RF/ER-95-0079.UN

DRAFT FINAL

PHASE II RFI/RI REPORT
903 PAD, MOUND, AND
EAST TRENCHES AREA
OPERABLE UNIT NO. 2

VOLUME 8

APPENDIX A
OU-2 GEOLOGICAL DATA

U.S. Department of Energy
Rocky Flats Environmental Technology Site
Golden, Colorado

May 1995

1591

(4040-1030-0041-510) (R4-CVRS) (05/10/95 8:04am)

ADMIN RECORD

OU02-A-001588

TABLE OF CONTENTS

Section — Page

LIST OF ACRONYMS xlvii

VOLUME 1

EXECUTIVE SUMMARY ES-1

1.0 INTRODUCTION 1-1

1.1 REPORT ORGANIZATION 1-2
1.2 INVESTIGATION OBJECTIVES 1-4
1.3 BACKGROUND 1-7

1.3.1 Plant Operations 1-7
1.3.2 OU-2 Individual Hazardous Substance Sites Locations 1-8

1.3.2.1 903 Pad IHSS Area 1-10
1.3.2.2 Mound Area 1-16

1.3.3 Previous Investigations 1-22

1.3.3.1 Regional and Plantwide Studies 1-22
1.3.3.2 OU-2 Phase I Investigation 1-26
1.3.3.3 Shallow, High Resolution Seismic Investigation 1-31
1.3.3.4 Observations on the Occurrence of Plutonium and Americium in Ground and Surface Water 1-32

1.4 SUMMARIES OF OU-2 PHASE II RFI/RI WORK PLANS AND TECHNICAL MEMORANDA 1-32

1.4.1 Summary of Technical Memorandum 1 - Final Phase II RFI/RI Work Plan (Alluvial) 1-34
1.4.2 Summary of TM2 - Addendum to Final Phase II RFI/RI Work Plans (Alluvial and Bedrock) Chemical Analysis Plan 1-37

Section | Page

1.4.3 Summary of TM3 - Final Phase II RFI/RI Aquifer Test Work Plan 1-40
1.4.4 Summary of TM5 - Exposure Assessment 1-43

1.4.4.1 Present and Future Land Use 1-43
1.4.4.2 Potential Receptors 1-44
1.4.4.3 Receptor Locations and Exposure Areas 1-45
1.4.4.4 Potential Exposure Pathways 1-46
1.4.4.5 Exposure Parameters 1-48

1.4.5 Summary of TM6 - Human Health Risk Assessment Model Description 1-48
1.4.6 Summary of TM7 - Addendum to Final Phase II RFI/RI Work Plan 1-50
1.4.7 Summary of TM8 - Final Revised Phase II RFI/RI Work Plan (Bedrock) 1-52
1.4.8 Summary of TM9 - Chemicals of Concern 1-57
1.4.9 Summary of TM10 - Toxicity Assessment 1-61
1.4.10 Summary of Environmental Evaluation Work Plan 1-63

2.0 OU-2 FIELD INVESTIGATIONS 2-1

2.1 PHASE II ALLUVIAL INVESTIGATION 2-1

2.1.1 Subsurface Soils Investigation 2-2
2.1.2 Individual Hazardous Substance Site Characterization 2-4

2.1.2.1 Source Characterization Borehole Sampling . . . 2-5
2.1.2.2 Source Characterization Borehole Analytical Parameters 2-6
2.1.2.3 Data Management 2-7

2.1.3 Groundwater Investigation 2-7

2.1.3.1 Monitoring Well Installation 2-9
2.1.3.2 Monitoring Well Development and Groundwater Sampling 2-9
2.1.3.3 Hydraulic Testing Program 2-10

Section			Page
	2.1.4	Geological Investigation	2-11
	2.1.5	Work Plan Deviations	2-13
		2.1.5.1 Site Status Summary	2-13
		2.1.5.2 Drilling Procedures	2-14
		2.1.5.3 Sampling Deviations	2-15
2.2	PHASE II REVISED BEDROCK WORK PLAN INVESTIGATION		2-16
	2.2.1	Subsurface Soils Investigation	2-18
	2.2.2	Individual Hazardous Substance Site Investigation	2-22
		2.2.2.1 Source Characterization Borehole Sampling	2-23
	2.2.3	Groundwater Investigation	2-25
		2.2.3.1 Pilot Borehole	2-26
		2.2.3.2 Monitoring Well Installation	2-27
		2.2.3.3 Monitoring Well Development and Groundwater Sampling	2-31
		2.2.3.4 Slug Testing	2-32
	2.2.4	Geological Investigation	2-33
	2.2.5	Work Plan Deviations	2-35
2.3	AIR QUALITY AND METEOROLOGICAL INVESTIGATION		2-37
	2.3.1	Air Quality	2-37
		2.3.1.1 Radionuclides Ambient Monitoring	2-37
		2.3.1.2 Nonradionuclides Ambient Monitoring	2-38
	2.3.2	Meteorology	2-38
2.4	SURFACE WATER AND SEDIMENT INVESTIGATION		2-39
	2.4.1	Sample Locations, Collection, and Frequency	2-39
	2.4.2	Seep and Sediment Analytical Parameters	2-41

Section Page

2.5 SURFACE SOIL INVESTIGATION 2-41

2.5.1 Surface Soil Sampling for Evaluating the Spatial Extent of Actinides 2-42

2.5.1.1 CDH Method Sampling 2-43
2.5.1.2 RFP Method Sampling 2-45

2.5.2 Soil Profile Investigation 2-45

2.5.2.1 Vertical Distribution Study of Actinides in Soils 2-46
2.5.2.2 Fate and Transport of Actinides in Soils 2-47

2.5.3 Surface Soil Sampling for Human Health Risk Assessment 2-48

2.5.3.1 Methodology 2-48
2.5.3.2 Work Plan Deviations 2-49

2.5.4 Background Surface Soil Sampling 2-49

2.5.4.1 Methodology 2-49
2.5.4.2 Work Plan Deviations 2-50

2.5.5 Data Management 2-50

2.6 ECOLOGICAL INVESTIGATION 2-50

2.6.1 Sampling Locations 2-51
2.6.2 Ecological Investigations 2-52

2.6.2.1 Vegetation 2-52
2.6.2.2 Small Mammals 2-53
2.6.2.3 Birds 2-53
2.6.2.4 Terrestrial Arthropods 2-54

Section Page

3.0 PHYSICAL CHARACTERISTICS OF OU-2 3-1

3.1 PHYSIOGRAPHIC FEATURES 3-1

3.1.1 Regional 3-1
3.1.2 Operable Unit 2 3-2

3.2 DEMOGRAPHICS AND LAND USE 3-3

3.2.1 Demographics 3-3
3.2.2 Off-Site Land Use 3-4

3.2.2.1 Current Land Use 3-4
3.2.2.2 Future Land Use 3-5

3.2.3 On-Site Land Use 3-6

3.2.3.1 Current Land Use 3-6
3.2.3.2 Future Land Use 3-6

3.3 METEOROLOGY AND CLIMATOLOGY 3-7
3.4 SOILS 3-8
3.5 GEOLOGY 3-9

3.5.1 Surficial Geology 3-11

3.5.1.1 Rocky Flats Alluvium 3-11
3.5.1.2 High Terrace Alluviums 3-24
3.5.1.3 Valley-Fill Alluvium 3-26
3.5.1.4 Colluvium 3-27
3.5.1.5 Debris Fans 3-28
3.5.1.6 Slumps 3-29
3.5.1.7 Man-made Deposits 3-30

3.5.2 Bedrock Geology 3-32

3.5.2.1 Arapahoe Formation No. 1 Sandstone 3-33
3.5.2.2 Upper Laramie Formation 3-37

Section Page

3.6 HYDROGEOLOGY 3-43

3.6.1 Regional Hydrogeology 3-43
3.6.2 OU-2 Hydrogeology 3-45

3.6.2.1 Definition of Hydrostratigraphic Units 3-46
3.6.2.2 Upper Hydrostratigraphic Unit 3-47
3.6.2.3 Lower Hydrostratigraphic Unit 3-66

3.7 SURFACE WATER HYDROLOGY 3-74

3.7.1 South Walnut Creek 3-75
3.7.2 Woman Creek 3-77

3.8 ECOLOGY 3-78

3.8.1 General Setting 3-78
3.8.2 Vegetation 3-78
3.8.3 Wildlife 3-80
3.8.4 Aquatic Organisms 3-82
3.8.5 Sensitive Habitats and Endangered Species 3-83
3.8.6 Location of OU-2 IHSSs Relative to Habitat Types 3-85

VOLUME 2

ES4.0 EXECUTIVE SUMMARY ES4-1

ES4.1 903 PAD SOURCE AREA SUMMARY ES4-1

ES4.1.1 Surface Soil ES4-2
ES4.1.2 Subsurface Soil ES4-3

ES4.1.2.1 Western Portion ES4-3
ES4.1.2.2 Central Portion ES4-7
ES4.1.2.3 Eastern Portion ES4-9

ES4.1.3 UHSU Groundwater ES4-9
ES4.1.4 LHSU Groundwater ES4-12

Section Page

ES4.1.5 Seep Surface Water and Seep Sediment ES4-13
ES4.1.6 Air ES4-16

ES4.2 MOUND SOURCE AREA SUMMARY ES4-16

ES4.2.1 Surface Soil ES4-17
ES4.2.2 Subsurface Soil ES4-18
ES4.2.3 UHSU Groundwater ES4-19
ES4.2.4 LHSU Groundwater ES4-21
ES4.2.5 Seep Surface Water and Seep Sediment ES4-22
ES4.2.6 Air ES4-24

ES4.3 NORTHEAST TRENCHES SOURCE AREA SUMMARY ES4-24

ES4.3.1 Surface Soil ES4-24
ES4.3.2 Subsurface Soil ES4-25
ES4.3.3 UHSU Groundwater ES4-27
ES4.3.4 LHSU Groundwater ES4-29
ES4.3.5 Seep Surface Water and Seep Sediment ES4-30
ES4.3.6 Air ES4-30

ES4.4 SOUTHEAST TRENCHES SOURCE AREA ES4-30

ES4.4.1 Surface Soil ES4-30
ES4.4.2 Subsurface Soil ES4-31
ES4.4.3 UHSU Groundwater ES4-32
ES4.4.4 LHSU Groundwater ES4-33
ES4.4.5 Seep Surface Water and Seep Sediment ES4-33
ES4.4.6 Air ES4-33

ES4.5 EAST OF IHSSs SOURCE AREA ES4-34

ES4.5.1 Surface Soil ES4-34
ES4.5.2 Subsurface Soil ES4-36
ES4.5.3 UHSU Groundwater ES4-37
ES4.5.4 LHSU Groundwater ES4-38
ES4.5.5 Seep Surface Water and Seep Sediment ES4-39
ES4.5.6 Air ES4-39

Section Page

4.0 NATURE AND EXTENT OF POTENTIAL CONTAMINATION 4-1

4.1 DESCRIPTION OF CHEMICAL DATA USED 4-2

4.1.1 OU-2 Chemical Data 4-3

4.1.1.1 Surface Soil Data 4-4
4.1.1.2 Subsurface Soil Data 4-5
4.1.1.3 Groundwater Data 4-7
4.1.1.4 Seep Surface Water and Seep Sediment Data . . 4-8
4.1.1.5 Air Data 4-9

4.1.2 Chemical Data Evaluation 4-10

4.1.1.1 Potential Laboratory and Other Non Site-Related Contaminants 4-10
4.1.2.2 Detection Limits Definition 4-12
4.1.2.3 Quality Assurance Summary 4-13

4.1.3 Background Chemical Data 4-15

4.1.3.1 Background Surface Soil Data 4-15
4.1.3.2 Background Subsurface Soil Data 4-16
4.1.3.3 Background Groundwater Data 4-16
4.1.3.4 Background Groundwater Geochemistry 4-17
4.1.3.5 Background Seep Surface Water and Seep Sediment Data 4-19

4.1.4 Comparison of OU-2 Data to Background Data 4-19

4.1.4.1 Data Aggregation 4-19
4.1.4.2 Statistical Background Comparison 4-20
4.1.4.3 Professional Judgement 4-22
4.1.4.4 Background Comparison Results 4-23

4.1.5 Identification of Source Areas 4-24
4.1.6 Identification of Chemicals of Concern 4-26
4.1.7 Applicable or Relevant and Appropriate Requirements . . . 4-27

Section				Page
4.2	SURFACE SOIL CHEMICAL RESULTS			4-28
	4.2.1	Background Surface Soil Chemical Results (Rock Creek Area)		4-29
	4.2.2	OU-2 Surface Soil Chemical Results		4-29
		4.2.2.1	Semivolatile Organic Compound Results	4-30
		4.2.2.2	Pesticides/PCB Results	4-31
		4.2.2.3	Metal Results	4-32
		4.2.2.4	Radionuclide Results	4-33
	4.2.3	Summary of Nature and Extent of Potential Contamination In Surface Soils		4-35
	4.2.4	Investigations of Actinide Distribution in the Soil Environment		4-36
		4.2.4.1	Spatial Analysis of Actinides in Soils East of the RFETS Industrial Area	4-37
		4.2.4.2	Vertical Distribution and Physicochemical Characteristics of Actinides in Soils East of the RFETS Industrial Area	4-42
4.3	SUBSURFACE SOIL CHEMICAL RESULTS			4-47
	4.3.1	903 Pad Source Area (Western Portion)		4-49
		4.3.1.1	Trench T-2 (IHSS 109)	4-49
		4.3.1.2	903 Drum Storage Site (IHSS 112)	4-54
		4.3.1.3	Reactive Metal Destruction Site (IHSS 140)	4-59
		4.3.1.4	903 Lip Site (IHSS 155)	4-64
		4.3.1.5	Gas Detoxification Site (IHSS 183)	4-69
		4.3.1.6	903 Pad Source Area (Western Portion) (Non-IHSS Locations)	4-70
	4.3.2	903 Pad Source Area (Central Portion)		4-74
		4.3.2.1	Trench T-9 (IHSS 111.6)	4-74
		4.3.2.2	Trench T-10 (IHSS 111.7)	4-78

Section			Page
	4.3.2.3	Trench T-11 (IHSS 111.8)	4-80
	4.3.2.4	Trench T-12	4-84
	4.3.2.5	Trench T-13	4-86
	4.3.2.6	903 Pad Source Area (Central Portion) (Non-IHSS Locations)	4-87
4.3.3	903 Pad Source Area (Eastern Portion)		4-91
	4.3.3.1	East Spray Field (IHSS 216.2)	4-91
	4.3.3.2	East Spray Field (IHSS 216.3)	4-92
	4.3.3.3	903 Pad Source Area (Eastern Portion) (Non-IHSS Locations)	4-96
4.3.4	Mound Area		4-96
	4.3.4.1	Trench T-1 (IHSS 108)	4-97
	4.3.4.2	Mound Site (IHSS 113)	4-100
	4.3.4.3	Oil Burn Pit No. 2 Site (IHSS 153)	4-104
	4.3.4.4	Pallet Burn Site (IHSS 154)	4-106
	4.3.4.5	Mound Area (Non-IHSS Locations)	4-109
4.3.5	Northeast Trenches Source Area		4-111
	4.3.5.1	Trench T-3 (IHSS 110)	4-112
	4.3.5.2	Trench T-4 (IHSS 111.1)	4-120
	4.3.5.3	Northeast Trenches Source Area (Non-IHSS Locations)	4-125
4.3.6	Southeast Trenches Source Area		4-127
	4.3.6.1	Trench T-5 (IHSS 111.2)	4-127
	4.3.6.2	Trench T-6 (IHSS 111.3)	4-131
	4.3.6.3	Trench T-7 (IHSS 111.4)	4-133
	4.3.6.4	Trench T-8 (IHSS 111.5)	4-136
	4.3.6.5	Southeast Trenches (Non-IHSS Locations)	4-141
4.3.7	Subsurface Soil Results East of IHSSs Source Area		4-142

Section Page

4.4 UPPER HYDROSTRATIGRAPHIC UNIT GROUNDWATER 4-145

4.4.1 UHSU Groundwater Geochemistry 4-147

4.4.1.1 pH 4-147
4.4.1.2 Anion/Cation Characteristics 4-147
4.4.1.3 Comparison of OU-2 and Background Groundwater Chemistry 4-149

4.4.2 Potential Chemicals of Concern 4-149

4.4.2.1 903 Pad Source Area 4-151
4.4.2.2 Mound Source Area 4-157
4.4.2.3 Northeast Trenches Source Area 4-160
4.4.2.4 Southeast Trenches Source Area 4-164
4.4.2.5 Area East of OU-2 IHSSs 4-165
4.4.2.6 Potential Occurrence of DNAPLs in the UHSU 4-168

4.5 LOWER HYDROSTRATIGRAPHIC UNIT GROUNDWATER 4-168

4.5.1 LHSU Groundwater Geochemistry 4-170
4.5.2 LHSU Groundwater Chemical Results 4-172

4.5.2.1 Volatile Organic Compounds 4-172
4.5.2.2 Semi-Volatile Organic Compounds 4-175
4.5.2.3 Pesticides and PCBs 4-176
4.5.2.4 Metals 4-176
4.5.2.5 Radionuclides 4-177

4.6 SEEP SURFACE WATER AND SEEP SEDIMENT 4-179

4.6.1 903 Pad Source Area 4-180

4.6.1.1 Historical Information 4-181
4.6.1.2 Chemical Results 4-181

Section Page

4.6.2 Mound Source Area 4-185

4.6.2.1 Historical 4-185
4.6.2.2 Chemical Results 4-185

4.7 AIR 4-187

5.0 FATE AND TRANSPORT OF CHEMICALS OF CONCERN 5-1

5.1 TRANSPORT PROCESSES 5-2

5.1.1 Vadose Zone 5-2
5.1.2 Groundwater 5-4
5.1.3 Surface Water and Sediment Processes 5-5
5.1.4 Air Processes 5-6

5.2 MOBILITY AND BEHAVIOR OF CHEMICALS OF CONCERN 5-8

5.2.1 Primary Physical and Chemical Processes that Influence the Mobility and Behavior of Contaminants 5-8
5.2.2 Physical and Chemical Properties of the Media that Affect Mobility and Behavior 5-12
5.2.3 Physical and Chemical Properties of Chemicals that Influence Mobility and Behavior 5-16

5.2.3.1 Volatile Organic Compounds 5-16
5.2.3.2 Semivolatile Organic Compounds 5-19
5.2.3.2 Metals 5-20
5.2.3.4 Radionuclides 5-21

5.2.4 Mobility and Behavior of Chemicals of Concern 5-22

5.2.4.1 Mobility and Behavior of Organic Compound COCs 5-22
5.2.4.2 Mobility and Behavior of Radionuclides and Metals 5-26

Section Page

5.3 OU-2 CONTAMINANT MIGRATION PATHWAYS 5-32

5.3.1 903 Pad Source Area 5-33
5.3.2 Northeast Trenches Source Area 5-36
5.3.3 Southeast Trenches Source Area 5-38
5.3.4 Mound Source Area 5-39
5.3.5 Source Area East of OU-2 IHSSs 5-40
5.3.6 Potential Contaminant Migration in the LHSU 5-41

5.3.6.1 903 Pad Source Area 5-44
5.3.6.2 Northeast Trenches Source Area 5-46
5.3.6.3 Southeast Trenches Source Area 5-48
5.3.6.4 Mound Source Area 5-48
5.3.6.5 Source Area East of OU-2 IHSSs 5-49

5.4 QUANTITATIVE EVALUATION OF FATE AND TRANSPORT OF CHEMICALS OF CONCERN FOR RISK ASSESSMENT 5-49

5.4.1 Groundwater Flow and Contaminant Fate and Transport Modeling 5-50

5.4.1.1 Simplified Conceptual Model 5-52
5.4.1.2 MODFLOW Groundwater Flow Model 5-55
5.4.1.3 MT3D Groundwater Fate and Transport Model 5-56
5.4.1.4 ONED3 Colluvium Groundwater Fate and Transport Model 5-58

5.4.2 Surface Water Contaminant Fate and Transport Modeling . 5-60

5.4.2.1 Introduction 5-60
5.4.2.2 Hydrologic and Contaminant Conditions at OU-2 5-61
5.4.2.3 Model Overview and Assumptions 5-62
5.4.2.4 Hydrologic Simulations 5-64
5.4.2.5 Simulation of Contaminant Loads 5-67
5.4.2.6 Volatile Organic Compound Volatilization . . . 5-69
5.4.2.7 Modeling Results 5-71

Section Page

5.4.3 Air Modeling Approach and Results 5-72

5.4.3.1 Introduction 5-72
5.4.3.2 Model Selection 5-72
5.4.3.3 Modeling Setup 5-73
5.4.3.4 Results 5-74

5.4.4 Fate and Transport of Actinides in Soils near Rocky Flats Plant: An Empirical Approach 5-76

VOLUME 5

6.0 HUMAN HEALTH RISK ASSESSMENT 6-1

6.1 INTRODUCTION 6-1

6.1.1 Site Description 6-1
6.1.2 Guidance Documents 6-2
6.1.3 Human Health Risk Assessment Organization 6-2

6.2 DATA EVALUATION AND AGGREGATION 6-3

6.2.1 Chemical Analytical Results Used in Risk Assessment 6-3
6.2.2 Chemical Data Qualifiers 6-5
6.2.3 Data Aggregation for Risk Assessment 6-5

6.3 CHEMICALS OF CONCERN (COCs) 6-8

6.3.1 Process For Selecting OU-Wide COCs 6-8
6.3.2 Summary of COCs 6-11

6.4 EXPOSURE SCENARIOS 6-12

6.4.1 Current and Future Land Use 6-12
6.4.2 Onsite Exposure Areas 6-14
6.4.3 Receptors Selected For Quantitative Risk Assessment 6-14
6.4.4 Exposure Pathways 6-16

Section Page

6.5 EXPOSURE POINT CONCENTRATIONS 6-17

6.5.1 Calculating the Concentration Term 6-17
6.5.2 Surface Soil 6-18
6.5.3 Subsurface Soil 6-19
6.5.4 Groundwater 6-19
6.5.5 Air Concentrations from Wind Erosion of Surface Soil . . 6-20
6.5.6 Onsite Air Concentrations from Construction Activities . . 6-21
6.5.7 Basement Air 6-21
6.5.8 Indoor VOCs from Domestic Use of Groundwater 6-21
6.5.9 Surface Water/Sediment 6-22
6.5.10 Root Uptake of Contaminants from Surface Soil 6-23
6.5.11 Deposition of PM_{10} on Garden Produce 6-24
6.5.12 Offsite Soil Concentrations from Deposition of PM_{10} 6-25

6.6 ESTIMATING CHEMICAL INTAKES 6-25

6.6.1 General Intake Equation 6-26
6.6.2 Pathway-Specific Intake Equations and Exposure Factors . 6-27
6.6.3 Age-weighted Soil Ingestion Rate 6-27
6.6.4 Chemical-Specific Exposure Factors 6-28
6.6.5 Area Weighting Factor for Current Onsite Worker 6-28

6.7 TOXICITY ASSESSMENT 6-29
6.8 RISK CHARACTERIZATION 6-29

6.8.1 Hazard Index For Noncarcinogenic Effects 6-30
6.8.2 Carcinogenic Risk 6-31
6.8.3 AOC No. 1 6-32
6.8.4 Maximum Exposure Areas in AOC No. 1 6-33
6.8.5 AOC No. 2 6-35
6.8.6 Offsite Residents 6-35
6.8.7 Summary of Cumulative Hazard/Risk Results 6-36
6.8.8 Evaluation of Health Hazards from Potential Exposure to Lead in OU-2 6-37

Section Page

6.9 RADIATION DOSE CALCULATIONS 6-39

6.9.1 Calculating Annual Radiation Doses 6-39
6.9.2 Radiation Protection Standards 6-41
6.9.3 Radiation Dose Estimates 6-41

6.10 UNCERTAINTIES AND LIMITATIONS 6-42

6.10.1 Identification of COCs 6-43
6.10.2 Exposure Point Concentrations 6-43
6.10.3 Exposure Scenarios and Pathways 6-44
6.10.4 Toxicity Assessment 6-44
6.10.5 Evaluation of Risk Associated with Special-Case COCs . . 6-45

6.11 SUMMARY AND CONCLUSIONS 6-46

6.11.1 Summary 6-46
6.11.2 Conclusions 6-49

7.0 CONCLUSIONS AND RECOMMENDATIONS 7-1

7.1 SUMMARY 7-1
7.2 RECOMMENDATIONS 7-5

A MASTER REFERENCE LIST IS INCLUDED IN EACH VOLUME.

LIST OF APPENDIXES

VOLUMES 6, 7, 8, AND 9

APPENDIX A OU-2 GEOLOGICAL DATA

A1 OU-2 PHASE II SURVEY DATA
A2 OU-2 PHASE II GEOTECHNICAL DATA
A3 OU-2 STRATIGRAPHIC DATA (HISTORICAL, PHASE II AND OTHER INVESTIGATIONS)
A4 OU-2 BOREHOLE LITHOLOGY AND MONITORING WELL CONSTRUCTION LOGS

VOLUME 9

This report has one set containing all volumes and another that does not contain Volumes 10, 11, and 12. The second set contains a disk copy of Appendix C, Analytical Data. The disk is at the end of Volume 9 for the second set.

APPENDIX B OU-2 HYDROGEOLOGIC DATA

B1 ESTIMATION OF HYDRAULIC CONDUCTIVITY BASED ON 1993 RBWP SLUG TESTING
B2 OU-2 HISTORICAL AND PHASE II ALLUVIAL AND BEDROCK MONITORING WELL INSTALLATION DATA
B3 OU-2 GROUNDWATER ELEVATION DATA AND HYDROGEOLOGIC DATA
B4 OU-2 GROUNDWATER ELEVATION HYDROGRAPHS

VOLUMES 10, 11, AND 12

APPENDIX C ANALYTICAL DATA

C1 BACKGROUND SURFACE SOIL: SVOCs, PESTICIDES/PCBs, METALS, INORGANIC, RADIONUCLIDES
C2 SURFACE SOIL: SVOCs, PESTICIDES/PCBs, METALS, INORGANICS, RADIONUCLIDES
C3 SUBSURFACE SOIL: VOCs, SVOCs, PESTICIDES/PCBs, METALS, INORGANICS, RADIONUCLIDES

C4 UHSU GROUNDWATER: VOCs, SVOCs, PESTICIDES/PCBs, UNFILTERED METALS, FILTERED METALS, INORGANICS, UNFILTERED RADIONUCLIDES, FILTERED RADIONUCLIDES
C5 LHSU GROUNDWATER: VOCs, SVOCs, PESTICIDES/PCBs, UNFILTERED METALS, FILTERED METALS, INORGANICS, UNFILTERED RADIONUCLIDES, FILTERED RADIONUCLIDES
C6 SEEP SURFACE WATER: VOCs, SVOCs, PESTICIDES/PCBs, UNFILTERED METALS, FILTERED METALS, INORGANICS, UNFILTERED RADIONUCLIDES, FILTERED RADIONUCLIDES
SEEP SEDIMENT: VOCs, SVOCs, PESTICIDES/PCBs, METALS, INORGANICS, RADIONUCLIDES
C7 FIELD PARAMETERS

VOLUME 13

APPENDIX D INVESTIGATIONS OF ACTINIDE DISTRIBUTION, FATE AND TRANSPORT IN SOIL

D1 SPATIAL ANALYSIS OF PLUTONIUM-239 IN SOIL AROUND ROCKY FLATS PLANT
D2 SPATIAL ANALYSIS OF AMERICIUM-241 IN SOIL AROUND ROCKY FLATS PLANT
D3 SPATIAL ANALYSIS OF URANIUM ISOTOPES IN SOIL AROUND ROCKY FLATS PLANT
D4 SOIL CLASSIFICATION, MINERALOGY, AND MORPHOLOGY
D5 VERTICAL DISTRIBUTION AND PHYSICOCHEMICAL CHARACTERIZATION OF ACTINIDES IN SOIL EAST OF ROCKY FLATS PLANT
D6 FATE AND TRANSPORT OF ACTINIDES IN SOIL AT ROCKY FLATS PLANT: AN EMPIRICAL APPROACH
D7 MODELING THE VADOSE ZONE IN SOIL OF ROCKY FLATS PLANT

VOLUME 14

APPENDIX E GROUNDWATER MODELING

E1 INTRODUCTION
E2 HYDROGEOLOGIC AND CONTAMINATION CONDITIONS
E3 SIMPLIFIED CONCEPTUAL MODEL FOR APPLICATION OF MATHEMATICAL MODELS
E4 NUMERICAL GROUNDWATER FLOW MODEL FOR THE ROCKY FLATS ALLUVIUM AND NO. 1 SANDSTONE

APPENDIX F SURFACE WATER MODELING

F1 INTRODUCTION
F2 CONCEPTUAL MODEL FOR THE HYDROLOGIC AND CONTAMINANT CONDITIONS
F3 MODELING APPROACH AND ASSUMPTIONS
F4 HYDROLOGIC SIMULATIONS

APPENDIX G AIR MODELING

G1 MODEL SELECTION
G2 MODELING SETUP
G3 MODEL INPUT PARAMETERS
G4 RESULTS

VOLUME 15

APPENDIX H BASELINE HEALTH RISK ASSESSMENT

H1 INTRODUCTION
H2 DATA EVALUATION AND AGGREGATION
H3 CHEMICALS OF CONCERN
H4 EXPOSURE SCENARIOS
H5 EXPOSURE POINT CONCENTRATIONS
H6 ESTIMATING CHEMICAL INTAKES
H7 TOXICITY FACTORS
H8 RISK CHARACTERIZATION
H9 RADIATION DOSE CALCULATIONS
H10 UNCERTAINTIES AND LIMITATIONS

H11 SUMMARY AND CONCLUSIONS
H12 REFERENCES

APPENDIX I ENVIRONMENTAL EVALUATION

VOLUME 16

APPENDIX J QUALITY ASSURANCE

J1 PRECISION RFP CALCULATIONS
J2 EQUIPMENT RINSATE DATA
J3 TRIP BLANK DATA

°C	degrees Celsius
%R	percent recovery
µCi/L	microcuries per liter
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
µCi/yr	microcuries per year
µm	micrometers
1,1-DCE	1,1-dichloroethene
1,1,1-TCA	1,1,1-trichloroethane
1,2-DCA	1,2-dichlorethane
1,2-DCE	1,2-dichloroethene
ac-ft	acre feet
AEC	Atomic Energy Commission
AET	actual evapotranspiration
Ag	silver
AGL	above ground level
AGS	above ground surface
Al	aluminum
ALARA	as low as reasonably achievable
Am	americium
Am-241	americium-241
$Am_2(CO_3)_3$	americium carbonate
AmO_2	americium dioxide
ANOVA	Analysis of Variance
ANOVA	Analysis of Variance
AOC	Area of Concern
AR	activity ratio
ARARs	applicable or relevant and appropriate requirements
As	arsenic
ASTM	American Society for Testing and Materials
ATD	At time of drilling
atm-m^3/mole	Atmosphere-cubic meter per mole
Ba	barium
BCF	bioconcentration factor
Be	beryllium
BEHP	bis(2-ethylhexyl)phthalate
BGS	below ground surface
BH	borehole
BNA	base neutral acid extractable
Bq	Becquerel
BSL	Background Screening Level

BW	body weight
c/f	coarse fine limit
Ca	calcium
CAS	Chemical Abstract Services
CCl_4	carbon tetrachloride
Cd	cadmium
CDH	Colorado Department of Health
CDPHE	Colorado Department of Public Health and Environment
Ce	cesium
CEARP	Comprehensive Environmental Assessment & Response Program
CEC	cation exchange capacity
CEDE	committed effective dose equivalent
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfm	cubic feet per minute
CHC	chlorinated hydrocarbon
$CHCl_3$	chloroform
Ci	curies
Cis-1,2-DCE	cis-1,2-dichloroethene
CLP	Contract Laboratory Program
cm	centimeter
cm/hr	centimeters per hour
cm/s	centimeters per second
cm^3	cubic centimeter
CME	Central Mine Equipment
CMS/FS	Corrective Measures Study/Feasibility Study
Co	cobalt
COC	chemical of concern
COI	chemicals of interest
cpm	counts per minute
Cr	chromium
Cr VI	chromium hexavalent
CRDL	contract required detection limit
CRQL	contract required quantitation limit
CS	claystone
Cs-134	cesium-34
Cs-137	cesium-137
CSM	conceptual site model
CSU	Colorado State University
CT	central tendency
Cu	copper
Cu	copper
CUHP	Colorado Urban Hydrograph Procedure
DCG	Derived Concentration Guide

DCN	document change notice
DF10 qualifier	10x dilution
DF50 qualifier	50x dilution
DMR	document modification request
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DOE	Department of Energy
dpm/g	disintegrations per minute per gram
DQO	Data Quality Objective
DRCOG	Denver-Regional Council of Governments
DW	dry weight
ECAO	Environmental Criteria and Assessment Office
ED	exposure duration
EDE	effective dose equivalent
EE	Environmental Evaluation
EF	exposure frequency
EG&G	EG&G Rocky Flats, Inc.
EIS	Environmental Impact Statement
EM	electromagnetics
EMC	event mean concentrations
EMD	Environmental Management Department
EPA	Environmental Protection Agency
ER	Environmental Restoration
ERA	Environmental Risk Assessment
ERDA	Energy Research and Development Administration
ERM	Environmental Restoration Management
ET	evapotranspiration
FDM	Fugitive Dust Model
Fe	iron
f_i	fractional uptake
FID	flame ionization detectors
FIDLER	field instrument for the detection of low-energy radiation
FS	feasibility study
FSP	field sampling plan
ft^2/min	square feet per minute
FWHM	full width half maximum
FWS	U.S. Fish and Wildlife Service
g/l	grams per liter
g/cm^3	gram per cubic centimeter
g/s	grams per second
g	grams
GC/MS	gas chromatography/mass spectrometry
GI	gastrointestinal
GIS	geographical information system

gpd/ft^2	gallons per day per square foot
gpm	gallons per minute
GPMPP	Groundwater Protection and Monitoring Program Plan
GPR	ground-penetrating radar
GRRASP	General Radiochemistry and Routine Analytical Services Protocol
GSSI	Geophysical Survey Systems, Inc.
GUI	Graphical User Interface
Gy	gray
HASL	Health and Safety Laboratory
HEPA	High Efficiency Particulate Air
Hg	mercury
HHRA	Human Health Risk Assessment
HI	hazard index
HPGe	high purity germanium
HQ	Hazard Quotient
HRR	Historical Release Report
HSA	hollow-stem auger
HSL	Hazardous Substances List
HSPF	Hydrologic Simulation Program in Fortran
HSU	hydrostratigraphic unit
IA	Industrial Area
IAG	Interagency Agreement
ICRP	International Commission on Radiological Protection
ID	inside diameter
IDL	instrument detection limit
IEUBK	Integrated Exposure Uptake Biokinetic
IHSS	Individual Hazardous Substance Site
IM/IRA	Interim Measures/Interim Remedial Action
IR	intake rate
K	potassium
K	hydraulic conductivity
K_1	Cretaceous Laramie formation
Ka	Cretaceous Arapahoe formation
kg	kilogram
km^2	square kilometer
LCS	laboratory control samples
LF	lateral flow
LHSU	lower hydrostratigraphic unit
Li	lithium
LNAPL	light non-aqueous phase liquid
LOAEL	lowest-observed-adverse-effect level
LR	laboratory replicate
m/s	meters per second
m	meter

m^2	square meter
m^2/g	square meters per gram
mCi	microcurie
MDA	minimal detectable activity
MDL	method detection limit
ME	matrix effect
meg/l	milliequivalents per liter
mg	milligram
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
Mg	magnesium
MKV	Mean Kriging Variance
mm	millimeters
Mn	manganese
Mo	molybdenum
mrem	millirem
MSA	Method of Standard Addition
MSE	mean square error
MW	monitoring well
Na	sodium
NA	not applicable
NAAQS	National Ambient Air Quality Standards
NAPL	Non-aqueous phase liquid
NCP	National Contingency Plan
NCRP	National Council on Radiation Protection and Measurements
ND	not definitive
NE	northeast
NE	not encountered
Ni	nickel
NI	not installed
nm	nanometer
NO_2	nitrite
NO_3	nitrate
NOAEL	no-observed-adverse-effect level
NP	non-plastic
NPDES	National Pollutant Discharge Elimination System
OB	observation well
OD	outside diameter
OH	hydroxide ion
OU	Operable Unit
OVM	organic vapor monitor
PA	protected area
PAH	polynuclear aromatic hydrocarbon

PARCC	precision, accuracy, representativeness, completeness, and comparability
Pb	lead
PC	permeability constant
PCB	polychlorinated biphenyl
PCE	tetrachloroethylene
pcf	pounds per cubic foot
pCi/m^3	picocuries per cubic meter
pCi/ml	picocuries per milliliter
pCi/g	picocuries per gram
pCi/l	picocuries per liter
PCOC	potential chemicals of concern
PERC	perchloroethylene
PID	photoionization detector
PM_{10}	particle matter less than or equal to 10 micrometers in diameter
Po	polonium
ppb	parts per billion
ppm	parts per million
PQL	practical quantitation limit
PRG	preliminary remediation goal
PTFE	polyethylene tetrafluoride
Pu	Plutonium
Pu-239/240	plutonium-239,240
Pu-239	plutonium-239
PVC	polyvinyl chloride
PW	pumping well
QA/QC	quality assurance/quality control
QAA	Quality Assurance Addendum
Qal	valley fill alluvium
QAPP	Quality Assurance Project Plan
Qc	colluvium
QC	quality control
Qrf	Rocky Flats Alluvium
R	radius of influence
Ra	radium
Ra-226	radium-226
Ra-228	radium-228
RAAMP	Radiological Ambient Air Monitoring Program
RAD screen	radiological screen
RAD	radiological
RAO	Remedial Action Objectives
RBC	risk-based concentrations
RBWP	Revised Bedrock Work Plan
RCRA	Resource Conservation and Recovery Act

RDL	required detection limit
RFA	Rocky Flats Alluvium
RfC	Reference Air Concentration
RfD	Reference Dose
RFEDS	Rocky Flats Environmental Database System
RFETS	Rocky Flats Environmental Technology Site
RFI/RI	RCRA Facility Investigation/Remedial Investigation
RFP	Rocky Flats Plant
RI	remedial investigation
RME	reasonable maximum exposure
RNS	rinsate blank results
ROD	Record of Decision
RPD	relative percent difference
SA	Sample Management
SAFER	Streamlined Approach for Environmental Restoration
SAP	sampling and analysis plan
Sb	antimony
SB	source borehole
SCS	Soil Conservation Service
Se	selenium
Se	selenium
SE	southeast
SEAM	Superfund Exposure Assessment Manual
SED	Sediment Sampling Location
SERA	Superfund Amendments and Reauthorization
SF	slope factor
Si	silicon
SID	South Interceptor Ditch
SIR	Subsurface Interface Ratio
SIR	Subsurface Interface Radar
SLTST	siltstone
SM	sample management
Sn	tin
SOP	Standard Operating Procedure
SOW	Statement of Work
SQL	sample quantitation limit
Sr	strontium
Sr-89,90	Strontium-89,90
SS	sandstone
Sv	sievert
SVE	soil vapor extraction
SVOC	semivolatile organic compound
SWL	sample
SWMS	Soil Water Monitoring System

SWMU	Solid Waste Management Unit
TAL	target analyte list
TCE	trichloroethene
TCL	Target Compound List
TD	total depth
TDR	time domain reflectometry
TDS	total dissolved solids
TEDE	total effective dose equivalent
Th	thorium
TIC	tentatively identified compound
TM	Technical Memorandum
TOC	total organic carbon
TPH	total petroleum hydrocarbon
TR	trench
TRC	total residual chlorine
TS	tension sampler
TSP	total suspended particulate
TSS	total suspended solids
U	uranium
U-234	uranium-234
U-235	uranium-235
U-238	uranium-238
UCL	upper confidence limit
UDFCD	Urban Drainage and Flood Control District
UHSU	upper hydrostratigraphic unit
USCS	Unified Soil Classification System
USDA	United States Department of Agriculture
USLE	Universal Soil Loss Equation
UTL	upper tolerance limit of the background data
V	vanadium
VF	volatilization factor
VOC	volatile organic compound
VVDM	Ventilated Valley Dispersion Model
WARP	Well Abandonment and Replacement Program
WQPL	Water Quality Parameter List
WW	wet weight
WWC	Woodward-Clyde Consultants
WWTP	Waste Water Treatment Plant
Z	zinc
Zn	zinc
ZTS	zero tension samplers
ZTS	sero tension samplers

OU-2 PHASE II BEDROCK BOREHOLES/MONITORING WELLS

A4.1

OU-2 PHASE II ALLUVIAL/BEDROCK BOREHOLE LITHOLOGY AND MONITORING WELL CONSTRUCTION LOGS

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193	
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 0.00/0.90; 0.90/1.20; 1.30/1.60; 0.00/0.30; 1.20/1.50; 0.00/0.40; 1.20/2.00; 1.50/2.20

DATUM (FT): 5948, 5947, 5946, 5945, 5944, 5943, 5942, 5941, 5940, 5939

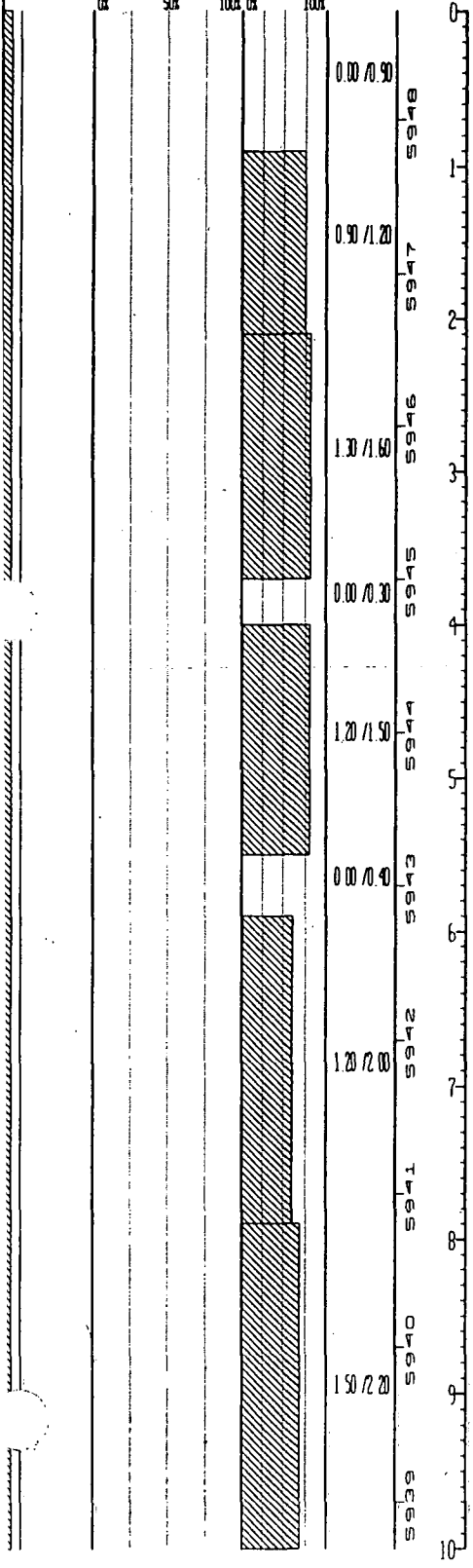
DEPTH (FT): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION



0.0-0.9 ft. Top soil, start of boring.

GC: 0.9-1.8 ft
Clayey Gravel with some sand and silt, very dark gray brown (7.5YR3/2) at 0.9-1.3', dark red (10R3/6) at 1.3-2.2', gravel maximum size 0.17', average size 0.05', angular to sub-angular, quartzite, igneous, metamorphics, and rock fragments, sand is fine- to coarse-grained, angular to sub-angular, quartz, rock fragments, kaolinized feldspar, well graded, some roots, plant fragments in upper 0.5', caliche near bottom, moist.
52% gravel, 11% sand, 11% silt, 26% clay

1.8-2.1 ft. No recovery for this interval.

GC: 2.1-2.2 ft. Clayey Gravel as described above.

GW: 2.2-3.4 ft.
Sandy Gravel with some clay and trace silt, pale yellow (10YR8/3) at 2.2-5.2', yellowish brown (7.5YR5/6) at 5.9-6.8', gravel maximum size 0.2', average size 0.04', angular to sub-rounded, gray quartzite, granites, metamorphics, sand is fine- to coarse-grained, angular to sub-angular, quartz, rock fragments, some feldspar, trace mica, well graded, clay fraction predominantly CaCO3, abundant caliche at 2.1-5.2' and 6.8-7.0', trace caliche at 5.9-6.8', dry
68% gravel, 24% sand, 1% silt, 7% clay

3.4-4.0 ft. No recovery for this interval.

GW: 4.0-5.2 ft. Sandy Gravel as described above.

5.2-5.9 ft No recovery for this interval.

GW: 5.9-7.0 ft Sandy Gravel as described above
Top of bedrock at 7.0 ft

CLAYSTONE: 7.0-7.1 ft. Claystone as described below.

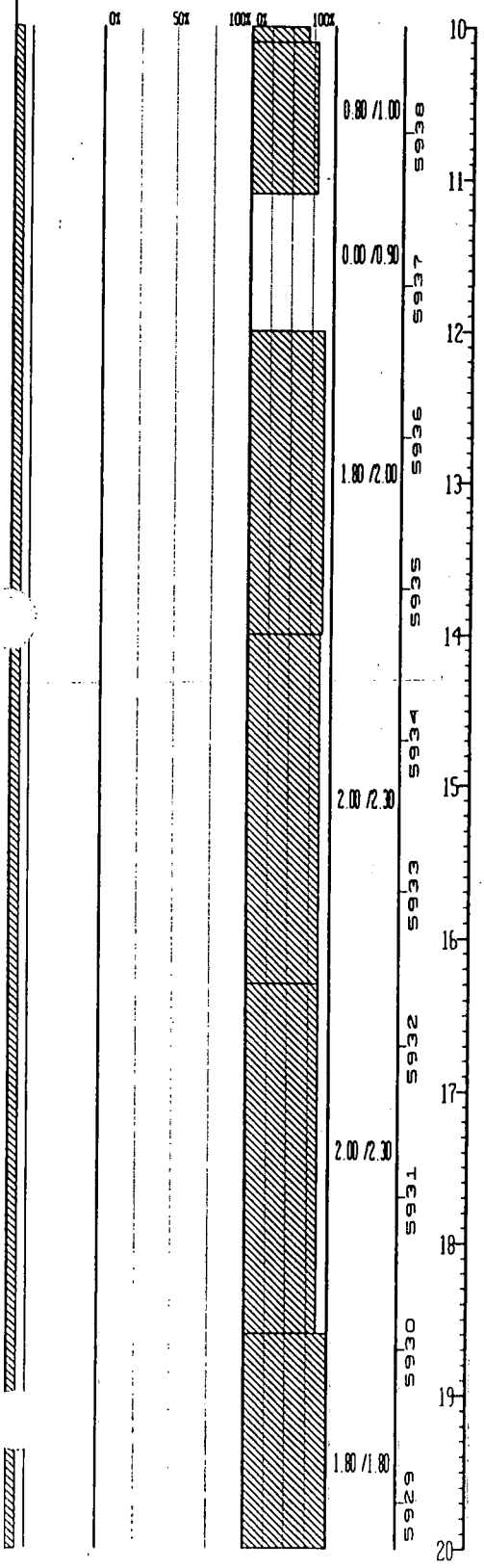
7.1-7.9 ft No recovery for this interval.

CLAYSTONE: 7.9-9.4 ft
Claystone with some silt, trace sand, pale olive (10Y6/2) at 7.0-10.9', light olive brown (5Y5/6) with mottled areas of dark yellowish orange (10YR6/6) at 12.0-15.5', light olive gray (5Y5/2) with iron staining along fractures dark yellowish orange (10YR6/6) at 15.5-19.6', sand is very fine-grained, well sorted, sub-angular to sub-rounded, less than 3% porosity, non-friable, no apparent bedding, CaCO3 nodules at 8.2', 9.0', 19.5', trace of carbonaceous matter, 7.0-10.9' microfractures, no apparent preferred orientation, iron stained, 12.0-15.5' microfractures with iron staining, large fractures at 13.0' (80 degrees), at 14.4' (20 degrees) and 16.3-16.9' (sub-horizontal fractures), trace manganese at 12.0-16.0', trace caliche at 19.6', slightly moist
1% sand, 10% silt, 89% clay

9.4-10.1 ft No recovery for this interval

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193	
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



Unified Soils Classification or Rock Type	Description
CLAYSTONE	10.1-10.9 ft. Claystone as described above.
	10.9-12.0 ft No recovery for this interval.
CLAYSTONE	12.0-13.8 ft Claystone as described above.
	13.8-14.0 ft. No recovery for this interval
CLAYSTONE	14.0-16.0 ft Claystone as described above
	16.0-16.3 ft No recovery for this interval.
CLAYSTONE	16.3-18.3 ft Claystone as described above
	18.3-18.6 ft No recovery for this interval
CLAYSTONE	18.6-19.6 ft Claystone as described above

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193	
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPL GRADATIONAL SA DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE 0% 50% 100%

PERCENT RECOVERY 0% 100%

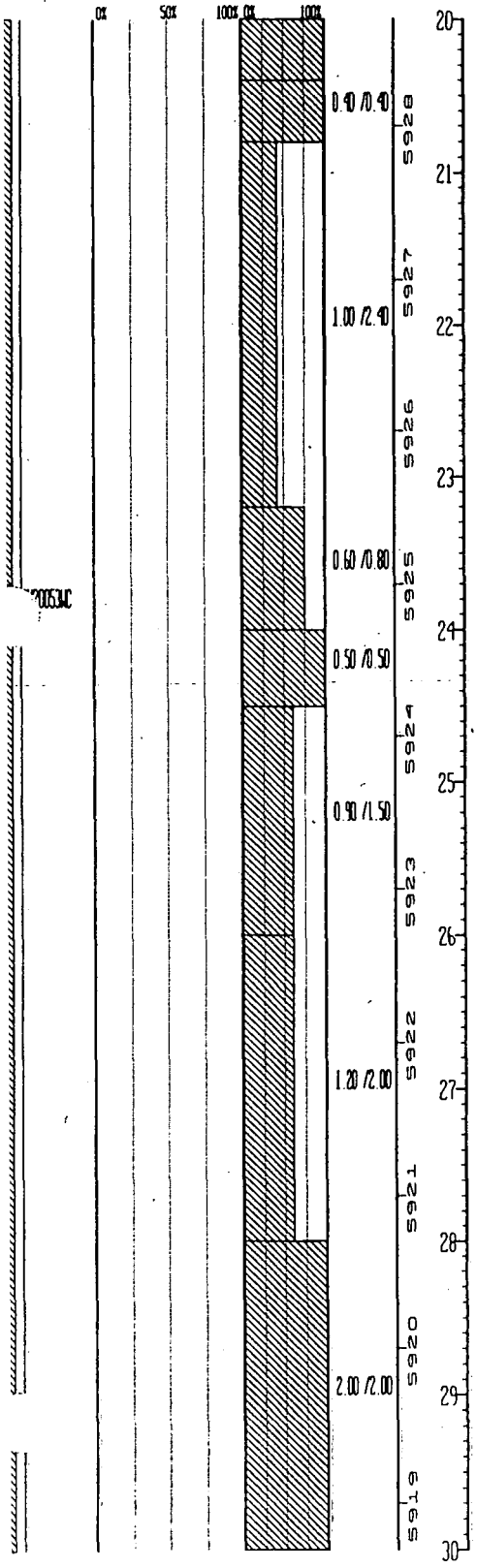
RECOVERY/INTERVAL: 0.40/0.40; 1.00/2.40; 0.60/0.80; 0.50/0.50; 0.90/1.50; 1.20/2.00; 2.00/2.00

DATUM (FT): 5928, 5927, 5926, 5925, 5924, 5923, 5922, 5921, 5920, 5919

DEPTH (FT): 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

SILTY SANDSTONE: 19.6-21.8 ft.
Silty Sandstone with some clay, yellowish gray (5Y7/2), sand is very fine- to fine-grained with some medium-grained, moderately sorted, sub-angular to sub-rounded, quartz (some frosted), trace of mafics, trace feldspar, iron stained grains, 0-7% porosity, abundant limonite cement at 20.5-20.7', trace argillaceous cement, moderately to highly friable, massive bedding, sand fraction increased slightly with depth, dry to 20.4', slightly moist to moist at 20.4-25.4'.
59% sand, 37% silt, 4% clay

21.8-23.2 ft. No recovery for this interval.

SILTY SANDSTONE: 23.2-23.7 ft. Silty Sandstone as described above.

23.7-24.0 ft. VOA sample obtained from this interval.

SILTY SANDSTONE: 23.2-25.4 ft Silty Sandstone as described above.

25.4-26.0 ft. No recovery for this interval.

SILTY SANDSTONE: 26.0-26.2 ft. Silty Sandstone as described above.

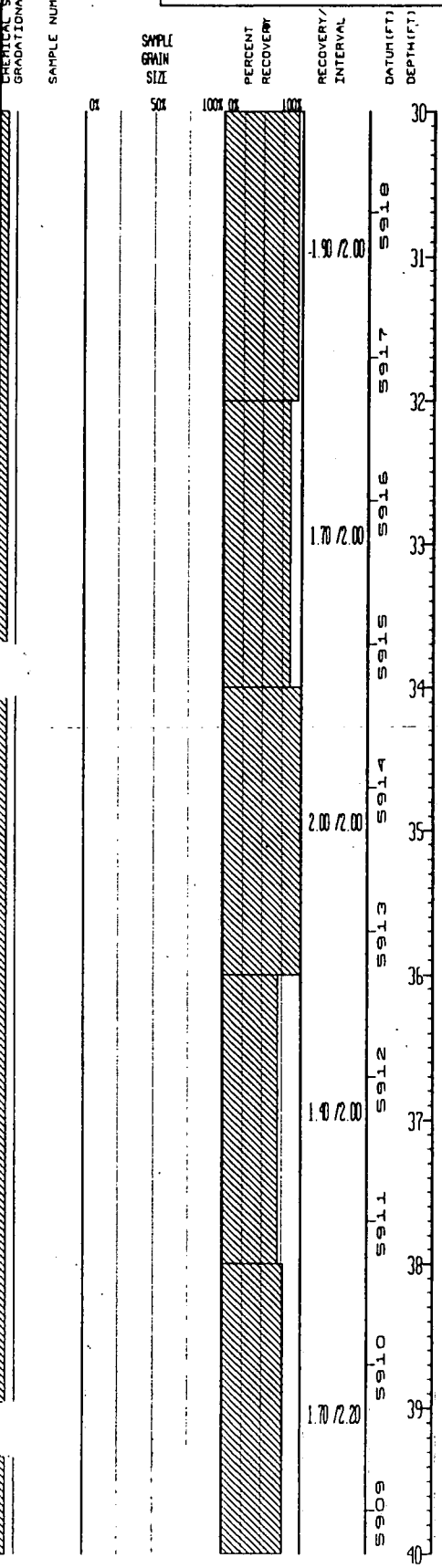
SANDY SILTSTONE: 26.2-27.2 ft.
Sandy Siltstone with some clay, dark yellowish orange (10YR6/6), grayish red (5R4/2), sand is very fine-grained with some fine-grained, moderately sorted, sub-angular to sub-rounded, predominantly quartz with trace of mafics, some frosted grains, 5-7% porosity, highly friable, trace laminations.
36% sand, 58% silt, 6% clay

27.2-28.0 ft. No recovery for this interval.

SANDY SILTSTONE: 28.0-28.3 ft. Sandy Siltstone as described above.

SILTY SANDSTONE: 28.3-31.9 ft.
Silty Sandstone with some clay, dark yellowish orange (10YR6/6), grayish orange (10YR7/4), light olive gray (5Y5/2), sand is very fine- to fine-grained with trace medium-grained, moderately sorted, sub-angular to sub-rounded, predominantly quartz, trace mafics, some frosted grains, 7% porosity, slightly friable, massive bedding to subhorizontal laminations.
55% clay, 29% silt, 16% clay.

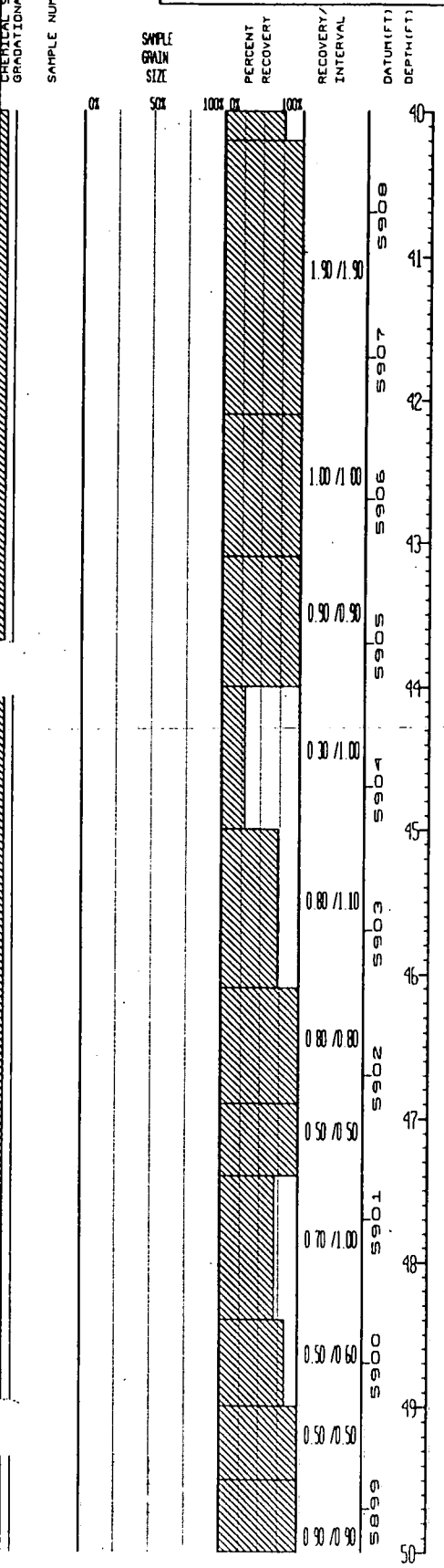
STATE PLANE COORDINATE	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93	
REMARKS: ABANDONED BOREHOLE				



WELL OR PIEZOMETER CONSTRUCTION: 04/29/93

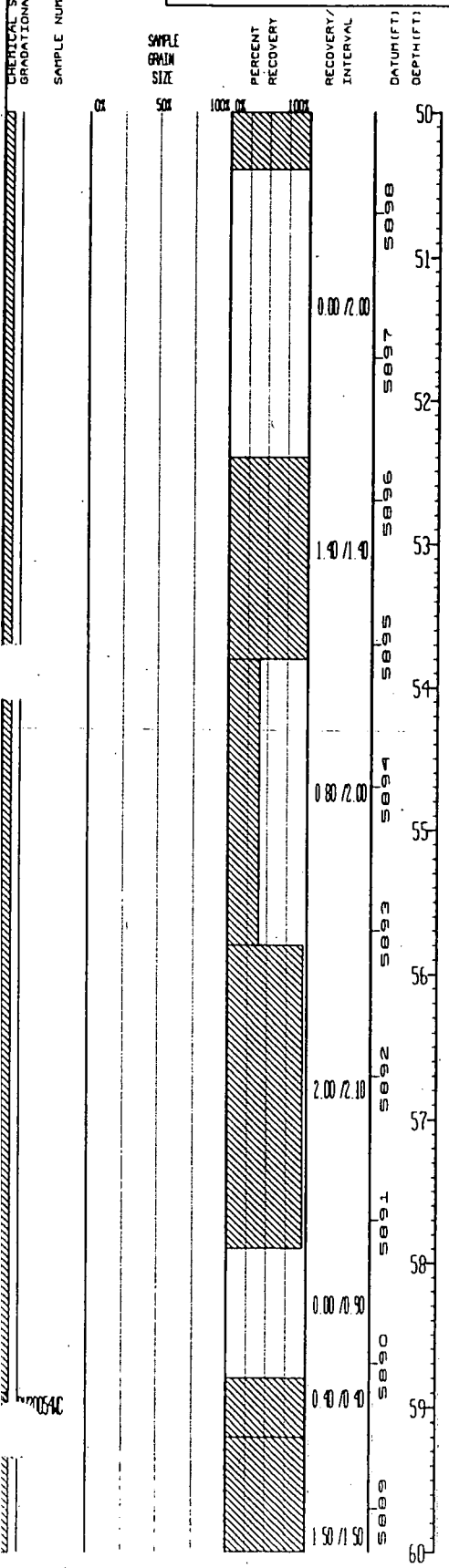
LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		31.9-32.0 ft. No recovery for this interval.
	SILTY SANDSTONE	32.0-33.7 ft. Silty Sandstone as described above.
		33.7-34.0 ft. No recovery for this interval.
	SILTY SANDSTONE	34.0-37.0 ft. Silty Sandstone as described above.
	SANDSTONE	37.0-37.4 ft. Sandstone as described below
		37.4-38.0 ft. No recovery for this interval.
	SANDSTONE	38.0-39.7 ft. Sandstone with some silt, grayish orange (10YR7/4), dark yellowish orange (10YR6/6), light gray (N7), sand is medium-grained, some fine-grained, trace coarse-grained, moderately sorted, sub-angular to rounded, predominantly quartz, trace of quartzite, mafics, mica, and feldspar, 15% porosity, highly to moderately friable, saturated 88% sand, 12% silt, 0% clay.
		39.7-40.2 ft. No recovery for this interval

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193	
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93		
REMARKS: ABANDONED BOREHOLE					



WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		SANDSTONE:	40.2-44.3 ft. Sandstone as described above.
			44.3-45.0 ft No recovery for this interval.
		SANDSTONE:	45.0-45.8 ft Sandstone as described above.
			45.8-46.1 ft No recovery for this interval.
		SANDSTONE:	46.1-48.1 ft Sandstone as described above.
			48.1-48.4 ft No recovery for this interval
		SANDSTONE:	48.4-48.9 ft Sandstone as described above
			48.9-49.0 ft. No recovery for this interval.
		SANDSTONE:	49.0-49.5 ft Sandstone as described above.
		SILTY SANDSTONE	49.5-50.4 ft Silty Sandstone with trace clay, dark yellowish orange

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749994	AREA NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93	
REMARKS: ABANDONED BOREHOLE				



WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		(10YR6/6), light olive gray (5Y6/1), sand is very fine- to fine-grained with some medium-grained, moderately sorted, sub-rounded to rounded, predominantly quartz, trace mafics, trace quartzite, trace mica, some frosted grains, some iron stained grains, 8-10% porosity, moderately to highly friable massive, finely laminated silts at 52.4-52.8', moist to saturated. 71% sand, 26% silt, 3% clay. 50.4-52.4 ft. No recovery for this interval.
	SILTY SANDSTONE	52.4-52.8 ft Silty Sandstone as described above.
	SILTY SANDSTONE	52.8-54.6 ft Silty Sandstone with some clay, dark yellowish orange (10YR 6/6) with medium gray (N5) at 54.3-54.6', sand is medium-grained with some fine-grained and trace coarse-grained, well sorted, sub-angular to rounded, predominantly quartz, trace quartzite, trace mafics, abundant frosted grains, 7-10% porosity, highly friable, massive, becomes silty near 54.3-54.6', -saturated. 75% sand, 16% silt, 9% clay.
		54.6-55.8 ft. No recovery for this interval.
	SILTY SANDSTONE	55.8-57.8 ft Silty Sandstone as described above.
		57.8-58.8 ft No recovery for this interval.
	SILTY SANDSTONE	58.8-58.9 ft Silty Sandstone as described above.
		58.9-59.2 ft VOA sample obtained from this interval
	SILTY SANDSTONE	58.8-60.7 ft Silty Sandstone as described above

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749994	AREA NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193	
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (100% 0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5948	60				
					61				60.7-62.3 ft. No recovery for this interval
			0.00 /1.60	5947	62				
			2.40 /2.40	5946	63			SILTY CLAYSTONE	62.3-64.7 ft. Silty Claystone with abundant sand, medium dark gray (N4), medium light gray (N6), light olive brown (5Y5/6), sand is very fine- to fine-grained with trace medium-grained, moderately sorted, sub-angular to sub-rounded, predominantly quartz, trace mafics, trace quartzite, non-friable to slightly friable, sub-horizontal laminations, abundant sandy siltstone filled burrows, interbeds of sandy siltstone, moist. 22% sand, 26% silt, 52% clay.
				5945	64				
			2.00 /2.00	5944	65			SILTY CLAYSTONE	64.7-67.5 ft. Silty Claystone with some sand, olive gray (5Y3/2), sand is very fine-grained with abundant fine grained, well sorted, sub-angular to sub-rounded, predominantly quartz, trace mafics, quartzite, non-friable, some bioturbation, trace clay rip-up clasts (<.005'), moist, stuff between 64.7-65.3' 13% sand, 26% silt, 61% clay.
				5943	66				
			0.90 /0.90	5942	67				
			0.00 /0.20	5941				SILTSTONE	67.5-67.6 ft. Siltstone as described below.
									67.6-67.8 ft. No recovery for this interval.
				5940	68			SILTSTONE	67.8-71.4 ft. Siltstone with some sand, trace clay, medium dark gray (N4), medium gray (N5) with sandstone interbeds of moderate yellowish brown (10YR5/4), sand is very fine-grained, trace fine-grained, well sorted, sub-angular to sub-rounded, quartz, 2-15% porosity, trace argillaceous cement, non-friable to highly friable (sandstone interbeds), bedding consists of inclined laminations (25 degrees) of clays, slump features, load casts, burrows, fracture of 40 degrees at 69.8', not healed, sandstone interbeds at 69.3-69.5',
				5939	69				
					70				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT)	5948.70	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)		GEOLOGIST	J DUBOIS	21193
EAST	2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	10	DATE DRILLED:	04/29/93	
REMARKS:	ABANDONED BOREHOLE						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				4.40 /5.00	5878	70				69.6-69.8', 70.8-71.0', 71.3-71.4', calcareous cemented sandstone marker bed at 71.0-71.3'. 10% sand, 85% silt, 5% clay.
					5877	71			CLAYSTONE	71.4-72.2 ft Claystone with trace silt, grayish black (N2), non-friable, dense, no bedding, natural fractures visible (45 degrees at 71.8', some carbonaceous matter throughout with trace coalified plant fragments 3% silt, 97% clay.
					5876	72				72.2-72.8 ft No recovery for this interval.
					5875	73			CLAYSTONE	72.8-73.6 ft Claystone as described above.
					5874	74			SILTSTONE	73.6-74.5 ft Siltstone with some sand, trace clay, olive gray (5Y4/1), sand is very fine grained, well sorted, sub-angular to sub-rounded, predominantly quartz, trace mafics, 1-3% porosity, slightly friable, laminated, soft sediment slip plane at 74.0' 20 degrees and at 73.6' 40 degrees. 7% sand, 90% silt, 3% clay.
				5.00 /5.00	5873	75			CLAYSTONE	74.5-85.5 ft Claystone with trace silt, grayish black (N2), dark greenish gray (5GY4/1), brownish black (5Y2/1), non-friable, dense, abundant to some carbonaceous material, some coalified plant fragments, interval becoming silty near base, fractures at 79.6' and 79.8' with slickensides along fracture face. 1% silt, 99% clay.
	B20101AC				5872	76				
					5871	77				
					5870	78				
					5869	79				
	B20152AC					80				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21193
EAST: 2087296	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN) 10	DATE DRILLED: 04/29/93	
REMARKS: ABANDONED BOREHOLE				

CHEMICAL SAMPLE | GRADATIONAL SAMPLE | SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

BH201S2WC 0% 50% 100% 0% 100%

5.00 /5.00

5.00 /5.00

5868 5867 5866 5865 5864 5863 5862 5861 5860 5859

80 81 82 83 84 85 86 87 88 89 90

SANDY SILTSTONE: 85.5-92.8 ft.
Sandy Siltstone with some clay, light olive gray (5Y6/1), olive gray (5Y4/1), sand is very fine-grained, trace fine-grained, well sorted, angular to sub-rounded, quartz with trace mafics, 3-7% porosity, slightly friable, some interbeds of silty sandstones (<0.4'), horizontal to sub-horizontal laminations, bioturbation present, heavy at 87.2-87.8', trace carbonaceous material, especially at 88.7', angular lignitic piece cutting through core at 50 degrees, trace siltstone nodules, grayish orange (10YR7/4) color, no fractures apparent
37% sand, 50% silt, 13% clay.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193	
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE
GRADATIONAL SAMPLE
SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 5.00 /5.00; 4.80 /5.00

DATUM (FT): 5958, 5957, 5956, 5955, 5954, 5953, 5952, 5951, 5950, 5949

DEPTH (FT): 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

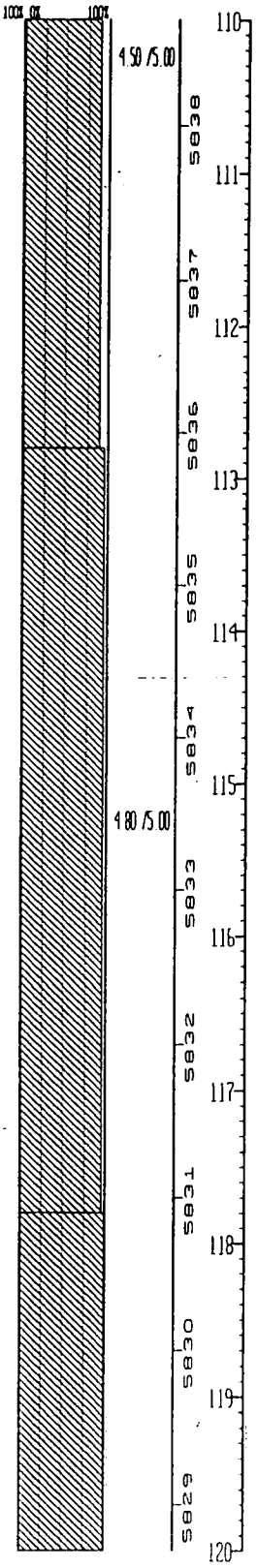
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	92.8-93.0 ft. No recovery for this interval.
SANDY SILTSTONE	93.0-95.7 ft. Sandy Siltstone as described above.
SILTY CLAYSTONE	95.7-97.8 ft Silty Claystone as described below.
	97.8-98.8 ft No recovery for this interval
SILTY CLAYSTONE	98.8-107.8 ft. Silty Claystone with trace sand, olive black (5Y2/1), dark gray (N3), black (N1) in very carbonaceous zones, sand is very fine-grained, well sorted, sub-rounded, predominantly quartz with trace mafics, non-friable to slightly friable, dense, no apparent bedding, carbonaceous throughout, visible

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93	
REMARKS: ABANDONED BOREHOLE				

CHEMICAL SAMPLE / GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM(FT)	DEPTH(FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH20080MC	0% 50% 100%	0% 100%	4.00 /5.00	5948 5947 5946 5945	100 101 102 103 104				plant fragments; very carbonaceous at 114.6-116.0', silty with fine clay laminations between 116.0-117.6', low plasticity. 4% sand, 24% silt, 72% clay. Siltstone nodules (<0.01') at 99.4-99.8'. Silica cemented siltstone, very dense at 127.5-127.8'. Siltstone nodules, very pale orange (10YR8/2) at 128.5-128.8 Fractures observed at 129.0' 45 degrees 129.3' 40 degrees 130.2' 60 degrees 132.2' 70 degrees 133.1' 40 degrees 133.7' 50 degrees 134.6' 35 degrees 135.0' 35 degrees 135.8' 60 degrees 140.7' 45 degrees 142.6' 25 degrees 143.7' 75 degrees 145.5' 70 degrees 97.0' 50 degrees 97.5' 70 degrees 99.1' 70 degrees 100.5' 75 degrees 112.4' 75 degrees 113.0' 45 degrees 123.4' 75 degrees Slickensides noted along all fracture planes above.
				5.00 /5.00	5944 5943 5942 5941	105 106 107 108				107.8-108.3 ft. No recovery for this interval.
					5940 5939	109 110			SILTY CLAYSTONE	108.3-117.6 ft Silty Claystone as described above.

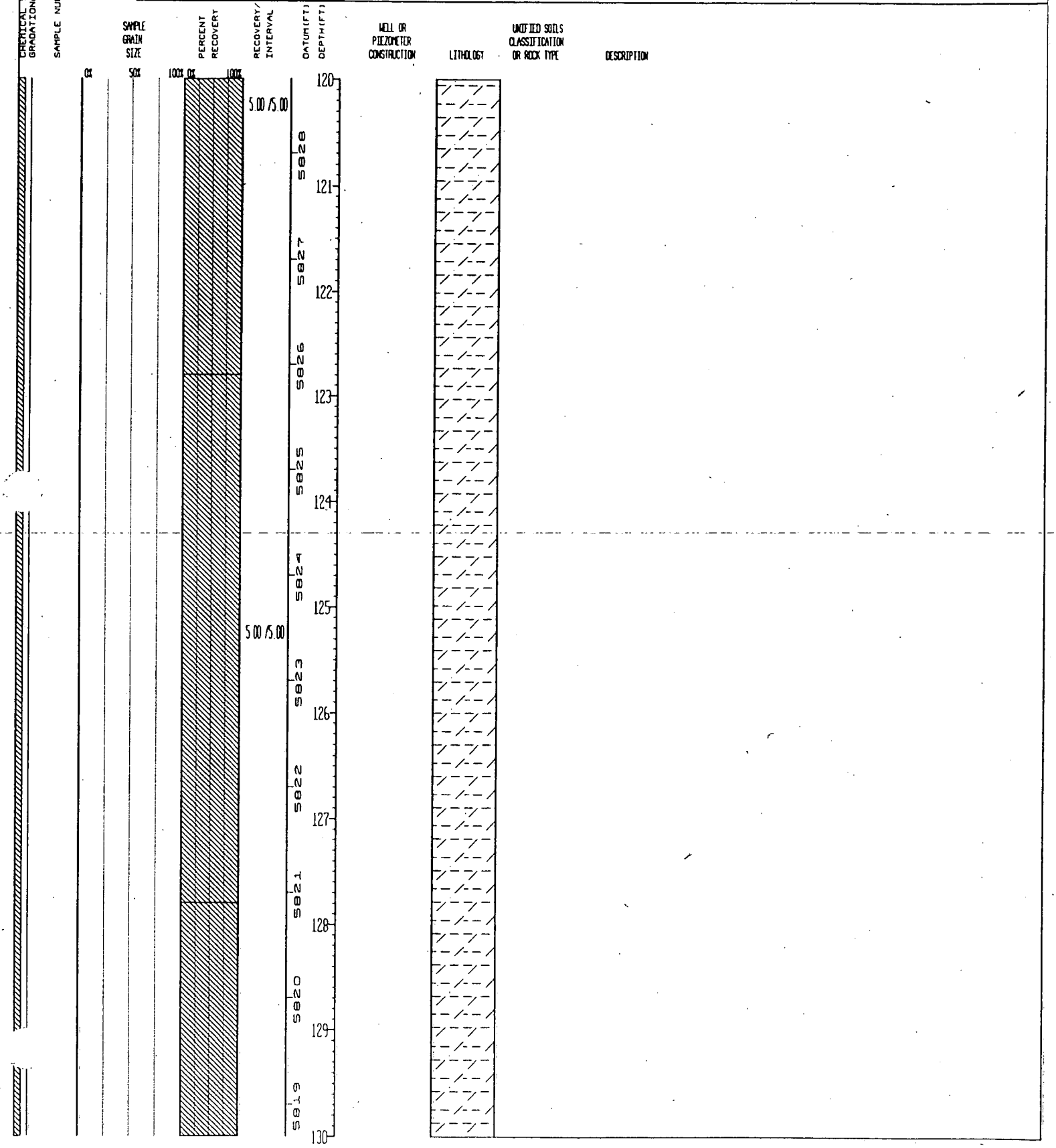
STATE PLANE COORDINATE	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749994	AREA NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193	
EAST: 2087296	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED 04/29/93		
REMARKS ABANDONED BOREHOLE					

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

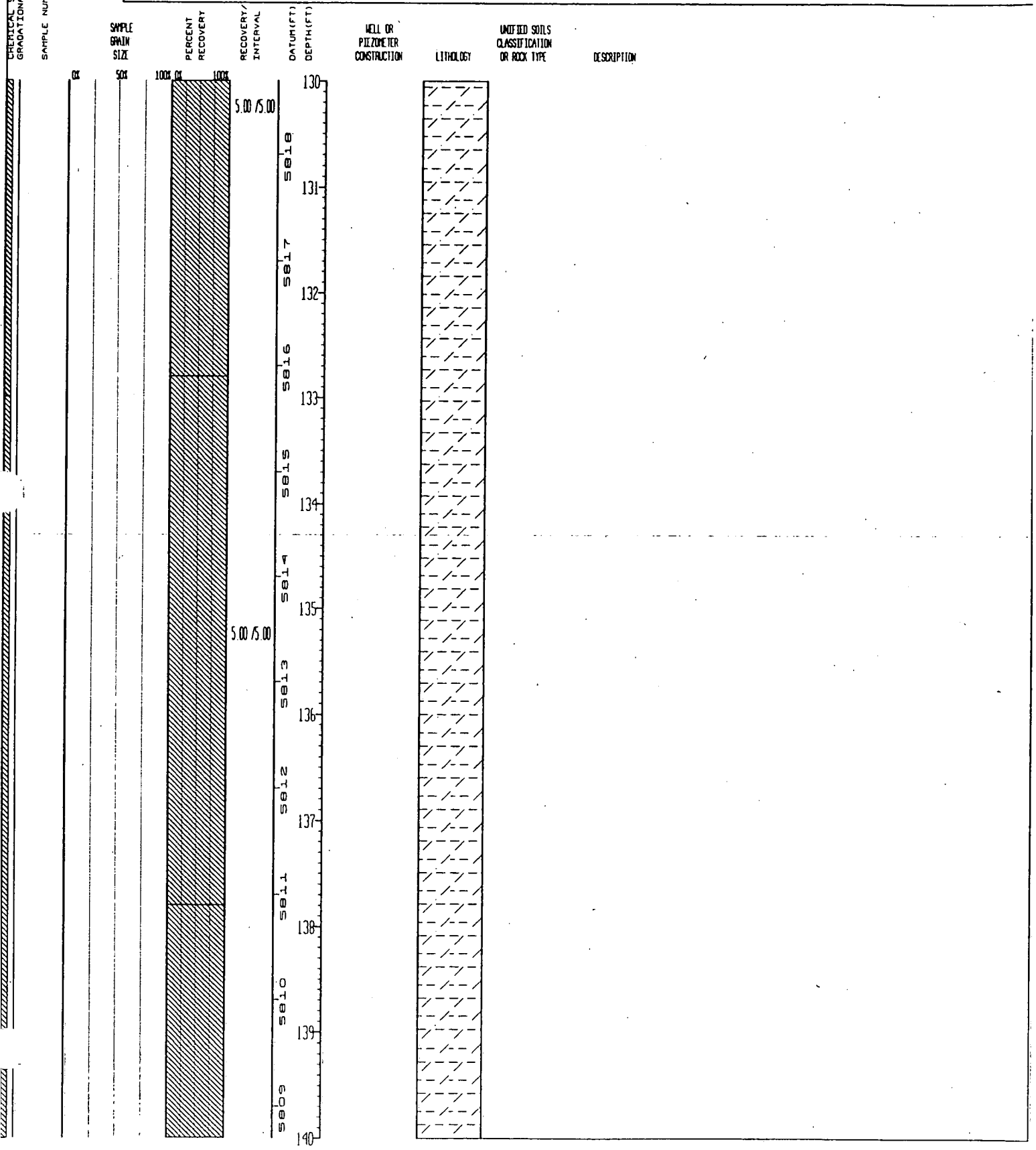


	117.6-117.8 ft. No recovery for this interval.
SILTY CLAYSTONE: 117.8-146.0 ft	Silty Claystone as described above.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER	
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193	
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93		
REMARKS: ABANDONED BOREHOLE					



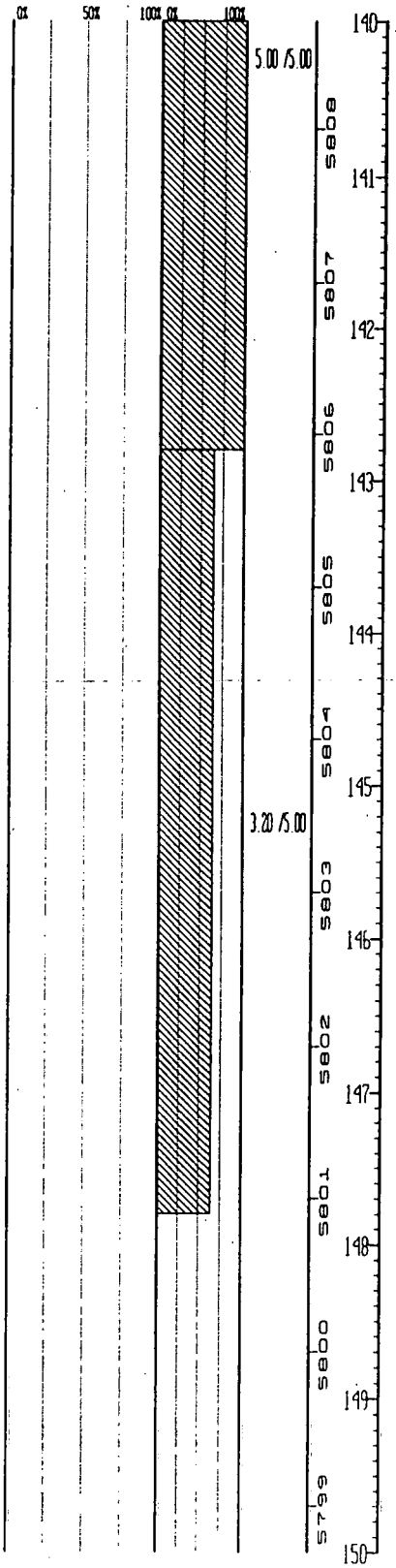
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT):	5948 70	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS	21193
EAST:	2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN)	10	DATE DRILLED:	04/29/93	
REMARKS:	ABANDONED BOREHOLE						



STATE PLANE COORDINATE	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93	

REMARKS: ABANDONED BOREHOLE

CHEMICAL SAMPL
GRADATIONAL SA
DEPTH
SAMPLE NUMBER



WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

147 6-147 8 ft No recovery for this interval

SILTY CLAYSTONE: 147 8-148 2 ft Silty Claystone as described above.

146 0-152 8 ft No recovery for this interval

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT)	5948.70	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS	21193
EAST	2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN)	10	DATE DRILLED:	04/29/93	
REMARKS	ABANDONED BOREHOLE						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / SAMPLE NUMBER / SAMPLE GRAIN SIZE (0% 50% 100%) / PERCENT RECOVERY (0% 100%) / RECOVERY/INTERVAL / DATUM (FT) / DEPTH (FT) / WELL OR PIEZOMETER CONSTRUCTION / LITHOLOGY / UNIFIED SOILS CLASSIFICATION OR ROCK TYPE / DESCRIPTION

RECOVERY/INTERVAL	DEPTH (FT)	DESCRIPTION
0.00 /5.00	150	
	151	
	152	
	153	SILTY CLAYSTONE: 152.8-154.9 ft. Silty Claystone as described above.
1.00 /1.00	154	
	155	CLAYEY SILTSTONE: 154.9-155.8 ft. Clayey Siltstone with some sand, olive gray (5Y4/1), sand is very fine-grained with trace fine-grained, well sorted, sub-rounded to rounded, quartz with trace mafics, trace quartzite, 0-2% porosity, slightly friable, mottled with claystone laminae, no apparent fractures. 22% sand, 43% silt, 35% clay
	156	SILTY CLAYSTONE: 155.8-160.2 ft. Silty Claystone with trace sand, olive black (5Y2/1), dark gray (N3), black (N1) in very carbonaceous zones, sand is very fine-grained, well sorted, sub-rounded, quartz with trace mafics, non-friable to slightly friable, dense, no apparent bedding, carbonaceous throughout, visible plant fragments, low plasticity. 4% sand, 24% silt, 72% clay.
6.40 /6.40	157	
	158	
	159	
	160	

DATUM (FT): 5798, 5797, 5796, 5795, 5794, 5793, 5792, 5791, 5790, 5789

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 160.2	GROUND ELEVATION (FT): 5948.70	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749994	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21193	
EAST: 2087296	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 10	DATE DRILLED: 04/29/93		
REMARKS: ABANDONED BOREHOLE					

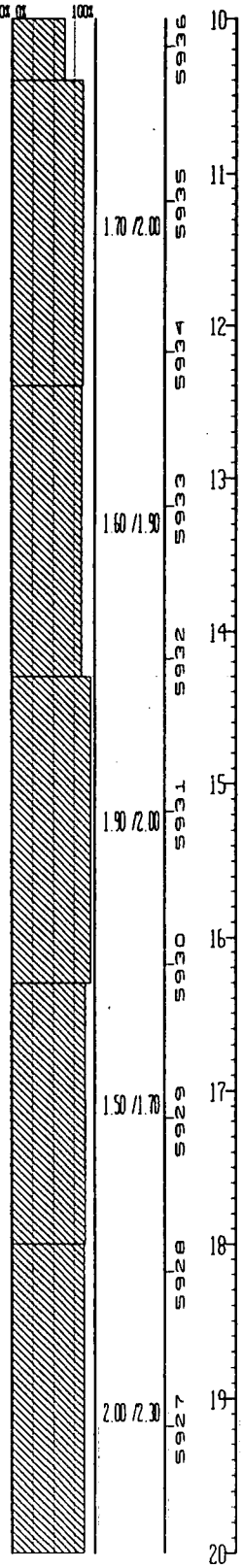
CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
						160				Total depth at 160.2 ft
					5788	161				
					5787	162				
					5786	163				
					5785	164				
					5784	165				
					5783	166				
					5782	167				
					5781	168				
					5780	169				
					5779	170				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148 8	GROUND ELEVATION (FT): 5946.18	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21293	
EAST: 2085968	LOCATOR NUMBER M8	BOREHOLE DIAMETER (IN): 8.25	DATE DRILLED: 05/27/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPL GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%							0.0-0.9 ft. Top soil, start of boring.
				0.00 /0.90	5946	0			GC	0.9-1.8 ft. Sandy Gravel with some silt and some clay, dark brown (7.5YR4/4), strong brown (7.5YR5/6), gravel maximum size 0.2', average size 0.03', sub-angular to sub-rounded, consists of quartz, schist, granite, sand is fine- to coarse-grained, angular to sub-rounded, consists of quartz, rock fragments, quartzite, well graded, plant roots at 0.9-1.2', moisture not reported. 62% gravel, 14% sand, 11% silt, 13% clay
				0.90 /1.60	5945	1				1.8-2.5 ft No recovery for this interval.
				1.30 /2.00	5944	2			GC	2.5-3.8 ft Sandy Gravel as described above
					5943	3				3.8-4.5 ft No recovery for this interval.
				1.10 /2.00	5942	4			GC	4.5-5.6 ft Sandy Gravel as described above.
					5941	5				5.6-6.5 ft No recovery for this interval.
				1.20 /2.00	5940	6			ML	6.5-7.0 ft Sandy Silt with some gravel and some clay, strong brown (7.5YR4/6) gravel, maximum size 0.14', average size 0.04', angular to sub-rounded, consists of quartz, quartzite, granite, sand is fine- to coarse-grained, angular to sub-rounded, quartz, rock fragments, quartzite, some feldspar, well graded, medium plasticity. 19% gravel, 20% sand, 55% silt, 6% clay
					5939	7			GC	7.0-7.7 ft Sandy Gravel as described at 0.9-5.6'. No plant roots reported for this interval. 62% gravel, 14% sand, 11% silt, 13% clay
					5938	8				7.7-8.5 ft No recovery for this interval.
				1.20 /1.90	5937	9			GC	8.5-8.8 ft Sandy Gravel as described at 0.9-5.6' Top of bedrock at 8.8 ft
									CLAYSTONE	8.8-9.7 ft Claystone as described below
						10				9.7-10.4 ft No recovery for this interval

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 148 8	GROUND ELEVATION (FT):	5946 18	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN)	8 25	DATE DRILLED:	05/27/93	
REMARKS: ABANDONED BOREHOLE						

CHEMICAL SAMPLE / GRADATIONAL SA / SAMPLE NUMBER / SAMPLE GRAIN SIZE (0% 50%) / PERCENT RECOVERY (100% 0% 100%) / RECOVERY/INTERVAL / DATUM (FT) / DEPTH (FT) / WELL OR PIEZOMETER CONSTRUCTION / LITHOLOGY / UNIFIED SOILS CLASSIFICATION OR ROCK TYPE / DESCRIPTION



CLAYSTONE: 10.4-12.1 ft.
Claystone with trace silt and sand, light olive gray (5Y6/1) dusky yellow (5Y6/4) with dark yellow orange (10YR6/6) along small fractures, dense, non-friable, no bedding, iron stain mottling between 11.1-12.1', iron stain along numereous hairline fractures at 12.9-14.0', most are healed, no preferred orientation, some caliche at 8.8-9.1'.
1% sand, 5% silt, 94% clay.

12.1-12.4 ft No recovery for this interval.

CLAYSTONE 12.4-14.0 ft Claystone as described above.

14.0-14.3 ft No recovery for this interval.

SILTY CLAYSTONE 14.3-16.2 ft
Silty Claystone with trace sand, moderate olive brown (5Y4/4), olive gray (5Y4/1), dense, non-friable, no bedding, mottling, iron staining along possible fractures, no distinct angles.
1% sand, 35% silt, 64% clay

16.2-16.3 ft No recovery for this interval.

SILTY CLAYSTONE 16.3-16.7 ft Silty Claystone as described above

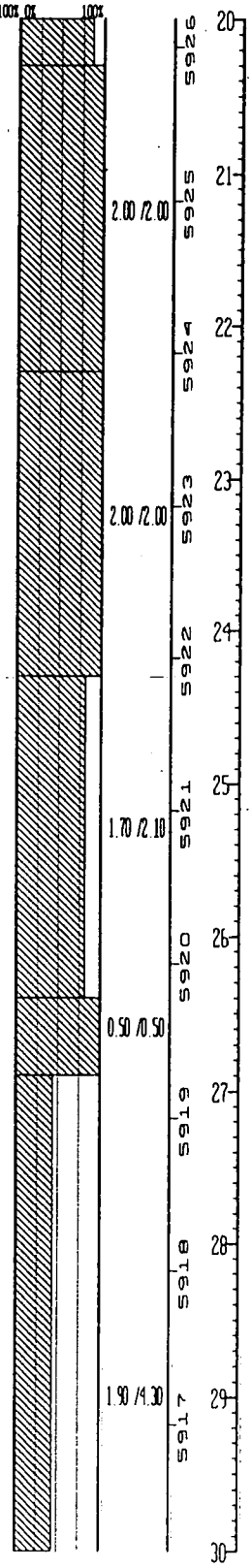
SILTY SANDSTONE 16.7-17.8 ft
Silty Sandstone with some clay, dark yellowish orange (10YR6/6), sand is very fine-grained, trace fine-grained, well sorted, sub-angular to sub-rounded, consists of quartz, trace quartzite, trace mafics, trace mica, 10% porosity, moderately friable, no bedding apparent, slight clay mottleing, no fractures
46% sand, 30% silt, 24% clay

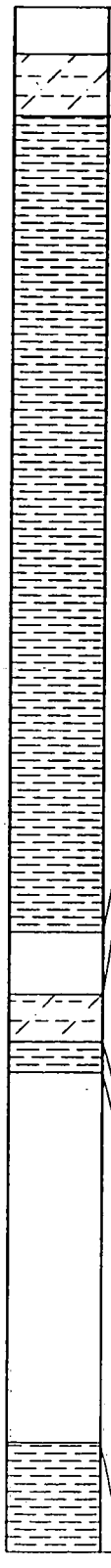
17.8-18.0 ft No recovery for this interval.

SILTY CLAYSTONE 18.0-20.0 ft
Silty Claystone with trace sand interbedded with Sandy Siltstone with some clay.
Silty Claystone with trace sand: light olive brown (5Y5/6), dense, non-friable, mottled, no fractures.
Sandy Siltstone with some clay: light olive gray (5Y6/1), sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, quartz with trace mafics and mica, 7% porosity, trace limonite cement, slightly friable, beds less than 0.1' thick, trace soft sediment deformation, iron staining along some bedding planes, small iron blebs (less than 0.01') at 19.0'.
Silty Claystone 4% sand, 19% silt, 77% clay.
Sandy Siltstone 37% sand, 53% silt, 10% clay

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT): 5946.18	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748631	AREA 903 PAD	CASING DIAMETER (IN)	GEOLOGIST J DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER M8	BOREHOLE DIAMETER (IN): 8.25	DATE DRILLED: 05/27/93	
REMARKS: ABANDONED BOREHOLE				

CHEMICAL SAMPL
GRADATIONAL SA
DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE (0% 50%)
PERCENT RECOVERY (100% 0% 100%)
RECOVERY/INTERVAL
DATUM(FT)
DEPTH(FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION





20.0-20.3 ft. No recovery for this interval.

SILTY CLAYSTONE: 20.3-20.7 ft. Silty Claystone interbedded with Sandy Siltstone as described above.

CLAYSTONE: 20.7-26.0 ft.
Claystone wiht some sand and silt, dark yellowish orange (10YR6/6) at 20.7-21.4', light olive gray (5Y5/2) at 21.4-24.1', olive gray (5Y3/2) at 24.1-26.0', dense, non-friable, carbonaceous, highly oxidized plant fragments at 21.3-23.9', leaf imprints visible, some iron staining present at 23.9-26.0', no preferred orientation, iron stain is dark yellowish orange (10YR6/6), no fractures visible.
8% sand, 9% silt, 83% clay

26.0-26.4 ft No recovery for this interval.

SILTY CLAYSTONE: 26.4-26.7 ft
Silty Claystone with some sand, light olive gray (5Y6/1), with claystone clasts, light olive brown (5Y5/6), sand is very fine-grained, very well sorted, sub-angular to sub-rounded, quartz, trace mafics, less than 1% porosity, well cemented with calcareous cement, non-friable, massive bedding, trace claystone clasts (less than 0.01'), no fractures
10% sand, 36% silt, 54% clay

CLAYSTONE: 26.7-26.9 ft Claystone as described below.

26.9-29.3 ft No recovery for this interval.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT)	5916.18	PROJECT NUMBER:	002 BEDROCK
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS
EAST: 2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN)	8.25	DATE DRILLED:	05/27/93
REMARKS: ABANDONED BOREHOLE					

LOG OF BORING NUMBER: 21293

CHEMICAL SAMPLE / GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM(FT)	DEPTH(FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%	5.90 /5.90 4.30 /5.00	5916 5915 5914 5913 5912 5911 5910 5909 5908 5907	30 31 32 33 34 35 36 37 38 39 40			CLAYSTONE	29.3-41.4 ft. Claystone with some sand and silt, olive gray (5Y4/1), light olive gray (5Y6/1), dark yellowish orange (10YR6/6) along fracture, dense, non-friable, slightly carbonaceous, some coalified plant material, bedding indurated at 26.7-31.5', fractures at 29.3-30.6' possible hairline fracture with some iron stain, 31.7' iron healed hairline fractures 75 degrees and horizontal, 32.3-33.0' as above with no distinct orientation, 33.5-33.9' iron healed hairline fracture horizontal, 30 and 75 degrees, 35.2-35.4' iron stained interval, 35.5' iron stained slickensided fracture at 35 degrees, 36.0-39.7' iron healed hairline fractures most healed various orientations, 39.7' iron stained fracture nearly vertical 0.5' long at 80 degrees, 40.2'; 40.4' iron stain fracture at 30-40 degrees, 40.4-41.4' iron stained healed fractures (hairline) rare, some fine laminations, possible carbonaceous matter at 36.8-41.0', calcareous nodule at 39.2', claystone becomes siltier in lower 5 feet of interval, moist to slightly moist. 9% sand, 9% silt, 82% clay.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT)	5946.18	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER
NORTH: 748631	AREA 903 PAD	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER M8	BOREHOLE DIAMETER (IN)	8.25	DATE DRILLED:	05/27/93	

REMARKS: ABANDONED BOREHOLE

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%		5906	40				
					5905	41				
										41.4-42.1 ft. No recovery for this interval.
					5904	42			CLAYSTONE	42.1-44.1 ft. Claystone with some silt and trace sand, dark greenish gray (5GY4/1), dense, non-friable, interval very rubbly, no fractures visible, slightly moist. 4% sand, 14% silt, 82% clay.
					5903	43				
					5902	44				44.1-47.6 ft No recovery for this interval
				2.00 /5.50	5901	45				
					5900	46				
					5899	47			CLAYSTONE	47.6-48.0 ft. Claystone as described above.
					5898	48			CLAYEY SILTSTONE	48.0-48.6 ft Clayey Siltstone with trace sand, light olive gray (5Y5/2), sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, quartz, trace mica, trace mafics, dense, well cemented with siliceous cement, cross-laminations, fracture at 65 degrees, not healed. 3% sand, 53% silt, 44% clay.
					5897	49			SILTY CLAYSTONE	48.6-50.4 ft Silty Claystone with some sand interbedded with clayey siltstone with some sand, claystone is olive gray (5Y3/2), siltstone is light olive gray (5Y5/2), sand is very fine-
						50				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 149.8	GROUND ELEVATION (FT): 5946.18	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	748631	AREA: 903 PAD	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21293
EAST	2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 8.25	DATE DRILLED: 05/27/93	
REMARKS: ABANDONED BOREHOLE					

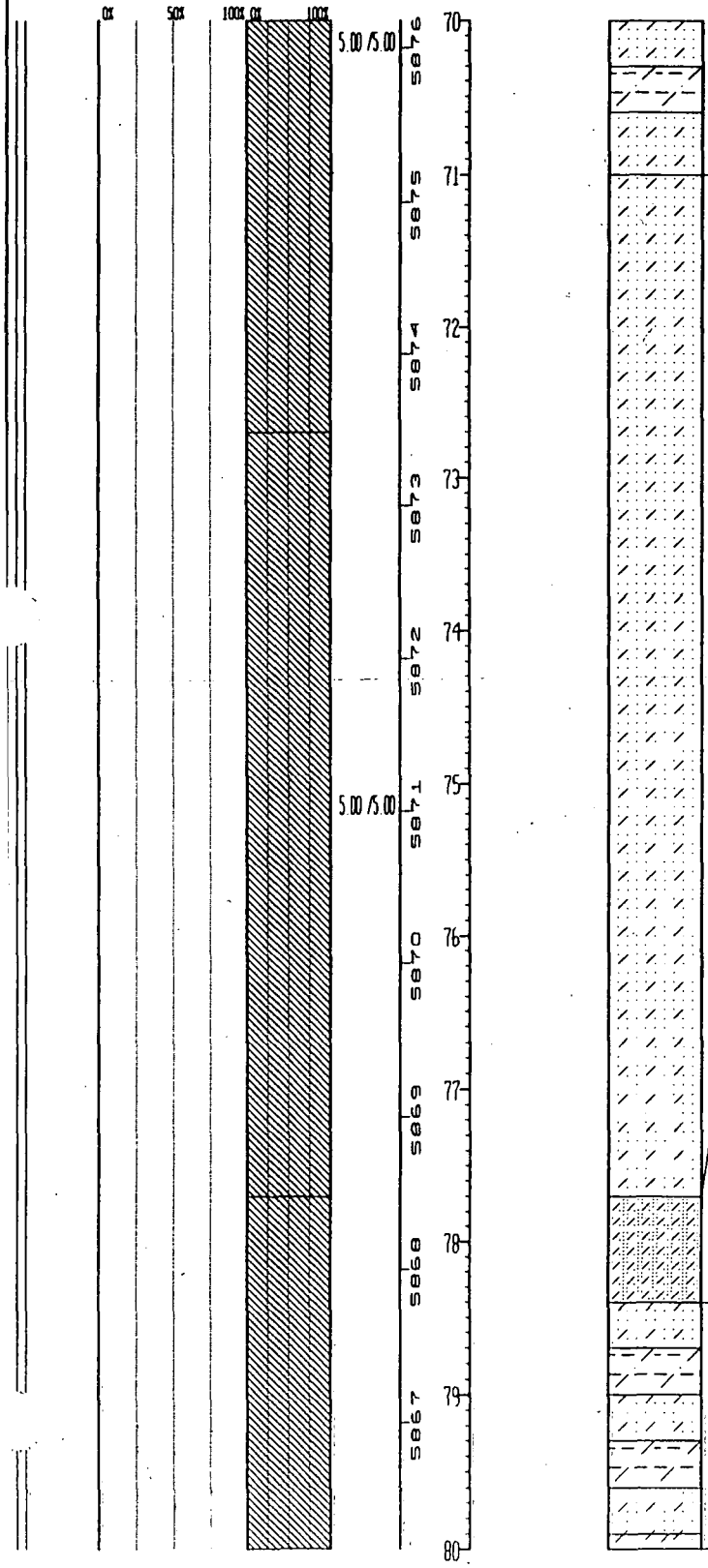
CHEMICAL SAMPL / GRADATIONAL SA.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	5.10 /5.10	5896	50				grained, very well sorted, sub-angular to sub-rounded, predominately quartz, trace mica and mafics, less than 2% porosity, well cemented with calcareous cement, non-friable to slightly friable, beds less than 0.1' thick, trace soft sediment deformation, slump feature, slightly carbonaceous, iron staining is moderate yellowish brown (10YR5/4), slightly moist. Silty Claystone: 8% sand, 28% silt, 64% clay. Clayey Siltstone: 9% sand, 78% silt, 13% clay
					5895	51				
					5894	52			SILTY SANDSTONE	50.4-59.9 ft. Interbedded Silty Sandstone and Silty Claystone with increasing Sandy Siltstone near lower portion of interval. Silty Sandstone with trace clay: light olive gray (5Y5/2) (5Y6/1), sand is very fine-grained, very well sorted, sub-angular to sub-rounded, predominately quartz (some frosted grains), some quartzite, some mafics, trace mica and meat-morphics, 10-12% porosity, moderately friable, massive to finely laminated (some beds less than 0.3' thick), laminations are horizontal to angles less than 25 degree some bioturbation visible, some slump features, trace wavy laminations, small fault at 60 degrees at 63.3', sand filled burrows at 53.6' and 59.0', slightly moist to moist, bed-size 0.1-0.3' thick, fractures at 52.5' 35 degree slicken-sides, at 53.8' 40 degrees slickensides, at 54.9' 35 degree several possible fractures, at 56.1' 40 degrees, claystone nodule present at 56.4' 60% sand, 36% silt, 4% clay.
					5893	53				
					5892	54				
				5.00 /5.00	5891	55				Part 1 of 3 50.4-71.0 ft. Interbedded Silty Sandstone, Silty Claystone, and Sandy Siltstone, see descriptions below and at 65.2 ft.
					5890	56				
					5889	57				
					5888	58				
					5887	59				
						60				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 148 8	GROUND ELEVATION (FT): 5946.18	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21293	
EAST: 2085968	LOCATOR NUMBER M8	BOREHOLE DIAMETER (IN): 8.25	DATE DRILLED: 05/27/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMP / GRADATIONAL S.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	5.00/5.00	5886	60			SILTY SANDSTONE:	59.9-65.2 ft. Interbedded Silty Sandstone and Silty Claystone, some Sandy Siltstone, higher percentage of claystone in this interval, laminae less than 0.05' thick, some beds less than 0.15' thick. Silty Claystone with some trace sand: olive gray (5Y3/2), dense, non-friable, slightly carbonaceous, very small claystone "rip-up" clasts in silty sandstone interval at 60.1', slump feature. 2% sand, 34% silt, 64% clay.
					5885	61				
					5884	62				
					5883	63				
					5882	64				
				5.00/5.00	5881	65			SILTY CLAYSTONE:	65.2-69.4 ft. Interbedded Silty Claystone and Silty Sandstone, some Sandy Siltstone, beds 0.1-0.5' thick. Sandy Siltstone with some clay: light olive gray (5Y5/2) to olive gray (5Y3/2), sand is very fine-grained with trace fine-grained, very well sorted, sub-angular to sub-rounded, predominately quartz with some mafics and quartzite, trace mica, 5% porosity, moderately friable, slightly moist to moist. 22% sand, 70% silt, 8% clay.
					5880	66				
					5879	67				
					5878	68				
					5877	69			SILTY SANDSTONE:	50.4-71.0 ft. Interbedded Silty Sandstone, Silty Claystone, and Sandy Siltstone as described above
						70				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT)	5946.18	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH:	748631	AREA: 903 PAD	CASING DIAMETER (IN):		GEOLOGIST	J DUBOIS	21293
EAST:	2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	8.25	DATE DRILLED:	05/27/93	
REMARKS:	ABANDONED BOREHOLE						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / SAMPLE NUMBER / SAMPLE GRAIN SIZE (0% 50% 100%) / PERCENT RECOVERY (0% 100%) / RECOVERY/INTERVAL / DATUM (FT) / DEPTH (FT) / WELL OR PIEZOMETER CONSTRUCTION / LITHOLOGY / UNIFIED SOILS CLASSIFICATION OR ROCK TYPE / DESCRIPTION



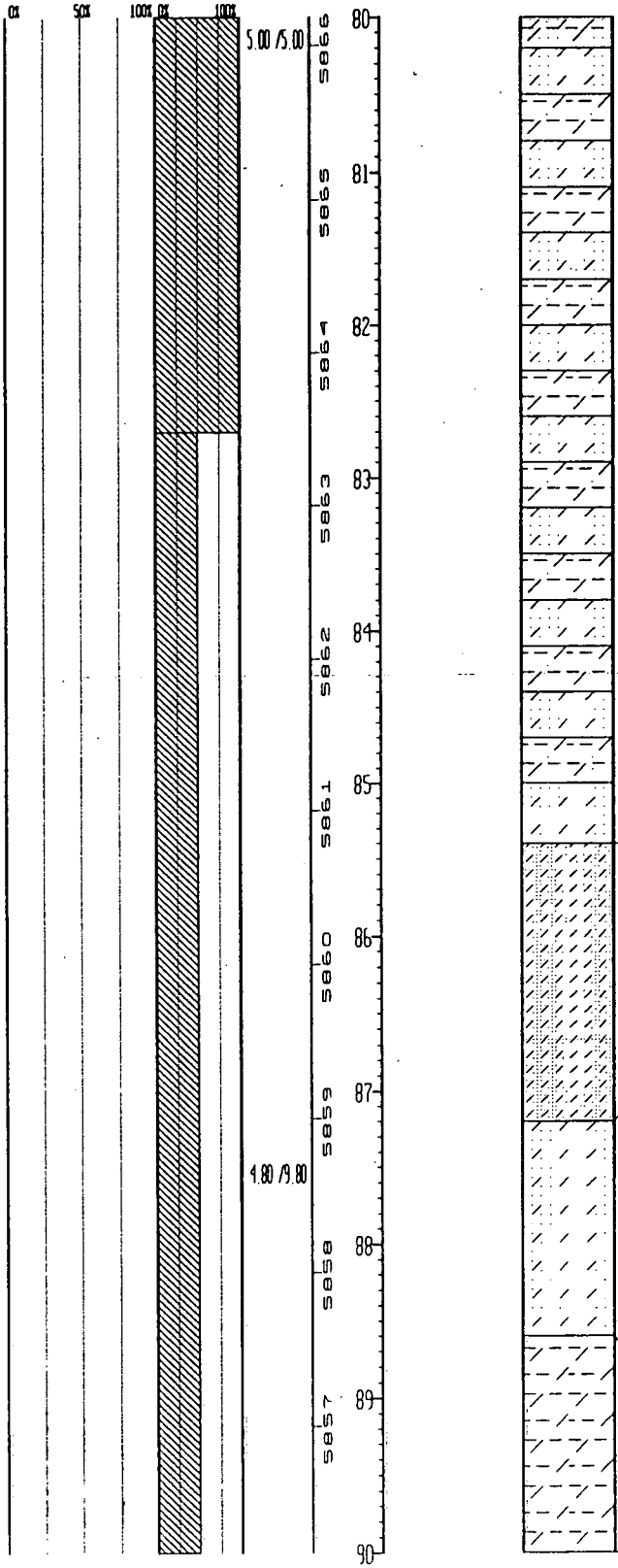
SILTY SANDSTONE: 71.0-77.7 ft.
Very Silty Sandstone with some clay, olive gray (5Y4/1), some fine laminations dark gray (N3), sand is very fine-grained with some fine-grained, trace medium-grained, well sorted, sub-angular to sub-rounded, trace rounded, predominately quartz, some mafics, trace quartzite, mica, feldspar, some frosted grains (quartz), 12-15% porosity, trace siliceous cement, moderately friable to highly friable massive to finely laminated bedding, horizontal to slightly inclined at 10-15 degrees, possible slump feature at 73.2', trace very small burrows at 73.2', some claystone beds present (less than 0.02' thick), slightly moist to moist. 47% sand, 45% silt, 8% clay.

SANDY SILTSTONE 77.7-78.4 ft
Sandy Siltstone with some clay, light olive gray (5Y6/1), olive gray (5Y4/1) with fine laminations grayish black (N2), very fine-grained, trace medium- and fine-grained, very well sorted, sub-angular to sub-rounded, predominantly quartz, some mafics, trace quartzite, 5-8% porosity, moderately friable, finely laminated, slightly carbonaceous, laminations horizontal to 50 degrees, bioturbation, slightly moist. 30% sand, 63% silt, 7% clay.

SILTY SANDSTONE 78.4-85.4 ft
Interbedded Silty Sandstone with trace clay, Silty Claystone with trace sand, and Clayey Siltstone with some sand, olive gray (5Y4/1), light olive gray (5Y6/1), grayish orange (10YR7/4) for claystone nodules
Silty Sandstone with trace clay sand is very fine-grained, some fine-grained, well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, mafics, trace mica

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 148.8	GROUND ELEVATION (FT): 5946.18	PROJECT NUMBER 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN):	GEOLOGIST J DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 8.25	DATE DRILLED 05/27/93	
REMARKS: ABANDONED BOREHOLE				

CHEMICAL SAMPLE
GRADATIONAL SAM
SAMPLE NUMBER
SAMPLE GRAIN SIZE (0% 50% 100%)
PERCENT RECOVERY (0% 100%)
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



Silty Claystone with trace sand: dense, non-friable, beds range 0.1'-0.6' thick
Clayey Siltstone with some sand: sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics. 5-8% pososity in sandstone and siltstones, slightly to moderately friable, horizontal to sub-horizontal bedding, beds range from 0.1-0.8' thick, soft sediment deformation at 79.9', bioturbation at 82.1', 83.0', fault at 81.6' of 55 degrees, claystone nodules at 78.7', 81.6', 83.6', calcareous cemented siltstone (less than 0.05') at 80.5', iron stained sandstone at 83.9', 84.1', 84.5-85.6', stain dark yellowish orange (10YR6/6), slightly moist.
Silty Sandstone 55% sand, 40% silt, 5% clay.
Silty Claystone 6% sand, 19% silt, 75% clay.
Clayey Siltstone 14% sand, 47% silt, 39% clay.

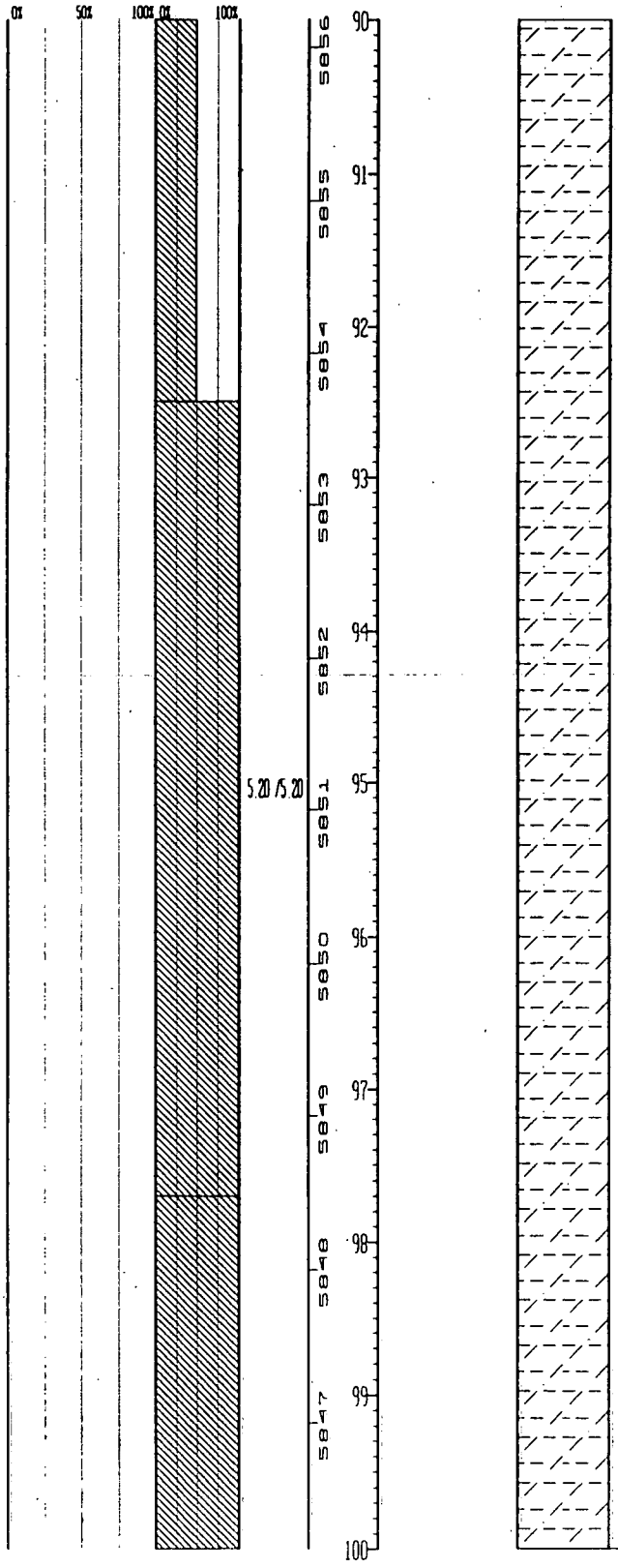
SANDY SILTSTONE 85.4-87.2 ft
Sandy Siltstone, light olive gray (5Y6/1), sand is very fine-grained, trace fine- and medium-grained, well sorted, sub-angular to sub-rounded, consists of quartz, trace mafics 0% porosity, well cemented with calcareous cement, non-friable to slightly friable, horizontal to sub-horizontal laminations
No sieve analysis performed

SILTY SANDSTONE 87.2-88.6 ft
Silty Sandstone with trace clay, yellowish gray (5Y7/2), sand is medium-grained with some fine-grained, trace very fine-grained, well sorted, sub-rounded to rounded, some sub-angular, consists of quartz, some quartzite, trace mafics, abundant frosted quartz grains, trace iron stained grains, massive to very finely laminated bedding, moist to saturated, 15% porosity.
78% sand, 20% silt, 2% clay

SILTY CLAYSTONE 88.6-100.5 ft
Silty Claystone with trace sand, some interbeds of clayey siltstones (less than 0.3' thick), olive gray (5Y3/2), light olive gray (5Y5/2), dense, non-friable, possible burrow at 93.4', groysih orange (10YR7/4) claystone nodules scattered throughout at 95.8', 96.3', 98.2', 99.5-100.0', slightly

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT):	5996.18	PROJECT NUMBER:	012 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN):		GEOLOGIST	J DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	8.25	DATE DRILLED:	05/27/93	
REMARKS: ABANDONED BOREHOLE						

CHEMICAL SAMPLE
GRADATIONAL SAMPLE
DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE
PERCENT RECOVERY
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



carbonaceous at 98.8', slightly moist, fracture at 96.7' of 60 degrees
2% sand, 25% silt, 73% clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT):	5946.18	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN):		GEOLOGIST:	J. DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	8.25	DATE DRILLED:	05/27/93	
REMARKS: ABANDONED BOREHOLE						

CHEMICAL SAMPLE / GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	5.00 /5.00	5946	100			CLAYEY SILTSTONE	100.5-102.6 ft. Clayey Siltstone with some sand, light olive gray (5Y5/2), sand is very fine-grained with some fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, trace mafics, some quartzite, 5-7% porosity, slightly friable, massive bedding to some fine laminations in upper 1.8', claystone lense at 101.6' with claystone nodules, grayish orange (10YR7/4), plant fragments along claystone partings, slightly moist. 14% sand, 60% silt, 26% clay
					5945	101				
					5944	102			SILTY CLAYSTONE	102.6-103.7 ft. Silty Claystone with some sand, olive gray (5Y3/2), claystone nodules grayish orange (10YR7/4), dense, non-friable, coalified plant fragments along possible bedding planes, becomes siltier near base, slightly moist. 8% sand, 37% silt, 55% clay
					5943	103			SILTY SANDSTONE	103.7-106.0 ft. Silty Sandstone with trace clay, light olive gray (5Y6/1), (5Y5/2), sand is very fine- to fine-grained with some medium grained, moderately sorted, sub-angular to sub-rounded, trace rounded, some frosted grains, consists of quartz and quartzite, some mafics, trace mica, feldspar, very fine laminations in upper 0.7', to massive for 0.4', then horizontal to sub-horizontal laminations to base, slightly carbonaceous at 104.2' and 105.4-105.8', slight iron stained along carbonaceous interval, 5-7% porosity, slightly friable moist. 70% sand, 25% silt, 5% clay
					5942	104				
				5.00 /5.00	5941	105			SILTY CLAYSTONE	106.0-107.5 ft. Silty Claystone with trace sand, olive gray (5Y3/2), olive black (5Y2/1), dense, non-friable, claystone nodules in upper 0.6', grayish orange (10YR7/4), some thin beds of sandy siltstones, contacts show soft sediment deformation/ slumping, slightly moist. 3% sand, 24% silt, 73% clay
					5940	106				
					5939	107			SILTY SANDSTONE	107.5-116.5 ft. Interbedded Silty Sandstone with some clay and Clayey Sandstone with some silt. Silty Sandstone with some clay: sand is very fine-grained with some fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics, mica. Clayey Sandstone with some silt: sand is very fine-grained with some fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some mafics, quartzite, trace mica. Interval becomes sandy siltstone near lower portion (112.0-119.0'), olive gray (5Y4/1), light olive gray (5Y6/1), 2-7% porosity, slightly friable, inclined cross-laminations, sub-horizontal to 50 degrees, increased laminations between
					5938	108				
					5937	109				
				4.30 /4.30		110				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT): 5946.18	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 8.25	DATE DRILLED: 05/27/93	
REMARKS: ABANDONED BOREHOLE				

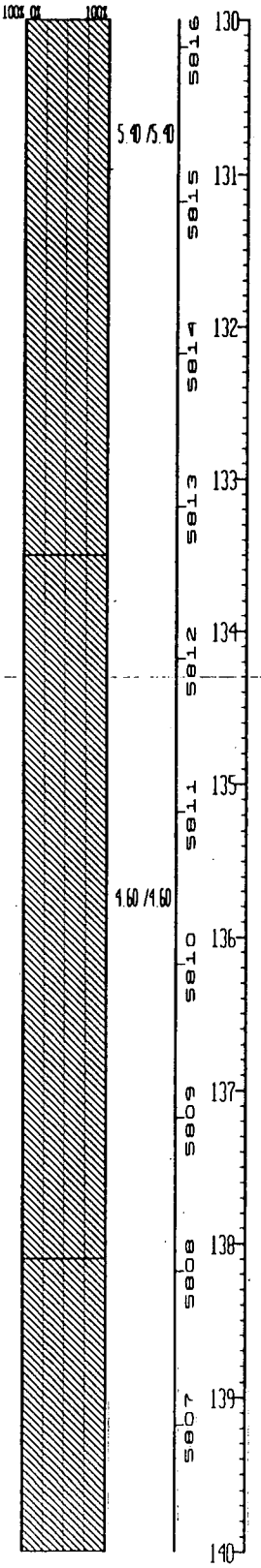
CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%		5936	110				113.7-114.5', claystone nodules, pale yellowish orange (10YR8/6) at 108.8', bioturbation at 111.2-112.0', slump feature in claystone at 109.0', carbonaceous plant fragments at 116.0, 118.8', some small lenses of claystone (less than 0.5') are present throughout, slightly moist Silty Sandstone: 60% sand, 24% silt, 16% clay Clayey Sandstone: 56% sand, 20% silt, 24% clay
					5935	111				
					5934	112				
					5933	113				
					5932	114				
				4.50 /5.70	5931	115				
					5930	116				
					5929	117				116.5-117.7 ft. No recovery for this interval
					5928	118			SILTY SANDSTONE	117.7-119.0 ft. Silty Sandstone interbedded with Clayey Sandstone as described above
					5927	119			SILTY SANDSTONE	119.0-124.7 ft. Silty Sandstone with trace clay, light olive gray (5Y6/1), olive gray (5Y4/1), olive black (5Y2/1), carbonaceous material, grayish black (N2), sand is very fine-grained to fine-grainedsome medium-grained, moderately sorted, sub-
						120				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT): 5946.18	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 8.25	DATE DRILLED: 05/27/93	
REMARKS: ABANDONED BOREHOLE				

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	4.70 /4.70	5826	120				angular to rounded, consists of quartz, some quartzite, trace mafics, 5-10% porosity, slightly friable, predominantly fine laminations, horizontal to sub-horizontal, cross-laminations present at 122.1', 123.8', 124.3', bioturbated at 120.0-120.6', carbonaceous material along laminations at 119.0-122.4', lower 2' of interval becomes more clay/silt bearing, few claystone beds (less than 0.15' thick) present, slightly moist 79% sand, 17% silt, 4% clay.
					5825	121				
					5824	122				
					5823	123				
					5822	124				
				5.70 /5.70	5821	125			SILTY CLAYSTONE	124.7-132.4 ft Silty Claystone with some sand, olive gray (5Y4/1), light olive gray (5Y6/1), claystone nodules, grayish orange (10YR7/4), dense, non-friable, predominantly silty claystone with small lenses/laminae of sandy siltstone/clayey sandstone, laminations horizontal to inclinations up to 30 degrees at 130.0', carbonaceous material at 129.4', plant imprints at 126.4', claystone nodules at 125.7', 128.0', 132.2', burrow at 125.1', slightly moist to moist. 11% sand, 13% silt, 76% clay.
					5820	126				
					5819	127				
					5818	128				
					5817	129				
						130				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT): 5946.18	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748631	AREA: 903 PAD	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 8.25	DATE DRILLED: 05/27/93	
REMARKS: ABANDONED BOREHOLE				

DEPTH | CHEMICAL SAMPLE | GRADATIONAL SA | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM(FT) | DEPTH(FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



CLAYEY SANDSTONE 132.4-138.9 ft.

Clayey Sandstone with some silt, olive gray (5Y4/1), olive black (5Y2/1), claystone nodules are grayish orange (10YR7/4), sand is very fine-grained, trace fine-grained very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, mafics, 5% porosity, slightly friable, massive bedding, some fine laminations at 133.0-133.5', some claystone beds less than 0.2' thick present, claystone nodule throughout, bioturbated at 134.8'-135.0', slightly carbonaceous, fractures at 138.2', 20 degree slickensides, and at 138.4' 20 degree, slightly moist. 58% sand, 17% silt, 25% clay.

SANDSTONE 138.9-144.5 ft.

Sandstone with some silt, trace clay, light olive gray (5Y5/2), olive gray (5Y3/2), sand is fine-medium grained, trace very fine- and coarse-grained, moderately sorted, sub rounded to rounded, some sub-angular, consists of quartz

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148.8	GROUND ELEVATION (FT): 5946.18	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH 748631	AREA: 903 PAD	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21293
EAST: 2085968	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 8.25	DATE DRILLED 05/27/93	

REMARKS: ABANDONED BOREHOLE

CHEMICAL SAMPLE / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%		5806	140				(many frosted grains), some mafics, quartzite, trace mica, rock fragments, 15-17% porosity, moderately to highly friable, finely laminated, some inclined up to 30-35 degrees slightly carbonaceous along laminations, carbonaceous material is grayish black (N2) at 140.2', 141.6-144.3', becomes siltier in lower foot of interval, claystone nodules at 139.2-139.3', 140.5-141.1', chert at 144.3-144.5', saturated. 90% sand, 9% silt, 1% clay.
				6.40 /6.40	5805	141				
					5804	142				
					5803	143				
					5802	144				
					5801	145				SILTY CLAYSTONE 144.5-148.8 ft Silty Claystone with some sand, olive gray (5Y4/1), dense, non-friable, moist, fractured at 147.6-148.8' 70 degrees, 25 degrees, slickensides. 7% sand, 28% silt, 65% clay.
					5800	146				
				4.30 /4.30	5799	147				
					5798	148				
					5797	149				total depth at 148.8 ft
						150				

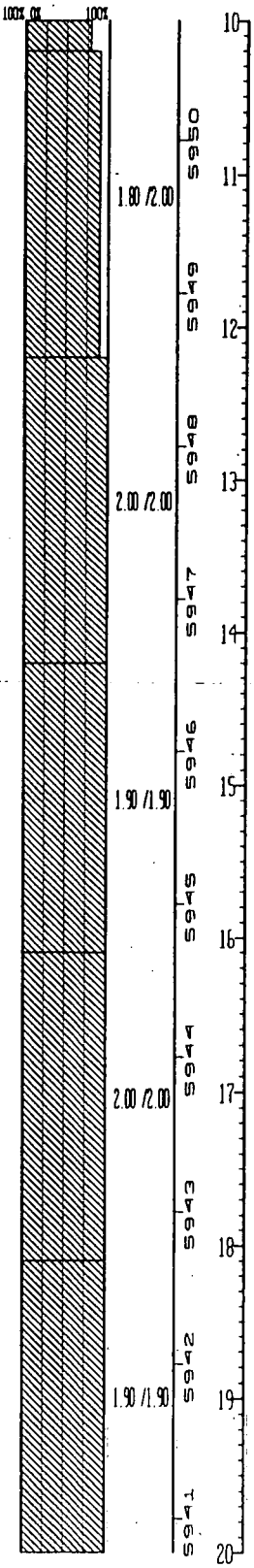
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749090	AREA: 903 LTP	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS		
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93	21393	
REMARKS: ABANDONED BOREHOLE					

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%	0.00/0.90	5960	0				0.0-0.9 ft Top soil, start of boring.
			1.10/1.30	5959	1			GM	0.9-2.0 ft. Sandy Gravel as described below.
									2.0-2.2 ft. No recovery for this interval.
			1.70/1.70	5958	2			GM	2.2-3.9 ft Sandy Gravel with some silt and clay, grayish orange (10YR7/4) to light brown (5YR5/6), gravel maximum size 0.2', average size 0.035', angular to sub-rounded, consists of quartzite, rock fragments, granite, sand is fine- to coarse-grained, angular to sub-rounded, consists of quartzite, rock fragments, schist, gniess, some mica, quartz, trace feldspar, some broken rock fragments are cobble size, well graded low plasticity on fines fraction, caliche zone (cement) upper 0.7' of interval, 3.2-3.7' some caliche throughout interval, moist. 61% gravel, 29% sand, 3% silt, 7% clay
				5957	3				
			1.60/2.30	5956	4			GW	3.9-5.5 ft Sandy Gravel with some silt and clay, light brown (5YR5/6), dark yellowish brown (10YR4/2), gravel maximum size 0.21', broken rock fragments, average size 0.05', angular to sub-rounded, consists of granite, meta morphics, trace quartz, rock fragments, sand is fine- to coarse-grained, sub-angular to sub-rounded, trace angular, rounded, consists of quartz, quartzite, some meta morphics, granites, trace rock fragments, well graded, low plasticity on fines fraction, caliche throughout interval, slightly moist. 58% gravel, 36% sand, 2% silt, 4% clay
				5955	5				
									5.5-6.2 ft No recovery for this interval.
				5954	6			GW	6.2-8.0 ft Sandy Gravel as described above
			1.80/2.10	5953	7				
									8.0-8.3 ft No recover for this interval.
				5952	8			GC	8.3-8.6 ft Clayey Gravel with some sand, dark yellowish orange (10YR 6/6), gravel maximum size 0.08', average size 0.08', sub-angular, schist, sand is medium- to fine-grained, trace coarse, poorly graded, consists of quartz, some meta morphic trace quartzite, rock fragments, low to medium plasticity, moist to saturated. 47% gravel, 16% sand, 20% silt, 17% clay. Top of bedrock at 8.6 ft.
			1.50/1.90	5951	9			SILTY CLAYSTONE	8.6-9.8 ft Silty Claystone as described below.
					10				9.8-10.2 ft No recovery for this interval

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 012 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393	
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE
GRADATIONAL SA
SAMPLE NUMBER
DEPTH

SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



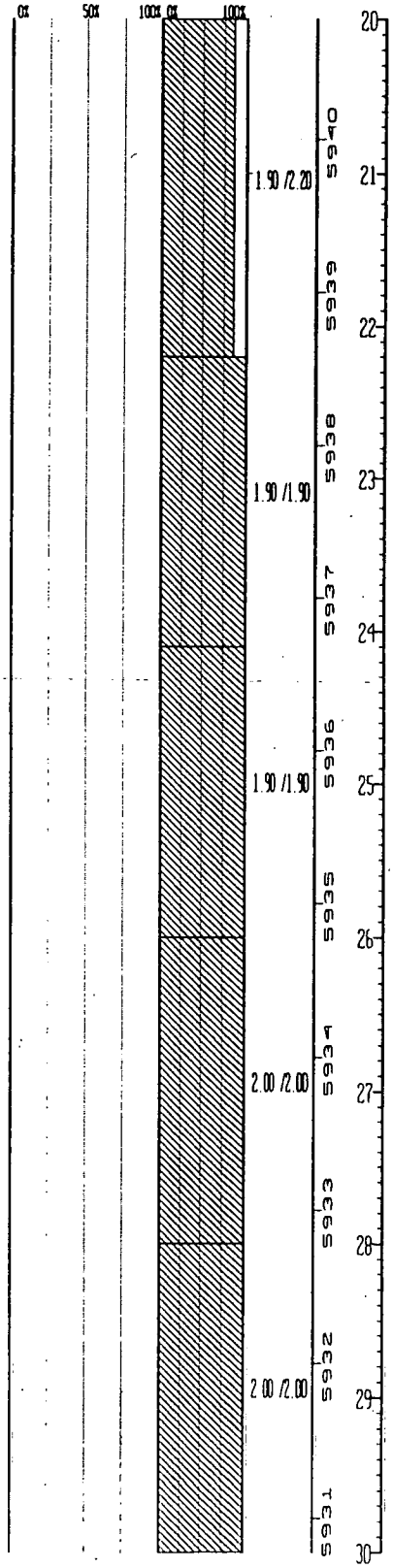
SILTY CLAYSTONE: 10.2-12.0 ft.
Silty Claystone with trace sand, light olive gray (5Y6/1) (5Y5/2), iron stain, dark yellowish brown (10YR4/2), dense, non-friable, slight to moderate iron staining/mottled appearance, caliche nodules at 9.3', caliche at 12.2-12.4' (rubble zone with alluvium/bedrock) and 10.2-10.7' (rubble zone), top of bedrock may be at 12.5', zones 10.2-10.7' and 12.2-12.5' appear to contain alluvium and bedrock rubble, a possible landslide or slump block with bedrock sandstone at 12.5', very moist.
4% sand, 43% silt, 53% clay

12.0-12.2 ft. No recovery for this interval.

SILTY CLAYSTONE: 12.2-12.5 ft. Silty Claystone as described above.

SILTY SANDSTONE: 12.5-21.9 ft.
Silty Sandstone with some clay with interbeds of Clayey Sandstone and Claystone, light olive gray (5Y6/1), dusky yellow (5Y6/4), heavy iron stain is dark yellowish orange (10YR6/6).
Silty Sandstone: sand is very fine-to fine-grained, some medium-grained, well sorted, sub-angular to sub-rounded, some rounded, consists of quartz, some mafics, trace mica, quartzite, many frosted grains of quartz.
Clayey Sandstone: sand is very fine-grained with some fine-grained, very well sorted, sub-rounded to rounded, consists of quartz, some quartzite, trace mafics, mica.
5-12% porosity, moderately to highly friable, massive to finely laminated bedding, iron stain is slight to heavy at 25.3-28.0', fracture at 23.8', 25 degrees heavy iron staining along fracture, not healed, leaf imprints at 29.0' and 29.5', small lense of caliche at 15.0', blebs at 15.4', 16.7', and 18.9', trace at 20.8', moist to saturated.
62% sand, 25% silt, 13% clay

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 012 BEDROCK	LOG OF BORING NUMBER
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93	
REMARKS: ABANDONED BOREHOLE				



21.9-22.2 ft. No recovery for this interval

SILTY SANDSTONE: 22.2-39.2 ft. Silty Sandstone as described above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN)	GEOLOGIST J DUBOIS	21393	
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPL GRADATIONAL SA DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE 0% 50% 100%

PERCENT RECOVERY 0% 100%

RECOVERY/INTERVAL: 2.00 /2.00; 3.00 /3.00; 3.50 /3.50

DATUM (FT): 5930, 5929, 5928, 5927, 5926, 5925, 5924, 5923, 5922, 5921

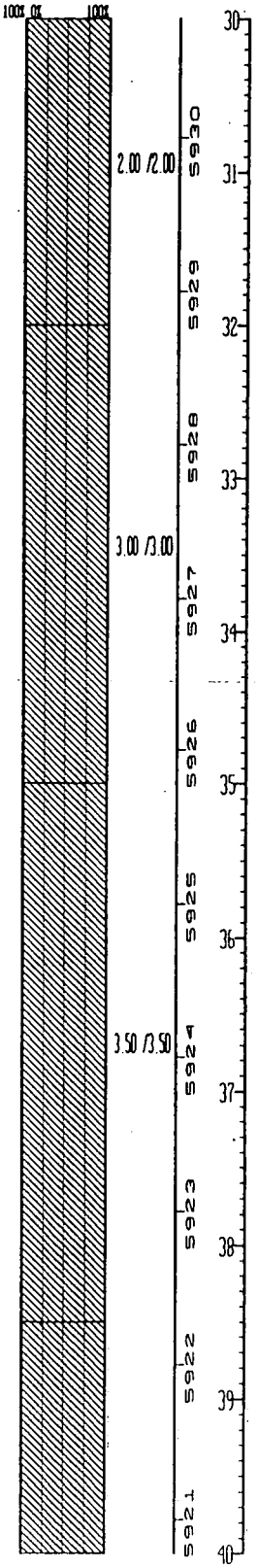
DEPTH (FT): 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

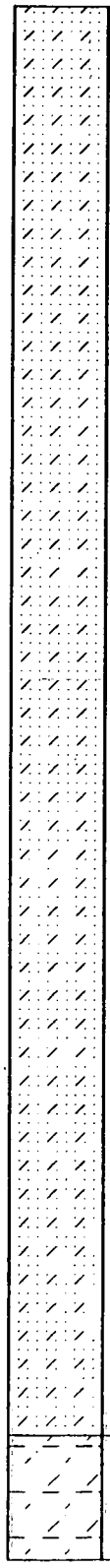
WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION





CLAYEY SILTSTONE 39.2-42.4 ft

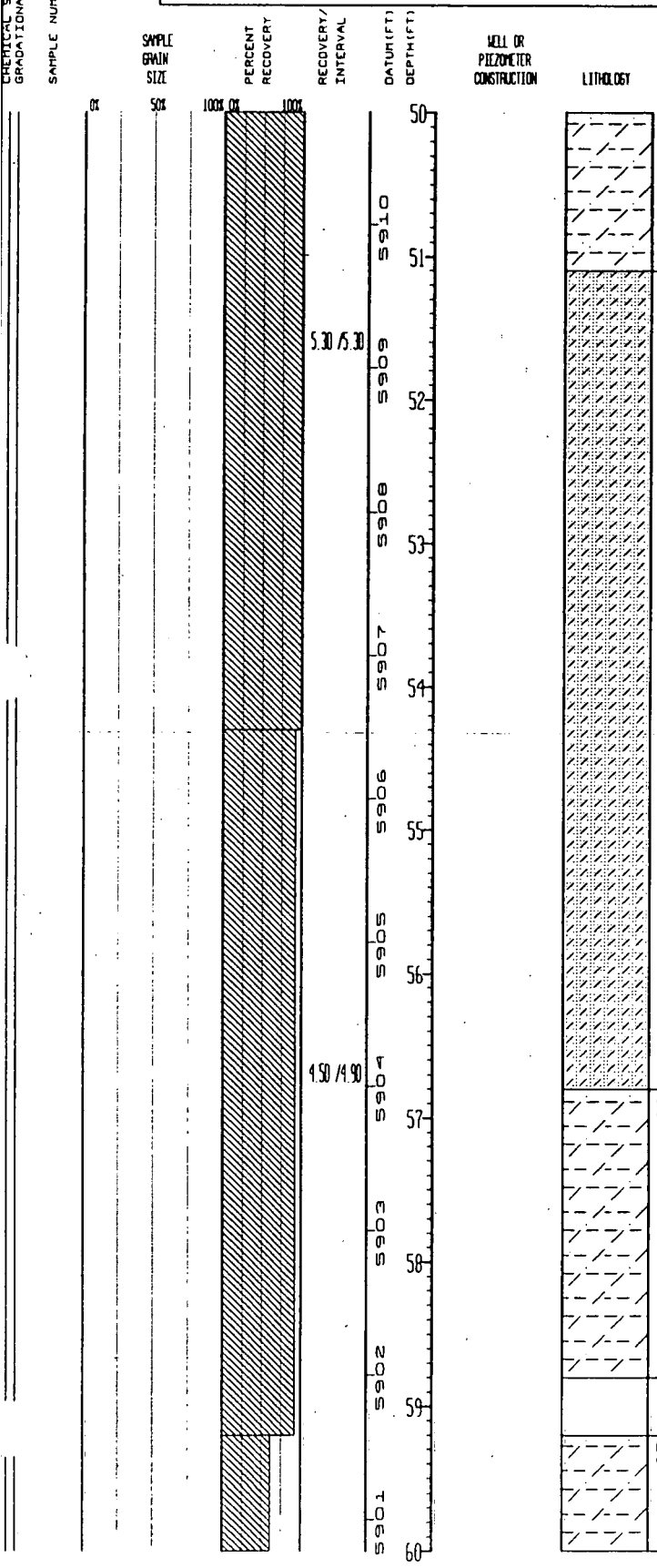
Clayey Siltstone with some sand, olive black (5Y2/1), dark yellowish orange (10YR6/6), sand is very fine-grained, trace

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER
NORTH:	749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393
EAST:	2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93	

REMARKS: ABANDONED BOREHOLE

DEPTH	CHEMICAL SAMPLE / GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					3.30 /3.30	5920	40				Fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, trace mafics, 0-3% porosity, slightly friable, massive bedding, some plant fragments at 40.8-42.4' few thin sandy claystone beds less than 0.1' thick, some iron staining present to 40.9', saturated, claystone beds are dry. 11% sand, 49% silt, 40% clay.
						5919	41				
						5918	42				
					3.30 /3.30	5917	43			SANDY SILTSTONE	42.4-45.1 ft. Sandy Siltstone with some clay, light olive gray (5Y5/2), olive black (5Y2/1), grayish orange (10YR7/4) for claystone nodules, sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz with some quartzite, trace mafics, 3-5% porosity, slightly friable, massive bedding, some thin sandy claystone beds less than 0.1' thick, rare carbonaceous material, dry. 32% sand, 44% silt, 24% clay.
						5916	44				
						5915	45				45.1-47.0 ft. No recovery for this interval.
					0.00 /1.90	5914	46				
						5913	47			SILTY CLAYSTONE	47.0-51.1 ft. Silty Claystone with trace sand, olive gray (5Y3/2), dense, non-friable, fracture at 50.8' 65 degrees, slickensides, dry 5% sand, 24% silt, 71% clay
					2.00 /2.00	5912	48				
						5911	49				
							50				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH 749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393
EAST 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93	
REMARKS: ABANDONED BOREHOLE				



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SANDY SILTSTONE	51.1-56.8 ft. Sandy Siltstone with some clay, olive gray (5Y4/1), light olive gray (5Y5/2), claystone nodules are grayish orange (10YR7/4), sand is very fine-grained with abundant fine-grained, trace medium-grained, well sorted, sub-angular to sub-rounded, consists of quartz, quartzite, trace mafics, 3-7% porosity, slightly friable, finely laminated, some bioturbation, slump features, soft sediment deformation, some wavy laminations, fractures at 51.2' 20 degrees, small scale, 53.5' 65 degrees, 54.7' 40 degrees, slump/slide plane, 56.1' 40 degrees, slump/slide plane, some claystone nodules are present, moist. 39% sand, 55% silt, 6% clay.
SILTY CLAYSTONE	56.8-58.8 ft. Silty Claystone as described below.
	58.8-59.2 ft No recovery for this interval
SILTY CLAYSTONE	59.2-62.2 ft. Silty Claystone with some sand, dusky yellow green (5GY5/2), olive black (5Y2/1), grayish black (N2), dense, non-friable

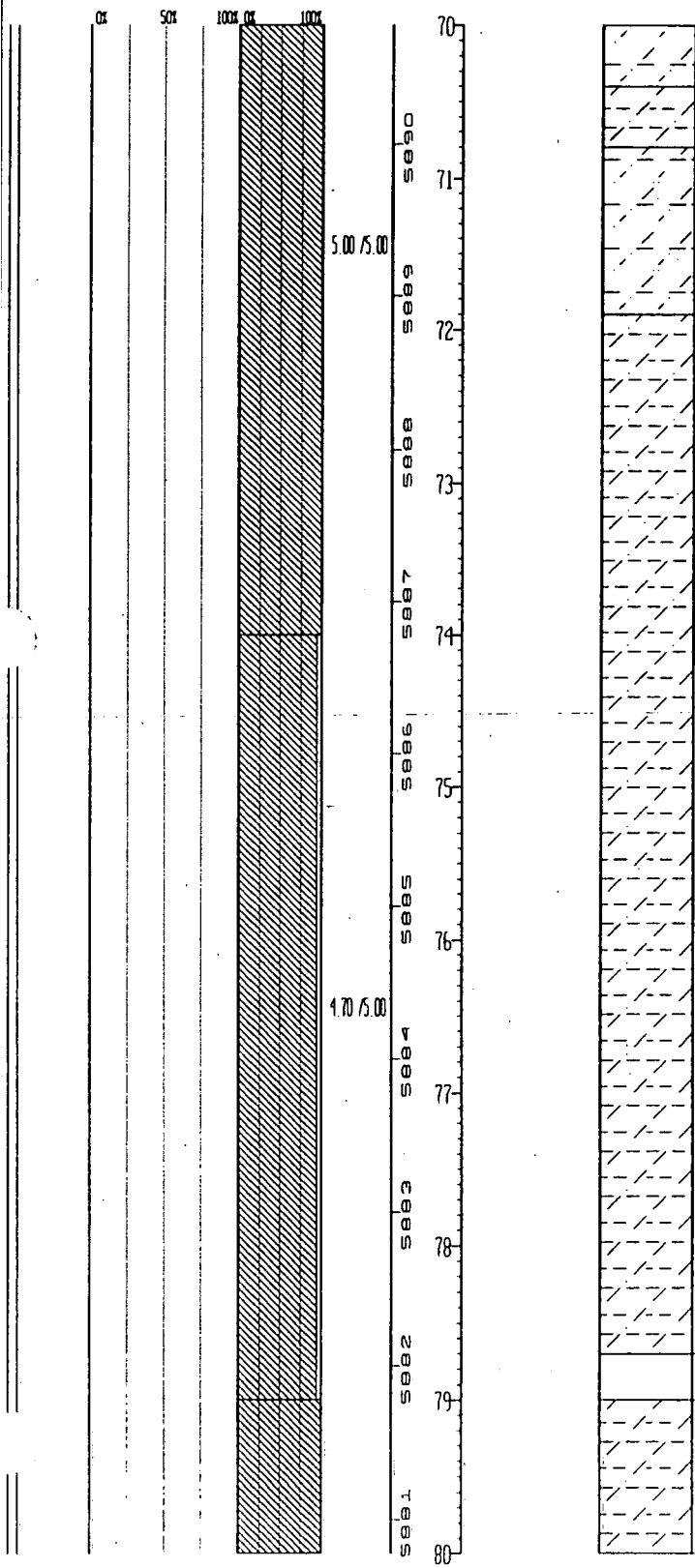
STATE PLANE COORDINATE	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393	
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPL GRADATIONAL S DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

Recovery/Interval	Depth (ft)	Unified Soils Classification or Rock Type	Description
	60		to slightly friable, moderately carbonaceous, especially at 60.9-66.1', rubbly, crumbles easily at 64.1-66.1', fractures at 57.5' 50 degrees, slickensides, 61.0' 80 degees, slickensides, and 59.9' 65 degrees, moist. 21% sand, 24% silt, 55% clay.
3.00/4.90	61, 62		
	62.2-64.1 ft. No recovery for this interval.		
	63, 64		
	64	SILTY CLAYSTONE	64.1-66.1 ft Silty Claystone as described above.
	65, 66		
3.50/4.90	66	CLAYEY SILTSTONE	66.1-67.6 ft. Clayey Siltstone with trace sand, light olive gray (5Y5/2) (5Y6/1), olive gray (5Y4/1), 0-5% porosity, slightly friable fine laminations, mottled, minor carbonaceous material in upper foot, very crumbly, slightly friable, not bedded silty claystone/clayey siltstone at 66.1-67.6', dry to slightly moist. 4% sand, 72% silt, 24% clay.
	67, 68		67.6-69.0 ft. No recovery for this interval
	69	CLAYEY SILTSTONE	69.0-70.4 ft. Clayey Siltstone as described above.
	70		

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21393	
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE / DEPTH
GRADATIONAL
SAMPLE NUMBER
SAMPLE GRAIN SIZE 0% 50% 100%
PERCENT RECOVERY 0% 100%
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



SILTY CLAYSTONE: 70.4-70.8 ft.
Silty Claystone with trace sand, olive gray (5Y4/1), dense, non-friable.
3% sand, 39% silt, 58% clay

CLAYEY SILTSTONE: 70.8-71.9 ft.
Clayey Siltstone with some sand, olive gray (5Y4/1), dense, very well cemented with calcareous cement, non-friable, fine cross lamination sets, inclined up to 50 degrees.
10% sand, 72% silt, 18% clay

SILTY CLAYSTONE: 71.9-78.7 ft. Silty Claystone as described below.

78.7-79.0 ft No recovery for this interval.

SILTY CLAYSTONE: 79.0-94.0 ft.
Silty Claystone with trace sand, olive gray (5Y3/2) (5Y4/1), dusky yellow (5Y6/4), olive black (5Y2/1), dense at 71.9-74.2', indurated, crumbly at 74.2-94.0', non-friable to slightly friable, fine laminations, horizontal to sub-

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393	
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE / GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%	5.00 /5.00	5880 5879 5878 5877	80 81 82 83 84				horizontal, few claystone nodules dusky yellow (5Y6/4) at 71.9-76.4', carbonaceous material along bedding breaks at 71.9-74.6', moist, possible biofeeding structures at 75.4', 76.7', fractures at 75.6' 70 degrees (very fractured zone), slickensides, 76.9' 70 degrees as above, 89.5' 80 degrees, slickensides, 92.2-93.0' 70 degrees, slickensides. 4% sand, 24% silt, 72% clay.
				5.00 /5.00	5876 5875 5874 5873 5872 5871	85 86 87 88 89 90				

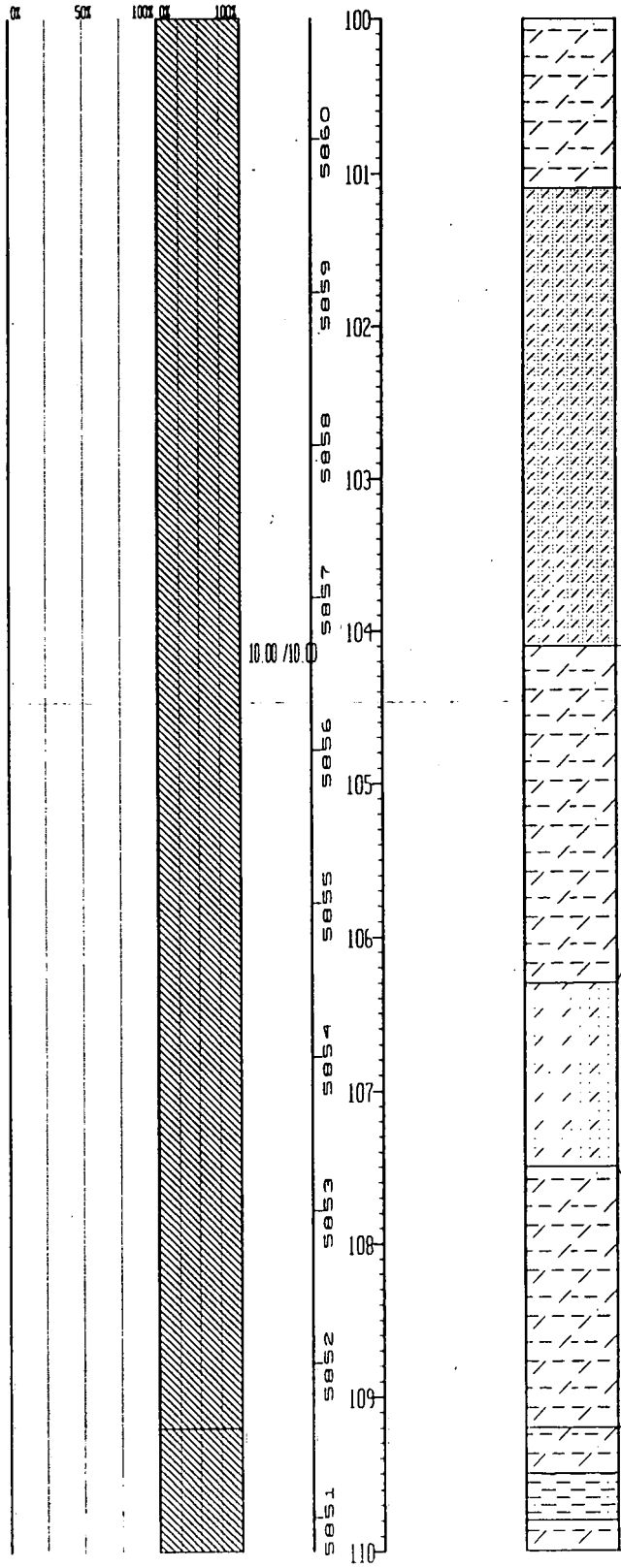
STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 209.8	GROUND ELEVATION (FT) 5960.78	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749090	AREA 903 LIP	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21393
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN) 12	DATE DRILLED: 05/03/93	
REMARKS: ABANDONED BOREHOLE				

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE (0% – 50%)
PERCENT RECOVERY (100% 0% 100%)
RECOVERY/INTERVAL: 2.20 /2.20; 2.80 /2.80; 4.90 /5.20
DATUM (FT): 5970, 5969, 5968, 5967, 5966, 5965, 5964, 5963, 5962, 5961
DEPTH (FT): 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYEY SILTSTONE	94.0-98.5 ft Clayey Siltstone with some sand, light olive gray (5Y5/2), olive gray (5Y4/1), grayish orange (10YR7/4) claystone nodules, 5-7% porosity, slightly cemented with siliceous cement, slightly friable to moderately friable, finely laminated, some alternating claystone laminae, some bioturbation at 96.3', trace carbonaceous material, claystone nodules at 98.2-98.3', several silty sandstone beds (less than 0.2' thick) interbedded with clayey siltstone, dry 19% sand, 45% silt, 36% clay.
SILTY CLAYSTONE	98.5-98.9 ft Silty Claystone as described below.
	98.9-99.2 ft No recovery for this interval.
SILTY CLAYSTONE	99.2-101.1 ft Silty Claystone with trace sand, olive gray (5Y3/2) with olive black (5Y2/1) where carbonaceous material is present, dense, non-friable, slightly carbonaceous, dry. 3% sand, 24% silt, 73% clay.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93	
REMARKS: ABANDONED BOREHOLE				

GRADATIONAL SA DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



SANDY SILTSTONE 101.1-104.1 ft.
Sandy Siltstone with some clay, olive gray (5Y4/1), light olive gray (5Y5/2), claystone nodules grayish orange (10YR7/4), sand is very fine- to fine-grained, some medium-grained, moderately sorted, sub-angular to rounded, consists of quartz, some quartzite, trace mafics, many quartz grains are frosted, 3-5% porosity, slightly friable, some siliceous cement, fine horizontal laminations in upper foot, massive otherwise, some interbeds of silty claystone less than 0.15' thick, rare claystone nodules, dry.
36% sand, 58% silt, 6% clay.

SILTY CLAYSTONE 104.1-106.3 ft
Silty Claystone with trace sand, olive gray (5Y3/2), black (N1), dense, non-friable, carbonaceous material found along core breaks, dry.
2% sand, 20% silt, 78% clay.

SILTY SANDSTONE 106.3-107.5 ft
Silty Sandstone with some clay, light olive gray (5Y5/2) banded with olive gray (5Y3/2), sand is very fine-grained with trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics, 3-5% porosity, slightly to moderately friable, finely laminated, horizontal to sub-horizontal, rare carbonaceous material, dry.
42% sand, 38% silt, 20% clay

SILTY CLAYSTONE 107.5-109.2 ft
Silty Claystone, olive gray (5Y3/2), black (N1), dense, non-friable, slightly carbonaceous, contains a few less than 0.1' thick clayey siltstone beds in interval, dry.
No sieve analysis performed, same as 104.1-106.3'

SILTY CLAYSTONE 109.2-116.3 ft
Silty Claystone with trace sand with interbeds of Sandy Claystone with some silt, sand is very fine-grained, some fine-grained, trace medium grained, moderately sorted, sub-

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT)	5960.78	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH	749090	AREA: 903 LIP	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS	21393
EAST	2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	12	DATE DRILLED:	05/03/93	

REMARKS: ABANDONED BOREHOLE

CHEMICAL SAMPLE / GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%			110				angular to rounded, consists of quartz, some mafics, quartzite, trace mica, light olive gray (5Y5/2), olive gray (5Y4/1), claystone nodules are grayish orange (10YR7/4), 0-3% porosity, non-friable to slightly friable, beds 0.3-0.8' thick, some bioturbation and soft sediment deformation features at 111.4-112.1', 114.4-115.7', possible slump feature at 111.9', slump fault at 114.4', claystone nodules present throughout, dry Silty Claystone: 3% sand, 39% silt, 58% clay. Sandy Claystone: 36% sand, 19% silt, 45% clay.
					5950	111				
				5.00 /5.00	5949	112				
					5948	113				
					5947	114				
					5946	115				
					5945	116			CLAYSTONE:	116.3-119.0 ft Claystone as described below.
				4.80 /4.90	5944	117				
					5943	118				
					5942	119				119.0-119.1 ft No recovery for this interval.
					5941	120			CLAYSTONE:	119.1-122.9 ft Claystone with some silt and trace sand, light olive gray (5Y5/2), olive gray (5Y3/2) (5Y4/1), dense, non-friable, some claystone intervals are silty, bedding is finely

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 012 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749090	AREA: 903 LTP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93	
REMARKS: ABANDONED BOREHOLE				

GRADATIONAL SA DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				3.80 /5.00	5940 5939 5938 5937	120 121 122 123 124				laminated in siltier zones, rubble zone at 120.4-122.9', claystone nodules, grayish orange (10YR7/4), are present, slightly carbonaceous at 130.2', 131.5', 132.1-133.9', leaf imprints at 132.5', fractures at 116.3-116.6' 50 degrees and 35 degrees, slickensides, 117.6' 60 degrees, slickensides, 119.3' 80 degrees, slickensides, 120.2' 90 degrees, slickensides, 126.0' 70 degrees, slickensides, 126.6-127.4' vertical, slicensides. 2% sand, 15% silt, 83% clay.
										122.9-124.1 ft. No recovery for this interval.
				4.90 /4.90	5936 5935 5934 5933 5932 5931	125 126 127 128 129 130			CLAYSTONE:	124.1-135.8 ft. Claystone as described above. Fractures at 127.4' 45 degrees, slickensides, 127.8' 50 degrees, 128.6', 85 degrees, slickensides, 134.2' 25 degrees slickensides, 135.5' 15 degrees, no slickensides, moist to 122.9', dry to 135.8'

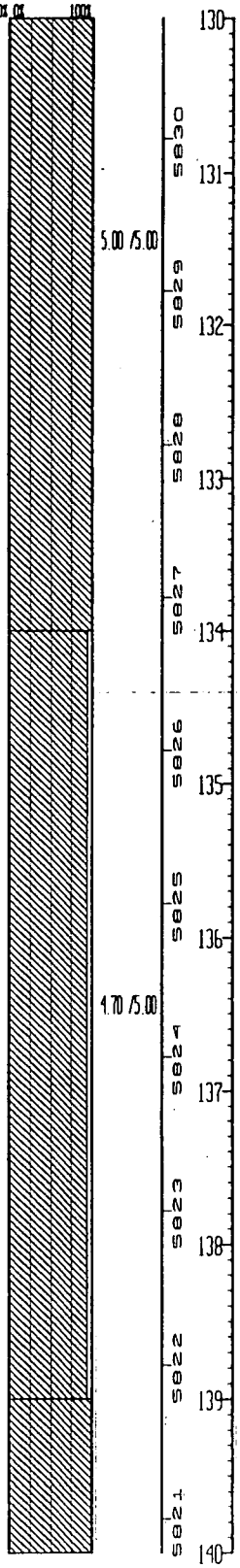
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT)	5960.78	PROJECT NUMBER:	002 BEDROCK
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	12	DATE DRILLED	05/03/93
REMARKS: ABANDONED BOREHOLE					

LOG OF BORING NUMBER

21393

CHEMICAL SAMPLE DEPTH
GRADATIONAL SA
SAMPLE NUMBER

SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



CLAYEY SANDSTONE 135.8-139.7 ft Clayey Sandstone as described below.

137.8-139.0 ft. No recovery for this interval.

CLAYEY SANDSTONE 139.0-159.6 ft
Clayey Sandstone with some silt, light olive gray (5Y5/2), olive gray (5Y4/1), sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, trace rounded, consists of quartz, some quartzite, mafics, 0-8%

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT)	5960.78	PROJECT NUMBER:	OU2 BEDROCK
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	12	DATE DRILLED:	05/03/93
REMARKS: ABANDONED BOREHOLE					

LOG OF BORING NUMBER

21393

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 5.00 /5.00; 5.00 /5.00

DATUM (FT): 5820, 5819, 5818, 5817, 5816, 5815, 5814, 5813, 5812, 5811

DEPTH (FT): 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

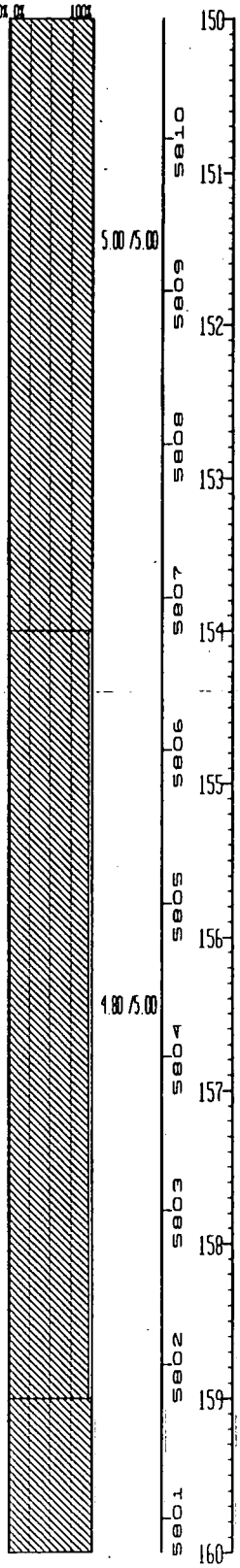
porosity (varies with lithology, increasing in sandstone), slightly friable, massive to finely laminated, horizontal to sub-horizontal laminations, interbeds of claystone at 135.8-143.7', most contacts between sandstone/claystone are sharp, slightly bioturbated at 141.0', at 143.6-144.0', 146.3-146.9 at 156.0-156.4', highly bioturbated at 144.9-145.3', at 151.0-152.0', small burrow at 144.5', some soft sediment deformation, some carbonaceous material present at 147.7-148.5' and 151.8', trace carbonaceous material at 153.6', moist at 135.-136.5' and 152.9-153.2', dry in remaining interval

43% sand, 17% silt, 40% clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393	
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE DEPTH
GRADATIONAL SA
SAMPLE NUMBER

SAMPLE GRAIN SIZE (0% – 50%) | PERCENT RECOVERY (100% 0% – 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



CLAYEY SANDSTONE 157.6-158.8 ft.
Clayey Sandstone with some silt, olive gray (5Y4/1), sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, some quartzite, trace mafics, mica, 0% porosity, non-friable, very well cemented with calcareous cement, some fine laminations, dense.
94% sand, 22% silt, 34% clay.

158.8-159.0 ft. No recovery for this interval.

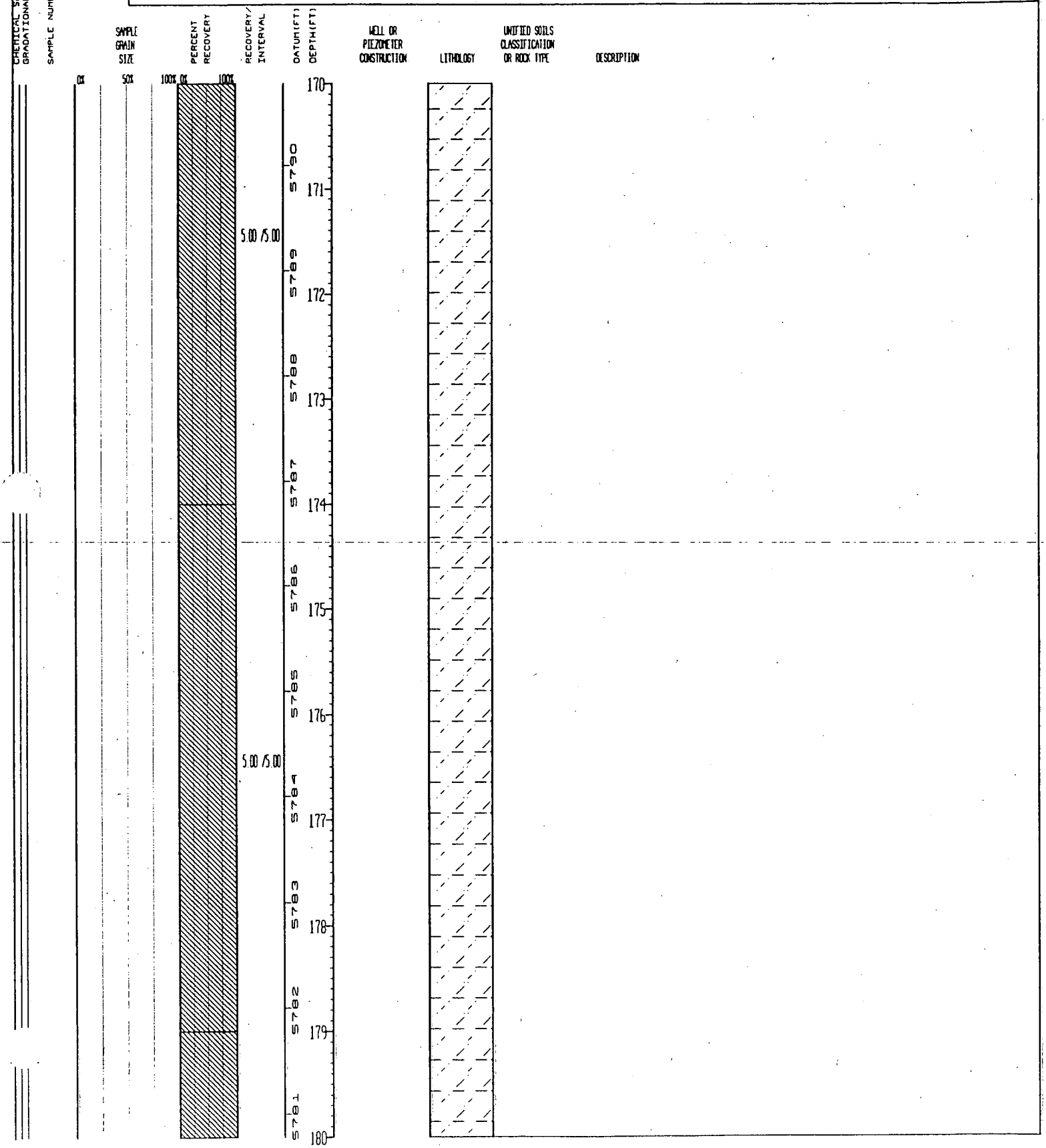
CLAYEY SANDSTONE 159.0-159.1 ft. Clayey Sandstone as described above.

SILTY CLAYSTONE 159.1-162.2 ft.
Silty Claystone with some sand, olive gray (5Y4/1) grayish orange (10YR7/4) claystone nodule, less than 3% porosity,

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT)	5960.78	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN):		GEOLOGIST:	J DUBOIS	21393
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	12	DATE DRILLED:	05/03/93	
REMARKS: ABANDONED BOREHOLE						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5800	160				slightly friable, heavily bioturbated throughout, few claystone nodules in upper foot, dry. 11% sand, 40% silt, 49% clay.
				5.00/5.00	5799	161				
					5798	162				
					5797	163			SILTY CLAYSTONE	162.2-166.7 ft. Silty Claystone with trace sand, olive gray (5Y4/1), light olive gray (5Y6/1), dense, non-friable, some laminations of clayey sandstone (0.01-0.1' thick), burrowing at 162.7-163.0', moist. 1% sand, 35% silt, 64% clay.
					5796	164				
					5795	165				
				5.00/5.00	5794	166				
					5793	167			CLAYEY SILTSTONE	166.7-181.5 ft. Clayey Siltstone with some sand, light olive gray (5Y5/2), olive gray (5Y4/1), sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics, mica, 2-7% porosity, slightly friable, possible burrows in upper 0.8', minor bioturbation at 167.6-168.0', soft sediment deformation at 168.5-168.9', finely laminated at 169.0-169.9', horizontal to sub-horizontal, heavily bioturbated between 169.9'-174.0', alternating intervals of heavily bioturbated and finely laminated (inclined at 20 degrees) at 174.0-181.5', large diagonal possible collapsed burrow at 180.3', trace carbonaceous material, dry, some thin beds of sandy siltstone present. 11% sand, 76% silt, 13% clay.
					5792	168				
					5791	169				
						170				

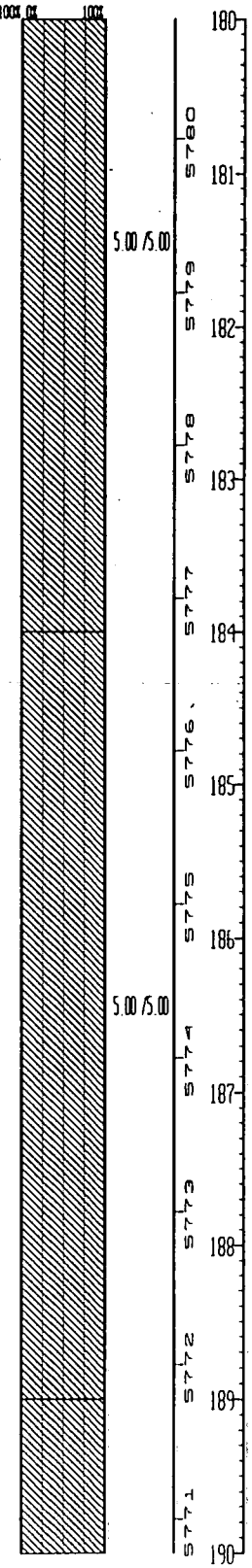
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT):	5960.78	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH	749090	AREA: 903 LIP	CASING DIAMETER (IN):		GEOLOGIST	J DUBOIS	21393
EAST	2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	12	DATE DRILLED:	05/03/93	
REMARKS	ABANDONED BOREHOLE						



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393	
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE
GRADATIONAL SA
DEPTH
SAMPLE NUMBER

SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



CLAYEY SANDSTONE: 181.5-184.5 ft.
Clayey Sandstone with some silt, olive gray (5Y4/1), light olive gray (5Y6/1), dense, non-friable, well cemented with calcareous cement, high angle laminations (inclined at 50 degrees), cross-laminations.
37% sand, 25% silt, 38% clay.

CLAYEY SANDSTONE: 184.5-190.3 ft
Clayey Sandstone with some silt, light olive gray (5Y5/2), olive gray (5Y4/1), grayish orange (10YR7/4), sand is very fine- to fine-grained, well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, mafics, 2-7% porosity, slightly to moderately friable, alternating massive bedding with intervals of high angle laminations (inclined at 50 degrees), one to two small beds of claystone small scale slump feature, fault at 186.4', 35 degrees, trace carbonaceous material at 187.2-188.5', 189.5-190.0', rare claystone nodules, some silty sandstones present, dry, inclined laminations (30 degrees) at 189.0-189.4'.
35% sand, 30% silt, 35% clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209 8	GROUND ELEVATION (FT): 5960.78	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21393	
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/03/93		
REMARKS: ABANDONED BOREHOLE					

GRADATIONAL SAI

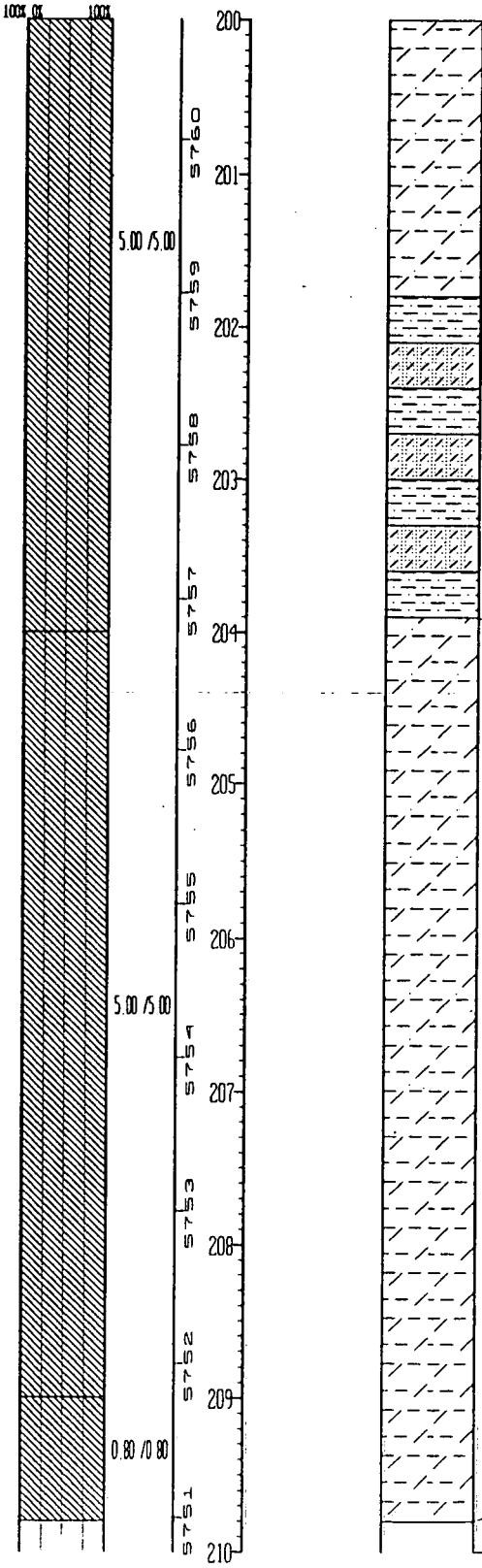
SAMPLE NUMBER

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0% 50% 100%	0% 100%			190				
			5770	191			CLAYEY SANDSTONE	190.3-191.0 ft. Clayey Sandstone with some silt, olive gray (5Y4/1), light olive gray (5Y6/1), dense, non-friable, well cemented with calcareous cement, inclined laminations. No sieve analysis performed, same as 181.5-184.5 ft
		5.00 /5.00	5769	192			CLAYEY SILTSTONE	191.0-198.0 ft. Clayey Siltstone with some sand, light olive gray (5Y5/2), olive gray (5Y3/2), dusky yellow (5Y6/4), sand is very fine-grained, very well sorted, sub-rounded to rounded, some sub-angular, consists of quartz, some quartzite, trace mafics, 3% porosity, slightly friable, inclined beds at 30 degrees at 191.0-191.5', silty claystone interval with sandy siltstone slump feature at 192.3-194.0', bioturbated between 194.0-196.1', fault at 196.1' (small scale displacement), alternating laminae of siltstone and claystone between 196.3-198.0', dry. 6% sand, 52% silt, 42% clay.
			5768	193				
			5767	194				
			5766	195				
			5765	196				
		4.50 /5.00	5764	197				
			5763	198			SILTY CLAYSTONE	198 0-201 8 ft Silty Claystone with trace sand, olive black (5Y2/1), dense, non-friable, fractures at 199.4' horizontal, slickensides, 199.7-200 7' fractured interval, 40 degrees, partly rubbly, 201.0' 35 degrees, slickensides 2% sand, 39% silt, 59% clay.
			5762	199				
			5761	200				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 209.8	GROUND ELEVATION (FT)	5960.78	PROJECT NUMBER:	002 BEDROCK
NORTH: 749090	AREA: 903 LIP	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS
EAST: 2086777	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	12	DATE DRILLED:	05/03/93
REMARKS: ABANDONED BOREHOLE					

LOG OF BORING NUMBER: 21393

TM DEPTH | CHEMICAL SAMP GRADATIONAL SI | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



SANDY CLAYSTONE: 201.8-203.9 ft.
Sandy Claystone with some silt interbedded with Sandy Siltstone, light olive gray (5Y5/2), olive gray (5Y3/2), sand is very fine-grained, very well sorted, sub-rounded to rounded, consists of quartz, some quartzite, mafics, some quartz grains frosted, less than 5% porosity, slightly friable, heavily bioturbated between 201.8-202.9'. Fine laminations inclined up to 50 degrees at 202.9-203.1', fault at 202.9' 50 degrees, small scale displacement.
Sandy Claystone: 29% sand, 28% silt, 43% clay.
Sandy Siltstone: 29% sand, 71% silt

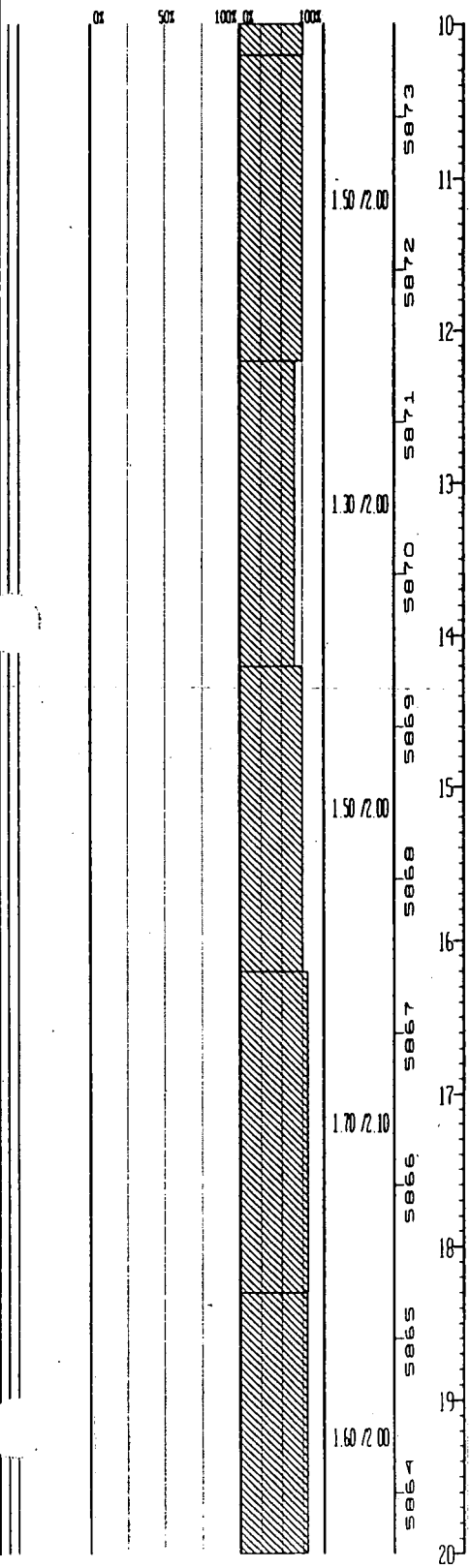
SILTY CLAYSTONE: 203.9-209.8 ft.
Silty Claystone with trace sand, olive gray (5Y3/2), black (N1) in coal/lignite zone, dense, non-friable, fractures at 204.4' 40-50 degrees, slickensides, at 204.6' 40 degrees, slickensides, at 205.3-205.9' several of 10-30 degrees, at 206.2-207.9' rubble zone, at 208.7' 40 degrees, no slickensides, at 208.3-208.7' coal/lignite zone, at 209.2' 40 degrees, no slickensides.
3% sand, 34% silt, 63% clay.

Total depth at 209.8 ft

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT): 5883.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748386	AREA 903 LIP	CASING DIAMETER (IN)	GEOLOGIST J DUBOIS	21493	
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/20/93		
REMARKS: ABANDONED BOREHOLE					

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%			0				0.0-0.9 ft Top soil, start of boring.
			0.00 /0.90	5883				ML	0.9-1.8 ft Clayey Silt with some sand, dark brown (7.5YR4/2), dark reddish gray (10R3/1), sand is fine- to medium-grained, angular to sub-angular, trace sub-rounded, consists of quartz, mafics, rock fragments, trace mica, feldspar, poorly graded, medium plasticity on fines portion, trace calcareous cement and caliche, few plant roots to 3.1', trace broken rock fragments, coarse gravel size, moisture content not given. 0% gravel, 17% sand, 50% silt, 33% clay
			0.90 /2.00	5882	1				1.8-2.9 ft No recovery for this interval
				5881	2				
				5880	3			ML	2.9-3.8 ft Clayey Silt as described above.
			0.90 /2.00		4				3.8-4.9 ft No recovery for this interval
				5879				ML	4.9-5.9 ft Sandy Silt with some clay, light brown (10YR6/4), sand is fine- to medium-grained, poorly sorted, angular to sub-angular, trace sub-rounded, consists of quartz, mafics, some rock fragments, trace mica, feldspar, medium plasticity slight calcareous cement, caliche veins to 11.1' becoming 0.1' thick caliche layers at 11.3', 11.6', 12.7', 13.4', trace broken rock fragments, coarse gravel maximum size 0.18', average size 0.06' 0% gravel, 31% sand, 45% silt, 24% clay
			1.00 /1.20	5878	5				
					6				5.9-6.1 ft. No recovery for this interval
				5877				ML	6.1-7.3 ft Sandy Silt as described above
			1.20 /2.00		7				7.3-8.1 ft. No recovery for this interval
				5876	8				
				5875				ML	8.1-9.7 ft Sandy Silt as described above.
			1.60 /2.10		9				
				5874					9.7-10.2 ft No recovery for this interval
					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT): 5883.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER	
NORTH: 748386	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21493	
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/20/93		
REMARKS: ABANDONED BOREHOLE					



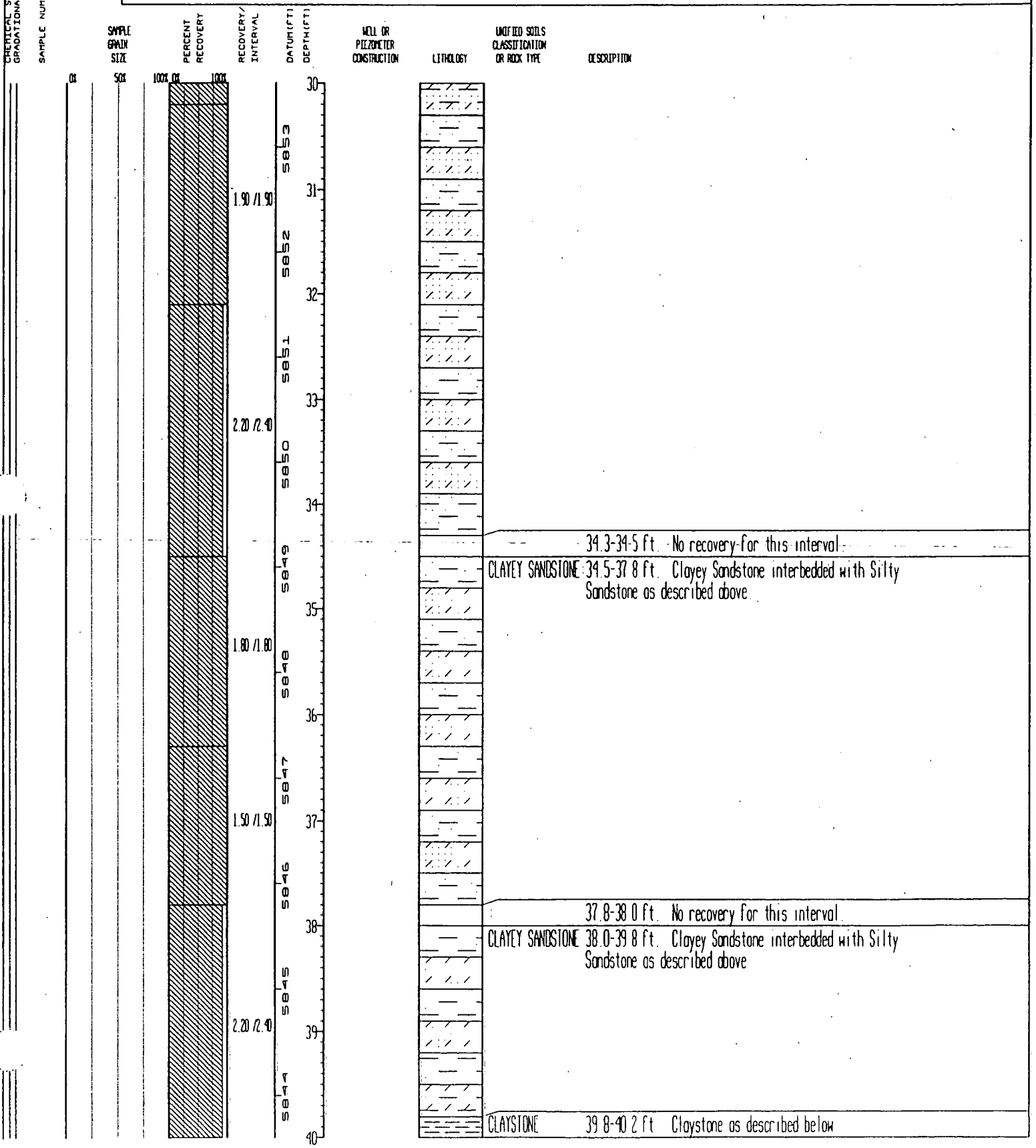
	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		ML:	10.2-11.7 ft. Sandy Silt as described above.
			11.7-12.2 ft. No recovery for this interval.
		ML:	12.2-13.5 ft. Sandy Silt as described above.
			13.5-14.2 ft. No recovery for this interval.
		CL:	14.2-15.7 ft. Silty Clay with abundant gravel and some sand, reddish brown (2.5YR5/4), light brown (7.5YR6/4), yellow (2.5Y7/6), gravel maximum size 0.2', broken cobble fragment, average size 0.07', gravel is angular to sub-rounded, consists of quartzite, rock fragments, granite, sand is fine- to coarse-grained, angular to sub-rounded, consists of quartz, quartzite, metamorphics, rock fragments, granite, well graded, medium plasiticity on fines portion, calcareous cement, caliche layers at 14.6-15.7' and 16.6-17.4', 18.9-19.7' and 19.8-19.9'. 26% gravel, 15% sand, 27% silt, 32% clay
			15.7-16.2 ft. No recovery for this interval.
		CL:	16.2-17.9 ft Silty Clay as described above.
			17.9-18.3 ft. No recovery for this interval.
		CL:	18.3-19.9 ft Silty Clay as described above.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT)	5883.60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH 749386	AREA: 903 LTP	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS	21493
EAST 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN)	12	DATE DRILLED:	05/20/93	

REMARKS ABANDONED BOREHOLE

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%			20				19.9-20.3 ft. No recovery for this interval.
					5863	21			CL:	20.3-21.1 ft. Silty Clay as described above. Top of bedrock at 21.1 ft.
				1.50/1.90	5862	22			CLAYEY SANDSTONE:	21.1-21.8 ft. Clayey Sandstone interbedded with Silty Sandstone as described below.
										21.8-22.2 ft. No recovery for this interval.
					5861	23			CLAYEY SANDSTONE:	22.2-24.2 ft. Clayey Sandstone interbedded with Silty Sandstone as described below.
				2.00/2.10	5860	24				
										24.2-24.3 ft. No recovery for this interval
					5859	25			CLAYEY SANDSTONE:	24.3-34.3 ft. Clayey Sandstone interbedded with Silty Sandstone. Clayey Sandstone with some silt: grayish orange (10YR7/4), dark yellowish orange (10YR6/6), dusky yellow (5Y6/4), yellowish gray (5Y7/2), sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded, some sub-angular, consists of quartz, trace mafics, mica, and quartzite. Silty Sandstone with some clay: colors same as above, sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded, some sub-angular, consists of quartz trace mafics, mica, quartzite. 8-12% porosity, some siliceous cementation, minor calcareous cement along some bedding planes and fractures, moderately to highly friable, bedding is finely laminated to massive, mottled, silty claystone intervals are 23.3-23.7', 28.2-28.7', 30.2-30.6', 36.3-36.7', 38.0-38.4', iron staining throughout, varies in intensity, fractures at 25.8' vertical, healed with calcareous cement, 39.7' vertical, healed with limonite cement. Clayey Sandstone: 50% sand, 20% silt, 30% clay. Silty Sandstone: 47% sand, 42% silt, 11% clay
				2.00/2.00	5858	26				
					5857	27				
				1.90/1.90	5856	28				
					5855	29				
				2.00/2.00	5854	30				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 130 4	GROUND ELEVATION (FT):	5883 60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749386	AREA: 903 LIP	CASING DIAMETER (IN):		GEOLOGIST:	J DUBOIS	21493
EAST:	2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	12	DATE DRILLED:	05/20/93	
REMARKS:	ABANDONED BOREHOLE						



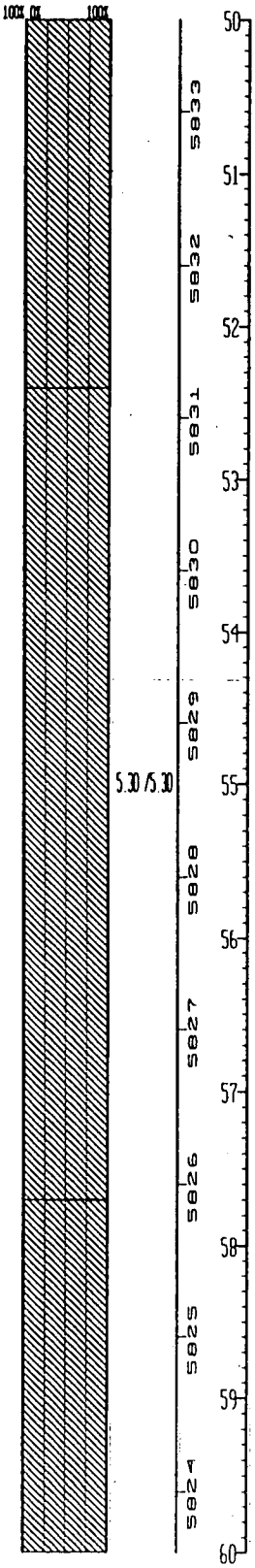
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT): 5883.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748386	AREA: 903 LIP	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21493	
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/20/93		
REMARKS: ABANDONED BOREHOLE					

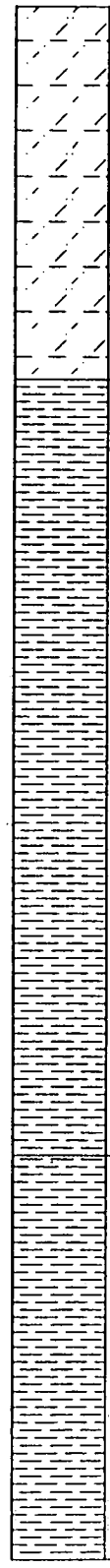
CHEMICAL SAMPLE / GRADATIONAL SAMPLE / SAMPLE NUMBER / SAMPLE GRAIN SIZE (0% 50% 100%) / PERCENT RECOVERY (0% 100%) / RECOVERY/INTERVAL / DATUM (FT) / DEPTH (FT) / WELL OR PIEZOMETER CONSTRUCTION / LITHOLOGY / UNIFIED SOILS CLASSIFICATION OR ROCK TYPE / DESCRIPTION

Recovery/Interval	Depth (ft)	Unified Soils Classification or Rock Type	Description
	40		40.2-40.5 ft. No recovery for this interval.
1.70 /2.00	41	CLAYSTONE:	40.5-43.0 ft. Claystone with some silt and trace sand, light olive gray (5Y5/2), iron staining is yellowish orange (10YR6/6), dense, non-friable to slightly friable in siltier zone (40.2-41.8') iron nodule at 40.1', heavy iron staining at 41.8-42.2', some iron staining throughout, trace manganese staining. 2% sand, 15% silt, 83% clay.
0.80 /0.80	42		
	43		43.0-47.4 ft. No recovery for this interval.
0.00 /4.40	44		
	45		
	46		
	47		
	48	CLAYEY SILTSTONE	47.4-52.4 ft. Clayey Siltstone with trace sand, light olive gray (5Y5/2), olive gray (5Y4/1), dark yellowish orange (10YR6/6) in iron stained zones, dense, non-friable to slightly friable, slightly bioturbated throughout, heavily bioturbated at 47.5-47.7', some soft sediment deformation, iron staining throughout, predominately in silt zones, mottled appearance, few beds of claystone (less than 0.5' thick) present, slightly moist. 3% sand, 58% silt, 39% clay.
5.00 /5.00	49		
	50		

STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 130.4	GROUND ELEVATION (FT) 5883.60	PROJECT NUMBER: 012 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748386	AREA: 903 LIP	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS		
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN) 12	DATE DRILLED: 05/20/93	21493	
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE | GRADATIONAL SA. | DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION





UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE	52.4-57.4 ft Claystone with some silt, trace sand, light olive gray (5Y5/2), olive gray (5Y3/2), dark yellowish orange (10YR6/6) in iron stained zones, dense, non-friable, many fractures throughout interval, most hairline fractures, healed with limonite cement, iron staining (oxidation) restricted to fractures, no preferred fracture orientation, slightly carbonaceous at 53.0-55.1', calcareous cement at 57.4', silty claystone in upper interval, 52.4-53.1', bio-feeding structure at 56.7' and 57.0', fracture and slickensides, horizontal at 56.5', slightly moist. 1% sand, 20% silt, 79% clay
CLAYSTONE	57.4-67.3 ft. Claystone with some silt, trace sand, olive gray (5Y3/2), dark gray (N3), light olive gray (5Y6/1) in calcareous cemented laminated zones (61.5-61.8'), dense, except between 57.7-58.9' which crumbles easily, non-friable, carbonaceous, trace plant fragments, intervals of siltstone laminae alternating with claystone laminae and slightly calcareous at 61.6-62.0', 65.6-66.0' (not calcareous) and 66.1-67.3', laminations are horizontal to 20 degrees, some lenticular laminations, several claystone nodules in lower foot of interval, iron staining occurs only along fractures, moist to slightly moist at 62.4-67.3', fractures at 57.7' 60

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT): 5883.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER
NORTH: 749386	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21493
EAST 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/20/93	
REMARKS ABANDONED BOREHOLE				

CHEMICAL SAMPLE DEPTH
GRADATIONAL SA.
SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50%
PERCENT RECOVERY: 100% 0% 100%
RECOVERY/INTERVAL: 4.70 /4.70; 5.30 /5.30
DATUM (FT): 5823, 5822, 5821, 5820, 5819, 5818, 5817, 5816, 5815, 5814
DEPTH (FT): 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

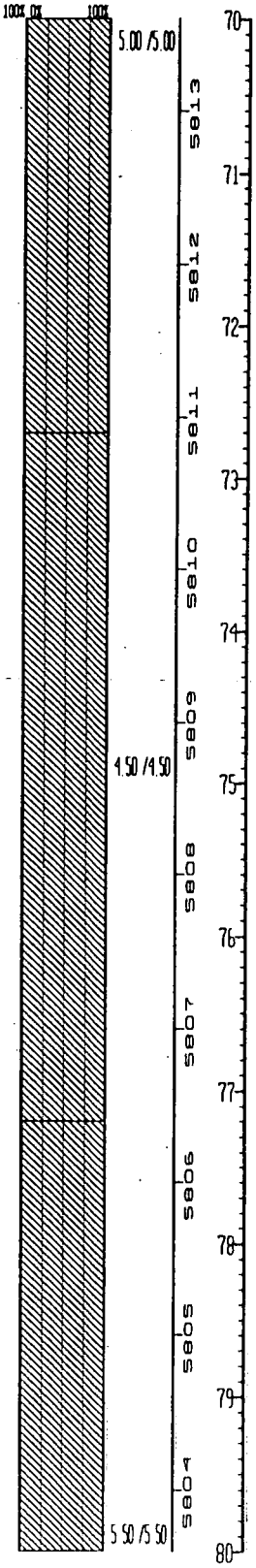
DESCRIPTION

degrees, 58.6' 40 degrees, 59.5' 30 degrees, 60.7' 30 degrees, 61.6' 40 degrees, 62.1' 50 degrees, all fractures above are iron stained, not healed, fracture at 62.6' 60 degrees, slight iron staining, slickensides, not healed, 63.9' 30 degrees, as above, 65.0' 70 degrees, no iron staining, slickensides, 65.2' 40 degrees, slight iron staining, slickensides, 65.5' 20 degrees, oxidation of plant fragments, coalified, 66.0' 25 degrees, as above.
1% sand, 20% silt, 79% clay.

CLAYEY SANDSTONE: 67.3-73.5 ft
Clayey Sandstone with some silt, light olive gray (5Y6/1), olive gray (5Y4/1), claystone nodules and iron stained interval is grayish orange (10YR7/4), sand is very fine- to fine-grained, some medium-grained, moderately sorted, sub-angular to rounded, consists of quartz, quartzite, trace mafics, mica.
3-8% porosity, cementation, trace siliceous and limonite cement, slightly friable to moderately friable, alternating fine laminae of sandstone and claystone in upper 2.0' of interval, becoming interbedded sandstone/claystone (0.01-0.05' thick), some wavy laminations, bioturbated, slightly oxidized (iron staining) to 69.5', carbonaceous streak at

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT): 5883.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748386	AREA: 903 LTP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21493
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/20/93	
REMARKS: ABANDONED BOREHOLE				

DEPTH | CHEMICAL SAMPLE | GRADATIONAL SI | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



70.9', calcareous cement at 72.1', rare claystone nodules, slightly moist to moist.
52% sand, 10% silt, 38% clay.

SILTY CLAYSTONE: 73.5-74.5 ft
Silty Claystone with trace sand, olive gray (5Y3/2), non-friable, fracture at 73.9' 55 degrees, slickensides, carbonaceous, plant fragments.
1% sand, 45% silt, 54% clay

SILTY SANDSTONE: 74.5-86.0 ft
Interbedded Silty Sandstone and Clayey Sandstone.
Silty Sandstone with some clay: sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded trace sub-angular, consists of quartz, some quartzite, trace mafics, some frosted quartz grains.
Clayey Sandstone with some silt: sand is very fine-grained, very well sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, some quartzite, trace mafics.
Light olive gray (5Y5/2)(5Y6/1), 3-8% porosity, slightly friable to moderately friable, massive to finely laminated intervals, cross-laminations at 75.4-75.7', bioturbation at 76.1-77.4' and 83.0-85.5', soft sediment deformation, claystone layers less than 0.05' thick, interbedded with sandstones predominately at 77.5-82.5', bed contacts gradational, trace carbonaceous streaks, moist to slightly moist
Silty Sandstone: 49% sand, 31% silt, 20% clay
Clayey Sandstone: 68% sand, 8% silt, 24% clay

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT): 5883.60	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748386	AREA: 903 LIP	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21493	
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/20/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAM... GRADATIONAL S... DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 5.00 /5.00

DATUM (FT): 5803, 5802, 5801, 5800, 5799, 5798, 5797, 5796, 5795, 5794

DEPTH (FT): 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

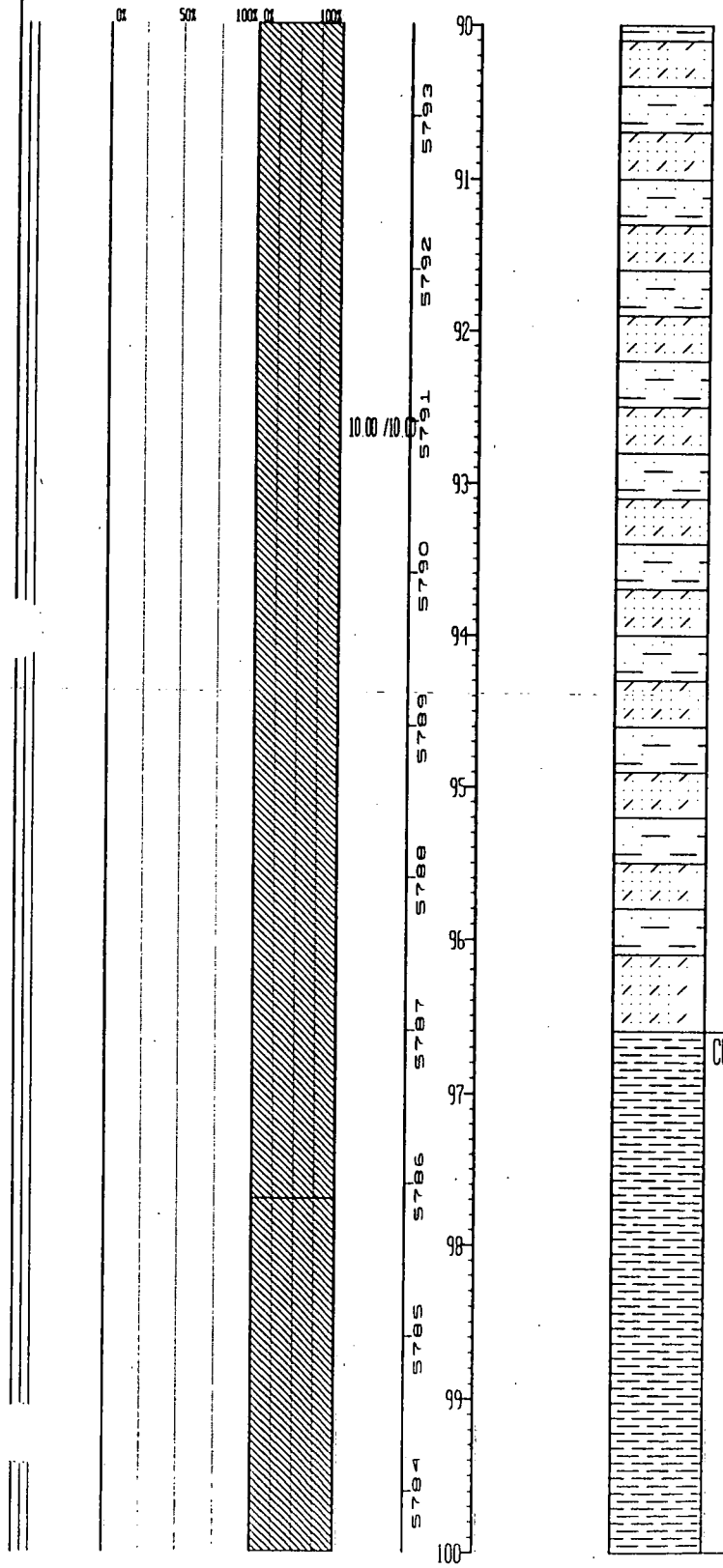
DESCRIPTION

SILTY SANDSTONE: 86.0-87.7 ft
Silty Sandstone with some clay, light gray (N6), light olive gray (5Y6/1), sand is very fine-grained to fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics, mica, 0% porosity, well cemented with calcareous cement, non-friable, finely laminated at 86.8-87.7', fracture at 87.0' 60 degrees.
44% sand, 31% silt, 25% clay.

SILTY SANDSTONE: 87.7-96.6 ft
Interbedded Silty Sandstone and Clayey Sandstone.
Silty Sandstone with some clay: sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded trace sub-angular, consists of quartz, some quartzite, trace mafics, mica.
Clayey Sandstone with some silt: sand is very fine-grained, very well sorted, sub-rounded to rounded, consists of quartz trace mafics, quartzite, mica.
Olive gray (5Y4/1), light olive gray (5Y5/2), 3-8% porosity, slightly friable to moderately friable, massive bedding to

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT): 5883.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748386	AREA: 903 LIP	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21493	
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/20/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE GRADATIONAL SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



Finely laminated, slump fault at 90.7' 50 degrees, 92.6' 50 degrees, 94.5' 65 degrees, some bioturbation at 91.3-94.2', trace carbonaceous streaks at 91.9-95.7', some thin interbeds of claystone are present, claystone nodule at 87.9', grayish orange (10YR7/4), minor amount of soft sediment deformation, moist.
Silty Sandstone: 43% sand, 42% silt, 15% clay.
Clayey Sandstone: 46% sand, 19% silt, 35% clay.

CLAYSTONE

96.6-118.2 ft
Claystone with some silt, trace sand, grayish black (N2), light olive gray (5Y5/2), olive black (5Y2/1), dense, non-friable, rip-up clasts at 96.5' at contact between sandstone and claystone, highly fractured intervals at 97.7-103.6', 106.7-110.2', 111.4-112.0', 113.4-114.6', some slickensides noted, no preferred orientation, other fractures at 107.5' 30 degrees, 108.0' horizontal, slickensides, 108.4' 80 degrees, slickensides, 117.1' 50 degrees, slickensides, crumbly interval at 99.8-101.4', carbonaceous material, coalified plant fragments at 107.0-110.2', very carbonaceous zone with some lignite and coal present at 115.0-116.2', silty claystone in upper foot of interval, becomes siltier in last foot of interval, slightly moist.
1% sand, 20% silt, 79% clay

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT)	5883.60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	748386	AREA: 903 LTP	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS	21493
EAST:	2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	12	DATE DRILLED:	05/20/93	

REMARKS: ABANDONED BOREHOLE

CHEMICAL SAMPLE DEPTH
GRADATIONAL SA.
SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 5.00 /5.00; 4.70 /4.70; 4.00 /4.00

DATUM (FT): 5883, 5882, 5881, 5880, 5879, 5878, 5877, 5876, 5875, 5874

DEPTH (FT): 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

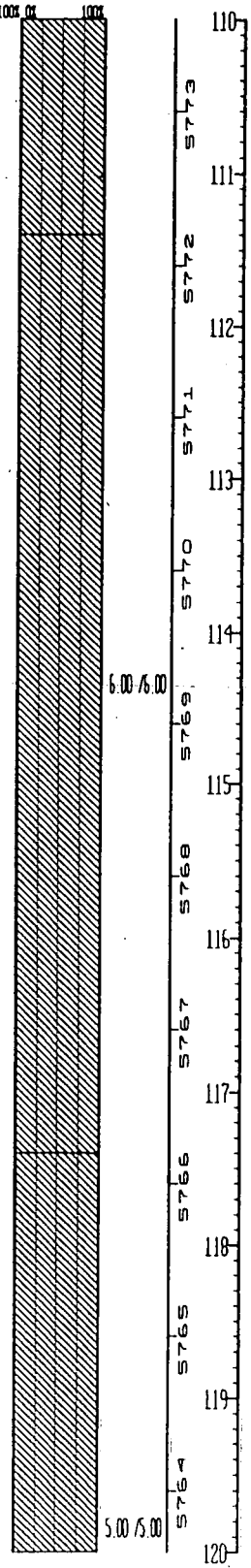
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT): 5883.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748386	AREA: 903 LTP	CASING DIAMETER (IN):	GEOLOGIST J DUBOIS	21493	
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 12	DATE DRILLED 05/20/93		
REMARKS: ABANDONED BOREHOLE					

DEPTH | CHEMICAL SAMP. | GRADATIONAL SA. | SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM(FT) | DEPTH(FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

0% 50% 100% 0% 100%



CLAYSTONE:	118.2-119.6 ft Claystone with some silt, trace sand, light olive gray (5Y6/1), olive gray (5Y4/1), dense, non-friable, burrow at 118.4', slight bioturbation at 118.3-118.7', slightly carbonaceous with plant fragments at 119.2', silty in upper 0.8' 1% sand, 15% silt, 84% clay
SANDY CLAYSTONE:	119.6-122.5 ft Interbedded Sandy Claystone and Silty Sandstone

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT):	5883.60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749386	AREA: 903 LIP	CASING DIAMETER (IN):		GEOLOGIST:	J DUBOIS	21493
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	12	DATE DRILLED:	05/20/93	
REMARKS: ABANDONED BOREHOLE						

CHEMICAL SAMP/ GRADATIONAL SI	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%		5763 5762 5761 5760 5759 5758 5757 5756 5755 5754	120 121 122 123 124 125 126 127 128 129 130				Silty Sandstone with abundant clay: sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, some quartzite, trace mafics, mica. Sandy Claystone with some silt: sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded trace sub-angular, consists of quartz, trace mafics, quartzite, mica. Light olive gray (5Y5/2) (5Y6/1), 0-6% porosity, moist, slightly siliceous and argillaceous cemented, slightly friable, slightly laminated becoming more laminated at 122.0-122.5', some bioturbation, highest at 120.0-120.8', some carbonaceous material along laminae. Silty Sandstone: 40% sand, 31% silt, 29% clay. Sandy Claystone: 29% sand, 25% silt, 46% clay.
				5.00 /5.00					CLAYSTONE	122.5-128.5 ft. Claystone with some silt and trace sand, light olive gray (5Y5/2), grayish olive (10Y4/2), olive gray (5Y3/2), dense, non-friable, slightly laminated, horizontal, carbonaceous material and plant fragments at 122.5-123.0', 123.8-124.3', fractures at 125.5' 70 degrees, slickensides, 125.9' 60 degrees, slickensides, 126.0' 40 degrees, slickensides, silt filled burrow at 126.1', slight bioturbation present, moist at 122.4-123.0', slightly moist at 123.0-123.4', dry at 123.4-128.5'. 1% sand, 15% silt, 84% clay.
				1.10 /3.00						128.5-130.4 ft No recovery for this interval.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 130.4	GROUND ELEVATION (FT)	5883.60	PROJECT NUMBER:	002 BEDROCK
NORTH: 748386	AREA: 903 LIP	CASING DIAMETER (IN):		GEOLOGIST:	J DUBOIS
EAST: 2086497	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	12	DATE DRILLED:	05/20/93
REMARKS: ABANDONED BOREHOLE					

LOG OF BORING NUMBER: 21493

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%		5753	130				
				5752	131				Total depth at 130.4 ft
				5751	132				
				5750	133				
				5749	134				
				5748	135				
				5747	136				
				5746	137				
				5745	138				
				5744	139				
					140				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPL / GRADATIONAL SA. / DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 0.00 /0.90; 1.20 /1.90; 1.50 /2.00; 1.30 /1.70; 1.20 /1.80; 1.20 /2.00

DATUM (FT): 5969, 5968, 5967, 5966, 5965, 5964, 5963, 5962, 5961, 5960

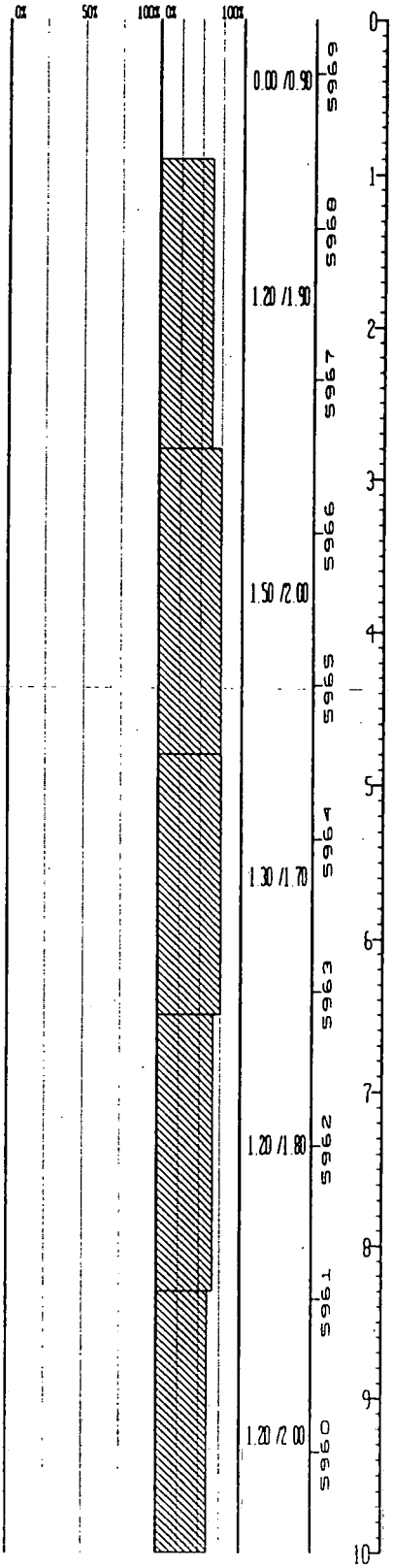
DEPTH (FT): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

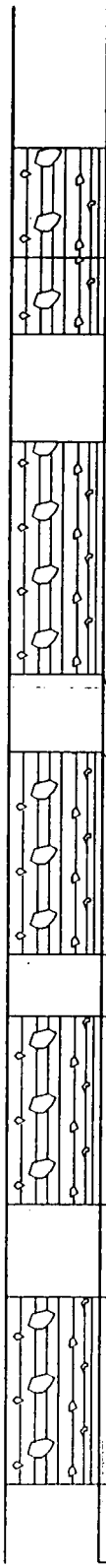
WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION





0.0-0.9 ft. Top soil, start of boring.

GM: 0.9-1.6 ft.
Silty Gravel with some sand, trace clay, dark gray (10YR4/1) gravel maximum size 0.12' broken cobbles, average size 0.06' sub-angular to sub-rounded, granite, rock fragments, caliche sand is fine- and coarse-grained, trace medium-grained, well graded, angular to sub-rounded, consists of quartz, quartzite, other metamorphics, granite, caliche blebs distributed evenly in matrix.
48% gravel, 20% sand, 29% silt, 3% clay

GM: 1.6-2.1 ft. Sandy Gravel as described below.

2.1-2.8 ft. No recovery for this interval.

GM: 2.8-4.3 ft
Sandy Gravel with some silt and clay, brownish yellow (10YR6/6), brown (7.5YR5/4), gravel maximum size 0.21' broken cobbles, average size 0.06', sub-angular to sub-rounded, consists of rock fragments, granite, metamorphics, sand is fine- to coarse-grained, well graded, sub-angular to sub-rounded, trace rounded, consists of quartz, quartzite schist, rock fragments, mafics, trace mica, caliche occurs throughout, both as a cementing agent and in small lens, fines are low plasticity, no moisture content reported.
61% gravel, 21% sand, 12% silt, 6% clay

4.3-4.8 ft. No recovery for this interval.

GM: 4.8-6.1 ft Sandy Gravel as described above.

6.1-6.5 ft. No recovery for this interval

GM: 6.5-7.7 ft Sandy Gravel as described above

7.7-8.3 ft No recovery for this interval.

GM: 8.3-9.5 ft. Sandy Gravel as described above.

9.5-10.3 ft No recovery for this interval

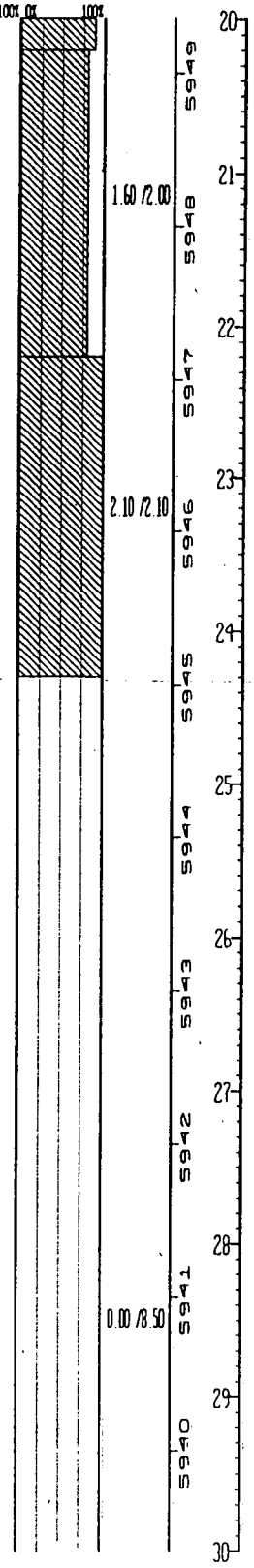
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21593	
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMP GRADATIONAL S.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%			10			GM:	10.3-10.8 ft. Sandy Gravel as described above.
					5959				SC:	10.8-11.6 ft. Clayey Sand with some silt, yellowish red (5YR5/6), gravel maximum size 0.12', average size 0.08', sub-angular to sub-rounded, sand is fine- to coarse-grained, well graded, sub-angular to sub-rounded, consists of quartz, metamorphics, rock fragments, trace granite, caliche lens (less than 0.1') at 10.8', some blebs present, slight calcareous cementation. 0% gravel, 63% sand, 15% silt, 22% clay
				1.60 /1.80	5958	11				
						12			GM	11.6-11.9 ft. Sandy Gravel with some silt and clay, brown (7.5YR5/4), description same as 1.6-10.8', slightly calcareous at 12.5-12.7'
					5957					11.9-12.5 ft. No recovery for this interval.
				1.70 /2.10	5956	13			GM:	12.5-12.7 ft. Sandy Gravel as described above. Top of bedrock at 12.7 ft
									SANDY CLAYSTONE:	12.7-14.2 ft Sandy Claystone as described below.
						14				
					5955					14.2-14.3 ft. No recovery for this interval
									SANDY CLAYSTONE:	14.3-18.3 ft. Sandy Claystone with some silt, dark yellowish orange (10YR6/6), light gray (N7), dusky yellow (5Y6/4), dense, non-friable to slightly friable, few clayey sandstone lenses interbedded (less than 0.15' thick), high iron staining throughout with slightly mottled appearance predominately in upper 6.0', caliche nodules at 12.7-14.2' and 15.7', slightly carbonaceous material throughout interval. Clayey Sandstone with some silt: sand is very fine- to fine-grained, trace medium grained, well sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, trace mafics quartzite, mica, some frosted and some iron stained quartz grains, trace manganese. 31% sand, 10% silt, 59% clay.
				1.90 /2.00	5954	15				
					5953	16				
				2.10 /2.10	5952	17				
					5951	18				
										18.3-18.5 ft No recovery for this interval.
									SANDY CLAYSTONE	18.5-20.2 ft Sandy Claystone as described above.
				1.70 /1.90	5950	19				
						20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21593	
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPL
GRADATIONAL SA
DEPTH
SAMPLE NUMBER

SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



20.2-20.6 ft. No recovery for this interval.

SANDY CLAYSTONE: 20.6-24.3 ft. Sandy Claystone as described above.

24.3-32.8 ft. No recovery for this interval.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT):	5969.35	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN):		GEOLOGIST:	J DUBOIS	21593
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	8	DATE DRILLED:	05/13/93	
REMARKS: ABANDONED BOREHOLE						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5939	30				
					5938	31				
					5937	32				
					5936	33			CLAYSTONE	32.8-34.7 ft. Claystone with some silt, light olive gray (5Y5/2), iron staining is dark yellowish orange (10YR6/6), dense, non-friable, hairline fracturing throughout with iron staining along fractures, open, fracture at 33.6' 80 degrees, caliche nodules at 34.2'. 0% sand, 10% silt, 90% clay.
					5935	34				
				4.60 /5.00	5934	35			SANDY CLAYSTONE	34.7-37.4 ft. Sandy Claystone with abundant silt, light olive gray (5Y6/1) dark yellowish orange (10YR6/6), sand is very fine-grained, well sorted, sub-angular to sub-rounded, predominately quartz, dense, non-friable to slightly friable, iron staining very faint in upper 1.0' becoming heavier with depth, ironstone nodule at 36.9', trace of manganese throughout, fracture at 35.0' 70 degrees, open with some manganese but not iron stained. 35% sand, 26% silt, 39% clay.
					5933	36				
					5932	37				
										37.4-37.8 ft. No recovery for this interval.
					5931	38			CLAYSTONE	37.8-40.2 ft. Claystone with some silt, trace sand, light olive gray (5Y6/1), dark yellowish orange (10YR6/6) at 37.8-38.7', olive gray (5Y4/1) to light olive gray (5Y6/1) at 38.7-40.2' dense, non-friable, brecciated zone at 37.8-38.7', numerous hairline fractures, no preferred orientation, open, iron stained at 37.8-38.7', no (oxidation) iron staining at 38.7-40.2', carbonaceous material throughout 1% sand, 10% silt, 89% clay
					5930	39				
						40				

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93	
REMARKS: ABANDONED BOREHOLE				

DEPTH | CHEMICAL SAMPLE | GRADATIONAL SAMPLE | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

4.50 /5.00

5.00 /5.00

DATUM (FT): 5929, 5928, 5927, 5926, 5925, 5924, 5923, 5922, 5921, 5920

DEPTH (FT): 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50

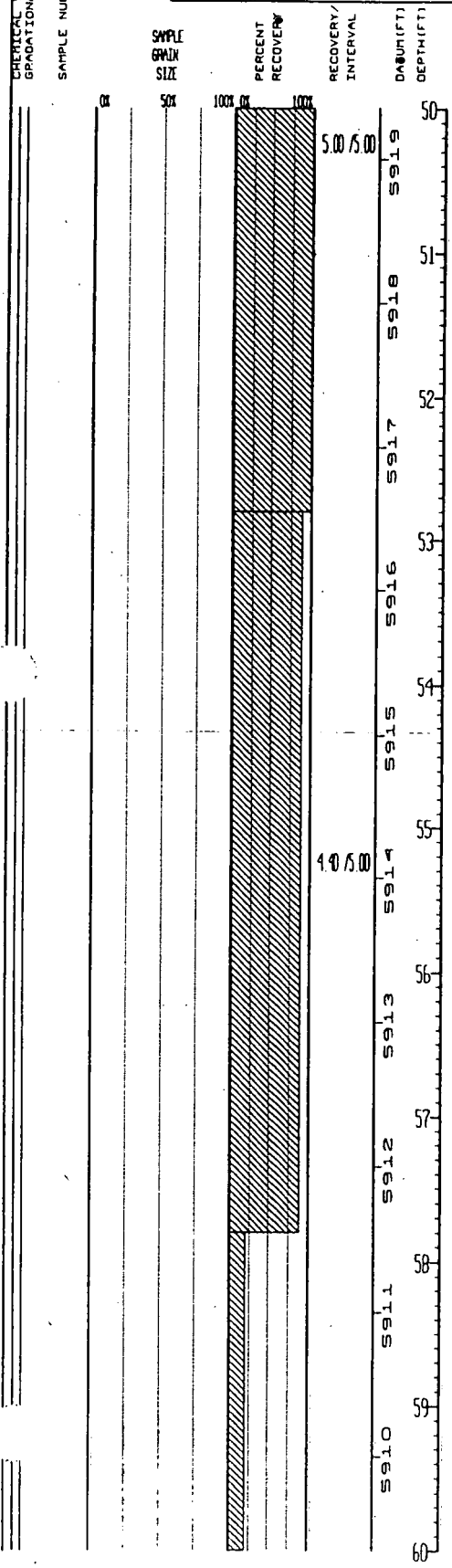
SILTY CLAYSTONE: 40.2-42.3 ft.
Silty Claystone with trace sand, light olive gray (5Y6/1) in upper 0.3', dark yellowish orange (10YR6/6) at 40.5-43.7', dense, non-friable, numerous fractures at 42.8-43.8', iron staining along fractures and in matrix, few fractures are healed.
4% sand, 34% silt, 62% clay.

42.3-42.8 ft No recovery for this interval

SILTY CLAYSTONE: 42.8-43.7 ft Silty Claystone as described above.

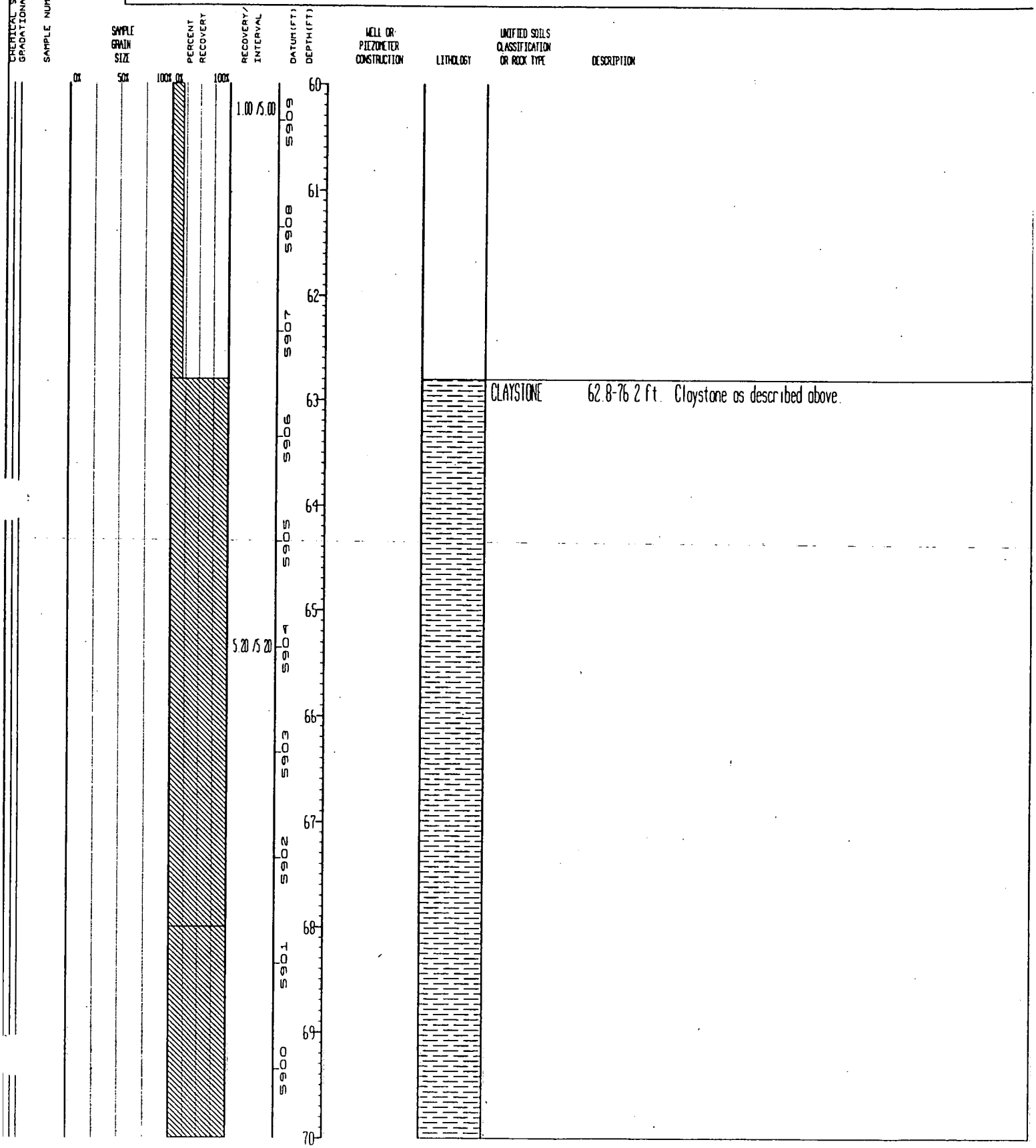
CLAYSTONE: 43.7-57.2 ft.
Claystone with some silt, trace sand, olive gray (5Y4/1), dark gray (N3), iron staining dark yellowish orange (10YR 6/6), dense, non-friable, iron stained matrix in top 0.4', then iron staining only along fractures to 46.3', fractures are moderately abundant throughout (43.7-47.4'), no preferred orientation, very carbonaceous at 46.3-47.4', rubbly with minor iron staining and some carbonaceous material and plant fragments (46.3-47.4'), "main" fractures at 48.2' 80 degrees, slickensides, open, no iron staining, multiple fractures over 48.4-48.9', 49.1' 60 degrees, slickensides, open, no iron staining, 49.4' 15 degrees, open 49.8' 40 degrees, slickensides, 49.9-50.0' horizontal, slickensides, 50.5-51.5' several fractures at 20-30 degrees, slickensides, 53.1' 40 degrees, no slickensides, 53.9-57.2' numerous fractures, open, iron stained along fractures and bedding planes, 66.9' 40 degrees, 68.8' 30 degrees, slickensides, 70.9' vertical, 71.1' 40 degrees, slickensides 74.5' 30 degrees, slickensides, 74.4' 30 degrees, slickensides, 74.7' 55 degrees, slickensides, carbonaceous throughout, some intervals are very carbonaceous, some plant fragments present, rare coalified plant fragments, very carbonaceous zones are grayish black (N2), iron stained zone at 52.4-53.5', rubbly zone at 57.8-58.8', calcareous nodule at 58.3, 73.8', claystone blebs/nodules at 71.6-76.2'.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS ABANDONED BOREHOLE					



WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			57.2-57.8 ft No recovery for this interval.
		CLAYSTONE	57.8-58.8 ft Claystone as described above 1% sand, 15% silt, 84% clay
			58.8-62.8 ft No recovery for this interval

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST 2086110	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS ABANDONED BOREHOLE					



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS: ABANDONED BOREHOLE					

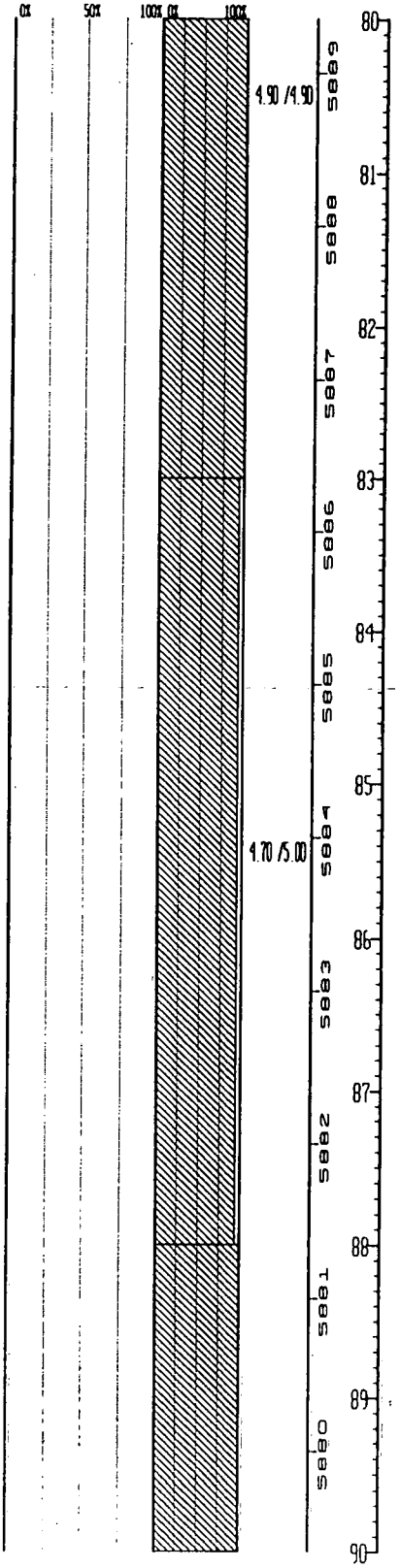
CHEMICAL SAMP	GRADATIONAL S.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0% 50%	100% 0% 100%	5.10 /5.10	5899	70				
						5898	71				
						5897	72				
						5896	73				
						5895	74				
					5.00 /5.00	5894	75				
						5893	76				
						5892	77				
						5891	78				
						5890	79				
							80				

SANDY CLAYSTONE 76.2-80.7 ft.

Sandy Claystone with some silt, light olive gray (5Y5/2) (5Y4/1), sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics, dense, non-friable, some fine laminae with some visible bioturbation, claystone nodules at 76.2-77.5', slightly carbonaceous, trace plant fragments, fractures at 76.4' 10 degrees, 77.0' 20 degrees, 77.3' 45 degrees, slickensides

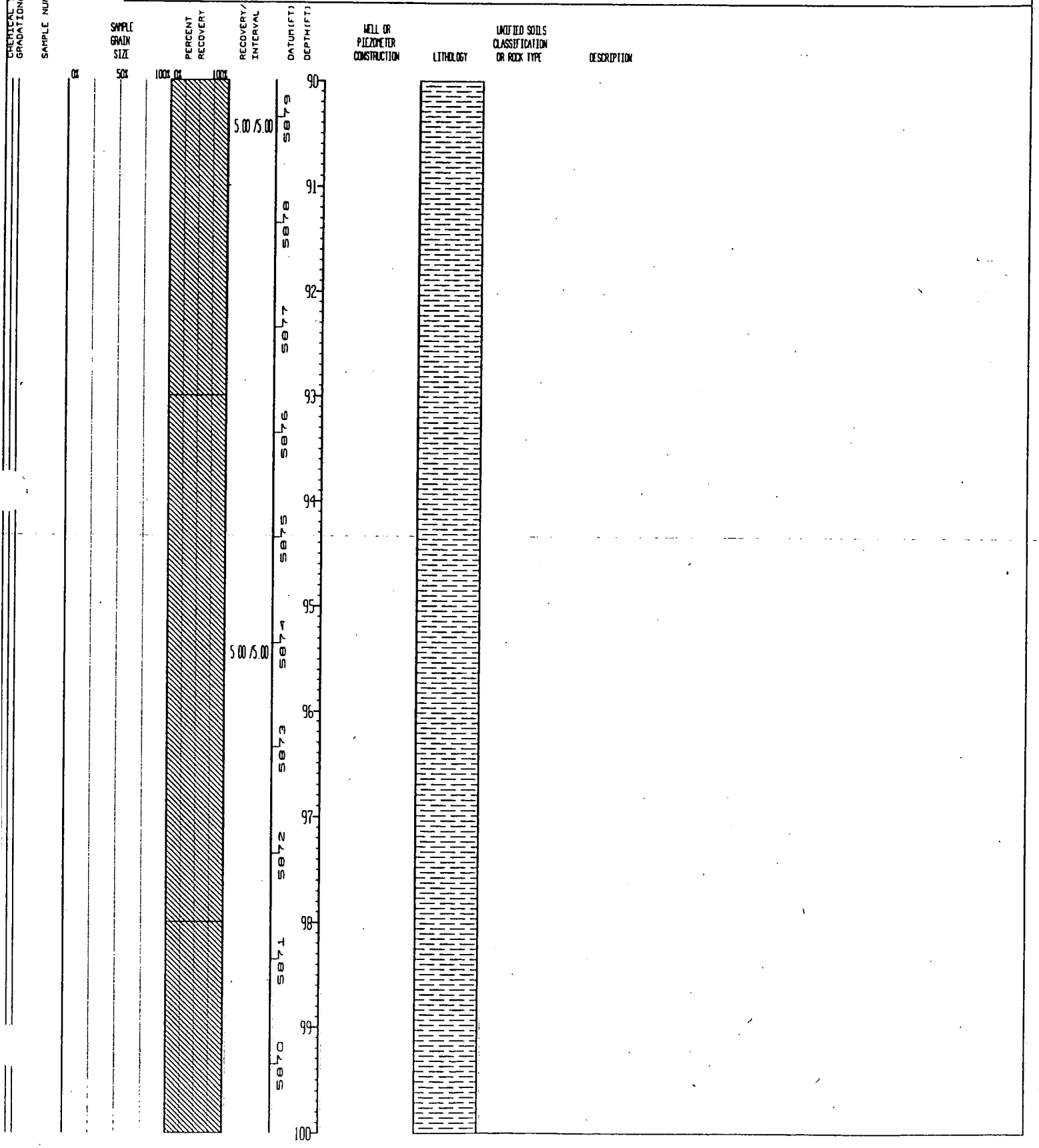
19% sand, 12% silt, 69% clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS: ABANDONED BOREHOLE					



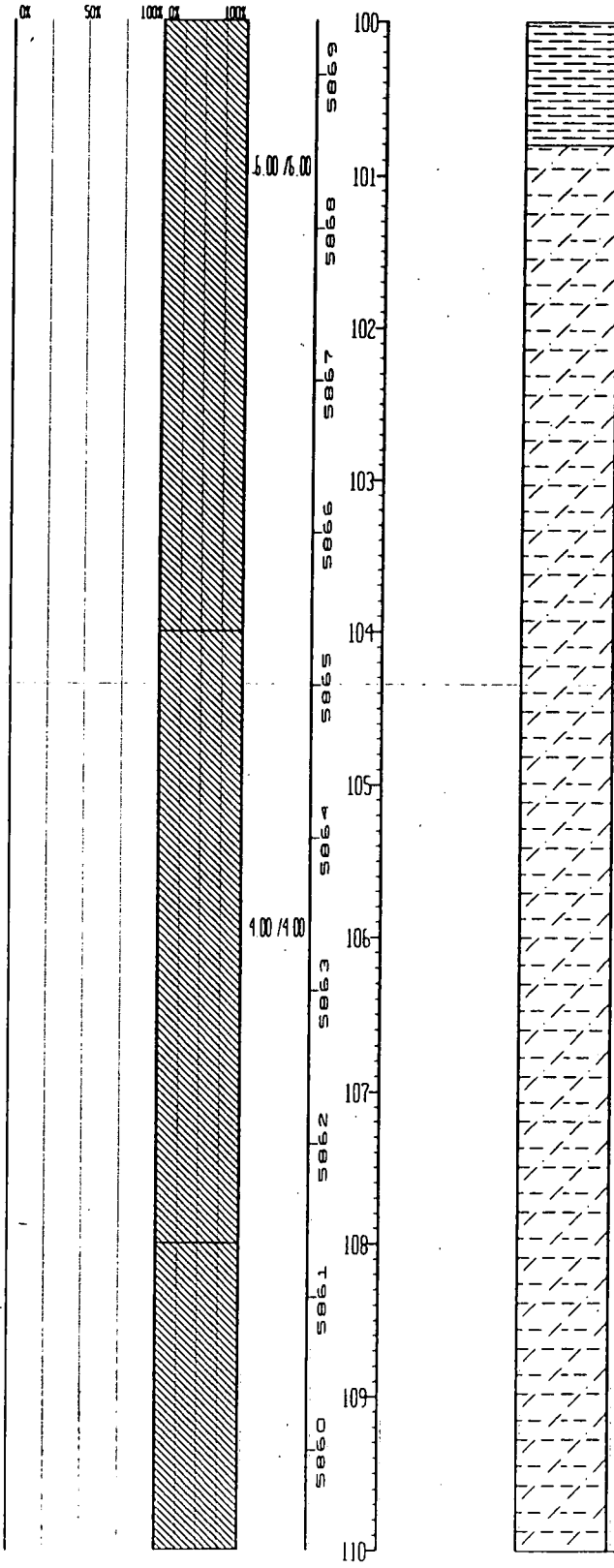
WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		CLAYSTONE:	80.7-87.7 ft. Claystone with some silt, trace sand, light olive gray (5Y5/2) (5Y6/1), olive gray (5Y4/1), dense, non-friable, calcareous nodule at 86.5', silty claystone at 89.2-89.5', claystone nodules at 96.7', some siltstone laminae less than 0.3' thick at 95.6-97.2', slightly carbonaceous throughout, increasing amount at 83.0-85.4', fractures at 80.7-81.9' one main vertical fracture with slickensides, numerous fractures in this interval cause it to be rubbly, 82.5' 40 degrees, slickensides, 83.0' 50 degrees, slickensides, 83.4' horizontal, slickensides, 85.4' 20 degrees, slickensides, 86.3' 75 degrees, slickensides, 85.9' 15 degrees, slickensides, 87.6' 60 degrees, 88.2' 30 degrees, 88.3' 50 degrees, slickensides, 89.5' 65 degrees, slickensides, 90.1' 55 degrees, slickensides, 90.7' 20 degrees, slickensides, 90.8' 50 degrees, slickensides, 91.7' 30 degrees, slickensides, 92.2' 90 degrees, slickensides (0.8" long), 95.4' 55 degrees, slickensides, 99.9' 50 degrees 1% sand, 20% silt, 79% clay.
			87.7-88.0 ft. No recovery for this interval.
		CLAYSTONE	88.0-100.8 ft Claystone as described above

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED 05/13/93		
REMARKS ABANDONED BOREHOLE					



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE
PERCENT RECOVERY
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION

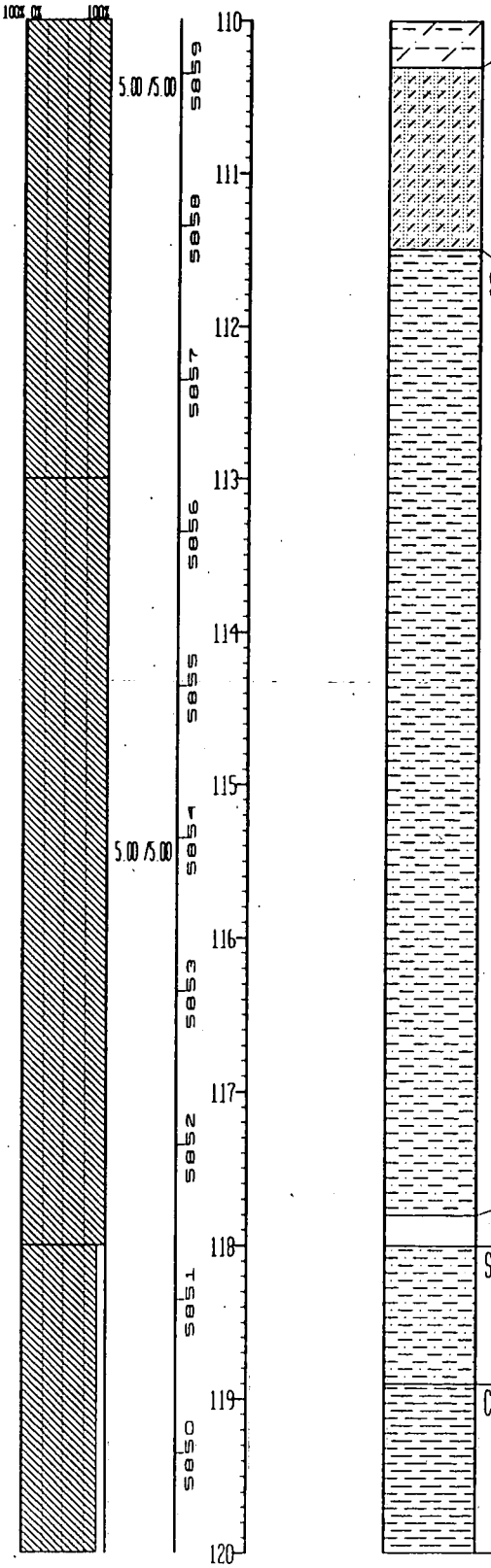


UNIFIED SOILS CLASSIFICATION OR ROCK TYPE: SILTY CLAYSTONE: 100.8-110.3 ft.

DESCRIPTION: Silty Claystone with some sand, light olive gray (5Y5/2), olive gray (5Y3/2)(5Y4/1), grayish olive (10Y4/2), dense, 0-3% porosity (3% in siltier intervals), non-friable to slightly friable, massive bedding to 103.6', very finely laminated, horizontal to 30 degree incline to 105.3', interbeds of claystone and finely laminated silty claystone to 108.1' (claystone beds 0.3-0.8' thick, laminated "beds" 0.1-0.2' thick), massive bedding with slight bioturbation to 110.3', slump fault at 103.6', minor amount of soft sediment deformation, possible erosional contact at 106.1', burrow at 105.9', fracture at 108.8' 40 degrees.
25% sand, 30% silt, 45% clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMP. GRADATIONAL SA. | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



SANDY SILTSTONE: 110.3-111.5 ft.
Sandy Siltstone with abundant clay, light olive gray (5Y5/2) sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, trace mafics, quartzite, dense, well cemented with calcareous cement, non-friable, massive bedding.
35% sand, 36% silt, 29% clay

SANDY CLAYSTONE: 111.5-117.8 ft.
Sandy Claystone with some silt, light olive gray (5Y5/2), olive gray (5Y3/2) (5Y4/1), claystone nodules are dusky yellow (5Y6/4), sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, trace mafics, quartzite, dense, porosity 0-3% (3% in sandy siltstone zone), non-friable, massive bedding to finely laminated (sandy claystone/claystone), bedding disturbed, possibly bioturbated, claystone nodules are sparsly distributed throughout interval, sandy siltstone at 118.4-118.9' (sand 42%, silt 46%, clay 12%), siliceous cemented zone at 117.1-117.2'.
32% sand, 10% silt, 58% clay.

117.8-118.0 ft VOA sample obtained from this interval.

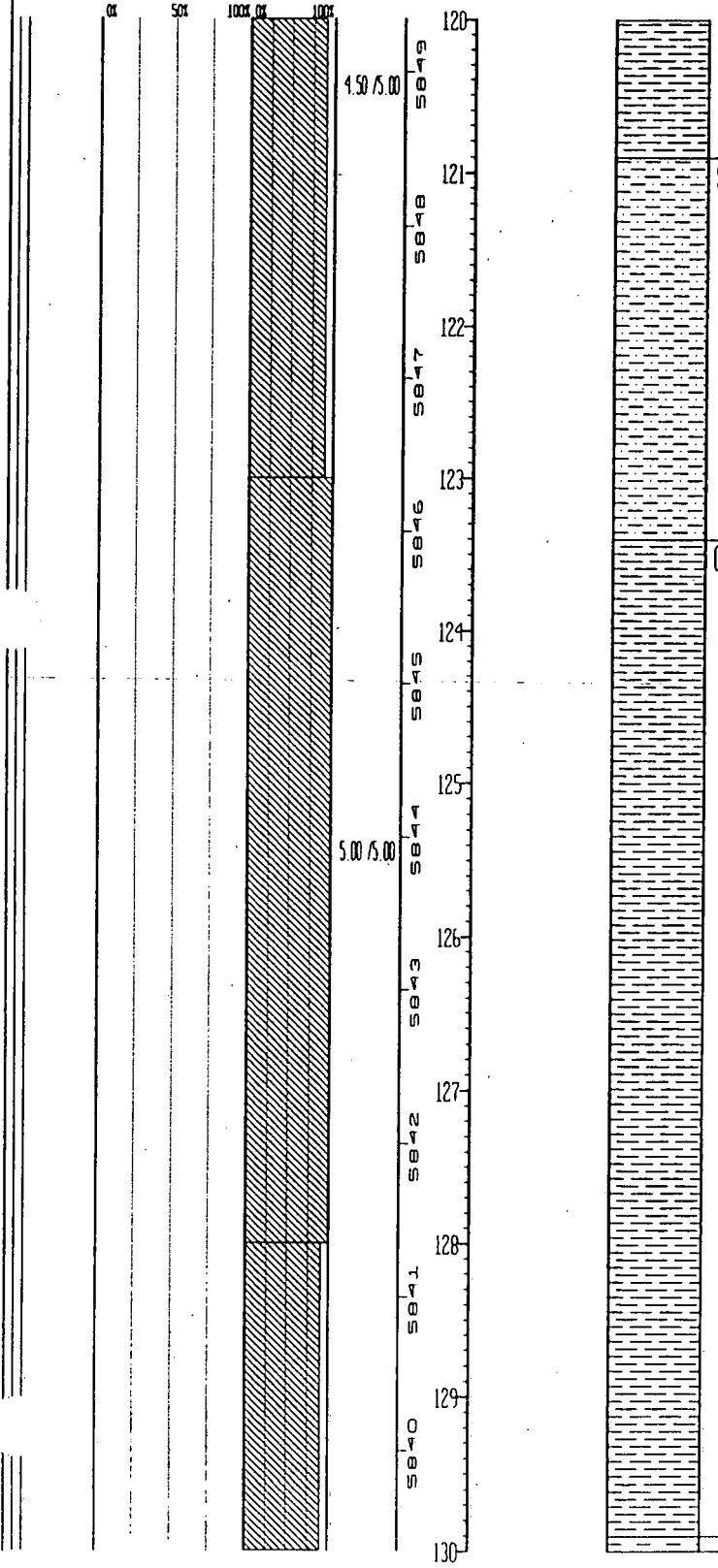
SANDY CLAYSTONE: 118.0-118.9 ft. Sandy Claystone as described above

CLAYSTONE: 118.9-120.9 ft.
Claystone with some silt, trace sand, light olive gray (5Y5/2), dense, non-friable, possibly fractured, rubbly zone at 118.9-120.3'.
1% sand, 11% silt, 79% clay.

BH20185WC

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMP. GRADATIONAL S. SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



SANDY CLAYSTONE: 120.9-123.4 ft.
Sandy Claystone with abundant silt, light olive gray (5Y5/2) sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, some quartzite, trace mafics, mica, dense, non-friable, carbonaceous material at 120.8-122.5', possible bioturbation at 120.9-121.9'.
32% sand, 27% silt; 41% clay.

CLAYSTONE: 123.4-129.9 ft.
Claystone with some silt, trace sand, light olive gray (5Y5/2), olive gray (5Y4/1), dense, non-friable, slightly more carbonaceous at 126.8-128.9', fracture at 125.7' 30 degrees, slickensides.
1% sand, 10% silt, 89% clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93	
REMARKS: ABANDONED BOREHOLE				

CHEMICAL SAMP. GRADATIONAL S. DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE 0% 50% 100%

PERCENT RECOVERY 0% 100%

RECOVERY/INTERVAL: 4.50 /5.00; 4.90 /5.00

DATUM (FT): 5839, 5838, 5837, 5836, 5835, 5834, 5833, 5832, 5831, 5830

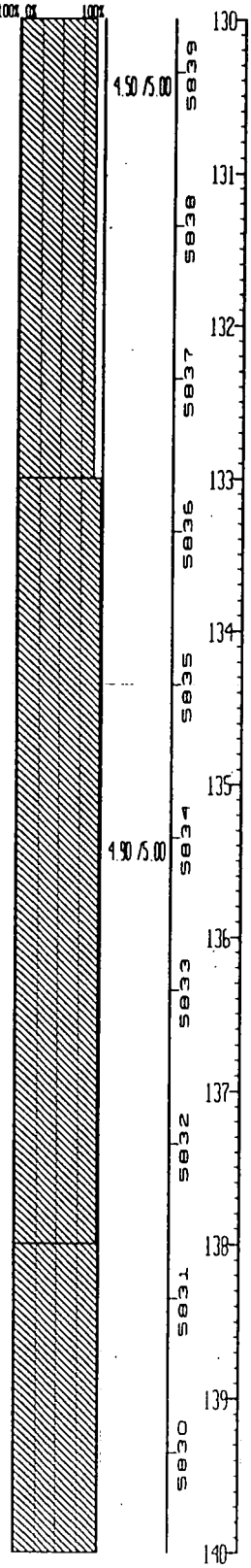
DEPTH (FT): 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140

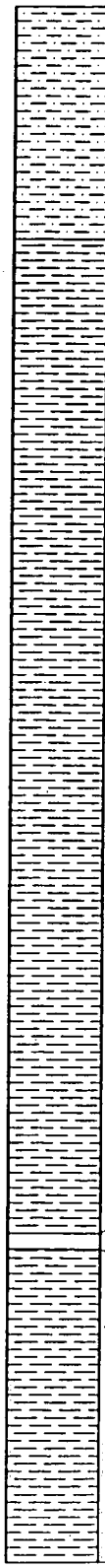
WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION





SANDY CLAYSTONE: 129.9-131.5 ft.
Sandy Claystone with some silt, light olive gray (5Y5/2), sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, some quartzite, trace mafics, mica, dense, non-friable, fracture at 130.0-130.3' 30 degrees.
29% sand, 11% silt, 60% clay.

CLAYSTONE: 131.5-137.9 ft.
Claystone with some silt, trace sand, olive gray (5Y4/1), very carbonaceous zone grayish black (N2), dense, non-friable, trace carbonaceous material throughout, trace pyrite along plant fragment at 135.1', very carbonaceous at 136.4-142.2', fractures at:
- 132.0' 70 degrees slickensides, 0.5' fracture
- 132.8' 65 degrees slickensides
- 133.1' 70 degrees slickensides
- 135.6' 70 degrees slickensides
- 137.2' 80 degrees slickensides
- 138.2' 15 degrees slickensides
- 142.2' 40 degrees slickensides

1% sand, 15% silt, 84% clay

137.9-138.0 ft. No recovery for this interval.

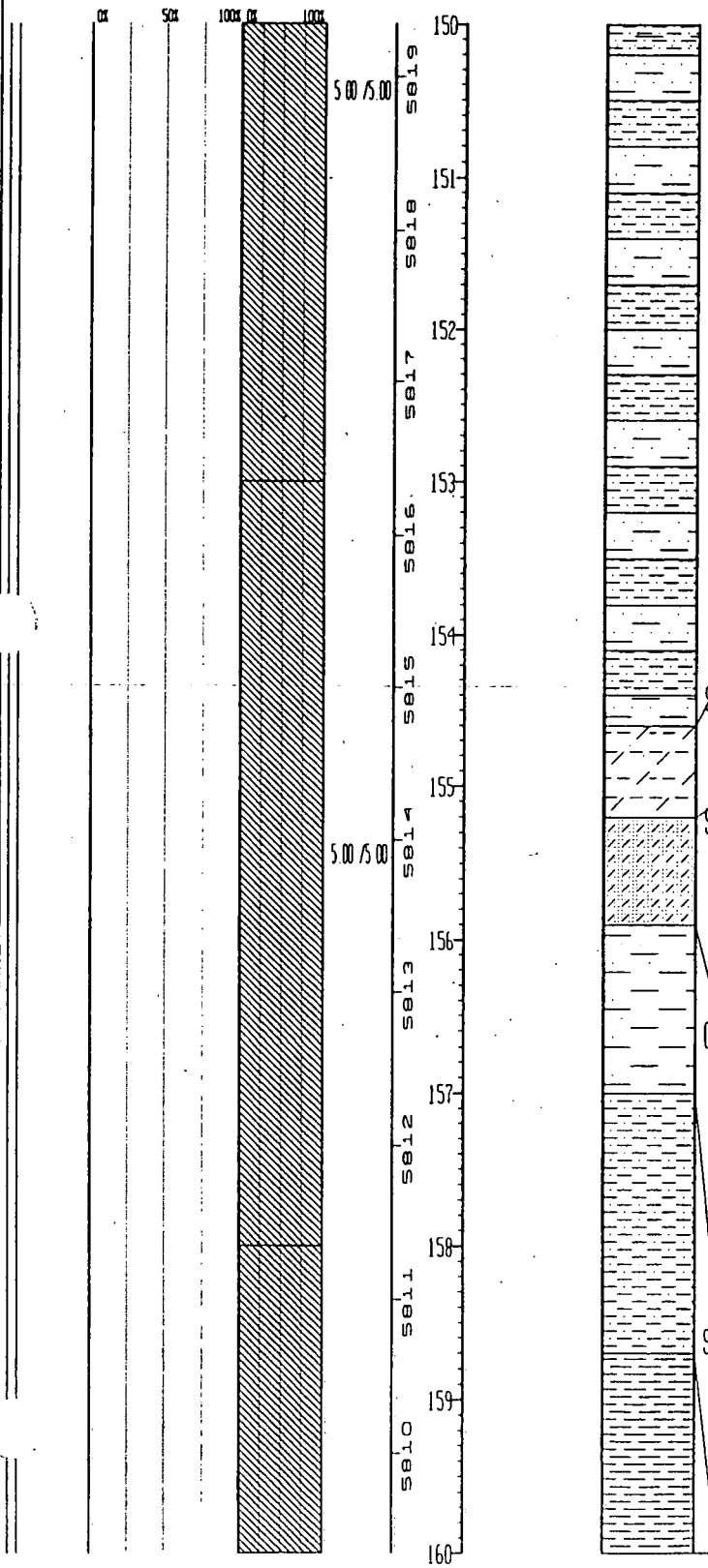
CLAYSTONE: 138.0-142.2 ft Claystone as described above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT):	5969.35	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749546	AREA: MOUND	CASING DIAMETER (IN):		GEOLOGIST:	J DUBOIS	21593
EAST:	2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	8	DATE DRILLED:	05/13/93	
REMARKS:	ABANDONED BOREHOLE						

CHEMICAL SAMP. GRADATIONAL SA.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	5.00 /5.00	5829	140				
					5828	141				
						142			SANDY CLAYSTONE	142.2-146.0 ft. Sandy Claystone with some silt, olive black (5Y2/1) at 142.2-143.2', light olive gray (5Y5/2) at 143.2-146.0', sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, quartzite, some mafics, dense, non-friable, massive to slightly bioturbated intervals at 143.0-143.3', slightly carbonaceous. 33% sand, 13% silt, 54% clay.
					5827					
					5826	143				
						144				
					5825					
						145				
				5.00 /5.00	5824				CLAYEY SANDSTONE	146.0-154.6 ft. Clayey Sandstones interbedded with Sandy Claystones. Clayey Sandstone with some silt: sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded trace sub-angular, consists of quartz, some quartzite, trace mafics, mica. Sandy Claystone with some silt: sand is very fine-grained, trace fine-grained, very well sorted, sub-rounded to rounded consists of quartz, some quartzite, trace mafics, mica. Light olive gray (5Y5/2), olive gray (5Y3/2) (5Y4/1), yellowish gray (5Y7/2) for claystone nodules and lenses, 0-7% porosity (7% in sandstone intervals), non-friable to slightly friable, predominately fine laminations, sub-horizontal to 30 degree inclination, slight bioturbation at 146.0-146.6', 149.3-149.9', 153.3-154.2', burrow at 149.4' soft sediment deformation, trace carbonaceous throughout, increasing amounts of carbonaceous material at 152.7-153.3', claystone nodules/lens throughout, slump faults at 148.0', 150.1', 150.5', 152.5', and 152.7' Clayey Sandstone: 48% sand, 21% silt, 31% clay. Sandy Claystone: 23% sand 12% silt, 65% clay
					5823	146				
						147				
					5822					
						148				
					5821					
						149				
					5820					
						150				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT):	5969.35	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749546	AREA: MOUND	CASING DIAMETER (IN)		GEOLOGIST	J DUBOIS	21593
EAST:	2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	8	DATE DRILLED:	05/13/93	
REMARKS:	ABANDONED BOREHOLE						

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE
PERCENT RECOVERY
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



SILTY CLAYSTONE: 154.6-155.2 ft.
Silty Claystone with some sand, light olive gray (5Y5/2), dense, non-friable, slightly carbonaceous.
14% sand, 26% silt, 60% clay

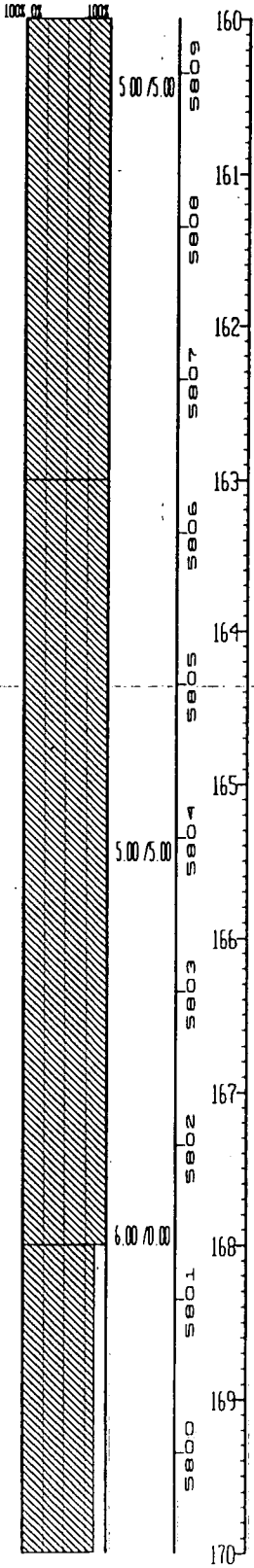
SANDY SILTSTONE: 155.2-155.9 ft
Sandy Siltstone with some clay, light olive gray (5Y5/2), sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to rounded, consists of quartz, some quartzite, trace mafics, mica, 3% porosity, slightly friable bioturbated, trace claystone clasts
33% sand, 50% silt, 17% clay

CLAYEY SANDSTONE: 155.9-157.0 ft.
Clayey Sandstone with trace silt, light olive gray (5Y6/1), black (N1), sand is very fine- to fine-grained, well sorted, sub-angular to sub-rounded, consists of quartz, trace quartzite, mafics, less than 5% porosity, slight argillaceous cementation, slightly friable to moderately friable, fine laminations, horizontal to sub-horizontal, small scale cross-laminations, small fault at 156.7' 45 degrees, carbonaceous and coalified plant material along laminae
50% sand, 5% silt, 45% clay

SANDY CLAYSTONE 157.0-158.7 ft.
Sandy Claystone with some silt, olive gray (5Y3/2), sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, mafics, dense, non-friable, fractures at 157.4' 25 degrees slickensides, 158.1' 85 degrees slickensides
16% sand, 15% silt, 69% clay

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT): 5969.35	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749546	AREA: MOUND	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21593	
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 8	DATE DRILLED: 05/13/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPL GRADATIONAL SA DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



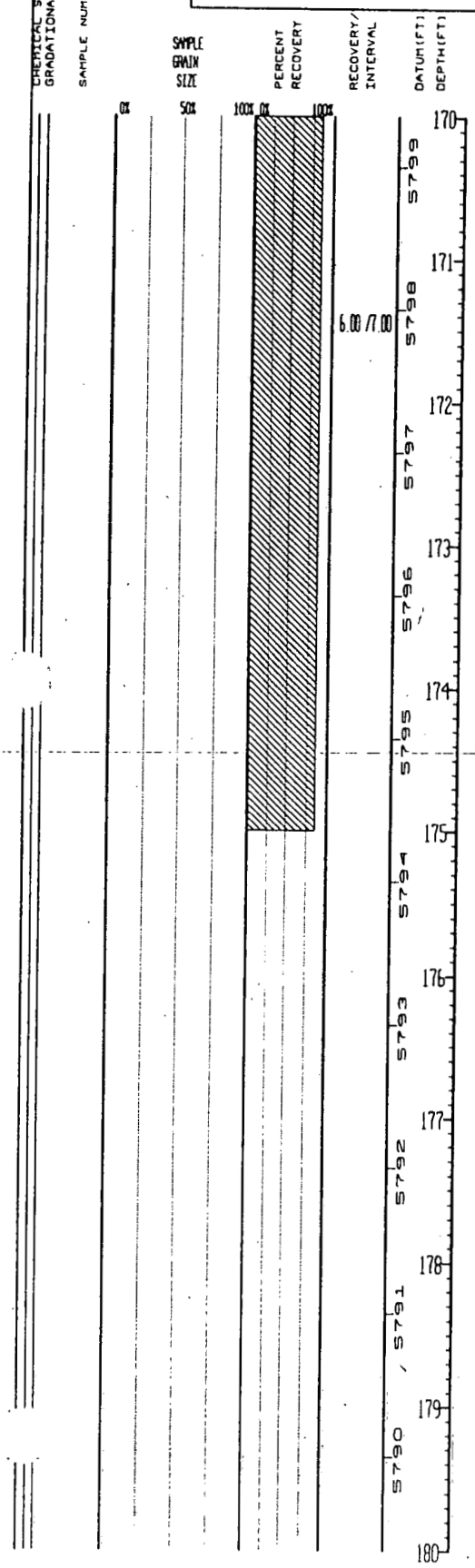
CLAYSTONE

158.7-174.0 ft.
Claystone with some sand and silt, olive black (5Y2/1), olive gray (5Y3/2), light olive gray (5Y5/2), dense, non-friable, carbonaceous throughout, increasing amounts of carbonaceous material at 160.2-160.8', rubble zone at 172.7-173.7', fractures at:

159.0'	55 degrees	slickensides
159.8'	30 degrees	slickensides
165.6'	35 degrees	slickensides
165.9'	20 degrees	slickensides
171.4'	40 degrees	slickensides

9% sand, 9% silt, 82% clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 175.0	GROUND ELEVATION (FT):	5969.35	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749546.	AREA: MOUND	CASING DIAMETER (IN):		GEOLOGIST:	J DUBOIS		21593
EAST: 2086110	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	8	DATE DRILLED:	05/13/93		
REMARKS: ABANDONED BOREHOLE							



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	174.0-175.0 ft. No recovery for this interval.
	Total depth at 175.0 ft

STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 163.0	GROUND ELEVATION (FT) 5955.17	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS		
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN) 12	DATE DRILLED: 05/05/93	21693	
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMP / GRADATIONAL S	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
						0				0.0-0.9 ft. Top soil, start of boring.
				0.00 /0.90	5955				SM	0.9-2.7 ft Gravelly Sand with some clay and trace silt, very dark grayish brown (10YR3/2), strong brown (7.5YR5/6), gravel maximum size 0.19' rock fragments, average size 0.04', angular to sub-rounded, consists of quartzite, granites, quartz, metamorphics, rock fragments, sand is fine- to coarse-grained, well graded, angular to sub-rounded, consists of quartzite, granite, schist, gneiss, rock fragments, quartz, trace mica, slightly cemented with calcareous cement, fines exhibit low plasticity, humus soil with plant rootlets at 0.9-1.4' and 2.9-3.1', trace caliche in soil, caliche in heavy concentration throughout interval, slightly moist to moist 36% gravel, 42% sand, 3% silt, 19% clay
					5954	1				
				1.80 /2.00	5953	2				
					5952	3				2.7-2.9 ft No recovery for this interval.
									SM	2.9-5.7 ft Gravelly Sand as described above.
				2.00 /2.00	5951	4				
					5950	5			SC	5.7-6.4 ft Clayey Sand with some gravel and silt, brown (7.5YR5/4), very pale brown (10YR7/3), gravel maximum size 0.12' rock fragment, average size 0.025', angular to sub-rounded, consists of quartzite, other metamorphics, rock fragments, sand is fine- to coarse-grained, well graded, angular to sub-rounded, consists of quartzite, schist, rock fragments, quartz, trace feldspar, granite, fines exhibit low plasticity, some caliche present in lenses, slightly cemented with calcareous cement, slightly moist. 6% gravel, 55% sand, 6% silt, 33% clay
				1.50 /2.00	5949	6				
					5948	7				6.4-6.9 ft No recovery for this interval.
									SC	6.9-7.5 ft Clayey Sand as described above.
				1.50 /1.80	5947	8			SM	7.5-8.4 ft Gravelly Sand as described at 0.9-5.7', omit humus soil description, slightly moist. 36% gravel, 42% sand, 3% silt, 19% clay
										8.4-8.7 ft No recovery for this interval.
				1.00 /1.00	5946	9			SW	8.7-9.7 ft Gravelly Sand as described below.
						10				9.7-11.0 ft No recovery for this interval

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21693	
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/05/93		
REMARKS: ABANDONED BOREHOLE					

GRADATIONAL S DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)
0.00 /1.30	5945	10
	5944	11
0.30 /2.00	5943	12
	5942	13
0.50 /2.00	5941	14
	5940	15
2.00 /2.00	5939	16
	5938	17
1.90 /2.00	5937	18
	5936	19
1.70 /1.70		20

SW: 11.0-11.3 ft.
Gravelly Sand with some silt and clay, strong brown (7.5YR 5/6), gravel maximum size 0.2' rock fragments, average size 0.06', sub-angular, consists of rock fragments, sand is fine- to medium-grained, well graded, sub-angular to sub-rounded, consists of quartz, quartzite, rock fragments, mafics, trace mica, fines exhibit low plasticity, some calcareous cement, trace caliche, moist.
32% gravel, 40% sand, 18% silt, 10% clay

11.3-13.0 ft. No recovery for this interval.

SW: 13.0-13.5 ft. Gravelly Sand as described above.

13.5-15.0 ft. No recovery for this interval.

ML: 15.0-15.6 ft.
Silty Sand with some clay, olive yellow (2.5Y6/6), gravel maximum size 0.18' rock fragment, sub-rounded, average size 0.18', sand is fine-grained, poorly graded, sub-rounded to rounded, trace sub-angular, consists of quartz, quartzite, some mafics, trace rock fragments, fines exhibit low to medium plasticity, interval has a couple of large cobble fragments in the silty sand matrix, dry.
0% gravel, 43% sand, 40% silt, 17% clay

SANDY SILTSTONE: 15.6-17.0 ft.
Sandy Siltstone with some clay, dark yellowish orange (10YR6/6), moderate yellowish brown (10YR5/4), sand is very fine- to fine-grained, trace medium-grained, well sorted, sub-angular to sub-rounded, consists of quartz, mafics, some quartzite, trace mica, some quartz grains are frosted, many are iron stained, 2-7% porosity, some limonite cement, slightly friable, massive bedding, ironstones present at 15.6-16.8', heavy iron staining, dry.
32% sand, 54% silt, 14% clay.
Top of bedrock at 15.6 ft.

SANDY CLAYSTONE: 17.0-18.1 ft.
Sandy Claystone with some silt, yellowish gray (5Y7/2), dark yellowish orange (10YR6/6), sand is very fine- to fine-grained, trace medium-grained, well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics, mica, 0-3% porosity, slightly friable, some limonite cement, massive bedding, heavily iron stained, slightly moist.
34% sand, 10% silt, 56% clay

SILTY CLAYSTONE: 18.1-18.9 ft
Silty Claystone with some sand, yellowish gray (5Y7/2), dark yellowish orange (10YR6/6), dense, non-friable to slightly friable, massive bedding, heavily iron stained to no iron staining, mottled, slightly moist.
9% sand, 10% silt, 81% clay

18.9-19.0 ft No recovery for this interval

SILTY CLAYSTONE: 19.0-19.4 ft Silty Claystone as described above.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21693
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/05/93	
REMARKS: ABANDONED BOREHOLE				

CHEMICAL SAMPL GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%			20			SILTY SANDSTONE	19.4-22.3 ft. Silty Sandstone with some clay, dusky yellow (5Y6/4), yellowish gray (5Y7/2), dark yellowish orange (10YR6/6), sand is very fine- to medium-grained, moderately sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, trace quartzite, mafics, many quartz grains are frosted, some iron stained grains, 3-8% porosity, slightly cemented with limonite cement, slightly friable to moderately friable, massive bedding, few silty claystone beds less than 0.35' thick present, heavily iron stained to no iron staining, slightly moist to moist. 71% sand, 15% silt, 14% clay
				1.00 /1.00	5934	21				
				1.00 /1.00	5933	22				
	BH20069C			0.00 /0.30					SANDSTONE	22.3-22.4 ft. Sandstone as described below.
										22.4-22.7 ft. VOA sample obtained from this interval.
					5932	23			SANDSTONE	22.7-24.6 ft. Sandstone with some clay and trace silt, yellowish gray (5Y7/2), grayish orange (10YR7/4), dark yellowish orange (10YR6/6), sand is medium- to coarse-grained, trace fine-grained, well sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, trace mafics, quartzite, many quartz grains are frosted, some are iron stained, 15-25% porosity, highly friable, massive bedding, predominately unconsolidated, saturated 89% sand, 5% silt, 6% clay
				2.00 /2.00	5931	24				
	BH20071C									
										24.6-24.9 ft VOA sample obtained from this interval.
					5930	25			SANDSTONE	24.9-26.6 ft Sandstone as described above.
				2.00 /2.00	5929	26				
	BH20072C									26.6-26.9 ft VOA sample obtained from this interval.
					5928	27			SANDSTONE	26.9-28.6 ft. Sandstone as described above
				2.00 /2.00	5927	28				
	BH20073C									28.6-28.9 ft VOA sample obtained from this interval.
					5926	29			SANDSTONE	28.9-30.6 ft Sandstone as described above.
				2.00 /2.00		30				

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 163.0	GROUND ELEVATION (FT) 5955.17	PROJECT NUMBER 002 BEDROCK	LOG OF BORING NUMBER
NORTH 749826	AREA NORTHEAST TRENCHES	CASING DIAMETER (IN)	GEOLOGIST J DUBOIS	21693
EAST 2086867	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN) 12	DATE DRILLED 05/05/93	
REMARKS ABANDONED BOREHOLE				

CHEMICAL SAMPL GRADATIONAL SA.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM(FT)	DEPTH(FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0%	100% 2.00/2.00	5925	30				
	BH20074C									30.6-30.9 ft. VOA sample obtained from this interval
					5924	31			SANDSTONE	30.9-31.5 ft. Sandstone as described above.
				2.00/2.00	5923	32			SANDY CLAYSTONE	31.5-32.6 ft. Sandy Claystone as described below.
	BH20088C									32.6-32.9 ft. VOA sample obtained from this interval.
					5922	33			SANDY CLAYSTONE	32.9-38.3 ft. Sandy Claystone with some silt, light olive gray (5Y5/2), olive gray (5Y4/1), iron staining is dark yellowish orange (10YR6/6), sand is very fine-grained, some fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some mafics, trace quartzite, dense, non-friable to slightly friable (in sandy intervals), some mottling present some iron staining throughout with increasing amounts of iron at 31.5-33.7', a few sandstone beds less than 0.2' thick present, saturated to slightly moist 29% sand, 7% silt, 64% clay.
				2.00/1.90	5921	34				
					5920	35				
				2.10/2.10	5919	36				
					5918	37				
				2.00/2.00	5917	38			SILTY SANDSTONE	38.3-40.9 ft. Silty Sandstone with some clay, yellowish gray (5Y7/2), dark yellowish orange (10YR6/6), sand is medium- to coarse-grained, trace very fine- and fine-grained, moderately sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, some mafics, quartzite, trace rock fragments, many quartz grains are frosted, trace iron stained grains, highly friable, unconsolidated, varying amounts of iron staining throughout, saturated 78% sand, 12% silt, 10% clay
					5916	39				
				1.90/2.00		40				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT)	5955.17	PROJECT NUMBER	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):		GEOLOGIST:	J DUBOIS	21693
EAST:	2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	12	DATE DRILLED:	05/05/93	
REMARKS:	ABANDONED BOREHOLE						

CHEMICAL SAMPL GRADATIONAL SA DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 1.90 /2.00; 2.00 /2.00; 2.00 /2.00; 2.00 /2.00; 0.00 /1.00

DATUM (FT): 5915, 5914, 5913, 5912, 5911, 5910, 5909, 5908, 5907, 5906

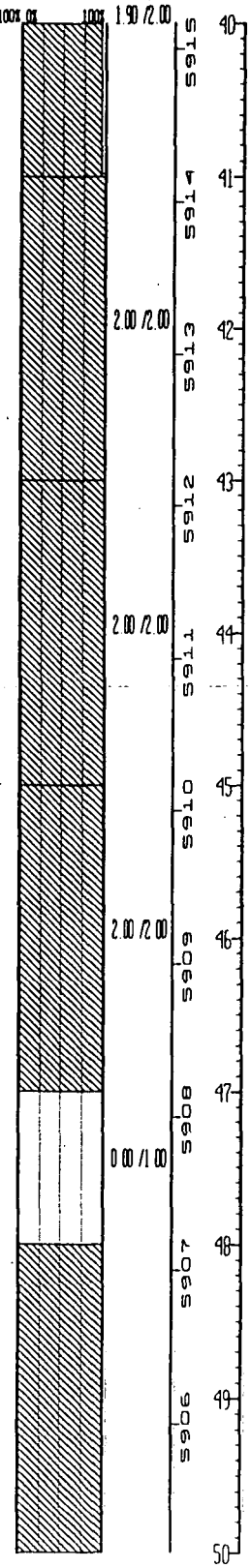
DEPTH (FT): 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION



40.9-41.0 ft. No recovery for this interval.

SILTY SANDSTONE: 41.0-41.8 ft. Silty Sandstone as described above.

SILTY SANDSTONE: 41.8-45.6 ft
Silty Sandstone interbedded with Sandy Claystone.
Silty Sandstone with some clay: sand is medium- to coarse-grained, trace very fine- to fine-grained, moderately sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, some mafics, quartzite, trace rock fragments, many quartz grains are frosted, trace iron stained grains.
Sandy Claystone with some silt: sand is very fine- to fine-grained, well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics, mica.
Medium dark gray (N4), light olive gray (5Y6/1), iron stained is dark yellowish orange (10YR6/6), dense, non-friable to slightly friable, small lenticular sands in claystone at 42.0-43.0', some sandy beds less than 0.25' thick present, iron staining predominately in sandy intervals, small ironstone pebble at 42.9', slightly moist
Silty Sandstone: 42% sand, 41% silt, 17% clay
Sandy Claystone: 31% sand, 31% silt, 38% clay

SILTY SANDSTONE: 45.6-47.0 ft.
Silty Sandstone with some clay, light olive gray (5Y5/2), light olive brown (5Y5/6), olive gray (5Y3/2), sand is very fine- to fine-grained, trace medium-grained, well sorted, sub-angular to sub-rounded, consists of quartz, some mafics, trace mica, quartzite, porosity 8-12%, slightly friable to moderately friable, inclined laminations (30 degrees) in upper 0.6', massive bedding in lower portion, several slump faults (30 degrees) in upper 0.6', slightly carbonaceous, slightly moist
58% sand, 36% silt, 6% clay

47.0-48.0 ft No recovery for this interval.

SILTY SANDSTONE: 48.0-48.1 ft Silty Sandstone as described above.

SILTY CLAYSTONE: 48.1-57.5 ft
Silty Claystone with some sand, olive gray (5Y4/1)(5Y3/2), dense, non-friable to slightly friable, folded, inclined bed at 50 degrees at 49.1-50.0', iron staining at 48.4', claystone nodules at 53.2-53.7' and 54.9-56.9', some carbonaceous material present, fractures at:
48.5' 50 degrees
52.0' 60 degrees slickensides
55.1' 40 degrees
15% sand, 17% silt, 68% clay

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749826	AREA NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST J DUBOIS	21693	
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED 05/05/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE
SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 5.00 /5.00; 5.00 /5.00

DATUM (FT): 5965, 5964, 5963, 5962, 5961, 5960, 5959, 5958, 5957, 5956

DEPTH (FT): 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

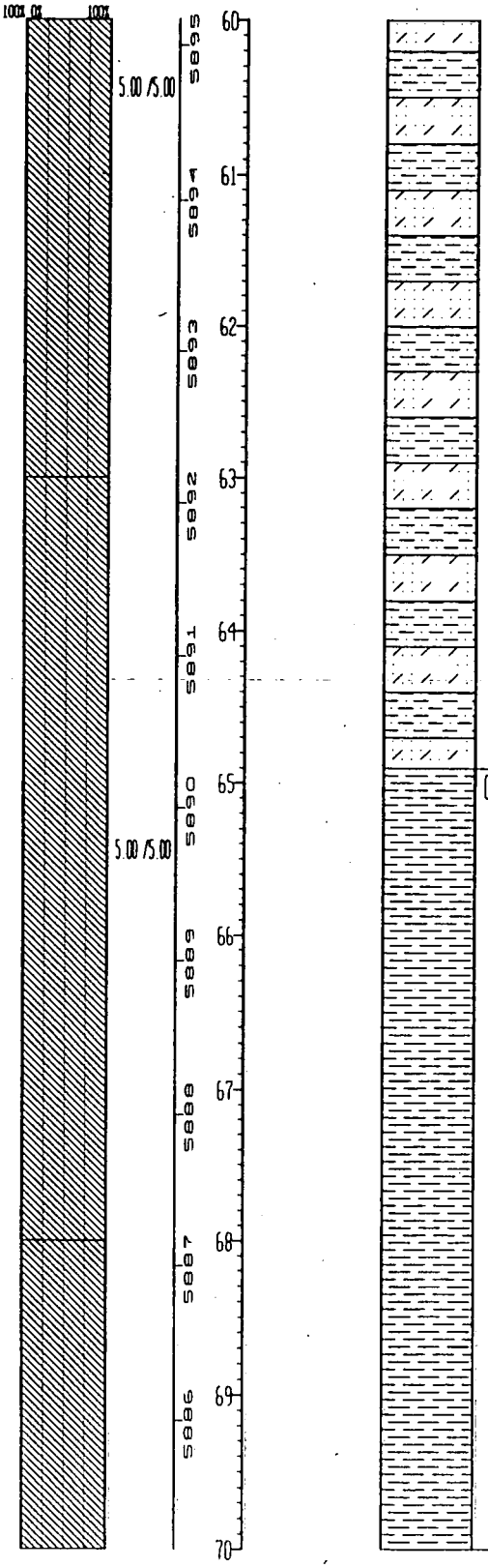
DESCRIPTION

SILTY SANDSTONE 57.5-64.9 ft

Silty Sandstone interbedded with Sandy Claystone.
Silty Sandstone with some clay: sand is very fine-grained, some fine-grained, trace medium-grained, well sorted, sub-angular to sub-rounded, consists of quartz, trace mafics, quartzite, mica
Sandy Claystone with some silt: sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics.
Light olive gray (5Y6/1), olive gray (5Y4/1), 0-5% porosity, claystones are dense, sandstones are slightly friable, beds are 0.15-0.5' thick, horizontal to sub-horizontal laminations becoming massive bedded, trace carbonaceous material, some claystone nodules.
Silty Sandstone 51% sand, 27% silt, 22% clay
Sandy Claystone 26% sand, 11% silt, 63% clay

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER
NORTH: 749826	AREA NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21693
EAST: 2086867	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/05/93	
REMARKS: ABANDONED BOREHOLE				

DEPTH | CHEMICAL SAMPLE | GRADATIONAL SAM... | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE	64.9-78.6 ft. Claystone with sand, trace silt, olive gray (5Y3/2) to olive black (5Y2/1), light olive gray (5Y5/2), dense, non-friable, several rubbly zones, slightly carbonaceous, calcareous nodules at 74.5' and 74.6', some inclusions of carbonaceous plant material, possible fracture at 75.9', 30 degrees 20% sand, 2% silt, 78% clay

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 163.0	GROUND ELEVATION (FT) 5955 17	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749826	AREA NORTHEAST TRENCHES	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21693	
EAST: 2086867	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN) 12	DATE DRILLED: 05/05/93		
REMARKS ABANDONED BOREHOLE					

CHEMICAL SAMPL
GRADATIONAL SA
DEPTH
SAMPLE NUMBER

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0% 50%	100% 0% 100%	5.00 /5.00	5885	70				
			5884	71				
			5883	72				
			5882	73				
			5881	74				
		5.00 /5.00	5880	75				
			5879	76				
			5878	77				
			5877	78				
			5876	79				
				80				

SILTY CLAYSTONE 78.6-87.8 ft
Silty Claystone interbedded with Clayey Sandstone
Silty Claystone with abundant sand: sand is very fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, trace quartzite, mafics.
Clayey Sandstone with some silt sand is very fine-grained, trace fine-grained, well sorted, sub-angular to sub-rounded,

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749826	AREA NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21693	
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/05/93		
REMARKS: ABANDONED BOREHOLE					

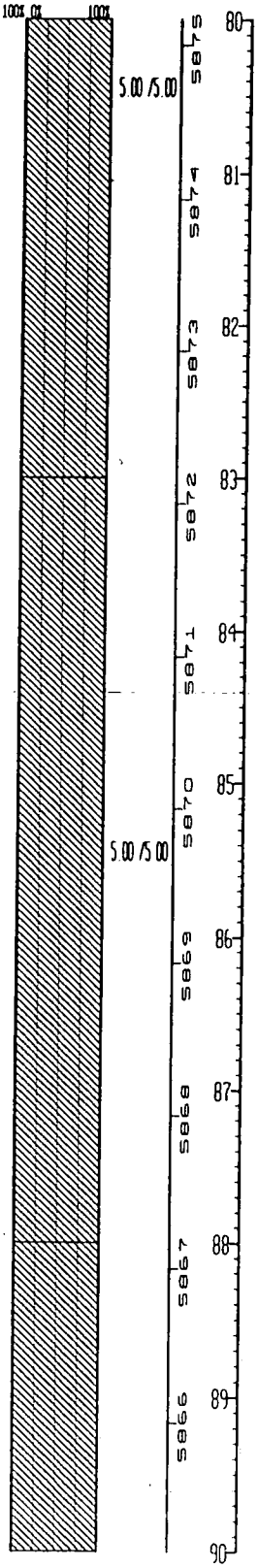
CHEMICAL SAM GRADATIONAL S TH DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE 0% 50% 100%

PERCENT RECOVERY 0% 100%

RECOVERY/INTERVAL: 5.00/5.00; 5.00/5.00



DATUM (FT): 5875, 5874, 5873, 5872, 5871, 5870, 5869, 5868, 5867, 5866

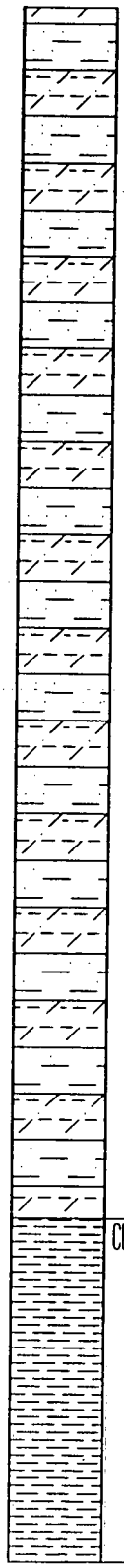
DEPTH (FT): 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION



consists of quartz, some quartzite, trace mafics.
Light olive gray (5Y6/1)(5Y5/2), olive gray (5Y4/1), claystone nodules are grayish orange (10YR7/4), 0-5% porosity, non-friable to slightly friable, bedding predominately finely laminated, horizontal to sub-horizontal predominately silty claystone in lower portion of interval
Silty Claystone: 31% sand, 33% silt, 36% clay.
Clayey Sandstone: 41% sand, 21% silt, 38% clay.

CLAYSTONE

87.8-106.0 ft
Claystone with trace silt and sand, olive gray (5Y4/1), olive black (5Y2/1), black (N1), dense, non-friable, very carbonaceous in large portions of interval, coal seam at 96.1-96.3', some plant fragments, fractures at:
92.3' 60 degrees slickensides
93.0' 60 degrees slickensides
93.6' 70 degrees slickensides
95.6' 30 degrees slickensides
96.4' horizontal slickensides
96.8' 20 degrees slickensides

STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 163 0	GROUND ELEVATION (FT)	5955 17	PROJECT NUMBER:	OU2 BEDROCK
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS
EAST: 2086867	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN)	12	DATE DRILLED:	05/05/93
REMARKS: ABANDONED BOREHOLE					

LOG OF BORING NUMBER

21693

CHEMICAL SAMPLE / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	5 00 /5.00	5865	90				98 8' 30 degrees slickensides 98 9-99.8' 70-90 degrees slickensides 100 2-100.9' 60-85 degrees slickensides 102 1' 45 degrees 105.9' 20 degrees slickensides 2% sand, 5% silt, 93% clay
					5864	91				
					5863	92				
					5862	93				
					5861	94				
				5 00 /5.00	5860	95				
					5859	96				
					5858	97				
					5857	98				
					5856	99				
						100				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21693	
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/05/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE
GRADATIONAL SAM
SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 5.00 /5.00; 5.00 /5.00

DATUM (FT): 5955, 5954, 5953, 5952, 5951, 5950, 5949, 5948, 5947, 5946

DEPTH (FT): 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

SILTY CLAYSTONE 106.0-110.8 ft

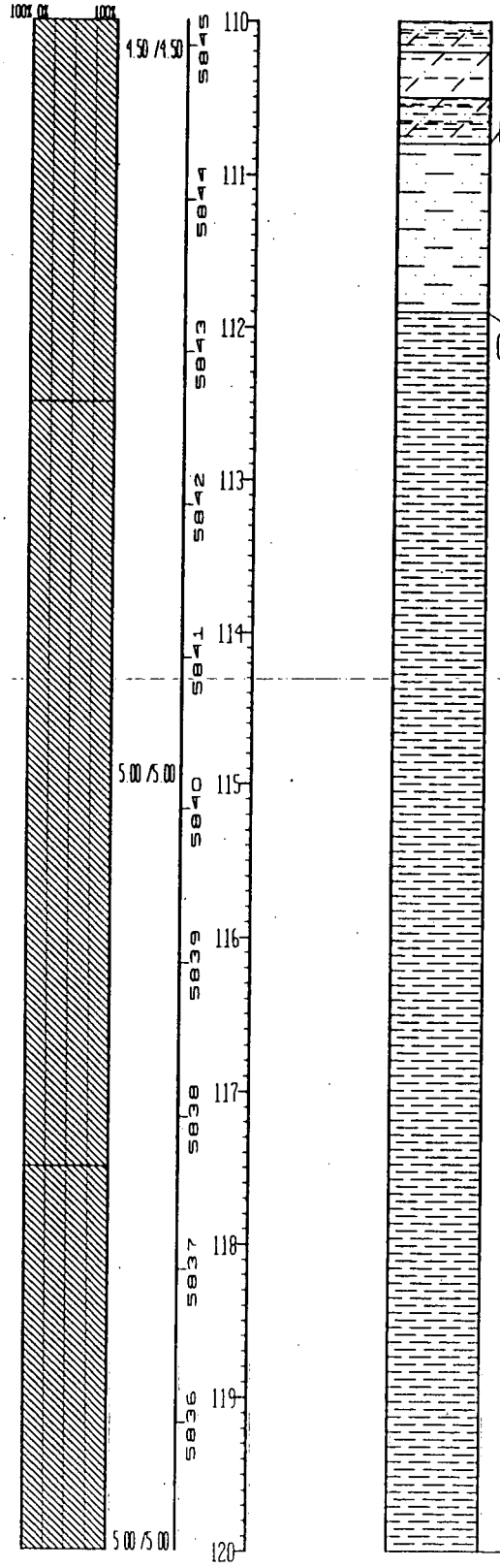
Silty Claystone with some sand interbedded with Sandy Claystone with some silt, light olive gray (5Y5/2), olive gray (5Y3/2), dense, non-friable to slightly friable, fine laminations with siltier laminae at 108.3-109.3', possible bioturbation, trace carbonaceous material.

Silty Claystone: 15% sand, 21% silt, 64% clay.

Sandy Claystone: 25% sand, 11% silt, 64% clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST: J DUBOIS	21693	
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/05/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE | GRADATIONAL SAMPLE | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



CLAYEY SANDSTONE: 110.8-111.9 ft.

Clayey Sandstone with some silt, olive gray (5Y4/1), sand is very fine-grained, very well sorted sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics, 0-3% porosity, slightly argillaceous cemented, slightly friable, no apparent bedding, no fractures.
40% sand, 21% silt, 39% clay

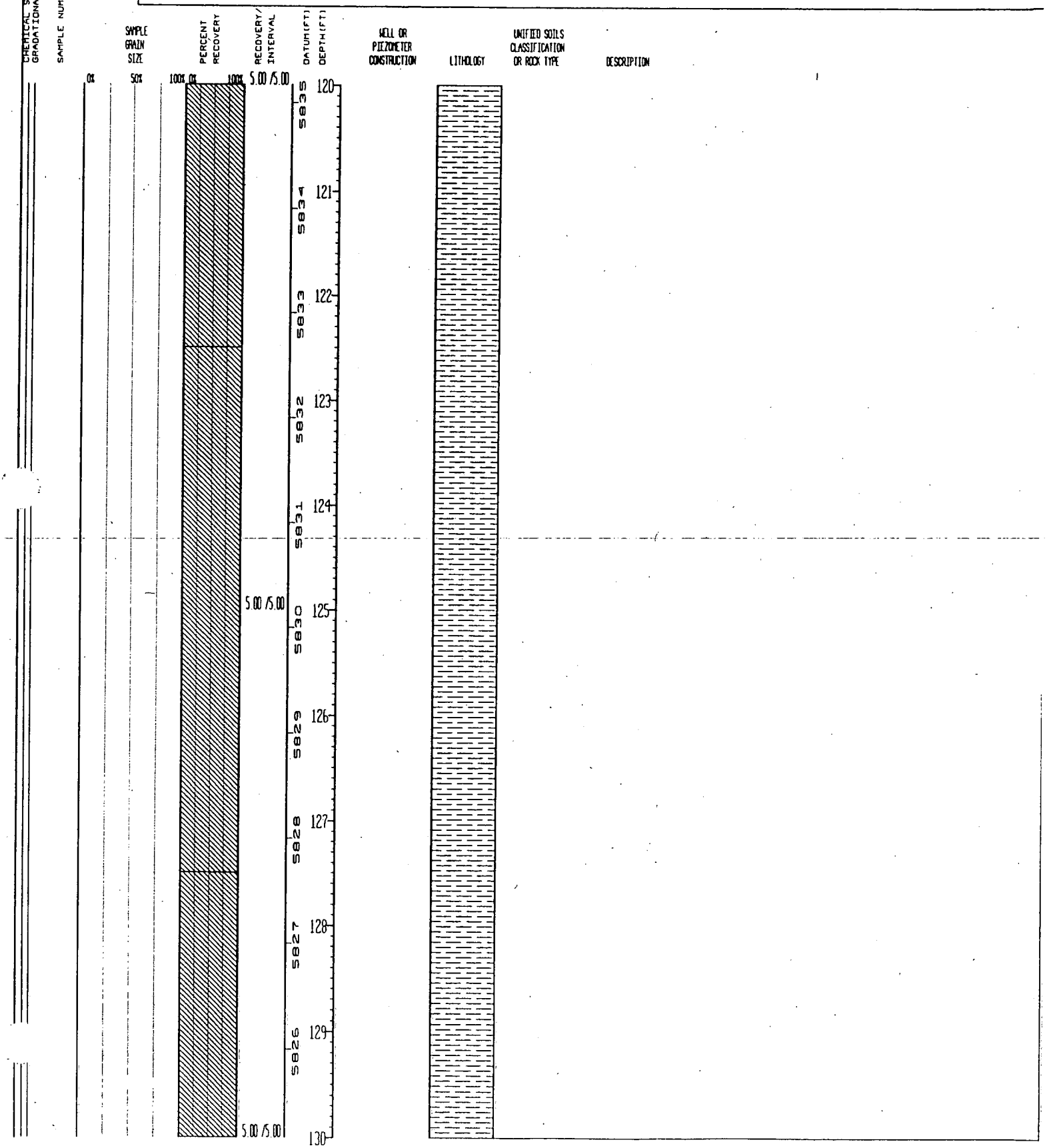
CLAYSTONE: 111.9-145.2 ft.

Claystone with some silt, trace sand, light olive gray (5Y5/2), olive gray (5Y4/1), grayish black (N2) in very carbonaceous intervals, dense, non-friable, fractures at:

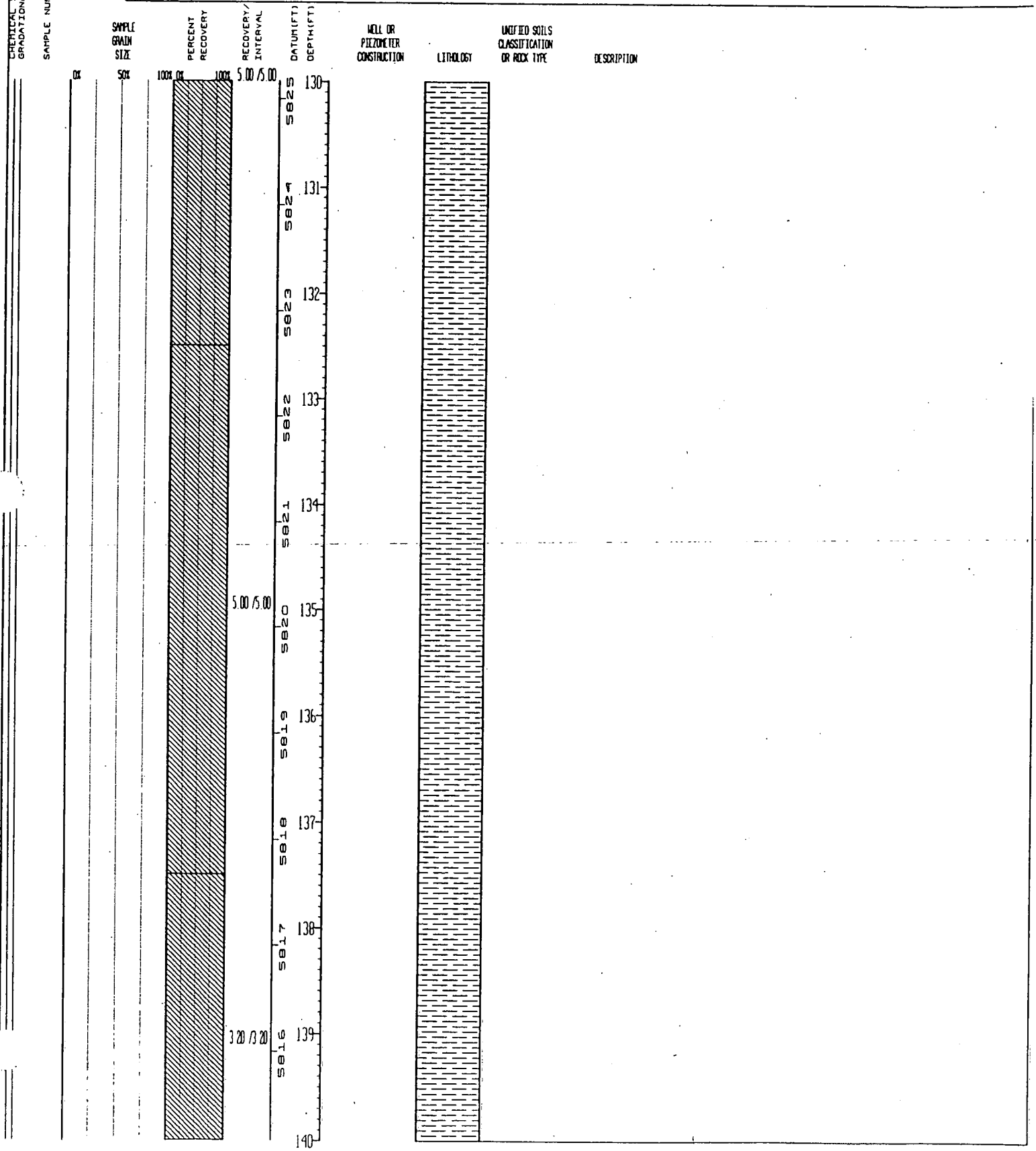
- 113.6' 30 degrees no slickensides
- 121.1-122.5' multiple fractures, 65-80 degrees, slickensides
- 123.3' 65 degrees slickensides
- 124.3' 90 degrees slickensides
- 124.5' 90 degrees slickensides
- 124.6' 50 degrees slickensides
- 129.8' 70 degrees slickensides (0.6' long fracture)
- 132.8' 70 degrees slickensides
- 134.2' 85 degrees slickensides
- 137.1' 85 degrees slickensides
- 144.3' 90 degrees slickensides

rubble zone at 137.5-140.6'
2% sand, 15% silt, 83% clay

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT):	5955.17	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)		GEOLOGIST:	J DUBOIS	21693
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	12	DATE DRILLED:	05/05/93	
REMARKS: ABANDONED BOREHOLE						



STATE PLANE COORDINATE	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21693	
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED: 05/05/93		
REMARKS: ABANDONED BOREHOLE					



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER	OU2 BEDROCK	LOG OF BORING NUMBER
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)	GEOLOGIST	J DUBOIS	21693
EAST: 2086867	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN) 12	DATE DRILLED:	05/05/93	
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPL GRADATIONAL SAM DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE 0% 50% 100%

PERCENT RECOVERY 0% 100%

RECOVERY/INTERVAL: 7.30 /7.30; 2.00 /2.00

DATUM (FT): 5815, 5814, 5813, 5812, 5811, 5810, 5809, 5808, 5807, 5806

DEPTH (FT): 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

SANDY CLAYSTONE 145.2-149.1 ft

Sandy Claystone with some silt, light olive gray (5Y5/2), olive gray (5Y4/1), sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics, mica, non-friable to slightly friable, small intervals (less than 0.4') of fine laminations, possible bioturbated intervals, predominately in sandy laminations, small scale slump faults at 148.0' 30 degrees, few claystone nodules present

25% sand, 19% silt, 56% clay

SILTY CLAYSTONE 149.1-150.7 ft

Silty Claystone with some sand, light olive gray (5Y5/2), olive gray (5Y3/2), calcareous cemented, non-friable to slightly friable, lower 0.7' thin laminations, cross-laminations, very well cemented with calcareous cement in lower portion

20% sand, 36% silt, 44% clay

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN)	GEOLOGIST: J DUBOIS	21693	
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN) 12	DATE DRILLED: 05/05/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 8.00/8.00

DATUM (FT): 5905, 5904, 5903, 5902, 5901, 5900, 5799, 5798, 5797, 5796

DEPTH (FT): 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY CLAYSTONE	150.7-153.6 ft. Silty Claystone with abundant sand, olive gray (5Y4/1), olive black (5Y2/1), non-friable, predominately fine laminations, claystone nodule at 151.5', fracture at 153.2' 50 degrees, slickensides. 27% sand, 29% silt, 44% clay.
SANDY CLAYSTONE	153.6-157.2 ft. Sandy Claystone with some silt, light olive gray (5Y6/1), olive gray (5Y3/2), sand is very fine-grained, trace fine-grained, very well-sorted, sub-angular to sub-rounded, consists of quartz, trace quartzite, mafics, non-friable to slightly friable, several intervals less than 0.3' of finely laminated sands/sandy claystone, small burrow at 153.8', fracture at 155.5' 50 degrees, slickensides 24% sand, 11% silt, 65% clay.
CLAYSTONE	157.2-158.0 ft. Claystone with some sand, trace silt, olive black (5Y2/1), dense, non-friable, trace carbonaceous plant fragments. 16% sand, 4% silt, 80% clay
	158.0-163.0 ft. No recovery for this interval

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 163.0	GROUND ELEVATION (FT): 5955.17	PROJECT NUMBER	002 BEDROCK	LOG OF BORING NUMBER
NORTH: 749826	AREA: NORTHEAST TRENCHES	CASING DIAMETER (IN):	GEOLOGIST	J DUBOIS	21693
EAST: 2086867	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 12	DATE DRILLED	05/05/93	
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% – 50% – 100%)	PERCENT RECOVERY (0% – 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0.00 /5.00	5795	160				
					5794	161				
					5793	162				
					5792	163				Total depth at 163.0 ft
					5791	164				
					5790	165				
					5789	166				
					5788	167				
					5787	168				
					5786	169				
						170				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 50.1	GROUND ELEVATION (FT): 5967.69	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749649	AREA: MOUND AREA	CASING DIAMETER (IN):	GEOLOGIST: J.P. GIROD	21793	
EAST: 2086167	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 06/04/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPL / GRADATIONAL SAM / DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5967	0			GC:	0.0-2.0 ft. Clayey Gravel with some silt and sand, very dark gray (10YR3/1), gravel maximum and average size 0.05', sub-angular, consisting of quartzite coated with caliche, sand is fine- to coarse-grained (in trace amounts), poorly graded angular to sub-angular, consisting of quartz, plagioclase, and mica (grains coated with CaCO3), moderate plasticity, some CaCO3 cementation, plant roots (1/32" thick), moist. 52% gravel, 8% sand, 8% silt, 33% clay.
					5966	1				
						2			SC:	2.0-12.0 ft. Clayey Sand with some gravel and silt, light yellowish brown at 2.0-8.0', strong brown (7.5YR4/6) at 8.0-13.2', gravel maximum size 0.15', average size 0.025', poorly graded, sub-angular, consisting of quartzite, sand is fine- to coarse-grained, poorly graded, angular to sub-angular, consisting of quartz and quartzite, CaCO3 coating on gravel and sand grains, moderate to high plasticity, some CaCO3 cementation, moist. 21% gravel, 32% sand, 10% silt, 37% clay.
					5965	3				
					5964	4				
					5963	5				
					5962	6				
				0.00 /13.00	5961	7				
					5960	8				
					5959	9				
					5958	10				

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 50.1	GROUND ELEVATION (FT): 5967.69	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749649	AREA: MOUND AREA	CASING DIAMETER (IN)	GEOLOGIST: J.P. GIROD	21793	
EAST 2086167	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 06/04/93		
REMARKS ABANDONED BOREHOLE					

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 3.00/3.00; 2.70/2.70; 2.00/2.00

DATUM (FT): 5957, 5956, 5955, 5954, 5953, 5952, 5951, 5950, 5949, 5948

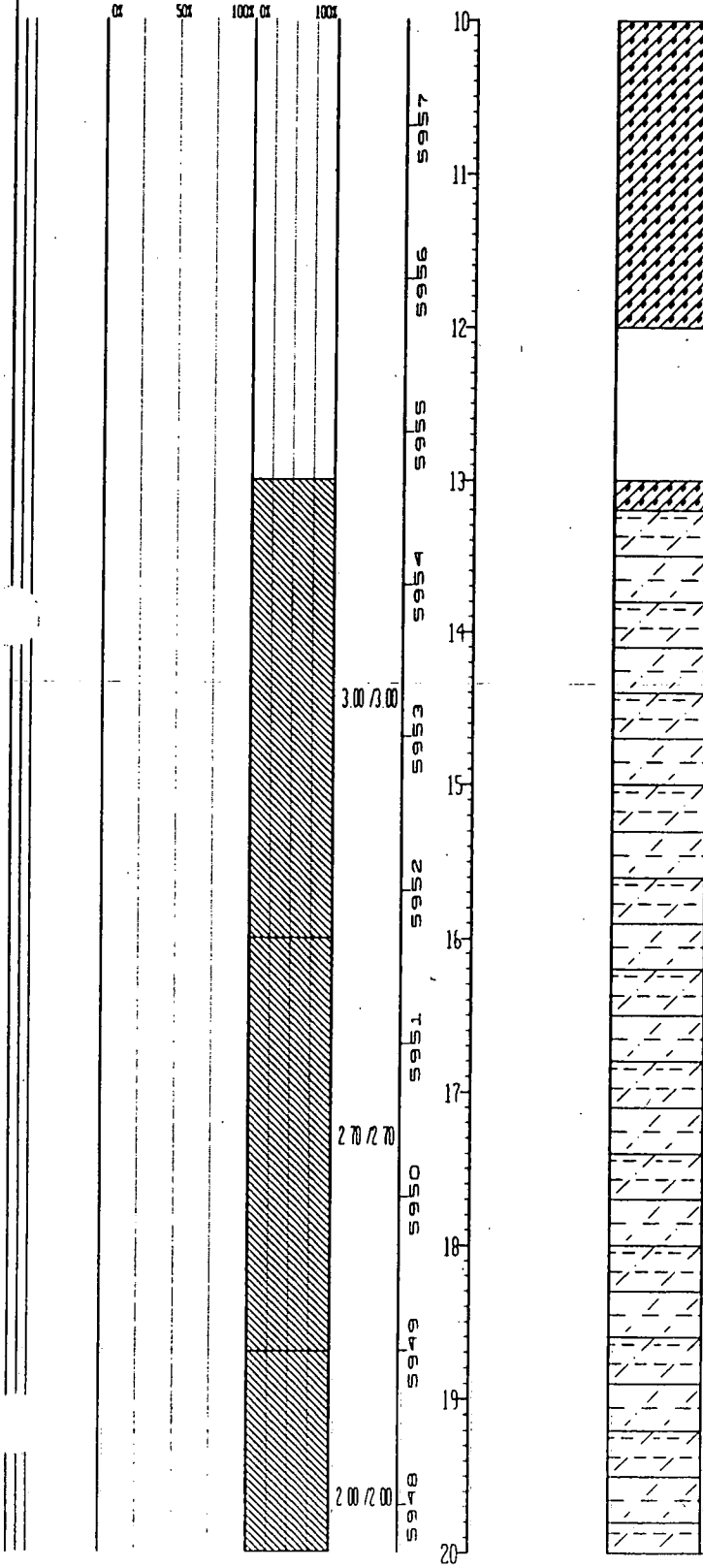
DEPTH (FT): 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION



12.0-13.0 ft. No recovery for this interval.

SC: 13.0-13.2 ft.
Clayey Sand as described above.
Top of bedrock at 13.2 ft.

SILTY CLAYSTONE: 13.2-23.1 ft.
Interbedded Silty Claystone, Clayey Siltstone, and Claystone as described from 13.2-23.1 ft. and from 23.4-27.5 ft.
Silty Claystone with trace sand: light olive gray (5Y5/2), moderate yellowish brown (10YR5/4), very pale orange (10YR8/2), sand is very fine- to fine-grained, well sorted, angular to rounded, consisting of quartz and mafics, <5% porosity, some calcareous cementation, slightly friable, faint horizontal bedding at 18.7-19.2', soft sediment deformation (convoluted bedding), extensive iron oxide staining (moderate yellowish brown (10YR5/4)), and manganese oxide (very dusky red purple (5RP2/2)) along fractures parallel to bedding 0 degrees, fractures induced by drilling

Clayey Siltstone with trace sand: light olive gray (5Y5/2), moderate yellowish brown (10YR5/4), very pale orange (10YR8/2), sand is fine-grained, well sorted, sub-angular to sub-rounded, consisting of quartz and mafics, <5% porosity, slightly friable, manganese oxide and iron oxide along faint horizontal bedding planes, extensive fracturing induced by drilling

Silty Claystone: 1% sand, 34% silt, 65% clay
Clayey Siltstone: 4% sand, 67% silt, 29% clay

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 50.1	GROUND ELEVATION (FT):	5967.69	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER
NORTH: 749649	AREA: MOUND AREA	CASING DIAMETER (IN):		GEOLOGIST:	J.P. GIROD	21793
EAST: 2086167	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/04/93	
REMARKS: ABANDONED BOREHOLE						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%			20				
					5947	21				
					5946					
				2.70 /2.70		22				
					5945					
						23				23.1-23.4 ft VOA sample obtained from this interval.
	BH2028WC								SILTY CLAYSTONE	23.4-27.5 ft. Interbedded Silty Claystone, Clayey Siltstone, and Claystone as described from 13.2-23.2 ft. and 23.4-27.5 ft. Claystone with some silt: light olive gray (10YR5/4), very pale orange (10YR8/2), <5% porosity, slightly friable, manganese oxide and iron oxide along faint horizontal bedding planes, extensive fracturing induced by drilling, nodules of charcoal, trace carbonaceous material, nodules of caliche. Fractures: 90 degrees at 14.5', healed with FeOX and MnOX, 25 degrees at 20.8', healed with FeOX and MnOX, 60 degrees at 38.8', healed with carbonaceous material, 90 degrees at 45.0', healed with FeOX, 90 degrees at 46.8', healed with FeOX, 90 degrees at 47.2', healed with FeOX, 90 degrees at 13.8-14.0', healed with FeOX and MnOX. Color changes at 13.2-36.8', weathered bedrock, light olive gray, moderate yellow brown, very pale orange, white (N9), yellowish gray (5Y8/1), at 36.8-38.8', dark yellowish brown (10YR4/2), dusky yellowish brown (10YR2/2), moderately weathered, at 38.8-49.6', weathered bedrock, dark yellow orange (10YR6/6), dark yellow brown (10YR4/2), olive gray (5Y4/1), light olive gray (5Y5/2), dusky yellow (5Y6/4), at 49.6-50.1', unweathered bedrock, brownish black (5YR2/1)
	BH2019WC				5944	24				
					5943					
				3.30 /3.30		25				
					5942	26				
					5941					
				2.40 /1.10		27				
	BH2031WC				5940					
						28				27.5-27.8 ft. VOA sample obtained from this interval.
				2.80 /1.80	5939				SILTY CLAYSTONE	27.8-31.6 ft Interbedded Silty Claystone, Clayey Siltstone, and Claystone as described from 13.2-23.1 ft. and 23.4-27.5 ft.
						29				
	1320WC				5938					
						30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 50.1	GROUND ELEVATION (FT): 5967.69	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749649	AREA: MOUND AREA	CASING DIAMETER (IN):	GEOLOGIST: J.P. GIROD	21793	
EAST: 2086167	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 06/04/93		
REMARKS: ABANDONED BOREHOLE					

DEPTH	CHEMICAL SAMPLE GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					2.80 /2.30	5937	30, 31				
		BH20316AC				5936					31.6-31.9 ft. VOA sample obtained from this interval.
					2.00 /1.10	5935	32, 33			SILTY CLAYSTONE	31.9-35.1 ft. Interbedded Silty Claystone, Clayey Siltstone, and Claystone as described from 13.2-23.1 ft. and 23.4-27.5 ft.
					2.70 /2.40	5934	34				
		BH20321AC				5933	35				
		BH20317AC									35.1-35.4 ft. VOA sample obtained from this interval
						5932	36			SILTY CLAYSTONE	35.4-39.0 ft. Interbedded Silty Claystone, Clayey Siltstone, and Claystone as described from 13.2-23.1 ft. and 23.4-27.5 ft.
					2.90 /2.00	5931	37				
					2.70 /1.90	5930	38				
		718AC				5929	39				39.0-39.3 ft. VOA sample obtained from this interval.
						5928	40			SILTY CLAYSTONE	39.3-42.9 ft. Interbedded Silty Claystone, Clayey Siltstone, and Claystone as described from 13.2-23.1 ft. and 23.4-27.5 ft.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 50.1	GROUND ELEVATION (FT)	5967.69	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749649	AREA: MOUND AREA	CASING DIAMETER (IN)		GEOLOGIST:	J.P. GIROD		21793
EAST: 2086167	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	14	DATE DRILLED:	06/04/93		
REMARKS: ABANDONED BOREHOLE							

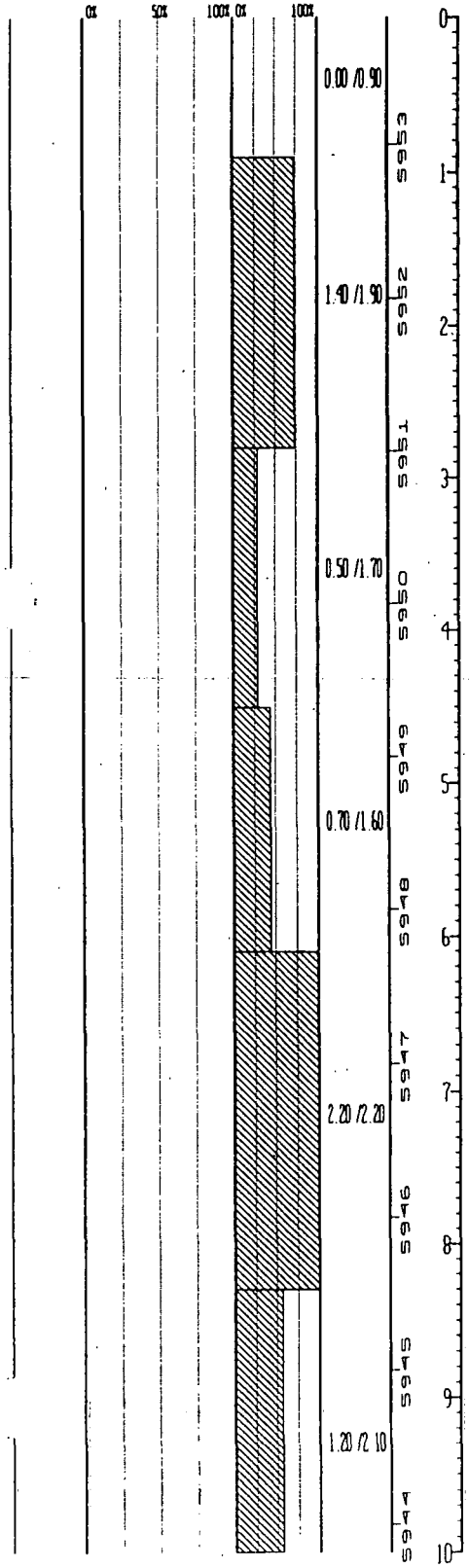
CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH2022AC			3.00 /1.80	5927	40				
					5926	41				
				2.50 /2.10	5925	42				
	BH2026AC					43				42.9-43.2 ft VOA sample obtained from this interval.
					5924				SILTY CLAYSTONE	43.2-47.0 ft Interbedded Silty Claystone, Clayey Siltstone, and Claystone as described from 13.2-23.1 ft. and 23.4-27.5 ft.
				2.80 /1.90		44				
					5923	45				
					5922	46				
				2.70 /2.20						
	BH2025AC				5921					
	BH2027AC					47				47.0-47.3 ft VOA sample obtained from this interval.
					5920				SILTY CLAYSTONE	47.3-49.7 ft Interbedded Silty Claystone, Clayey Siltstone, and Claystone as described from 13.2-23.1 ft and 23.4-27.5 ft.
						48				
				3.00 /2.80	5919					
						49				
	BH2028AC				5918					49.7-50.0 ft VOA sample obtained from this interval.
						50				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 50.1	GROUND ELEVATION (FT): 5967.69	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749649	AREA: MOUND AREA	CASING DIAMETER (IN)	GEOLOGIST: J.P. GIROD	21793	
EAST: 2086167	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 06/04/93		
REMARKS: ABANDONED BOREHOLE					

CHEMICAL SAMPLE / GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5917 5916 5915 5914 5913 5912 5911 5910 5909 5908	50 51 52 53 54 55 56 57 58 59 60				SILTY CLAYSTONE: 50.0-50.1 ft. Interbedded Silty Claystone, Clayey Siltstone, and Claystone as described from 13.2-23.1 ft. and 23.4-27.5 ft. Total depth at 50.1 ft. Core longer than measured run.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 50.0	GROUND ELEVATION (FT): 5953.82	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748618	AREA: 903 PAD	CASING DIAMETER (IN):	GEOLOGIST: J.P. GIROD	21893
EAST: 2085859	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 05/26/93	
REMARKS: ABANDONED BOREHOLE				

GRADATIONAL SAMPLE TH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0.0-0.9 ft. Top soil, start of boring at 0.9 ft.
CL	0.9-2.0 ft. Sandy Clay with some silt and trace clay, very dark grayish brown (10YR3/2), sand is medium- to fine-grained with trace coarse-grained sand, poorly graded, angular to sub-angular, consisting of quartz, mica, quartzite and mafics, <10% porosity, moderate plasticity, argillaceous cement, slight caliche present, extensive plant roots, trace gravel, maximum gravel size 0.1', average size 0.1', sub-angular 35% sand, 20% silt, 45% clay
CL	2.0-2.3 ft. Gravelly Clay as described below.
	2.3-2.8 ft. No recovery for this interval.
CL	2.8-3.3 ft. Gravelly Clay as described below.
	3.0-3.3 ft. VOA sample obtained from this interval.
	3.3-4.5 ft. No recovery for this interval
CL	4.5-5.2 ft. Gravelly Clay as described below.
	4.6-4.9 ft. VOA sample obtained from this interval.
	4.9-5.2 ft. VOA sample obtained from this interval.
	5.2-6.1 ft. No recovery for this interval.
CL	6.1-7.6 ft. Gravelly Clay with some sand and silt and caliche, dark brown (7.5YR3/4), brown (7.5YR5/4), sand is fine-grained with trace medium- to coarse-grained sand, angular to sub-rounded, poorly graded, consisting of mica, quartz, and mafics, maximum gravel size 0.05, average size 0.03', angular, consisting of quartzite, quartz, and schist, high plasticity, caliche ($CaCO_3$), moderately to highly weathered. 21% gravel, 12% sand, 20% silt, 47% clay
	7.6-8.3 ft. No recovery for this interval
CL	8.3-9.5 ft. Gravelly Clay as described above
	9.2-9.5 ft. VOA sample obtained from this interval.
	9.5-10.4 ft. No recovery for this interval

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 50.0	GROUND ELEVATION (FT): 5953.82	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748618	AREA: 903 PAD	CASING DIAMETER (IN):	GEOLOGIST: J.P. GIROD	21893	
EAST: 2085859	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 05/26/93		
REMARKS: ABANDONED BOREHOLE					

GRADATIONAL SAM PTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%			10				10.4-10.7 ft. VOA sample obtained from this interval.
					5943	11				10.7-12.3 ft. No recovery for this interval.
				0.50 /1.90	5942	12			CL	12.3-13.2 ft Sandy Clay with some silt and trace gravel, brown-dark brown (10YR4/3), gravel maximum size 0.1', average size 0.02', angular, poorly graded, well graded, angular to sub-angular, consisting of quartz, quartzite, plagioclase and mica, moderate plasticity, argilloceous cement, some CaCO3 present extensive iron oxide staining, damp, moderately weathered to highly weathered. 3% gravel, 26% sand, 11% silt, 60% clay. Top of bedrock at 13.2 ft
				1.40 /2.20	5941	13				
					5940	14			CLAYSTONE	13.2-13.4 ft. Interbedded Claystone and Silty Sandstone as described below.
										13.4-13.7 ft. VOA sample obtained from this interval.
										13.7-16.3 ft. No recovery for this interval.
					5939	15				
				0.00 /1.80	5938	16				
				0.60 /0.80	5937	17			CLAYSTONE	16.3-16.7 ft. Interbedded Claystone and Silty Sandstone as described below.
										16.7-17.0 ft VOA sample obtained from this interval.
				0.00 /1.50	5936	18				17.0-20.2 ft No recovery for this interval.
					5935	19				
				0.00 /1.60	5934	20				

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 50.0	GROUND ELEVATION (FT): 5953.82	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748618	AREA: 903 PAD	CASING DIAMETER (IN):	GEOLOGIST: J.P. GIROD	21893	
EAST: 2085859	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 05/26/93		
REMARKS: ABANDONED BOREHOLE					

GRADATIONAL SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

Depth scale: 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

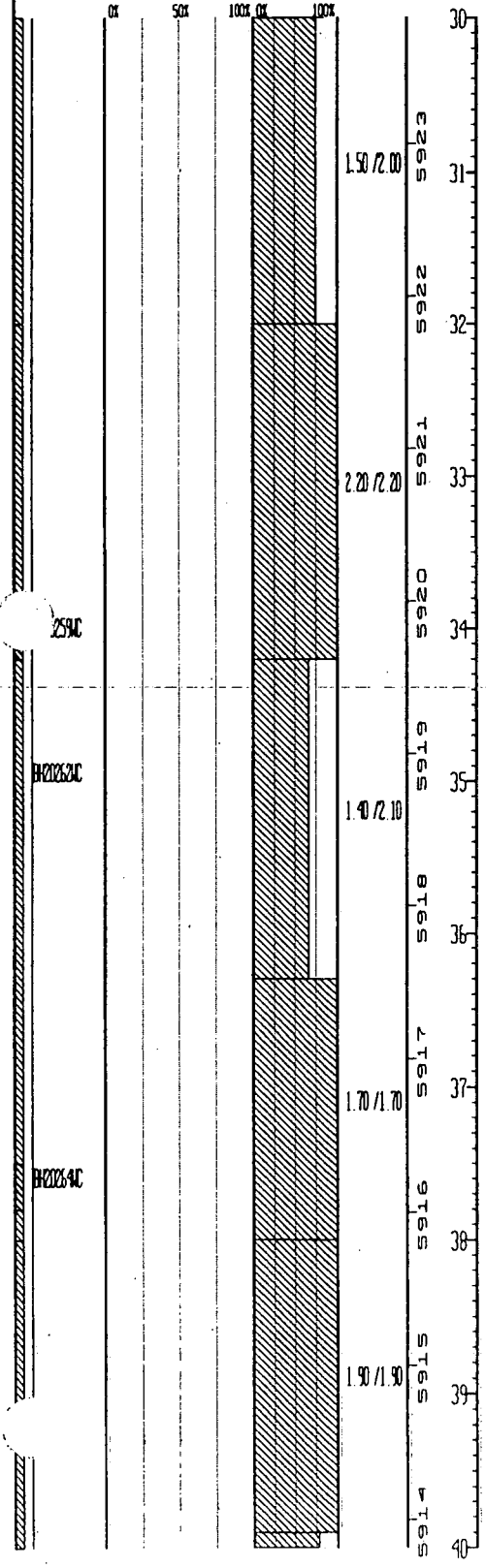
Recovery/interval: 2.00/2.00; 1.40/1.80; 2.00/2.00; 1.40/2.00; 1.70/2.00

Datum (FT): 5933, 5932, 5931, 5930, 5929, 5928, 5927, 5926, 5925, 5924

Sample number: BH20260WC, BH20256WC, BH20257WC, BH20261WC, ...8WC

Unified soils classification or rock type	Description
CLAYSTONE:	20.2-23.1 ft. Interbedded Claystone and Silty Sandstone. Claystone with trace sand and silt: light olive brown (5Y5/6), light olive gray (5Y5/2), strong brown (7.5YR4/6), yellowish red (5YR5/8), sand is very fine- to fine-grained, well sorted, <5% porosity, slightly friable, faint horizontal bedding with iron oxide staining along bedding planes, mottled texture, soft sediment deformation (convoluted bedding), manganese oxide present, gravel at 16.3-16.7' as sluff from top of run 9. Silty Sandstone with some clay: light olive brown (5Y5/6), light olive gray (5Y5/2), strong brown (7.5YR4/6), yellowish red (5YR5/8), sand is very fine- to fine-grained, well sorted, angular to sub-angular, consisting of quartz, trace quartzite, and mica, <10% porosity, argillaceous and CaCO3 cementing, slightly friable, faint horizontal bedding with iron oxide staining along bedding planes, extensive iron oxide staining, moderately to highly weathered. Claystone: 2% sand, 5% silt, 93% clay. Silty Sandstone: 50% sand, 36% silt, 14% clay
	23.1-23.4 ft. VOA sample obtained from this interval.
CLAYSTONE	23.4-23.6 ft. Claystone as described from 24.0-26.9 ft.
	23.6-24.0 ft. No recovery for this interval.
CLAYSTONE	24.0-26.9 ft. Claystone with trace silt and sand, olive gray (5Y4/1), brownish gray (5Y4/1), dusky yellowish brown (10YR2/2), sand is very fine-grained, well sorted, <5% porosity, slightly friable, faint horizontal bedding with iron oxide staining along bedding planes, nodules of silty claystone (pale yellowish orange (10YR8/6)), concretions at 25.2', extensive iron oxide staining at 25.2' with local iron oxide staining, fractures of 70 degrees at 24.5', healed with iron oxide, 45 degrees at 25.5', healed with iron oxide, 80 degrees at 26.3', healed with manganese oxide, 90 degrees at 28.5', healed with iron oxide, low to moderate weathering. 1% sand, 4% silt, 95% clay
	26.9-27.2 ft. VOA sample obtained from this interval.
CLAYSTONE	27.2-27.4 ft. Claystone as described from 24.0-26.9 ft.
	27.4-28.0 ft. No recovery for this interval.
CLAYSTONE	28.0-29.2 ft. Claystone as described at 24.0-26.9 ft.
	29.2-29.5 ft. VOA sample obtained from this interval.
CLAYSTONE	29.5-29.7 ft. Claystone as described from 24.0-26.9 ft.
	29.7-30.0 ft. No recovery for this interval

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 50.0	GROUND ELEVATION (FT) 5953.82	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 748618	AREA 903 PAD	CASING DIAMETER (IN)	GEOLOGIST: J.P. GIROD		
EAST: 2085859	LOCATOR NUMBER M8	BOREHOLE DIAMETER (IN) 14	DATE DRILLED: 05/26/93	21893	
REMARKS ABANDONED BOREHOLE					



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE	30.0-31.5 ft. Claystone as described from 24.0-26.9 ft.
	31.5-32.0 ft. No recovery for this interval.
CLAYSTONE	32.0-33.9 ft. Claystone as described from 24.0-26.9 ft.
	34.0-34.2 ft. No recovery for this interval.
CLAYSTONE	34.2-35.6 ft. Claystone as described from 24.0-26.9 ft.
	35.6-36.3 ft. No recovery for this interval.
CLAYSTONE	36.3-37.5 ft. Claystone as described from 24.0-26.9 ft.
	37.5-37.8 ft. VOA sample obtained from this interval.
CLAYSTONE	37.8-38.0 ft. Claystone as described from 24.0-26.9 ft.
SILTSTONE	38.0-39.4 ft. Interbedded Siltstone and Claystone Siltstone with some sand and clay: grayish brown (2.5Y5/2), olive gray (5Y3/2), olive gray (5Y5/2), dark yellowish orange (10YR6/6), sand is very fine- to fine-grained, well sorted, angular, consisting of quartz and mica, <10% porosity, slightly friable, argillaceous cement. Claystone with some silt, trace sand: grayish brown (2.5Y5/2), olive gray (5Y3/2), olive gray (5Y5/2), dark yellowish orange (10YR6/6), <5% porosity, slightly friable, iron oxide staining at 39.9-40.8' extensive, manganese oxide present, nodules of coal (black (N1)), $CaCO_3$ is possible cement agent. Fractures: 90 degrees at 40.5', 90 degrees at Fractures: 90 degrees at 40.5', 90 degrees at 40.6', 90 degrees at 49.5-50.0' Low to moderate weathering, healed with fine sand. Sandstone: 8% sand, 82% silt, 10% clay. Claystone: 5% sand, 15% silt, 80% clay.
	39.4-39.9 ft. No recovery for this interval.

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 50.0	GROUND ELEVATION (FT) 5953.82	PROJECT NUMBER 002 BEDROCK	LOG OF BORING NUMBER
NORTH: 748618	AREA 903 PAD	CASING DIAMETER (IN)	GEOLOGIST J.P. GIROD	21893
EAST: 2085859	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 14	DATE DRILLED 05/26/93	
REMARKS ABANDONED BOREHOLE				

DEPTH	GRADATIONAL %	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
							40			SILTSTONE	39.9-40.8 ft. Interbedded Siltstone and Claystone as described above.
					1.50/1.90	5913	41				40.8-41.1 ft. VOA sample obtained from this interval.
										SILTSTONE	41.1-41.5 ft. Interbedded Siltstone and Claystone as described above.
											41.5-41.8 ft. No recovery for this interval.
						5912	42			SILTSTONE	41.8-43.0 ft. Interbedded Siltstone and Claystone as described above.
					1.20/1.40	5911	43				43.0-43.2 ft. No recovery for this interval.
										SILTSTONE	43.2-43.8 ft. Interbedded Siltstone and Claystone as described above.
					1.10/1.40	5910	44				43.8-44.1 ft. VOA sample obtained from this interval
										SILTSTONE	44.1-44.3 ft. Interbedded Siltstone and Claystone as described above.
											44.3-44.6 ft. No recovery for this interval.
						5909	45			SILTSTONE	44.6-45.7 ft. Interbedded Siltstone and Claystone as described above.
					1.10/2.00	5908	46				45.7-46.6 ft. No recovery for this interval.
						5907	47			SILTSTONE	46.6-47.6 ft. Interbedded Siltstone and Claystone as described above.
					1.00/1.40	5906	48				47.6-48.0 ft. No recovery for this interval
										SILTSTONE	48.0-48.6 ft. Interbedded Siltstone and Claystone as described above.
					1.10/1.20	5905	49				48.6-48.9 ft. VOA sample obtained from this interval
										SILTSTONE	48.9-49.1 ft. Interbedded Siltstone and Claystone as described above.
											49.1-49.2 ft. No recovery for this interval
					0.80/0.80	5904	50			SILTSTONE	49.2-50.0 ft. Interbedded Siltstone and Claystone as described above.
											Total depth at 50.0 ft

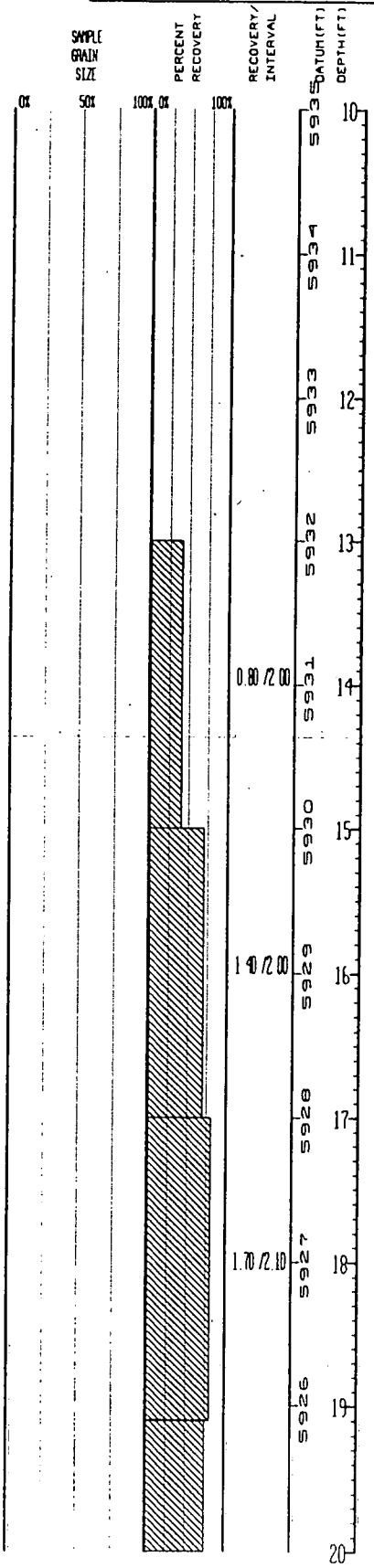
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 64.3	GROUND ELEVATION (FT):	5945.00	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER
NORTH:	748623	AREA: 903 PAD	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	22093
EAST:	2085973	LOCATOR NUMBER M8	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/09/93	
REMARKS: MONITORING WELL							

CHEMICAL SAMP / GRADATIONAL S	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5945	0				0.0-13.0 ft. No grab samples collected at 0.0-13.0'.
					5944	1				
					5943	2				
					5942	3				
					5941	4				
					5940	5				
					5939	6				
				0.00 /13.00	5938	7				
					5937	8				
					5936	9				
						10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 64.3	GROUND ELEVATION (FT):	5945.00	PROJECT NUMBER:	002 BEDROCK
NORTH: 748623	AREA: 903 PAD	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD
EAST: 2085973	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/09/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22093

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE	13.0-13.8 ft. Interbedded Claystone and Silty Sandstone as described at 13.0-24.1 ft. Claystone with some silt and sand: dark yellowish brown (10YR4/2), dark yellowish orange (10YR6/6), olive gray (5Y4/1), sand is very fine- to fine-grained, well sorted, sub-angular, consisting of quartz, <5% porosity, slightly friable, faint horizontal bedding, soft sediment deformation (convoluted bedding). Silty Sandstone with some clay: dark yellowish brown (10YR4/6), dark yellowish orange (10YR6/6), olive gray (5YR4/1), sand is very fine- to fine-grained, well sorted, sub-angular, consisting of quartz, <15% porosity, slightly friable, sandstone beds at 16.2-16.4', 17.7-18.7' Claystone: 2% sand, 5% silt, 93% clay Silty Sandstone: 44% sand, 40% silt, 16% clay
	13.8-15.0 ft. No recovery for this interval
CLAYSTONE	15.0-16.4 ft. Interbedded Claystone and Silty Sandstone as described above, fractures: 90 degrees at 13.0-13.4' healed with iron oxide and manganese oxide (very dusky purple (5RP2/2), 90 degrees at 21.6-21.9' healed with manganese oxide, 45 degrees at 22.1' healed with iron oxide and manganese oxide, slickensides at 21.6-21.9', extensive iron oxide staining at 13.0-13.8', 17.0-20.6', 21.6-22.1'
	16.4-17.0 ft. No recovery for this interval.
CLAYSTONE	17.0-18.7 ft. Interbedded Claystone and Silty Sandstone as described above, gravelly clay with some sand encountered at the top of run 2, 3, and 4 with fine- to coarse-grained sand and gravel (average size 0.025', maximum size 0.1'), sand and gravel is angular to sub-angular, consisting of quartzite and quartz, sand and gravel appears to be in place at 15.0-15.2', sand and gravel does not appear to be in place at 17.0-17.4' and 19.1-19.5'
	18.7-19.1 ft. No recovery for this interval
CLAYSTONE	19.1-20.6 ft. Interbedded Claystone and Silty Sandstone as described above

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 64.3	GROUND ELEVATION (FT)	5945.00	PROJECT NUMBER:	002 BEDROCK
NORTH: 749623	AREA: 903 PAD	CASING DIAMETER (IN)	2.0	GEOLOGIST	J.P. GIROD
EAST: 2085973	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN)	14	DATE DRILLED	06/09/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22093

CHEMICAL SAMPLE / GRADATIONAL SA / DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.50 /2.00	5925	20				
										20.6-21.1 ft No recovery for this interval.
					5924	21			CLAYSTONE	21.1-22.6 ft Interbedded Claystone and Silty Sandstone as described above.
				1.50 /2.00	5923	22				
										22.6-23.1 ft No recovery for this interval.
					5922	23				23.1-23.5 ft Sluff, coarse sand on outside of core.
				0.60 /1.00					CLAYSTONE	23.5-24.1 ft Interbedded Claystone and Silty Sandstone as described above
					5921	24				24.1-45.0 ft No recovery for this interval
					5920	25				
					5919	26				
					5918	27				
					5917	28				
					5916	29				
						30				

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 64.3	GROUND ELEVATION (FT): 5945.00	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748623	AREA 903 PAD	CASING DIAMETER (IN): 2.0	GEOLOGIST: J.P GIROD	22093
EAST: 2085973	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 06/09/93	
REMARKS: MONITORING WELL				

GRADATIONAL SI DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5915	30				
					5914	31				
					5913	32				
					5912	33				
					5911	34				
					5910	35				
					5909	36				
					5908	37				
					5907	38				
					5906	39				
						40				

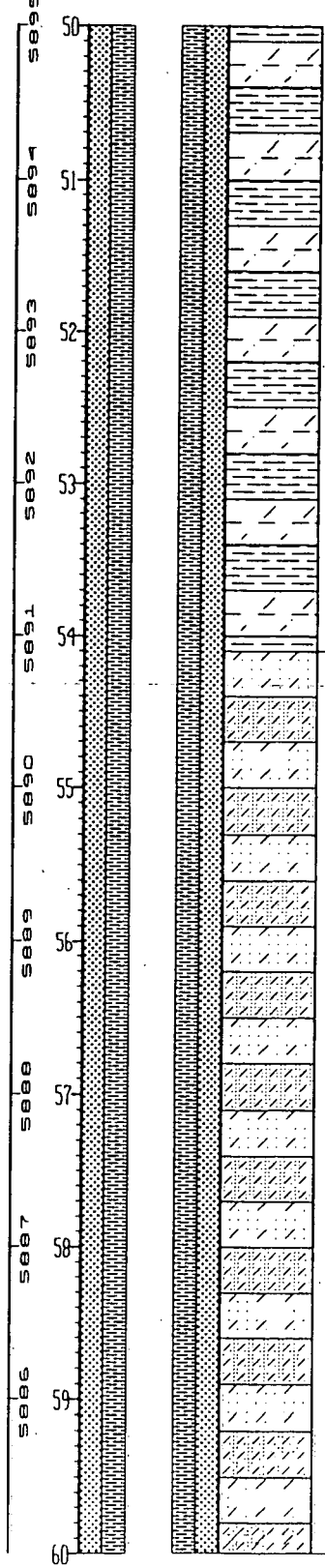
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 64.3	GROUND ELEVATION (FT):	5945.00	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	748623	AREA: 903 PAD	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P GIROD	22093
EAST:	2085973	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/09/93	
REMARKS:	MONITORING WELL						

DEPTH	CHEMICAL SAMPL GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0% 50% 100%	0% 100%		5905	40				
						5904	41				
						5903	42				
						5902	43				
						5901	44				
						5900	45			CLAYSTONE	45.0-54.1 ft. Interbedded Claystone and Clayey Siltstone. Claystone with some sand and silt: olive black (5Y2/1), olive gray (5Y4/1), light olive gray (5Y5/2), olive gray (5Y3/2), sand is very fine- to fine-grained, well sorted, consisting of quartz, sub-angular, <5% porosity, slightly friable, faint bedding 0-10 degrees, soft sediment deformation (convoluted bedding), localized iron oxide staining. Clayey Siltstone with some sand: very light gray (N8), light olive gray (5Y6/1), white (N9), sand is very fine- to fine-grained, well sorted, angular to sub-angular, consisting of quartz, trace quartzite and mafics, 0-10 degree bedding, laminated siltstone with interbedded clay and sand beds. Fractures: 80 degrees at 45.1-45.5' healed with iron oxide, 90 degrees at 47.0-47.6', 45 degrees at 47.7', 40 degrees at 50.8-51.1' healed with iron oxide, top of siltstone bed 40 degrees from horizontal at 50.8', extensive iron oxide staining at 49.5-51.1', calcareous interval at 50.8-51.8' Claystone: 6% sand, 9% silt, 85% clay Clayey Siltstone: 7% sand, 74% silt, 19% clay.
						5899	46				
						5898	47				
						5897	48				
						5896	49				
							50				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 64.3	GROUND ELEVATION (FT):	5945.00	PROJECT NUMBER:	OU2 BEDROCK
NORTH: 748623	AREA: 903 PAD	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD
EAST: 2085973	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/09/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22093

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / SAMPLE NUMBER / SAMPLE GRAIN SIZE (0% 50% 100%) / PERCENT RECOVERY (0% 100%) / RECOVERY/INTERVAL / DATUM (FT) / DEPTH (FT) / WELL OR PIEZOMETER CONSTRUCTION / LITHOLOGY / UNIFIED SOILS CLASSIFICATION OR ROCK TYPE / DESCRIPTION



SILTY SANDSTONE 54.1-64.3 ft.

Interbedded Silty Sandstone and Sandy Siltstone.
Silty Sandstone with some clay: very light gray (N8), light olive gray (5Y6/1), white (N9), sand is very fine- to fine-grained, well sorted, angular to sub-rounded, consisting of quartz, trace quartzite, mica, and mafics, laminated sandstone with interbedded silt and clay beds (<1/32" thick), 0-20 degrees, soft sediment deformation (convoluted bedding)
Sandy Siltstone with some clay: very light gray (N8), light olive gray (5Y6/1), white (N9), sand is very fine- to fine-grained, well sorted, angular to sub-angular, consisting of quartz, trace quartzite and mica, laminated siltstone with clay and sand beds (1/32" thick average and up to 0.5"), soft sediment deformation (convoluted bedding with load structures), calcareous cement at 60.5'.
Fractures 45 degrees at 55.0' with slickensides, 50 degrees at 61.3', 70 degrees at 61.8', approximately 20 degrees at 58.4' healed with silt and carbonaceous material.
Silty Sandstone: 50% sand, 3.8% silt, 22% clay
Sandy Siltstone: 20% sand, 64% silt, 16% clay.

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 64.3	GROUND ELEVATION (FT)	5945.00	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH:	748623	AREA: 903 PAD	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	22093
EAST:	2085973	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/09/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL SA... DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

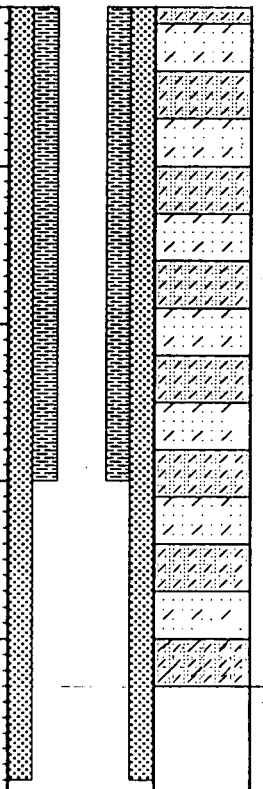
PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL

DATUM (FT): 5885, 5884, 5883, 5882, 5881, 5880, 5879, 5878, 5877, 5876

DEPTH (FT): 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70

WELL OR PIEZOMETER CONSTRUCTION



LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

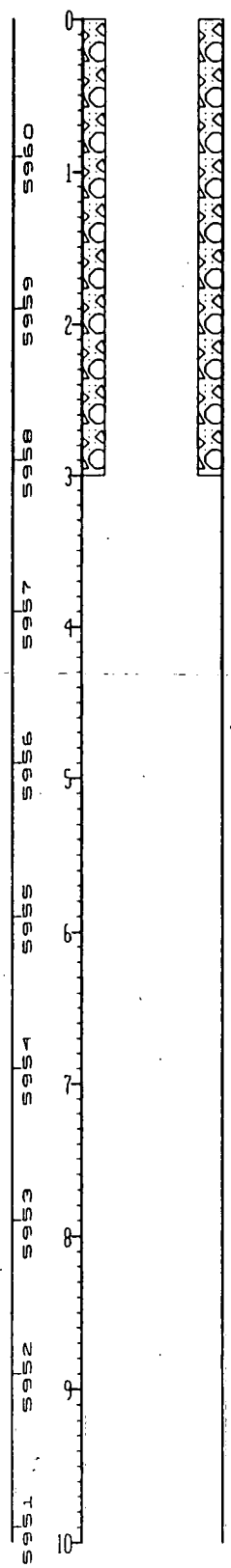
64.3-67.5 ft No recovery for this interval.

Total depth at 67.5 ft

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 59.7	GROUND ELEVATION (FT)	5960.90	PROJECT NUMBER:	002 BEDROCK
NORTH: 749084	AREA: 903 LIP	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD
EAST: 2086763	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	05/12/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22193

CHEMICAL SAMPLE
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE (0% 50% 100%)
PERCENT RECOVERY (0% 100%)
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



0.0-38.1 ft Begin core samples at 38.1 ft.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 59.7	GROUND ELEVATION (FT):	5960 90	PROJECT NUMBER	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749084	AREA: 903 LIP	CASING DIAMETER (IN):	2.0	GEOLOGIST	J.P. GIROD	22193
EAST:	2086763	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	05/12/93	

REMARKS: MONITORING WELL

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5950	10				
						11				
					5949	12				
					5948	13				
					5947	14				
					5946	15				
					5945	16				
					5944	17				
					5943	18				
				0 00 /38 10	5942	19				
					5941	20				

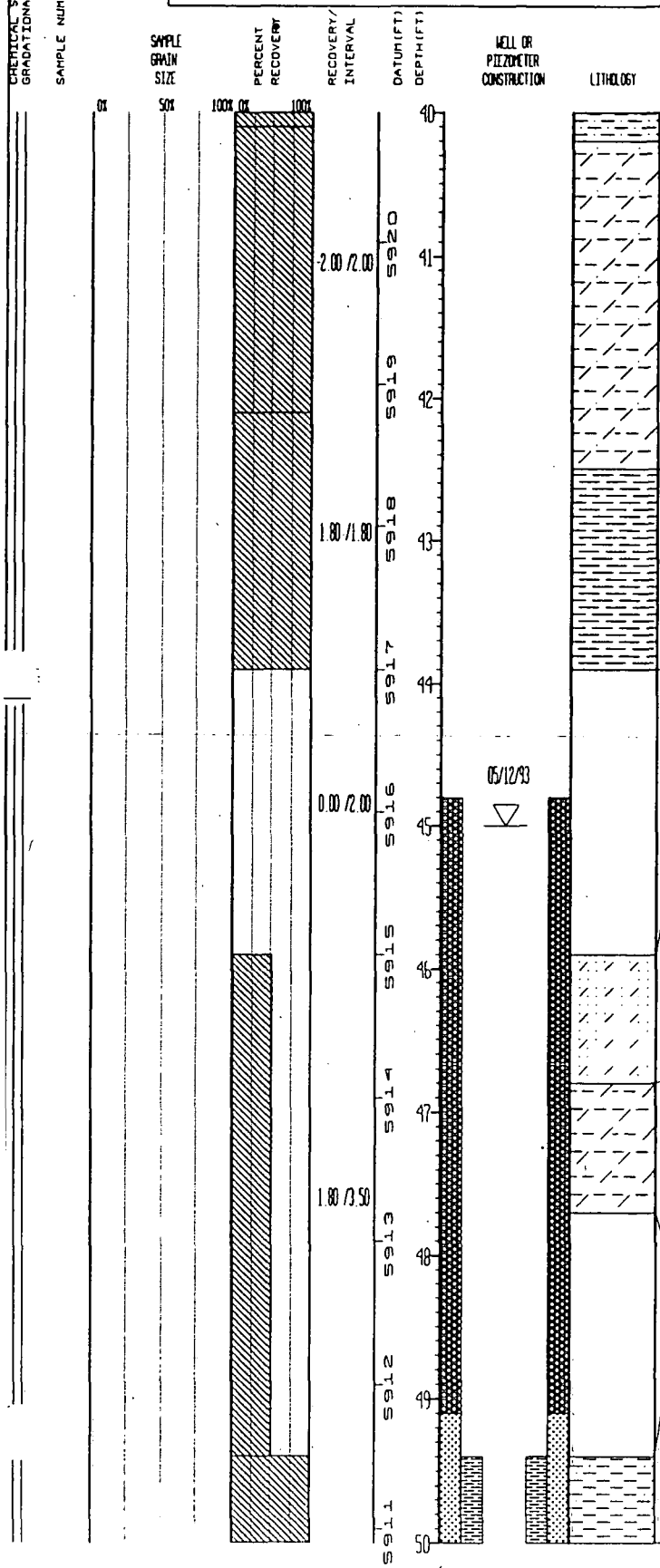
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 59.7	GROUND ELEVATION (FT):	5960.90	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749084	AREA: 903 LIP	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	22193
EAST 2086763	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	05/12/93	
REMARKS: MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5940	20				
						21				
					5939	22				
					5938	23				
					5937	24				
					5936	25				
					5935	26				
					5934	27				
					5933	28				
					5932	29				
					5931	30				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 59.7	GROUND ELEVATION (FT):	5960.90	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749084	AREA: 903 LIP	CASING DIAMETER (IN):	2.0	GEOLOGIST	J.P. GIROD	22193
EAST:	2086763	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	05/12/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% – 50% – 100%)	PERCENT RECOVERY (0% – 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5930	30				
						31				
					5929	32				
					5928	33				
					5927	34				
					5926	35				
					5925	36				
					5924	37				
					5923	38				
				2.00 /2.00	5922	39			SANDY CLAYSTONE	38.1-40.2 ft Sandy Claystone with some silt, olive gray (5Y3/2)(5Y4/1), iron staining is dark yellowish orange (10YR6/6), sand is very fine-grained, very well sorted, sub-rounded to rounded, consists of quartz, trace quartzite, mafics, dense, <5% porosity, non-friable to slightly friable numerous thin interbeds (<0.03' thick) of sandy siltstones, heavy iron staining at 38.1-39.6', predominately stained in siltstone intervals, slight iron staining at 39.6-40.2' 27% sand, 11% silt, 62% clay
					5921	40				

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 59.7	GROUND ELEVATION (FT): 5960.90	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749084	AREA: 903 LIP	CASING DIAMETER (IN): 2.0	GEOLOGIST: J.P. GIROD	22193
EAST: 2086763	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 05/12/93	
REMARKS: MONITORING WELL				



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY CLAYSTONE	40.2-42.5 ft. Silty Claystone with some sand, olive black (5Y2/1), olive gray (5Y3/2), iron staining is dark yellowish orange (10YR6/6), dense, <5% porosity, non-friable to slightly friable, several thin laminae of sandy siltstone present, slight iron staining predominately in sandy siltstone laminae, trace carbonaceous material, moist to saturated. 8% sand, 18% silt, 74% clay.
CLAYSTONE	42.5-43.9 ft. Claystone with some silt, trace sand, olive black (5Y2/1), grayish black (N2), dense, <5% porosity, non-friable to slightly friable, iron staining is minor and is predominately along fractures, 45 degree fracture at 43.0', 90 degree fracture at 43.4', moist 2% sand, 10% silt, 88% clay.
	43.9-45.9 ft. No recovery for this interval.
SILTY SANDSTONE	45.9-46.8 ft. Silty Sandstone with some clay, light olive gray (5Y5/2), olive gray (5Y3/2), sand, very fine- to medium-grained, moderately sorted, sub-angular to sub-rounded, consists of quartz, trace mafics and quartzite, 10-12% porosity, slightly friable to moderately friable, massive bedding, few laminations of claystone present, some quartz grains are frosted and iron stained. 71% sand, 23% silt, 6% clay.
SILTY CLAYSTONE	46.8-47.7 ft. Silty Claystone as described at 40.2-42.5', dark yellowish brown (10YR4/2), dusky yellow brown (10YR2/2) iron oxide staining along bedding planes, nodule of claystone at 47.1', (moderate yellow brown (10YR5/4)), some beds are 10-20 degrees, 60 degree fracture at 46.8' with iron staining along fracture surface. 13% sand, 22% silt, 65% clay.
	47.7-49.4 ft. No recovery for this interval.
SANDY CLAYSTONE	49.4-50.4 ft. Sandy Claystone as described at 38.1-40.2', light olive gray (5Y5/2), brownish black (5YR2/1), olive gray (5Y3/2), cross-bedding of laminae, soft sediment deformation (convoluted bedding), iron oxide staining along bedding planes, some beds at 10-50 degrees, micro-fractures at 50.2-50.4' healed with clay, clay rip up clasts at 50.3', trace carbonaceous material, some localized iron oxide staining.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 59.7	GROUND ELEVATION (FT):	5960.90	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749084	AREA 903 LIP	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	22193
EAST:	2086763	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	05/12/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

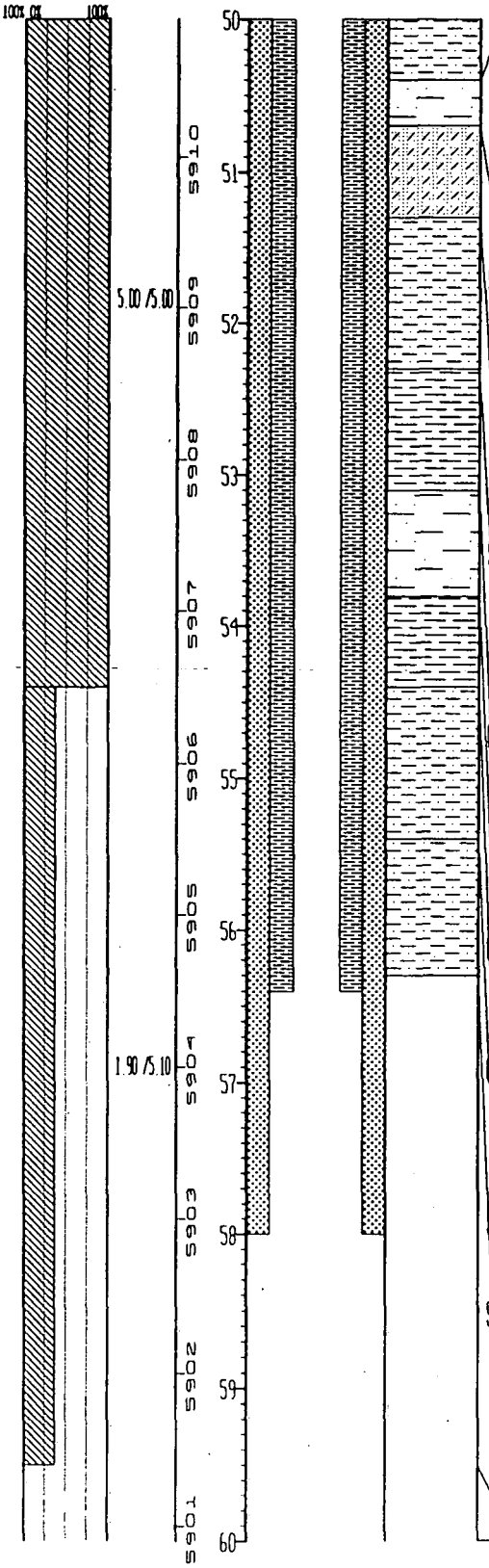
RECOVERY/INTERVAL: 5.00/5.00; 1.90/5.10

DATUM (FT): 5910, 5909, 5908, 5907, 5906, 5905, 5904, 5903, 5902, 5901

DEPTH (FT): 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

34% sand, 10% silt, 56% clay

CLAYEY SANDSTONE: 50.4-50.7 ft. Clayey Sandstone with some silt, moderate yellowish brown (10YR5/4), olive black (5YR2/1), sand is very fine- to fine-grained, well sorted, sub-angular, consisting of quartz, <10% porosity, slightly to moderately friable, laminated sandstone with interbedded claystone beds (<1/32" thick), bedding 40-50 degrees from horizontal, soft sediment deformation (convoluted bedding), micro fractures (45 degrees) at 50.4-50.7' healed with silt and sand.
48% sand, 18% silt, 34% clay

SANDY SILTSTONE: 50.7-51.3 ft. Sandy Siltstone with some clay, light olive gray (5Y6/1), olive gray (5Y4/1), brownish black (5YR2/1), olive black (5Y2/1), sand is very fine- to fine-grained, well sorted, sub-rounded, consisting of quartz and trace quartzite (2%), <5% porosity, slightly friable, laminated siltstone, with interbedded sand and clay beds (<1/32" thick), soft sediment deformation (convoluted bedding), fractures (30-80 degrees) throughout interval, trace iron oxide staining at 51.1' in sand, clay nodules present, trace carbonaceous material.
26% sand, 22% clay, 52% silt

SANDY CLAYSTONE: 51.3-52.3 ft. Sandy Claystone as described at 38.1-40.2', brownish (5YR2/1), olive black (5Y2/1), light olive gray (5Y6/1), locallized iron oxide staining, clay nodules (light brown (5YR5/6)), carbonaceous material, fractures throughout core (slump/creep fractures with minor breccia), high plasticity.
19% sand, 8% silt, 73% clay

CLAYSTONE: 52.3-53.1 ft. Claystone as described above at 42.5-43.9', brownish black (5YR2/1), olive black (5Y2/1), light olive gray (5YR4/1), soft sediment deformation (convoluted bedding), iron oxide staining along bedding planes, bedding 0-10 degrees, clay nodules (light brown (5YR5/6)), local iron oxide staining, slump/creep fracturing throughout interval (45-90 degrees), carbonaceous material.
8% sand, 4% silt, 88% clay

CLAYEY SANDSTONE: 53.1-53.8 ft. Clayey Sandstone as described at 50.4-50.7', olive black (5Y2/1), brownish black (5YR2/1), olive gray (5Y4/1), 45 degree fracture at 53.2', 80 degree fracture at 53.4' healed with clay, carbonaceous material present. 46% sand, 11% silt, 43% clay

CLAYSTONE: 53.8-54.4 ft. Claystone as described above at 42.5-43.9', olive black (5Y2/1), brownish black (5YR2/1), olive gray (5Y4/1), soft sediment deformation (convoluted bedding), 10 degree fracture at 54.2' with slickensides, carbonaceous material present.
8% sand, 7% silt, 85% clay

SANDY CLAYSTONE: 54.4-55.4 ft. Sandy Claystone as described at 38.1-40.2', possible sluff at 54.4-55.4'
32% sand, 28% silt, 40% clay

SANDY CLAYSTONE: 54.4-56.3 ft. Sandy Claystone as described at 38.1-40.2', olive black (5Y2/1), brownish black (5YR2/1), olive gray (5Y4/1), soft sediment deformation (convoluted bedding), possible sluff at 54.4-55.4', 0.75' thick sand bed at 55.7' with very fine- to fine-grained sand, 45 degree fracture at 55.6' and 56.0', local iron oxide staining.
32% sand, 28% silt, 40% clay

56.3-59.5 ft. No recovery for this interval

Total depth at 59.5 ft.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 84.5	GROUND ELEVATION (FT): 5881.50	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 748373	AREA: 903 LIP	CASING DIAMETER (IN): 2.0	GEOLOGIST: J DUBOIS	22293
EAST: 2086501	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 06/03/93	
REMARKS: MONITORING WELL				

CHEMICAL SAMPLE / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5881, 5880, 5879, 5878, 5877, 5876, 5875, 5874, 5873, 5872	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10			ML	0.0-5.0 ft Sandy Silt with some clay, dark brown (7.5YR4/2), very dark grayish brown (10YR3/2), sand is fine-grained, poorly graded angular to sub-angular, some sub-rounded, consists of quartz trace mafics, rock fragments, mica, medium plasticity, moist 0% gravel, 19% sand, 65% silt, 16% clay Note: Grab samples were used for lithology descriptions from 0.0-28.4'. Hole was augered and no core was taken from 0.0-28.4'
									ML	5.0-14.0 ft Clayey Silt with some sand, dark brown (10YR4/3), sand is fine- to medium-grained, well graded, angular to sub-rounded consists of quartz, some rock fragments, trace gneiss, schists, mica, low to medium plasticity, moist. 0% gravel, 15% sand, 47% silt, 38% clay Note: As above

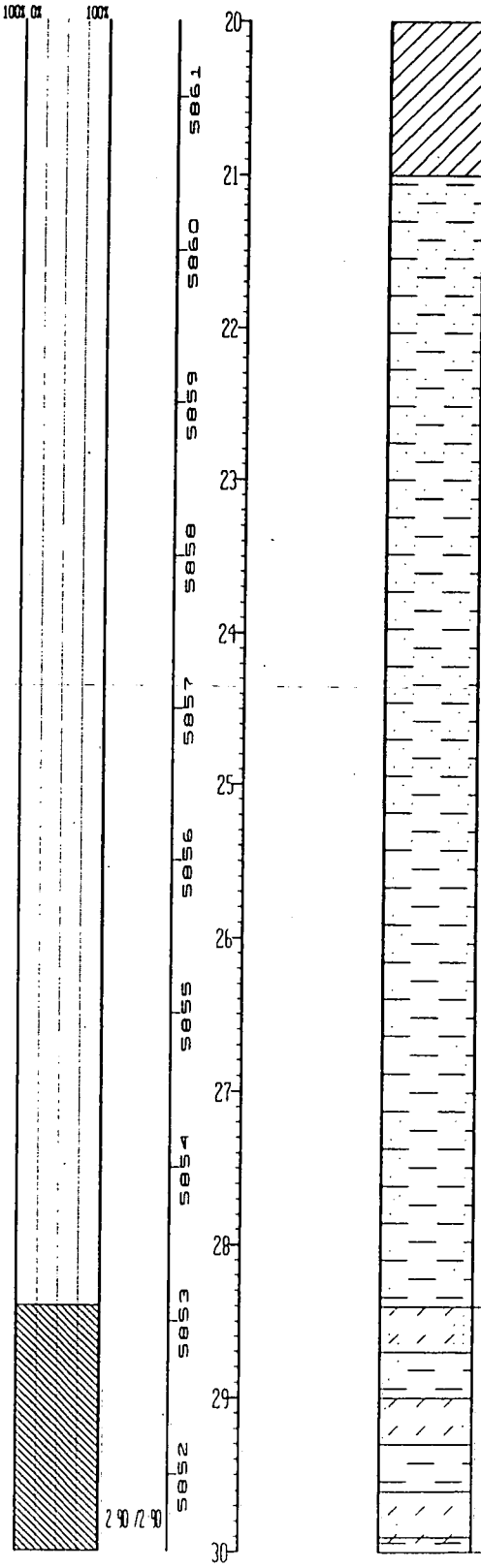
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 84.5	GROUND ELEVATION (FT)	5881.50	PROJECT NUMBER	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	748373	AREA: 903 LIP	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J DUBOIS	22293
EAST:	2086501	LOCATOR NUMBER: N8:	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/03/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5871	10				
					5870	11				
					5869	12				
					5868	13				
				0.00 /28.4	5867	14			CL	14.0-21.0 ft Silty Clay with some sand, dark yellowish brown (10YR4/4), yellowish brown (10YR5/4), sand is fine-grained, poorly graded, angular to sub-rounded, consists of quartz, trace mafics, rock fragments, low plasticity, moist 0% gravel, 14% sand, 34% silt, 52% clay Approximate top of bedrock at 21.0 ft Note: As above. Borehole 21493 was used to estimate top of bedrock for this borehole.
					5866	15				
					5865	16				
					5864	17				
					5863	18				
					5862	19				
						20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 84.5	GROUND ELEVATION (FT): 5881.50	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH 748373	AREA 903 LIP	CASING DIAMETER (IN): 2.0	GEOLOGIST: J DUBOIS	22293	
EAST 2086501	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 06/03/93		
REMARKS: MONITORING WELL					

CHEMICAL SAMP... GRADATIONAL SA... DEPTH

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



Depth scale: 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

Datum (FT): 5861, 5860, 5859, 5858, 5857, 5856, 5855, 5854, 5853, 5852

Recovery/interval: 2.90/2.90

CLAYEY SANDSTONE: 21.0-28.4 ft.
Clayey Sandstone with some silt, moderate yellowish brown (10YR5/4), sand is very fine-grained, some fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics.
47% sand, 16% silt, 37% clay
Note: As above.

SILTY SANDSTONE: 28.4-37.6 ft
Silty Sandstone interbedded with Clayey Sandstone
Silty Sandstone with some clay: sand is very fine-grained, some fine-grained, trace medium-grained, well sorted, sub-angular to rounded, consists of quartz, some quartzite, mafics, trace mica
Clayey Sandstone with some silt: sand is very fine-grained

STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 84.5	GROUND ELEVATION (FT):	5881.50	PROJECT NUMBER:	OU2 BEDROCK
NORTH: 748373	AREA: 903 LIP	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J DUBOIS
EAST: 2086501	LOCATOR NUMBER N8	BOREHOLE DIAMETER (IN)	14	DATE DRILLED:	06/03/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22293

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 2.20/2.20; 2.00/2.40; 1.70/2.40; 1.90/1.90

DATUM (FT): 5851, 5850, 5849, 5848, 5847, 5846, 5845, 5844, 5843, 5842

DEPTH (FT): 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

with some fine-grained, trace medium-grained, well sorted, sub-angular to sub-rounded, consists of quartz, quartzite, some mafics, trace mica.
Grayish orange (10YR7/4), dark yellowish orange (10YR6/6), yellowish gray (5Y7/2), light olive gray (5Y5/2), 5-12% porosity, some siliceous cement, slight calcareous cement, moderately friable to highly friable, predominately massive bedding, trace fine laminations, iron staining throughout, varying in intensity.
Silty Sandstone: 64% sand, 23% silt, 13% clay.
Clayey Sandstone: 56% sand, 18% silt, 26% clay.

35.5-35.9 ft No recovery for this interval

SILTY SANDSTONE 35.9-37.6 ft. Silty Sandstone interbedded with Clayey Sandstone as described above.

37.6-38.3 ft No recovery for this interval.

SANDY CLAYSTONE 38.3-39.6 ft
Sandy Claystone with some silt, light olive gray (5Y5/2), dusky yellow (5Y6/4), dense, non-friable, iron staining throughout, decreasing sand fraction near base of interval.
17% sand, 12% silt, 71% clay

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 84.5	GROUND ELEVATION (FT)	5881.50	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER
NORTH:	748373	AREA: 903 LIP	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J DUBOIS	22293
EAST:	2086501	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/03/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE
GRADATIONAL SA
DEPTH
SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 3.40 /3.40; 2.10 /2.60; 2.60 /2.60

DATUM (FT): 5841, 5840, 5839, 5838, 5837, 5836, 5835, 5834, 5833, 5832

DEPTH (FT): 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

CLAYEY SANDSTONE: 39.6-43.3 ft.
Clayey Sandstone with some silt, dusky yellow (5Y6/4), dark yellowish orange (10YR6/6), sand is very fine-grained, some fine-grained, well sorted, sub-rounded to rounded, trace sub-angular, consists of quartz, some quartzite, mafics, trace mica, 5-8% porosity, slight argillaceous cement, slightly friable to moderately friable, massive bedding, iron staining, predominately at 39.6-42.4', slight iron staining to base of interval.
57% sand, 6% silt, 37% clay.

SANDY CLAYSTONE: 43.3-45.7 ft.
Sandy Claystone with a few Silty Claystone beds.
Sandy Claystone with some silt: sand is very fine-grained, trace fine-grained, very well sorted, sub-angular to sub-rounded, consists of quartz, some quartzite, trace mafics. Light olive gray (5Y5/2), olive gray (5Y3/2), dark yellowish orange (10YR6/6), moderate yellowish brown (10YR5/4), dense, non-friable, iron staining varies in intensity, fine laminations, horizontal to sub-horizontal at 53.0-53.9'
Sandy Claystone: 30% sand, 14% silt, 56% clay.
Silty Claystone: 18% sand, 33% silt, 49% clay.

45.7-46.2 ft No recovery for this interval.

SANDY CLAYSTONE: 46.2-49.0 ft Sandy Claystone as described above

49.0-53.0 ft No recovery for this interval.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 84.5	GROUND ELEVATION (FT):	5881.50	PROJECT NUMBER:	002 BEDROCK
NORTH: 748373	AREA: 903 LTP	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J DUBOIS
EAST: 2086501	LOCATOR NUMBER N8	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/03/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22293

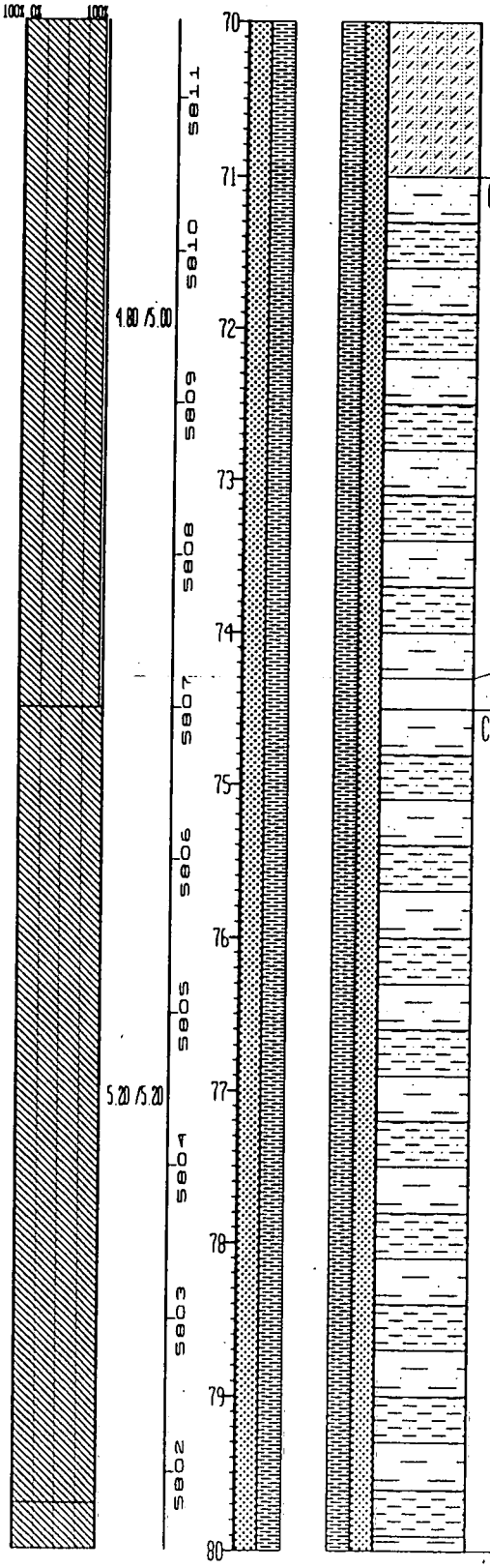
DEPTH	CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0% 50% 100%	0% 100%	0.20 /2.70	5831	50				
						5830	51				
					0.00 /1.50	5829	52				
						5828	53			SANDY CLAYSTONE	53.0-55.7 ft Sandy Claystone as desribed above.
						5827	54				
						5826	55				
					4.10 /6.50	5825	56			CLAYEY SANDSTONE	55.7-57.1 ft Clayey Sandstone as described below.
						5824	57				57.1-59.5 ft. No recovery for this interval.
						5823	58				
						5822	59				
							60				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 84.5	GROUND ELEVATION (FT)	5881.50	PROJECT NUMBER	002 BEDROCK	LOG OF BORING NUMBER
NORTH	748373	AREA 903 LIP	CASING DIAMETER (IN)	2.0	GEOLOGIST	J DUBOIS	22293
EAST	2086501	LOCATOR NUMBER NB	BOREHOLE DIAMETER (IN)	14	DATE DRILLED	06/03/93	
REMARKS	MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL SAM.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	5.00/5.00	5821 5820 5819 5818	60 61 62 63			CLAYEY SANDSTONE	59.5-63.1 ft. Clayey Sandstone with some beds of Silty Sandstone and Sandy Claystone, olive gray (5Y4/1), light olive gray (5Y6/1), dark yellowish orange (10YR6/6) in iron stained intervals, sand is very fine- to fine-grained, some medium-grained, moderately sorted, sub-angular to sub-rounded, consists of quartz, quartzite, some mafics, trace coal, some quartz grains are frosted, 0-5% porosity, slightly to well cemented with argillaceous and/or siliceous cement, non-friable to moderately friable, predominately finely laminated, horizontal to low angle (less than 20 degrees) laminations, some soft sediment deformation present, some carbonaceous plant fragments at 56.8-62.9', increasing amounts of carbonaceous material and trace coalified plant fragments at 62.0-62.5', iron staining predominately in sandy intervals at 56.7-63.1', claystone nodule at 61.7', silty sandstone present as 50% sand, 28% silt, 22% clay, sandy claystone present as 24% sand, 11% silt, 65% clay, moist. 69% sand, 14% silt, 17% clay
					5817	64			SILTY CLAYSTONE	63.1-64.1 ft. Silty Claystone with some sand, olive gray (5Y4/1), dense, non-friable to slightly friable, few beds of claystone less than 0.03' thick present, slightly carbonaceous, moist. 15% sand, 34% silt, 51% clay
				5.00/5.00	5816 5815	65 66 67			SANDY SILTSTONE	64.1-66.9 ft Sandy Siltstone with abundant clay, light olive gray (5Y6/1) olive gray (5Y4/1), sand is very fine- to fine-grained, well sorted, sub-rounded to rounded, consists of quartz, some quartzite, mafics, trace mica, 0-5% porosity, slight to well cemented with argillaceous or siliceous cement, non-friable to slightly friable, some fine laminations, thin silty claystone beds less than 0.04' thick present, trace carbonaceous material at 65.0-66.9', claystone nodules at 64.6' and 65.6' 32% sand, 37% silt, 31% clay
					5814 5813	68 69			SANDY CLAYSTONE	66.9-68.9 ft Sandy Claystone with some silt, olive gray (5Y3/2) (5Y4/1), sand is very fine-grained, some fine-grained, well sorted, sub-rounded to rounded, consists of quartz, some quartzite, trace mafics, dense, non-friable, claystone nodules at 67.0' and 68.4' 21% sand, 12% silt, 67% clay
					5812	70			SANDY SILTSTONE	68.9-71.0 ft Sandy Siltstone with some clay, light olive gray (5Y6/1) olive gray (5Y4/1), sand is very fine- to medium-grained, moderately sorted, angular to sub-rounded, consists of quartz, trace quartzite, mafics, some quartz grains are

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 84.5	GROUND ELEVATION (FT)	5881.50	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	748373	AREA: 903 LIP	CASING DIAMETER (IN)	2.0	GEOLOGIST	J DUBOIS	22293
EAST	2086501	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN)	14	DATE DRILLED	06/03/93	
REMARKS: MONITORING WELL							

DEPTH | CHEMICAL SAMPL GRADATIONAL SA | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



frosted, 0% porosity, very well cemented with calcareous cement, non-friable, predominately finely laminated, some carbonaceous plant fragments at 68.9-69.5', moist.
42% sand, 46% silt, 12% clay.

CLAYEY SANDSTONE 71.0-74.3 ft Clayey Sandstone interbedded with Sandy Claystone, Silty Claystone as described below.

74.3-74.5 ft No recovery for this interval.

CLAYEY SANDSTONE 74.5-84.5 ft

Clayey Sandstone interbedded with Sandy Claystone, and Silty Claystone

Clayey Sanstone with some silt: sand is very fine- to fine-grained, well sorted, sub-angular to sub-rounded, consists of quartz, some mafics, trace quartzite

Sandy Claystone with some silt: sand is very fine-grained, very well sorted, sub-rounded to rounded, consists of quartz trace quartzite, mafics

Light olive gray (5Y6/1), olive gray (5Y4/1), 0-12% porosity (highest porosity in sandstone), slightly cemented with argillaceous cement, calcareous cement at 74.0-74.2', 82.4-82.8', 84.2-84.5', slightly friable to moderately friable, some fine laminations, horizontal to slightly inclined to less than 20 degrees, slump faults at 71.5', 71.9', possible at 75.7', some soft sediment deformation, moist.

Clayey Sandstone: 55% sand, 18% silt, 27% clay

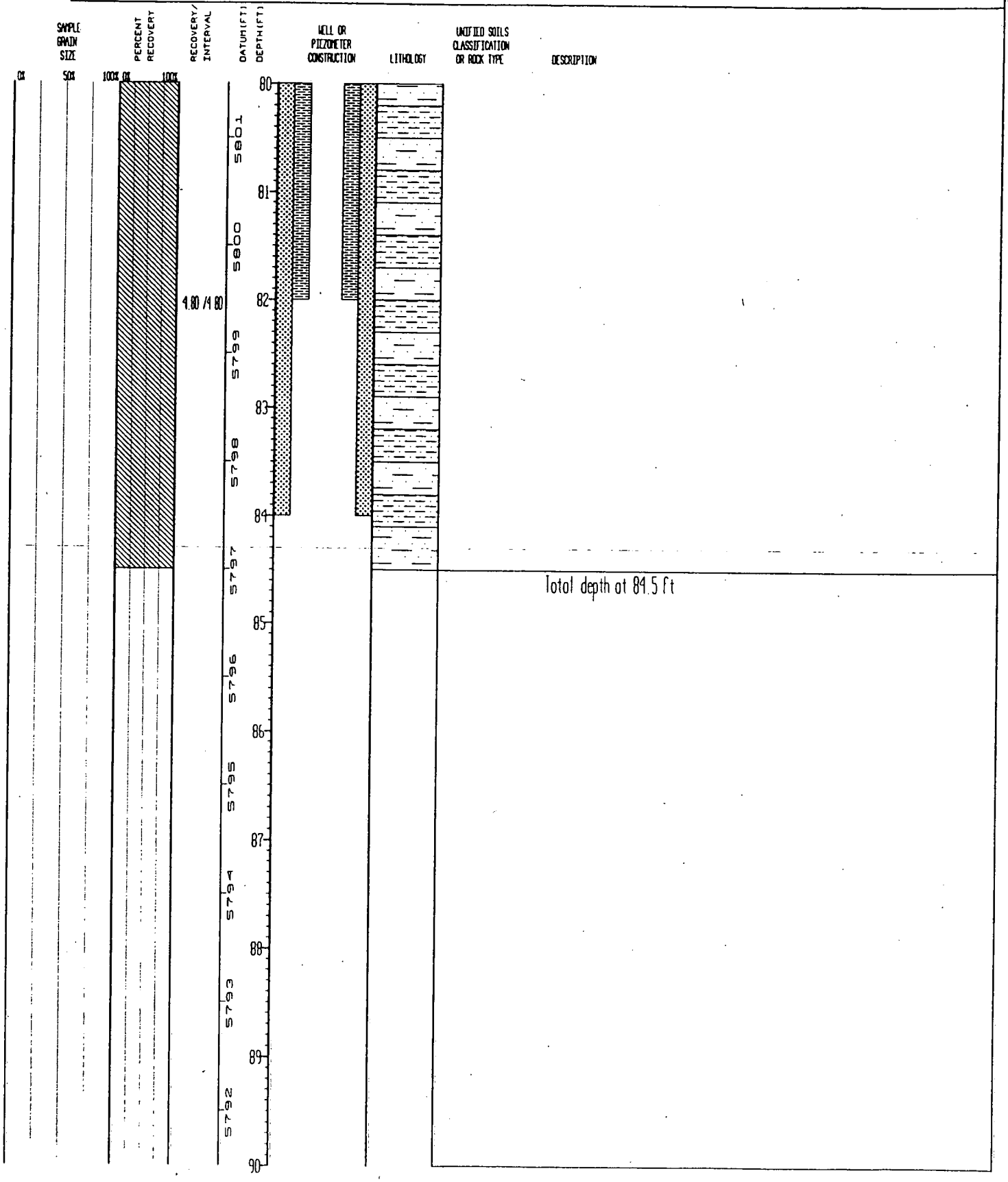
Sandy Claystone: 21% sand, 12% silt, 67% clay.

Silty Claystone: 14% sand, 30% silt, 56% clay

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 84.5	GROUND ELEVATION (FT):	5881.50	PROJECT NUMBER:	002 BEDROCK
NORTH: 748373	AREA: 903 LIP	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J DUBOIS
EAST: 2086501	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	06/03/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22293

CHEMICAL SAMPLE
GRADATIONAL SA
DEPTH
SAMPLE NUMBER



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT): 5969.30	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749564	AREA: MOUND AREA	CASING DIAMETER (IN): 2.0	GEOLOGIST: J.P. GIROD	22393	
EAST: 2086121	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 14.25	DATE DRILLED: 05/26/93		
REMARKS: MONITORING WELL					

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5969	0			GC	0.0-4.0 ft Sandy Gravel with some clay and silt, very dark grayish brown (10YR3/2), gravel maximum size 0.1', average size 0.03', well graded, angular to sub-angular, consisting of quartzite and schist, sand is fine- to coarse-grained, moderately graded, angular to rounded, consisting of quartz, quartzite, and mafics, medium plasticity, calcareous cementation with grains and gravel coated with caliche, plant roots (1/32" thick), moist. 45% gravel, 22% sand, 13% silt, 20% clay. Grab samples taken every 2.0 ft. from 0.0-50.0 ft.
					5968	1				
					5967	2				
					5966	3				
					5965	4			SC	4.0-12.7 ft Clayey Sand with some gravel and silt; color changes from very pale brown (10YR7/4) at 4.0-8.0' to brown (10YR5/3) at 8.0-10.0', gravel maximum and average size 0.02', sub-angular, poorly graded, abundant medium-grained sand with some fine- and coarse-grained sand, moderately graded, angular to sub-angular, consisting of quartz and quartzite, medium plasticity, argilloceous and calcareous cementation. 12% gravel, 48% sand, 16% silt, 24% clay. Top of bedrock at 12.7 ft Lower contact determined from pilot boring 21593
					5964	5				
					5963	6				
					5962	7				
					5961	8				
					5960	9				
						10				

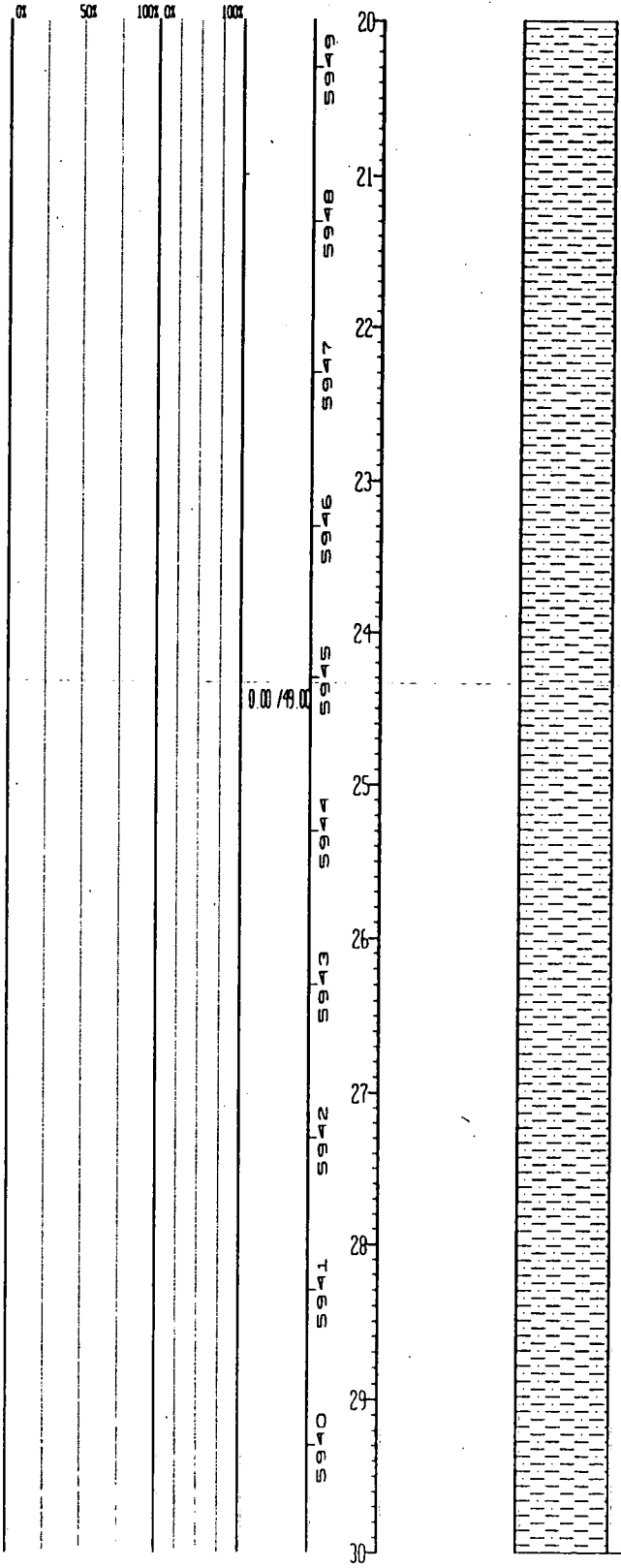
STATE PLANE COORDINATE	TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT)	5969.30	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER
NORTH: 749564	AREA: MOUND AREA	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J.P. GIROD	22393
EAST: 2086121	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	14.25	DATE DRILLED:	05/26/93	
REMARKS: MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE / DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5959	10				
					5958	11				
					5957	12				
					5956	13				SANDY CLAYSTONE: 12.7-16.0 ft Sandy Claystone with some silt and gravel, light olive brown (5Y5/6), gravel maximum size 0.03', average size 0.01', angular to sub-angular, well sorted, sand is fine-grained, with trace amounts of medium- to coarse-grained sand, poorly graded, angular to sub-rounded, argillaceous and calcareous cementation, top of bedrock determined from pilot boring 21593 at 12.7', gravel and sand was introduced and mixed in with tailings from claystone by auger 6% gravel, 21% sand, 14% silt, 59% clay.
					5955	14				
					5954	15				
					5953	16				SANDY CLAYSTONE: 16.0-50.0 ft. Sandy Claystone with some silt, light olive brown (5Y5/6) at 16.0-44.0', olive brown (2.5Y4/4) at 44.0-50.0', sand is fine-grained with trace medium- to coarse-grained, well sorted, argillaceous and calcareous cementation. 21% sand, 12% silt, 67% clay.
					5952	17				
					5951	18				
					5950	19				
						20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT): 5969.30	PROJECT NUMBER	002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749564	AREA: MOUND AREA	CASING DIAMETER (IN): 2.0	GEOLOGIST	J.P GIROD	22393
EAST: 2086121	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 14.25	DATE DRILLED	05/26/93	
REMARKS: MONITORING WELL					

CHEMICAL SAMPLE
GRADATIONAL SA
DEPTH
SAMPLE NUMBER

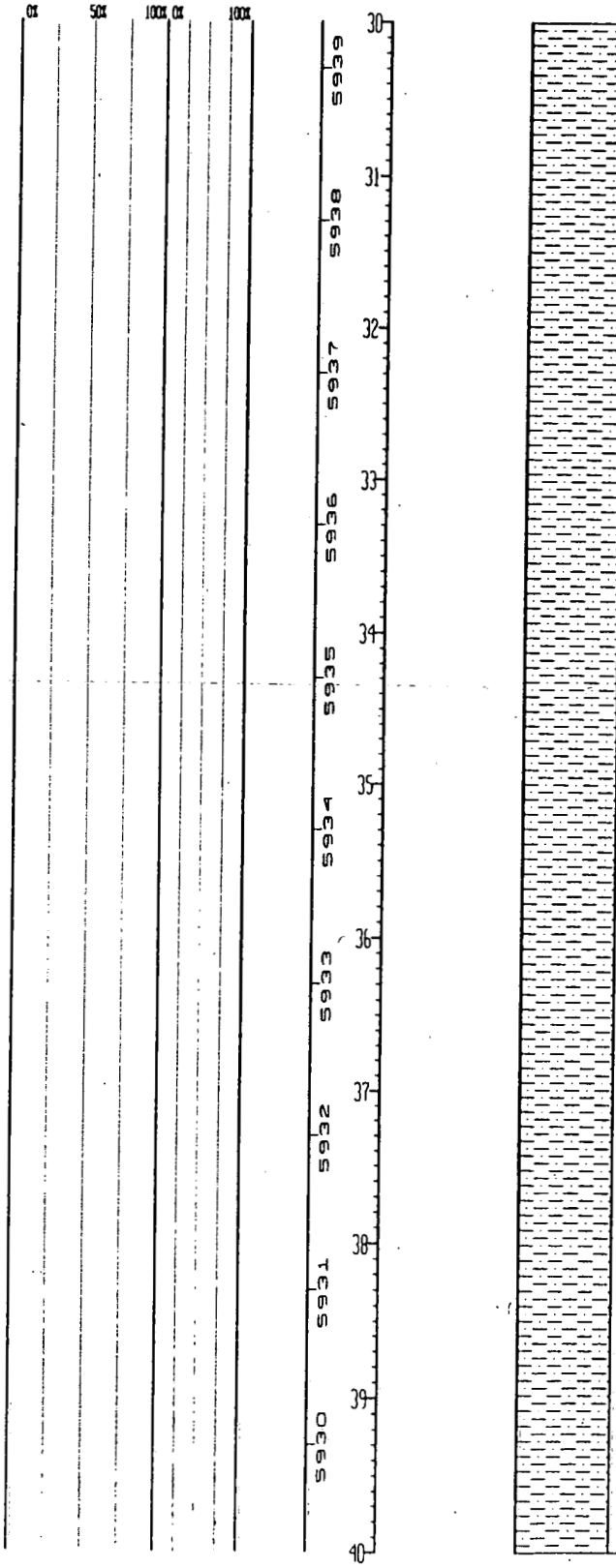
SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM(FT) | DEPTH(FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



STATE PLANE COORDINATE	TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT):	5969.30	PROJECT NUMBER:	002 BEDROCK
NORTH: 749564	AREA MOUND AREA	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P GIROD
EAST: 2086121	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14.25	DATE DRILLED	05/26/93
REMARKS: MONITORING WELL					

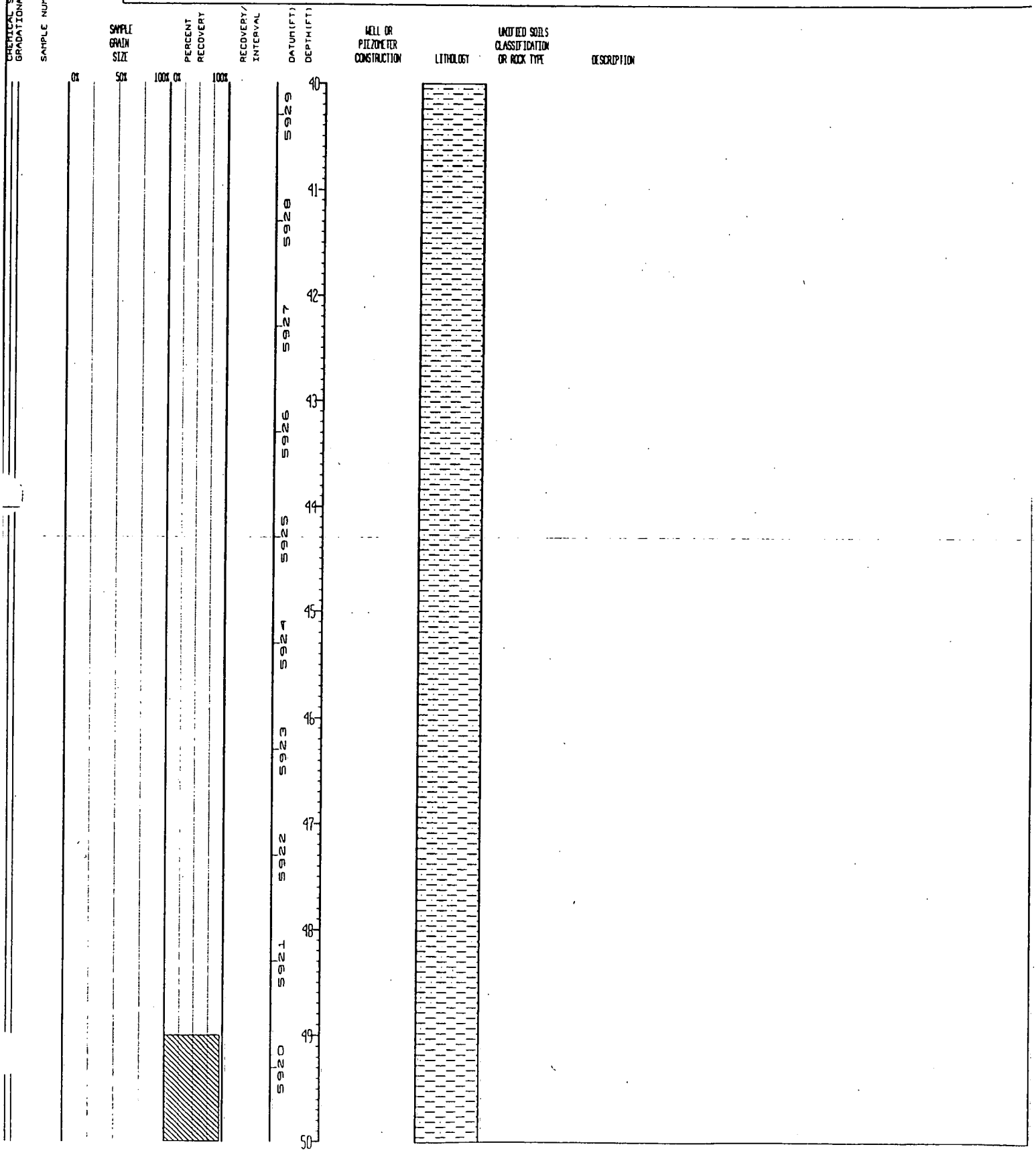
LOG OF BORING NUMBER: 22393

CHEMICAL SAMPLE
GRADATIONAL SA
DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE
PERCENT RECOVERY
RECOVERY/INTERVAL
DATUM(FT)
DEPTH(FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT):	5969.30	PROJECT NUMBER:	OU2 BEDROCK
NORTH: 749564	AREA MOUND AREA	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD
EAST: 2086121	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14.25	DATE DRILLED	05/26/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22393



STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT):	5969.30	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749564	AREA NOUND AREA	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIRDO	22393
EAST:	2086121	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN):	14.25	DATE DRILLED:	05/26/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50%

PERCENT RECOVERY: 100% 0% 100%

RECOVERY/INTERVAL: 2.10 /2.20; 2.00 /2.20; 2.50 /2.50; 2.70 /2.70

DATUM (FT): 5919, 5918, 5917, 5916, 5915, 5914, 5913, 5912, 5911, 5910

DEPTH (FT): 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE	50.0-53.2 ft. Claystone with some silt, color changes from olive black (5Y2/1) at 50.0-53.0' to olive gray (5Y4/1) and moderate reddish brown (10YR4/6) at 53.0-58.0' to olive gray (5Y4/1) at 53.4-58.0' to brownish black (5Y2/1) at 58.0-58.6', <5% porosity, moderately friable at 50.0-58.0', slightly friable at 58.0-58.6', iron oxide staining along faint horizontal bedding at 51.0', manganese oxide and iron oxide staining at 53.0-53.2', some iron oxide staining at 50.0-53.0', carbonaceous material at 51.8-53.2', highly fractured at 50.0-58.0' (drilling induced), slickensides at 52.0', bedrock weakly weathered at 50.0-53.0', highly weathered at 53.0-53.2' 0% sand, 10% silt, 90% clay.
	53.2-53.4 ft. No recovery for this interval.
CLAYSTONE	53.4-58.6 ft. Claystone as described above Unweathered bedrock at 53.4-58.6 ft
	58.6-100.0 ft. No recovery for this interval.

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT)	5969.30	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749564	AREA: MOUND AREA	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J.P. GIROD	22393
EAST:	2086121	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	14.25	DATE DRILLED:	05/26/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPL
GRADATIONAL SA
DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE
PERCENT RECOVERY
RECOVERY/ INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION

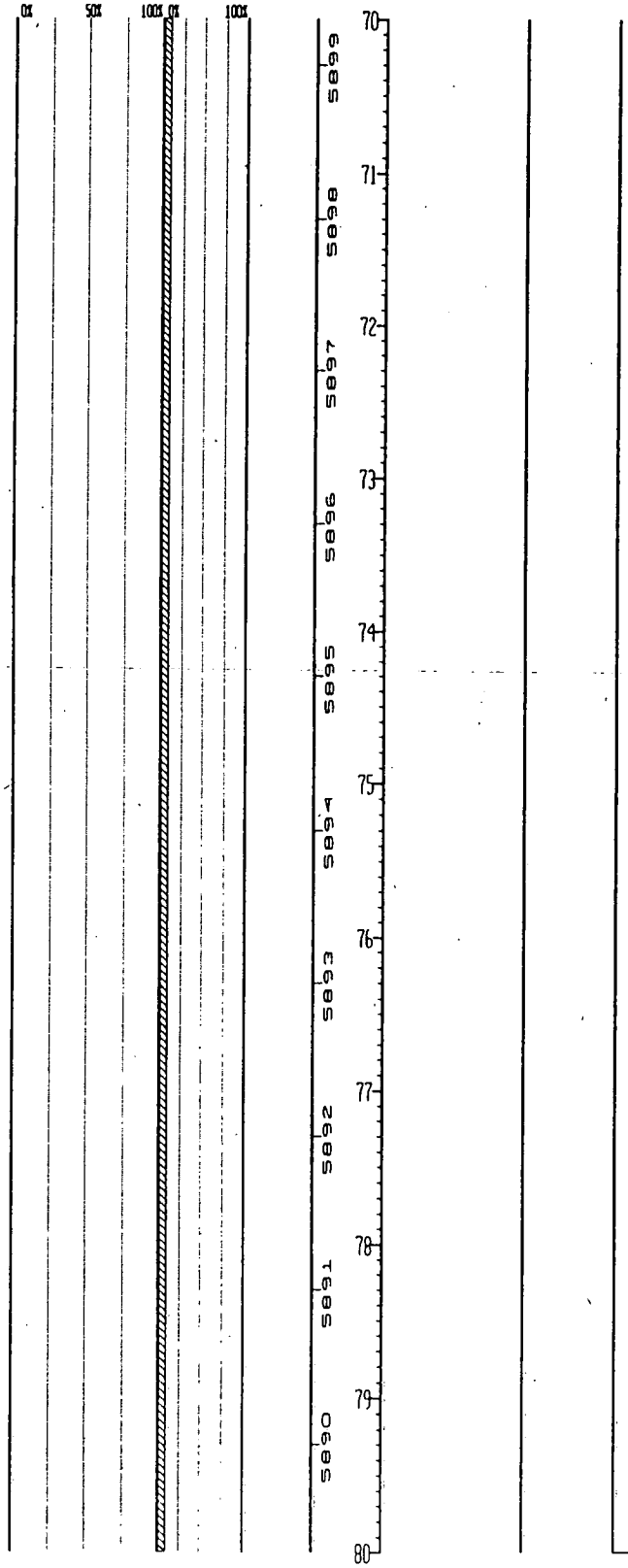
0% 50% 100% 0% 100%

5909 5908 5907 5906 5905 5904 5903 5902 5901 5900

60 61 62 63 64 65 66 67 68 69 70

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 121.0	GROUND ELEVATION (FT)	5969.30	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749564	AREA: MOUND AREA	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J.P GIROD		22393
EAST 2086121	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN)	14.25	DATE DRILLED	05/26/93		
REMARKS MONITORING WELL							

DEPTH | CHEMICAL SAMPL. GRADATIONAL SAM. | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/ INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT):	5969.30	PROJECT NUMBER:	OU2 BEDROCK
NORTH: 749564	AREA: MOUND AREA	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J.P. GIROD
EAST: 2086121	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	14.25	DATE DRILLED:	05/26/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22393

CHEMICAL SAMPL
GRADATIONAL SA
DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE
PERCENT RECOVER#
RECOVERY/ INTERVAL
DATUM(FT)
DEPTH(FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION

0% 50% 100% 0% 100%

4.00 /45.4

5889 5888 5887 5886 5885 5884 5883 5882 5881 5880

80 81 82 83 84 85 86 87 88 89 90

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT):	5969.30	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749564	AREA: MOUND AREA	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	22393
EAST:	2086121	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14.25	DATE DRILLED	05/26/93	
REMARKS	MONITORING WELL						

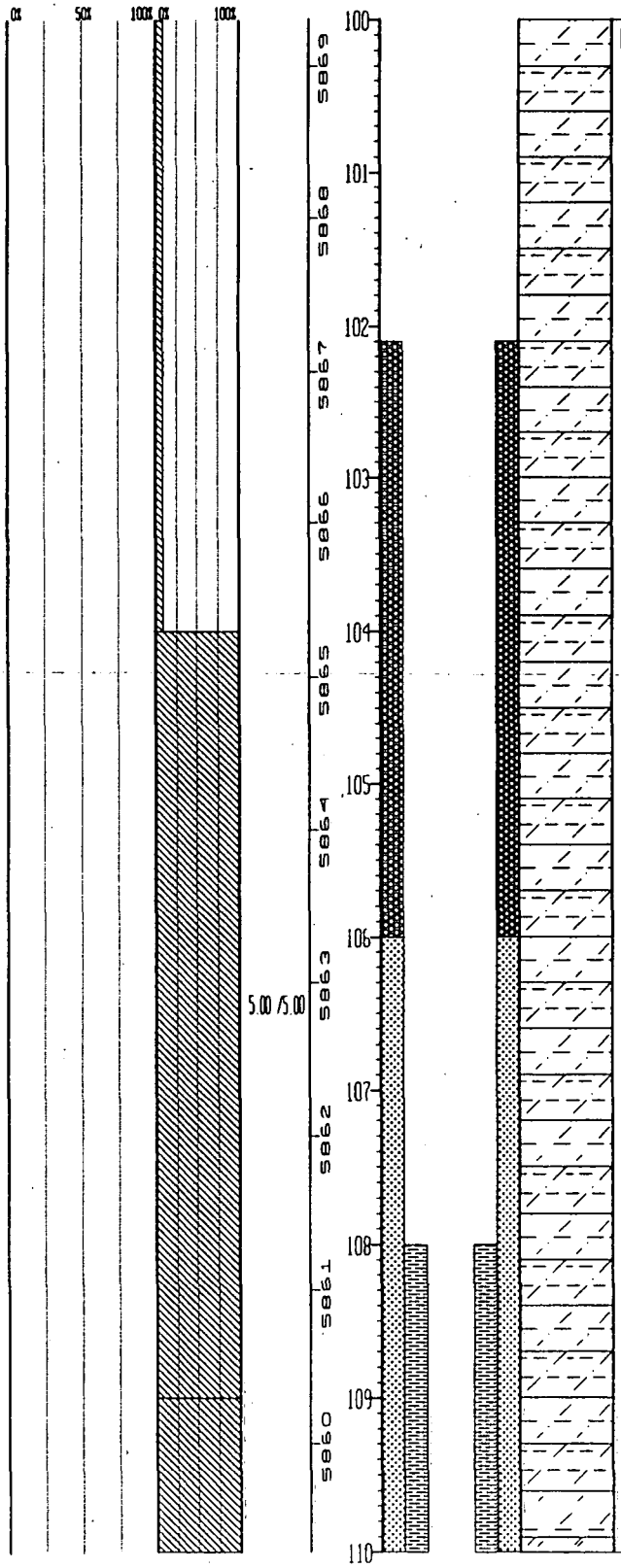
CHEMICAL SAMPLE / GRADATIONAL SAMPLE / DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM(FT)	DEPTH(FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5965	90				
					5885	91				
					5785	92				
					5685	93				
					5585	94				
					5485	95				
					5385	96				
					5285	97				
					5185	98				
					5085	99				
						100				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT):	5969.30	PROJECT NUMBER:	002 BEDROCK
NORTH: 749564	AREA: MOUND AREA	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD
EAST: 2086121	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14.25	DATE DRILLED:	05/26/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER

22393

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

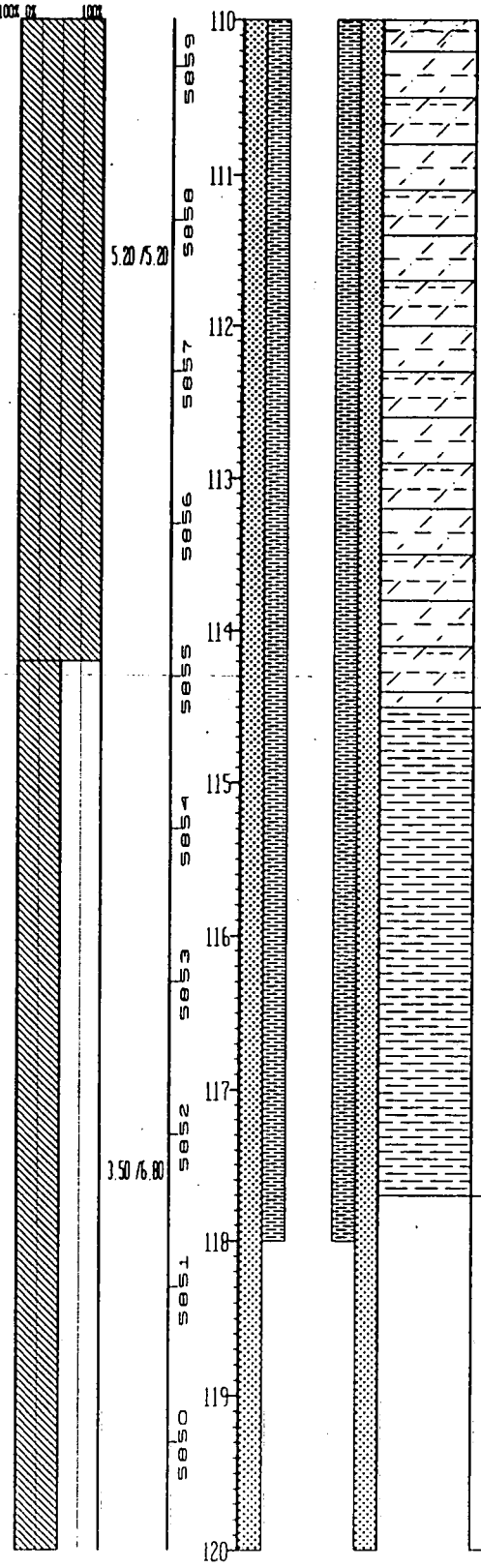


CLAYEY SILTSTONE: 100.0-114.5 ft. Interbedded Cly.Siltstone and Sty.Claystone
Clayey Siltstone with some sand: light olive gray (5Y6/1), olive gray (5Y4/1), sand is fine-grained, well sorted, sub-angular to sub-rounded, consisting of quartz and quartzite, <5% porosity, argillaceous and calcareous cementation, slightly friable, soft sediment deformation (convoluted bedding, flame structures at 103.7', load structures, sand filled burrows at 102.2'), cross bedding at 104.5', calcareous siltstone at 108.5-109.0' interbedded with silty claystone at 109.0-110.0', carbonaceous material.
Silty Claystone with some sand and silt: light olive gray (5Y6/1), olive gray (5Y4/1), sand is very fine-grained, well sorted, consisting of quartz, <5% porosity, argillaceous and calcareous cementation, slightly friable, soft sediment deformation (convoluted bedding, flame structures, load structures and sand filled burrows), nodules of clay (dark yellowish orange (10YR6/6)), horizontal bedding, carbonaceous material, some drilling induced fracturing throughout section, concretions at 112.4', 113.2', 113.7', moderately to weakly weathered with some iron oxide staining.
Fractures: 20 degrees at 105.8', 20 degrees at 107.7', 30 degrees at 114.5', 30 degrees at 114.7', all with slickensides.
Clayey Siltstone: 17% sand, 58% silt, 25% clay.
Silty Claystone: 6% sand, 19% silt, 75% clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 121.0	GROUND ELEVATION (FT)	5969.30	PROJECT NUMBER:	OU2 BEDROCK
NORTH: 749564	AREA: MOUND AREA	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J.P. GIROD
EAST: 2086121	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN)	14.25	DATE DRILLED:	05/26/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22393

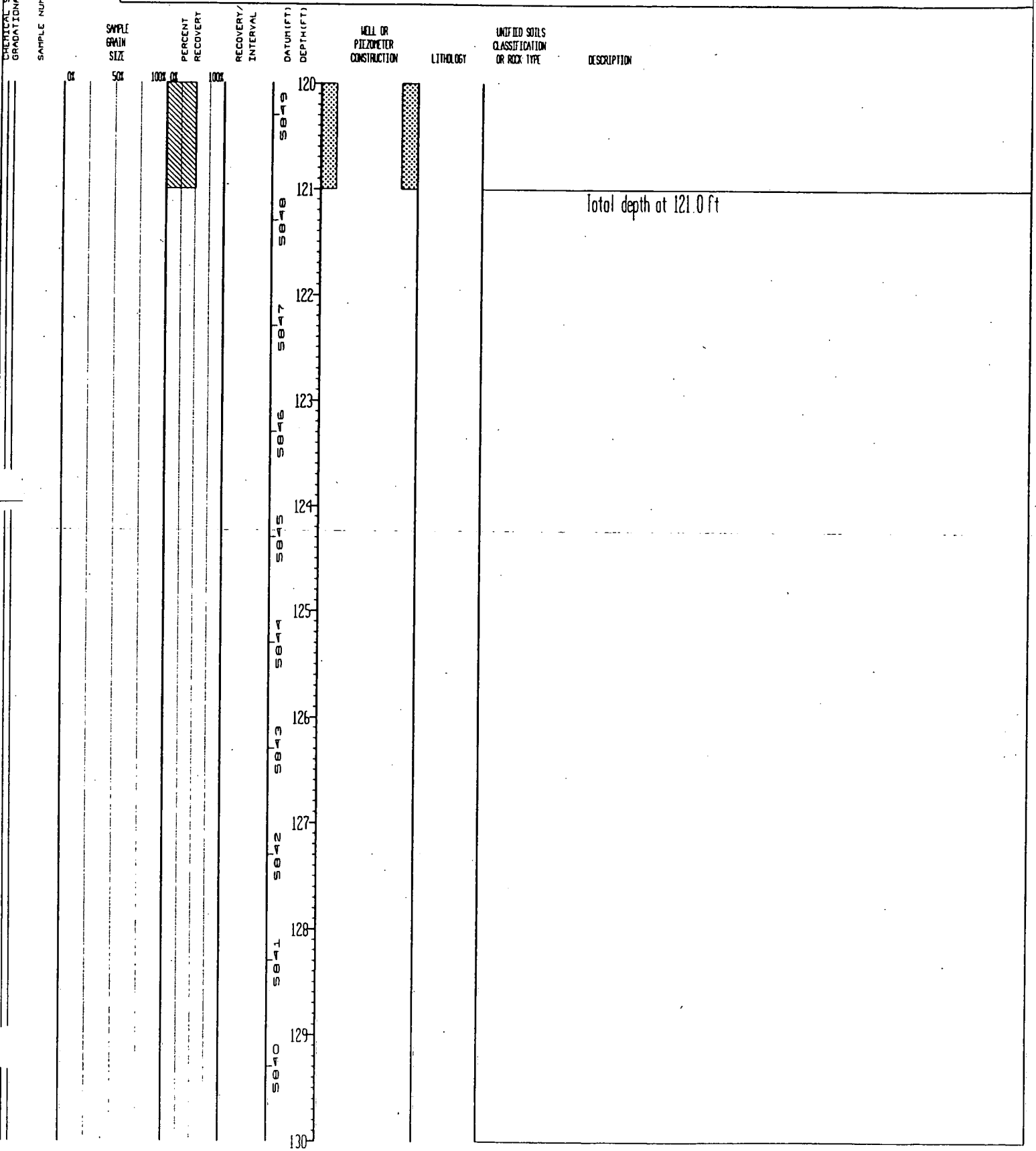
CHEMICAL SAMPLE
GRADATIONAL SAM
SAMPLE NUMBER
SAMPLE GRAIN SIZE (0% 50%)
PERCENT RECOVERY (100% 0% 100%)
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



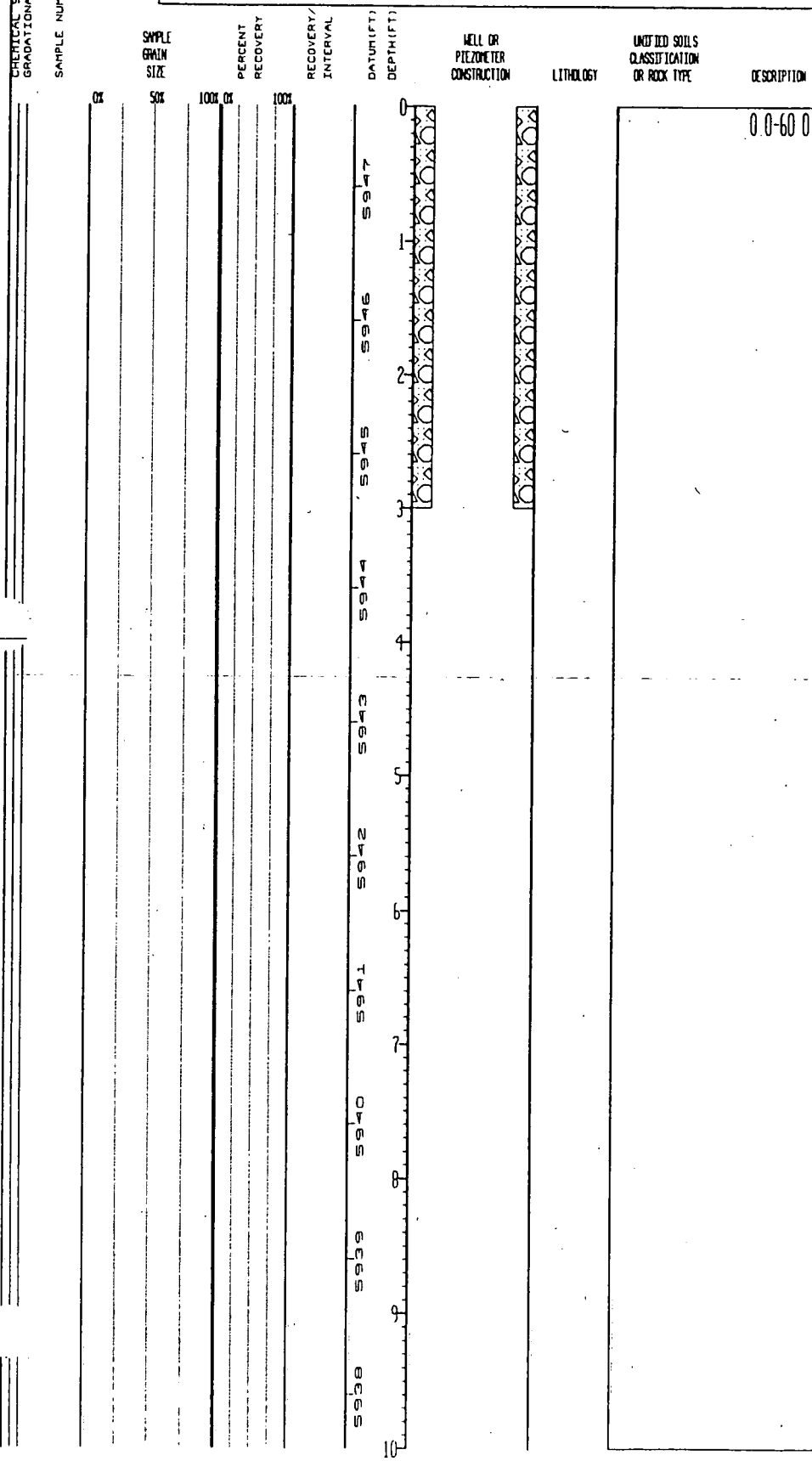
CLAYSTONE: 114.5-117.7 ft.
Claystone with some silt and trace sand, grayish black (N2), <5% porosity, calcareous cementation, slightly friable, no apparent bedding, fractures: 30 degrees at 114.7', 70 degrees at 114.9', 80 degrees at 115.0', 0 degrees at 115.6', 10 degrees at 116.0', and 80 degrees at 116.4', all with slickensides, sand filled burrows at 115.0' on fracture surface, carbonaceous material, clay clasts present, unweathered bedrock.
1% sand, 5% silt, 94% clay

117.7-121.0 ft No recovery for this interval

STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 121.0	GROUND ELEVATION (FT) 5969.30	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH 749564	AREA MOUND AREA	CASING DIAMETER (IN) 2.0	GEOLOGIST: J.P. GIROD	22393	
EAST 2086121	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN) 14.25	DATE DRILLED 05/26/93		
REMARKS: MONITORING WELL					



STATE PLANE COORDINATE		TOTAL DEPTH (FT): 99 5	GROUND ELEVATION (FT)	5947 60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	750008	AREA: NE TRENCHES	CASING DIAMETER (IN)	2 0	GEOLOGIST:	J.P GIROD	22593
EAST:	2087315	LOCATOR NUMBER: 010	BOREHOLE DIAMETER (IN)	16	DATE DRILLED:	07/16/93	
REMARKS: MONITORING WELL							



0.0-60 0 ft. No recovery for this interval.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 99.5	GROUND ELEVATION (FT):	5947.60	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH:	750008	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	22593
EAST:	2087315	LOCATOR NUMBER: 010	BOREHOLE DIAMETER (IN):	16	DATE DRILLED:	07/16/93	
REMARKS: MONITORING WELL							

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5937	10				
					5936	11				
					5935	12				
					5934	13				
					5933	14				
					5932	15				
					5931	16				
					5930	17				
					5929	18				
					5928	19				
						20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 99.5	GROUND ELEVATION (FT)	5947.60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH	750008	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIRDO	22593
EAST:	2087315	LOCATOR NUMBER 010:	BOREHOLE DIAMETER (IN):	16	DATE DRILLED:	07/16/93	
REMARKS: MONITORING WELL							

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
						5927	20				
							21				
						5926					
							22				
						5925					
							23				
						5924					
							24				
						5923					
							25				
						5922					
							26				
						5921					
							27				
						5920					
							28				
						5919					
							29				
						5918					
							30				

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 99.5	GROUND ELEVATION (FT)	5947.60	PROJECT NUMBER	002 BEDROCK
NORTH: 750008	AREA: NE TRENCHES	CASING DIAMETER (IN)	2.0	GEOLOGIST	J.P. GIROD
EAST: 2087315	LOCATOR NUMBER: 010	BOREHOLE DIAMETER (IN)	16	DATE DRILLED:	07/16/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 22593

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%	2.00 /62.00	5917 5916 5915 5914 5913 5912 5911 5910 5909 5908	30 31 32 33 34 35 36 37 38 39 40				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 99.5		GROUND ELEVATION (FT):	5947.60	PROJECT NUMBER:	002 BEDROCK
NORTH:	750008	AREA: NE TRENCHES		CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD
EAST:	2087315	LOCATOR NUMBER:	010	BOREHOLE DIAMETER (IN):	16	DATE DRILLED:	07/16/93
REMARKS:	MONITORING WELL						

LOG OF BORING NUMBER: 22593

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5907 5906 5905 5904 5903 5902 5901 5900 5899 5898	40 41 42 43 44 45 46 47 48 49 50				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 99.5	GROUND ELEVATION (FT):	5947.60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	750008	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	22593
EAST:	2087315	LOCATOR NUMBER: 010	BOREHOLE DIAMETER (IN):	16	DATE DRILLED:	07/16/93	
REMARKS:	MONITORING WELL						

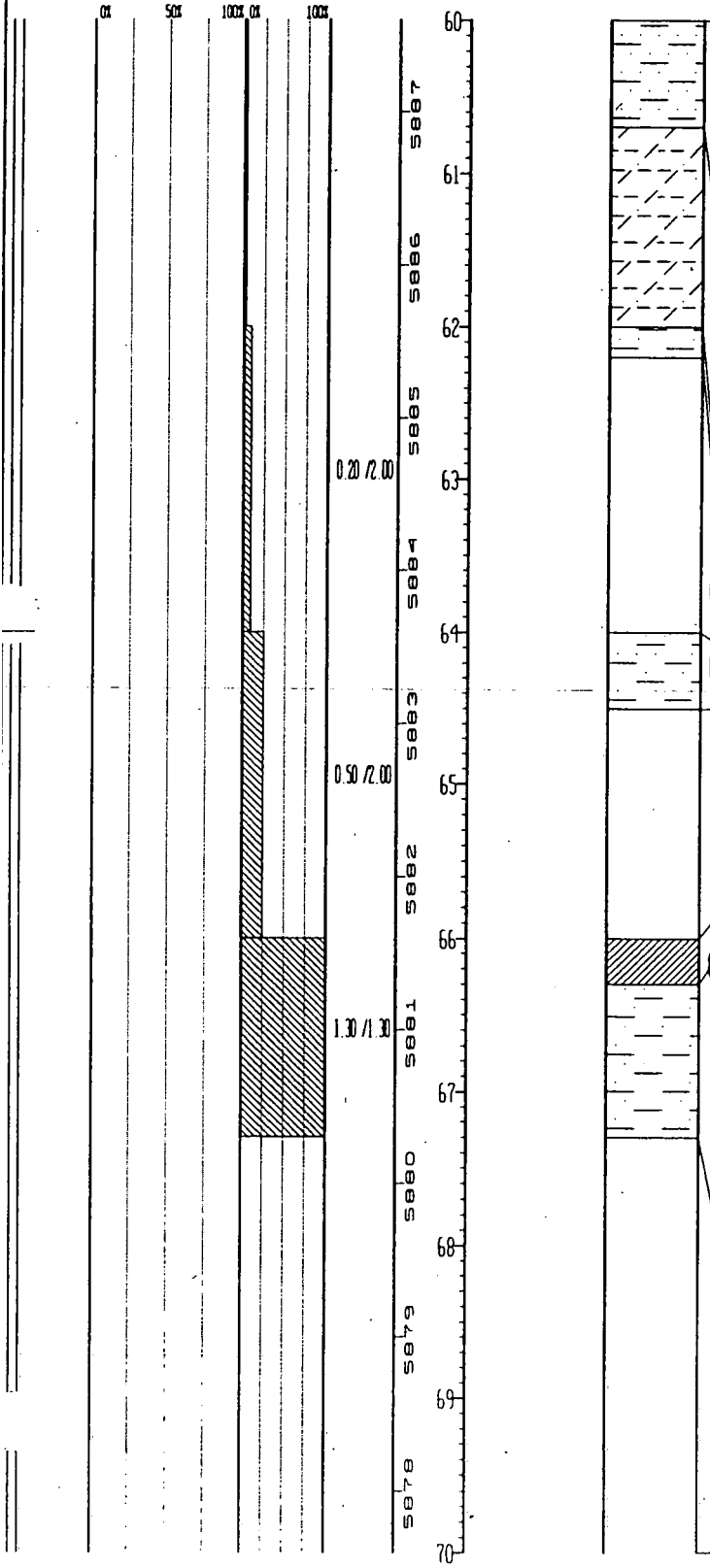
CHEMICAL SAMPLE / GRADATIONAL SAMPLE	DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0% 50% 100%	0% 100%		5897 5896 5895 5894 5893 5892 5891 5890 5889 5888	50 51 52 53 54 55 56 57 58 59 60				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 99.5	GROUND ELEVATION (FT):	5947.60	PROJECT NUMBER:	OU2 BEDROCK
NORTH: 750008	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD
EAST: 2087315	LOCATOR NUMBER: 010	BOREHOLE DIAMETER (IN):	16	DATE DRILLED:	07/16/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER

22593

CHEMICAL SAMPLE / GRADATIONAL SA... / SAMPLE NUMBER / SAMPLE GRAIN SIZE (0% 50% 100%) / PERCENT RECOVERY (0% 100%) / RECOVERY/INTERVAL / DATUM (FT) / DEPTH (FT) / WELL OR PIEZOMETER CONSTRUCTION / LITHOLOGY / UNIFIED SOILS CLASSIFICATION OR ROCK TYPE / DESCRIPTION



CLAYEY SANDSTONE: 60.0-60.7 ft.
Clayey Sandstone with trace silt and gravel, dark yellowish orange (10YR6/6), pale yellowish orange (10YR8/6), grayish red (10R4/2), sand is medium-grained with some fine- and coarse-grained sand, well sorted, sub-angular to rounded, consisting of quartz, quartzite, and mica, mottled texture, no apparent bedding, 10-20% porosity, argillaceous cement, highly friable, saturated, bedrock is extensively weathered.
1% gravel, 75% sand, 2% silt, 22% clay

SILTY CLAYSTONE: 60.7-62.0 ft.
Silty Claystone with some sand, dark gray (N3), dark yellowish orange (10YR6/6), sand is fine-grained, well sorted, sub-angular to sub-rounded, consisting of quartz and trace quartzite, <5% porosity, slightly friable, no apparent bedding, extensive iron oxide staining and weathering of bedrock, 90 degree fracture at 60.7-61.5' healed with iron oxide, mottled texture, manganese oxide at 61.5'.
18% sand, 20% silt, 62% clay

CLAYEY SANDSTONE: 62.0-62.2 ft Clayey Sandstone as described below.

62.2-64.0 ft. No recovery for this interval.

CLAYEY SANDSTONE: 64.0-64.5 ft Clayey Sandstone as described below

64.5-66.0 ft No recovery for this interval

66.0-66.3 ft GEOTECH sample obtained from this interval.

CLAYEY SANDSTONE: 66.3-67.3 ft
Clayey Sandstone with some silt, medium dary gray (N4), very fine- to fine-grained sand with trace medium-grained sand, poorly sorted, sub-rounded to rounded, consisting of quartz and trace mafics, <5% porosity, argillaceous cement, slightly friable, faint bedding, 0-10 degrees at 64.4', 66.4-66.7', 60 degree fractures at 66.5' and 66.7', 45 degree fracture at 66.4', nodules of claystone (dark yellowish orange (10YR6/6)), carbonaceous material
48% sand, 10% silt, 42% clay

67.3-80.5 ft. No recovery for this interval

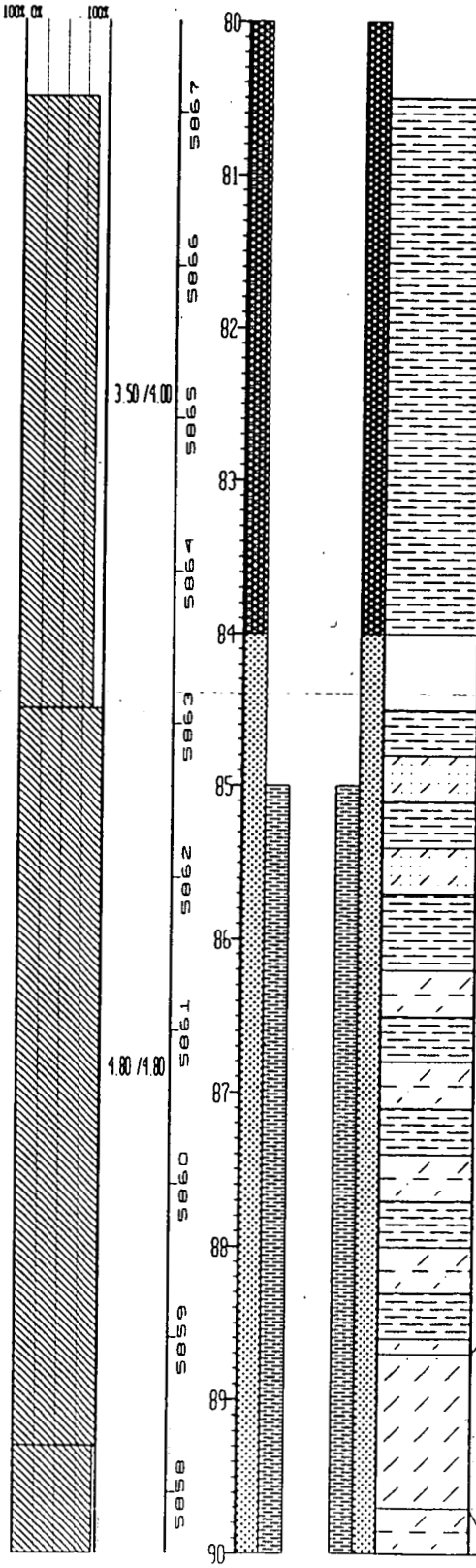
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 99.5	GROUND ELEVATION (FT):	5997.60	PROJECT NUMBER:	OU2 BEDROCK	LOG OF BORING NUMBER:
NORTH:	750008	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	22593
EAST:	2087315	LOCATOR NUMBER: 010	BOREHOLE DIAMETER (IN):	16	DATE DRILLED:	07/16/93	
REMARKS: MONITORING WELL							

CHEMICAL SAMPLE DEPTH / GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5977	70				
					5976	71				
					5975	72				
					5974	73				
				0.00 /13.20	5973	74				
					5972	75				
					5971	76				
					5970	77				
					5969	78				
					5968	79				
					5967	80				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 99.5	GROUND ELEVATION (FT)	5947.60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER
NORTH	750008	AREA: NE TRENCHES	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J.P. GIROD	22593
EAST:	2087315	LOCATOR NUMBER: 010	BOREHOLE DIAMETER (IN)	16	DATE DRILLED:	07/16/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPL
GRADATIONAL SA
SAMPLE NUMBER
DEPTH

SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



CLAYSTONE — 80.5-84.0 ft.
Claystone with some silt and trace sand, dark gray (N3), <5% porosity, slightly friable, 80 degree fracture at 82.0' with slickensides (drilling induced), 30 degree fracure at 83.6' with slickensides, 20 degree fracture at 83.7' with slickensides, unweathered bedrock with carbonaceous material.
1% sand, 9% silt, 90% clay

84.0-84.5 ft. No recovery for this interval.

CLAYSTONE — 84.5-86.2 ft.
Interbedded Claystone and Silty Sandstone, olive gray (5Y4/1)
Claystone with some silt: <5% porosity, argillaceous cement, slightly friable, no apparent bedding.
Silty Sandstone with some clay: <5% porosity, argillaceous cementation, slightly friable, faint bedding, 10-20 degrees, faint cross-bedding.
Fractures: 30 degrees at 85.5' (drilling induced).
Claystone: 10% silt, 90% clay.
Silty Sandstone: 40% sand, 35% silt, 25% clay.

CLAYEY SILTSTONE — 86.2-88.7 ft
Interbedded Clayey Silstone and Claystone as described from 89.7-94.3'
Fractures: 30 degrees at 86.4' with slickensides, 60 degrees at 86.7' with slickensides, 80 degrees at 88.1' healed with carbonaceous material, 45 degrees at 88.2', microfractures.

SILTSTONE — 88.7-89.7 ft.
Calcareous Siltstone with some clay, white (N9), olive gray (5Y4/1), <5% porosity, calcareous cementation, slightly friable, 0-20 degree bedding, cross-bedding, carbonaceous material, soft sediment deformation (convoluted bedding), laminated siltstone with thin beds of claystone (<1/32" thick)
1% sand, 74% silt, 25% clay

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 99.5	GROUND ELEVATION (FT): 5947.60	PROJECT NUMBER: OU2 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 750008	AREA: NE TRENCHES	CASING DIAMETER (IN): 2.0	GEOLOGIST: J.P GIROD	22593	
EAST: 2087315	LOCATOR NUMBER: 010	BOREHOLE DIAMETER (IN): 16	DATE DRILLED: 07/16/93		
REMARKS: MONITORING WELL					

CHEMICAL SAMPL GRADATIONAL SAI DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE 0% 50% 100%

PERCENT RECOVERY 0% 100%

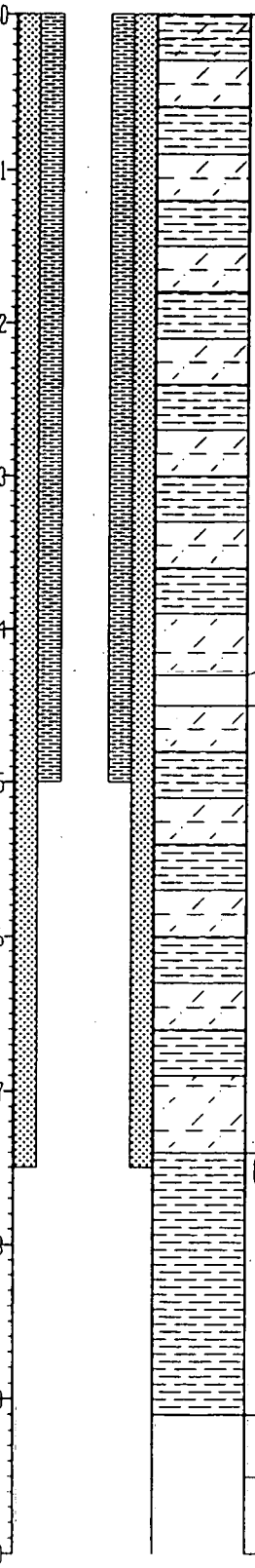
RECOVERY/INTERVAL: 5.00 /5.20; 4.60 /5.00

DATUM (FT): 5857, 5856, 5855, 5854, 5853, 5852, 5851, 5850, 5849, 5848

DEPTH (FT): 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

WELL OR PIEZOMETER CONSTRUCTION

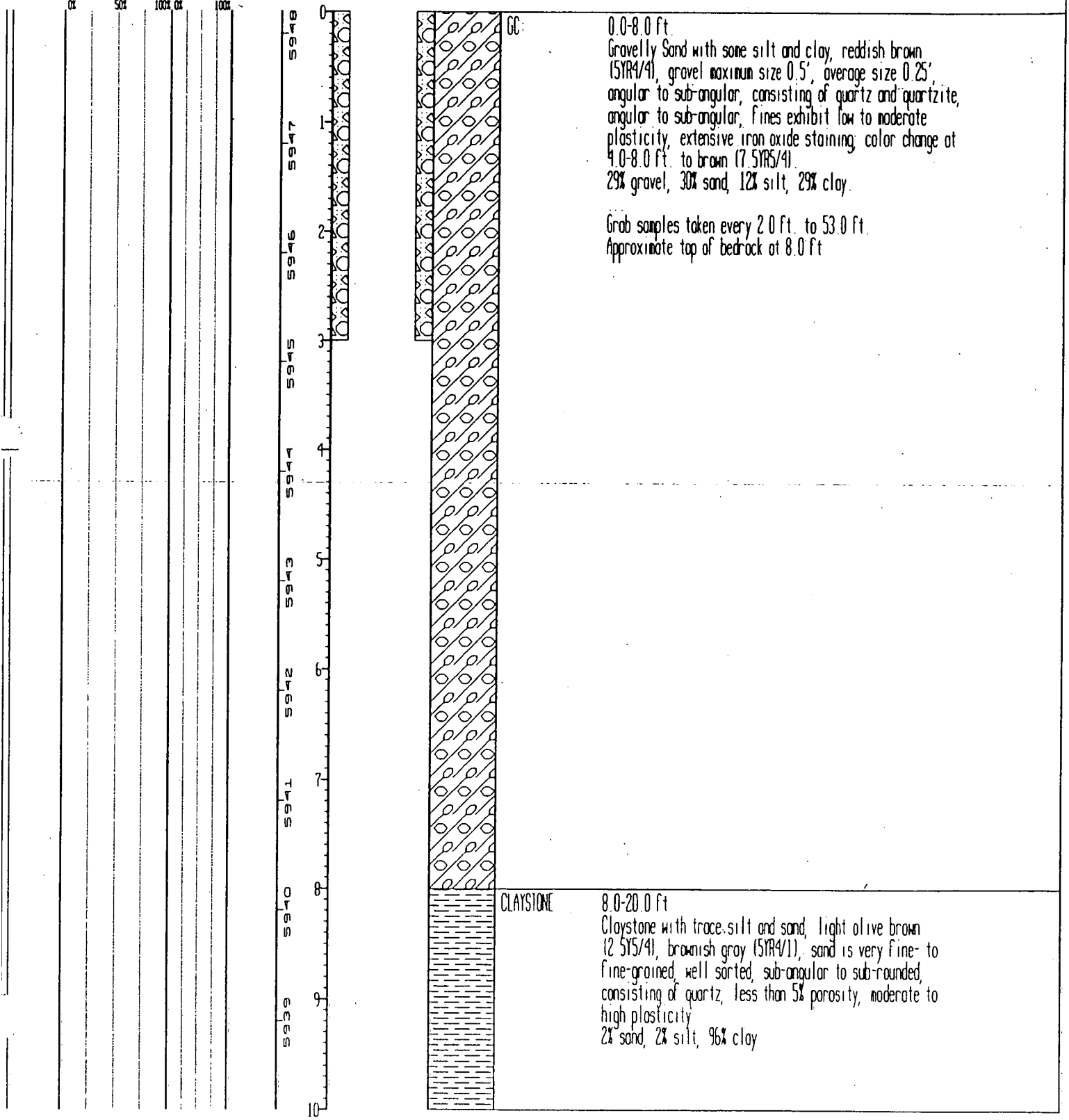
LITHOLOGY



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYEY SILTSTONE	89.7-94.3 ft Interbedded Clayey Siltstone and Claystone. Clayey Siltstone: light olive gray (5Y6/1), olive gray (5Y4/1), white (N9), <5% porosity, slightly friable, 0-10 degree bedding, soft sediment deformation (convoluted bedding, load structures, micro-fractures, slump and creep features). Claystone with some silt: olive black (5Y2/1), <5% porosity, slightly friable, 0-10 degree bedding, soft sediment deformation (convoluted bedding, load structures, micro-fractures, slump and creep features). Fractures (drilling induced): 60 degrees at 90.9', 60 degree at 91.9', 10 degrees at 94.2', 10 degrees at 97.2', all with slickensides. Bioturbation: sand filled burrows at 94.9' Clayey Siltstone: 65% silt, 35% clay. Claystone: 20% silt, 80% clay
	94.3-94.5 ft No recovery for this interval.
CLAYEY SILTSTONE	94.5-97.4 ft Interbedded Clayey Silstone and Claystone as described above
CLAYSTONE:	97.4-99.1 ft Claystone, brownish black (5YR2/1), <5% porosity, slightly friable, faint horizontal bedding at 97.4-98.0', nodules of clay (moderate yellowish brown (10YR5/4)), fracture of 85-90 degrees at 98.7' with slickensides 5% silt, 95% clay
	99.1-99.5 ft No recovery for this interval
	Total depth at 99.5 ft

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 77.0	GROUND ELEVATION (FT):	5948.20	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749999	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST	J.P. GIRDO	23193
EAST: 2087319	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	14	DATE DRILLED	05/14/93	
REMARKS: MONITORING WELL						

DEPTH | CHEMICAL SAMPLE | GRADATIONAL SA. | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



GC:

0.0-8.0 ft.
Gravelly Sand with some silt and clay, reddish brown (5YR4/4), gravel maximum size 0.5', average size 0.25', angular to sub-angular, consisting of quartz and quartzite, angular to sub-angular, fines exhibit low to moderate plasticity, extensive iron oxide staining; color change at 4.0-8.0 ft. to brown (7.5YR5/4).
29% gravel, 30% sand, 12% silt, 29% clay.

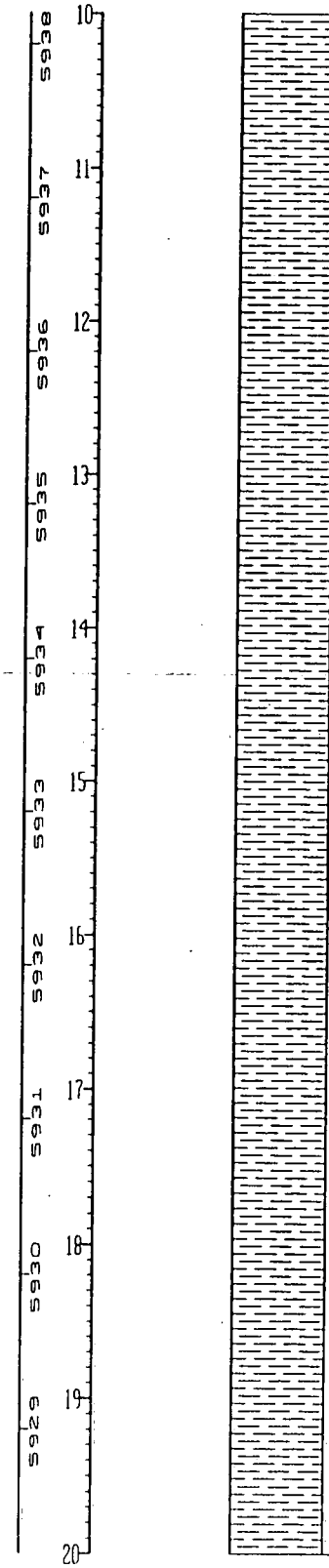
Grab samples taken every 2.0 ft. to 53.0 ft.
Approximate top of bedrock at 8.0 ft

CLAYSTONE

8.0-20.0 ft
Claystone with trace silt and sand, light olive brown (2.5Y5/4), brownish gray (5YR4/1), sand is very fine- to fine-grained, well sorted, sub-angular to sub-rounded, consisting of quartz, less than 5% porosity, moderate to high plasticity
2% sand, 2% silt, 96% clay

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 77.0	GROUND ELEVATION (FT): 5948.20	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749999	AREA: NE TRENCHES	CASING DIAMETER (IN): 2.0	GEOLOGIST: J.P. GIROD	23193	
EAST: 2087319	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 05/14/93		
REMARKS: MONITORING WELL					

CHEMICAL SAMPL
GRADATIONAL SAM
DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE (0% 50% 100%)
PERCENT RECOVERY (0% 100%)
RECOVERY/INTERVAL
DATUM(FT)
DEPTH(FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 77 0	GROUND ELEVATION (FT)	5948 20	PROJECT NUMBER	002 BEDROCK
NORTH 749999	AREA: NE TRENCHES	CASING DIAMETER (IN)	2.0	GEOLOGIST	J.P GIROD
EAST 2087319	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN)	14	DATE DRILLED	05/14/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 23193

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%		5928	20			SILTY SANDSTONE	20.0-52.0 ft Silty Sandstone with some clay, light olive brown (2.5Y5/4), sand is very fine- to fine-grained, well sorted, sub-rounded, consisting or quartz, low plasticity, iron oxide staining, interval at 40.0-48.0 is more clayey. 59% sand, 31% silt, 10% clay.
				5927	21				
				5926	22				
				5925	23				
				5924	24				
				5923	25				
			0.00 /53.00	5922	26				
				5921	27				
				5920	28				
				5919	29				
					30				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 77 0	GROUND ELEVATION (FT)	5948 20	PROJECT NUMBER	002 BEDROCK	LOG OF BORING NUMBER
NORTH	749999	AREA NE TRENCHES	CASING DIAMETER (IN)	2 0	GEOLOGIST	J.P GIROD	23193
EAST	2087319	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN)	14	DATE DRILLED	05/14/93	
REMARKS	MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL S.	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5918	30				
					5917	31				
					5916	32				
					5915	33				
					5914	34				
					5913	35				
					5912	36	05/06/93 ▽			
					5911	37				
					5910	38				
					5909	39				
						40				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 77.0	GROUND ELEVATION (FT)	5948.20	PROJECT NUMBER	002 BEDROCK	LOG OF BORING NUMBER
NORTH	749999	AREA: NE TRENCHES	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J.P. GIROD	23193
EAST	2087319	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN)	14	DATE DRILLED	05/14/93	
REMARKS	MONITORING WELL						

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%		5908	40				
				5907	41				
				5906	42				
				5905	43				
				5904	44				
				5903	45				
				5902	46				
				5901	47				
				5900	48				
				5899	49				
					50				

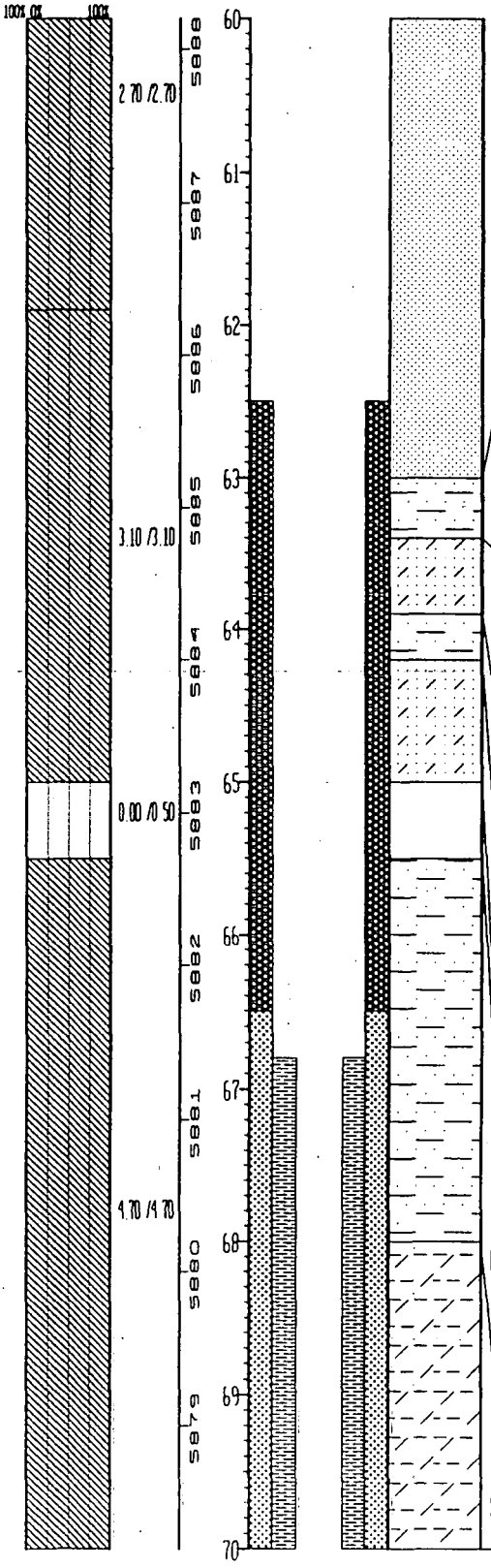
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 77 0	GROUND ELEVATION (FT)	5948 20	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749999	AREA: NE TRENCHES	CASING DIAMETER (IN)	2 0	GEOLOGIST:	J.P. GIROD	23193
EAST:	2087319	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN)	14	DATE DRILLED:	05/14/93	
REMARKS	MONITORING WELL						

CHEMICAL SAMPL
GRADATIONAL SA.
DEPTH
SAMPLE NUMBER

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0% 50% 100%	0% 100%		5898	50				
			5897	51				
			5896	52				52 0-53 0 ft. No recovery for this interval. Begin core samples at 53.0 ft.
			5895	53			SANDSTONE	53.0-63 0 ft. Sandstone with some silt, trace clay, dark yellowish orange (10YR6/6), yellowish gray (5Y8/1), moderate yellowish brown (10YR5/4), sand is very fine- to medium-grained, poorly graded, consisting of quartz and mafics, extensive iron oxide staining on grains, 30% porosity, silica and argillaceous cement, highly friable, horizontal bedding at 58.3', alternating color change from yellow gray to moderate yellow brown to dark yellowish orange, trace manganese oxide staining (very dusky red purple (5RP2/2)) 88% sand, 9% silt, 3% clay.
		2.50 /2.50	5894	54				
			5893	55				
		1.90 /1.90	5892	56				
			5891	57				
		1.80 /1.80	5890	58				
			5889	59				
				60				

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 77.0	GROUND ELEVATION (FT): 5948.20	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH: 749999	AREA NE TRENCHES	CASING DIAMETER (IN): 2.0	GEOLOGIST: J.P. GIROD	23193
EAST: 2087319	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 05/14/93	
REMARKS: MONITORING WELL				

DEPTH | CHEMICAL SAMPLE | GRADATIONAL SAMPLE | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



CLAYEY SANDSTONE: 63.0-63.4 ft. Clayey Sandstone with some silt, dark gray (N3), dark yellowish orange (10YR6/6), sand is very fine- to fine-grained, well sorted, angular to sub-angular, consisting of quartz, quartzite, and mica, extensive iron oxide staining on grains, <10% porosity, argillaceous cement moderately to slightly friable, horizontal bedding with clay clasts.
54% sand, 9% silt, 37% clay

SILTY SANDSTONE: 63.4-63.9 ft. Silty Sandstone with some clay, dark yellowish orange (10YR6/6), olive gray (5Y4/1), sand is very fine- to fine-grained, well sorted, angular to sub-angular, consisting of quartz, quartzite, mafics, and mica, extensive iron oxide staining on grains, <20% porosity, silica and argillaceous cement, highly friable
77% sand, 16% silt, 7% clay

CLAYEY SANDSTONE: 63.9-64.2 ft. Clayey Sandstone with some silt, dark gray (N3), dark yellowish orange (10YR6/6), sand is very fine- to fine-grained, well sorted, angular to sub-angular, consisting of quartz, quartzite, and mica, extensive iron oxide staining on grains, <10% porosity, argillaceous cement moderately to slightly friable, horizontal bedding with clay clasts.
54% sand, 9% silt, 37% clay

SILTY SANDSTONE: 64.2-65.0 ft. Silty Sandstone with some clay, medium dark gray (N4), sand is very fine- to fine-grained, well sorted, angular to sub-rounded, consisting of quartz, mica, and trace quartzite and mafics, <10% porosity, argillaceous cement, slightly friable, bedding approximately 30 degrees from horizontal, moderate to high plasticity
53% sand, 28% silt, 19% clay

65.0-65.5 ft. No recovery for this interval.

CLAYEY SANDSTONE: 65.5-68.0 ft. Clayey Sandstone with some silt, medium dark gray (N4), dark gray (N3), sand is very fine- to fine-grained, well sorted, sub-angular to sub-rounded, consisting of quartz with trace quartzite, mica and mafics, <10% porosity, argillaceous cement, slightly to moderately friable, moderate to high plasticity, carbonaceous material, highly fractured
45% sand, 17% silt, 38% clay

SILTY CLAYSTONE: 68.0-71.2 ft. Silty Claystone with some sand, medium dark gray (N4) to dark gray (N3), sand is very fine- to fine-

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 77.0	GROUND ELEVATION (FT)	5948.20	PROJECT NUMBER	OU2 BEDROCK	LOG OF BORING NUMBER
NORTH	749999	AREA NE TRENCHES	CASING DIAMETER (IN)	2.0	GEOLOGIST	J.P. GIROD	23193
EAST	2087319	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN)	14	DATE DRILLED	05/14/93	
REMARKS	MONITORING WELL						

CHEMICAL SAMPL GRADATIONAL SA DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE 0% 50% 100%

PERCENT RECOVERY 0% 100%

RECOVERY/INTERVAL: 2.70/2.70; 2.50/2.50; 1.60/1.60

DATUM (FT): 5878, 5877, 5876, 5875, 5874, 5873, 5872, 5871, 5870, 5869

DEPTH (FT): 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

grained, well sorted, sub-angular to sub-rounded, consisting of quartz, quartzite, mafics, <5% porosity, slightly friable carbonaceous material (carbon material at 69.5'), highly plastic, nodules of claystone, convoluted bedding at 69.5' with sand and silt beds (<1/32" thick).
15% sand, 26% silt, 59% clay

SILTY SANDSTONE: 71.2-71.7 ft. Silty Sandstone with some clay, medium dark gray (N4), dark gray (N3), sand is very fine- to fine-grained, well sorted, sub-angular to angular, consisting of quartz, trace quartzite, <10% porosity, moderately friable, highly fractured, localized iron oxide staining, carbonaceous material
68% and, 19% silt, 13% clay

SANDSTONE: 71.7-72.7 ft. Sandstone with some silt, trace clay, light gray (N7), medium light gray (N8), grayish black (N2), sand is very fine- to fine-grained, well sorted, angular to sub-angular, consisting of quartz, trace quartzite (<5%), laminated sandstone with clay beds (<1/32" thick), grayish black (N2), 20% porosity, siliceous and argillaceous cement, moderate friability, faint horizontal bedding, convoluted bedding (soft sediment deformation), highly fractured, trace iron oxide staining (localized), most fractures appear to be drilling induced.
80% sand, 16% silt, 4% clay

CLAYSTONE: 72.7-77.0 ft. Claystone with some silt, trace sand, medium dark gray (N4), dark gray (N3), brownish gray (5YR4/1), sand is very fine- to fine-grained, well sorted, angular to sub-angular, consisting of quartz, trace quartzite and mafics, <5% porosity, slightly friable, highly fractured, most fractures appear to be drilling induced, laminae of silt and sand (<1/32" thick)
3% sand, 10% silt, 87% clay

Total depth at 77.0 ft

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 89.5	GROUND ELEVATION (FT)	5955.60	PROJECT NUMBER	002 BEDROCK	LOG OF BORING NUMBER
NORTH	749823	AREA NE TRENCHES	CASING DIAMETER (IN)	2.0	GEOLOGIST	J.P. GIROD	23293
EAST	2086846	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN)	14	DATE DRILLED	05/20/93	
REMARKS	MONITORING WELL						

CHEMICAL SAMPL / GRADATIONAL SA	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5955 5954 5953 5952 5951 5950 5949 5948 5947 5946	0 1 2 3 4 5 6 7 8 9 10				

0.0-0.9 ft Top soil, start of boring at 0.9 ft.

GM: 0.9-2.0 ft.
Silty Gravel with some sand and clay, very dark grayish brown (10YR3/2), gravel maximum size 0.05', average size 0.03', sub-angular, consisting of quartzite and quartz, sand is fine- to coarse-grained, well graded, sub-angular to rounded, consisting of quartz and quartzite, no plasticity, caliche coats gravel and sand grains, plant roots (<1/32" thick), calcareous cementation, moist
36% gravel, 23% sand, 32% silt, 9% clay

GC: 2.0-15.5 ft
Clayey Gravel with some sand, and silt, color change to brown (10YR5/3) at 2.0-4.0', brownish yellow (10YR6/6) at 4.0-8.0', light olive gray (5Y6/1) at 8.0-14.0', light olive brown (5Y5/6) at 14.0-15.5', gravel maximum size 0.06', average size 0.03', angular to sub-angular, consisting of quartzite, quartz, sand is medium- to coarse-grained, poorly graded, angular, moderate plasticity, caliche coating on gravel and sand grains, moist.
63% gravel, 15% sand, 7% silt, 15% clay

Top of bedrock at 15.5 ft
Lower contact of alluvials based on pilot hole 21693.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 89.5	GROUND ELEVATION (FT):	5955.60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749823	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	23293
EAST:	2086846	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	05/20/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5945	10				
					5944	11				
					5943	12				
					5942	13				
					5941	14				
					5940	15				
					5939	16			CLAYSTONE	15.5-24.0 ft Claystone with some silt and sand, color change at 15.5-24.0' to light olive brown (5Y5/6), sand is fine-grained, well sorted, consisting of quartz, CaCO3 present, moist 18% sand, 17% silt, 65% clay
					5938	17				
					5937	18				
				0.00 /39.30	5936	19				
						20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 89.5	GROUND ELEVATION (FT):	5955.60	PROJECT NUMBER:	OU2 BEDROCK
NORTH: 749823	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD
EAST: 2086846	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	05/20/93
REMARKS: MONITORING WELL					

LOG OF BORING NUMBER: 23293

CHEMICAL SAMPLE / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH2D182WC				5935, 5934, 5933, 5932, 5931, 5930, 5929, 5928, 5927, 5926	20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30				

CLAYEY SILTSTONE: 24.0-32.0 ft.
Clayey Siltstone with some sand, dark yellowish brown (10YR4/1), sand is fine-grained, well sorted, consisting of quartz, CaCO3 present, weathered bedrock, moist.
12% sand, 62% silt, 26% clay.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 89.5	GROUND ELEVATION (FT)	5955.60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749823	AREA: NE TRENCHES	CASING DIAMETER (IN)	2.0	GEOLOGIST:	J.P. GIROD	23293
EAST:	2086846	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	14	DATE DRILLED:	05/20/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL SA.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%	1.40/1.40	5925, 5924, 5923, 5922, 5921, 5920, 5919, 5918, 5917, 5916	30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40				
									SILTY SANDSTONE	32.0-39.3 ft. Silty Sandstone with some clay, brown (10YR5/3), sand is fine-grained, well sorted, sub-rounded to rounded, consisting of quartz and trace quartzite, saturated. 58% sand, 25% silt, 17% clay.
									CLAYSTONE	39.3-40.7 ft Interbedded Claystone and Sandstone. Claystone with some silt and trace sand dark yellow orange (10YR6/6), pale yellow orange (10YR8/6), <5% porosity,

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 89.5	GROUND ELEVATION (FT):	5955.60	PROJECT NUMBER	OU2 BEDROCK	LOG OF BORING NUMBER
NORTH	749823	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	23293
EAST	2086846	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	05/20/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE GRADATIONAL SA... DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 1.40/1.40; 0.00/0.60; 1.40/1.40; 0.00/0.30; 1.50/1.50; 0.00/0.50

DATUM (FT): 5915, 5914, 5913, 5912, 5911, 5910, 5909, 5908, 5907, 5906

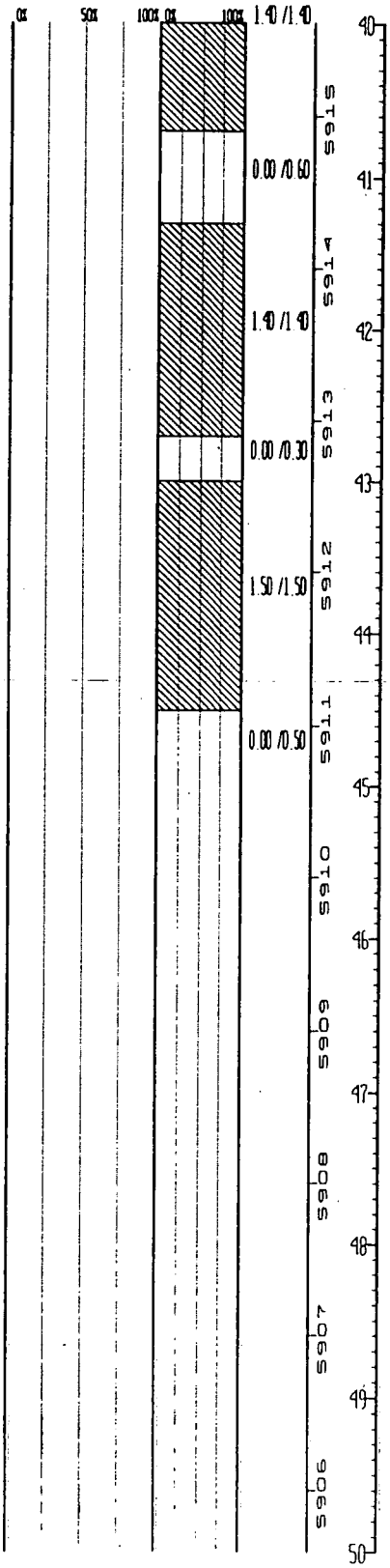
DEPTH (FT): 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION



slightly friable, soft sediment deformation (convoluted bedding), extensive weathering.
Sandstone with some silt and trace clay: dark yellow orange (10YR6/6), pale yellow orange (10YR8/6), sand is fine- to coarse-grained, sub-angular to sub-rounded with extensive iron oxide staining on grains, up to 30% porosity, very friable with some argillaceous cementing, sand beds at 39.5-40.0', 42.0', extensive weathering with iron oxide and manganese oxide throughout section, 0 degree fracture along bedding at 40.4', 90 degree fracture at 40.7', healed with iron oxide, approximately 0-10 degree fracture at 42.0'; possible sluff at 41.3-41.6', moist.
Claystone: 1% sand, 9% silt, 90% clay.
Sandstone: 85% sand, 13% silt, 2% clay

40.7-41.3 ft. No recovery for this interval.

CLAYSTONE: 41.3-42.7 ft Interbedded Claystone and Sandstone as described above.

42.7-43.0 ft. No recovery for this interval.

SANDY CLAYSTONE: 43.0-44.5 ft
Sandy Claystone with some silt, dusky yellow brown (10YR2/2) dark yellow orange (10YR6/6), sand is fine-grained, well sorted, angular to sub-angular, consisting of quartz and trace quartzite, <5% porosity, slightly friable, 70 degree fractures at 43.3', 43.5', 43.6', healed with iron oxide, moderately to highly weathered bedrock, carbonaceous material.
30% sand, 7% silt, 63% clay

44.5-73.0 ft No recovery for this interval.
Began air rotary coring.

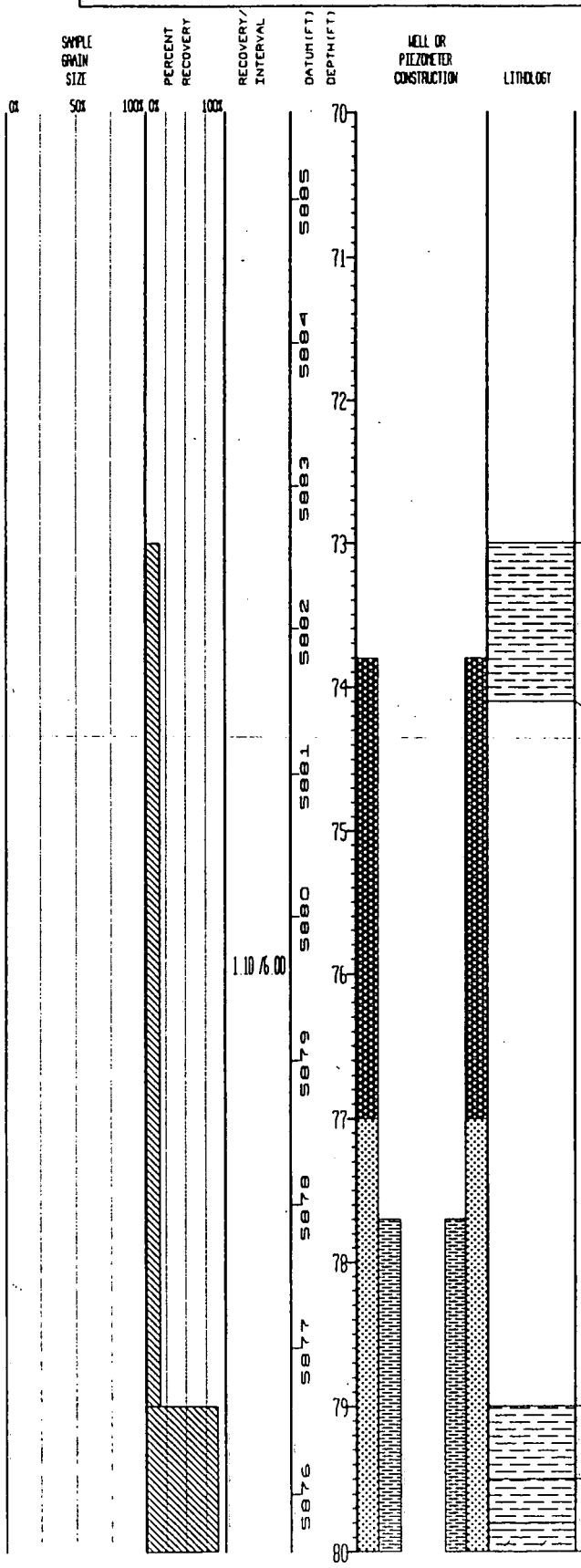
STATE PLANE COORDINATE	TOTAL DEPTH (FT): 89.5	GROUND ELEVATION (FT): 5955.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:	
NORTH: 749823	AREA: NE TRENCHES	CASING DIAMETER (IN): 2.0	GEOLOGIST: J.P. GIROD	23293	
EAST: 2086846	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 05/20/93		
REMARKS: MONITORING WELL					

GRADATIONAL SA DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5905	50				
					5904	51				
					5903	52				
					5902	53				
					5901	54				
					5900	55				
					5899	56				
					5898	57				
				0.00 /28.00	5897	58				
					5896	59				
						60				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 89.5	GROUND ELEVATION (FT):	5955.60	PROJECT NUMBER:	002 BEDROCK	LOG OF BORING NUMBER:
NORTH:	749823	AREA: NE TRENCHES	CASING DIAMETER (IN):	2.0	GEOLOGIST:	J.P. GIROD	23293
EAST:	2086846	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	14	DATE DRILLED:	05/20/93	
REMARKS:	MONITORING WELL						

CHEMICAL SAMPLE / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5895	60				
					5894	61				
					5893	62				
					5892	63	05/20/93			
					5891	64				
					5890	65				
					5889	66				
					5888	67				
					5887	68				
					5886	69				
						70				

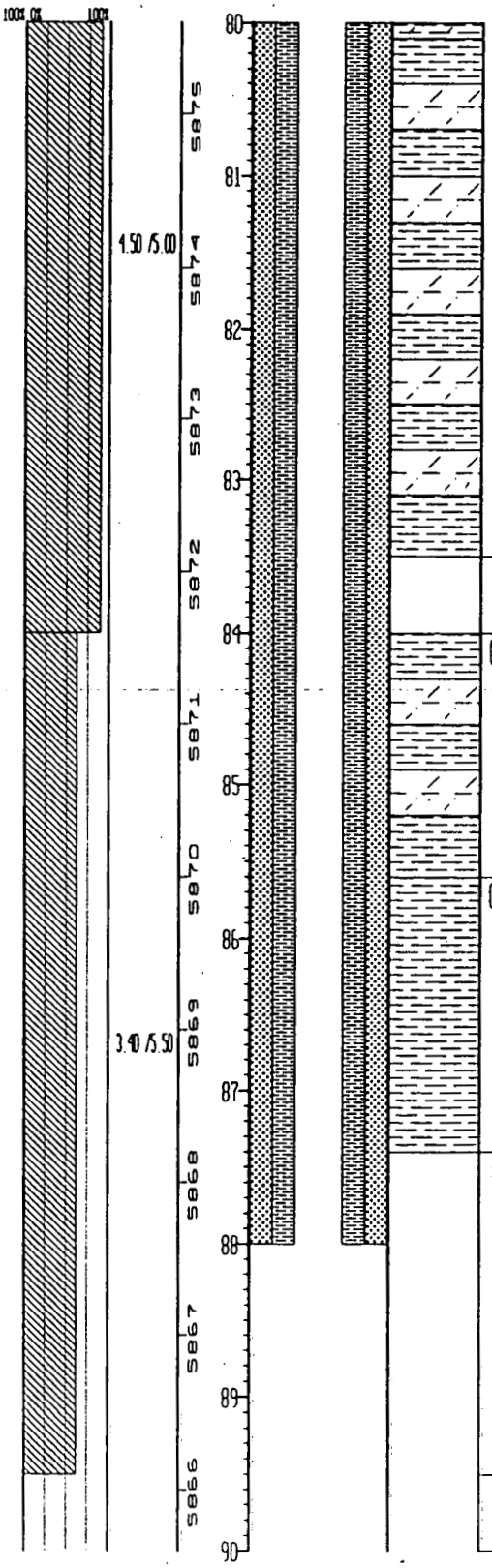
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 89.5	GROUND ELEVATION (FT): 5955.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER:
NORTH 749823	AREA: NE TRENCHES	CASING DIAMETER (IN): 2.0	GEOLOGIST: J.P. GIROD	23293
EAST 2086846	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 05/20/93	
REMARKS: MONITORING WELL				



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE	73.0-74.1 ft. Claystone with some silt and trace sand, olive black (5Y2/1) <5% porosity, slightly friable, no apparent bedding, 80 degree fractures with slickensides at 73.0-74.1', carbonaceous material 1% sand, 12% silt, 87% clay
	74.1-79.0 ft. No recovery for this interval
CLAYSTONE	79.0-79.5 ft Claystone as described above
CLAYSTONE	79.5-83.5 ft Interbedded Claystone and Clayey Siltstone Claystone with some silt and trace sand: olive black (5Y2/1)

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 89.5	GROUND ELEVATION (FT): 5955.60	PROJECT NUMBER: 002 BEDROCK	LOG OF BORING NUMBER
NORTH: 749823	AREA: NE TRENCHES	CASING DIAMETER (IN): 2.0	GEOLOGIST: J.P. GIROD	23293
EAST: 2086846	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 14	DATE DRILLED: 05/20/93	
REMARKS: MONITORING WELL				

TH DEPTH | CHEMICAL SAMP | GRADATIONAL S | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	<5% porosity, slightly friable, 0-20 degree bedding, cross-bedding, soft sediment deformation (convoluted bedding, load structures), micro-fractures throughout section, 10 degree fractures at 79.9', 80.0', 80.2', 81.0', 81.4', and 82.0', carbonaceous material, nodules of clay. Clayey Siltstone with trace sand: light olive gray (5Y5/2), <5% porosity, slightly friable, 0-20 degree bedding, cross-bedding, soft sediment deformation (convoluted bedding, load structures). Claystone: 1% sand, 14% silt, 85% clay. Clayey Siltstone: 2% sand, 70% silt, 28% clay.
	83.5-84.0 ft. No recovery for this interval.
CLAYSTONE	84.0-85.6 ft. Interbedded Claystone and Clayey Siltstone as described above.
CLAYSTONE	85.6-87.4 ft. Claystone with some silt and trace sand, olive black (5Y2/1) <5% porosity, slightly friable, faint horizontal bedding, carbonaceous material, weakly weathered, localized iron oxide staining, 80 degree fracture at 86.7' with slicken-sides (fractures possibly drilling induced). 2% sand, 10% silt, 88% clay.
	87.4-89.5 ft. No recovery for this interval
	Total depth at 89.5 ft

A4.2

OU-2 HISTORICAL AND OTHER INVESTIGATIONS BOREHOLE LITHOLOGY AND MONITORING WELL CONSTRUCTION LOGS

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 13	GROUND ELEVATION (FT): 5718.57	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748753	AREA: BUFFER EAST	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	2-86
EAST: 2093910	LOCATOR NUMBER: U8	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 04/22/86	
REMARKS: Hollow Stem Auger.				

SAMPLE NUMBER	SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		100%	0.5/0.5	5718	0			CL:	First 0.5 ft.: Large cobble 13 X 8 cm, sub-rounded and dark yellowish brown SILTY CLAY (10 YR 4/2). Some roots, trace sand.
			0.8/1	5717	1			CALICHE:	Changes rather abruptly to very pale orange (10 YR 8/2) Caliche. Moderate to low plasticity. Trace sand. Trace gravel.
				5716	2			NO SAMPLE:	
			0/5.9	5715	3	04/22/86			
				5714	4				
				5713	5				
				5712	6				
				5711	7				
			1.1/0.8	5710	8			CL:	Top of interval dark yellowish brown SILTY CLAY. Some roots to very pale orange (10 YR 8/2) to white (N 9) (caliche). Some sand and gravel. This interval is marked that it starts at 7.4 but looks suspiciously like soil from close to surface.
								SILTY CLAYSTONE:	Top of Bedrock Same as above.
			2.4/2.4	5709	9			SILTY CLAYSTONE:	White to yellowish gray (N 9) to (5 YR 8/1), med. to high plasticity. Very calcareous (caliche).
					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 13	GROUND ELEVATION (FT): 5718.57	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 748753	AREA: BUFFER EAST	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAW	2-86	
EAST: 2093910	LOCATOR NUMBER: U8	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 04/22/86		
REMARKS: Hollow Stem Auger.					

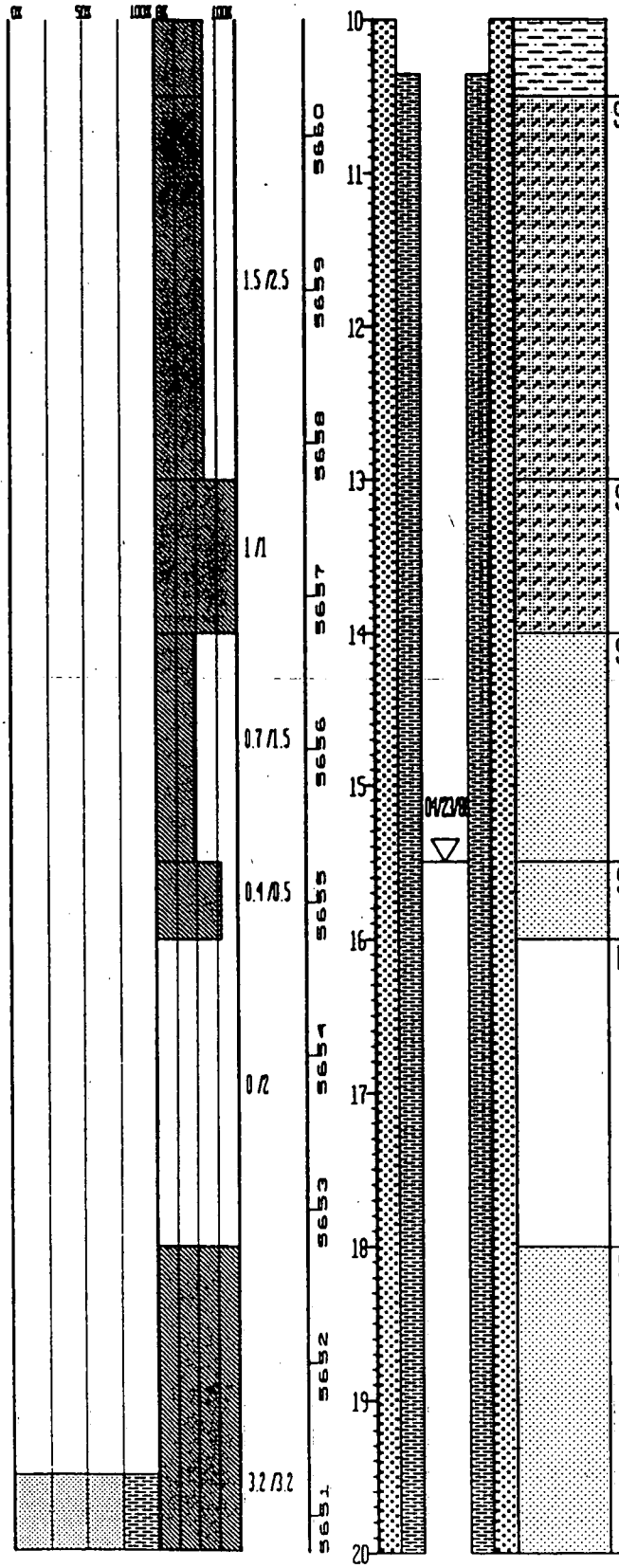
SAMPLE NUMBER	SAMPLE GRADI SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			2.7/2.4	5708	10				SILTY CLAYSTONE: Light olive gray (5 Y 6/1) to dark yellowish orange (10 YR 6/6). Moderate to high plasticity. Trace amounts of iron staining.
				5707	11				
				5706	12				
				5705	13				
				5704	14				
				5703	15				
				5702	16				
				5701	17				
				5700	18				
				5699	19				
					20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 28	GROUND ELEVATION (FT): 5670.76	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 750601	AREA: BUFFER EAST	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	3-86
EAST: 2093773	LOCATOR NUMBER: U10	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 04/23/86	

REMARKS: Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			3.8/1.5	5670	0			CL:	CLAY (top 6 in.), grayish brown (5 YR 3/2), mod. plast., some sand VFG-FG, some roots, trace of gravel. 0.7 ft.-1.8 ft.: same as above, moderate yellowish brown (10 YR 5/4), trace of calc. material. 1.8 ft.-2.7 ft.: same as above, very light gray (N 8), some calcite, calcareous, some iron staining as mottles. 2.7 ft.-3.8 ft.: same as above, brownish gray (5 YR 4/1), some roots, surficial grass at 2.7 ft., no iron staining, non-calcareous.
				5669	1				
			0.5/1.5		2				
				5668	3				
				5667	4				
				5666	5			CL:	CLAY, dark yellowish brown (10 YR 4/2) grading to moderate yellowish brown (10 YR 5/2) grading to light brownish gray (5 YR 6/1), est. mod. plast., calcareous, some VFG-FG sand, some roots in top 3 in. of interval, some iron staining as mottles.
			1.7/5	5665	6				
				5664	7				
				5663	8				
				5662	9			SANDY CLAYSTONE:	Top of Bedrock VFG, very light gray (N 8), mod-low plast., iron staining as mottles.
			1.5/2.5	5661	10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 28	GROUND ELEVATION (FT): 5670.76	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 750501	AREA: BUFFER EAST	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	3-86	
EAST: 2093773	LOCATOR NUMBER: U10	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 04/23/86		
REMARKS: Hollow Stem Auger.					



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SANDY SILTSTONE:	VFG, moderate brown (5 YR 4/4), non-apparent bedding, well weathered, poorly friable, increased VFG-FG sand fraction at bottom of interval.
SANDY SILTSTONE:	Same as above.
SANDSTONE:	Very pale orange (10 YR 8/2), non-apparent bedding, highly weathered, mod-highly friable, FG-MG, sub-angular-sub-rounded, well-mod sorted, slightly floury texture, some clay.
SANDSTONE:	Same as above; consolidated texture.
NO SAMPLE:	Sample removed by Ward Hurst, Aug. 13, 1986. Sample sent to Chen & Associates.
SANDSTONE:	Same as above: slab shows 50 degree fractures filled w/iron staining, 10 degree laminar bedding and distorted bedding, possible slump structures, some soft sed. deformation.

60209

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 28	GROUND ELEVATION (FT):	5670.76	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	751601	AREA: BUFFER EAST	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DAT	3-86
EAST:	2093773	LOCATOR NUMBER: U10	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	04/23/86	

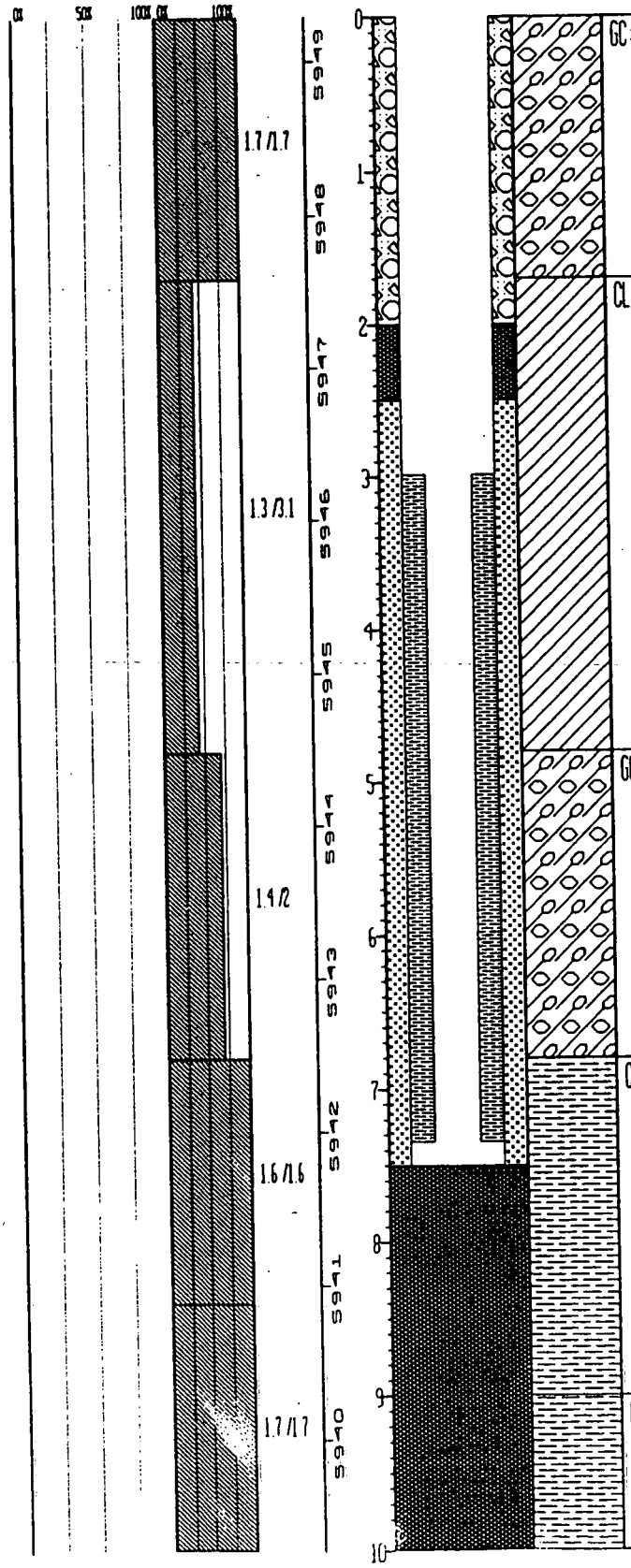
REMARKS: Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5650	20				
					21			SANDSTONE:	Very pale orange (10 YR 8/2), possible distorted bedding, highly weathered, mod. friability, VFG-FG, sub-angular-sub-rounded, mod-well sorted; some clay.
			2/1.8	5649	22				
				5648	23			CLAYSTONE:	Light brownish gray (5 YR 6/1), non-apparent bedding (floury texture), well weathered, mod. friable, abundant micro fractures, some iron staining along 70, 80, 10, 40 degree fractures, some carb. material.
			1.3/1	5647	24			CLAYSTONE:	Same as above.
			1.4/1.2	5646	25			CLAYSTONE:	Same as above: consolidated texture.
			1.3/1.3	5645	26			CLAYSTONE:	Same as above.
			1/0.7	5644	27			SILTY CLAYSTONE:	Pale yellowish brown (10YR 6/2), non-apparent bedding, well weathered, mod. poorly friable, some iron staining as mottles.
			1/0.79	5643	28				
				5642	29				
				5641	30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 16.8	GROUND ELEVATION (FT): 5949.28	PROJECT NUMBER: 667 11	LOG OF BORING NUMBER:
NORTH: 749963	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	33-86
EAST: 2085000	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/10/86	

REMARKS: Hollow Stem Auger.

SAMPLE NUMBER | SAMPLE GRADIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	Clayey Gravel, dominantly light gray (N7), clay matrix is light brownish gray (5YR 6/1), sub-angular to sub-rounded, poorly graded, max. size 6 cm, some roots, matrix is calcareous.
CL:	GRAVELLY CLAY, pale yellowish brown (10YR 6/2), low to moderate plasticity, some silt, calcareous, color grades to dusky brown (5YR 2/2), from approx. 4.6 ft. to approx. 6.0 ft
GC:	Clayey Gravel, dominantly light gray (N7), clay matrix is pale brown (5YR 5/2), sub-angular, poorly graded, max size approx. 2.5 cm.
CLAYSTONE:	Top of Bedrock Moderate yellowish brown (10YR 5/4), moderately low plasticity, trace of silt
CLAYSTONE:	Mottled yellowish brown (10YR 5/4) to light gray (N7), bedding not apparent, highly weathered, slightly friable, local iron staining.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 16.8	GROUND ELEVATION (FT): 5949.28	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749963	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	33-86
EAST: 2085000	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/10/86	

REMARKS: Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.7/1.7	5939	10			CLAYSTONE:	Same as above.
			1.9/1.9	5938	11			CLAYSTONE:	As above with abundant iron staining from approx. 11.8 ft. to 13.6 ft.
			1.8/1.8	5937	12			CLAYSTONE:	As above with slickensides at approx. 14.8 ft., attitude 45 degrees.
			1.3/1.3	5936	13			CLAYSTONE:	As above with some carbonaceous mineralization at approx 16.6 ft.
				5935	14				
				5934	15				
				5933	16				
				5932	17				
				5931	18				
				5930	19				
					20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT):	5910.44	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	750173	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2	GEOLOGIST:	DAT	34-86
EAST:	2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN):	4 3/4	DATE DRILLED:	08/28/86	

REMARKS: Hollow Stem Auger/NC Core.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

RECOVERY/INTERVAL	UNIFIED SOILS CLASSIFICATION	DESCRIPTION
1.3/1.3	CL:	CLAY, light gray (N7), mod. plasticity, some roots, trace of gravel (5.5 cm), trace of sand.
0/0.7	NO SAMPLE:	
0.3/0.3	CL:	Same as above, moderate yellowish brown (10 YR 5/4), some silt, trace of twigs, some iron staining as mottles, slightly calcareous.
1.5/1.7	CL:	Same as above, no roots or twigs, calcareous material esp. in bottom of interval.
	NO SAMPLE:	
0/3		
1.7/2.4	CL:	Same as above.
	NO SAMPLE:	

DATUM (FT): 5910, 5909, 5908, 5907, 5906, 5905, 5904, 5903, 5902, 5901

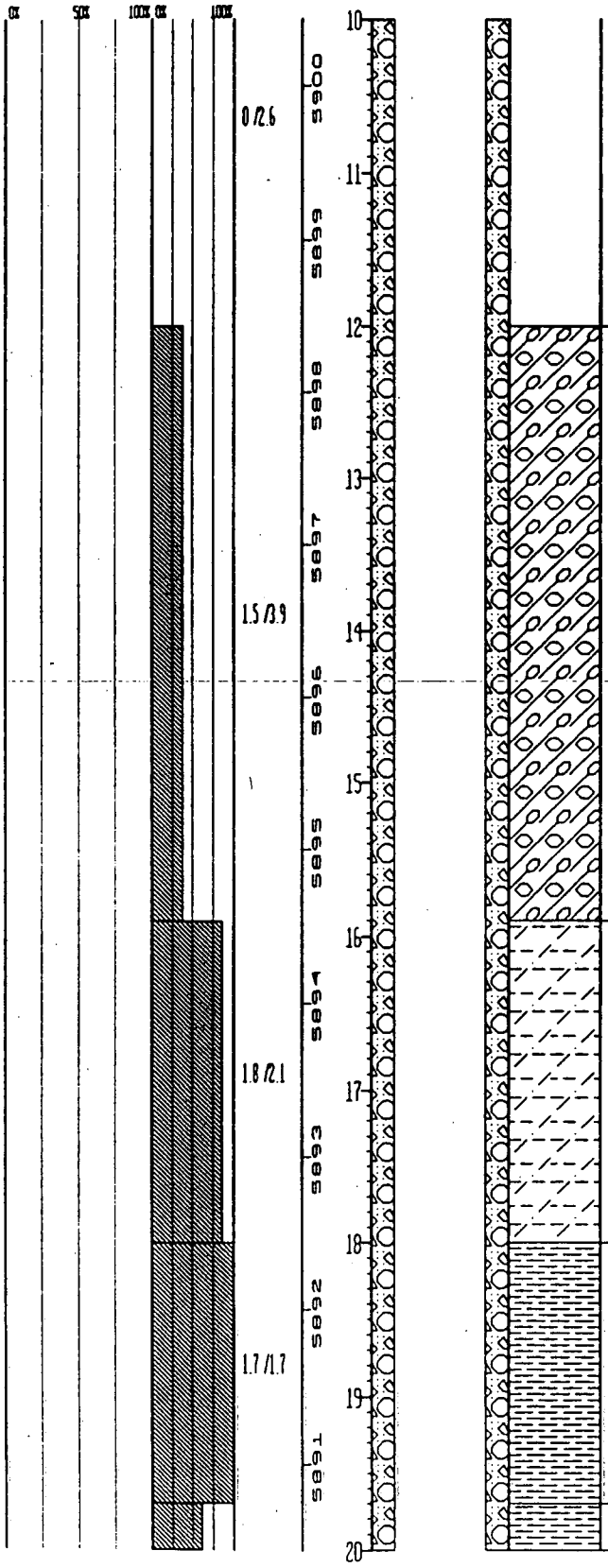
DEPTH (FT): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT):	5910.44	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	750173	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2	GEOLOGIST:	DAT	34-86
EAST:	2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN):	4 3/4	DATE DRILLED:	08/28/86	

REMARKS: Hollow Stem Auger/NC Core.

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER

SAMPLE GRAIN SIZE (0% – 50% – 100%) | PERCENT RECOVERY (0% – 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



GC:	Clayey Gravel, matrix color is pale yellowish brown (10 YR 6/2), angular - sub-angular, mod. graded, max. size = 5 cm., some sand, trace of iron staining.
SILTY CLAYSTONE:	Top of Bedrock Grayish orange (10 YR 7/4), laminar bedding @ 12 degrees, well weathered, mod. friable, some gravel in top 3 in. of interval, some iron staining as mottles.
CLAYSTONE:	Light gray (N7), horizontally laminated, well weathered, mod. friable, some iron staining, trace of silt.
CLAYSTONE:	Same as above: Some silt fractures at 70 degrees, trace of Mg

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT): 5910.44	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 750173	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2	GEOLOGIST: DAT	34-86
EAST: 2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN): 4 3/4	DATE DRILLED: 08/28/86	

REMARKS: Hollow Stem Auger/NC Core.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					20				staining.
			1.7/2.8	5890	21				
				5889	22				
				5888	23			CLAYSTONE:	Yellowish gray (5 Y 8/1), massive bedding, well weathered, mod. friability, iron staining as mottles, trace of Mg staining, some fractures at approx. 70 and 10 degrees.
			2/2	5887	24				
				5886	25			CLAYSTONE:	Same as above.
			2/2	5885	26				
				5884	27			CLAYSTONE:	Same as above.
			1.3/1.3	5883	28				
				5882	29			CLAYSTONE:	Same as above, light brownish gray (5 YR 4/1), some carb. material, esp. at bottom of interval, fracture @ 60 degrees
			1.8/2	5881	30				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT):	5910.44	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	750173	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2	GEOLOGIST:	DAT	34-86
EAST:	2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN):	4 3/4	DATE DRILLED:	08/28/86	

REMARKS: Hollow Stem Auger/NC Core.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

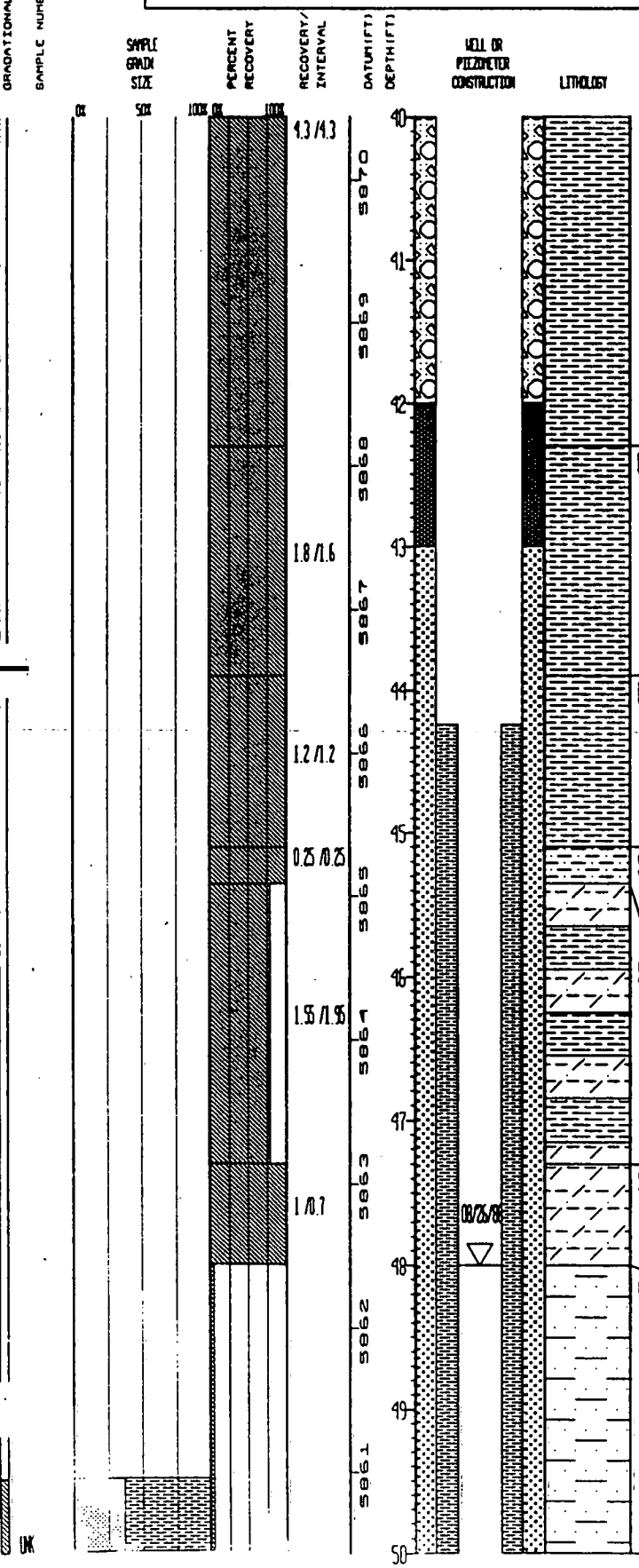
Recovery/Interval	Depth (ft)	Unified Soils Classification or Rock Type	Description
1.7/2	30–31	CLAYSTONE:	Same as above: fractures at 90 and 70 degrees.
1.2/1	32	CLAYSTONE:	Light gray (N7), massively bedded, highly weathered, mod. friable, some iron staining as mottles and along fracture planes, some silt, some carb. material, fractures at 90 to 70 degrees, trace of calc. material.
0.6/0.6	33	CLAYSTONE:	Same as above, Yellowish gray (5 Y 8/1), approx. 20 degree fractures, no calc
1.8/2	34–35	CLAYSTONE:	Same as above; Light gray (N7), trace of 70 to 90 degree fractures.
1.7/1.4	36	CLAYSTONE:	Same as above
1/1	37	CLAYSTONE:	Same as above; fractures @ 20, 40, 85, and 60 degrees.
0/0.2	38	NO SAMPLE:	
	38–40	CLAYSTONE:	Same as above; Light olive gray (5 Y 6/1) at top of interval to olive black (5 Y 2/1) at bottom of interval, trace of iron staining.

Depth scale: 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

Datum scale: 5880, 5879, 5878, 5877, 5876, 5875, 5874, 5873, 5872, 5871

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT): 5910.44	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 750173	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2	GEOLOGIST: DAT	34-86
EAST: 2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN): 4 3/4	DATE DRILLED: 08/28/86	

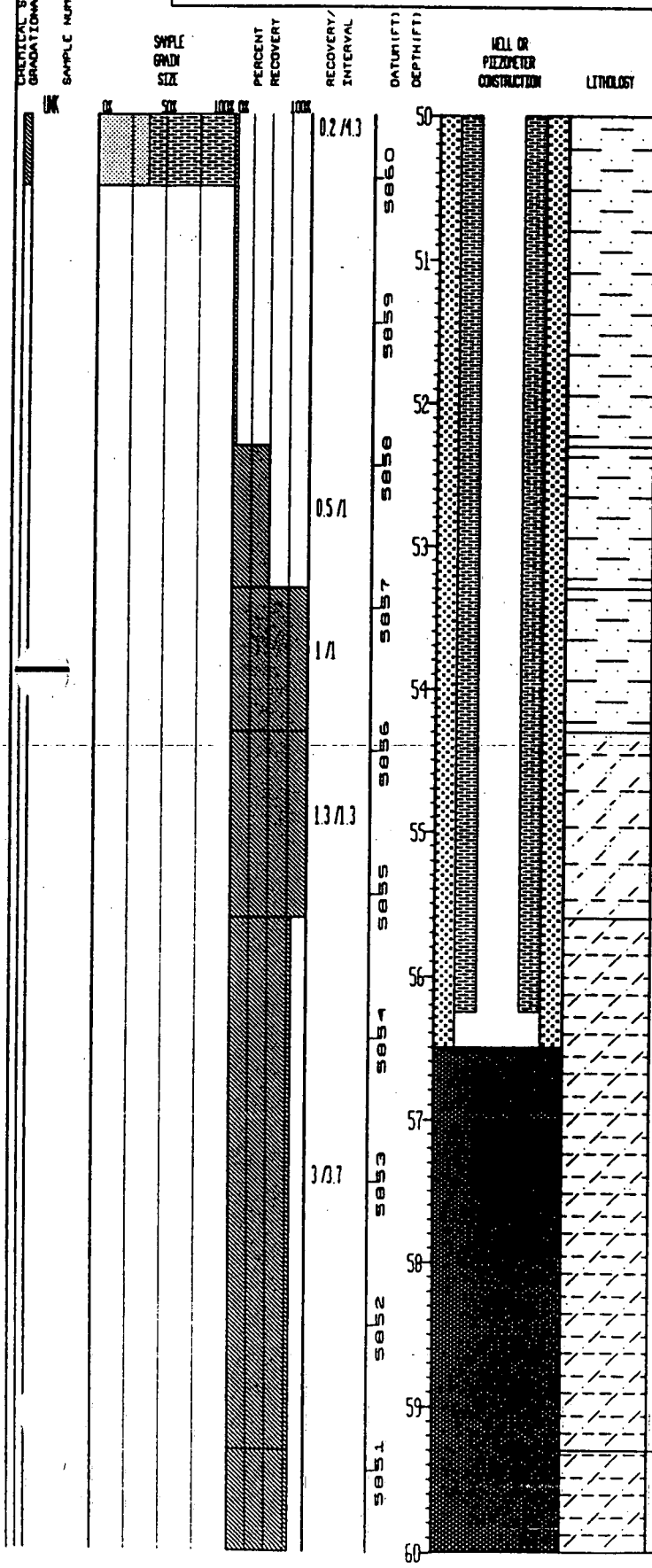
REMARKS: Hollow Stem Auger/NC Core.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Olive gray (5 Y 4/1), bedding non-apparent, well weathered, mod. friable, some carb. material, trace of coal (1-2 mm), trace of iron staining, some silt.
CLAYSTONE:	Same as above; Light olive gray (5 Y 6/1), bottom of interval contains abundant FG sand.
SANDY CLAYSTONE:	Light olive gray (5 Y 6/1), horizontal bedding approx. 1/2-1 cm, highly weathered, mod friable, sand is VFG, trace of iron staining.
SILTY CLAYSTONE:	Olive gray (5 Y 4/1), 1-2 cm bedding, interbedded with Claystone, Olive black (5 Y 2/1), 1-5 mm thick, well weathered, mod. friable, some coal seams, 1/4-1 cm thick ; parallel and cross-cutting bedding planes, iron staining associated with coal and as mottles.
SILTY CLAYSTONE:	Light olive gray (5 Y 4/1), non-apparent bedding, well weathered, moderately friable, some iron staining as mottles, trace of carb. material.
CLAYEY SANDSTONE:	Light gray (N7), thinly bedded @ approx. 10 degrees, well weathered, mod-highly friable, VFG-FG, trace of iron staining.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT):	5910.44	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	750173	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2	GEOLOGIST:	DAT	34-86
EAST:	2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN):	4 3/4	DATE DRILLED:	08/28/86	

REMARKS: Hollow Stem Auger/NC Core.

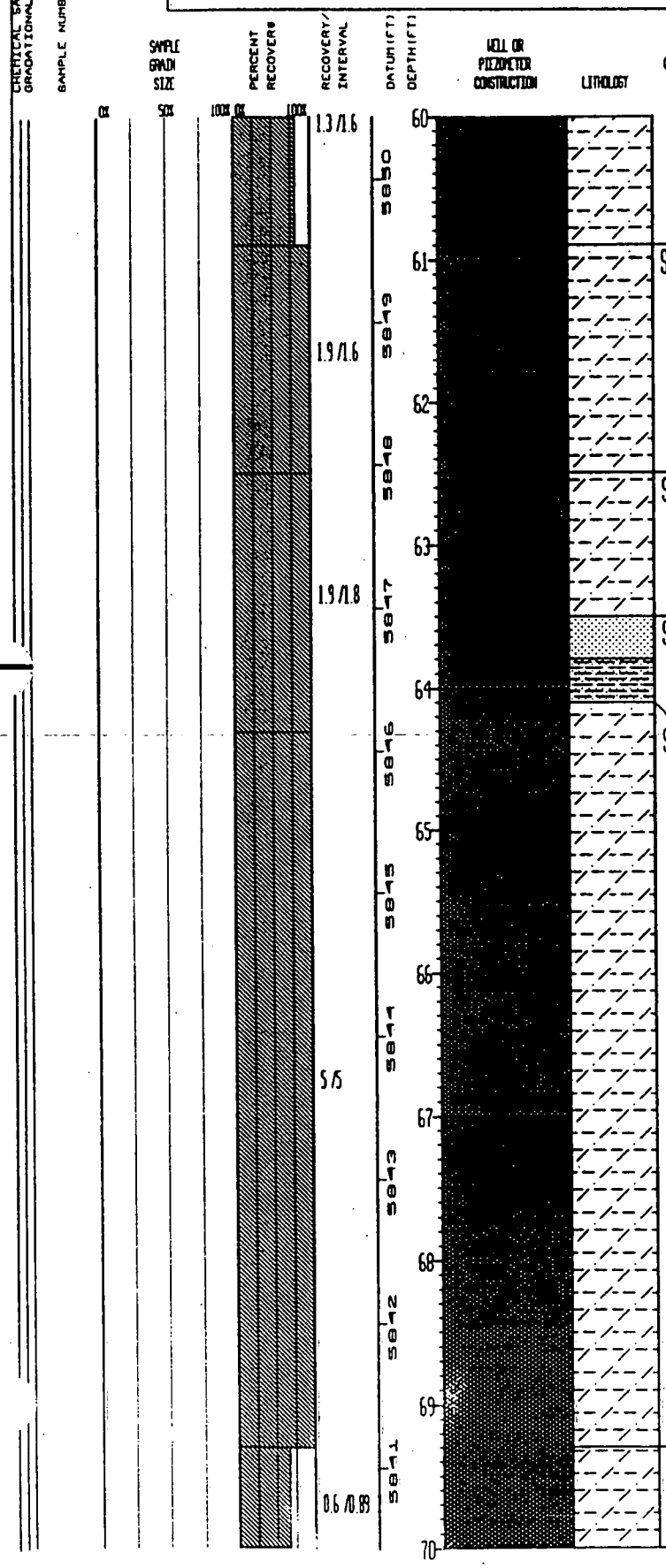


UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYEY SANDSTONE	Same as above.
CLAYEY SANDSTONE	Same as above: possible hummocky cross stratification.
CLAYEY SILTSTONE	Olive gray (5 Y 4/1), bedding non-apparent, highly weathered, mod friability, some VFG sand at bottom of interval, some iron staining as mottles, trace of carb. material.
SILTY CLAYSTONE	Olive gray (5 Y 4/1), non-apparent bedding, highly weathered, mod friability, iron staining as mottles, some VFG sand, at approx. 51 ft., VFG-FG sand body, approx. 3 in. thick, bedding @ 5-10° degrees.
SILTY CLAYSTONE	Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT):	5910.44	PROJECT NUMBER:	667.11
NORTH: 750173	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2	GEOLOGIST:	DAT
EAST: 2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN):	4 3/4	DATE DRILLED:	08/28/86

LOG OF BORING NUMBER: 34-86

REMARKS: Hollow Stem Auger/NC Core.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY CLAYSTONE:	Olive gray (5 Y 4/1), non-apparent bedding, highly weathered, mod. friable, trace of iron staining as mottles, trace of carb. material.
SILTY CLAYSTONE:	Same as above.
SANDSTONE:	Approx. 6 in. of VFG Sandstone, light olive gray (5 Y 6/1), beds are 1-2 cm, interbedded with Claystone, olive gray (5 Y 4/1); approx. 3 mm. thick.
SILTY CLAYSTONE:	Same as above; increased silt fraction, (reference interval, 60.9 ft. to 62.5 ft.).
SILTY CLAYSTONE:	Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT): 5910.44	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 750173	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2	GEOLOGIST: DAT	34-86
EAST: 2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN): 4 3/4	DATE DRILLED: 08/28/86	

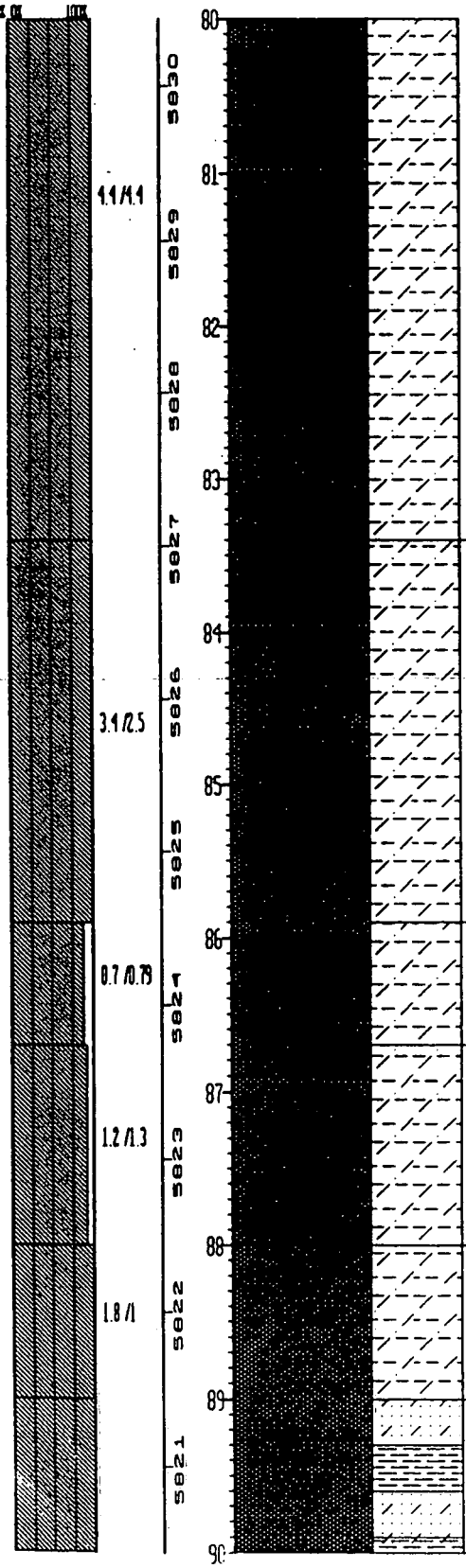
REMARKS: Hollow Stem Auger/NC Core.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.6 /0.8	5840	70				SILTY CLAYSTONE: Light olive gray (5 Y 6/1), massive bedding, highly weathered, mod. friability, trace of iron staining.
			3.1 /3.3	5839	71				SILTY CLAYSTONE: Same as above; Olive black (5 Y 2/1), trace of carb. material.
				5838	72				
				5837	73				
					74				
			0.7 /1	5836	75				SILTY CLAYSTONE: Same as above; Olive gray (5 Y 4/1), trace of iron nodules.
			3.8 /3.2	5835	76				SILTY CLAYSTONE: Same as above; Top 1 ft of interval; brownish gray (5 YR 4/1), no iron staining or nodules. Bottom 2 ft. of interval; Same as above- yellowish gray (5 Y 8/1), increased silt fraction, some fine grained sand, especially in lenses.
				5834	77				
				5833	78				
			0.7 /0.5	5832	79				SILTY CLAYSTONE: Same as above; Olive gray (5 Y 4/1), decreased silt fraction, floury texture.
				5831	80				SILTY CLAYSTONE: Same as above; bottom 2 ft of interval has consolidated texture.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT):	5910.44	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	750173	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2	GEOLOGIST:	DAT	34-86	
EAST:	2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN):	4 3/4	DATE DRILLED:	08/28/86		

REMARKS: Hollow Stem AUger/NC Core.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



SILTY CLAYSTONE: Olive black (5 Y 2/1), non-apparent bedding, well weathered, mod. friability, some carb. material, some iron staining as mottles, some micro-fractured.

SILTY CLAYSTONE: Same as above; floury texture, no iron staining, micro-fractures non-apparent.

SILTY CLAYSTONE: Same as above; Olive gray (5 Y 4/1), increased silt fraction, consolidated texture, some VFG sand.

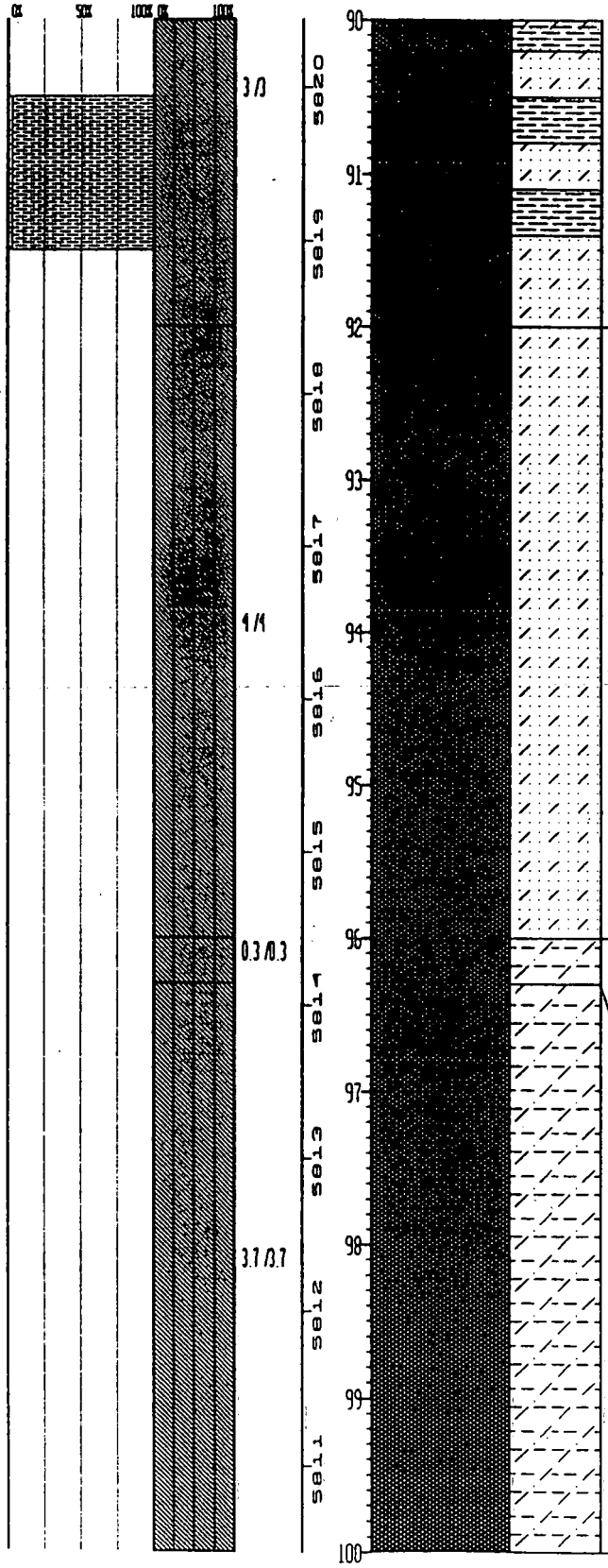
SILTY CLAYSTONE: Same as above; Yellowish gray (5 Y 8/1).

SILTY SANDSTONE: VFG-FG, very light gray (N8), bedding from slab shows extensive vertical burrowing (2 1/2 in. - 1/2 in. long), bioturbated, thinly laminated, some cross-stratification, general bedding angle of 20 degrees, some horizontal clay interbeds (1/2 - 1 cm thick), well-mod weathered, mod-poor friability, sub-angular to sub-rounded, mod

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 100	GROUND ELEVATION (FT): 5910.44	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	750173	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2	GEOLOGIST: DAT	34-86
EAST:	2086192	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN): 4 3/4	DATE DRILLED: 08/28/86	

REMARKS: Hollow Stem Auger/NC Core.

SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



to well sorted, trace of carb. material, some clay.

SILTY SANDSTONE: VFG-FG, very light gray (N8), bedding is non-apparent (coating on core), well-mod. weathered, mod-poorly friable, sub-angular to sub-rounded, mod-well sorted, some carb material, some clay.

SILTY CLAYSTONE: Dark greenish gray (5 GY 4/1), non-apparent bedding, highly weathered, mod. friable, some carb. material, trace iron staining as mottles and nodules.

SILTY CLAYSTONE: Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 18	GROUND ELEVATION (FT): 5909.2	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 750179	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAW	35-86
EAST: 2086218	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 08/19/86	
REMARKS: Hollow Stem Auger.				

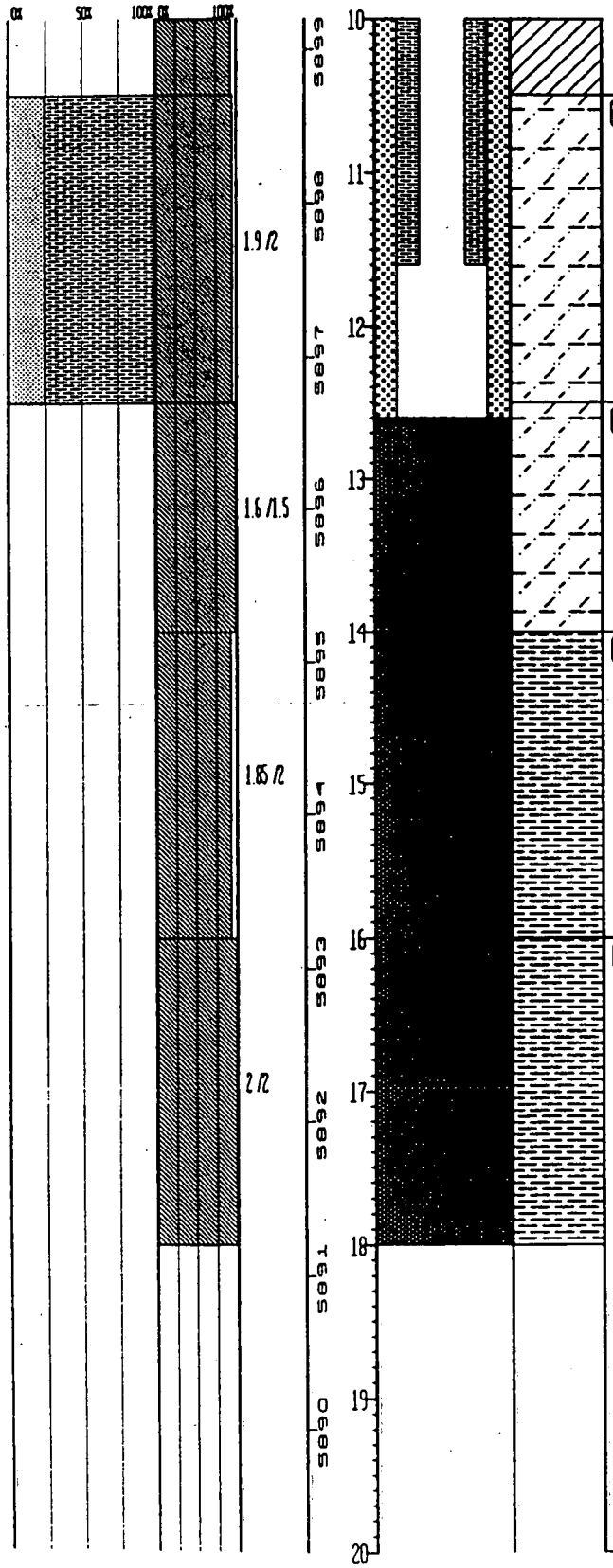
GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.5 /2	5908	1			CL:	SILTY GRAVELLY CLAY. Very lt. gray (N8) grading to mod. yellowish brown (10 YR 5/4). Est. plast. mod. to low. Gravel angular to sub-rounded, mod. well graded. Granules to 2.5 cm. Some sand; VFG. Root material throughout interval.
				0.7 /0.75	5907	2			CL:	Same as above.
				0 /1	5906	3			NO SAMPLE:	
				0.8 /0.6	5905	4	03/17/87		CL:	SILTY GRAVELLY CLAY. Pale yellowish brown (10 YR 6/2), Est. plasticity low to mod. Gravel angular to sub-rounded, mod to well graded. Some sand, VFG to coarse.
				1.6 /1.4	5904	5			CL:	Same as above. More VFG sand in matrix.
				1.75 /2.75	5903	6	09/03/86		CL:	SILTY GRAVELLY CLAY. Dk. yellowish brown (10 YR 4/2) to grayish brown (5 YR 3/2). Gravel mod. to well graded. Max size 3.0 cm. Sub-angular to sub-rounded. Some sand VFG to granules, trace root material. Very slightly calcareous matrix.
				1.85 /2	5902	7				
					5901	8				
					5900	9	09/03/86		CL:	SANDY SILTY CLAY, Brownish gray (5 YR 4/1). Est. plast. low to mod, Sand VFG to granules, mostly VFG; Some gravel; max size measurable 2 cm. Matrix slightly calcareous.
						10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 18	GROUND ELEVATION (FT): 5909.2	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 750179	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	35-86
EAST: 2086218	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 08/19/86	
REMARKS: Hollow Stem Auger.				

GRADATIONAL / DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



CLAYEY SILTSTONE: Top of Bedrock
Very Lt. gray (N8) to dark yellowish orange (10 YR 6/6). Bedding not evident. Highly weathered; mod. to slightly friable, CaCO3 mineralization in some small discontinuous fractures. Trace root material.

CLAYEY SILTSTONE: Same as above. Grading to Claystone, dk. yellowish orange (10 YR 6/6). Highly weathered. Slightly to mod. friable, CaCO3 in fractures. Some in matrix, bedding not evident. Some iron staining. Trace silt.

CLAYSTONE: Very pale orange (10 YR 8/2) to dk. yellowish orange (10 YR 6/6). Highly weathered, slightly friable. CaCO3 in fractures and some in matrix. Iron oxide nodule (2.5 cm) present. Some iron staining. Trace carb. material.

CLAYSTONE: Lt. olive gray (5 Y 6/1). Mod. weathered, bedding not evident. Slightly friable. Some iron staining in fractures. Trace CaCO3, trace carb. material.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 10.2	GROUND ELEVATION (FT):	5881.94	PROJECT NUMBER:	667.11
NORTH: 750397	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DAT
EAST: 2086819	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN):	7.25	DATE DRILLED:	08/25/86
REMARKS: Hollow Stem Auger.					

LOG OF BORING NUMBER: 36-86

GRADATIONAL S' DEPTH

SAMPLE NUMBER

SAMPLE GRAIN SIZE 0% 50% 100%

PERCENT RECOVERY 0% 100%

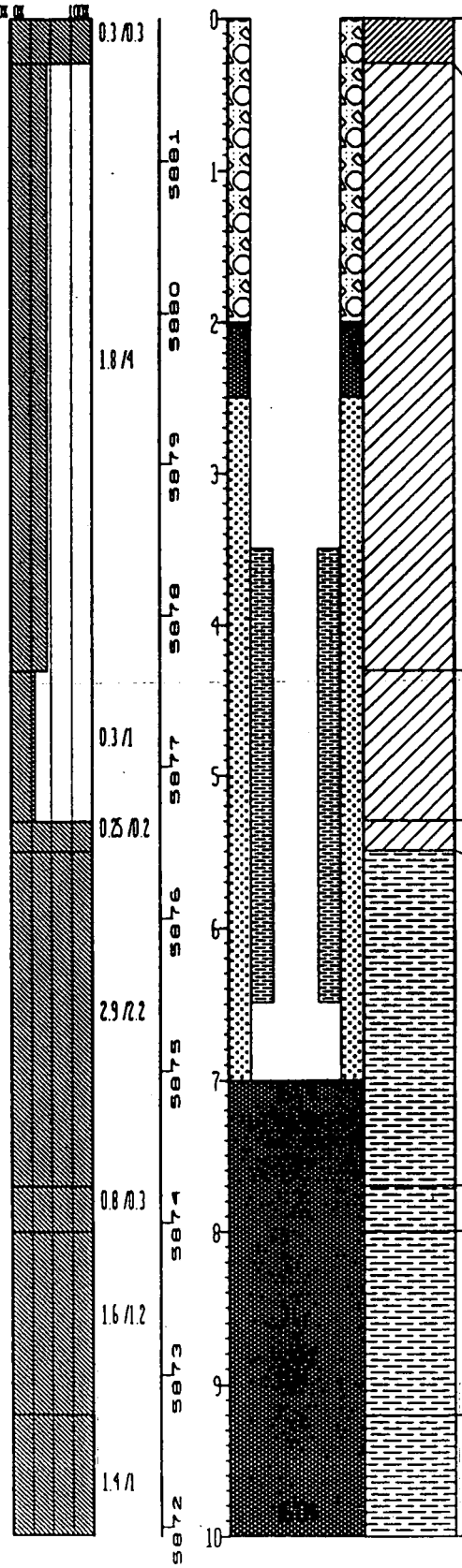
RECOVERY/INTERVAL: 0.3/0.3; 1.8/4; 0.3/1; 0.25/0.2; 2.9/2.2; 0.8/0.3; 1.6/1.2; 1.4/1

DATUM (FT): 5881, 5880, 5879, 5878, 5877, 5876, 5875, 5874, 5873, 5872

DEPTH (FT): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

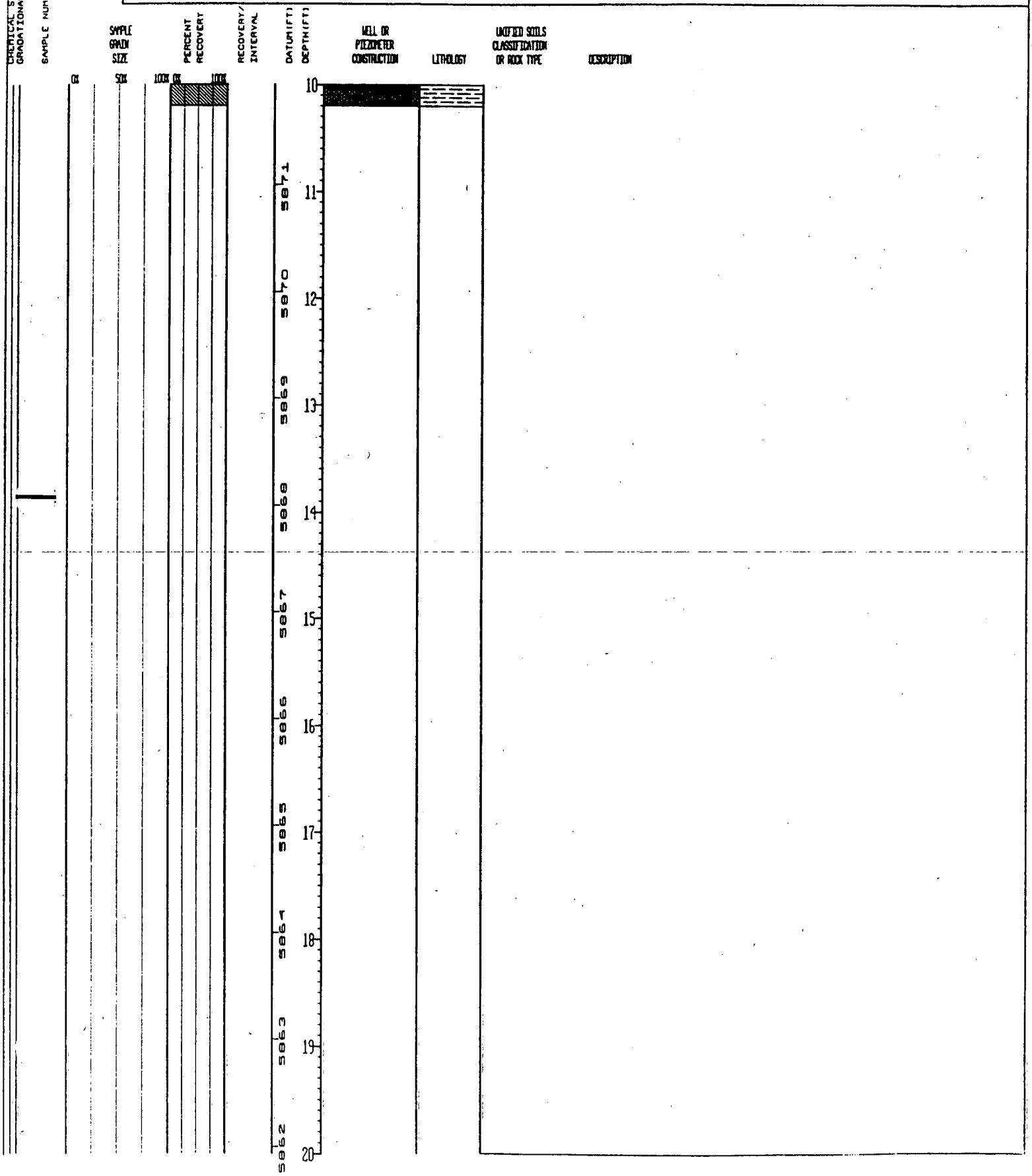
WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CH:	Sandy Clay, Pale yellowish brown (10 YR 6/2), mod-high plast., some roots, trace of gravel, slightly calc.
CL:	SANDY CLAY, multicolored- grayish brown (5 YR 3/2), moderate yellowish brown (10 YR 5/4), light gray (N8), mod. plast., some calc. material, trace of gravel increasing to some gravel at bottom of interval, bottom 2 in. with abundant iron staining and concretions, some iron staining in top part of interval.
CL:	Same as above; floury texture.
CL:	Same as above.
CLAYSTONE:	Top of Bedrock Light olive gray (5 Y 8/1), est. mod. plast., some calc. material, some iron staining as mottles, trace of sand.
CLAYSTONE:	Same as above, slightly calcitic.
CLAYSTONE:	Same as above; yellowish gray (5 Y 8/1), some silt, some VFG sand, floury texture, increased iron staining.
CLAYSTONE:	Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 10.2	GROUND ELEVATION (FT): 5881.94	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 750397	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	36-86
EAST: 2086819	LOCATOR NUMBER: N10	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 08/25/86	
REMARKS: Hollow Stem Auger				



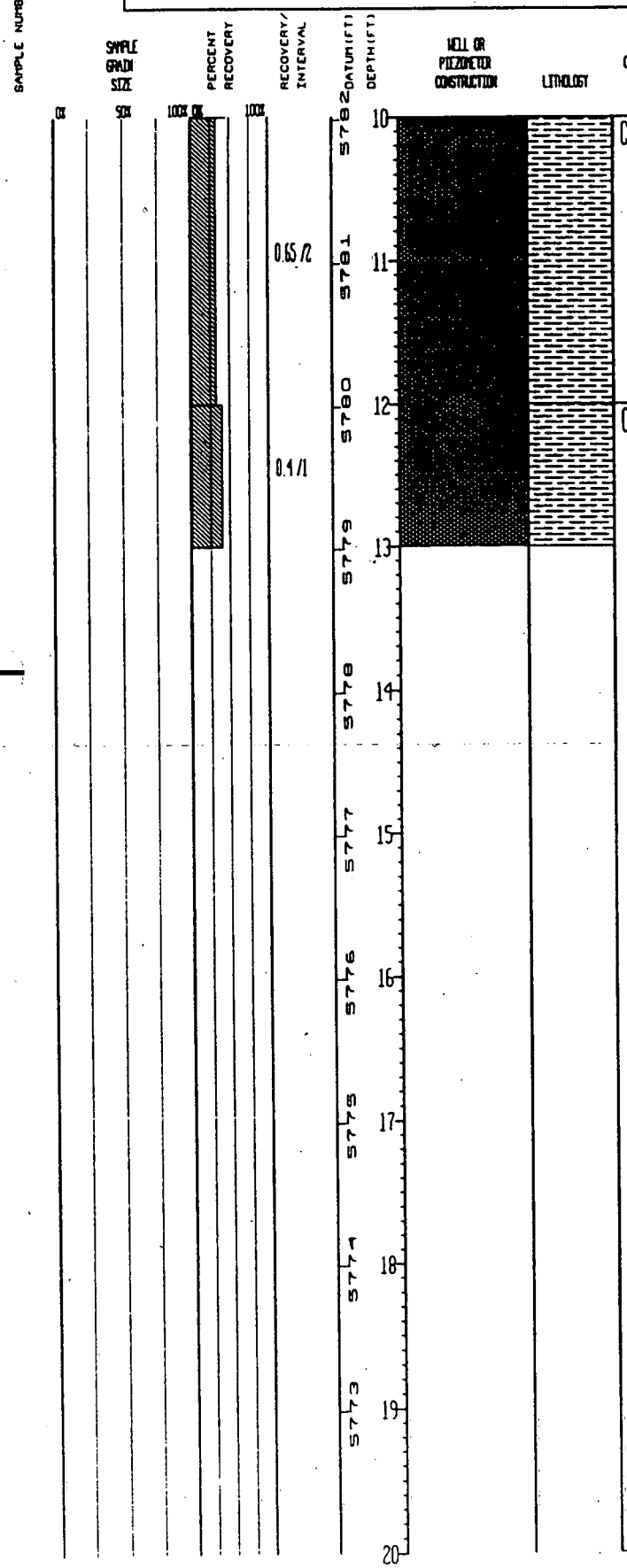
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 13	GROUND ELEVATION (FT): 5792.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 751563	AREA: BUFFER EAST	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	37-86
EAST: 2088862	LOCATOR NUMBER: P11	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/22/86	

REMARKS: Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRADI SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		100%	1.65 /2	5792	0			CH:	Silty Clay, pale yellowish brown (10 YR 6/2), Est. plast. mod. to high, some roots and grass, trace gravel, granule size.
		100%	1.75 /1	5791	1			CL:	Same as above, with color change to dusky yellowish brown (10 YR 2/2). Trace roots.
			0.2 /1	5790	2			CH:	Silty Clay, olive gray (5 Y 4/1). Est. plast., mod.-high, some sand VFG to FG.
			2.35 /2	5789	3			CL:	SANDY CLAY, olive gray (5 Y 4/1) and dark yellowish orange (10 YR 6/6). Mottling. Est. plast. mod., sand VFG to CG, Trace gravel to 3.5cm, trace CaCO3.
			0.8 /1.5	5788	4			CL:	Same as above, lg. piece of gravel 6.5cm.
			0.8 /0.5	5787	5			CLAYSTONE:	Top of Bedrock. Same as above, some CaCO3.
			0.9 /2	5786	6			CLAYSTONE:	Same as above, some CaCO3.
				5785	7			CLAYSTONE:	Same as above, no gravel.
				5784	8				
				5783	9				
					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 13	GROUND ELEVATION (FT): 5792.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 751563	AREA: BUFFER EAST	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	37-86
EAST: 2088862	LOCATOR NUMBER: P11	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/22/86	

REMARKS: Hollow Stem Auger.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Yellowish gray (5 Y 8/1), Est. plast. mod., trace $CaCO_3$.
CLAYSTONE:	Same as above with color change to light olive gray (5 Y 6/1). Trace carb. material. Note: No water encountered during drilling.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 37	GROUND ELEVATION (FT): 5904.91	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 751291	AREA: BUFFER EAST	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	39-86	
EAST: 2090696	LOCATOR NUMBER: R11	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 08/18/86		

REMARKS: Hollow Stem Auger. Cave from TD to 35.80'.

CHEMICAL SAMP.	GRADATIONAL G.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				100%	0.5 /0.5	5904	0			SC:	Gravelly Clayey Sand, dark yellowish brown (10 YR 4/2), sub-angular-sub-rounded, mod. graded, max. gravel size= 3.5cm., some roots.
					0.8 /14.5	5903, 5902, 5901	1, 2, 3, 4			GC:	Calcareous Gravel, bottom is moderate yellowish brown (10 YR 5/4), top is pale yellowish brown (10 YR 6/2), angular-sub-angular, max. size = 7cm., mod. graded.
					0.6 /12.5	5900, 5899, 5898	5, 6, 7			GC:	Calcareous Sandy Gravel, matrix color is light brown (5 YR 5/6), angular to sub-angular, mod. grading, max. size = 6cm., sand is mg-vcg, some clay.
					0.6 /12.5	5897, 5896, 5895	8, 9, 10			GC:	Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 37	GROUND ELEVATION (FT):	5904.91	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	751291	AREA: BUFFER EAST	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DAT	39-86
EAST:	2090696	LOCATOR NUMBER: R11	BOREHOLE DIAMETER (IN):	7.25	DATE DRILLED:	08/18/86	

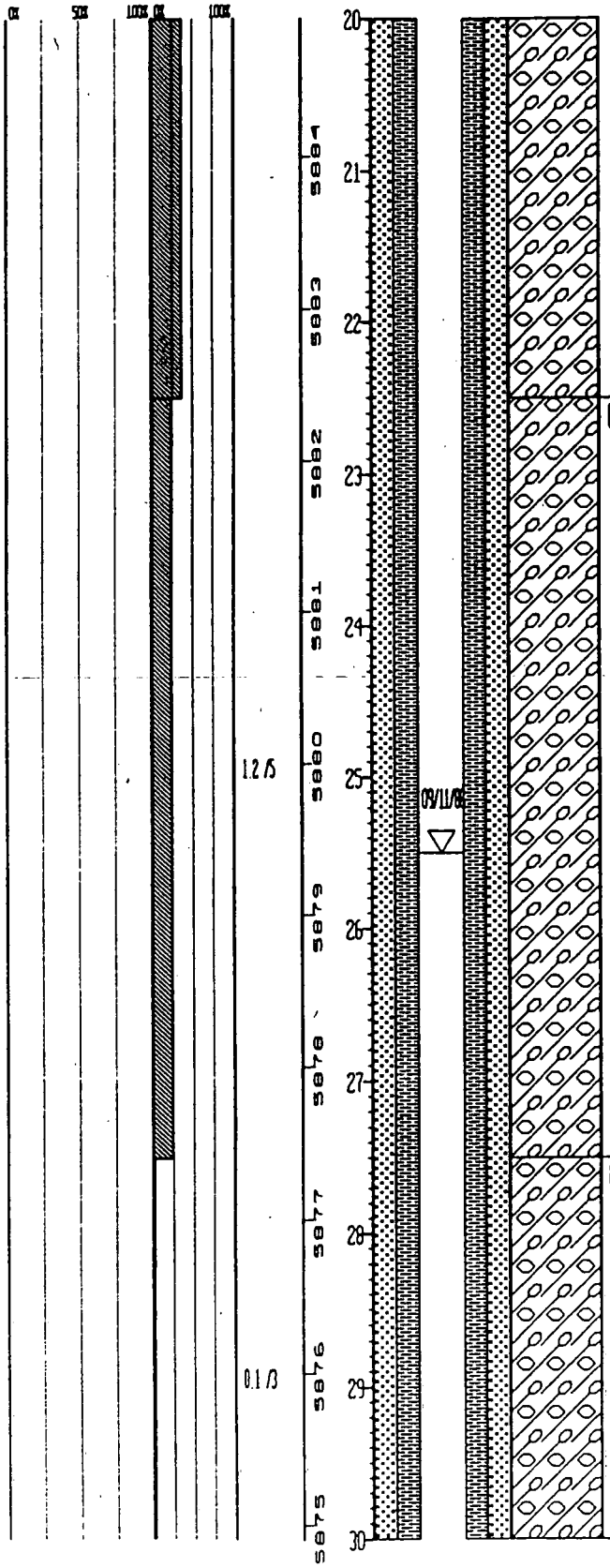
REMARKS: Hollow Stem Auger. Cave from TD to 35.80'.

CHEMICAL DATA GRADATIONAL S.	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0.7/2	5894	10–11			GC:	Calcareous Sandy Gravel, matrix color is light brown (5 Y 5/6), angular-sub-angular, mod. grading, max. size = 4 cm., sand is MG to VCG.
				0.3/0.5	5893	11–12			SC:	Clayey Sand, very pale orange (10 YR 8/2), angular to sub-angular, mod.-poorly graded, trace of biotite (?).
	DAT-10			1.1/4.3	5892, 5891, 5890, 5889, 5888	12–17			GC:	SANDY GRAVEL, matrix color is light brown (5 Y 5/6), angular-sub-angular, mod. to well graded, max size= 6 cm., some clay esp. @ bottom of interval, slightly calc.
				2.1/5.7	5887, 5886, 5885	17–20			GC:	Same as above; trace of clay, v. slightly calc.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 37	GROUND ELEVATION (FT):	5904.91	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	751291	AREA: BUFFER EAST	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DAT	39-86
EAST:	2090696	LOCATOR NUMBER: R11	BOREHOLE DIAMETER (IN):	7.25	DATE DRILLED:	08/18/86	

REMARKS: Hollow Stem Auger. Cave from TD to 35.80'.

SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	SANDY GRAVEL, matrix color is light brown (5 Y 5/6), angular-sub-angular, mod-well graded, max. size= 6 cm., trace of clay.
GC:	Clayey Gravel, very pale orange (10 YR 8/2), angular-sub-angular, mod. grading, max. size= 4 cm..

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 37	GROUND ELEVATION (FT): 5904.91	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 751291	AREA: BUFFER EAST	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	39-86
EAST: 2090696	LOCATOR NUMBER: R11	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 08/18/86	

REMARKS: Hollow Stem Auger. Cave from TD to 35.80'.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					30			GC:	Same as above.
			0.5/0.5	5874	31			SILTY CLAYSTONE:	Top of Bedrock Lt. gray (N8) and grayish-orange (10 YR 7/4), mod. to high plast., some very fine (VF6) sand.
			1.1/1.5	5873	32			SILTY CLAYSTONE:	Same as above; trace of carb. material.
			1.9/2.5	5872	33			SILTY CLAYSTONE:	Brownish gray (5 YR 4/1). Mod-high plast., abundant carb. material; some iron staining, with carb. Bottom of interval: same as above, olive black (5 Y 2/1).
				5871	34				
				5870	35			SILTY CLAYSTONE:	Same as above, olive gray (5 Y 4/1), trace carb. material, trace of iron staining along fractures.
			2.7/2	5869	36				
				5868	37				
				5867	38				
				5866	39				
				5865	40				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT):	5941.23	PROJECT NUMBER:	667.11
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB
EAST: 2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	5 5/8	DATE DRILLED:	09/23/86

REMARKS: Casing driver/NC Core.

LOG OF BORING NUMBER: 40-86

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%							
				5941	0				NO SAMPLE:
				5940	1				
			0/5	5939	2				
				5938	3				
				5937	4				
				5936	5				NO SAMPLE:
				5935	6				
			0/5	5934	7				
				5933	8				
				5932	9				
					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT): 5941.23	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	40-86
EAST: 2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 5 5/8	DATE DRILLED: 09/23/86	

REMARKS: Casing driver/NC Core.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0%	50% 100%	0% 100%	0/10	5931 5930 5929 5928 5927 5926 5925 5924 5923 5922	10 11 12 13 14 15 16 17 18 19 20				NO SAMPLE

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT): 5941.23	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	40-86
EAST: 2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 5 5/8	DATE DRILLED: 09/23/86	

REMARKS: Casing driver/NC Core.

SAMPLE NUMB.	SAMPLE GRADI SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%							
				5921	20				NO SAMPLE
				5920	21				
				5919	22				
				5918	23				
				5917	24				
			0 /10	5916	25				
				5915	26				
				5914	27				
				5913	28				
				5912	29				
					30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT): 5941.23	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	40-86	
EAST: 2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 5 5/8	DATE DRILLED: 09/23/86		
REMARKS: Casing driver/NC Core.					

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5911	30				NO SAMPLE:
				5910	31				
				5909	32				
				5908	33				
				5907	34				
			0 /10	5906	35				
				5905	36				
				5904	37				
				5903	38				
				5902	39				
					40				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 124 8	GROUND ELEVATION (FT)	5941 23	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH	749615	AREA EAST TRENCHES	CASING DIAMETER (IN)	2 ID	GEOLOGIST	DCB	40-86
EAST	2088502	LOCATOR NUMBER P9	BOREHOLE DIAMETER (IN)	5 5/8	DATE DRILLED	09/23/86	

REMARKS Casing driver/NC Core

GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5901	40				NO SAMPLE
					5900	41				
					5899	42				
					5898	43				
					5897	44				
				0 /10	5896	45				NO SAMPLE Top of Bedrock
					5895	46				
					5894	47				
					5893	48				
					5892	49				
						50				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 124.8	GROUND ELEVATION (FT)	5941.23	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	749615	AREA EAST TRENCHES	CASING DIAMETER (IN)	2.10	GEOLOGIST	DCB	40-86
EAST	2088502	LOCATOR NUMBER P9	BOREHOLE DIAMETER (IN)	5 5/8	DATE DRILLED	09/23/86	

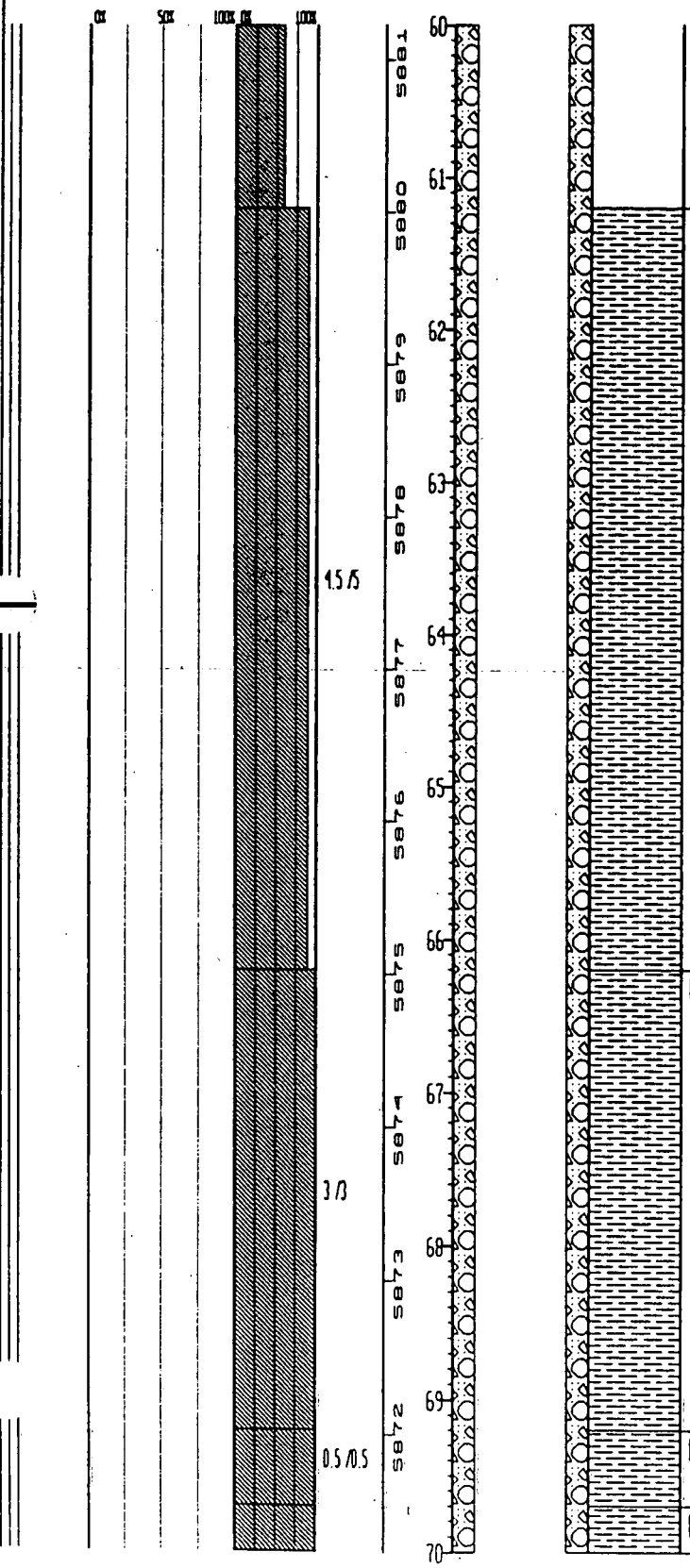
REMARKS Casing driver/NQ Core

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%		5891	50			NO SAMPLE	These files (0 - 58.3 ft), were not found by ASI
				5890	51				
				5889	52				
				5888	53				
			0/83	5887	54				
				5886	55				
				5885	56				
				5884	57				
				5883	58			CLAYSTONE	Light gray (N7), bedding not apparent, slightly friable, moderate silt component, local iron staining. Slickensides at 61 ft, 40 degrees attitude
			17/29	5882	59				
					60				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT):	5941.23	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749615	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB	40-86
EAST:	2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	5 5/8	DATE DRILLED:	09/23/86	

REMARKS: Casing driver/NC Core.

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE NUMBER
SAMPLE GRAIN SIZE 0% 50% 100%
PERCENT RECOVERY 0% 100%
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Same as above, with slickensides at 61.5 ft., attitude approx. 55 degrees. Small iron nodules (< 5 mm. diameter) occur at 63.5 to 63.9 ft.. Slickensides at approx. 64 ft., curvilinear surface.
CLAYSTONE:	Same as above, with color changes to medium gray (N5) with some carbonaceous mineralization occurring locally. Slickensides occur at approx. 66.3 ft. and 68.2 ft. Color grades to medium light gray at approx. 68.2 ft.
CLAYSTONE:	Same as above, with decrease in amount of carb. mineralization below approx. 69 ft.
CLAYSTONE:	Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT):	5941.23	PROJECT NUMBER:	667.11
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB
EAST: 2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	5 5/8	DATE DRILLED:	09/23/86

REMARKS: Casing driver/NC Core.

LOG OF BORING NUMBER: 40-86

SAMPLE NUMBER | SAMPLE GRADI SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

0% 50% 100% 0% 100%

1.5/1.5

2.5/2.5

2.5/2.5

3.3/3.3

GCI-89

5871 5870 5869 5868 5867 5866 5865 5864 5863 5862

70 71 72 73 74 75 76 77 78 79 80

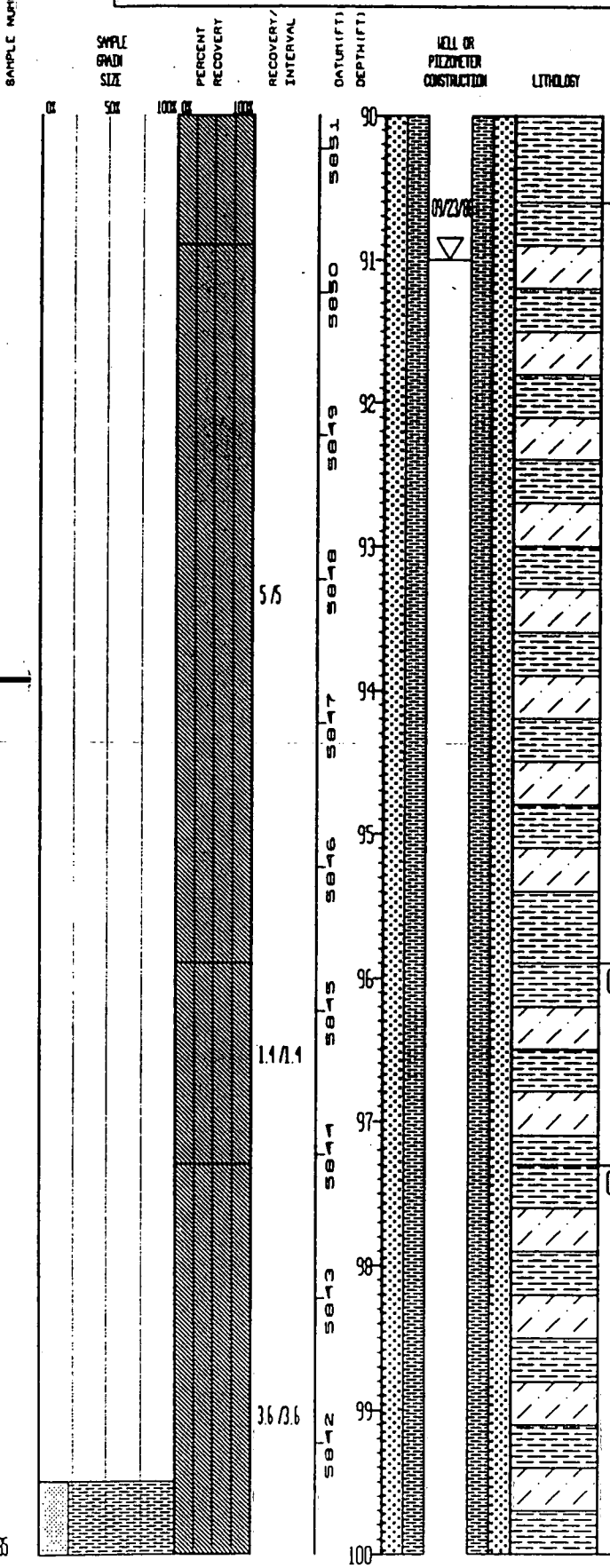
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Same as above.
CLAYSTONE:	Same as above.
CLAYSTONE:	Same as above, Bedding may be horizontal based on appearance of core breaks and slab at 79.0 ft.
CLAYSTONE:	Same as above, Bedding appears to be 1cm. in thickness, bedding features are irregular surfaces that may be erosional surfaces.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT): 5941.23	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	40-86
EAST: 2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 5 5/8	DATE DRILLED: 09/23/86	

REMARKS: Casing driver/NC Core.

SAMPLE GRADI SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		1.7/1.7	5861	80				
			5860	81			CLAYSTONE:	Same as above.
		2.5/2.5	5859	82				
			5858	83				
			5857	84			CLAYSTONE:	Medium dark gray (N4), bedding not apparent, weathered, slightly friable, local carb. mineralization, slight to moderate silt component.
		2.5/2.5	5856	85				
			5855	86			CLAYSTONE:	Same as above, color grades to very light gray (N8) at approx. 87 ft. and carb. mineralization is absent, increase in silt fraction.
		1.8/1.8	5854	87				
			5853	88			CLAYSTONE:	Same as above.
		2.9/2.9	5852	89				
				90				

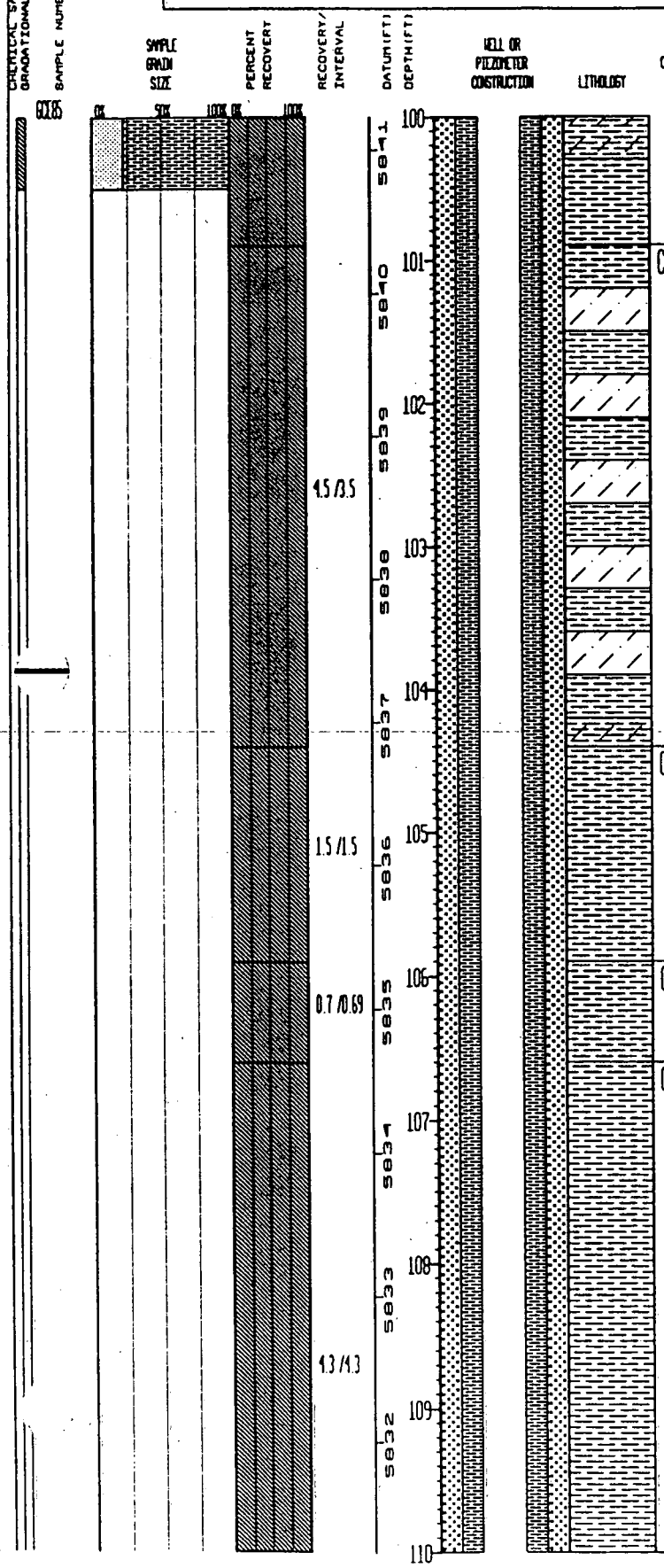
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124.8		GROUND ELEVATION (FT):	5941.23	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	749615	AREA: EAST TRENCHES		CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB		40-86
EAST:	2088502	LOCATOR NUMBER:	P9	BOREHOLE DIAMETER (IN):	5 5/8	DATE DRILLED:	09/23/86		
REMARKS:	Casing driver/NC Core.								



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Interbedded with siltstone, medium gray (N5) to light gray (N7), thin (less than 2mm.) horizontal silt beds interfingered with Claystone, interval exhibits soft sediment deformation, slightly friable, occasional carb. mineralization, local iron staining below approx 91.6 ft. and increase in silt component.
CLAYSTONE:	Same as above.
CLAYSTONE:	Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT): 5941.23	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	40-86
EAST: 2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 5 5/8	DATE DRILLED: 09/23/86	

REMARKS: Casing driver/NC Core.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Same as above.
CLAYSTONE:	Medium light gray (N6), bedding not apparent, weathered, slightly friable, moderate silt component, occasional carb. mineralization.
CLAYSTONE:	Same as above.
CLAYSTONE:	Same as above, with slickensides at approx. 110 ft., attitude approx. 55 degrees.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT):	5941.23	PROJECT NUMBER:	667.11
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB
EAST: 2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	5 5/8	DATE DRILLED:	09/23/86

REMARKS: Casing driver/NC Core.

LOG OF BORING NUMBER: 40-86

SAMPLE GRADIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			5931	110				
			5930	111			CLAYSTONE:	Same as above.
		2/2	5929	112				
			5928	113			CLAYSTONE:	Same as above, with faint slickensides at approx. 114 ft. attitude approx. 55 degrees.
		3/3	5927	114				
			5926	115				
		0.5/0.5	5925	116			CLAYSTONE:	Same as above.
			5924	117			CLAYSTONE:	Same as above.
		2.6/2.6	5923	118				
		1.2/1.2	5922	119			SANDY SILTSTONE:	Very light gray (N8) to light gray (N7), bedding exhibits extensive soft sediment deformation and possible intraclasts, sand component is VFG, slightly friable.
				120				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124.8	GROUND ELEVATION (FT):	5941.23	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB	40-86
EAST: 2088502	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	5 5/8	DATE DRILLED:	09/23/86	

REMARKS: Casing driver/NC Core.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	UK			1.3/1.3	5921 5920	120 121				
				1.7/1.7	5919 5918	122 123			SILTSTONE:	Interbedded Siltstone and Sandstone, very light gray (N8) to light gray (N7), thin bedded less than 5mm., soft sediment deformation occurs in this interval, slight to moderate friability, thin discontinuous coal beds, local iron staining.
				1.6/1.6	5917 5916 5915 5914 5913 5912	124 125 126 127 128 129 130			SILTY CLAYSTONE:	Light gray (N7), thin bedded (less than 2mm.), slightly friable, occasional carb. mineralization.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 44.8	GROUND ELEVATION (FT): 5940.03	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749613	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	41-86
EAST: 2088541	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/18/86	

REMARKS: Hollow Stem Auger. Cave From TD to 44.70'. Well built through casing advancer; no centralizers used.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.15 /0.15	5940	0			CL:	Top 2in.: SILTY CLAY, dark yellowish brown (10 YR 4/2), mod. plast., highly calcareous, some sand (VFG to MG), some roots, trace of gravel.
			0.65 /0.85	5939	1			SP:	2in.-12in.: Calcareous Gravelly Sand, matrix color is pinkish gray (5 YR 8/1), sub-angular-sub-rounded, mod-well graded, max. gravel size= 5cm., sand is FG to MG, some clay some roots.
			0.85 /1					GC:	12in.-1.65 Ft.: SANDY GRAVEL, dark reddish brown (10 R 3/4), angular-sub-angular, mod. grading, max. gravel size= 4cm., some clay.
			0.15 /0.15	5938	2			GC:	Top 2in.: Same as above.
			1.75 /1.85	5937	3			GC:	Clayey Calcareous Gravel, mod. orange pink (5 YR 8/4), angular-sub-angular, mod-poor grading, max. gravel size= 5cm., abundant iron staining, some sand.
				5936	4			GC:	Same as above; some sand.
			1.9 /2	5935	5				
				5934	6			GC:	Same as above, max. size= 7cm. at base of interval, base of interval has little clay and is very pale orange (10 YR 8/2).
			1.8 /2	5933	7				
				5932	8			GC:	Same as above, mod. orange pink (5 YR 8/4), increased clay content.
			1.4 /2	5931	9				
					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 44.8	GROUND ELEVATION (FT): 5940.03	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749613	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	41-86
EAST: 2088541	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/18/86	

REMARKS: Hollow Stem Auger. Cave from TD to 44.70'. Well built through casing advancer; no centralizers used.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.8 ft	5930	10			GC:	Calcareous Sandy Gravel, mod. orange pink (5 YR 8/4), angular-sub-angular, max gravel size= 6.5cm., some clay.
				5929	11				
				5928	12			CL:	SANDY CLAY, light brown (5 YR 5/6), mod. plast., some gravel, trace of Mg staining, some calc. material.
			1.5 ft	5927	13				
				5926	14			GC:	Clayey Sandy Gravel, matrix color is light brown (5 YR 6/4), sub-angular to sub-rounded, max. gravel size= 8cm., some calc. material.
			1.4 ft	5925	15				
				5924	16			GC:	Same as above; increased clay fraction.
			2.1 ft	5923	17				
				5922	18			GC:	Same as above.
			1.7 ft	5921	19				
					20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 44.8	GROUND ELEVATION (FT): 5940.03	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749613	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	41-86
EAST: 2088541	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/18/96	

REMARKS: Hollow Stem Auger. Cave from TD to 44.70'. Well built through casing advancer; no centralizers used.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.9 ft	5920 5919	20 21			GC:	Clayey Sandy Gravel, matrix color is light brown (5 YR 5/6), sub-angular to sub-rounded, mod-poorly graded, max gravel size= 6cm., sand is FG-MG-CG, top of interval has larger fraction of clay (approx. 30%).
			1.8 ft	5918 5917	22 23			GC:	Same as above; increased clay and sand fraction.
			1.7 ft	5916 5915	24 25			GC:	Same as above.
			1.7 ft	5914 5913	26 27			GC:	Same as above; increased gravel fraction.
			1.8 ft	5912 5911	28 29			GC:	Same as above; decreased gravel fraction.
					30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 44.8	GROUND ELEVATION (FT): 5940.03	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749613	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	41-86
EAST: 2088541	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/18/86	

REMARKS: Hollow Stem Auger. Cave From TD to 44.70'. Well built through casing advancer; no centralizers used.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.4/1.5	5910	30			CL:	GRAVELLY CLAY, dark yellowish orange (10 YR 6/6), mod.-poor plast., some sand, floury texture.
			0/0.7	5909	31			NO SAMPLE:	
			0.3/0.29	5908	32			GC:	SANDY GRAVEL, grayish orange (10 YR 7/4), sub-angular-angular, mod. grading, max size= 4cm., some clay, floury texture, sand is FG to CG.
			0.2/0.29					GC:	Same as above; angular; with higher gravel fraction.
			1/0.5	5907	33			GC:	Same as above; angular-sub-angular, decreased gravel fraction.
			0.8/0.7					GC:	Same as above.
				5906	34			GC:	Same as above; increased clay fraction, slightly consolidated.
			1.1/1						
			0.7/0.5	5905	35			GC:	Same as above; increased sand fraction, gravel is sub-angular to sub-rounded.
			1/1.5	5904	36	08/18/86		GC:	Same as above; angular to sub-angular.
			1.8/1.5	5903	37			SC:	Gravelly Clayey Sand, grayish orange (10 YR 7/4), mod. grading, sand is VFG to MG, max. gravel size = 3cm., bottom 1 ft. of interval; sand is FG to MG
			0.7/0.5	5902	38			SC:	Same as above; sand is FG to MG.
			0.6/1	5901	39			SC:	Top 2in.: Same as above, sand is MG to VCG. Bottom of interval: same as above, sand is VFG to FG, increased clay fraction.
					40				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 44.8	GROUND ELEVATION (FT):	5940.03	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749613	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DAT	41-86
EAST:	2088541	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	08/18/86	

REMARKS: Hollow Stem Auger. Cave from TD to 44.70'. Well built through casing advancer; no centralizers used.

CHEMICAL SAMPLE DEPTH / GRADATIONAL DEPTH / SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 1.1/1.3; 0/0.4; 1/1.3; 0.5/0.5; 1.15/1.15; 0.15/0.14

DATUM (FT): 5900, 5899, 5898, 5897, 5896, 5895, 5894, 5893, 5892, 5891

DEPTH (FT): 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SC:	Gravelly Clayey Sand, grayish orange (10 YR 7/4), sub-angular to sub-rounded, mod. grading, sand is VFG to MG, max. gravel size approx. 7cm., some iron staining as mottles.
NO SAMPLE:	
SC:	Same as above, increased gravel fraction.
SC:	Same as above.
GC:	Clayey Sandy Gravel, grayish orange (10 YR 7/4), sub-angular to sub-rounded, mod.-highly graded, max. size= 7cm., sand is FG to VCG, trace of iron staining.
CLAYSTONE:	Top of Bedrock Bottom 2 in.; Claystone, very pale orange, non-apparent bedding, well weathered, mod. friable, some Mg. staining, trace of iron staining.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 35	GROUND ELEVATION (FT): 5954.34	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749568	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	42-86
EAST: 2087112	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/13/86	

REMARKS: Hollow Stem Auger.

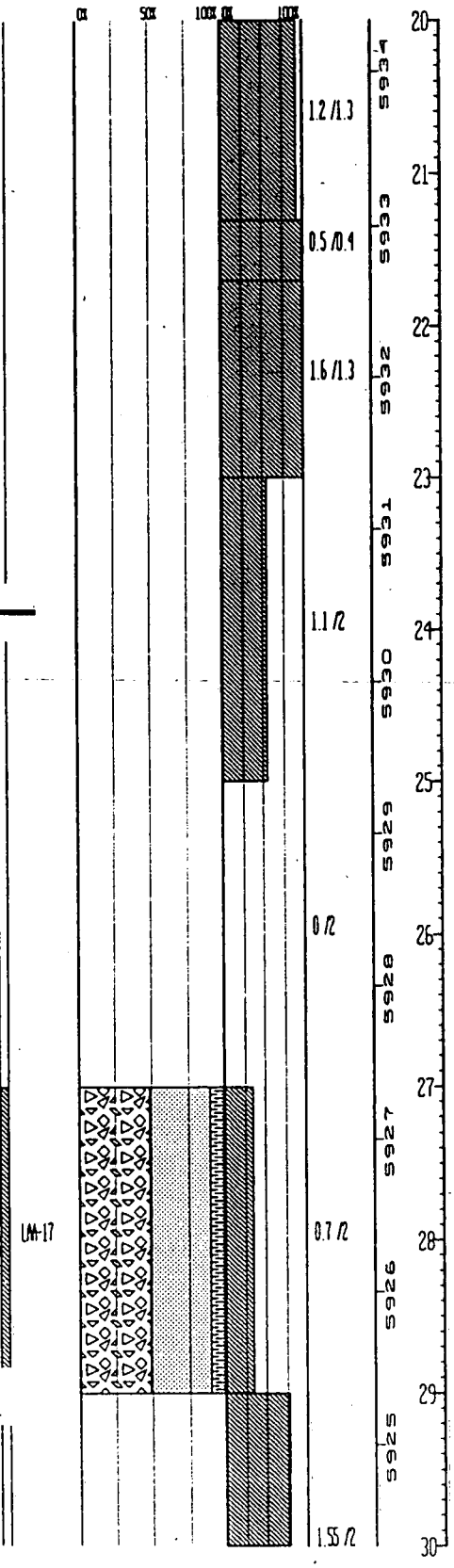
SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5954	0			NO SAMPLE:	No sample found by AST.
			0/2	5953	1				
			0.65/1.3	5952	2			GC:	GRAVEL, Predom. color med. light gray (N6). Angular to sub-angular, well graded, granules to 6 cm., matrix white (N9) to very pale orange (10 YR 8/2). Caliche. Some sand VFG.
			0.9/0.8	5951	3			GC:	GRAVEL as above, matrix sandy clay and caliche, white (N9) to dk. yellowish orange (10 YR 6/6). Est. plast. low to moderate. Some sand VFG to VCG.
			0.8/0.9	5950	4			GC:	GRAVEL, same as above.
			0.9/0.9	5949	5			GC:	SANDY GRAVEL, Predom. color med. dk. gray (N4). Well graded, granules to 4.5cm. Angular to sub-rounded, Sand VFG to VCG, some clay, trace CaCO3.
			0.7/0.6	5948	6			GC:	Same as above, less sand and clay, gravel to 5cm.
			0.2/1.5	5947	7			GC:	GRAVEL, grayish red (5R 4/2), angular, poorly graded, 3cm to 6cm, some silty clay, trace CaCO3.
				5946	8			NO SAMPLE:	
			0/3.5	5945	9				
					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 35	GROUND ELEVATION (FT): 5954.34	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749568	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	42-86
EAST: 2087112	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/13/86	

REMARKS: Hollow Stem Auger.

DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
10					5944				
11					5943				
12				0.8 /1.5	5942			GC:	Clayey Gravel, predom. color med. dk. gray (N4). Angular to sub-rounded. Well graded, granules to 4.5cm, Some sandy clay matrix, Dk. yellowish orange (10 YR 6/6). Sand VFG to VCG. Some CaCO3.
13				1.2 /1	5941			GC:	Clayey Gravel, same as above. Silty clay, grayish orange (10 YR 7/4) matrix, Est. plast. low to mod., some sand VFG to VCG, trace CaCO3.
14				1.85 /2	5940			GC:	Sandy Clayey Gravel, gravel predom. med. gray (N5). Angular to sub-angular, well graded. Granules to 6cm. Sandy clay matrix, mod. yellowish brown (10 YR 5/4), Est. plast. low, sand VFG to VCG. Some silt, trace CaCO3.
15					5939				
16				0.55 /0.5	5938			GC:	Same as above.
17				0 /1	5937			NO SAMPLE:	
18				1.15 /1	5936			GC:	Same as above.
19				0 /1.5	5935			NO SAMPLE:	
20									

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 35	GROUND ELEVATION (FT): 5954.34	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749568	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	42-86
EAST: 2087112	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/13/86	
REMARKS: Hollow Stem Auger.				



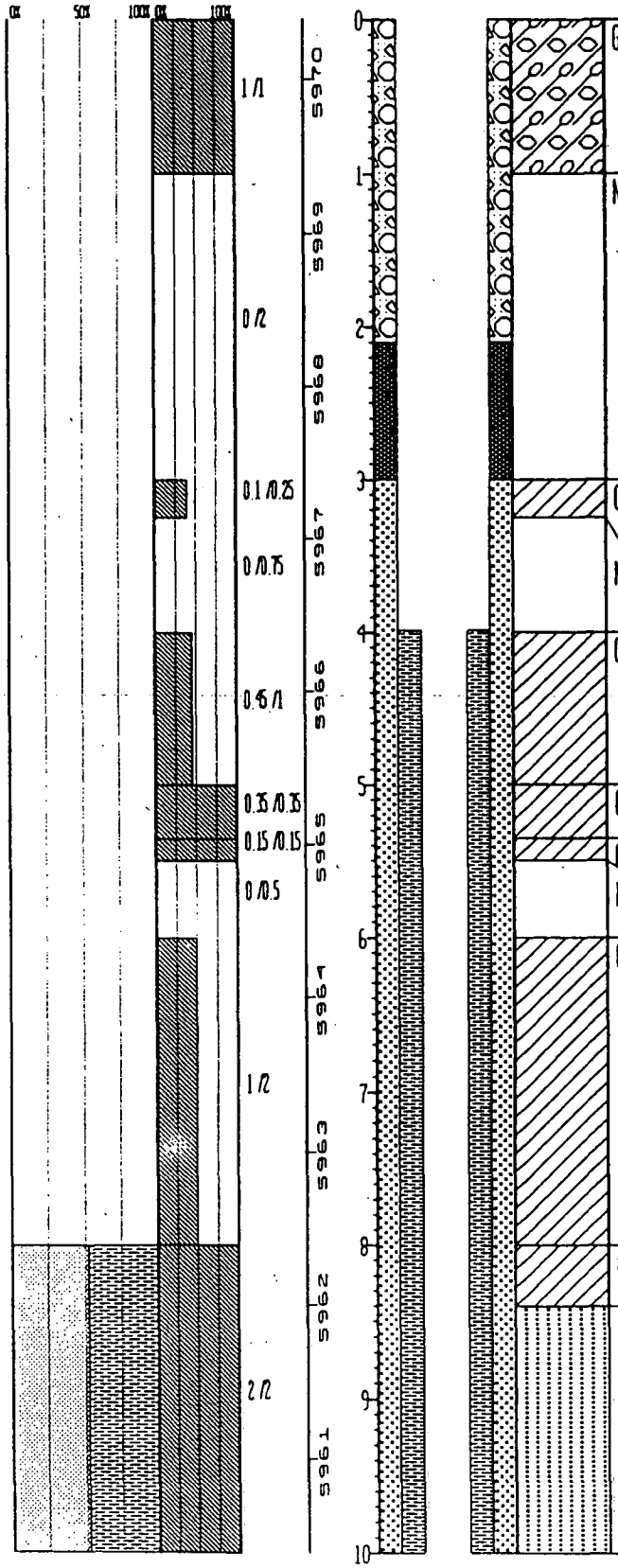
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	Sandy Clayey Gravel. Cannot determine predom. color. Angular to sub-rounded. Well graded granules to approx. 4 cm. Matrix grayish orange to light brown (5YR 5/6). Estim. plast. low. Sand VFG to VCG, some silt appears to have been wet when stored.
SC:	Gravelly Clayey Sand. Mod. yellowish brown (10 YR 5/4). Est. plast. low, VFG to granules, mod. graded gravel, sub-rounded, to 3 cm., some silt.
SC:	Same as above.
GC:	Clayey Sand and Gravel, grayish orange (10 YR 7/4 to 10 YR 5/4). Gravel sub-angular to rounded, well graded. Granules to 4.5 cm., Sand mod. well graded, VFG to VCG, some silt. Trace iron staining.
NO SAMPLE:	
SW:	GRAVELLY SAND, grayish orange (10 YR 7/4), sand mod. well graded VFG to granules. Gravel sub-angular to sub-rounded. (0.75 cm to 5.5 cm.), mod. graded.
SILTY CLAYSTONE:	Top of Bedrock. Interval grades to a very silty claystone. Pinkish gray to very pale orange (5YR 8/1 to 10YR 8/2). Mod. plast.
SILTY CLAYSTONE:	Pinkish gray (5YR 8/1) to dk. yellowish orange (10 YR 6/6). Mod. weathered, slightly to mod. friable, bedding not evident, some iron staining.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 35	GROUND ELEVATION (FT): 5954.34	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749568	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	42-86
EAST: 2087112	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/13/86	
REMARKS: Hollow Stem Auger				

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.55/2	5927	30				
				0.3/0.4	5923	31			SILTY CLAYSTONE	Grayish orange (10 YR 7/4) to pinkish gray (5 YR 8/1). Mod. weathered, mod. friable, bedding not evident, some gravel and sand (probably from above), some iron staining.
				1.1/1.6	5922	32			SILTY CLAYSTONE	Same as above; with no sand and gravel.
					5921	33			NO SAMPLE	
				0/2	5920	34				
					5919	35				
					5918	36				
					5917	37				
					5916	38				
					5915	39				
						40				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 22	GROUND ELEVATION (FT): 5970.39	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749417	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	43-86
EAST: 2085865	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/26/86	

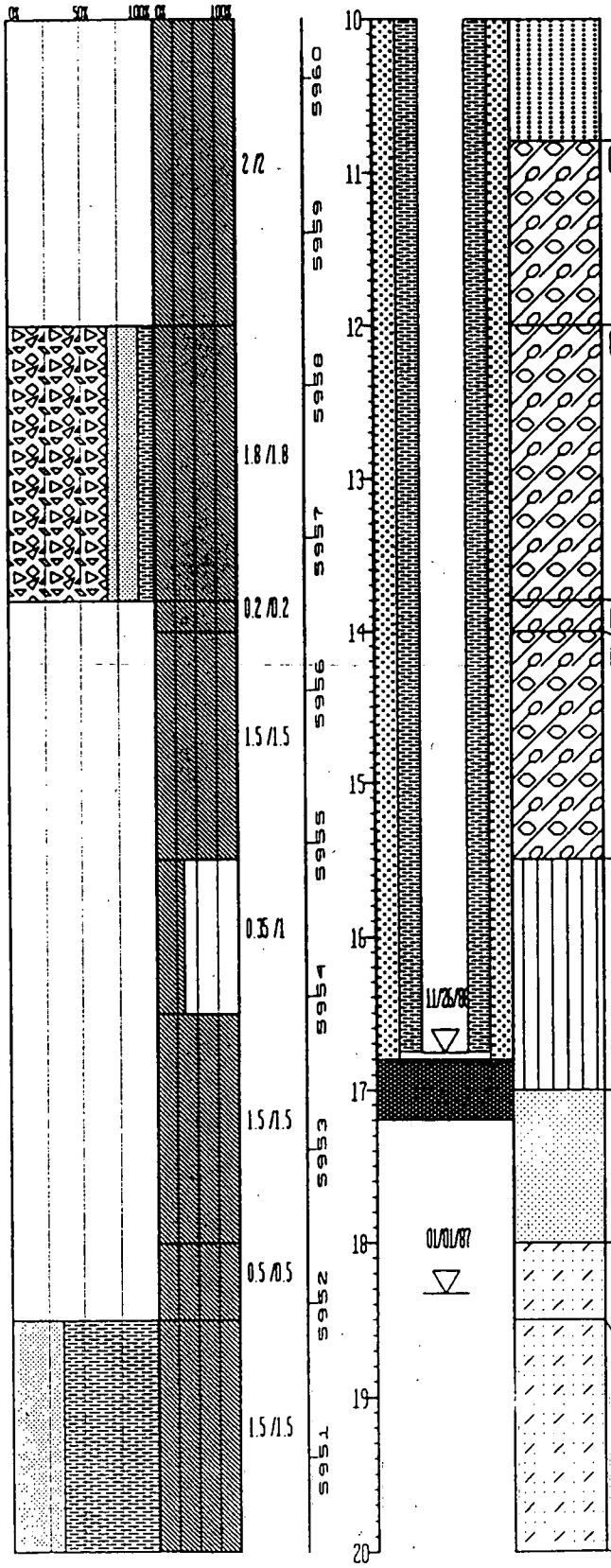
REMARKS: Hollow Stem Auger. Top of stainless steel casing: 1.98'. Cave from 10 to 17.20'.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	Clayey Gravel - dominantly light gray (N7), matrix is brownish gray (5YR 4/1), to white (N9), angular to sub-rounded, poorly graded, max. size 6.5 cm., some roots and caliche, caliche rind occurs on some gravel.
NO SAMPLE:	
CL:	GRAVELLY CLAY - pale yellowish brown (10YR 6/2), moderate plasticity, some silt, calcareous.
NO SAMPLE:	
CL:	As above (reference interval 3.0 to 3.25 ft.), trace of VFG sand.
CL:	As above.
CL:	As above.
NO SAMPLE:	
CL:	As above with increase in the gravel fraction with depth.
CL:	SANDY CLAY - with gradational change to silty sand, some clay.
SP:	SILTY SAND - light brown (5YR 6/4), sub-angular to sub-rounded, poorly graded, medium grained to very fine grained, some clay, trace of gravel

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 22	GROUND ELEVATION (FT): 5970.39	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749417	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	43-86
EAST: 2085865	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/26/86	

REMARKS: Hollow Stem Auger. Top of stainless steel casing: 1.98'. Cave from TD to 17.20'.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	Sandy Clayey Gravel - light gray (N7), sub-angular to sub-rounded, poorly graded, max. size is 6.5 cm., some silt, matrix is grayish orange (10YR 7/4).
GC:	Sandy Clayey Gravel - as above.
GC:	As above.
GC:	As above.
ML:	SANDY SILT - grayish orange (10YR 7/4), trace of gravel and clay, with a cobble at 17.0 ft.
SANDSTONE:	Top of Bedrock. Mottled light gray (N8), to dark yellowish orange (10YR 6/6), iron stained, very fine grained, slight silt fraction, bedding not apparent, highly weathered, moderately friable.
SILTY SANDSTONE:	Very light gray (N8), with iron staining, dark yellowish orange (10YR 6/6), bedding not apparent, highly weathered, moderately friable, trace of dark mineralization (possible Mg oxides) on fracture.
SILTY SANDSTONE:	As above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 22	GROUND ELEVATION (FT): 5970.39	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749417	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	43-86
EAST: 2085865	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/26/86	

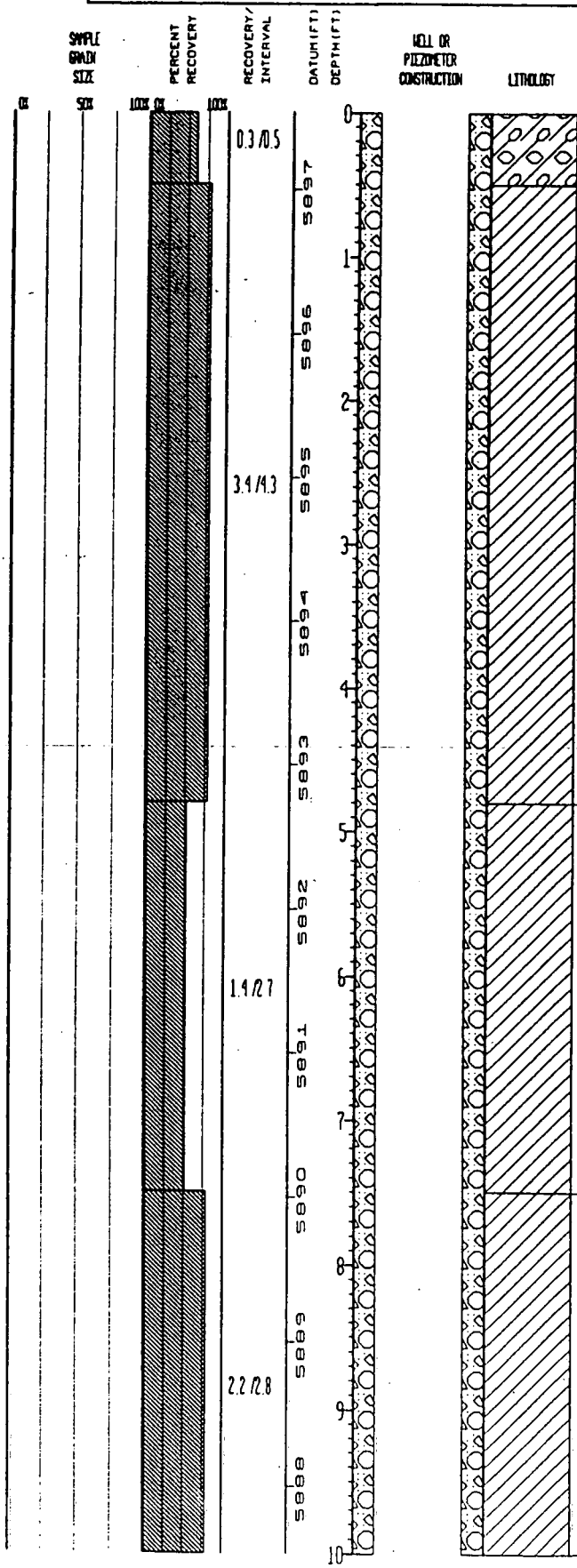
REMARKS: Hollow Stem Auger. Top of stainless steel casing: 1.98' Cave from TD to 17.20'.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0.8 /0.79	5950	20		SILTY SANDSTONE:	As above.
1.2 /1.2	5949	21	10/10/86	SANDSTONE:	Very light gray (N8) to grayish orange (10YR 7/4), bedding not apparent, well weathered, slightly to moderately friable, very fine grained, well sorted, rounded to well rounded. NOTE: No water encountered while drilling.
	5948	22			
	5947	23			
	5946	24			
	5945	25			
	5944	26			
	5943	27			
	5942	28			
	5941	29			
		30			

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 59.3	GROUND ELEVATION (FT):	5897.54	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER
NORTH:	749156	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DAT	62-86
EAST:	2085717	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	7.25	DATE DRILLED:	09/25/86	

REMARKS: Hollow Stem Auger. 35.5' - 37' is bentonite & 37' - 59.3' is Portland Type I cement



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC	GRAVELLY SAND, dusky yellowish brown (10 YR 2/2), sub-angular - sub-rounded, max gravel size = 3cm, some roots, some clay.
CL	SANDY CLAY, dark yellowish brown (10 YR 4/2), mod. plasticity, some gravel (max. size = 3cm), sand is FG-MG, trace of roots. Bottom of interval: same as above, grayish orange (10 YR 7/4), increased amount of sand, some silt, trace of roots, some calc. material in possible fractures.
CL	Same as above: Calc. material in fractures is more abundant
CL	Same as above: trace of calc. material as mottles, no apparent fractures, sand fraction is larger, trace of gravel

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 59.3	GROUND ELEVATION (FT): 5897.54	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER
NORTH:	748156	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	62-86
EAST:	2085717	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 09/25/86	

REMARKS: Hollow Stem Auger. 35.5' - 37' is bentonite & 37' - 59.3' is Portland Type I cement

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
DAT 5	0% 50% 100%	0% 100%	2.5/2.5	5887, 5886, 5885	10, 11, 12			CL	SANDY CLAY, dark yellowish brown (10 YR 4/2), mod. plast., some silt, sand is FG-MG.
			0.5/1.2	5884	13			SW	GRAVELLY SAND, light brown (5 YR 5/6), angular-sub-angular, mod-well graded, max size gravel = 7cm., some silt.
			0.5/0.5	5883	14			CL	CLAY, grayish orange (10 YR 7/4), mod. plast., some iron staining as mottles, some silt, trace of gravel.
			1.5/0.8	5882	15			CL	GRAVELLY SANDY CLAY, moderate yellowish brown (10 YR 5/4), mod-high plasticity, max. gravel size = 2cm., sand is FG-CG, some silt, possible Mg-staining and concretions.
			1/2.5	5881, 5880	16, 17			CL	Same as above
			1/2.5	5879, 5878	18, 19, 20			SC	Clayey Gravelly Sand, moderate yellowish brown (10 YR 5/4), sub-angular to sub-rounded, mod-well graded, max gravel size = 5cm, trace of possible Mg-staining and concretions, sand is MG-CG, trace of iron staining as mottles

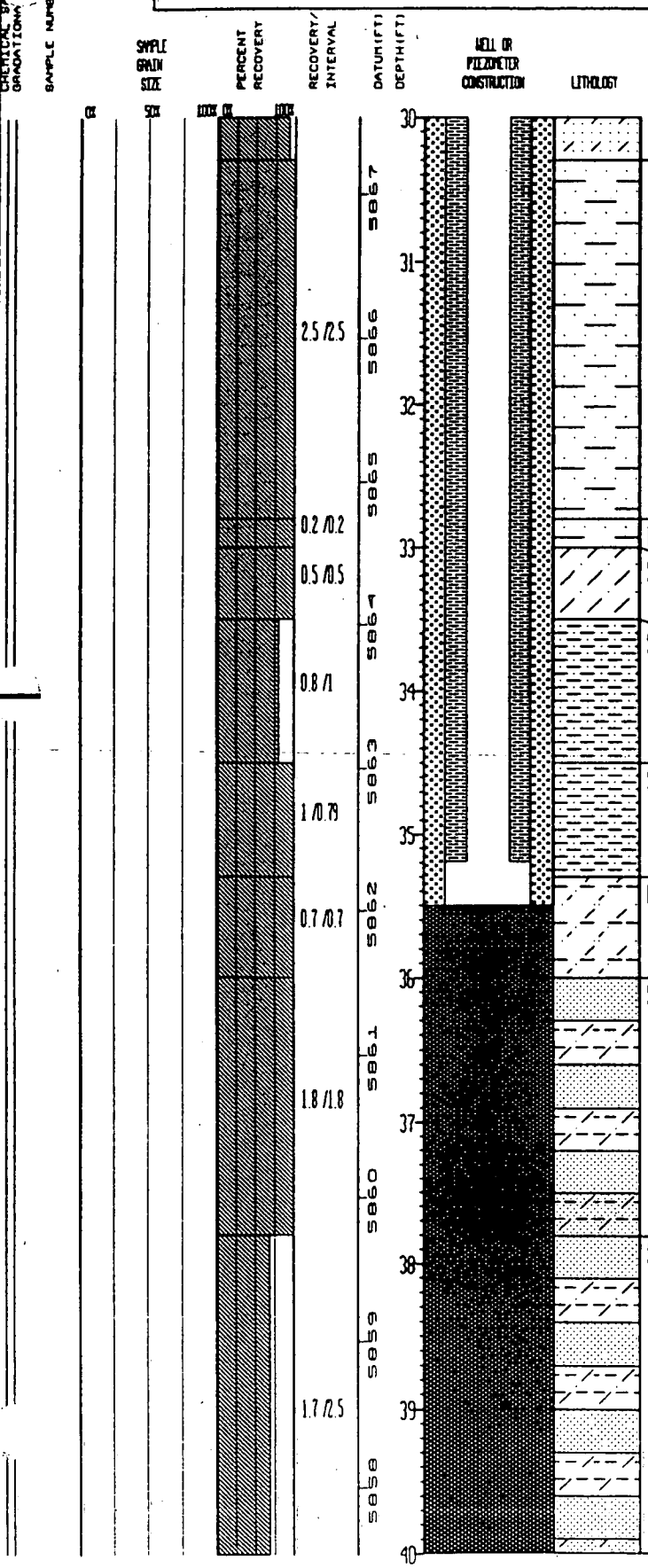
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 59.3	GROUND ELEVATION (FT): 5897.54	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	748156	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	62-86
EAST:	2085717	LOCATOR NUMBER: NB	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 09/25/86	

REMARKS: Hollow Stem Auger. 35.5' - 37' is bentonite & 37' - 59.3' is Portland Type I cement.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (GR / SAN / ROCK GR / ROCK)	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1/1.7	5877	20			SC:	Clayey Gravelly Sand, moderate yellowish brown (10 YR 5/4), sub-angular to sub-rounded, mod. well graded, max. gravel size = 7cm., sand is MG-VCG, trace of possible Mg staining on concretions.
				0.5/0.79	5876	21			CLAYSTONE:	Top of Bedrock. Grayish orange (10 YR 7/4), est. mod. plast., some iron staining as mottles; some gravel, trace of possible gypsum.
				2.5/2.5	5875	22			CLAYSTONE:	Same as above, some 1 mm-2 cm VFG-FG sand lenses, very light gray (N8), trace of iron concretions at bottom of interval.
				1.2/1.7	5874	23			SILTY SANDSTONE:	VFG-FG, pale yellowish orange (10 YR 8/6) and light gray (N8), sub-angular - sub-rounded, poorly graded, abundant iron staining, trace of possible Mg staining.
	BM 6			0.8/0.79	5873	24	09/25/86		SILTY SANDSTONE:	Same as above. Increased competency, some clay.
				2.3/2.5	5872	25			SILTY SANDSTONE:	Same as above.
					5871	26				
					5870	27				
					5869	28				
					5868	29				
						30				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 59.3	GROUND ELEVATION (FT):	5897.54	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	748156	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DAT	62-86	
EAST:	2085717	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	7.25	DATE DRILLED:	09/25/86		

REMARKS: Hollow Stem Auger. 35.5' - 37' is bentonite & 37' - 59.3' is Portland Type I cement.



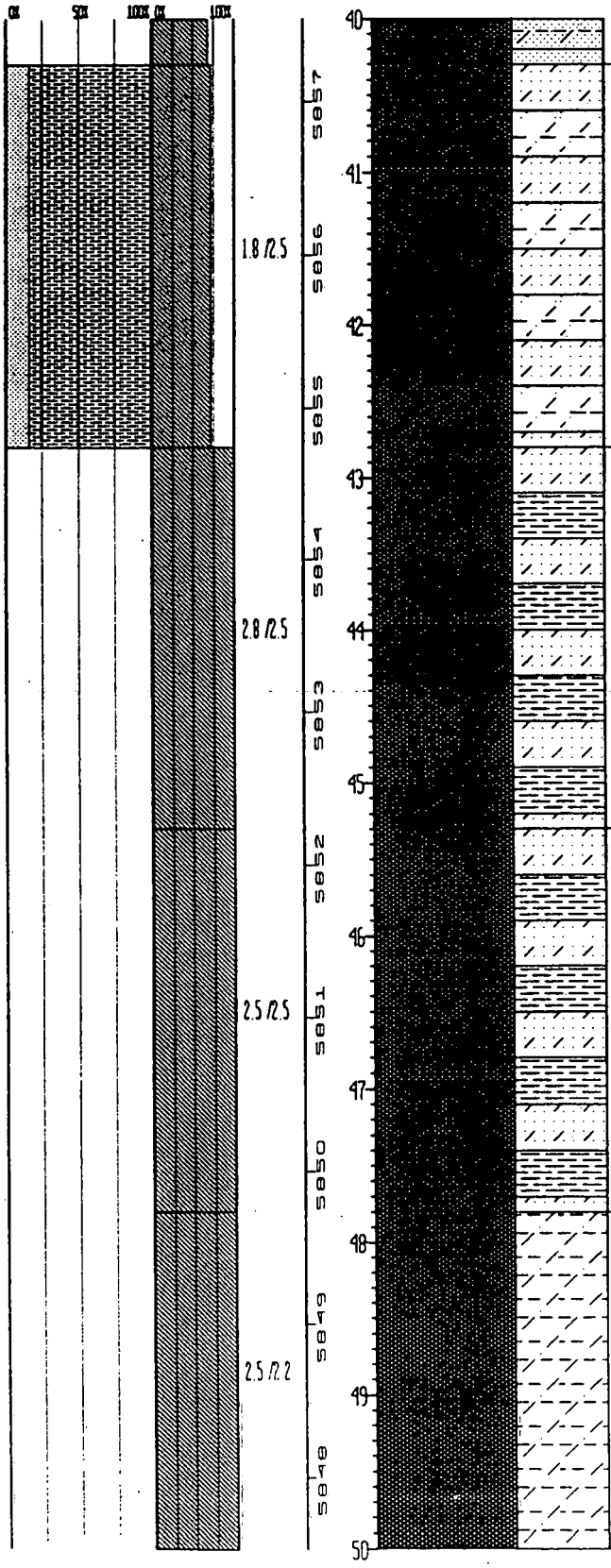
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYEY SANDSTONE	Pale yellowish orange (10 YR 8/6) and light gray (N8), gradational contact between soil and rock, sub-angular to sub-rounded, highly weathered, mod. friable, VCG-FG, well sorted, iron staining as mottles.
CLAYEY SANDSTONE	Same as above: (Top 3 in.)
SILTSTONE:	Light olive gray (5Y 6/1), sharp contact, non-apparent bedding, highly weathered, moderate to poorly friable.
SANDY CLAYSTONE:	Pale yellow orange (10 YR 8/6) and light gray (N8), non-apparent bedding (floury texture), highly weathered, mod. friable, abundant iron staining, some Mg staining.
SANDY CLAYSTONE:	Same as above: Mg staining shows dendritic pattern.
CLAYEY SILTSTONE:	Light olive gray (5Y 6/1), massive bedding, highly weathered, mod-poorly friable, abundant iron staining as mottles.
SANDSTONE:	Thin interbedding of: VFG-FG Sandstone, (bedding is 1 mm-1 cm), very pale orange (10YR 8/2), highly weathered, mod. friable, well sorted. Interbedded with Silty Claystone, (bedding is .5-3cm), med. light gray (N6), well weathered, mod. friable, iron staining throughout as mottles and along bedding planes.
SANDSTONE:	Same as above: trace of carb. material.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 59.3	GROUND ELEVATION (FT):	5897.54	PROJECT NUMBER:	667.11
NORTH: 748156	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DAT
EAST: 2085717	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN)	7.25	DATE DRILLED:	09/25/86

LOG OF BORING NUMBER: **62-86**

REMARKS: Hollow Stem Auger. 35.5' - 37' is bentonite & 37' - 59.3' is Portland Type I cement

SAMPLE NUMBER	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
DAT 7	1.8 /2.5	5857, 5856, 5855	40, 41, 42	SILTY SANDSTONE	Yellowish gray (5Y 8/1), gradational contact, highly weathered, mod. friable, VFG-FG, mod.-well sorted, abundant iron staining as mottles, carb. material, some interbedding of Clayey Siltstones (less than 1 mm), some clay.
	2.8 /2.5	5854, 5853	43, 44, 45	SILTY SANDSTONE	Slabbed core shows interbedding of sandstones and claystones, light olive gray (5Y 6/1).
	2.5 /2.5	5852, 5851, 5850	46, 47	SILTY SANDSTONE	Same as above
	2.5 /2.2	5849, 5848	48, 49, 50	SILTY CLAYSTONE	Light olive gray (5Y 4/1), non-apparent bedding, well weathered, mod friability, some iron staining as mottles, fractures approx. 35 degrees.



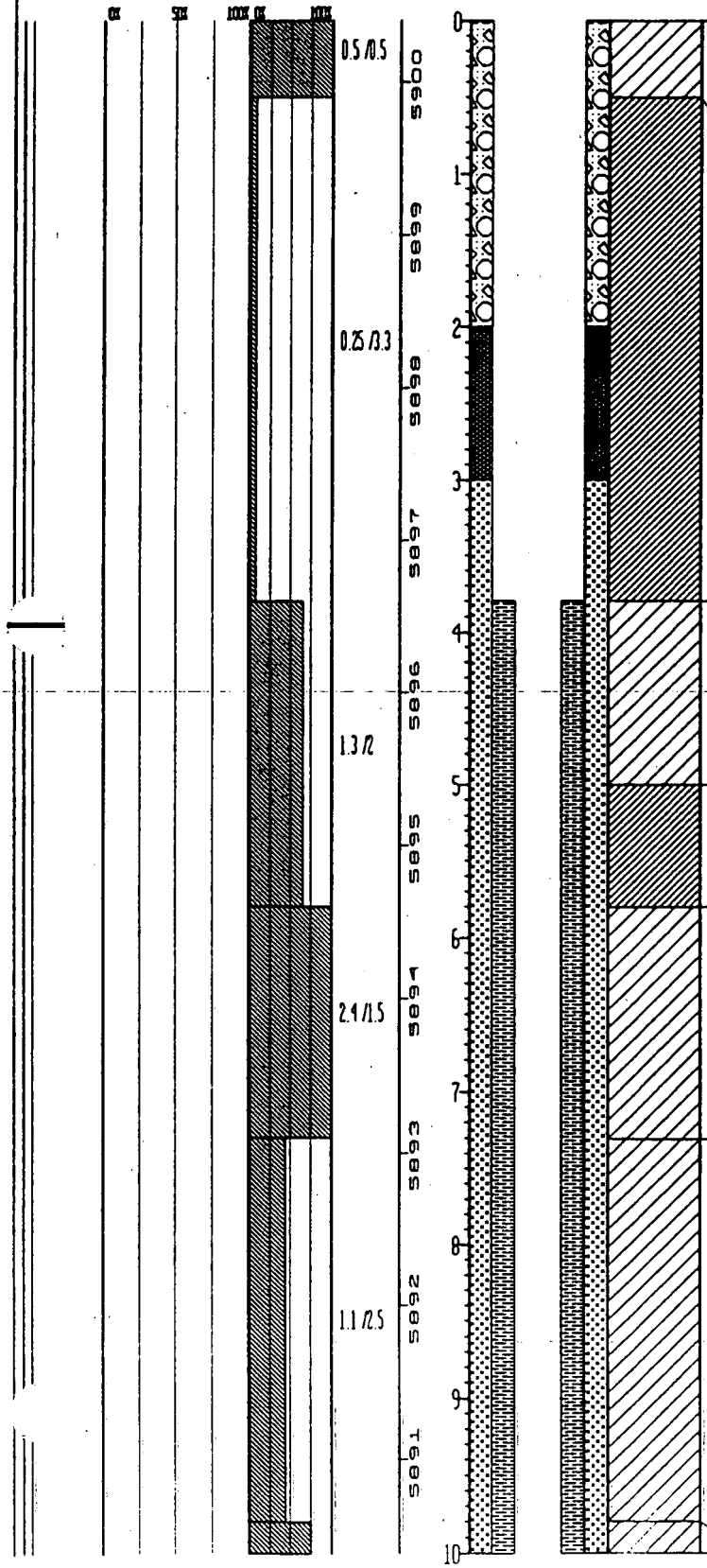
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 59.3	GROUND ELEVATION (FT): 5897.54	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 748156	AREA: 903 PAD	CASING DIAMETER (IN): 2.10	GEOLOGIST: DAT	62-86	
EAST: 2085717	LOCATOR NUMBER: 118	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 09/25/86		

REMARKS: Hollow Stem Auger. 35.5' - 37' is bentonite & 37' - 59.3' is Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.3/0.29	5847	50			SILTY SANDSTONE	Very pale orange (10 YR 8/2), well weathered, mod-low friability, VFG-FG, well-mod sorted, some iron staining.
			2.1/2.5	5846	51			SILTY SANDSTONE	Same as above. Slab shows wavy bedding, micro slump structures, soft sediment deformation, possible burrowing.
				5845	52				
			0.9/1.2	5844	53			SILTY SANDSTONE	Same as above; FG-MG, trace of carb. material.
			1.7/1.3	5843	54			SILTY SANDSTONE	Same as above; grayish orange (10 YR 8/2), mod. high friability, trace of clay.
					55				
DAT 8			1.8/2.5	5842	56			SILTY SANDSTONE	Same as above; some clay
				5841	57				
				5840					
			1.4/1.5	5839	58			SILTY SANDSTONE	Same as above; increased clay content in bottom 4 in. of interval.
					59				
				5838	60				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 17.3	GROUND ELEVATION (FT): 5900.4	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748145	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	63-86
EAST: 2085753	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 09/26/86	
REMARKS: Hollow Stem Auger.				

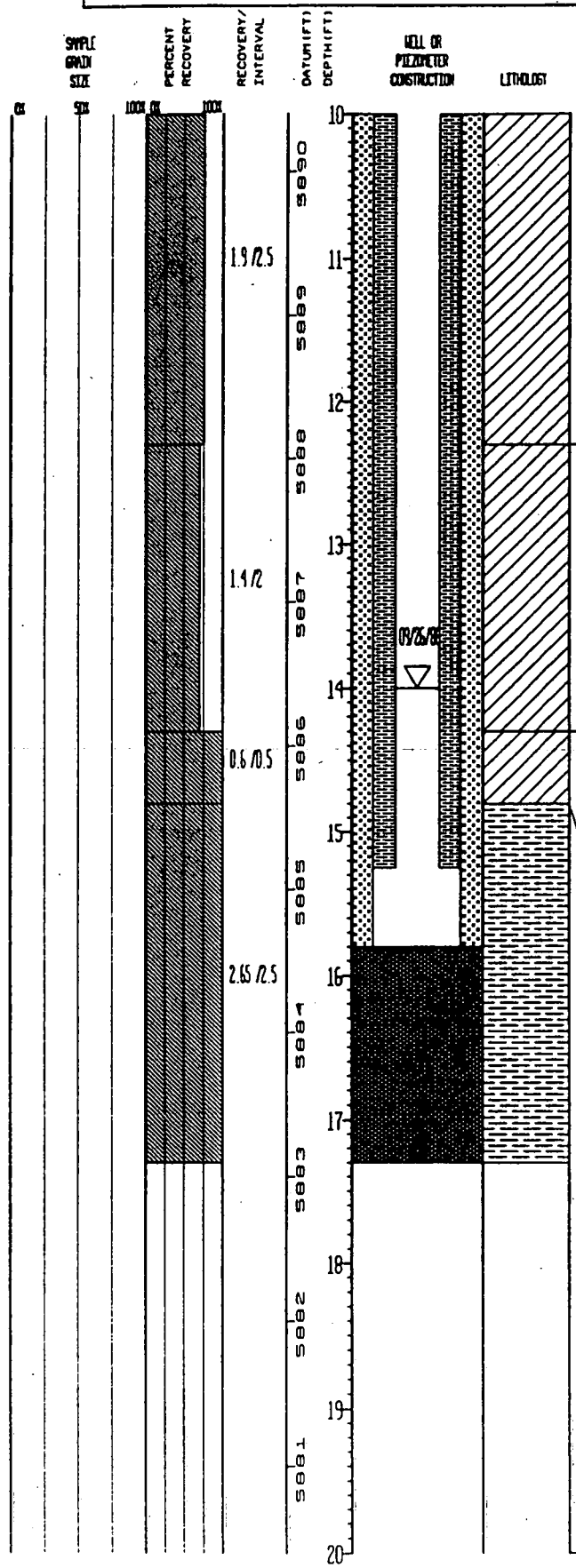
CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE (0% 50% 100%)
PERCENT RECOVERY (0% 100%)
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL:	GRAVELLY SILTY CLAY, Dusty yellowish brown (10 YR 2/2), Est. plast. moderate, gravel angular to sub-rounded, fine to 2 cm., some sand, some surficial root material.
CH:	Sandy Clay, Mod. yellowish brown (10 YR 5/4), Est. plast. mod. to high, sand VFG to med. grained, some gravel approx. 1 cm.
CL:	GRAVELLY CLAY, Top 5 in. mod. yellowish brown (10 YR 5/4), Est. moderate plasticity, gravel angular to sub-rounded small to 4.5 cm., some silt.
CH:	Grades to Silty Clay, moderate yellowish brown (10 YR 5/4). Est. plast. med. to high, some sand; VFG.
CL:	SANDY CLAY, Mod. yellowish brown (10 YR 5/4), Est. plast. moderate, sand VFG to FG, well sorted, trace root material.
CL:	Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 17.3	GROUND ELEVATION (FT): 5900.4	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749145	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	63-86
EAST: 2085753	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 09/26/86	

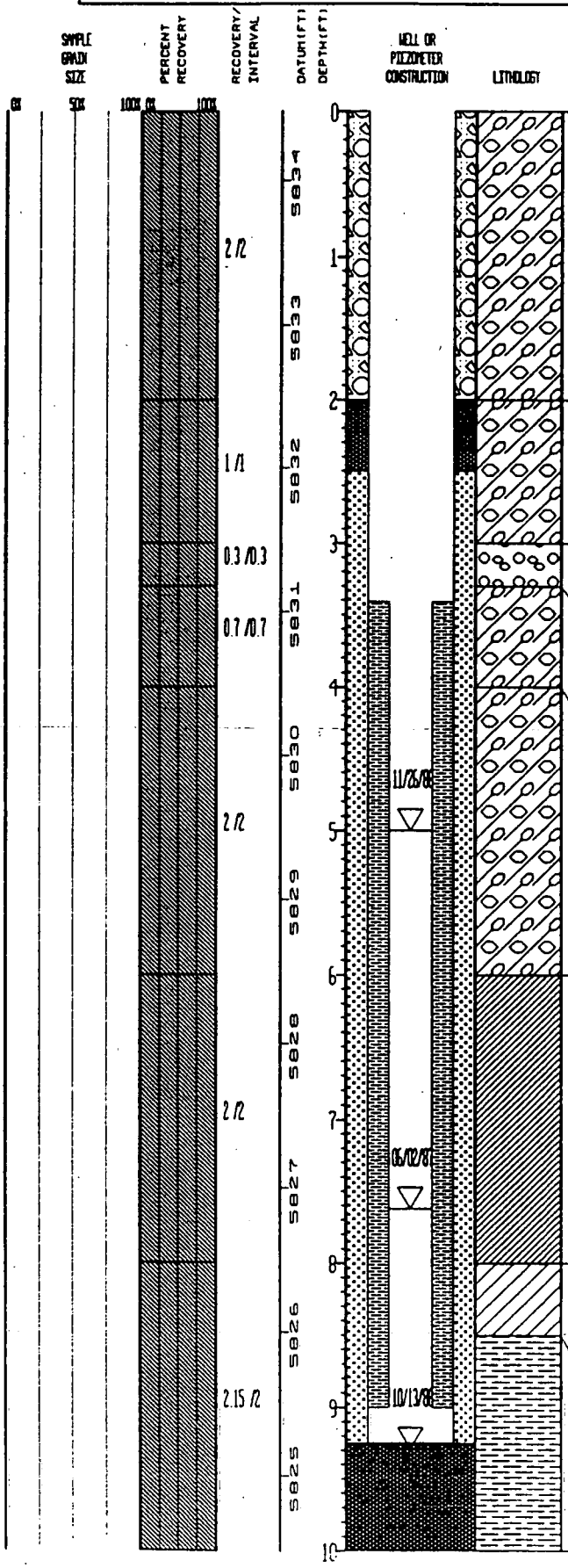
REMARKS: Hollow Stem Auger.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL:	SANDY CLAY, Moderate yellowish brown (10 YR 5/4), Est. plast. moderate, sand VFG to FG, well sorted, trace carb. material towards bottom of interval.
CL:	Same as above, trace fine gravel to approx. 1 cm.
CL:	SANDY-GRAVELLY CLAY, Very pale orange (10 YR 8/2), lt. brown (5 YR 6/4) to dark yellowish orange (10 YR 6/6). Est. plast. moderate, gravel angular to sub-rounded, mod. well graded to 6 cm., sand VFG to coarse.
CLAYSTONE:	Top of Bedrock. Very pale orange to dk. yellowish orange (10 YR 6/6), Est. plast. mod. to high, some silt, trace sand, $CaCO_3$ in stringers and throughout matrix.

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 14	GROUND ELEVATION (FT)	5834.48	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	747686	AREA: BUFFER SOUTH	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	64-86
EAST:	2085601	LOCATOR NUMBER: 117	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	09/10/86	

REMARKS: Hollow Stem Auger.

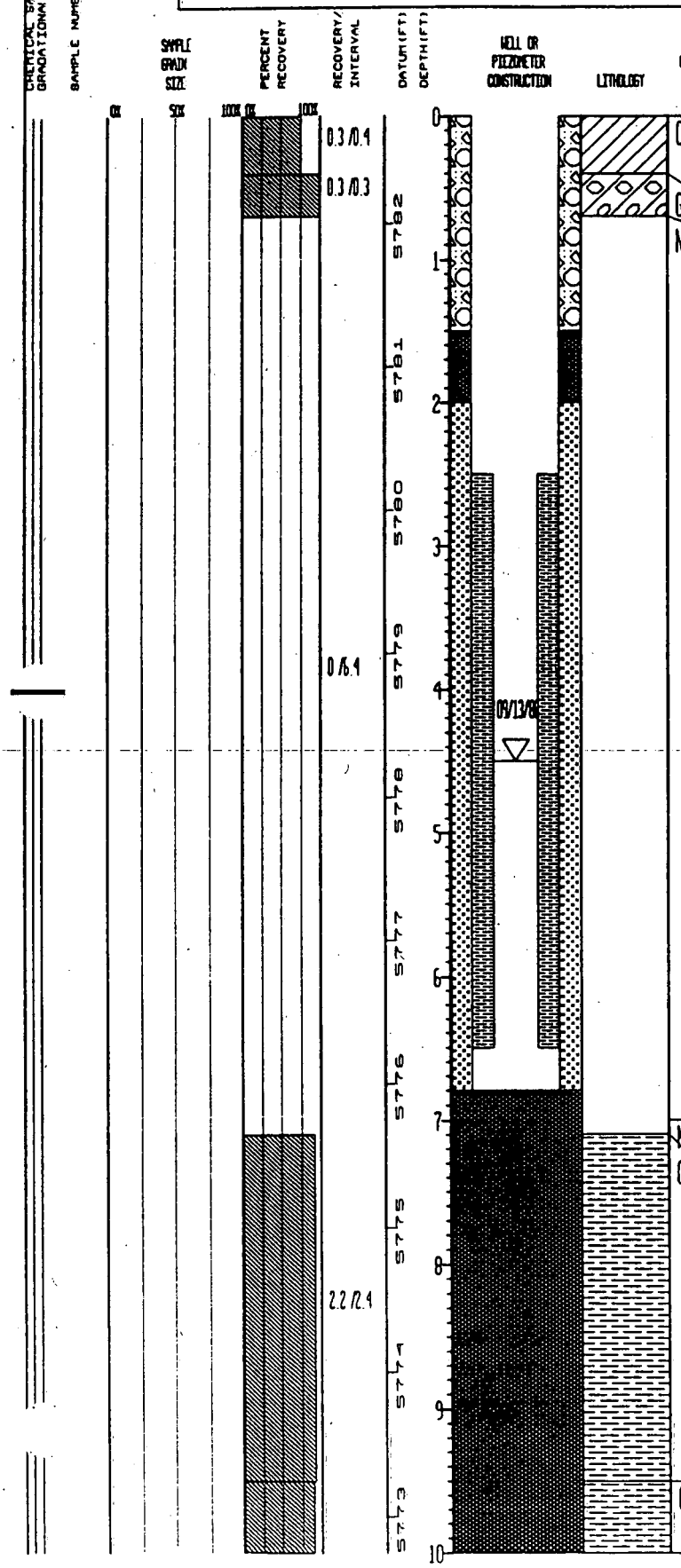


GC:	Silty Clayey Gravel, no predominate color to gravel, sub-angular to sub-rounded; mod. graded, max size 7 cm., silty clay matrix grayish brown (5 YR 3/2), some sand, some surficial grass and root material.
GC:	Silty Clayey Gravel, as above.
GW:	GRAVEL, no predom. color, angular to sub-rounded, mod. graded (1-7 cm.), trace silty clay.
GC:	Silty Clayey Gravel, no predom. gravel color, angular to sub-angular, mod. well graded, granules to 3.5 cm., Silty clay matrix, grayish brown (5 YR 3/2), some sand, trace root material
GC:	Silty Clayey Gravel, no predom. color, angular to sub-angular, mod. graded, granules to 2 cm., matrix grayish orange silty sandy clay (some sand), floury texture at bottom.
CH:	Clay, grayish orange to yellowish gray (10 YR 7/4) to (5 Y 8/1). Est plast. mod. to high, some calcite stringers, some gravel (to 3 cm.), some sand
CL:	Dk. yellowish orange (10 YR 6/6) to lt. olive gray (5 Y 6/1). Est plasticity moderate to high, trace iron staining, trace carb material, trace $CaCO_3$
CLAYSTONE:	Top of Bedrock Same as above

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 14	GROUND ELEVATION (FT):	5834.48	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER
NORTH:	747686	AREA: BUFFER SOUTH	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	64-86
EAST:	2085601	LOCATOR NUMBER: M7	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	09/10/86	
REMARKS:	Hollow Stem Auger						

CHEMICAL SAMP. / GRADATIONAL / DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			100% 0% 100%	1.2/1	5824	10			CLAYSTONE:	Grayish orange (10 YR 7/4) to lt. olive gray (5 Y 6/1). Est. plast. mod. to high, trace carb. material, trace CaCO3.
				1.1/1	5823	11			CLAYSTONE:	Same as above. Predom. lt. olive gray (5 Y 6/1). Trace iron staining.
				0.4/0.3	5822	12			CLAYSTONE:	Same as above.
				1.5/1.7	5821	13			CLAYSTONE:	Same as above, also has dk. yellowish orange coloring. Note: No water encountered during drilling.
					5820	14				
					5819	15				
					5818	16				
					5817	17				
					5816	18				
					5815	19				
						20				

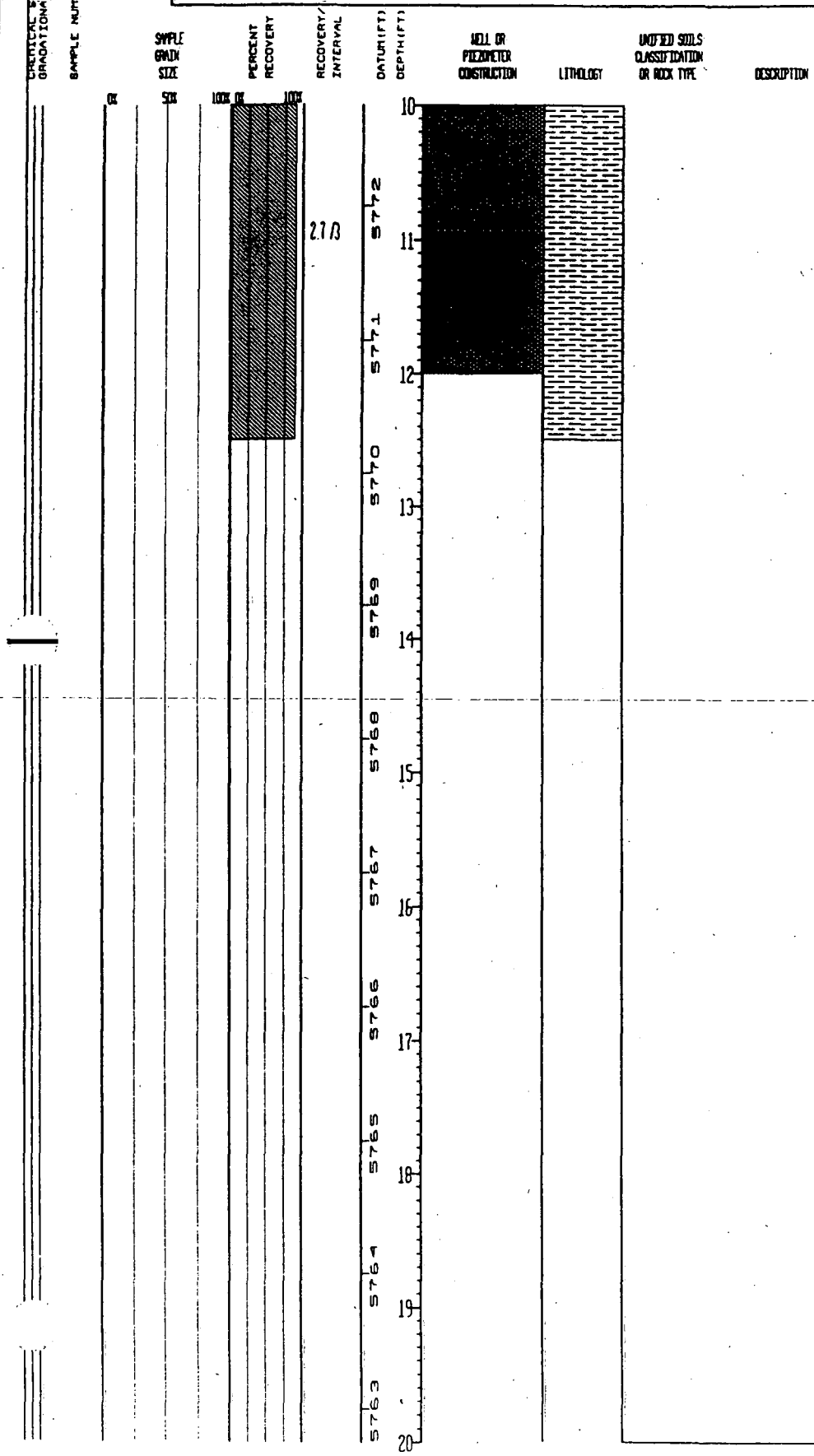
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 12.5	GROUND ELEVATION (FT): 5782.75	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 747888	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	65-86
EAST: 2087493	LOCATOR NUMBER: 07	BOREHOLE DIAMETER (IN): 7.25	DATE DRILLED: 09/13/86	
REMARKS: Hollow Stem Auger.				



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL:	SANDY CLAY, Dk. yellowish brown (10 YR 4/2), Est. plast. low to mod., sand VFG to coarse, Mod. to well sorted. Some surficial root material.
GC:	Clayey Sand, As above, fine to med. grained.
NO SAMPLE:	
NO SAMPLE:	Top of Bedrock
CLAYSTONE:	Lt. brownish gray (5 YR 6/1), Est. plast. mod., some sand and gravel at top of interval becomes siltier as you go down, some black carb. material. Trace iron staining, gravel fine to 1 cm.
CLAYSTONE:	Lt. olive gray (5 Y 6/1). No bedding evident, highly weathered, highly friable, silty towards bottom of interval. Some iron staining in

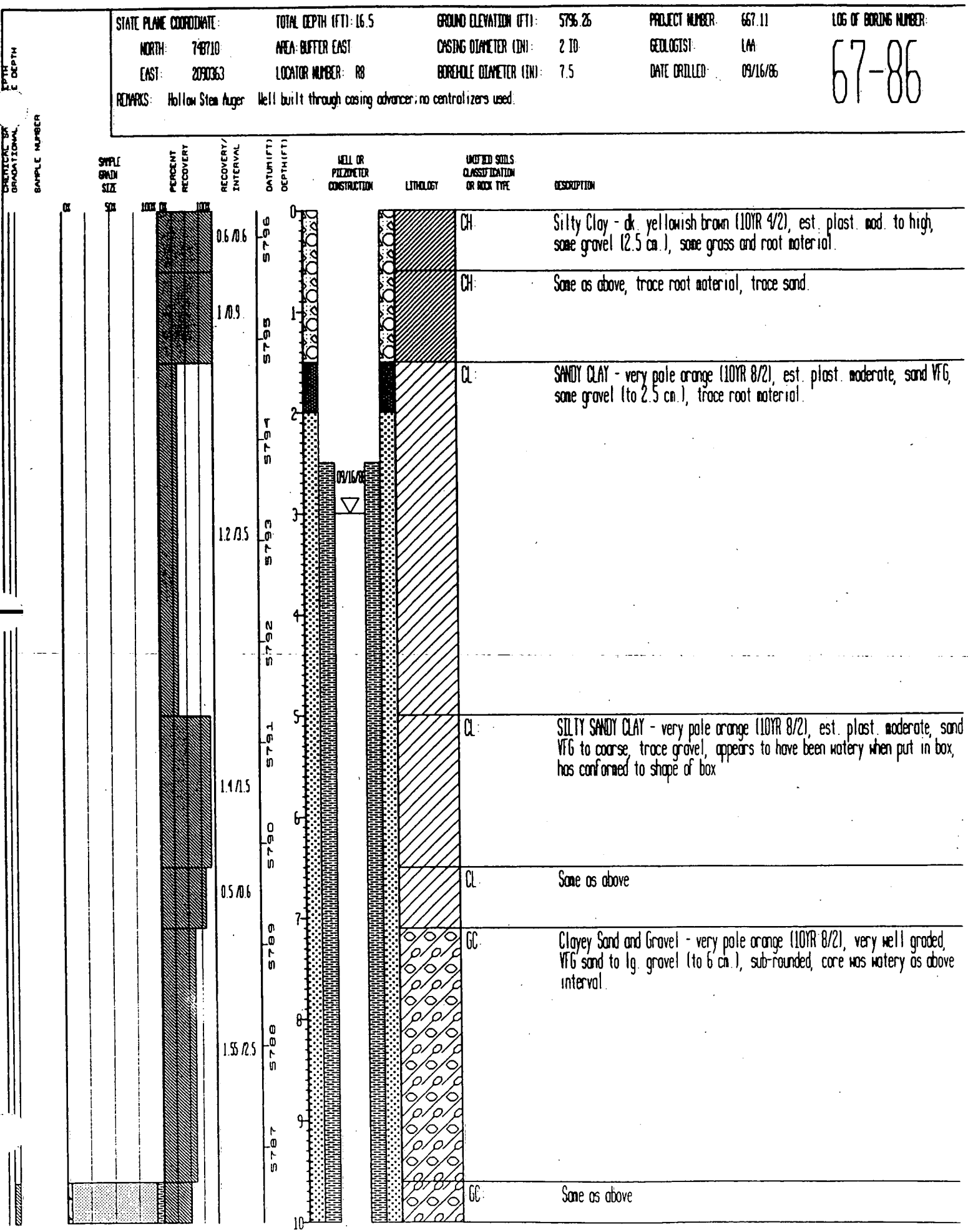
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 12.5		GROUND ELEVATION (FT):	5782.75	PROJECT NUMBER:	667.11
NORTH:	747888	AREA: BUFFER SOUTH		CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA
EAST:	2087493	LOCATOR NUMBER:	07	BOREHOLE DIAMETER (IN):	7.25	DATE DRILLED:	09/13/86
REMARKS:	Holoow Stem Auger						

LOG OF BORING NUMBER: 65-86



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 16.5	GROUND ELEVATION (FT):	5796.26	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 748710	AREA: BUFFER EAST	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	67-86
EAST: 2090363	LOCATOR NUMBER: R8	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	09/16/86	

REMARKS: Hollow Stem Auger Well built through casing advancer; no centralizers used.



STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 16.5	GROUND ELEVATION (FT):	5796.26	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748710	AREA: BUFFER EAST	CASING DIAMETER (IN):	2.10	GEOLOGIST:	LAA	67-86
EAST:	2090363	LOCATOR NUMBER: R8	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	09/16/86	

REMARKS: Hollow Stem Auger. Well built through casing advancer; no centralizers used.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
LM10			1.3/2.5	5786	10				
				5785	11				
				5784	12				Sample interval consists of a few pieces of sandy clay, not enough to accurately characterize interval
				5783	13				
			0.1/1.1	5782	14				Top of Bedrock Sample interval consists of a few pieces of sandy clay, not enough to accurately characterize interval.
				5781	15				
				5780	16				
				5779	17				
				5778	18				
				5777	19				
					20				

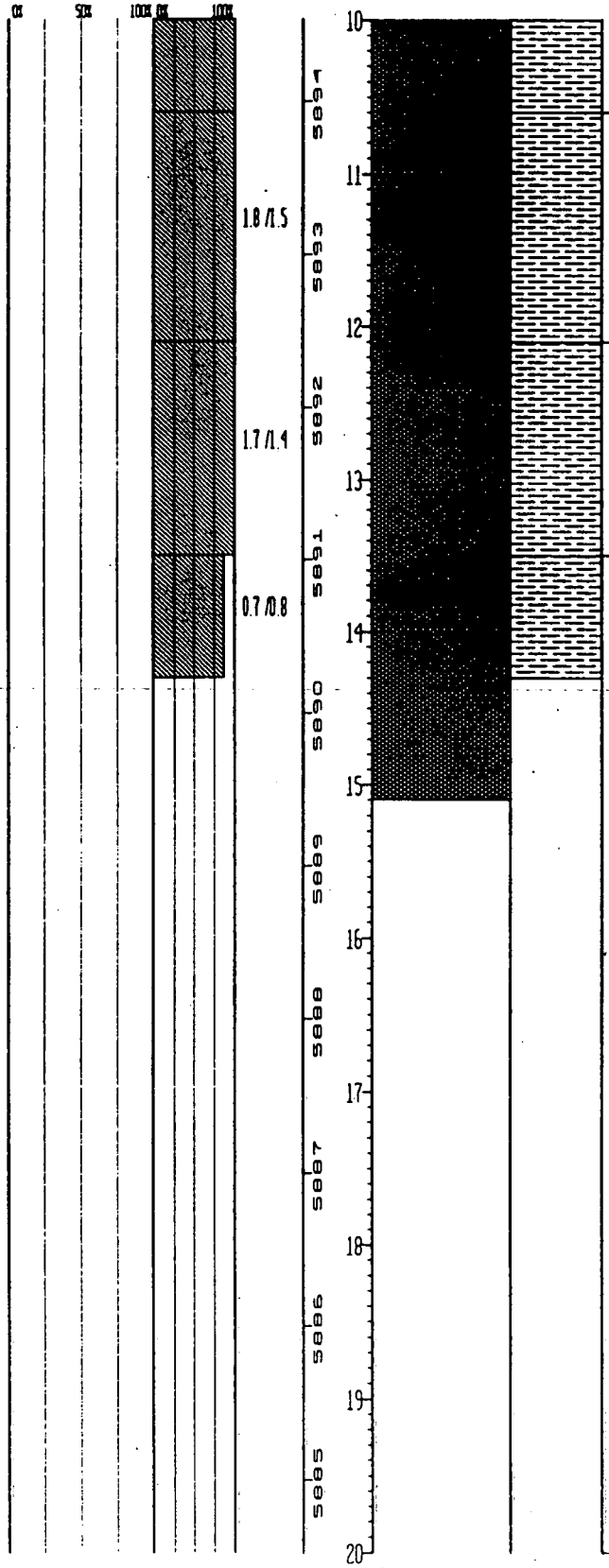
1987
BOREHOLES/MONITORING WELLS

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 14.3	GROUND ELEVATION (FT): 5904.53	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749003	AREA: 881 HILLSIDE	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	6-87
EAST: 2085134	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 05/14/87	
REMARKS: Hollow Stem Auger				

DEPTH	GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					1.6 /1.65	5904	0–1			CL:	SILTY CLAY - dark yellowish brown (10YR 4/2), low plasticity, some surficial roots, trace fine sand and fine gravel, gravel to approx. 1 cm.
					0.5 /0.35	5903	1–2			CL:	Same as above, decreasing silt.
					1 /1.05	5902	2–3			CL:	As above, increasing calcareous, grades to lighter color beginning at 2.4 ft., pale yellowish brown (10YR 6/2), very calc. 2.6 - 4.75'.
					1.5 /1.7	5901	3–4	06/24/87 ▽ 05/14/87 ▽		CL:	As above, continues grading to lighter color 3.45 to 4.75' - yellowish gray (5Y 7/2) to gray orange (10YR 7/4). Med. to large sub-rounded pebbles 3.7 - 4.75'.
					1.5 /0.75	5900	4–5			ML:	Clayey Silt - mottled color pale yellowish orange (10YR 8/6) to very pale orange (10YR 8/2), calc. in spots, some fine to coarse grained sand, moderately graded, mod. friable, no apparent bedding, some roots.
					1.5 /1.85	5899	5–6			ML:	As above.
					1.7 /1.65	5898	6–7			CLAYEY SILTSTONE:	Top of Bedrock As above.
					1.7 /1.6	5897	7–8			CLAYEY SILTSTONE:	As above, grades to med. lt. gray (N6) to med. gray (N5) 8.25 - 9.0'. Increasing claystone to 9.0', decreasing rocks, trace siltstone, calc. on partings below 7.9'.
						5896	8–9			CLAYSTONE:	Slightly silty, very lt. gray (N7) to med. gray (N5), mod. plasticity, no organic material, no bedding evident, calc. lense at 9.6', some iron stains on partings, calc. on some partings.
						5895	9–10				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 14.3		GROUND ELEVATION (FT):	5904.53	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748003	AREA: 881 HILLSIDE		CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	6-87
EAST:	2085134	LOCATOR NUMBER: M8		BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	05/14/87	
REMARKS:	Hollow Stem Auger							

SAMPLE NUMB | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	As above.
CLAYSTONE:	As above.
CLAYSTONE:	As above.

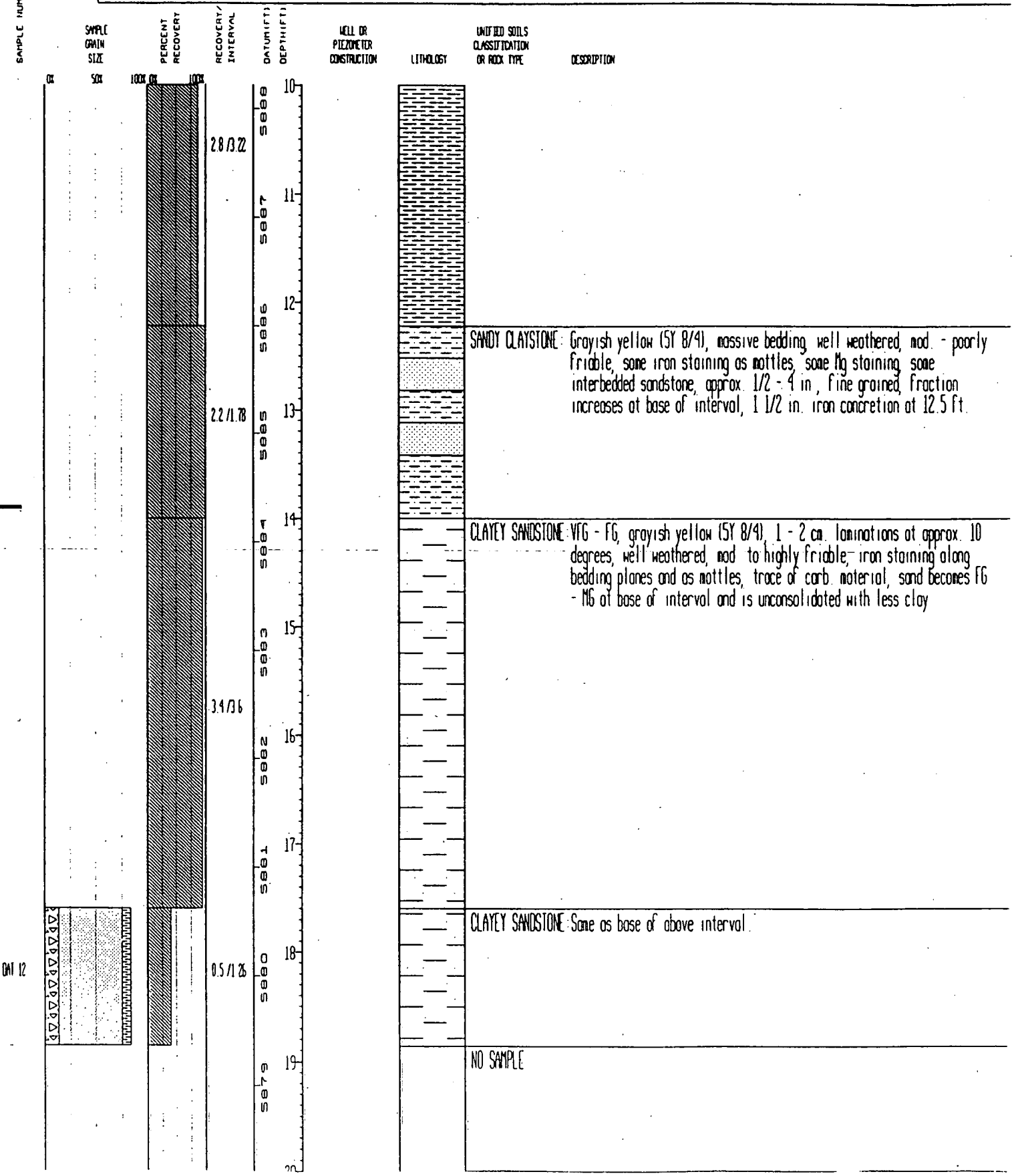
STATE PLANE COORDINATE		TOTAL DEPTH (FT) 32.6	GROUND ELEVATION (FT)	5898.22	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	747972	AREA: 0	CASING DIAMETER (IN):	0	GEOLOGIST:	DAT	6-87A
EAST:	2085468	LOCATOR NUMBER: M7	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	05/13/87	

REMARKS: Hollow Stem Auger. Abandoned hole at 32.0'. Plugged with Portland Type I cement.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	100%	1.4/1.4	5898	0			CL	GRAVELLY SANDY CLAY - mod. plast., some roots, max. size gravel = 3 cm.
			5897	1			CL	CLAY - pinkish gray (5YR 8/1), est. mod. plast., slightly calc., trace of calcite, trace of gravel.
							NO SAMPLE	
		0/3.6	5896	2				
			5895	3				
			5894	4				
			5893	5			CL	Same as above: grayish orange (10YR 7/4), top 2 in. of interval contains abundant roots and gravel and is pale yellowish brown (10YR 6/2).
							CLAYSTONE	Top of Bedrock Same as above grayish orange (10YR 7/4), interval has trace of Mg staining and has a floury texture
			5892	6				
		4.2/4	5891	7				
			5890	8				
			5889	9			CLAYSTONE	Same as above, some VFG -FG sand lenses (approx. 1 - 5 mm.)

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 32.6	GROUND ELEVATION (FT)	5898.22	PROJECT NUMBER:	667 11	LOG OF BORING NUMBER
NORTH: 749972	AREA: 0	CASING DIAMETER (IN):	0	GEOLOGIST:	DAT	6-87A
EAST: 2085468	LOCATOR NUMBER: M7	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	05/13/87	

REMARKS: Hollow Stem Auger Abandoned hole at 32.0'. Plugged with Portland Type I cement



STATE PLANE COORDINATE		TOTAL DEPTH (FT) 32.6	GROUND ELEVATION (FT)	5938.22	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	747972	AREA 0	CASING DIAMETER (IN)	0	GEOLOGIST	DAT	6-87A
EAST	2085468	LOCATOR NUMBER: M7	BOREHOLE DIAMETER (IN)	0	DATE DRILLED	05/13/87	

REMARKS: Hollow Stem Auger. Abandoned hole at 32.0' Plugged with Portland Type I cement.

DEPTH	GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					0/3.74	5878	20				
						5877	21				
						5876	22				
					1.5/1.7	5875	23			SANDSTONE	Grayish yellow (5Y 8/4), non - apparent bedding, highly weathered, highly friable, VFG - MG, sub-angular to sub-rounded, mod. to well sorted Top 1 ft is unconsolidated, some iron staining.
						5874	24				
					1.7/2.2	5873	25			SANDSTONE	Same as above: 1 - 2 cm. bedding at approx. 5 degrees, grains are MG - CG at bottom of interval and is unconsolidated. Bottom 2 in.: abundant iron staining and consolidated.
						5872	26				
					0.6/0.54					CLAYSTONE	Yellowish gray (5Y 8/1), bedding non - apparent, well weathered, mod - poorly friable, trace of iron staining.
					0/0.55	5871	27			NO SAMPLE	
					0.9/0.79	5870	28			CLAYSTONE	Same as above med. light gray (N6), abundant iron staining filling fractures approx. 90 degrees, 40 degrees
					1.9/1.6	5869	29			CLAYSTONE	Same as above med. light gray (N6), and very light gray (N8), bedding at 10 degrees, some silt
							30				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 32.6	GROUND ELEVATION (FT):	5898.22	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	747972	AREA: 0	CASING DIAMETER (IN):	0	GEOLOGIST:	DAT	6-87A
EAST:	2085468	LOCATOR NUMBER: M7	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	05/13/87	

REMARKS: Hollow Stem Auger. Abandoned hole at 32.0'. Plugged with Portland Type I cement

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%	1.8/1.5	5868	30			CLAYEY SANDSTONE	Grayish yellow (5Y 8/4), bedding horizontal, well weathered, mod. - poorly friable, VFG - FG, sub-angular to sub-rounded, mod. - well sorted, iron staining along bedding planes, trace of carb. material.
				5867	31				
			1.1/1.1	5866	32			CLAYEY SANDSTONE	Same as above, trace of calcite, trace of Mg staining, iron staining is filling approx 90 degree fractures NOTE No water encountered while drilling
				5865	33				
				5864	34				
				5863	35				
				5862	36				
				5861	37				
				5860	38				
				5859	39				
					40				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 15	GROUND ELEVATION (FT):	5951.5	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749286	AREA: 881 HILLSIDE	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH8-87
EAST:	2085049	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	06/03/87	

REMARKS: Hollow stem auger. Borehole backfilled w/ Portland Type I cement. Elevation estimated from topographic map.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0.6/1.2	5951	0			GC:	Clayey Gravel - medium light gray (N6), clay matrix is moderate brown (5YR 3/4), angular to sub-rounded, moderately graded, max. size 4 cm., some sand and roots.
				0.8/0.8	5950	1			GC:	As above.
				0.4/0.4	5949	2			GC:	As above, at 2.0 to 3.2 ft. the clay fraction decreases and the gravel becomes coarser, max. size 5 cm.
	BH0887D007			0.6/0.8		3			GC:	As above.
				0.4/1	5948	4			GC:	As above, at 3.2 to 4.2 ft. the clay fraction increases and the gravel diminishes in size, max. size is 2 cm.
				0/0.5	5947				NO SAMPLE:	
				1.3/1.7	5946	5			GC:	As above (reference interval 3.2 to 4.2 ft.). Two large gravel clasts occur.
	BH0887D011			0/0.6	5945	6			SILTY CLAYSTONE:	Top of Bedrock Mottled dark yellowish orange (10YR 6/6) to very light gray (N8), bedding is 1 mm. to 6 mm. and laterally discontinuous, silt and clay appears to interfinger, highly weathered, slightly friable.
				0.4/0.4	5944	7			NO SAMPLE:	
				1.5/1.5	5943	8			CLAYSTONE:	Grayish orange (10YR 7/4), bedding not apparent (massive?), highly weathered, moderately friable, iron staining occurs locally and along fractures.
				0.5/0.5		9			CLAYSTONE:	As above.
				0/0.2	5942	10			NO SAMPLE:	
									CLAYSTONE:	As above.
									CLAYSTONE:	Light gray (N7), bedding not apparent (massive?), highly weathered,

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 15	GROUND ELEVATION (FT): 5951.5	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749286	AREA: 881 HILLSIDE	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH8-87
EAST: 2085049	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 06/03/87	

REMARKS: Hollow stem auger. Borehole backfilled w/ Portland Type I cement. Elevation estimated from topographic map.

SAMPLE NUMB	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%							moderately friable, localized iron staining and carbonaceous mineralization.
			0.6/2.2	5941	10				
BH8871108R				5940	11				
			0.9/0.3		12			CLAYSTONE:	As above.
				5939				CLAYSTONE:	As above.
			1.7/1.7		13				
				5938					
					14			CLAYSTONE:	As above.
			1.2/1.2	5937					NOTE: No water encountered while drilling.
					15				
				5936					
					16				
				5935					
					17				
				5934					
					18				
				5933					
					19				
				5932					
					20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 37.5	GROUND ELEVATION (FT): 5980.22	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749068	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LMA	9-87BR
EAST: 2085348	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 06/12/87	

REMARKS: Boring No. 9-87BR/BH29-87.
Hollow Stem Auger.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.2/1.6	5980	0			GC:	Clayey Gravel - very lt. gray (N8), angular, mod. to well graded, granules to 4.5 cm., matrix sandy clay, med. brown (5YR 4/4 to 3/4), est. plast. low to mod., sand VFG to VCG.
				0/0.55	5979	1			NO SAMPLE:	
				0.25/0.2	5978	2			GC:	Clayey Gravel - white (N9), angular to sub-angular, poorly graded, max. size is 8 cm. Silty clay matrix mod. yellowish brown (10YR 5/4), est. plast. low to mod., some sand VCG to granules.
				0.8/0.8					GC:	Same as above.
				0.6/1	5977	3			GC:	Same as above, max. size 6 cm.
				0/0.2	5976	4			NO SAMPLE:	
				0.8/0.8					GC:	Same as above, max. size 5 cm., mod. graded.
BH29R0010				0/1	5975	5			NO SAMPLE:	
				1.2/0.6	5974	6			GC:	Same as above.
				0.2/0.9	5973	7			GC:	Same as above.
				1.5/2	5972	8			GC:	Same as above. Max. size 6.5 cm.
					5971	9			SW:	SAND - lt. brown (5YR 5/6), med. grained to granules, sub-rounded to rounded, mod. well graded, some silt, some gravel, rounded, granules to
						10				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 37.5	GROUND ELEVATION (FT):	5980.22	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	749068	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	9-87BR	
EAST:	2085348	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	06/12/87		

REMARKS: Boring No. 9-87BR/BH29-87
Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
LAA18			0.4/2	5970	10				3 cm., poorly graded, some clay.
29871 3CT				5969	11				
			0/1	5968	12			NO SAMPLE:	
									Top of Bedrock
				5967	13			NO SAMPLE	NO SAMPLE - this section of core was all in sample jars, was not logged.
				5966	14				
			0/5	5965	15				
29871 6BR				5964	16				
				5963	17	06/12/87			
29871 7WT				5962	18			SANDSTONE	Sandstone per sieve analysis, 17.5' - 19.5'. Per field log: Claystone - Light gray (N7), bedding not apparent, well weathered, slightly friable, iron stained VFG sand forms a rind on claystone fragments. Sand is grayish orange (10YR 7/4), fine grained, sub-rounded to rounded. Sand description above is for loose sand in interval, not for sandy rind on the claystone.
6CE2			0.4/2	5961	19				
			0/0.5		20			NO SAMPLE	

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 37.5	GROUND ELEVATION (FT): 5980.22	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749068	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	9-87BR
EAST: 2085348	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 06/12/87	

REMARKS: Boring No. 9-87BR/BH29-87
Hollow Stem Auger.

GRADATIONAL / DEPTH	SAMPLE NUMBER	SAMPLE GRADI SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	DC010			1.5/1.5	5960	20			SANDSTONE	Very pale orange (10YR 8/2), sub-rounded to rounded, poorly graded, VFG.
				0/1	5959	21			NO SAMPLE	
				1.5/1.5	5958	22			SANDSTONE	As above, color changes to grayish orange (10YR 7/4).
				0/1	5957	23			NO SAMPLE	
				1.3/2.5	5956	24			SANDSTONE	As above, (reference interval 20 to 21.5 ft.), color very pale orange (10YR 8/2).
				0/2.5	5955	25			NO SAMPLE	
					5954	26				
					5953	27				
					5952	28				
					5951	29				
						30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 37.5	GROUND ELEVATION (FT):	5990.22	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 749068	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	9-87BR
EAST: 2085348	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	06/12/87	

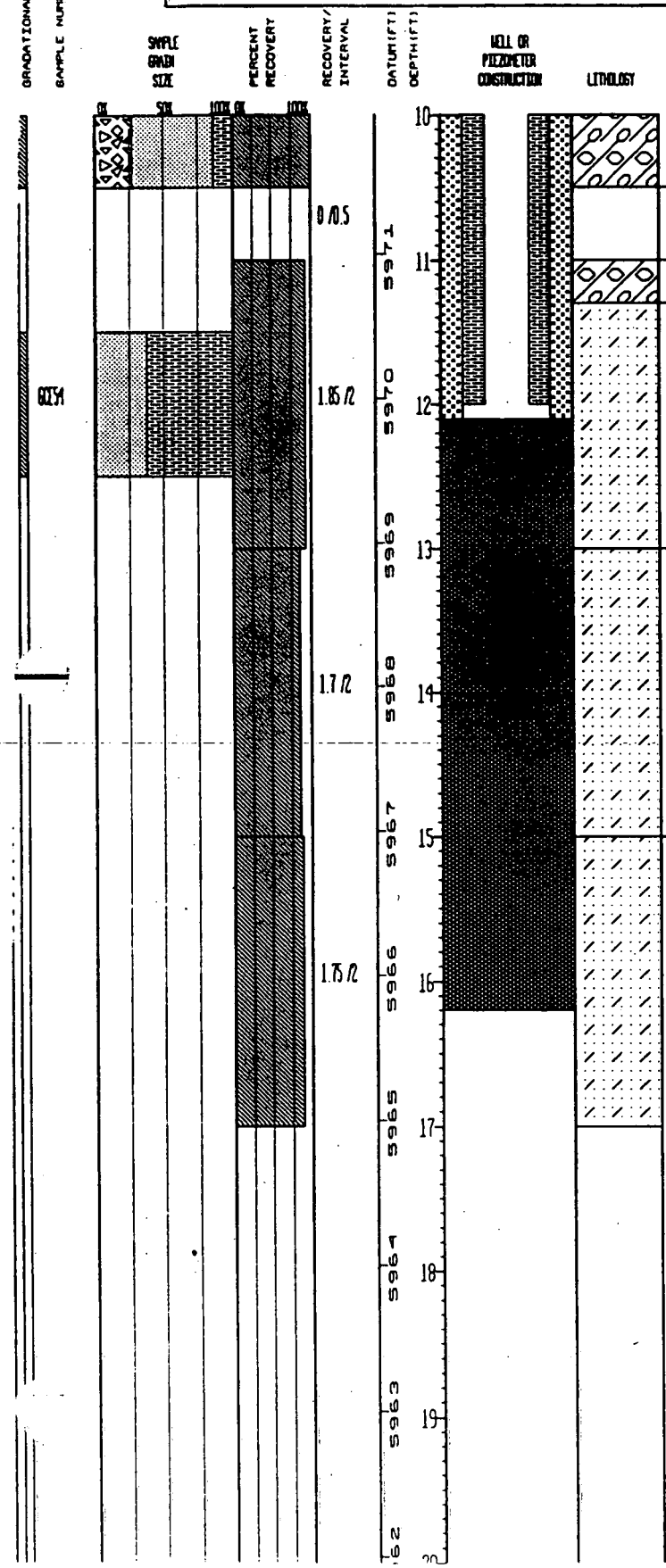
REMARKS: Boring No. 9-87BR/GH29-87
Hollow Stem Auger.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5990	30			SANDSTONE	Grayish orange (10YR 7/4), well graded, silt sized to granule sized, rounded grains, trace clay.
					5989	31			CLAYSTONE	Very lt gray (N8), est. plast. mod. to high, some iron staining in fractures, some carb. material.
	6253			2.6/2.5					SILTY SANDSTONE	Dk. yellowish orange, sand VFG to granules, rounded well graded, gravel to 1.5 cm., sub-angular to rounded, some clay.
					5988	32			SILTY CLAYSTONE	Very pale orange to grayish orange (10YR 8/2 to 10YR 7/4), mod. weathered, mod. friable, some iron staining, some carb. material, bedding appears horizontal, some sand, VFG to coarse grained in patches.
					5987	33				
				2.9/2.5	5986	34				
					5985	35			SILTY CLAYSTONE	Same as above.
				2.3/2.5	5984	36				
					5983	37				
					5982	38				
					5981	39				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 17	GROUND ELEVATION (FT):	5981.96	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH: 748947	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DCB		10-87
EAST: 2085289	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	06/15/87		
REMARKS: Hollow Stem Auger.							

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%	0.93 /1	5981	0			GC	GRAVEL - light gray (N7) and grayish orange pink (10R 8/2), angular to sub-rounded, low to high sphericity, poorly graded, some clay, grayish brown (5YR 3/2), trace of roots.
			0 /1		1			NO SAMPLE	
			0.63 /0.6	5980	2			GC	GRAVEL - grayish pink (5R 8/2) to light brownish gray (5YR 6/1), angular to sub-angular, sphericity is low to high, well graded, some clay, silt and sand.
				5979	3			NO SAMPLE	
			0 /2.4	5978	4				
				5977	5			GP	SANDY GRAVEL - light gray (N7), angular to sub-rounded, low to high sphericity, moderately graded, some calcareous mineralization.
			1.82 /2	5976	6				
				5975	7			GC	Same as above with some clay occurring from approximately 8.4 ft. to 9.0 ft
			1.85 /2	5974	8				
				5973	9			GC	Same as above including clay fraction.
0013			1.53 /1.5	72	10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 17	GROUND ELEVATION (FT):	5981.96	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 748947	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DCB	10-87
EAST: 2085289	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	06/15/87	
REMARKS: Hollow Stem Auger.						



NO SAMPLE:

GC: Same as above.

SILTY SANDSTONE: Top of Bedrock
Very weathered, fine to very fine, white (N9) and dark yellowish orange (10YR 6/6), some calcareous mineralization and black (carbonaceous?) mineralization, some horizontal bedding 3 - <1 mm. thick.

SILTY SANDSTONE: Same as above.

SILTY SANDSTONE: Same as above with decreasing amounts of staining and calcareous mineralization with depth. NOTE: Interval blocks from 15' to 17' appear to be reversed based on color gradation between 15' - 17' int. and 13' to 15' interval.

NOTE: No water encountered while drilling.

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 15.9	GROUND ELEVATION (FT)	5934.74	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	749581	AREA 903 PAD	CASING DIAMETER (IN)	2 10	GEOLOGIST	LAA	12-87BR
EAST	2096066	LOCATOR NUMBER N8	BOREHOLE DIAMETER (IN)	7 5	DATE DRILLED	07/14/87	

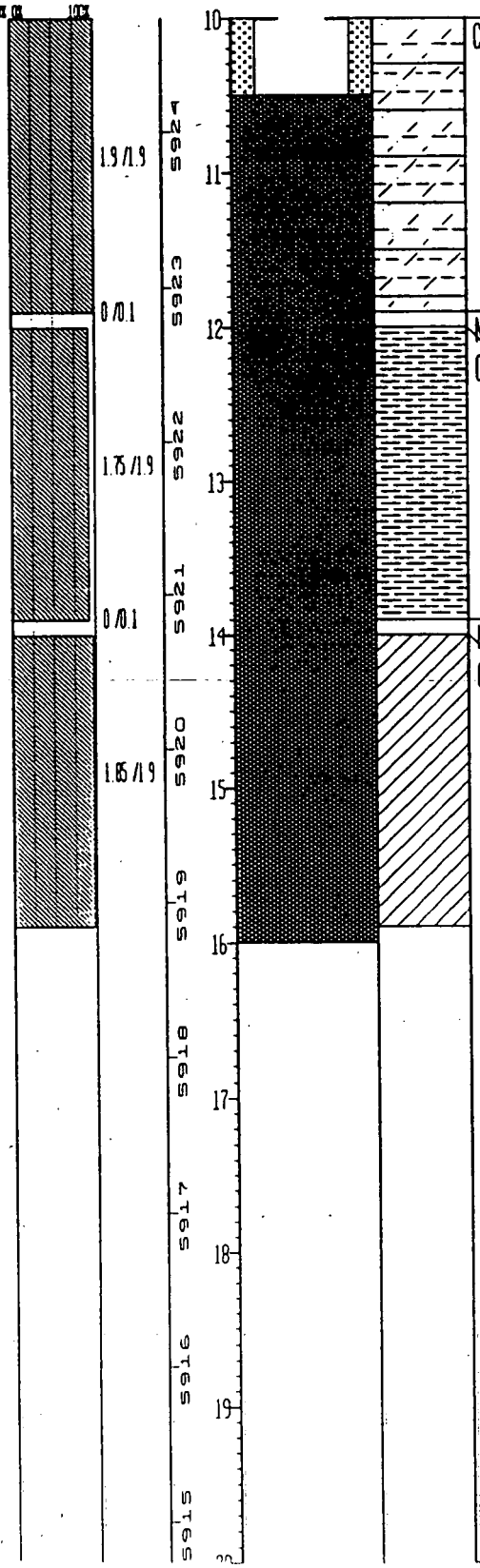
REMARKS Hollow Stem Auger

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.8 /0.8	5934	0			CL	SILTY CLAY - grayish brown (5YR 3/2), moderate plasticity, some surficial roots and grass, some sand and fine gravel, trace CaCO3
			0 /1.2	5933	1			NO SAMPLE	
			1.8 /2	5932	2			CH	As above Less silt, roots and sand, grades to clay, yellowish gray (5Y 8/1)
				5931	3			CLAYSTONE	Top of Bedrock Yellowish gray (5Y 8/1), moderately high plasticity, trace roots and iron staining
			1.8 /1.85	5930	4			CLAYEY SILTSTONE	Very pale orange (10YR 8/2), homogenous, iron staining throughout matrix
			0 /0.15	5929	5			NO SAMPLE	
			1.8 /1.9	5928	6	12/01/87		CLAYEY SILTSTONE	As above Trace carbonaceous material
			0 /0.09	5927	7	07/14/87		NO SAMPLE	
			1.8 /2	5926	8			CLAYEY SILTSTONE	As above Grains getting slightly larger, almost very fine grained sandstone
				5925	9				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 15.9	GROUND ELEVATION (FT)	5934.74	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	749581	AREA 903 PAD	CASING DIAMETER (IN)	2 ID	GEOLOGIST	LAA	12-87BR
EAST	2086066	LOCATOR NUMBER N8	BOREHOLE DIAMETER (IN)	7.5	DATE DRILLED	07/14/87	

REMARKS Hollow Stem Auger.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYEY SILTSTONE	Clayey Siltstone and Silty Claystone - interbedded, approaching soil / bedrock contact (gradational), very light gray (N8) to med. light gray (N6) to light olive gray (5Y 6/1). Clay constituent, moderate plasticity, some horizontal bedding evident, heavily iron stained, weathered, silt has some CaCO3.
NO SAMPLE	
CLAYSTONE	Same as above, becoming weathered claystone, abundant iron staining in matrix and especially in horizontal and vertical fractures, trace carbonaceous material
NO SAMPLE	
CL	Same as above

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 4	GROUND ELEVATION (FT):	5933.85	PROJECT NUMBER:	667 11	LOG OF BORING NUMBER:
NORTH:	749554	AREA: 903 PAD	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	12-87BRA
EAST:	2086033	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/10/87	

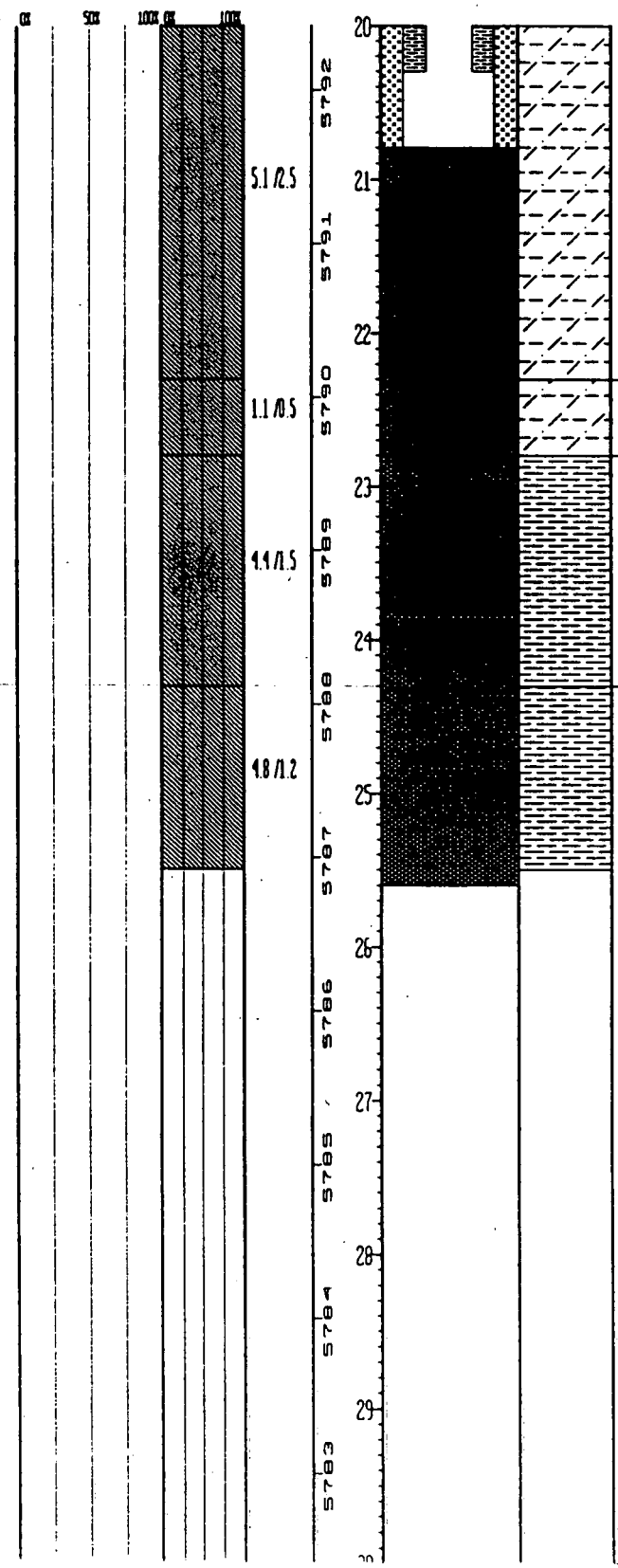
REMARKS: Hollow Stem Auger. BH backfilled w/Portland Type I cement due to poor recovery.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.5/2	5933	0–1			CH:	Silty Clay - dark yellowish brown (10YR 4/2), high plasticity, some gravel and plant detritus.
				5932	2			CL:	CLAY - medium light gray (N6) to yellowish gray (5Y 8/1), trace of gravel, roots and silt, sample reacts weakly with dilute HCl.
			0.1/2	5931	3				Note: No water encountered during drilling.
				5930	4				
				5929	5				
				5928	6				
				5927	7				
				5926	8				
				5925	9				
				5924	10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 25.6	GROUND ELEVATION (FT): 5812.42	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	29-87
EAST: 2087361	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/30/87	

REMARKS: Hollow Stem Auger.

GRADATIONAL DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY CLAYSTONE:	Top of Bedrock Grayish orange (10YR 7/4); mod. plast., some sand, some gravel, max. size = 2 cm., becomes more pure clay at bottom. Color change to dk. yellowish brown (10YR 4/2), some iron staining.
SILTY CLAYSTONE:	Same as above, some sandy areas (f grained).
CLAYSTONE:	Pale yellowish brown (10YR 6/2), mod. to high plast., some iron staining, trace carbonaceous material, trace silt.
CLAYSTONE:	Brownish gray (5YR 4/1), mod. to high plast., trace iron staining, color change to very pale orange and grayish orange (10YR 8/2 and 10 YR 7/4). Higher silt content toward bottom.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT):	5811.87	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748089	AREA: BUFFER SOUTH	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DCB	30-87BR
EAST:	2087424	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	10/06/87	

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			2/2	5811	0			CL:	GRAVELLY CLAY - dusky yellowish brown (10YR 2/2) and moderate yellowish brown (10YR 4/2), low plasticity, some sand, trace of roots and calcite.
			0.9/2	5810	2			GC:	Clayey Gravel - predominantly med. lt. gray (N6), angular to sub-rounded, mod. graded, max. size = 5 cm. some sand, bottom 2" is a silty clay brownish gray, (5YR 4/1), trace of sand, gravel and roots.
			0.9/2	5809	3			CL:	SANDY CLAY - fG to MG, mod. yellowish brown (10YR 5/4), mod. plast., trace of gravel, calcite in pockets.
			2.3/2	5808	4			CL:	Same as above with increase CaCO3 and trace of iron staining.
			2.25/2	5807	5			CL:	Same as above with bottom 8" having less sand, increased CaCO3 and some silt.
				5806	6				
				5805	7				
				5804	8				
				5803	9				
				5802	10				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT):	5811.87	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749089	AREA: BUFFER SOUTH	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DCB	30-87BR
EAST:	2087424	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	10/06/87	

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 100%	0.8 /0.8	5801	10	10/06/87 ▽		ML:	CALCAREOUS SILT - very pale orange (10YR 8/2), some sand.
			1.2 /1.2	5800	11			SC:	Grades into a Clayey Sand, FG to VCG sand. Sub-rounded to rounded and grayish orange (10YR 7/4), mod. graded, trace of CaCO3 in pockets.
			2 /2	5799	12			CL:	SANDY CLAY - FG, grayish orange (10YR 7/4), mod. plast., some silt and CaCO3 in pockets. Second half of interval is a sandy gravelly clay / clayey gravel, sub-rounded, mod. sorted, max. size = 1 cm.
			0 /2	5798	13			NO SAMPLE:	
			0.8 /1	5797	14			CLAYSTONE:	Top of Bedrock Light olive gray (5Y 6/1), massive bedding, weathered, slightly friable, trace of iron staining and organic matter.
			1.1 /1	5796	15			CLAYSTONE:	Same as above.
			1 /1	5795	16			CLAYSTONE:	Same as above; moderately friable, iron staining apparent in fractures.
			0.6 /1	5794	17			CLAYSTONE:	Same as above; grayish orange (10YR 7/4), apparently very moist at one time.
				5793	18				
				5792	19				
					20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT): 5811.87	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DCB	30-87BR
EAST: 2087424	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/06/87	

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		100%	1/1	5791	20–21			CLAYSTONE:	Lt. olive gray (5Y 6/1), massive bedding, well weathered, moderately friable, iron staining apparent in fractures and as mottles, trace of organic matter.
			1/1	5790	21–22			CLAYSTONE:	Same as above; less iron staining.
			1/1	5789	22–23			CLAYSTONE:	Light olive gray (5Y 6/1), massive bedding, mod. friable, highly weathered, iron staining in fractures, trace of organic staining.
			1/1	5788	23–24			CLAYSTONE:	Same as above.
			1.2/1	5787	24–25			CLAYSTONE:	Same as above; increased iron staining and organic matter.
			1/1	5786	25–26			CLAYSTONE:	Same as above.
			1/1	5785	26–27			CLAYSTONE:	Same as above.
			0.8/1	5784	27–28			CLAYSTONE:	Same as above.
			1/1	5783	28–29			CLAYSTONE:	Same as above; increased iron staining (in fractures and as mottles).
			1/1	5782	29–30			CLAYSTONE:	Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT): 5811.87	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DCB	30-87BR
EAST:	2087424	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/06/87	

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1/1	5781	30			CLAYSTONE:	Med. lt. gray (N6) to lt. olive gray (5Y 6/1), massive bedding, well weathered, mod. friable, iron staining as mottles and in fractures, some organic matter.
			1/1	5780	31			CLAYSTONE:	Same as above.
			1/1	5779	32			CLAYSTONE:	Same as above.
			1/1	5778	33			CLAYSTONE:	Same as above.
			1/1	5777	34			CLAYSTONE:	Same as above.
			1/1	5776	35			CLAYSTONE:	Same as above.
			1/1	5775	36			CLAYSTONE:	Same as above.
			1/1	5774	37			CLAYSTONE:	Same as above.
			1/1	5773	38			SILTY CLAYSTONE:	Lt. olive gray, massive bedding, well weathered, mod. friable, iron staining as mottles and in fractures, trace of carbonaceous staining.
			1/1	5772	39			SILTY CLAYSTONE:	Same as above.
					40				

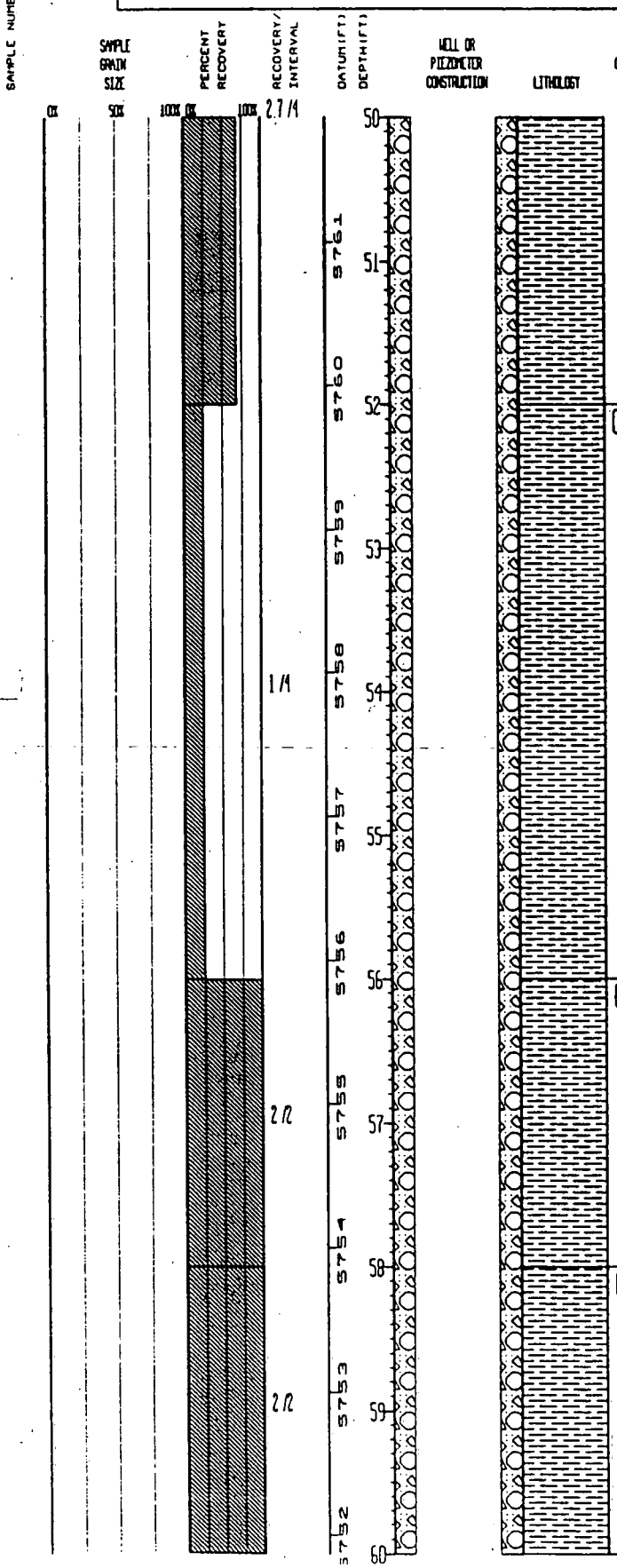
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT): 5811.87	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DCB	30-87BR
EAST: 2087424	LOCATION NUMBER: 08	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/06/87	

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1/1	5771	40			CLAYSTONE:	Light brownish gray (5YR 6/1) to med. lt. gray (N6), massive bedding, well weathered, mod. friable, some iron staining in fractures and as mottles, trace of carbonaceous staining and silt.
			1/1	5770	41			CLAYSTONE:	Same as above with less iron staining and some silt and fine sand in pockets.
			1/1	5769	42			CLAYSTONE:	Same as above with no silt or sand, med. dk. gray (N4) and increased amount of carbonaceous material.
			1/1	5768	43			CLAYSTONE:	Same as above with no iron staining.
			1/1	5767	44			SILTY CLAYSTONE:	Lt. olive gray (5Y 6/1), massive bedding, well weathered, mod. friable, approx. 1 mm. thick coal seams (vertical), trace of iron staining.
			0/0.5		45			NO SAMPLE:	
			2.5/2.5	5766	46			CLAYSTONE:	Medium gray (N5), bedding not apparent (massive?), well weathered, highly friable, trace of silt.
				5765	47				
				5764	48			CLAYSTONE:	As above.
				5763	49				
			2.7/4	5762	50				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT): 5811.87	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DCB	30-87BR
EAST: 2087424	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/06/87	

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	As above: color changes to light olive gray (5Y 6/1) at 52.0 ft. with an increase in the silt fraction.
CLAYSTONE:	Medium light gray (N6), bedding appears to be horizontal based on core breaks, well weathered, moderately friable, some silt and carbonaceous mineralization. Interval becomes highly carbonaceous below 58.0 ft.
CLAYSTONE:	As above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT): 5811.87	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DCB	30-87BR
EAST: 2087421	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/06/87	

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			2 ft	5751	60–61			CLAYSTONE:	As above.
			2 ft	5750	61–62			CLAYSTONE:	Medium gray (N5), bedding not apparent (massive?), weathered, slightly friable, carbonaceous mineralization occurs on partings, trace of silt.
			2 ft	5749	62–63				
			0.1 ft	5748	63–64			CLAYSTONE:	As above.
			2 ft	5747	64–65			CLAYSTONE:	As above.
			2 ft	5746	65–66				
			2 ft	5745	66–67			CLAYSTONE:	As above.
			2 ft	5744	67–68			CLAYSTONE:	As above.
			2 ft	5743	68–69				
				5742	69–70				

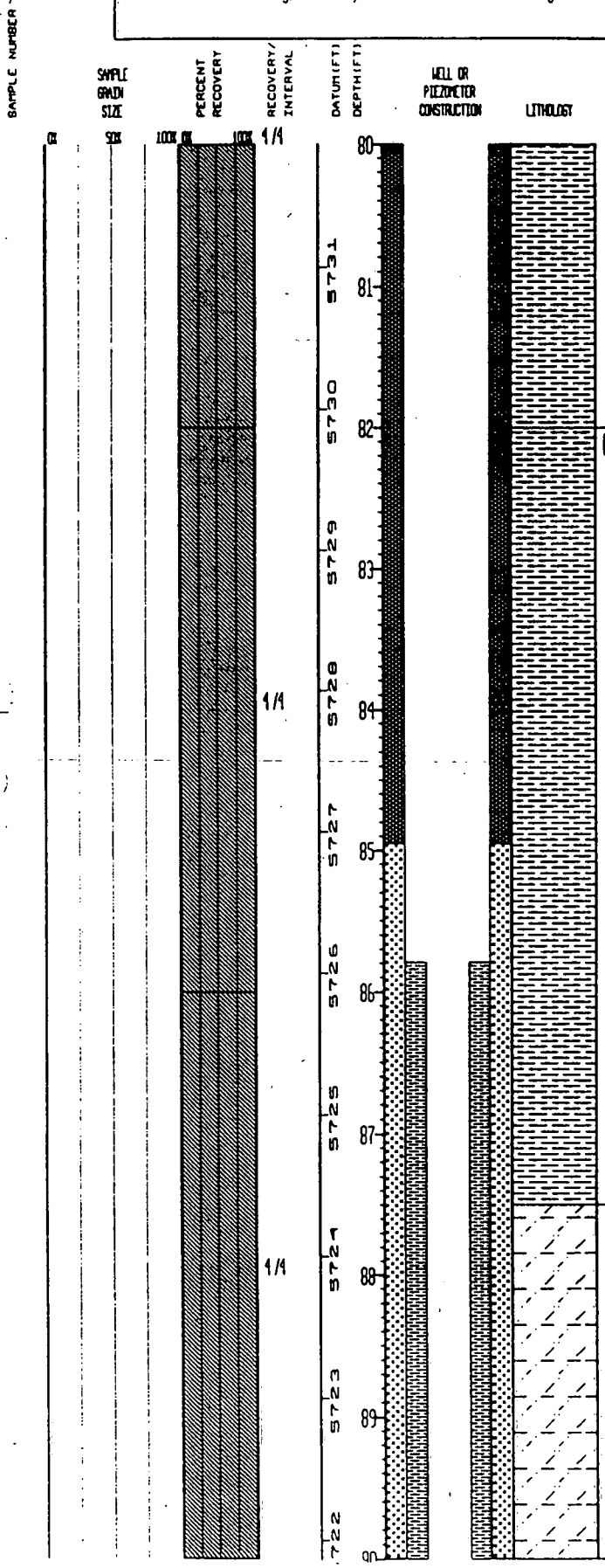
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT): 5811.87	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DCB	30-87BR
EAST: 2087424	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/06/87	

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 100%	2/2	5741	70			CLAYSTONE:	As above.
				5740	71				
					72			CLAYSTONE:	As above.
			2/2	5739	73				
				5738	74			CLAYSTONE:	As above.
				5737	75				
			1/1	5736	76				
				5735	77				
				5734	78			CLAYSTONE:	As above.
				5733	79				
			1/1	5732	80				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT):	5811.87	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	748089	AREA: BUFFER SOUTH	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DCB	30-87BR	
EAST:	2087424	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	10/06/87		

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.



CLAYSTONE: As above with increase in silt fraction and change in color - light gray (N7).

CLAYEY SILTSTONE: Light gray (N7), bedding appears to be horizontal and thin bedded, well weathered, slightly friable, carbonaceous mineralization occurs on partings.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT): 5811.87	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: ISD/DCB	30-87BR
EAST: 2087424	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/06/87	

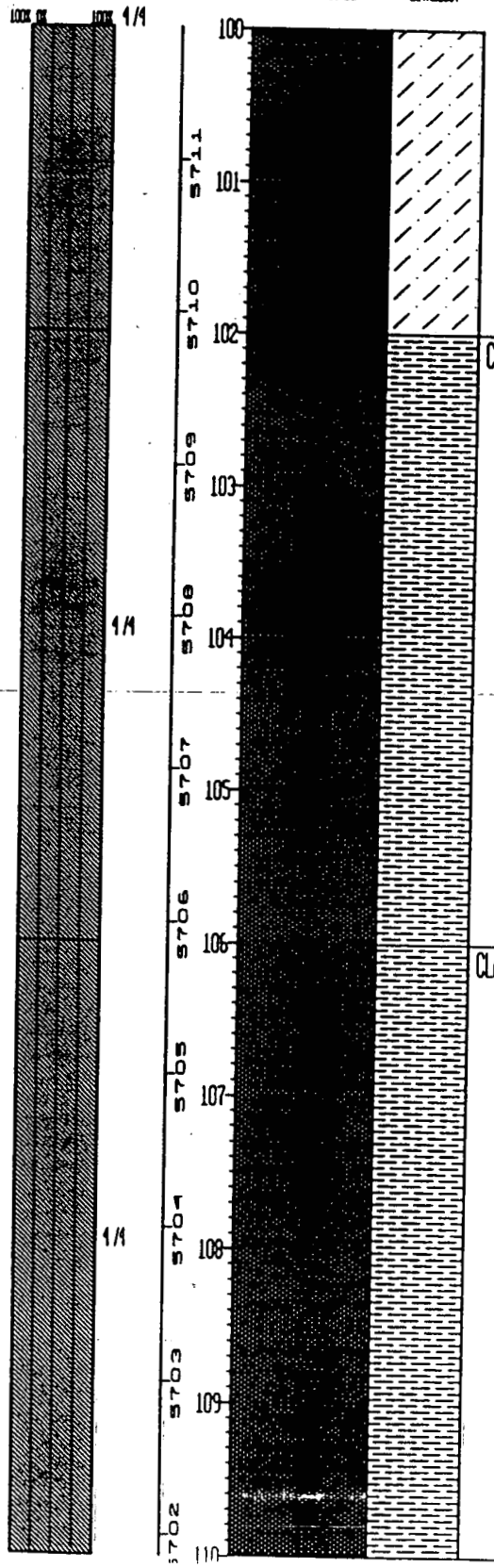
REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.4/1.4	5721	90–91				CLAYEY SILTSTONE: As above.
			2.6/2.6	5720, 5719	92–93				CLAYEY SILTSTONE: As above.
			3/4	5718, 5717, 5716, 5715	94–97				SILTY CLAYSTONE: Interval grades to silty claystone at approx. 94.0 ft. Light gray (N7), bedding may be horizontal based on core breaks, well-weathered, moderately friable, carbonaceous mineralization on partings, local iron staining. Slabbed interval shows bedding to be <2 mm. thick and to be deformed, possible dewatering structures / bioturbation. At 97.0 ft. interval grades back to siltstone.
			4/4	5714, 5713, 5712	98–100				SILTSTONE: light gray (N7), thin bedded, <2 mm., horizontal, weathered, slightly friable, slight clay fraction. 100 to 102 ft. claystone, medium gray (N5), bedding may be thin <2 mm. with 20 degree dip based on core breaks, well weathered, mod. friable, carbonaceous mineralization on partings.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 110	GROUND ELEVATION (FT):	5811.87	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748089	AREA: BUFFER SOUTH	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DCB	30-87BR
EAST:	2087424	LOCATOR NUMBER: 08	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	10/06/87	

REMARKS: Hollow Stem Auger / Rotary Core Drilled. Surface casing set to 45.0' by R. Treat, October 1, 1987.

GRADATIONAL DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50%) | PERCENT RECOVERY (100% 0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



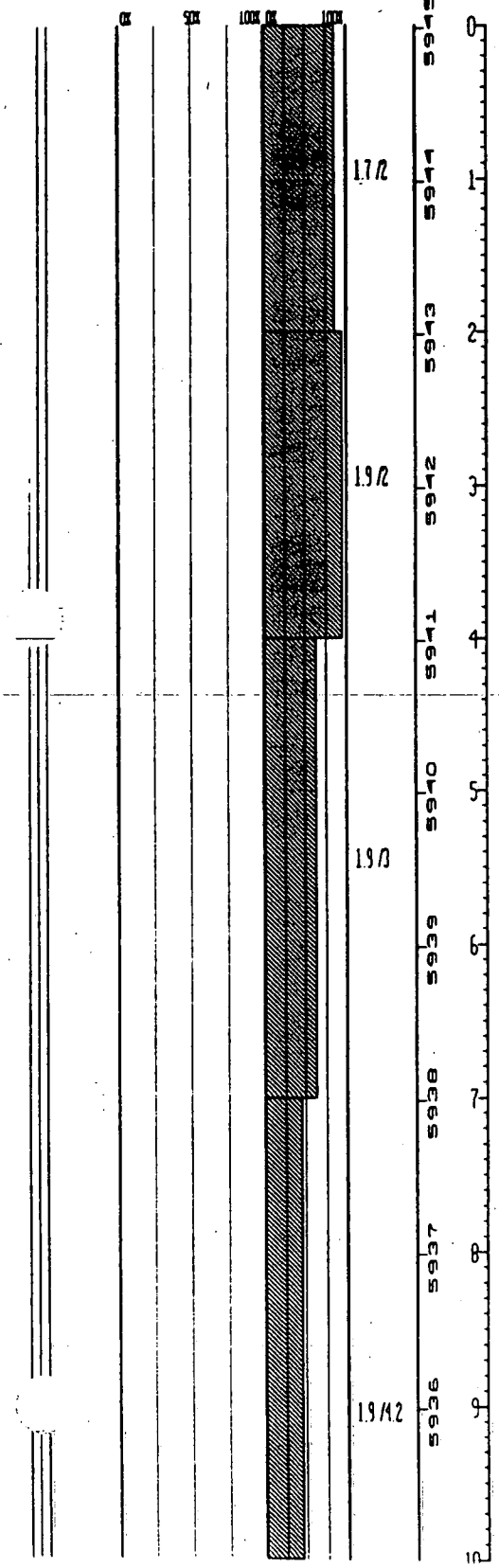
CLAYSTONE: Top half of interval is carbonaceous claystone, grayish black (N2), thin bedded <1 mm., horizontal bedding, weathered, highly friable, many coal lenses. Bottom half of interval is claystone, medium dark gray (N4), thin horizontal bedding <2 mm., well weathered, moderately friable, abundant carbonaceous mineralization, some coal stringers. Reduction in carbonaceous material below 105.5 ft.

CLAYSTONE: Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT):	5945.02	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	749500	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	31-87BR	
EAST:	2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/29/87		

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.

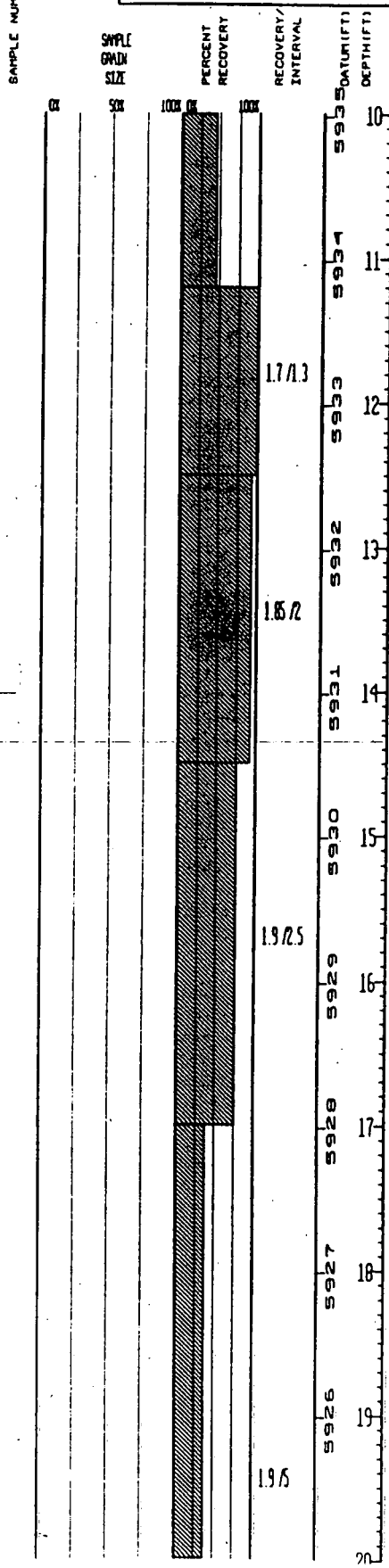
GRADATIONAL S... DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL:	GRAVELLY SILTY CLAY - dk. yellowish brown to grayish brown (10YR 4/2 to 5YR 3/2), est. plast. mod. Gravel angular to sub-angular, poorly graded 2-4 cm., some grass and roots at surface, some CaCO3, some sand, VFG to VCG.
GC:	Grades to Gravel in Caliche, gravel well graded, granules to 5 cm., angular to sub-rounded, still has some brown silty clay from above with the caliche.
GC:	Gravel and Caliche - no predom. color, angular to sub-rounded, well graded, granules to 4 cm., caliche and clay matrix, some sand, VFG to VCG.
GC:	Clayey Gravel - gravel med. dk. gray (N4), angular to sub-angular, mod. well graded, granules to 7 cm., clay matrix lt. brown (5YR 6/4 to 5/6), est. plast. low, sand VFG to VCG, abundant CaCO3
GC:	Same as above, slightly less CaCO3.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT): 5945.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749500	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LMA	31-87BR
EAST: 2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/29/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.



GC: Clayey Gravel - med. dk. gray (N4), angular to sub-angular, mod. well graded, granules to 7 cm., sandy clay matrix, lt. brown (5YR 6/4 to 5/6), est. plast. low, sand VFG to VCG, some CaCO3.

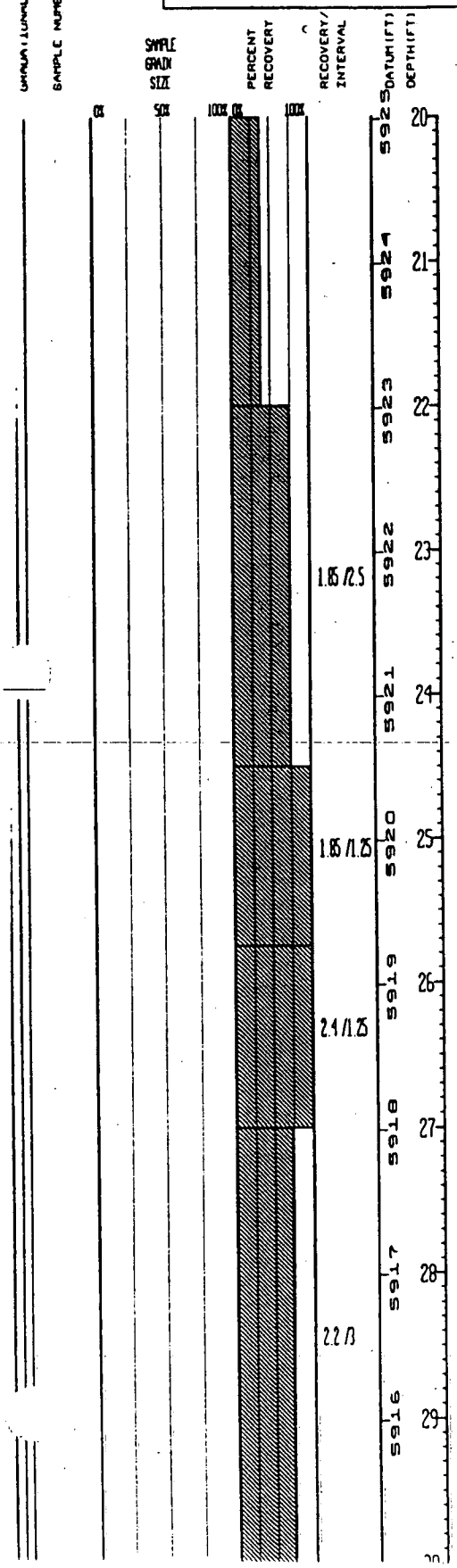
GC: Same as above.

CL: SANDY GRAVELLY CLAY - grayish orange (10YR 7/4) to dk yellowish orange (10YR 6/6), est. plast. low, gravel sub-angular to sub-rounded, mod. graded granules to 5 cm., sand VFG to VCG, trace CaCO3.

CL: Same as above, gravel to 6 cm.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT): 5945.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749500	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	31-87BR
EAST: 2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/29/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.



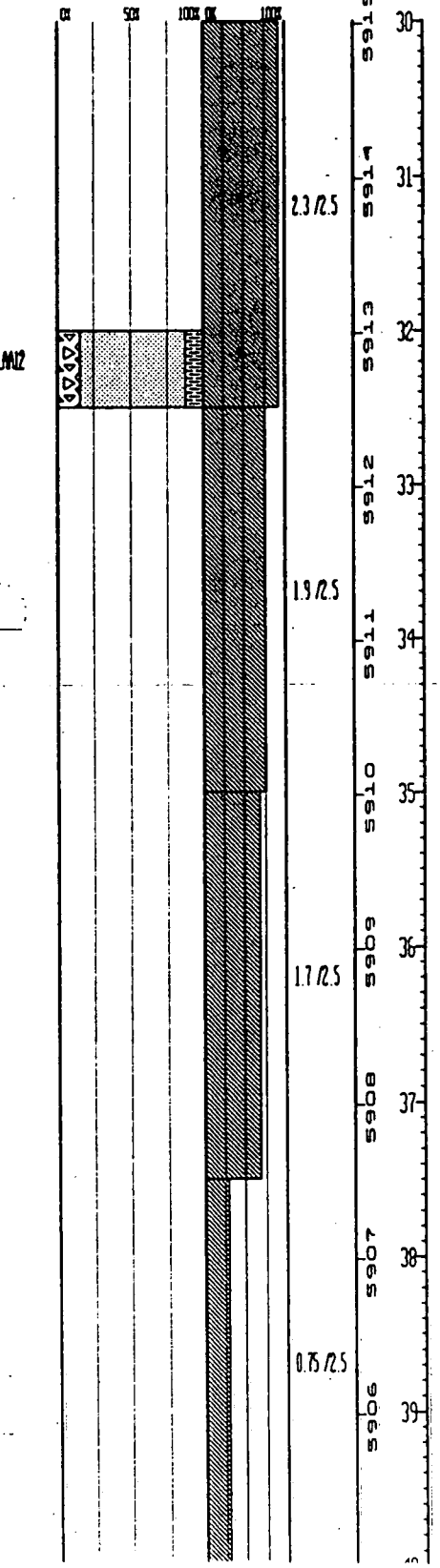
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	Sandy Clayey Gravel - dk. gray (N3), angular to sub-rounded, mod. graded, max. size 7 cm., matrix sandy clay, grayish orange (10YR 7/4), plast. low to mod., sand VFG to coarse.
CL:	GRAVELLY SANDY CLAY - lt. brown (5YR 5/6), est. plast. mod., gravel to 6 cm., (mainly at top of interval), mod. graded, sub-rounded, sand VFG to granules.
CL:	SANDY CLAY - some gravel, same as above, max. size gravel approx. 2 cm.
CL:	SANDY CLAY - some gravel, same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT):	5945.02	PROJECT NUMBER:	667.11
NORTH: 749500	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA
EAST: 2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/29/87

LOG OF BORING NUMBER: **31-87BR**

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



Unified Soils Classification or Rock Type	Description
GC:	Clayey Sand and Gravel - lt. brown (5YR 5/6), sand med. grained to granules, sub-angular, well graded, gravel angular to sub-rounded, mod graded to 4 cm.
CL:	SANDY GRAVELLY CLAY - grayish orange to dk yellowish orange (10YR 6/6 to 7/4), est. plast. low, sand VFG to VCG, gravel granules to 2 cm., sub-rounded, some silt.
GC:	Clayey Sand and Gravel - grayish orange to dk. yellowish orange (10YR 7/4 to 6/6), sand VFG to VCG, mod. graded, sub-rounded, gravel granules to 5 cm., sub-angular to sub-rounded, mod. graded, some silt.
GC:	Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT):	5945.02	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749500	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	31-87BR
EAST:	2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/29/87	

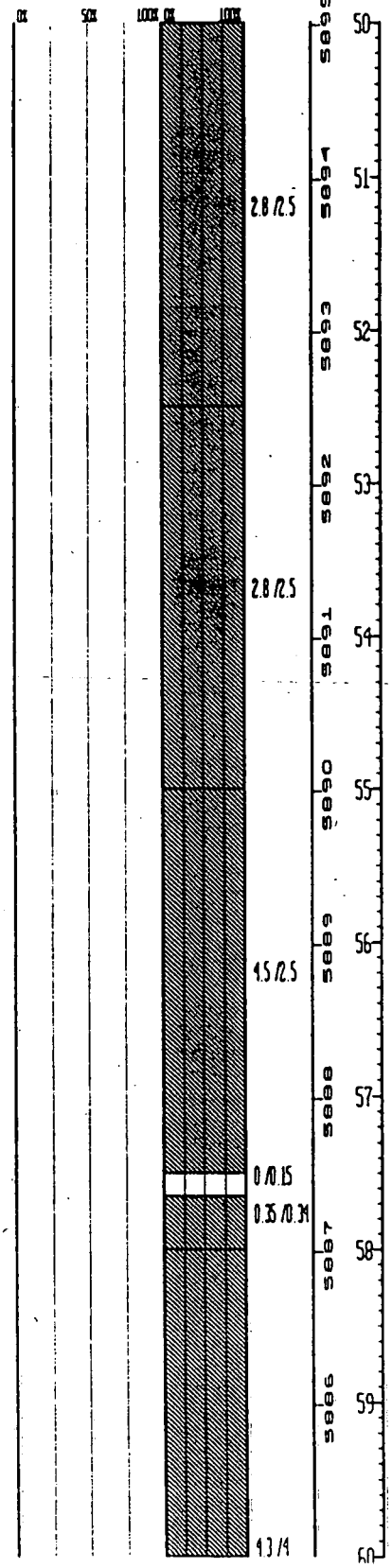
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.

SAMPLE GRAIN SIZE	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0% 50% 100%	0 /2.5	5905	40			NO SAMPLE:	
		5904	41				
		5903	42				
	1 /2.5	5902	43			GC:	Clayey Sandy Gravel - grayish orange (10YR 7/4), angular to rounded, sand, VFG to VCG, gravel granules to 1.5 cm. (one cobble 5 cm.), mod. well graded, some silt. This interval appears to have originally been wet.
		5901	44				
		5900	45			SILTY CLAYSTONE:	Top of Bedrock Pinkish gray (5YR 8/1) to dk. yellowish orange, est. plast. mod.
	2.85 /2.5	5899	46				
		5898	47				
	1.8 /0.5	5897	48			SILTY CLAYSTONE:	Same as above, plast. mod. to high.
	2.4 /2	5896	49			SILTY CLAYSTONE:	Same as above (may be highly weathered claystone).
			50				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT): 5945.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749500	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	31-87BR
EAST: 2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/29/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.

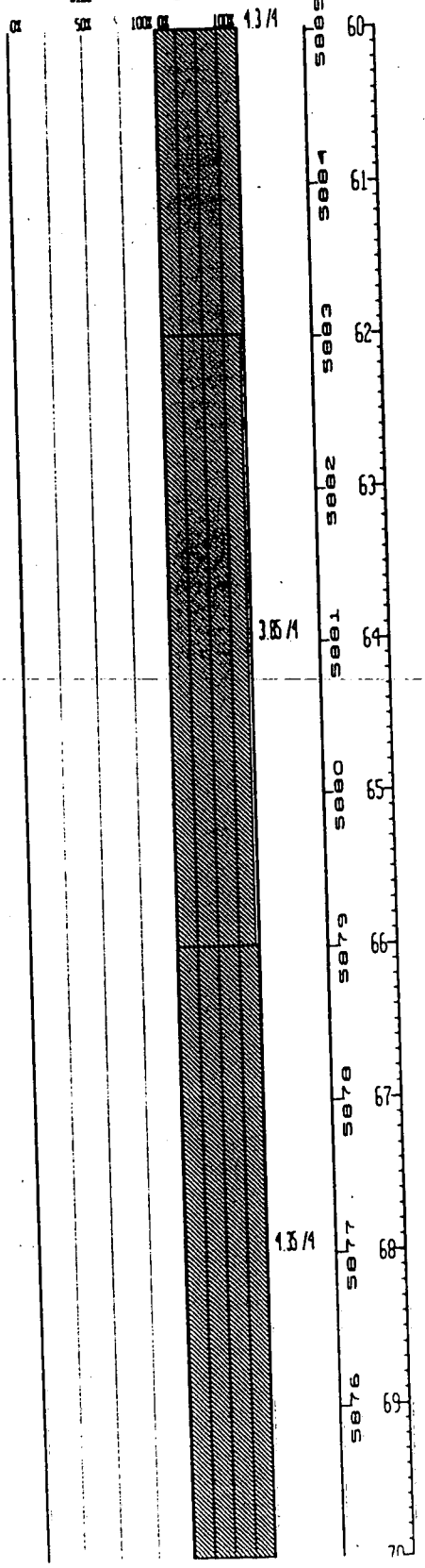
SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY CLAYSTONE:	Grayish orange (10YR 7/4), est. plasticity mod. to high. Contact - becomes Claystone (at approx. 51.5 ft.).
CLAYSTONE:	Brownish gray (5YR 4/1), highly weathered, slightly to mod. friable, some silt, some iron staining, bedding appears horizontal and thin with silt between layers.
SILTY CLAYSTONE:	Brownish gray (5 YR 4/1), highly weathered, mod. to highly friable, bedding not evident, becomes very silty at bottom of interval, trace iron staining.
SILTY CLAYSTONE:	Same as above, siltier in some areas.
NO SAMPLE:	
CLAYSTONE:	Brownish gray (5YR 4/1), highly weathered, mod. friable, bedding not evident, some siltstone, trace carb. material.
CLAYSTONE:	Same as above, some mod. yellowish brown (10YR 5/4) discoloration, some possible slickensides on a vertical fracture, some iron staining at bottom of interval.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT):	5945.02	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749500	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	31-87BR
EAST:	2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/29/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.



CLAYSTONE: Brownish gray (5YR 4/1), highly weathered, mod. friable, bedding not evident, some carb. material, trace of iron staining, trace silt.

CLAYSTONE: Same as above, bedding horizontal, layers, trace gravel, (no iron stains visible).

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT):	5945.02	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749500	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	31-87BR
EAST:	2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/29/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0% 50% 100%	0% 100%		5875	70			CLAYSTONE:	Brownish gray (5YR 4/1) to lt. olive gray (5YR 6/1), highly weathered, mod. friable, bedding not evident, silty in areas.
			5874	71				
		4.3/4	5873	72				
			5872	73				
		0.7/0.44	5871	74			CLAYSTONE:	Same as above.
			5870	75			SILTY CLAYSTONE:	Lt. olive gray (5YR 6/1), highly weathered, mod. friable, bedding appears as layered, horizontal from weathering, abundant carb. material, trace iron staining.
		3.15/3.55	5869	76				
			5868	77				
			5867	78			SILTY CLAYSTONE:	Same as above, becoming less silty to claystone toward bottom of interval.
			5866	79				
		4.5/4		80				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT):	5945.02	PROJECT NUMBER:	667.11
NORTH: 749500	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA
EAST: 2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/29/87

LOG OF BORING NUMBER: **31-87BR**

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SIZE	100% 0%	100% 4.5/4	5865	80				
			5864	81				
			5863	82				SILTY CLAYSTONE: Brownish gray (5YR 4/1), highly weathered, mod. friable, bedding appears horizontal, layered (from weathering), abundant carb. material.
		1.8/3.05	5862	83				
			5861	84				
			5860	85				SILTY CLAYSTONE: Same as above.
		0.05/0.94	5859	86				SILTY CLAYSTONE: Same as above, becoming siltier toward bottom, beds appear to begin to tilt toward bottom, not as much carb. toward bottom, but still has some.
			5858	87				
		4.85/4	5857	88				
			5856	89				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT): 5945.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749500	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	31-87BR	
EAST: 2088309	LOCATOR NUMBER: P3	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/29/87		

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.

SAMPLE GRADIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	100%	2.2/2	5855	90			SILTY CLAYSTONE	Lt. olive gray to olive gray (5YR 6/1 to 4/1), highly weathered, mod. friable, bedding not evident, some carb. material, some mod. brown discoloration, trace iron staining.
			5854	91				
			5853	92	12/01/87 ▽		SILTY CLAYSTONE	Same as above, some siltstone layers.
		0.9/1	5852	93			SILTSTONE	Interbedded siltstones and claystones, lt. olive gray (5Y 6/1) to olive gray (5Y 4/1), highly weathered, mod. friable, bedding not clear but appears to be tilted in some areas, some fractures also show possible tilted bedding, some carb. material.
			5851	94				
		3/3	5850	95				
			5849	96			SILTSTONE	Same as above, some lt. brown (5YR 5/6) discolorations in matrix, some rusted metal (probably nails from drilling operation), at top of interval.
			5848	97				
		4.6/4	5847	98				
			5846	99				
				100				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT): 5945.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749500	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	31-87B
EAST: 2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/29/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.

CHEMICAL SAMPL / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% – 50% – 100%)	PERCENT RECOVERY (0% – 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.9/2.3	5944	100				SILTY CLAYSTONE: Lt. olive gray (5Y 5/1), mod. weathered, slightly to mod. friable, beddi not evident, trace carb. material, trace iron staining.
					5943	101				
					5942	102				
				1.65/1.7	5941	103				SILTY CLAYSTONE: Same as above.
					5940	104				SILTY CLAYSTONE: Same as above.
				3.9/3.8	5939	105				
					5938	106				
				0/0.19	5937	107				NO SAMPLE:
					5936	108				SILTY CLAYSTONE: Same as above.
				3.15/2.7		109				

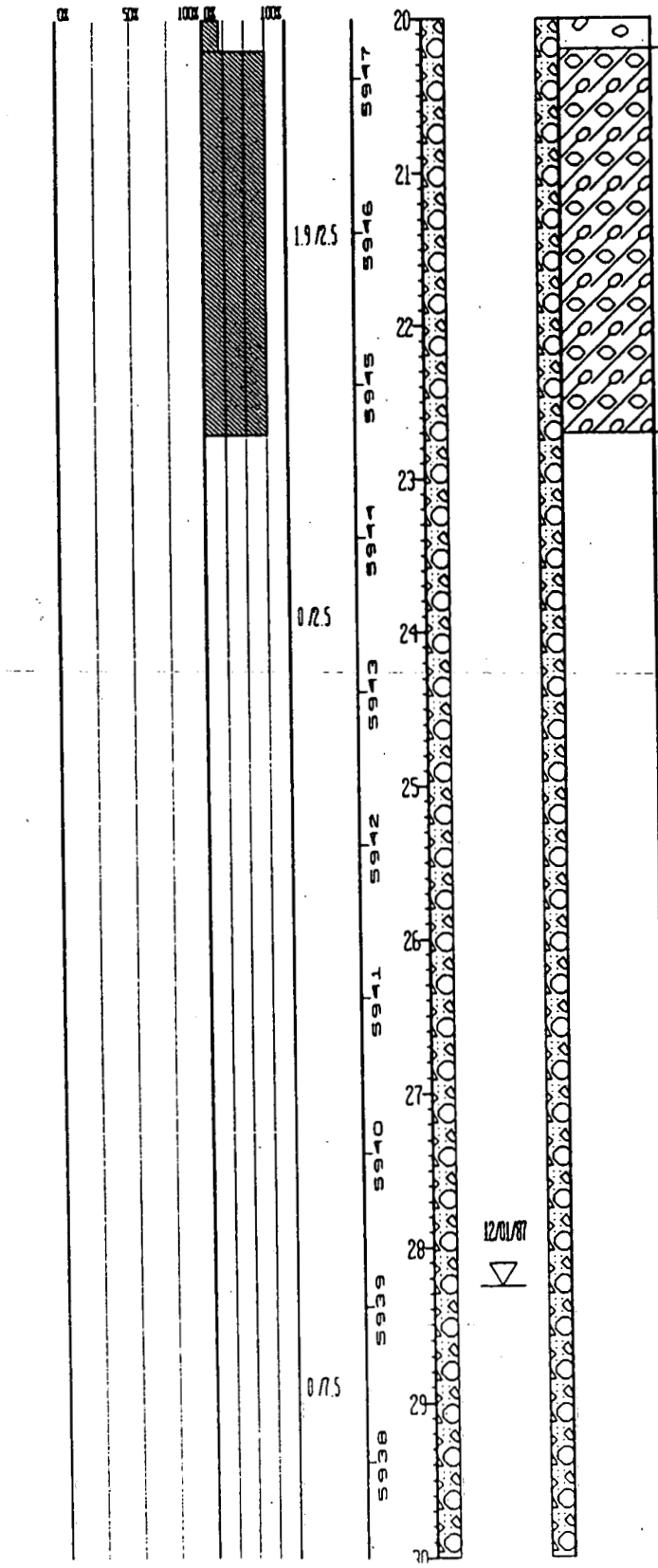
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5957.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LAA	18-87BR
EAST: 2086339	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				10				NO SAMPLE:
		0/2.5	5957, 5956	11				
			5955	12				
		0.6/2.5	5954, 5953	13, 14			SP:	GRAVELLY SAND - (FG to VCG), lt brown (5YR 5/6), sub-angular to sub-rounded, well graded, max. gravel size = 4.5 cm. trace of clay.
		0.5/2.5	5952, 5951	15, 16	08/20/87		SC:	Same as above; with some clay.
		0.5/2.5	5950, 5949, 5948	17, 18, 19			GP:	SANDY GRAVEL - lt brown (5 YR 5/6), sub-angular to rounded, mod. grading, max. size = 6 cm., trace of clay.
				20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT):	5967.38	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749404	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/LAA	18-87BR
EAST:	2086339	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	08/20/87	

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	GRAVEL - grayish orange (10YR 7/4), angular to sub-rounded, mod. to poorly graded, max. size approx. 4.5 cm., some sand and clay.
NO SAMPLE:	
	Top of Bedrock.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5967.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LAA	18-87BR
EAST: 2086339	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			5937	30				
			5936	31				
			5935	32				
		1.2/2.5	5934	33				SILTY CLAYSTONE: Mottled lt. gray (N7) to dk. yellowish orange (10YR 6/6), bedding non-apparent, highly weathered, mod. friable, highly fractured, some carb. staining. (fractures are predominantly vertical.)
			5933	34				
			5932	35				SILTY CLAYSTONE: Same as above; lt. olive gray (5Y 6/1) to dk. yellowish orange (10YR 6/6) and mod. - highly friable.
		2.1/2.5	5931	36				
			5930	37				
			5929	38				SILTY CLAYSTONE: Same as above; mod. friable.
		2.5/2.5	5928	39				
				40				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5967.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LMA	18-87BR
EAST: 2086339	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

SAMPLE NUMBER	SAMPLE GRADING SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			2.5/2.5	5927, 5926, 5925, 5924, 5923, 5922, 5921, 5920, 5919, 5918	40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50			SILTY CLAYSTONE	Mottled lt. olive gray (5Y 6/1) to dk. yellowish orange (10YR 6/6), bedding is non-apparent, highly weathered, highly to mod. friable, highly fractured (predominantly vertical), some iron staining as mottles and in fractures, some carb material becoming abundant at bottom of interval.
								SILTY CLAYSTONE	Same as above; medium gray (N5) to dk. yellowish orange (10YR 6/6), mod. friability, abundant carb. material. At approx. 44.2' to 45.4 ft. the rock becomes very crumbly and varicolored (from a dusky red (5R 3/4) to a dusky brown (5YR 2/2) and includes the above colors), and is slightly calc.
			10/10					CLAYSTONE	Dusky yellow (5Y 6/4) and med. lt. gray (N6), mottled and brownish black, massive bedding, highly weathered, mod. friable, iron staining in fractures and as mottles, some carb. material and silt.
								CLAYSTONE	Lt gray (N6), iron staining in fractures to about 48.5 ft. only, trace of carb. material.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5957.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LAA	18-87BR
EAST: 2086339	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

SAMPLE NUMBER	SAMPLE GRADIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5917	50				
				5916	51				
				5915	52				
			0/1.3	5914	53			NO SAMPLE:	
			1.75/1.5	5913	54			CLAYSTONE:	Lt. brownish gray (5YR 6/1), mod. weathered, mod. friable, bedding not evident, silty in areas, some silt throughout matrix, mildly calcareous throughout matrix.
			0.6/0.5	5912	55			SILTY CLAYSTONE:	Same as above, but silty claystone, non-calcareous, trace carb. material.
			1.2/1.3	5911	56			SILTY CLAYSTONE:	Lt. brownish gray (5YR 6/1), mod. weathered, slightly to mod. friable, mildly calcareous.
			0/0.7	5910	57			NO SAMPLE:	
			1.75/1.6	5909	58			CLAYSTONE:	Lt. brownish gray (5YR 6/1), mod. to highly weathered, mod. friable, bedding not evident, vertical and horizontal fractures, (no staining in fractures), some silt, trace black carb. material.
			0.35/0.4	5908	59			CLAYSTONE:	Same as above.
					60				

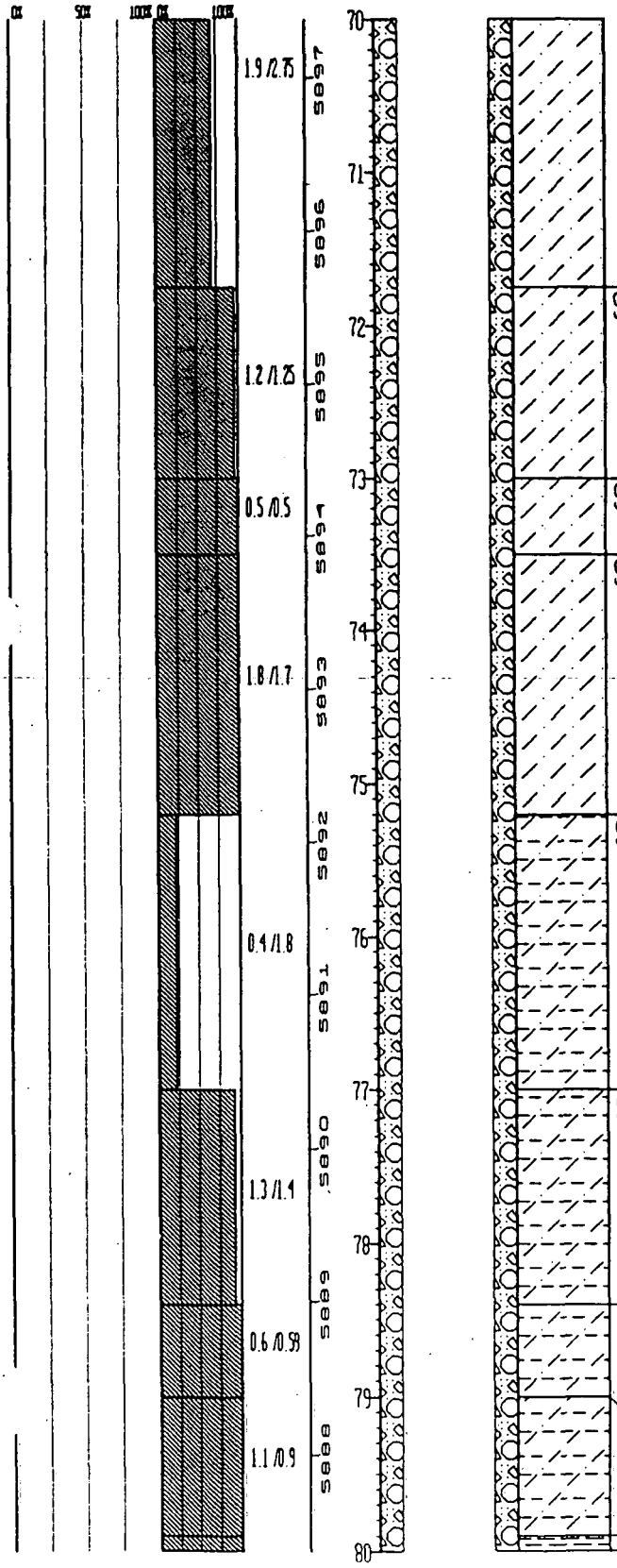
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5967.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LAM	18-87BR
EAST: 2086339	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

SAMPLE NUMB	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.3/1.45	5967	60			CLAYSTONE:	Brownish gray to olive gray (5YR 4/1 to 5Y 4/1), highly weathered, highly friable, bedding appears to be in thin uneven horizontal layers, surfaces have a grainy appearance but does not have sand in matrix, some silt in areas, mildly calcitic in areas.
			1.7/1.65	5966	61			CLAYSTONE:	Same as above. Does not have sand grainy texture, bedding not evident, no CaCO3.
			1.1/1.15	5965	62			SILTY CLAYSTONE:	Lt. olive gray (5Y 6/1), mod. weathered, slightly friable, bedding not evident, trace carb. material.
			0/0.75	5964	63			NO SAMPLE:	
			0.5/0.5	5963	64			SILTY CLAYSTONE:	Same as above.
			1.7/1.9	5962	65			SILTY CLAYSTONE:	Brownish gray (5Y 8/1), mod. weathered, mod. friable, bedding not evident, trace carb. material, trace CaCO3 in matrix.
			0/1.6	5961	66			NO SAMPLE:	
				5960	67				
				5959	68				
				5958	69			SILTSTONE:	Yellowish gray (5Y 8/1), mod. weathered, slightly to mod. friable, bedding not evident.
					70				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5967.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LAM	18-87BR
EAST: 2086339	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

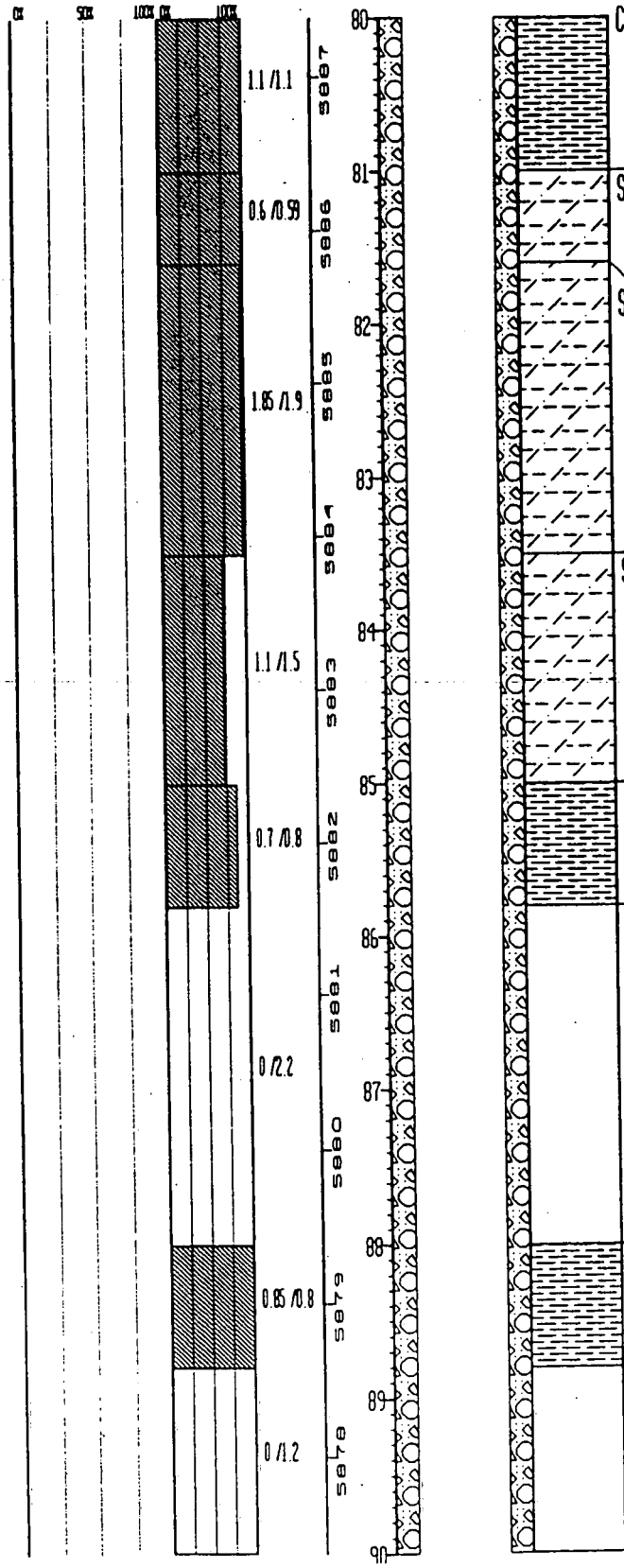


UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTSTONE:	Lt. olive gray to olive gray (5Y 6/1 to 4/1), mod. weathered, slightly to mod. friable material. Bedding not evident; trace iron staining, carb. material
SILTSTONE:	As above with thin (0.75 cm) layer claystone, bedding appears horizontal, uneven.
SILTSTONE:	Yellowish gray (5Y 8/1) to lt. olive gray (5Y 6/1), mod. weathered, mod. to slightly friable, thin layered bedding (<1 mm. to 10 mm.) near horizontal, some VFG sand in layers, some carb. material.
SILTY CLAYSTONE:	Olive gray (5Y 4/1), mod. weathered, slightly friable, bedding not evident, some carb. material, trace iron staining, matrix very mildly calcitic.
SILTY CLAYSTONE:	Olive gray (5Y 4/1) to pinkish gray (5YR 8/1), mod. weathered, slightly to mod. friable, bedding may be thin horizontal layers (from weathering) some grayish orange (10YR 7/4) discoloration in matrix, trace carb. material, siltier at bottom.
SILTY CLAYSTONE:	Olive gray (5Y 4/1) to yellowish gray (5Y 8/1), slightly weathered, slightly friable, thin layered horizontal bedding, some carb material and iron staining.
SILTY CLAYSTONE:	Same as above, mod. friable.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5967.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LAM	18-87BR
EAST:	2086339	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Olive gray (5Y 4/1), mod. weathered, mod. friable, layered bedding (from weathering), abundant carb. material between layers, some mod. yellowish brown discoloration (10YR 5/4).
SILTY CLAYSTONE:	Brownish gray (5YR 4/1), slightly weathered, slightly friable, bedding not evident, some dk. yellowish brown discoloration in matrix, trace carb. material.
SILTY CLAYSTONE:	Same as above.
SILTY CLAYSTONE:	Lt. olive gray to lt. brownish gray (5YR 6/1 to 5Y 6/1), highly weathered, mod. friable, bedding not evident, rusted nail found in matrix.
CLAYSTONE:	Lt olive gray (5Y 6/1), mod. weathered, mod. friable, bedding not evident.
NO SAMPLE:	
CLAYSTONE:	Lt. brownish gray (5YR 6/1) to brownish gray (5YR 4/1), mod. weathered, mod. friable, bedding not evident, some silt.
NO SAMPLE:	

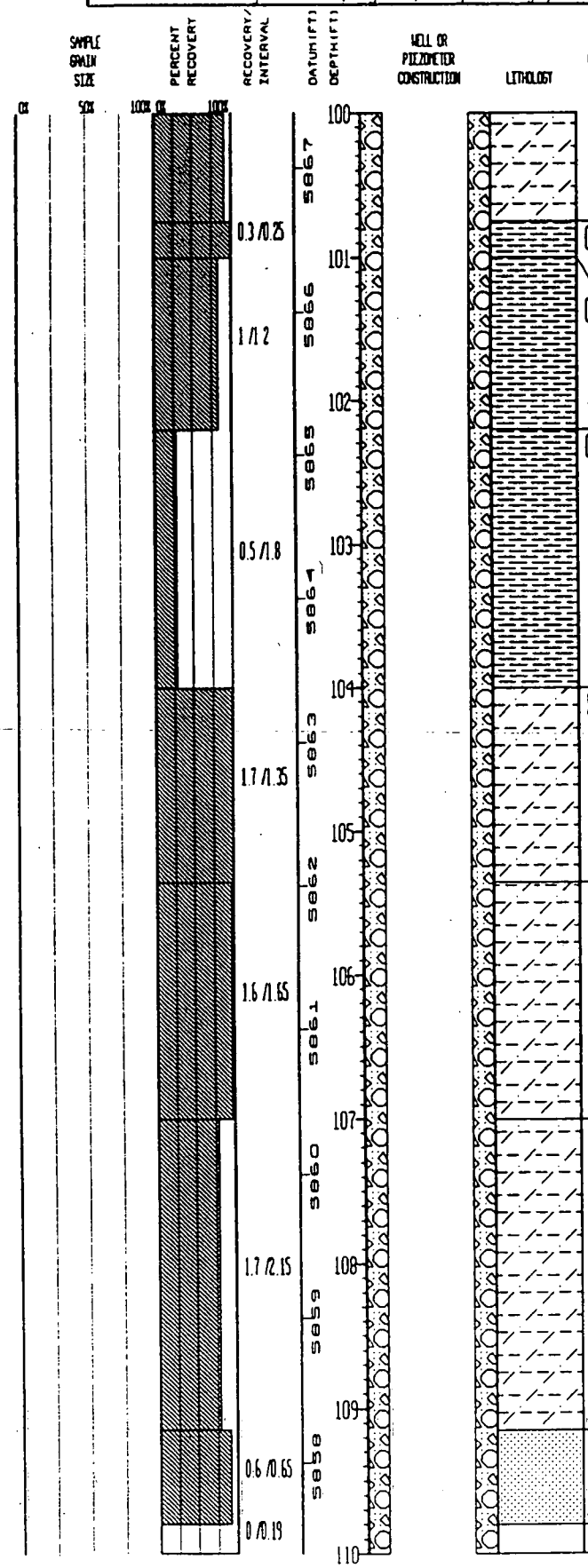
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5967.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LMA	18-87BR
EAST: 2086339	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core:
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		100%	0.8 /0.8	5877	90				SILTY CLAYSTONE: Lt brownish gray (5YR 4/1), mod. weathered, slightly friable, bedding not evident, trace carb. material.
			1.1 /1.1	5876	91				SILTY CLAYSTONE: Same as above.
			0 /0.09		92				NO SAMPLE:
			0.6 /0.5	5875					SILTY CLAYSTONE: Same as above.
			1.6 /1.5	5874	93				SILTY CLAYSTONE: Same as above.
			1.65 /2.3	5873	94				SILTY CLAYSTONE: Same as above.
				5872	95				
			0 /0.69	5871	96				NO SAMPLE:
			1.6 /2	5870	97				SILTY CLAYSTONE: Same as above.
				5869	98				
			1.6 /1.75	5868	99				SILTY CLAYSTONE: Same as above.
					100				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5967.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LMA	18-87BR
EAST: 2086339	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

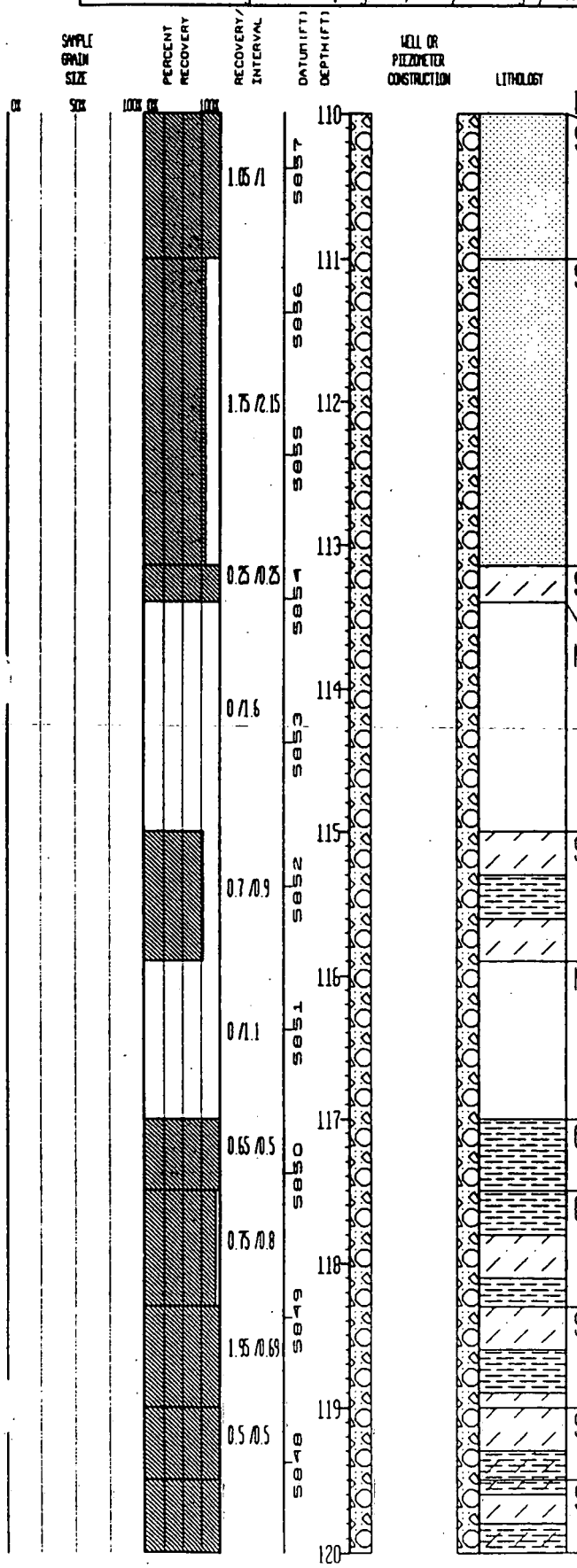
REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Lt. olive gray (5Y 6/1), mod. weathered, mod. friable, bedding not evident, some silt, trace carb. material.
CLAYSTONE:	Same as above, some carb. material.
CLAYSTONE:	Same as above.
SILTY CLAYSTONE:	Olive gray (5Y 4/1), slightly weathered, slightly friable, massive bedding, trace carb. material, iron staining.
SILTY CLAYSTONE:	Same as above, becoming very silty toward bottom.
SILTY CLAYSTONE:	Same as above, not as silty as bottom of last interval.
SANDSTONE:	Med. lt. gray (N6), slightly weathered, slightly friable, cross bedding (very thin), VFG sand, well sorted, some silt, some carb. material.
NO SAMPLE:	

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5567.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LAM	18-87BR
EAST: 2086339	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

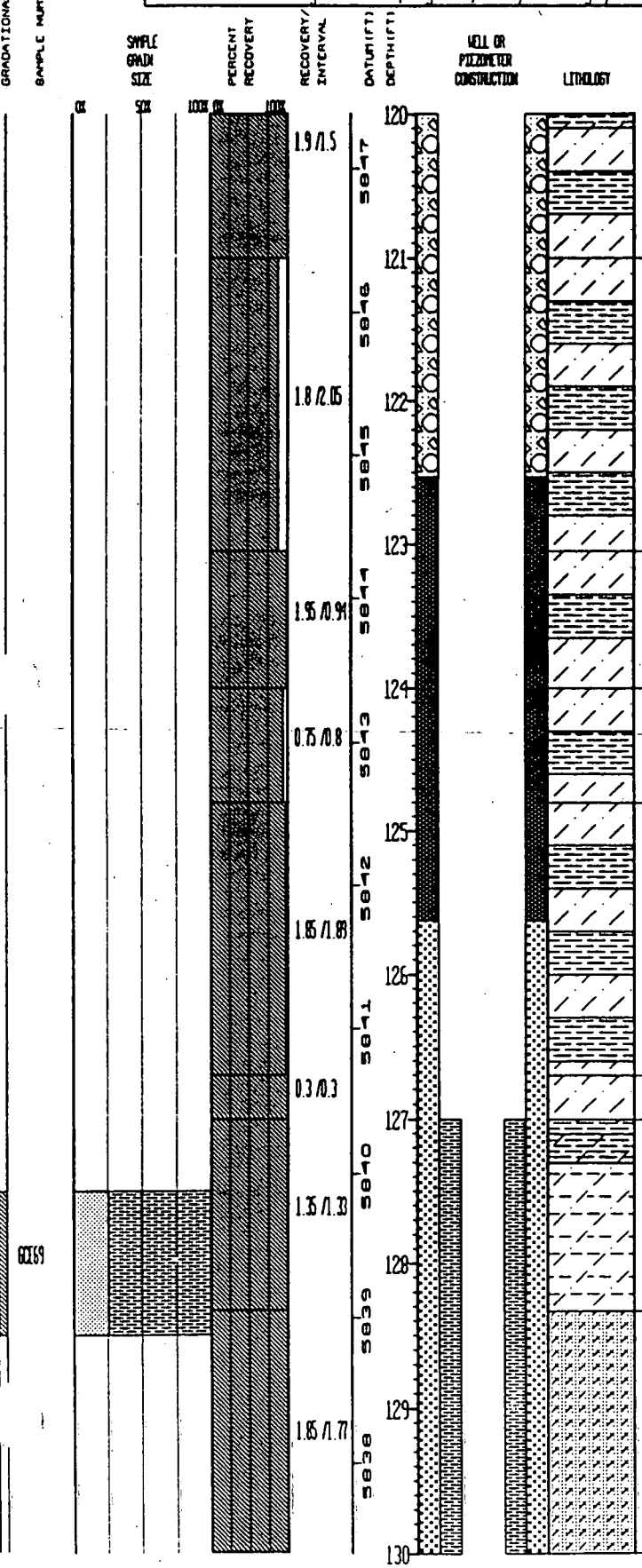


UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
NO SAMPLE:	
SANDSTONE:	Med. lt. gray (N6), slightly weathered, slightly friable, very thin cross beds, VFG sand, well sorted, some silt, some siltstone layers
SANDSTONE:	Same as above; sand VFG to med. grained
SILTSTONE:	Olive gray (5Y 4/1), slightly weathered, slightly friable, thin layered bedding.
NO SAMPLE:	
SILTSTONE:	Interbedded siltstones and claystones Claystones olive gray (5Y 4/1), siltstones yellowish gray (5Y 8/1), mod weathered, slightly friable, claystones massive (up to 1 in thick) siltstones thinly layered
NO SAMPLE:	
CLAYSTONE:	Olive gray (5Y 4/1), slightly friable, slightly weathered, massive bedding.
CLAYSTONE:	Same as above, some laminar siltstone layers (thin) at bottom.
SILTSTONE:	Interbedded siltstones and claystone as above, mod. weathered, mod. friable, thin laminar bedding, some very fine grained sand.
SILTSTONE:	Same as above
SILTSTONE:	Interbeded siltstone and claystone Claystones olive gray (5Y 4/1), siltstones pinkish gray (5YR 8/1), mod weathered, mod friable, bedding

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5967.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LAA	18-87BR
EAST: 2086339	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87	

REMARKS: Hollow stem auger; Rotary core.

Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	in thin laminated horizontal layers, some VFG very thin (< 0.5 mm.) layers of sand.
SILTSTONE:	Same as above.
SILTSTONE:	Same as above.
SILTSTONE:	Same as above.
SILTSTONE:	Same as above.
SILTSTONE:	Same as above.
SILTY CLAYSTONE:	Olive gray (5Y 4/1), slightly weathered, slightly friable, layered bedding, some very thin layers of silt and VFG sand, bedding slightly dipping at bottom, some carb. material toward the top.
SANDY SILTSTONE:	Olive gray (5Y 4/1) to yellowish gray (5Y 8/1), slightly weathered, slightly friable, thin layered bedding, uneven, some soft sed. deformation, bedding tilted, sand VFG.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 148		GROUND ELEVATION (FT):	5967.38	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	749404	AREA: MOUND AREA		CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/LAA		18-87BR
EAST:	2086339	LOCATOR NUMBER:	N9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	08/20/87		

REMARKS: Hollow stem auger; Rotary core.
Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

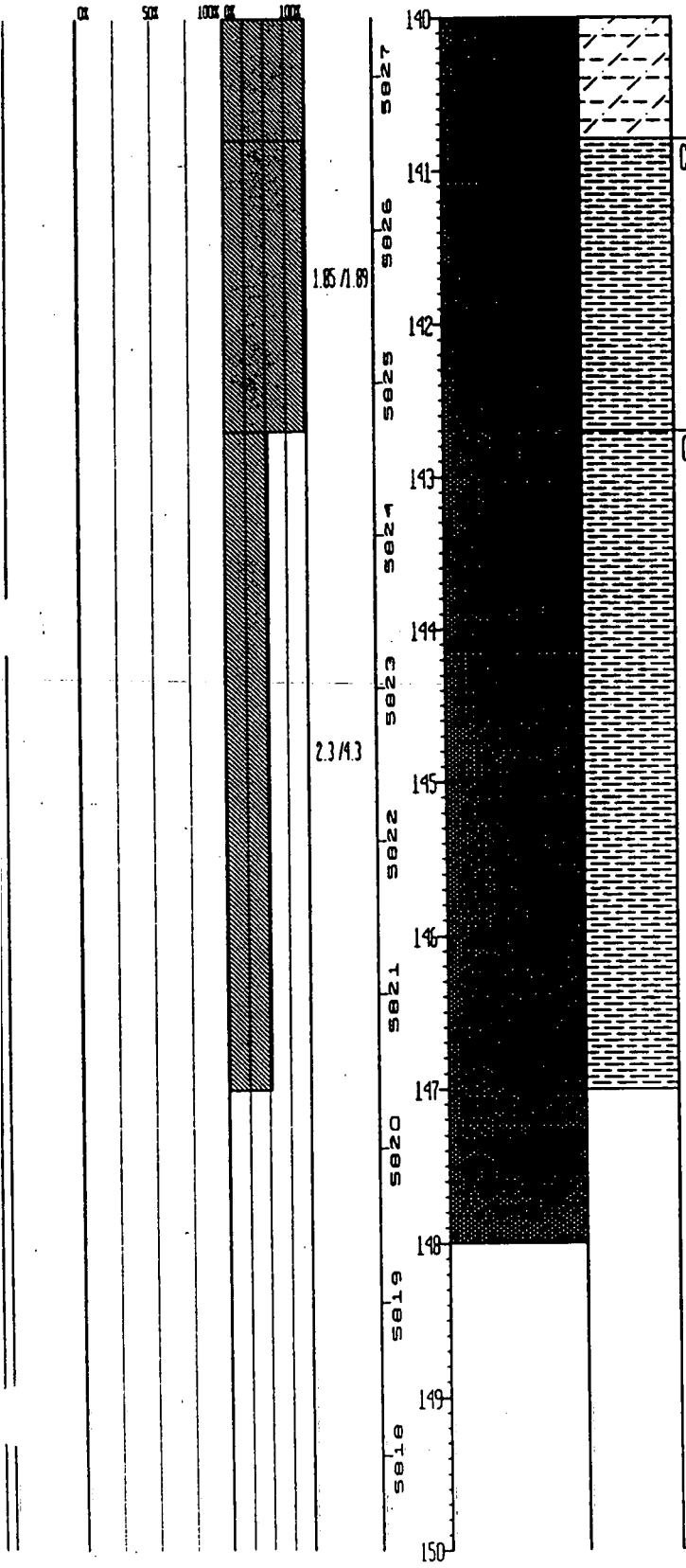
SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		1.1 /0.89	5837	130			SANDSTONE:	Yellowish gray (5Y 8/1), slightly to mod. weathered, slightly friable, thin layered bedding (<1 mm.), sand VFG, well sorted, some silt, some carb. material.
		0.6 /0.6	5836	131			SANDSTONE:	Same as above.
		1.75 /1.79	5835	132			SILTSTONE:	Brownish gray (5YR 4/1), slightly weathered, slightly friable, bedding not evident, some areas of VFG sand as above, trace of carb. material.
			5834	133				
		1.7 /1.6	5833	134			SILTSTONE:	Same as above.
		1.75 /1.75	5832	135			SILTSTONE:	Same as above with layers of silty claystone.
			5831	136				
		1.9 /2.25	5830	137			SILTY CLAYSTONE:	Brownish gray (5YR 4/1), slightly weathered, slightly friable, bedding not evident, some areas of very FG sandstone (not in horizontal layers.)
			5829	138				
		1.8 /1.8	5828	139			SILTY CLAYSTONE:	Same as above, VFG sand in thin (< 1 mm.) layers, bedding tilted but can not determine extent, possibly 30 degrees (from weathering).
				140				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT): 5967.38	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749404	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/LAA	18-87BR	
EAST: 2086339	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 08/20/87		

REMARKS: Hollow stem auger; Rotary core.

Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.

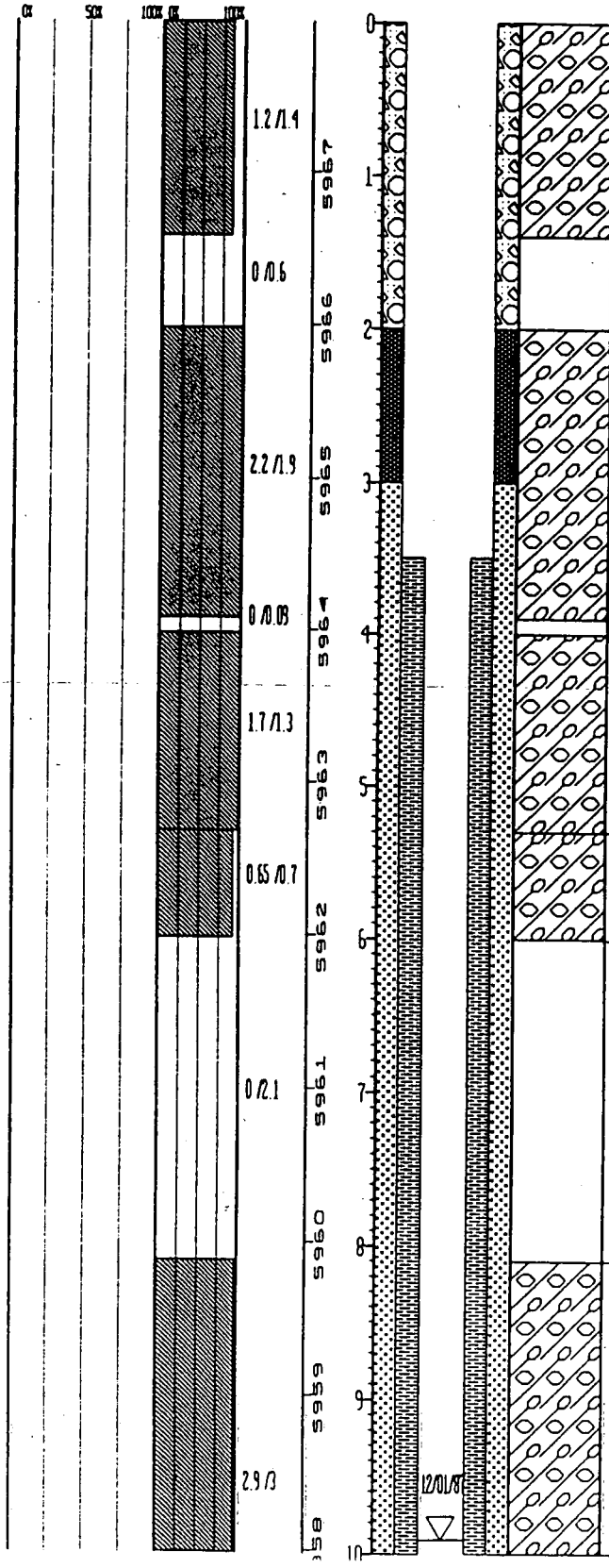
SAMPLE NUMB. | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Brownish gray (5YR 4/1), mod. weathered, moderately friable, bedding not evident, possibly tilted (from weathering), some iron staining, traces of carb. material, some silt in matrix.
CLAYSTONE:	Same as above, silty claystone at bottom of interval.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 16.1	GROUND ELEVATION (FT):	5967.98	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749623	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LMA	19-87
EAST:	2086172	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	08/05/87	

REMARKS: Hollow stem auger.



GC: Clayey Gravel - gravel med. gray to med. dark gray (N5 to N4), angular to sub-angular, mod. grading, max. size 6 cm., matrix med. brown (5YR 3/4), silty clay, low plasticity, some sand, some surficial roots and grass, matrix calcareous.

NO SAMPLE:

GC: Gravelly Caliche - white (N9), very pale orange (10YR 8/2) to dark yellowish orange (10YR 6/6), mod. plasticity, sandy gravel angular to sub-rounded, max. size 3 cm., mod. grading, short interval (approx. 0.3 in.) clayey v. coarse grained sand, lt. brown (5YR 5/6), well sorted, sub-rounded, calcite stringers (near top.)

NO SAMPLE:

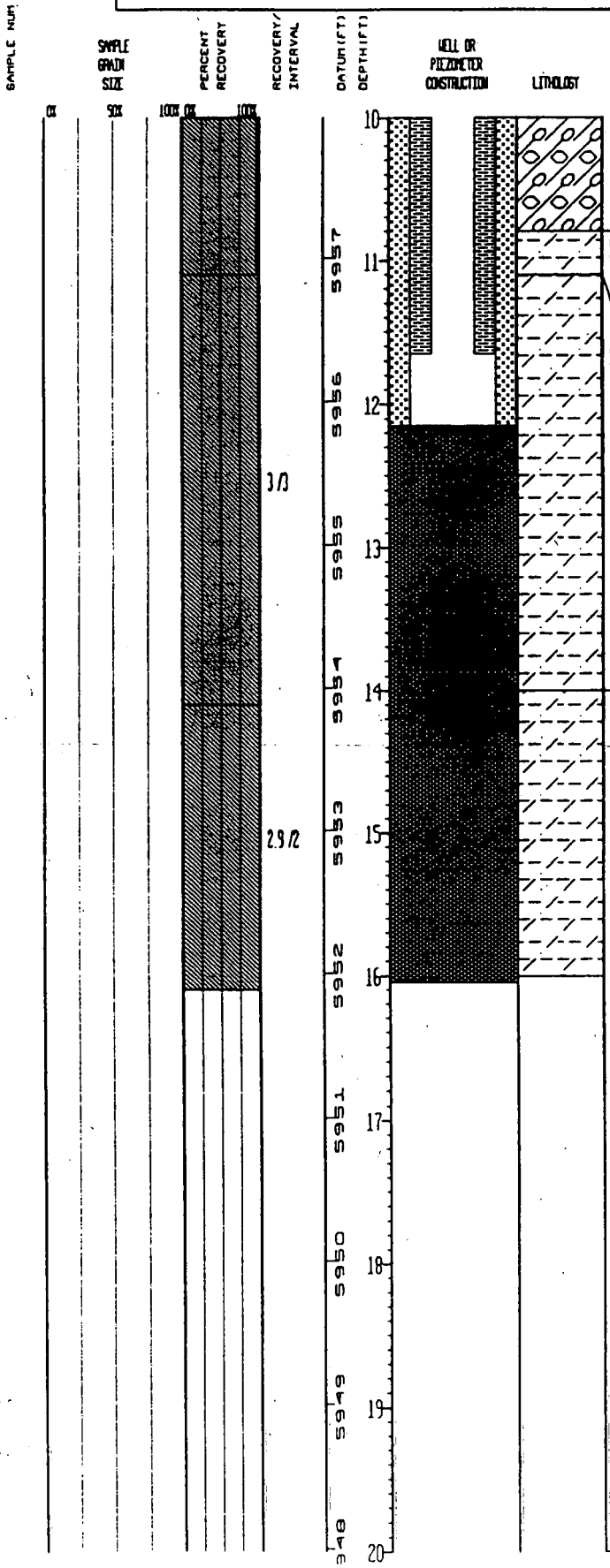
GC: Same as above, more clay, no sand interval.

GC: Clayey Gravel - predom. med. gray (N5), angular to sub-rounded, well graded, max. size 6 cm., matrix sandy clay med. brown (5YR 4/4), sand fine to granules, calcitic.

NO SAMPLE:

GC: Same as above, lg. amount of caliche present.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 16.1	GROUND ELEVATION (FT): 5967.98	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749623	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	19-87	
EAST: 2086172	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/05/87		
REMARKS: Hollow stem auger.					



SILTY CLAYSTONE: Top of Bedrock
Yellowish gray to dark yellowish orange (5Y 8/1 to 10YR 6/6), mod. plasticity, some carb. material, some caliche in areas.

SILTY CLAYSTONE: Same as above.

SILTY CLAYSTONE: Same as above.

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5968.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER
NORTH:	749634	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/TSD/DCB	20-87BR
EAST:	2086155	LOCATOR NUMBER: N3	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.

GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.8/1.85	5968	0			GC:	Clayey Gravel - light gray (N7), predominant gravel color. Angular to sub-rounded, moderately well graded, max. size 5 cm. Clay matrix brownish gray (5YR 4/1), some sand, and silt, some surficial roots, some CaCO3, grades to caliche matrix, less gravel at bottom of interval.
				0/0.15	5967	1			NO SAMPLE:	
				1.8/2	5966	2			GC:	Gravel In Caliche Matrix - medium gray (N5), angular to sub-angular, well graded, max. size 9.5 cm., some sand in caliche matrix, grades to some clay in caliche matrix toward bottom, light brown (5YR 5/6).
				1.7/1.9	5965	3			GC:	Same as above.
				0.7/0.5	5964	4			GC:	Same as above, less caliche, CaCO3, more brown clay matrix.
				0/2.4	5963	5			NO SAMPLE:	
				1.1/2	5962	6			GC:	GRAVEL - very pale orange (10YR 8/2) to light gray (N7), angular to sub-rounded, well graded, max. size 4.5 cm. Sandy clay matrix, light brown (5YR 5/6), matrix approx. 30% coarse sand, some CaCO3 still present.
					5961	7				
					5960	8				
					5959	9				
						10				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT):	5968.1	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749634	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAW/TSD/DCB	20-87BR
EAST:	2086155	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	4.0	DATE DRILLED:	08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.

SAMPLE NUM	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5958	10				
			1.9/1	5957	11			GC:	Same as above, no CaCO3 seems to be present.
			1.9/2	5956	12			CLAYSTONE:	Top of Bedrock Dark yellowish orange (10YR 6/6) to light brown (5YR 5/6), mod. to high plasticity, horizontal bedding with some carbonaceous material, some gravel, becoming silty, very pale orange (10YR 8/2) toward bottom of interval.
				5955	13				
			2.5/2	5954	14			SILTY CLAYSTONE:	Very pale orange to dark yellowish orange (10YR 8/2 to 10YR 6/6), moderate to high plasticity, bedding appears horizontal, some areas of matrix appear to be iron stained, trace carbonaceous material.
				5953	15				
			3.1/3	5952	16			SILTY CLAYSTONE:	Same as above.
				5951	17				
				5950	18				
			1.9/2	5949	19			SILTY CLAYSTONE:	Same as above, silt content fluctuates 10% either way.
					20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5958.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749634	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/TSD/DCB	20-87BR
EAST: 2086155	LOCATION NUMBER: N9	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.

SAMPLE NUM.	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5948	20				
				5947	21			SILTY CLAYSTONE	Very pale orange to light brown (10YR 8/2 to 5YR 5/6), moderate plasticity, iron staining vertical in fractures, some carbonaceous material. Trace gravel, silt content fluctuates throughout interval by 30%, some areas 70% silt (one area approx. 2 in. long.)
			3.3/3	5946	22				
				5945	23				
				5944	24			SILTY CLAYSTONE	Same as above.
			2.4/2	5943	25				
				5942	26			SILTY CLAYSTONE	Same as above.
			3.3/3	5941	27				
				5940	28				
				5939	29			SILTY CLAYSTONE	Grayish orange to dark yellowish brown (10YR 7/4 to 6/6), moderately high plast., some carbonaceous material, some vertical fractures, 2' hollow geode like nodules approx. 1" (iron rich), trace $CaCO_3$.
			2.3/2		30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT):	5968.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749634	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST: LAA/TSD/DCB	20-87BR
EAST: 2086155	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	4.0	DATE DRILLED: 08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5938	30				
			3.6/3	5937	31			SILTY CLAYSTONE	Same as above, some pale yellowish brown (10YR 6/2) toward bottom, CaCO3 stringers present, iron staining, did not see any nodules.
				5936	32				
				5935	33				
			0/0.9	5934	34			NO SAMPLE	
				5933	35			SILTY CLAYSTONE	Dark yellowish orange to very light gray (10YR 8/2 to N8), moderate to high plasticity, becoming siltier at bottom.
			2.5/2	5932	36				
				5931	37			SILTY CLAYSTONE	Dark yellowish orange (10YR 6/6) yellowish gray (5Y 7/2), some iron staining, trace gravel, becoming less silty and light brownish gray (5YR 6/1) toward bottom of interval.
			3.9/3	5930	38				
				5929	39				
					40			SILTY CLAYSTONE	Dark yellowish orange to yellowish gray (10YR 6/6 to 5Y 7/2), iron

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5958.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749634	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/ISD/DCB	20-87BR
EAST:	2086155	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.

GRADATIONAL SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			2.5 ft	5928	40				staining in some vertical fractures, silt content fluctuates by 10%.
				5927	41				
				5926	42			CLAYSTONE:	Dusky yellow (5Y 6/4) to light brownish gray (5YR 6/1), highly weathered, slightly to moderately friable, some silt, some iron staining.
			1.8 ft	5925	43				
				5924	44				
				5923	45			SILTY CLAYSTONE:	Brownish gray (5YR 4/1) to grayish orange (10YR 7/4), highly weathered, moderately friable, vertical heavily iron stained fracture bottom 1.7 ft.
			2.7 ft	5922	46				
				5921	47			CLAYSTONE:	Same as above, silt content fluctuates approx. 20% upward toward bottom of interval.
			4.3 ft	5920	48				
				5919	49				
					50			CLAYSTONE:	Light olive gray to olive gray (5Y 6/1 to 5Y 4/1), highly weathered,

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5968.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749634	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/TSD/DCB	20-87BR	
EAST: 2086155	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4 0	DATE DRILLED: 08/03/87		

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 3/2.3; 0/2; 1.5/1.5; 1.6/1; 1.5/1.5; 1.75/1.75

DATUM (FT): 5918, 5917, 5916, 5915, 5914, 5913, 5912, 5911, 5910, 5909

DEPTH (FT): 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

highly friable, slightly silty, weathered somewhat horizontally, possibly due to bedding. NOTE: intervals overlap, this box ends at 51.7 ft., next box begins at 50 ft. First interval in this box goes from 50.0 to 52.0 ft. and is logged as silty claystone, same description as below, interval 54 to 55.5 ft.

NO SAMPLE:

SILTY CLAYSTONE: Lt. gray (N7), massive bedding, well weathered, mod. friability, trace of carb. material and iron staining as mottles.

SILTY CLAYSTONE: Same as above.

SILTY CLAYSTONE: Same as above.

SILTY CLAYSTONE: Same as above.

SILTSTONE: Light gray (N7), massive bedding, weathered, slightly frid[illegible] some

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5968.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749634		AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/ISD/DCB	20-87BR
EAST: 2086155		LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.7/1.7	5968	60				carb. material and clay, becoming clayier at bottom 0.5 ft. of interval.
				5967	61				
			1.65/1.65	5966	62				SILTY CLAYSTONE: Olive gray (5Y 4/1), massive to wavy bedding, weathered, slightly friable, VFG sand and silt are interbedded throughout, trace of carb. material.
				5965	63				SILTY CLAYSTONE: Same as above, trace of iron staining as mottles.
			1.8/1.8	5964	64				
				5963	65				SILTY CLAYSTONE: Same as above, some carb. material and iron staining.
			1.05/1.05						
			0/0.05						
			0.25/0.25	5962	66				NO SAMPLE:
									SILTY CLAYSTONE: Same as above.
									SILTY CLAYSTONE: Same as above.
			1.75/1.75	5961	67				
				5960	68				SILTY CLAYSTONE: Olive gray (5Y 4/1) to very lt. gray (N8), well weathered, VFG sand and silt laminae are bedded vertically, mod. friable, some carb. material and iron staining as mottles.
			1.7/1.7	5959	69				
			0/0.3		70				NO SAMPLE:

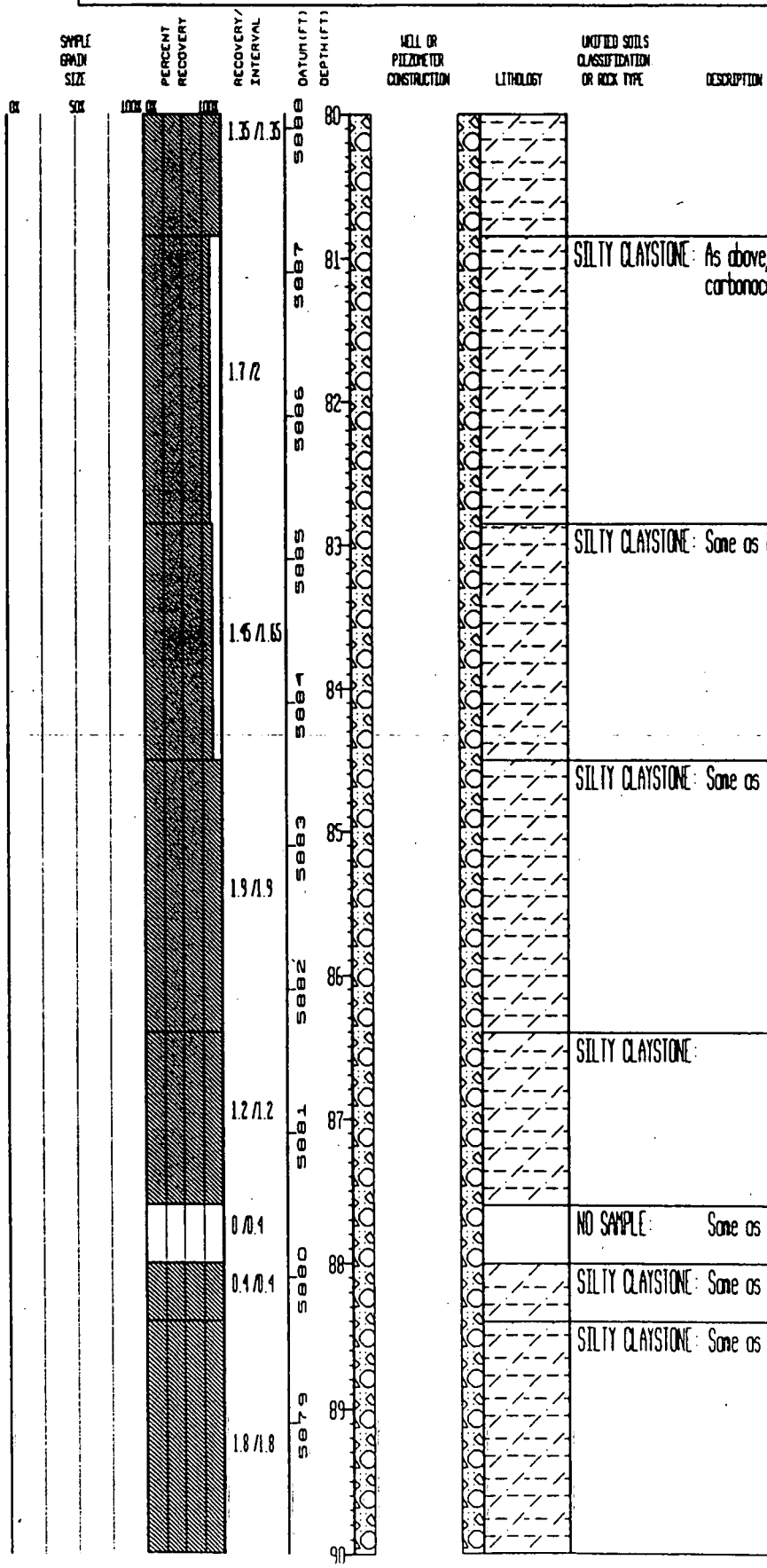
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5968.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749634	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAW/TSD/DCB	20-87BR
EAST: 2086155	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.6/1.6	5968	70			SILTY CLAYSTONE	Olive gray (5Y 4/1) to very lt. gray (N8), VFG sandstone and silt laminae are bedded vertically to nearly vertical, mod. friable, trace of carb. material and iron staining as mottles.
			1.8/1.2	5967	71			SILTY CLAYSTONE	Same as above.
			1.5/1.2	5966	72			SILTY CLAYSTONE	Same as above; vertical laminae is no longer present, (massive bedding?), silt occurs in pockets.
			1.6/1.6	5965	73			SILTY CLAYSTONE	Same as above, lt. olive gray (5Y 6/1), interval becomes more carb. at the bottom.
			1.7/1.7	5964	74			SILTY CLAYSTONE	Same as above.
			1.2/1.2	5963	75			SILTY CLAYSTONE	Same as above.
			0.8/1	5962	76			SILTY CLAYSTONE	Same as above.
				5961	77			SILTY CLAYSTONE	Same as above.
				5960	78			SILTY CLAYSTONE	Same as above.
				5959	79			SILTY CLAYSTONE	Same as above.
					80				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT):	5968.1	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 749634	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAW/TSD/DDB	20-87BR
EAST: 2086155	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	4 0	DATE DRILLED:	08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987



SILTY CLAYSTONE: As above, with slickensides at 81.5 ft, 40 degree angle and decrease in carbonaceous mineralization.

SILTY CLAYSTONE: Same as above.

SILTY CLAYSTONE: Same as above.

SILTY CLAYSTONE:

NO SAMPLE: Same as above.

SILTY CLAYSTONE: Same as above.

SILTY CLAYSTONE: Same as above.

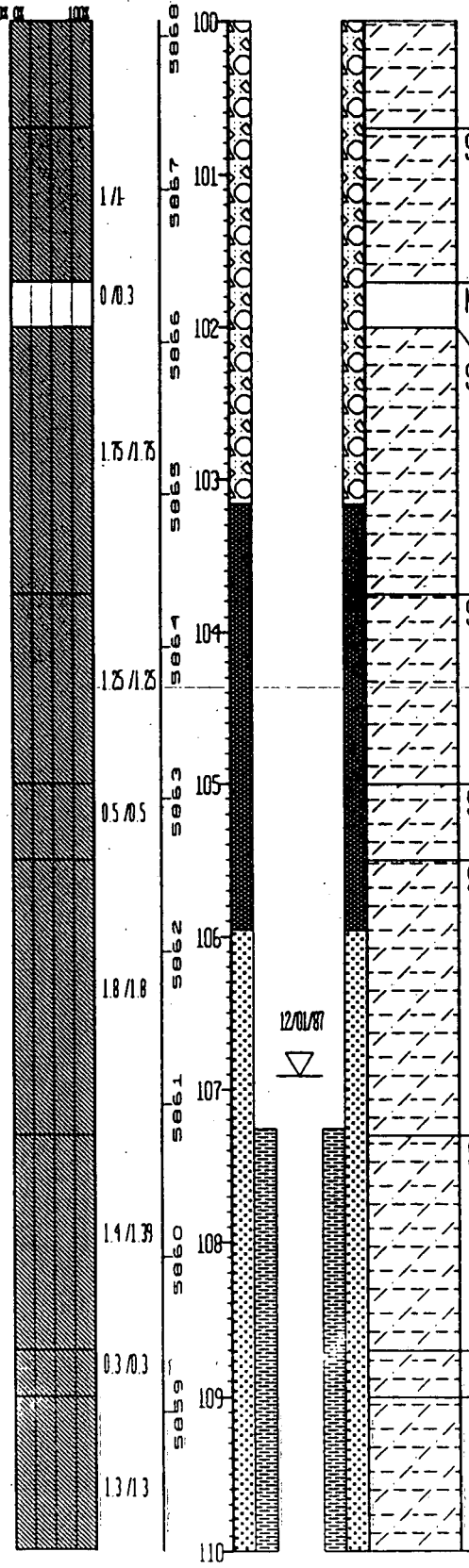
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5958.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749634	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/TSD/DCB	20-87BR
EAST:	2086155	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4 0	DATE DRILLED: 08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5958	90				
			1.8/1.8	5957	91				SILTY CLAYSTONE: Same as above, increase in silt fraction below 92.0 ft.
			1.65/1.65	5956	92				SILTY CLAYSTONE:
				5955	93				
			0/2.35	5954	94				NO SAMPLE: Light gray (N7), bioturbated / soft sediment deformation?, well weathered, moderately friable, some carbonaceous mineralization disseminated throughout.
				5953	95				
			1.4/1.4	5952	96				SILTY CLAYSTONE: Same as above.
				5951	97				
			1.6/1.6	5950	98				SILTY CLAYSTONE: Same as above.
			1.7/1.7	5949	99				SILTY CLAYSTONE: Same as above
					100				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5968.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER
NORTH:	749634	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/TSD/DCB	20-87BR
EAST:	2086155	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.



SILTY CLAYSTONE: SLUFF

NO SAMPLE: As above (reference interval 96.0 to 101.7 ft.), with localized iron staining below 103 ft., bedding not apparent.

SILTY CLAYSTONE: As above.

SILTY CLAYSTONE: As above.

SILTY CLAYSTONE: As above.

SILTY CLAYSTONE: As above.

SILTY CLAYSTONE: As above.

SILTY CLAYSTONE: As above.

SILTY CLAYSTONE: As above.

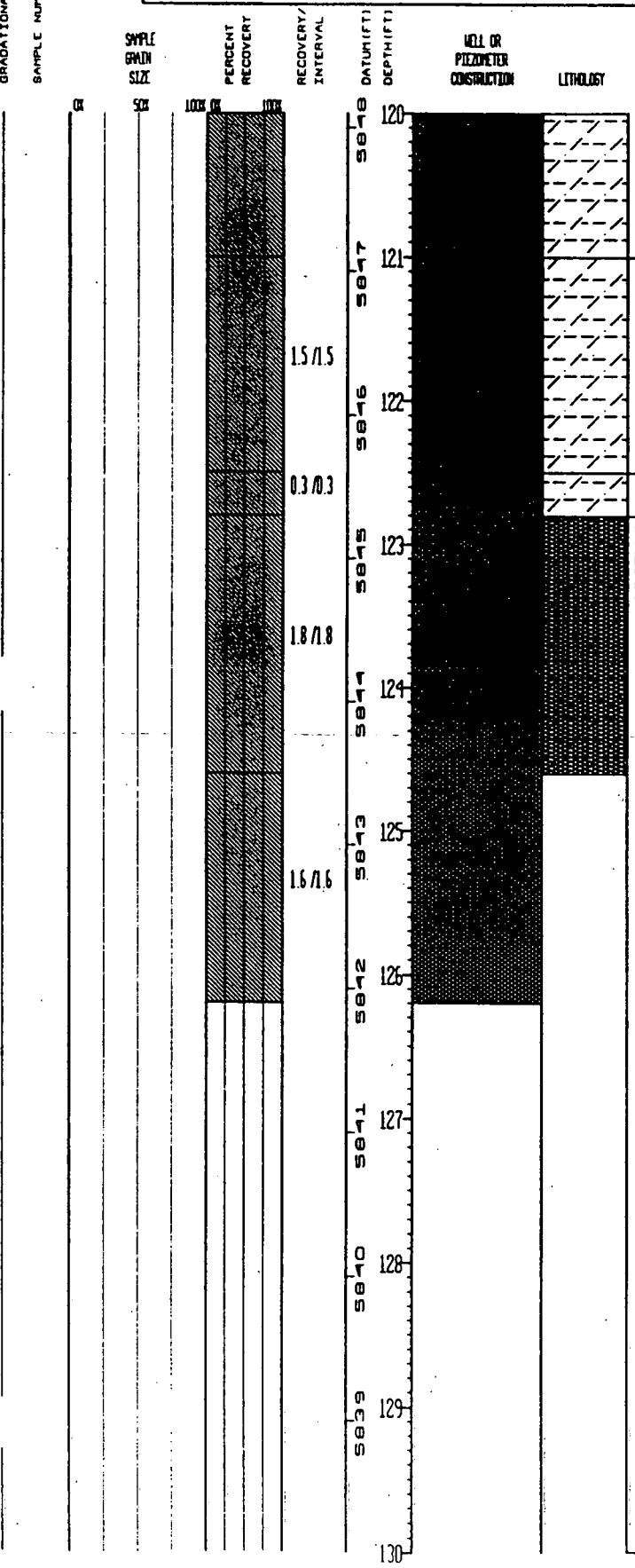
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5968.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER
NORTH:	749634	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/TSD/DCB	20-87BR
EAST:	2086155	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 08/03/87	

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergeon, Aug. 4, 1987

SAMPLE NUM.	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5958	110				
			1.7 /1.7	5957	111				SILTY CLAYSTONE: As above.
6271			1 /1	5956	112				SILTY CLAYSTONE: As above.
			0.7 /0.69	5955	113				SILTY CLAYSTONE: As above.
				5954	114				SILTY CLAYSTONE: As above, slickenside occurs at approx. 115.8 ft. approx. 45 degrees.
			1.7 /1.7	5953	115				
			1.6 /1.6	5952	116				SILTY CLAYSTONE: As above with decrease in silt fraction from approx. 117 to 118 ft. Slickenside occurs at approx. 118.2 ft. vertical orientation.
			1.8 /1.8	5951	117				SILTY CLAYSTONE: As above.
				5950	118				
			2.2 /2.2	5949	119				SILTY CLAYSTONE: As above.
					120				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 126.2	GROUND ELEVATION (FT): 5968.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749634	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/TSD/DCB	20-87BR	
EAST: 2086155	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 08/03/87		

REMARKS: Hollow stem auger; Rotary core. Surface casing to 51.64' by J.B.Bergman, Aug. 4, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY CLAYSTONE:	As above.
SILTY CLAYSTONE:	As above.
SILTY CLAYSTONE:	As above.
LITHOLOGY:	-124.6 -126.2 -124.6
SILTY CLAYSTONE:	
	NOTE: No water encountered during drilling.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 17	GROUND ELEVATION (FT): 5927.58	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749969	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	21-87
EAST: 2085800	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 10/16/87	

REMARKS: Hollow stem auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.9/1.9	5927	0			GC	Clayey Gravel - light gray (N7), clay matrix is medium light gray (N6), angular to sub-angular, poorly graded, max. size 5 cm., some plant debris in upper 0.15 ft., some silt, trace of sand, calcareous mineralization disseminated throughout clay matrix.
			0/0.1	5926	1			NO SAMPLE	
			1/1	5925	2			GC	As above (reference interval 0.0 to 1.9 ft.), clay matrix is med. dark gray (N4)
			0/1	5924	3			NO SAMPLE	
			0.3/0.3		4			GC	As above (reference intervol 0 to 1.9 ft.)
			0/2.7	5923	5	11/12/87		NO SAMPLE	
				5922	6				
				5921	7	10/16/87			
			0.3/0.3					CL	CLAY - light gray (N7), low to moderate plasticity, some gravel from 7.0 to approx. 7.4 ft., trace of calcareous mineralization.
			1.6/1.6	5920	8			CL	CLAY - light gray (N7) to medium dark gray (N4), bedding not apparent, highly weathered, highly friable, some iron staining, local carbonaceous mineralization
				5919				CLAYSTONE	Top of Bedrock Same as above
			0.6/0.6		9			CLAYSTONE	Same as above
				5918	10			CLAYSTONE	Light olive gray (5Y 5/2), moderately high plasticity, localized calcareous bodies.

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 17	GROUND ELEVATION (FT):	5927.58	PROJECT NUMBER:	667 11
NORTH	749969	AREA: MOUND AREA	CASING DIAMETER (IN):	2 10	GEOLOGIST	DCB
EAST	2085800	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	7 5	DATE DRILLED:	10/16/87
REMARKS	Hollow stem auger					

LOG OF BORING NUMBER: 21-87

SAMPLE NUM | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

0% 50% 100% 0% 100%

1.1/1.1

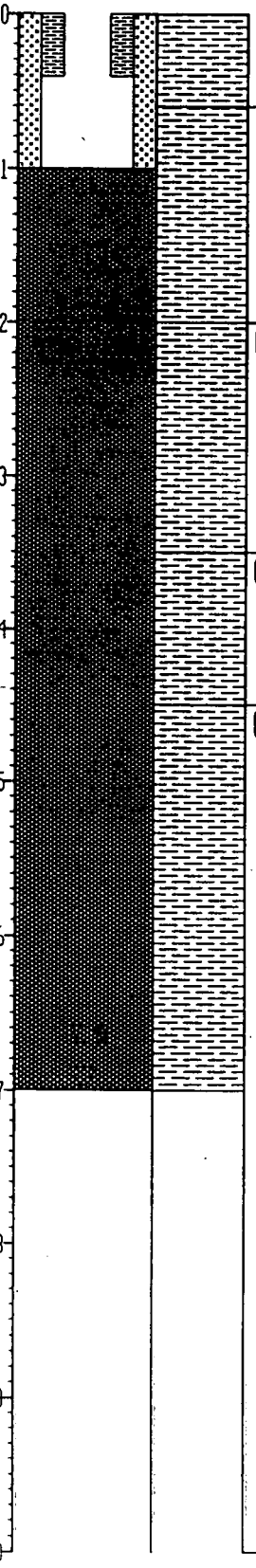
1.4/1.4

2.5/2.5

2.5/2.5

5917 5916 5915 5914 5913 5912 5911 5910 5909 5908

10 11 12 13 14 15 16 17 18 19 20



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE	Same as above.
CLAYSTONE	Same as above.
CLAYSTONE	Medium light gray (N6), bedding not apparent (massive?), highly weathered, moderately friable, iron staining occurs on fracture surfaces, localized carbonaceous mineralization.
CLAYSTONE	As above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT): 5930.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749924	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAW	22-87BR
EAST:	2085822	LOCATOR NUMBER: 119	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/08/87	

REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliday on October 2, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.15/2	5930	0			GC:	Sandy Clayey Gravel - matrix color, moderate yellowish brown (10YR 5/4). Gravel sub-angular to sub-rounded, mod. well graded, max. size 3.5 cm. Sandy clay matrix, low plasticity. Sand med. grained primarily, becoming less gravelly toward bottom. Color darker and more mottled, (dark yellowish brown (10YR 4/2)), calcitic.
			1.5/1.5	5929	1			GC:	Same as above.
			0/0.5	5928	2			NO SAMPLE:	
			1.75/2	5927	3			CH:	Gravelly Clay - pale brown (5YR 5/2), est. mod. high plasticity, some sand, trace calcite, gravel sub-rounded, small to very large, max. size 7 cm., some moderate yellow (5Y 7/6) mottling toward bottom.
			1.6/1.9	5926	4			CH:	Clay - dark yellowish brown (10YR 4/2) to dark yellowish orange. Slightly silty, trace gravel, slightly calcitic, est. plast. mod. - high, trace very ferrous material mineralized (about 1 in. x 10 in. plate).
			0.6/0.6	5925	5			CH:	Same as above.
			0.9/1	5924	6			CH:	Same as above with some color change in areas to grayish brown (5YR 3/2). These darker areas have traces of root material and organics, very small.
			1.6/1.2	5923	7			CL:	SILTY CLAY - yellowish gray (5Y 8/1) to dk yellowish orange (10YR 6/6). Trace of the darker grayish brown (5YR 3/2) clay from above. Trace small rounded gravel, slightly calcitic, est. plast. mod.
					8				
					9				
					10				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT):	5930.7	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749924	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAM	22-87BR
EAST:	2085822	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	10/08/87	

REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				10				
		1.8/1.6	5920	11			CL:	Same as above.
		0.3/0.1	5919	12	10/08/87 ▽		CL:	Same as above.
		1.1/1	5918				CL:	Same as above, some sub-rounded lg. gravel - max. 6.5 cm.
				13			CLAYSTONE:	Top of Bedrock Same as above, but without gravel.
		1.1/1	5917	14			CLAYSTONE:	Same as above, but without gravel.
		0.7/0.8	5916	15			CLAYSTONE:	Same as above, higher silt content, larger areas of dark yellowish orange coloring.
		1.6/1.2	5915	16			CLAYSTONE:	Same as above, siltier at top of interval, less silt toward bottom.
		1.75/1.4	5914	17			CLAYSTONE:	Lt. brownish gray (5YR 4/1), est. plasticity moderate, slightly silty in some areas, trace root material.
		0.75/0.6	5913	18			CLAYSTONE:	Same as above, some dk. yellowish orange (10YR 6/6) mottling.
		1/0.75	5912	19			CLAYSTONE:	Same as above, some calcareous nodules.
		1.7/1.2	5911	20			CLAYSTONE:	Same as above, some calcareous nodules. Claystone at very bottom of interval.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT): 5930.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749924	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	22-87BR
EAST: 2085822	LOCATOR NUMBER: 119	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/08/87	

REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.8/1.8	5910	20–21			CLAYSTONE:	Lt. olive gray (5Y 6/1), massive bedding, highly weathered, moderately friable, some silt, some dark yellowish orange (10YR 6/6) mottling.
			0.1/0.2	5909	22			CLAYSTONE:	Same as above.
			0/0.29					NO SAMPLE:	
			1.2/1	5908	23			CLAYSTONE:	Same as above, some areas slightly siltier.
			1.6/1	5907	24			CLAYSTONE:	Lt. olive gray (5Y 6/1), possible horizontal bedding, highly weathered, moderately friable, silty in areas.
			1.6/1	5906	25			CLAYSTONE:	Same as above.
			1.55/1	5905	26			CLAYSTONE:	Same as above, some iron staining, some fractures with mineralization.
			1.45/1	5904	27			CLAYSTONE:	Same as above, more mottled.
			0.1/0.2	5903				CLAYSTONE:	Same as above.
			1.7/0.79		28			CLAYSTONE:	Same as above.
			1.65/1	5902	29			SILTY CLAYSTONE:	Light olive gray (5Y 5/2) to dk. yellowish orange (10YR 6/6), horizontal bedding, highly to extremely weathered, moderately to highly friable.
			1.5/1	5901	30			SILTY CLAYSTONE:	Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT): 5930.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749924	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	22-87BR
EAST: 2085822	LOCATOR NUMBER: 119	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/08/87	

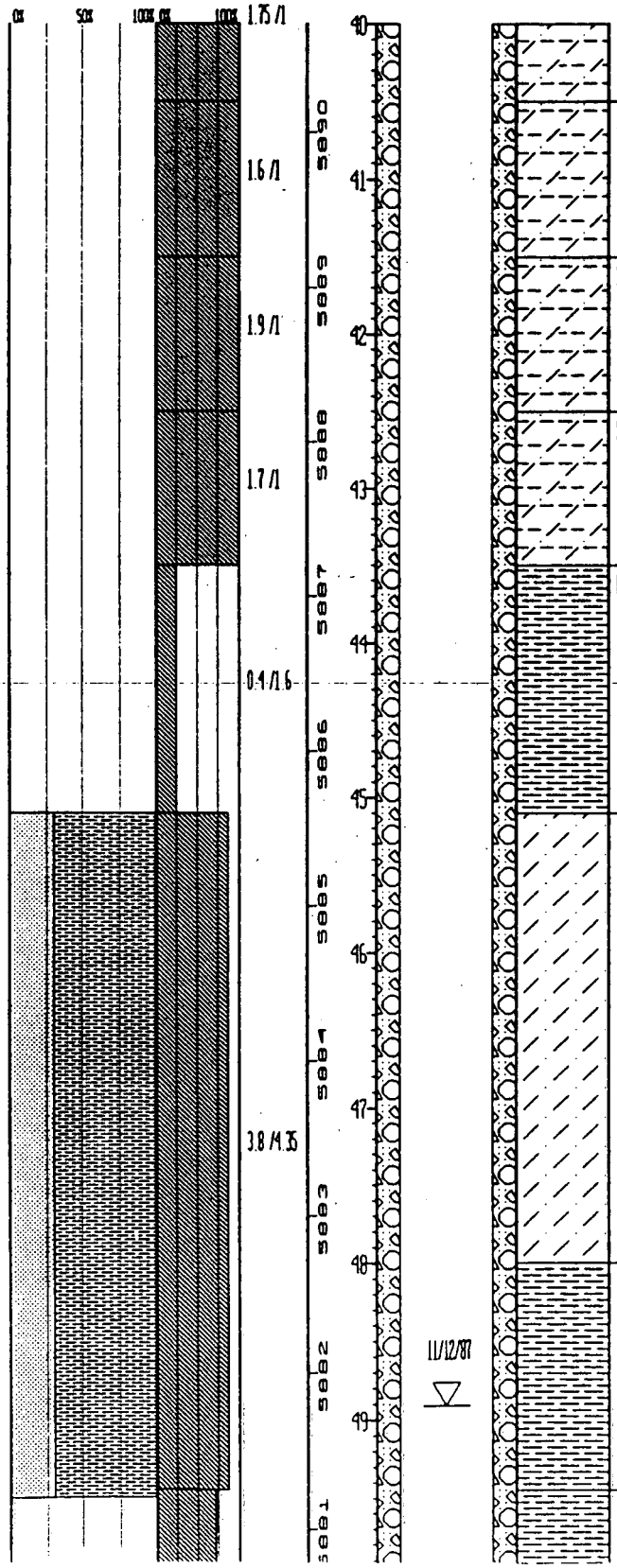
REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		1.5/1		30				
		0.1/0.1	5900				SILTY CLAYSTONE	Same as above.
		1.1/0.6		31			SILTY CLAYSTONE	Same as above.
		0.5/0.28	5899				SILTY CLAYSTONE	Same as above.
		0.9/0.7		32			SILTY CLAYSTONE	Some as above, appears less weathered, possibly due to more massively bedded interval. Some areas of very heavy iron staining.
		0.65/0.5	5898				SILTY CLAYSTONE	Same as above.
		0.65/0.5		33			SILTY CLAYSTONE	Same as above.
		1/0.5	5897				SILTY CLAYSTONE	Same as above, heavily weathered, some black carbonaceous material.
		0.8/0.5		34			SILTY CLAYSTONE	Yellowish gray (5Y 7/2), highly weathered, healed fractures (with iron staining) some carbonaceous material.
		1/0.5	5896				SILTY CLAYSTONE	Same as above.
		0.9/0.5		35			SILTY CLAYSTONE	Same as above.
		0.9/0.28	5895				SILTY CLAYSTONE	Same as above.
		1/0.7		36			SILTY CLAYSTONE	Same as above.
		1.1/1	5894	37			SILTY CLAYSTONE	Olive gray (5Y 4/1), bedding not apparent, mod. weathered, slightly friable, trace sand.
		2.1/1	5893	38			SILTY CLAYSTONE	Yellowish gray (5Y 7/2), bedding not apparent, highly weathered, healed fractures, some iron staining, some carbonaceous material.
		1.75/1	5892	39			SILTY CLAYSTONE	Brownish gray (5YR 4/1) to grayish orange (10YR 7/4), layered bedding, probably horizontal, highly weathered, moderately friable, common black carbonaceous material, usually between layers.
		1.75/1	5891	40			SILTY CLAYSTONE	Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT):	5930.7	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749924	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	22-87BR
EAST:	2085822	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	10/08/87	

REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.

SAMPLE NUMB. | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



SILTY CLAYSTONE: Same as above.

SILTY CLAYSTONE: Same as above.

SILTY CLAYSTONE: Same as above.

CLAYSTONE: Olive gray (5Y 4/1), massive bedding, weathering moderate, slightly friable, some silt, trace of carbonaceous material, some iron staining in horizontal and vertical fractures, trace $CaCO_3$ (very weak HCl reaction).

SILTSTONE: Yellowish gray to light olive gray (5Y 8/1) to 5Y 6/1). Moderately weathered, slightly friable, massive bedding, some iron staining, some clay.

CLAYSTONE: Grades back into claystone (as 41.1 to 45.1 above), slickenslides present in fractures.

CLAYSTONE: Light brownish gray to brownish gray (5YR 6/1 to 5YR 4/1), massive bedding, slightly friable, some silt, trace carbonaceous material, some

0082

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT): 5930.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749924	AREA: ROUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	22-87BR
EAST: 2085822	LOCATOR NUMBER: 119	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/08/87	

REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		2.2/3.05	5880, 5879	50, 51, 52				slickensides visible in fractures, trace iron staining.
		1.9/2	5878, 5877	53, 54			CLAYSTONE:	Same as above.
		1.9/2	5876, 5875	55, 56			CLAYSTONE:	Light olive gray (5Y 6/1), massive bedding, weathered, slightly friable, some silt, some carbonaceous material, some iron staining.
		3.7/4	5874, 5873, 5872, 5871	57, 58, 59, 60			CLAYSTONE:	Same as above, slightly more friable, some slickenslides visible in fractures. Grades to darker olive gray (5Y 4/1) to olive black (5Y 2/1) claystone more weathered, moderately friable, weathered in platey layers, some carbonaceous material, trace very fine grained sand. Becoming more carbonaceous, trace coal.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT): 5930.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749924	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	22-87BR
EAST: 2085822	LOCATOR NUMBER: 119	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/08/87	

REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					60				
				5870	61			CLAYSTONE:	Olive gray to olive black (5Y 4/1) to (5Y 2/1), massive bedding, highly weathered, moderately friable, weathered in thin platey layers 1-2 mm. Some areas of abundant carbonaceous material, silty in upper 1 ft. of interval, trace iron staining.
				5869	62				
			3.6 ft	5868	63				
				5867	64				
				5866	65			CLAYSTONE:	Olive gray (5Y 4/1), massive bedding, moderately weathered, slightly friable. As above in top 1 in. of interval, some carbonaceous material, not as abundant as above, trace of iron staining. Becomes very hard, non-friable at bottom of interval, very stained on outside of core, healed fracture (carbon).
				5865	66				
			3.1 ft	5864	67				
				5863	68				
				5862	69			CLAYSTONE:	Olive gray (5Y 4/1), massive bedding, mod. weathering, slightly friable, abundant carbonaceous material, slickensides present in fractures.
			2.35 ft	5861	70				

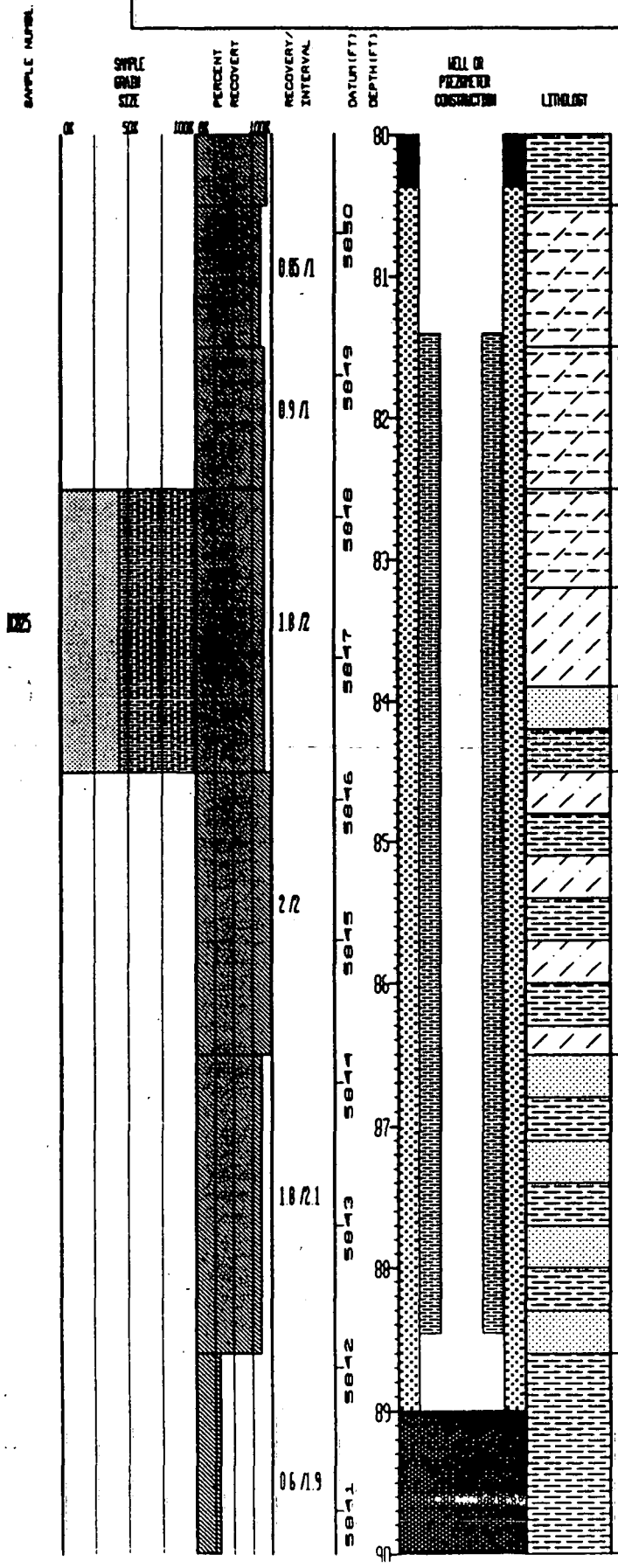
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT): 5930.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749924	AREA: ROUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAW	22-87BR
EAST: 2085822	LOCATOR NUMBER: 119	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/08/87	

REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				70				
			5860				CLAYSTONE:	As above interval, vertical fracture with slickensides.
				71				
		1.65 ft	5859					
				72				
			5858				CLAYSTONE:	As above.
				73				
		1.65 ft	5857					
				74				
			5856				CLAYSTONE:	Light olive gray to olive gray (5Y 4/1 - 2/1), massive bedding, moderate weathering, slightly friable, some carbonaceous material, some slickensides in fractures.
				75				
		1.7 ft	5855					
				76				
			5854				CLAYSTONE:	Same as above, except highly weathered, friable. Olive gray to olive black (5Y 2/1) to (5Y 4/1).
				77				
		3.7 ft	5853					
				78	12/01/87 ▽			
			5852				CLAYSTONE:	Same as above, slightly less weathered, less friable, more carbonaceous material.
				79				
		1.65 ft	5851					
				80				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT): 5930.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749924	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	22-87BR
EAST: 2085822	LOCATION NUMBER: 19	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/08/87	

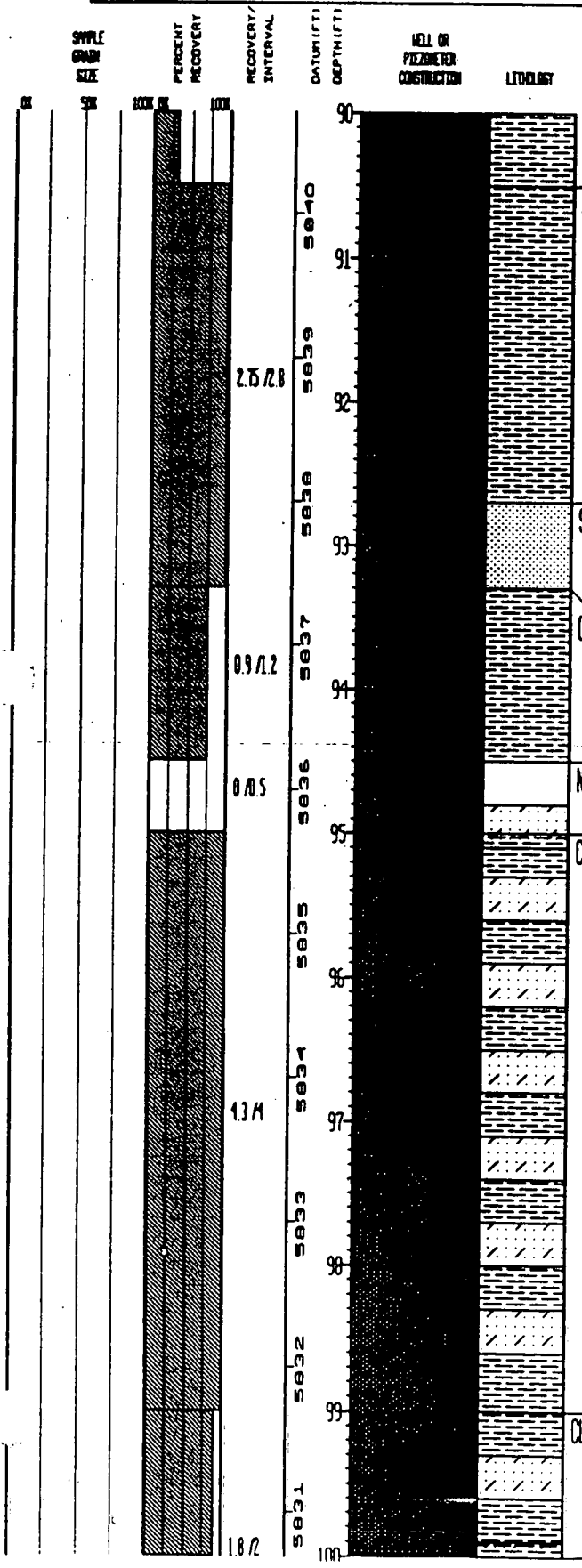
REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.



SILTY CLAYSTONE:	Brownish gray to olive gray (5YR 4/1 to 5Y 4/1), moderately weathered, slightly friable, abundant carbonaceous material.
SILTY CLAYSTONE:	As above.
SILTY CLAYSTONE:	Same as above but with less carbonaceous material.
SILTSTONE:	Grades to siltstone, light olive gray (5Y 6/1), weathered, slightly friable, very thin parallel bedding.
SANDSTONE:	Grades to very fine sandstone color - some weathered, moderately friable, well sorted, with thin layers of claystone (1in. thick.)
SILTSTONE:	Top 0.7 ft. interbedded siltstones, claystones and very fine grained sandstones. Light olive gray (5Y 6/1) to olive gray (5Y 4/1). S.S. and siltstn. layers approx. 1 in. thick. Claystn. 0.5 in. thick, possible load casts in clay layers. S.S. layers well sorted, weathered, moderately friable.
SANDSTONE:	Fine grained silty sandstones as above, first .5 ft. sandstone, light olive gray, moderately weathered, slightly to nonfriable, fine to med. grained, well sorted, calcareous cement. Rest of interval interbedded claystone, siltstone and sandstone, horizontal bedding, sharp contacts, some possible cross bedding.
CLAYSTONE:	Olive gray (5Y 4/1), slightly weathered, slightly friable, trace iron staining.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT): 5930.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749924	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	22-87BR
EAST: 2085822	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/08/87	

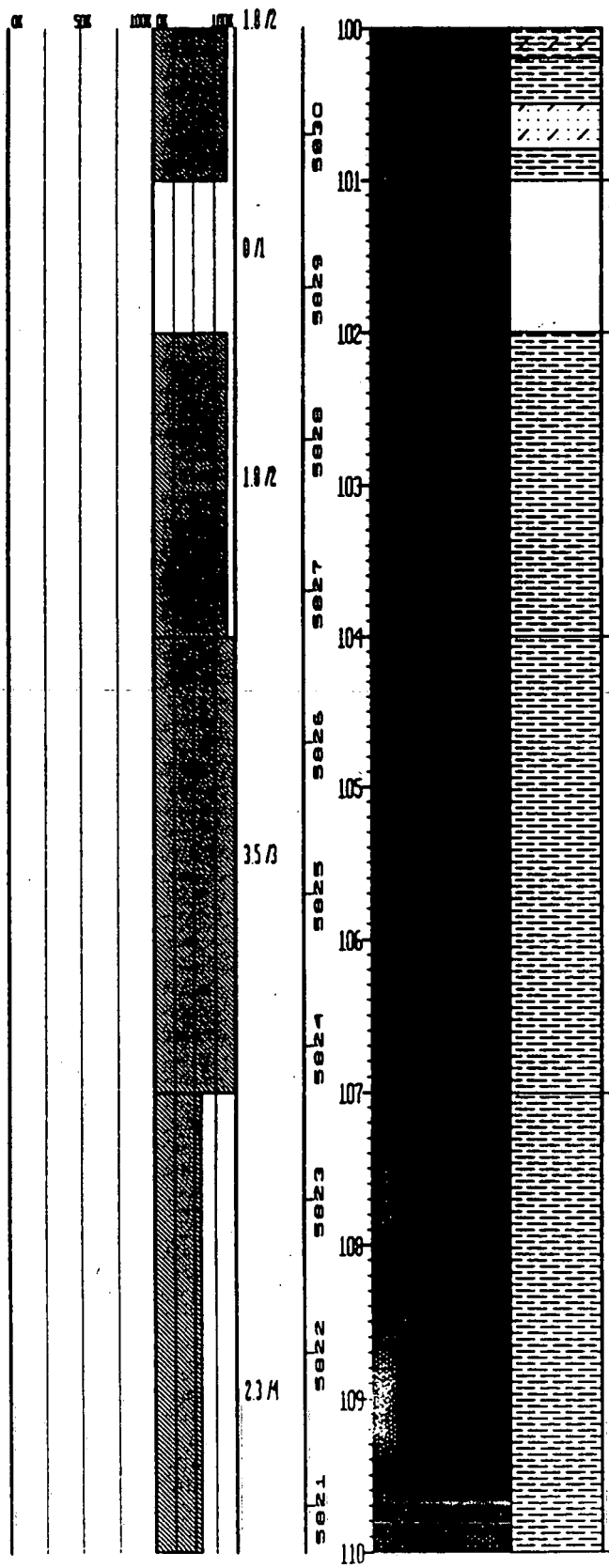
REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Olive gray (5Y 4/1) slightly weathered to weathered in places, bedding angle changed abrubtly to approx. 50 degrees off horizontal.
SANDSTONE:	Sharp contact with med. grained SS (contact at 53 degrees). Some possible load casts in claystone, very thin (1-2 mm.) coal seam visible.
CLAYSTONE:	Brownish gray (5YR 4/1), massive bedding over interval, slightly weathered, slightly friable.
NO SAMPLE:	
CLAYSTONE:	Same as above, interbedded lenticularly with med. grained silty sandstone, same color, horizontal thin layers from 1-2 mm. to 8 cm. thick, also some siltstone layers.
CLAYSTONE:	Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 111	GROUND ELEVATION (FT): 5930.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749924		AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAM	22-87BR
EAST: 2085822		LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 10/08/87	

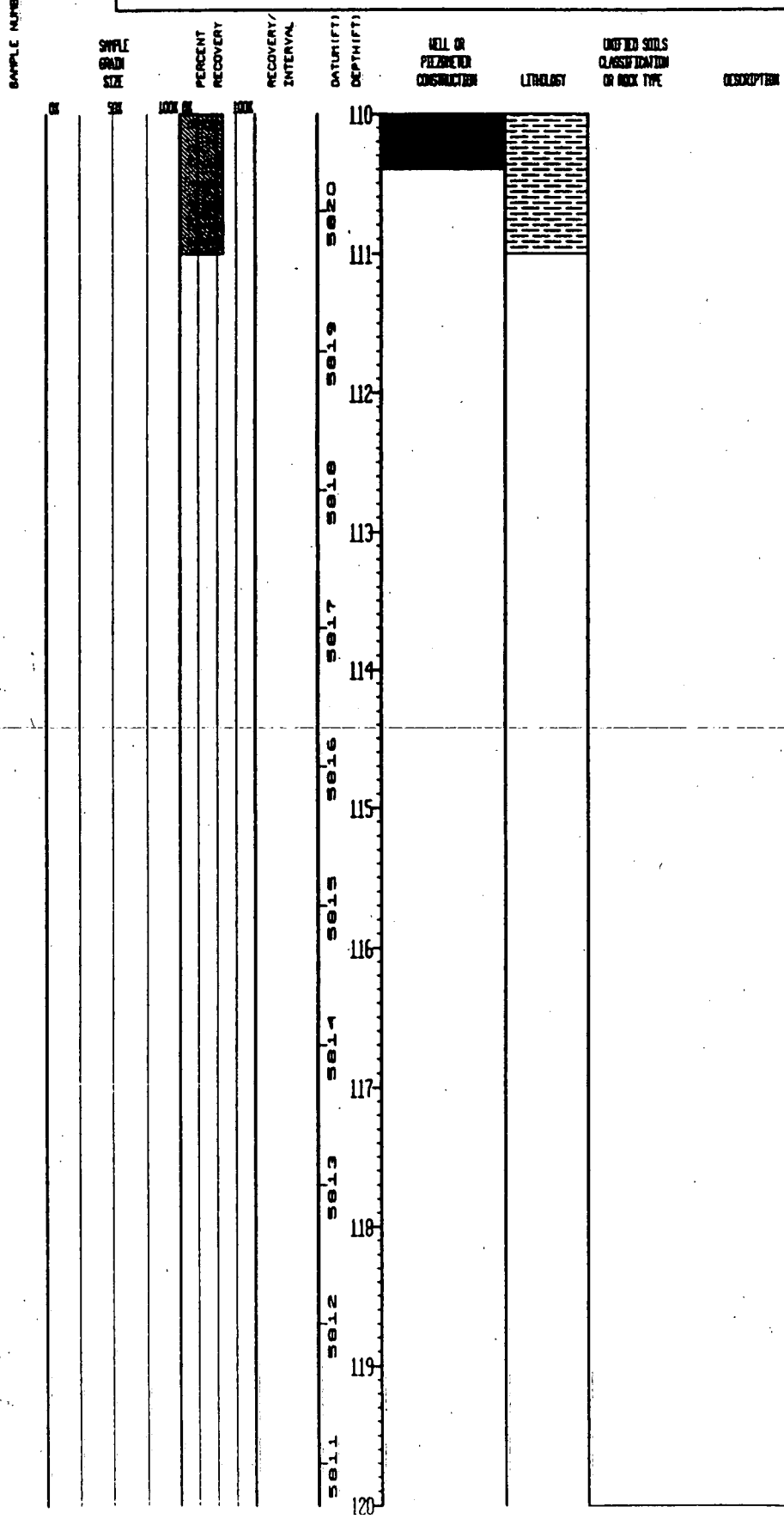
REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
NO SAMPLE:	
CLAYSTONE:	Brownish gray (5Y 4/1), massive bedding, moderately weathered, slightly friable, abundant black carbonaceous material, silty, some fractures.
CLAYSTONE:	Light olive gray (5Y 6/1), massive bedding, highly weathered, slightly to moderately friable, some carbonaceous material.
CLAYSTONE:	Same as above, more weathered, highly friable.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 111		GROUND ELEVATION (FT):	5930.7	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749924	AREA: MOUND AREA		CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	22-87BR
EAST:	2085822	LOCATOR NUMBER: M9		BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	10/08/87	

REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set to 43.59' by K.D. Holliway on October 2, 1987.



STATE PLANE COORDINATE		TOTAL DEPTH (FT): 27.2	GROUND ELEVATION (FT)	5978.5	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748778	AREA: 903 PAD	CASING DIAMETER (IN):	0	GEOLOGIST	DCB	BH22-87
EAST:	2085646	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/09/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement. Sample BH228720C1 triples as samples BH228719WT and BH228720WS.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% – 50%)	PERCENT RECOVERY (100% – 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.1/1.1	5978	0			GC:	Clayey Gravel - light gray (N7), clay matrix is dark yellowish brown (10YR 4/2), sub-rounded, moderately graded, max. size 5 cm., some roots and plant debris, some silt, trace of sand.
			0/1.1	5977	1			NO SAMPLE:	
			0.4/0.4	5976	2			GM:	SILTY GRAVEL - light gray (N7), angular, poorly graded, max. size 3 cm., some clay and calcareous mineralization.
			1.25/1.25	5975	3			CALICHE:	Below 2.6 ft. interval is Sandy Gravelly Caliche, white (N9), max. gravel size is 4 cm
			0/0.35		4			NO SAMPLE:	
BH228700D9			1.75/1.75	5974	5			CALICHE:	Sandy, gravelly, white (N9), some clay, max. gravel size is 7 cm
			0.4/0.4	5973	6			CL:	SANDY GRAVELLY CLAY - grayish orange (10YR 7/4), low plasticity, calcareous mineralization.
			0/0.85	5972	7			NO SAMPLE:	
D036			1.6/1.6	5971	8			GC:	SANDY GRAVEL - medium dark gray (N4), matrix is light brown (5YR 5/6), angular to sub-angular, moderately graded, max. size 4 cm., some clay and silt
			0.5/0.5	5970	9			GC:	Same as above.
			0/0.4	5969	10			NO SAMPLE:	
								NO SAMPLE:	

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 27.2	GROUND ELEVATION (FT) 5978.5	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH:	748778	AREA: 903 PAD	CASING DIAMETER (IN) 0	GEOLOGIST: DCB	BH22-87
EAST:	2085646	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN) 0	DATE DRILLED: 07/09/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement. Sample BH228720CT triples as samples BH228719WT and BH228872OWS

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
228710WS			0/0.9	5968	10				
			1.35/1.35	5967	11			GC	As above (reference interval 7.2 to 9.3ft.)
			0/0.25		12			NO SAMPLE	
			1.6/1.6	5966, 5965	13			GC	As above (reference interval 7.2 to 9.3 ft.), max. gravel size 6 cm with increase in overall size of gravel
			0/0.9		14			NO SAMPLE	
228710IB				5964					
			1.75/1.75	5963	15, 16			GC	As above (reference interval 7.2 to 9.3 ft.), gravel is not as coarse as interval 12.2 to 13.8.
			0/0.75	5962	17			NO SAMPLE	
			1.6/1.6	5961, 5960	18			GC	As above (reference interval 7.2 to 9.3 ft.)
			0/0.9		19			NO SAMPLE	
228720CT				5959		07/09/87 ▽			
					20			CL	CLAY - Light gray (N7), bedding not apparent, highly weathered, moderately

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 27.2	GROUND ELEVATION (FT): 5978.5	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	748778	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH22-87
EAST:	2085646	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/09/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement. Sample BH228720CT triples as samples BH228719WT and BH228872OWS

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

Recovery/Interval	Depth (ft)	Unified Soils Classification or Rock Type	Description
0.3/1	20		friable, possible Mg oxides (exhibits dendritic morphology), 1 cobble, trace sand and gravel
		NO SAMPLE:	
0/1.5	21–22		
0.35/1.5	22–23	CLAYSTONE:	Top of Bedrock As above (reference interval 19.7 to 20.7 ft), cobble, sand and gravel are absent, local iron staining.
2.6/1	23–24	CLAYSTONE:	As above
1.3/1.3	24–25	CLAYSTONE:	As above with dark mineralization occurring locally but lacking dendritic morphology
1.2/1.2	25–26	CLAYSTONE	As above, abundant iron staining at 26.5 ft

Depth scale: 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

Elevation scale: 5958, 5957, 5956, 5955, 5954, 5953, 5952, 5951, 5950, 5949

22872ZBR

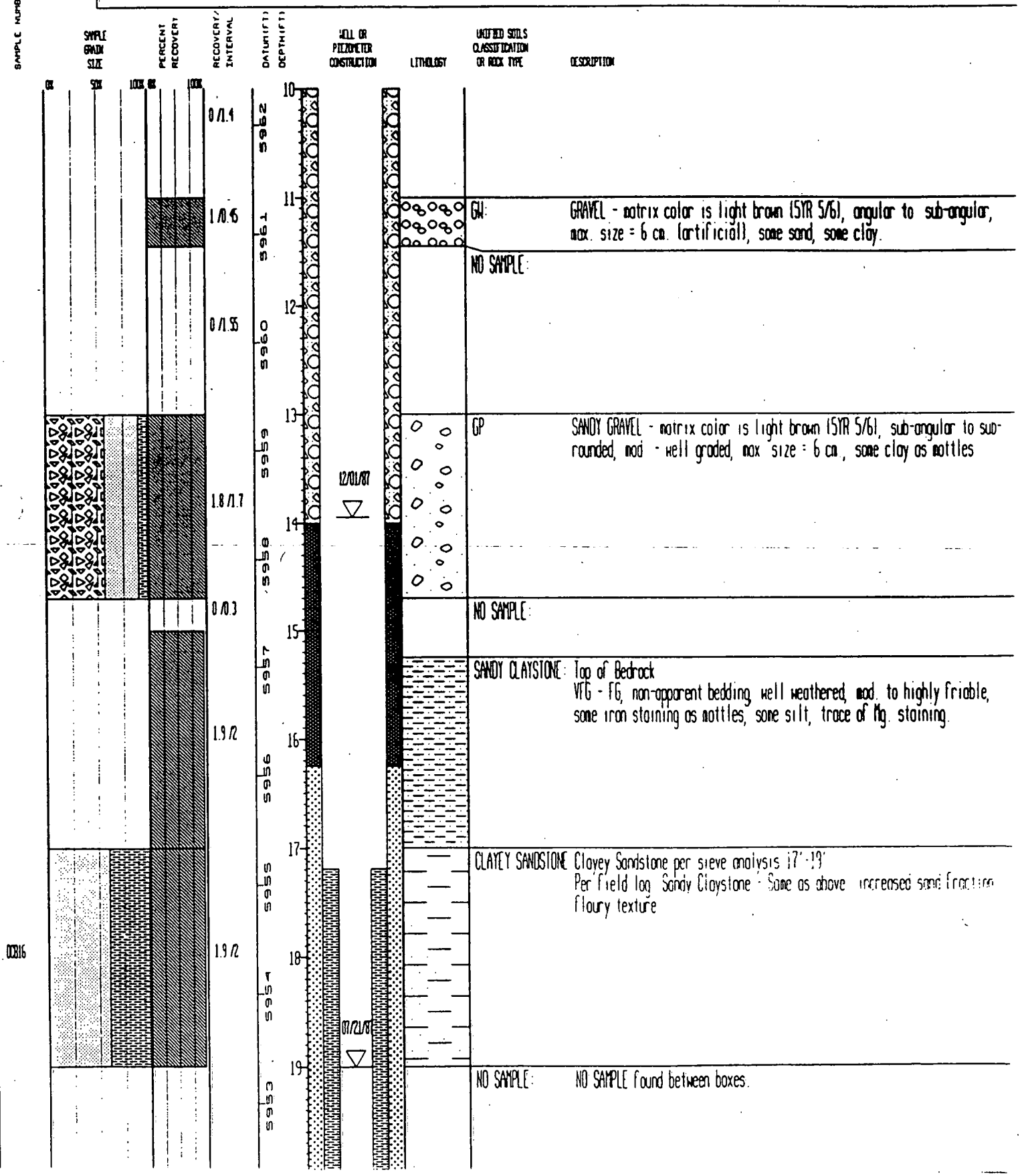
STATE PLANE COORDINATE:		TOTAL DEPTH (FT) 45 3	GROUND ELEVATION (FT)	5972 34	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH	749404	AREA MOUND AREA	CASING DIAMETER (IN)	2 ID	GEOLOGIST	DAT/DCB	23-87BR
EAST	2085910	LOCATOR NUMBER M9	BOREHOLE DIAMETER (IN)	7 5	DATE DRILLED	07/21/87	
REMARKS: Hollow stem auger							

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

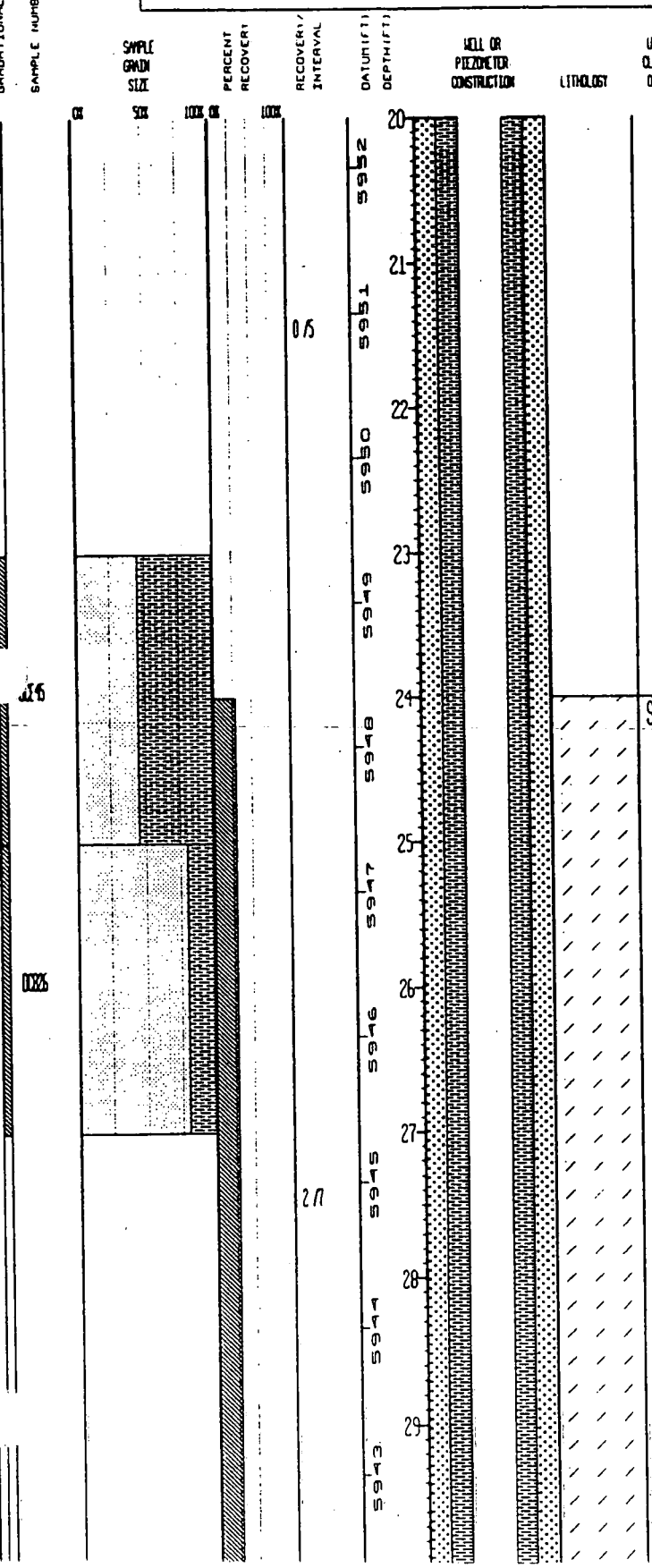
RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
1.6/1.5	5972	0	GP	Top 1 ft Clayey Sandy Gravel - dark yellowish brown (10YR 4/2), angular to sub-angular, mod. grading, max size = 5 cm, abundant calc material
	5971	1	CALICHE	Moderate orange pink (5YR 8/4), some gravel and sand, broken-up texture
0/0.5			NO SAMPLE	
1.5/1.4	5970	2	GP	CALCAREOUS GRAVEL - moderate orange pink (5YR 8/4), angular to sub-angular, mod. grading, max size = 5 cm, some sand
	5969	3		
1.3/1.5	5968	4	GP	Same as above max size = 7 cm, bottom of interval is dark yellowish orange (10YR 6/6), some clay
0/0.5	5967	5	NO SAMPLE	
0.9/0.6			GP	Same as above some clay
0/1	5966	6	NO SAMPLE	
1.6/1.7	5965	7	GP	Same as above
	5964	8		
0/0.3			NO SAMPLE	
1.1/0.6	5963	9	SW	GRAVELLY SAND - matrix color is moderate orange pink (5YR 8/4), angular to sub-angular, mod grading, max gravel size = 6 cm, sand is FG - CG, some clay, calcareous
			NO SAMPLE	

STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 45.3	GROUND ELEVATION (FT) [illegible]	PROJECT NUMBER [illegible]	LOG OF BORING NUMBER	
NORTH [illegible]	AREA MOUND AREA	CASING DIAMETER (IN) [illegible]	GEOLOGIST [illegible]	23-87BR	
EAST 2385910	LOCATOR NUMBER 19	BOREHOLE DIAMETER (IN) [illegible]	DATE DRILLED [illegible]		

REMARKS Hollow stem auger

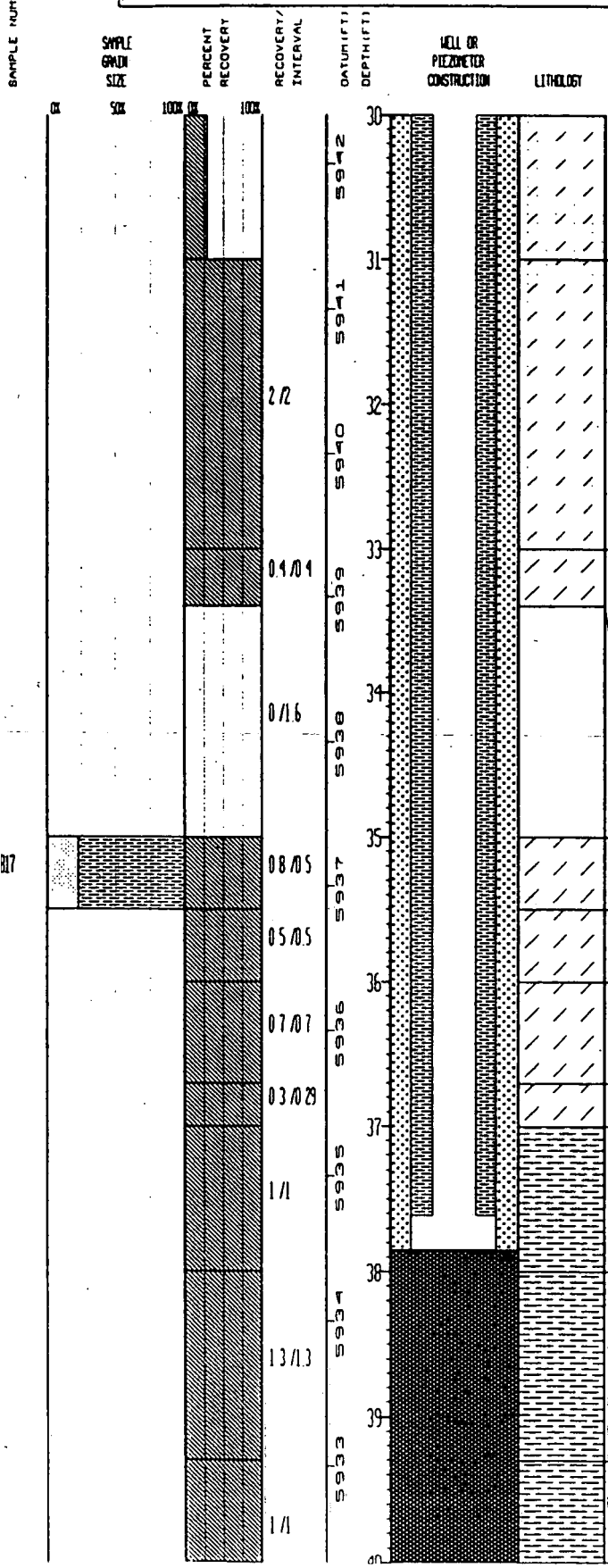


STATE PLANE COORDINATE		TOTAL DEPTH (FT)	45 3	GROUND ELEVATION (FT)	5972 34	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH	749404	AREA: MOUND AREA		CASING DIAMETER (IN)	2 10	GEOLOGIST	DAT/DCB	23-87BR
EAST	2085910	LOCATOR NUMBER	M9	BOREHOLE DIAMETER (IN)	7 5	DATE DRILLED	07/21/87	
REMARKS	Hollow stem auger							



SILTY SANDSTONE Grayish orange (10YR 7/4), to very light gray (N8), bedding not apparent to thin bedded (<4 mm), highly weathered, moderately friable, very fine grained, moderately sorted

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 45 3	GROUND ELEVATION (FT) 5972 34	PROJECT NUMBER 667 11	LOG OF BORING NUMBER
NORTH	749404	AREA MOUND AREA	CASING DIAMETER (IN) 2 10	GEOLOGIST DAT/DCB	23-87BR
EAST	2085910	LOCATOR NUMBER M9	BOREHOLE DIAMETER (IN) 7 5	DATE DRILLED 07/21/87	
REMARKS Hollow stem auger					



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY SANDSTONE	As above, with thin beds of silty claystone at approx 32 8 ft
SILTSTONE	Interval is actually logged as 31 4 to 33 4 ft overlaps with previous interval Siltstone, dark yellowish orange (10YR 6/6), bedding not apparent, highly weathered, slightly friable, localized iron staining, trace of fine sand At 32.5 ft (est depth) strata of siltstone, white (N9) are bedded at 10 degrees and are less than 1 mm thick
NO SAMPLE	
SILTSTONE	As above (reference interval from 31 44 to 33 41), with irregular lenses of the white siltstone
SILTSTONE	As above
SILTSTONE	As above
SILTSTONE	As above
CLAYSTONE	Medium gray (N5), bedding not apparent, highly weathered, moderately friable, localized iron staining
CLAYSTONE	As above
CLAYSTONE	As above

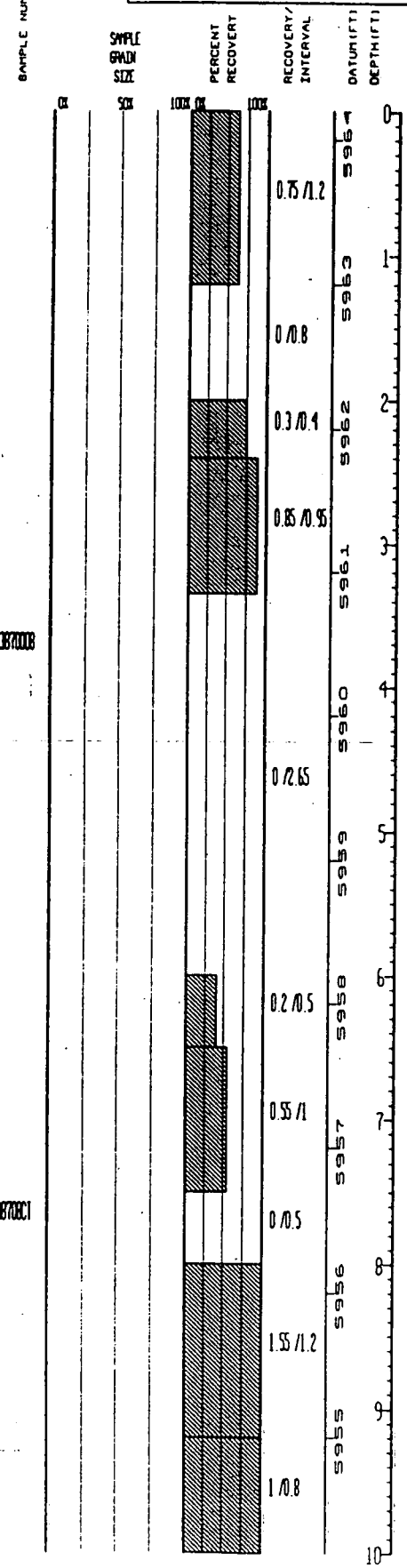
STATE PLANE COORDINATE		TOTAL DEPTH (FT) 45.3	GROUND ELEVATION (FT)	5972.34	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH	749404	AREA MOUND AREA	CASING DIAMETER (IN)	2 ID	GEOLOGIST	DAT/DCB	23-87BR
EAST	2085910	LOCATOR NUMBER M9	BOREHOLE DIAMETER (IN)	7.5	DATE DRILLED	07/21/87	

REMARKS Hollow stem auger

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5932	40			CLAYSTONE	As above
			2/2	5931	41				
				5930	42			CLAYSTONE	Olive gray (5Y 4/1), bedding appears flaggy with approx. 10 degree dip based on core breaks, weathered, moderately friable, localized iron staining and carbonaceous mineralization
			1/1		43				
				5929				CLAYSTONE	As above
			1/1		44				
				5928				CLAYSTONE	As above
			1/1		45				
				5927					
				5926	46				
				5925	47				
				5924	48				
				5923	49				
					50				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 12.5	GROUND ELEVATION (FT): 5964.2	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749765	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: TSD	BH23-87
EAST: 2085888	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/07/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.



LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	CL:	SANDY SILTY CLAY - FG, dark yellowish brown (10YR 4/2), estimated low plasticity, some gravel, trace of roots, max. gravel size approx. 4 cm.
	NO SAMPLE:	
	GC:	SANDY GRAVEL - variegated predominantly light brownish gray (5YR 6/1), angular to sub-angular, mod. well graded, max. size = 3 cm., some silt and clay.
	GC:	Same as above with max. gravel size = 5.5 cm.
	NO SAMPLE:	
	GP:	GRAVEL - predominantly pinkish gray (5YR 8/1), angular to subangular, poorly graded, max. size approx. 8 cm., some sand.
	GP:	Same as above, sub-rounded, max. size approx. 6.5 cm., less sand.
	NO SAMPLE:	
	SILTY CLAYSTONE:	Top of Bedrock Lt. gray (N8), trace of limonite staining as mottles, calcite (top of interval) and organic matter, estimated mod. - high plasticity.
	SILTY CLAYSTONE:	Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 12.5		GROUND ELEVATION (FT):	5964.2	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748765	AREA: 903 PAD		CASING DIAMETER (IN):	0	GEOLOGIST:	TSD	BH23-87
EAST:	2085888	LOCATOR NUMBER:	M8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/07/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

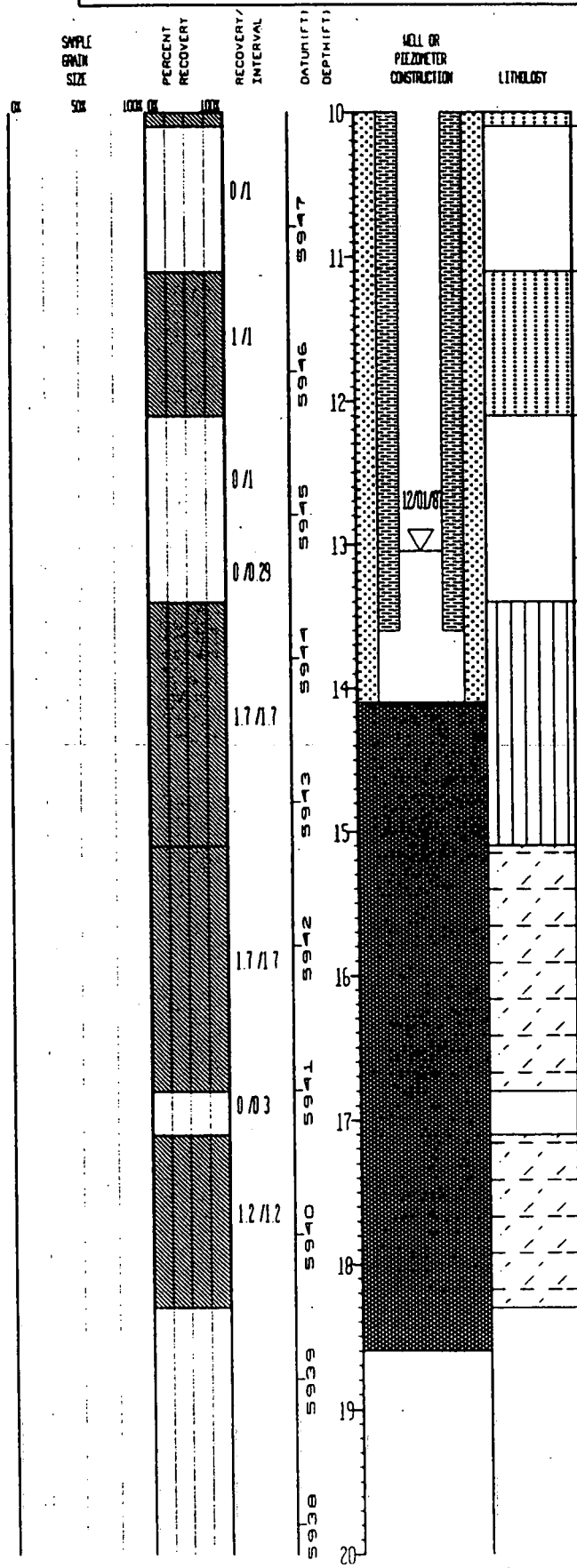
SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%	0.5/0.4	5954	10			SILTY CLAYSTONE:	Pinkish gray (5YR 8/1), some iron staining and organic matter, vertical fractures present.
			1/1.55	5953	11			SILTY CLAYSTONE:	Light gray (N7), massive bedding, weathered, some limonite staining as mottles and in fractures, trace of organic staining.
11BR			0.5/0.55	5952	12			SILTY CLAYSTONE:	Same as above. NOTE: No water encountered while drilling.
				5951	13				
				5950	14				
				5949	15				
				5948	16				
				5947	17				
				5946	18				
				5945	19				
					20				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 18.3	GROUND ELEVATION (FT) 5957.79	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH:	749751	AREA: EAST TRENCHES	CASING DIAMETER (IN) 2.10	GEOLOGIST: DCB	24-87
EAST:	2086746	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN) 7.5	DATE DRILLED 09/02/87	

REMARKS: Hollow Stem Auger

Sample Number	Recovery/Interval	Datum (Ft)	Depth (Ft)	Lithology	Unified Soils Classification or Rock Type	Description
	1.3/1.3	5957	0–1		GW	Clayey Gravel - very light gray (N8), light gray (N7), grayish red (10R 4/2), clay matrix, angular, well graded, max. size 5 cm., some silt and sand.
	0/0.7	5956	1–2		NO SAMPLE	
	1.3/1.3	5955	2–3		GW	As above, clay matrix color changes to moderate brown (5YR 3/4), gravel decreases in size, max. size 3 cm.
	0/0.7	5954	3–4		NO SAMPLE	
	1/1	5953	4–5		SP	GRAVELLY SAND - grayish orange pink (5YR 7/2), fine to coarse grained, sub-rounded to rounded, moderate grading, some silt and carbonate mineralization - strong reaction with dilute HCl
	0/1	5952	5–6		NO SAMPLE	
	1.3/1.3	5951	6–7		SP	As above, a very coarse gravel fraction (max. size 6 cm.) occurs at 6.7 ft. (est.) and continues to 7.3 ft. Gravel, medium gray (N5), angular to sub-rounded, moderate grading, some sand and carbon.
	1.2/1.2	5950	7–8		SP	As above (6.0 to 6.7 ft. interval) with color change to grayish orange (10YR 7/4). At 7.8 ft. a coarse gravel fraction, 6 cm. max. size occurs from 7.8 to 8.5 ft. - see gravel description above
	0/0.8	5949	8–9		NO SAMPLE	
	0.8/0.8	5948	9–10		SP	As above (7.3 to 7.8 ft. interval) with decrease in size of gravel fraction, max. size 4 cm.

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 18 3	GROUND ELEVATION (FT) 5957 79	PROJECT NUMBER 667 11	LOG OF BORING NUMBER
NORTH 749751	AREA EAST TRENCHES	CASING DIAMETER (IN) 2 ID	GEOLOGIST DCB	24-87
EAST 2086746	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN) 7 5	DATE DRILLED 09/02/87	
REMARKS Hollow Stem Auger				



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
NO SAMPLE	
SP	As above (9 3 to 10 10)
NO SAMPLE	
NO SAMPLE	
ML	Clayey Silt - grayish orange (10YR 7/4), bedding not apparent, highly weathered, highly friable, localized bodies of carbonate mineralization and localized staining, single gravel clast sub-rounded 5 cm at 14 8 ft
CLAYEY SILTSTONE	Top of Bedrock Same as above At 16 1 ft color change to dark yellowish orange (10YR 6/6)
NO SAMPLE	
CLAYEY SILTSTONE	As above, at 18 1 ft an isolated body of iron and possible Mg oxide minerals occurs Note No water encountered during drilling

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 12.3	GROUND ELEVATION (FT): 5953.6	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749829	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH24-87
EAST: 2086190	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/08/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.1/1.7	5953	0			GC:	Clayey Gravel - light gray (N7), clay is dusky brown (5YR 2/2), sub-angular to sub-rounded, poorly graded, max. size = 6 cm., some roots and plant debris, some silt.
	BH24870002				5952	1				
				0/0.3					NO SAMPLE:	
				0.7/1.3	5951	2			GC:	As above.
						3				
	BH24870501			0/0.7	5950				NO SAMPLE:	
				0.9/0.9	5949	4			GC:	GRAVEL - med. light gray (N6), sub-angular to sub-rounded, poorly graded, max. size 7 cm., some sand and silty clay at the base of this interval.
					5948	5			NO SAMPLE:	Top of Bedrock.
				0/2.6	5947	6				
						7				
				0.3/0.3	5946				CLAYSTONE:	Very pale orange (10YR 8/2), bedding not apparent, highly weathered, moderately friable, iron staining or fractures as mottling, calcareous mineralization on fractures and dark mineralization on fractures and on possible bedding plane partings.
	BH24870808			1.6/1.6	5945	8			CLAYSTONE:	As above.
						9				
				0.6/0.6	5944				CLAYSTONE:	As above.
						10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 12.3	GROUND ELEVATION (FT): 5953.6	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749829	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH24-87
EAST: 2086190	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/08/87	

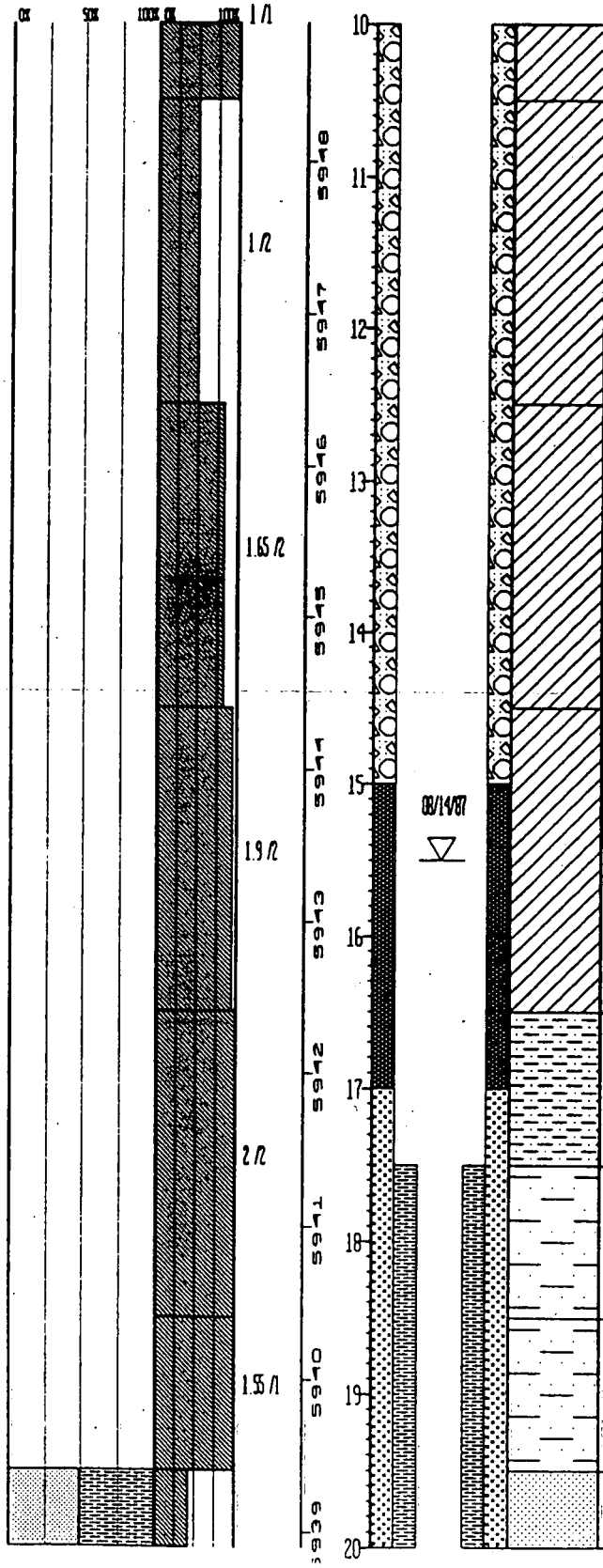
REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0/0.75	5943	10			NO SAMPLE:	
		1.55/1.55	5942	11			CLAYSTONE:	As above (reference interval 7.5 to 10 ft.) without calcareous mineralization. NOTE: No water encountered while drilling.
			5941	12				
			5940	13				
			5939	14				
			5938	15				
			5937	16				
			5936	17				
			5935	18				
			5934	19				
				20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 47	GROUND ELEVATION (FT):	5958.91	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 749719	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DAT	25-87BR
EAST: 2086748	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	08/14/87	
REMARKS: Hollow Stem Auger.						

SAMPLE NUMB.	SAMPLE GRADI SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.65 /2.2	5958	0–1			GC:	Clayey Gravel - matrix color - mod. brown (5YR 3/4), angular to sub-rounded, well graded, max. size = 4.5 cm. some sand, trace of roots.
				5957	1–2				
			1.65 /3.3	5956	2–3			GC:	Calcareous Sandy Gravel - matrix color, white (N9) to grayish orange (10YR 7/4), angular to sub-angular, mod. - well graded, max. size = 6 cm., some clay.
				5955	3–4				
				5954	4–5				
			1.95 /2	5953	5–6			CL:	SANDY CLAY - matrix mod. orange pink (5YR 8/4), med. plast., some gravel, floury texture.
				5952	6–7			GC:	Calcareous Clayey Gravel - mod. orange pink (5YR 8/4), angular to sub-rounded, poorly graded, max. size = 6 cm.
			1.2 /2	5951	7–8			GC:	Clayey Gravel - mod. orange pink (5YR 8/4), angular, mod. graded, max. size = 6.5 cm., some sand and calcareous material.
				5950	8–9				
			1/1	5949	9–10			CL:	SANDY CLAY - matrix grayish orange (10YR 7/4), low plasticity, some gravel, slightly calcareous.

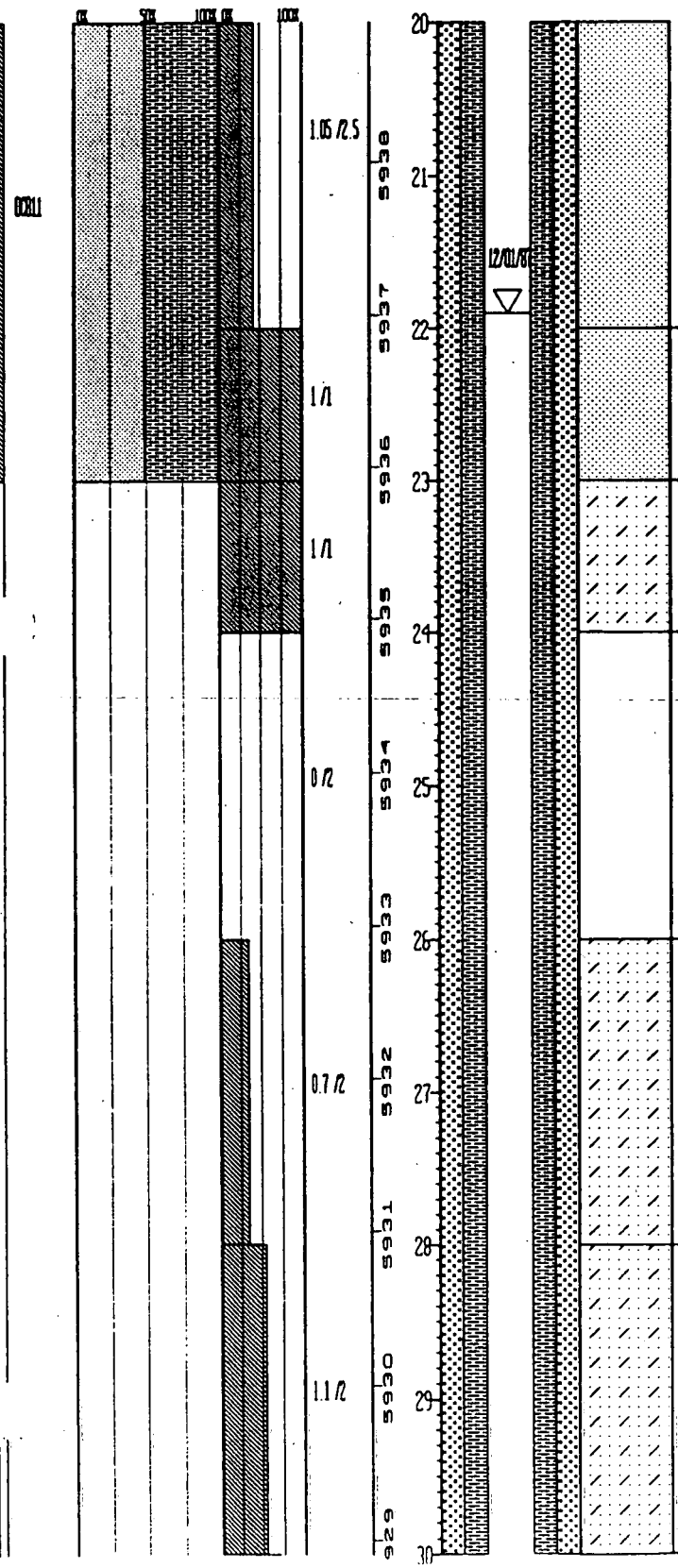
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 47	GROUND ELEVATION (FT): 5958.91	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749719	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: ISD/DAT	25-87BR	
EAST: 2086748	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/14/87		
REMARKS: Hollow Stem Auger.					



CL:	Clayey Gravel - light brown (5Y 6/4), angular to sub-angular, mod. grading, max. size = 6.5 cm., some sand, slightly calcareous.
CL:	SANDY GRAVELLY CLAY - grayish orange (10YR 7/4), angular to sub-angular, mod. grading, max. size = 6 cm., top 1/2 of interval has floury texture, bottom 1/2 is more cohesive.
CL:	Same as above.
SANDY CLAYSTONE:	Top of Bedrock Very pale orange (10YR 8/2), mod. plast, iron staining, slight floury texture.
CLAYEY SANDSTONE:	Very pale orange (10YR 8/2), massive bedding, well weathered, M-VFG, sub-angular to sub-rounded, mod. sorted, silica cemented, calcareous streak in top of bottom 1 ft.
CLAYEY SANDSTONE:	Same as above with carb. material, iron staining, becoming heavily iron stained at bottom of interval.
SANDSTONE:	Very pale orange (10YR 8/2) to dark yellowish orange (10YR 6/6), massive bedding, well weathered, mod. friable, VFG-FG, well sorted, silica

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 47	GROUND ELEVATION (FT): 5958.91	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749719	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	25-87BR	
EAST: 2086748	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/14/87		
REMARKS: Hollow Stem Auger.					

GRADATIONAL DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



cemented.

SANDSTONE: VFG - MG, very pale orange (10YR 8/2) to dark yellowish orange (10YR 6/6), massive bedding, highly weathered, mod. friable, sub-angular to sub-rounded, mod. sorted, some silt and iron staining.

SILTY SANDSTONE: Very pale orange (10YR 8/2) to dark yellowish orange (10YR 6/6), non-apparent bedding, highly weathered, mod.-highly friable, VFG-MG, sub-angular to sub-rounded, mod. sorted, some clay, iron staining.

NO SAMPLE:

SILTY SANDSTONE: Same as above, no clay.

SILTY SANDSTONE: Same as above.

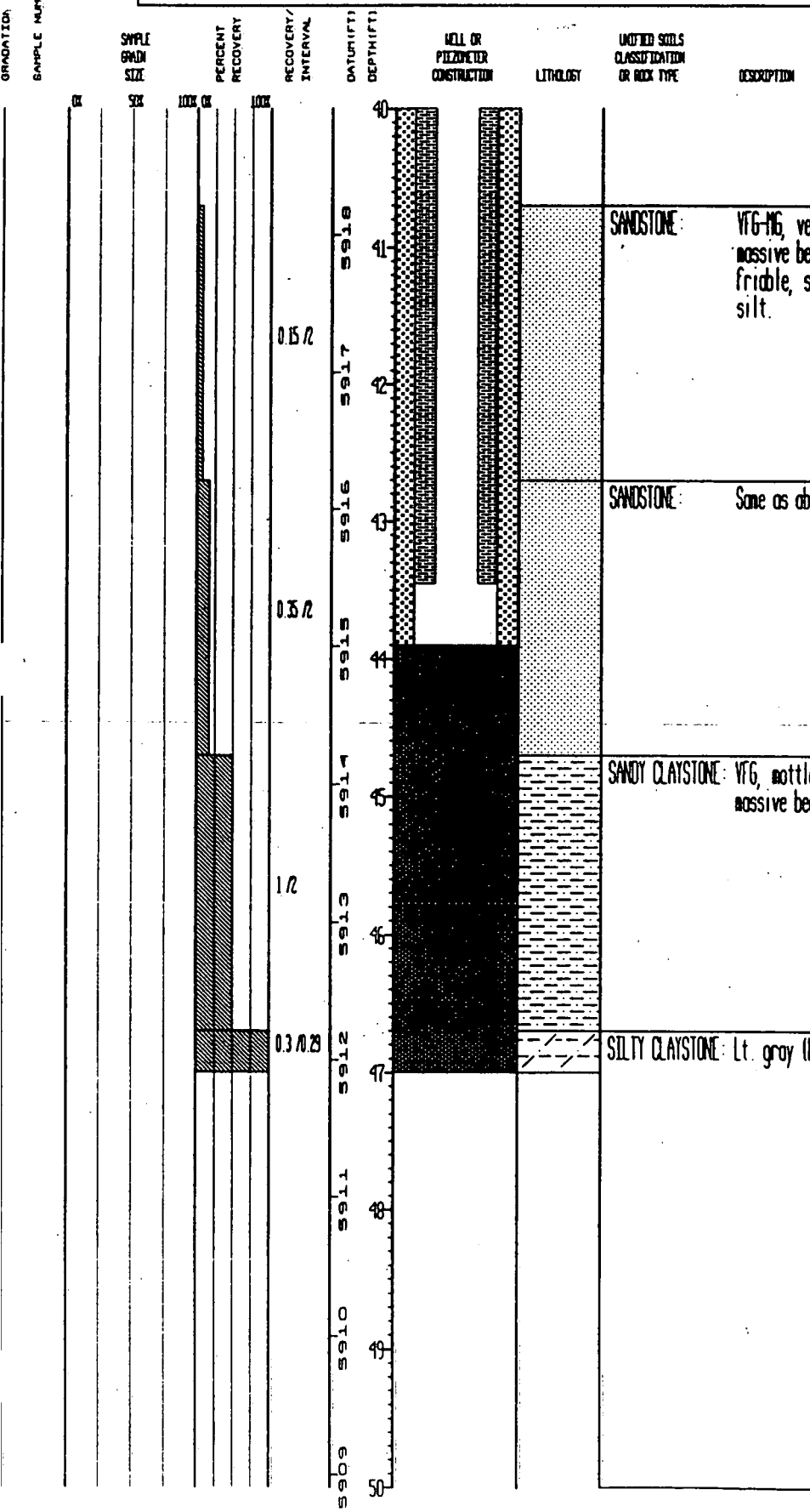
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 47	GROUND ELEVATION (FT): 5958.91	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749719	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	25-87BR
EAST: 2086748	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/14/87	

REMARKS: Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.4/2	5928	30–31			SANDSTONE:	MG, very pale orange (10YR 8/2) to dark yellowish orange (10YR 6/6), massive bedding, highly weathered / poorly indurated, highly - mod. friable, sub-angular to sub-rounded, well sorted, iron staining, trace of silt.
			0.65/1	5927	32			SANDSTONE:	Same as above.
			0.4/2	5926	33–34			SANDSTONE:	Same as above.
			0.25/1	5925	35			SANDSTONE:	Same as above - VFG-MG, silty, sub-angular to rounded.
			0/2	5923	36–37			NO SAMPLE:	
			0.35/0.5	5922	38			SANDSTONE:	Same as above.
			0/2.2	5921	39–40			NO SAMPLE:	

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 47	GROUND ELEVATION (FT): 5958.91	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749719	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	25-87BR
EAST: 2086748	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/14/87	

REMARKS: Hollow Stem Auger.



SANDSTONE: VFG-MG, very pale orange (10YR 8/2) to dark yellowish orange (10YR 6/6), massive bedding, highly weathered / poorly indurated, highly - mod. friable, sub-angular to sub-rounded, mod. sorted, iron staining, some silt.

SANDSTONE: Same as above - convoluted with claystone.

SANDY CLAYSTONE: VFG, mottled lt. olive gray (5Y 6/1) and dark yellowish orange (10YR 6/6), massive bedding, weathered, slightly friable.

SILTY CLAYSTONE: Lt. gray (N7), massive bedding? slightly friable, some VFG sand.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 25.2	GROUND ELEVATION (FT):	5953.2	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749590	AREA: 903 PAD	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH25-87
EAST:	2085830	LOCATOR NUMBER: 118	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	06/18/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

SAMPLE NUMBER	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	1.65 /1.65	5953	0		CH:	Slightly Silty Clay - grayish brown (5YR 3/2), highly plastic, some sand and surficial roots and grass. Trace gravel (to 2.8 cm.).
	0 /0.35	5952	1		NO SAMPLE:	
	1.55 /1.55	5951	2		CH:	Slightly Silty Clay - moderate yellowish brown (10YR 5/4), trace sand and surficial roots, trace gravel (up to 1 cm.), moderate to high plasticity.
H25870009	0 /3.05	5950	3		NO SAMPLE:	
	1.5 /1.85	5949	4			
H25870911	0.25 /0.15	5948	5	06/18/87	GW:	Clayey Gravel - gravel, grayish orange pink to medium gray (10R 8/2 to N5), angular to sub-rounded, well graded, maximum size 7.5 cm. Clay matrix, moderate reddish brown, some sand, trace calcareous materials (slight reaction).
	0 /0.5	5947	6		GW:	Single cobble - medium dark gray (N4), sub-angular, some clay and sand attached.
		5946	7		NO SAMPLE:	
H25870910	0.35 /0.9	5945	8		GW:	Two cobbles, medium dark gray, sub-angular, some sandy clay attached.
		5944	9			
			10			

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 25.2	GROUND ELEVATION (FT): 5953.2	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748590	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH25-87
EAST: 2085830	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 06/18/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5943	10				
				5942	11			NO SAMPLE:	
			0/4.1	5941	12				
				5940	13				
				5939	14				
			0/0.3					NO SAMPLE:	
25871663			1.2/1.5	5938	15			CLAYSTONE:	Top of Bedrock Light olive gray (5Y 6/1), medium to high plasticity, some silt, trace iron staining and carbonaceous material.
				5937	16				
			1.2/1					CLAYSTONE:	Same as above, but with more iron stains.
				5936	17				
			0/0.3					NO SAMPLE:	
				5935	18			CLAYSTONE:	Same as above, but slightly more silt, medium plasticity.
			1.1/1.7						
05471988R				5934	19				
			1/0.5					SILTY CLAYSTONE:	Very pale orange to grayish orange (10YR 8/2 to 10 YR 7/4), med. to high plasticity, some iron staining throughout and in tracks.
					20			NO SAMPLE:	

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 25.2	GROUND ELEVATION (FT):	5953.2	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749590	AREA: 903 PAD	CASING DIAMETER (IN):	0	GEOLOGIST:	LMA	BH25-87
EAST:	2085830	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	06/18/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
02872045			0 /0.7	5933	20			NO SAMPLE:	
			1.9 /1.35	5932	21			SILTY CLAYSTONE:	Very pale orange to grayish orange (10YR 8/2 to 10YR 7/4) to light olive gray (5Y 6/1), medium to high plasticity, some iron staining in fractures.
			1.5 /0.65	5931	22			SILTY CLAYSTONE:	Very pale orange to grayish orange (10YR 8/2), med. to high plasticity.
				5930	23				
				5929	24				
				5928	25				
				5927	26				
				5926	27				
				5925	28				
				5924	29				
					30				

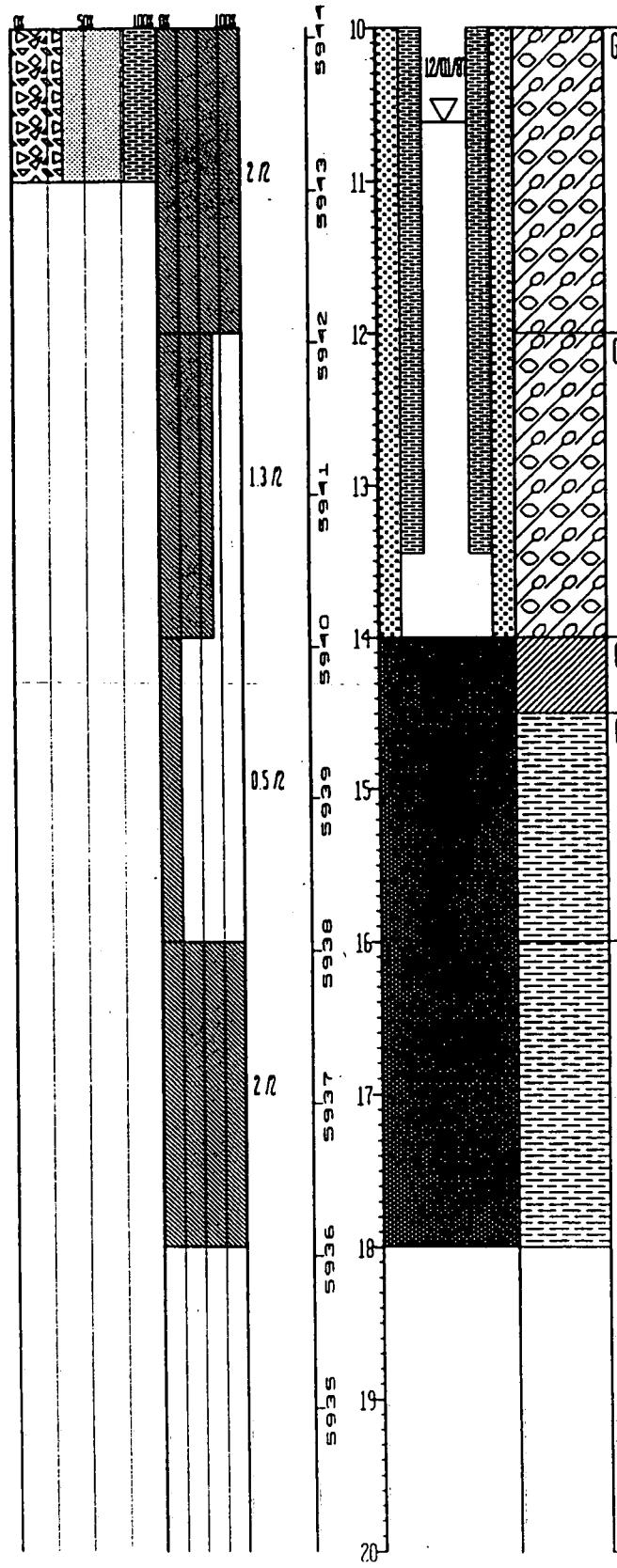
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 18	GROUND ELEVATION (FT):	5954.06	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749256	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	26-87
EAST:	2087490	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	09/23/87	

REMARKS: Hollow Stem Auger.

GRADATIONAL	SAMPLE NUMBER	SAMPLE GRADIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	100%	0.85/2	5954	0			GW:	GRAVEL - predominantly mod. yellowish brown (10YR 5/4), sub-angular to sub-rounded, mod. grading, max. size 6.5 cm. Top 4" has some dark yellowish brown (10YR 5/4) silt. Rest of interval has very pale orange (10YR 8/2), floury silt, very calcareous, CaCO3 mineralization on gravel rind. Roots and surficial grass at surface, trace clay.
					5953	1				
					5952	2			ML:	GRAVELLY SILT - very pale orange (10YR 8/2), floury texture. Gravel, angular to sub-angular, moderately graded, max. size 6.5 cm., calcareous rinds on gravel, matrix very calcareous.
				1.7/2	5951	3				
					5950	4			GC:	Clayey Sandy Gravel - gravel predominantly med. dark gray (N4), angular to sub-angular, mod. grading, max. size 6 cm., matrix very clayey, very pale orange to grayish orange (10YR 8/2 to 7/4), calcitic.
				0.9/2	5949	5				
					5948	6			GC:	Same as above. Less gravel, more floury matrix.
				0.9/2	5947	7				
					5946	8			GC:	Clayey Sandy Gravel - gravel predominantly med. dark gray (N4), angular to sub-rounded, well graded, max. size 5 cm. Clayey sand matrix, grayish orange (10YR 7/4), slightly calcitic.
				1/2	5945	9				
						10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 18	GROUND ELEVATION (FT): 5954.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749256	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	26-87
EAST: 2087490	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/23/87	

REMARKS: Hollow Stem Auger.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	Clayey Gravel - gravel predominantly med. gray (N5), angular to sub-angular, mod. well graded, max. size 5.5 cm. Clay matrix, yellowish gray (5Y 8/1), trace sand and silt, some caliche, but generally slightly calcitic.
GC:	Same as above. Gravel generally smaller, more silt, slightly less cohesive.
CH:	Clay - pinkish gray (5Y 8/1), mod. high plast., some calcite nodules.
CLAYSTONE:	Top of Bedrock Same as above.
CLAYSTONE:	Same as above, some dark yellowish orange (10YR 6/6) mottling. Silty toward bottom of interval.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 7.9	GROUND ELEVATION (FT):	5934.1	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749571	AREA: 903 PAD	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH26-87
EAST:	2086057	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/16/87	

REMARKS: Boring No. BH26-87/11-87BRA. Hollow Stem Auger.

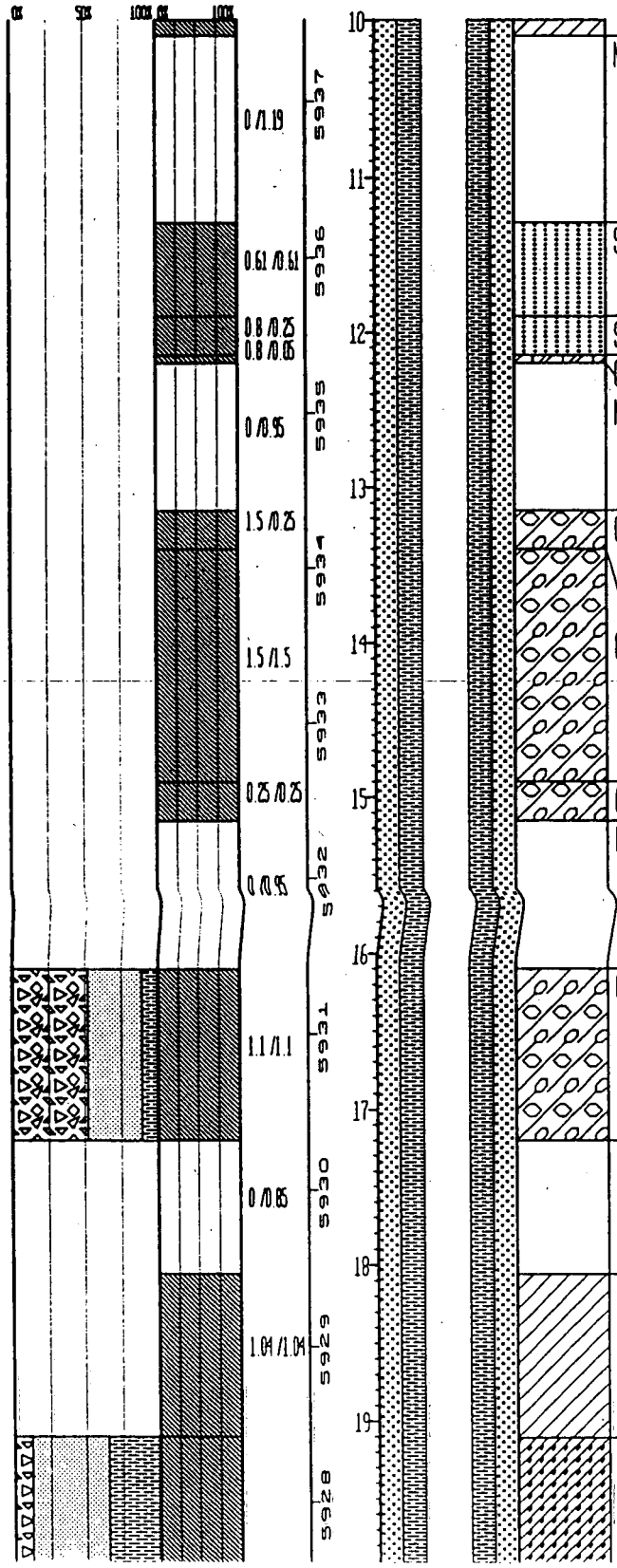
SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.6/1.7	5934	0			CL:	Silty Clay: brownish gray to olive gray (5YR 4/1 to 5Y 4/1); moderate plasticity; trace sand; trace gravel; surficial roots and grass present.
			0/0.3	5933	1			NO SAMPLE:	
			1.1/2	5932	2			SILTSTONE:	Top of Bedrock Very pale orange (10YR 8/2) to grayish orange (10YR 7/4); some clay; weathered; slightly to moderately friable; some roots; trace iron staining; trace CaCO3; trace iron staining.
			1.8/2	5931	3			SILTSTONE:	Same as above with lenses of very fine grained sands; more CaCO3; some CaCO3 mineralization in vertical fractures.
			1/1.9	5930	4			SILTSTONE:	Same as above. NOTE: No water encountered while drilling.
				5929	5				
				5928	6				
				5927	7				
				5926	8				
				5925	9				
					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 47.4	GROUND ELEVATION (FT): 5947.52	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	27-87
EAST: 2088052	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/10/87	
REMARKS: Hollow Stem Auger.				

CHEMICAL BY GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100% OR 100%)	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.5/1.5	5947	0			CL:	CLAY - moderate brown (5YR 3/4), moderate plasticity, some silt and fine gravel, some plant roots and debris in upper 0.3 ft.
				1.5/1.5	5946	1			CALICHE:	Grayish pink (10R 8/2), trace of gravel.
				1/1	5945	2			CALICHE:	As above with increase in the gravel fraction, max. size 4.5 cm.
				0.5/0.5	5944	3			CALICHE:	As above.
				0.5/0.5	5943	4			MH:	SANDY SILT - light brown (5YR 6/4) to grayish orange pink (5YR 7/2), calcareous, some gravel, coarse fraction ranges from angular to rounded.
				0.5/0.5	5942	5			GM:	SILTY SANDY GRAVEL - medium gray (N5), silty sand matrix is light brown (5YR 6/4), angular to sub-angular, poorly graded, max. size 3.5 cm., calcareous matrix with a body of caliche at approx. 6.0 ft.
				0.5/0.5					GM:	Same as above.
				0.5/0.5	5941	6			GM:	Same as above.
				0/1.05	5940	7			NO SAMPLE:	
				0.75/0.75	5939	8			GM:	As above (reference interval 5.0 to 6.5').
				0/1.1	5938	9			NO SAMPLE:	
				0.7/0.7		10			CL:	GRAVELLY CLAY - grayish orange (10YR 7/4), grading to light gray (N7), plasticity, abundant silt, some sand.

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 47.4	GROUND ELEVATION (FT) 5947.52	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH 749438		AREA EAST TRENCHES	CASING DIAMETER (IN) 2 ID	GEOLOGIST DCB	27-87
EAST 2088052		LOCATOR NUMBER P9	BOREHOLE DIAMETER (IN) 7.5	DATE DRILLED 09/10/87	

REMARKS: Hollow Stem Auger



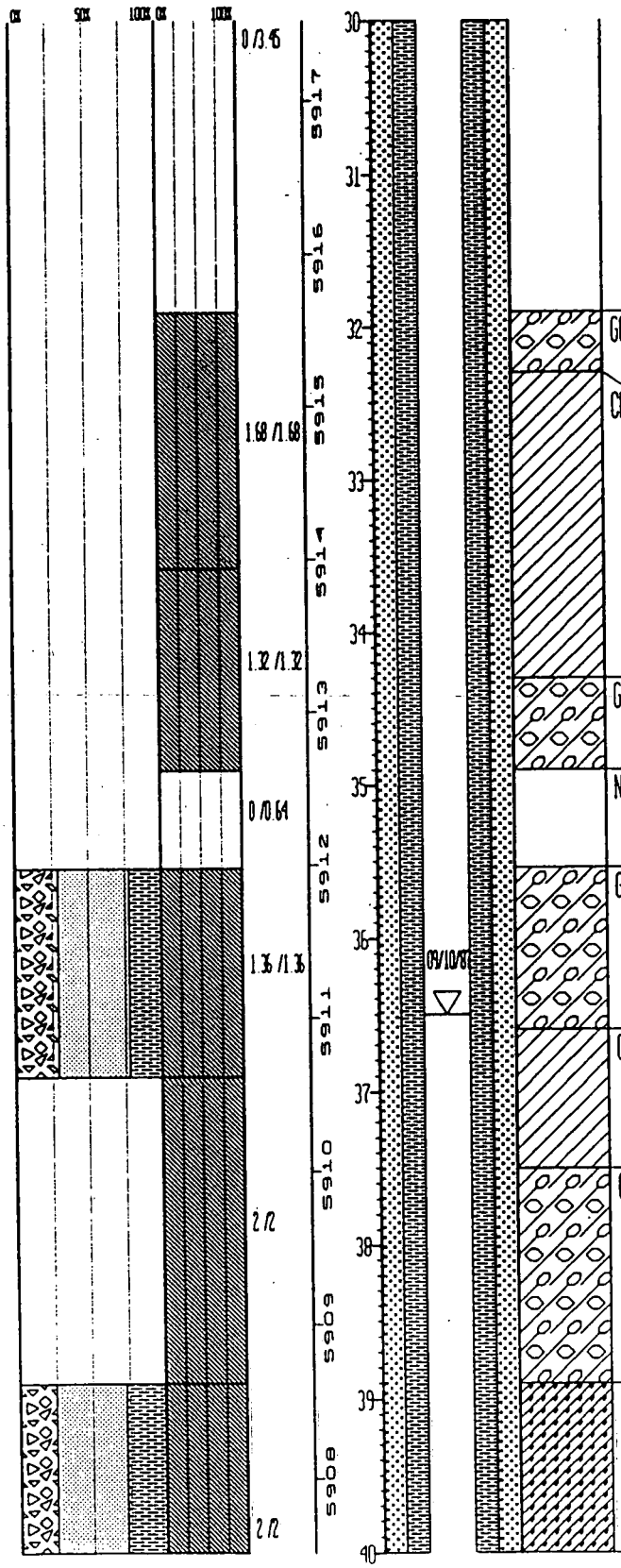
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
NO SAMPLE	
SP	Gravelly Sand/Clay - light brown (5YR 6/4), low plasticity, calcareous, abundant coarse grained sand 11.8 to 11.9 ft. (est.).
SP	As above.
GC	As above.
NO SAMPLE	
GC	Clayey Sandy Gravel - light gray (N7) to medium dark gray (N4), matrix is light brown (5YR 6/4), angular, poorly graded, max. size 3.5 cm., some silt.
GC	As above
GC	As above.
NO SAMPLE	
GC	As above (reference interval 13.15 to 15.15 ft.), max. gravel size 4 cm., slight decrease in clay and sand fraction.
NO SAMPLE	
CL	SANDY CLAY - light brown (5YR 6/4), low plasticity, trace of gravel.
SC	Sc per sieve analysis 19.1'-21.12' Per field log: cl - As above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 47.4	GROUND ELEVATION (FT): 5947.52	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	27-87	
EAST: 2088052	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/10/87		
REMARKS: Hollow Stem Auger					

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
UNK	0% 50% 100%	0% 100%	2.02 /2.02	5927	20				
					21			CL:	As above with color change to moderate reddish orange (10R 6/6), and slight increase in clay fraction.
			1.78 /1.78	5926	22				
				5925					
					23			CL:	As above with color change to light brown (5YR 5/6) and some gravel from approx. 23.5 to 23.8 ft. (est. depth).
			2 /2	5924	24				
				5923					
					25			CL:	SANDY CLAY - light brown, (5YR 6/4), low plasticity, some gravel.
			1.9 /1.9	5922	26				
				5921					
					27			CL:	As above.
			1.65 /1.65	5920	28				
				5919				NO SAMPLE:	
				5918	29				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 47.4	GROUND ELEVATION (FT):	5947.52	PROJECT NUMBER:	667 11	LOG OF BORING NUMBER:
NORTH:	749438	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB	27-87
EAST:	2088052	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	7 5	DATE DRILLED:	09/10/87	

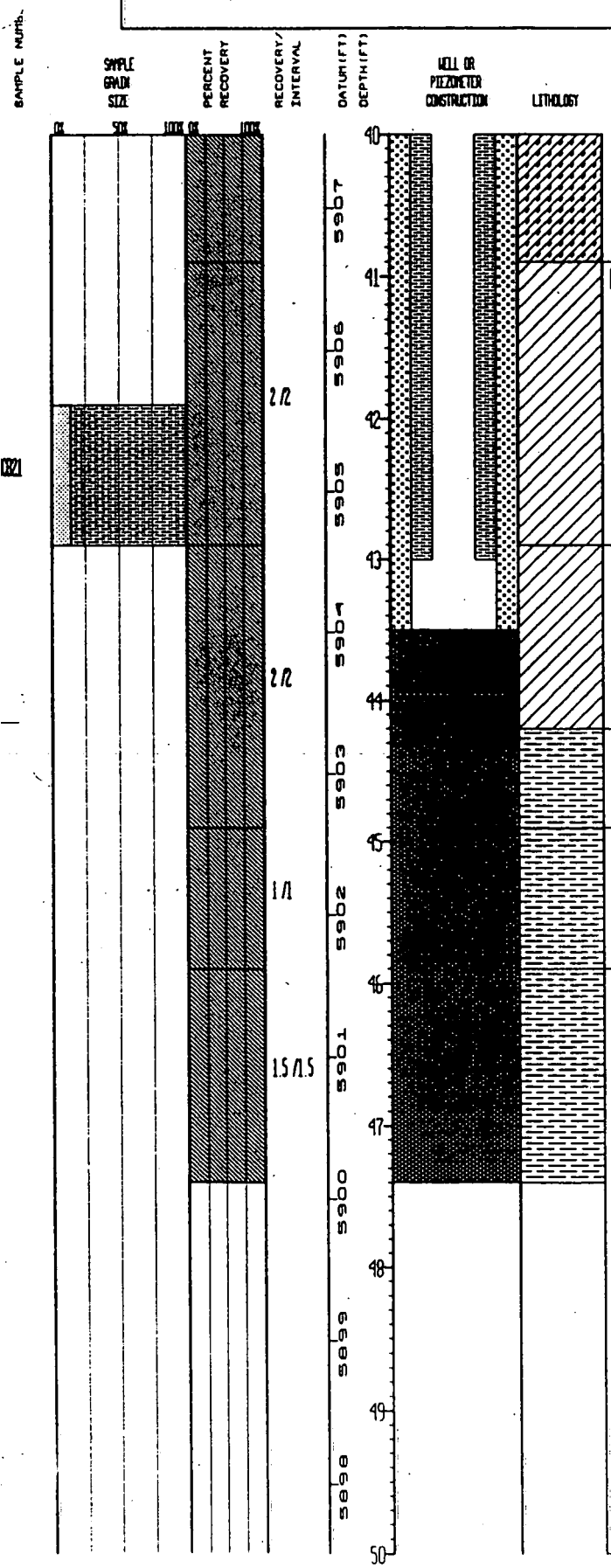
REMARKS: Hollow Stem Auger



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC	SANDY GRAVEL - medium light gray (N6), matrix is light brown (5YR 6/4), 4.5 cm. is max. size, angular, poorly graded, some clay.
CL	SANDY CLAY - light brown (5YR 6/4), low plasticity, trace of gravel.
GC	Sandy Clayey Gravel - dominantly light gray (N7), matrix is light brown (5YR 6/4), angular to sub-rounded, moderately graded, max. size 5.5 cm.
NO SAMPLE	
GC	As above (reference interval 34.3 to 34.9 ft.).
CL	Silty Clay - yellowish gray (5Y 8/1), moderately high plasticity, micaceous, some sand.
GC	Sandy Gravel - medium light gray (N6), sand is grayish orange (10YR 7/4), angular to sub-rounded, poorly graded, max. size is 3.5 cm.
SC	Sc per sieve analysis 38.9'-40' Per field log: Silty Clay - grayish orange (10YR 7/4), moderate plasticity, some gravel and fine sand.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 47.4	GROUND ELEVATION (FT):	5947.52	PROJECT NUMBER:	667.11
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB
EAST: 2088052	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	09/10/87
REMARKS: Hollow Stem Auger.					

LOG OF BORING NUMBER: 27-87



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL:	CLAY - Very light gray (N8), silty, bedding not apparent, highly weathered, moderately friable, local iron staining, some fine grained sand at approx. 42 ft.
CL:	At 42.9 ft. interval is highly friable, contains some sub-rounded gravel and appears to be a mixture of weathered claystone and possible colluvial materials.
CLAYSTONE:	Top of Bedrock Same as above.
CLAYSTONE:	Light gray (N7), bedding not apparent, highly weathered, highly to moderately friable, local iron staining on fracture faces and as irregular mottling, some carbonaceous mineralization.
CLAYSTONE:	Same as above, color grades to light olive gray (5Y 6/1) and carbonaceous mineralization is absent.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 17	GROUND ELEVATION (FT): 5944.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749649	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH27-87
EAST: 2086009	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/06/87	

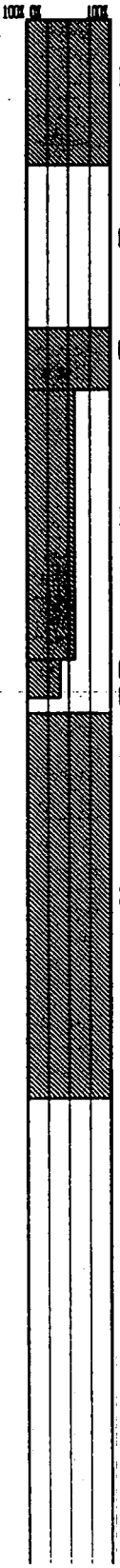
REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.75/1.75	5944	0–1.75			GC:	Clayey Gravel - light gray (N7), clay matrix is grayish brown (5YR 3/2), sub-angular, poorly graded, max. size 6 cm., some sand, silt and roots.
			0/0.25	5943	1.75–2			NO SAMPLE:	
27870010			1.5/1.5	5942	2–3.5			GC:	As above (reference interval 0-1.75 ft.) with increase in sand fraction below approx. 2.5 ft. and corresponding color change in matrix to grayish orange (10YR 7/4), gravel exhibits angular fraction as well.
			0/0.5	5941	3.5–4			NO SAMPLE:	
			1.55/1.55	5940	4–5.55			GC:	Sandy Clayey Gravel - medium light gray (N6), matrix is light brown (5YR 6/4), angular to sub-angular, poorly graded, max. size is 6 cm.
			0/1.6	5939	5.55–7.15			NO SAMPLE:	
27871001			0.8/0.8	5938	7.15–7.95			GP:	GRAVEL - dominantly medium light gray (N6), sub-angular to sub-rounded, poorly graded, max. size 6 cm., some sand, trace of clay and silt.
			0/1.2	5937	7.95–9.15			NO SAMPLE:	
			0.5/0.9	5936	9.15–9.65	07/06/87 ▽		GP:	As above (reference interval 7 to 7.8 ft.).
				5935	9.65–10				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 17	GROUND ELEVATION (FT):	5944.7	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	748649	AREA: 903 PAD	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH27-87	
EAST:	2086009	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/06/87		

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



RECOVERY/INTERVAL	DATUM (FT)	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
1.05 /1.05	5934	CLAYSTONE:	Top of Bedrock Light gray (N7), bedding not apparent, highly weathered, slightly friable, slight silt fraction.
0 /1.05	5933	NO SAMPLE:	
0.4 /0.4	5932	CLAYSTONE:	AS above, with mottling grayish orange (10YR 7/4) from 12.4to 12.9 (est. depth) moderately friable.
1 /1.75	5931	CLAYSTONE:	As above.
0.1 /0.25		CLAYSTONE:	As above, carbonaceous mineralization at 14.4 ft.
0 /0.1	5930	NO SAMPLE:	
2.5 /2.5	5929, 5928, 5927, 5926, 5925	CLAYSTONE:	Light gray (N7), bedding not apparent, highly weathered, slightly to moderately friable, slight silt fraction, abundant iron staining below 16.0 ft.

DEPTH (FT): 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

BH27871.BR

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.3/1.3	5947	0			GC:	Sandy Clayey Gravel - dominantly medium gray (N5), sub-angular to rounded, moderately graded, some silt. (Clay fraction is pale yellowish brown (10YR 6/2)).
			0/0.7	5946	1			NO SAMPLE:	
			1.7/1.1	5945	2			GW:	CALCAREOUS GRAVEL - moderate orange pink (5YR 8/4), angular to sub-rounded, moderately well graded, some silt, trace of roots.
			0/0.6	5944	3			NO SAMPLE:	
			1.5/1	5943	4			SW:	GRAVELLY SAND - grayish orange (10YR 7/4), angular to sub-rounded, well graded, some clay and silt.
			0/1	5942	5			NO SAMPLE:	
			1.65/1.1	5941	6			SW:	Same as above.
			0/0.9	5940	7			NO SAMPLE:	
			2.4/1.8	5939	8			GW:	Sandy Clayey Gravel - dominantly light gray (N7), angular to rounded, moderately graded, trace of silt.
			0/0.2	5938	9			NO SAMPLE:	

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR	
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87		

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.

SAMPLE NUM. | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

Recovery/Interval	Depth (ft)	Well or Piezometer Construction	Unified Soils Classification or Rock Type	Description
			NO SAMPLE:	
1.2/1.3	10		GC:	Clayey Sandy Gravel - predominantly light brownish gray, angular to sub-rounded, moderately graded.
0/0.7	11		NO SAMPLE:	
1/1.3	12		GC:	Same as above.
0/0.4	13		NO SAMPLE:	
1.55/1.5	14		GC:	Same as above.
0.9/1.6	15		GC:	Sandy Clayey Gravel - fine grained, predominantly light brownish gray, sub-angular to rounded, moderately well graded.
0/0.9	16		NO SAMPLE:	
1.6/1.3	17	09/15/87	CH:	Sandy Clay - light brown (5YR 6/4), moderately high plasticity, some fine to medium gravel.
1.6/0.7	18		CH:	Same as above.
	19		CH:	Same as above.
	20			

Depth scale: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Elevation scale: 5937, 5936, 5935, 5934, 5933, 5932, 5931, 5930, 5929, 5928

E28

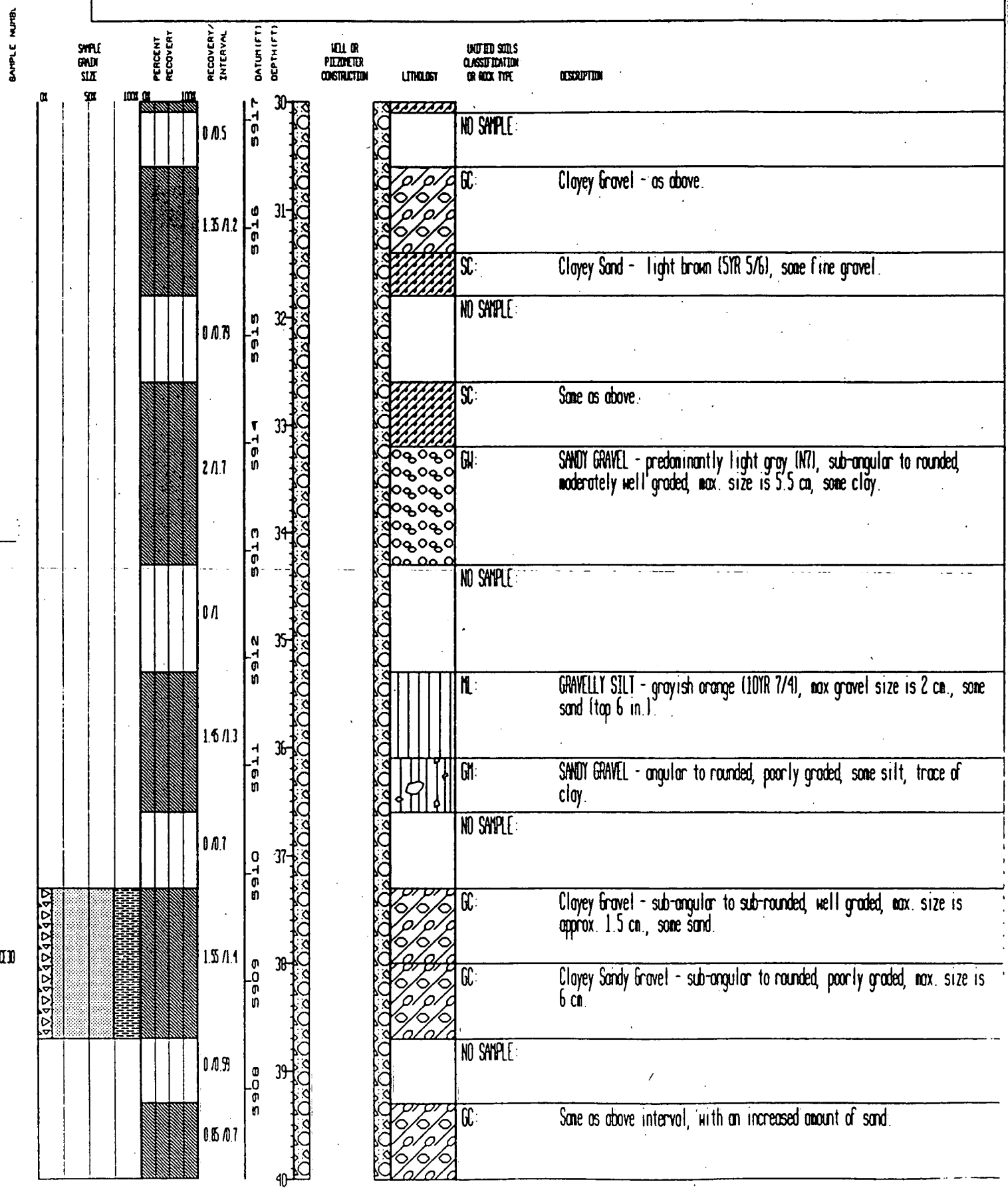
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT):	5947.17	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749438	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DAT	28-87BR
EAST:	2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergson on September 8, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.6 /1.6	5927	20				
				5926	21			SC:	Clayey Sand - light brown (5YR 5/6), sub-angular to rounded, well graded, some gravel and silt. At approximately 24 ft. the material becomes much sandier and is predominantly coarse to medium grained.
				5925	22				
			1.5 /1	5924	23				
				5923	24				
				5922	25			GC:	Clayey Sandy Gravel - with the max. size being 6 cm., angular to sub-angular, moderately graded.
			2.2 /2	5921	26			GC:	Clayey Gravel - predominantly medium gray (N5) clay fraction is grayish orange (10YR 7/4), gravel is angular to rounded, moderately graded, max. size is approx. 5.5 cm., some sand.
				5920	27				
			2.2 /2	5919	28			GC:	Same as above.
				5918	29				
			1.28 /0.8		30			SC:	Clayey Sand and Gravel - predominantly light gray (N7) to medium gray (N5), clay fraction is grayish orange (10YR 7/4), angular to sub-rounded, poor to moderately graded, max. size = 4.5 cm., some silt.

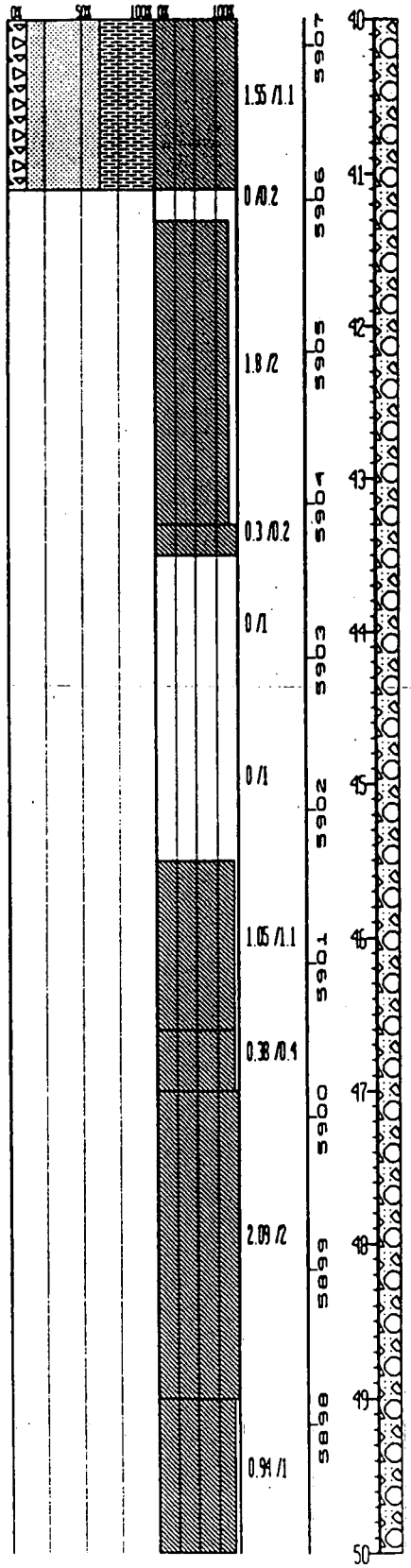
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5917.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.



STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT):	5947.17	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749438	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DAT	28-87BR
EAST:	2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.



SC:	Clayey Sand - med. to fine grained, light greenish gray (5GY 8/1), poorly graded, some v. coarse and coarse grained sand and fine gravel. Trace of dark yellowish orange (10YR 6/6) staining.
NO SAMPLE:	
GP:	SANDY GRAVEL - predominantly light gray (N7), sub-angular to sub-rounded, moderately poor graded, trace of clay, grayish orange (10YR 7/4), max. gravel size = 6.5 cm.
GP:	Same as above.
NO SAMPLE:	Top of Bedrock.
NO SAMPLE:	
CLAYSTONE:	Yellowish gray (5Y 7/2), massively bedded, well weathered, moderately friable, trace of carbonaceous and medium grained sand inclusions.
CLAYSTONE:	Light gray (N7), massively bedded, well weathered, highly friable, iron oxide staining within fractures, trace of carbonaceous staining.
CLAYSTONE:	Same as above with friability decreasing with depth.
CLAYSTONE:	Same as above, less friable, less iron staining, increase in carbonaceous material (coal and leaves?) and color is medium light gray (N6).

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0% 50% 100%	0% 100%		5897	50			NO SAMPLE:	
			5896	51				
			5895	52				
		0/6	5894	53				
			5893	54				
			5892	55				
			5891	56			CLAYSTONE:	Med. gray (N5), massive bedding, mod. friable, some carbonaceous material, vertical coal seams, iron staining as mottles and in fractures, trace of silt.
			5890	57				
		4/4	5889	58				
			5888	59				
				60				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT):	5947.17	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749438	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DAT	28-87BR
EAST:	2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/15/87	

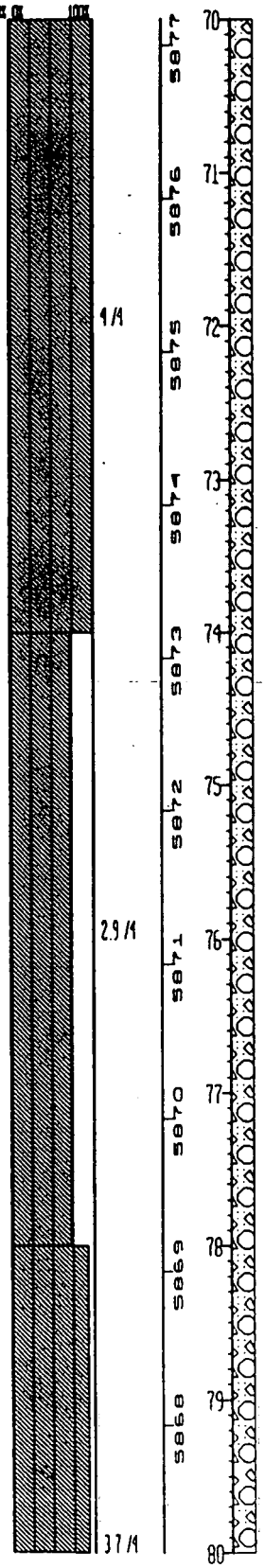
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.55/2	5887	60			CLAYSTONE:	Carbonaceous Claystone - olive gray (5Y 4/1), massive bedding, highly weathered, mod. friable, trace of iron staining is mottled.
				5886	61				
				5885	62			CLAYSTONE:	Same as above; mod. to highly friable, 80 degree coal seam at bottom of interval.
			1.8/3.5	5884	63				
				5883	64				
				5882	65				
				5881	66			CLAYSTONE:	Olive gray (5Y 4/1), massive bedding, highly weathered, mod. friable, trace of carbonaceous material.
			2/2.1	5880	67				
				5879	68			CLAYSTONE:	Same as above: light olive gray (5Y 6/1).
			2.1/2.1	5878	69				
					70				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.

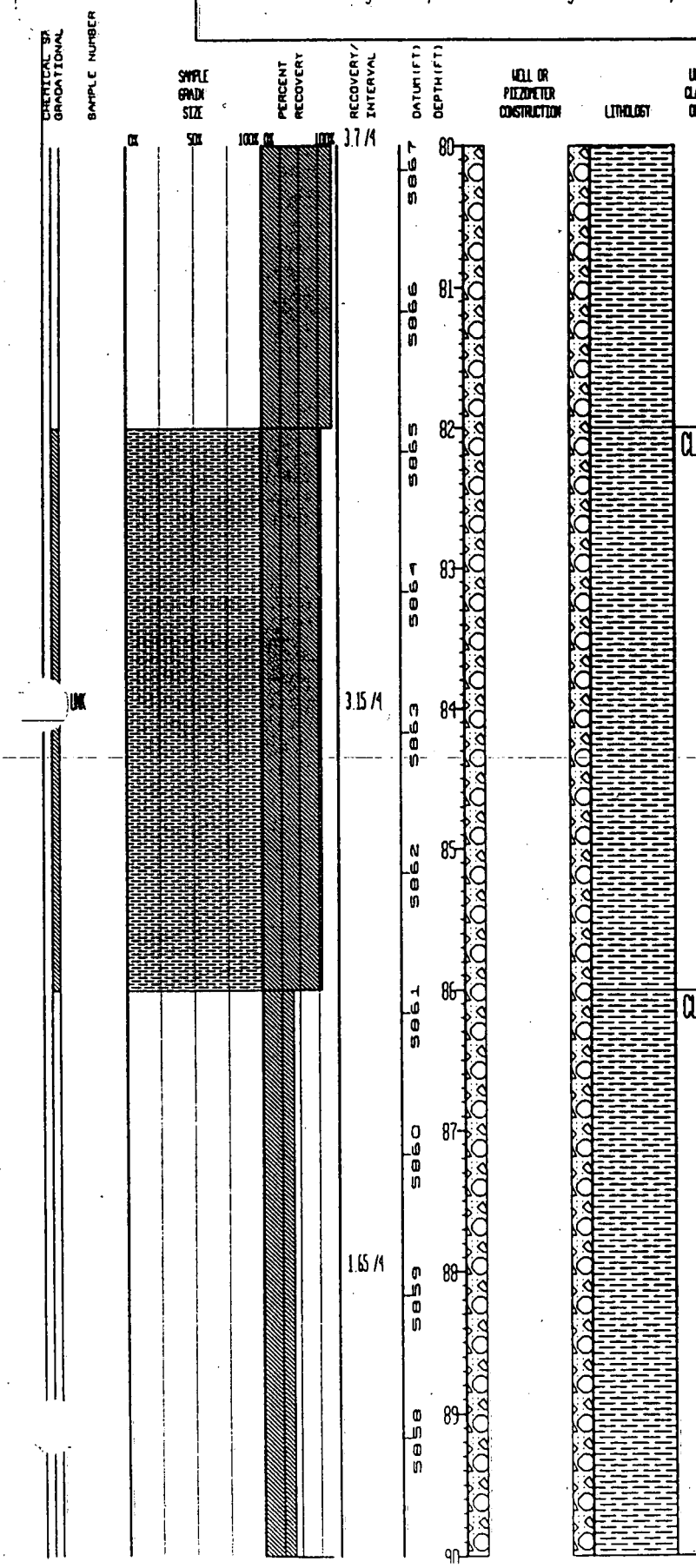
SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Light olive gray (5Y 4/1), massive bedding, highly weathered, mod. friable, trace of carb. in first half of interval, becoming very carb. in last half of interval.
CLAYSTONE:	Same as above: decreased amount of carb. than last half of above interval, trace of iron staining.
CLAYSTONE:	Same as above; med. light gray (N6) to light olive gray (5Y 6/1) with increase of carb. material, some vertical fractures apparent.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BF
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

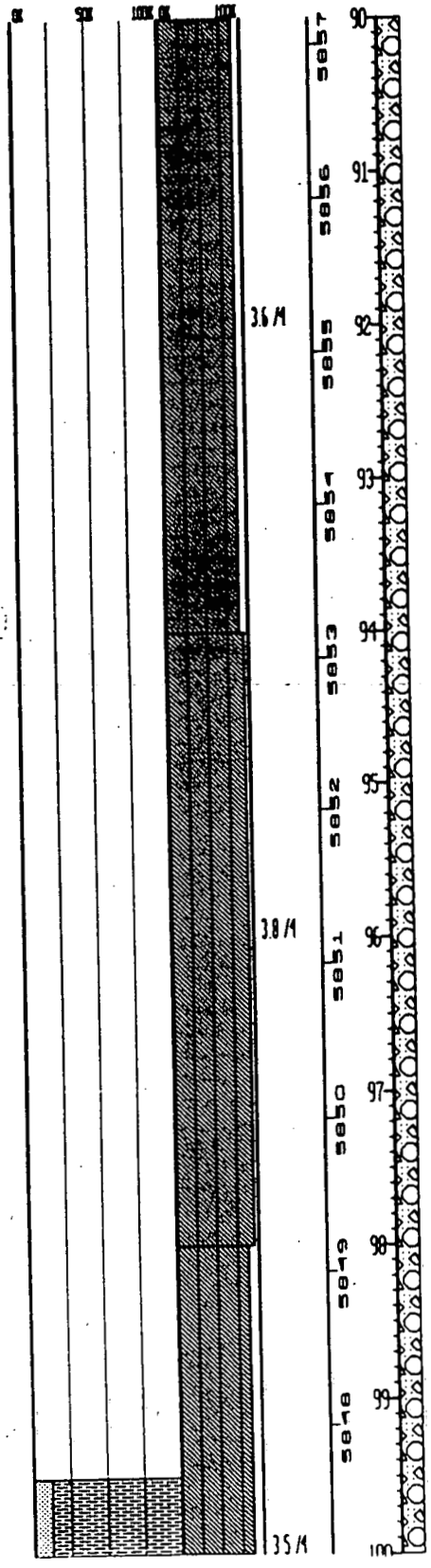
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Light olive gray (5Y 6/1) to olive gray (5Y 4/1), well weathered, mod. friable, some carbonaceous material, trace of silt.
CLAYSTONE:	Same as above; increase of carb. material, some iron staining. NOTE: box 3 of 16 has interval 86-90', and box 4 of 16 as interval 87.7-90', therefore overlapping intervals exist. Interval 87.7-90' same as above, with abundant carb. in bottom 5 inches.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

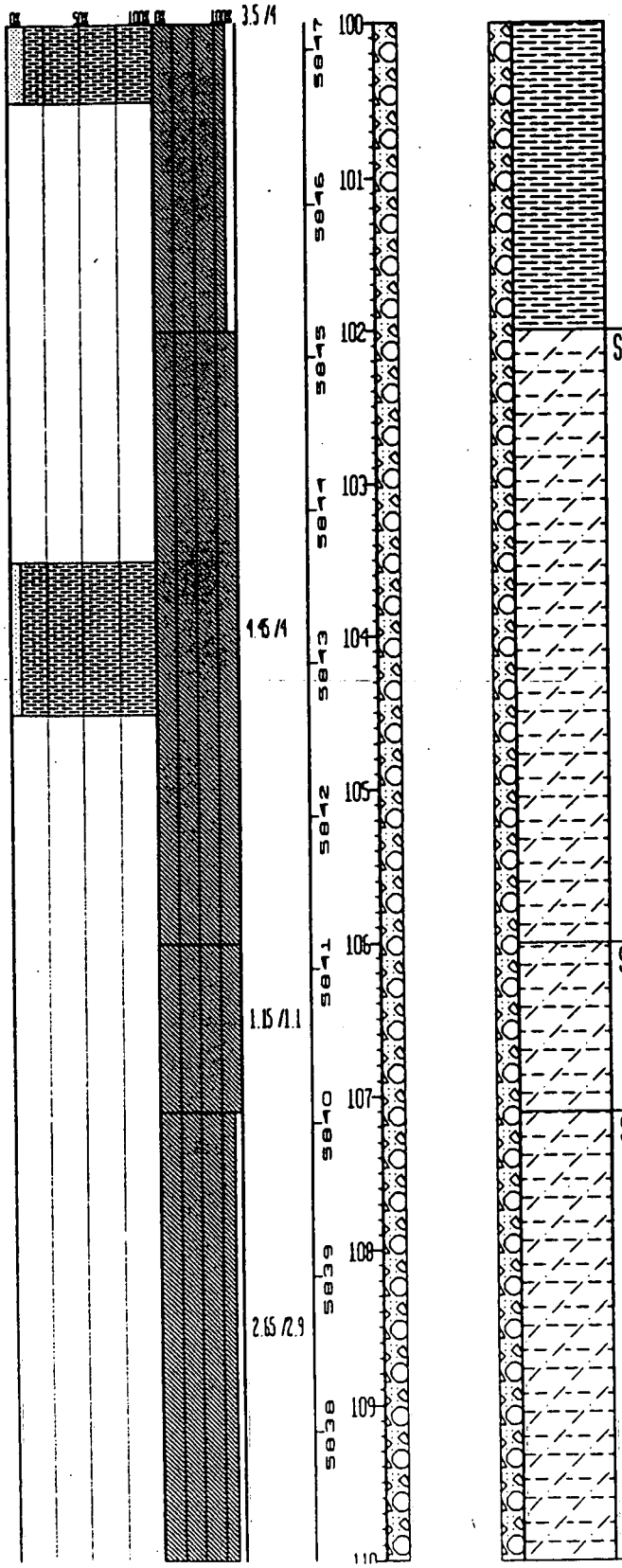
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.



CLAYSTONE:	First half of interval consists of carbonaceous claystone, olive black (5Y 2/1), well weathered, massive bedding, mod. friable, small (1 mm.) coal seams. Second half of interval consists of claystone, light olive gray (5Y 6/1) to olive gray (5Y 4/1), massive bedding, well weathered, slightly to mod. friable, some carb. material.
CLAYSTONE:	Same as above; olive gray (5Y 4/1) with iron staining at bottom.
CLAYSTONE:	Same as above; with some silt and iron staining as mottles.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

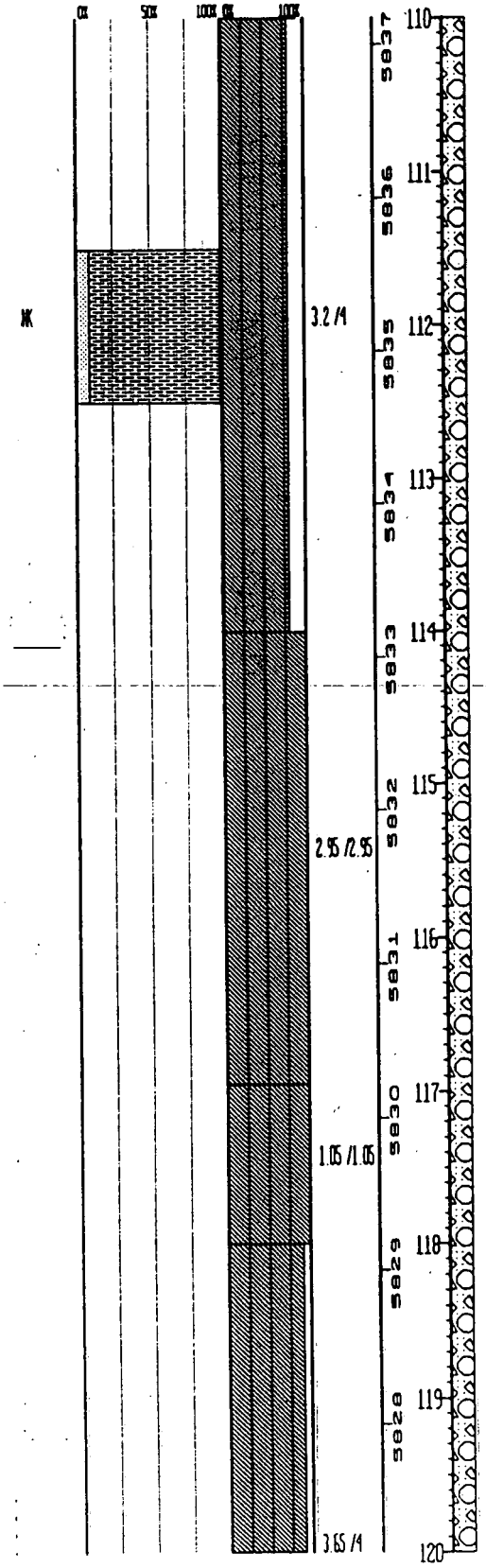
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY CLAYSTONE	Olive gray (5Y 4/1), massive bedding, well weathered, mod. to slightly friable, some FG sand in pockets and lenses, some carb. material and iron staining.
SILTY CLAYSTONE	Same as above, less sand, carb. and iron staining.
SILTY CLAYSTONE	Same as above; grading into siltstone in bottom 1' of interval, pinkish gray (5YR 8/1), wavy bedding, weathered, slightly friable.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.



LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	SANDY SILTSTONE	Very fine grained, yellowish gray (5Y 8/1), wavy laminations, well weathered, slightly friable, some thin clay layers throughout interval, some carbonaceous and iron staining. Slabbed top 4" of bottom 8" of interval: predominantly horizontal laminae from <1 mm. to 14 mm. thick, small scale cross laminae, possible dewatering structure or bioturbation, iron staining follows laminations.
	SANDY SILTSTONE	Same as above.
	SANDY SILTSTONE	Same as above, light olive gray (5Y 6/1).
	SILTY CLAYSTONE	Light olive gray (5Y 6/1) to olive gray (5Y 4/1), massive bedding, well weathered, mod. friable, trace of carb. material.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT):	5947.17	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749438	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DAT	28-87BR
EAST:	2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergson on September 8, 1987.

SAMPLE NUMB.	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			3.65/4	5827	120				
				5826	121				
				5825	122			CLAYSTONE:	Light olive gray (5Y 6/1) to olive black (5Y 2/1), massive bedding, well weathered, mod. friable, trace of carbonaceous becoming abundantly carb. in center of interval.
			3.6/4	5824	123				
				5823	124				
				5822	125				
			0.9/0.9	5821	126			CLAYSTONE:	Same as above.
				5820	127			CLAYSTONE:	Light olive gray (5Y 6/1), bedding non-apparent, mod. friable, trace of carbonaceous material.
			1.7/3.1	5819	128				
				5818	129				
					130				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P3	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		100%		5817	130			CLAYSTONE:	Olive gray (5Y 4/1), massive bedding, well weathered, mod. friable, some carbonaceous material.
				5816	131				
			4.75/4	5815	132				
				5814	133				
				5813	134			CLAYSTONE:	Same as above; with some iron staining as mottles. Top of interval was slabbed - revealed some laminae (1 mm.
			2.55/2.55	5812	135				
				5811	136				
			1.6/1.6	5810	137			CLAYSTONE:	Same as above, light olive gray (5Y 6/1), trace of carb. material.
				5809	138			CLAYSTONE:	Same as above, light olive gray (5Y 6/1) to olive gray (5Y 4/1), with increase of carb. material in bottom 1' of interval.
				5808	139				
			1/1		140				

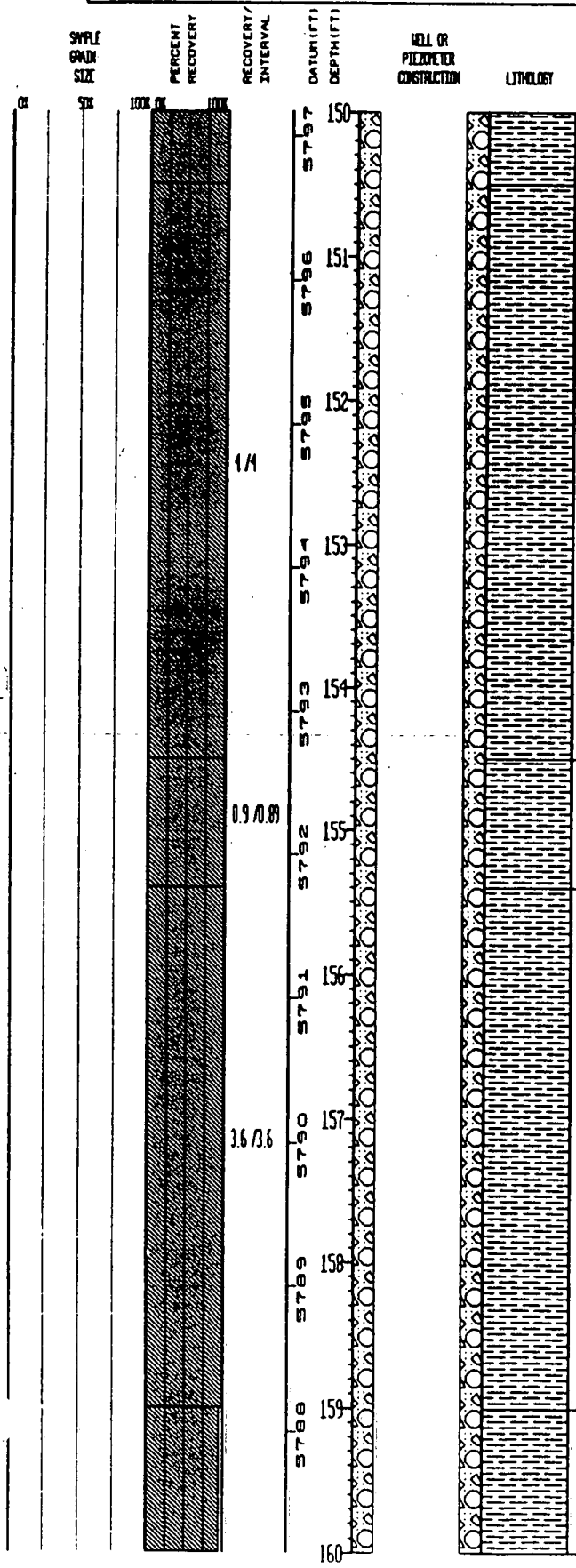
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT):	5997.17	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 74908	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergeon on September 8, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			4/4	5987	140				
				5986	141				
				5985	142			CLAYSTONE:	Light olive gray (5Y 6/1) to olive black (5Y 2/1), massive bedding, weathered, mod. to slightly friable, some carbonaceous material, some iron staining in bottom 1/2' of interval.
				5984	143				
			4/4	5983	144				
				5982	145				
			0.3/0.3	5981	146			CLAYSTONE:	Carbonaceous, olive black (5Y 2/1), massive bedding, mod. to slightly friable.
								CLAYSTONE:	Light gray (N7), massive bedding, mod. friability, some iron staining as mottles at top of interval, trace of carb. material at bottom of interval.
				5980	147				
			4.2/4.2	5979	148				
				5978	149				
					150				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5997.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergson on September 8, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Olive gray (5Y 4/1), massive bedding, mod. friability, well weathered, trace carb. material and iron staining.
CLAYSTONE:	Same as above, light olive gray (5Y 6/1), no iron staining.
CLAYSTONE:	Same as above, olive gray (5Y 4/1).
CLAYSTONE:	Olive gray (5Y 4/1), massive bedding, well weathered, mod. friability, trace of carb. material with increased amount of carb. material in bottom foot of iron staining.

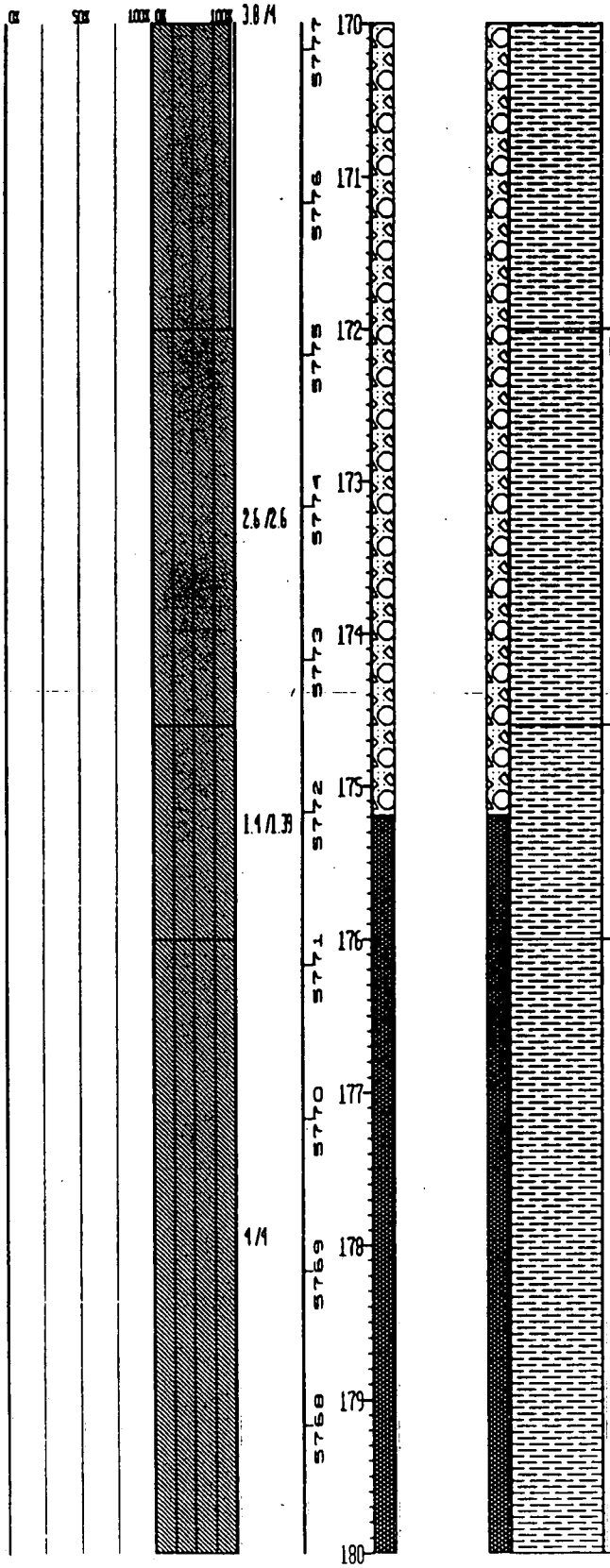
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT):	5947.17	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749438	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/DAT	28-87BR
EAST:	2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			3.8/4	5787	160				
				5786	161				
				5785	162				
				5784	163			CLAYSTONE:	Same as above with increased iron staining, a few iron concretions, and a thin coal seam.
			1.9/1.89	5783	164				
				5782	165			CLAYSTONE:	Same as above, with a silty iron concretion and only a trace of iron staining and carb. material at bottom of interval.
			2.8/3.1	5781	166				
				5780	167				
				5779	168			CLAYSTONE:	Same as above with increasing amounts of carb. material, iron concretions and iron staining as mottles.
				5778	169				
			3.8/4		170				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088050	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

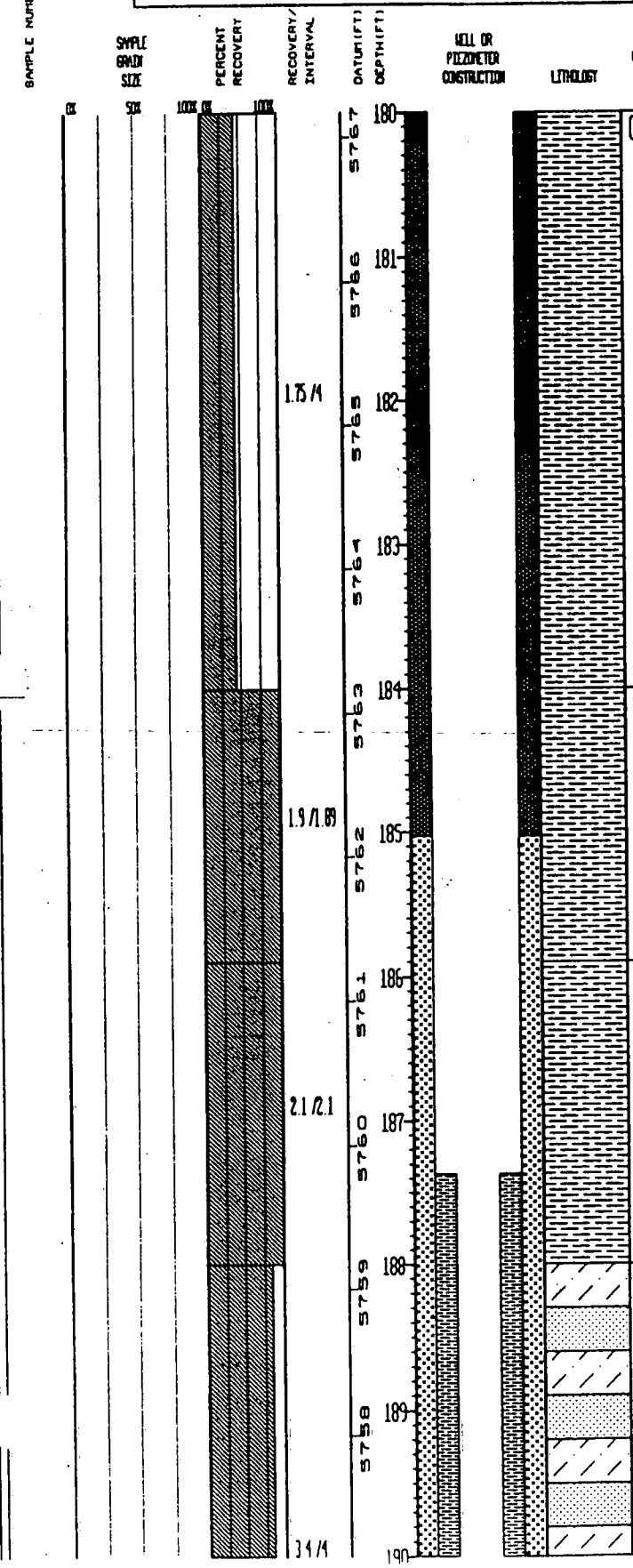
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergson on September 8, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Olive gray (5Y 4/1), massive bedding, well weathered, mod. friable, some carb. material decreasing to trace in bottom 1' of interval, trace of iron staining, 1/2-1" coal seam in bottom 1 ft. of interval.
CLAYSTONE:	Same as above, no carb. material, one fracture approx. 85 - 90 degrees.
CLAYSTONE:	Same as above with trace of carb. material at top of interval increasing to some carb. material at bottom of interval, one 1 mm. thick coal seam.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Olive gray (5Y 4/1), massive bedding, well weathered, mod. friability, trace of iron staining and carb. material, one fracture approx. 87 degrees (visible).
CLAYSTONE:	Same as above, light olive gray (5Y 6/1), 2 fractures at bottom of interval approx. 30 to 60 degrees.
CLAYSTONE:	First foot of interval is same as above with numerous fractures ranging from 50 to 70 degrees. Bottom of interval appears to be interbedded with thin laminae of VFG sand. Bottom 2" are as below.
SILTSTONE:	Lt olive gray (5Y 6/1), massive bedding, weathered, slightly to non-friable, VFG sandstone interbedded as thin laminae and at bottom of interval claystone is interbedded as thin laminae, trace of iron staining and carb. material. Slabbed section reveals bedding to be thin laminae and one possible load cast.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST:	2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergman on September 8, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		100%	3.4/4	5757	190				
				5756	191				
				5755	192			CLAYSTONE:	Lt. olive gray (5Y 6/1), massive bedding, well weathered, mod. friable, trace of carb. material and iron staining becoming silty at bottom foot of interval, one apparent fracture at approx. 40 degrees.
				5754	193				
			3.8/3.8	5753	194				
				5752	195				
			0.2/0.19	5751	196			SILTY CLAYSTONE:	Lt. olive gray (5Y 6/1), massive bedding, well weathered, mod. - slightly friable, trace of carb. material, trace of iron staining.
				5750	197			CLAYSTONE:	Olive gray (5Y 4/1), massive bedding, well weathered, mod. friable, trace carb. material.
			3/3	5749	198				
				5748	199			CLAYSTONE:	Same as above.
					200				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 207	GROUND ELEVATION (FT): 5947.17	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749438	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD/DAT	28-87BR
EAST: 2088090	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.5' by J.B. Bergson on September 8, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			3/3	5747	200				
				5746	201				
				5745	202			CLAYSTONE:	Lt. olive gray (5Y 6/1), massive bedding, well weathered, mod. friable, trace of carb. material.
			2.4/2.39	5744	203				
				5743	204				
			0.6/0.6					CLAYSTONE:	Same as above with trace of iron staining.
				5742	205			CLAYSTONE:	Same as above.
			2/2	5741	206				
				5740	207				
				5739	208				
				5738	209				
					210				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 15	GROUND ELEVATION (FT):	5946.7	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748794	AREA: 903 PAD	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH28-87
EAST:	2086241	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/13/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

SAMPLE NUMBER	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
BH28870001	0/0.9	5946	0		NO SAMPLE:	
	0/1.1	5945	1		NO SAMPLE:	
BH28870104	0.5/0.5	5944	2		CL:	Silty Clay - grayish black (N2), moderate plasticity, trace of gravel, to some gravel - gravel fraction increases in abundance with depth.
	1.4/1.4	5943	3		CL:	Same as above.
BH28870546	0/0.08		4		NO SAMPLE:	
					NO SAMPLE:	
BH28870601	0/1.9	5942	5			
	1.1/1.1	5941	6		CLAYSTONE:	Top of Bedrock Very light gray (N8) with mottled iron staining, dark yellowish orange (10YR 6/6), highly weathered, slightly to moderately friable, localized occurrence of calcareous mineralization as small bodies <1 mm.
	2/2	5940	7		CLAYSTONE:	Same as above.
BH28870988		5939	8			
		5938	9		NO SAMPLE:	Note: No water encountered during drilling.
		5937	10			

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 15	GROUND ELEVATION (FT): 5946.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748794	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH28-87
EAST: 2086241	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/13/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					10				
				5936					
					11				
88709BR				5935					
			0/6		12				
				5934					
					13				
				5933					
					14				
				5932					
					15				
				5931					
					16				
				5930					
					17				
				5929					
					18				
				5928					
					19				
				5927					
					20				

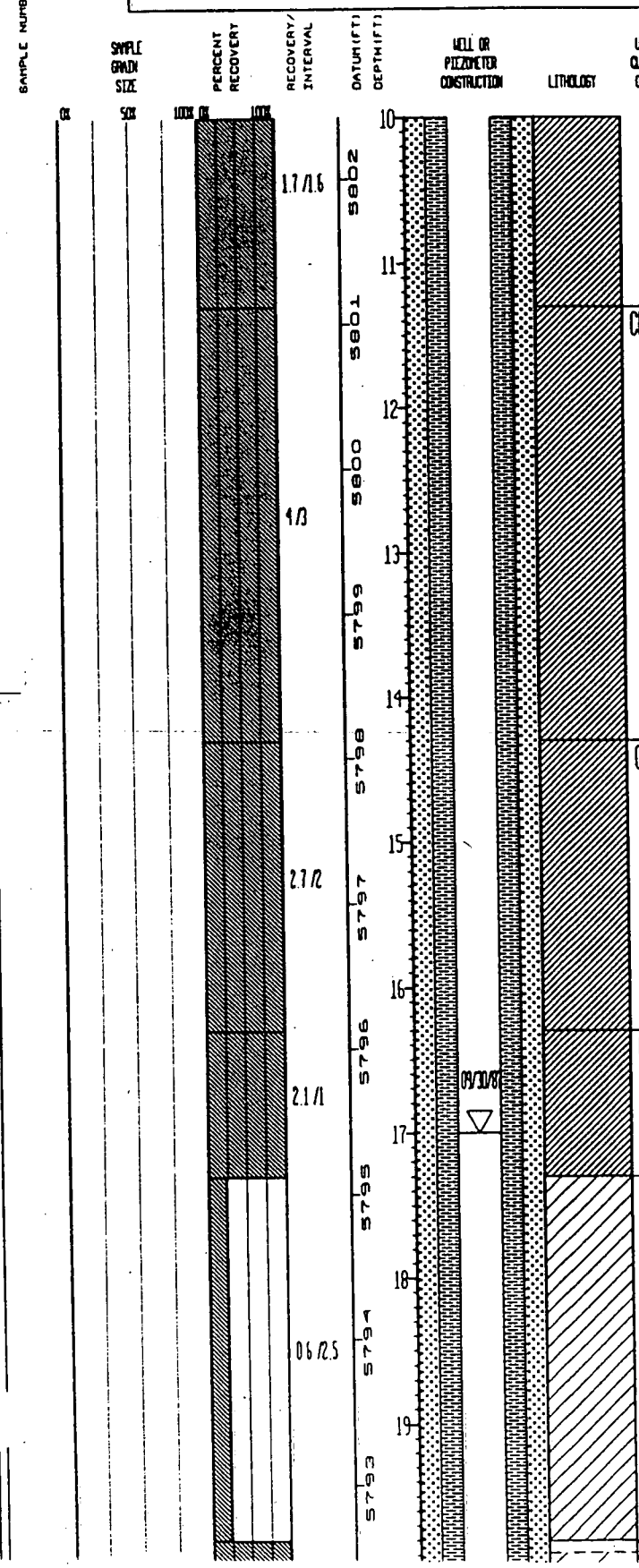
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 25.6	GROUND ELEVATION (FT): 5812.92	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	748089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	29-87
EAST:	2087361	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/30/87	

REMARKS: Hollow Stem Auger.

CRITICAL SAT GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%							
				1.9/2	5812 5811	0 1			CL	Gravelly Clay - Grayish orange (10YR 7/4), moderate plasticity, some sand, trace silt, trace surficial roots at top of interval, moderately calcitic, gravel angular to sub-rounded, mod. well graded, max. size 3.5 cm., becoming more calcitic toward bottom.
				2/2	5810 5809	2 3			CH	Silty Sandy Clay - Grayish orange to moderate brown (10YR 7/4 to 10 YR 5/4), moderately high plasticity. Abundant calcite almost caliche, some gravel.
				0/0.65	5808	4			NO SAMPLE	
				3.8/3.75	5807 5806 5805	5 6 7			CH	Clay - moderate yellowish brown and lt. brownish gray (5YR 6/1), high plasticity, some calcite stringers, trace gravel.
				1.3/1.3	5804 5803	8 9			CH	Same as above, slightly silty.
						10			CH	Clay - Yellowish gray (5Y 7/2) to dark yellowish orange. High plasticity,

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 25.6	GROUND ELEVATION (FT): 5812.92	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748089	AREA: BUFFER SOUTH	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LMA	29-87
EAST: 2087361	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/30/87	

REMARKS: Hollow Stem Auger.



abundant calcite, some gravel, approx. 1.5 cm.

CH: Same as above, color change to yellowish gray (5Y 7/2) and light brown (5YR 5/6) toward bottom of interval.

CH: Same as above.

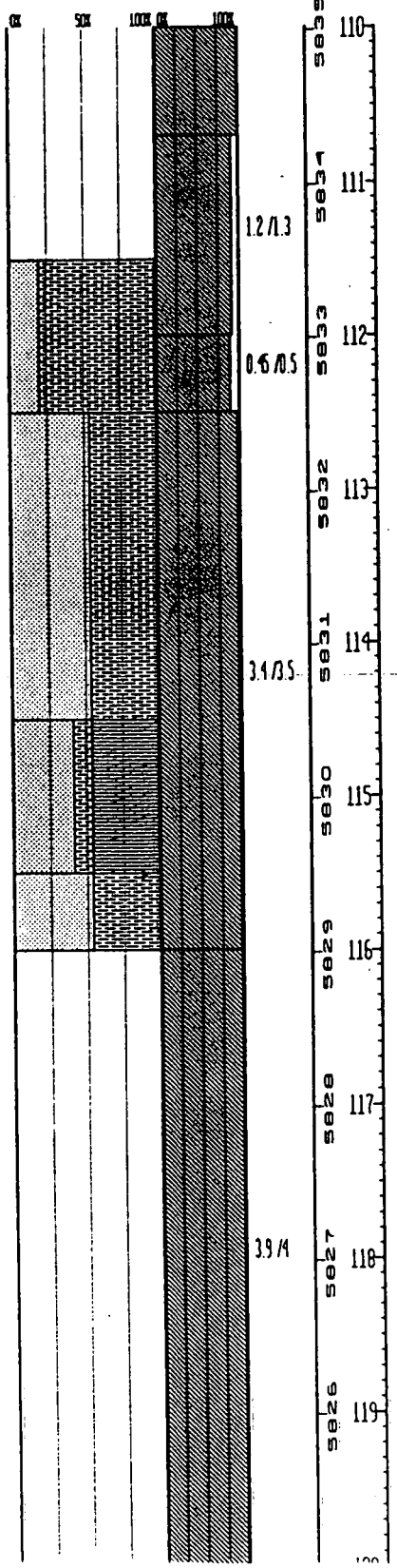
CH: Clay - moderate yellowish brown (10YR 5/4), mod. high plast., some sand, some fine gravel, some calcite. Increasing sand content toward bottom, sand med. grained, few lg. cobbles at bottom.

CL: SILTY CLAY - moderate yellowish brown (10YR 5/4), moderate plasticity, some sand, some gravel, max. size 3 cm.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT):	5945.02	PROJECT NUMBER:	667.11
NORTH: 749500	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA
EAST: 2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/29/87

LOG OF BORING NUMBER: **31-87BR**

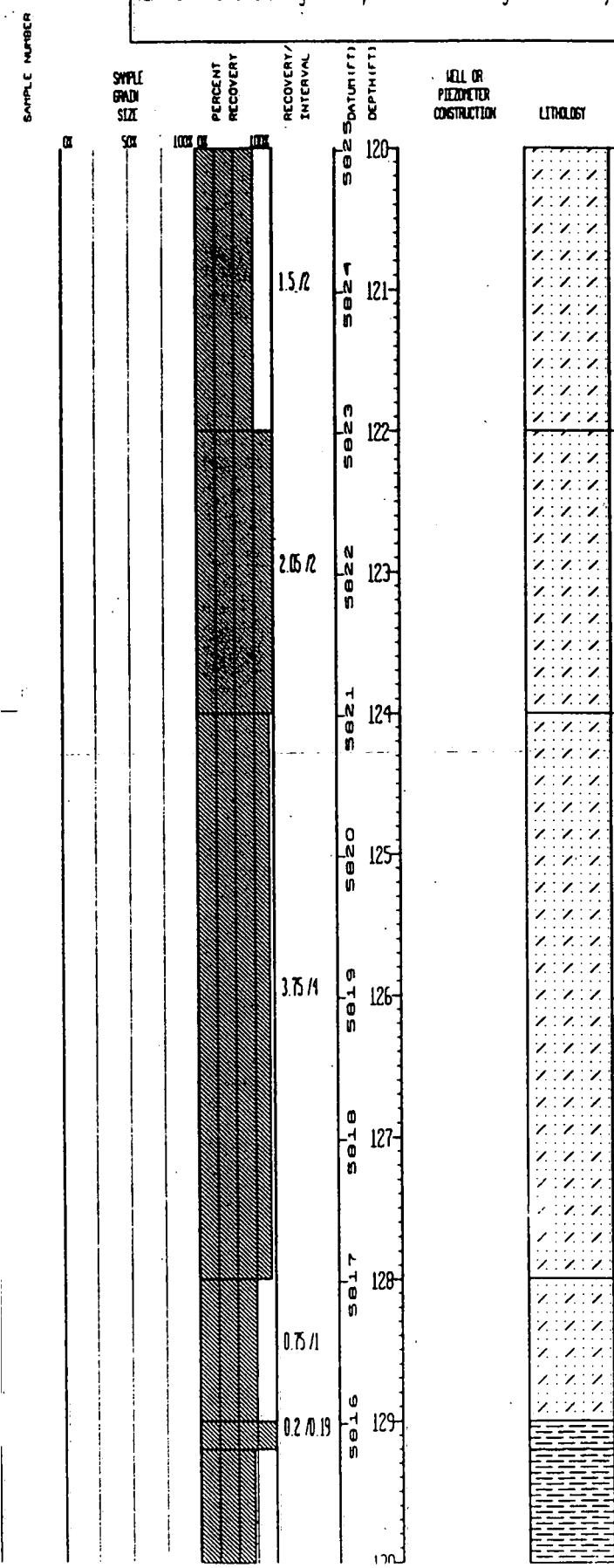
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY CLAYSTONE	Lt. olive gray (5Y 5/1), mod. weathered, slightly to mod. friable, bedding appears horizontally layered from weathering., some carb. material, some VFG sand in silt layers.
SILTY CLAYSTONE	Same as above.
SILTY SANDSTONE	Lt. olive gray (5Y 6/1) to yellowish gray (5Y 8/1), mod. weathered, slightly to mod. friable, bedding appears distorted, not in definable layers, may be soft sediment deformation, some silty claystone thin layers in very upper portion of interval (top 5 in.), sand VFG to FG, mod. well sorted, trace carb. material/coal, trace clay. At bottom bedding gets slightly more defined and horizontally layered.
SILTY SANDSTONE	Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT):	5945.02	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	749500	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	31-87BR	
EAST:	2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/29/87		

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.



WELL OR PIEZOMETER CONSTRUCTION

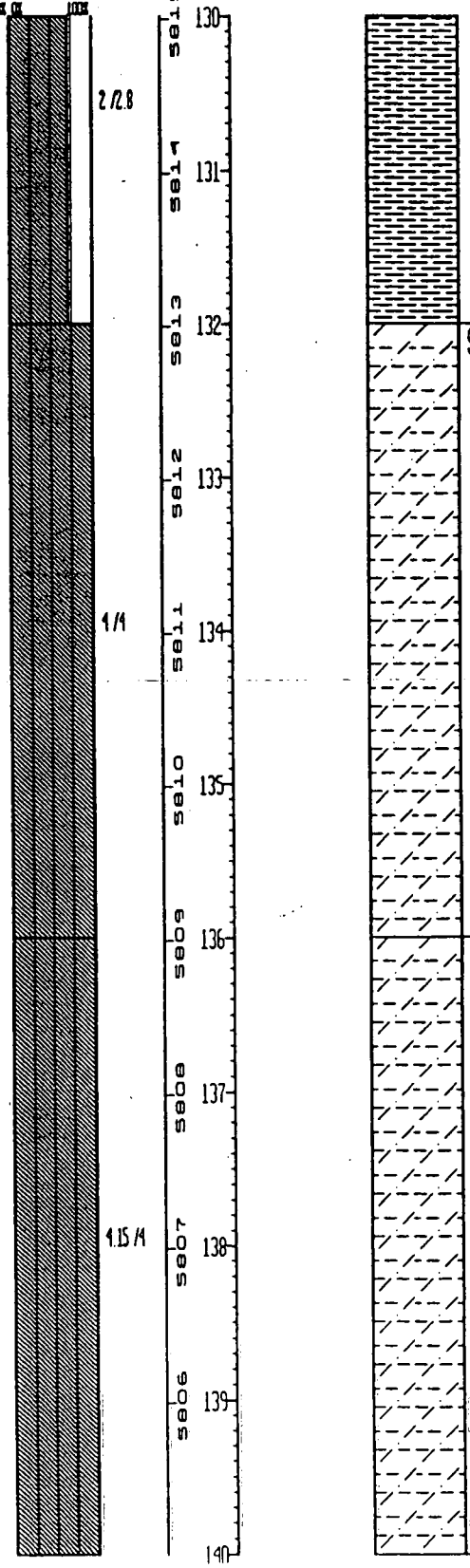
LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY SANDSTONE:	Yellowish gray to lt. olive gray (5Y 8/1 to 6/1), mod. weathered, mod. to slightly friable, bedding distorted, possible burrow, soft sed. deformation, sand VFG to FG, mod. well sorted, trace carb. material.
SILTY SANDSTONE:	Same as above, some horizontal layers, sand VFG to med. grained.
SILTY SANDSTONE:	Same as above, some iron staining, becomes more carb. toward bottom.
SILTY SANDSTONE:	Same as above, some coarser sands in areas VFG to VCG, some iron staining, some very thin coal seams (1 mm.), horizontal.
CLAYSTONE:	Lt. brownish gray (5YR 6/1), slightly weathered, non to slightly friable, bedding not evident, (very hard).
CLAYSTONE:	Brownish black (5YR 2/1), highly weathered, mod. friable, bedding appears tilted 40 degrees and layered, abundant carb. material, some silt, some

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 140	GROUND ELEVATION (FT): 5945.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749500	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	31-87BR
EAST: 2088309	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/29/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 57.60 by L.A. Gregory Frost.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



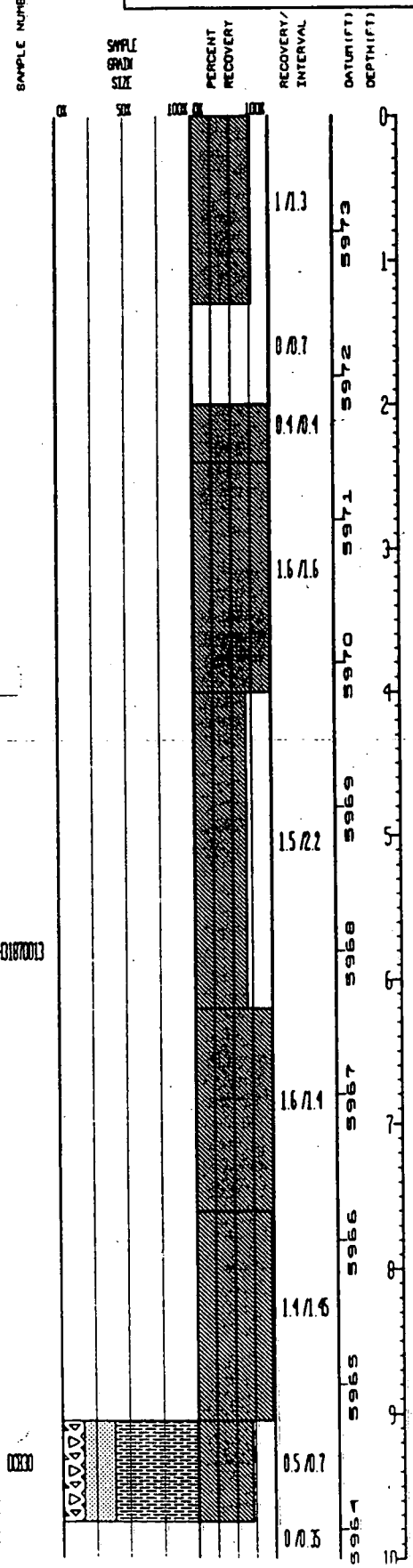
possible slickensides.

SILTY CLAYSTONE: Lt. brownish gray (5Y 4/1), mod. weathered, slightly to mod. friable, bedding appears horizontal from fracture planes, some carb. material toward top, trace carb. material otherwise.

SILTY CLAYSTONE: Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 22.9	GROUND ELEVATION (FT): 5973.8	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749486	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH31-87
EAST: 2085405	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/04/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL:	GRAVELLY, SANDY CLAY - grayish orange (10YR 7/4), low plasticity, roots and wood fragments in upper 1.3 ft., some silt, locally calcareous.
NO SAMPLE:	
CL:	A gradational change occurs below 1.3 ft. - SILTY CLAY, light gray (N7), moderate plasticity, locally calcareous, some fine sand, trace of root fragments, localized iron staining.
CL:	Same as above.
CL:	GRAVELLY CLAY - moderate reddish orange (10R 6/6), moderate plasticity, abundant sand and caliche.
CL:	At 6.2 ft. a gradational change occurs. - GRAVELLY CLAY, grayish orange (10YR 7/4), moderate plasticity, decrease in gravel, sand and caliche fraction.
SILTY SANDSTONE:	Top of Bedrock Very light gray (N8) and grayish orange (10YR 7/4), bedding not apparent, highly weathered, slightly friable, very fine grained.
SILTY SANDSTONE:	Same as above.
NO SAMPLE:	

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 22.9	GROUND ELEVATION (FT): 5973.8	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749486	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH31-87
EAST: 2085405	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/04/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

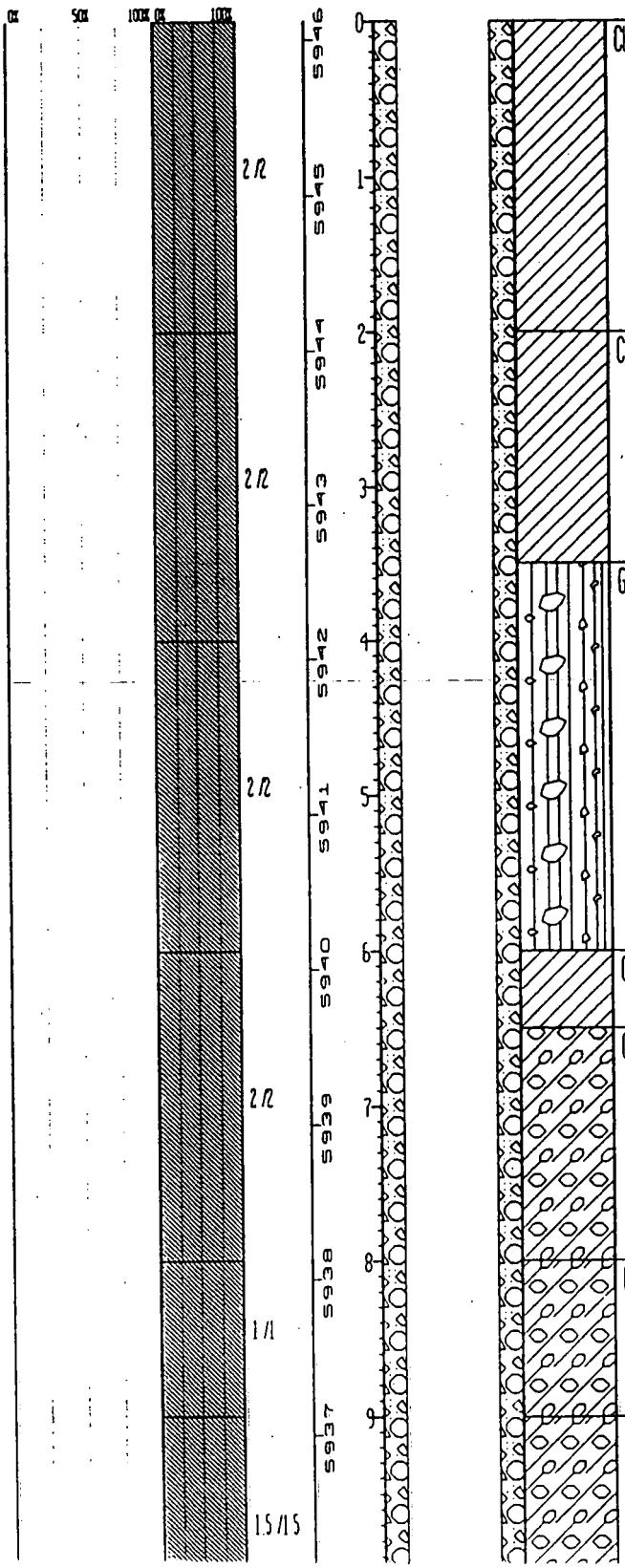
SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%			10				
			0.9/0.9	5963				CLAYSTONE:	Yellowish gray (5Y 8/1), mottled grayish orange (10YR 7/4), moderate plasticity, some caliche and silt, trace of fine sand, localized iron staining.
			0.7/1.6	5962	11			CLAYSTONE:	As above - two 5 cm. size gravel occur at the base of the interval from 11.0 to 12.6.
18713CT					12				
			1.6/1.6	5961	13			CLAYSTONE:	As above.
				5960	14				
			0.9/0.9	5959	15			CLAYSTONE:	As above.
			0.45/0.79	5958				CLAYSTONE:	As above.
					16			NO SAMPLE:	NO SAMPLE - ASI only found core boxes to 15.9 ft. Weston logs go to 22.9 ft.
				5957	17				
				5956	18				
				5955	19				
			0/7	5954	20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 22.9	GROUND ELEVATION (FT): 5973.8	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749486	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH31-87
EAST:	2085405	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/04/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					20			NO SAMPLE:	NO SAMPLE
				5953	21				Note: No water encountered during drilling.
				5952	22				
				5951	23				
				5950	24				
				5949	25				
				5948	26				
				5947	27				
				5946	28				
				5945	29				
				5944	30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 51.3	GROUND ELEVATION (FT):	5996.12	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 749511	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2.10	GEOLOGIST:	TSD	32-87
EAST: 2088363	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	09/24/87	
REMARKS: Hollow Stem Auger						



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL	SILTY, SANDY CLAY - yellowish gray (5Y 7/2) to light gray (N7), est. med plast., some gravel, trace of roots.
CL	First 3/4 of interval is same as above; moderate brown (5YR 3/4) and more of a floury texture.
GM	CALCAREOUS GRAVELLY SILT - mod. orange pink (5YR 8/4), some sand, texture ranges from cohesive to floury (max. gravel size = 5.5 cm.).
CL	GRAVELLY CLAY - grayish orange (10YR 7/4), low plast., some sand, trace of silt.
GC	CALCAREOUS GRAVEL - grayish orange (10YR 7/4) (matrix) angular to sub-rounded ? Poorly graded, max. size = 6 cm trace of sand and clay. (the sample appears to be core of granitic rock with sand and clay infilling the fractures rather than, a gravel)
GC	Same as above
GC	CALCAREOUS GRAVEL - matrix is white (N9) to grayish orange (10YR 7/4) angular to sub-rounded, poorly graded, max. size = 6.5 cm., some sand and clay

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 41.5	GROUND ELEVATION (FT): 5855.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749241	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	13-87BRA	
EAST: 2086641	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/27/87		
REMARKS: Hollow Stem Auger.					

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.55/2	5855	0			GC:	Clayey Gravel - gravel predom. med. lt. gray (N6), angular to sub-rounded, mod. well graded, max. size 5.5cm., matrix dk. yellowish brown (10YR 4/2). Silty clay grading to sandy clay, mod. yellowish brown (10YR 5/4) at bottom of interval, sand VFG, est. plast. mod., some grass and root material at surf.
			1.7/2	5854	1			CL:	SILTY CALCAREOUS CLAY - dk. yellowish brown (10YR 4/2), consistency of flour, grades to more cohesive, grayish orange (10YR 7/4), with CaCO3 layers, some horizontal bedding visible.
			2/2	5853	2			CL:	SILTY CALCAREOUS CLAY - dk. yellowish brown (10YR 4/2), consistency of flour, grades to more cohesive, grayish orange (10YR 7/4), with CaCO3 layers, some horizontal bedding visible.
			2.75/2.5	5852	3			SILTY CLAYSTONE:	Top of Bedrock Very pale orange (10YR 8/2), to dk. yellowish orange (10YR 6/6), highly weathered, slightly friable, calcite stringers and iron stains.
			0.6/2	5851	4			SILTY CLAYSTONE:	Same as above.
				5850	5			SILTY CLAYSTONE:	Very pale orange (10YR 8/2), highly weathered, mod. friable, no bedding evident, calcareous.
				5849	6				
				5848	7				
				5847	8				
				5846	9				
					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 41.5	GROUND ELEVATION (FT): 5855.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749241	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	13-87BRA
EAST: 2086641	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/27/87	

REMARKS: Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					10				
			0.8 /1	5844	11				SILTY CLAYSTONE: Grayish orange to dk. yellowish orange (10YR 7/4 to 6/6), bedding not apparent, highly weathered, slightly friable, moderately calcitic.
			2.6 /3	5843	12				SILTY CLAYSTONE: Same as above. Some iron staining in fractures, very slightly calcitic.
				5842	13				
				5841	14				
			3.9 /2	5840	15				SILTY CLAYSTONE: Same as above.
				5839	16				
			2.2 /2	5838	17				SILTY CLAYSTONE: Same as above.
				5837	18				
			0.1 /0.1	5836	19				SILTY SANDSTONE: VFG, very pale orange to dk. yellowish orange (10YR 8/2 to 6/6), bedding not apparent, trace clay.
					20				SILTY SANDSTONE: Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 41.5	GROUND ELEVATION (FT): 5855.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748241	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	13-87BRA
EAST: 2086641	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/27/87	

REMARKS: Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
UNK			2.8/2.6	5835	20			SILTY CLAYSTONE	Increased clay content.
				5834	21			SANDSTONE	Med. grained sandstone.
								SILTSTONE	Clean siltstone.
			2.9/2	5833	22			CLAYEY SILTSTONE	Pinkish gray (5YR 8/1) to dk. yellow orange (10YR 6/6), bedding not apparent, highly weathered, mod. friable to highly friable, iron stained fractures, becomes sandy in some short intervals (med. grained).
				5832	23				
				5831	24			SILTY CLAYSTONE	Lt. brownish gray (5YR 6/1) to dark yellowish orange (10YR 6/6), bedding not evident, highly weathered, mod. friable, some iron staining, some vertical fractures.
			3.2/3	5830	25				
				5829	26				
			0.35/0.4					SILTY CLAYSTONE	Same as above.
				5828	27			SILTY CLAYSTONE	Very pale orange (10YR 8/2), to dk. yellowish orange (10YR 6/6) highly weathered, mod. friable, some iron staining in fractures, bedding not apparent.
			1.9/1.6	5827	28				
				5826	29			SILTY CLAYSTONE	Same as above, possibly horizontal bedding.
			3.9/3		30				

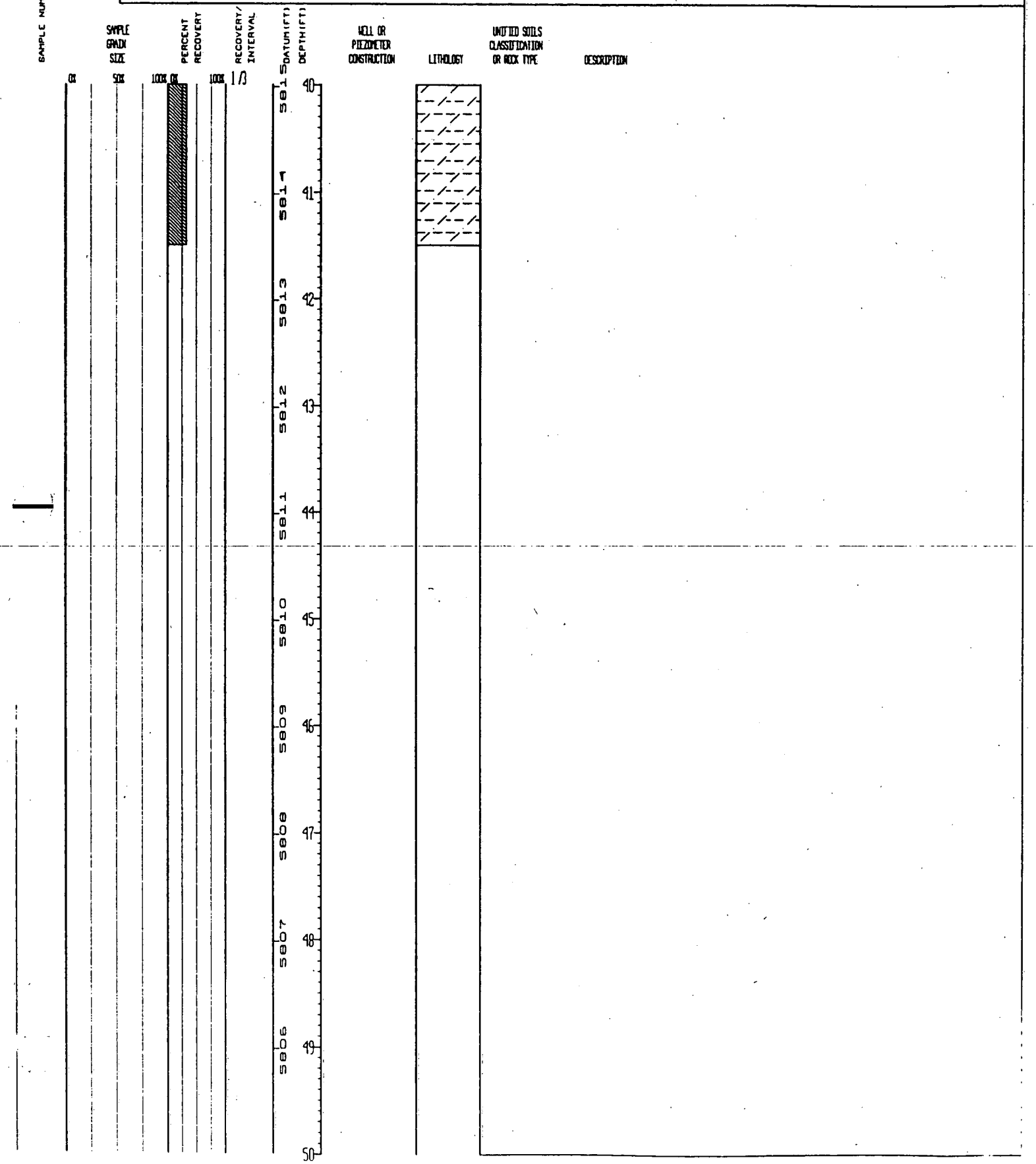
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 41.5	GROUND ELEVATION (FT): 5855.02	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749241	AREA: 903 PAD	CASING DIAMETER (IN): 0	GEOLOGIST: LMA	13-87BRA
EAST:	2086641	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/27/87	

REMARKS: Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			3.9/3	5825	30				
				5824	31				
				5823	32				SILTY CLAYSTONE: Dk. yellowish orange (10YR 6/6), highly weathered, mod. to highly friable, bedding not apparent, becomes grayish brown (5YR 3/2), some areas of heavy carbon - coal like pockets.
			3.5/3.5	5822	33				
				5821	34				
				5820	35				SILTY CLAYSTONE: Brownish gray (5YR 4/1) to dk. yellowish orange (10YR 6/6), highly weathered, mod. friable, some iron stained cracks.
			1.85/1.5	5819	36				
				5818	37				SILTY CLAYSTONE: Same as above, color changes at bottom of interval to lt. brownish gray (5YR 6/1).
			2.85/2	5817	38				
				5816	39				SILTY CLAYSTONE: Same as above. Extremely crumbly - crumbled, color change to dk. yellowish orange at bottom of interval. NOTE: No water encountered while drilling.
			1/0		40				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 41.5	GROUND ELEVATION (FT):	5855.02	PROJECT NUMBER:	667.11
NORTH: 748241	AREA: 903 PAD	CASING DIAMETER (IN):	0	GEOLOGIST:	LAM
EAST: 2086641	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/27/87
REMARKS: Hollow Stem Auger.					

LOG OF BORING NUMBER: 13-87BRA



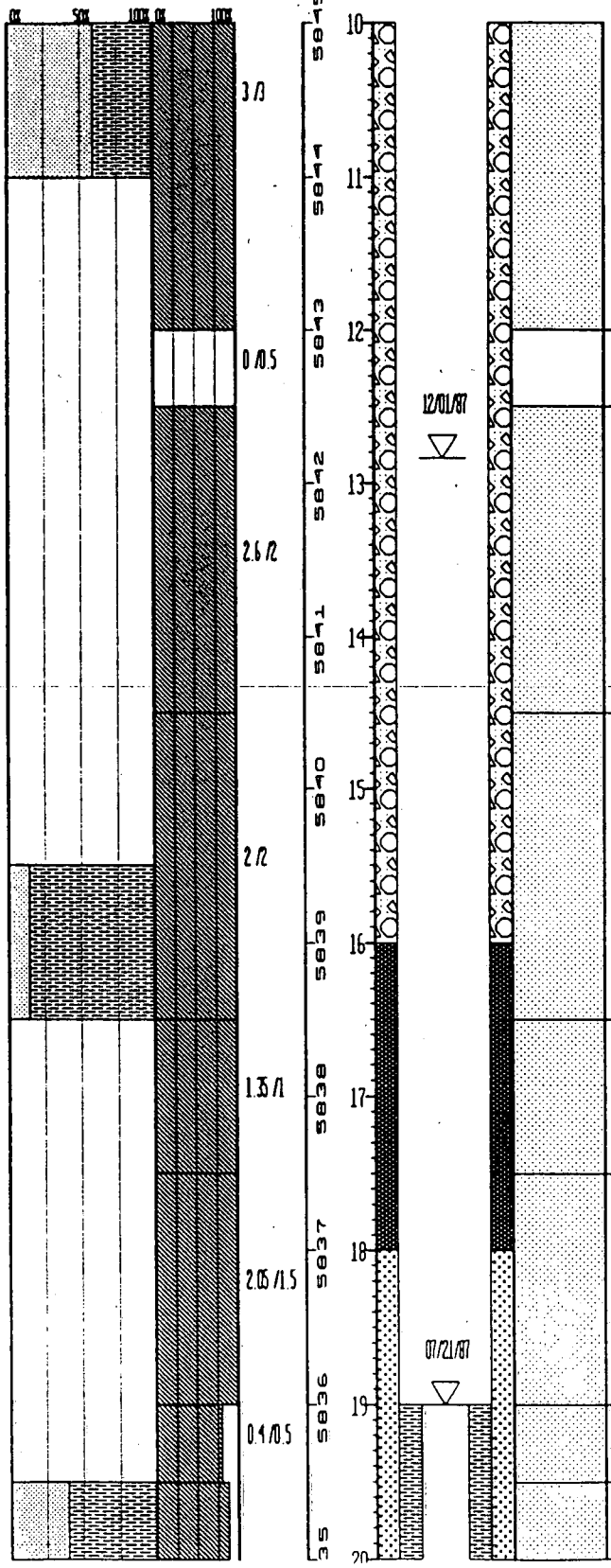
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 25.5	GROUND ELEVATION (FT):	5855	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749228	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB	14-87BR
EAST:	2086616	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	07/21/87	

REMARKS: Hollow Stem Auger. Portland Type I cement and 3/8" Volclay pellets used as well backfill due to problems encountered with slough during installation.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.8/1.8	5855	0			CL:	SILTY CLAY - dusky yellowish brown (10YR 2/2), moderate plasticity, some gravel and organic detritus. At approx. 1 ft. this interval grades to a silty clay, moderate yellowish brown (10YR 5/4), moderate plasticity, some fine sand and carbonate mineralization is disseminated throughout.
				0/0.2	5854	1			NO SAMPLE:	
				1.8/2	5853	2			CL:	As above, interval below 1 ft., carbonate mineralization occurs in laminar stringers 1 mm. and less in thickness and as isolated bodies.
				0.7/1.2	5852	3			CL:	As above. Note: a badly broken 0.3 ft. interval labeled 4' shoe occurs above interval marked 4.0' to 5.2'.
				2.5/1.8	5851	4			CLAYSTONE:	Top of Bedrock Mottled moderate yellowish brown (10YR 5/4) to dark yellowish orange (10YR 6/6), with an increase in carbonate mineralization.
				1.75/2	5850	5			CLAYSTONE:	As above.
					5849	6			SANDSTONE:	Note: an interval of 1 ft. (as above) occurs at the top of this box and is labeled 8.0 to 9.0 ft. Yellowish gray (5Y 8/1), bedding not discernable, heavily weathered, moderately friable, fine grained to very fine grained, sub-rounded to rounded, well sorted. Localized iron staining occurs at approx. 11.5 to
					5848	7				
					5847	8				
					5846	9				
					5845	10				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 25.5	GROUND ELEVATION (FT): 5855	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER
NORTH:	749228	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	14-87BR
EAST:	2086616	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 07/21/87	

REMARKS: Hollow Stem Auger. Portland Type I cement and 3/8" Voldoy pellets used as well backfill due to problems encountered with slough during installation.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	12'
NO SAMPLE	
SANDSTONE	Yellowish gray (5Y 7/2), silt fraction, some coloration, bedding not discernable, weathered, moderately friable to slightly friable, very fine grained, some carbonate mineralization occurs locally, iron oxide staining occurs locally, trace of clay.
SANDSTONE	As above.
SANDSTONE	As above, decrease in carbonate mineralization, clay fraction increases, ground sample exhibits moderate plasticity.
SANDSTONE	Grayish orange (10YR 7/4), bedding not discernable, weathered, moderately friable, fine grained portion is sub-rounded to rounded, well sorted, some silt and clay.
SANDSTONE	Pinkish gray (5YR 8/1), friable, med. grained, sub-rounded to rounded, well sorted, some FG sand and silt.
SANDSTONE	As above with a gradational change at approx. 2/3 of this interval to siltstone.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 25.5	GROUND ELEVATION (FT):	5855	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749228	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB	14-87BR
EAST:	2086616	LOCATOR NUMBER: N8	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	07/21/87	

REMARKS: Hollow Stem Auger. Portland Type I cement and 3/8" Voldoy pellets used as well backfill due to problems encountered with slough during installation.

SAMPLE NUMBER	SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			2.65/3	5835	20				
				5834	21			SILTSTONE:	Light olive gray (5Y 6/1), contains discontinuous beds of siltstones (<1 mm. thick), weathered, moderately friable, localized stains of iron oxide.
				5833	22	07/21/87			
			1.6/1.3	5832	23			SANDSTONE:	Grayish orange (10YR 7/4), bedding not apparent, highly weathered, highly friable, sub-angular to well rounded, poorly sorted.
				5831	24			SANDSTONE:	Yellowish gray (5Y 7/2), bedding not visible, highly weathered, moderately friable, medium to fine grain sand, rounded, poorly sorted, abundant silt and clay.
			2.75/1.7	5830	25			CLAYSTONE:	Interval grades to claystone at approx. 24.5 ft (same color), thin horizontal bedding less than 2 mm., weathered.
				5829	26				
				5828	27				
				5827	28				
				5826	29				
				5825	30				

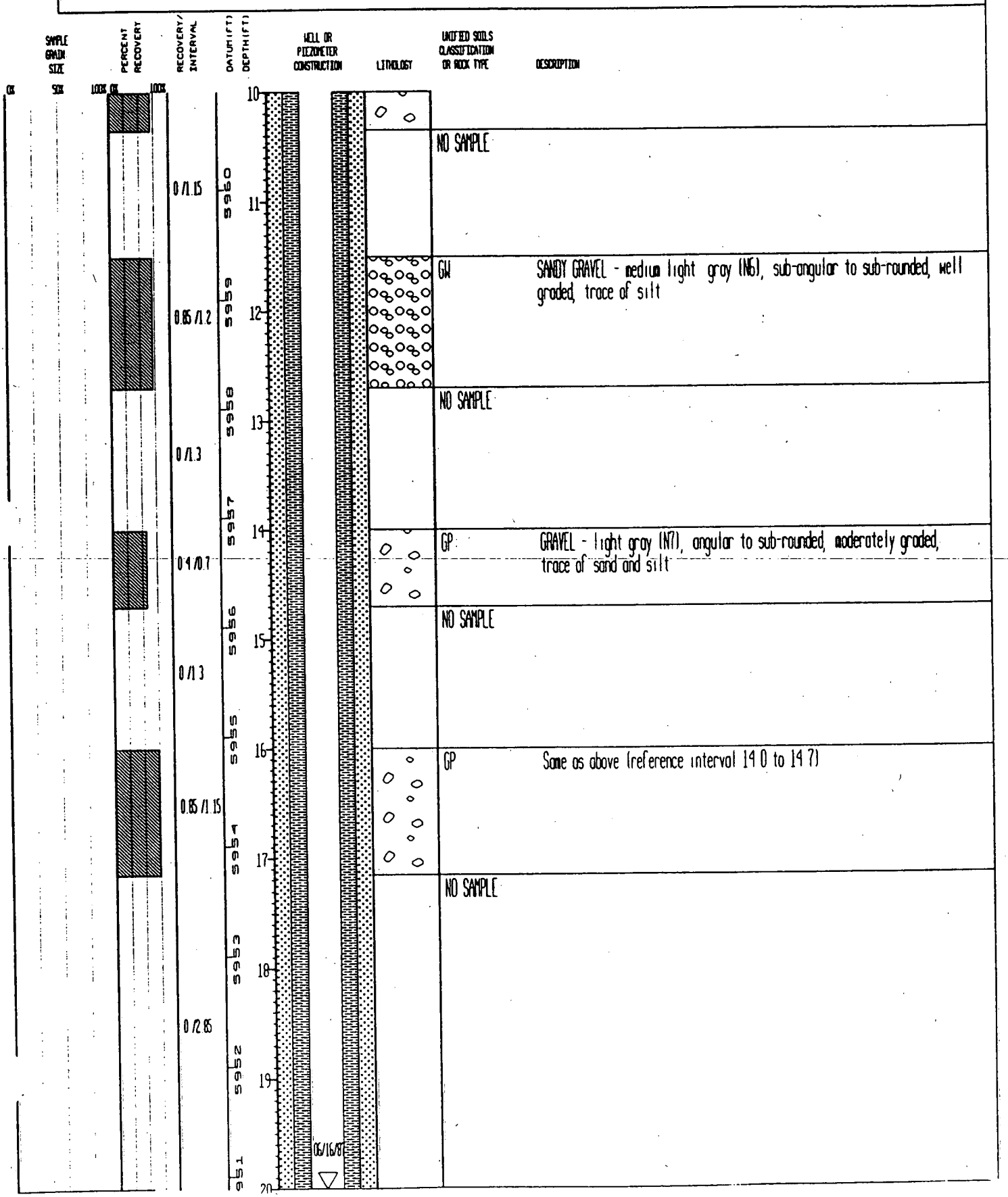
STATE PLANE COORDINATE		TOTAL DEPTH (FT) 27.05	GROUND ELEVATION (FT)	5970.89	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	749010	AREA 903 PAD	CASING DIAMETER (IN)	2 ID	GEOLOGIST	DCB/GCE	15-87
EAST	2086249	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN)	7.5	DATE DRILLED	06/16/87	

REMARKS: Hollow Stem Auger. Sample BH0087204T doubles as sample BH0087220T due to insufficient recovery for two samples.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0.95/1.1	5970	0–1			GP	GRAVEL - black (N1) to white (N9), sub-angular to rounded, poorly graded, some sand and silt, plant detritus at top of interval.
		0/0.9	5969	1–2			GC	Clayey Gravel, very light gray (N8), angular, poorly graded, some silt, clay fraction (5YR 3/2).
		0.15/0.15					NO SAMPLE	
		1.25/1.25	5968	2–3			GC	As above. Lower portion of interval
		0/0.6	5967	3–4			GP	Gravel in Caliche Matrix - light gray (N7), angular, poorly graded, caliche matrix is very pale orange (10YR 8/2).
		1.2/1.2	5966	4–5			NO SAMPLE	
		0/1.8	5965	5–6			GP	As above, interval 2.15 to 3.4, with increase in max. gravel size to 7 cm.
		1.15/1.15	5964	6–7			NO SAMPLE	
		0/0.85	5963	7–8			GP	SANDY GRAVEL - medium light gray (N6), angular to sub-angular, poor to moderate grading, some clay.
		0/0.2	5962	8–9			NO SAMPLE	
		0.8/1.15	5961	9–10			NO SAMPLE	
							GP	GRAVEL - med. gray (N5), sub-angular to sub-rounded, poorly graded.

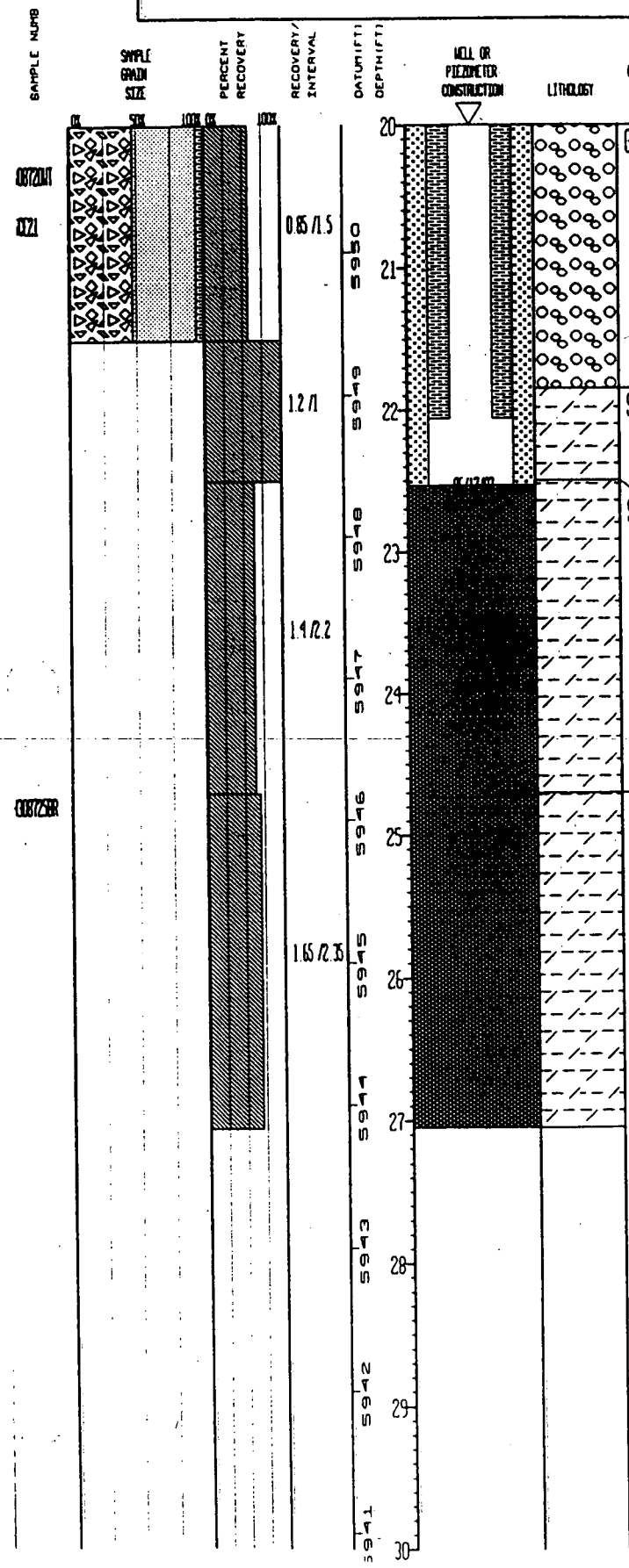
STATE PLANE COORDINATE		TOTAL DEPTH (FT) 27.05	GROUND ELEVATION (FT) 5970.89	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH 749010		AREA 903 PAD	CASING DIAMETER (IN) 2.10	GEOLOGIST DCB/GCE	15-87
EAST 2086249		LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN) 7.5	DATE DRILLED 06/16/87	

REMARKS: Hollow Stem Auger. Sample BH008720WT doubles as sample BH008722CT due to insufficient recovery for two samples



STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 27.05	GROUND ELEVATION (FT):	5970.89	PROJECT NUMBER:	667 11	LOG OF BORING NUMBER:
NORTH:	749010	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB/GCE	15-87
EAST:	2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	7 5	DATE DRILLED:	06/16/87	

REMARKS: Hollow Stem Auger. Sample BH308720WT doubles as sample BH308722CT due to insufficient recovery for two samples



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GW	SANDY GRAVEL - medium gray (N5), sub-angular to sub-rounded, well graded, trace of silt
SILTY CLAYSTONE	Top of Bedrock Interval changes gradational to a silty claystone, very light gray (N8), moderate plasticity, trace of fine sandstone
SILTY CLAYSTONE	As above, mottled coloring, pale yellowish orange (10YR 8/6) and very light gray (N8)
SILTY CLAYSTONE	As above

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 25.8	GROUND ELEVATION (FT) 5985	PROJECT NUMBER: 667 11	LOG OF BORING NUMBER:
NORTH: 749407		AREA: 881 HILLSIDE	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH15-87
EAST: 2084933		LOCATOR NUMBER: L8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 06/03/87	

REMARKS: Hollow Stem Auger BH backfilled with Portland Type I cement Elevation est. from topographic map.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.7/1.7	5984	0–1			CH:	Clay - pale yellowish orange (10YR 8/6) to lt. gray (N8), est. plast. mod. to high, some roots throughout, some CaCO3, some silt.
			0.55/0.3	5985	1–2			CH:	Same as above, some silt, some dk. yellowish orange coloring, possible staining, trace gravel
BH15870005			1.1/1	5982	2–3			CH:	Same as above, some gravel, sub-rounded, to 4.5 cm., no roots.
			1.6/1	5981	3–4			CL:	SILTY CLAY - white (N9) to yellowish gray (5Y 8/1) to dk. yellowish orange (10YR 6/6), est. plast. mod., some gravel, sub-rounded, mod. graded, to 4.5 cm., some CaCO3.
				5980	4–5			CL:	Same as above.
			1.3/3	5979	5–6				
				5978	6–7				
BH15870610			2.3/2.5	5977	7–8			CL:	Same as above
				5976	8–9				
				5975	9–10			CL:	GRAVELLY SILTY CLAY - grayish brown (5YR 3/2) to dk. yellowish brown (10YR 4/2), est. plasticity low to mod., gravel angular to sub-angular, max.

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 25.8	GROUND ELEVATION (FT)	5985	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748407	AREA: 881 HILLSIDE	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH15-87
EAST:	2084933	LOCATOR NUMBER: L8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	06/03/87	

REMARKS: Hollow Stem Auger. BH backfilled with Portland Type I cement. Elevation est. from topographic map.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	100%	1.15/2.5	5975	10				size 5.5 cm., sand in clay matrix, VFG to med. grained, some CaCO3, abundant in upper interval.
			5974	11				
			5973	12			NO SAMPLE:	
			5972	13				
			5971	14				
		0/5	5970	15				
			5969	16				
			5968	17			CLAYSTONE:	Top of Bedrock Grayish orange to yellowish gray (10YR 7/4) to (5Y 8/1), est. plast. moderate to high, some CaCO3, trace silt
		0.4/2	5967	18				
			5966	19			CLAYSTONE:	Yellowish gray to lt. olive gray (5Y 8/1 to 6/1), est. plast mod. to high, some CaCO3 in upper 1/2 of interval, some silt.
			5965	20				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 25.8	GROUND ELEVATION (FT): 5985	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	748407	AREA: 881 HILLSIDE	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH15-87
EAST:	2084933	LOCATOR NUMBER: 18	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 06/03/87	

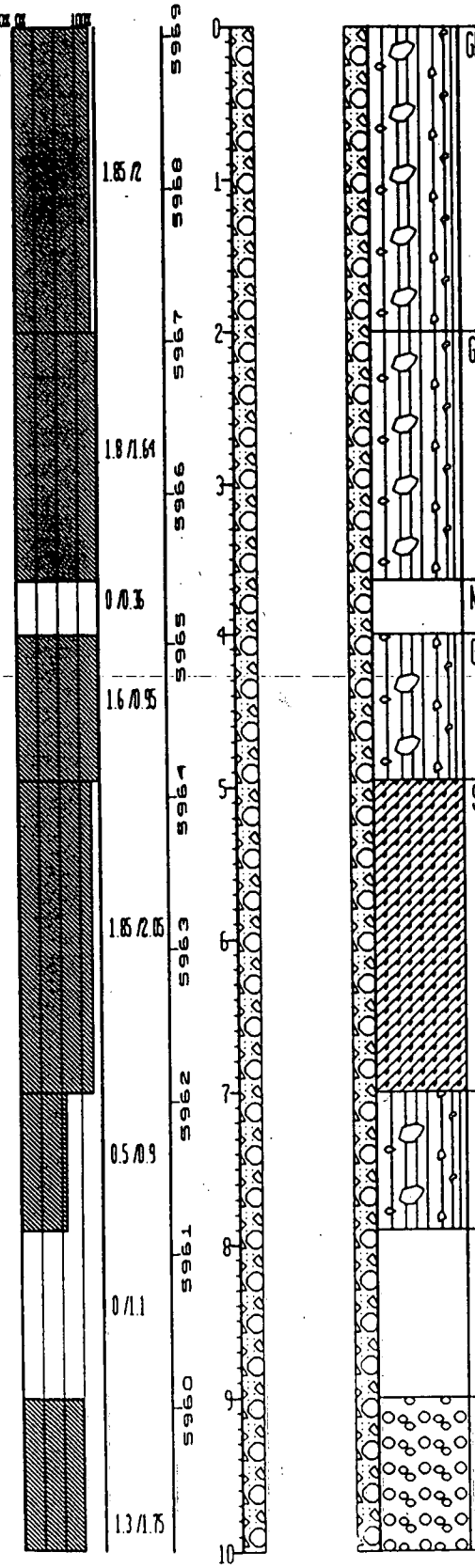
REMARKS: Hollow Stem Auger. BH backfilled with Portland Type I cement. Elevation est. from topographic map

SAMPLE NUMB	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			2.4/5	5965	20				
				5964	21				
				5963	22				
				5962	23				
				5961	24			NO SAMPLE:	NOTE: No water encountered while drilling.
58726BR			0/1.8	5960	25				
				5959	26				
				5958	27				
				5957	28				
				5956	29				
				955	30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR	
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87		

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

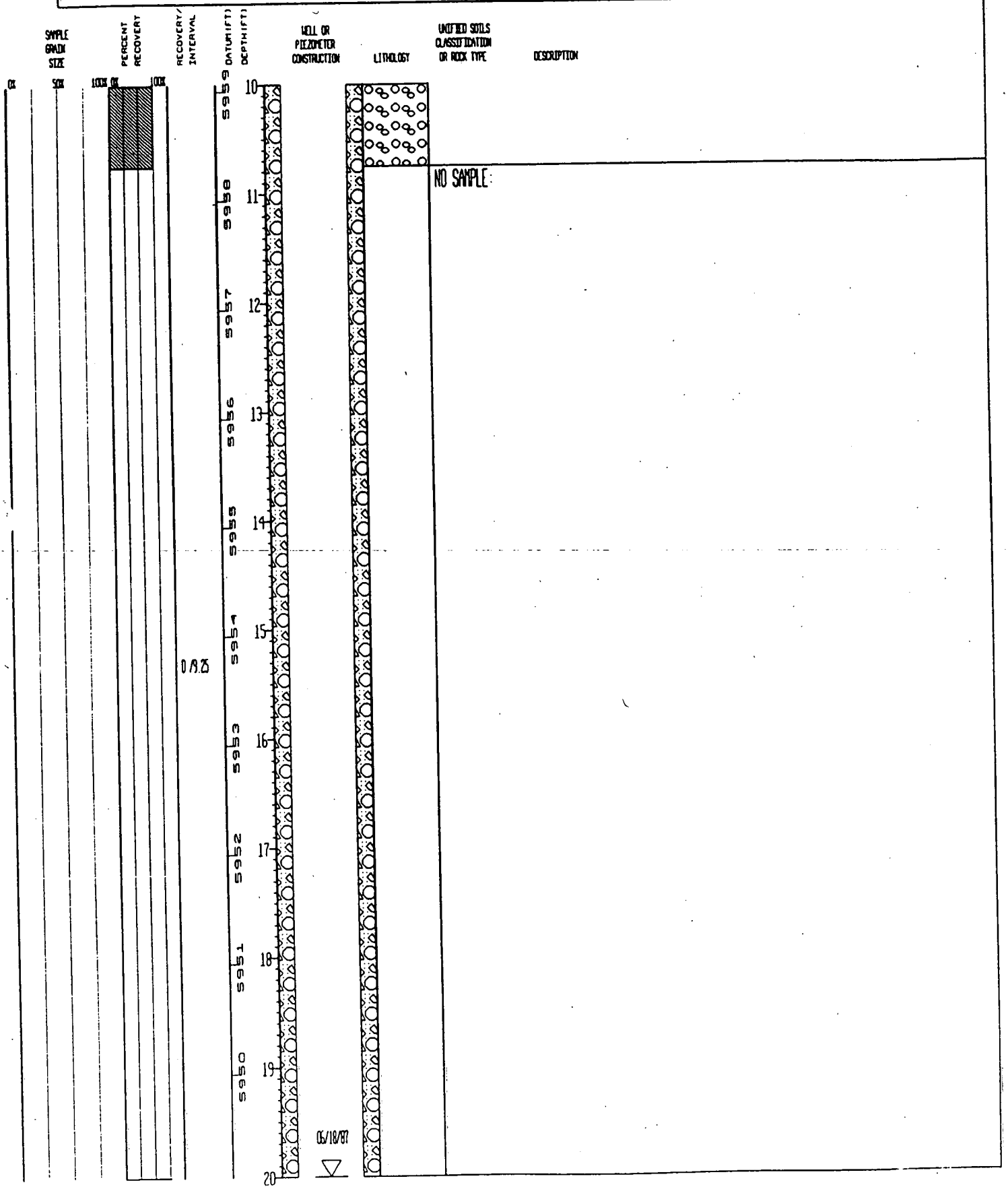
GRADATIONAL SAMPLE DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



Unified Soils Classification or Rock Type	Description
GM:	SILTY SANDY GRAVEL - predom. med. gray (N5), angular to rounded, well graded, granules to 6 cm., sand med. to coarse grained, mod. well graded, some root material, some clay.
GM:	Same as above.
NO SAMPLE:	
GM:	GRAVEL - as above, max. size 6 cm., silty clay matrix est. plast. low to mod., grayish orange to white (10YR 7/4) to (N9), some caliche.
SC:	Sandy Clay & Caliche - lt. brown (5YR 5/6) to white (N9), est. plast. low, sand VFG to coarse, well graded.
GM:	Silty Gravel & Sand - gravel lt. gray (N7) to lt. olive gray (5Y 6/1), angular to sub-rounded, sand VFG to granules, well graded, gravel mod. graded, trace CaCO3.
NO SAMPLE:	
GW:	GRAVEL - no predom. color, angular to sub-rounded, well graded, granules to 3 cm., some sand, well graded, VFG to granules, trace silt and clay.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT):	5969.06	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA/DCB	16-87BR
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	07/08/87	

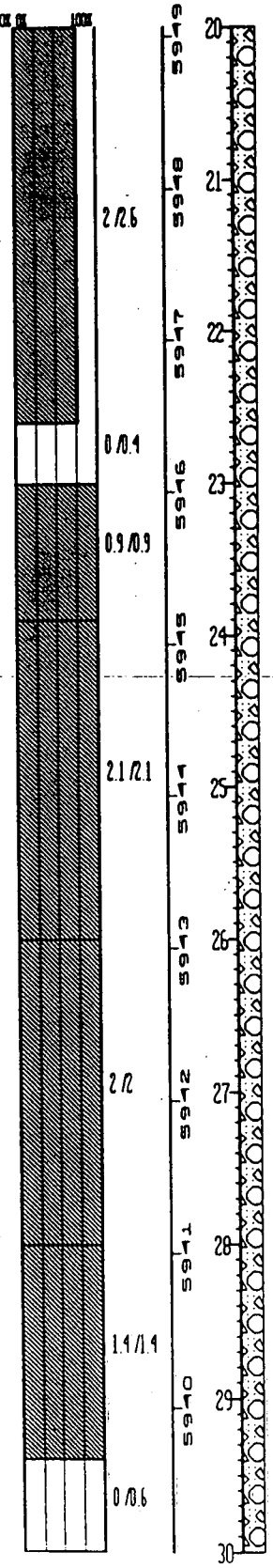
REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.



STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT):	5969.06	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749130	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA/DCB	16-87BR
EAST:	2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

GRADATIONAL / DEPTH | SAMPLE NUMB | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



Recovery/Interval	Depth (ft)	Unified Soils Classification or Rock Type	Description
	20	GC:	SANDY GRAVEL - medium light gray (N6), matrix is light brown (5YR 6/4), sub-angular to sub-rounded, moderately graded, max. size 4 cm., some clay.
2/2.6	21		
	22	CLAYSTONE:	Top of Bedrock Very light gray (N8), bedding not apparent, highly weathered, slightly friable, occasional iron stains.
0/0.4		NO SAMPLE:	
0.9/0.9	23	CLAYSTONE:	As above (reference interval 22.3 to 22.6 ft.)
	24	CLAYSTONE:	As above.
2.1/2.1	25		
	26	CLAYSTONE:	As above, color grades to grayish orange (10YR 7/4) approx. 26 to 27 ft. with increase in iron staining.
2/2	27		
	28	SILTY CLAYSTONE:	Pinkish gray (5YR 8/1), bedding not apparent, highly weathered, slightly friable, moderate silt fraction, local iron staining.
1.4/1.4	29		
0/0.6		NO SAMPLE:	
	30		

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT):	5969.06	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749130	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA/DCB	16-87BR
EAST:	2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0% 50% 100%	0% 100%	1.6/1.35	5939	30			SILTY CLAYSTONE:	Very pale orange (10YR 8/2), bedding not evident, highly weathered, mod. friable, some iron staining, becomes mod. yellowish brown (10YR 5/4) toward bottom of interval.
		0/0.65	5938	31			NO SAMPLE:	
		1.8/2	5937	32			SILTY CLAYSTONE:	Same as above, heavy ironization and abundant black mineralization near top of interval.
		1.85/2	5936	33				
		1.75/2	5935	34			SILTY CLAYSTONE:	Very lt. gray to grayish orange (10YR 7/4 to N8), highly weathered, mod. friable, bedding not evident, some iron staining.
		1.75/2	5934	35				
		1.75/2	5933	36			SILTY CLAYSTONE:	Same as above.
			5932	37				
			5931	38			SILTY CLAYSTONE:	Same as above.
			5930	39				
				40				

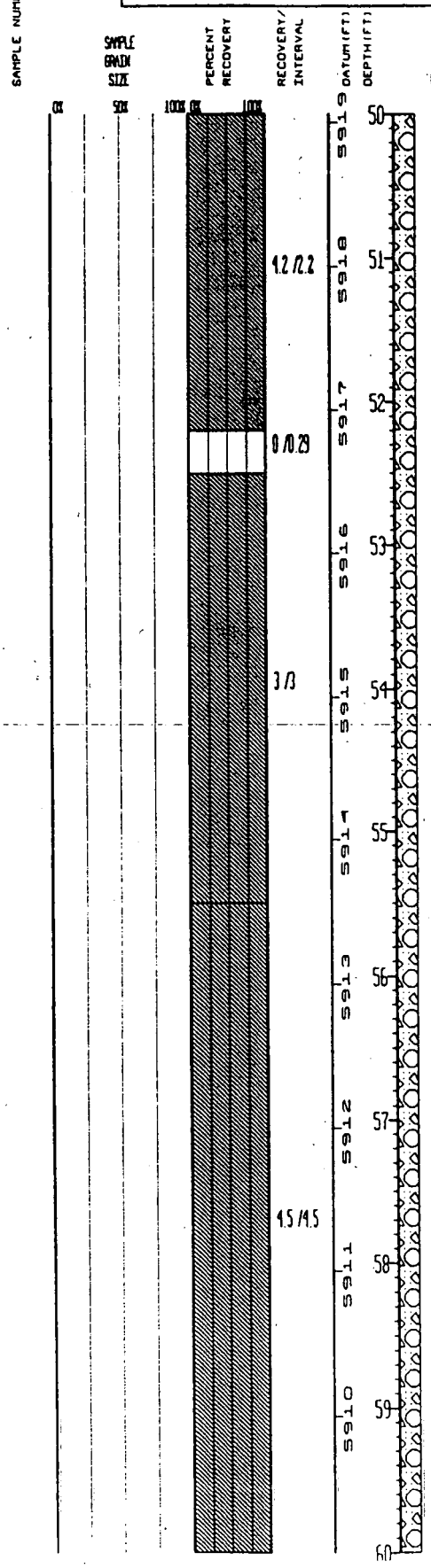
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.7 ft	5929	40			SILTY CLAYSTONE	Grayish orange (10YR 7/4 to 10YR 6/2), highly weathered, mod. friable, bedding not evident, some iron staining.
				5928	41				
				5927	42			SILTY CLAYSTONE	Same as above with color change to light brownish gray (5YR 6/1).
			1.8 ft	5926	43				
				5925	44			SILTY CLAYSTONE	Same as above with color change to medium dk. gray (N4), some carb. material, no iron staining.
			1.75 ft	5924	45				
				5923	46			SILTY CLAYSTONE	Same as above.
			1.85 ft	5922	47				
				5921	48			SILTY CLAYSTONE	Same as above, some iron staining.
			1.8 ft	5920	49			CALICHE	White (N9), slightly friable.
					50				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

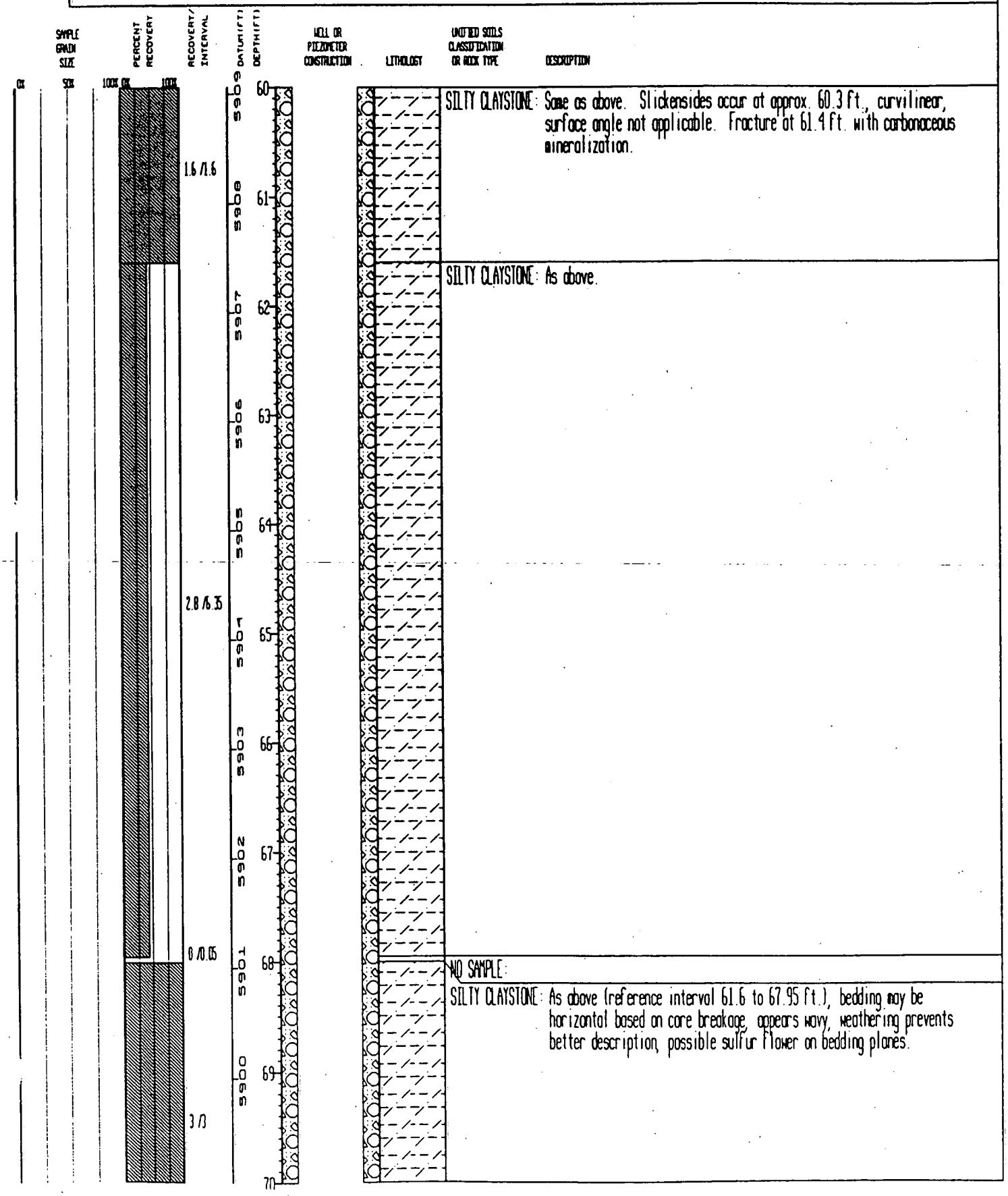
REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Light gray (N7), bedding not apparent (massive?), weathered, slightly to moderately friable, localized iron staining.
NO SAMPLE:	
CLAYSTONE:	Medium dark gray (N4), bedding not apparent (massive?), weathered, slightly friable, localized iron staining, and carbonaceous mineralization, occasional small bodies or lenses of coal <2.5 mm. thick.
CLAYSTONE:	Same as above.
SILTY CLAYSTONE:	Light gray (N7), bedding not apparent (massive?), weathered, moderately friable.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5959.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR
EAST: 2086249	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5959	70				
			0.1/1	5958	71			SILTY CLAYSTONE:	As above.
			2/2	5957	72			SILTY CLAYSTONE:	As above.
				5956	73				
			2/2	5955	74			SILTY CLAYSTONE:	As above. Slickenside at 75 ft. 60 degree angle, coal body approx. 1.5 cm. in thickness also occurs at this depth and angle. At 75 ft. interval grades to silty claystone, yellowish gray (5Y 7/2), bedding not apparent (massive?).
				5954	75				
			3.2/3.2	5953	76			CLAYSTONE:	At 76 ft. interval grades to interbedded claystone and siltstone, medium gray (N5) and light gray (N7) respectively, bedding is horizontal, interfingering very fine sandstone occurs occasionally in this interval, weathered, moderately friable, carbonaceous. Interval grades to siltstone, light gray (N7), bedding not apparent (massive?), weathered, mod. friable.
				5952	77				
				5951	78				
			0/0.8	5950	79			NO SAMPLE:	
					80				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR
EAST:	2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1/1	5889	80			CLAYSTONE:	Medium light gray (N6), bedding not apparent (massive?), weathered, slightly friable, slight silt fraction and occasional short intervals of silt.
				5888	81				
				5887	82				
				5886	83	12/01/87			
				5885	84			CLAYSTONE:	Same as above.
				5884	85				
			1/1	5883	86				
				5882	87				
				5881	88			CLAYSTONE:	As above.
				5880	89				
			1/1		90				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749130	AREA: 903 PAD	CASING DIAMETER (IN): 2.10	GEOLOGIST: LAA/DCB	16-87BR
EAST:	2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1/1	5969	90				
				5968	91				
			0.5/0.5	5967	92			CLAYSTONE:	As above.
				5966	93			CLAYSTONE:	As above.
				5965	94				
			1/1	5964	95				
				5963	96				
				5962	97			CLAYSTONE:	As above.
			3.3/3.3	5961	98			SILTSTONE:	Interval grades to siltstone below 98 ft., very light gray (N8), thin bedded <1 mm., Horizontal to 10 degree dip, weathered, slightly friable.
				5960	99				
					100				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

SAMPLE NO.	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0/0.69	5869	100			NO SAMPLE:	
			1.2/1.2	5868	101			SILTSTONE:	Very light gray (N8), thin bedded <1 mm, horizontal to 10 degree dip, weathered, slightly friable, slight sand fraction very fine grained, interbedded.
GDI64				5867	102			SILTSTONE:	As above.
			3.3/3.3	5866	103				
				5865	104				
				5864	105			SILTSTONE:	As above with abundant very fine grained sand from 105.0 to 105.4 ft.
				5863	106				
			4/4	5862	107				
				5861	108				
				5860	109			SILTSTONE:	As above.
					110				

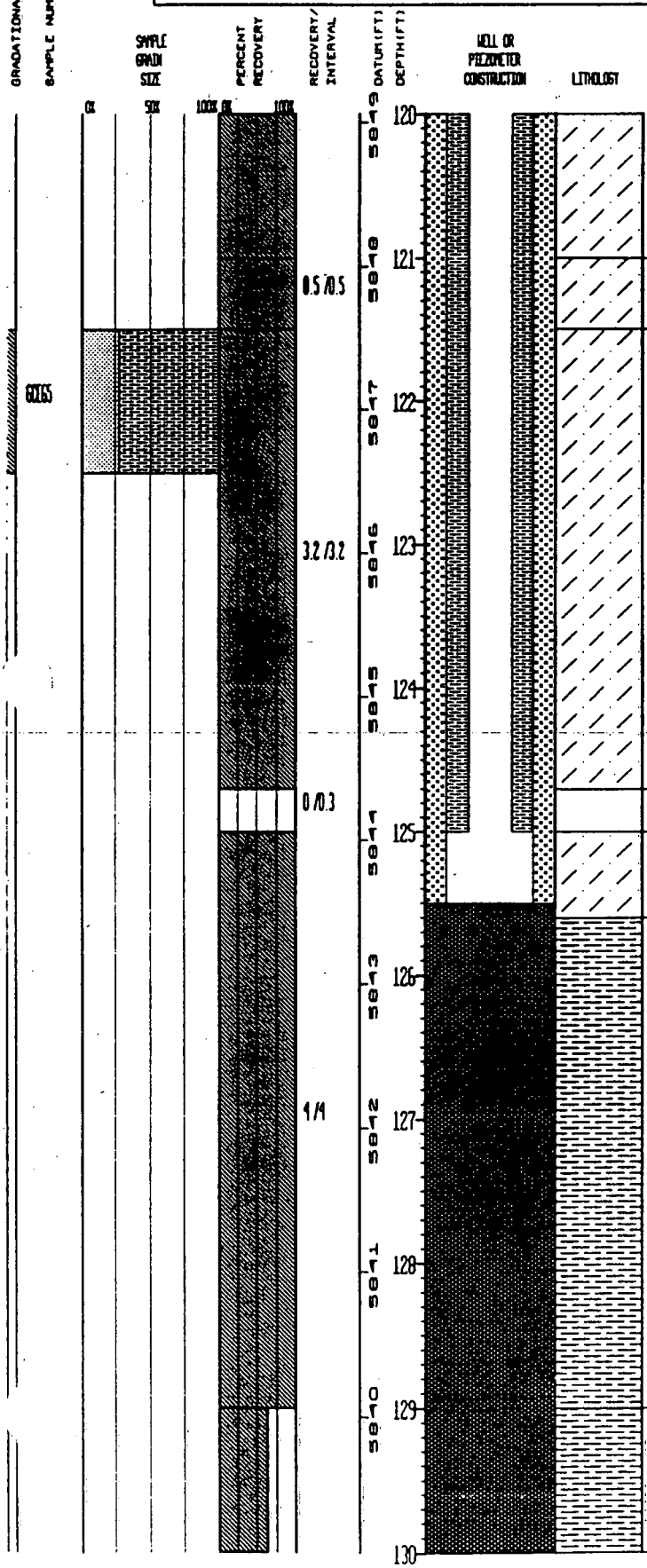
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			3.3/3.3	5959	110				
				5958	111				
				5957	112				
			0/0.69					NO SAMPLE:	
				5956	113			SILTSTONE:	As above.
				5955	114				
			1/1	5954	115				
				5953	116				
				5952	117			SILTSTONE:	As above, 0.75 ft. slabbed, bedding is dominantly deformed through bioturbation otherwise roughly horizontal, thin bedded < 2.5 mm., interbedded siltstone, sandstone and claystone, small scale offsets in bedding.
				5951	118				
			1/1	5950	119				
					120				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749130		AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR
EAST: 2086249		LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

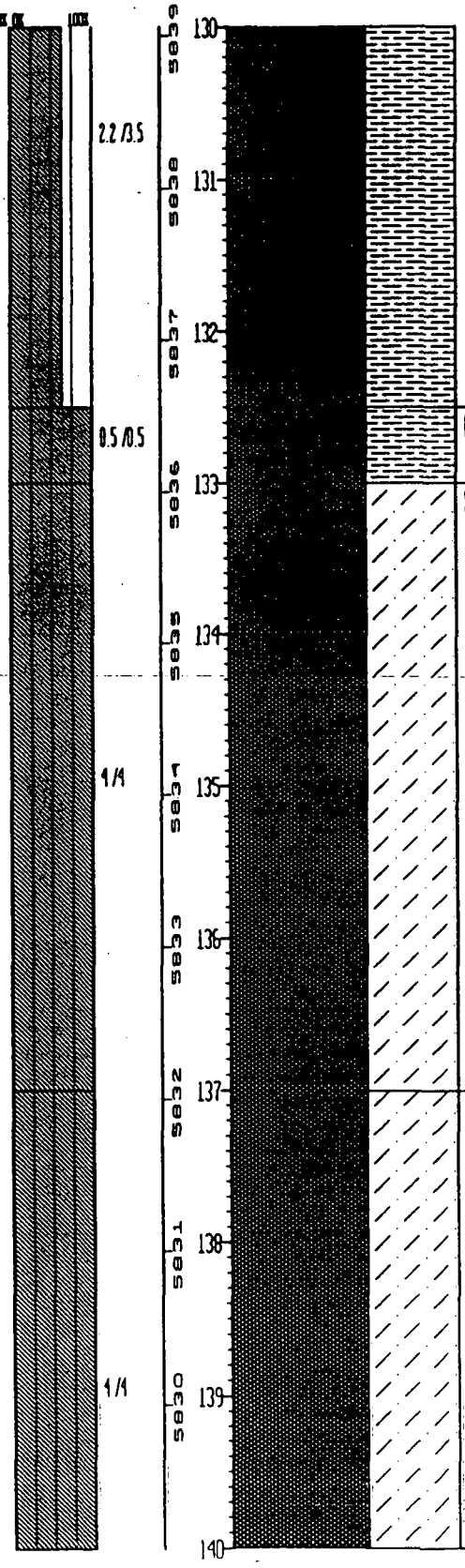


UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTSTONE:	As above.
SILTSTONE:	As above.
NO SAMPLE:	
SILTSTONE:	Light gray (N7), laminar bedding with some wavy bedding, weathered, slightly friable.
CLAYSTONE:	Interval grades to claystone at approx. 125.6 ft., olive gray (5Y 4/1), bedding approx. 10 degrees based on core breaks, weathered, slightly friable, carbonaceous mineralization occurs locally, fossil leaf at approx. 126 ft., short intervals of siltstone occur occasionally.
CLAYSTONE:	As above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 174		GROUND ELEVATION (FT):	5969.06	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749130	AREA: 903 PAD		CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA/DCB	16-87BR
EAST:	2086249	LOCATOR NUMBER: #9		BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

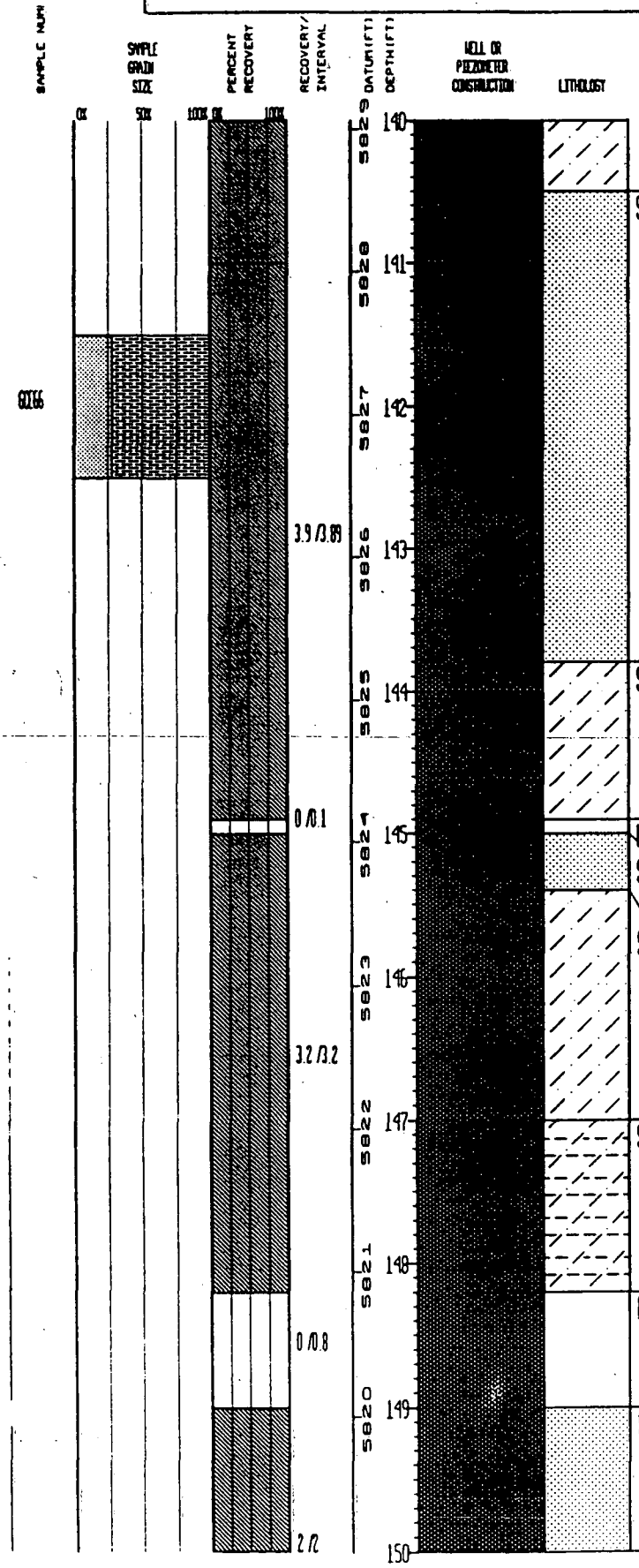
SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	As above.
SILTSTONE:	Interval grades to siltstone at 132.9 ft., light gray (N7), thin bedded, weathered, slightly friable, occasionally interbedded with claystone.
SILTSTONE:	As above with increasing very fine sand fraction.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5959.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR	
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87		

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

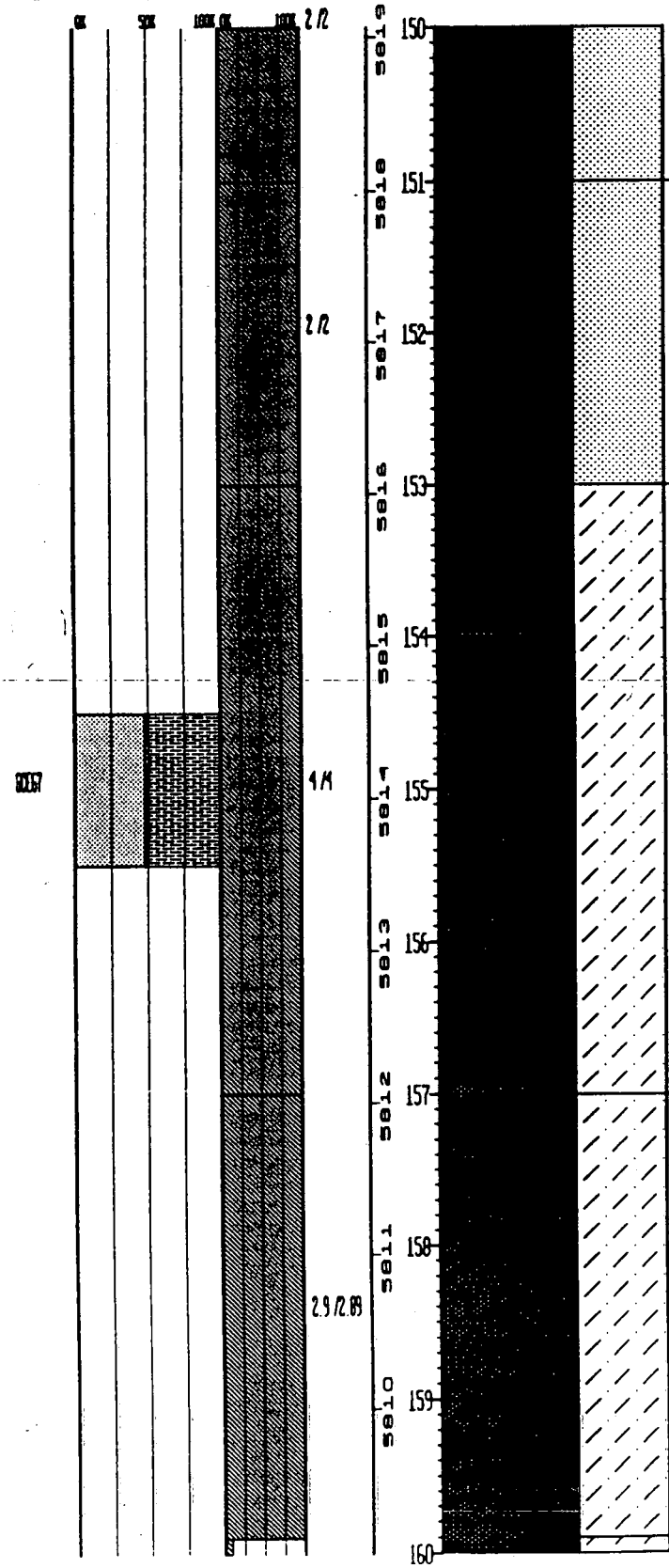


UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SANDSTONE:	Interval grades to sandstone by approx. 140.5 ft., light gray (N7), thin bedded, weathered, slightly friable, very fine grained, abundant silt.
SILTSTONE:	Interval grades to siltstone at approx. 143.8 ft., light gray (N7), thin bedded <2.5 mm., weathered, slightly friable, slight clay and VF6 sand fraction.
NO SAMPLE:	
SANDSTONE:	Light gray (N7), thin bedded <2 mm., weathered, slightly friable, medium to fine grained, moderately sorted, sub-rounded to rounded.
SILTSTONE:	Interval grades to siltstone at approx. 145.4 ft., light gray (N7), thin bedded <2.5 mm., convolute bedding possible, bioturbation load casts visible in slab, weathered, slightly friable.
SILTY CLAYSTONE:	Interval grades to silty claystone at 147.0 ft. Light gray (N7) to med. gray (N5), bedding not apparent, weathered, slightly friable.
NO SAMPLE:	
SANDSTONE:	As above, (reference interval 147.0 ft. to 148.2 ft.), slickensides occur at approx. 150 ft. approx. 70 degree angle, slight to moderate silt fraction.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5969.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR	
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87		

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

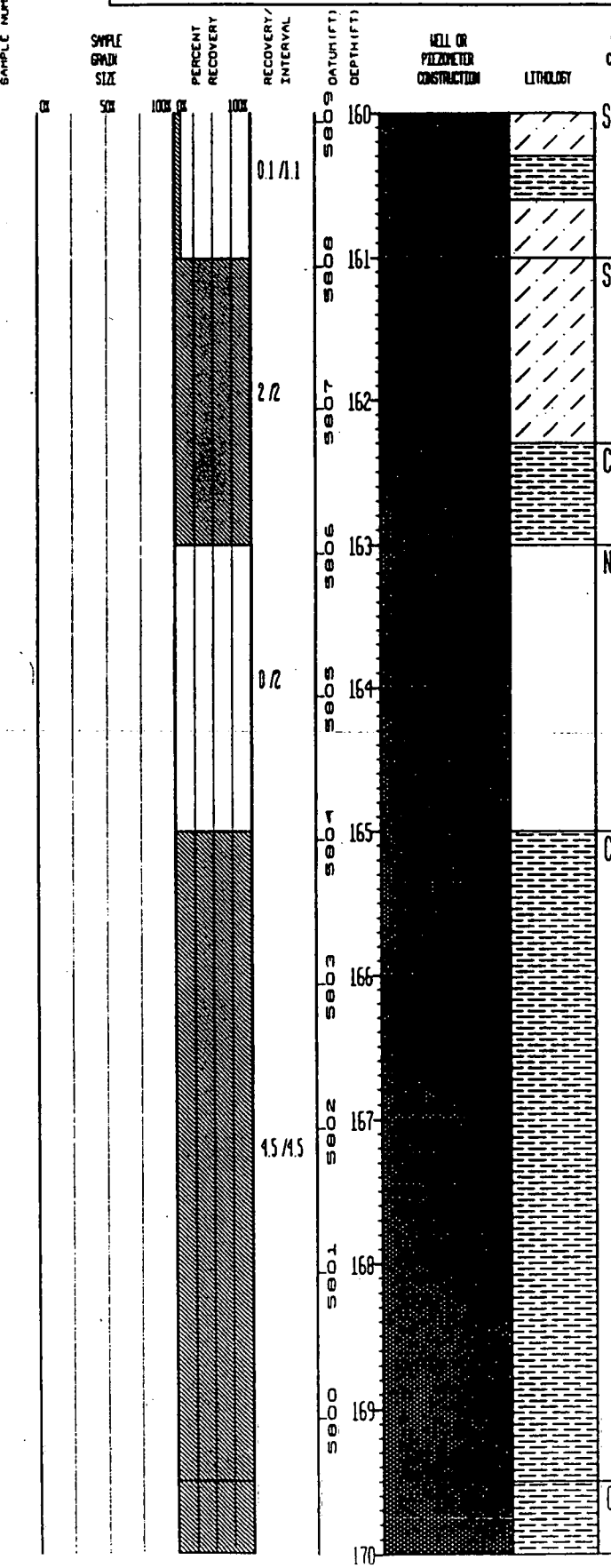
SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SANDSTONE:	As above.
SILTSTONE:	Interval grades to siltsone, light gray (N7), thin bedded, wavy, weathered, slightly friable, slight clay fraction, carbonaceous mineralization along bedding plane parting at approximately 155 ft.
SILTSTONE:	As above with increase in sand fraction below 157.3 ft. sandy siltstone.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT):	5969.06	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749130	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA/DCB	16-87BR
EAST:	2086249	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTSTONE:	Interbedded siltstones and claystones at 160 ft., reference intervals above. Grades to siltstone at 161 ft.
SILTSTONE:	Light gray (N7), thin bedded <2 mm., slightly weathered, slightly friable, localized carbonaceous mineralization.
CLAYSTONE:	Grades to claystone; medium gray (N5), bedding not apparent (massive?), weathered, moderately friable, slight silt fraction.
NO SAMPLE:	
CLAYSTONE:	As above (reference interval 162.3 to 163.3ft.)
CLAYSTONE:	As above.

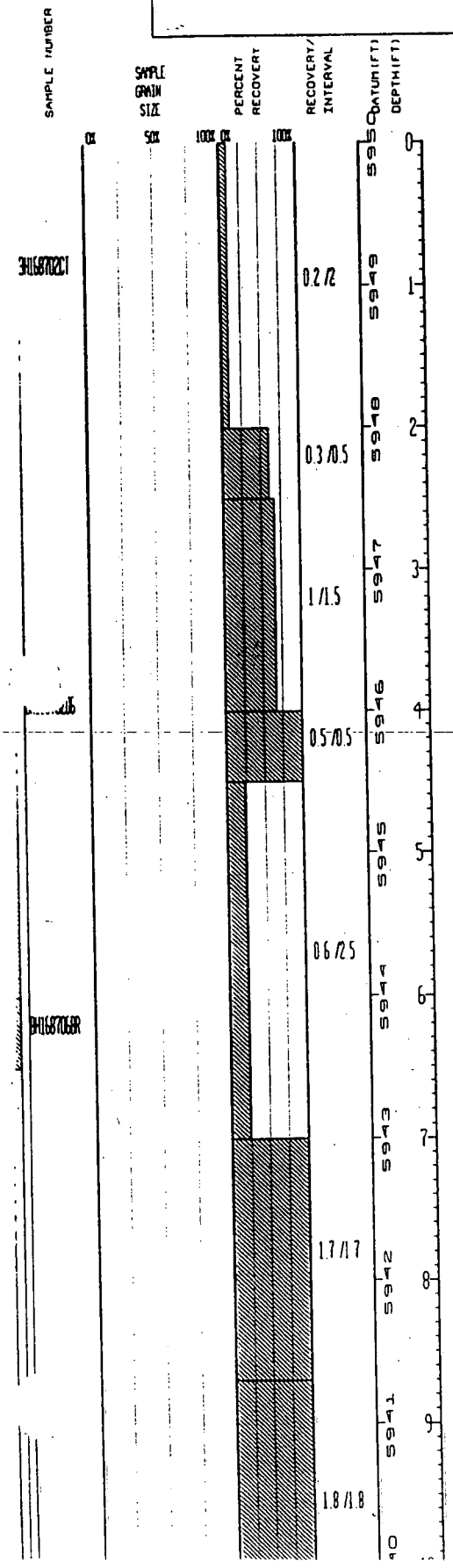
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 174	GROUND ELEVATION (FT): 5959.06	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749130	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/DCB	16-87BR
EAST: 2086249	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 07/08/87	

REMARKS: Hollow stem auger, Rotary core. Surface casing set to 49.17' by Craig Wood, June 18, 1987.

SAMPLE GRADI SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	100%	4.5/4.5	5959	170				
			5958	171				
			5957	172				
			5956	173				
			5955	174				SILTY CLAYSTONE: Interval grades to silty claystone, Light gray (N7), bedding not apparent (massive?), weathered, slightly friable.
			5954	175				
			5953	176				
			5952	177				
			5951	178				
			5950	179				
				180				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 12	GROUND ELEVATION (FT): 5950	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER
NORTH:	749287	AREA: 881 HILLSIDE	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH16-87
EAST:	2085292	LOCATOR NUMBER: 118	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 06/02/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement. Elev. estimated from topographic map



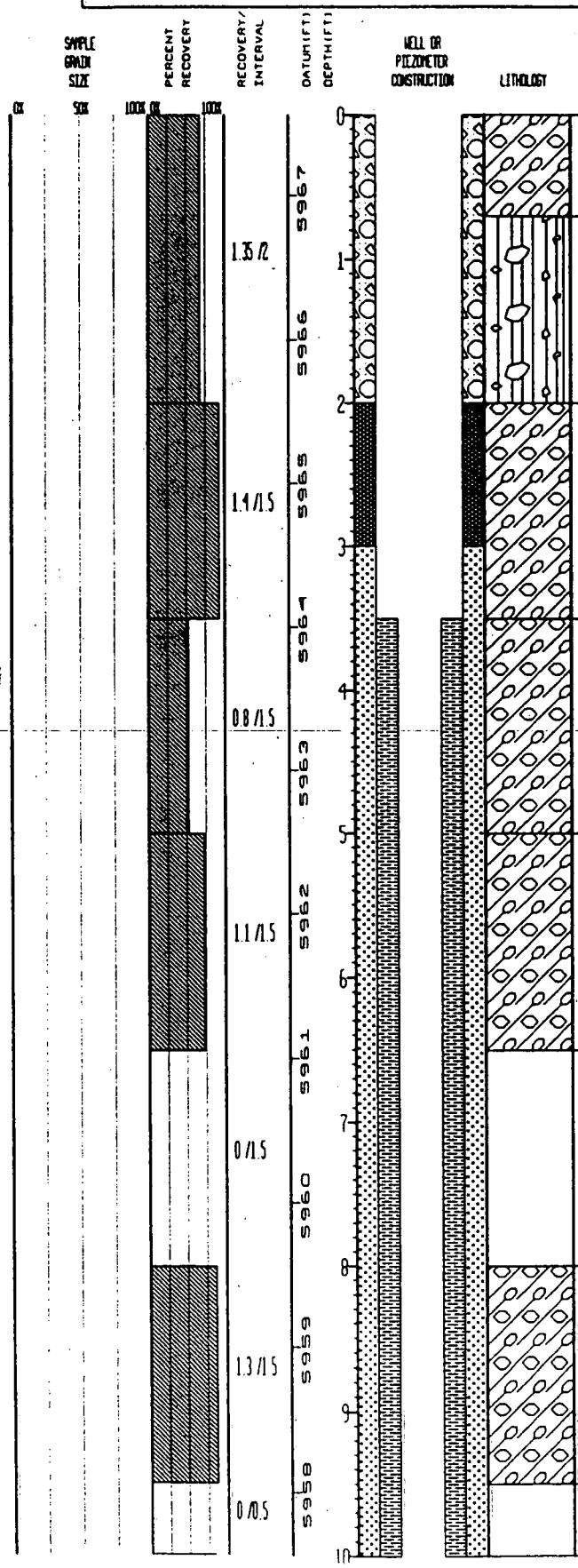
LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	GC	GRAVEL - dominant very light gray (N8), angular to sub-angular, poorly graded, max. size 5.5 cm., trace of clay and sand.
	CLAYSTONE	Top of Bedrock Grayish orange (10YR 7/4), high plasticity, trace of roots, some calcareous mineralization as irregular bodies.
	CLAYSTONE	As above.
	CLAYSTONE	Light gray (N7), bedding not apparent, highly weathered, slightly friable, body of calcareous mineralization at approx. 6.4 ft. (est. depth), trace of iron staining on fractures and possible Mg oxides mineralization.
	CLAYSTONE	As above.
	CLAYSTONE	First half of interval as above, color grades to yellowish gray (5Y 7/2). Interval grades to siltstone at approx. 7.8 ft
	SILTSTONE	Yellowish gray (5Y 7/2), bedding not apparent, highly weathered, slightly friable, localized iron staining and iron staining on fractures, slight amount of Mg oxide mineralization, slight to moderate clay components. Trace of FG sand below 10 ft

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 12	GROUND ELEVATION (FT)	5950	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748287	AREA: 881 HILLSIDE	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH16-87
EAST:	2085292	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	06/02/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement. Elev. estimated from topographic map.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%							
				5940	10				
			1.5/1.5	5939	11			SILTSTONE:	As above.
				5938	12				
				5937	13				
				5936	14				
				5935	15				
				5934	16				
				5933	17				
				5932	18				
				5931	19				
				5930	20				

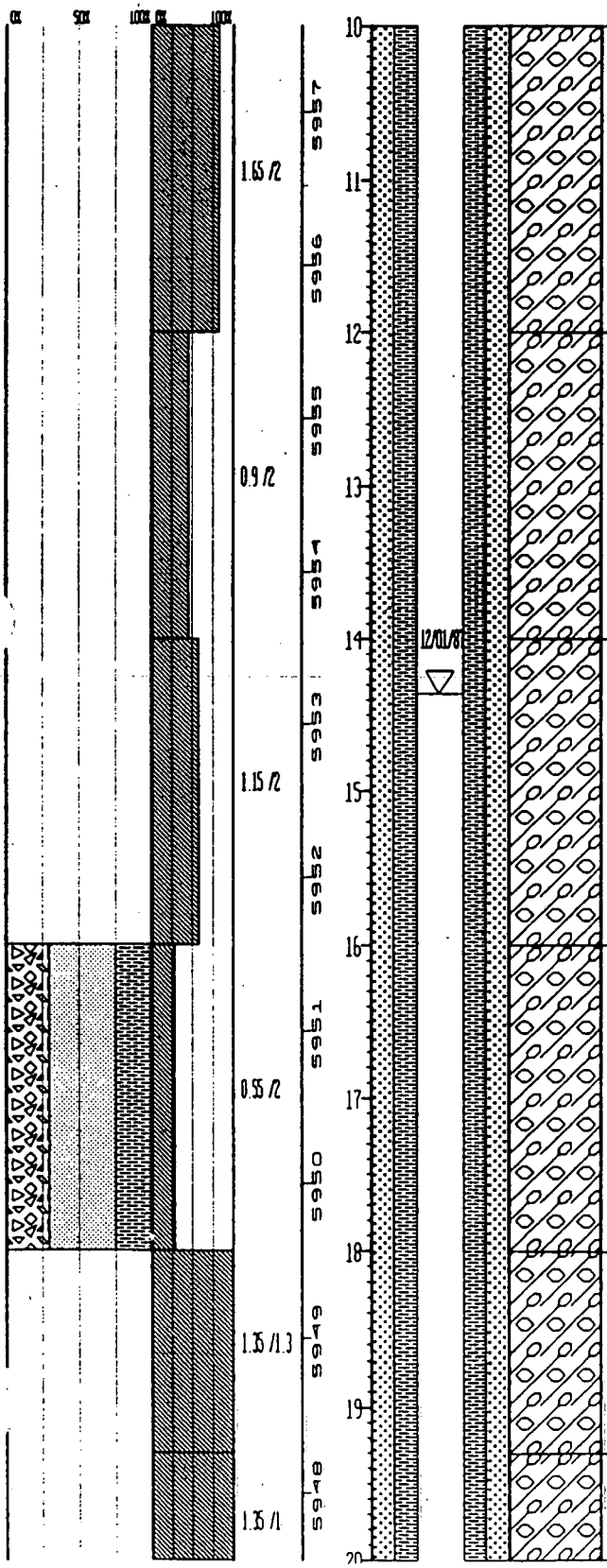
STATE PLANE COORDINATE	TOTAL DEPTH (FT): 30.3	GROUND ELEVATION (FT): 5967.56	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER
NORTH: 749415	AREA: MOUND AREA	CASING DIAMETER (IN): 2.10	GEOLOGIST: DAT	17-87
EAST: 2086308	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/09/87	
REMARKS: Hollow Stem Auger.				



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC	SANDY GRAVEL - moderate brown (10YR 4/2), angular to sub-angular, max size = 5 cm., some silt, some clay, some roots
GM	Gravelly Clay - dark reddish brown (10R 3/4), mod. plast., some sand, (VFG - MG), some silt.
GC	Calcareous Clayey Gravel - moderate orange pink (5YR 8/4), angular to sub-angular, mod. - well graded, max size = 4.5 cm., some sand, FG - VCG
GC	Same as above
GC	Same as above, dark yellowish orange (10YR 6/6), max. size of gravel = 2 cm
NO SAMPLE	
GC	Same as above
NO SAMPLE	

STATE PLANE COORDINATE:		TOTAL DEPTH (FT) 30.3	GROUND ELEVATION (FT):	5967.56	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER
NORTH:	749415	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DAT	17-87
EAST:	2086308	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	09/09/87	

REMARKS: Hollow Stem Auger



GC	Sandy Clayey Gravel - light brown (5YR 5/6), angular to sub-angular, mod. - well graded, max size = 5 cm., some silt, floury texture, slightly calcareous Bottom of interval is consolidated, grading is moderate, contains trace of biotite
GC	Same as above, no biotite
GC	Same as above, not calcareous
GC	Same as above, floury texture
GC	Same as above
GC	Same as above

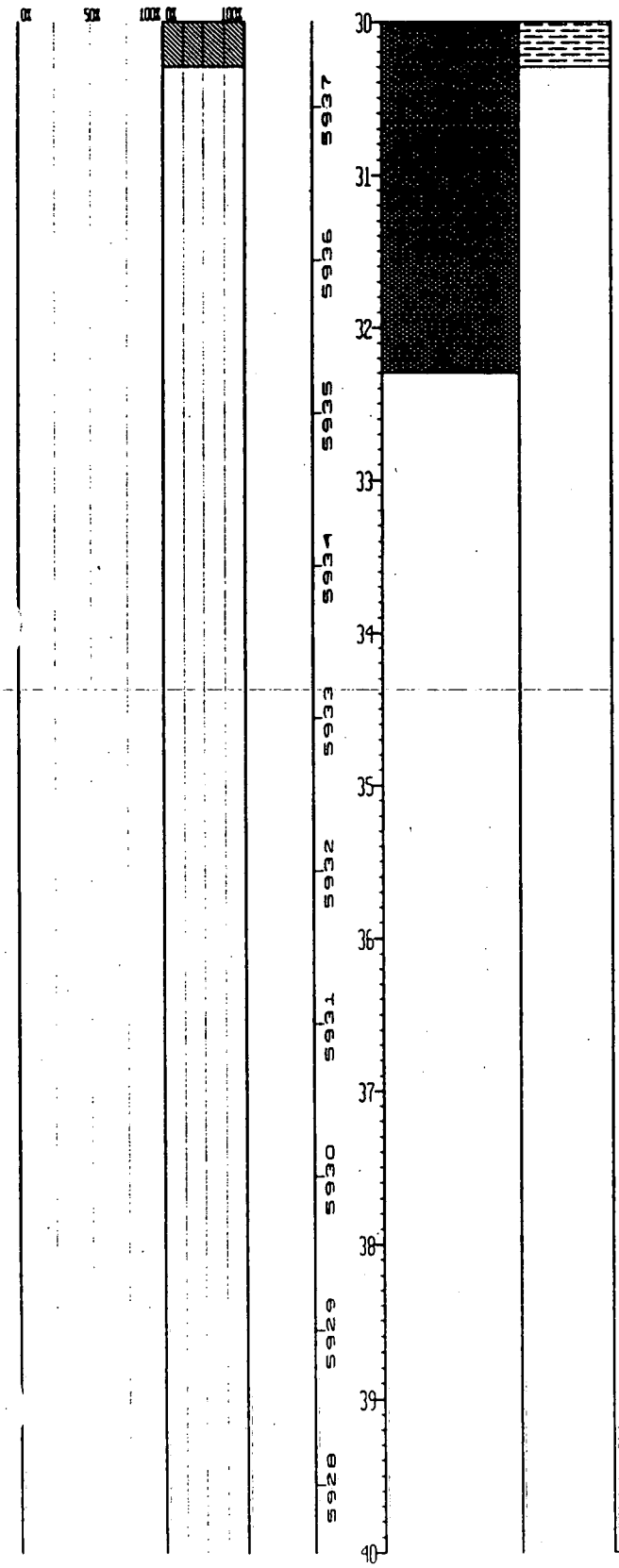
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 30.3	GROUND ELEVATION (FT): 5967.56	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749415	AREA: MOUND AREA	CASING DIAMETER (IN): 2.10	GEOLOGIST: DAT	17-87
EAST: 2086308	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/09/87	

REMARKS: Hollow Stem Auger.

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0.95/2	5947, 5946	20, 21, 22			GC:	Sandy Clayey Gravel - light brown (5YR 5/6), angular to sub-angular, mod. - well graded, max. size = 6 cm., some silt.
		1.4/2	5945, 5944	23, 24			GC:	Same as above, dark yellowish orange (10YR 6/6). Bottom 4 in., moderate yellowish brown (10YR 5/4).
		1.35/2	5943, 5942	25, 26			SILTY CLAYSTONE:	Top of Bedrock Pale yellowish orange (10YR 8/6), high plast., some VFG sand.
		0.95/1	5941	27			SILTY CLAYSTONE:	Same as above. Mottled coloring of very light gray (N8) and dark yellowish orange, plast. is moderate.
		1.1/1	5940	28			SILTY CLAYSTONE:	Same as above, mod. - high plast.
		2.1/2	5939, 5938	29, 30			CLAYSTONE:	Light brownish gray (5YR 6/1), mod. - high plast., some silt, iron staining as mottles. Note: No water encountered during drilling.

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 30.3	GROUND ELEVATION (FT): 5967.56	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749415	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	17-87
EAST: 2086308	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/09/87	
REMARKS: Hollow Stem Auger				

SAMPLE NUMBER | SAMPLE GRADIN SIZE | PERCENT RECOVERY | RECOVERY/ INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



STATE PLANE COORDINATE		TOTAL DEPTH (FT): 26.3	GROUND ELEVATION (FT):	5967.58	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749401	AREA: MOUND AREA	CASING DIAMETER (IN):	0	GEOLOGIST:	J.B. BERGMAN	17-87A
EAST:	2086308	LOCATOR NUMBER: NS	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/07/87	

REMARKS: Hollow Stem Auger. Core barrel and overshot rod stuck in hole. Rotary drill moved on hole to try to retrieve. Abandoned hole for now.
No AST log, all information from Weston log.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				2/2	5967	0			GM:	0 - 0.9': Top Soil: moderate brown (5YR 3/4); sand and clay with abundant quartzite gravels; unconsolidated; poorly sorted; abundant roots and grasses; dry. 0.9 - 2.0': Sand and Gravel: moderate brown (5YR 3/4); abundant caliche-reacts strongly with HCl; abundant quartzite gravels; angular; unconsolidated; medium grained sand; dry.
				2/2	5966	1			GM:	Sand and Gravel: pale yellowish brown (10YR 6/2); very fine grained to fine grained sand; abundant quartzite gravels; angular; abundant caliche-reacts strongly with HCl; unconsolidated; poorly sorted; dry.
				0.4/0.5	5965	2			GM:	Sand and Gravel: same as above.
				0/1	5964	3			NO SAMPLE:	No recovery. Drilled with center bit.
				0.5/0.5	5963	4			GM:	Sand and Gravel: pale yellowish brown (10YR 6/2); very fine grained sand; quartzite gravels; poorly sorted; unconsolidated; dry. NOTE: Readjust depth after hole caved 1.2'.
				2/0.8	5962	5			GM:	Sand and Gravel: grayish orange pink (5YR 7/2) sand matrix with abundant quartzite gravels; poorly sorted; unconsolidated; angular to sub-rounded; very fine grained sand; abundant caliche-reacts strongly with HCl; dry.
				2/3	5961	6			GM:	Sand and Gravel: pale yellowish brown (10YR 6/2) sand matrix; abundant quartzite gravels and pebbles; poorly sorted; unconsolidated; angular to sub-rounded; very fine grained sand; abundant caliche-reacts strongly with HCl; dry.
					5960	7				
					5959	8				
					5958	9				
						10			NO SAMPLE:	No recovery.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 26.3	GROUND ELEVATION (FT): 5967.58	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749401	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: J.B. BERGMAN	17-87A
EAST: 2086308	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/07/87	

REMARKS: Hollow Stem Auger. Core barrel and overshot rod stuck in hole. Rotary drill moved on hole to try to retrieve. Abandoned hole for now. No AST log, all information from Weston log.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0/2	5957	10–11			NO SAMPLE:	No recovery.
			0/1.2	5956	11–12			NO SAMPLE:	No recovery.
			1/2	5955	12–13				
			1.5/3.8	5954	13–14			GM:	Sand and Gravel: pale yellowish brown (10YR 6/2) sand matrix with abundant quartzite gravels and pebbles; very fine grained sand; abundant caliche-reacts strongly with HCl; dry.
			0/2	5953	14–15				
				5952	15–16				
				5951	16–17				
				5950	17–18			NO SAMPLE:	No recovery.
				5949	18–19			NO SAMPLE:	No recovery.
				5948	19–20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 26.3	GROUND ELEVATION (FT): 5967.58	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749401	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: J.B. BERGMAN	17-87A
EAST: 2086308	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/07/87	

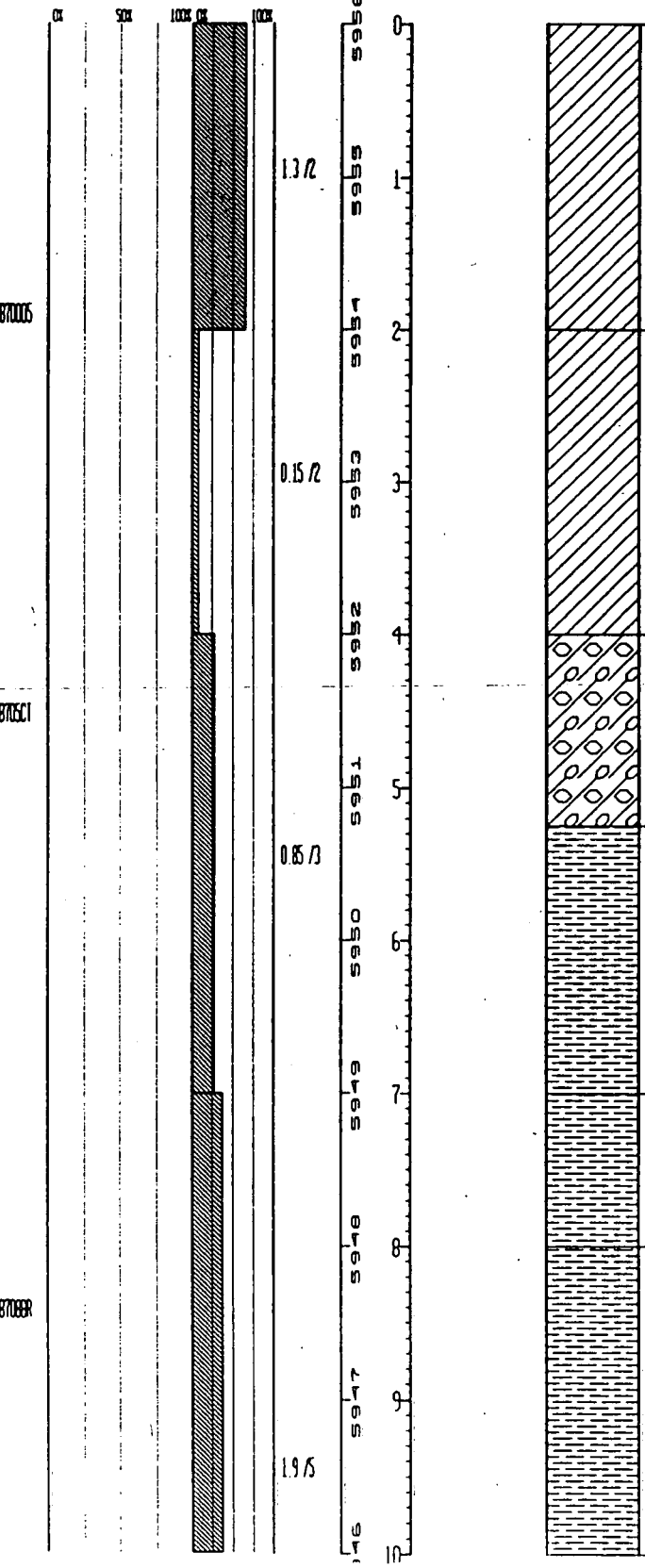
REMARKS: Hollow Stem Auger. Core barrel and overshot rod stuck in hole. Rotary drill moved on hole to try to retrieve. Abandoned hole for now. No ASI log, all information from Weston log.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0/4.5	5967 5966 5965	20 21 22 23				
			5/3	5964 5963 5962 5961 5960 5959 5958	24 25 26 27 28 29 30			GC:	Sandy Clay and Gravel: pale yellowish brown (10YR 6/2) sandy clay matrix; abundant quartzite gravels; rounded; poorly sorted; unconsolidated; very fine-grained sand; wet.
								CLAYSTONE:	Top of Bedrock Moderate olive brown (5Y 4/4); consolidated; homogenous; weathered; dry. NOTE: No water encountered during drilling.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 12	GROUND ELEVATION (FT): 5956	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748346	AREA: 881 HILLSIDE	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH17-87
EAST: 2085232	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 06/03/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Elevation estimated from topographic map.

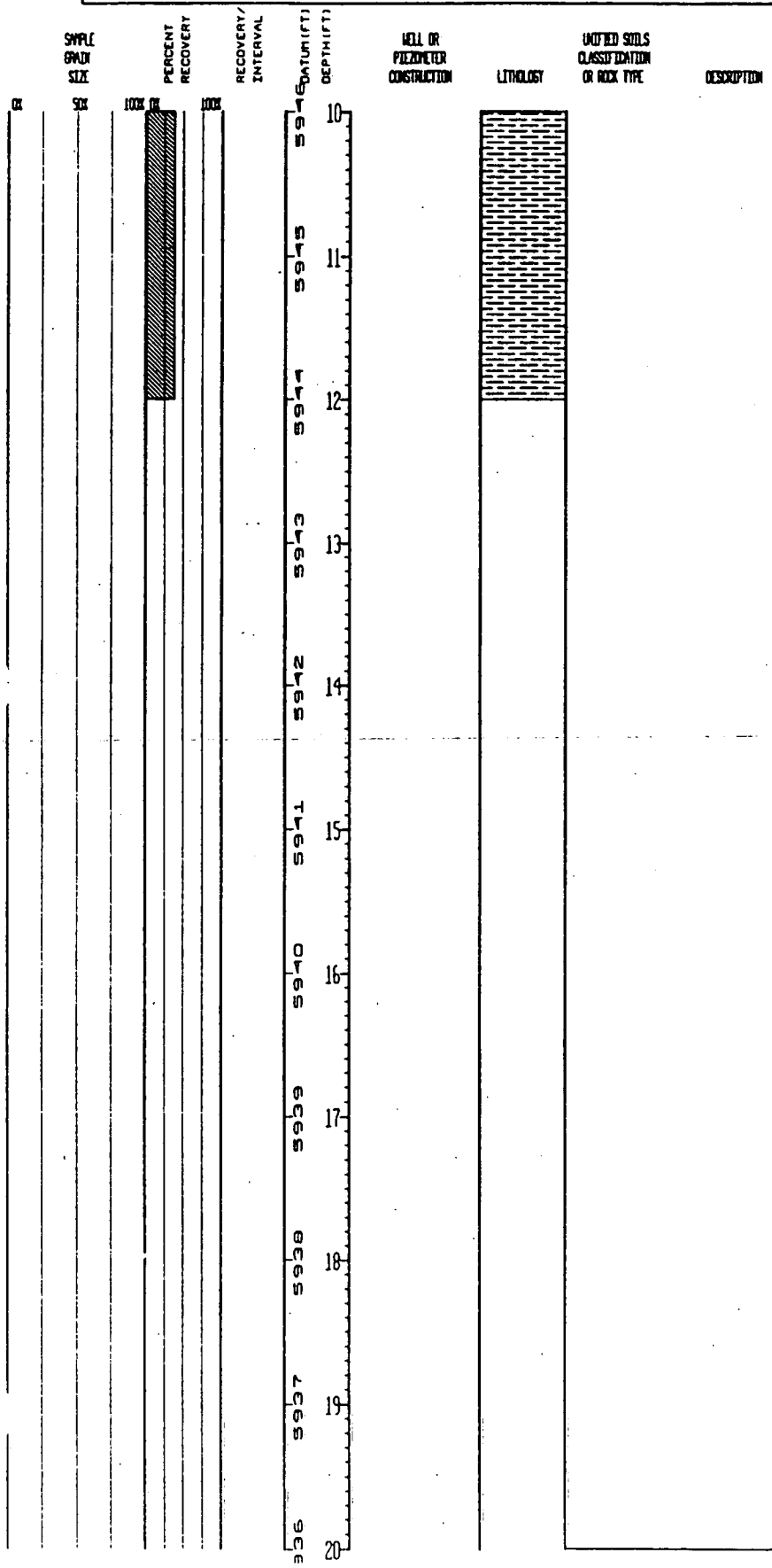
SAMPLE NUMB | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL:	CLAY - light gray (N8), mottled grayish orange (10YR 7/4), moderate plasticity, some roots and plant debris in upper 0.3 ft., trace of gravel and calcareous mineralization.
CL:	As above.
GC:	Clayey Gravel - medium light gray (N6), clay matrix is brownish gray (5YR 6/1), poorly graded, angular, max. size 8 cm. some silt and sand, trace of calcareous mineralization in clay matrix.
CLAYSTONE:	Top of Bedrock Medium light gray (N6), clay/sand matrix is moderate yellowish brown (10YR 5/4), poorly graded, angular.
CLAYSTONE:	Same as above.
CLAYSTONE:	Very light gray (N8), laminar bedding and soft sediment deformation, well weathered, slightly friable, localized iron staining, calcareous bodies and carbonaceous partings, trace of sand and gravel at approx. 12 ft. NOTE: No water encountered while drilling.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 12	GROUND ELEVATION (FT):	5956	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749346	AREA: 881 HILLSIDE	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH17-87
EAST:	2085232	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	06/03/87	

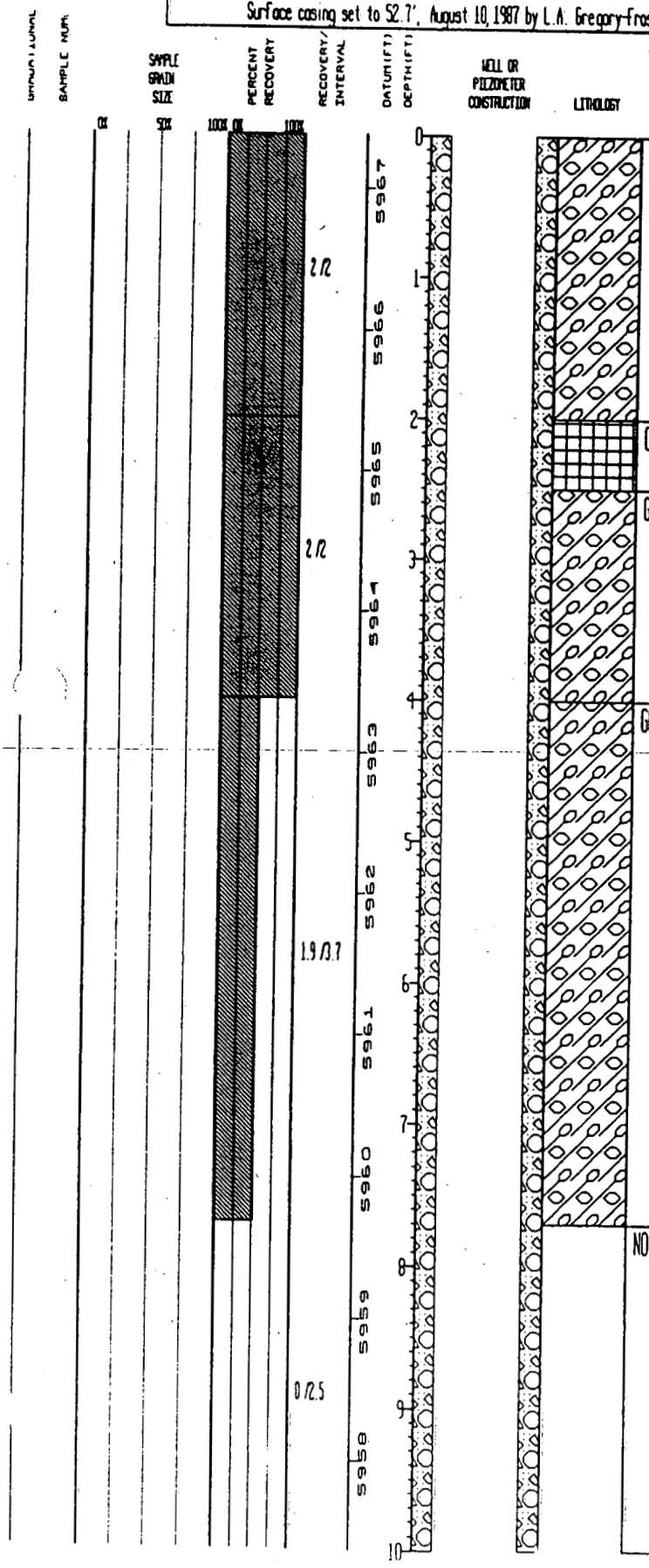
REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Elevation estimated from topographic map.



STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 148	GROUND ELEVATION (FT):	5967.38	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749404	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD/LAA	18-87BR
EAST:	2086339	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	08/20/87	

REMARKS: Hollow stem auger; Rotary core.

Surface casing set to 52.7', August 10, 1987 by L.A. Gregory-Frost.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	Clayey Gravel - matrix is mod. brown (5YR 3/4), sub-angular to sub-rounded, mod. - well graded, max. size approx. 6 cm., some sand, trace of roots, calcareous in bottom 6 in. of interval.
CALICHE:	Very pale orange (10YR 8/2) to mod. orange pink (5YR 8/4), trace of gravel.
GC:	CALCEROUS GRAVEL, matrix is very pale orange (10YR 8/2), angular to sub-rounded, mod. - well graded, max. size = 6 cm., some sand.
GC:	Same as above; trace of clay.
NO SAMPLE:	

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 51.3	GROUND ELEVATION (FT):	5946.12	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749511	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD	32-87
EAST:	2088363	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	7 5	DATE DRILLED:	09/24/87	

REMARKS: Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5936	10			GC:	Same as above.
			1.5/1	5935	11				
			1.5/1	5934	12			SP:	SAND - MG-VCG, lt. brown (5YR 5/6), rounded to sub-rounded, poorly graded some gravel, trace of clay.
			1.5/1.5	5933	13			SP:	SAND AND GRAVEL - lt. brown (5YR 5/6), sub-angular to rounded, mod. to poorly graded, max. size = 6.5 cm., trace of clay, slightly calcareous.
			1.5/2	5932	14			GC:	SANDY GRAVEL - grayish orange (10YR 7/4), angular to sub-rounded, poorly graded, max. size = 5 cm., some clay, calcareous.
			1.5/0.5	5931	15			GC:	Same as above.
			0/0.7	5930	16			NO SAMPLE:	
			1.8/1.8	5929	17			GC:	Same as above with an increase in the clay fraction.
			1.15/0.2	5928	18			GC:	Same as above.
				5927	19			GC:	Sandy Clayey Gravel - matrix is grayish orange (10YR 7/4), angular to sub-rounded, mod. to poorly graded, max. size = 5 cm., calcareous.
					20				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 51.3	GROUND ELEVATION (FT)	5946.12	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	749511	AREA: EAST TRENCHES	CASING DIAMETER (IN)	2.10	GEOLOGIST	ISD	32-87
EAST	2088363	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN)	7.5	DATE DRILLED	09/24/87	
REMARKS: Hollow Stem Auger							

DEPTH	GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				100%	2 ft	5926	20				
						5925	21			GC	Same as above, with an increased clay fraction and no CaCO3.
					1.8 ft	5924	22				
						5923	23			SP	GRAVELLY SAND - MG, lt. brown (5YR 5/6), poorly graded, trace of clay.
					2 ft	5922	24			GP	Grades into GRAVEL - angular, mod. graded, siliceously cemented(?).
						5921	25			GM	Gravelly Clayey Silt - grayish orange (10YR 7/4).
					1.35 ft	5920	26			GP	Same as 24.2'-25.2' description with a trace of sand and clay.
						5919	27			SC	Clayey Sand - MG to VCG, mod. yellowish brown (10YR 5/4), mod to well graded, some gravel.
					2 ft	5918	28			CL	Grades to a sandy clay at the bottom 1/4 of interval.
						5917	29			SC	Clayey Sand - FG to VCG, grayish orange (10YR 7/4), well graded, some gravel.

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 51 3	GROUND ELEVATION (FT)	5946 12	PROJECT NUMBER	667 11
NORTH	749511	AREA EAST TRENCHES	CASING DIAMETER (IN)	2 10	GEOLOGIST	TSD
EAST	2088363	LOCATOR NUMBER P9	BOREHOLE DIAMETER (IN)	7 5	DATE DRILLED	09/24/87
REMARKS	Hollow Stem Auger					

LOG OF BORING NUMBER

32-87

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			2/2	5916	30				
			1.4/1	5915	31			SC	Same as above.
			1.8/1	5914	32			SC	Same as above; mottled with yellowish gray (5Y 8/1) and less gravel.
			1.2/1	5913	33			SC	Same as above.
			1.6/1	5912	34			GC	SANDY GRAVEL - matrix is grayish orange (10YR 7/4), angular to sub-angular, well graded, max. size = 6 cm., some clay
UNK			1/1	5911	35			GP	Same as above, gravel is mod. graded and generally much smaller, and less clay
			0.75/1	5910	36			SW	GRAVELLY SAND - FG to VCG, grayish orange (10YR 7/4), well graded, trace of clay.
			1.6/1	5909	37	09/24/87		GW	SANDY GRAVEL - grayish orange (10YR 7/4), sub-angular to sub-rounded, mod. graded, max. size = 4.5 cm., trace of clay
			0.8/1	5908	38			GW	Same as above, max. size = 5 cm
			0.9/1	5907	39	12/01/87		GW	Same as above, with a slight increase in clay content.
					40				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 51.3	GROUND ELEVATION (FT): 5996.12	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER
NORTH:	749511	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: TSD	32-87
EAST:	2088363	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/24/87	

REMARKS: Hollow Stem Auger.

GRADATIONAL I DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1/1	5996	40			GW	SANDY GRAVEL - matrix is grayish orange (10YR 6/2), sub-angular to sub-rounded, well graded, max. size is 5.5 cm., trace of clay.
				1.55/1	5995	41			CL	SANDY CLAY - FG to MG, very lt gray (N8), med. plast., some gravel. (Top 5" is same as above).
				1.5/1	5994	42			CL	Same as above.
				1.8/0.79	5993	43			GC	Clayey Gravel - matrix is dark yellowish orange (10YR 6/6), sub-rounded, poorly graded, max. size = 5.5 cm., some sand.
									GC	Same as above, well graded, max. size = 5.5 cm. Bottom of this interval is at 44.2' according to core boxes.
				1/1	5992	44			GC	Same as above; grayish orange (10YR 7/4) angular to sub-rounded.
				1.7/1	5991	45			GC	Same as above, sub-angular to sub-rounded.
				1.7/1	5990	46			SILTY CLAYSTONE	Top of Bedrock Light gray (N7), massive bedding, well weathered, mod. friable, trace of carbonaceous, trace of iron staining.
									SILTY CLAYSTONE	Same as above; with increased iron staining.
				0.5/1	5989	47			SILTY CLAYSTONE	Same as above; brownish gray (5YR 4/1), mod. - highly friable, moist (top 1' of sample), bottom of interval same as 47' to 48' interval.
				2.4/1	5988	48			SILTY CLAYSTONE	Brownish gray (5YR 4/1), bedding nonapparent, highly weathered, mod. friable, some iron staining as mottle and in fractures, carbonaceous material, MG sandstone in pockets.
				0/0.29	5987	49			NO SAMPLE	
				1.8/1					SILTY CLAYSTONE	Light gray (N7), massive bedding, highly weathered, mod. friable, some

STATE PLANE COORDINATE:	TOTAL DEPTH (FT) 51.3	GROUND ELEVATION (FT)	5946.12	PROJECT NUMBER:	667 11
NORTH: 749511	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	TSD
EAST: 2088363	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	7 5	DATE DRILLED:	09/24/87
REMARKS: Hollow Stem Auger.					

LOG OF BORING NUMBER: 32-87

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%	1/1	5896	50				carbonaceous material, iron staining as mottle and fractures, mod. fractured.
				5895	51				
				5894	52				
				5893	53				
				5892	54				
				5891	55				
				5890	56				
				5889	57				
				5888	58				
				5887	59				
					60				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 20.5	GROUND ELEVATION (FT): 5971.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749485	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: TSD	BH32-87
EAST: 2085528	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/03/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% / 50% / 100%)	PERCENT RECOVERY (0% / 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.2/2	5971, 5970	0–2			GW:	GRAVEL - light gray (N7) to medium gray (N5), angular to sub-angular, low to high sphericity, 5 cm. is max. size, moderately graded, some sand and silt, trace of roots.
			0/2	5969, 5968	2–4			NO SAMPLE:	
1008			0.75/3.7	5967, 5966, 5965, 5964	4–8			GP:	SANDY GRAVEL - very light gray (N8), angular to sub-rounded, low to moderate sphericity, moderately graded, some silty clay, trace of organics.
			1.75/2.5	5963, 5962	8–10			SANDSTONE:	Top of Bedrock Silty, fine to very fine, mottled very light gray (N8) and dark yellowish orange (10YR 6/6), calcareous mineralization as possible fracture fills, limonite staining, (well weathered/incompletely indurated?).

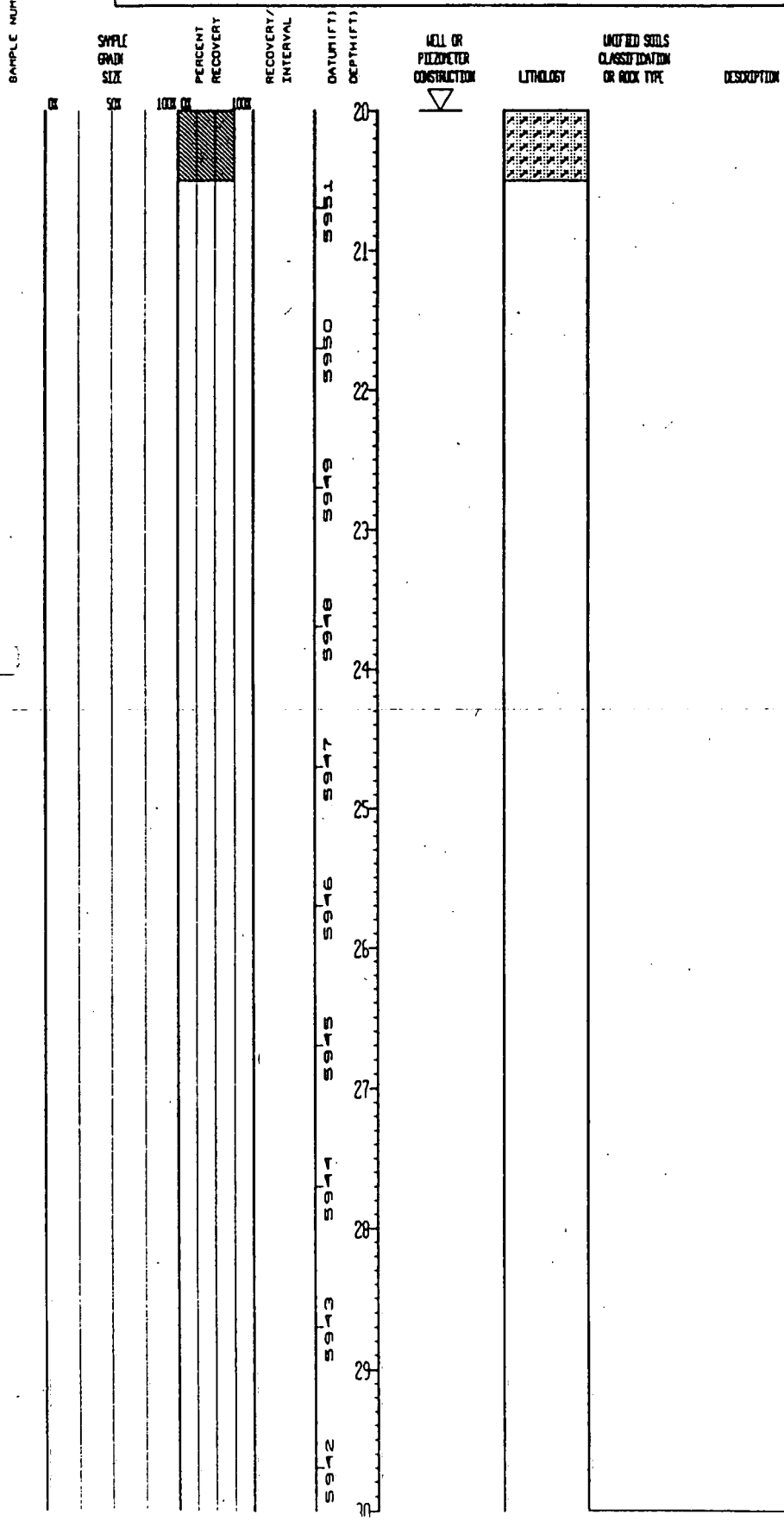
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 20.5		GROUND ELEVATION (FT):	5971.7	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749485	AREA: MOUND AREA		CASING DIAMETER (IN):	0	GEOLOGIST:	TSD	BH32-87
EAST:	2085528	LOCATOR NUMBER: M9		BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/03/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					10				
				5961	11			SANDSTONE:	Same as above.
GC22			2.9/2.5						
32870815				5960	12				
				5959	13			SANDSTONE:	Same as above.
			2.85/2.5	5958	14				
				5957	15			SANDY SILTSTONE:	Grades to a highly weathered fine sandy siltstone, very pale orange (10YR 10/2), calcareous mineralization.
			0/0.3					NO SAMPLE:	
H32871GCT				5956	16			SANDY SILTSTONE:	Same as above, mottled dark yellowish orange (10YR 6/6) and very pale orange (10YR 10/2), no calcareous mineralization.
			1.9/2.5	5955	17				
BH32871BBR				5954	18			SANDY SILTSTONE:	Same as above.
				5953	19				
			1.87/2.5	5952	20	08/03/87			

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 20.5	GROUND ELEVATION (FT): 5971.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749485	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: TSD	BH32-87
EAST: 2085528	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/03/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.



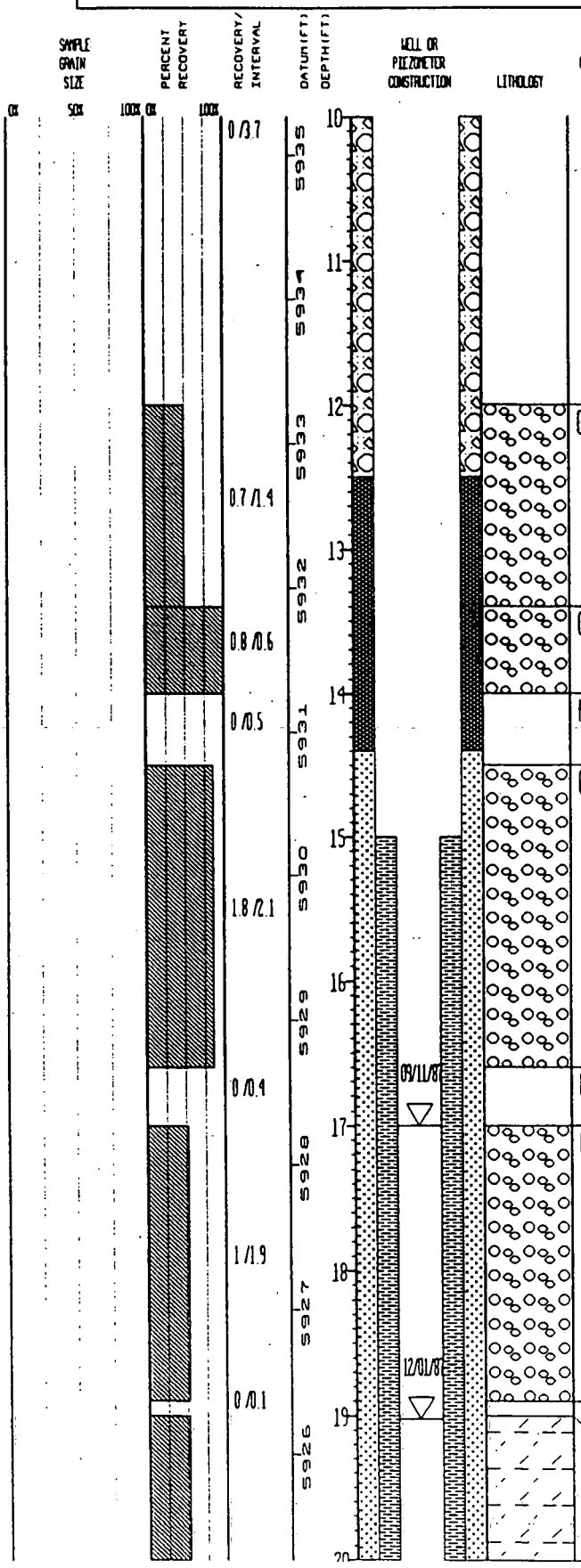
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 24.5	GROUND ELEVATION (FT):	5945.27	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749855	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA/TSD	33-87
EAST	2087921	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	09/11/87	

REMARKS: Boring No 33-87/BH56-87 Hollow Stem Auger.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.05/1.9	5945, 5944	0, 1			GC	Clayey Gravel - predominantly medium light gray (N6) sub-angular to angular, well graded, max. size is 7 cm., clay fraction is grayish brown (5YR 8/2), some sand, trace of roots, trace of silt.
			0/0.1		2			NO SAMPLE	
BH56870203			0.6/1.5	5943, 5942	3			GW	GRAVEL AND CALCAREOUS SAND - predominantly medium dark gray (N4), moderately graded, angular to sub-rounded, max. size is 6 cm., some clay.
			0/0.5		4			NO SAMPLE	
BH56870415			0.1/1.5	5941, 5940	5			GW	GRAVEL - medium dark gray (N4), sub-rounded, trace of clay, sand and calcareous mineralization.
			0/1.5	5939	6			NO SAMPLE	
			0.7/1.3	5938, 5937	7, 8			GC	Clayey Sandy Gravel - predominantly medium dark gray (N4), angular to sub-angular, moderately well graded, some silt, clay and silt fraction is moderate yellowish brown.
				5936	9			NO SAMPLE	
BH56870910					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 24.5	GROUND ELEVATION (FT)	5945.27	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH: 749855	AREA: MOUND AREA	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA/TSD	33-87
EAST: 2087921	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN)	7.5	DATE DRILLED:	09/11/87	

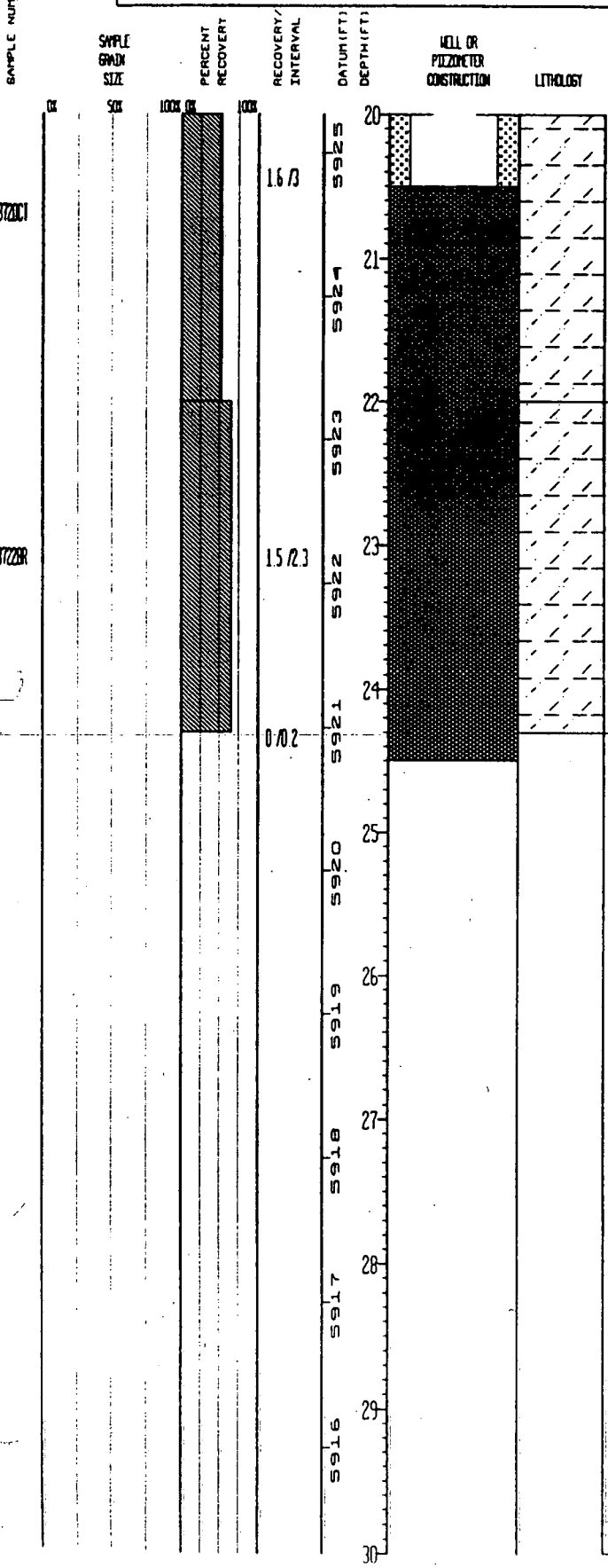
REMARKS: Boring No. 33-87/BH56-87. Hollow Stem Auger.



	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	GW	SANDY GRAVEL - predominantly brownish gray (5YR 4/1), angular to sub-rounded, moderately well graded, some clay (moderate yellowish brown (10YR 5/4))
	GW	Same as above with an increased clay fraction.
	NO SAMPLE	
	GW	Same as above
	NO SAMPLE	
	GW	Same as above
	NO SAMPLE	
	CLAYEY SILTSTONE	Top of Bedrock Pinkish gray (5YR 8/1), nonevident bedding (massive?), slightly to moderately friable, trace of iron staining

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 24.5	GROUND ELEVATION (FT): 5945.27	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749855	AREA: MOUND AREA	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA/TSD	33-87
EAST: 2087921	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 09/11/87	

REMARKS: Boring No. 33-87/BH56-87. Hollow Stem Auger.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	CLAYEY SILTSTONE: Same as above with slight color change to light olive gray (5Y 6/1).
	NO SAMPLE.

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 20.8	GROUND ELEVATION (FT) 5967.9	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH:	749988	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: DCB/GCE	BH33-87
EAST:	2085766	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN) 0	DATE DRILLED: 07/30/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.

CHEMICAL SAMPL / GRADATIONAL SAMPLE	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH33870004			1.5/2	5967	0–1			GP	SANDY SILTY GRAVEL - med. dark gray (N4), sub-angular to sub-rounded, poorly graded gravel, some carbonate mineralization in fine grained fraction
				2.2/2	5966	1–2			CL	SILTY SANDY CLAY - light olive gray (5Y 6/1), low to moderate plasticity, some gravel
					5965	2–3				
					5964	3–4				
						4–5			NO SAMPLE	
					5963	5–6				
				0/3.8	5962	6–7				
					5961	7–8				
					5960	8–9			SP	SAND - dark yellowish (10YR 6/6), sub-rounded to well rounded, poorly graded, some gravel.
				2.2/2.5	5959	9–10			CLAYSTONE	Top of Bedrock Grades to a claystone, very pale orange (10YR 8/2) mottled dark yellowish orange (10YR 6/6) sand lenses 1.5 cm. to <1 mm thick, iron oxide stains on bedding planes and fractures, some carbonate mineralization
					5958	10				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 20.8	GROUND ELEVATION (FT)	5967.9	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	799488	AREA MOUND AREA	CASING DIAMETER (IN)	0	GEOLOGIST	DCB/GCE	BH33-87
EAST	2085766	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN)	0	DATE DRILLED	07/30/87	

REMARKS Hollow Stem Auger BH backfilled w/ Portland Type I cement

SAMPLE NUMBER	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			10		CLAYSTONE	Same as above, fractures not apparent.
BH33870815	2/2.5	5957	11		SANDSTONE	Fine grained, yellowish gray (5Y 8/1) and dark yellowish orange (10YR 6/6), sub-rounded to rounded, poorly graded, interval is heavily weathered, some calcareous mineralization.
		5956	12			
		5955	13		SANDSTONE	Same as above.
0815	2.3/2.5	5954	14			
		5953	15			
BH33871601		5952	16		CLAYSTONE	Heavily weathered, mottled dark yellowish orange (10YR 6/6) to light gray (N7), iron staining and black carbonaceous mineralization apparent at core breaks, fine to medium gray sandstone occurs in last 0.2 ft. of this interval.
	1.65/2.5	5951	17			
		5950	18		SANDSTONE	Heavily weathered, mottled very light gray (N8) to dark yellowish orange (10YR 6/6). Claystone lense 1 cm. thick, linear carbonaceous mineralization apparent on bedding planes, possibly plant remains.
UK	2/2.5	5949	19			
71988		5948	20	07/30/87 ▽	CLAYSTONE	Grades to claystone, heavily weathered, dark yellowish orange (10YR 6/6).

STATE PLANE COORDINATE:		TOTAL DEPTH (FT) 20.8		GROUND ELEVATION (FT):	5967.9	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749488	AREA: MOUND AREA		CASING DIAMETER (IN):	0	GEOLOGIST:	DCB/GCE	BH33-87
EAST:	2085766	LOCATOR NUMBER: M9		BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/30/87	

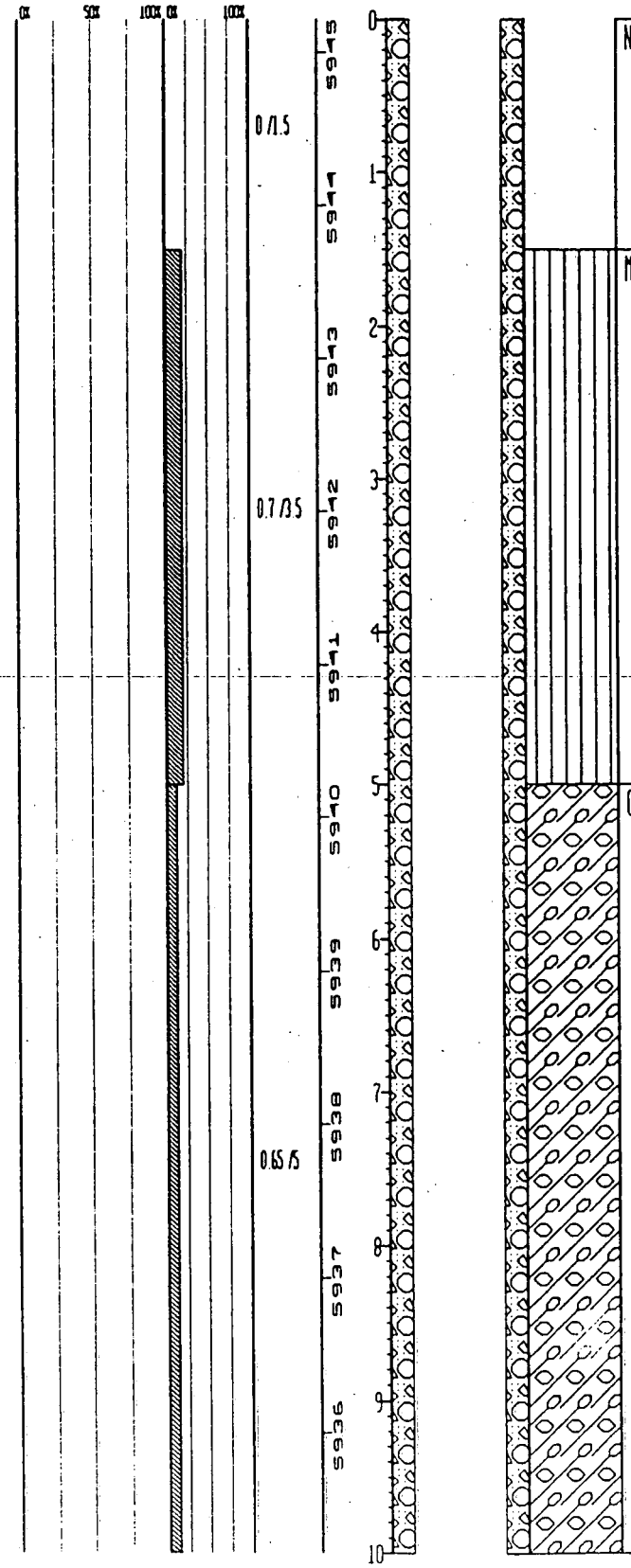
REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.

GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH33872OWT	0% 50% 100%	0% 100%			20				carbonaceous mineralization throughout.
				0.5/0.5	5947	21			SANDSTONE:	Pale yellowish orange (10YR 8/6), sub-angular to sub-rounded, poorly graded, some clay (20%).
					5946	22				
					5945	23				
					5944	24				
					5943	25				
					5942	26				
					5941	27				
					5940	28				
					5939	29				
					5938	30				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT):	5945.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE (0% 50% 100%)
PERCENT RECOVERY (0% 100%)
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
NO SAMPLE:	
ML:	Clayey Silt - dark yellowish brown, some surficial roots, some gravel (first 3rd of interval).
GC:	GRAVEL with caliche rinds, color predominantly dark gray (N3). Angular to sub-angular, well graded, max. size 3.0 cm., some sand and silt.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT): 5945.21	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5935	10			GC:	GRAVELLY SAND - moderate yellowish brown (10YR 5/4), angular to sub-rounded, well graded, max. size (gravel) 2.5 cm., some clay.
					5934	11				
				0.75/5	5933	12				
					5932	13				
					5931	14				
					5930	15			NO SAMPLE:	
					5929	16				
				0/5	5928	17				
					5927	18	09/04/87			
					5926	19				
						20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT): 5945.21	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LMA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5925	20			CLAYSTONE:	Top of Bedrock Light olive gray (5Y 6/1), slightly silty, some carbonaceous material, some iron staining, slightly friable, slightly weathered.
					5924	21				
				1.2/5	5923	22				
					5922	23				
					5921	24				
					5920	25			CLAYSTONE:	Same as above, less silt. Light gray to med. light gray (N7 to N6).
					5919	26				
					5918	27				
				1/5	5917	28				
					5916	29				
						30				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT):	5945.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2.10	GEOLOGIST:	LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

CRITICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.1/5	5915	30			CLAYSTONE:	Moderate yellowish brown to light brown (5YR 5/6), massive bedding, slightly weathered, slightly friable, trace of carbonaceous material.
					5914	31				
					5913	32				
					5912	33				
					5911	34				
					5910	35			CLAYSTONE:	Med. light gray (N6), massive bedding, weathered, slightly friable, some iron staining.
					5909	36				
				0.7/5	5908	37				
					5907	38				
					5906	39				
						40				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT): 5945.21	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

CHEMICAL SAMPLE DEPTH / GRADATIONAL S DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%		5905	40			CLAYSTONE:	Same as above.
					5904	41				
					5903	42				
				0.7/5	5902	43				
					5901	44				
					5900	45			CLAYSTONE:	Same as above.
					5899	46				
					5898	47				
				1.1/5	5897	48				
					5896	49				
						50				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT): 5945.21	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749836	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	34-87BR
EAST: 2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 4	DATE DRILLED: 09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH / SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	5895	50			NO SAMPLE:	
	5894	51				
0/3.5	5893	52				
	5892	53				
					CLAYSTONE:	Same as above.
1/1.5	5891	54				
0/0.5	5890	55			NO SAMPLE:	
0.45/0.5					CLAYSTONE:	Brownish gray (5YR 4/1), mod. weathered, slightly friable, bedding not evident, trace silt.
1.1/1	5889	56	12/01/87 ▽		CLAYSTONE:	Same as above, mod. friable, some iron, rust stained areas. (May be nails from drilling process.) Slightly calcareous matrix.
	5888	57			NO SAMPLE:	
0/2	5887	58				
	5886	59			CLAYSTONE:	Same as above, some silt.
1.7/1.8		60				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT):	5945.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

DEPTH	CHEMICAL SAMPLE / GRADATIONAL	SAMPLE NUMBER	SAMPLE GRADE SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
						5985	60				
					0/0.2					NO SAMPLE:	
						5984	61			SILTY CLAYSTONE:	Lt. brownish gray (5YR 6/1). Mod. weathered, mod. friable, bedding appears horizontal from weathering but may be massive. Slightly calcitic.
					1.8/2	5983	62				
						5982	63			SILTY CLAYSTONE:	Same as above.
					1.8/1.8	5981	64				
					1/1.2	5980	65			SILTY CLAYSTONE:	Same as above. Some carb. material, some lt. brown discoloration (5YR 5/6) on one uneven fracture plane.
					0.65/0.75	5979	66			SILTY CLAYSTONE:	Same as above.
					0.7/0.69	5978	67			SILTY CLAYSTONE:	Lt olive gray (5Y 6/1) to brownish gray (5YR 4/1), mod. to highly weathered, mod. friable, bedding not evident, some nodules very hard silt, mod. yellowish brown (10YR 5/4).
					0.85/1.55	5977	68			SILTY CLAYSTONE:	Lt. brownish gray (5YR 4/1), mod. weathered, mod. friable, bedding not evident, some carb. material.
					1.9/1.9	5976	69			SILTY CLAYSTONE:	Same as above, not as silty.
							70				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 124		GROUND ELEVATION (FT):	5945.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES		CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09		BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/04/87	

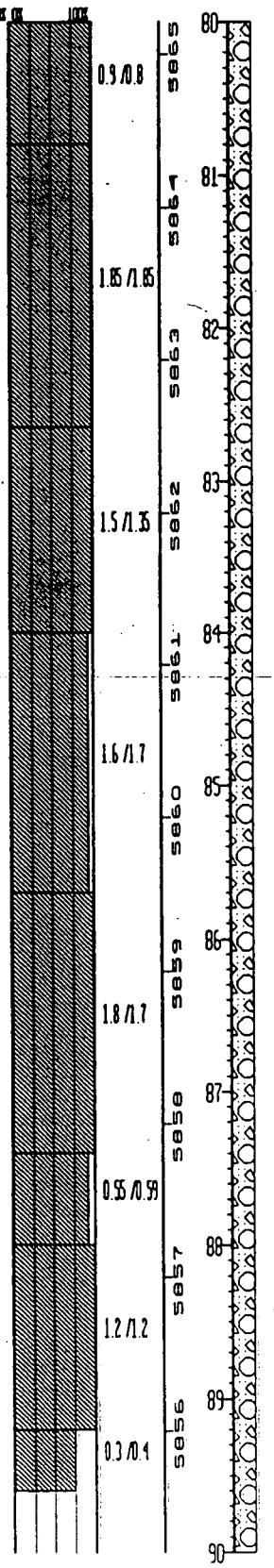
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

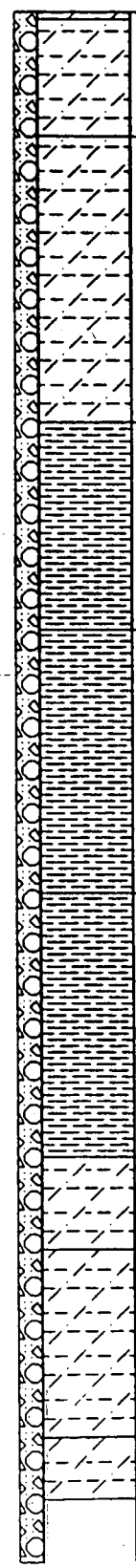
SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0% 50% 100%	0% 100%		5875	70				
		1.1/1.1	5874	71			SILTY CLAYSTONE:	Brownish gray (5YR 4/1), mod. weathered, mod. friable. Distorted bedding, possibly slump or soft sed. deformation, some carb. material, some very silty layers.
		0.65/0.69	5873	72			SILTY CLAYSTONE:	Same as above.
		1.7/1.4	5872	73			SILTY CLAYSTONE:	Same as above, some spotty iron in matrix.
		1.8/1.9	5871	74			SILTY CLAYSTONE:	Same as above.
		1.7/1.6	5870	75				
			5869	76			SILTY CLAYSTONE:	Interbedded silty claystone and siltstone. Pinkish gray to lt brownish gray (5YR 8/1 to 4/1), mod. weathered, mod. friable, bedding appears tilted but can not determine angle, some carb. material.
			5868	77				
		1.8/1.85	5867	78			SILTY CLAYSTONE:	Same as above.
			5866	79				
		0.6/0.55		80			SILTY CLAYSTONE:	Same as above, some VFG sand.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT):	5945.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

CHEMICAL SAMPLE DEPTH | GRADATIONAL DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION





Unified Soils Classification or Rock Type	Description
SILTY CLAYSTONE:	Brownish gray to pinkish gray (5YR 8/1 to 4/1), bedding not evident, mod. weathered, mod. friable, some carb. material, some VFG sand, some spotty iron staining.
SILTY CLAYSTONE:	Same as above, some mod. yellowish brown discoloration (10YR 5/4).
CLAYSTONE:	Brownish gray (5YR 4/1), mod. weathered, mod. friable, bedding appears massive, trace carb. material, spotty iron staining.
CLAYSTONE:	Same as above.
CLAYSTONE:	Same as above, some carb. material, some silt.
SILTY CLAYSTONE:	As above, silty claystone.
SILTY CLAYSTONE:	Same as above, bedding not evident.
SILTY CLAYSTONE:	Same as above.
NO SAMPLE:	

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT):	5945.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMB	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0/2.4	5955	90				
					5954	91				
				1.3/1.3	5953	92			CLAYSTONE	Brownish gray (5YR 4/1), mod. weathered, mod. friable, bedding appears massive, some carb. material, some possible slickensides.
				0.9/0.94	5952	93			SILTY CLAYSTONE	As above (silty claystone).
				0.8/0.9	5951	94			SILTY CLAYSTONE	Same as above, some lt. brown (5YR 5/6) discoloration in matrix.
				0/0.84	5950	95			NO SAMPLE	
				1.8/1.8	5949	96			CLAYEY SILTSTONE	Lt. olive gray (5Y 6/1), slightly to mod. weathered, slightly friable, bedding distorted, no clear layers, some carb. material, some lt. brown discoloration (5YR 5/6), some VFG sand.
				0.3/0.19	5948	97			CLAYEY SILTSTONE	Same as above.
				1.3/1	5947	98			SILTY CLAYSTONE	Pinkish gray (5YR 8/1) to lt. olive gray (5Y 6/1). Slightly weathered, slightly friable, siltstone in very thin layers, some carb. material.
				1.7/1.75	5946	99			SILTY CLAYSTONE	Same as above, some lt. brown discoloration (5YR 5/6).
						100				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT):	5945.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/04/87	

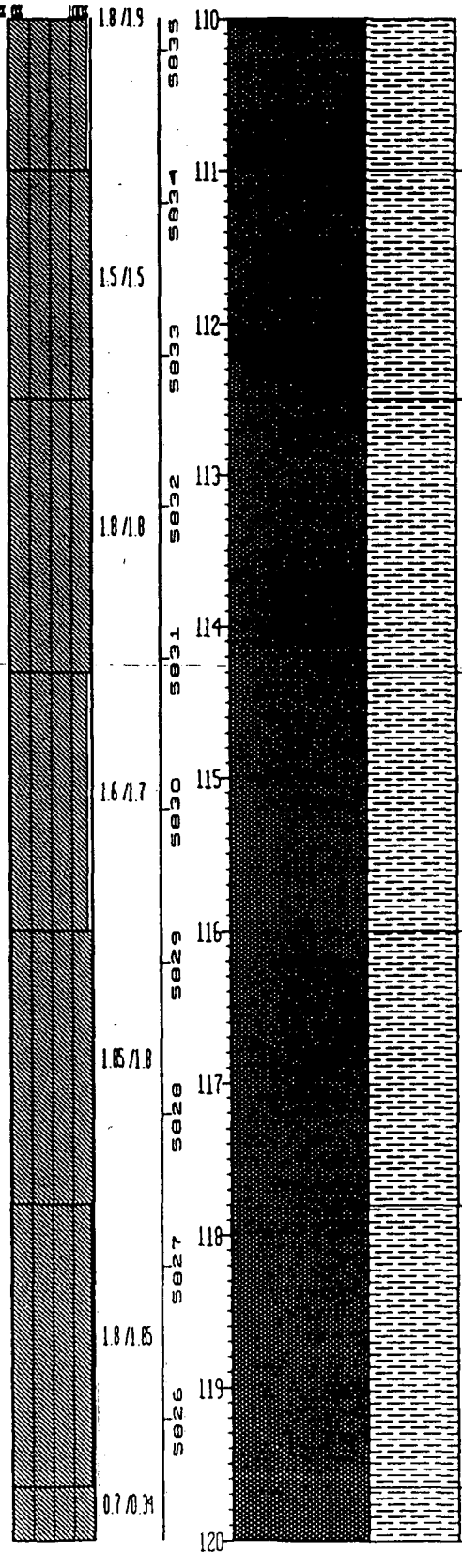
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0.2/0.25	5945	100			SILTSTONE:	Interbedded siltstones and claystones, pinkish gray (5YR 8/1) to lt. olive gray (5Y 6/1), moderately weathered, slightly friable, bedding in layers, <1 mm. to approx. 1 in. Some carb. material, trace iron staining.
				1.5/1.55	5944	101			SILTSTONE:	Same as above.
				1.4/1.45	5943	102			SILTSTONE:	Same as above.
				1.6/1.65	5942	103			SILTSTONE:	Same as above, abundant carb. material, some grayish orange (10YR 7/4) discoloration on some silty areas.
				1.7/1.8	5941	104			SILTSTONE:	Same as above, some VFG sandstone layers approx. 1-2 in. thick.
				0.5/0.55	5940	105			SILTSTONE:	Same as above. No sand.
				1.05/1.1	5939	106			SILTSTONE:	Same as above.
					5938	107			CLAYSTONE:	Olive gray (5Y 4/1), mod. to highly weathered, mod. friable, bedding not evident, some silt, trace discoloration (med. yellowish brown (10YR 5/4), vertical fracture shows possible slickensides.
					5937	108				
					5936	109				
						110				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT):	5945.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde., Possible cave-in above filter pack from well sitting overnight.

CHEMICAL SAMPLE DEPTH
GRADATIONAL DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE 0% 50% 100%
PERCENT RECOVERY 0% 100%
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Same as above.
CLAYSTONE:	Same as above with color change to brownish black (5YR 2/1), abundant carb. material toward bottom.
CLAYSTONE:	Same as above, color change back to olive gray (5Y 4/1) some carb. material.
CLAYSTONE:	Same as above, color change back to brownish black (5YR 2/1). Trace carb. material.
CLAYSTONE:	Same as above.
CLAYSTONE:	Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 124	GROUND ELEVATION (FT):	5945.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749836	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAM	34-87BR
EAST:	2087931	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	4	DATE DRILLED:	09/04/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set to 55.3' August 27, 1987 by B.O. Hyde. Possible cave-in above filter pack from well sitting overnight.

GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0.85/0.9	5925	120			CLAYSTONE:	Olive gray (5Y 4/1), mod. weathered, mod. friable, bedding not evident, some carb. material, some silt.
				1.6/1.7	5924	121			SILTY CLAYSTONE:	Lt. olive gray (5Y 6/1), mod. weathered, mod. friable, bedding not evident, some carb. material, abundant carb. toward bottom.
				1.4/1.4	5923	122				
					5922	123			CLAYSTONE:	As above. Some silt, some carb. material.
					5921	124				
					5920	125				
					5919	126				
					5918	127				
					5917	128				
					5916	129				
						130				

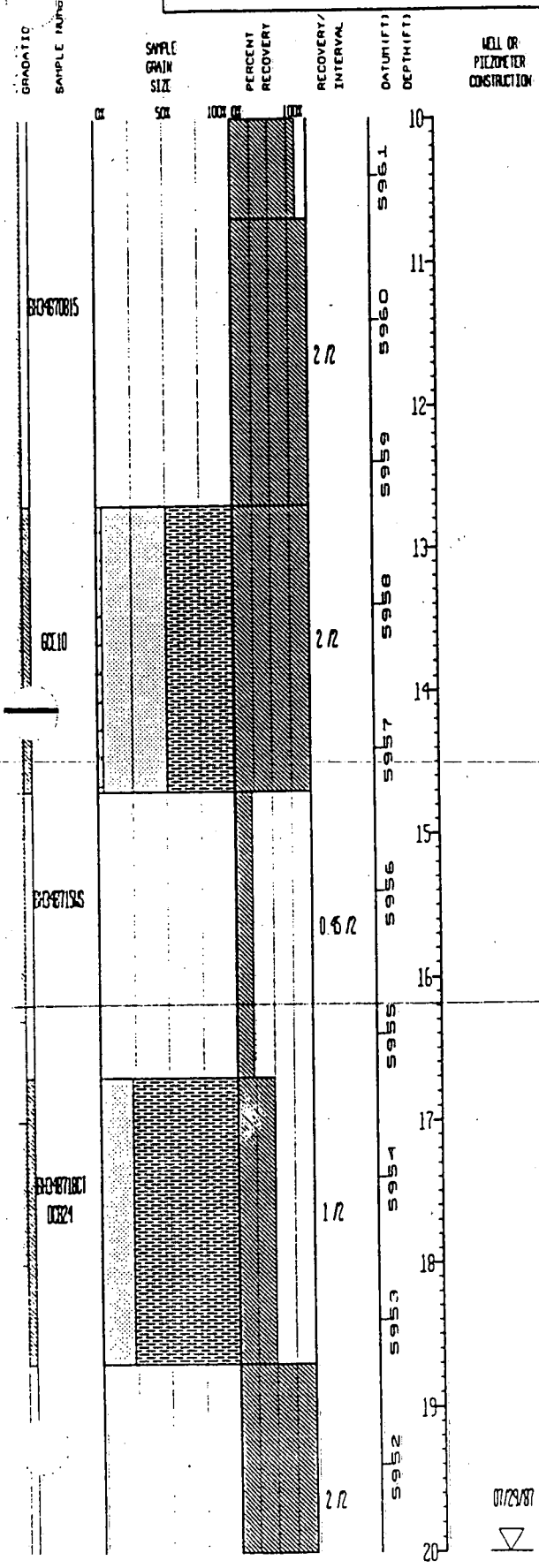
STATE PLANE COORDINATE		TOTAL DEPTH (FT) 24.7	GROUND ELEVATION (FT) 5971.4	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH	749463	AREA MOUND AREA	CASING DIAMETER (IN) 0	GEOLOGIST DCB	BH34-87
EAST	2085893	LOCATOR NUMBER M9	BOREHOLE DIAMETER (IN) 0	DATE DRILLED 07/29/87	

REMARKS Hollow Stem Auger BH backfilled w/ Portland Type I cement

CHEMICAL GRADATION	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.1 ft	5971	0			GP	GRAVEL - medium light gray (N6), angular to sub-rounded, moderately graded, max. size 6 cm., some caliche, sand and silt, trace of clay, plant debris occurs in upper 2 ft of interval.
				1.3 ft	5970	1				
					5969	2			GP	As above.
					5968	3				
	BH87008			0.7 ft	5967	4			GP	As above, with an increase in the clay and caliche fraction in this interval.
	6012			0.25 ft	5966	5			GP	As above.
					5965	6				
	BH87001			0.5 ft	5964	7			GP	As above.
					5963	8				
				1.7 ft	5962	9			SM	SILTY SAND - grayish orange pink (5YR 7/2), sub-angular to rounded, poorly graded, very fine to fine grained, localized carbonate mineralization.
						10				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 24.7	GROUND ELEVATION (FT)	5971.4	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	749463	AREA MOUND AREA	CASING DIAMETER (IN)	0	GEOLOGIST	DCB	BH34-87
EAST	2085893	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN)	0	DATE DRILLED	07/29/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.



SM: As above.

SM: As above.

SM: As above with some gravel, variegated pink, gray, grayish white, sub-angular, poorly graded.

SILTY SANDSTONE: Top of Bedrock
A gradational change occurs at approximately 16.7 ft. Silty sandstone, very light gray (N8) to yellowish gray (5Y 8/1), bedding is <1 mm. to 2 mm. thick, appears to have slumped during coring but is probably horizontal, highly weathered, highly friable, very fine grained, well sorted, clay is present in sufficient amount to give a ground sample low plasticity, iron staining and possible Mg oxides occur along bedding planes.

SILTY SANDSTONE: Same as above

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 24.7	GROUND ELEVATION (FT) 5971.4	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749463	AREA: MOUND AREA	CASING DIAMETER (IN) 0	GEOLOGIST: DCB	BH34-87	
EAST: 2085893	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/29/87		

REMARKS: Hollow Stem Auger BH backfilled w/ Portland Type I cement.

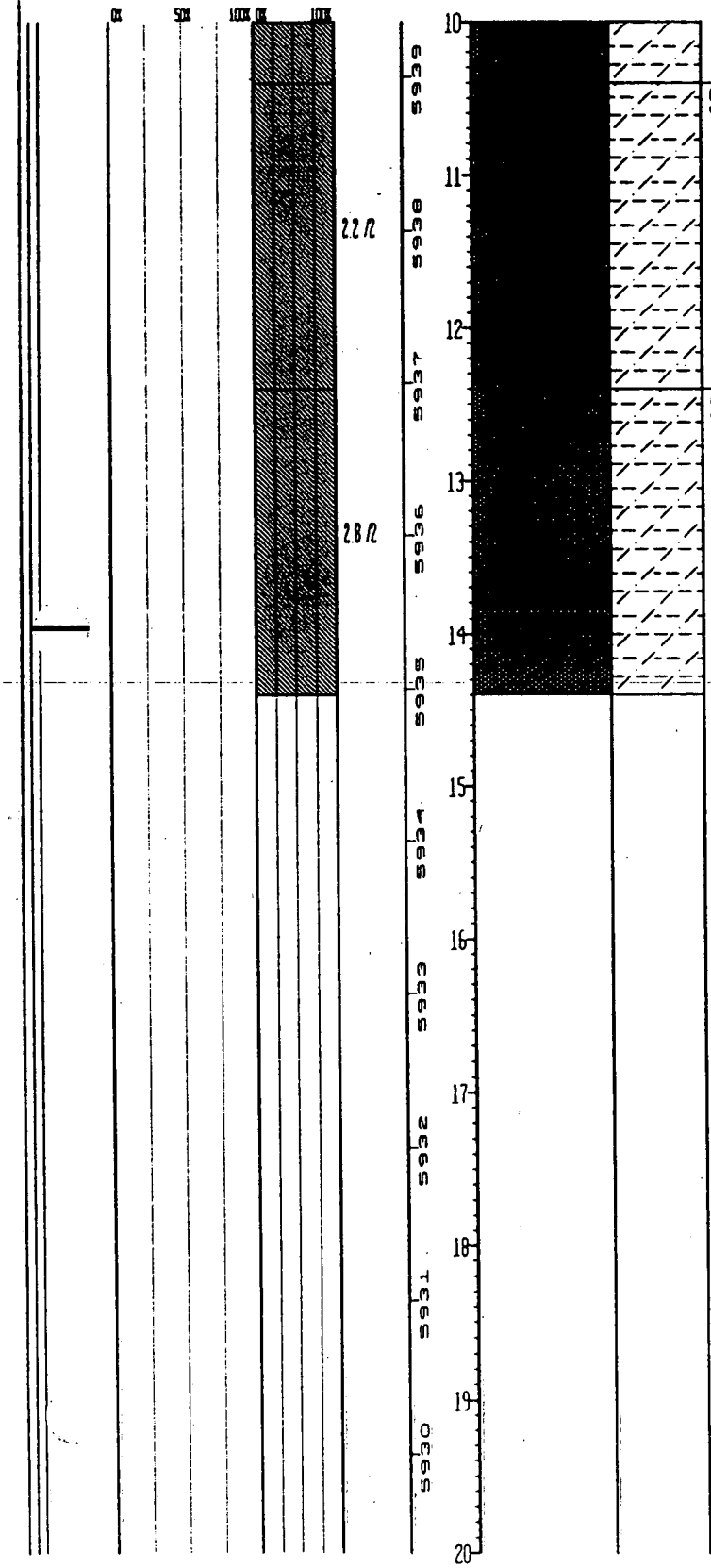
CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH34B721BR 0C823			0.8/2	5951, 5950, 5949	20–22				SILTY SANDSTONE: Same as above.
				2/2	5948, 5947, 5946	22–26				SILTY SANDSTONE: Same as above.
					5945, 5944, 5943, 5942	26–30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 14.4	GROUND ELEVATION (FT): 5949.36	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749975	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	35-87
EAST: 2087268	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/31/87	
REMARKS: Hollow Stem Auger.				

CHEMICAL & GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0.5/1.3	5949	0			CH:	Gravelly Clay - between dark reddish brown (10R 3/4) to moderate brown (5YR 3/4). Est. plast. mod. to high. Gravel angular to sub-rounded, granules to 3 cm., mod. graded, some silt. Trace sand VFG to med. grained. Trace root material.
				0/0.2	5948	1			NO SAMPLE:	
				0.8/1.4	5947	2			GW:	GRAVEL - pale yellowish brown (10YR 6/2), angular, mod. well graded, granules to 3 cm., some clay, silt and sand VFG to VCG. Some CaCO3.
				0/0.09					NO SAMPLE:	
				0.4/1	5946	3			GW:	Same as above.
				0/1.2	5945	4			NO SAMPLE:	
				2.5/0.8	5944	5			SC:	Clayey Sand - grayish orange to very pale orange (10YR 7/4 to 8/2). Sand VFG to coarse, well graded, some gravel, granules to 33.5 cm., some silt, CaCO3.
				1/0.9	5943	6			CH:	Same as above.
				0/1.5	5942	7			NO SAMPLE:	
				0.8/0.7	5941	8	12/01/87		CL:	Same as above. Trace gravel.
				1.4/1.3	5940	9			SILTY CLAYSTONE:	Top of Bedrock Yellowish gray (5Y 8/1) (Light), Mod. to high plast. Some CaCO3.
						10				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 14.4	GROUND ELEVATION (FT):	5949.36	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749975	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	35-87
EAST:	2087268	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	08/31/87	
REMARKS: Hollow Stem Auger.							

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMBER
SAMPLE GRAIN SIZE (0% – 50%)
PERCENT RECOVERY (100% OR – 100%)
RECOVERY/INTERVAL
DATUM (FT)
DEPTH (FT)
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE
DESCRIPTION



SILTY CLAYSTONE: Pinkish gray (5YR 8/1) Est. plast. mod. to high.

SILTY CLAYSTONE: Yellowish gray (5Y 8/1), est. plast. mod. to high. Some dk. yellowish orange coloring toward bottom (10YR 6/6). Calcite stringer near bottom.
NOTE: No water encountered while drilling.

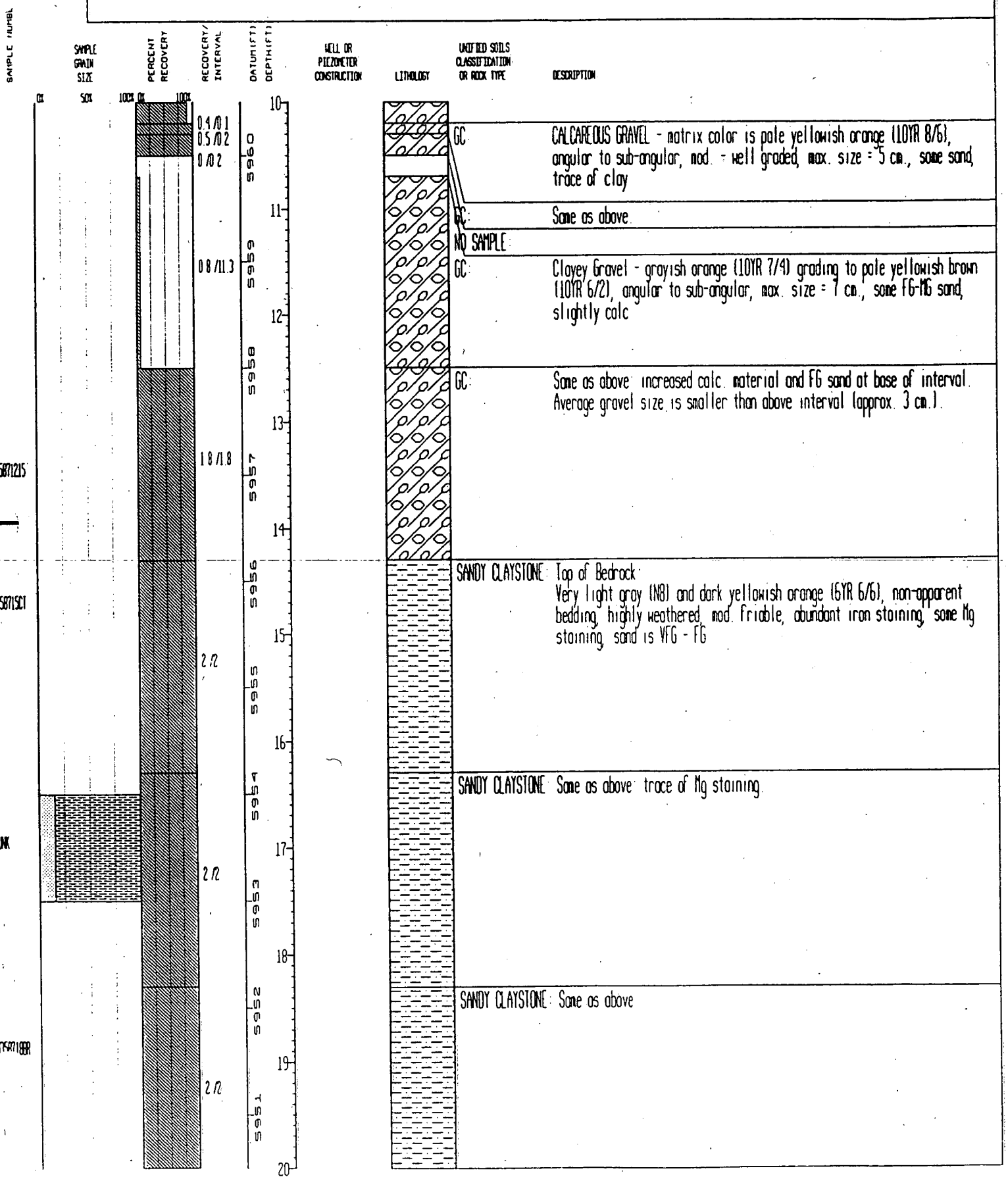
STATE PLANE COORDINATE		TOTAL DEPTH (FT) 20.3	GROUND ELEVATION (FT) 5970.5	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH	749400	AREA MOUND AREA	CASING DIAMETER (IN) 0	GEOLOGIST DAT	BH35-87
EAST	2986069	LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN) 0	DATE DRILLED 07/28/87	

REMARKS Hollow Stem Auger Borehole backfilled with Portland Type I cement

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.8/1.2	5970	0			GC	Clayey Gravel - top of interval matrix color is dusky yellowish brown (10YR 2/2), bottom is light brownish gray (5YR 6/1), sub-angular to sub-rounded, max. size = 7 cm., bottom is highly calc.
			0/0.8	5969	1			NO SAMPLE	
			0.3/0.7	5968	2			GC	Same as above.
			0.9/1.2	5967	3			GC	CALCAREOUS GRAVEL - matrix color is pinkish gray (5YR 8/1), angular to sub-angular, mod. - well graded, max. size = 5 cm., some sand.
			0/0.09		4			NO SAMPLE	
			0.2/0.35					GC	Same as above
			0.7/0.65	5966				GC	Same as above moderate orange pink (5YR 8/4), max. size = 7 cm.
			0/1	5965	5			NO SAMPLE	
BH35870012			0.5/0.8	5964	6			GC	Same as above
			0.7/0.6	5963	7			GC	Same as above some clay.
			0/0.9		8			NO SAMPLE	
			0.7/0.9	5962	9			GC	Same as above
			0.9/1	5961	10			GC	Same as above Pale yellowish orange (10YR 8/6)

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 20.3	GROUND ELEVATION (FT)	5970.5	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH	749430	AREA MOUND AREA	CASING DIAMETER (IN)	0	GEOLOGIST:	DAT	BH35-87
EAST	2086069	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	0	DATE DRILLED:	07/28/87	

REMARKS: Hollow Stem Auger Borehole backfilled with Portland Type I cement



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 20.3	GROUND ELEVATION (FT): 5970.5	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749930	AREA: MOUND AREA	CASING DIAMETER (IN): 0	GEOLOGIST: DAT	BH35-87
EAST: 2086069	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/28/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%	0/02	5950	20				NO SAMPLE: NOTE: No water encountered while drilling.
				5949	21				
				5948	22				
				5947	23				
				5946	24				
				5945	25				
				5944	26				
				5943	27				
				5942	28				
				5941	29				
					30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 74.5	GROUND ELEVATION (FT):	5949.04	PROJECT NUMBER:	667.11
NORTH: 749979	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB
EAST: 2087295	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	08/27/87

REMARKS: Hollow Stem Auger.

LOG OF BORING NUMBER: **36-87BR**

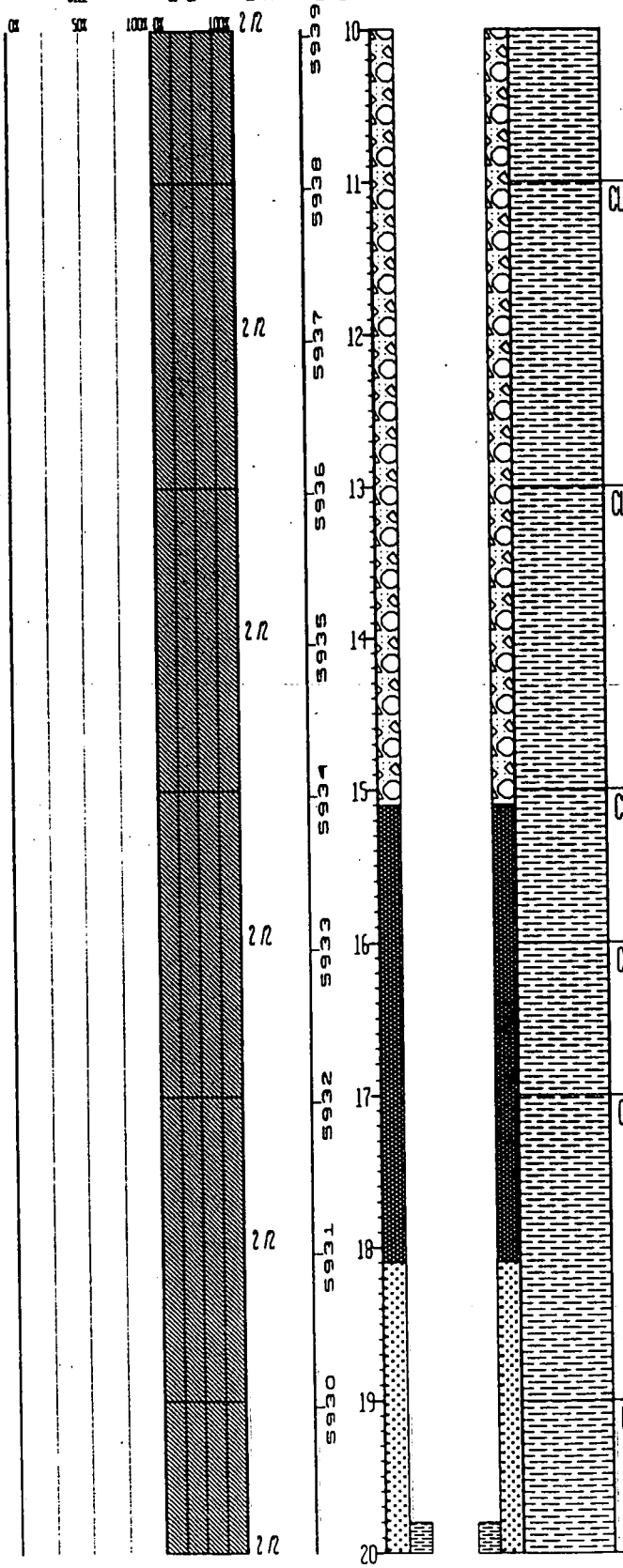
CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH / SAMPLE NUMBER / SAMPLE GRAIN SIZE (0% 50% 100%) / PERCENT RECOVERY (0% 100%) / RECOVERY/INTERVAL / DATUM (FT) / DEPTH (FT) / WELL OR PIEZOMETER CONSTRUCTION / LITHOLOGY / UNIFIED SOILS CLASSIFICATION OR ROCK TYPE / DESCRIPTION

RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	5949	0	GC:	Clayey Gravel - light gray (N7), clay matrix is dark yellowish brown (10YR 4/2), angular, moderately sorted, max. size 5.5 cm., some plant debris in upper 0.3 ft.
1.3/2	5948	1		
	5947	2	GC:	GRAVEL - light gray (N7), angular to sub-angular, moderately sorted, max. size 4.5 cm., caliche matrix.
2/2	5946	3		
0.5/0.5	5945	4	GC:	As above, gravel fraction is coarser, max size 6 cm., some sand.
0/0.5			NO SAMPLE:	
	5944	5	GC:	Clayey Gravel - light gray (N7), clay matrix is light brown (5YR 5/6), angular to sub-rounded, poorly graded, max. size 5.5 cm., some sand, caliche rind on gravel.
1.5/1.5	5943	6		
0/0.5			NO SAMPLE:	
	5942	7	SP:	GRAVELLY SAND - grayish orange (10YR 7/4), coarse grained to very fine grained, poorly graded, angular to sub-angular, some clay and calcareous mineralization.
2/2	5941	8	CLAYSTONE:	Top of Bedrock Very light gray (N7), high plasticity (est.) local iron staining and bodies of caliche, some silt and stringers.
	5940	9	CLAYSTONE:	As above, caliche bodies/stringers less frequent below 10 ft.
2/2		10		

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 74.5	GROUND ELEVATION (FT): 5949.04	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749979	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	36-87BR
EAST: 2087295	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/27/87	

REMARKS: Hollow Stem Auger

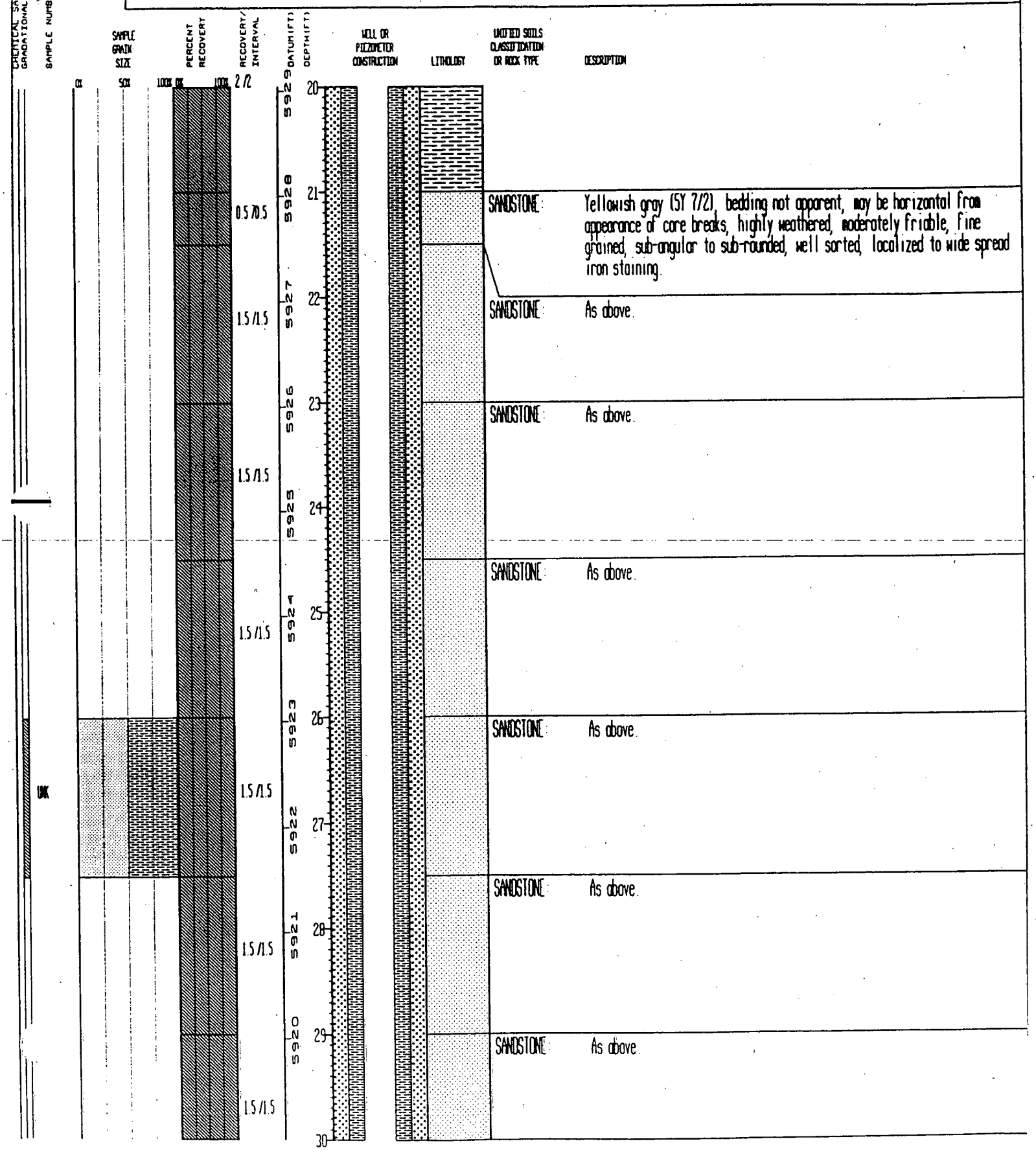
SAMPLE NUMB. | SAMPLE GRADE SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	As above at 12 ft. (est. depth) interval grades to very pale orange (10YR 8/2).
CLAYSTONE:	As above.
CLAYSTONE:	As above.
CLAYSTONE:	Light gray (N7), bedding not apparent (massive?), highly weathered, moderately friable, localized iron staining.
CLAYSTONE:	As above.
CLAYSTONE:	As above, below 20 ft. (est. depth) interval grades from claystone to siltstone to sandstone.

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 74.5	GROUND ELEVATION (FT)	5949.04	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	749979	AREA EAST TRENCHES	CASING DIAMETER (IN)	2 ID	GEOLOGIST	DCB	36-87BR
EAST	2087295	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN)	7.5	DATE DRILLED	08/27/87	

REMARKS: Hollow Stem Auger.



STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 74.5	GROUND ELEVATION (FT): 5949.04	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749979	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	36-87BR
EAST: 2087295	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/27/87	

REMARKS: Hollow Stem Auger.

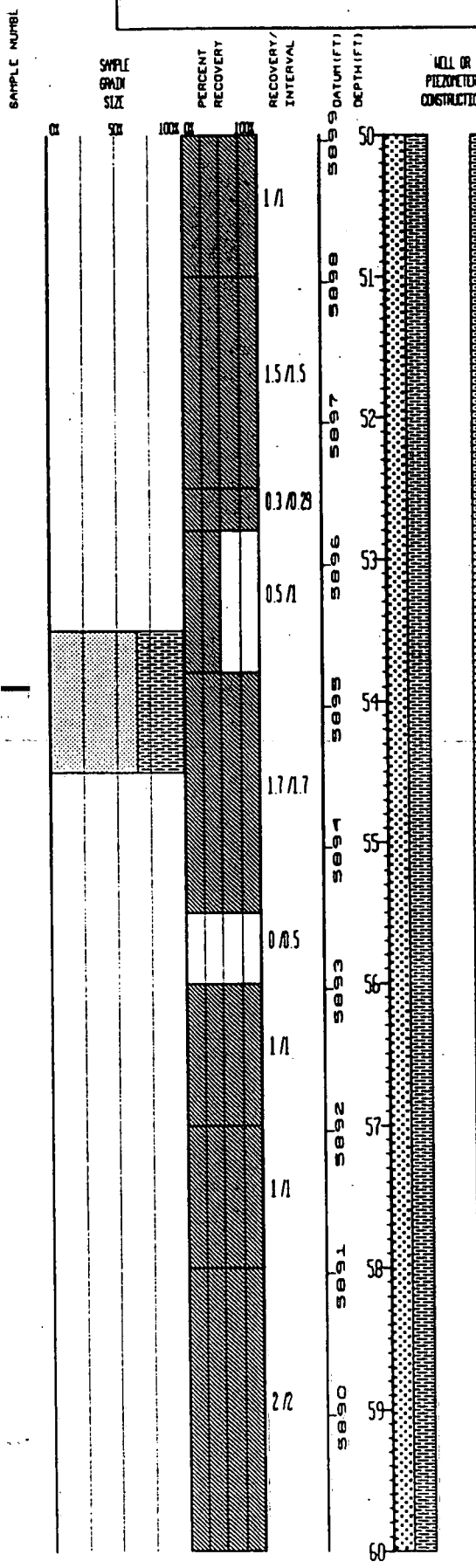
SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5919	30				
			2/2	5918	31	12/01/87		SANDSTONE:	As above, at about 31 ft. bedding becomes distinct, 2 mm. and less in thickness.
				5917	32				
			1.5/1.5	5916	33			SANDSTONE:	As above.
				5915	34			SANDSTONE:	As above, at about 34.5, bedding thickness increases to 5 mm. and less, medium grained fraction present.
			1.5/1.5	5914	35	08/27/87			
			1.5/1.5	5913	36			SANDSTONE:	Very light gray (N8) and grayish orange (10YR 7/4), bedding not apparent, highly weathered, highly friable, very fine grained to fine grained, poorly sorted, localized to widely disseminated iron staining.
				5912	37			SANDSTONE:	As above.
			1.5/1.5	5911	38				
			1.5/1.5	5910	39			SANDSTONE:	As above.
					40				

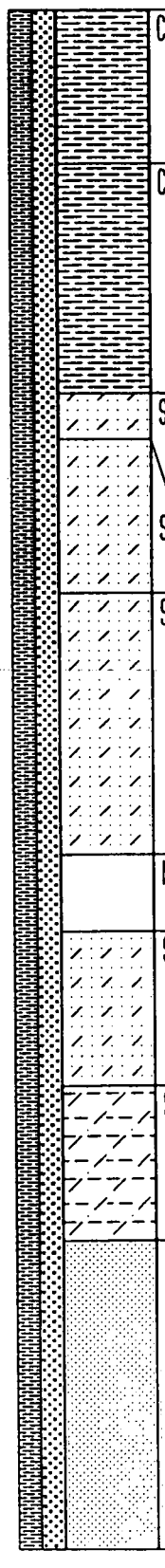
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 74.5	GROUND ELEVATION (FT):	5949.04	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749979	AREA: EAST TRENCHES	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB	36-87BR
EAST:	2087295	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	08/27/87	

REMARKS: Hollow Stem Auger.

CHEMICAL SAMP / GRADATIONAL S	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.5/1.5	5909	40			SANDSTONE:	As above.
				0.9/1.5	5908	41			SANDSTONE:	At 42 ft. (est depth), interval grades to medium grained, well rounded sandstone.
	UNK			1/1	5907	42			SANDSTONE:	As above.
				0.7/1.5	5906	43			SANDSTONE:	As above.
				1.5/1.5	5905	44			SILTSTONE:	Interval grades to siltstone below 45 ft, light gray (N7), well weathered, moderate to slightly friable, slight VFG sand fraction.
				0.3/1	5904	45			SILTSTONE:	As above.
				0/1	5903	46			NO SAMPLE:	
				0.5/0.5	5902	47			SILTSTONE:	As above (reference interval 45.5 to 47.0 ft.).
				0.5/0.5	5901	48			SILTSTONE:	As above.
					5900	49				
						50				

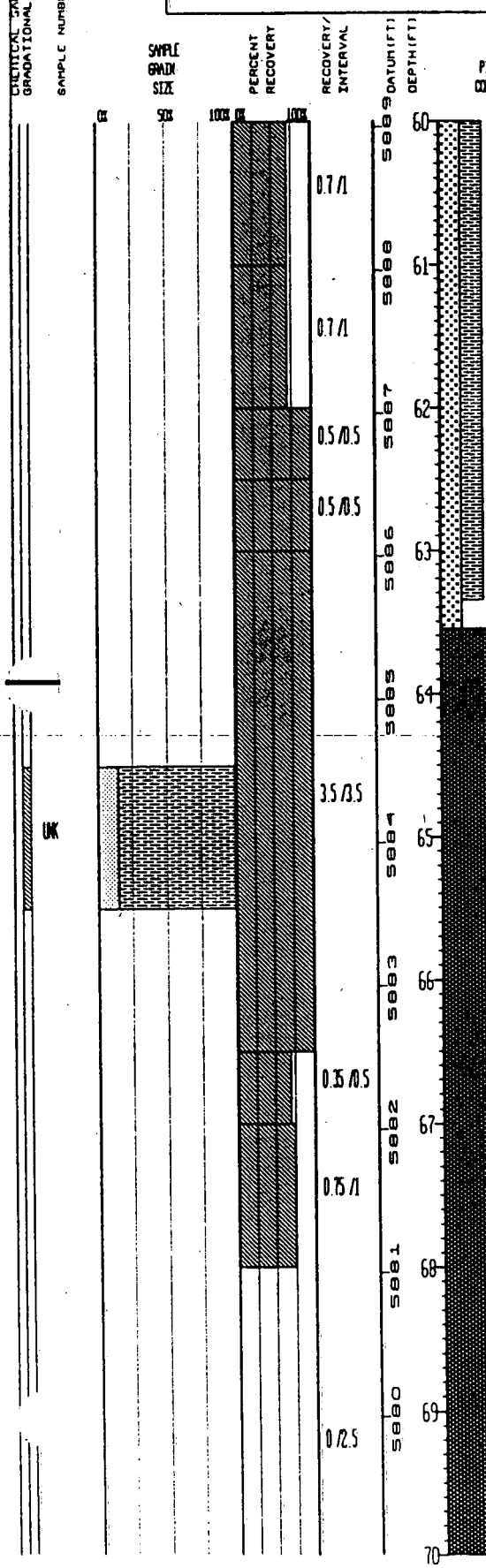
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 74.5	GROUND ELEVATION (FT): 5949.04	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749979	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	36-87BR
EAST: 2087295	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/27/87	
REMARKS: Hollow Stem Auger				





UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Medium light gray (N6), bedding not apparent (massive?), well weathered, moderately to slightly friable, slight silt fraction.
CLAYSTONE:	As above.
SILTY SANDSTONE:	Very pale orange (10YR 8/2), bedding not apparent (massive?), highly weathered, moderately friable, very fine grained, localized iron staining.
SILTY SANDSTONE:	As above.
SILTY SANDSTONE:	As above.
NO SAMPLE:	
SILTY SANDSTONE:	As above (reference interval 52 to 55.5).
SILTY CLAYSTONE:	Very light gray (N8), weathered, slightly friable, interval grades to sandstone, dark yellowish orange (10YR 6/6), bedding not apparent (massive?), well weathered, moderately friable, very fine grained with abundant silt.
SANDSTONE:	Grayish orange (10YR 7/4), bedding not apparent (massive?), highly weathered, slightly friable, some silt, interval grades to medium grained to very fine grained, well rounded, moderate sorting and highly friable.

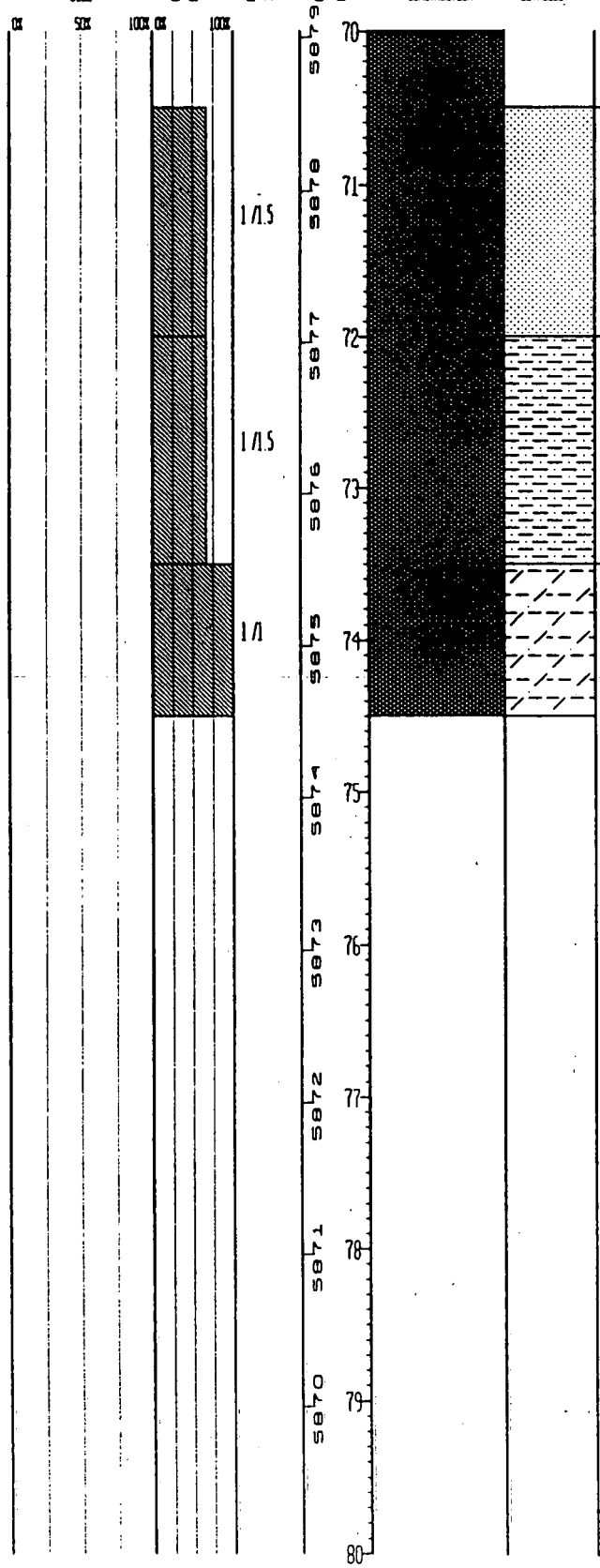
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 74.5	GROUND ELEVATION (FT): 5949.04	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749979	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	36-87BR
EAST: 2087295	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 08/27/87	
REMARKS: Hollow Stem Auger.				



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SANDSTONE:	As above.
SANDSTONE:	As above.
SANDSTONE:	As above.
SANDSTONE:	Dark yellowish orange (10YR 6/6), bedding not apparent (massive?), well weathered, moderately to highly friable, very fine grained, well sorted, moderate silt fraction.
CLAYSTONE:	Medium light gray (N6), bedding not apparent (massive?), well weathered, moderately friable, localized iron staining and carbonaceous mineralization. Interval grades to clayey siltstone with depth.
CLAYEY SILTSTONE:	Med. light gray, massive bedding, well weathered, slightly friable, trace of carbonaceous and iron staining.
SANDSTONE:	Fine grained, mottled, very light gray (N8) and very pale orange (10YR 8/2), massive bedding, highly weathered, mod. friable, well sorted, becoming clayey at bottom of interval.
NO SAMPLE:	

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 74.5	GROUND ELEVATION (FT): 5949.04	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749979	AREA: EAST TRENCHES	CASING DIAMETER (IN): 2 10	GEOLOGIST: DCB	36-87BR
EAST: 2087295	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 7 5	DATE DRILLED: 08/27/87	
REMARKS: Hollow Stem Auger.				

SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SANDSTONE:	Fine grained, light gray (N8), massive bedding, well weathered, well sorted, some iron staining mottled, trace of carbonaceous material, wavy bedding, at 70 degrees with clay infilling.
SANDY CLAYSTONE:	Fine grained, light gray (N7), massive bedding, well weathered, mod. friable, trace of organic material.
SILTY CLAYSTONE:	Light gray (N7), massive bedding, well weathered, mod. friable, some organic material, FG sandstone occurs in pockets.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 26	GROUND ELEVATION (FT)	5969.4	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH: 749502	AREA: MOUND AREA	CASING DIAMETER (IN)	0	GEOLOGIST	DCB	BH36-87
EAST: 2086149	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED	07/20/87	

REMARKS: Hollow Stem Auger BH backfilled w/ Portland Type I cement

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0.6/1.3	5969	0			CL	GRAVELLY CLAY - pale yellowish brown (10YR 6/2), low plasticity, abundant carbonate mineralization, some plant debris, caliche rind occurs in gravel.
				0/0.7	5968	1			NO SAMPLE	
	BH36870005			1.3/2	5967	2			CL	As above (reference interval 0.0 to 1.3), clay component decreases below 3 ft. and is replaced by caliche.
				0/1.3	5966	3			NO SAMPLE	
	BH36870545			0/0.7	5965	4			NO SAMPLE	
				0.35/0.6	5964	5			GC	Clayey Gravel - medium gray (N5), clay matrix is grayish orange (10YR 7/4), angular, poorly graded, max. size 5.5 cm, some silt.
				0/3.4	5963	6			NO SAMPLE	
					5962	7				
					5961	8				
					5960	9				
	BH36870515					10				

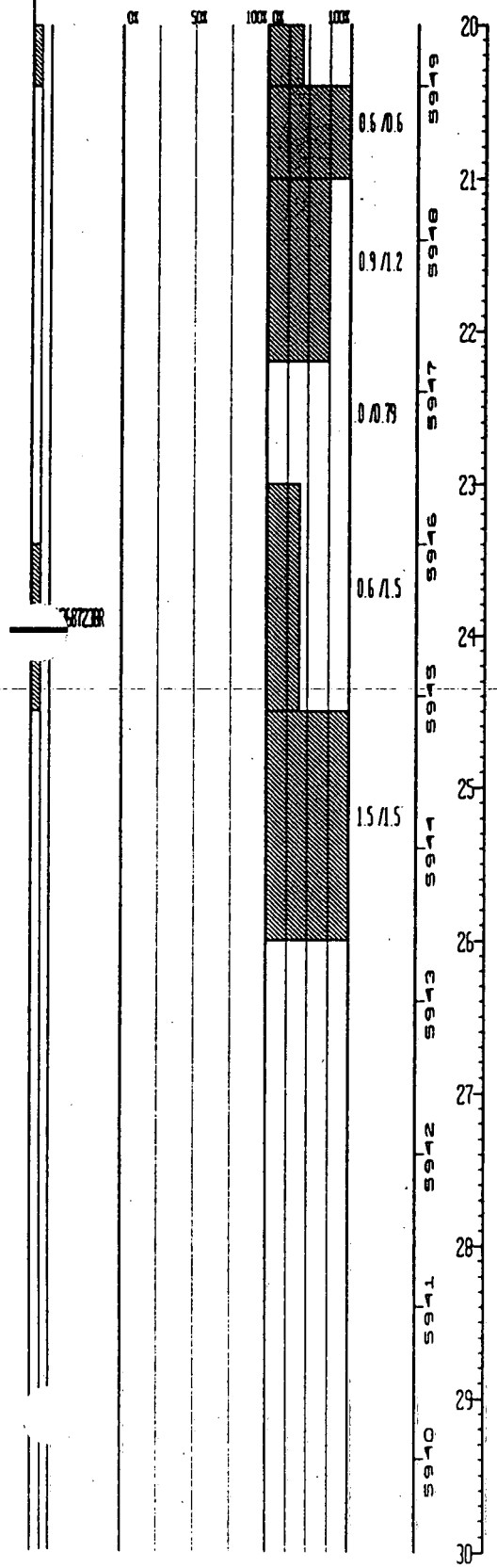
STATE PLANE COORDINATE	TOTAL DEPTH (FT) 26	GROUND ELEVATION (FT) 5969.4	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749502	AREA MOUND AREA	CASING DIAMETER (IN) 0	GEOLOGIST DCB	BH36-87	
EAST: 2086149	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN) 0	DATE DRILLED: 07/20/87		

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
06870515	0% 50% 100%	0% 100%	0/0.6	5959	10			NO SAMPLE	
			0/1.4	5958	11			NO SAMPLE	
			0/0.65	5957	12			NO SAMPLE	
			0/3.55	5956, 5955, 5954	13, 14, 15			NO SAMPLE	
			0.8/1.5	5953, 5952	16, 17			GC	Clayey Gravel - medium gray (N5), clay matrix is grayish orange (10YR 7/4), angular to sub-rounded, poorly sorted, max. size 4 cm.
			0/1.5	5951	18			NO SAMPLE	
			0.5/1.2	5950	19, 20			GC	As above (reference interval 16.2 to 17.7 ft.), max. gravel size is 2.5 cm.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 26	GROUND ELEVATION (FT):	5959.4	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749502	AREA: MOUND AREA	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH36-87
EAST:	2086149	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/20/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	Top of Bedrock Grades to claystone.
CLAYSTONE:	Light olive gray (5Y 6/1), high plasticity, localized iron staining.
NO SAMPLE:	
CLAYSTONE:	As above (reference interval 20.6 to 22.2 ft.).
CLAYSTONE:	As above. NOTE: No water encountered while drilling.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 28	GROUND ELEVATION (FT):	5968.8	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749610	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	DAT	BH37-87
EAST:	2086128	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/17/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.

CHEMICAL SAMP GRADATIONAL & DEPTH	SAMPLE NUMBER	SAMPLE GRADA SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%						GC:	GRAVELLY SAND - pale yellowish brown (10YR 6/2), angular - sub-angular, med. - well grading, sand is VFG - MG, max. gravel size = 4 cm., calcareous material.
	BH37870010			1.2/2	5968 5967	0 1 2			GC:	Same as above: very pale orange (10YR 8/2), increased amt of calcareous material.
				1.1/2	5966 5965	3 4			GC:	Same as above: grayish orange (10YR 7/4).
	DAT15			1.4/3	5964 5963	5 6				
					5962 5961	7 8			SC:	Clayey Gravelly Sand - grayish orange (10YR 7/4), angular - sub-angular, mod. grading, sand is FG-CG, max. gravel size = 4 cm., calcareous.
				1.5/4	5960 5959	9 10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 28	GROUND ELEVATION (FT): 5968.8	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749610	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: DAT	BH37-87
EAST: 2086128	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 07/17/87	

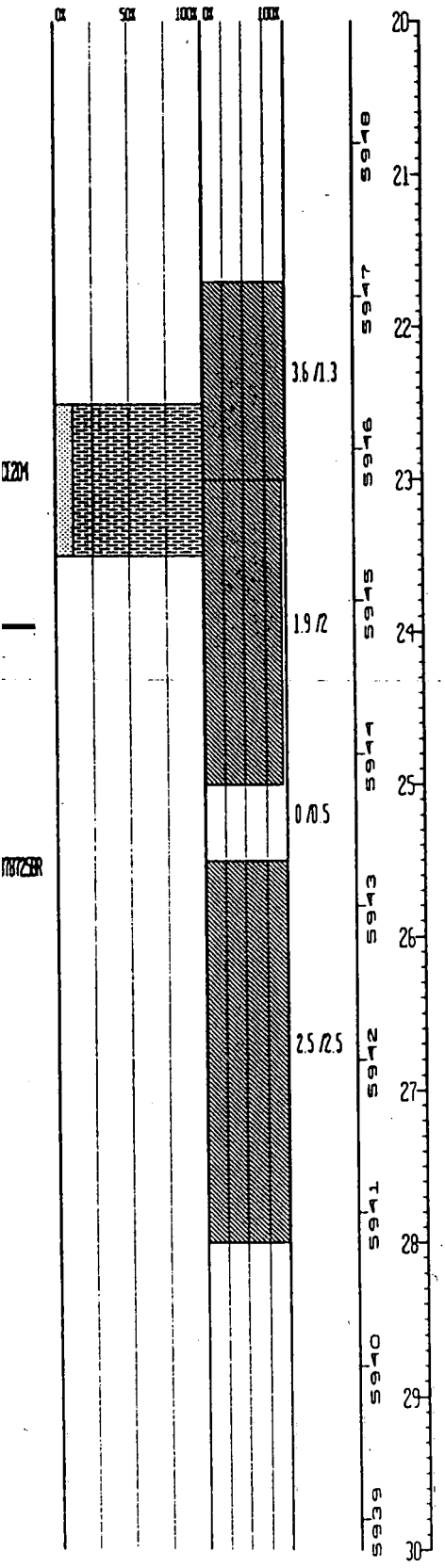
REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5958	10				
						11			NO SAMPLE:	JAR SAMPLES.
	BH0787113			0 /1.3	5957	12				
					5956	13			NO SAMPLE:	
					5955	14			NO SAMPLE:	Top of Bedrock.
				0 /5.7	5954	15				
					5953	16				
					5952	17				
					5951	18			NO SAMPLE:	
					5950	19				
	BH0787201			0 /3.7	5949	20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 28	GROUND ELEVATION (FT):	5968.8	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749610	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	DAT	BH37-87
EAST:	2086128	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/17/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



SANDY CLAYSTONE: Grayish orange (10YR 7/4) and very light gray (N8), possibly 10 degree laminar bedding, highly weathered, mod. friable, some iron staining, some Mg staining, sand is VFG - FG, some silt.

SANDY CLAYSTONE: Same as above: dark yellowish orange, increased sand fraction, bedding is non-apparent in top 1 ft., possibly horizontal laminar bedding in bottom of interval.

NO SAMPLE:

SANDY CLAYSTONE: Same as above: grayish orange (10YR 7/4) and very light gray (N8), decreased sand fraction, bedding is non-apparent.
NOTE: No water encountered while drilling.

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 23.4	GROUND ELEVATION (FT)	5965.3	PROJECT NUMBER	667 11	LOG OF BORING NUMBER:
NORTH:	749670	AREA: MOUND AREA	CASING DIAMETER (IN):	0	GEOLOGIST:	TSD	BH38-87
EAST:	2086308	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN)	0	DATE DRILLED:	07/14/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement. No contact sample collected due to insufficient recovery.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1/1.3	5965	0			GW:	GRAVEL - predominantly pinkish gray (5YR 8/1), sub-angular to sub-rounded, mod. grading, max size = 6 cm., trace of sand, silt and clay, bottom 3" of interval has some clay and calcite. (Clay matrix is dark yellowish brown (10YR 4/2).
			0/0.7	5964	1			NO SAMPLE:	
			0.55/1.1	5963	2			SW:	CALCAREOUS SAND - FG - VCG, very pale orange (10YR 8/2) to dark yellowish orange (10YR 6/6), sub-rounded to rounded, well graded, some gravel (max size = 4.5 cm.)
			0/0.9	5962	3			NO SAMPLE:	
			0.6/0.6	5961	4			GC:	Clayey Gravel - variegated predominantly med. lt. gray (N6), angular to sub-rounded, poorly graded, some sand, very calcareous. (Max. size = 4.5 cm.)
			1.15/1.15	5960	5			SW:	CALCAREOUS SAND - same as 2.0 to 3.1 description, max. gravel size = 6.5 cm
			0/1.25	5959	6			NO SAMPLE	
			1/1	5958	7			GP:	GRAVEL - med. lt. gray (N6), sub-angular to sub-rounded, poorly graded, max. size = 7.5 cm., calcareous, trace of sand and clay.
			0/1.5	5957	8			NO SAMPLE:	
			0.2/0.65	5956	9			GP:	Same as above. max. size = 5 cm
					10				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 23.4	GROUND ELEVATION (FT) 5965.3	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH 749670		AREA MOUND AREA	CASING DIAMETER (IN) 0	GEOLOGIST TSD	BH38-87
EAST 2086308		LOCATOR NUMBER N9	BOREHOLE DIAMETER (IN) 0	DATE DRILLED 07/14/87	

REMARKS Hollow Stem Auger BH backfilled w/ Portland Type I cement No contact sample collected due to insufficient recovery

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH0887105			0.3/0.7	5955	10			GP	GRAVEL - med. light gray (N6), sub-rounded, poorly graded, max. size = 7 cm., trace of sand, clay and calcite.
					5954	11			NO SAMPLE	
				0/3.55	5953	12				
					5952	13				
					5951	14				
				0.2/0.2					GP	Same as above, increased clay.
									NO SAMPLE	Top of Bedrock.
				0/1.8	5950	15				
					5949	16				
	602206			0.2/0.2					SANDY SILTSTONE	Very pale orange (10YR 8/2) and pale yellowish orange (10YR 8/6), mottles, highly weathered, mod. friable.
									NO SAMPLE	
				0/1.8	5948	17				
					5947	18				
				0.1/0.1					SANDY SILTSTONE	Same as above
									NO SAMPLE	
				0/1.6	5946	19				
						20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 23.4		GROUND ELEVATION (FT):	5965.3	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749670	AREA: MOUND AREA		CASING DIAMETER (IN):	0	GEOLOGIST:	TSD	BH38-87
EAST:	2086308	LOCATOR NUMBER:	N9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	07/14/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement. No contact sample collected due to insufficient recovery.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
BH38872DBR			0.6 /1.4	5945, 5944	20, 21			CLAYSTONE:	Mottled light olive gray (5Y 6/1) and dark yellowish orange (10YR 6/6), occasional silt in thin layers, limonite staining in fractures, trace of carbonaceous staining, massive bedding, moderately friable, weathered
			1.6 /1.6	5943, 5942	22, 23			CLAYSTONE:	Same as above. Note: No water encountered during drilling.
				5941, 5940, 5939, 5938, 5937, 5936	24, 25, 26, 27, 28, 29, 30				

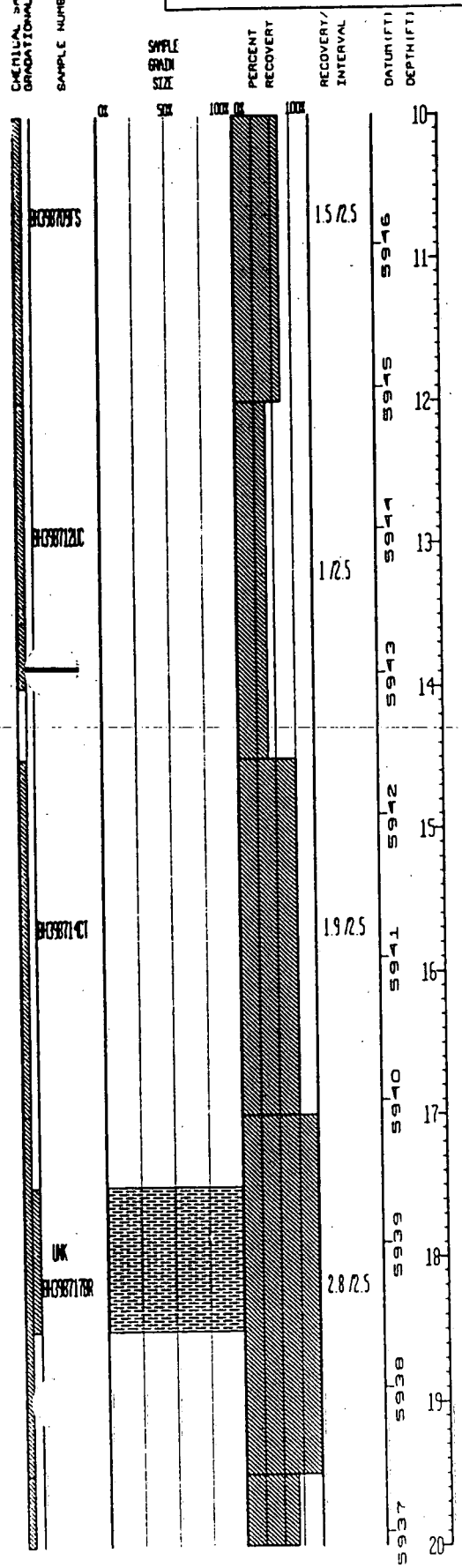
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 22	GROUND ELEVATION (FT):	5956.9	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749760	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH39-87
EAST:	2086905	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/12/87	

REMARKS: Hollow Stem Auger. Borhole backfilled with Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%			0			GW:	GRAVEL - predominantly light gray to medium dark gray (N7 to N4), angular, well graded, maximum size = 9 cm. long, some clay, dark reddish brown (10R 3/4), with fine to coarse grain sand, silt.
39870FS			1.6 /2	5956	1				
				5955	2			GW:	GRAVEL - predominantly light gray to med. dark gray (N7 to N4), some moderate pink (5R 7/4), angular to sub-rounded, well graded, max. size 6 cm. Some clayey sand, light brown (5YR 5/6), well graded, fine to very coarse grained, angular to sub-rounded, some HCl reaction, some calcareous precipitation.
39870ZH			1.1 /2	5954	3				
				5953	4			GW:	GRAVEL - predominantly light gray to med. dark gray (N7 to N4), angular to sub-rounded, well graded, max. size 7.5 cm. Some sand and silt, color too varied to describe accurately, fine to coarse grained, angular to sub-rounded, some calcareous mineralization, strong HCl reaction.
39870MH			0.65 /3	5952	5				
				5951	6				
				5950	7			GW:	Same as above, clayey sand is light brown (5YR 5/6).
39870TH			1.85 /2.5	5949	8				
				5948	9				
				5947	10			GW:	Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 22	GROUND ELEVATION (FT):	5956.9	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH: 749760	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA		BH39-87
EAST: 2086905	LOCATOR NUMBER: N9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/12/87		

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.



GW: Same as above.

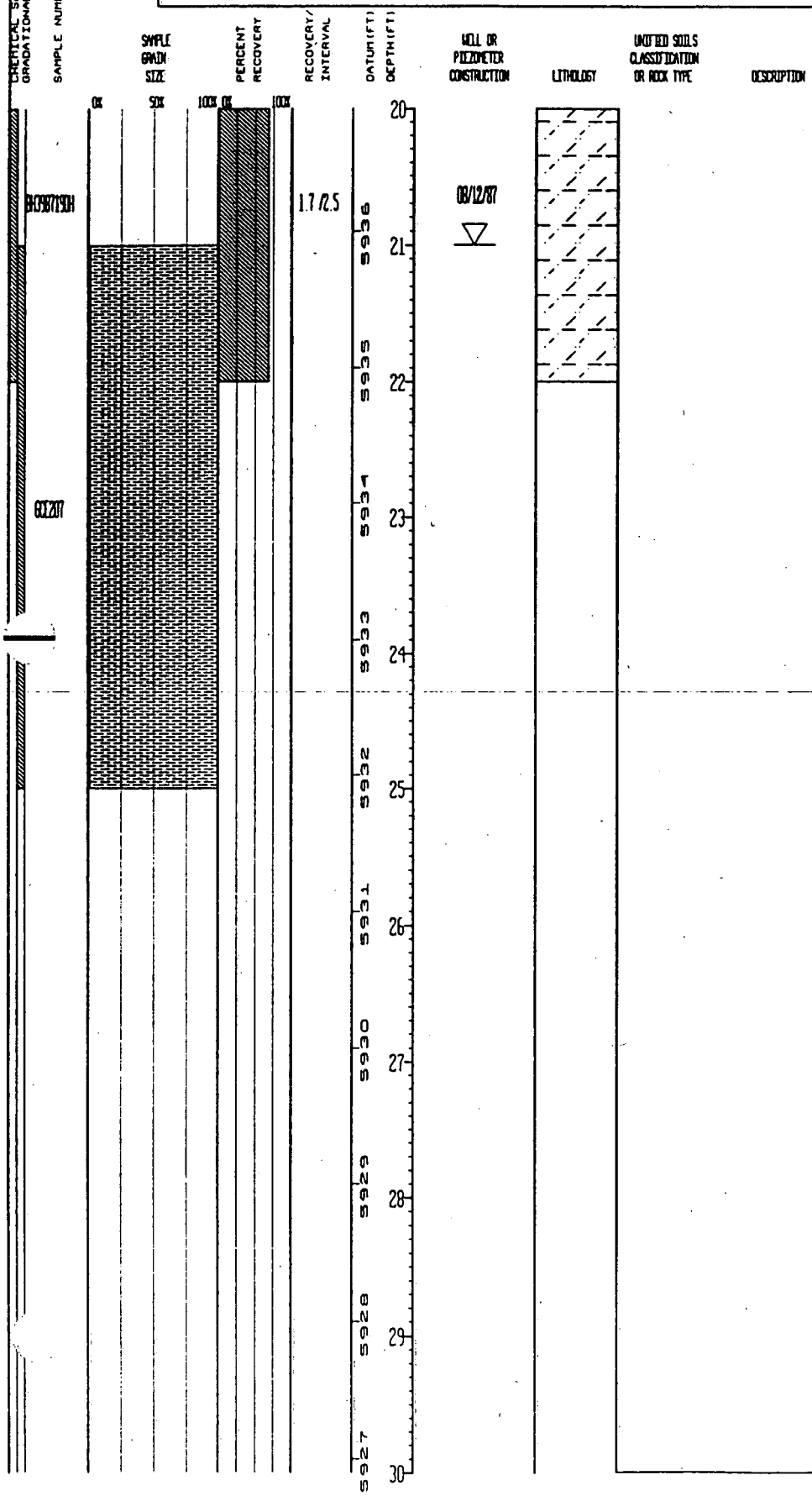
SILTSTONE: Top of Bedrock
Moderate brown to moderate reddish brown (10R 4/6 to 5YR 3/4), possibly convoluted and horizontal bedding, highly weathered, non to slightly friable, some mineralization in fractures. Grades to grayish orange clayey siltstone to fine sandstone (10YR 7/4), looks like thin horizontal bedding, weathered, moderately friable, very fine grained, well sorted.

CLAYEY SILTSTONE: Same as above, also has dark yellowish orange coloring.

CLAYEY SILTSTONE: Same as above, trace of carbonaceous material throughout matrix.

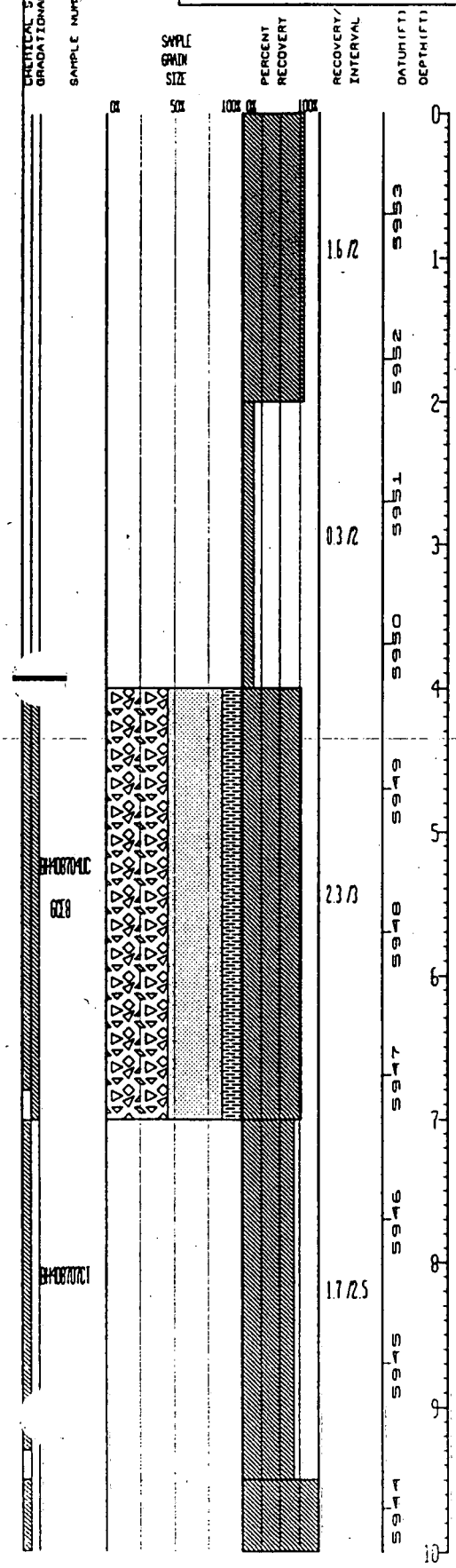
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 22	GROUND ELEVATION (FT):	5956.9	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749760	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LMA	BH39-87
EAST:	2086905	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/12/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.



STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 14.5	GROUND ELEVATION (FT):	5953.7	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749850	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH40-87
EAST:	2087026	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/13/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.



WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	GP:	GRAVEL - grayish orange pink (10R 8/2), sub-angular to sub-rounded, poorly graded, max. size 6 cm., some grass and roots in upper 0.1 ft., some clay at approximately 1 ft.
	GP:	Interval changes to gravel and caliche below 1.6 ft. Gravel, medium gray (N6), angular to sub-angular, well graded, some caliche.
	GP:	Same as above.
	CLAYSTONE:	Top of Bedrock Very light gray (N8), high plasticity, trace of silt and gravel.
	SILTSTONE:	At 9.5 ft. interval grades to Siltstone - Clayey Siltstone, yellowish gray (5Y 8/1), bedding not apparent, highly weathered, moderately friable.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 14.5	GROUND ELEVATION (FT):	5953.7	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749850	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH40-87
EAST:	2087026	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/13/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
0B709BR			2.5/2.5	5943	10				abundant very fine sand, localized iron staining, localized carbonate mineralization.
				5942	11				
					12			SILTSTONE:	Same as above.
			2.5/2.5	5941	13				Note: No water encountered during drilling.
				5940	14				
				5939	15				
				5938	16				
				5937	17				
				5936	18				
				5935	19				
				5934	20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 19.5	GROUND ELEVATION (FT):	5950.2	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749938	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH41-87
EAST:	2087318	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/17/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.

CHEMICAL SAMP / GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.2/2	5950	0			GW:	GRAVEL - predominantly med. light gray to med. dark gray (N6 to N4), angular to sub-rounded, well graded, max. size 7.5 cm., some silty clay, some sand, fine to coarse grained, some surface grass and roots, some calcareous mineralization.
					5949	1				
					5948	2			GW:	GRAVEL - predominantly med. dark gray (N4), sub-angular to sub-rounded, well graded, max. size 5.5 cm., sand, clay and silt present, abundant $CaCO_3$.
				1.3/2	5947	3				
					5946	4			GW:	Same as above.
	BH1870012			1.2/3	5945	5				
					5944	6				
					5943	7			GW:	Same as above, no $CaCO_3$ (no reaction with HCl).
				0.5/2.5	5942	8				
					5941	9				
						10			CL:	GRAVELLY SANDY CLAY - dark yellowish orange (10R 6/6), moderate plasticity, some silt. Gravel, sub-angular to sub-rounded, to 4.5 cm.,

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 19.5	GROUND ELEVATION (FT): 5950.2	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749938	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH41-87
EAST: 2087318	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/17/87	

REMARKS: Hollow Stem Auger. BH backfilled w/ Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
1870912			0.7/2.5	5940	10				well graded, some CaCO3 (moderate HCl reaction).
				5939	11				
				5938	12			GW:	GRAVEL - mainly med. dark gray (N4), sub-angular to sub-rounded, well graded, max. size 7.0 cm., sand, clay and silt present, some CaCO3.
1871210			1.9/2.5	5937	13				
				5936	14				
								GW:	Same as above.
				5935	15			CLAYSTONE:	Top of Bedrock Grading to Claystone. Yellowish gray (5Y 7/2), moderately high plasticity, massive (?) bedding, weathered, slightly friable, trace of silt, some iron staining throughout matrix, no HCl reaction.
1871410			1.9/2.5	5934	16				
				5933	17			CLAYSTONE:	Same as above. Note: No water encountered during drilling.
1871708			2.7/2.5	5932	18				
				5931	19				
					20				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 55.5	GROUND ELEVATION (FT)	5950.5	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749863	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH42-87
EAST:	2087385	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/26/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Sample BH42872TBR doubles as a direct hit sample.

CHEMICAL SAT GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0.75/2	5950	0			GC:	SILTY GRAVEL - matrix med. brown (5YR 3/2). Gravel angular to sub-rounded, poor to mod. graded, max. size 5 cm., floury matrix is calcitic, trace sand, some calcite clasts, avg. 3 cm.
					5949	1				
				0.6/2	5948	2			GC:	GRAVEL - white (N9) matrix. Gravel sub-angular to sub-rounded, poor to mod. grading, max. size 6 cm. Caliche and silty clay matrix, floury, caliche rinds on gravel, interval extremely calcitic.
					5947	3				
	87TD09			1.9/3	5946	4			GC:	GRAVEL in caliche and sandy clay matrix. Gravel angular to sub-angular, poorly graded, max. size 5 cm., matrix mod. yellowish brown (10YR 5/4). Grading to gravelly sand and clay, slightly less calcite.
					5945	5				
					5944	6				
				0.4/2.5	5943	7			GC:	Clayey Sand and Gravel - grayish orange (10YR 7/4). Gravel mod. graded, angular to sub-rounded, max. size 3 cm. Sand well graded, coarse to very fine, slightly calcitic.
					5942	8				
					5941	9			GC:	Clayey Sand and Gravel - as above
						10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 55.5	GROUND ELEVATION (FT): 5950.5	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749863	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH42-87
EAST: 2087385	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/26/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Sample BH42872788 doubles as a direct hit sample

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
BH42870709			0.75/2.5	5940	10				
				5939	11				
					12			GC:	Sandy Clayey Gravel - matrix lt. brown (5YR 5/6) to mod. yellowish brown (10YR 5/4), angular to sub-angular, mod. well graded, max. size 5.5 cm., matrix sandy clay, sand fine to coarse.
				5938					
			0.7/2.5	5937	13				
					14				
				5936				GC:	Same as above.
			0.8/1		15				
				5935				GC:	Clayey Sandy Gravel - matrix grayish orange (10YR 7/4). Gravel sub-angular to sub-rounded, poor to mod. sorting, max. size 6 cm. Sandy clay matrix est. plast. mod. to high, sand fine to med. grained, some very highly iron stained areas
				5934	16	08/26/87			
					17				
			0.8/4	5933					
BH42871WT					18				
				5932					
					19				
				5931				CH:	Sandy Clay - yellowish gray (5Y 8/1) to grayish orange (10YR 7/4), est. mod. to high plast., sand med. grained, some gravel, angular to sub-
					20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 55.5	GROUND ELEVATION (FT):	5950.5	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749863	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH42-87
EAST:	2087385	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	08/26/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Sample BH42872TBR doubles as a direct hit sample.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	2.15/2.5	5930	20				rounded, 2.5 cm to 5.5 cm.
					5929	21				
						22			GW	GRAVEL - angular to sub-angular, mod. well graded, max. size 5.5 cm. Bottom of interval is silt, pinkish gray (5 YR 8/1) to grayish orange (10 YR 7/4), bedding not apparent.
	BH42872CT			2.5/2	5928	23				
					5927	24			SILTY SANDSTONE	Top of Bedrock Very light gray to grayish orange (N8) to (10YR 7/4), horizontal bedding, highly weathered, mod. friable, very fine grained, well sorted, small caliche pocket toward bottom.
					5926	25	08/26/87 ▽			
	BH42872DH UNK			2.7/3	5925	26				
					5924	27			SILTY SANDSTONE	Same as above, slightly darker color to dk. yellowish orange, some surfaces have calcitic mineralization.
	BH42872BR			3/2.5	5923	28				
					5922	29			SILTY SANDSTONE	Very fine grained, lt. gray to grayish orange (N8 to 10YR 7/4) to dark yellowish brown (10YR 4/2), well graded, evidence of cross bedding.
					5921	30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 55.5	GROUND ELEVATION (FT): 5950.5	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749863	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH42-87
EAST: 2087385	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/26/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Sample BH42872TBR doubles as a direct hit sample.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
42872SH			2.9/2.5	5920, 5919	30, 31				
42873FS			1.1/2.5	5918, 5917	32, 33, 34			SILTY SANDSTONE:	Very pale orange to dark yellowish orange (10YR 8/2 to 10YR 7/4), bedding not apparent. If stone, highly weathered, highly friable, well sorted in areas, poorly sorted in others. Grains med. sized mainly, trace of coarse, rounded grains.
42874FS			0.5/2.5	5916, 5915, 5914	35, 36			SILTY SANDSTONE:	Same as above, generally more well sorted, generally med. grained.
UNK H42873TS			1.9/2	5913, 5912	37, 38			SILTY SANDSTONE:	Very pale orange to pale yellowish orange (10YR 8/2 to 8/6), mod. well graded, rounded grains very fine to med. grained, trace coarse. If stone, very weathered, very friable.
H42873FS				5911	39, 40			NO SAMPLE:	

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 55.5	GROUND ELEVATION (FT): 5950.5	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749863	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH42-87
EAST: 2087385	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/26/87	

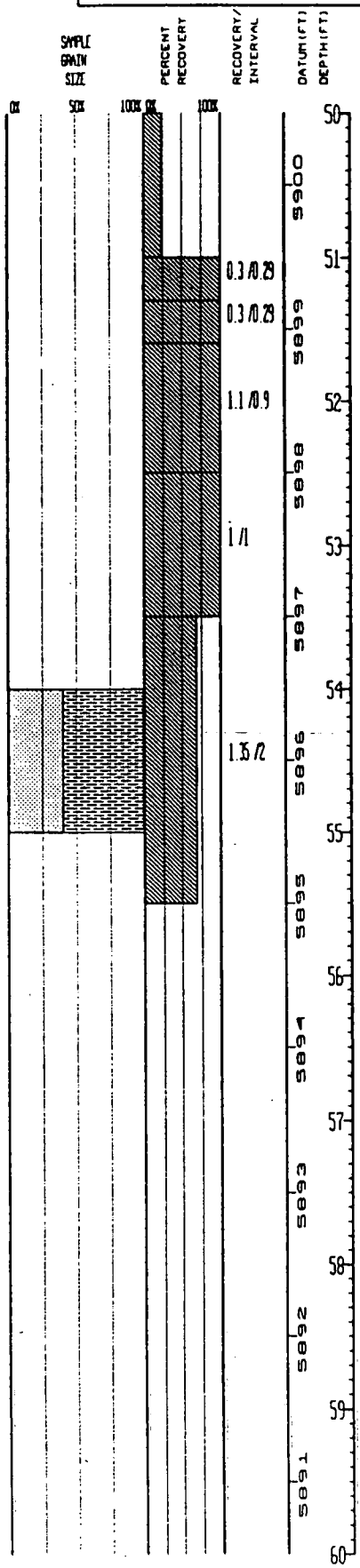
REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Sample BH428727BR doubles as a direct hit sample.

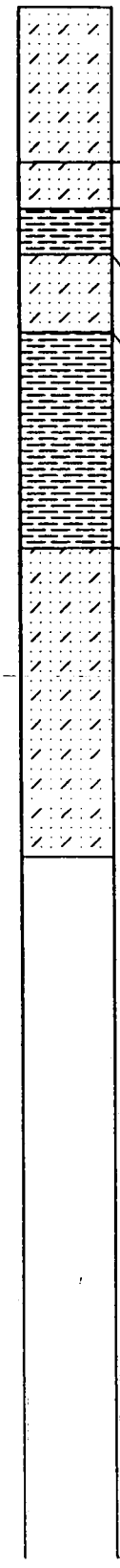
SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5910	40				
				5909	41				
				5908	42				
			0/9.5	5907	43				
				5906	44				
				5905	45				
BH428745DH				5904	46				
				5903	47				
				5902	48				
			0.6/2.5	5901	49				
					50				

SILTY SANDSTONE: Very pale orange to pale yellowish orange (10YR 8/2 to 8/6), mod. graded, rounded grains, very fine to med., trace coarse. If stone, highly weathered, highly friable, some evidence of horizontal bedding.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 55.5	GROUND ELEVATION (FT): 5950.5	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749863	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH42-87
EAST:	2087385	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 08/26/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Sample BH42872TBR doubles as a direct hit sample.





UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTY SANDSTONE	Yellowish gray (5Y 8/1) as above.
CLAYSTONE	Light brownish gray, sharp contact horizontal bedding, some carb. material, getting silty.
SILTY SANDSTONE	Yellowish gray (5Y 8/1) to grayish orange (10YR 7/4), wavy bedding, very thin clay layers (approx. 1 mm.)
CLAYSTONE	Light brownish gray (5YR 6/1), sharp contact, bedding not evident.
SILTY SANDSTONE	Grayish orange (10YR 7/4), bedding not apparent, but probably horizontal, highly weathered, mod. friable, fine to med. grained, mod. sorted, rounded grains, some gravel approx. 0.75 cm. Clay layer (as above approx. 0.75 in.) Trace clay in silty sandstone.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 34.7	GROUND ELEVATION (FT): 5956.5	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749635	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH43-87
EAST: 2087026	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/04/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement, Sept. 8, 1987, by J.B. Bergman.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH-087001S			0.6/2	5956, 5955	0–2			GC:	GRAVEL - medium gray (N5) to very light gray (N8) to moderate orange pink (10R 7/4). Clay matrix is dark yellowish brown (10YR 4/2), sub-angular to rounded, poorly graded, max. size 6 cm., trace of root fragments.
	BH-087002S			0.5/2	5954, 5953	2–4			GC:	GRAVEL - very light gray (N8), sub-rounded to rounded, poorly graded, max. size 9 cm., trace of clay.
	BH-087004H			0/3	5952, 5951, 5950	4–7			NO SAMPLE:	
	BH-087007H			0.5/2.5	5949, 5948, 5947	7–10			GC:	As above, max. size 6 cm.
	BH-087009H								GC:	As above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 34.7	GROUND ELEVATION (FT):	5956.5	PROJECT NUMBER:	667.11
NORTH: 749635	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB
EAST: 2087026	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/04/87

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement, Sept. 8, 1987, by J.B. Bergeon.

LOG OF BORING NUMBER: **BH43-87**

SAMPLE NUMB.	SAMPLE GRAIN SIZE (0% / 50% / 100%)	PERCENT RECOVERY (0% / 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.3/2.5	5946	10				
				5945	11				
					12			GC:	As above.
H087128H				5944					
			0.2/2.5		13				
				5943					
					14				
				5942				NO SAMPLE:	
H087140H					15				
				5941					
					16				
				5940					
			0/5.2		17				
H087170H				5939					
					18				
				5938					
					19				
				5937					
					20			GM:	SANDY GRAVEL - medium gray (N5), to light brownish gray (5YR 6/1), angular

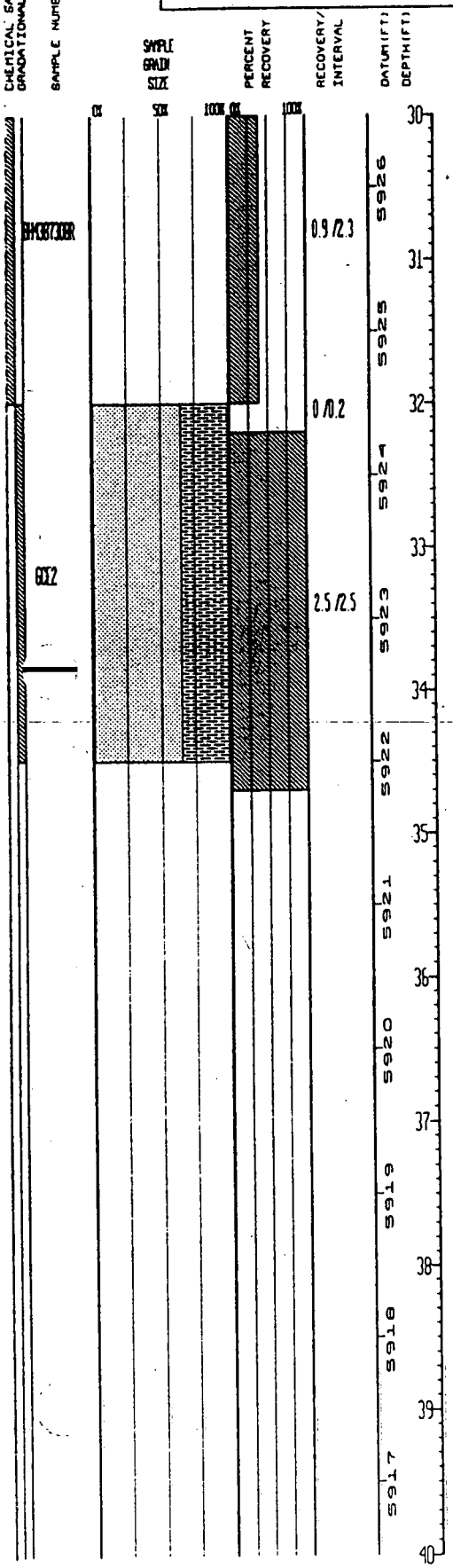
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 34.7	GROUND ELEVATION (FT): 5956.5	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749635	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH43-87
EAST:	2087026	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/04/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement, Sept. 8, 1987, by J.B. Bergman.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
						20				to sub-rounded, moderately well graded, max. size 6 cm., some silt and clay.
				2.6/2.6	5936					
					5935	21				
	6CE7					22				
	BH43B722DH				5934				NO SAMPLE:	
				0/2.4	5933	23				
						24				
					5932					
						25			NO SAMPLE:	
	BH43B725UC			0/1.3	5931					
						26			NO SAMPLE:	
				0/1.2	5930					
						27				
					5929				SILTSTONE:	Top of Bedrock Dark yellowish orange (10YR 6/6) to very light gray (N8), bedding not apparent, highly weathered, highly friable, some clay and trace of fine sand, abundant iron stains and localized Mg oxide mineralization.
	BH43B727CI			0.8/1.3		28				
					5928				NO SAMPLE:	
				0/1.2		29				
					5927					
						30			CLAYSTONE:	Grayish orange (10YR 7/4) to yellowish gray (5Y 8/1), bedding not apparent

STATE PLANE COORDINATE:		TOTAL DEPTH (FT) 34.7	GROUND ELEVATION (FT) 5956.5	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH:	749635	AREA: EAST TRENCHES	CASING DIAMETER (IN) 0	GEOLOGIST DCB	BH43-87
EAST:	2087026	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN) 0	DATE DRILLED 09/04/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement, Sept. 8, 1987, by J.B. Bergman.



WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE

DESCRIPTION

or distorted by drill tools, highly weathered, slightly friable, trace of silt, localized iron staining.

NO SAMPLE:

CLAYEY SANDSTONE: Clayey Sandstone per sieve analysis 32'-34.5'
Per field log Claystone - As above
NOTE No water encountered while drilling

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 7	GROUND ELEVATION (FT): 5949.53	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748306	AREA: 903 PMD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DAT	44-87
EAST: 2085435	LOCATOR NUMBER: L8	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 10/09/87	
REMARKS: Hollow Stem Auger.				

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRADI SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%			0			GC:	SANDY GRAVEL - dusky yellowish brown (10YR 2/2), sub-angular to sub-rounded, mod. grading, max. size = 5 cm., trace of clay, trace of roots.
	BH5887001C			2/2	5949	1			CL:	CLAY - grayish orange (10YR 7/4), mod. - low plast., some sand, trace of carb. material.
					5948	2	11/11/87		CL:	CLAY - same as above.
	BH5887021T			2/2	5947	3	01/09/88		CLAYSTONE:	Top of Bedrock Same as above.
					5946	4			CLAYSTONE:	Same as above: light gray (N7) in middle of interval. Increased amount of iron staining at base of interval. NOTE: No water encountered while drilling.
	BH5887048R			3/3	5945	5				
					5944	6				
					5943	7				
					5942	8				
					5941	9				
					5940	10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 34.5	GROUND ELEVATION (FT): 5956.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749685	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH44-87
EAST: 2087085	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/09/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. Sample BH44872410H doubles as upper contact sample, and BH44872411T doubles as the contact sample.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.7/2	5956	0			GC:	Clayey Gravel - variegated white, light gray, pink, dominant color is very light gray (N8), clay matrix is dark reddish brown (10R 3/4), angular to sub-rounded, moderately graded, maximum size 5.5 cm., roots and plant debris from 0 to 0.3 ft., some sand and silt.
			1.6/1.8	5955	1			GC	Same as above
			0/0.2	5954	2			NO SAMPLE:	
BH44870410H			1.7/2.2	5953	3			GM:	SANDY GRAVEL - light gray (N7), sand silt matrix is moderate yellowish brown (10YR 5/4), poorly graded, max. size 4 cm., some silt, trace of clay.
			0/0.8	5952	4			NO SAMPLE:	
			0/1.5	5951	5			NO SAMPLE:	
			1/1	5950	6			GM:	As above (reference interval 4.0 to 6.2).
			0.7/0.9	5949	7			GM:	As above.
				5948	8				
				5947	9				
					10				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 34.5	GROUND ELEVATION (FT):	5956.1	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749685	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH44-87
EAST:	2087085	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/09/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. Sample BH4487240H doubles as upper contact sample, and BH4487294T doubles as the contact sample.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% – 50%)	PERCENT RECOVERY (100% 0% – 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5946	10				
				0/1.6	5945	11			NO SAMPLE:	
				0.3/0.7	5944	12			GM:	As above, two cobbles approx. 5 cm. occur at 12.0 ft. (est. depth).
				0/1.8	5943	13			NO SAMPLE:	
					5942	14				
	BH4487140H			1.4/1.9	5941	15			GM	As above with increase in silt below 15.0 ft. (est. depth).
					5940	16				
				0/0.6					NO SAMPLE:	
				0.8/1.3	5939	17			SM:	SILTY SAND - pale yellowish brown (10YR 6/2), angular to sub-rounded, moderately graded, very coarse to very fine grained, some gravel.
					5938	18				
				0/1.2	5937	19			NO SAMPLE	
						20			SM:	As above with increase in gravel fraction from 20.5 ft. to 23.5 ft. (est. depth) and decrease in silt fraction.

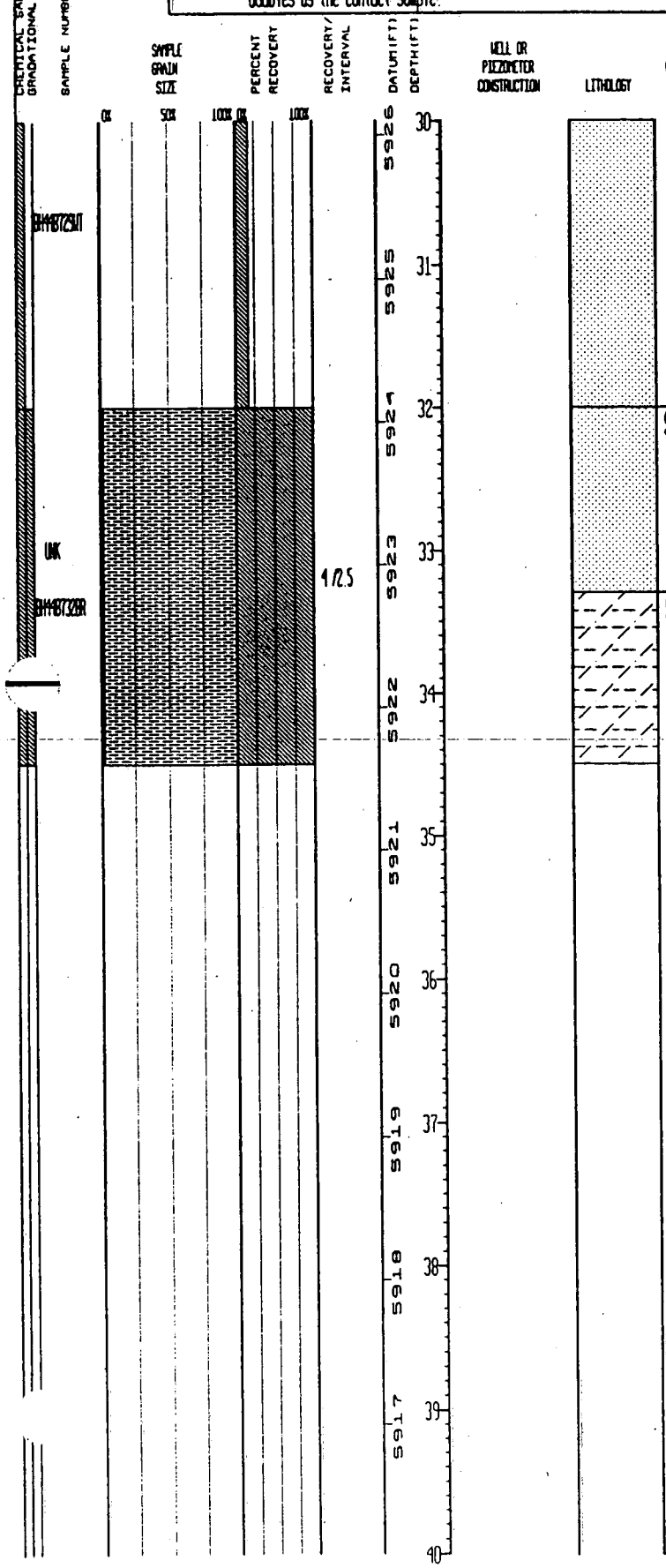
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 34.5	GROUND ELEVATION (FT): 5956.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749685	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH44-87
EAST: 2087085	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/09/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. Sample BH44872410H doubles as upper contact sample, and BH44872910T doubles as the contact sample.

SAMPLE NUMBER	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
BH44871910H	2.5 /2.5	5936	20			
		5935	21			
		5934	22		SP	As above
BH44872210H	0.7 /1.5	5933	23			
	0 /1	5932	24		NO SAMPLE:	
		5931	25		GM:	As above (reference interval 20.5 to 23.5 ft.).
BH44872410H	2.5 /2.5	5930	26			
		5929	27		SM:	SILT - pale yellowish brown (10YR 6/2), some fine sand and gravel.
		5928	28		SANDSTONE:	Top of Bedrock Grayish orange (10YR 7/4), sub-rounded to rounded, poorly graded, fine grained to very fine grained, clean, siliceous.
	0.9 /5	5927	29	09/09/87 ▽		
			30			

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 34.5		GROUND ELEVATION (FT):	5956.1	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749685	AREA: EAST TRENCHES		CASING DIAMETER (IN):	0	GEOLOGIST:	DCB	BH44-87
EAST:	2087085	LOCATOR NUMBER: 09		BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/09/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. Sample BH448724DH doubles as upper contact sample, and BH448729WT doubles as the contact sample.

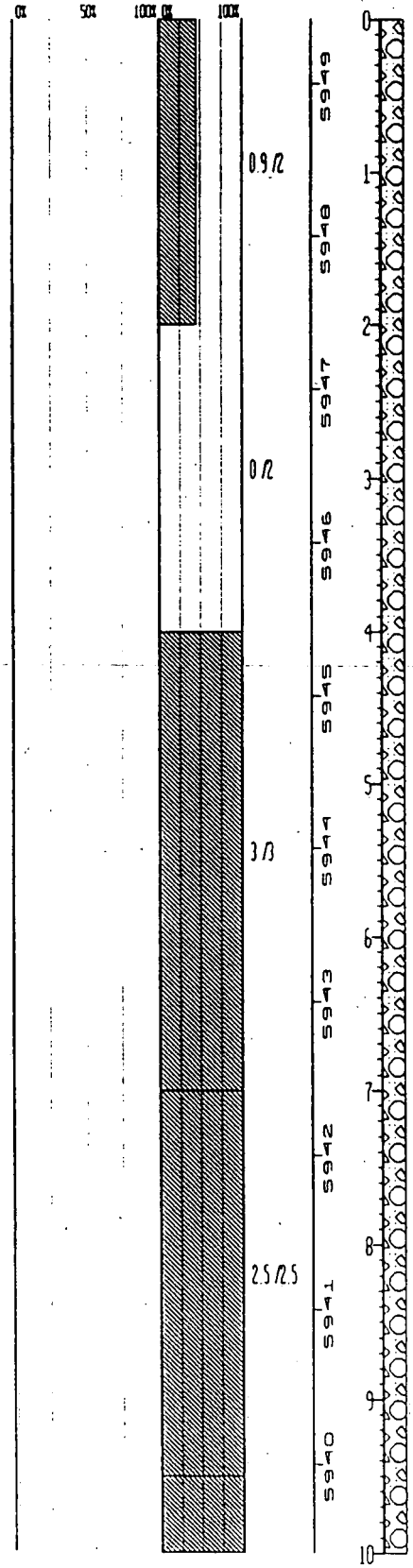


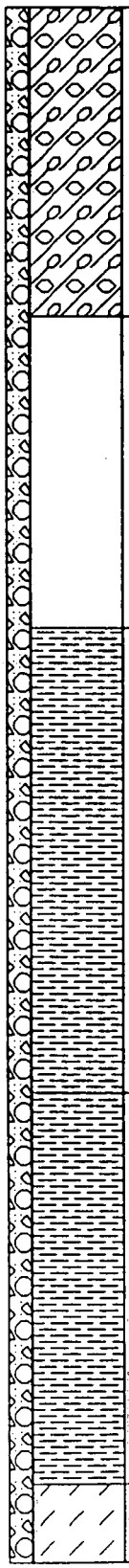
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SANDSTONE:	Grayish orange (10YR 7/4), sub-rounded to rounded, fine to very fine grained, poorly graded, some silt, trace of clay.
SILTY CLAYSTONE:	Grayish orange (10YR 7/4) and very light gray (N8), bedding is cryptic, highly weathered, moderately friable, some fine sand, localized iron staining.

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT):	5949.42	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748313	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB	45-87BR
EAST	2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	4.0	DATE DRILLED:	10/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct 7-8, 1987 by J.L. Bannon to 58.77'

SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION





UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC	Clayey Gravel - medium light gray (N6), clay matrix is medium light gray (N6) to moderate yellowish brown (10YR 5/4), angular to sub-angular, moderately well graded, 6 cm., trace of roots and some silt.
NO SAMPLE	
CLAYSTONE	Top of Bedrock Light gray (N7), bedding not apparent, highly weathered, slightly friable, localized iron staining, trace of carbonaceous mineralization and silt.
CLAYSTONE	As above, with decrease in carbonaceous mineralization and increase in silt fraction
SILTSTONE	As above, interval grades to siltstone below 10.0 ft. Siltstone, light gray (N7), laminar bedding <2 mm thick, highly friable, localized iron

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT): 5949.42	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749313	AREA: 903 PAD	CASING DIAMETER (IN): 2.10	GEOLOGIST: DCB	45-87BR
EAST: 2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 10/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct. 7-8, 1987 by J.L. Bannon to 58.77'.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50% 100%	0% 100%							staining, some clay
			2.5/2.5	5939	10				
				5938	11				
					12			CLAYSTONE	Interval grades to claystone, light olive gray (5Y 6/1), bedding not apparent, highly weathered, moderately friable, localized iron staining. From 12.0 to 13.0 ft. interval grades to dark olive gray (5Y 4/1) with abundant iron staining and some clay
			2.5/2.4	5937	13			SILTSTONE	Grayish orange (10YR 7/4), bedding not apparent, highly weathered, moderately friable, local iron staining, some clay.
				5936	14				
				5935	15			CLAYSTONE	Interval grades to claystone at approx. 14.4 ft. Olive gray (5Y 3/2), bedding not apparent, highly weathered, highly friable, abundant iron staining on fracture faces. Interval grades to grayish orange with depth, at 17.3 ft. interval grades to olive gray (5Y 3/2).
			2.5/2.6	5934	16				
				5933	17			CLAYSTONE	As above
			2.5/2.5	5932	18				
				5931	19				
				5930	20			CLAYSTONE	As above with color change to medium light gray (N6) and carbonaceous mineralization beginning at approx. 21 ft.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT): 5949.42	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748313	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	45-87BR
EAST: 2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 4 0	DATE DRILLED: 10/15/87	

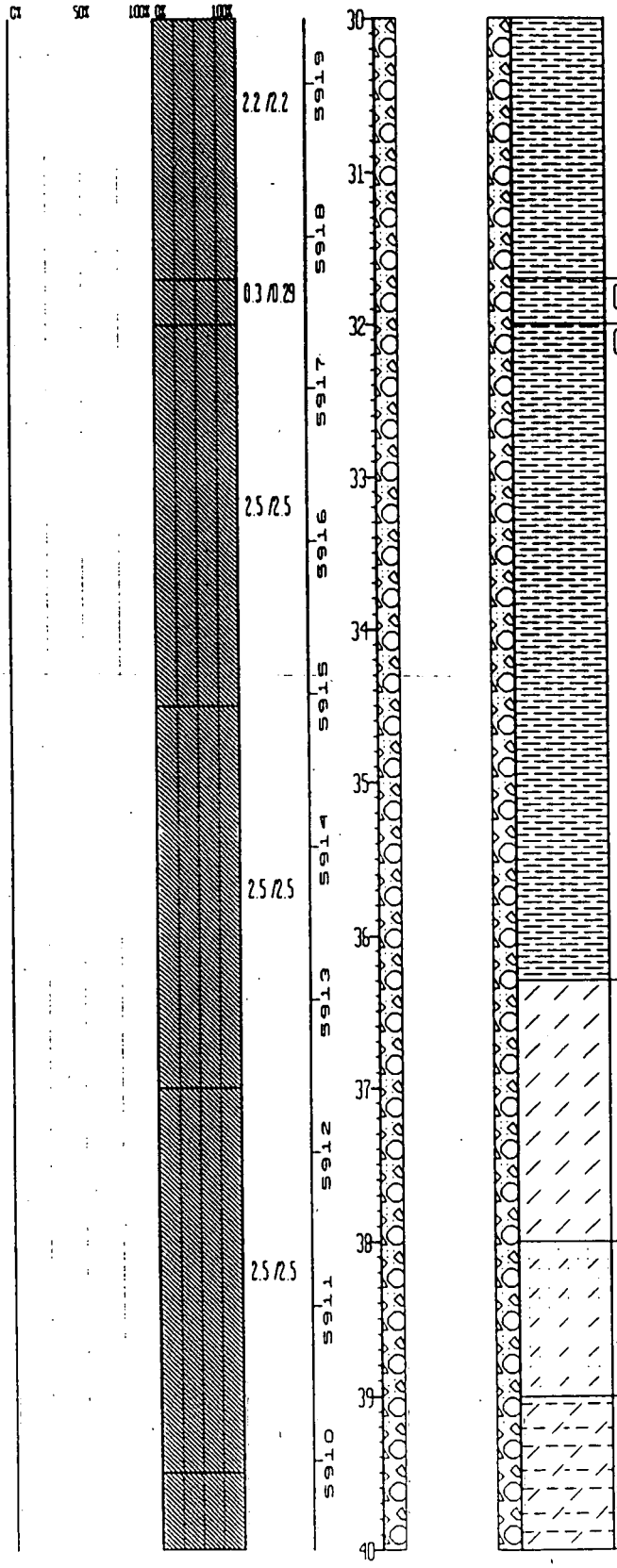
REMARKS: Hollow Stem Auger, Rotary Core. Surface casing set on Oct. 7-8, 1987 by J.L. Bannon to 58.77'.

DEPTH	GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					2.5/2.5	5929	20				
						5928	21				
							22			CLAYSTONE	As above. Small body (<0.2 ft. thick) of coal at 24 ft.
						5927					
					2.5/2.5	5926	23				
							24				
						5925				CLAYSTONE	Light olive gray (5Y 6/1), bedding not apparent, highly weathered, highly friable, abundant iron staining on fractures
							25				
					2.5/2.5	5924					
							26				
						5923					
							27			CLAYSTONE	As above with decrease in iron staining and fractures.
						5922					
					2.5/2.5		28				
						5921					
							29				
						5920				CLAYSTONE	As above.
							30				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 112	GROUND ELEVATION (FT)	5949.42	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	748313	AREA: 903 PAD	CASING DIAMETER (IN)	2 ID	GEOLOGIST:	DCB	45-87BR	
EAST:	2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN)	4 0	DATE DRILLED:	10/15/87		

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct. 7-8, 1987 by J.L. Bannon to 58.77'

SAMPLE NUMBER | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE:	As above, bedding appears to be horizontal based on core breakage.
CLAYSTONE	As above.
SILTSTONE:	Grades to siltstone and iron rich concretions, light olive gray (5Y 6/1) and light brown (5YR 5/6), bedding not apparent, well weathered, moderately friable.
SILTY SANDSTONE:	Grayish orange (10YR 7/4), thin bedded, horizontal to approx. 5 degree dip on bedding, well weathered, moderately friable, very fine grained, moderately sorted
SILTY CLAYSTONE:	Interval grades to silty claystone, grayish orange (10YR 7/4) to light gray (N7), well weathered, moderately friable, localized iron staining along partings and as irregular mottling, bedding not apparent.

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT): 5949.42	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER
NORTH:	748313	AREA: 903 PAD	CASING DIAMETER (IN): 2.10	GEOLOGIST: DCB	45-87BR
EAST:	2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 10/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct 7-8, 1987 by J.L. Bannon to 58.77'.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%							
				2.5/2.5	5909	40			CLAYEY SILTSTONE	Mottled very light gray (N7) to medium light gray (N6), bedding not apparent, weathered, moderately friable, irregular bodies of VFG sandstone.
					5908	41				
					5907	42			CLAYEY SILTSTONE	As above. Interval from 42.0 to 43 ft. appears to have thin, horizontal bedding based on core breakage.
				2.5/2.5	5906	43				
					5905	44			CLAYEY SILTSTONE	As above
				2.5/2.5	5904	45				
					5903	46				
				0.1/0.1	5902	47			CLAYEY SILTSTONE	As above.
									CLAYEY SILTSTONE	As above.
				2.1/2.1	5901	48				
					5900	49			CLAYSTONE	Interval grades to claystone at approx. 49.5 ft. Olive gray (5Y 4/1), bedding not apparent (massive?), weathered, moderately friable, iron
						50				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 112	GROUND ELEVATION (FT)	5949.42	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	748313	AREA 903 PAD	CASING DIAMETER (IN)	2.10	GEOLOGIST	DCB	45-87BR
EAST	2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN)	4.0	DATE DRILLED	10/15/87	

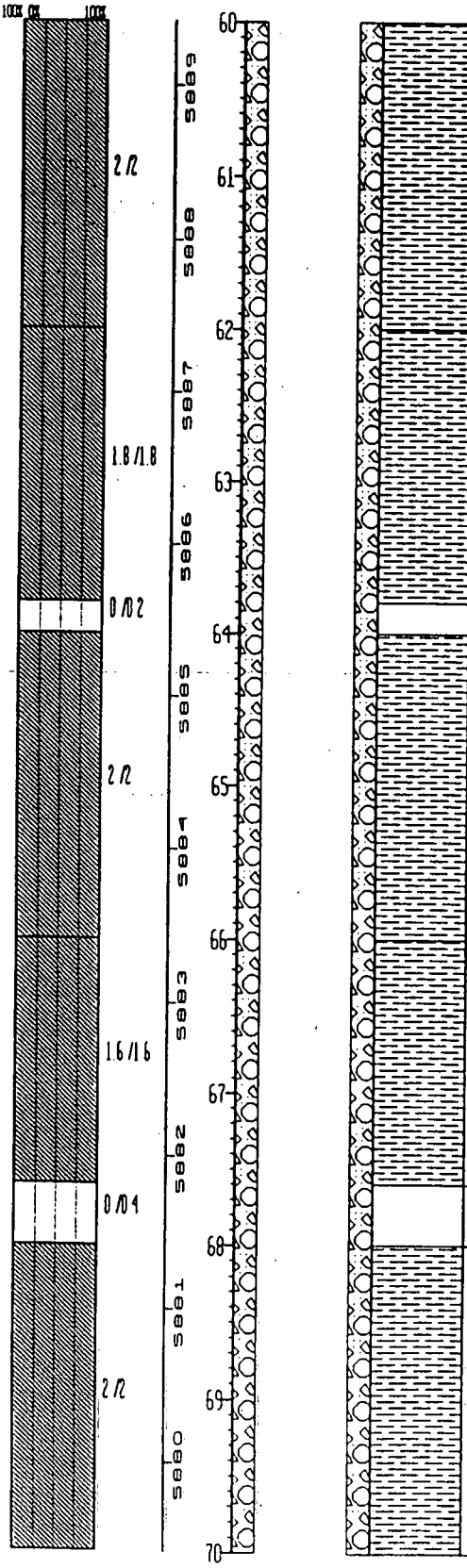
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct. 7-8, 1987 by J.L. Bannon to 58.77'

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					50				staining on partings, slight silt fraction.
			2.5/2.5	5899					
					51			SILTSTONE	Grades to siltstone at approx. 51 ft. Light olive gray (5Y 6/1), bedding not apparent, weathered, moderate to highly friable, local iron staining.
				5898					
					52			SILTSTONE	As above
				5897					
			2.5/2.5		53				
				5896					
					54				
				5895					
					55			CLAYSTONE	Grades to claystone at approx. 54.6 ft. Light olive gray (5Y 6/1), bedding not apparent (massive?), weathered, slightly friable, localized iron staining. Slickensides at approx. 55.3 ft
				5894					
			2.5/2.5					SILTSTONE	Grades to siltstone at approx. 55.5 ft. Light olive gray (5Y 6/1), bedding not apparent (massive?), weathered, slightly friable, local iron staining, moderate clay fraction.
				5893	56				
					57			CLAYSTONE	Interval grades to claystone, olive gray (5Y 4/1), bedding not apparent (massive?), weathered, slightly friable, localized iron staining and carbonaceous mineralization.
				5892					
			2.5/2.5		58				
				5891					
					59				
				5890					
			0/0.5		60			NO SAMPLE	

STATE PLANE COORDINATE	TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT): 5949.42	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 748313	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	45-87BF	
EAST: 2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 10/15/87		

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct. 7-8, 1987 by J.L. Bannon to 58.77'

CHEMICAL SAMPLE DEPTH | GRADATIONAL SAMPLE DEPTH | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE	Medium light gray (N6) to medium gray (N5), bedding not apparent, slightl friable, localized iron staining and carbonaceous mineralization, slight silt component.
CLAYSTONE	Same as above.
NO SAMPLE	
CLAYSTONE	As above. Slickenside at approx. 65.2 ft., 60 degrees attitude.
CLAYSTONE	As above.
NO SAMPLE	
CLAYSTONE	As above (reference interval 60.0 to 63.8)

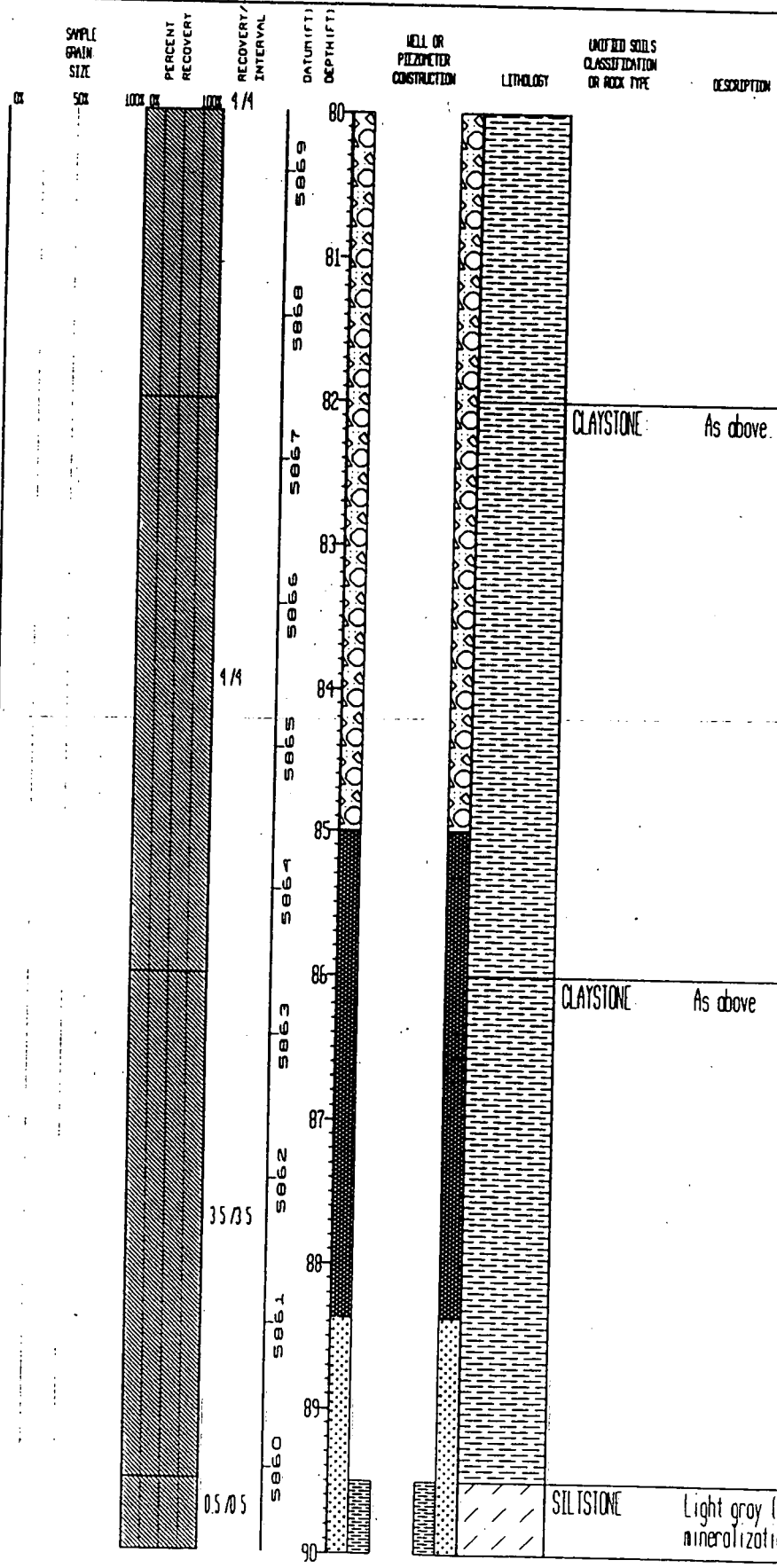
STATE PLANE COORDINATE		TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT)	5949.42	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH	748313	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB	45-87BR
EAST	2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN)	4.0	DATE DRILLED:	10/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct 7-8, 1987 by J.L. Bannon to 58.77'

SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0/2	5869	70			NO SAMPLE:	
		2/2	5868	71			CLAYSTONE:	Medium light gray (N6) to medium gray (N5), bedding not apparent to thin (approx. 2 cm. and less), horizontal, slight to moderate dip, slight to moderate friability, localized iron staining and iron staining on fracture, occasional carbonaceous mineralization, slight to moderate silt fraction.
		1.5/1.5	5867	72			CLAYSTONE:	Same as above
		0.5/0.5	5866	73			CLAYSTONE	Same as above
		0/2	5865	74			NO SAMPLE	
		1/1	5864	75			CLAYSTONE	As above
			5863	76				
			5862	77				
			5861	78				
			5860	79				
				80				

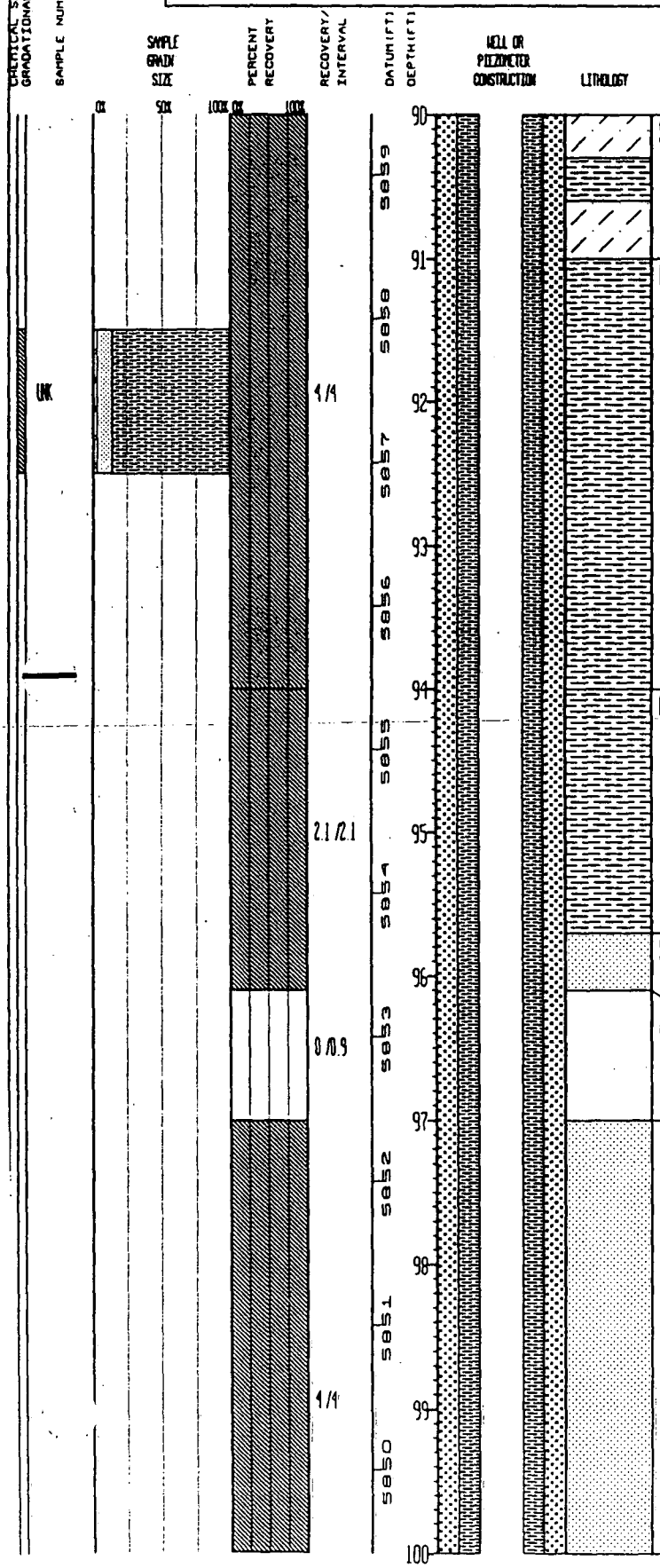
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT):	5949.92	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748313	AREA: 903 PAD	CASING DIAMETER (IN):	2.10	GEOLOGIST:	DCB	45-87BR
EAST:	2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	4.0	DATE DRILLED:	10/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct. 7-8, 1987 by J.L. Bonnon to 58.77'



STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT):	5949.92	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748313	AREA: 903 PAD	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB	45-87BR
EAST:	2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	4.0	DATE DRILLED:	10/15/87	

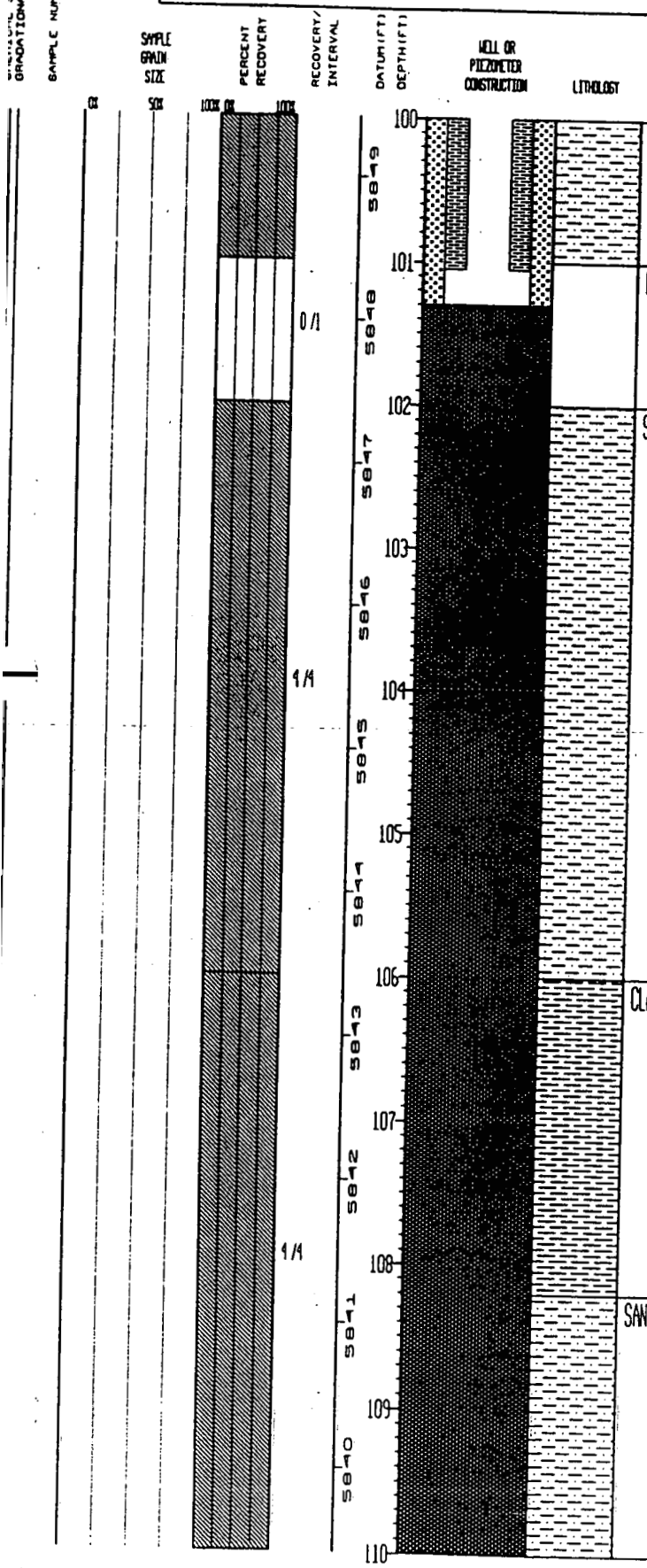
REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct. 7-8, 1987 by J.L. Bannon to 58.77'



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
SILTSTONE:	First foot, interbedded siltstone and claystone, light gray (N7) to med. light gray (N6) respectively, thin bedded (<2 mm.), slight dip, slightly friable, slight component of VFG sand, localized iron staining, occasional carb. mineralization.
CLAYSTONE:	Medium light gray (N6), bedding not apparent, slightly friable, local iron staining occasional carb. mineralization on partings, slight VFG sand fraction.
CLAYSTONE:	Same as above.
SANDSTONE:	Very light gray (N8), bedding not apparent, moderately friable, med. grained, well sorted, sub-rounded, local iron staining.
NO SAMPLE:	
SANDSTONE:	As above, slightly friable, occasional carb. mineralization, significant Mg fraction, local iron staining.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT): 5949.42	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 748313	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	45-87BR	
EAST: 2085451	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 10/15/87		

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct. 7-8, 1987 by J.L. Bannon to 58.77'.



SANDY CLAYSTONE: Very light gray (N8) to silty light gray (N7), bedding not apparent, slightly friable, local iron staining, sand is VFG.

NO SAMPLE:

SANDY CLAYSTONE: As above (reference interval 100.0 to 101.0 ft.)

CLAYSTONE: Light gray (N7), bedding not apparent, slightly friable, localized iron staining and carb. mineralization, moderate silt fraction.

SANDY CLAYSTONE: Light gray (N7), bedding not apparent, slightly friable, occasional iron staining, sand fraction is VFG.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 112	GROUND ELEVATION (FT): 5949.42	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749313	AREA: 903 PAD	CASING DIAMETER (IN): 2 ID	GEOLOGIST: DCB	45-87BR
EAST: 2085451	LOCATION NUMBER: 118	BOREHOLE DIAMETER (IN): 4.0	DATE DRILLED: 10/15/87	

REMARKS: Hollow Stem Auger; Rotary Core. Surface casing set on Oct. 7-8, 1987 by J.L. Bonon to 58.77'.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		100%	2 ft	5939	110			CLAYSTONE:	Light gray (N7), bedding indistinct may dip at 90 degrees, slightly friable, significant silt fraction, occasional iron stains and carb. mineralization, slight component of VFG sand in siltier spots.
				5938	111				
				5937	112				
				5936	113				
				5935	114				
				5934	115				
				5933	116				
				5932	117				
				5931	118				
				5930	119				
					120				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 40	GROUND ELEVATION (FT):	5952.7	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749738	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	TSD	BH45-87
EAST:	2087264	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/01/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. On September 1, 1987 BH45B7228R doubles as a DH sample.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.2/2	5952, 5951	0, 1			CL:	Gravelly Clay - grayish brown (5YR 3/2), mod. plast., some sand, trace of silt.
				0.7/1.2	5950	2, 3			GC:	GRAVEL - matrix color is dk. yellowish brown (10YR 4/2), angular to sub-rounded, well graded, max. size = 4.5 cm., some clay and sand, calcareous (floury texture).
				0/0.8	5949				NO SAMPLE:	
	BH45B7008			1.9/2.4	5948, 5947	4, 5, 6			GW:	GRAVEL - med. lt. gray (N6), angular to sub-angular, well graded, max. size = 6.5 cm., some sand, trace of clay (floury texture), calcareous.
				0/0.6	5946				NO SAMPLE:	
				0.5/0.5	5945	7			GW:	Same as above, max. size = 3.5 cm.
	BH45B7009			1.3/2	5944, 5943	8, 9, 10			GW:	Same as above, max. size = 5.5 cm.
									GW:	GRAVEL - matrix is grayish orange (10YR 7/4), angular to sub-rounded, mod. well graded, some sand and clay (floury texture), calcareous, max. size

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 40	GROUND ELEVATION (FT): 5952.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749738	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: TSD	BH45-87
EAST: 2087264	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/01/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. On September 1, 1987 BH45872ZBR doubles as a DH sample.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					10				= 6 cm.
			1.45/2.5	5942	11				
				5941	12			GW:	Same as above.
5870917			1.5/2.5	5940	13				
				5939	14				
				5938	15			CL:	Sandy Gravelly Clay - grayish orange (10YR 7/4), est. low plasticity, slightly calcareous, (max. gravel size = 7.5 cm.).
5871417			1/2	5937	16				
			0/1	5936	17			NO SAMPLE:	
				5935	18			GP:	SANDY GRAVEL - matrix color is grayish orange (10YR 7/4), sub-angular to sub-rounded, mod. to poorly graded, max. size = 6 cm., some clay.
5871 7UC			1.15/2.5	5934	19				
				5933	20				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 40	GROUND ELEVATION (FT): 5952.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749738		AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: TSD	BH45-87
EAST: 2087264		LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/01/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. On September 1, 1987 BH45872228R doubles as a DH sample.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5932	20			SANDSTONE:	Top of Bedrock Fine grained, yellowish gray (5Y 7/2), massive bedding, highly weathered, mod. friable, poorly graded, trace of iron staining.
			1.3/2.5	5931	21				
				5930	22				
			1.7/2.5	5929	23			CLAYSTONE:	Mottled yellowish gray (5Y 8/1) and dark yellowish orange (10YR 6/6), massive bedding, well weathered, slightly friable, some carbonaceous staining.
				5928	24			SANDSTONE:	As above, with trace of carbonaceous staining.
			1.35/1.8	5927	25			SILTY CLAYSTONE:	Mottled yellowish gray (5Y 8/1) and dark yellowish orange (10YR 6/6), bedding non-apparent, highly weathered, slightly to mod. friable, some carbonaceous staining, FG sand in pockets.
			0.7/0.7	5926	26	09/01/87		SILTY CLAYSTONE:	Same as above, no sand in pockets.
				5925	27			SILTY CLAYSTONE:	Same as above, mod. friable.
			2.5/2.5	5924	28			SANDSTONE:	Grades into a FG sandstone with colors as above, bedding non-apparent, mod. friable, poorly graded, trace of carbonaceous staining.
				5923	29				
					30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 40	GROUND ELEVATION (FT): 5952.7	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749738	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: TSD	BH45-87
EAST: 2087264	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/01/87	

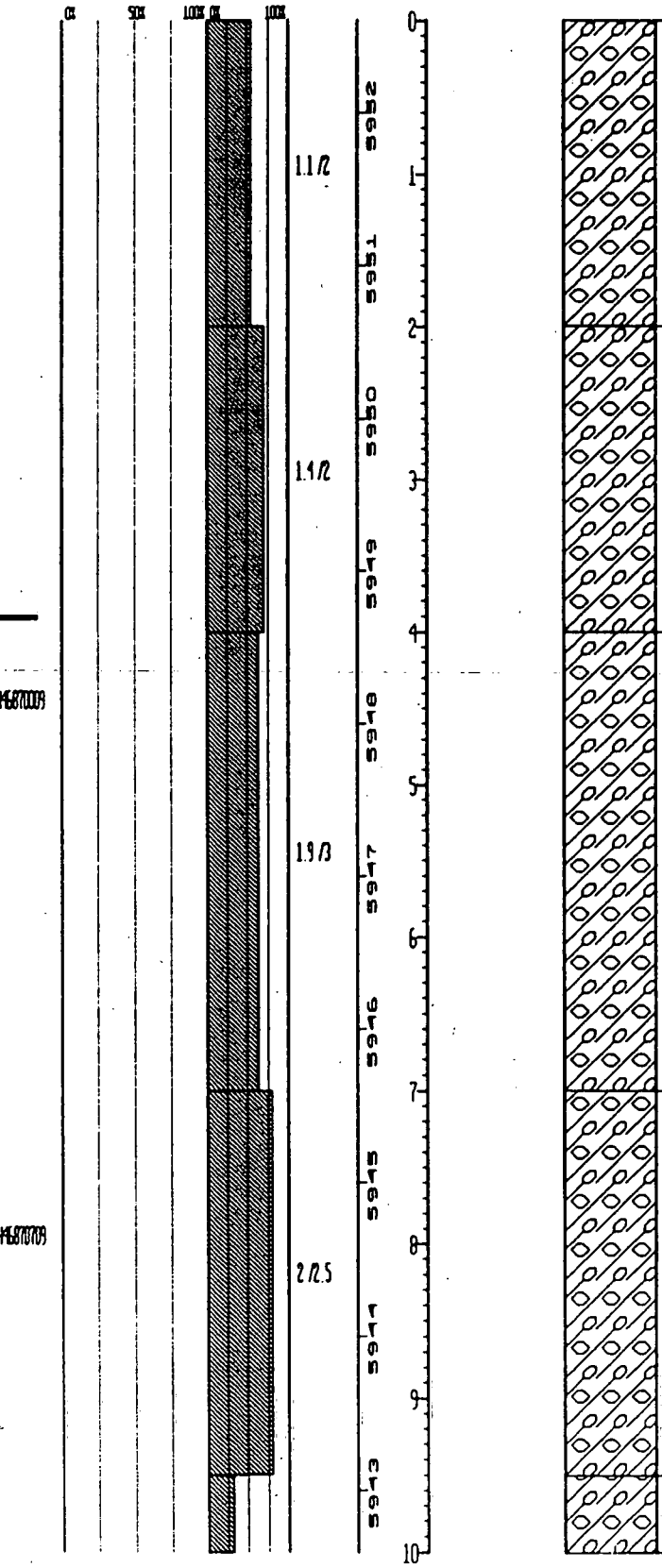
REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. On September 1, 1987 BH45872288 doubles as a DH sample.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			2/2.5	5922, 5921	30, 31, 32				CLAYEY SANDSTONE: Mottled yellowish gray (5Y 8/1) and dk. yellowish orange (10YR 6/6), bedding non-apparent, highly weathered, mod. friable, VFG to FG, poorly graded, some iron staining, trace of carbonaceous staining.
			0.2/1.4	5920, 5919	33, 34				CLAYEY SANDSTONE: Same as above, color is yellowish gray (5Y 7/2), less iron staining.
			3.6/3.6	5918, 5917, 5916	35, 36, 37				CLAYEY SANDSTONE: Same as above, becoming mottled again in the second half of interval with increased iron staining.
			1.7/2.5	5915, 5914, 5913	38, 39, 40				CLAYEY SANDSTONE: Same as above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 32	GROUND ELEVATION (FT):	5952.6	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:	
NORTH:	749695	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH46-87	
EAST:	2087322	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/03/87		

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC:	Clayey Gravel - gravel predominantly med. gray (N5), angular to sub-rounded, moderately graded, max. size 5 cm. Clay matrix mod. brown (5YR 3/4), est. mod. plast., trace to some sand, VF to coarse grained, interval slightly calcareous.
GC:	Same as above, gravel mod. well graded, matrix sandier and siltier.
GC:	Sandy Clayey Gravel - gravel predom. med. gray (N5), sub-angular to sub-rounded, mod. grading, max. size 7 cm. Matrix very pale orange to grayish orange (10YR 8/2 to 7/4). Clayey sand well graded silt to granules, sub-angular to sub-rounded, matrix slightly calcareous.
GC:	Same as above.
GC:	Sandy Clayey Gravel - gravel predom. med. gray (N5), angular to sub-rounded, mod. grading, max. size 7 cm., matrix grayish orange (10YR 7/4)

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 32	GROUND ELEVATION (FT): 5952.6	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749695	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH46-87
EAST:	2087322	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/03/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.8/2.5	5942	10–11				Clayey sand, well graded-silt to granules, sub-angular to sub-rounded, slightly calcareous.
			1.8/2.5	5940–5939	12–14			GC:	Same as above. Gravel well graded, non-calcareous.
			1/2.5	5938–5936	14–16			GC:	Same as above, max. gravel size 6 cm.
			0.1/2.5	5935–5933	17–20			GC:	Same as above.
								GC:	Clayey Sandy Gravel - gravel predominantly med. dark gray (N4), mod. well graded, angular to sub-angular, max. size 6.5 cm. Matrix lt. brown (5YR

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 32	GROUND ELEVATION (FT):	5952.6	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749695	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH46-87
EAST:	2087322	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/03/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

DEPTH	CHEMICAL SAMP / GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					1.75/2.5	5932	20				6/4) sandy clay, est. plast. low to moderate, sand fine to granules.
						5931	21				
							22			GC:	Same as above.
					0.7/2.5	5930	23				
						5929	24				
		BH68724C				5928	25			GC:	Same as above, poorly graded (only 2 cobbles, some sandy clay).
					0.2/2.5	5927	26				
						5926	27			SILTY CLAYSTONE:	Top of Bedrock Yellowish gray (5Y 8/1) to dark yellowish orange (10YR 6/6), est. plast. moderate, some carb. material, trace of gravel.
		BH68725C1			2.4/2	5925	28				
						5924	29				
					0/0.5					NO SAMPLE:	
						5923	30			SILTY CLAYSTONE:	Yellowish gray (5Y 8/1) to grayish orange (10YR 7/4), est. plast. moderate, some carb. material, grades to clayey silt.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 32	GROUND ELEVATION (FT):	5952.6	PROJECT NUMBER:	667.11
NORTH: 749695	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA
EAST: 2087322	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/03/87

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

LOG OF BORING NUMBER:

BH46-87

GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH46872SBR			2/2.5	5922	30				Note: No water encountered during drilling.
					5921	31				
					5920	32				
					5919	33				
					5918	34				
					5917	35				
					5916	36				
					5915	37				
					5914	38				
					5913	39				
						40				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 28.2	GROUND ELEVATION (FT):	5951.4	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749615	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	TSD	BH47-87
EAST:	2087570	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/15/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. Sample BH47872214T doubles as upper contact sample.

CHEMICAL SAMPLE DEPTH / GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH47871T S			0.65 /2	5951 / 5950	0 / 1			GP:	GRAVEL, predominately mod. orange pink (10 R 7/4), sub-angular to sub-rounded, poorly graded, max size equals 5.5 cm., some sand and clay grayish brown (5 YR 3/2), trace of CaCO3.
	BH47872T S			0.8 /2	5949 / 5948	2 / 3			GP:	GRAVEL, predominately lt gray (N7), angular to sub-rounded, mod. sorted, max size equals 6 cm., some sand and clay, calcareous.
	BH47873CH			0.85 /1.7	5947 / 5946	4 / 5			GP:	Same as above; Trace of clay.
	BH47874CH			0 /2.3	5945 / 5944	6 / 7			NO SAMPLE:	
	BH47875CH			0.5 /1.3	5943	8			GM:	SILTY GRAVEL, predominately med. lt. gray (N6), floury, angular to sub-rounded, mod. graded, max size equals 3.5 cm., some VFG sand to CG sand, trace of clay, calcareous, silt color is grayish orange (10 YR 7/4).
				0 /0.2	5942	9			NO SAMPLE:	
						10			GW:	GRAVEL, predominately lt. gray (N7), angular to sub-angular, mod. well graded, max size equals 5.5 cm., some sand and silt, some CaCO3.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 28.2	GROUND ELEVATION (FT):	5951.4	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749615	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	TSD	BH47-87
EAST:	2087570	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/15/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. Sample BH478722WT doubles as upper contact sample.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
BH478709DH	0% 50% 100%	0% 100%	0.9/1.5	5941	10				
			0/0.5	5940	11			NO SAMPLE:	
BH478711DH			0.6/1.5	5939	12			GW:	Same as above, interval 9.5- 11.0, less silt, some clay.
			0/0.5	5938	13			NO SAMPLE:	Interval documented as containing sample jars.
[illegible]13DH			0.95/1.5	5937	14			GW:	GRAVEL, predominately lt. gray (N7), angular to sub-rounded, mod. well graded, max size equals 4 cm., some silt, sand and clay.
BH478715DH			0/1	5936	15			NO SAMPLE:	Interval documented as containing sample jars.
BH478716FS			1/2	5935 5934	16 17			GW:	Same as above, interval 13.5- 15.0, max size equals 7 cm.
			0/0.5	5933	18			NO SAMPLE:	
			1.4/2	5932	19 20			GC:	Clayey Sandy Gravel, clay matrix is lt. brown (5 YR 5/6), gravel is sub-angular to sub-rounded, mod. well graded, max size equals 6 cm.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 28.2	GROUND ELEVATION (FT): 5951.4	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749615	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: TSD	BH47-87
EAST: 2087570	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/15/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. Sample BH478722WT doubles as upper contact sample.

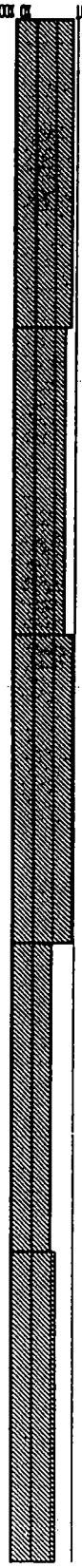
GRADATIONAL SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
BH478720H				5931	20				
BH478721FS			2/2	5930	21			GW:	SANDY GRAVEL, grayish orange (10 YR 7/4), angular to sub-rounded, well graded, max size equals 6.5 cm., some clay.
				5929	22	09/15/87 ▽			
BH478722WT			0.95/2	5928	23			GW:	Same as above.
				5927	24				
			1/1	5926	25			GP:	Same as above; gravel is poorly graded, (mostly 4 mm), max size equals 3.5 cm.
BH478788GW			0/2.2	5925	26			NO SAMPLE:	
BH478727BR				5924	27				
			0.55/0.5	5923	28			CLAYEY SILTSTONE:	Top of Bedrock Yellowish gray, bedding non evident, well weathered, mod. friable, trace of carbonaceous material, iron staining, and FG sand.
				5922	29				
					30				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 17.35	GROUND ELEVATION (FT): 5949.4	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749550	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: DAT	BH48-87
EAST: 2087749	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/17/87	

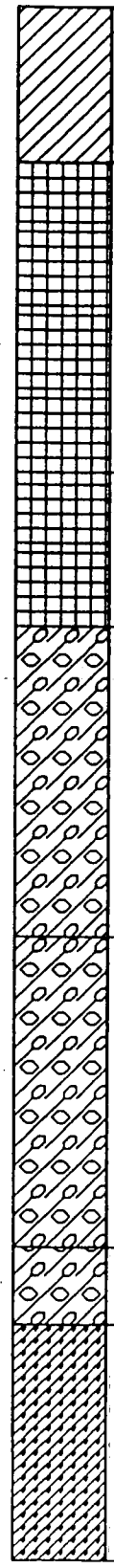
REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

GRADATIONAL | SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

BH4887000



RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)
	5949	0
1.4/2	5948	1
	5947	2
1.25/2	5946	3
	5945	4
1.6/2	5944	5
	5943	6
0.95/2	5942	7
	5941	8
1.1/2	5940	9
		10



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL:	SANDY CLAY - dusky yellowish brown (10YR 2/2), est. low plast., calcareous material, some roots.
CALICHE:	Moderate orange pink (5YR 8/4), some gravel, max gravel size = 4 cm., some clay, some sand.
CALICHE:	Same as above, with more gravel.
GC:	Clayey Gravel, light brown (5YR 5/6), angular - sub-angular, mod grading, max size = 5.5 cm., some sand, some calcareous material, gravel size becoming larger at bottom of interval.
GC:	Same as above, bottom of interval is moderate brown (5YR 4/4), sub-angular - sub-rounded, max gravel size = 3 cm., no calcareous material, increased amount of sand.
GC:	Same as above. Calcite at top 6 in. of interval.
SC:	Clayey Sand - light brown (5YR 5/6) to very pale orange (10YR 8/2), angular - sub-angular, mod - poorly graded, some silt.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 17.35	GROUND ELEVATION (FT):	5949.4	PROJECT NUMBER:	667.11
NORTH: 749550	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	DAT
EAST: 2087749	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/17/87

LOG OF BORING NUMBER:

BH48-87

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH48871OUC			0.8/1.5	5939	10			GC:	Clayey Gravel, light brown (5YR 5/6), angular - sub-angular, mod - well graded, max size = 6 cm., some sand, some silt.
					5938	11				
				0/1.7	5937	12			NO SAMPLE:	Interval contains sample jars.
					5936	13			SANDY CLAYSTONE:	Top of Bedrock Pinkish gray (5YR 8/1), mod - high plast., some silt.
	8713CT			1.8/2	5935	14				
					5934	15			SANDY CLAYSTONE:	Same as above. NOTE: No Water Encountered.
	BH48871SBR			1.7/2.15	5933	16				
					5932	17				
					5931	18				
					5930	19				
						20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 25.84	GROUND ELEVATION (FT):	5953	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749495	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	GCE	BH49-87
EAST:	2087567	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/21/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH49870008			1.9/2	5953, 5952, 5951	0, 1, 2			GC	Clayey Sandy Gravel, moderate brown (5YR 3/4), sub-angular to sub-rounded moderately graded, 4 cm diameter maximum size gravel, some root remains.
				1.6/2	5950, 5949	3, 4			GC	Clayey Sandy Gravel, moderate orange pink (5YR 8/4), sub-angular to sub-rounded, moderately graded, 5 cm diameter maximum size gravel, clay fraction is calcareous.
				1.6/2	5948, 5947	5, 6			GC	As above, color is variegated, pale yellowish orange (10YR 8/6) to/and moderate orange pink (10YR 7/4).
				1.6/2	5946, 5945	7, 8			GC	As above, color is grayish orange (10YR 7/4)
				1.2/2	5944, 5943	9, 10			GC	As above.

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 25.84	GROUND ELEVATION (FT):	5953	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749495	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	GCE	BH49-87
EAST:	2087567	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/21/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement

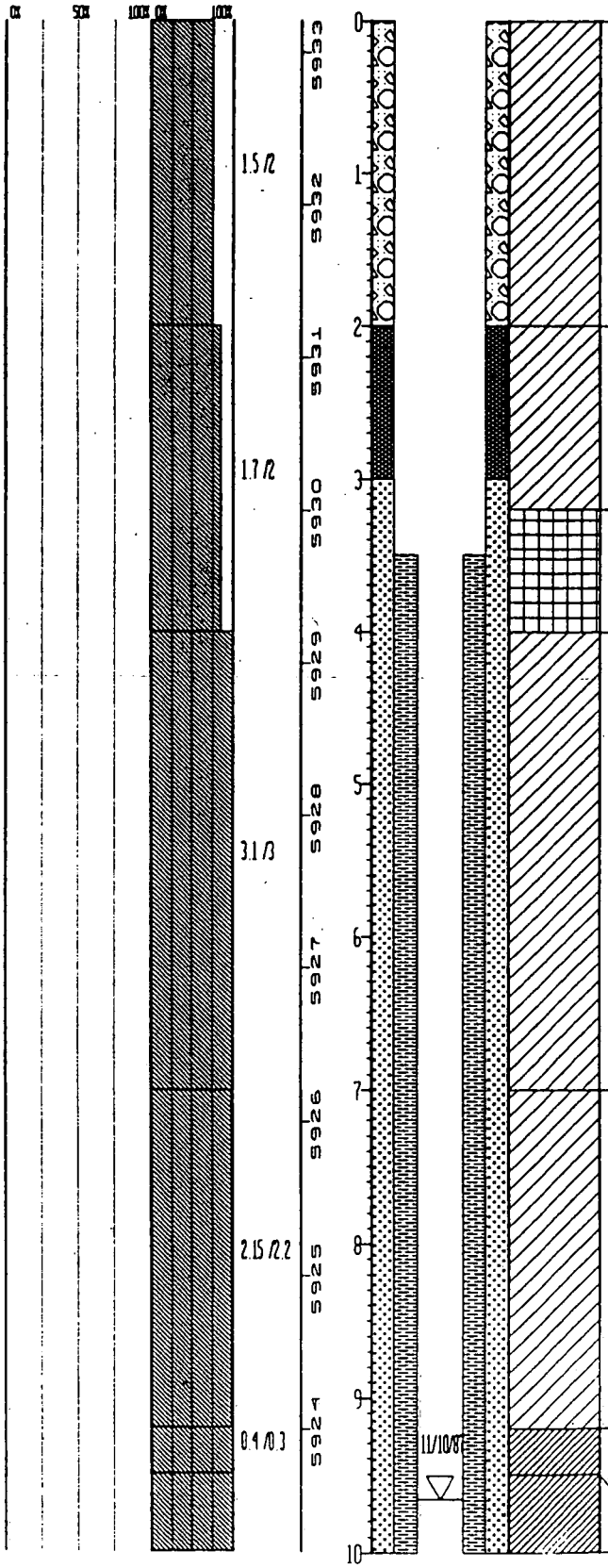
CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
BH49870816			1.5/2	5943, 5942, 5941	10, 11, 12			GC	SANDY GRAVEL, grayish orange (10YR 7/4) angular to sub-rounded, moderate to well graded, maximum size 4 cm diameter, some calcareous clay.
			1.5/2	5940, 5939	13, 14			GC	As above.
			1.8/2	5938, 5937	15, 16			GC	As above.
			1.5/2	5936, 5935	17, 18			GC	As above
			1.5/2	5934, 5933	19, 20			GC	As above

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 25.84	GROUND ELEVATION (FT): 5953	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749495	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: GCE	BH49-87
EAST: 2087567	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/21/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	BH49872UC			1.2/2	5933, 5932, 5931	20, 21, 22			GC:	As above.
	BH49872CT			1.85/2.14	5930, 5929	23, 24			CLAYSTONE:	Top of Bedrock Light gray (N7), bedding not apparent, moderate to lightly friable, iron staining on fractured surfaces.
	BH49872BR			1.7/1.7	5928, 5927, 5926, 5925, 5924, 5923	25, 26, 27, 28, 29, 30			CLAYSTONE:	As above. NOTE: No water encountered while drilling.

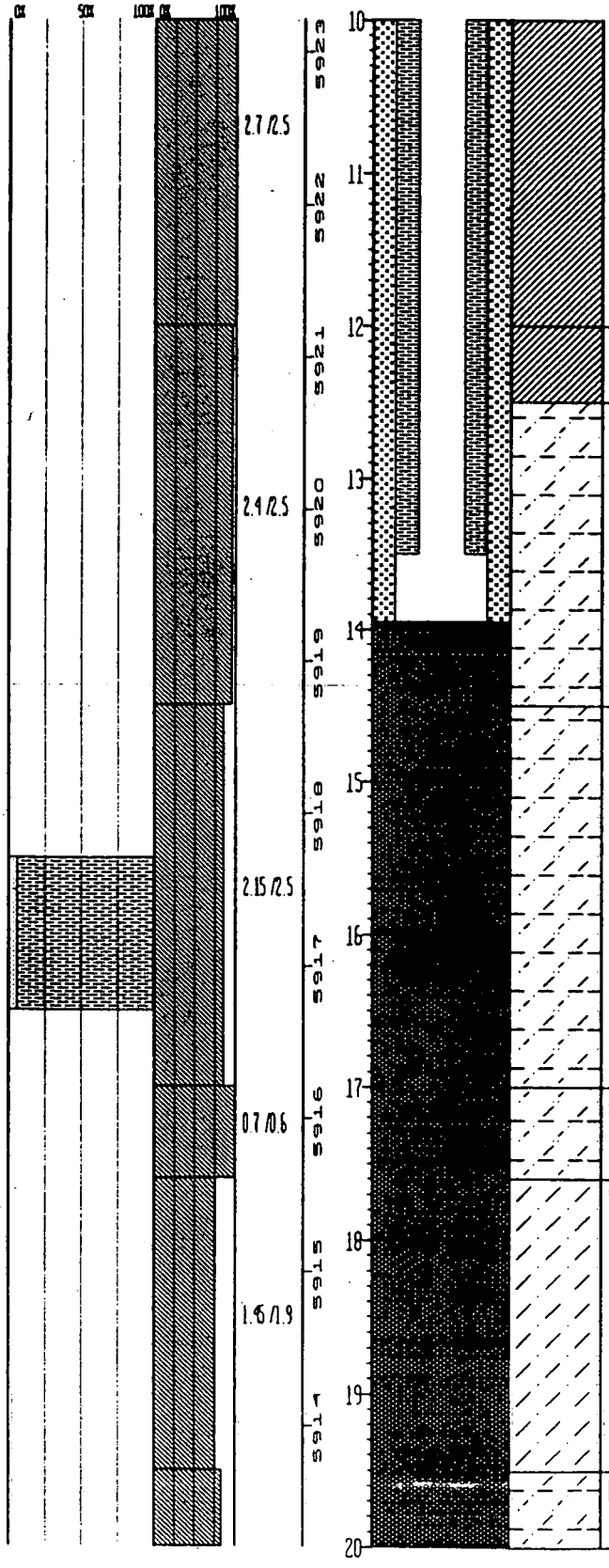
STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 27	GROUND ELEVATION (FT): 5933.21	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749121	AREA: 881 HILLSIDE	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	50-87
EAST: 2085334	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 10/02/87	
REMARKS: Hollow Stem Auger.				



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL:	GRAVELLY CLAY - grayish brown (5YR 3/2), est. plast. moderate, gravel, angular to sub-rounded, mod. grading, some sand, surficial roots and grass present at top of interval.
CL:	CLAY - lt. brownish gray (5YR 6/1), est. plast. mod. to mod. high, trace sand, some calcite.
CALICHE:	Becomes mostly caliche.
CL:	CLAY - grayish orange (10YR 7/4) to very pale orange (10YR 8/2), est. plast. moderate, very calcitic, caliche in areas, some sand (med. grained).
CL:	Same as above, caliche stringers, trace gravel.
CH:	Clay - grayish orange (10YR 7/4), est. plast. mod. to high, some gravel, some sand, some caliche clasts, matrix slightly calcitic.
CH:	Clay - grayish orange (10YR 7/4), est. plast. mod. to high, some gravel,

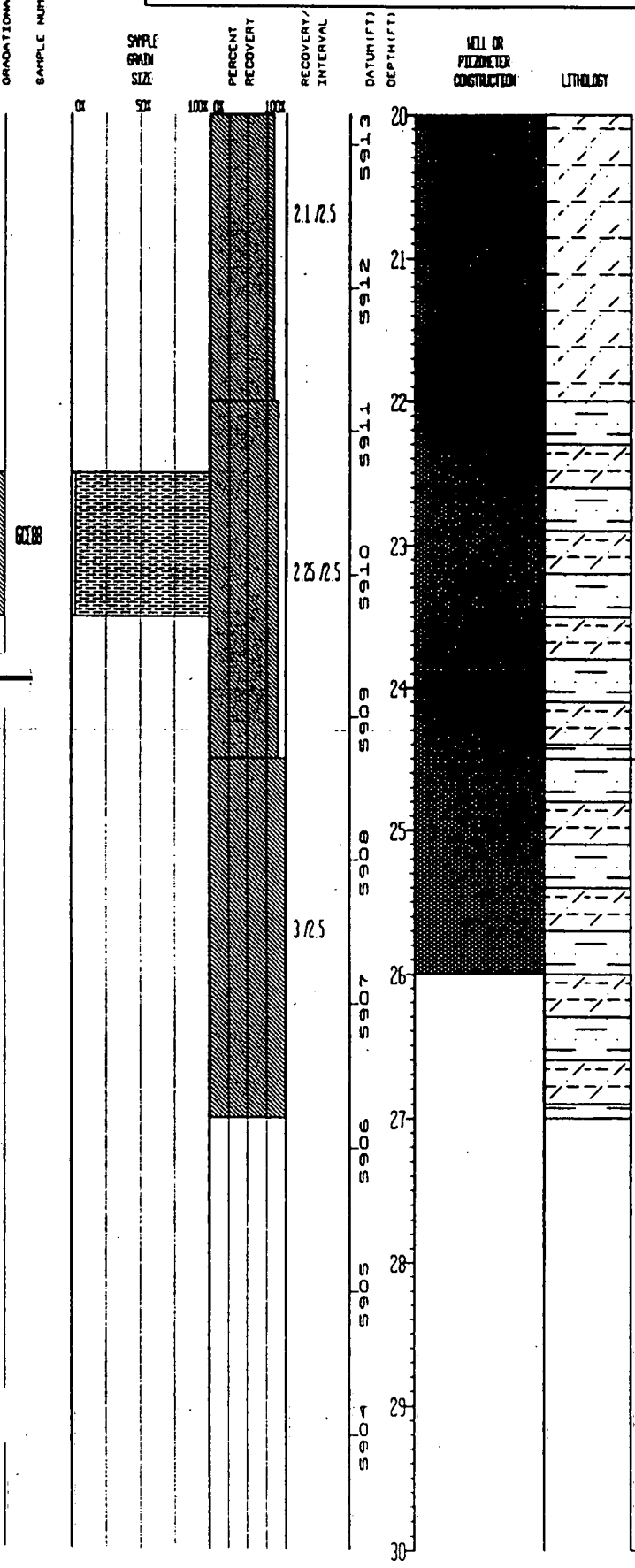
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 27	GROUND ELEVATION (FT):	5933.21	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	748121	AREA: 881 HILLSIDE	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	LAA	50-87
EAST:	2085334	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN):	7.5	DATE DRILLED:	10/02/87	

REMARKS: Hollow Stem Auger.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	some sand, some caliche clasts, matrix slightly calcitic.
CH:	Same as above.
CLAYEY SILTSTONE:	Top of Bedrock Yellowish gray to dk. yellowish orange (10YR 6/6), calcitic in areas, slightly calcitic matrix. Iron oxide concretion at bottom of interval.
CLAYEY SILTSTONE:	Dark yellowish orange to very pale orange (10YR 6/6 to 10YR 8/2), gradational contacts, horizontal bedding, highly weathered, slightly to moderately friable, iron oxide concretions at top of interval.
CLAYEY SILTSTONE:	Same as above: color more homogenous at grayish orange (10YR 7/4), no iron concretions, moderately friable.
SILTSTONE:	Very pale orange to dark yellowish orange (10YR 8/2 to 10YR 6/6), bedding not apparent, highly weathered, moderately friable.
CLAYEY SILTSTONE:	Grayish orange to dk. yellowish orange (10YR 7/4 to 10YR 6/6), bedding appears horizontal, gradational. Some thin (approx. 1 cm.), more clayey

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 27	GROUND ELEVATION (FT): 5933.21	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 748121	AREA: 881 HILLSIDE	CASING DIAMETER (IN): 2 ID	GEOLOGIST: LAA	50-87
EAST: 2085334	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 7.5	DATE DRILLED: 10/02/87	
REMARKS: Hollow Stem Auger.				



layers with iron staining at top of interval. Some very fine sand to fine sand in areas near bottom, trace of carb. material near bottom, highly weathered, mod. friable.

CLAYEY SANDSTONE: Interbedded with silty claystones, grayish orange to dk. yellowish orange (10YR 7/4 to 6/6), bedding not apparent, highly weathered, moderately friable. Sandstones very fine grained, well sorted, some iron stained vertical (?) fractures.

CLAYEY SANDSTONE: Same as above, sandstones very fine grained, some horizontal bedding visible, some carb. material.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 19.5	GROUND ELEVATION (FT): 5949.2	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749554	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH50-87
EAST: 2087866	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/17/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement

GRADATIONAL SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

Recovery/Interval	Datum (FT)	Depth (FT)	Unified Soils Classification or Rock Type	Description
	5949	0	CL:	SILTY GRAVELLY CLAY - grayish brown (5YR 3/2), moderate plasticity, some sand and surficial root material, gravel to approx. 4 cm., abundant calcite, grades downward into gravel in a caliche matrix.
1.3/2	5948	1		
	5947	2	GC:	GRAVEL - in caliche matrix, gravel med. dk. gray (N4), angular to sub-angular, mod. sorted/graded, matrix also has some clay, max. size gravel = 5 cm.
1.15/1.4	5946	3		
0/0.6			NO SAMPLE:	
0.25/0.3	5945	4	GC:	Same as above, more clay in matrix, less caliche, gravel smaller, max. size 2 cm.
0.8/0.8			GC:	Same as above, max. size gravel: 6.5 cm.
	5944	5	NO SAMPLE:	
0/1.9	5943	6		
0.3/0.5	5942	7	GC:	Clayey Gravel - med. dk. gray (N4), angular to sub-angular, mod. graded, max. size 6 cm., matrix moderate yellowish brown (10YR 5/4), silty sandy clay, mod. plasticity, slightly calcitic.
1.1/1.4	5941	8	GC:	GRAVEL - in caliche and clay. Gravel as above, max. size: 6 cm., clay matrix as above, some black carbonaceous material.
0/0.6	5940	9	NO SAMPLE:	
0.2/0.3			GC:	Same as above, matrix siltier, less sand, less caliche.
		10		

BH50B70TS

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 19.5	GROUND ELEVATION (FT): 5949.2	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749554	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH50-87
EAST: 2087866	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/17/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	0% 50%	100% 0% 100%	0.8/1	5939	10			CL:	SILTY GRAVELLY CLAY - grayish orange (10YR 7/4), low to mod. plasticity, some sand, gravel angular to sub-angular, max. size 5 cm., mod. grading, slightly clacitic.
			0.2/1.2	5938	11			GC:	Same as above.
BH50871220				5937	12			CLAYSTONE:	Top of Bedrock Very pale orange to dark yellowish orange (10YR 8/2 to 10YR 6/6), moderately high plasticity, slightly silty in some areas, trace carbonaceous material.
				5936	13				
				5935	14				
			4.3/5						
BH50871500				5934	15				
				5933	16				
				5932	17			CLAYSTONE:	Same as above. NOTE: No water encountered while drilling.
BH50871780			4/2.5	5931	18				
				5930	19				
					20				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 19.5	GROUND ELEVATION (FT): 5949	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749485	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: GCE	BH51-87
EAST: 2087929	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/22/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. Sample BH51B712WT both the water table and upper contact sample.

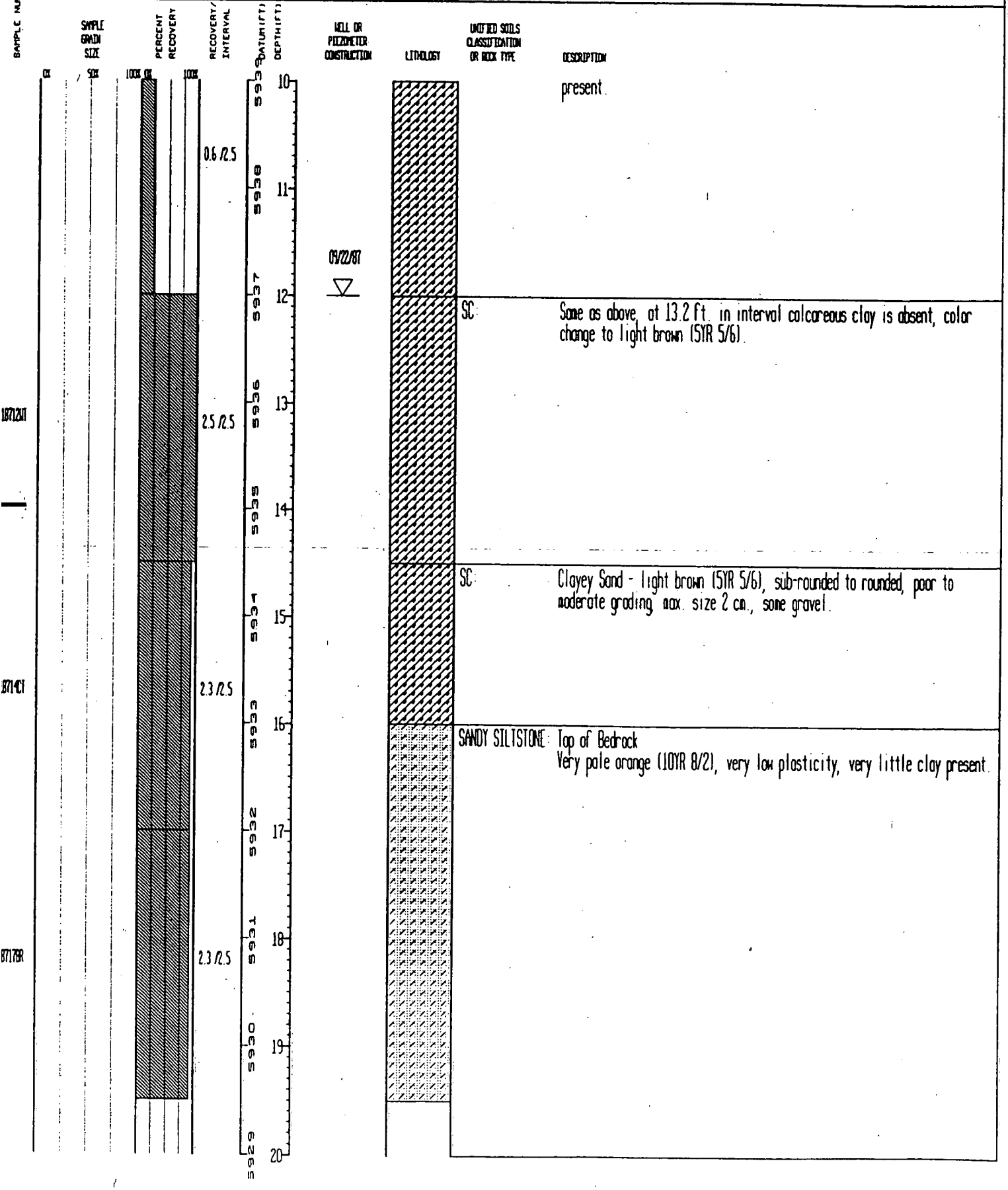
GRADATIONAL SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION

BH51B70009

RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	5949	0	GC:	Upper 1.65 ft is clayey gravel, dark yellowish brown (10YR 4/2) (clay matrix), sub-angular to rounded, moderate to well graded, max. clast size 4 cm., grass - plant remains uppermost 0.2 ft.
1.85 /2	5948	1		
	5947	2	CALICHE:	Very pale orange (10YR 8/2), some gravel and sand, gravel is sub-rounded, max. size is 5 cm.
1.55 /1.7	5946	3		
0 /0.3	5945		NO SAMPLE:	
0.4 /0.4		4	CALICHE:	Same as above.
			CALICHE:	Same as above.
1.85 /1.6	5944	5		
	5943	6	NO SAMPLE:	
0 /1				
	5942	7	GW:	SANDY GRAVEL - grayish orange (10YR 4/4), rounded to sub-angular, well graded, max. size 8 cm., some caliche present (calcareous clay).
1.85 /2	5941	8		
	5940	9	NO SAMPLE:	
0 /0.5				
	5939	10	SC:	Clayey Sand - grayish orange (10YR 4/4), sub-angular to rounded, moderately well graded, max. size 3 cm., some calcareous clay and gravel

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 19.5	GROUND ELEVATION (FT): 5949	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749485	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: GCE	BH51-87
EAST: 2087929	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/22/87	

REMARKS: Hollow Stem Auger. Borehole backfilled w/ Portland Type I cement. Sample BH518712WT both the water table and upper contact sample.



SAMPLE NUM.	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5939	10				present.
			0.6 /2.5	5938	11				
				5937	12	09/22/87 ▽			
								SC:	Same as above, at 13.2 ft. in interval calcareous clay is absent, color change to light brown (5YR 5/6).
18712WT			2.5 /2.5	5936	13				
				5935	14				
								SC:	Clayey Sand - light brown (5YR 5/6), sub-rounded to rounded, poor to moderate grading, max. size 2 cm., some gravel.
8714CT			2.3 /2.5	5934	15				
				5933	16			SANDY SILTSTONE:	Top of Bedrock Very pale orange (10YR 8/2), very low plasticity, very little clay present.
				5932	17				
8717BR			2.3 /2.5	5931	18				
				5930	19				
				5929	20				

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 25	GROUND ELEVATION (FT):	5948.1	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749555	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	DAT	BH52-87
EAST:	2087988	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/22/87	

REMARKS: Borehole backfilled on September 23, 1987 with Portland Type I cement.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH / SAMPLE NUMBER / SAMPLE GRAIN SIZE (0% 50% 100%) / PERCENT RECOVERY (0% 100%) / RECOVERY/INTERVAL / DATUM (FT) / DEPTH (FT) / WELL OR PIEZOMETER CONSTRUCTION / LITHOLOGY / UNIFIED SOILS CLASSIFICATION OR ROCK TYPE / DESCRIPTION

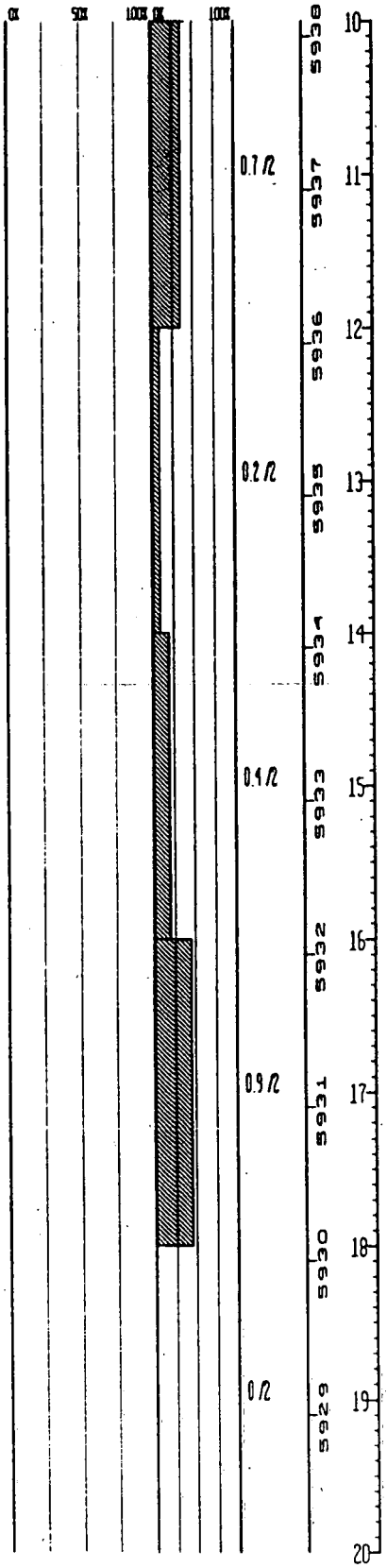
Recovery/Interval	Datum (FT)	Depth (FT)	Unified Soils Classification or Rock Type	Description
	5948	0	GC:	Clayey Sandy Gravel - matrix color is mod. brown (5Y 3/4), sub-angular to sub-rounded, mod. - well graded, max. size = 5 cm., some calc. material.
0.7 /2	5947	1		
	5946	2	CALICHE:	Moderate orange pink (5YR 8/4), powdery texture, some gravel.
0.6 /2	5945	3		
	5944	4	CALICHE:	Same as above: increase in gravel fraction.
0.3 /2	5943	5		
	5942	6	CALICHE:	Same as above: again increase in gravel fraction, some sand, some silt, slightly more consolidated texture.
1 /2	5941	7		
	5940	8	GC:	CALCAREOUS GRAVEL - matrix color is moderate orange pink (5YR 8/4), angular to sub-angular, mod. graded, max. size = 8 cm., some sand.
0.8 /2	5939	9		
		10		

BH52870010

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 25	GROUND ELEVATION (FT): 5948.1	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749555	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: DAT	BH52-87	
EAST: 2087988	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/22/87		

REMARKS: Borehole backfilled on September 23, 1987 with Portland Type I cement.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



GC:	Clayey Sandy Gravel - matrix color is grayish orange (10YR 7/4), angular to sub-angular, mod. grading, max. size = 6 cm., sand is FG-MG, some silt, slightly calc.
NO SAMPLE:	Jar sample.
GC:	Same as above: increase in clay and sand fraction, max. size = 3 cm.
GC:	Same as above: light brown (5YR 5/6), increase in gravel fraction.
NO SAMPLE:	

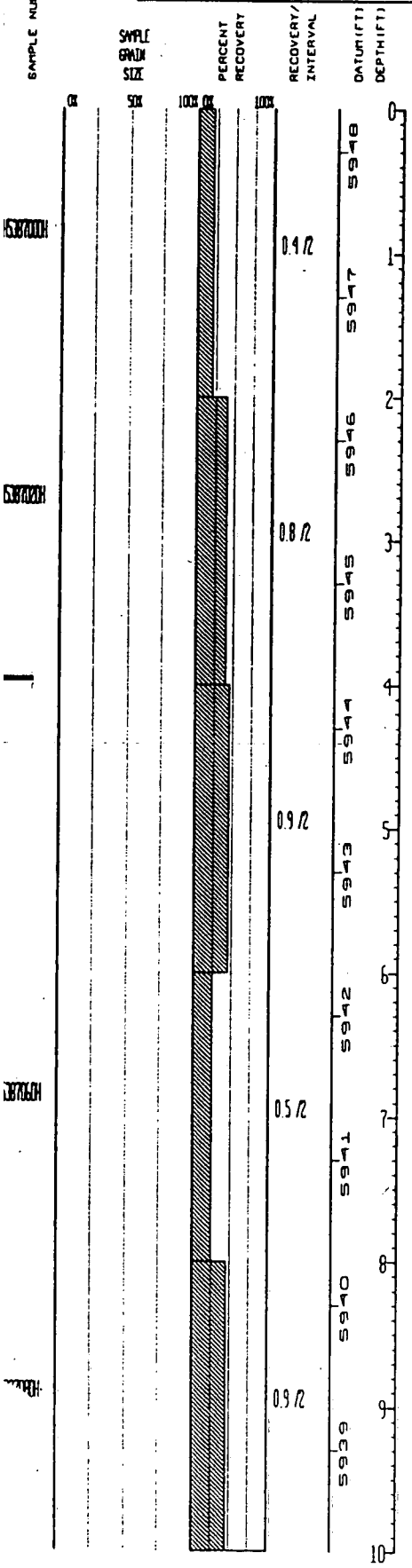
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 25		GROUND ELEVATION (FT):	5948.1	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749555	AREA: EAST TRENCHES		CASING DIAMETER (IN):	0	GEOLOGIST:	DAT	BH52-87
EAST:	2087988	LOCATOR NUMBER: 09		BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/22/87	

REMARKS: Borehole backfilled on September 23, 1987 with Portland Type I cement.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5928	20			NO SAMPLE:	
			0/2	5927	21				
				5926	22			SILTY CLAYSTONE:	Top of Bedrock Yellowish gray (5Y 7/2), non - apparent bedding, highly weathered, (floury texture at top of interval), mod. friable, some iron staining as mottles, trace of gravel at top of interval.
BH52872ZCT			2/2	5925	23				
				5924	24			SILTY CLAYSTONE:	Same as above, less silt fraction.
BH52872-BR			1/1						
				5923	25				
				5922	26				
				5921	27				
				5920	28				
				5919	29				
					30				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 24	GROUND ELEVATION (FT): 5948.3	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749686	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH53-87
EAST:	2087740	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/14/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement
Sample BH5387L9WT is water table, upper contact and direct hit sample.



WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		GW:	GRAVEL - med. lt. gray (N5), angular to sub-angular, moderately sorted, some encased in calcite mineralization, max. size 6 cm., some silty clay, calcite present.
		GC:	GRAVEL - med. lt. gray (N5), angular to sub-rounded, moderately sorted, max. size 6 cm., silty clay matrix dark yellowish brown (10YR 4/2), some sand, calcitic.
		GC:	GRAVEL - med. lt. gray (N5) predominantly, angular to sub-rounded, well graded, max. size 4 cm., matrix caliche and sandy clay, grayish orange (10YR 7/4) to white.
		GC:	Same as above.
		GC:	Same as above.

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 24	GROUND ELEVATION (FT): 5948.3	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749686	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH53-87	
EAST: 2087740	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/14/87		

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.
Sample BH538719WT is water table, upper contact and direct hit sample.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			1.7/1.6	5938, 5937	10, 11			GC:	GRAVEL - as above.
			1.3/1.6	5936	12, 13			GC:	Clayey Gravel - med. lt. gray (N6), angular to sub-angular, moderately well graded, max. size 6 cm., matrix grayish orange (10YR 7/4), clay, some sand.
				5935	14			GC:	Same as above.
BH538714DH			1.3/3	5934	15				
GCE14				5933	16				
				5932				CL:	SANDY SILTY CLAY - lt. brown (5YR 5/6) low plasticity, sand fine to very fine grained, trace gravel.
BH538716DH			1.7/1.7	5931	17				
			0/0.3		18			NO SAMPLE:	
			1.6/0.4	5930				CL:	Same as above, more gravel, 2.5 cm.
					19	09/14/87 ▽		GC:	Clayey Gravel - sub-angular to sub-rounded, med. lt. gray (N6), poorly graded, max. size 6.5 cm., clay as above.
BH538719WT			1/2	5929	20				

STATE PLANE COORDINATE		TOTAL DEPTH (FT): 24	GROUND ELEVATION (FT): 5948.3	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749686	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LMA	BH53-87
EAST:	2087740	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/14/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.
Sample BH538719WT is water table, upper contact and direct hit sample.

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE DEPTH	SAMPLE NUMB	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5928	20				
					5927	21			CH:	Gravelly Clay - yellowish gray (5Y 8/1f), high plasticity, gravel sub-angular to sub-rounded, mod. well graded, max. size 5 cm., some sand also occurs in matrix.
	BH538720CT			1.6 /2						
					5926	22			CLAYSTONE:	Top of Bedrock
	BH538722BR			1.5 /1.4	5925	23			CLAYSTONE:	Yellowish gray (5Y 8/1), mod. - high plasticity, some iron staining throughout matrix.
					5924	24				
					5923	25				
					5922	26				
					5921	27				
					5920	28				
					5919	29				
						30				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 44.5	GROUND ELEVATION (FT) 5946.2	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH	749554	AREA EAST TRENCHES	CASING DIAMETER (IN) 0	GEOLOGIST TSD/DAT	BH54-87
EAST	2088106	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN) 0	DATE DRILLED 09/21/87	

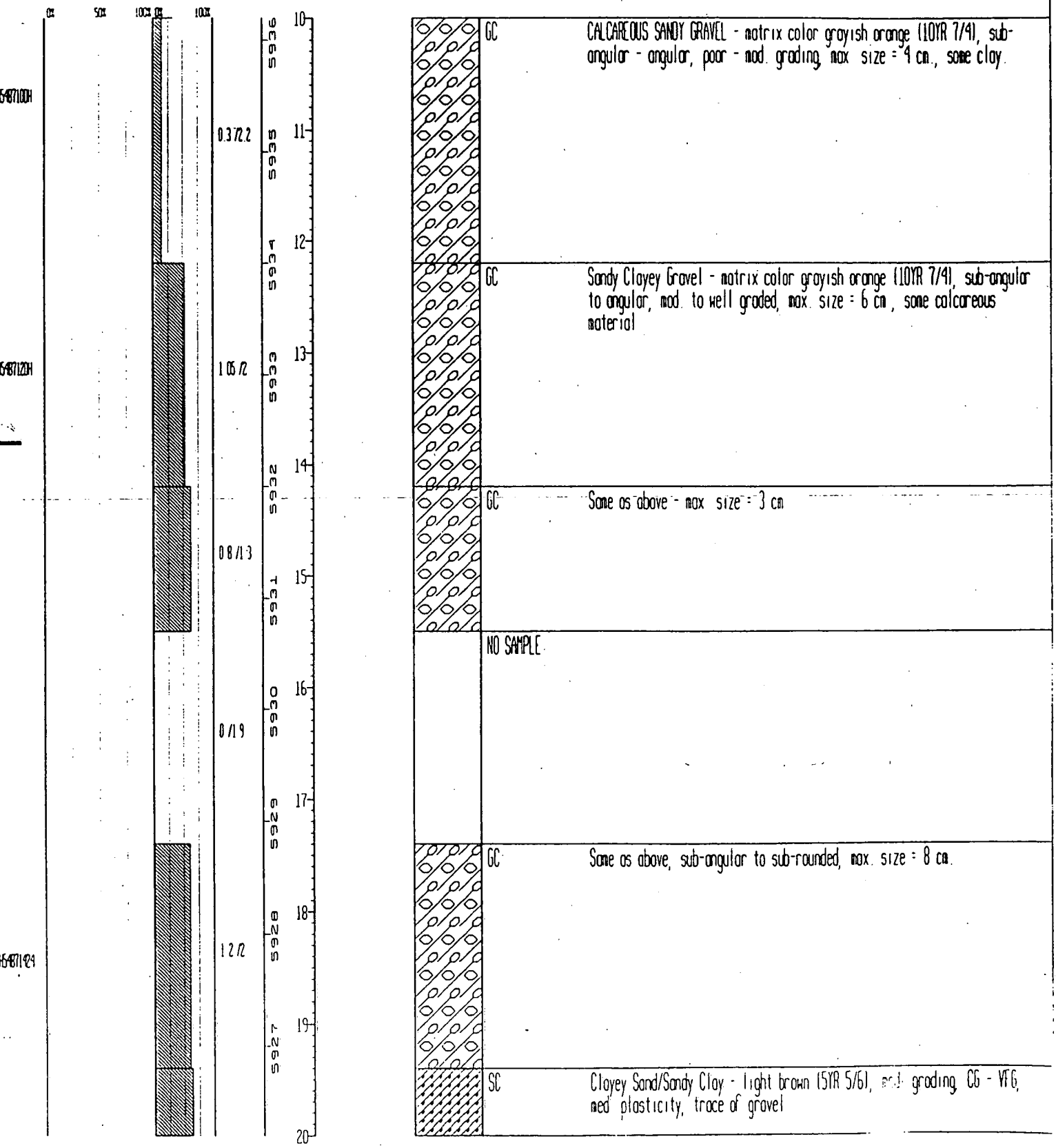
REMARKS Hollow Stem Auger Borehole backfilled with Portland Type I cement Sample BH54873BUT doubles as an upper contact sample.

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				5946	0			CL	SILTY CLAY - mod brown (5YR 3/4), est low plast., some roots, some gravel.
			1.6/2	5945	1			CALICHE	Grayish orange pink (10R 8/2), trace of gravel, max. gravel size = 8 cm.
						09/21/87 ▽			
				5944	2			CALICHE	Same as above with increasing gravel.
H54870211			1.5/2	5943	3				
				5942	4			CALICHE	Same as above with larger portion of gravel in top 8".
			2/2	5941	5				
				5940	6			GC	CALCAREOUS GRAVEL - matrix color grayish orange pink (10R 8/2), angular to sub-angular, mod. to well graded, max. size is 5.5 cm., some sand.
H54870610			0.8/2	5939	7				
				5938	8			GC	CALCAREOUS SANDY GRAVEL - matrix color very pale orange (10YR 8/2), angular/sub-angular, mod. to well graded, max. size = 5.0 cm., some clay, trace of silt
H54870510			0.65/2	5937	9				
					10				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 44.5	GROUND ELEVATION (FT): 5946.2	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:	
NORTH: 749554	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: TSD/DAT	BH54-87	
EAST: 2088106	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/21/87		

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Sample BH54873BWT doubles as an upper contact sample.

SAMPLE NUMBER | SAMPLE GRAIN SIZE (0% 50% 100%) | PERCENT RECOVERY (0% 100%) | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC	CALCAREOUS SANDY GRAVEL - matrix color grayish orange (10YR 7/4), sub-angular - angular, poor - mod. grading, max size = 4 cm., some clay.
GC	Sandy Clayey Gravel - matrix color grayish orange (10YR 7/4), sub-angular to angular, mod. to well graded, max. size = 6 cm, some calcareous material
GC	Same as above - max size = 3 cm
NO SAMPLE	
GC	Same as above, sub-angular to sub-rounded, max. size = 8 cm.
SC	Clayey Sand/Sandy Clay - light brown (5YR 5/6), mod. grading, CG - VFG, med plasticity, trace of gravel

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 44.5	GROUND ELEVATION (FT)	5946.2	PROJECT NUMBER	667.11	LOG OF BORING NUMBER:	
NORTH	743554	AREA EAST TRENCHES	CASING DIAMETER (IN)	0	GEOLOGIST	TSD/DAT	BH54-87	
EAST	2088106	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN)	0	DATE DRILLED	09/21/87		

REMARKS Hollow Stem Auger Borehole backfilled with Portland Type I cement Sample BH54873BWT doubles as an upper contact sample

CHEMICAL SAMPLE GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.35/2.1	5926	20				
					5925	21				
									SC	Clayey Sand/Sandy Clay - light brown (5YR 5/6), mod. grading, VCG - VFG, mod plast, trace of gravel
				0.9/2	5924	22				
					5923	23				
									SC	Same as above
				0.85/2	5922	24				
					5921	25				
									SC	Same as above - grayish orange (10YR 7/4)
				1.5/2	5920	26				
					5919	27				
									SC	Same as above - some gravel
	BH54872334			0.95/2	5918	28				
					5917	29				
									NO SAMPLE	
						30				

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 44.5	GROUND ELEVATION (FT) 596.2	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749554	AREA EAST TRENCHES	CASING DIAMETER (IN) 0	GEOLOGIST: ISD/DAT	BH54-87
EAST: 2088106	LOCATOR NUMBER: 09	BOREHOLE DIAMETER (IN) 0	DATE DRILLED: 09/21/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement. Sample BH54873BWT doubles as an upper contact sample.

SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0/2	566	30				
				565	31				
				564	32			SC	Clayey Sand/Sandy Clay - grayish orange (10YR 7/4), mod. grading, VCG - VFG, mod. plast., trace of gravel
			0.8/2.9	563	33				
				562	34				
				561	35			SC	Same as above, some gravel
			0.6/2	560	36				
				559	37			SC	Same as above, trace of gravel.
			0.65/2.1	558	38				
BH54873BWT				557	39			NO SAMPLE	This interval and the next 2 intervals have samples in sample jars.
			0/2		40				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 44 5	GROUND ELEVATION (FT) 5946 2	PROJECT NUMBER 667 11	LOG OF BORING NUMBER
NORTH	749554	AREA EAST TRENCHES	CASING DIAMETER (IN) 0	GEOLOGIST TSD/DAT	BH54-87
EAST	2088106	LOCATOR NUMBER 09	BOREHOLE DIAMETER (IN) 0	DATE DRILLED 09/21/87	

REMARKS Hollow Stem Auger Borehole backfilled with Portland Type I cement Sample BH54873BWT doubles as an upper contact sample.

CHEMICAL SAMPLE GRADATIONAL	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
					5906	40				
	BH54874DCT								NO SAMPLE	
				0/2	5905	41				
					5904	42				
									NO SAMPLE	Top of Bedrock
	BH54874ZBR			0/2	5903	43				
					5902	44				
					5901	45				
					5900	46				
					5899	47				
					5898	48				
					5897	49				
						50				

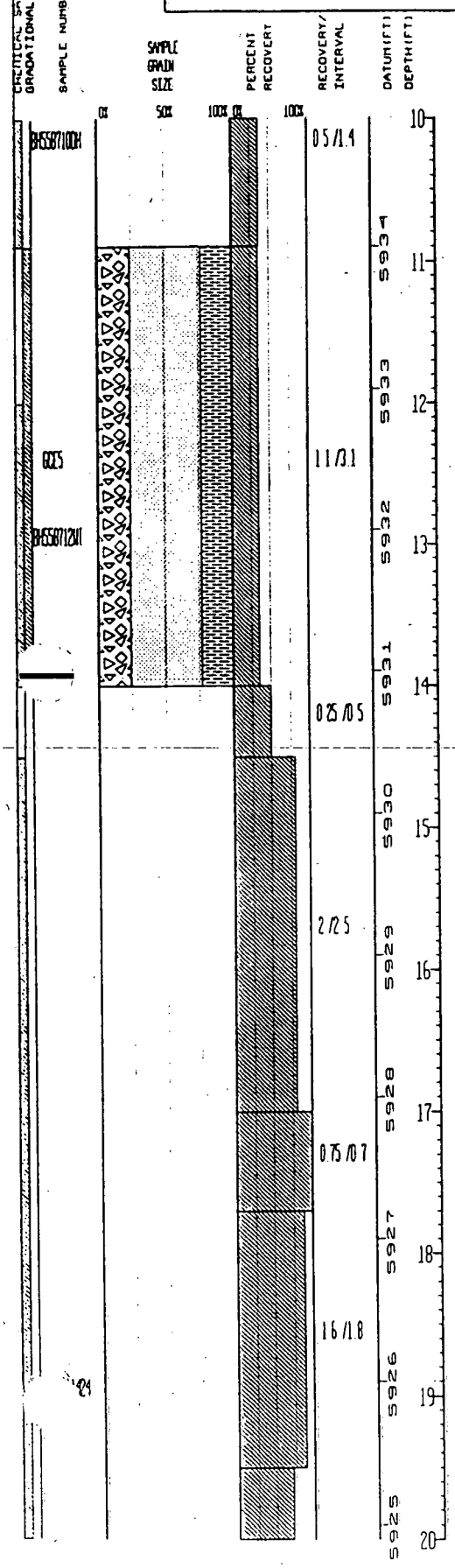
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 39.5	GROUND ELEVATION (FT):	5944.9	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749734	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH55-87
EAST:	2088041	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/16/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement

CHEMICAL SAMPLE DEPTH / GRADATIONAL SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
			0.7/1.4	5944	0–1			GC	Silty Clayey Gravel - dark gray (N3) to grayish pink (5R 8/2), sub-angular to sub-rounded, well graded, max. size 5 cm., matrix silty sandy clay, very dusky red (10R 2/2), sand fine to coarse grained, some calcite in matrix and on gravel.
			0/0.6	5943	1–2			NO SAMPLE	
BH55870ZOH			0.4/1.3	5942	2–3			GC	Silty Clayey Gravel - gravel med. lt. gray (N6), angular to sub-angular, mod. well graded, max. size 4 cm., matrix lt. brown (5YR 5/6), sandy clay. Sand fine to very coarse grained, calcite present in matrix and in rinds on gravel
			0/0.7	5941	3–4			NO SAMPLE	
			0.9/1.5	5940	4–5			GC	Same as above, max. size gravel 6.0 cm.
			0/1.5	5939	5–6			NO SAMPLE	
			0/2.5	5938	6–7			NO SAMPLE	
				5937	7–8				
				5936	8–9				
				5935	9–10			GP	3 lg. cobbles, dark gray (N3), sub-rounded, poorly graded, avg. size 6 cm., calcite and clay rinds.

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 39.5	GROUND ELEVATION (FT)	5944.9	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	749734	AREA EAST TRENCHES	CASING DIAMETER (IN)	0	GEOLOGIST	LAA	BH55-87
EAST	2983041	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN)	0	DATE DRILLED	09/16/87	

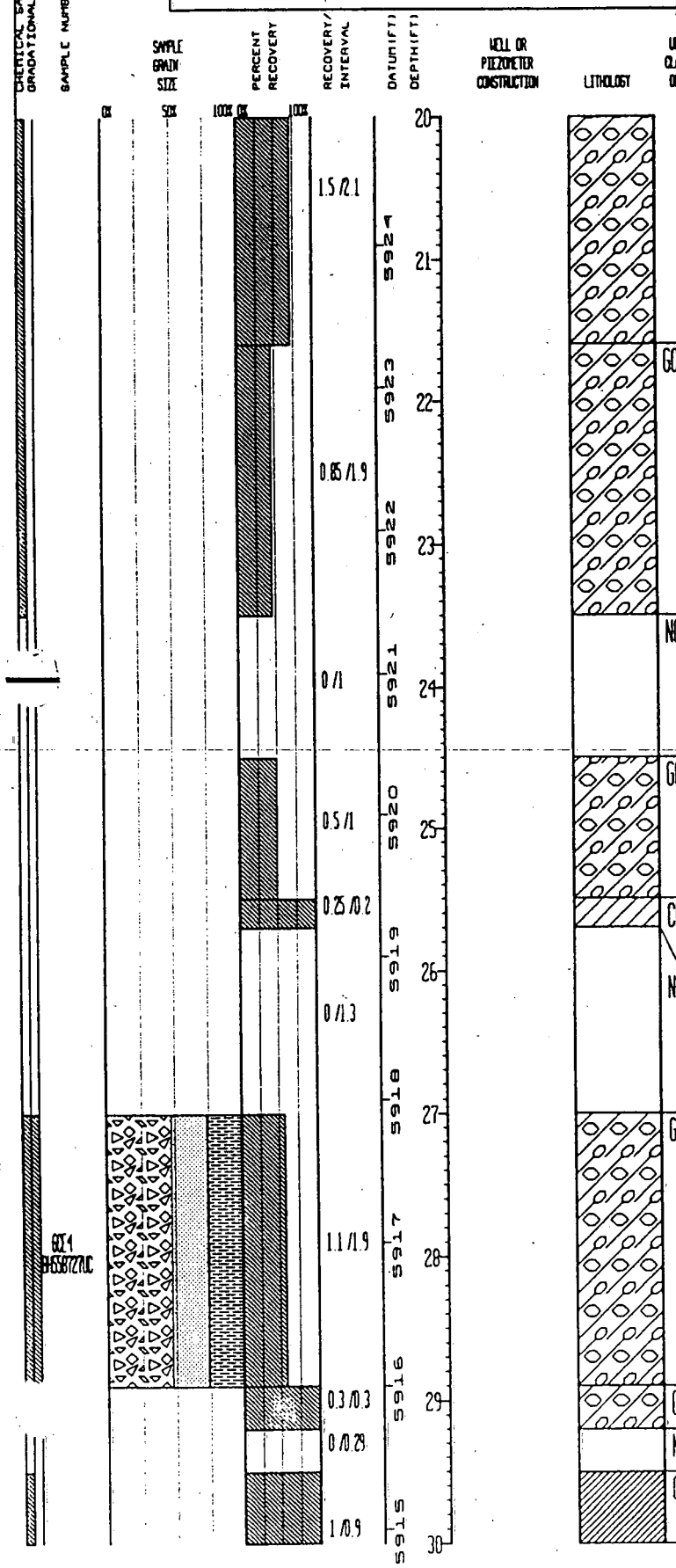
REMARKS Hollow Stem Auger Borehole backfilled with Portland Type I cement.



LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	SC	Clayey Gravelly Sand - gravel med. lt. brown (5YR 5/6), sub-angular to sub-rounded, mod. well graded, VF grained to coarse grained. Gravel sub-angular, max size 3.5 cm, well graded. Clay content enough to produce low plast
	ML	SANDY GRAVELLY SILT - grayish orange (10YR 7/4), angular to sub-angular. Sand and gravel, well graded, max size 1.5 cm, enough clay to produce low plasticity
	GC	Clayey Gravel - gravel predominantly med. lt. gray, angular to sub-rounded, mod graded, max. size 5 cm, clay matrix, lt. brown (5YR 5/6), sandy
	CL	SANDY GRAVELLY CLAY - mod. reddish brown (10R 4/6), mod. plasticity. Gravel rounded, max. size 4 cm. Sand fine to coarse grained, some black carbonaceous mineralization in cracks.
	CL	Same as above, more gravel
	GC	Clayey Gravel - light gray (N7) gravel, sub-angular to sub-rounded, mod well graded, max size 6 cm. Clay matrix dark yellowish orange (10YR

STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 39.5	GROUND ELEVATION (FT):	5944.9	PROJECT NUMBER:	667.11	LOG OF BORING NUMBER:
NORTH:	749734	AREA: EAST TRENCHES	CASING DIAMETER (IN):	0	GEOLOGIST:	LAA	BH55-87
EAST:	2088041	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	09/16/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
	6/6), sandy, fine to coarse grained.
GC:	Same as above.
NO SAMPLE:	
GC:	Same as above.
CL:	SANDY CLAY - grayish orange (10YR 7/4), moderate plasticity, sand fine to coarse grained, some gravel up to 1 cm.
NO SAMPLE:	
GC:	Clayey Gravel - grayish orange (10YR 7/4), matrix light gray (N7) gravel, sub-angular to sub-rounded, mod. well graded, max. size 6 cm. Matrix sandy, fine to coarse grained.
GC:	Same as above.
NO SAMPLE:	
CH:	Silty Clay - yellowish gray (5Y 8/1), some pale yellowish orange (10YR 8/6) and lt. brown (5YR 5/6), trace gravel, mod. high plasticity.

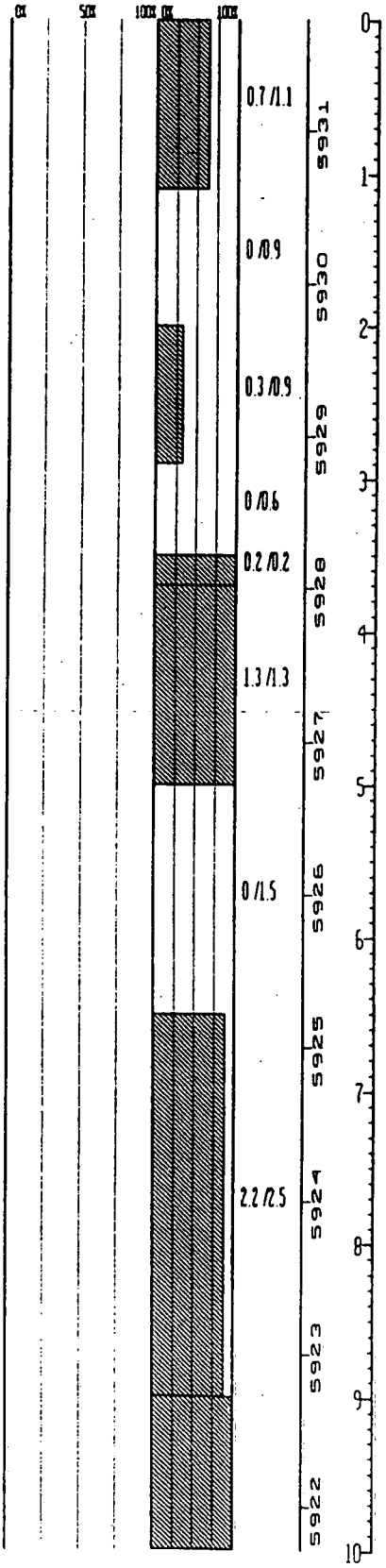
STATE PLANE COORDINATE:		TOTAL DEPTH (FT): 39.5	GROUND ELEVATION (FT): 5944.9	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH:	749734	AREA: EAST TRENCHES	CASING DIAMETER (IN): 0	GEOLOGIST: LAA	BH55-87
EAST:	2088041	LOCATOR NUMBER: P9	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 09/16/87	

REMARKS: Hollow Stem Auger Borehole backfilled with Portland Type I cement.

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
						30				
	BH55872SC1			1.75/1.6	5914	31			CH:	Silty Clay - yellowish gray (5Y 8/1), trace dk. yellowish orange (10YR 6/6), mod. high plasticity, some gravel to 6.5 cm.
					5913	32			CH:	Same as above, less gravel.
	BH55872SB1			0.1/2.1	5912	33				
					5911	34				
				0/0.1					NO SAMPLE:	
					5910	35			CH:	Same as above, more dk. yellowish orange (10YR 6/6).
	BH55874D1			2/2.1	5909	36				
				0/0.1	5908	37			NO SAMPLE:	
				1.5/1.5	5907	38			CLAYSTONE:	Top of Bedrock Lt. olive gray (5Y 6/1) to grayish orange (10YR 7/4), bedding not apparent, extremely weathered, moderately friable.
				1.05/1.05	5906	39			CLAYSTONE:	Same as above, less weathered, slightly friable.
					5905	40				

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 14	GROUND ELEVATION (FT): 5931.72	PROJECT NUMBER: 667.11	LOG OF BORING NUMBER:
NORTH: 749110	AREA: 881 HILLSIDE	CASING DIAMETER (IN): 0	GEOLOGIST: DCB	BH61-87
EAST: 2085353	LOCATOR NUMBER: M8	BOREHOLE DIAMETER (IN): 0	DATE DRILLED: 10/12/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement.



WELL OR PIEZOMETER CONSTRUCTION

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CL	CLAY - dark yellowish brown (10YR 4/2), and very pale orange (10YR 8/2), moderate plasticity, abundant caliche precipitate disseminated throughout clay, some gravel
NO SAMPLE:	
GC:	Clayey Gravel - dominantly light gray (N7), matrix is very pale orange (10YR 8/2), poorly graded, angular, max. size 6 cm., clay matrix has caliche precip. throughout.
NO SAMPLE:	
GC:	Clayey Gravel - as above (reference interval 2.0 to 2.9 ft.).
CL:	Grayish orange (10YR 7/4), bedding not apparent, highly weathered, slightly friable, abundant caliche precip. occurs throughout this weathered rock
NO SAMPLE:	
CL:	As above (reference interval 3.7 to 5.0 ft.)
CLAYSTONE	Top of Bedrock As above
CLAYSTONE	Yellowish gray (5Y 7/2), moderate plasticity, some silt, calcareous mineralization occurs throughout

STATE PLANE COORDINATE:		TOTAL DEPTH (FT) 14	GROUND ELEVATION (FT)	5931 72	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH:	748110	AREA: 881 HILLSIDE	CASING DIAMETER (IN)	0	GEOLOGIST	DCB	BH61-87
EAST:	2085353	LOCATOR NUMBER: H8	BOREHOLE DIAMETER (IN):	0	DATE DRILLED:	10/12/87	

REMARKS: Hollow Stem Auger. Borehole backfilled with Portland Type I cement

SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		100%	2.5/2.5	5921	10				
				5920	11				SILTY SANDSTONE: A gradational change occurs below 11 ft (est. depth). Silty sandstone, grayish orange (10YR 7/4), bedding not apparent, highly weathered, moderately friable, sand is very fine grained and well sorted, iron oxide occurs locally and calcareous mineralization occurs throughout. A nodule of iron oxide occurs at 12 ft (est. depth)
			2.5/2.5	5919	12				Note: No water encountered during drilling
				5918	13				
				5917	14				
				5916	15				
				5915	16				
				5914	17				
				5913	18				
				5912	19				
					20				

24/591