casing	3,2,2	CH		SILTY CLAY; medium dark gray, moist, soft to stiff, medium to high plasticity, salty odor.
	MD#3	12/18	Bentonite/ cement grout	1,1,2			
	S	24/24					
10	S	60/60	Bentonite pellets 11.5 to 13.0 ft.				GRAVELLY SILTY CLAY; mottled olive gray and gray, slightly moist to moist, stiff, medium plasticity, gravel is fine, angular to subangular.
15	S	30/60	4" .010 S.S. screen 15 to 20 ft. Centralizer #1C sand		SM-SP		SILTY SANDS; light brownish gray, wet, medium dense, sand is uniformly sized as medium to fine, grades to cleaner, coarser sands with depth.
20	S	60/60	Bentonite backfill		CL/CH		SILTY CLAY; moderate brown with light gray patches, slightly moist, stiff, medium to high plasticity, trace of gravel, grades to sandy silty clay with depth. At 23 ft. sandy silt with same colors, dense, moist, sand is fine and very fine grained.
25							TOTAL DEPTH 25.0 FEET
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W11-2(A1)

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 80 feet

COORDINATES N 341,444.3 E 1,550,241.1
DATE BEGAN 8/25/88
DATE FINISHED 8/29/88
GROUND SURFACE EL. 1.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER 6"	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	8/18	8"x5' standpipe 2.0' stick-up-top of casing	6,6,6	GM		SILTY SANDY GRAVEL; light brown, dry, loose (top soil).
5	MD#2	11/18	4" sch. 40 steel casing	1,1,0	CH-CL		SILTY CLAY; medium gray and medium dark gray, moist, soft, high plasticity, becomes drier and less plastic with depth, many organic fibers (roots), trace of coarse sand.
	S	42/42	Bentonite/cement grout				
10	S	45/60					SILTY CLAY; medium to light gray with green spots, very moist to wet, soft to stiff, medium to high plasticitty, trace of medium grained sands, color grades to browner shades with depth.
15	S	60/60	Bentonite pellets 14.6 to 15.7 ft. 4" .010 S.S. screen 17.5 to 22.5 ft. Centralizer		ML		CLAYEY SILT; moderate brown with light gray spots, moist, stiff, low plasticity.
20	S	60/60	#10 sand				▽ SANDY SILT; moderate brown and light gray, wet, soft, low plasticity, sand is uniformly medium and fine grained. SANDY SILT; moderate brown and light olive gray, moist to slightly moist, very stiff, low plasticity.
25	S	60/60	Bentonite and grout backfill				●24 ft. small layer with fine angular gravels in with silts.
30	S	60/60			CH		SILTY CLAY; moderate brown, moist, very soft to soft, high plasticity, trace of medium rounded sands.
35	S	60/60			ML		SANDY SILT; pale brown, wet, soft, low plasticity. CLAYEY SILT; grayish olive with grayish yellow streaks, slightly moist to dry, very stiff to hard, low plasticity.
40	S	30/60			CL/CH		SILTY CLAY; light brown and moderate brown, moist, soft to stiff, high to medium plasticity, fine subang. gravel
					ML-SP		SANDY SILT; medium brown, wet, stiff, low plasticity, grades to predominantly clean, brown and black medium grained sand.
45	S	28/60			SP		SAND; medium brown and black, wet-saturated, medium dense, dries out with depth, relatively clean.
50	S	55/60					
55	S	10/60					Sands as above, but with more fine grained sand, wet-saturated.
60	S	30/60					SAND; moderate brown and black with some white, wet-saturated, medium dense, poorly graded.
65	S	14/60					
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W11-2(A1)

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 80 feet

COORDINATES N 341,444.3 E 1,550,241.1
DATE BEGAN 8/25/88
DATE FINISHED 8/29/88
GROUND SURFACE EL. 1.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
70	S	30/60	Bentonite/cement grout		SP		SAND; moderate brown and black with some white, wet, medium dense, moderately graded.
					GW		FINE GRAVEL/COARSE SAND; clean, rounded.
75					SM		SILTY SAND; moderate to light brown, wet, stiff, fine sand.
	S	32/60			SP		SAND; moderate brown and black with some white, wet saturated, medium dense, predominantly clean, poorly graded
80			12"				TOTAL DEPTH 80 FEET
85							
90							
95							
100							
105							
110							
115							
120							
125							
130							
135							
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 12

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

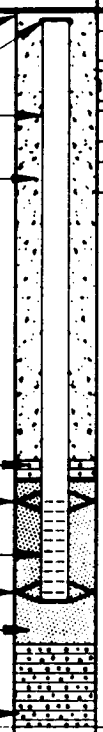
BORING NO. W12-1(A1)

FIELD GEOLOGIST G.L. Williams
EDITED BY J. Hodsoll
CHECKED BY B. Manchon
TOTAL DEPTH 35 feet

COORDINATES N 338,009.7 E 1,549,044.6
DATE BEGAN 9/7/88
DATE FINISHED 9/8/88
GROUND SURFACE EL. 8.9 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	7/18	9,11,12	CL	SANDY CLAY; yellowish brown, damp, soft to medium stiff, low to non-plastic.
	MD#2	10/18	10,18,30		
5	MD#3	15/18	8,8,29	SM-SC	SAND; moderate yellowish brown, moist, loose, fine to medium, traces of silt and clay, little pebbles.
	MD#4	12/18	6,6,11	CL-ML	SILTY CLAY/CLAYEY SILT; light gray to light yellowish gray, damp, soft to medium stiff, low plasticity.
10	S	ND		SM-SC	SAND; light gray, wet, loose, trace of silt and clay.
15	S	60/60		CL	SILTY CLAY; light yellowish gray, moist very soft, low plasticity.
					Wet, soft, more silt.
20	S	60/60			Very stiff, low plasticity.
25	S	60/60		SM	SAND; wet (saturated), medium dense, with silt and clay.
30				CL	SILTY CLAY; yellowish brown, wet, medium stiff, with gravel.
				SM	SAND; yellowish brown, wet (saturated), fine to medium, trace gravel, pebbles and cobbles.
35				SP/GW	SAND/GRAVEL; yellowish brown, wet (saturated), loose, with traces of silty clay.
					TOTAL DEPTH 35 FEET

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

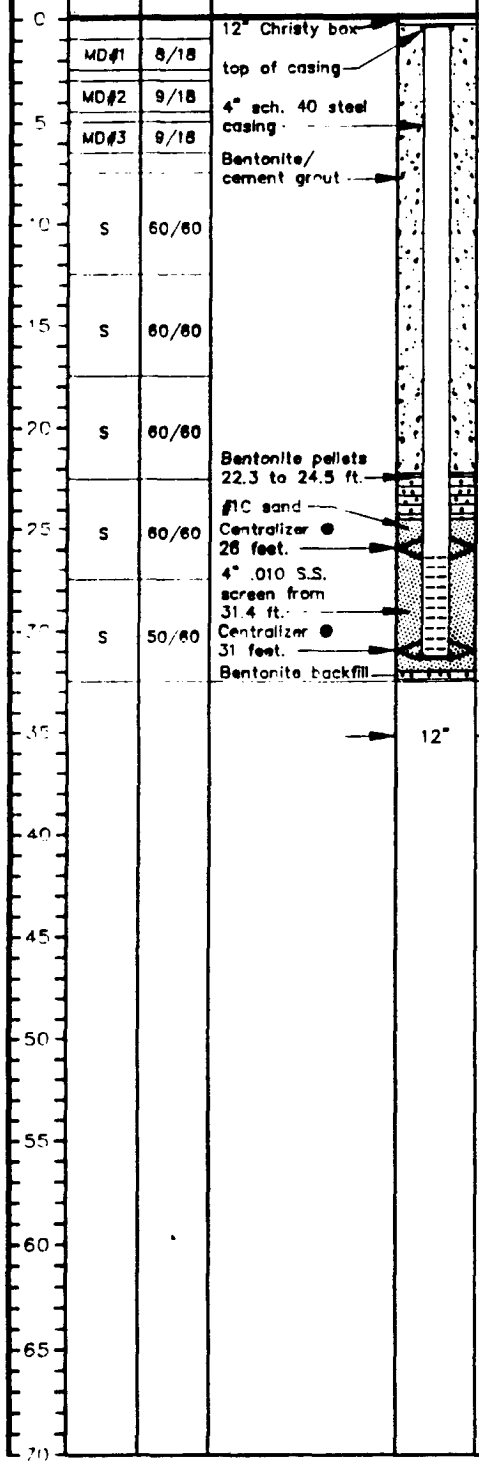
AUTOCAD FILE W12-1A.DWG

BORING NO. W12-2(A1)

FIELD GEOLOGIST G.L. Williams
EDITED BY J. Hadsell
CHECKED BY B. Monchon
TOTAL DEPTH 32.8 feet

COORDINATES N 338,270.3 E 1,549,017.0
DATE BEGAN 9/8/88
DATE FINISHED 9/9/88
GROUND SURFACE EL. 9.0 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	8/18	21,30,18	SW	SAND; dark yellowish brown, moist to dry, fine to medium sands with gravel and pebbles/cobles.
	MD#2	9/18	5,8,12	OL	SILTY CLAY; yellowish brown, moist, stiff, low plasticity, trace sand, trace pebbles.
5	MD#3	9/18	7,6,7	ML	CLAYEY SILT; grayish orange, moist to dry, stiff, low plasticity, trace gravel.
10	S	60/60		CL-ML	SILT and CLAY; dark greenish gray, moist to damp, stiff, low plasticity, some gravels.
				CH	CLAY; damp, soft, to med. stiff, mod. to high plas., tr. silt.
15	S	60/60		CL	SILTY CLAY; moderate yellowish brown, wet (saturated), stiff, low plasticity.
20	S	60/60			Some gravels and sand.
25	S	60/60			
				SP	SAND; moderate to dark yellowish brown, wet (saturated), loose, fine, with little gravel. Becomes dark grayish green and silty.
30	S	50/60		ML	CLAYEY SILT; dark greenish gray, damp, very stiff, low to non-plastic, some gravels.
					TOTAL DEPTH 32.8 FEET
35					
40					
45					
50					
55					
60					
65					
70					



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: W12-2A.DWG

BORING NO. W12-3(A1)

FIELD GEOLOGIST G.L. Williams
EDITED BY J. Hodsdl
CHECKED BY B. Monchon
TOTAL DEPTH 27.6 feet

COORDINATES N 338,291.8 E 1,548,812.3
DATE BEGAN 9/12/88
DATE FINISHED 9/12/88
GROUND SURFACE EL. 5.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	7/18	13,15,34	OL	SILTY SANDY CLAY; yellowish brown, moist to dry, hard, low to non-plastic.
	MD#2	7/18	7,10,13		
5	MD#3	10/18	4,5,6	CL	SILTY CLAY; dark greenish gray, damp, very soft, low to medium plasticity.
	S	18/18		SC-SM	CLAYEY SILTY SAND; dark greenish gray, wet (saturated), loose, some gravel.
10	S	60/60		CL	SILTY CLAY; moderate yellowish brown, wet (non-saturated), soft to medium stiff, low to medium plasticity.
	S	24/24			
15	S	52/60		SM	SAND; mod. yellowish brown, wet (saturated), loose, fine.
				GW	GRAVEL; moderate yellowish brown, wet (saturated), loose, with fine to medium sand, traces of silt and clay.
20	S	36/36		CL	SILTY CLAY; moderate yellowish brown, wet (non-saturated), stiff, low plasticity, some gravel.
25	S	53/60		SM	SILTY SAND; yellowish brown, wet, loose, medium to coarse, some gravel.
30					TOTAL DEPTH 27.6 FEET
35					
40					
45					
50					
55					
60					
65					
70					

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W12-3A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 13

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO BORINGS OR WELLS WERE DRILLED AT SITE 13

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 14

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#28

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 260 feet

COORDINATES N 333,680.8 E 1,549,926.3
DATE BEGAN 8/5/88
DATE FINISHED 8/8/88
GROUND SURFACE EL. 30.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
0							Asphalt; fill material.
	#1	0/60			FILL		FILL: sandy clayey gravel; gray to brown, coarse and fine grained, angular, with sand; coarse to medium grained.
5	#2	18/60		2.5–3.0	ML		CLAYEY SILT; mottled gray, brown to tan and cream, dry, stiff to very stiff, low to medium plasticity, trace of rounded, medium grained sand, trace of wood fibers.
10	#3	3/60		0.8	GC		SANDY CLAYEY GRAVEL; black to brown, gravel is fine grained, angular, sand is coarse to medium grained, low to medium plasticity, trace of wood fibers.
					CL		SANDY SILTY CLAY; gray and light brown, with cream patches, moist, soft, high plasticity, sand is medium to fine grained, subrounded to rounded.
15	#4	0/60			GW		SANDY GRAVEL; gray, gravel is fine and coarse grained, subrounded to rounded, sand is coarse to medium grained, significant fraction of woodlike, fiberous chips, brown, do not float in water.
20	#5	0/60					
25	#6	0/60					
30	#7	0/60			SW		GRAVELLY SAND; black to tan, sand is coarse to fine grained, rounded, gravel is fine, subrounded. Prevalent wood chips and fragments to 5mm long, no odor.
35	#8	10/60		4.0–4.5	ML		CLAYEY SILT; mottled dark gray and dark brown with cream patches, slightly moist, hard, medium to low plasticity, trace of fine sands, no odor.
40	#9	20/60		2.0–2.5	CL–ML		CLAY/CLAYEY SILT; dark brown with dark and light gray, dry to slightly moist, medium plasticity, no odor.
					SC		CLAYEY SAND; black and gray, coarse to fine grained, rounded.
45	#10	0/60					
50	#11	0/60					Trace of fine gravel and wood fibers – very thin (splinters) to 1.5" long.
55	#12	0/60					Small gray clay lens (2" thick), interbedded, moist, soft, very high plasticity.
60	#13	0/60					CLAYEY SAND; black to brown, predominantly medium grained, subrounded.
65	#14	18/60		2.25–2.75	CH ML		SILTY CLAY/SANDY SILT; clay is dark brown with gray streaks, dry, very stiff, high plasticity, silt is brown, moist, very stiff, low plasticity, sand is fine to very fine grained.
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#28

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 260 feet

COORDINATES N 333,880.8 E 1,549,926.3
DATE BEGAN 8/5/88
DATE FINISHED 8/8/88
GROUND SURFACE EL. 30.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#15	0/60			SC		CLAYEY SAND; black and gray, medium to coarse grained, subangular to subrounded.
75	#16	12/60		0.4–1.1	CL–CH		SILTY CLAY; grading to sandy clay. Silt is orangish brown with light gray spots, moist, soft, high plasticity, sand is coarse to medium , subrounded.
					CH		SILTY CLAY; light and dark gray, moist, very stiff to hard, high plasticity, trace of fine grained sands.
80	#17	30/60		2.3–4.2			
85	#18	24/60		1.3			SANDY SILTY CLAY; light brown and gray, slightly moist, stiff, medium to high plasticity, sand is coarse to medium grained.
90	#19	0/60			SC		CLAYEY SAND; light brown, soft, medium plasticity, sand is coarse to medium grained, subangular to subrounded.
95	#20	5/60		2.0	CL		SANDY SILTY CLAY; tan to mottled dark gray, brown, tan, slightly moist, high to med. plasticty, sand is fine to v. fine.
					SC		CLAYEY SAND; gray, coarse to fine, predominantly medium grained, angular to subrounded.
100	#21	0/60					
105	#22	50/60		0.7–1.5	CH		SILTY CLAY; dark gray and brown, slightly moist to moist, stiff, high plasticity, trace of fine sand.
110	#23	46/60		3.25	CL		SILTY CLAY; brown with gray patches, dry, very stiff, medium plasticity.
115	#24	30/60		0.75–4.25	ML–CH		CLAYEY SILT/SILTY CLAY; clayey silt is mottled gray and brown, dry, hard, low plasticity, silty clay is tan and brown, moist to very moist, soft, high plasticty.
120	#25	36/60		1.0	SC		CLAYEY SAND; tan, coarse to med. grained.
					CH		CLAY; gray, moist, stiff, high plasticity, trace of silt and fine sand.
125	#26	40/60		3.0–3.5	SC		CLAYEY SAND; tan, coarse to med. grained.
					ML–CH		CLAYEY SILT/SILTY CLAY; clayey silt is mottled light and dark gray, dry, very stiff, low plasticity, silty clay is mottled brown and gray, moist to very stiff, medium to high plas.
130	#27	0/60			GC		CLAYEY SANDY GRAVEL; gray and black, coarse and fine grained, subrounded and rounded, sand is coarse to medium grained, angular to subrounded.
135	#28	48/60		1.0–3.5	CL		SILTY CLAY; dark deep gray, moist, stiff to very stiff, medium plasticty, laminated beds.
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#28

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 260 feet

COORDINATES N 333,680.8 E 1,549,926.3
DATE BEGAN 8/5/88
DATE FINISHED 8/8/88
GROUND SURFACE EL. 30.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#29	60/60		3.5–4.5	ML		CLAYEY SILT; dark gray with cream spots, dry to slightly moist, very stiff to hard, low plasticity, blocky structure.
145	#30	26/60		4.0–4.5			
150	#31	52/60		2.0–2.3	CL		SILTY CLAY; dark gray and dark brown with creamy white patches and streaks, moist to very moist, stiff to very stiff, medium plasticity.
155	#32	40/60		2.5–2.6			SILTY CLAY; dark deep gray, slightly moist to moist, very stiff, medium plasticity.
160	#33	60/60		2.25			
165					ML		CLAYEY SILT; dark gray and dark brown, dry to slightly moist, very stiff, low to medium plasticity, laminated structure (platey).
	#34	8/60		2.30	SM–SC		SILTY CLAYEY SAND; black to tan, coarse to medium grained, subrounded to rounded.
170	#35	0/60			SC		CLAYEY SAND; small (inches thick) sandy clay beds interspersed in this interval.
175					CH		SILTY CLAY; dark gray, dry, stiff, high plasticity, tr. fine sand
	#36	52/60		1.25–2.0	ML		CLAYEY SILT; gray and gray brown, moist, very stiff, low plas.
					CH		SILTY SANDY CLAY; brown with cream spots, moist, stiff, high plasticity.
180	#37	0/60			CL		SANDY CLAY; gray and brown, soft, medium to high plasticty sand is coarse and medium grained with some fine grained particles, loose.
185	#38	0/60			SC		CLAYEY SAND; black and gray to tan, coarse to medium grained, some fine grained, angular to sub-rounded, some particle cementation.
190	#39	0/60			SW		SAND; black to gray, coarse to fine grained, subangular, to rounded, trace of fines and fine gravel.
195	#40	0/60					GRAVELLY SAND; sand is all earthen colors and white, sub-angular to rounded, coarse to very fine grained, gravel is fine grained, angular.
200	#41	0/60			SP		SAND; mostly brown colors with some gray, subrounded and rounded, medium grained, trace of coarse and fine grained, trace of fine gravels.
205	#42	55/60		1.0–1.6	CL		SILTY CLAY/GRAVELLY CLAY/SANDY CLAY; orangish brown and light gray to gray, moist to very moist, stiff, medium plasticity, sand is fine and very fine, gravel is coarse to fine, rounded.
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: MF-GB28.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#28

FIELD GEOLOGIST S. Logan
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 260 feet

COORDINATES N 333,880.8 E 1,549,926.3
DATE BEGAN 8/5/88
DATE FINISHED 8/8/88
GROUND SURFACE EL. 30.4 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#43	48/60		3.6–4.0	ML		CLAYEY SILT; mottled light and dark gray and brown, dry, very stiff to hard, low to non-plastic, trace of medium grained sand, blocky stucture.
215	#44	54/60		3.3–3.5			
220	#45	47/60		2.5–4.5			
225	#46	52/60		3.0–2.5			
230	#47	0/60			SC		CLAYEY SAND; light brown and grays, medium to fine grained, low plasticity, angular to subrounded.
235	#48	0/60					
240	#49	0/60			SW		SAND; black to brown, coarse to fine grained, subrounded to rounded, trace of fines, trace of fine gravels.
245	#50	60/60		1.5–2.5	CL–ML		SILTY CLAY/SANDY SILT; clay is dark gray with some lighter shades of gray, moist, stiff to very stiff, medium plasticity, silt is dark gray, dry, low plasticity, sand is fine to very fine, grained.
250	#51	0/60					
255	#52	38/60		3.25–3.75	ML		CLAYEY SILT; dark gray grading to mottled dark gray and dark brown with light gray streaks, moist, stiff to hard, low plasticity.
260							TOTAL DEPTH 260 FEET 4-1/2" diameter boring
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE MF-GB28.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W14-1(A2)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hodsoll
CHECKED BY J. Hodsoll
TOTAL DEPTH 56.2 ft.

COORDINATES N 333,888.5 E 1,548,923.0
DATE BEGAN 8/24/88
DATE FINISHED 8/24/88
GROUND SURFACE EL. 30.3

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	9/18	6,9,12	CL	CLAY/SILTY CLAY; dark gray, dry, stiff, non-plastic. Color varying from light gray to brown.
	MD#2	12/18	6,9,12		
5	MD#3	12/18	6,9,12		
10					SANDY CLAY; dark gray, moist, soft, moderate plasticity, increasing sand with depth.
15				GC	SANDY CLAYEY GRAVEL; gravel, medium coarse subangular rounded with sandy clay-clayey sand; dark gray, moist, stiff.
				CL	CLAY/SILTY CLAY; dark gray-dark brown, soft to stiff, slightly to moderately plastic.
20				CH	SILTY SANDY CLAY; dark gray, moist, soft, plastic.
25				CL	CLAY/SILTY CLAY; light to medium gray, moist, stiff, moderate plasticity.
30				GC	CLAYEY SANDY GRAVEL; medium to coarse, predominantly angular, composition - sandstones, siltstones, cherts, quartz, clay; dark gray, wet, soft, slightly plastic.
35					
40				CL	SILTY SANDY CLAY; medium gray, moist, stiff, slightly plastic, interbedded silts and sands. SILTY CLAY; medium brown, moist, stiff, plastic.
45				GC	CLAYEY GRAVELS; gravel, sand; clay, interbedded; pred. siltstones and sandstones, minor cherts and quartz, all medium to coarse, subround to angular, sand; medium coarse, subangular to subround, moderate to well sorted.
50				CL	SILTY SANDY CLAY; gray brown, wet, soft to stiff, interbedded with clay and silty clay; gray brown, moist, soft-stiff, plastic. CLAY/SILTY CLAY; gray brown, moist, stiff, moderate plasticity.
55					
					TOTAL DEPTH 56.2 FEET
60					
65					
70					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE: W14-1B1.DWG

BORING NO. W14-2(A1)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 28.0 ft.

COORDINATES N 333,682.5 E 1,549,915.9
DATE BEGAN 7/29/88
DATE FINISHED 8/1/88
GROUND SURFACE EL. 30.5

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	9/18	12" Christy box; 8"x5' standpipe top of casing	9,9,15	CL		CLAY/SILTY CLAY; medium dark gray, dry, stiff, slightly plastic.
	MD#2	9/18	4" sch. 40 steel casing	7,12,20			
5	MD#3	10/18		4,8,13			
	MD#4	18/18	Bentonite/ cement grout	ND			
10	S	60/60	Bentonite pellets 10 to 12.5 ft.		CH-CL		CLAY/SILTY CLAY; medium gray green, moist, soft, plastic. 8-13-88 CLAY/SILTY CLAY; medium dark gray, predominantly dry, stiff, slightly plastic.
			4" .010 S.S. screen from 15 to 25 ft.				
15	S	48/48	Centralizer		CL		SANDY CLAY; gray green, wet, soft, plastic, sticky, very fine sand.
	S	12/12			SC		CLAYEY SAND; medium dark gray, wet, fine to medium.
	S	12/12			GC		GRAVELLY SAND; dark gray black, medium coarse, w/pebbles
20					CL-CH		CLAY; medium dark gray, stiff, plastic. SANDY CLAY; dark gray, wet, soft, non-plastic, silty, fine grained.
	S	60/60					
			Centralizer				
25	S	48/48	#1C sand; Bentonite backfill		OH		CLAY; medium dark gray, moist, stiff, plastic, organic material.
30			12"				TOTAL DEPTH 28.0 FEET
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W14-2A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

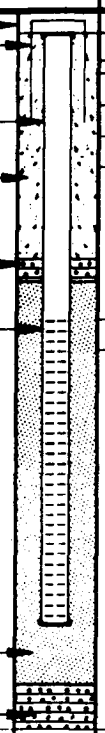
BORING NO. W14-3(A1)

FIELD GEOLOGIST J. Hadsell
EDITED BY D. H. Cox
CHECKED BY J. Hadsell
TOTAL DEPTH 35 feet

COORDINATES N 333,561.9 E 1,549,910.7
DATE BEGAN 7/20/88
DATE FINISHED 7/20/88
GROUND SURFACE EL. 31.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0					Asphalt
	MD#1	9/18	6,6,10	GM	SILTY SANDY GRAVEL; dark brown, moist, medium dense.
	MD#2	18/18	5,10,12	CL	SILTY CLAY; dark brown, dry, very stiff, low plasticity.
5	MD#4	9/18	5,9,12		
	MD#3	10/18	4,9,11		
	S	30/30			
10	S	60/60			Grades to a sandy clay with depth, moisture also increases.
15	MD#5	15/18	4,8,9	SM	SILTY SAND; dark brown, saturated, medium dense, fine grained.
	S	42/42			
20	S	60/60			Grades to SAND; dark gray, saturated, medium dense, very fine grained.
25				CL	SANDY SILTY CLAY; dark gray, very moist, low plasticity.
	S	60/60		SM	SILTY SAND; dark gray, saturated, medium dense, very fine grained.
30				CL	SANDY SILTY CLAY; dark gray, very moist, low plasticity.
	S	60/60			SILTY CLAY; medium brown, moist, stiff, low to medium plasticity.
35					TOTAL DEPTH 35 FEET
40					
45					
50					
55					
60					
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

W14-3A.DWG

BORING NO. W14-4(A1)

FIELD GEOLOGIST W. Hopkins
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 28.0 feet

COORDINATES N 333,735.9 E 1,549,948.9
DATE BEGAN 7/28/88
DATE FINISHED 7/28/88
GROUND SURFACE EL. 29.5 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER PER 6"	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	6/18	12" Christy box; 8"x5' standpipe; top of casing	10,5,8	SC		CLAYEY SAND; medium brown, moist, medium dense, non-plastic.
	MD#2	12/18	4" sch. 40 steel casing	5,7,12	CL		SILTY CLAY; medium gray, moist, stiff, moderate plasticity.
5	MD#3	15/18		7,7,10			SILTY CLAY; medium brown, moist to wet, stiff, moderate plasticity.
	MD#4	9/18	Bentonite/ cement grout	6,6,9			
10	S	60/60	Bentonite pellets 11.7 to 13.5 ft.				SILTY CLAY; medium brownish gray, wet, soft to medium stiff, moderate plasticity.
15	S	36/60	4" .010 S.S. screen from 16 to 21 ft.		ML		CLAYEY SILT; medium grayish brown, wet, soft, low plasticity.
					SP		SAND; grayish brown, wet, loose, medium to coarse grained.
			Centralizer		GP		SANDY GRAVEL; red to gray and black, wet(saturated), loose.
20	S	60/60			CL		SILTY CLAY; medium to dark gray, moist to wet, stiff, moderate plasticity.
			#10 sand		ML		CLAYEY SILT; medium gray, wet, soft, low plasticity.
	S	60/60	Bentonite backfill		CL-CH		SANDY SILTY CLAY; medium to dark gray, moist to wet, stiff, moderate to high plasticity.
30			12"				TOTAL DEPTH 28 FEET
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: W14-4A.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

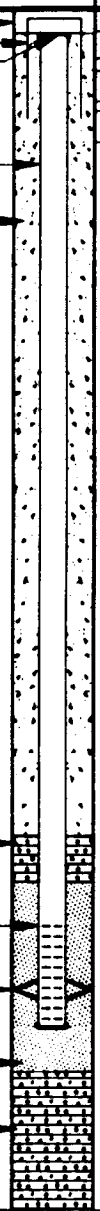
BORING NO. W14-5(A2)

FIELD GEOLOGIST E. Wessner
EDITED BY J. Hadsell
CHECKED BY B. Monchon
TOTAL DEPTH 58.7 ft.

COORDINATES N 333,567.8 E 1,549,800.6
DATE BEGAN 8/11/88
DATE FINISHED 8/12/88
GROUND SURFACE EL. 31.6 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	6/18	5,4,5	FILL	FILL: silty sandy clay; gray brown, dry, non-plastic, some gravel.
	MD#2	12/18	4,7,8	CL	SILTY CLAY; dark gray, slightly moist, stiff, moderate plasticity. SILTY CLAY; light tan, slightly moist, stiff, slightly plastic.
	MD#3	12/18	6,7,9	SC	CLAYEY SAND; medium grained, angular, poorly sorted.
10				CL	SILTY CLAY; brown, moist, soft, plastic, with thin coarse sand interbeds. SANDY GRAVELLY CLAY; dark brown, moist, soft, moderate plasticity, coarse sand to fine gravels.
15				GW	GRAVEL; dark gray, fine to coarse, angular, poorly sorted. Produces water.
20				CL	SANDY CLAY; brown, moist, soft, slightly to moderately plastic. SILTY CLAY; brown to dark gray, moderately moist, soft, plastic, sticky, stringers of coarse sands.
25					
30					SILTY CLAY; gray, wet, very soft, slightly plastic, very sticky, some coarse sand stringers.
35					SILTY CLAY; dark brown gray, moist to moderately moist, medium stiff, moderately plastic, stringers of coarse sand.
				SC	SAND; black tan, angular, poorly sorted, coarse, clays present
40				CL	SILTY CLAY; gray and orangish brown, moist, soft, moderate plasticity, inclusions of medium grains, thin interbeds of coarse sands, poorly sorted.
45					SILTY CLAY; gray and orange brown, moist, soft, very plastic.
				GW	GRAVEL; black and tan, fine to very coarse, angular, poorly sorted, grading to a fine-coarse sand; very clean. Produces water.
50				CL	SANDY CLAY/SILTY CLAY; gray, moist, soft, moderate to very plastic.
55					
60					TOTAL DEPTH 58.7 FEET
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

AutoCAD FILE W14-5B1.DWG

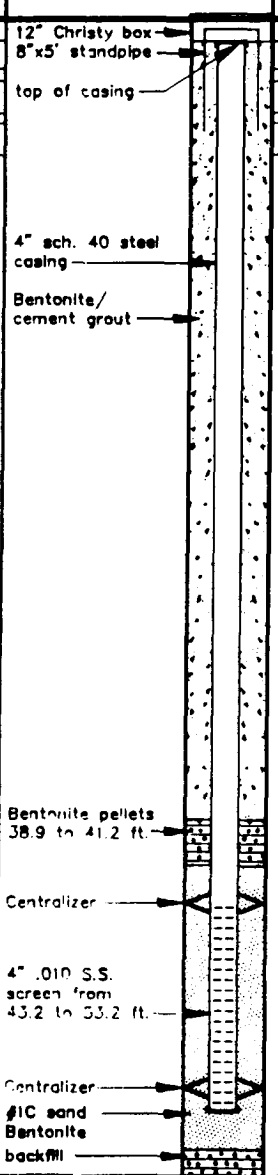
BORING NO. W14-6(A2)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 56.3 feet

COORDINATES N 333,732.7 E 1,549,944.3
DATE BEGAN 8/25/88
DATE FINISHED 8/26/88
GROUND SURFACE EL. 29.6 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	8/18	3,6,9	CH	CLAY/SILTY CLAY; light to medium gray, moist, stiff, plastic.
	MD#2	10/18	5,10,15	CL	CLAY/SILTY CLAY; light to medium gray brown, moist, moderate plasticity.
5	MD#3	12/18	5,9,12		
10					GRAVELLY SILTY CLAY; dark gray brown, moist, stiff, moderately plastic.
15				GC	CLAYEY SANDY GRAVEL; medium to coarse, subround to angular, with cherts, and milky quartz mixed with sand; fine to coarse, subangular to subround, moderate to poorly sorted and interbedded with clay; light to medium gray, wet, soft, slightly plastic. Product in cuttings; produces water.
20				SC	CLAYEY SAND; fine to medium, subangular to subround, medium sorted quartz, with clay; brown to gray, moist, soft, moderate plasticity.
25				CL	SANDY SILTY CLAY; dark gray, wet, soft, slightly to non-plastic. SILTY CLAY; medium gray brown, moist, soft, slightly to moderately plastic.
30				GC	SANDY CLAYEY GRAVEL; medium coarse, subround to angular, poorly sorted, with sand; fine to coarse, subangular to subround, moderately to poorly sorted, with clay; dark brown, moist, stiff. Produces water.
35				CL	SANDY CLAY; coarse, angular, poorly sorted. SILTY CLAY; green gray and green brown, moist to wet, soft.
40				SC	CLAYEY SAND; fine to coarse, subangular to subround, moderately to poorly sorted quartz with interbedded clay; green gray, moist to wet, soft, slightly plastic.
				CH	CLAY/SILTY CLAY; dark gray, moist, stiff, plastic.
				SC	CLAYEY SAND; medium coarse, subangular to subround, moderately to well sorted.
45				GC	CLAYEY SANDY GRAVEL; coarse, predominantly angular mixed with sand; medium to coarse, subangular to subround, moderately sorted quartz, and clay; medium dark gray, wet, slightly moist. Produces water.
55				CL	CLAY/SILTY CLAY; medium gray, moist, soft, moderately plastic.
					TOTAL DEPTH 56.3 FEET

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

CAD FILE W14-6B1.DWG

BORING NO. SB14-1

FIELD GEOLOGIST W. Hopkins
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 15 feet

COORDINATES N 333,559.7 E 1,550,066.1
DATE BEGAN 8/8/88
DATE FINISHED 8/8/88
GROUND SURFACE EL. 30.97 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	8/18		8,10,7	OL		SILTY CLAY; medium dark brown, moist, stiff, moderate plasticity.
	MD#2	9/18		4,8,16			
5	MD#3	12/18		4,7,13	CL-CH		SILTY CLAY; gray-green-orange-brown, moist, stiff, moderate plasticity. SANDY CLAY; greenish gray, moist, stiff, moderate to high plasticity.
	S	42/42					
10							SANDY SILTY CLAY; greenish gray, moist, stiff, low plasticity.
	S	60/60					
					SM-SC		CLAYEY SILTY SAND; gray brown, wet, medium dense, low plasticity.
15							TOTAL DEPTH 15 FEET 8" diameter boring
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: ••.DWG

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB14-2

FIELD GEOLOGIST W. Hopkins
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 15 feet

COORDINATES N 333,805.7 E 1,550,004.6
DATE BEGAN 8/8/88
DATE FINISHED 8/8/88
GROUND SURFACE EL. 30.67 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0					SW		GRAVELLY SAND; light brown, dry.
	MD#1	ND		6,6,9	CL		SILTY CLAY; medium gray, moist, stiff, low to moderate plasticity.
	MD#2	ND		8,6,13			
5	MD#3	ND		3,6,10			
	MD#4	ND		7,10,13			
	S	ND					SILTY CLAY; medium gray, with brown and light gray spots, moist to wet, stiff, low plasticity, pebbly.
10	S	ND					SANDY SILTY CLAY; light gray, wet, medium stiff, low plasticity.
15					SM		CLAYEY SILTY SAND; light gray brown, wet, loose, low plasticty.

TOTAL DEPTH 15 FEET
8" diameter boring

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 4096'6
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: SB14-2(MF21)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB14-3

FIELD GEOLOGIST W. Hopkins
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 15 feet

COORDINATES N 333,691.7 E 1,549,917.6
DATE BEGAN 8/10/88
DATE FINISHED 8/10/88
GROUND SURFACE EL. 30.3 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0					FILL		FILL: clayey silty sand; orange brown, moist, loose, low plasticity.
	MD#1	8/18		13,5,14	OL		SILTY CLAY; dark brown, moist, stiff, moderate plasticity.
	MD#2	9/18		6,7,14	CL		SILTY CLAY; medium gray brown, moist, stiff, low to moderate plasticity.
5	MD#3	11/18		5,12,16			SILTY CLAY; medium gray with brown and white spots, moist, stiff, low plasticity.
	S	42/42					
10					ML		CLAYEY SILT; medium to light gray, wet, soft, loose, low plasticity.
	S	60/60			SM		SILTY SAND; dark gray, wet, loose, low plasticity.
					ML		CLAYEY SILT; medium gray, wet, soft, low plasticity.
					CL		SILTY CLAY; medium gray with brown spots, wet, stiff, low to moderate plasticity.
15							TOTAL DEPTH 15 FEET 8" diameter boring
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: SB14-3(MF21)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 15

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO BORINGS OR WELLS WERE DRILLED AT SITE 15

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 16

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO BORINGS OR WELLS WERE DRILLED AT SITE 16

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 17

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO BORINGS OR WELLS WERE DRILLED AT SITE 17

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 18

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO BORINGS OR WELLS WERE DRILLED AT SITE 18

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX F
SITE 19

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

BORING NO. GB#29

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 250 feet
COORDINATES N 338,113.9 E 1,552,447.9
DATE BEGAN 8/10/88
DATE FINISHED 8/12/88
GROUND SURFACE EL. 9.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (SF)	USCS SYMBOL	PROFILE	DESCRIPTION
0							Asphalt.
	#1	0/60			FILL		FILL: silty sandy gravel; dark brown, slightly moist, soft, gravels and sands are poorly sorted.
5	#2	0/60			GC		CLAYEY SANDY GRAVEL; dark gray, coarse, angular, moderately to poorly sorted.
10	#3	0/60					Gravel as above with silt and sand.
15	#4	0/60					
20	#5	0/60					GRAVEL; dark brown, hard, coarse, angular to rounded, with clay; gray brown, wet, soft.
25	#6	24/60		1.5	CL		SILTY CLAY; gray brown, moist, soft, plastic, pebbles.
30	#7	0/60					
35	#8	38/60		2.5–3.5			SILTY CLAY; medium brown, moist, very stiff, slightly plastic, minor sand.
40	#9	41/60		1.5–3.0–3.5			SILTY CLAY; medium brown to gray brown, dry, very stiff, slightly to non-plastic.
45	#10	0/60					
50	#11	0/60					
55	#12	13/60		2.5–1.5			SANDY CLAY; green brown, moist, very stiff, slightly plastic, associated coarse sand and minor gravel.
60	#13	38/60		2.5–3.0–3.0			
65	#14	55/60		3.0–2.5–3.0			SILTY CLAY; medium brown – gray brown, dry, very stiff, slightly to non-plastic.
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#29

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hodsoll
CHECKED BY J. Hodsoll
TOTAL DEPTH 250 feet

COORDINATES N 338,113.9 E 1,552,447.9
DATE BEGAN 8/10/88
DATE FINISHED 8/12/88
GROUND SURFACE EL. 9.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
70	#15	11/60		1.0	CL-CH		SILTY CLAY; medium brown minor gray, moist, soft, plastic, minor fine sand.
75	#16	0/60					
80	#17	0/60					
85	#18	0/60					
90	#19	0/60					
95	#20	0/60					
100	#21	23/60			CL		SILTY CLAY; medium brown, wet, soft, plastic, minor coarse, angular, gravel fragments.
105	#22	0/60					
110	#23	0/60					
115	#24	0/60					
120	#25	31/60		1.0			SILTY CLAY; medium brown - gray brown, moist, stiff, slightly to moderately plastic. SANDY CLAY; brown gray, moist, stiff, slightly plastic.
125	#26	60/60		3.0 - 4.0			SILTY CLAY; blue gray, moist, very stiff, slightly plastic, grades to brown gray.
130	#27	24/60		2.5 - 2.0			
135	#28	52/60		2.5			
140							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#29

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 250 feet

COORDINATES N 338,113.9 E 1,552,447.9
DATE BEGAN 8/10/88
DATE FINISHED 8/12/88
GROUND SURFACE EL. 9.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
140	#29	57/60		3.0–4.0	CL		SILTY CLAY; gray brown, moist, very stiff to hard, slightly to non-plastic.
145	#30	60/60		4.0–3.5	CL		CLAY; bluegray, predominantly dry, very stiff to hard, slightly plastic.
150	#31	50/60		3.0–4.0	CL		
155	#32	55/60		4.0	ML		CLAYEY SILT; gray brown, dry, hard, non-plastic, trace fossil fragments.
160	#33	0/60			CL		SANDY CLAY; medium brown, moist, soft, non-plastic.
165	#34	60/60		2.0–4.0	CL		SILTY CLAY; gay-green, moist, very stiff to hard, slightly plastic.
170	#35	57/60		3.5–3.0	CL		
175	#36	45/60		3.0–2.0	CL		CLAY; medium to dark gray, predominantly dry, very stiff, non to slightly plastic.
180	#37	0/60			CL		
185	#38	34/60		2.5–3.5	CL		GRAVELLY SANDY CLAY; medium gray, moist, very stiff, non-plastic. SILTY CLAY; gray-brown, moist to dry, stiff, slightly plastic.
190	#39	60/60		4.5–3.0	CL		SILTY CLAY; gray, minor brown-gray, prdominantly dry, stiff to hard, slightly to non-plastic.
195	#40	48/60		2.5–4.5	CL		SANDY CLAY; mottled gray brown, predominantly dry, very stiff – hard, slightly to non-plastic.
200	#41	58/60		4.5	CL		SILTY CLAY; light to medium gray, dry, hard, non-plastic.
205	#42	22/60		4.0–4.5	CL		SILTY CLAY; dark gray, dry, hard, non-plastic.
210							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. GB#29

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 250 feet

COORDINATES N 338,113.9 E 1,552,447.9
DATE BEGAN 8/10/88
DATE FINISHED 8/12/88
GROUND SURFACE EL. 9.7 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	MEASURED CONSISTENCY (TSF)	USCS SYMBOL	PROFILE	DESCRIPTION
210	#43	0/60			CL		SILTY CLAY; green gray to brown, dry to moist, stiff, non to slightly plastic.
215	#44	0/60					
220	#45	0/60					
225	#46	25/60		4.5–2.5			
230	#47	59/60		3.0			SILTY CLAY; brown gray, predominantly dry, stiff, non to slightly plastic.
235	#48	60/60		3.0–2.5			
240	#49	60/60		4.5–4.0			SILTY CLAY; light to medium gray, dry, very stiff, non-plastic.
245	#50	50/60		4.5–2.5			SILTY CLAY; medium gray, dry, very stiff–hard, non-plastic.
250							TOTAL DEPTH 250 FEET 4-1/2" diameter boring
255							
260							
265							
270							
275							
280							

DRILLING CO.: Water Development Co.
DRILLING METHOD: Mud Rotary

SAMPLER: 5' Core Barrel Wireline Sampler

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W19-1(A1)

FIELD GEOLOGIST J. Hadsall
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 40 feet

COORDINATES N 338,105.4 E 1,552,444.2
DATE BEGAN 7/26/88
DATE FINISHED 7/27/88
GROUND SURFACE EL. 9.78 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	9/18	4,10,15	SM	SILTY SAND; moderate brown, moist, medium dense, with subrounded gravel (15%).
	MD#2	9/18	8,7,8		
5	MD#3	12/18	3,6,10	CL	CLAY; olive black, slightly moist, stiff, moderate plasticity
	MD#4	12/18	6,8,11		
	S	24/24			SILTY CLAY; light brown, moist, soft, plastic.
10	S	60/60		CL	SANDY SILTY CLAY; light brown, moist, soft, plastic, pebbles throughout, moisture increasing with depth.
15	S	60/60			∇
20	S	60/60			SILTY CLAY; light brown, moist, medium stiff, moderate plastic.
25	S	60/60			Sand content increases (10%).
30	S	24/60		SW	SAND; medium brown, wet, medium dense, well sorted, subrounded sand.
35	S	60/60		CL	SILTY CLAY; medium brown, moist, medium stiff, moderate plasticity.
				GM	SILTY SANDY GRAVEL; wet, loose.
40				CL	SILTY CLAY; medium brown, moist, med. stiff, mod. plasticity
					TOTAL DEPTH 40 FEET

WELL SUMMARY

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W19-2(A2)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hadsall
CHECKED BY B. Manchon
TOTAL DEPTH 60.2 feet

COORDINATES N 337,875.5 E 1,552,511.4
DATE BEGAN 8/29/88
DATE FINISHED 8/29/88
GROUND SURFACE EL. 10.3 ft

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	8/18	6,20,17	GM	SILTY SANDY GRAVEL; medium brown to dark brown, slightly moist, soft, gravels and sands are poorly sorted sub-rounded to subangular.
	MD#2	10/18	6,7,8		
5	MD#3	10/18	5,5,8		
				CL	SANDY CLAY; dark brown, moist, stiff, slightly plastic.
10					GRAVELLY SANDY CLAY; dark brown, moist, stiff, slightly plastic, gravel; fine to medium, angular, coarse sand interbedded stringers, increasing clay.
					SILTY CLAY; medium dark brown, moist, stiff, slightly plastic.
15					
20					GRAVELLY SANDY CLAY; light brown – gray brown, soft, slightly to non-plastic, with gravel; medium – coarse, subround-angular, coarse sand interbeds.
25					SILTY CLAY; medium brown, olive brown, moist, soft, moderate plasticity.
30					SANDY CLAY; tan, moist, stiff, plastic.
35				SC-CL	CLAYEY SAND; fine to medium, subangular to sub-rounded, moderately sorted, interbedded clay; medium to dark brown, stiff, moderately plastic.
40				CL	SILTY CLAY; medium dark brown, moist, stiff, plastic.
45					
50				SC-CL	CLAYEY SAND/GRAVELLY SANDY CLAY; sands are fine to medium, subangular to subround, moderately to well sorted, with gravel; predominantly medium, angular, moderately to well sorted, all with clay – silty clay; gray, brown, moist, stiff, plastic.
55				CL	CLAY/SILTY CLAY; medium to dark brown, moist, stiff, moderately plastic.
60					TOTAL DEPTH 60.2 FEET
65					
70					

DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

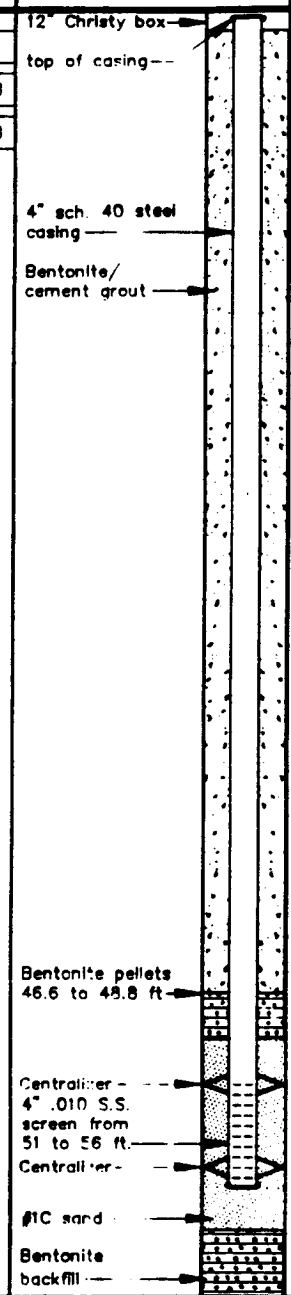
BORING NO. W19-3(A2)

FIELD GEOLOGIST D. H. Cox
EDITED BY J. Hodsall
CHECKED BY B. Manchon
TOTAL DEPTH 61.1 feet

COORDINATES N 338,304.3 E 1,552,227.1
DATE BEGAN 8/31/88
DATE FINISHED 9/1/88
GROUND SURFACE EL. 8.2 ft

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	DESCRIPTION
0	MD#1	8/18	12,10,6	CL	GRAVELLY SANDY CLAY; brown, wet, soft, non-plastic, interbedded with coarse angular gravel with medium coarse, subangular to subrounded, poorly sorted sand.
	MD#2	12/18	6,5,5		SANDY CLAY; dark gray, moist, stiff, slightly plastic.
5	MD#3	12/18	5,8,13		SILTY CLAY; dark gray, moist, stiff, plastic with minor sand; fine to medium, and gravel, medium coarse, angular
10					SILTY CLAY; medium dark gray-brown, moist, very stiff, moderate plasticity.
15					GRAVELLY SANDY CLAY; brown, moist, stiff, plastic.
20				CH	SILTY CLAY; medium brown, moist, stiff, plastic.
				SC	CLAYEY SAND; predominantly medium, subangular to subround, moderately to poorly sorted quartz.
25				CL	SILTY CLAY; medium dark brown, moist, stiff, moderate plasticity.
					SILTY CLAY; medium brown, moist, stiff, moderate plasticity, with interbedded gravels (minor); medium coarse, angular.
30					GRAVELLY SANDY CLAY; medium brown, moist, stiff, moderately plastic, interbedded with coarse angular gravels with medium coarse sand.
35					SILTY CLAY; medium brown, moist, stiff, moderate plasticity.
40					
45					
50				CL-GC	GRAVELLY SANDY CLAY; gray brown, moist, stiff, plastic, interbedded with fine to medium, subround to angular gravel, predominantly siltstone and sandstones, with sand; fine to medium, subangular to subround, moderately to well sorted.
				CL	CLAY/SILTY CLAY; gray-brown, moist, stiff, moderate plasticity.
60					TOTAL DEPTH 61.1 FEET
65					
70					

WELL SUMMARY



DRILLING CO.: Water Development Co.
DRILLING METHOD: Air Rotary

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. W19-4(A1)

FIELD GEOLOGIST J. Hadsell
EDITED BY B. Manchon
CHECKED BY B. Manchon
TOTAL DEPTH 40 feet

COORDINATES N 338,282.7 E 1,552,236.2
DATE BEGAN 7/28/88
DATE FINISHED 7/28/88
GROUND SURFACE EL. 8.25 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0							Asphalt on concrete.
	MD#1	6/18	12" Christy box; 8"x5' standpipe; top of casing	12,10,8	GM		SILTY SANDY GRAVEL; medium brown, moist, medium dense.
	MD#2	18/18		5,5,8	GC		SILTY CLAYEY GRAVEL; mottled blk. and brn. stiff, plastic.
	MD#3	9/18		5,9,13	CH		SILTY CLAY; black, slightly moist, stiff, plastic.
	MD#4	9/18		9,10,13			SILTY CLAY; brown gray, slightly moist, stiff, low plasticity, with mudstone fragments.
	S	30/30					
10	S	60/60	4" sch. 40 steel casing; Bentonite/cement grout				SANDY CLAY; light brown, slightly moist, soft, moderate plasticity, with mudstone fragments.
15	S	60/60			CL		
20	S	60/60					
25	S	60/60	Bentonite pellets 27.5 to 29 ft.				
					GC		SILTY SANDY CLAYEY GRAVEL; light brown, moist, plastic, 1/4-1/2" gravel clasts.
30	S	36/60	4" .010 S.S. screen from 31 to 36 ft.; Centralizer		ML		CLAYEY SANDY SILT; brown, saturated, very soft, low plas..
					SW		GRAVELLY SAND; coarse sand with gravel, gray, wet, loose, very coarse gravel, subrounded with silt and sand <10%
35	S	54/60	#1C sand; Bentonite backfill		CL		SILTY CLAY; brown, moist, stiff, plastic.
					SC		CLAYEY SILTY SAND; brown, v. moist, v. soft, v. low plas..
					CL		CLAY; med. brown, moist, highly plastic.
			12"				TOTAL DEPTH 40 FEET
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB19-1

FIELD GEOLOGIST G. L. Williams
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 15 feet

COORDINATES N 337,530.8 E 1,552,686.9
DATE BEGAN 9/15/88
DATE FINISHED 9/15/88
GROUND SURFACE EL 10.73 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	8/18		3,5,9	SC		CLAYEY GRAVELLY SAND; reddish brown, non-plastic.
	MD#2	11/18		4,7,12	OH		SILTY CLAY; brownish black, moist, stiff to very stiff, moderate to high plasticity, trace pebbles and cobbles.
5	MD#3	11/18		5,7,8			
	S	36/42			CL		SANDY SILTY CLAY; dark yellowish brown, wet, stiff, medium to low plasticity, trace of pebbles. ▽
10	S	0/60			GP		SANDY GRAVEL; dark yellowish brown, wet (saturated), loose.
15							TOTAL DEPTH 15 FEET 8" diameter boring
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: SB19-1(MF21)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB19-2

FIELD GEOLOGIST G. L. Williams
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 15 feet

COORDINATES N 337,552.0 E 1,952,689.2
DATE BEGAN 9/15/88
DATE FINISHED 9/15/88
GROUND SURFACE EL. 10.39 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	10/18		3,5,10	SC		SILTY CLAYEY SAND; moist, soft, loose, non-plastic, with gravel and pebbles.
	MD#2	9/18		5,9,11	OL		SILTY CLAY; dark brownish black, moist, very stiff to hard, low to moderate plasticity, some gravel and pebbles, trace cobbles.
5	MD#3	7/18		5,6,4	CL		SILTY SANDY CLAY; dark yellowish brown, damp to moist, stiff, low plasticity.
	S	8/42					
10	S	10/60			SM		SAND; dark yellowish brown, wet, soft, loose, non-plastic, medium to fine, little silt.
					GM		SILTY CLAYEY GRAVEL; dark yellowish brown, wet, soft, loose, non-plastic, some fine to medium sand.
15							TOTAL DEPTH 15 FEET 8" diameter boring
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: SB19-2(MF2')

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB19-3

FIELD GEOLOGIST G. L. Williams
EDITED BY J. Hadsall
CHECKED BY J. Hadsall
TOTAL DEPTH 15 feet

COORDINATES N 337,574.1 E 1,552,859.1
DATE BEGAN 9/15/88
DATE FINISHED 9/15/88
GROUND SURFACE EL. 10.65 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0					SC		SILTY CLAYEY SAND; moist, red-orange brown, soft, non-plastic, some gravel.
	MD#1	10/18		4,3,4			
	MD#2	10/18		4,7,8	OL		SILTY CLAY; dark brownish black, moist, very stiff to hard, low to medium plasticity, some gravel and pebbles.
5	MD#3	9/18		3,5,4			
	S	24/42			CL		SILTY SANDY CLAY; dark yellowish brown, damp to moist, stiff, low plasticity.
10	S	0/60					
15							TOTAL DEPTH 15 FEET 8" diameter boring
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: SB19-3(MF21)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB19-4

FIELD GEOLOGIST G. L. Williams
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 15 feet

COORDINATES N 338,094.1 E 1,592,473.9
DATE BEGAN 9/14/88
DATE FINISHED 9/14/88
GROUND SURFACE EL. 9.86 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	11/18		4,10,13	SC-GC		CLAYEY SAND; dark orange-red brown, moist, hard, non-plastic, pebbles and cobbles.
	MD#2	7/18		6,6,8			
5	MD#3	10/18		7,9,13	OL		SILTY CLAY; brownish black, moist, very stiff, low to medium plasticity.
	S	42/42			CL		SANDY SILTY CLAY; dark yellowish brown, moist, stiff, low to non-plastic.
10	S	48/60					SANDY SILTY CLAY; dark greenish gray, damp, very soft.
15							TOTAL DEPTH 15 FEET 8" diameter boring
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

AutoCAD FILE: SB19-4(MF21)

IT ...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

BORING NO. SB19-5

FIELD GEOLOGIST G. L. Williams
EDITED BY J. Hadsell
CHECKED BY J. Hadsell
TOTAL DEPTH 15 feet

COORDINATES N 338,087.8 E 1,552,450.3
DATE BEGAN 9/13/8
DATE FINISHED 9/14/88
GROUND SURFACE EL. 10.09 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY (IN.)	WELL SUMMARY	BLOWS ON SAMPLER (PER 6")	USCS SYMBOL	PROFILE	DESCRIPTION
0	MD#1	8/18		6,7,15	SC-GC		SAND; orange brown, moist, loose, trace clay with cobbles and pebbles.
	S	0/30					
5	MD#2	11/18		MD	OL		CLAY; brownish black, moist, very stiff, medium plasticity.
	S	42/42					SILTY CLAY; dark yellowish brown, moist, soft, low to moderate plasticity.
10	S	60/60			CL		
15							TOTAL DEPTH 15 FEET 8" diameter boring
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Development Co.
DRILLING METHOD: CME 55 Hollow Stem Auger

SAMPLING METHODS: MD=California Modified
S=Split Barrel

PROJECT NO.: 409616
CLIENT: Moffett Naval Air Station
Moffett Field, California

IT ...Creating a Safer Tomorrow

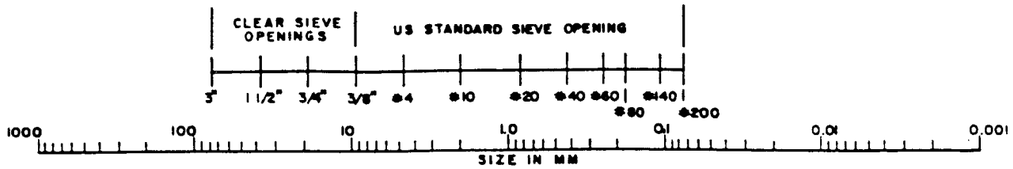
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

VOLUME 6, APPENDIX G

GEOPHYSICAL LOGS

DRAWN BY	CHECKED BY	DRAWING NUMBER
F.C.R. 11-14-88	S.H.B. 11-14-88	409616-B7

USCS CLASSIFICATION OF COARSE GRAINED MATERIALS



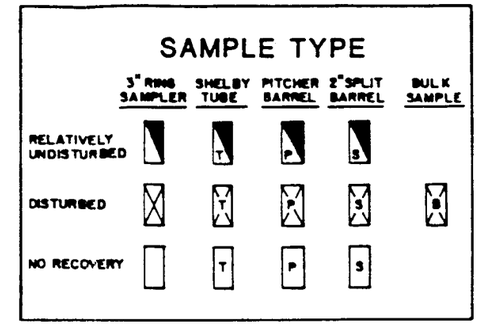
COBBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

USCS CLASSIFICATION FOR SOILS

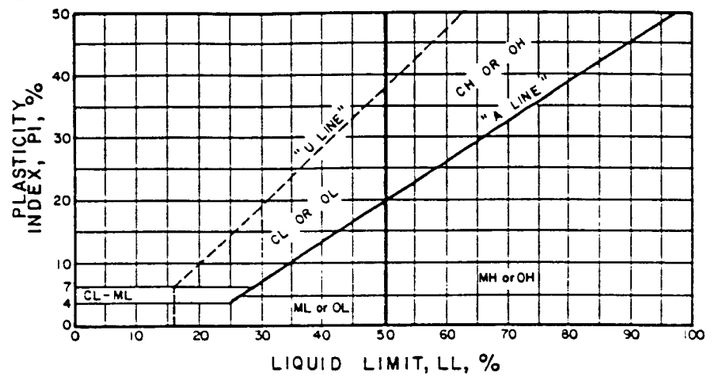
ABBREVIATIONS FOR LABORATORY TESTS

COMP — COMPACTION TEST
PI — ATTERBERG LIMITS
SA — SIEVE ANALYSIS
MA — MECHANICAL ANALYSIS
HYD — HYDROMETER ANALYSIS
CONS — CONSOLIDATION TEST

SAMPLE TYPE



USCS CLASSIFICATION OF FINE GRAINED MATERIALS



UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) (ASTM D2487-83)

MAJOR DIVISIONS			GROUP SYMBOLS	GRAPHIC SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN 50% RETAINED ON NO. 200 SIEVE*	GRAVELS 50% or More of Coarse Fraction Retained on No. 4 Sieve	CLEAN GRAVELS	GW		Well-graded gravels and gravel-sand mixtures, little or no fines
			GP		Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM		Silty gravels, gravel-sand-silt mixtures
			GC		Clayey gravels, gravel-sand-clay mixtures
	SANDS More Than 50% of Coarse Fraction Passes No. 4 Sieve	CLEAN SANDS	SW		Well-graded sands and gravelly sands, little or no fines
			SP		Poorly graded sands and gravelly sands, little or no fines
		SANDS WITH FINES	SM		Silty sands, sand-silt mixtures
			SC		Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS 50% OR MORE PASSES NO. 200 SIEVE*	SILTS AND CLAYS Liquid Limit 50% or Less		ML		Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL		Organic silts or organic clays of low plasticity
	SILTS AND CLAYS Liquid Limit Greater Than 50%		MH		Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
			CH		Inorganic clays of high plasticity, fat clay
			OH		Organic clays or organic silts of medium to high plasticity
HIGHLY ORGANIC SOILS			PT		Peat, muck and other highly organic soils

* BASED ON THE MATERIAL PASSING THE 3-INCH (75-mm) SIEVE.
REFERENCE: ASTM STANDARD D2487

DENSITY OF GRANULAR SOILS

DESIGNATION	SPT BLOWS PER FOOT
VERY LOOSE	0 — 4
LOOSE	5 — 10
MEDIUM DENSITY	11 — 30
DENSE	31 — 50
VERY DENSE	OVER 50

CONSISTENCY OF COHESIVE SOIL

CONSISTENCY	FIELD IDENTIFICATION	UNCONFINED COMPRESSIVE STRENGTH q_u (TONS/SQ. FT.)
VERY SOFT	EASILY PENETRATED SEVERAL INCHES BY FIST	LESS THAN 0.25
SOFT	EASILY PENETRATED SEVERAL INCHES BY THUMB	0.25 — 0.5
MEDIUM STIFF	PENETRATED SEVERAL INCHES BY THUMB WITH MODERATE PRESSURE	0.5 — 1.0
STIFF	READILY INDENTED BY THUMB BUT PENETRATED WITH GREAT EFFORT	1.0 — 2.0
VERY STIFF	READILY INDENTED BY THUMBNAIL	2.0 — 4.0
HARD	INDENTED WITH DIFFICULTY BY THUMBNAIL	OVER 4.0

NOTES:

(1) UPPER CASE USED FOR LABORATORY VERIFIED USCS CLASSIFICATIONS.

(2) LOWER CASE USED FOR FIELD USCS CLASSIFICATIONS.

(3) DUAL USCS SYMBOL, SUCH AS (SP-SM) DENOTES 5 TO 12% OF MINOR CONSTITUENT.

(4) BORDER LINE SYMBOL, SUCH AS (CL/CH) DENOTES SOIL HAVING PROPERTIES THAT DO NOT DISTINCTLY PLACE THE SOIL IN A SPECIFIC GROUP.

(5) SUBSURFACE INFORMATION FROM BORING AND TEST PIT LOGS DEPICT CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SOIL CONDITIONS AND WATER LEVELS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS AT THESE LOCATIONS. ALSO THE CONDITIONS AT THESE LOCATIONS MAY CHANGE WITH TIME.

(6) BLOW COUNTS ON LOGS ARE THE NUMBER OF BLOWS TO DRIVE THE SAMPLER 12 INCHES WITH A 140 POUND HAMMER FALLING 30 INCHES.

▽ GROUND WATER FIRST ENCOUNTERED

▼ 1-1-84 WATER LEVEL AND DATE MEASURED

LEGEND FOR LOG OF BORINGS AND TEST PITS

PREPARED FOR

NAVAL AIR STATION
MOFFETT FIELD, CALIFORNIA

IT ... Creating a Safer Tomorrow

122293

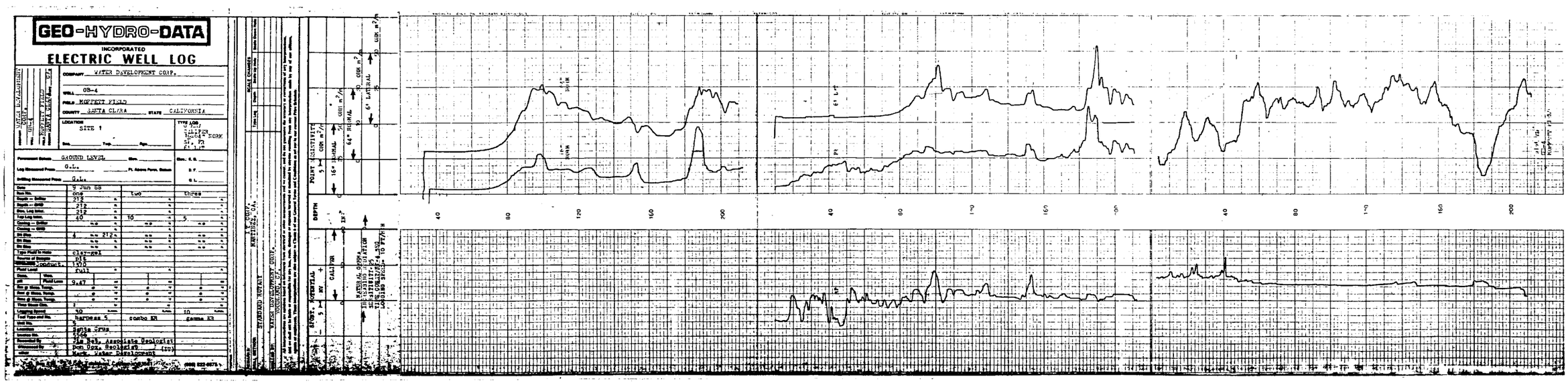
"Do Not Scale This Drawing"

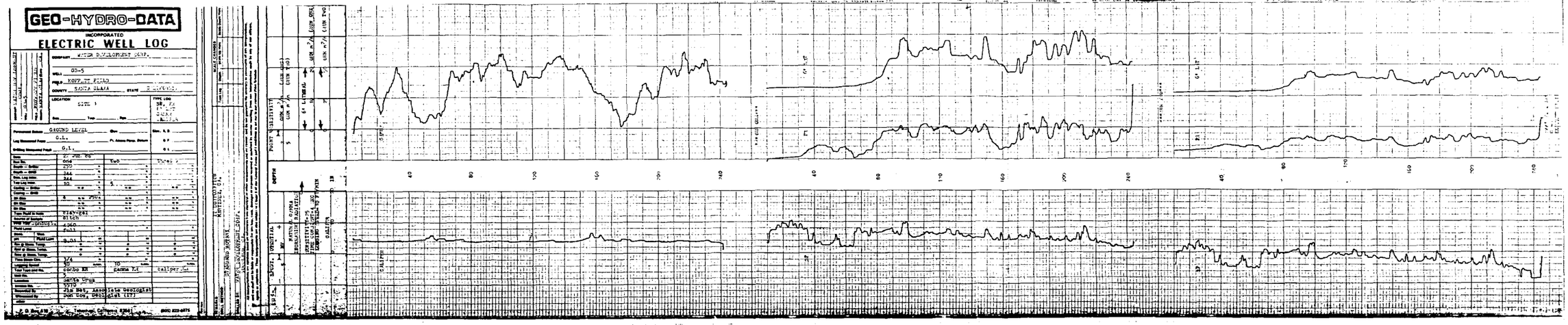
N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 1

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY WATER DEVELOPMENT CORP.
WELL OB-4
FIELD MOFFETT FIELD
COUNTY SANTA CLARA STATE CALIFORNIA
LOCATION SITE 1
Permanent Datum GROUND LEVEL
Log Measured From G.L.
Drilling Measured From G.L.
Date 9 Jun 88
Run No. one two three
Depth — Driller 212
Depth — GND 212
Depth Log Inter. 212
Top Log Inter. 40 10 5
Casing — Driller 4 212
Bit Size 4
Type Fluid in Hole clay-gel
Source of Sample pit
Fluid Level full
pH 9.47
Top Sample Temp.
Rmf @ Meas. Temp.
Rmf @ Meas. Temp.
Rmc @ Meas. Temp.
Time Since Circ.
Logging Speed 30 FT/MIN 10 FT/MIN
Tool Type and No. harness 5 combo KR gamma KR
Unit No. 5
Location Santa Cruz
Recorded By J.M. Bell, Associate Geologist
Witnessed By Don Cox, Geologist
Remarks Mark, Water Development
STANDARD ROTARY
WATER DEVELOPMENT CORP.
WOODLAND, CA.
DEPTH
SPONT. POTENTIAL
CALIPER
POINT RESISTIVITY
16" NORMAL
64" NORMAL
6' LATERAL
40
80
120
160
200


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
WATER DEVELOPMENT CORP.
GD-5
KOFFETT FIELD
SANTA CLARA
GROUND LEVEL
G.L.
G.L.
Jim Bell, Associate Geologist
Don Cox, Geologist (17)
DEPTH
POINT RESISTIVITY
INPUT POTENTIAL
NATURAL GAMMA
INSTRUMENT RADIATION
RESISTIVITY-25 FINE CONSTANT-4 SEC
CALIPER

GEO-HYDRO-DATA
INCORPORATED

ELECTRIC WELL LOG

WATER DEVELOPMENT — GR-6 — VOFFITT FIELD — SANTA CLARA, CA.

COMPANY WATER DEVELOPMENT CORP.
WELL GR-6
FIELD VOFFITT FIELD
COUNTY SANTA CLARA STATE CALIFORNIA

LOCATION
GATE 15
Sec. ____ Twp. ____ Rge. ____

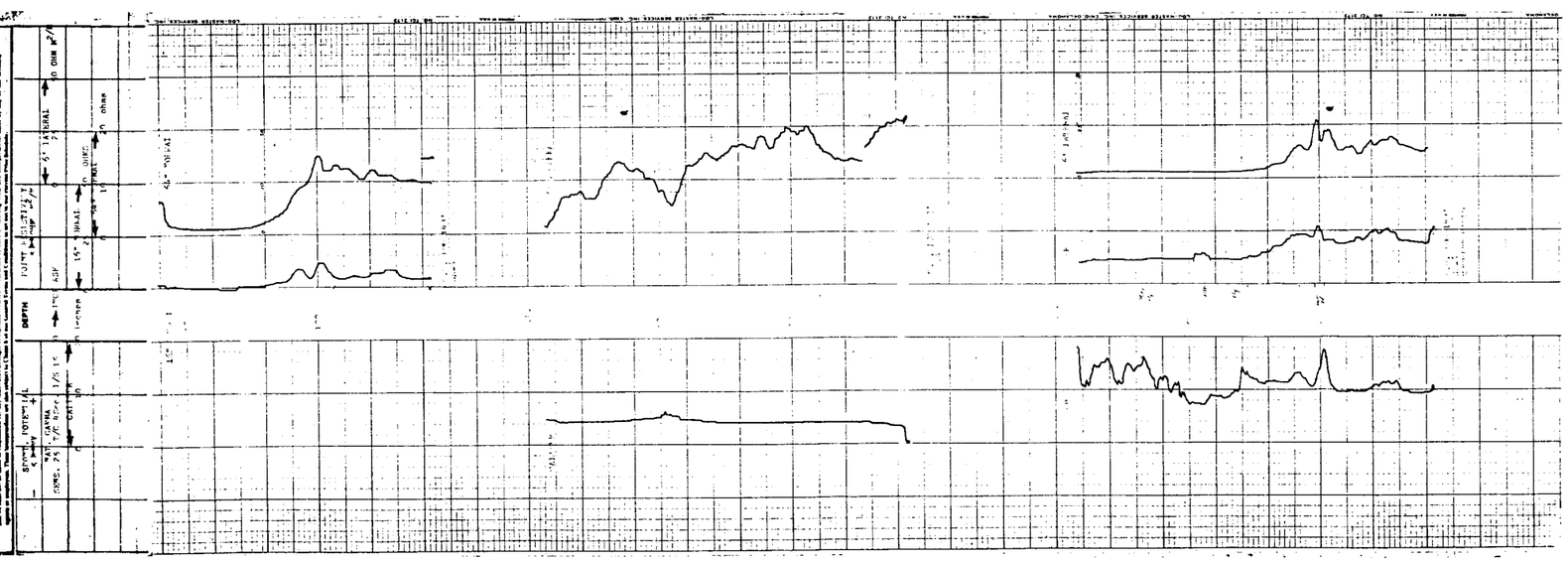
TYPE LOG
SP, PR, 64" LAT
NAT. GAMMA
CALIPER
NORMALS

Permanent Datum GROUND LEVEL Elev. ____ Elev.: K.B. ____
Log Measured From G.L. 0 Ft. Above Perm. Datum D.F. ____
Drilling Measured From GROUND LEVEL G.L. ____

Date	14 APR 58		
Run No.	ONE	TWO	THREE
Depth — Driller	163		
Depth — Logger	163		
Bott. Log Interval	163	163	163
Top Log Interval	0	0	60
Casing — Driller	8 5/8 @ 0	8 5/8 @ 0	8 5/8 @ 0
Casing — Logger			
Bit Size	6 3/4	6 3/4	6 3/4
Bit Size			
Bit Size			
Type Fluid in Hole	GEL		
Source of Sample	DITCH		
Rm @ Meas. Temp.	1.6@		
Fluid Level	FULL		
Rmf @ Meas. Temp.			
Rmc @ Meas. Temp.			
Rm @ Meas. Temp.			
Time Since Circ.			
Logging Speed	30	30	30
Tool Type and No.	CONTO 21	CAL 7 GAMMA 3	NORMAL 2
Unit No.			
Location	Shafter		
Station No.	5645		
Recorded By	Kirk Alexander Assoc. Geologist		
Witnessed By	Don Cox GEOLOGIST		
Witnessed By	Park		

P. O. Box 418 Tehachapi, California 93561 (805) 823-6675

REMARKS:
DRILL BIT NO. STANDARD ROTARY CONSULTANT: W. CONN, MARTINEZ, CA.
RECORDED BY WATER DEVELOPMENT CORP.



N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 2

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

GEO-HYDRO-DATA
INCORPORATED

ELECTRIC WELL LOG

WATER DEVELOPMENT CORP. — WELL GB-1 — FIELD MOFFITT FIELD — SAN CLAR — STATE CALIFORNIA

COMPANY WATER DEVELOPMENT CORP.
WELL GB-1
FIELD MOFFITT FIELD
COUNTY SANTA CLARA STATE CALIFORNIA

LOCATION: GATE 15
Sec. Twp. Rge.

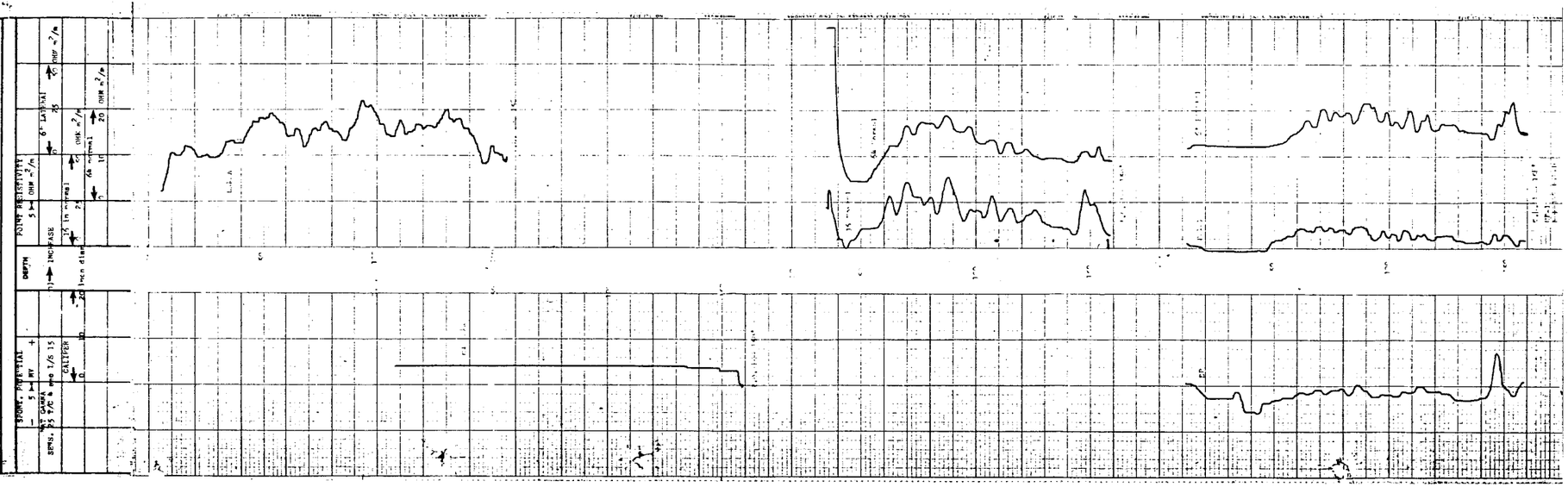
TYPE LOG: SP,FR,65' LAT, NAT GAMMA, CALIPER, 16,64 NORMAL

Permanent Datum: GROUND LEVEL Elev.
Log Measured From: G.L. 0 Ft. Above Perm. Datum
Drilling Measured From: GROUND LEVEL
Elev.: K.B. D.F. G.L.

Date	27 JUN 86			
Run No.	one	two	three	four
Depth — Driller	158.5			
Depth — GHD	158.5			
Bott. Log Inter.	158.5			
Top Log Inter.	surf	35	0	5
Casing — Driller	5" @ surf	no	no	no
Casing — GHD				
Bit Size	8	no	no	no
Bit Size	no	no	no	no
Bit Size	no	no	no	no
Type Fluid in Hole	clay-fej			
Source of Sample	pitch			
Rm @ Meas. Temp.	.074			
Rmf @ Meas. Temp.	full			
Rmc @ Meas. Temp.				
Source Rmf / Rmc				
Rm @ Bhst. Temp.				
Rmf @ Bhst. Temp.				
Rmc @ Bhst. Temp.				
Time Since Circ.	1 hr			
Logging Speed	30 min	40	20 min	15 min
Tool Type and No.	combo 23	nat 7	cal 7	gamma 3
Unit No.				
Location	Shattuck			
Operator No.	5650			
Recorded By	K. Kemp Registered Geologist			
Witnessed by other	D. Cox			

P.O. Box 418 Taft, California 93281 (805) 623-5875

REMARKS
DRILL METHOD: STANDARD ROTARY
DRILLED BY: WATER DEVELOPMENT CORP. MARTINEZ, CA.



GEO-HYDRO-DATA

INCORPORATED

ELECTRIC WELL LOG

COMPANY WATER DEVELOPMENT CORP.
WELL GB-2
FIELD MOFFETT FIELD
COUNTY SANTA CLARA STATE CA.

COMPANY WATER DEVELOPMENT CORP.
WELL GB-2
FIELD MOFFETT FIELD
COUNTY SANTA CLARA STATE CA.

LOCATION
Sec. Twp. Rge.

TYPE LOG
SP, PR
6' LAT
GAMMA

Permanent Datum GROUND LEVEL Elev.
Log Measured From G.L. Ft. Above Perm. Datum
Drilling Measured From G.L.

Elev.: K. B.
D. F.
G. L.

Date	30 JUN 88		
Run No.	one	two	
Depth — Driller	156 ft.	ft.	ft.
Depth — GHD	154 ft.	ft.	ft.
Btm. Log Inter.	154 ft.	ft.	ft.
Top Log Inter.	10 ft.	5 ft.	ft.
Casing — Driller	in. @ ft.	in. @ ft.	in. @ ft.
Casing — GHD	ft.	ft.	ft.
Bit Size	4 in. to 156 ft.	in. to ft.	in. to ft.
Bit Size	in. to ft.	in. to ft.	in. to ft.
Bit Size	in. to ft.	in. to ft.	in. to ft.
Type Fluid in Hole	clay-gel		
Source of Sample	pit		
Rheostat CONDUCT	670		
Fluid Level	full ft.	ft.	ft.
Bsns. / Visc.			
pH / Fluid Loss	6.32 cc	cc	cc
Rm @ Meas. Temp.	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	@ °F	@ °F	@ °F
Time-Since Circ.	1 hr.	hr.	hr.
Logging Speed	30 ft./min.	10 ft./min.	ft./min.
Tool Type and No.	combo KR	gamma KR	
Unit No.	5		
Location	Santa Cruz		
Invoice No.	5703		
Recorded By	Jim Bat, Associate Geologist		
Witnessed By	Don Cox, IT Corp.		
other			

P. O. Box 418 Tehachapi, California 93561 (805) 822-6875

Field Note

REMARKS: IT CORPORATION MARTINEZ, CA.

DRILL METHOD: STANDARD ROTARY

DRILLED BY: WATER DEVELOPMENT CORP. WOODLAND, CA.

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

POINT RESISTIVITY 5 OHM m²/m

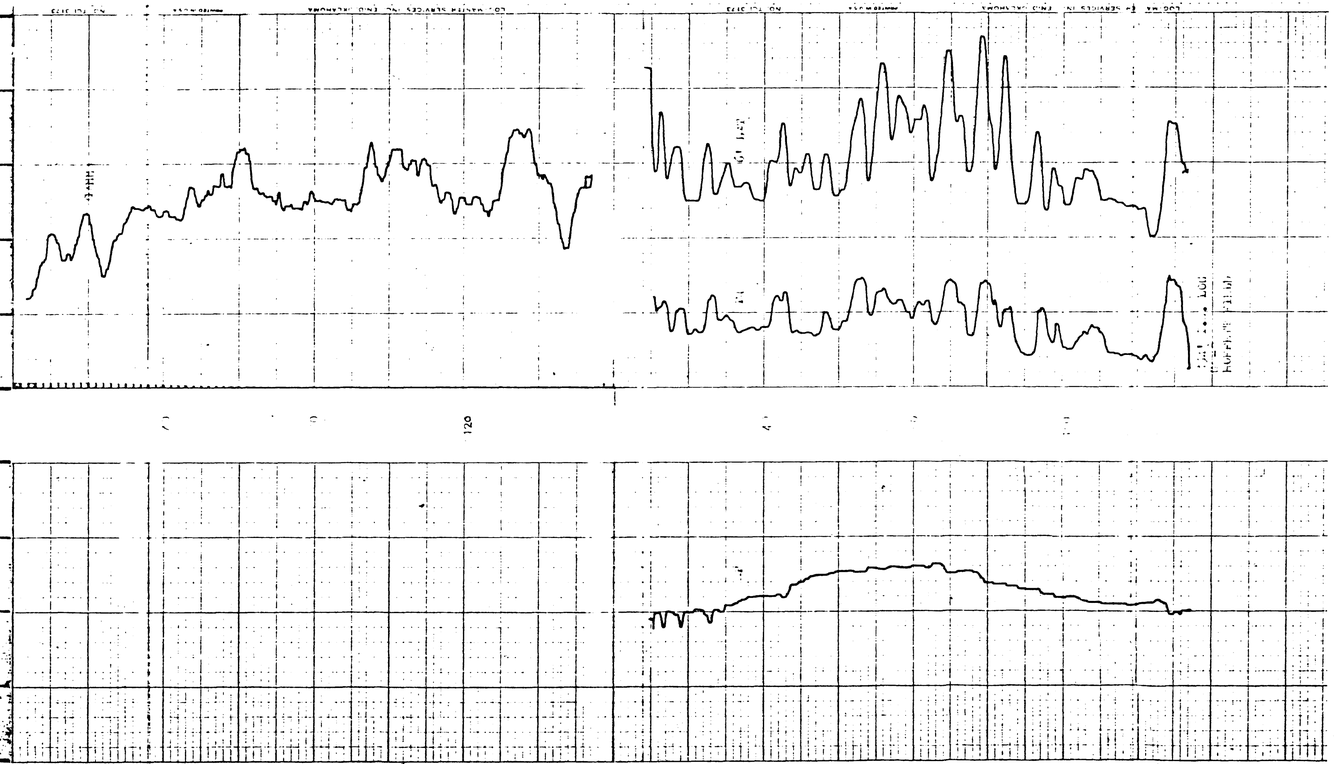
6' LATERAL 0 10 20 OHM m²/m

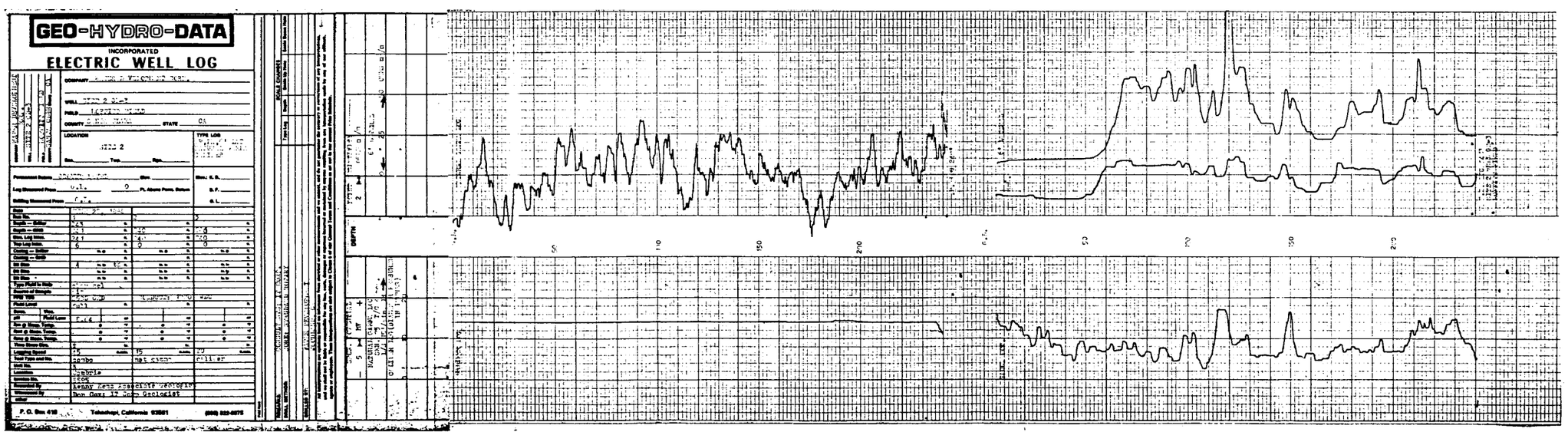
DEPTH

SPONT. POTENTIAL — 5 MV +

NATURAL GAMMA INCREASING RADIATION
SENSITIVITY=25
TIME CONSTANT=4 SEC
LOGGING SPEED=10 FT/MIN

NOTE: CALIPER LOG MISSING DUE TO FAILURE; WILL BE REPAIRED OR REPLACED FOR NEXT LOGGING.




GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY
WELL
FIELD
COUNTY
STATE
LOCATION
TYPE LOG
Permanent Datum
Log Measured From
Drilling Measured From
Date
Run No.
Depth — Driller
Depth — Grid
Elev. Log Interval
Top Log Interval
Casing — Driller
Casing — Grid
Bit Size
Type Fluid in Hole
Source of Sample
RMF TEMP
Fluid Level
Source
Fluid Level
Rm @ Meas. Temp.
Rmf @ Meas. Temp.
Rmc @ Meas. Temp.
Time Since Circ.
Logging Speed
Tool Type and No.
Unit No.
Location
Operator No.
Recorded By
Witnessed By
other
Kenny Ness Associate Geologist
Don Gay: IT Cons Geologist
P. O. Box 418
Tehachapi, California 93581
DEPTH
50
100
150
200
250
300
350
400

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 3

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

GEO-HYDRO-DATA
INCORPORATED

ELECTRIC WELL-LOG

COMPANY U.S. NAVY
WELL GB-13 S/Z 2
FIELD MOFFETT FIELD
COUNTY SANTA CLARA STATE CALIFORNIA

LOCATION
Sec. ____ Twp. ____ Rge. ____

TYPE LOG
SP, PR,
6' LATERAL
CALIPER
NAT GAMMA

Permanent Datum GROUND LEVEL Elev. ____ Elev.: K.B. ____
Log Measured From G.L. 0 Ft. Above Perm. Datum D.F. ____
Drilling Measured From GROUND LEVEL G.L. ____

Date	31 August 88		
Run No.	one	two	three
Depth — Driller	252 ft	ft	ft
Depth — Grid	252 ft	ft	ft
Depth — Log Inter.	252 ft	ft	ft
Top Log Inter.	10 ft	5 ft	5 ft
Casing — Driller	42 no 8 ft	no ft	no ft
Casing — Grid	ft	ft	ft
Bit Size	8 no TD ft	no ft	no ft
Bit Size	no ft	no ft	no ft
Bit Size	no ft	no ft	no ft
Type Fluid in Hole	gel	ft	ft
Source of Sample	ditch		
RPM Type	mud		
Fluid Level	full ft	ft	ft
Density / Visc.			
pH / Fluid Loss	cc	cc	cc
Rm @ Meas. Temp.	° °F	° °F	° °F
Rmf @ Meas. Temp.	° °F	° °F	° °F
Rmc @ Meas. Temp.	° °F	° °F	° °F
Time Since Circ.	1 hr	hr	hr
Logging Speed	30 ft/min	14 ft/min	15 ft/min
Tool Type and No.	combo 21	cal 7	gamma 3
Unit No.	7		
Location	Shafter		
Station No.	5749		
Recorded By	Kile Alexander Assoc. Geologist		
Witnessed By	Joel Hadsall Jr Geologist		

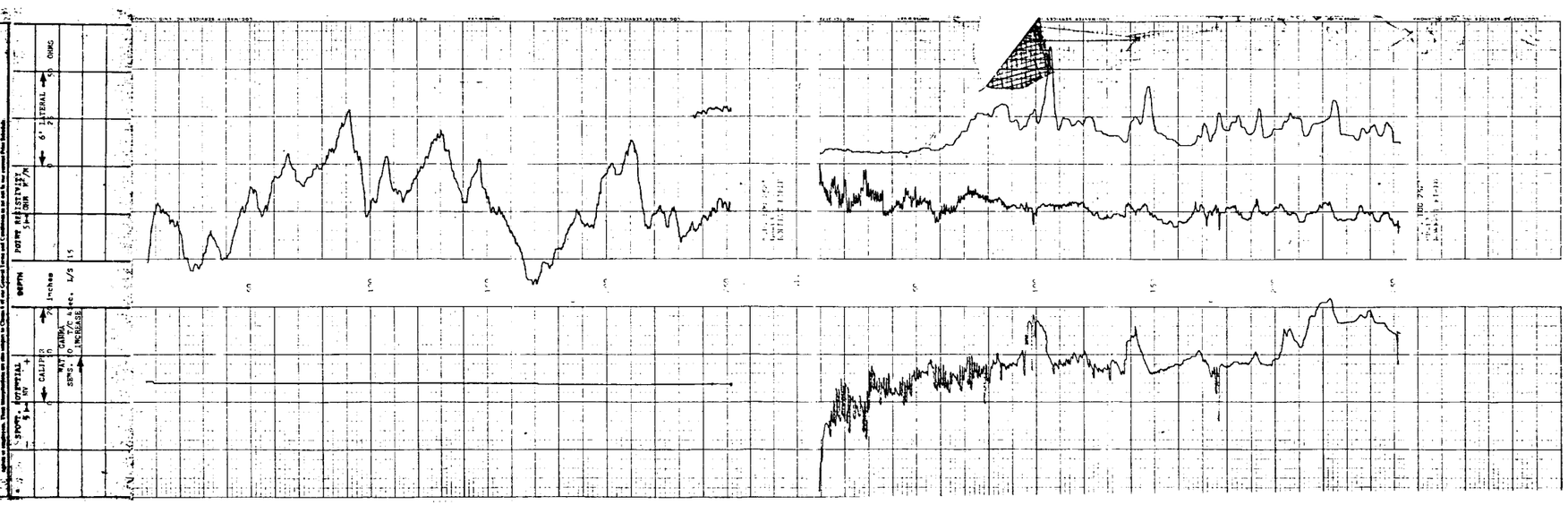
P. O. Box 418 Tehachapi, California 93561 (805) 822-6675

REMARKS
DRILL METHOD STANDARD ROTARY
LOCATION U.S. NAVY, JT. CORPORATION.
DRILLER BY MAYFE DEVELOPMENT CORP.

SCALE CHANGES

Type Log	Depth	Scale Changes	Scale Up Hole

All conclusions and opinions (which are interpretations, based on standard practice and experience, and are not a guarantee of performance) are based on data and information furnished by our customer or obtained by our personnel, and we are prepared to accept responsibility only for such conclusions and opinions as are based solely on our interpretations of such data and information. These interpretations are made to the Client's sole risk and Client agrees that neither GEO-HYDRO-DATA, INCORPORATED nor its officers or employees will be liable for any errors therein howsoever caused.



GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG

COMPANY: WATER DEVELOPMENT CORPORATION

WELL: GB-14 SITE B

FIELD: MOFFETT FIELD

COUNTY: SANTA CLARA STATE: CALIFORNIA

LOCATION:

TYPE LOG: SP, PR, 6' LAT, GAMMA, CALIPER

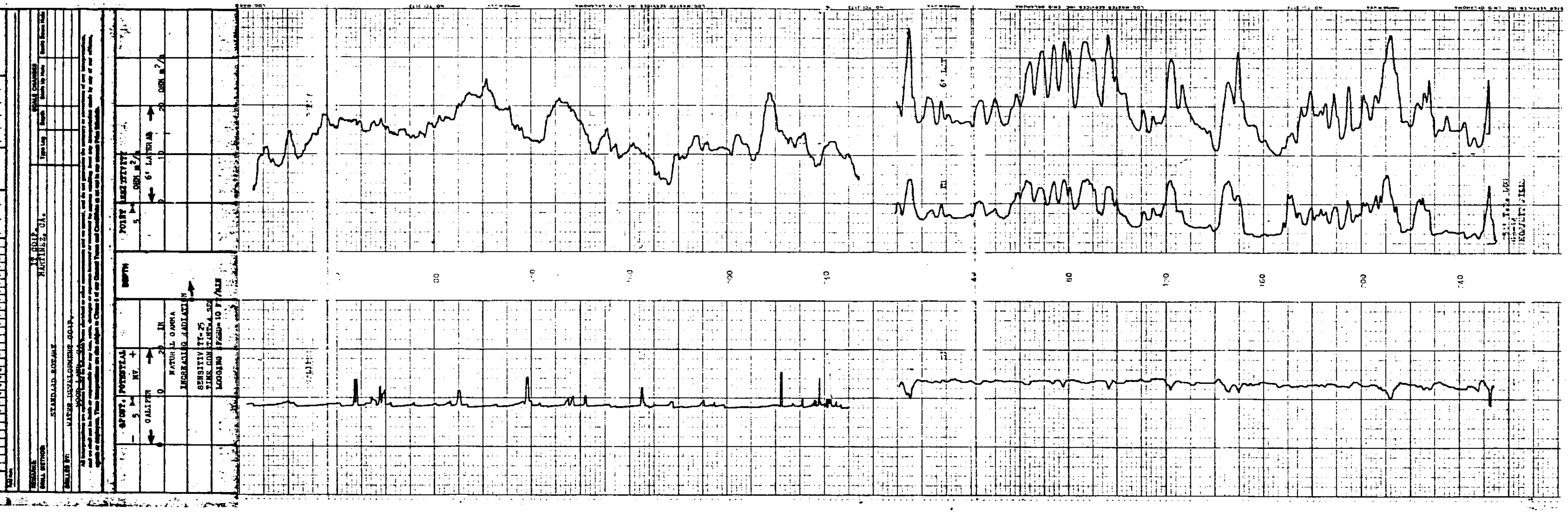
Permanent Datum: GROUND LEVEL

Log Measured From: G.L.

Drilling Measured From: G.L.

[illegible]	Sep 1, 1988		
[illegible]	one		
[illegible]	257		
[illegible]	254		
[illegible]	254		
[illegible]	10	5	
[illegible]			
[illegible]			
[illegible]	4 257		
[illegible]			
[illegible]			
[illegible]	clay-gel		
[illegible]	pit		
COND'T.	840		
[illegible]	full		
[illegible]			
[illegible]	7.55		
[illegible]			
[illegible]			
[illegible]			
[illegible]	1/2		
[illegible]	10	10	
[illegible]	combo 5	gamma 1	caliper M/
[illegible]	5		
[illegible]	Santa Cruz		
[illegible]	5805		
[illegible]	Jim Bat, Associate Geologist		
[illegible]	Kyle, Driller		
other			

P. O. Box 418 Tehachapi, California 93561



GEO-HYDRO-DATA

INCORPORATED

ELECTRIC WELL LOG

COMPANY: THE WATER DEVELOPMENT CORP. (IT)
MOFFETT FIELD

WELL: GB-15 *5ITA-3*

FIELD: GOLF COURSE

COUNTY: SANTA CLARA STATE: CALIFORNIA

LOCATION: GOLF COURSE

TYPE LOG: SP FR 6' LAT. NAT. GAMMA CALIPER

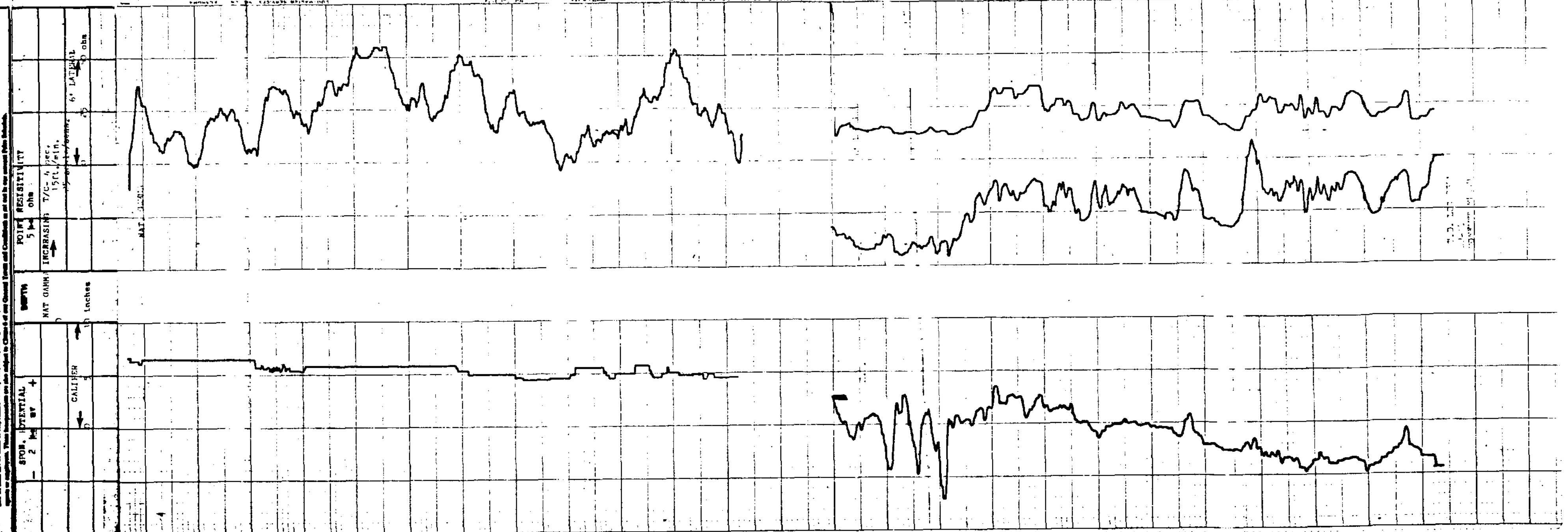
Permanent Datum: GROUND LEVEL

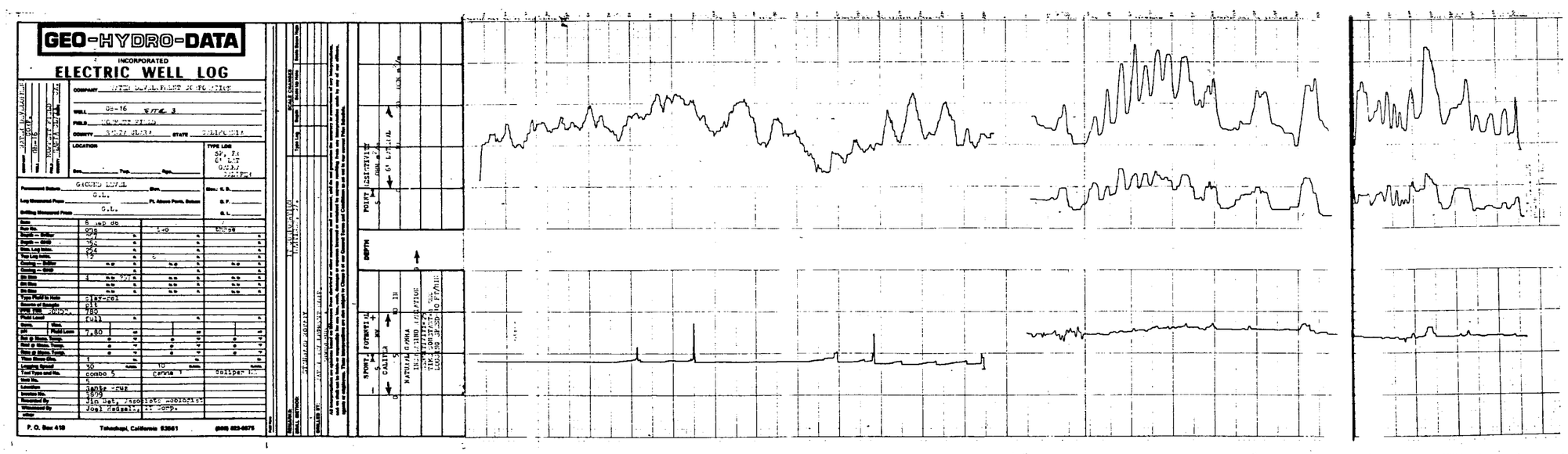
Log Measured From: G.L. 0 Ft. Above Perm. Datum

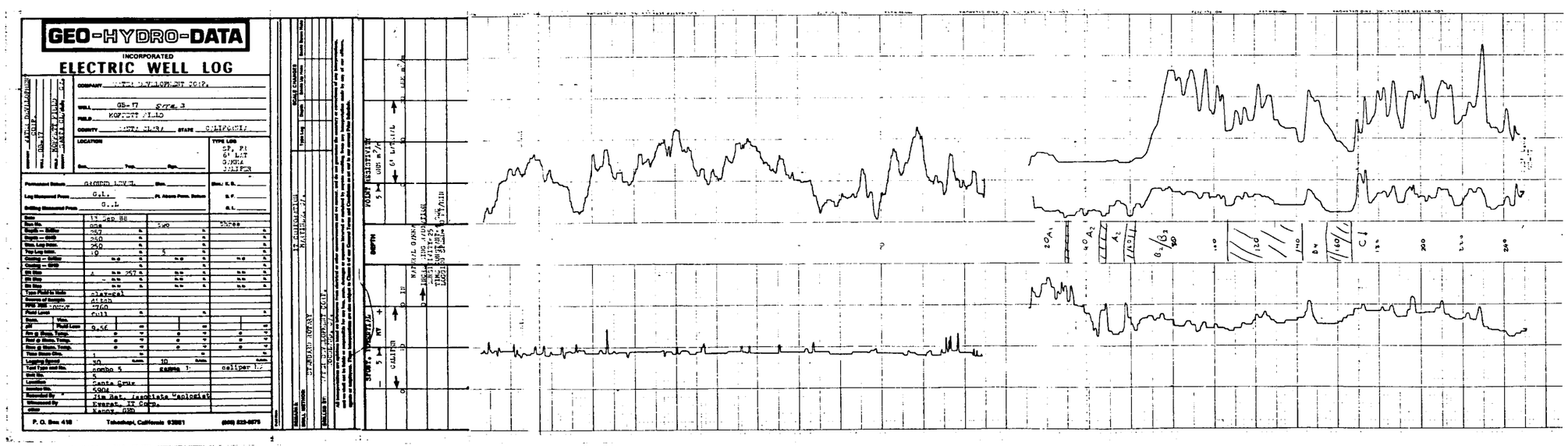
Drilling Measured From: G.L.

[illegible]	16 SEPT.78		
[illegible]	ONE		
[illegible]	250		
[illegible]	236		
[illegible]	236		
[illegible]	4		
[illegible]	4 td		
[illegible]	CLAY-GEL		
[illegible]	PIT		
[illegible]	8		
pH	9.5		
[illegible]	700 @ 70		
[illegible]	12		
Logging Speed	13 & 35		
[illegible]	ALL-O's		
[illegible]	2		
Location	STOCKTON, CA.		
[illegible]	5775		
Recorded by	D. SHANHOLTZER (ASSOCIATE GEOLOGIST)		
Witnessed by	JOEL BARSKI (IT)		
other	STAN (DR LLER)		

P.O. Box 418 Tehachapi, California 93561 (805) 822-6875




GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY
WELL GB-16 SITE 3
FIELD
COUNTY
STATE
LOCATION
TYPE LOG
Permanent Datum GROUND LEVEL
Log Measured From G.L.
Drilling Measured From G.L.
Date 6 Sep 86
Run No. one
Depth — Driller
Depth — Grid
Bot. Log Inter.
Top Log Inter.
Casing — Driller
Casing — Grid
Bit Size
Type Fluid in Hole clay-rel
Source of Sample pit
Fluid Level full
pH 7.80
Test Type and No. combo 5
Location Santa Cruz
Recorded By Jim Det, Associate Geologist
Witnessed By Joel Hedzell, IT Corp.
P. O. Box 418 Tehachapi, California 93561
SCALE CHANGES
DEPTH
POINT RESISTIVITY
SPONT. POTENTIAL
CALIPER
NATURAL GAMMA
INCREASING RADIATION
RESISTIVITY-25
TIME CONSTANT-10 MSEC
LOGGING SPEED-10 FT/MIN

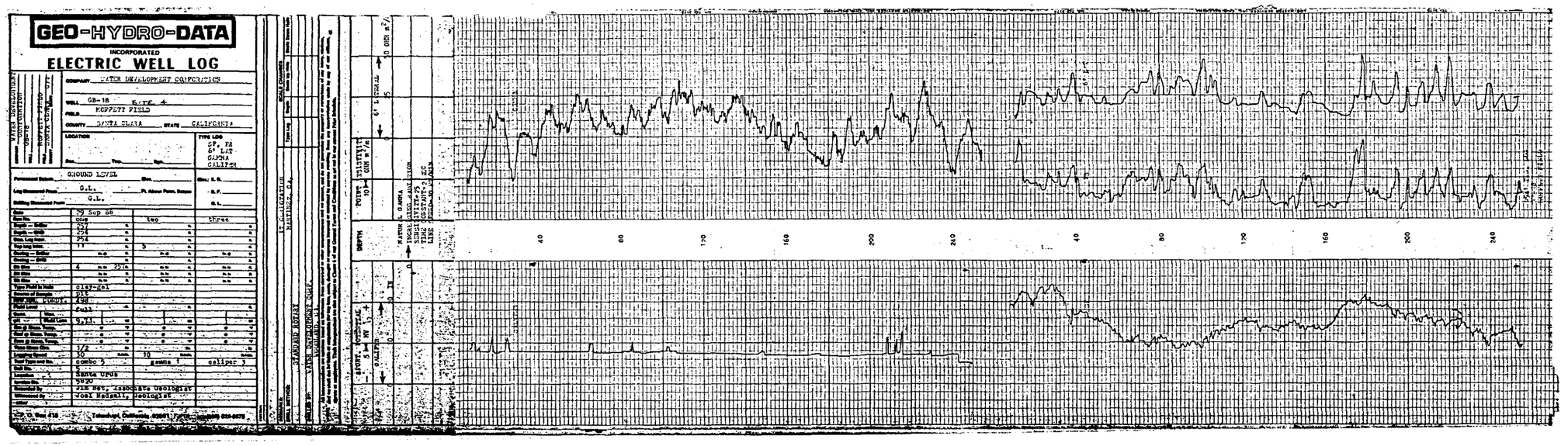

GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY
WELL GB-17 SITE 3
FIELD
COUNTY
STATE
LOCATION
TYPE LOG
Permanent Datum GROUND LEVEL
Log Measured From G.L.
Drilling Measured From G.L.
Date 13 Sep 88
Run No. one two three
Depth — Driller 257
Depth — GWD 250
Depth — Log Inter. 250
Top Log Inter. 10
Casing — Driller
Casing — GWD
Bit Size 4 in. 257 ft.
Type Fluid in Hole clay-gel
Source of Sample ditch
Fluid Level full
Fluid Loss 9.56
Time Since Circ. 1
Logging Speed 30 ft/min. 10 ft/min.
Tool Type and No. combo 5 gamma 1 caliper 1
Unit No. 5
Location Santa Cruz
Recorded By Jim Bat, Associate Geologist
Witnessed By Everett, IT Corp.
P. O. Box 418 Tehachapi, California 93561 (805) 822-8575
SCALE CHANGES
IT CORPORATION
STANDARD ROTARY
GEO-HYDRO-DATA
POINT RESISTIVITY
SPONT. POTENTIAL
CALIPER
NATURAL GAMMA
INCH
DEPTH

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 4

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY WATER DEVELOPMENT CORPORATION
WELL GB-18 RATE 4
FIELD MOFFETT FIELD
COUNTY SANTA CLARA STATE CALIFORNIA
LOCATION
TYPE LOG SP, RR 6" LAT GAMMA CALIPER
GROUND LEVEL
G.L.
G.L.
29 Sep 88
two
three
Type Field in Hole clay-gel
Source of Sample pit
Field Level full
Total Type and No. combo 5 gamma 1 caliper 3
Location Santa Cruz
Invoice No. 5820
Recorded by Jim Bat, Associate Geologist
Witnessed by Joel Hedsall, Geologist
P. O. Box 418 Tehachapi, California 93561
STANDARD ROTARY
WATER DEVELOPMENT CORP.
DEPTH
40
80
120
160
200
240
40
80
120
160
200
240

GEO-HYDRO-DATA
INCORPORATED

ELECTRIC WELL LOG

COMPANY	WATER DEVELOPMENT CORPORATION
	CALIFORNIA
WELL	03-19
FIELD	HOFFER FIELD
COUNTY	SANTA CLARA
STATE	CALIFORNIA
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured From	G.L.
Drilling Measured From	G.L.
Date	
Run No.	
Depth-Driller	26 deg. 28
Depth-Logger	2400
Bottom Log Interval	2400
Top Log Interval	0
Casing-Driller	16 in. @ 2400
Casing-Logger	
Bit Size	14 3/4
Type Fluid in Hole	Air
Dens.	
Visc.	
pH	
Fluid Loss	
Source of Sample	
Rm @ Meas. Temp.	
Rmf @ Meas. Temp.	
Rmc @ Meas. Temp.	
Source: Rmf / Rmc	
Rm @ BHT	
Time Since Circ.	
Max. Rec. Temp.	
Equip. Location	
Recorded By	
Witnessed By	

Run No.	1
Bottom Log Interval	2400
Top Log Interval	0
Casing-Driller	16 in. @ 2400
Casing-Logger	
Bit Size	14 3/4
Type Fluid in Hole	Air
Dens.	
Visc.	
pH	
Fluid Loss	
Source of Sample	
Rm @ Meas. Temp.	
Rmf @ Meas. Temp.	
Rmc @ Meas. Temp.	
Source: Rmf / Rmc	
Rm @ BHT	
Time Since Circ.	
Max. Rec. Temp.	
Equip. Location	
Recorded By	
Witnessed By	

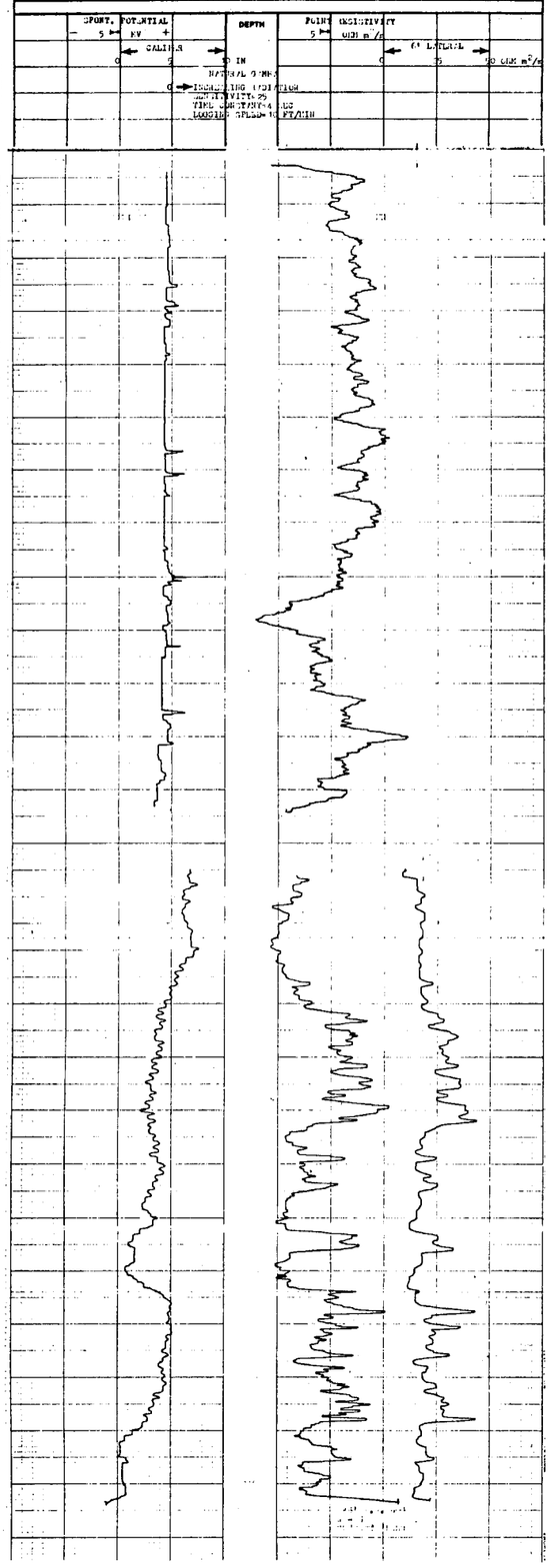
REMARKS: IT CORPORATION
MARTINEZ, CA.

DRILL METHOD: STANDARD ROTARY

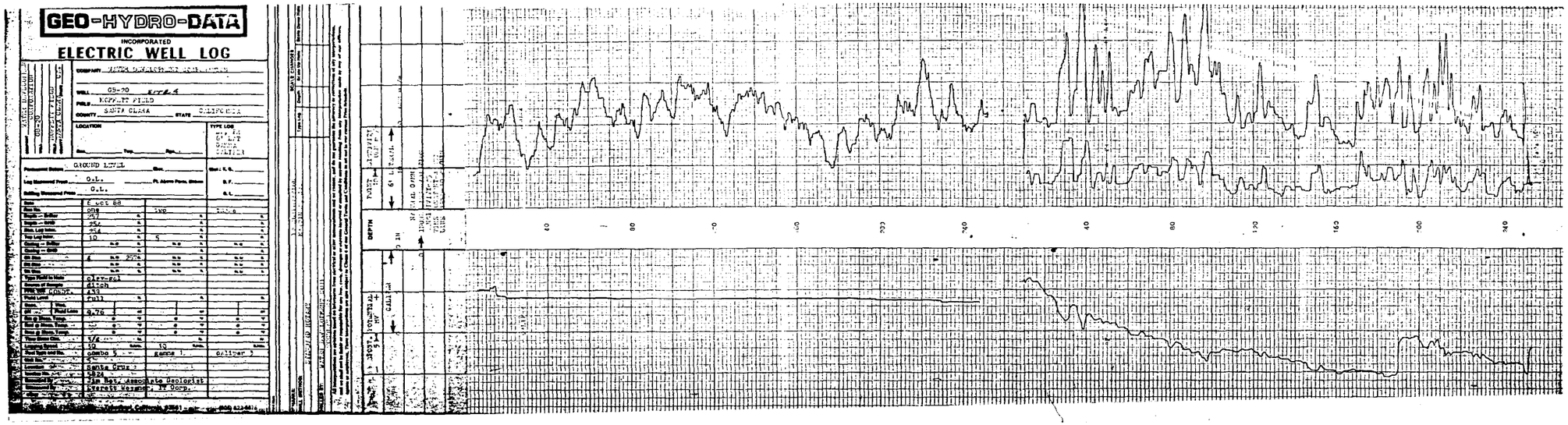
DRILLED BY: WATER DEVELOPMENT CORPORATION
MODESTO, CA.

SCALE CHANGES			
Type Log	Depth	Scale Up 100ft	Scale Down Hole

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.



P.O. Box 418
Tehachapi, California 93561
(805) 822-8075

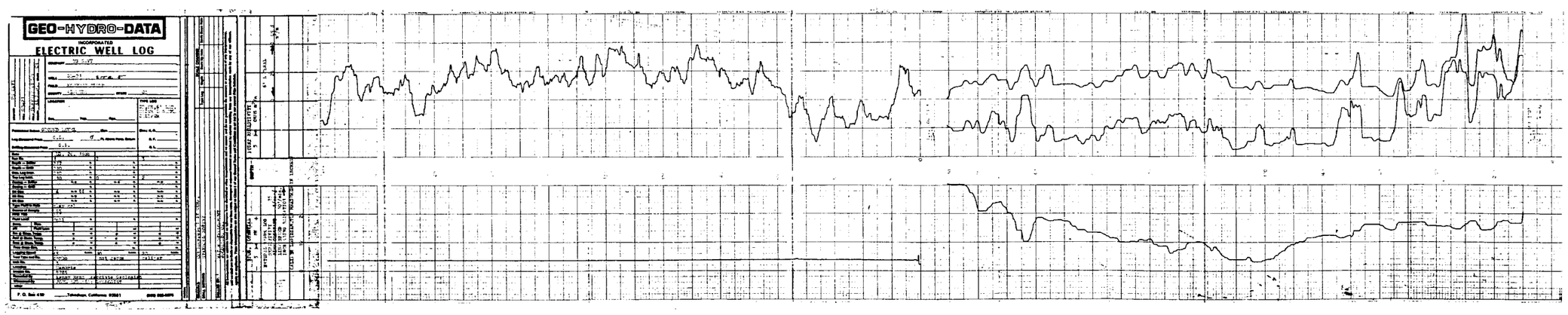

GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY
WELL GS-20
FIELD MOFFETT FIELD
COUNTY SANTA CLARA
STATE CALIFORNIA
LOCATION
TYPE LOG
Permanent Datum GROUND LEVEL
Log Measured From G.L.
Drilling Measured From G.L.
Date 6 Oct 88
Depth — Driller 257
Depth — Grid 254
Elev. Log Inter. 254
Top Log Inter. 10
Casing — Driller
Casing — Grid
Bit Size 4 in 2576
Type Fluid in Hole clay-gel
Source of Sample ditch
Fluid Level full
Bore Size 9.76
Bore Size 3/4
Logging Speed 30
Tool Type and No. combo 5
Location Santa Cruz
Recorded By Jim Hoy, Associate Geologist
Witnessed By Everett Wessner, IT Corp.
DEPTH
POTENTIAL MV
CALIPER
SPOT. 5
40
80
120
160
200
240

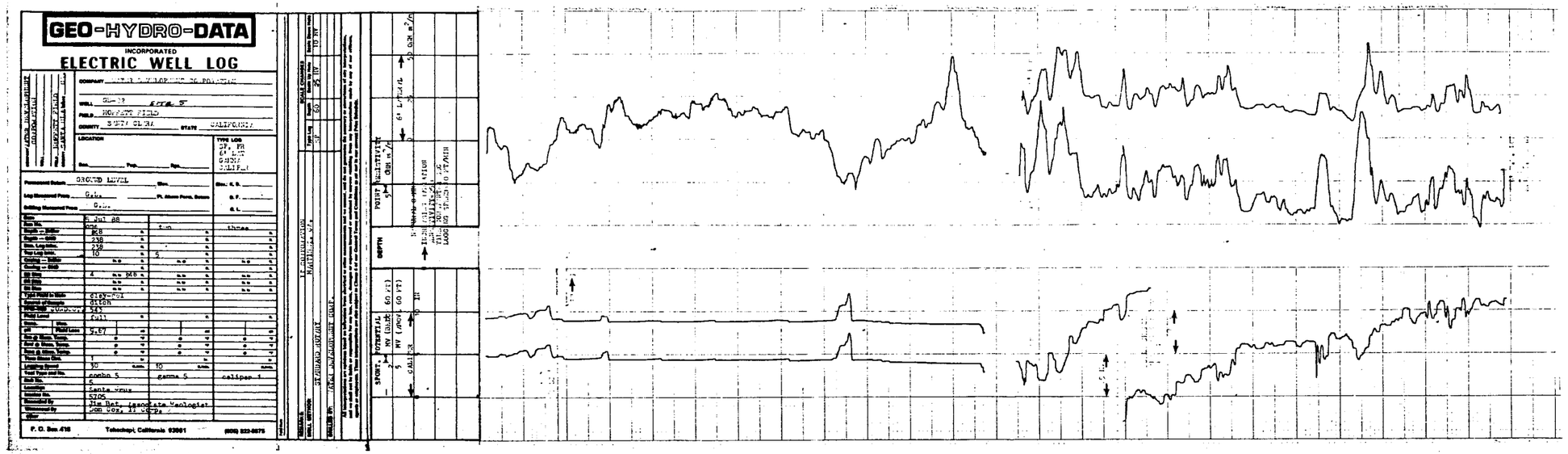
N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

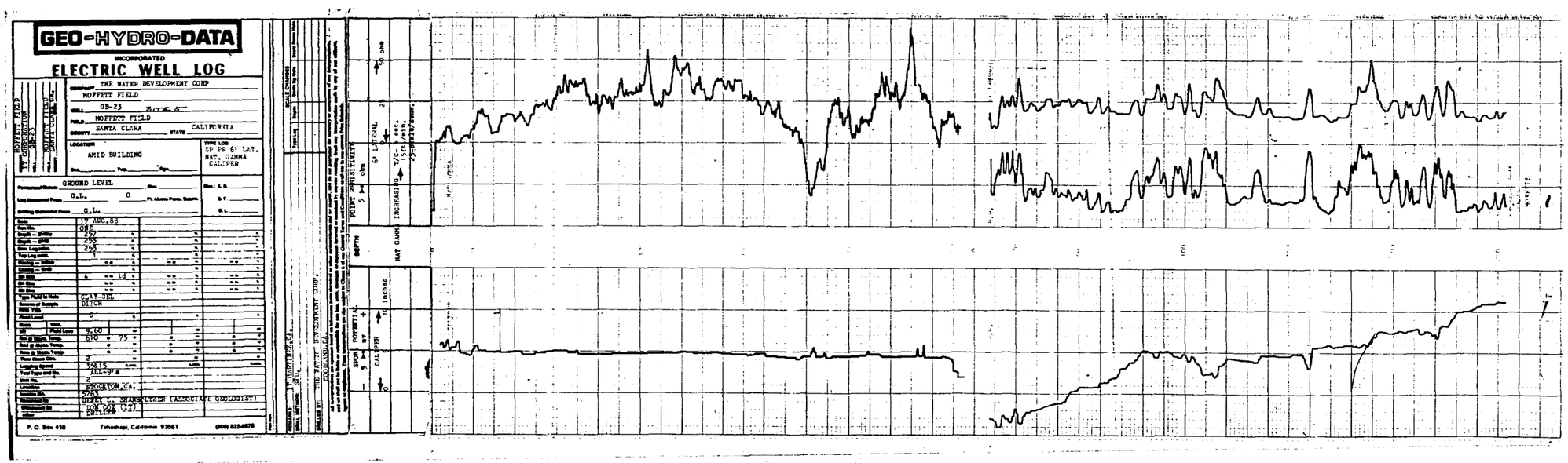
APPENDIX G
SITE 5

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY
WELL
FIELD HOFFETT FIELD
COUNTY SANTA CLARA
STATE CALIFORNIA
LOCATION
TYPE LOG
Permanent Datum GROUND LEVEL
Log Measured From G.L.
Drilling Measured From G.L.
Date 5 Jul 88
Run No. one
Depth — Driller 168
Depth — Grid 238
Depth — Log Inter. 238
Top Log Inter. 10
Casing — Driller
Casing — Grid
Bit Size 4 in. 6 in.
Type Fluid in Hole clay-fol
Source of Sample ditch
Fluid Level full
Fluid Loss 5.67
Fluid Loss 30
Logging Speed 10
Test Type and No. combo 5 gamma 5 caliper 1
Location Santa Cruz
Location 5705
Recorded By Jim Det, Associate Geologist
Witnessed By Don Cox, II Corp.
P. O. Box 416 Tehachapi, California 93561 (805) 822-8875
SCALE CHANGES
Type Log Depth Scale Up Hole Scale Down Hole
SP 60 25 HV 10 HV
DEPTH
POINT RESISTIVITY
6" LATERAL
SPONT. POTENTIAL
MV (BLDG 60 FT)
MV (ABOVE 60 FT)
CALIPER
30 IN


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY THE WATER DEVELOPMENT CORP
MOFFETT FIELD
WELL GB-23 SITE 5
FIELD MOFFETT FIELD
COUNTY SANTA CLARA STATE CALIFORNIA
LOCATION AMID BUILDING
TYPE LOG SP PR 6' LAT. NAT. GAMMA CALIPER
GROUND LEVEL
G.L. 0
17 AUG.88
ONE
257
253
253
4 ft
CLAY-JEL
DITCH
0
9.60
610 @ 75
2
35.15
ALL-9'
2
STOCKTON, CA.
5763
DENEY L. SHANSLYZER (ASSOCIATE GEOLOGIST)
DON COX (IT)
DRILLER
P. O. Box 418
Tehachapi, California 93561
(805) 822-6675
SCALE CHANGES
SPOT POTENTIAL
5 mv
CALIPER
10 inches
NAT GAMM
INCREASING
T/C
6' LATERAL
25
50 ohm
SEPTH

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 6

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

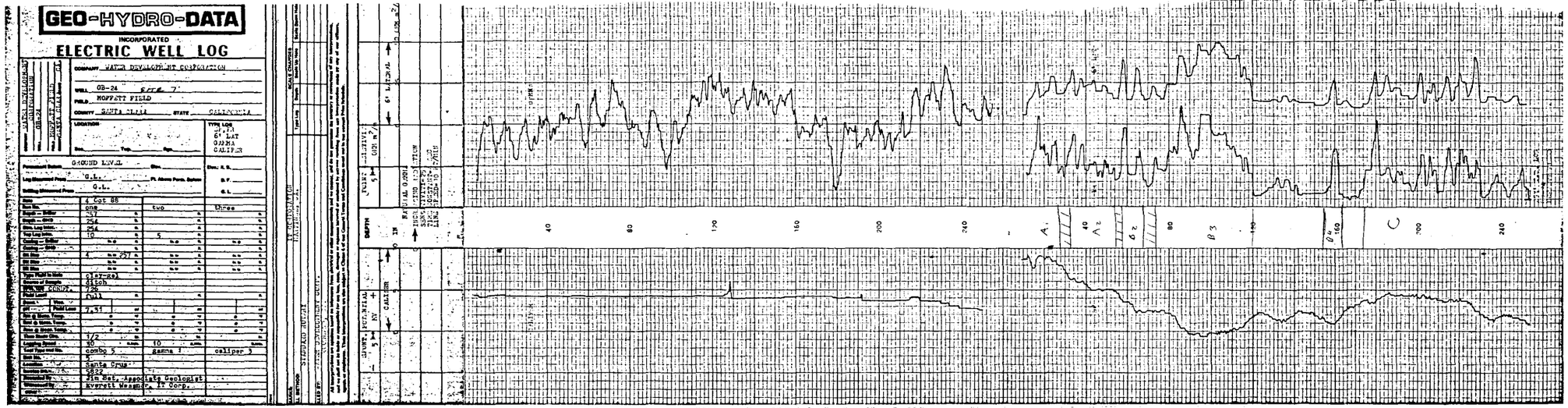
NO GEOPHYSICAL LOGGING WAS CONDUCTED AT SITE 6

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 7

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

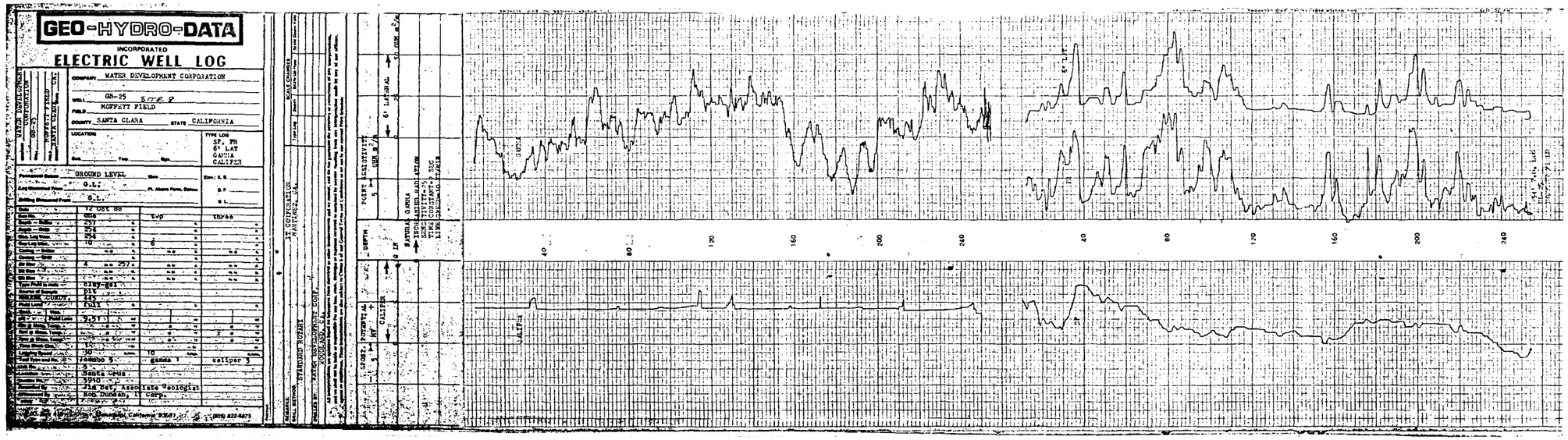

GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY WATER DEVELOPMENT CORPORATION
WELL GB-24 SITE 7
FIELD MOFFETT FIELD
COUNTY SANTA CLARA STATE CALIFORNIA
LOCATION
TYPE LOG
6' LAT
GAMMA
CALIPER
GROUND LEVEL
Log Measured From G.L.
Drilling Measured From G.L.
Date 4 Oct 88
one
two
three
Type Fluid in Hole clay-gel
Source of Sample ditch
Fluid Level full
Bit Size 7.31
Logging Speed 30
Test Type and No. combo 5
gamma 1
caliper 3
Location Santa Cruz
Recorded by Jim Bet, Associate Geologist
Witnessed by Everett Weagner, IT Corp.
DEPTH
POINT 5
6' LATERAL
POINT 5
CALIPER
40
80
120
160
200
240
A1
A2
B2
B3
B4
C

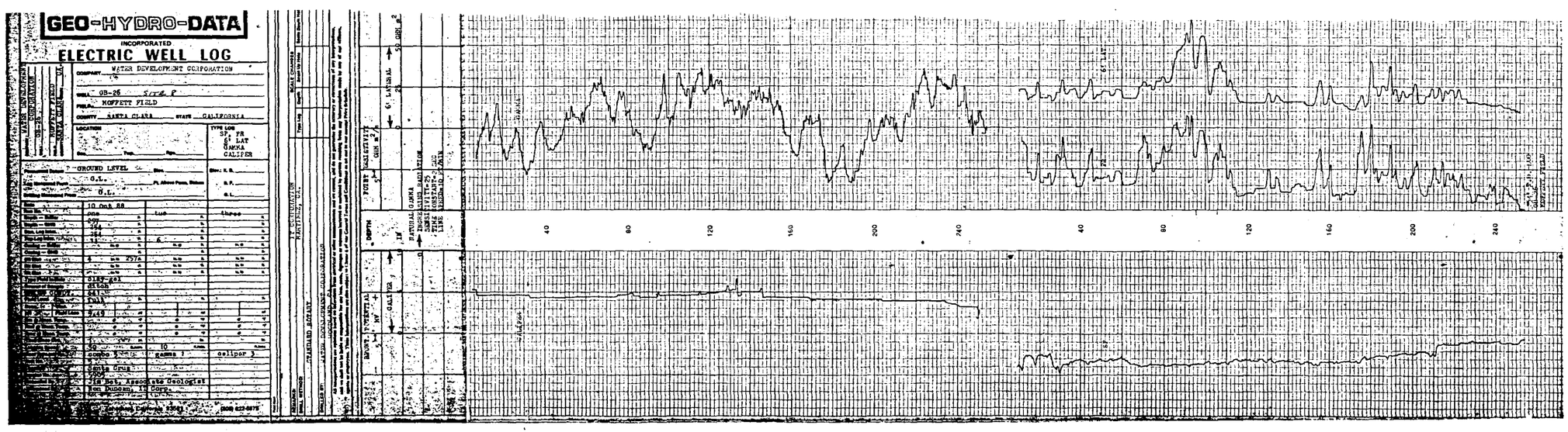
N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 8

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY WATER DEVELOPMENT CORPORATION
WELL GB-25 SITE 8
FIELD MOFFETT FIELD
COUNTY SANTA CLARA STATE CALIFORNIA
LOCATION
TYPE LOG SP, FR 6" LAT GAMMA CALIPER
GROUND LEVEL
G.L.
G.L.
12 Oct 88
twp
three
257
254
254
10
6
4
257
clay-gel
pit
fuel
9.51
10
10
gamma 1
caliper 3
Santa Cruz
5910
Jim Bet, Associate Geologist
Ron Duncan, II Corp.
Denver, California 93681
(805) 822-4475
IT CORPORATION
MARTINEZ, CA.
STANDARD ROTARY
WATER DEVELOPMENT CORP.
WOODLAND, CA.
DEPTH
POINT RESISTIVITY
6' LATERAL
GAMMA
CALIPER
SP
40
80
120
160
200
240


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
WATER DEVELOPMENT CORPORATION
OB-26
MOFFETT FIELD
SANTA CLARA
CALIFORNIA
GROUND LEVEL
G.L.
10 Oct 88
one
two
three
ditch
Santa Cruz
Jim Bot, Associate Geologist
Ron Duncan, IT Corp.
IT CORPORATION
MARTINEZ, CA.
STANDARD ROTARY
WATER DEVELOPMENT CORPORATION
GAMMA
GALIPER
40
80
120
160
200
240

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 9

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

GEO-HYDRO-DATA
INCORPORATED

ELECTRIC WELL LOG

WATER DEVELOPMENT CORP.
WELL: GB-7
FIELD: MOFFETT FIELD
COUNTY: SANTA CLARA, STATE: CALIF.

COMPANY: THE WATER DEVELOPMENT CORPORATION
WELL: GB-7 5774.9
FIELD: MOFFETT FIELD
COUNTY: SANTA CLARA STATE: CALIFORNIA

LOCATION: Sec. Twp. Rge.
TYPE LOG: SP PR 6' LAT. NAT. GAMMA CALIPER

Permanent Datum: GROUND LEVEL Elev.: K.B.
Log Measured From: G.L. 0 Ft. Above Perm. Datum D.F.
Drilling Measured From: G.L. G.L.

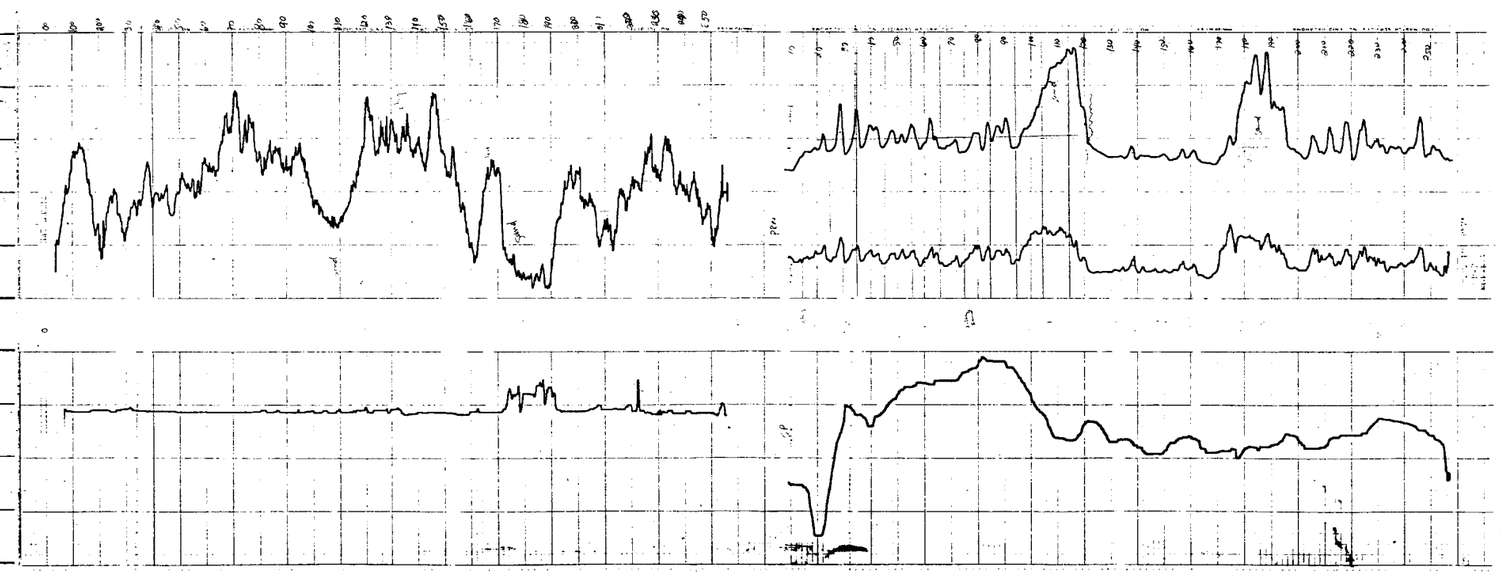
Date	19 JULY 88
Run No.	ONE
Depth — Driller	260
Depth — Logger	252
Btm. Log Inter.	252
Top Log Inter.	2
Casing — Driller	
Casing — Logger	
Bit Size	4
Bit Size	
Bit Size	
Type Fluid in Hole	CLAY-GEL
Source of Sample	PIT
RM @ Meas. Temp.	1.95
Fluid Level	FULL
Max. Rec. Temp.	
pH	9.65
Rm @ Meas. Temp.	
Rmf @ Meas. Temp.	
Rmc @ Meas. Temp.	
Time Since Circ.	3
Logging Speed	35&15
Tool Type and No.	COMB-18,N, G-L,CAL-4
Unit No.	2
Location	STOCKTON,CA.
Invoice No.	
Recorded By	D.L. HEDGCOTH (ASSOCIATE GEOLOGIST)
Witnessed By	C. WALLACE( )
other	DRILLER

P. O. Box 419 Tehachapi, California 93561 (805) 822-6875

SCALE CHANGES: Depth Scale Up Inch / Scale Up Inch
TIME LOG: Depth Scale Up Inch

REMARKS: 1) CONSOLIDATED MAGNETICS, CA.
DRILL METHOD: ROTARY
2) THE WATER DEVELOPMENT CORP.
DRILLED BY: THE WATER DEVELOPMENT CORP.

All conclusions and opinions (including but not limited to, opinions of potential mineral, oil and gas, water and geothermal yields and productivity of any zone or strata) are based on interpretations, and we, the GEO-HYDRO-DATA, INC., and its officers and employees, assume no responsibility for the accuracy of any such interpretations, opinions or conclusions. These interpretations are subject to Terms of our Current Terms and Conditions as set forth in our current Price Schedule.



GEO-HYDRO-DATA

INCORPORATED

ELECTRIC WELL LOG

Company	WATER DEVELOPMENT CORPORATION
Well	GB-8 SITE 9
Field	MOFFETT FIELD
County	SANTA CLARA
State	CALIFORNIA
Location	
Type Log	SP, RN 64' LAT GAMMA CALIPER
Permanent Datum	GROUND LEVEL
Elev.	
Elev.: K.B.	
Log Measured From	G.L.
Ft. Above Perm. Datum	
D.F.	
Drilling Measured From	G.L.
G.L.	

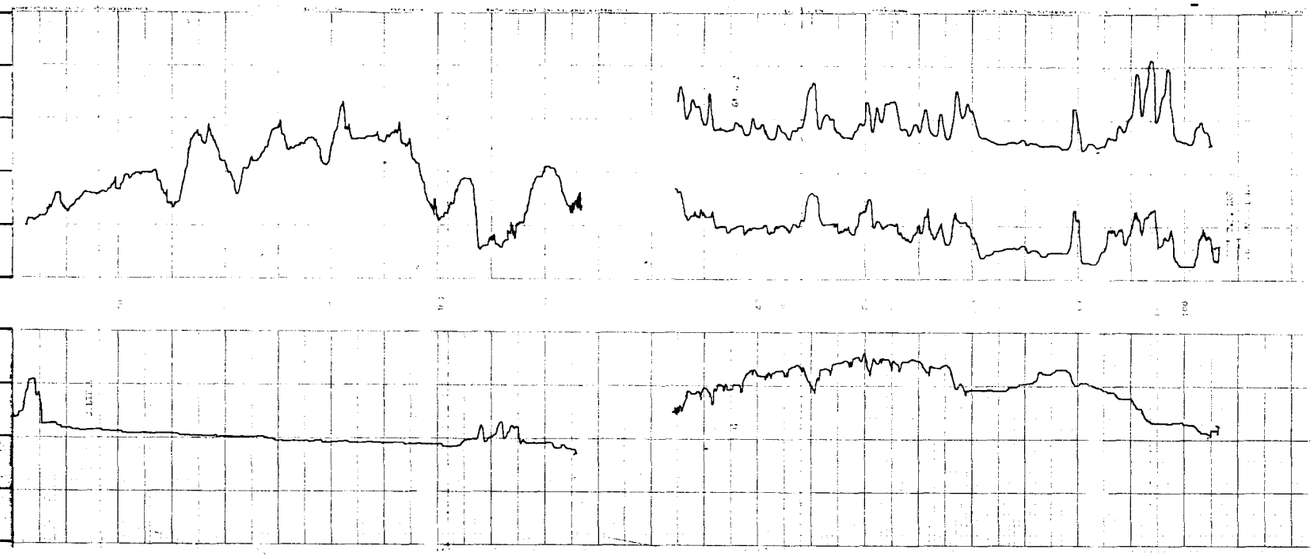
Date	15 Jul 88					
Run No.	one		two		three	
Depth — Driller	95	n		n		n
Depth — GEO	213	n		n		n
Btm. Log Inter.	213	n		n		n
Top Log Inter.	10	n		n		n
Casing — Driller	n.a.	n	n.a.	n	n.a.	n
Casing — GEO		n		n		n
Bit Size	4 n.a.	2613 n	n.a.	n	n.a.	n
Bit Size	n.a.	n	n.a.	n	n.a.	n
Bit Size	n.a.	n	n.a.	n	n.a.	n
Type Fluid in Hole	clay-gel					
Source of Sample	pit					
Rm @ Meas. Temp.	499					
Fluid Level	full	n		n		n
Rmf @ Meas. Temp.	3.66	m		m		m
Rmc @ Meas. Temp.		m		m		m
Time Since Circ.	2	h		h		h
Logging Speed	30	feet/min.	30	feet/min.		feet/min.
Tool Type and No.	combo 5		gamma 1		caliper 9	
Unit No.	3					
Location	Santa Cruz					
Location No.	5711					
Recorded By	Jim Day, Associate Geologist					
Witnessed By	Cory Wallace, EI Corp.					
other	D. Shanholtzer GHD					

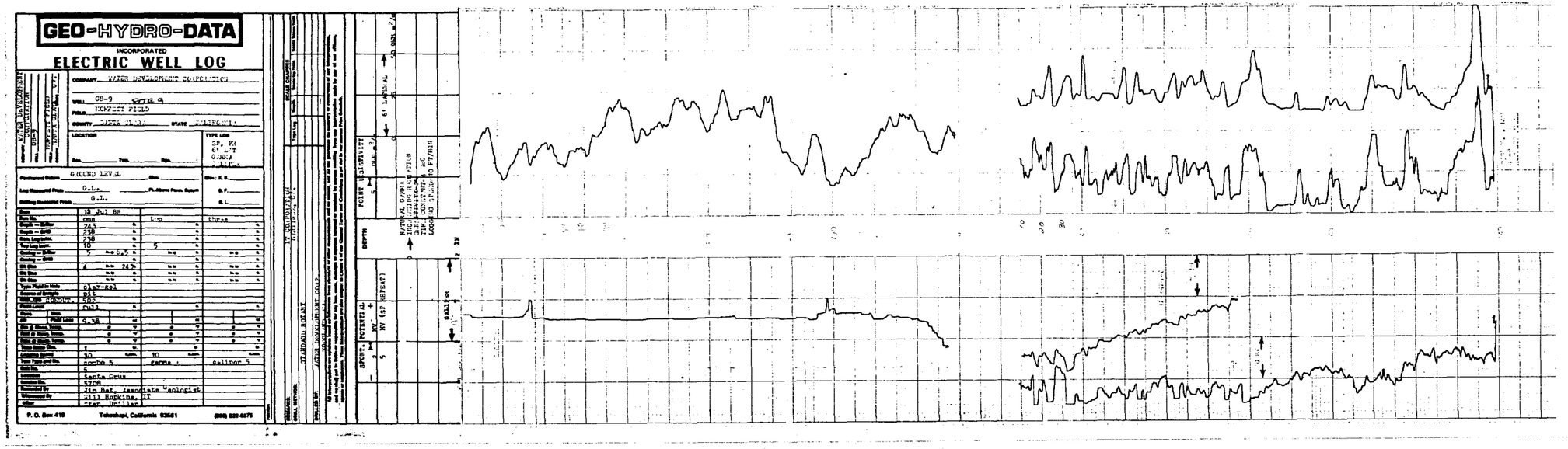
P. O. Box 418 Tehachapi, California 93561 (805) 822-5575

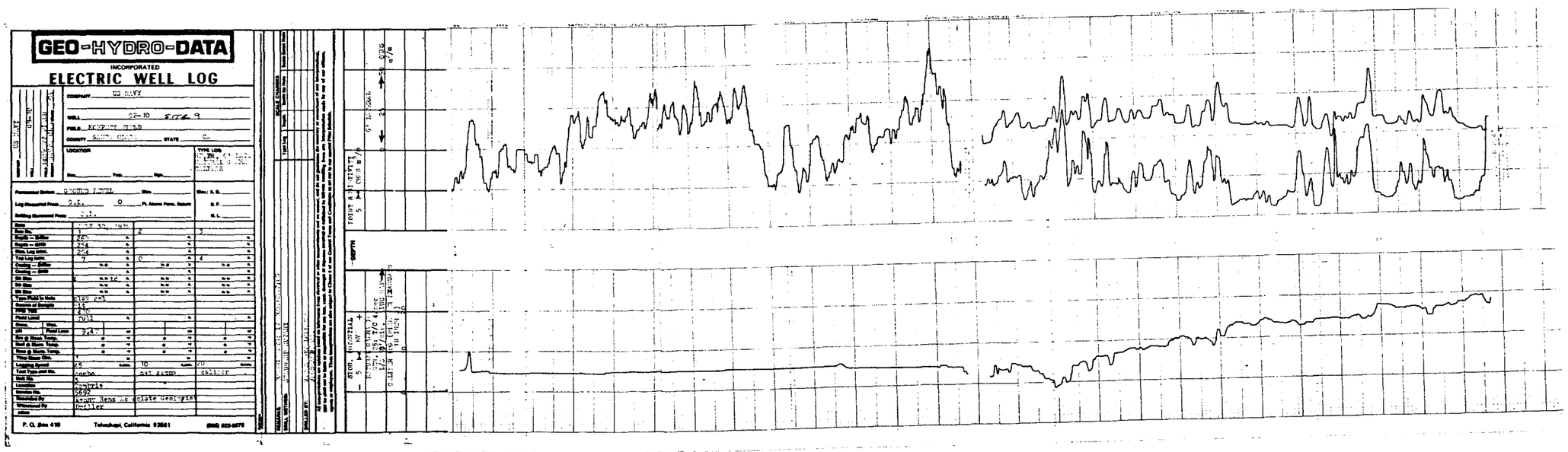
Field Operation: Type Log | Begin | Back to Info | Back Down Hole

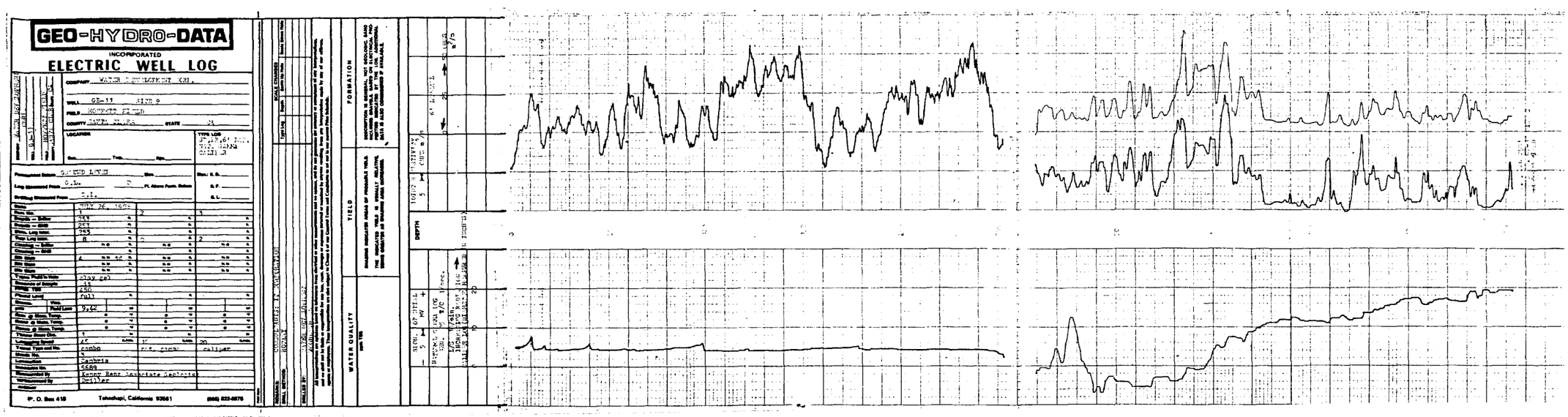
Field Interpretation: Prepared by: STANDARD ROCAT, WATER DEVELOPMENT CORP. Checked by: MONTGOMERY, CA. Date: Field estimate: Calculated by:

All interpretations are based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our standard terms and conditions as set forth in our current price schedule.




GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY WATER DEVELOPMENT CORPORATION
WELL GB-9
FIELD HOFFETT FIELD
COUNTY SANTA CLARA
STATE CALIFORNIA
LOCATION
TYPE LOG
GROUND LEVEL
Log Measured From G.L.
Drilling Measured From G.L.
Date 13 Jul 88
Run No. one
Depth — Driller 243
Depth — GRID 238
Gen. Log Inter. 238
Top Log Inter. 10
Casing — Driller 5
Casing — GRID
Bit Size 4
Type Fluid in Hole clay-gel
Source of Sample pit
Field Level full
Rem. Temp.
Rem. Temp.
Time Since Cir. 1
Logging Speed 30
Tool Type and No. combo 5
Unit No. 5
Location Santa Cruz
Recorded By Jim Bat, Associate Geologist
Witnessed By Will Hopkins, JT
Other Stan. Driller
P. O. Box 418 Tehachapi, California 93561
SPONT. POTENTIAL
NV (SP REPEAT)
DEPTH
POINT RESISTIVITY
6' LATERAL
NATURAL GAMMA
INCLINATION
DIRECTIONAL
TIME CONSTANT
LOGGING SPEED 10 FT/MIN


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY US NAVY
WELL 22-10 SITE 9
FIELD KERTRY TRAP
COUNTY SAN BERNARDINO STATE CA
LOCATION
TYPE LOG
Permanent Datum GROUND LEVEL Elev.
Log Measured From G.L. 0 Ft. Above Perm. Datum
Drilling Measured From G.L.
Date 1-17-92 1-20-92
Run No. 1 2 3
Depth — Driller 260 4
Depth — Logger 254 4
Btm. Log Inter. 254 4
Top Log Inter. 7 0 4 4
Casing — Driller n.a. n.a. n.a. n.a.
Casing — Logger 4
Bit Size 8 n.a. n.a. n.a. n.a.
Bit Size n.a. n.a. n.a. n.a.
Bit Size n.a. n.a. n.a. n.a.
Type Fluid in Hole CLAY POL
Source of Sample PIT
Fluid Yield FAIR
Fluid Level FULL
Rmf @ Meas. Temp. 9.47 @ @ @
Rmc @ Meas. Temp. @ @ @ @
Rm @ Meas. Temp. @ @ @ @
Time Since Circ. 1 1
Logging Speed 25 10 20
Tool Type and No. Combo NAT GAMMA CALIPER
Unit No. 4
Location Cambria
Invoice No. 5692
Recorded By Array Sens or Calate Urologist
Witnessed By other Driller
P. O. Box 410 Tehachapi, California 93561 (805) 823-5575
SCALE COUNTER
Type Log Depth Scale Sec/In Scale Div/In
REMARKS
RIGS, OPTIONS
ENGINEER BY
Note
All interpretations or opinions based on inferences from electrical or other measurements are opinions only and are offered only as an aid to the best judgment of competent petroleum engineers and geologists. We assume no responsibility for the accuracy or correctness of any opinion or interpretation, and we shall not be liable for any loss or damage arising from any use of such opinions or interpretations. This interpretation is in accordance with the Schedule of Fees and Conditions set forth in the current Price Schedule.
TOTAL NATURAL GAMMA
0 6" DIA. HOLE 24 50 GAPI n/a
DEPTH
NATURAL GAMMA
0 CALIBRATED HOLE DIAMETER 6" 24 n/a
5 SP MILLIVOLTS 5 n/a


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY WATER DEVELOPMENT CO.
WELL GE-11
FIELD
COUNTY
STATE
LOCATION
TYPE LOG
Permanent Datum GROUND LEVEL
Log Measured From G.L.
Drilling Measured From G.L.
Elev. D.F.
G.L.
Date MAY 26, 1976
Run No. 1 2 3
Depth — Driller 369
Depth — Logger 369
Depth Log Interval 369
Top Log Interval 8 0 2
Casing — Driller 0 0 0
Casing — Logger 0 0 0
Bit Size 6 0.0 0.0 0.0
Type Fluid in Hole clay gel
Density and Viscosity 68
Fluid Level full
pH 9.62
Rm @ Meas. Temp.
Rmf @ Meas. Temp.
Rmc @ Meas. Temp.
Source of Rmf and Rmc
Rm @ Bhst Temp.
Source of Rm
Rmf Rmc
Time Since Circ.
Max. Rec. Temp.
Equipment No. combo
Location Cambria
Recorded By Kenny Ranz Associate Geologist
Witnessed By Driller
P. O. Box 418 Tehachapi, California 93561 (805) 822-8878
FORMATION
YIELD
WATER QUALITY
DEPTH

GEO-HYDRO-DATA

INCORPORATED

ELECTRIC WELL LOG

COMPANY WATER DEVELOPMENT CORPORATION

WELL GB-12 E/TR. 9

FIELD MOFFETT FIELD

COUNTY SANTA CLARA STATE CALIFORNIA

LOCATION

Sec. Twp. Rge.

TYPE LOG: SP, PR: 6' LATERAL CALIPER NAT. GAMMA

Permanent Datum: GROUND LEVEL Elev.

Log Measured From: G.L. O. Ft. Above Perm. Datum

Drilling Measured From: GROUND LEVEL

Date	3 August 88		
Run No.	one	two	three
Depth — Driller	253 ft	ft	ft
Depth — Logger	250 ft	ft	ft
Btm. Log Inter.	250 ft	ft	ft
Top Log Inter.	10 ft	5 ft	5 ft
Casing — Driller	no ft	no ft	no ft
Casing — Logger	ft	ft	ft
Bit Size	8 no in	no in	no in
Bit Size	no ft	no ft	no ft
Bit Size	no ft	no ft	no ft
Type Fluid in Hole	gel		
Source of Sample	ditch		
PPM Cl⁻	325		
Fluid Level	full ft	ft	ft
Meas. From			
Max. Rec. Temp.	° °F	° °F	° °F
Est. Cement Top	° °F	° °F	° °F
Rmf @ Meas. Temp.	° °F	° °F	° °F
Rmc @ Meas. Temp.	° °F	° °F	° °F
Rm @ Meas. Temp.	° °F	° °F	° °F
Time Since Circ.	1 hr	hr	hr
Logging Speed	30 ft/min	15 ft/min	15 ft/min
Tool Type and No.	combo 21	cal 3	gamma 3
Unit No.	2		
Location	Shaffer		
Session No.	5735		
Recorded By	Mike Alexander	Assoc. Geologist	
Witnessed By	Scott Jr		

P.O. Box 4[illegible] Tehachapi, California 93561 (805) 822-6875

COMPANY WATER DEVELOPMENT CORP.

WELL GB-12

FIELD MOFFETT FIELD

COUNTY SANTA CLARA STATE CA

SCALE CHANGES: Type Log | Depth | Scale Up Hole | Scale Down Hole

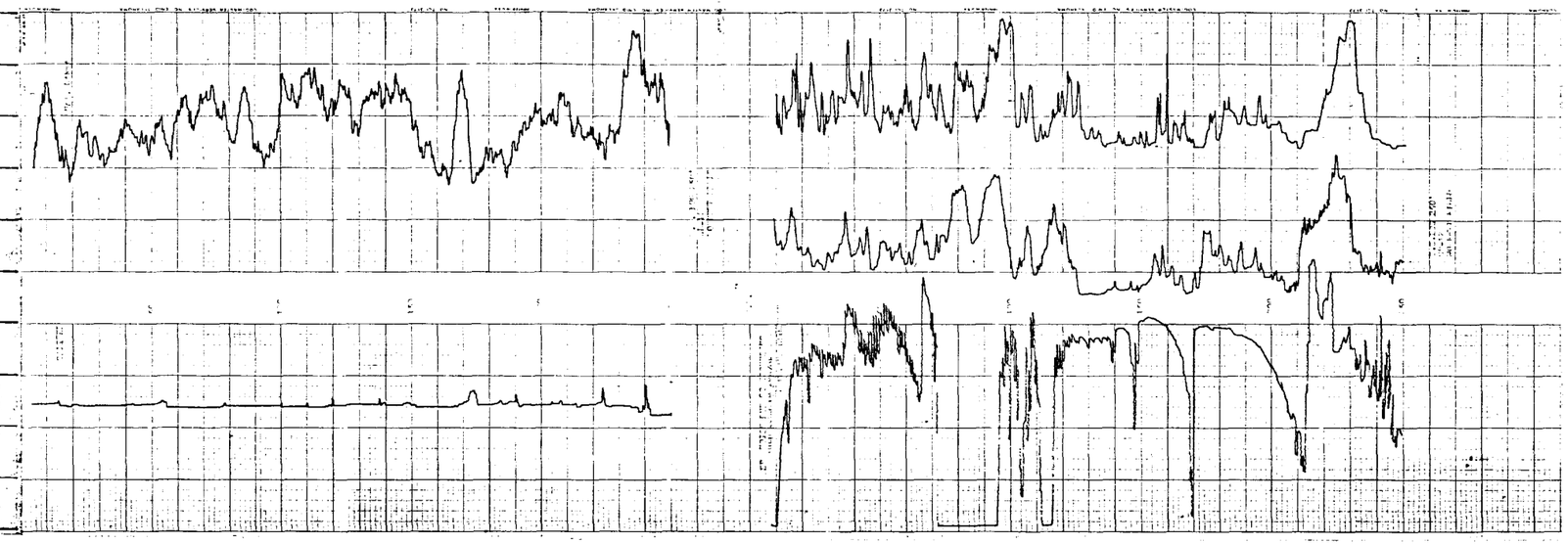
RESISTIVITY: STANDARD CONSOL. ART. IT CORP.

DRILLER'S BIT: WATER DEVELOPMENT CORP.

FORMATION

YIELD

WATER QUALITY

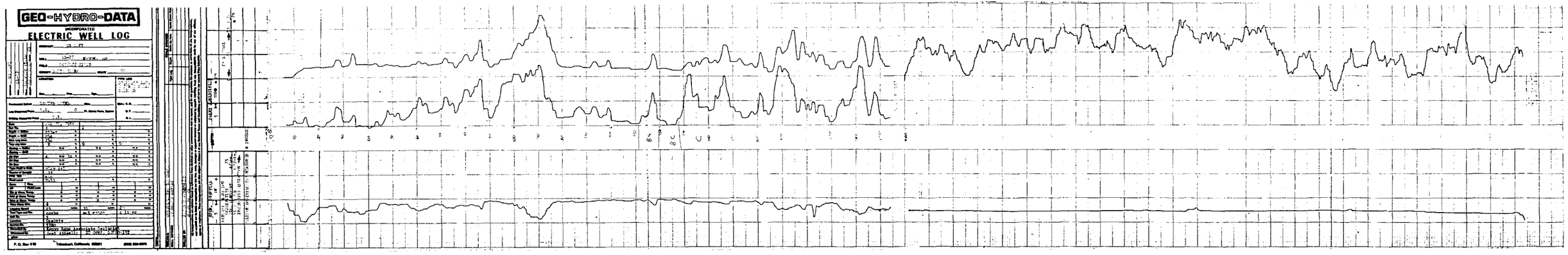


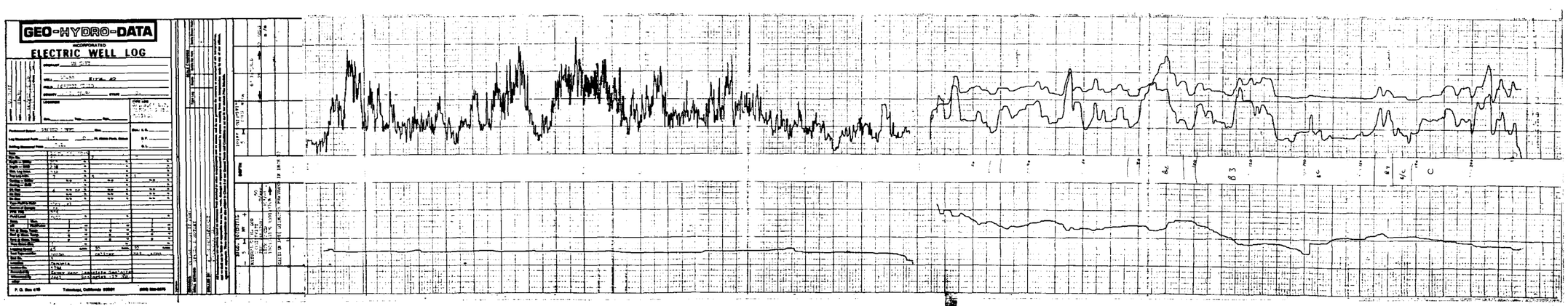
N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 10

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
P. O. Box 419
Tehachapi, California 93581


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 11

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO GEOPHYSICAL LOGGING WAS CONDUCTED AT SITE 11

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 12

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO GEOPHYSICAL LOGGING WAS CONDUCTED AT SITE 12

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 13

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

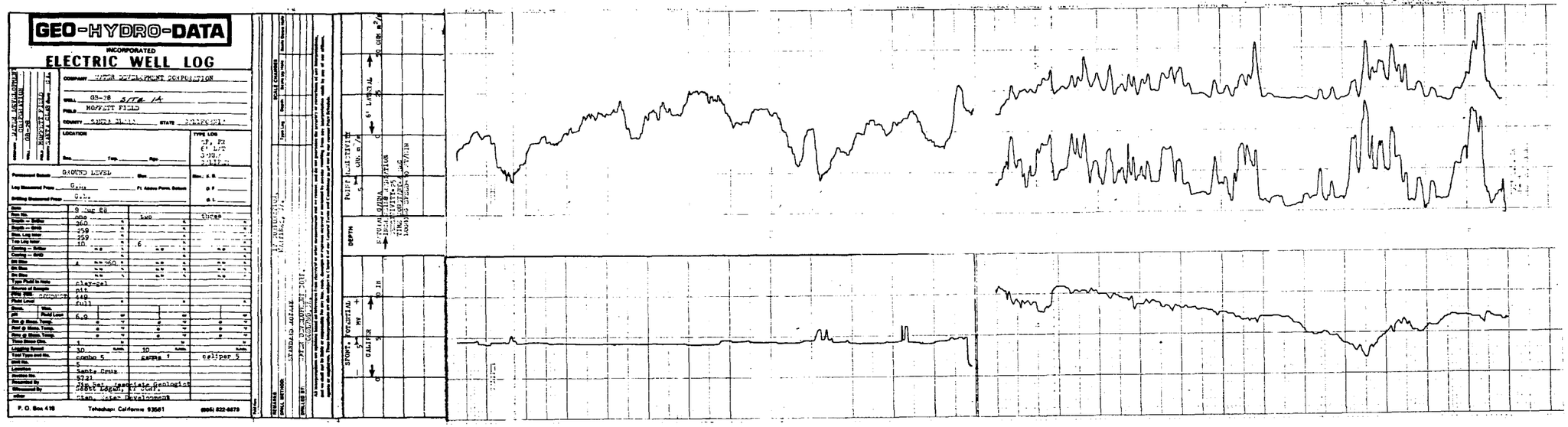
NO GEOPHYSICAL LOGGING WAS CONDUCTED AT SITE 13

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 14

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991


GEO-HYDRO-DATA
INCORPORATED
ELECTRIC WELL LOG
COMPANY WATER DEVELOPMENT CORPORATION
WELL GS-28 SITE 1A
FIELD MOFFETT FIELD
COUNTY SANTA CLARA
STATE CALIFORNIA
LOCATION
TYPE LOG
Permanent Datum GROUND LEVEL
Log Measured From G.L.
Drilling Measured From G.L.
Date 9 Aug 88
Run No. one two three
Depth — Driller 260
Depth — Grid 259
Elev. Log Inter. 259
Top Log Inter. 10 6
Casing — Driller
Casing — Grid
Bit Size 4 to 260
Bit Size
Bit Size
Type Fluid in Hole clay-gel
Source of Sample pit
Fluid Level full
Fluid Loss 6.9
Time Since Circ. 1
Logging Speed 30 10
Tool Type and No. combo 5 gamma 1 caliper 5
Unit No. 5
Location Santa Cruz
Recorded By Jim Sar, Associate Geologist
Witnessed By Scott Logan, Ex Conf.
Other Stan. Water Development
P. O. Box 418 Tehachapi, California 93561 (805) 822-8879
REMARKS
DRILL METHOD STANDARD ROTARY
DRILLED BY WATER DEVELOPMENT CORP. GEOLOGIC
SCALE CHANGES
DEPTH
POINT RESISTIVITY
6' LATERAL
SPONT. POTENTIAL
CALIPER

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 15

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO GEOPHYSICAL LOGGING WAS CONDUCTED AT SITE 15

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 16

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO GEOPHYSICAL LOGGING WAS CONDUCTED AT SITE 16

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 17

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO GEOPHYSICAL LOGGING WAS CONDUCTED AT SITE 17

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 18

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

NO GEOPHYSICAL LOGGING WAS CONDUCTED AT SITE 18

N00296.001076
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX G
SITE 19

CHARACTERIZATION REPORT
PHASE I REMEDIAL INVESTIGATION

DATED 01 APRIL 1991

GEO-HYDRO-DATA

INCORPORATED

ELECTRIC WELL LOG

WATER DEVELOPMENT CORPORATION

08-29 SITE 19

MOFFETT FIELD

SANTA CLARA, CA.

COMPANY: WATER DEVELOPMENT CORPORATION

WELL: 08-29 SITE 19

FIELD: MOFFETT FIELD

COUNTY: SANTA CLARA STATE: CALIFORNIA

LOCATION: SITE 19

Sec. Twp. Rge.

TYPE LOG: 64" PR, 64" LAT, GAMMA, CALIPER

GROUND LEVEL

Permanent Datum: Elev.: Elev.: G.L.

Log Measured From: G.L. Ft. Above Perm. Datum: G.P.

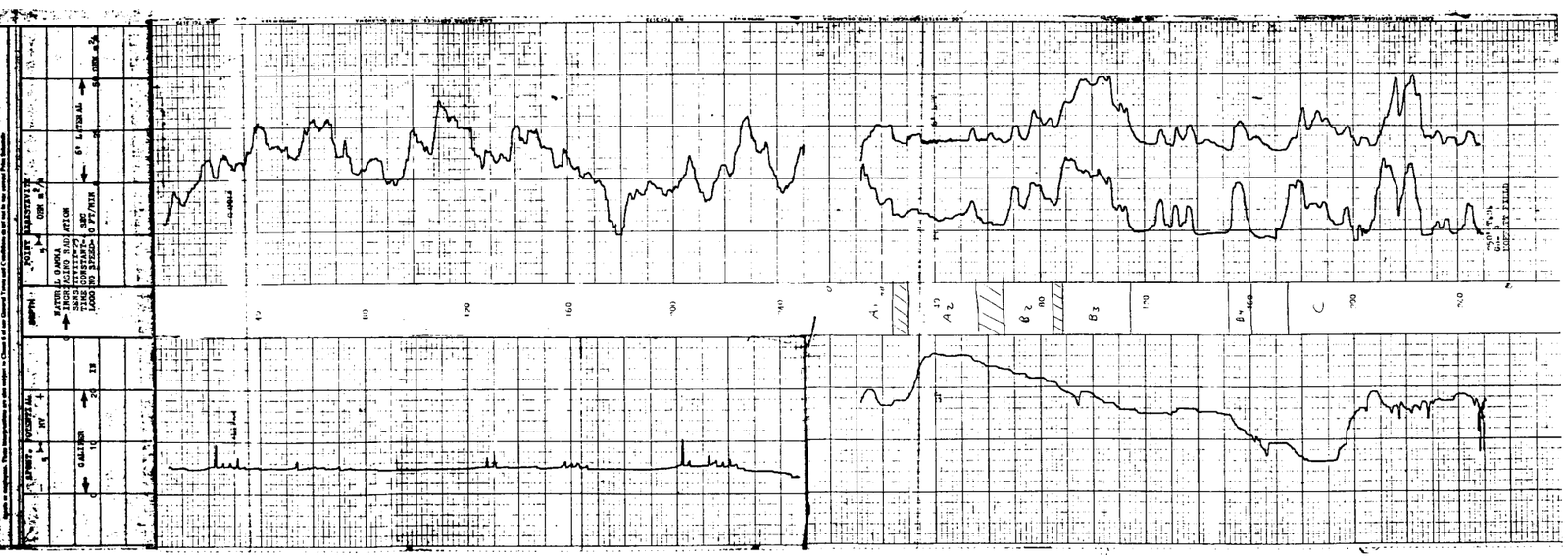
Drilling Measured From: G.L. G.L.

Date	15 Aug 88		
Run No.	one	two	three
Depth — Driller	250	"	"
Depth — GEO	250	"	"
Btm. Log Inter.	250	"	"
Top Log Inter.	10	5	"
Casing — Driller	n.a. "	n.a. "	n.a. "
Casing — GEO	"	"	"
Bit Size	4 n.a. 250	n.a. "	n.a. "
Bit Size	n.a. "	n.a. "	n.a. "
Bit Size	n.a. "	n.a. "	n.a. "
Type Fluid in Hole	clay-gel		
Source of Sample	ditch		
RM @ Meas. Temp.	.665		
Fluid Level	full	"	"
Rmf @ Meas. Temp.	10.05	"	"
Rmc @ Meas. Temp.	"	"	"
Rm @ Meas. Temp.	"	"	"
Rmf @ Meas. Temp.	"	"	"
Rmc @ Meas. Temp.	"	"	"
Rm @ Meas. Temp.	"	"	"
Source Rmf/Rmc	"	"	"
Logging Speed	30	10	
Tool Type and No.	combo 5	Ratio 1	caliper 5
Unit No.	5		
Location	Santa Cruz		
Service Ord.	5725		
Recorded By	Jim Bat, Associate Geologist		
Witnessed By	Don Cox, Geologist (IT Corp)		
Other	Kyle, Water Development		

P. O. Box 418 Tehachapi, California 93561 (805) 822-8878

TYPE LOG: Depth Scale Date Run Time Logged Depth Driller Depth Logger Bottom Log Interval Top Log Interval Casing Driller Casing Logger Bit Size Type Fluid in Hole Density Viscosity Source of Sample Rm @ Meas. Temp. Rmf @ Meas. Temp. Rmc @ Meas. Temp. Source Rmf/Rmc Rm @ Bht Time Since Circ. Max. Rec. Temp. Equipment Location Recorded By Witnessed By

IT CORPORATION
LAWRENCE, CA.

STANDARD ROTARY

WELL: WATER DEVELOPMENT CORP.
MOORLAND, CA.