N00296.000930
MOFFETT FIELD
SSIC NO. 5090.3

QUARTERLY REPORT
2ND QUARTER 1990
NAS MOFFETT FIELD, CALIFORNIA
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

VOLUME 3: APPENDICES C, D, E, F, G, H AND I

AUGUST 15, 1990

Prepared by:

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Knoxville, Tennessee 37923

Submitted by:

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Oak Ridge, Tennessee 37831

for:

U.S. Department of Energy
Contract DE-AC05-840R21400

Submitted to:

Department of the Navy
Western Division
Naval Facilities Engineering Command
San Bruno, California 94066-0720

MA:MOF:4774-tocr/081390

QUARTERLY REPORT
2ND QUARTER 1990

NAS MOFFETT FIELD
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

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MOFFETT FIELD
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QUARTERLY REPORT
2ND QUARTER 1990
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

DATED 15 AUGUST 1990

THIS RECORD CONTAINS MULTIPLE VOLUMES
WHICH HAVE BEEN ENTERED SEPARATELY

VOLUME 1 OF 3 IS FILED AS ADMINISTRATIVE
RECORD NO. **N00296.000928**

VOLUME 2 OF 3 IS FILED AS ADMINISTRATIVE
RECORD NO. **N00296.000929**

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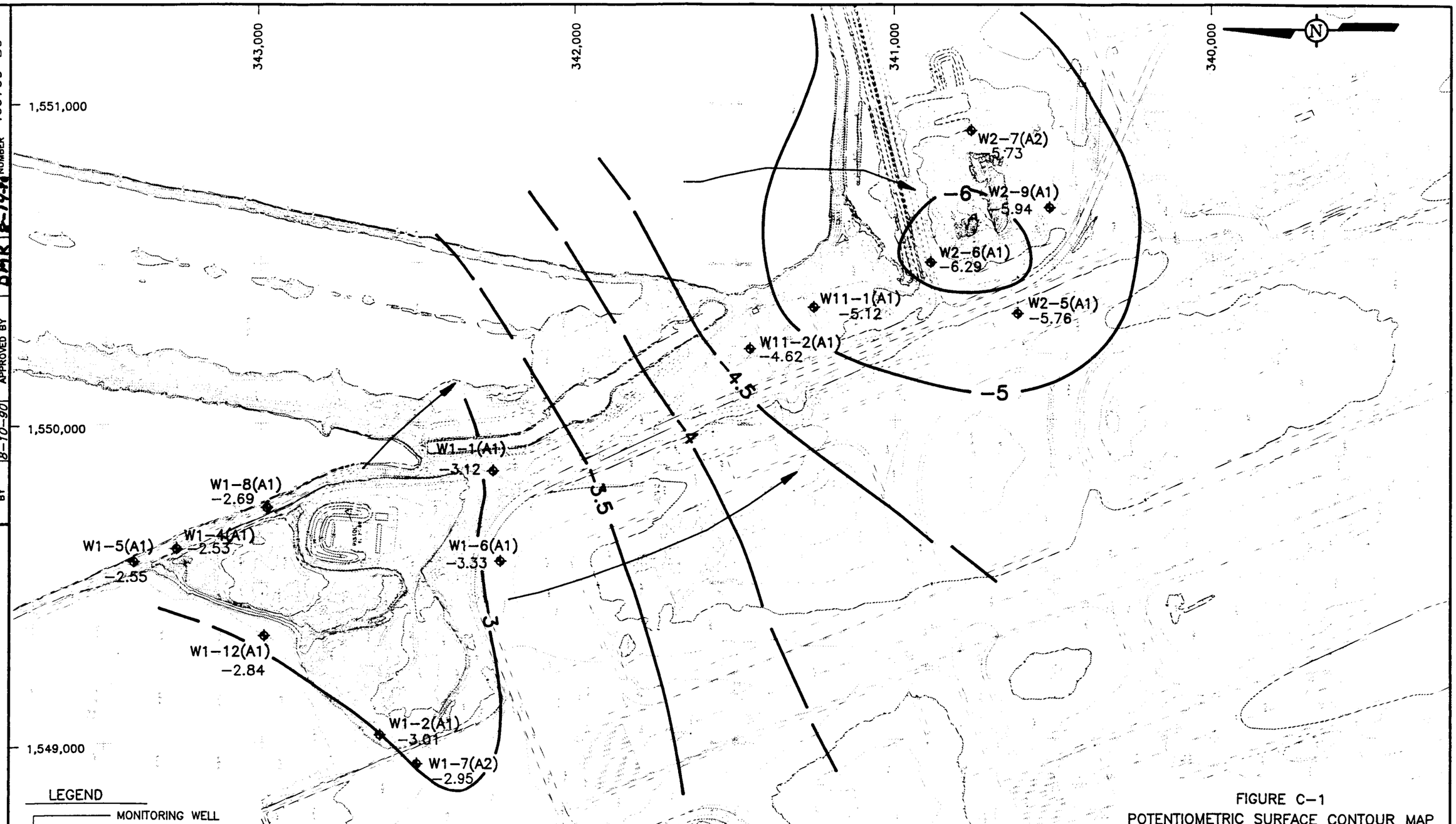
LIST OF ABBREVIATIONS

BNAs	Base/neutral and acid extractable priority pollutants
CPT/HP	Cone Penetrometer Test/Hydropunch™
ERM-West	Environmental Resources Management West, Inc.
ESA	Earth Science Associates, Inc.
DCA	Dichloroethane
DCE	Dichloroethene
EPA	Environmental Protection Agency
FS	Feasibility Study
GC	Gas chromatograph
gpm	Gallons per minute
HAZWRAP	Hazardous Waste Remedial Actions Program
IRP	Installation Restoration Program
IT	IT Corporation
ID	Internal Diameter
MEW	Middlefield - Ellis - Whisman
NAS	Naval Air Station
NTU	Nephelometric turbidity unit
PCBs	Polychlorinated biphenyls
ppb	Parts per billion
ppm	Parts per million
RI	Remedial Investigation
RWQCB	Regional Water Quality Control Board
SWAT	Solid Waste Assessment Test
TCA	Trichloroethane
TCE	Trichloroethene
TDS	Total dissolved solids
TIP	Total ionizables present, photovac, photoionization detector/pump
TL-#	Transect lines
TPHC	Total petroleum hydrocarbons
VOC	Volatile organic compounds

APPENDIX C

POTENTIOMETRIC SURFACE CONTOUR MAPS



LEGEND

- MONITORING WELL
- SITE
- WELL I.D.
- W1-6(A) — AQUIFER DESIGNATION
- -2.87 — WATER LEVEL ELEVATION (FEET-MSL,
- GROUND WATER MONITORING WELL (IT,ESA)
- -3 — POTENTIOMETRIC SURFACE CONTOUR, DASHED WHERE INFERED
- INDICATES GENERALIZED DIRECTION OF GROUND WATER MOVEMENT

NOTE:
ONLY GROUND WATER WELLS MONITORING THE A AQUIFER ARE SHOWN ON THIS MAP.

SCALE

0 300 600 900 FEET

FIGURE C-1
POTENTIOMETRIC SURFACE CONTOUR MAP
A AQUIFER, MAY 1990, SITES 1 & 2

PREPARED FOR

NAVAL AIR STATION
MOFFETT FIELD, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

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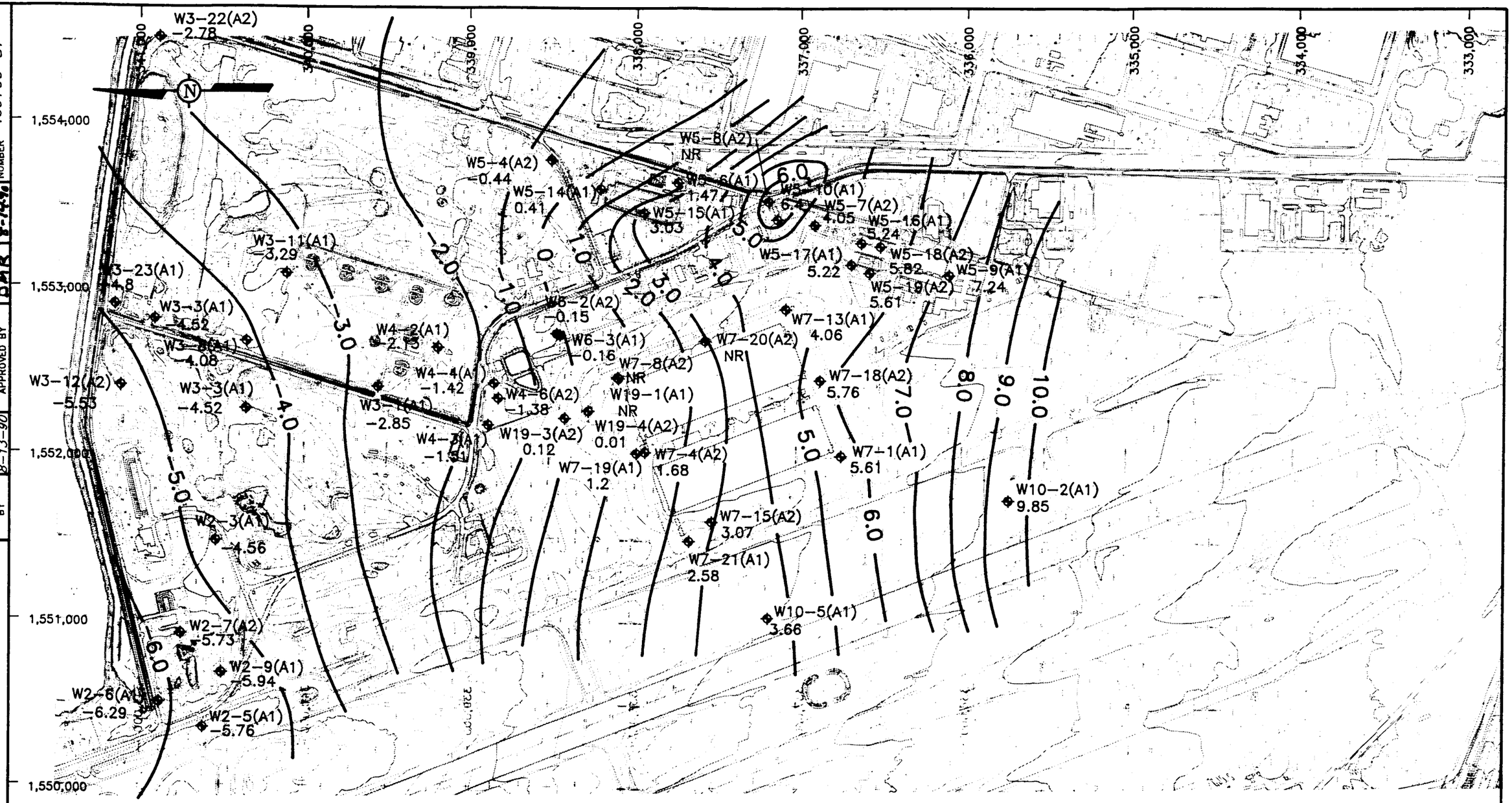
CHECKED BY
APPROVED BY
DRAWING NUMBER 409700-B6

A12-MAY(MF21)



LEGEND

MONITORING WELL
SITE
WELL I.D.
W1-6(A) — AQUIFER DESIGNATION
-2.87 — WATER LEVEL ELEVATION (FEET-MSL
NR NO READING
GROUND WATER MONITORING WELL (IT,ESA)
-3 — POTENTIOMETRIC SURFACE CONTOUR, DASHED WHERE INFERRED
INDICATES GENERALIZED DIRECTION OF GROUND WATER MOVEMENT

NOTE:
ONLY GROUND WATER WELLS MONITORING THE A AQUIFER ARE SHOWN ON THIS MAP WITH THE EXCEPTION OF TWO "B AQUIFER" WELLS (W3-12(B1) AND W3-13(B1)) WHICH ARE SCREENED IN THE DEEP A AQUIFER (40-50FT.).

SCALE
0 600 1200 1800 FEET

FIGURE C-2
POTENTIOMETRIC SURFACE CONTOUR MAP
A AQUIFER EAST, MAY 1990
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CHECKED BY		
APPROVED BY		
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1,550,000
1,549,000
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1,546,000

W14-6(A2) 20.90
W14-4(A1) 20.32
W14-5(A2) 21.52
W14-3(A1) 21.31
W14-1(A2) 21.03
W14-2(A1) 20.61
W12-2(A1) -0.21
W12-1(A2) 0.55
W12-3(A1) -0.44
W9-27(A2) 7.13
W9-14(A2) 13.52
W9-6(A1) 9.72
W9-1(A1) 9.81
W9-2(A1) 10.99
W9-7(A1) 11.97
W9-13(A2) 11.07
W8-2(A2) -0.56
W8-1(A2) -0.37
W8-5(A1) -0.78
W8-4(A1) -1.31
W8-6(A1) -0.51

0 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 19.0 20.0 21.0

LEGEND

- MONITORING WELL
- SITE
- WELL I.D.
- W1-6(A) — AQUIFER DESIGNATION
- -2.87 — WATER LEVEL ELEVATION (FEET-MSL)
- GROUND WATER MONITORING WELL (IT,ESA)
- 3 — POTENTIOMETRIC SURFACE CONTOUR, DASHED WHERE INFERRED
- INDICATES GENERALIZED DIRECTION OF GROUND WATER MOVEMENT

NOTE:
ONLY GROUND WATER WELLS MONITORING THE A AQUIFER ARE SHOWN ON THIS MAP.

SCALE
0 600 1200 1800 FEET

FIGURE C-3
POTENTIOMETRIC SURFACE CONTOUR MAP
A AQUIFER WEST, MAY 1990
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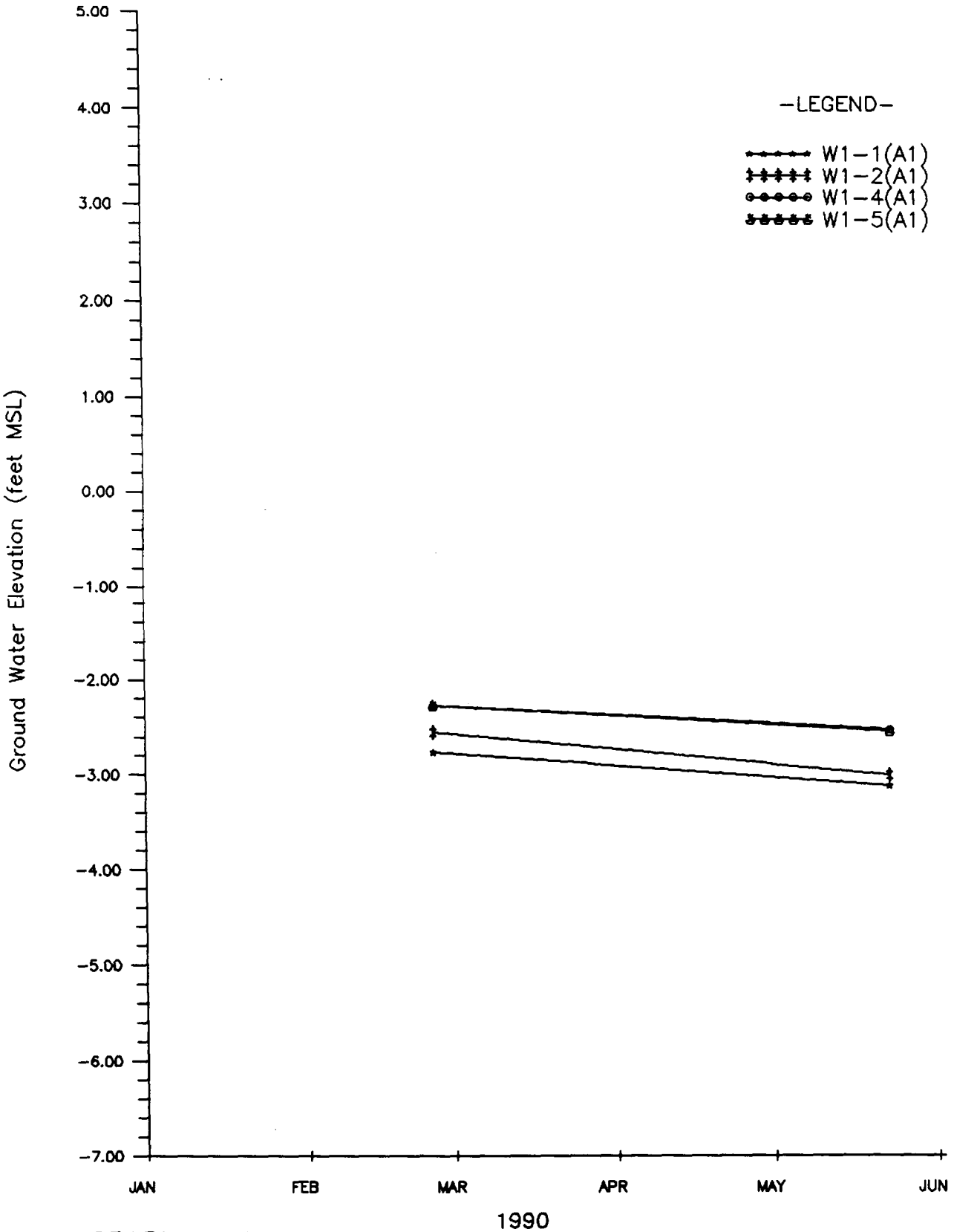
AW-MAY(MF21)

APPENDIX D
HYDROGRAPHS



GRAPH A-1
Hydrograph of Site 01
A-Aquifer Well(s)

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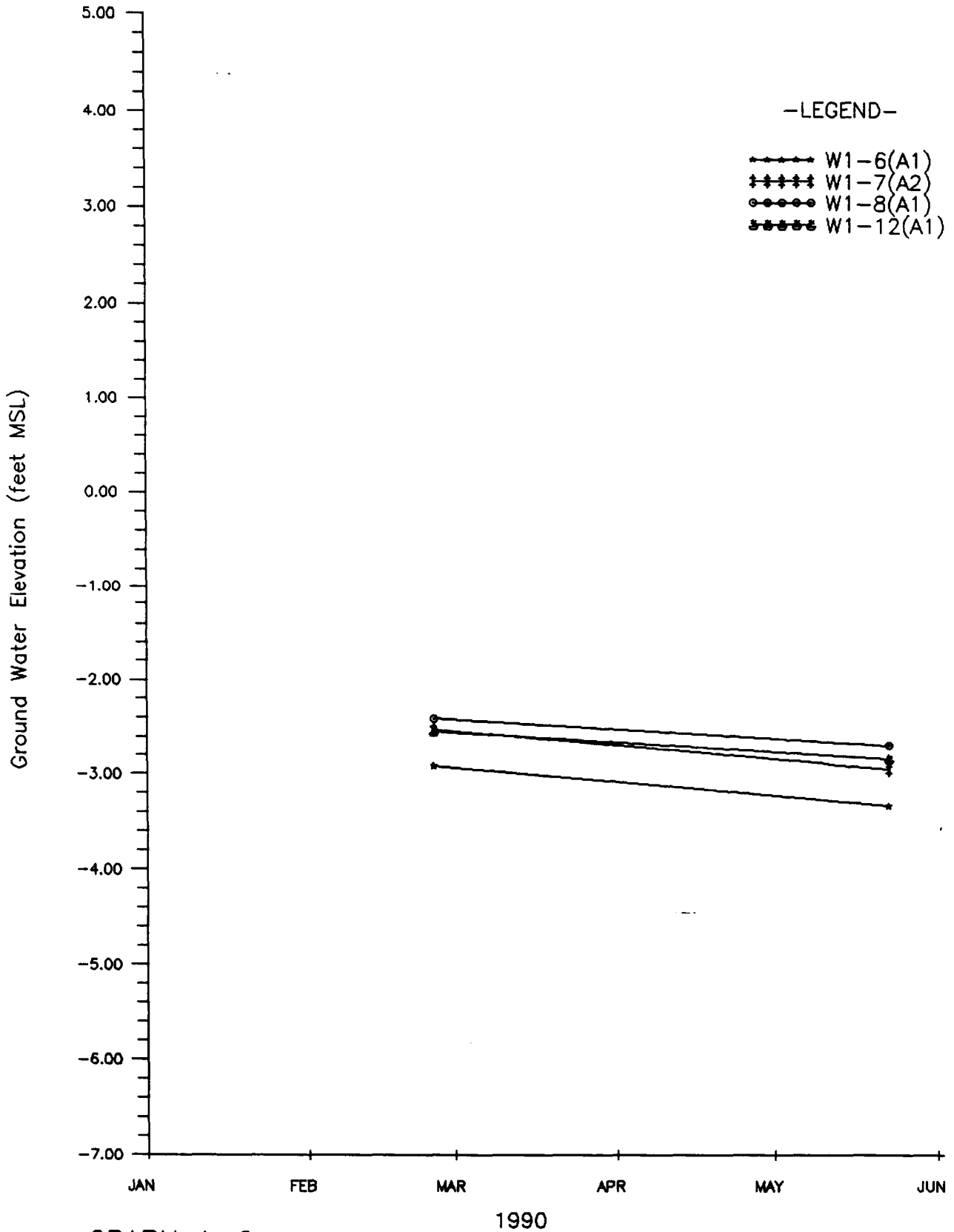

GRAPH A-2
Hydrograph of Site 01
A-Aquifer Well(s)

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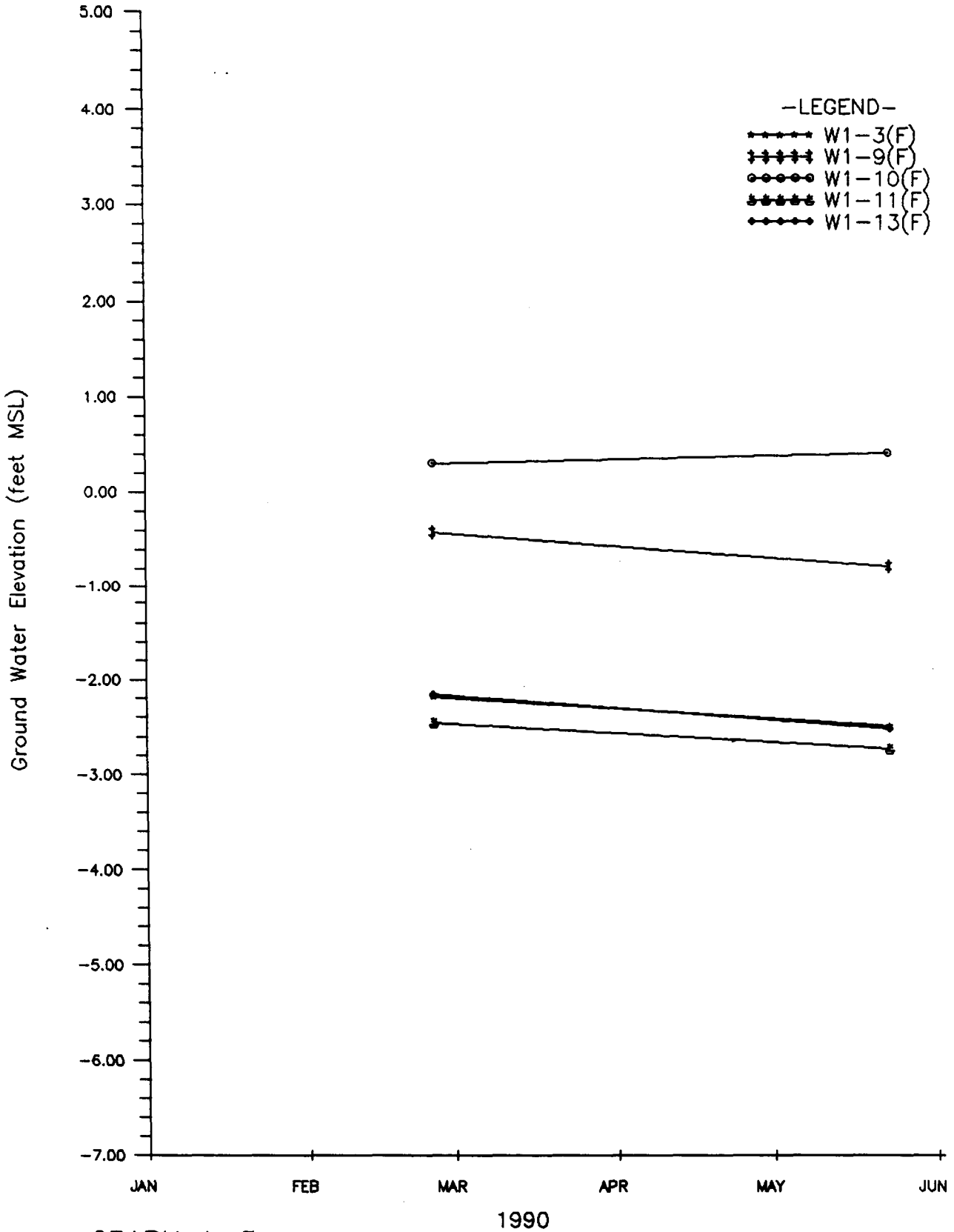

GRAPH A-3
Hydrograph of Site 01
Leachate Well(s)

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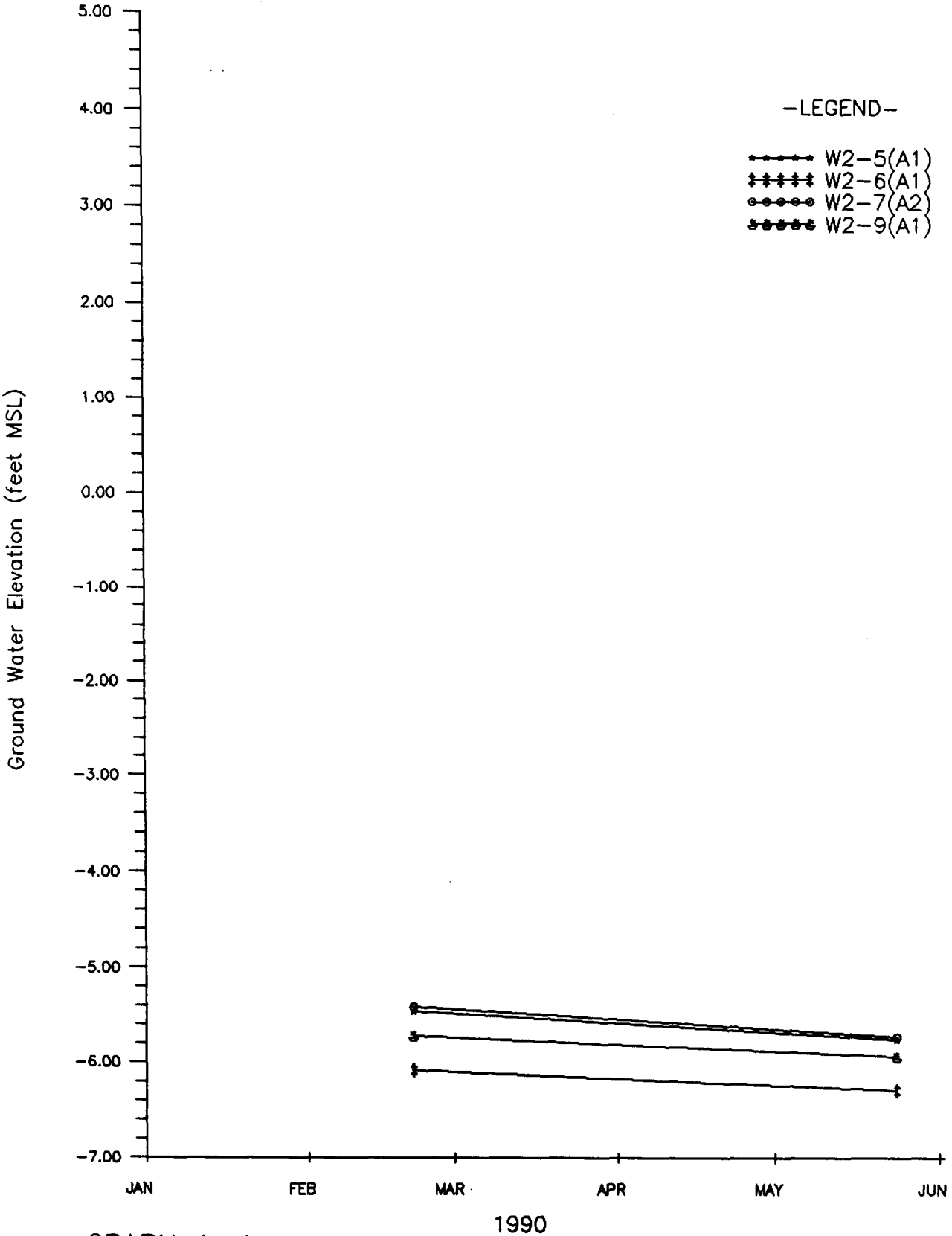

GRAPH A-4
Hydrograph of Site 02
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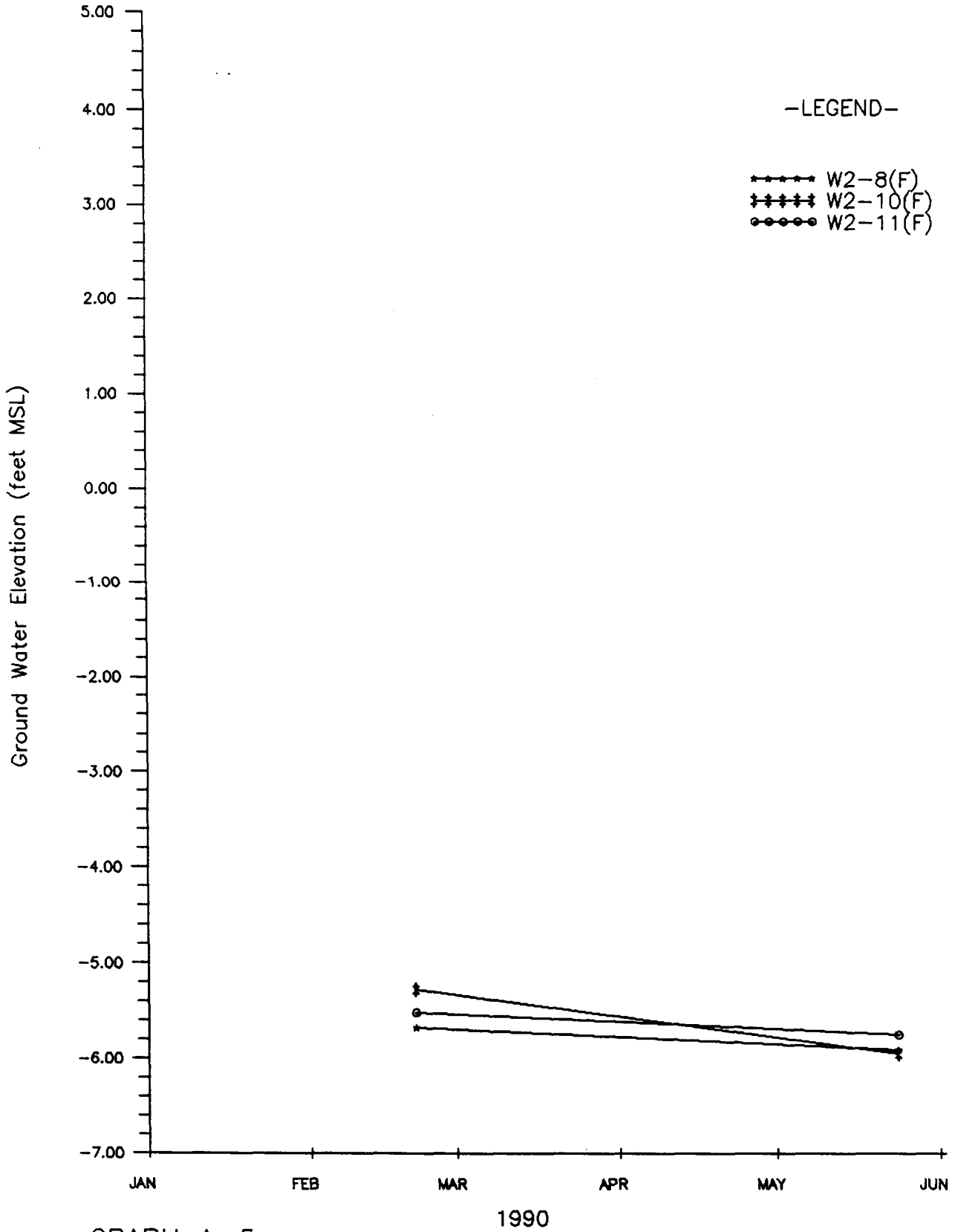

GRAPH A-5
Hydrograph of Site 02
Leachate Well(s)

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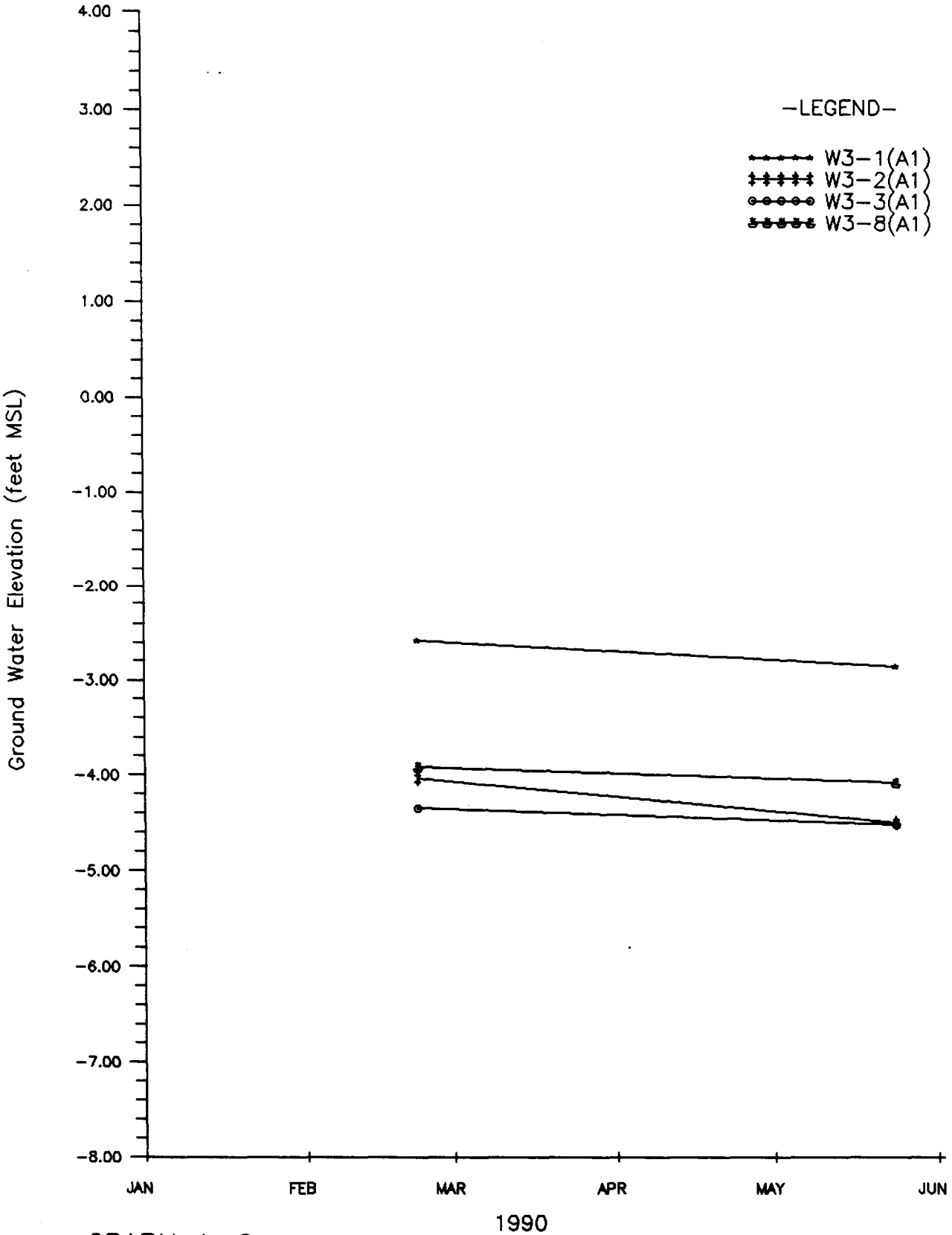

GRAPH A-6
Hydrograph of Site 03
A-Aquifer Well(s)

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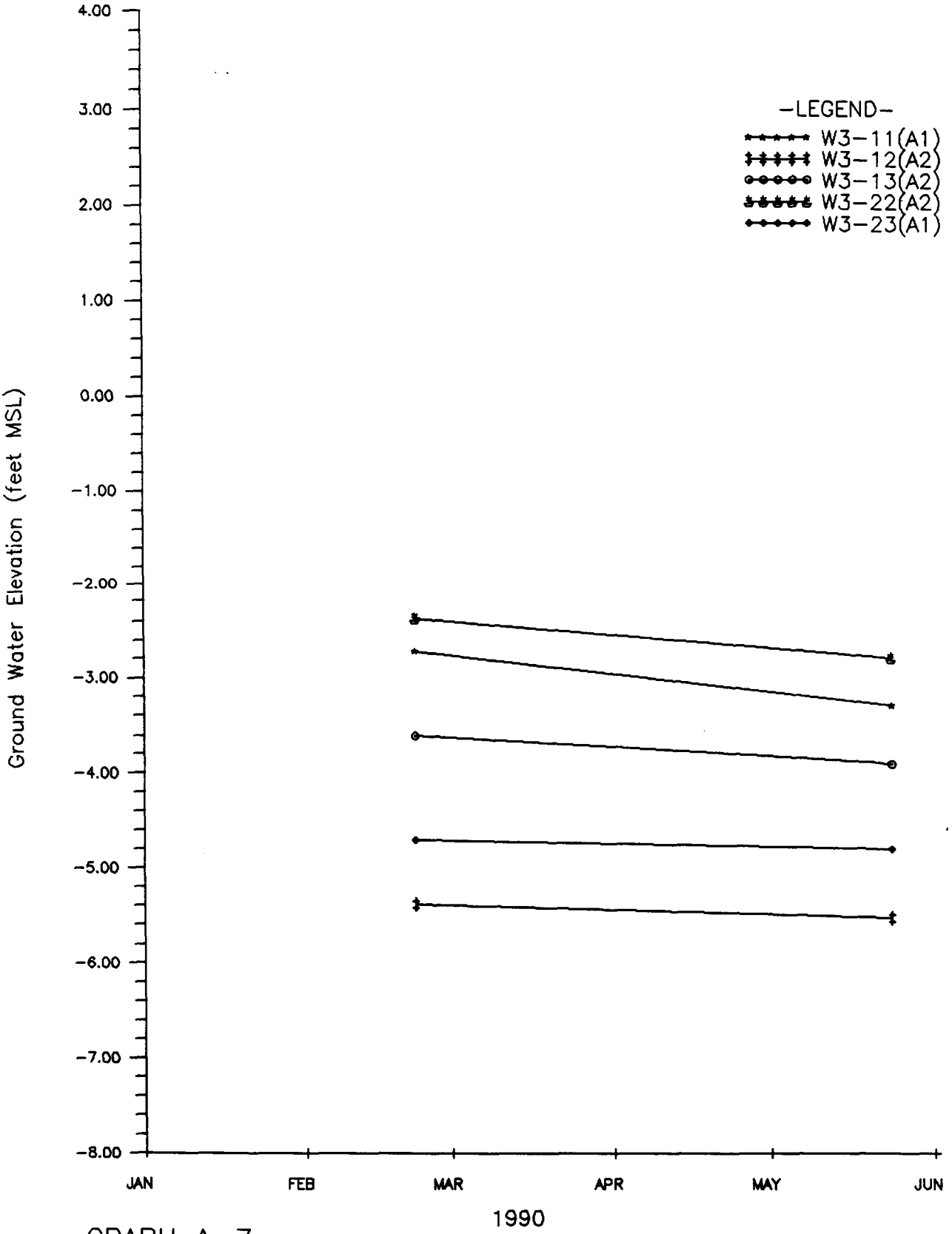

GRAPH A-7
Hydrograph of Site 03
A-Aquifer Well(s)

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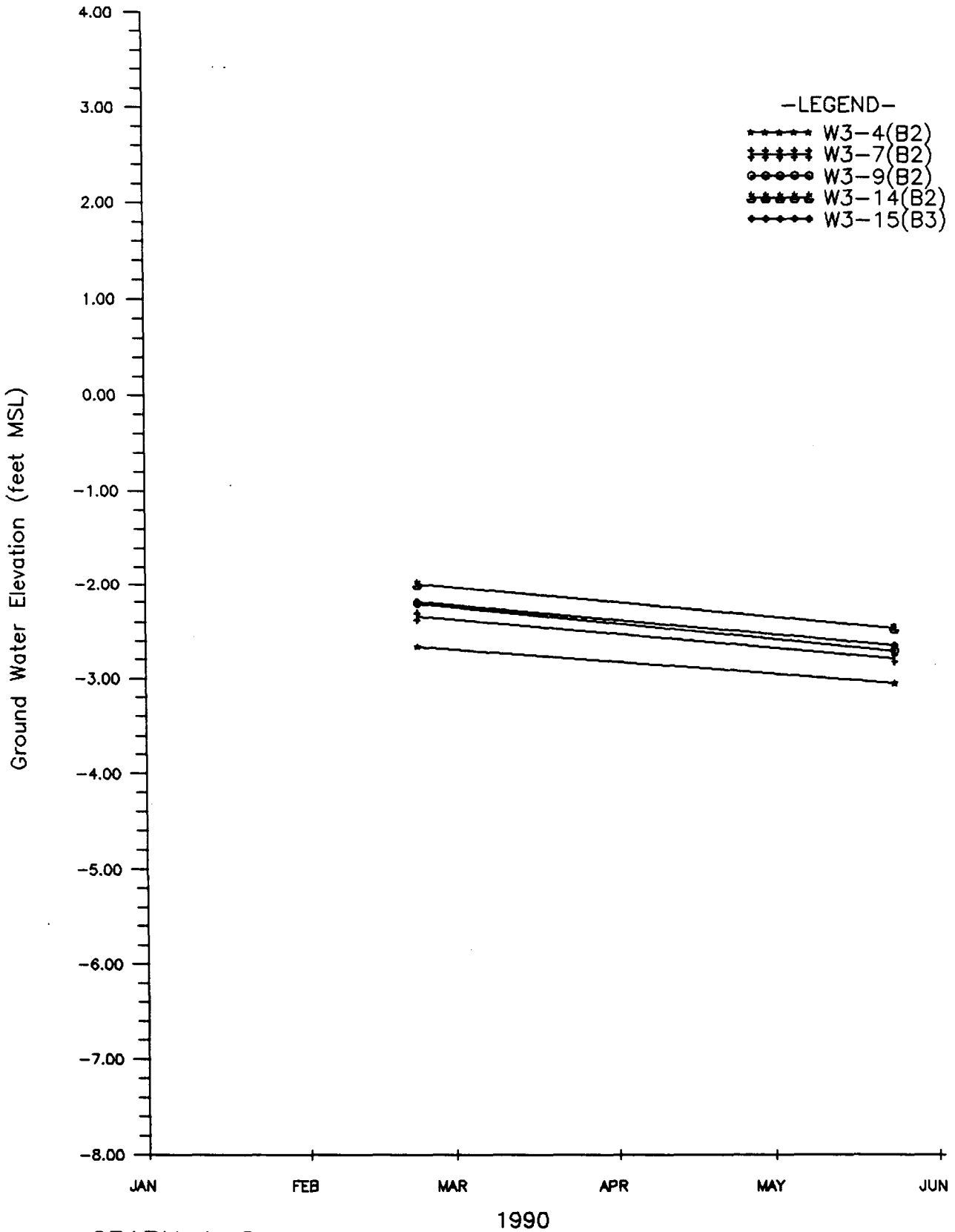

GRAPH A-8

Hydrograph of Site 03

B-Aquifer Well(s)

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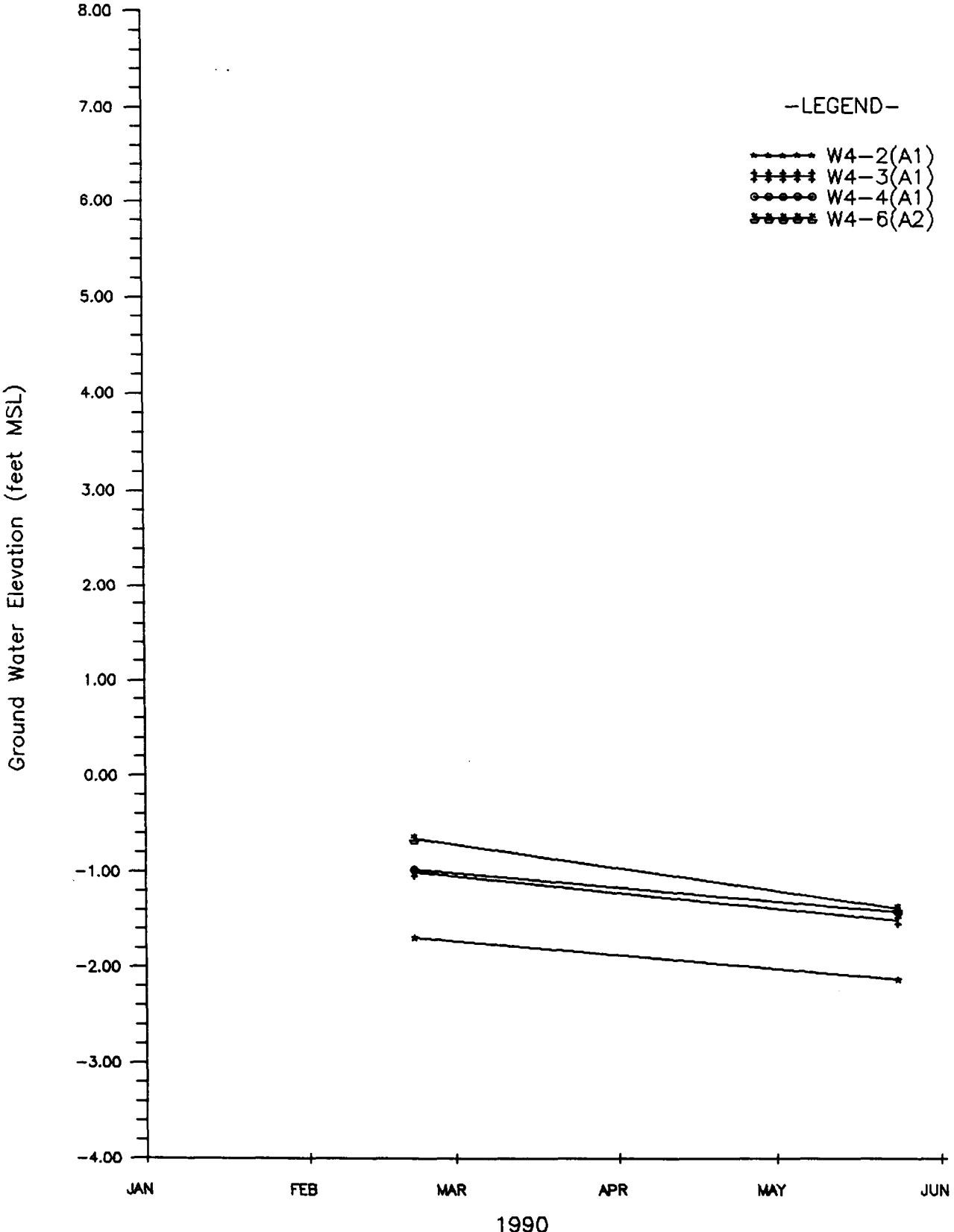

GRAPH A-9
Hydrograph of Site 04
A-Aquifer Well(s)

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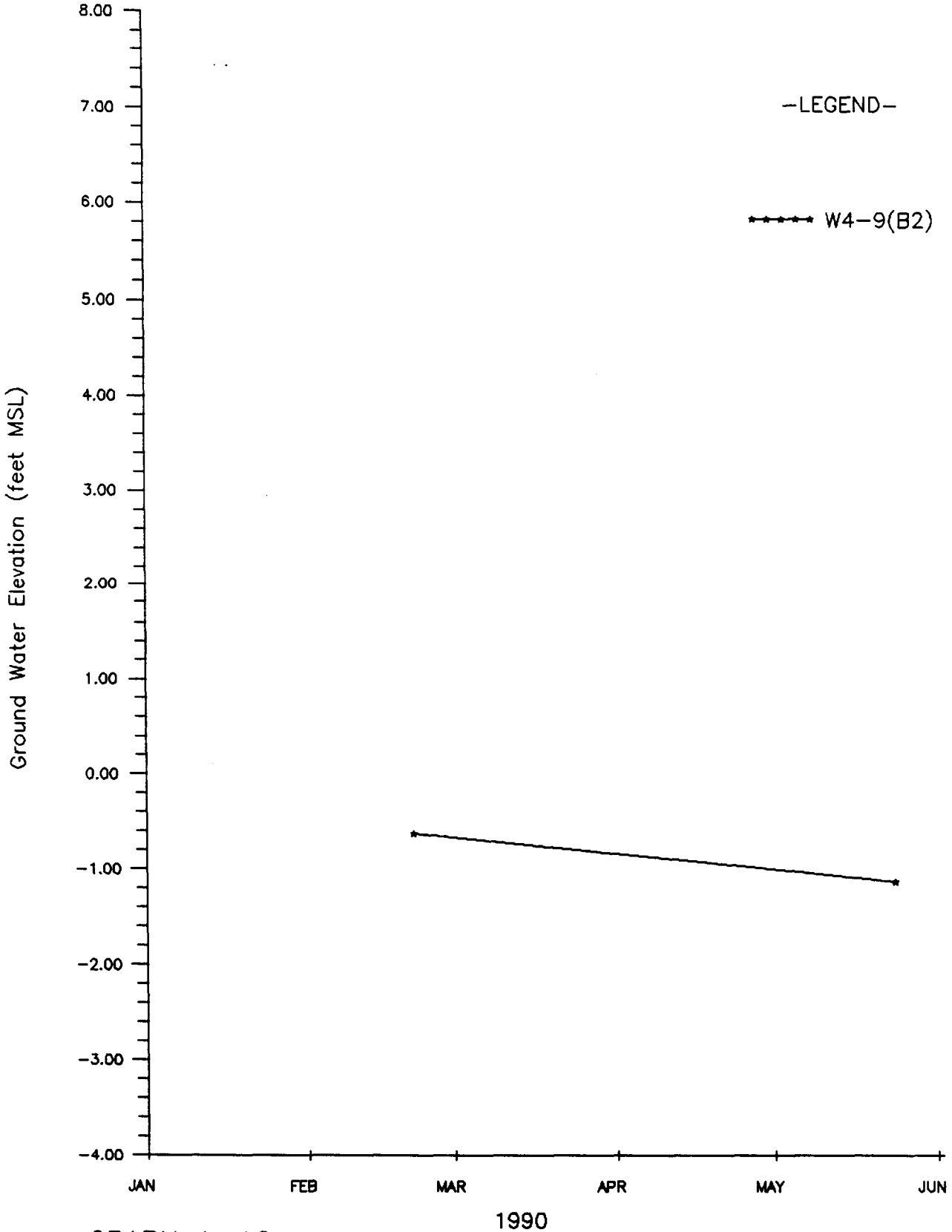

GRAPH A-10
Hydrograph of Site 04
B-Aquifer Well(s)

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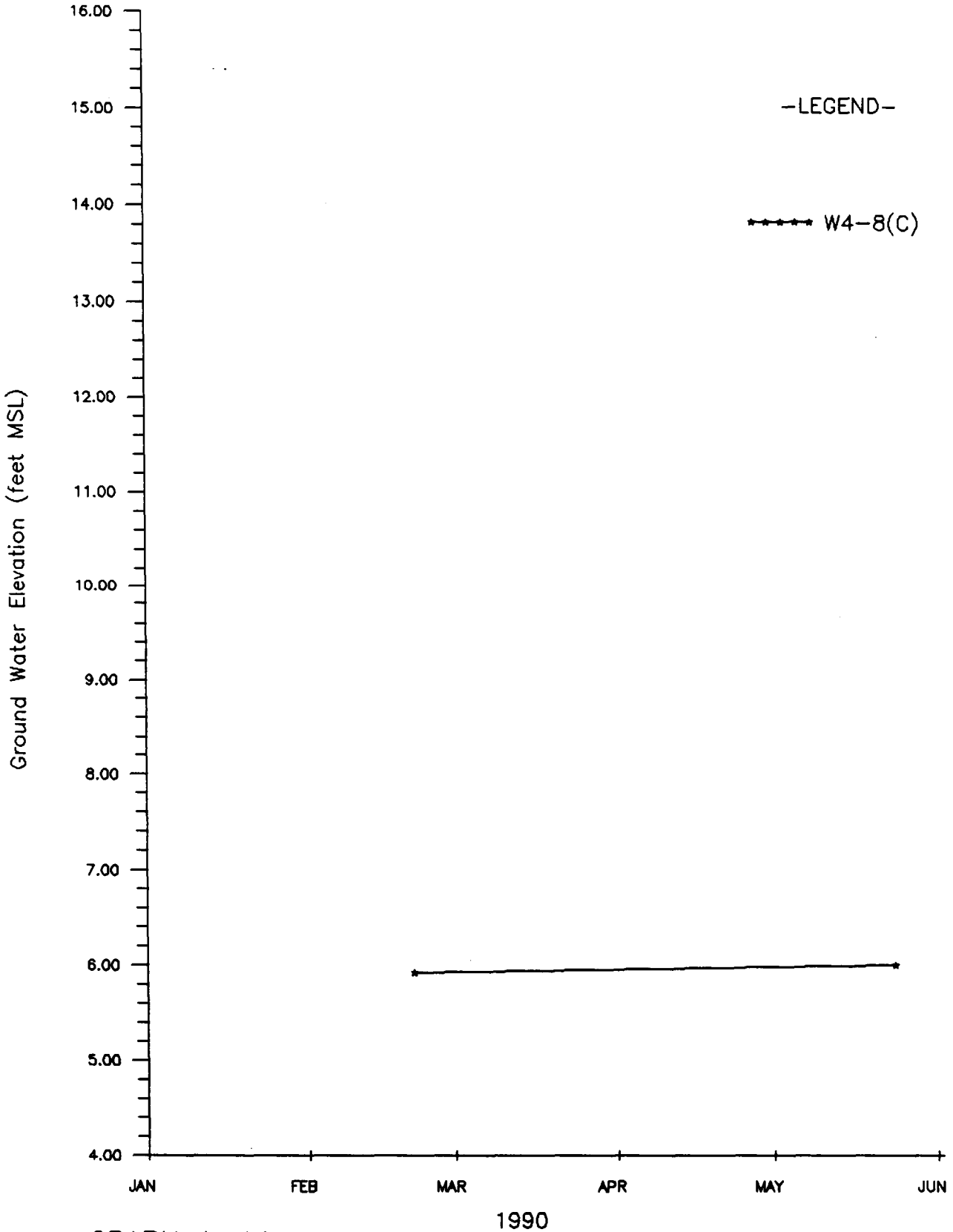

GRAPH A-11
Hydrograph of Site 01
C-Aquifer Well(s)

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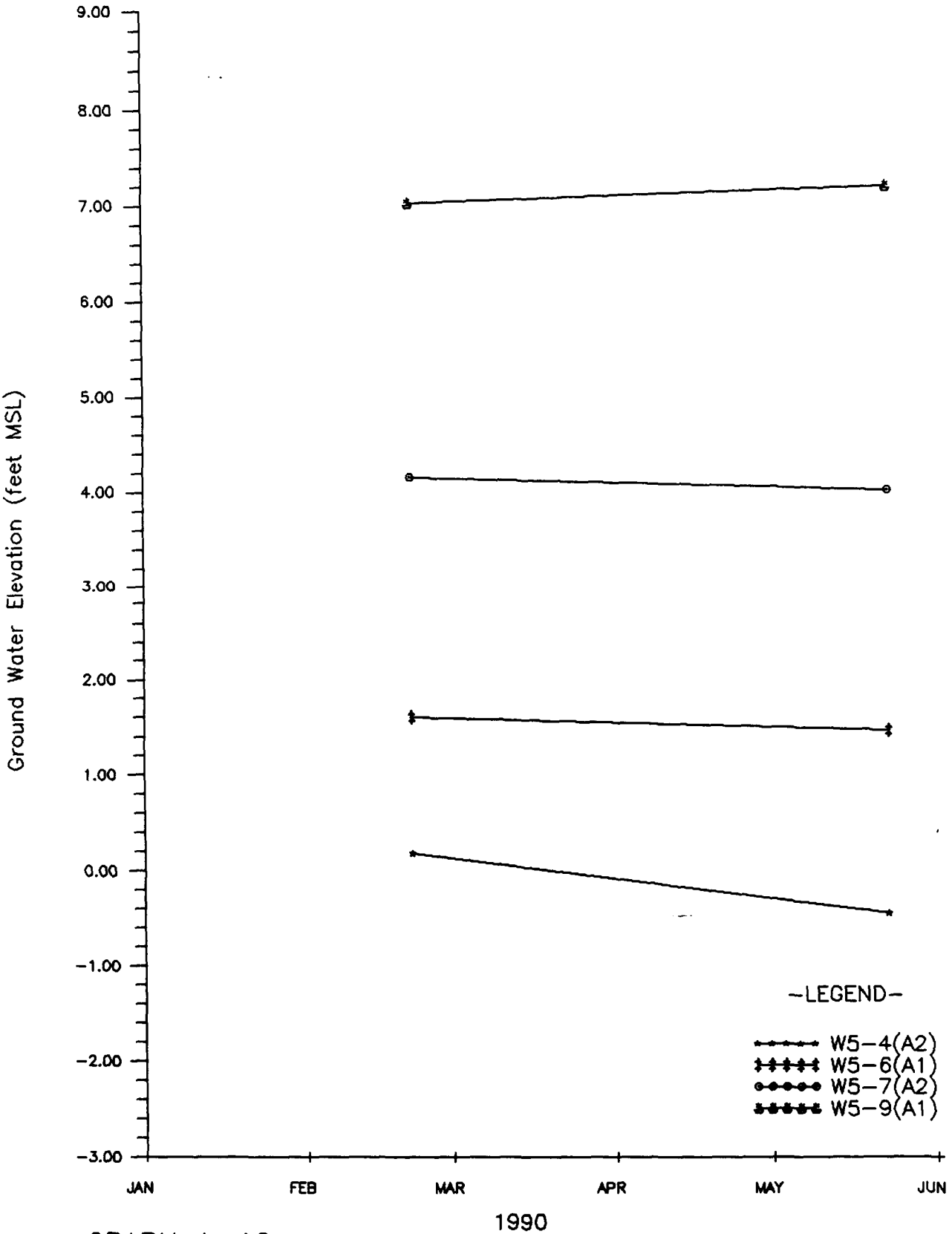

GRAPH A-12
Hydrograph of Site 05
A-Aquifer Well(s)

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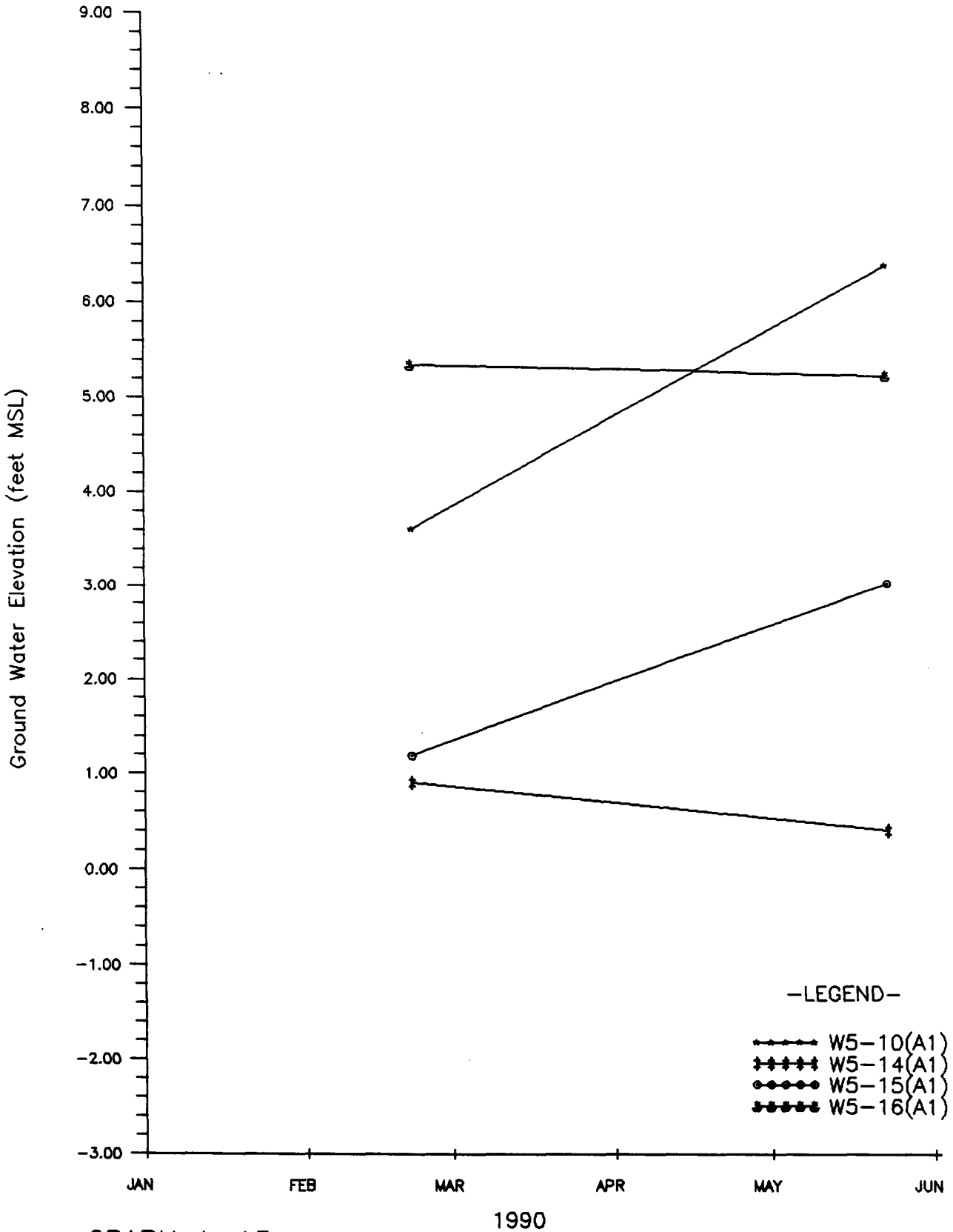

GRAPH A-13
Hydrograph of Site 05
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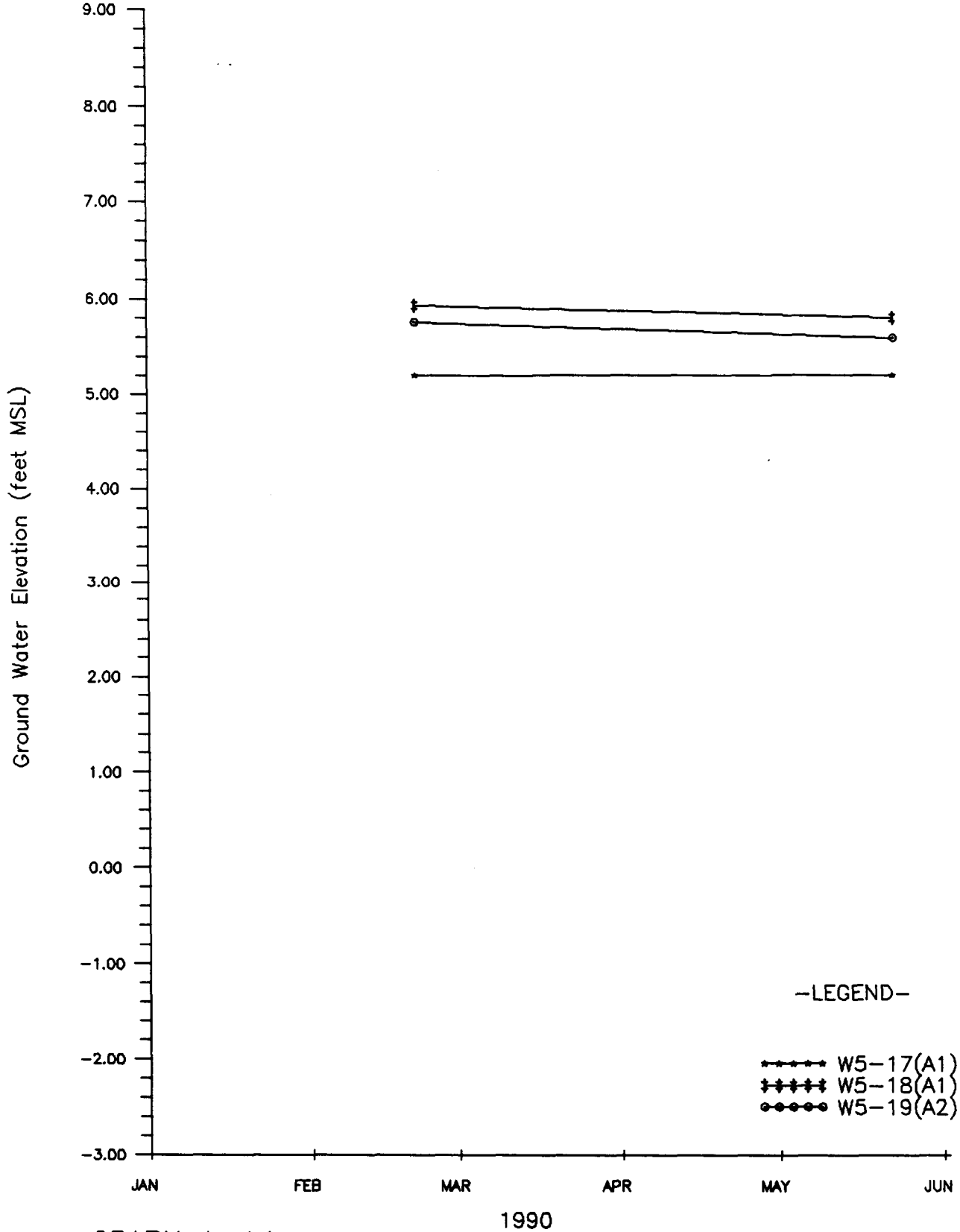

GRAPH A-14
Hydrograph of Site 05
A-Aquifer Well(s)

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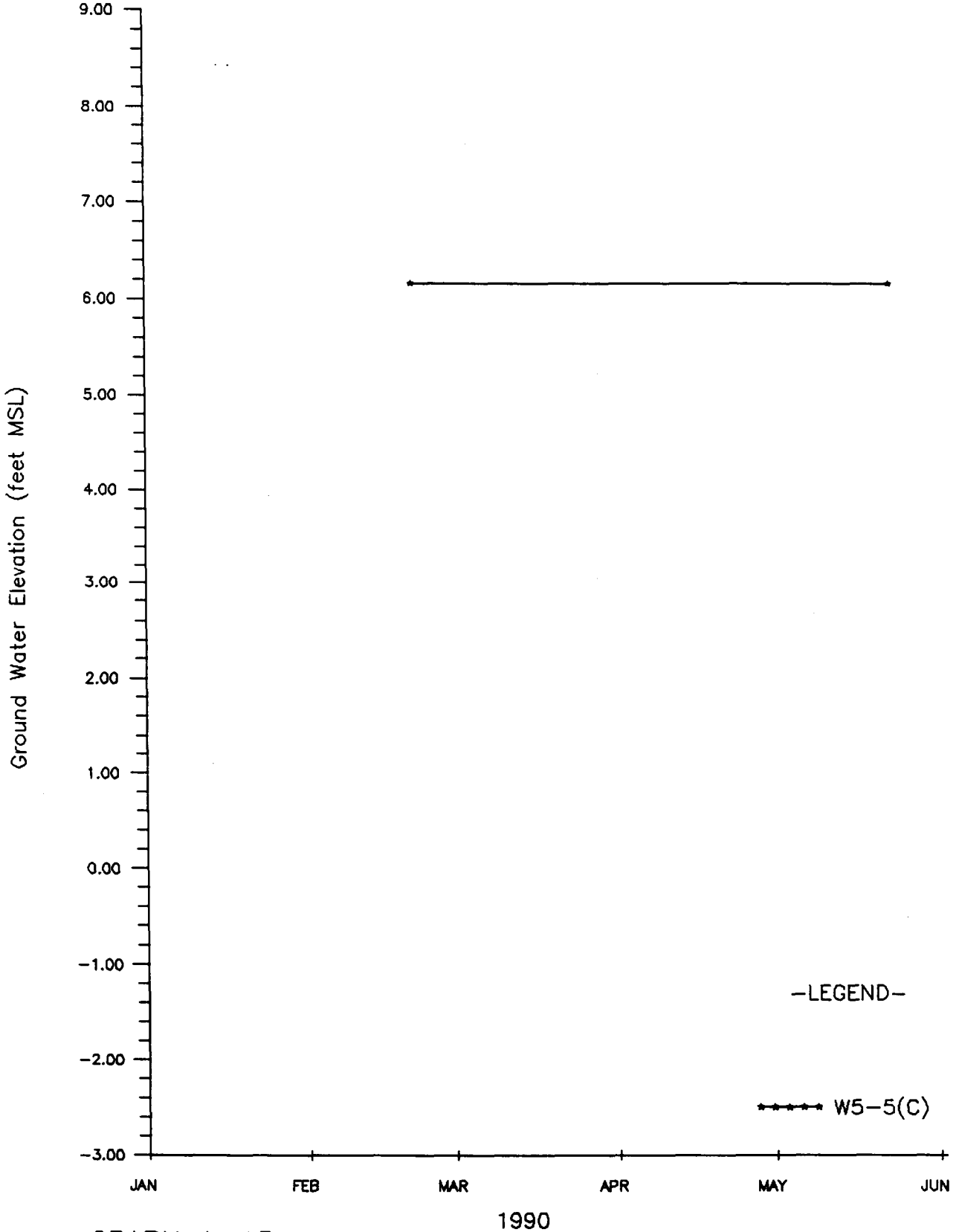

GRAPH A-15
Hydrograph of Site 05
C-Aquifer Well(s)

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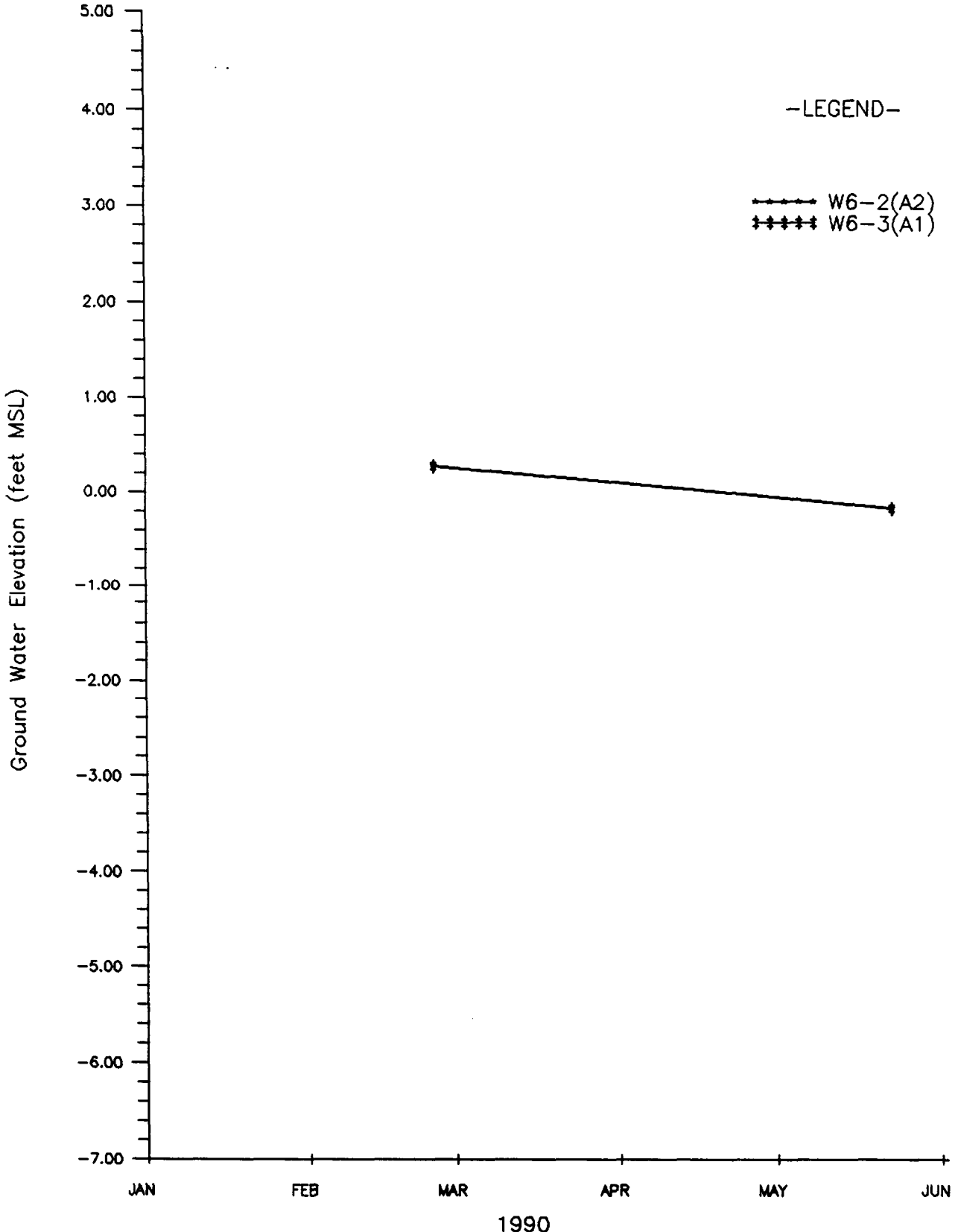

GRAPH A-16
Hydrograph of Site 06
A-Aquifer Well(s)

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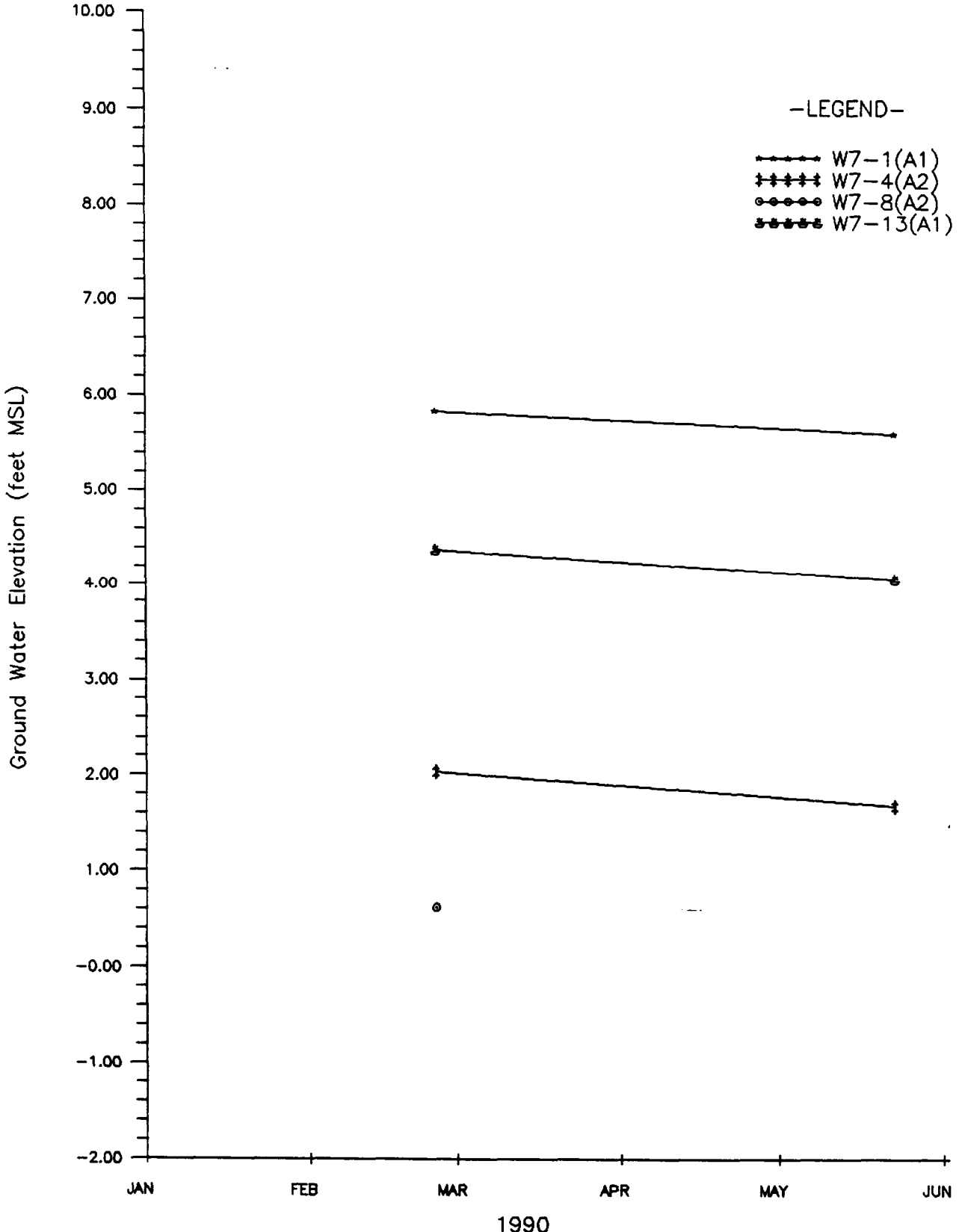

GRAPH A-17
Hydrograph of Site 07
A-Aquifer Well(s)

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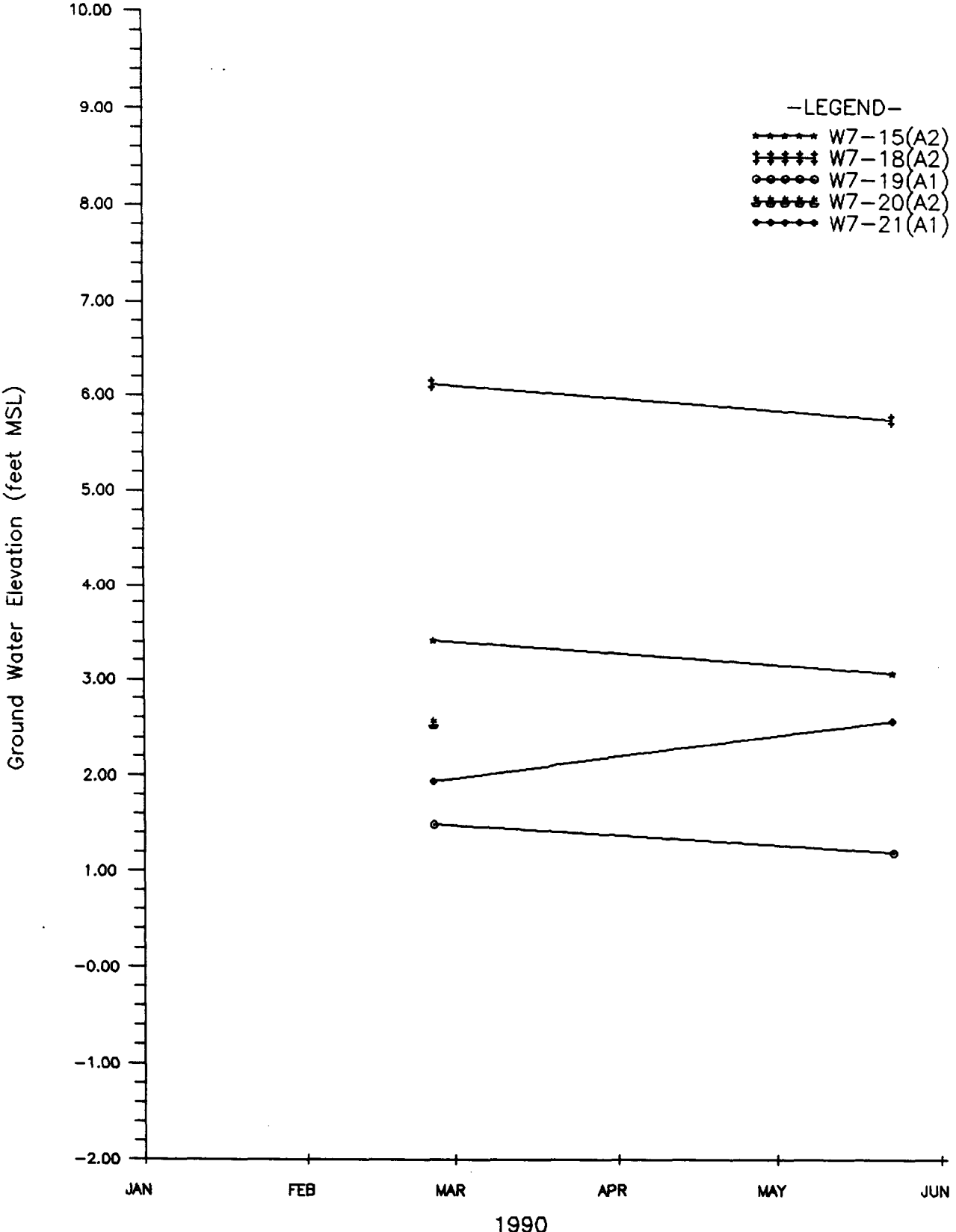

GRAPH A-18
Hydrograph of Site 07
A-Aquifer Well(s)

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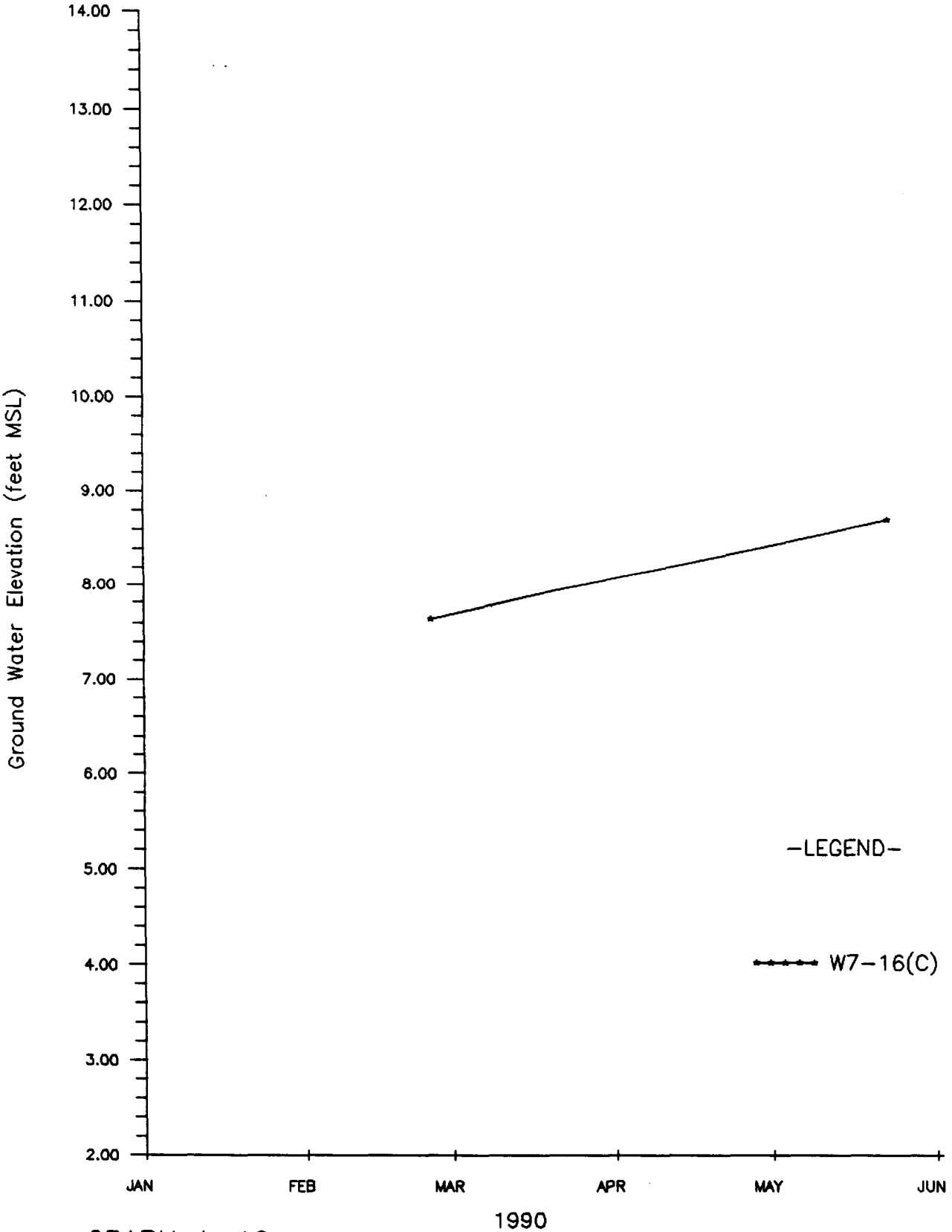

GRAPH A-19
Hydrograph of Site 07
C-Aquifer Well(s)

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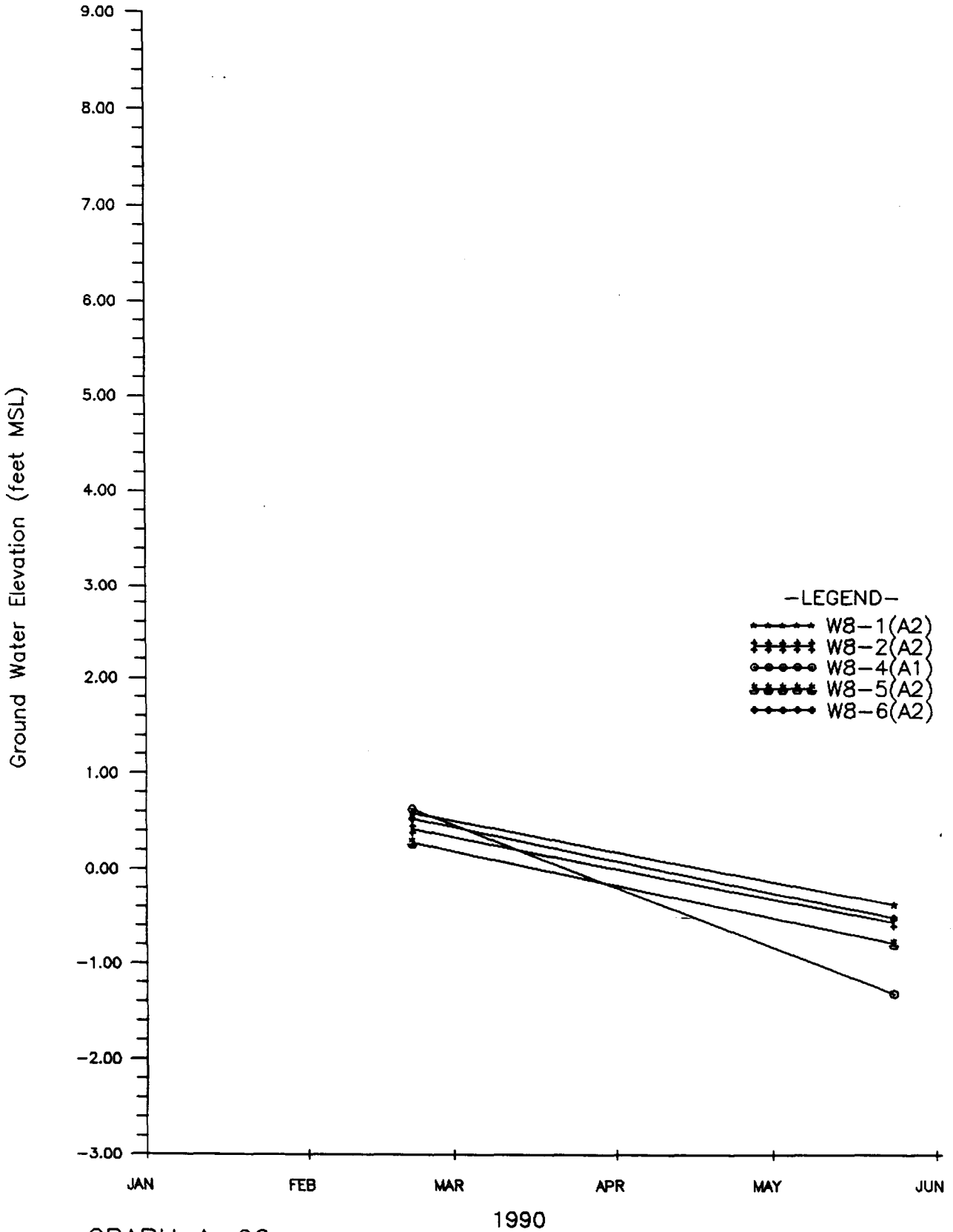

GRAPH A-20
Hydrograph of Site 08
A-Aquifer Well(s)

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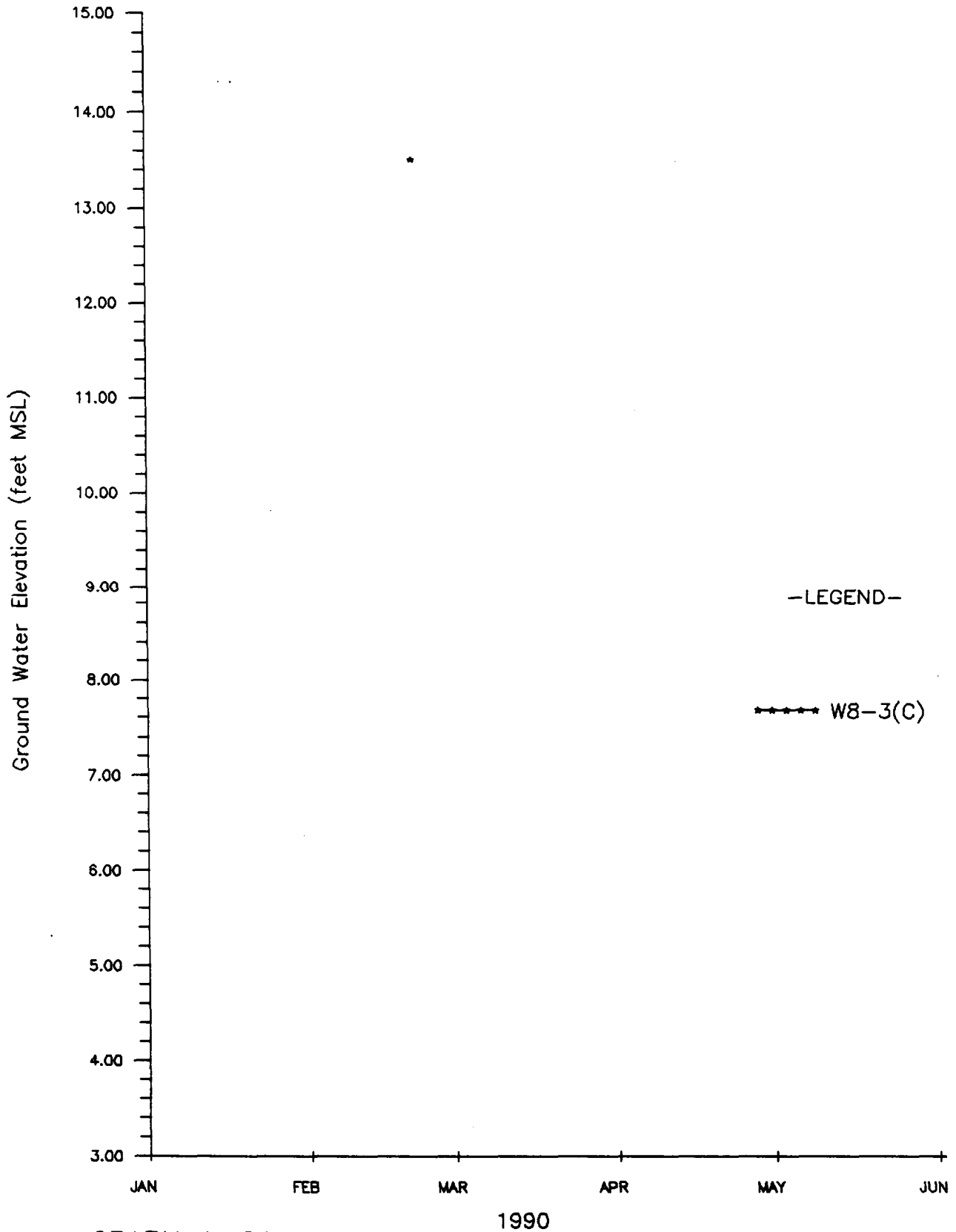

GRAPH A-21
Hydrograph of Site 08
C-Aquifer Well(s)

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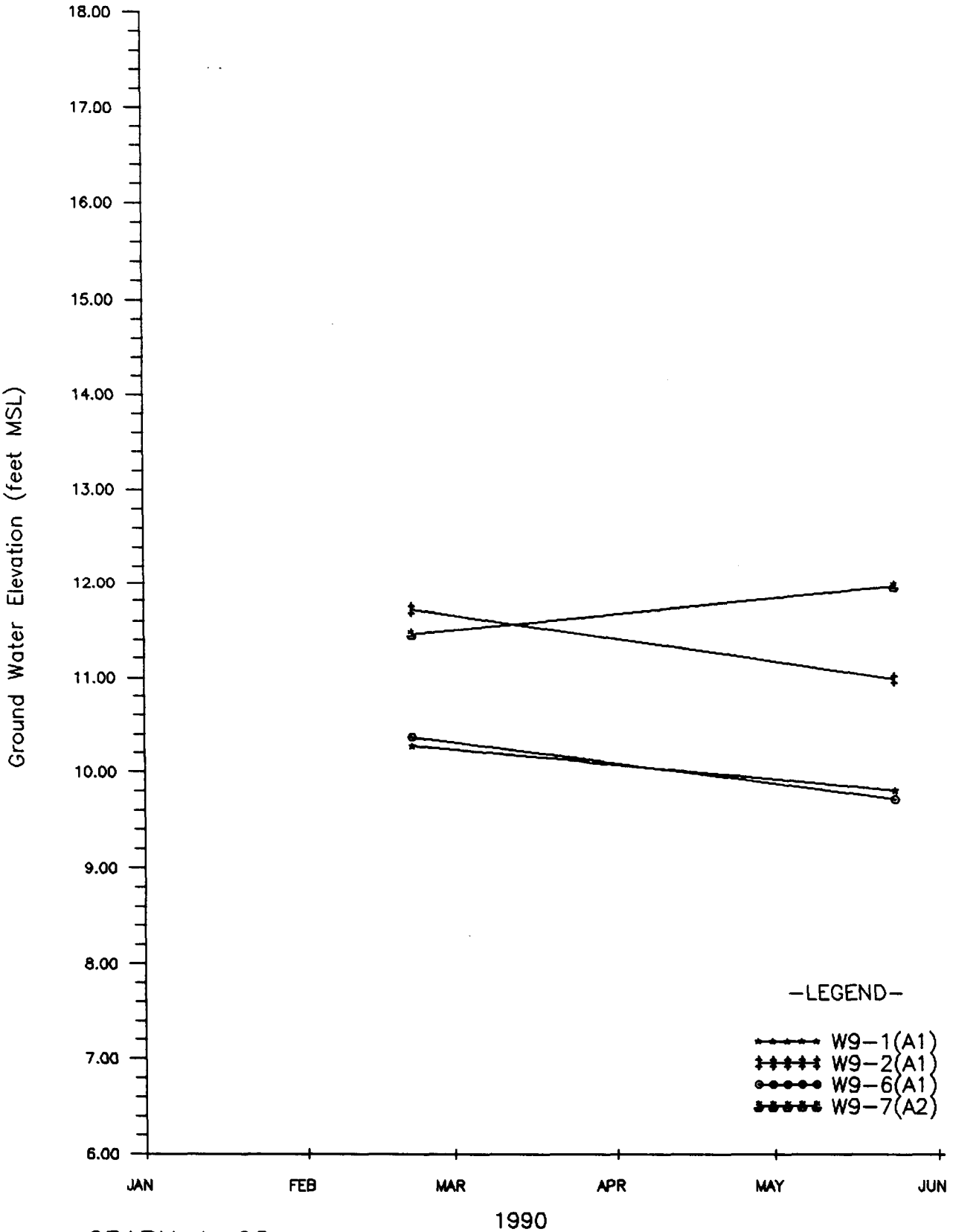

GRAPH A-22
Hydrograph of Site 09
A-Aquifer Well(s)

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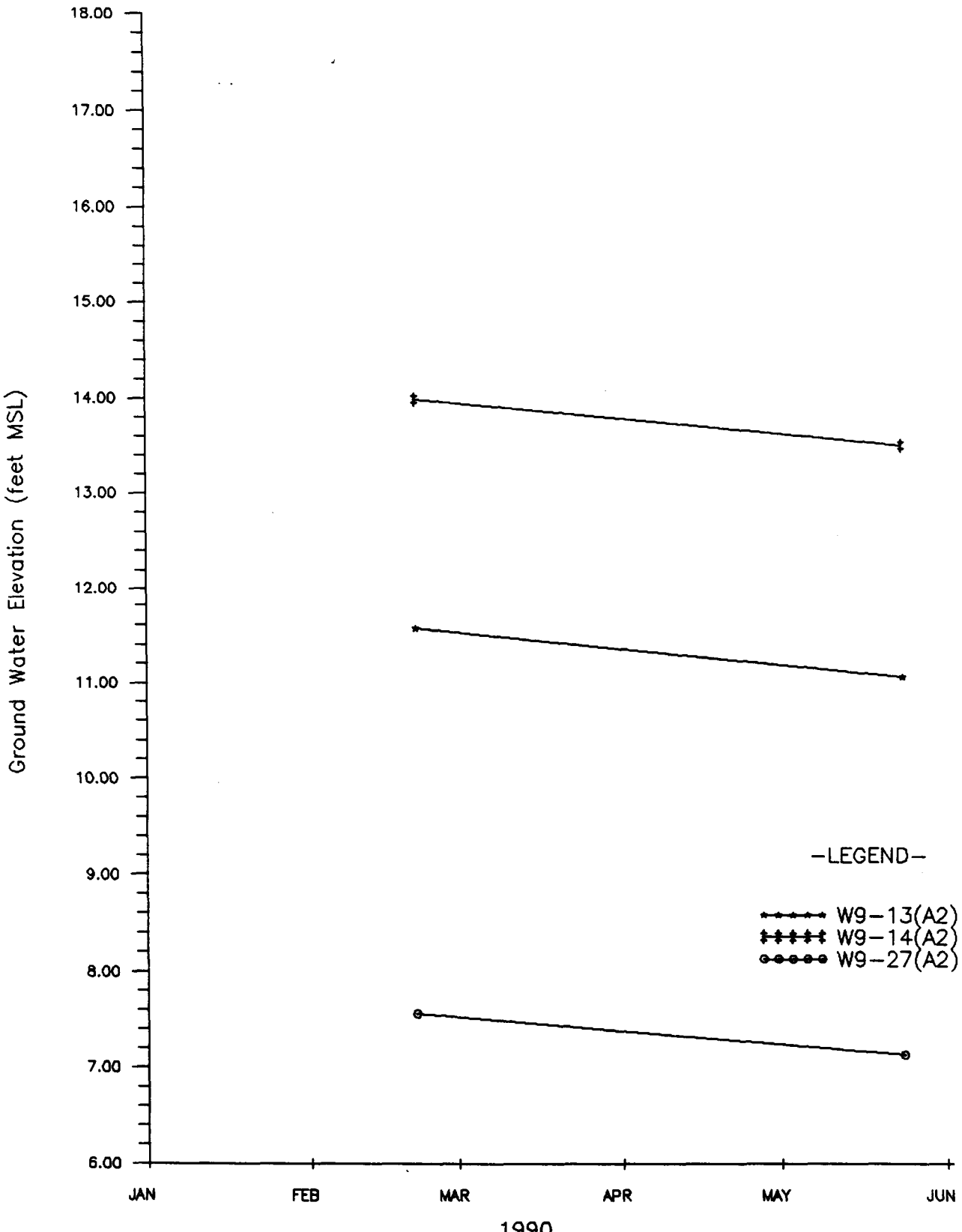

GRAPH A-23
Hydrograph of Site 09
A-Aquifer Well(s)

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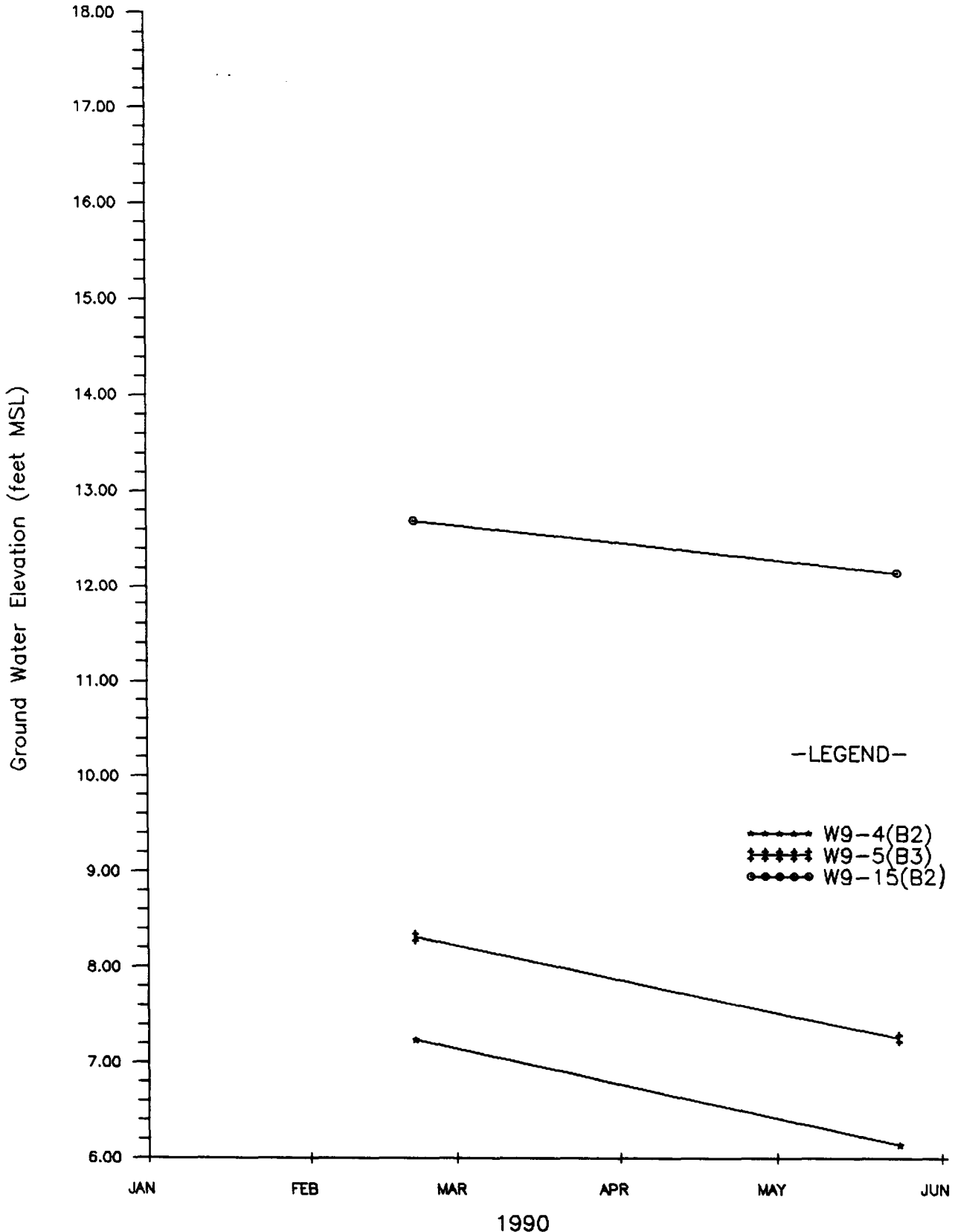

GRAPH A-24
Hydrograph of Site 09
B-Aquifer Well(s)

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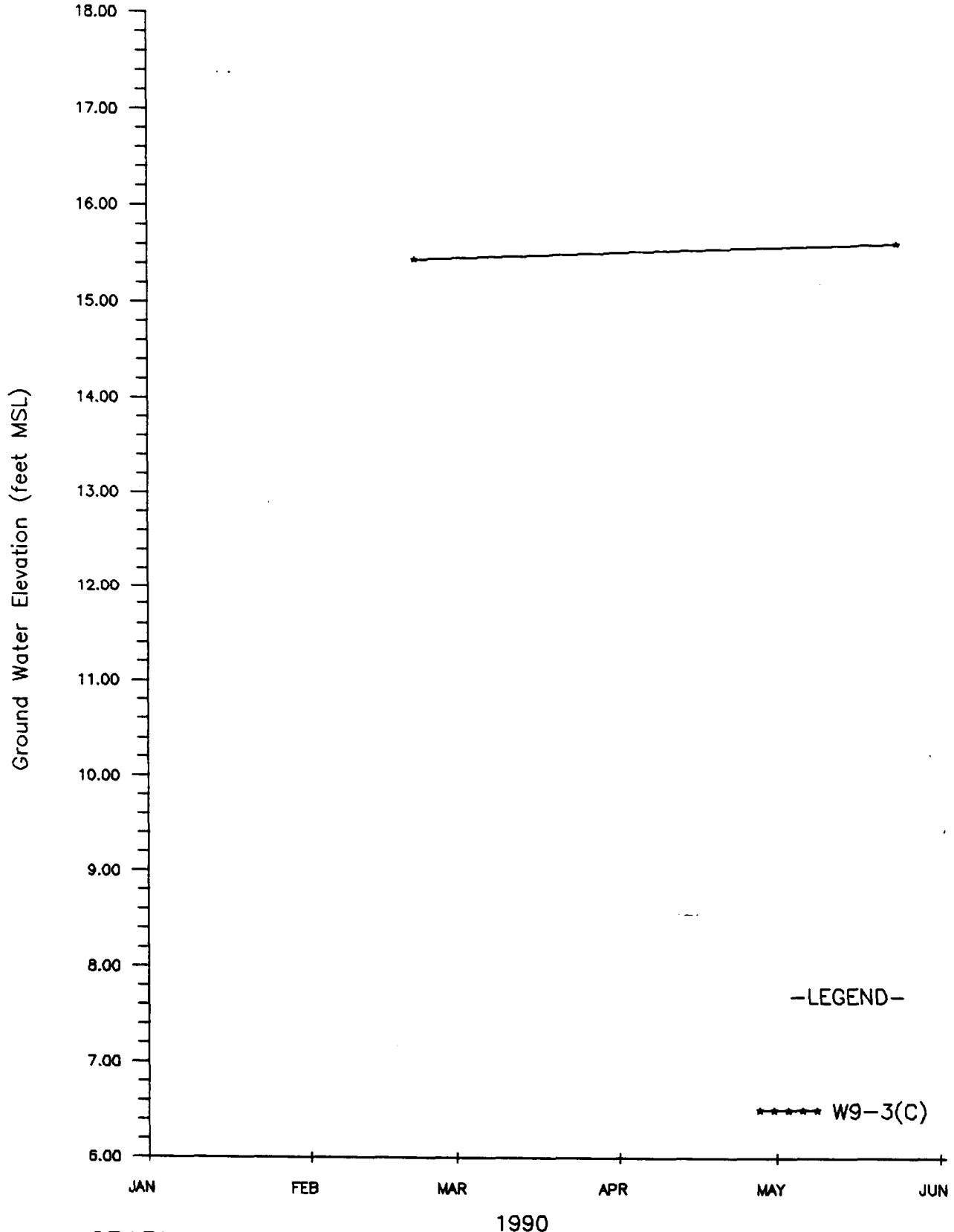

GRAPH A-25
Hydrograph of Site 09
C-Aquifer Well(s)

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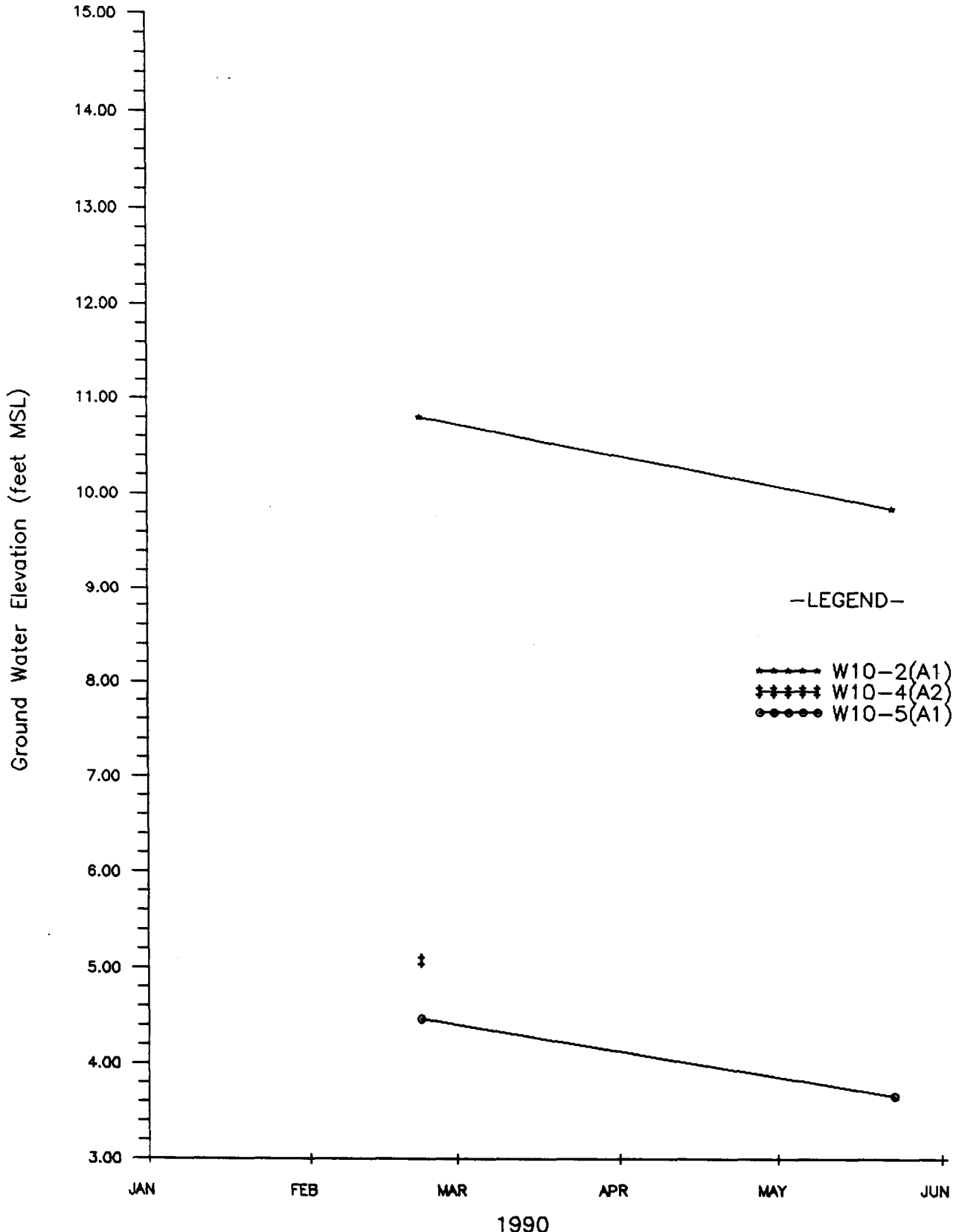

GRAPH A—26
Hydrograph of Site 10
A—Aquifer Well(s)

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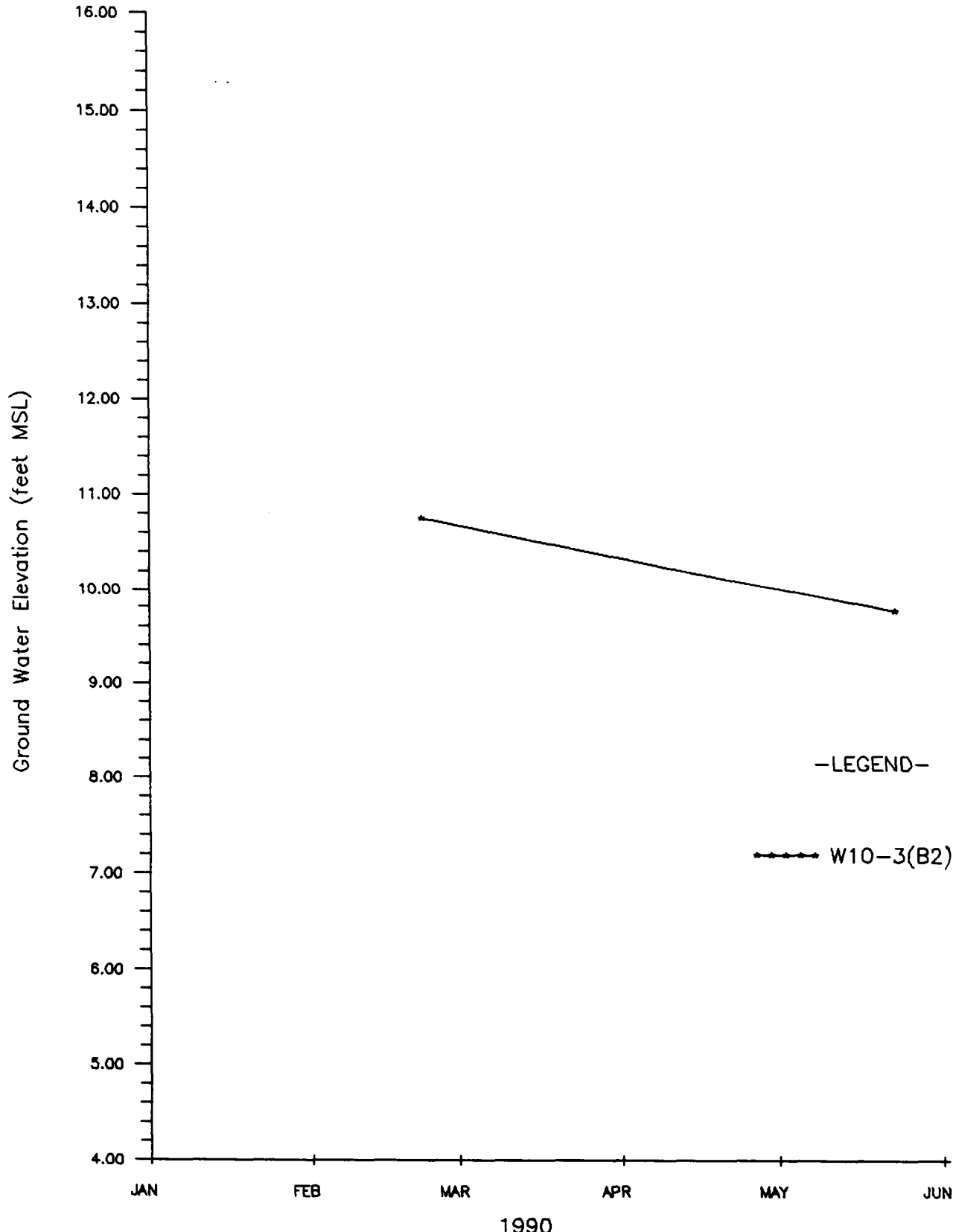

GRAPH A-27
Hydrograph of Site 10
B-Aquifer Well(s)

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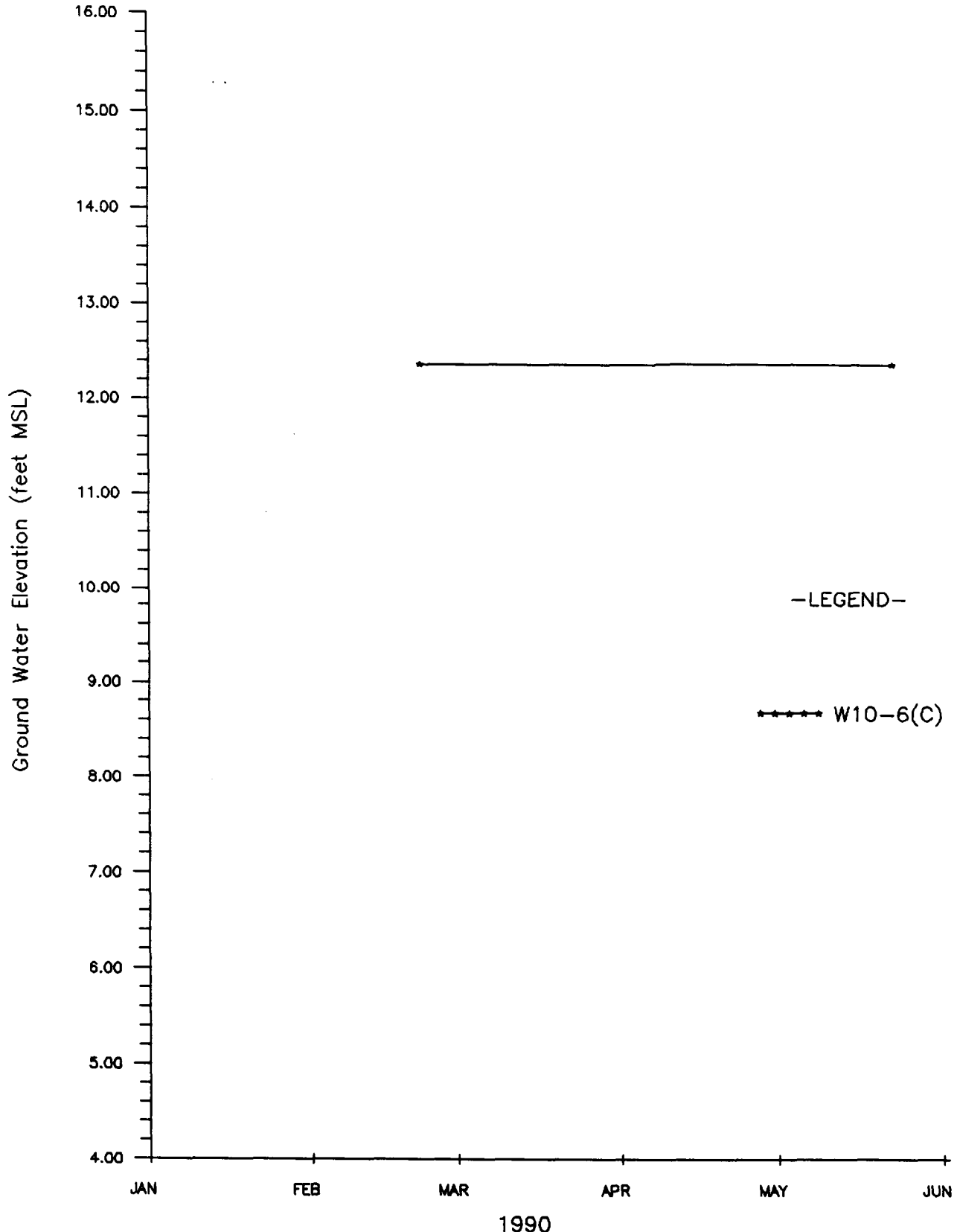

GRAPH A-28

Hydrograph of Site 10

C-Aquifer Well(s)

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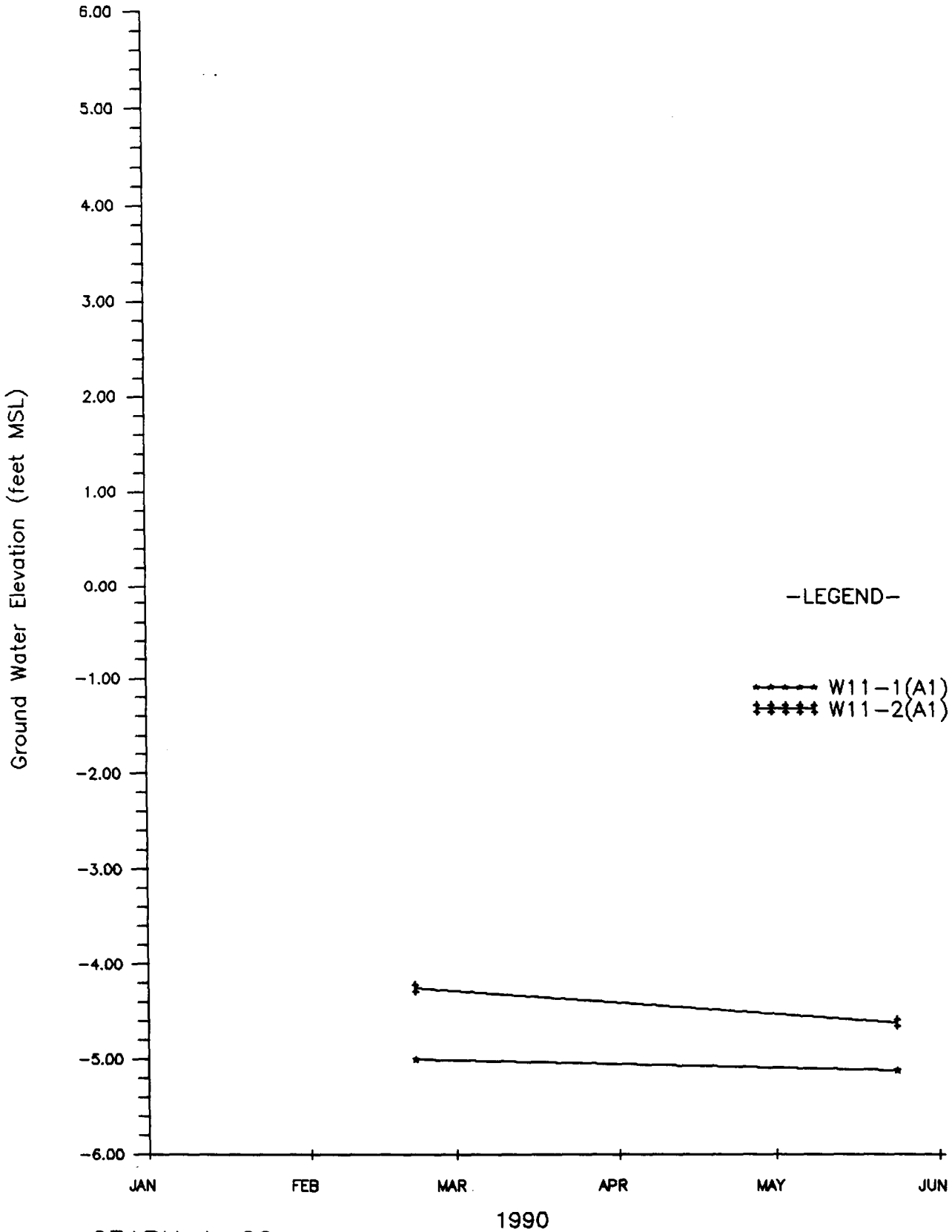

GRAPH A-29
Hydrograph of Site 11
A-Aquifer Well(s)

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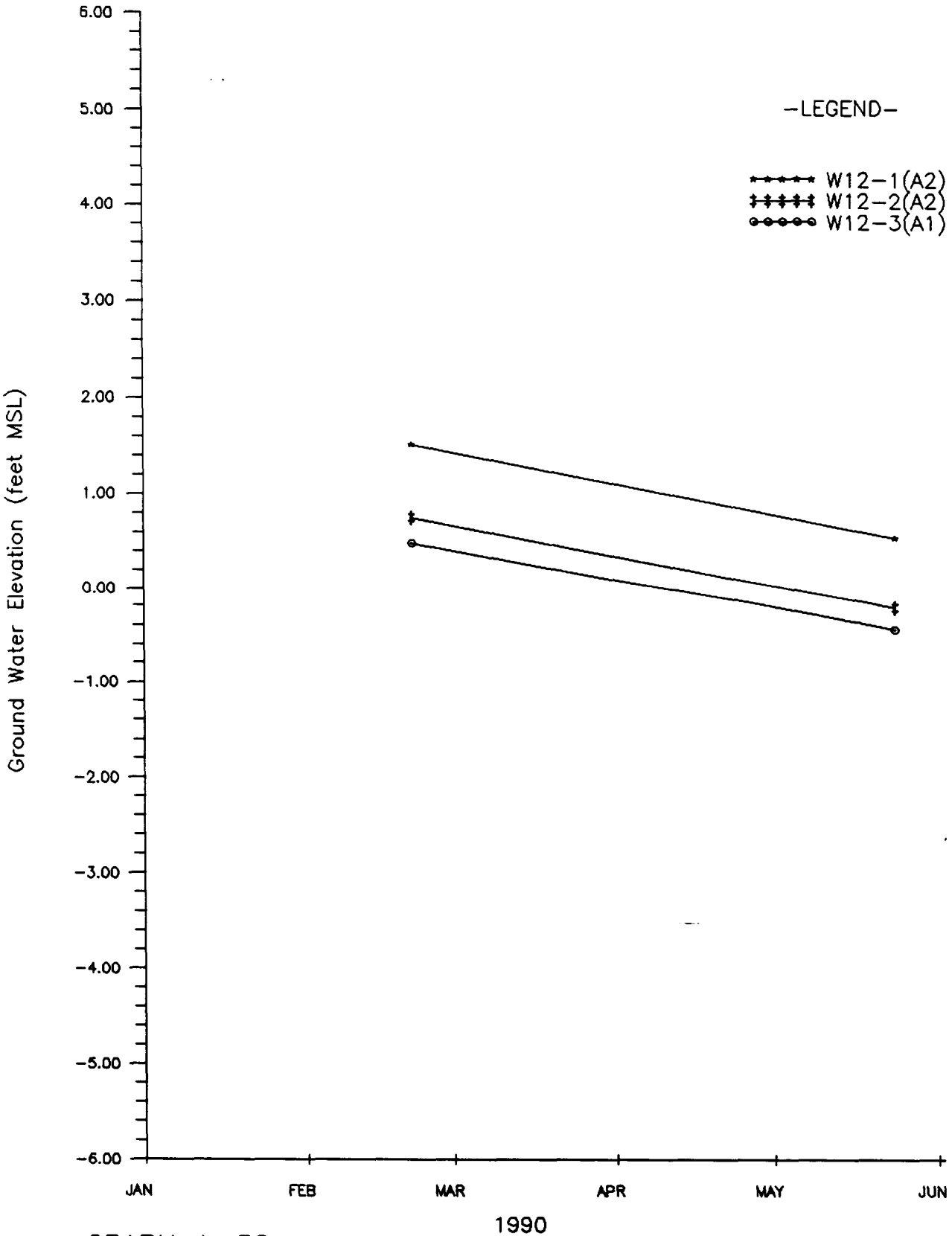

GRAPH A-30
Hydrograph of Site 12
A-Aquifer Well(s)

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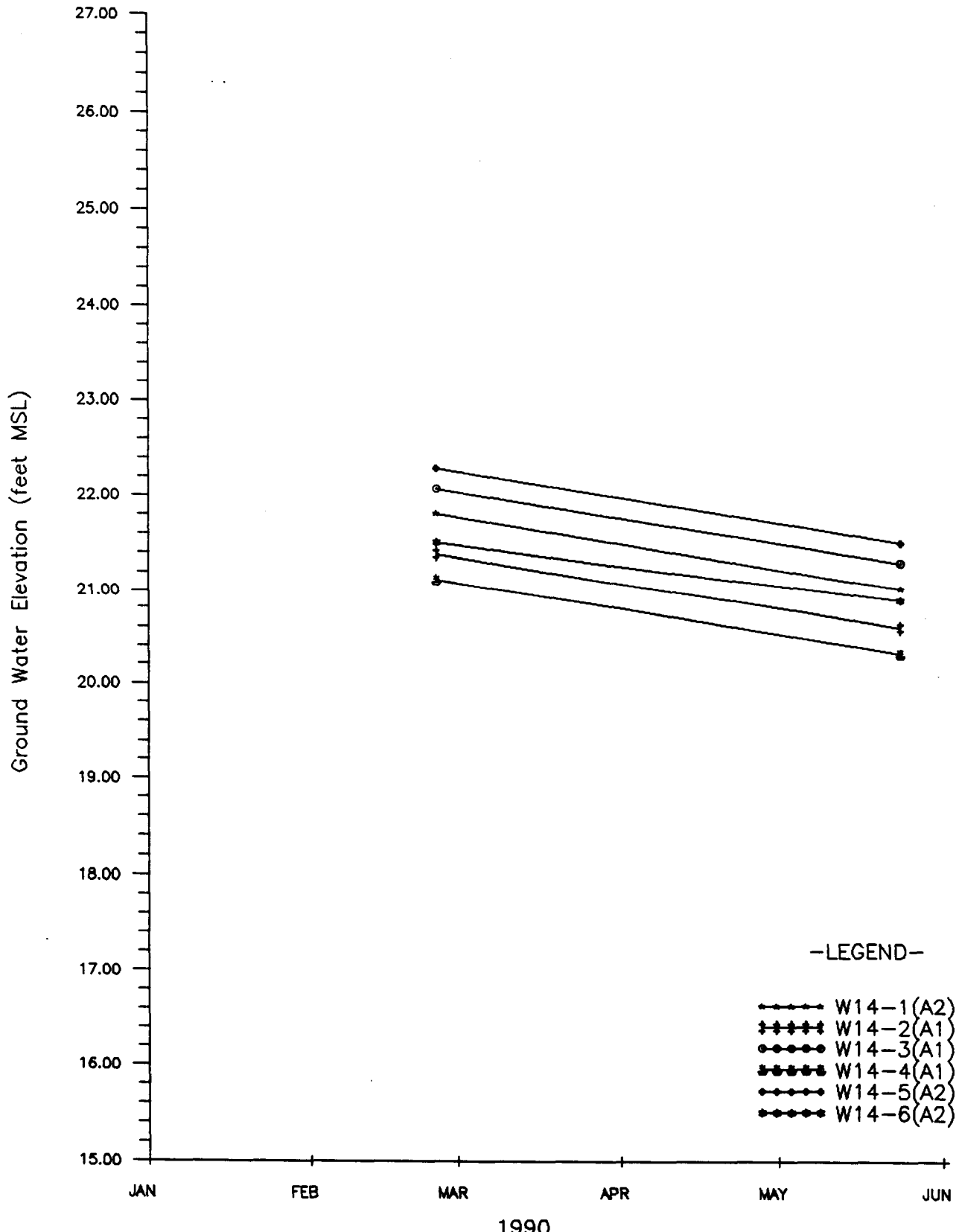

GRAPH A-31
Hydrograph of Site 14
A-Aquifer Well(s)

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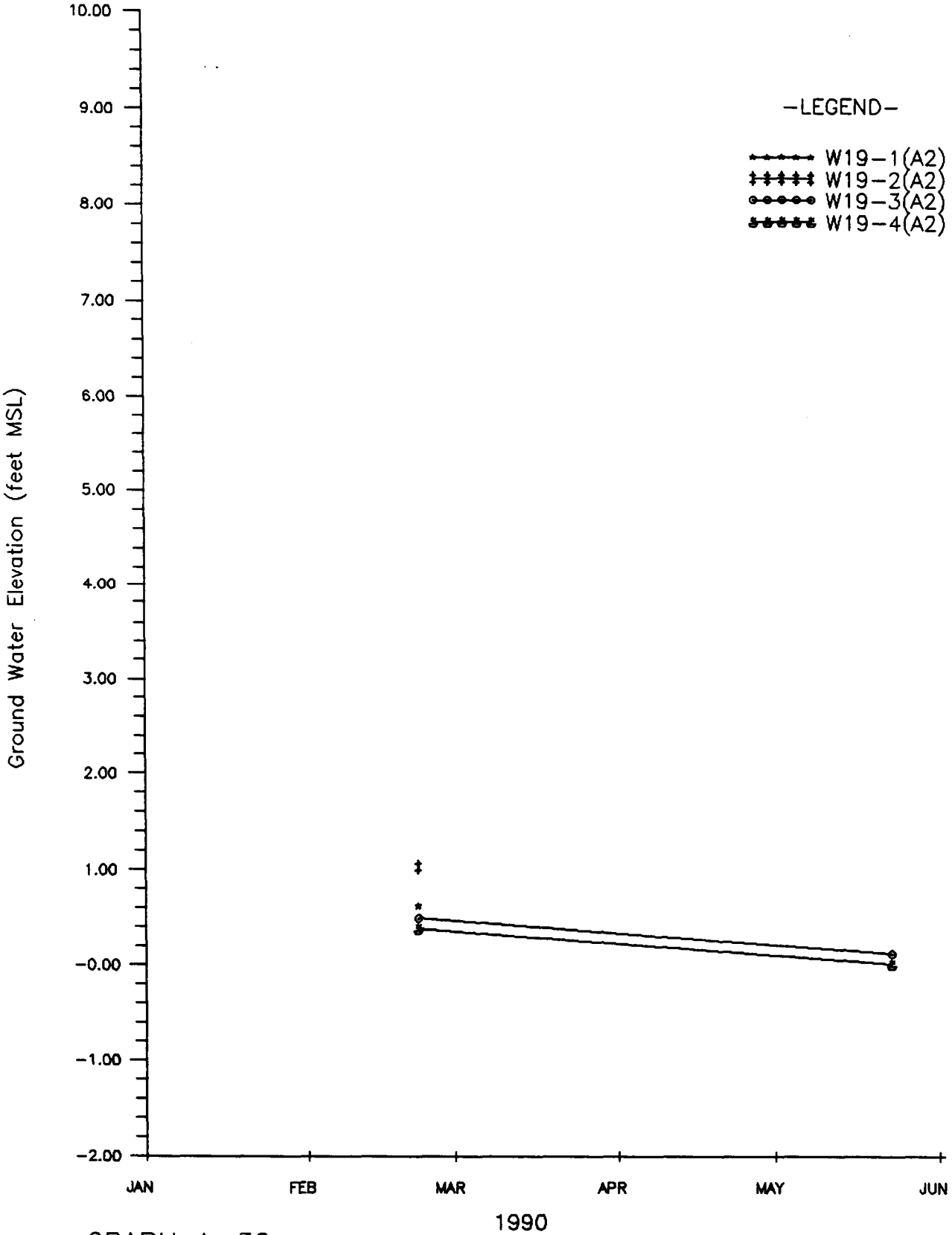

GRAPH A-32
Hydrograph of Site 19
A-Aquifer Well(s)

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APPENDIX E
WATER LEVEL MEASUREMENTS

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 1

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W1-1(A1)	TOC	2.75	2.60	-2.77	02/26/90	
W1-2(A1)	TOC	4.46	4.30	-2.56	02/26/90	
W1-3(F)	TOC	16.55	16.80	-2.18	02/26/90	
W1-4(A1)	TOC	2.33	2.00	-2.28	02/26/90	
W1-5(A1)	TOM	4.71	2.40	-2.27	02/26/90	
W1-6(A1)	TOM	.76	1.20	-2.92	02/26/90	
W1-7(A2)	TOM	1.57	.40	-2.53	02/26/90	
W1-8(A1)	TOM	4.31	1.60	-2.41	02/26/90	
W1-9(F)	TOM	19.92	17.10	-.42	02/26/90	
W1-10(F)	TOM	6.92	7.30	.30	02/26/90	
W1-11(F)	TOM	16.15	13.10	-2.46	02/26/90	
W1-12(A1)	TOM	2.30	-3.00	-2.54	02/26/90	
W1-13(F)	TOM	7.46	4.70	-2.16	02/26/90	
W1-1(A1)	TOC	2.75	2.60	-3.12	05/24/90	
W1-2(A1)	TOC	4.46	4.30	-3.01	05/24/90	
W1-3(F)	TOC	16.55	16.80	-2.49	05/24/90	
W1-4(A1)	TOC	2.33	2.00	-2.53	05/24/90	
W1-5(A1)	TOM	4.71	2.40	-2.55	05/24/90	
W1-6(A1)	TOM	.76	1.20	-3.33	05/24/90	
W1-7(A2)	TOM	1.57	.40	-2.95	05/24/90	
W1-8(A1)	TOM	4.31	1.60	-2.69	05/24/90	
W1-9(F)	TOM	19.92	17.10	-.77	05/24/90	
W1-10(F)	TOM	6.92	7.30	.42	05/24/90	
W1-11(F)	TOM	16.15	13.10	-2.73	05/24/90	
W1-12(A1)	TOM	2.30	-3.00	-2.84	05/24/90	
W1-13(F)	TOM	7.46	4.70	-2.51	05/24/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 2

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W2-3(A1)	TOC	.30	.20	-4.07	02/22/90	
W2-5(A1)	TOM	2.20	-.70	-5.46	02/22/90	
W2-6(A1)	TOM	2.62	-.30	-6.08	02/22/90	
W2-7(A2)	TOM	3.35	.60	-5.41	02/22/90	
W2-8(F)	TOM	5.87	3.10	-5.68	02/22/90	
W2-9(A1)	TOM	4.32	1.30	-5.72	02/22/90	
W2-10(F)	TOM	3.73	1.10	-5.28	02/22/90	
W2-11(F)	TOM	10.00	7.10	-5.52	02/22/90	
W2-3(A1)	TOC	.30	.20	-4.56	05/25/90	
W2-5(A1)	TOM	2.20	-.70	-5.76	05/25/90	
W2-6(A1)	TOM	2.62	-.30	-6.29	05/25/90	
W2-7(A2)	TOM	3.35	.60	-5.73	05/25/90	
W2-8(F)	TOM	5.87	3.10	-5.91	05/25/90	
W2-9(A1)	TOM	4.32	1.30	-5.94	05/25/90	
W2-10(F)	TOM	3.73	1.10	-5.95	05/25/90	
W2-11(F)	TOM	10.00	7.10	-5.75	05/25/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 3

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W3-1(A1)	TOC	2.80	3.15	-2.58	02/23/90	
W3-2(A1)	CBX	-1.83	-2.00	-4.04	02/23/90	
W3-3(A1)	TOM	-.60	-.39	-4.35	02/23/90	
W3-4(B2)	TOM	-.66	-.51	-2.66	02/23/90	
W3-6(A1)	TOC	.26	.40	-3.85	02/23/90	
W3-7(B2)	TOC	.22	2.30	-2.35	02/23/90	
W3-8(A1)	TOC	.65	.53	-3.92	02/23/90	
W3-9(B2)	TOC	.70	2.60	-2.21	02/23/90	
W3-11(A1)	TOC	-.17	2.20	-2.72	02/23/90	
W3-12(A2)	TOM	-2.22	-2.00	-5.39	02/23/90	
W3-13(A2)	TOM	-1.21	-1.06	-3.61	02/23/90	
W3-14(B2)	TOM	2.89	3.32	-2.00	02/23/90	
W3-15(B3)	TOM	-.49	-.13	-2.19	02/23/90	
W3-16(A1)	TOM	.79	.04	----	02/23/90	FLOWING WELL
W3-22(A2)	TOM	2.00	2.44	-2.38	02/23/90	
W3-23(A1)	TOM	.37	.75	-4.71	02/23/90	
W3-1(A1)	TOC	2.80	3.15	-2.85	05/25/90	
W3-2(A1)	CBX	-1.83	-2.00	-4.50	05/25/90	
W3-3(A1)	TOM	-.60	-.39	-4.52	05/25/90	
W3-4(B2)	TOM	-.66	-.51	-3.05	05/25/90	
W3-6(A1)	TOC	.26	.40	-4.14	05/25/90	
W3-7(B2)	TOC	.22	2.30	-2.78	05/25/90	
W3-8(A1)	TOC	.65	.53	-4.08	05/25/90	
W3-9(B2)	TOC	.70	2.60	-2.70	05/25/90	
W3-11(A1)	TOC	-.17	2.20	-3.29	05/25/90	
W3-12(A2)	TOM	-2.22	-2.00	-5.53	05/25/90	
W3-13(A2)	TOM	-1.21	-1.06	-3.90	05/25/90	
W3-14(B2)	TOM	2.89	3.32	-2.47	05/25/90	
W3-15(B3)	TOM	-.49	-.13	-2.65	05/25/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 3

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W3-16(A1)	TOM	.79	.04	----	05/25/90	FLOWING WELL
W3-22(A2)	TOM	2.00	2.44	-2.78	05/25/90	
W3-23(A1)	TOM	.37	.75	-4.80	05/25/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 4

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W4-2(A1)	TOC	4.12	4.43	-1.69	02/22/90	
W4-3(A1)	TOC	5.35	5.48	-1.01	02/22/90	
W4-4(A1)	TOC	5.39	5.47	-.98	02/22/90	
W4-6(A2)	TOC	5.19	5.19	-.66	02/22/90	
W4-7(C)	TOM	4.97	4.34	----	02/22/90	FLOWING WELL
W4-8(C)	TOM	6.74	4.11	5.92	02/22/90	
W4-9(B2)	TOM	2.85	3.19	-.63	02/22/90	
W4-2(A1)	TOC	4.12	4.43	-2.13	05/25/90	
W4-3(A1)	TOC	5.35	5.48	-1.51	05/25/90	
W4-4(A1)	TOC	5.39	5.47	-1.42	05/25/90	
W4-6(A2)	TOC	5.19	5.19	-1.38	05/25/90	
W4-7(C)	TOM	4.97	4.34	----	05/25/90	FLOWING WELL
W4-8(C)	TOM	6.74	4.11	6.00	05/25/90	
W4-9(B2)	TOM	2.85	3.19	-1.13	05/25/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 5

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W5-4(A2)	TOM	6.15	6.55	.18	02/22/90	
W5-5(C)	TOM	6.16	6.68	6.16	02/22/90	
W5-6(A1)	TOM	9.00	9.66	1.60	02/22/90	
W5-7(A2)	TOM	13.27	13.69	4.16	02/22/90	
W5-8(A2)	CBX	13.47	13.47	----	02/22/90	UNABLE TO READ
W5-9(A1)	TOM	13.25	13.93	7.04	02/22/90	
W5-10(A1)	TOM	13.20	13.47	3.61	02/22/90	
W5-14(A1)	TOM	7.25	7.64	.90	02/22/90	
W5-15(A1)	TOM	9.67	10.28	1.19	02/22/90	
W5-16(A1)	TOM	11.68	12.05	5.34	02/22/90	
W5-17(A1)	TOM	12.14	12.55	5.20	02/22/90	
W5-18(A1)	TOM	11.77	12.13	5.93	02/22/90	
W5-19(A2)	TOM	12.11	12.47	5.75	02/22/90	
W5-4(A2)	TOM	6.15	6.55	-.44	05/24/90	
W5-5(C)	TOM	6.16	6.68	6.16	05/24/90	
W5-6(A1)	TOM	9.00	9.66	1.47	05/24/90	
W5-7(A2)	TOM	13.27	13.69	4.05	05/24/90	
W5-8(A2)	CBX	13.47	13.47	----	05/24/90	UNABLE TO READ
W5-9(A1)	TOM	13.25	13.93	7.24	05/24/90	
W5-10(A1)	TOM	13.20	13.47	6.40	05/24/90	
W5-14(A1)	TOM	7.25	7.64	.41	05/24/90	
W5-15(A1)	TOM	9.67	10.28	3.03	05/24/90	
W5-16(A1)	TOM	11.68	12.05	5.24	05/24/90	
W5-17(A1)	TOM	12.14	12.55	5.22	05/24/90	
W5-18(A1)	TOM	11.77	12.13	5.82	05/24/90	
W5-19(A2)	TOM	12.11	12.47	5.61	05/24/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 6

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W6-2(A2)	TOC	5.53	6.19	.28	02/26/90	
W6-3(A1)	TOC	5.51	6.10	.27	02/26/90	
W6-2(A2)	TOC	5.53	6.19	-.15	05/24/90	
W6-3(A1)	TOC	5.51	6.10	-.16	05/24/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 7

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W7-1(A1)	TOC	11.20	11.31	5.83	02/26/90	
W7-4(A2)	TOC	10.08	10.31	2.03	02/26/90	
W7-8(A2)	TOC	9.59	9.90	.62	02/26/90	
W7-13(A1)	TOC	11.28	11.31	4.38	02/26/90	
W7-15(A2)	TOC	8.10	8.30	3.41	02/26/90	
W7-16(C)	TOM	10.39	11.15	7.64	02/26/90	
W7-18(A2)	TOM	10.79	11.19	6.12	02/26/90	
W7-19(A1)	TOM	8.95	9.40	1.49	02/26/90	
W7-20(A2)	TOM	10.20	10.51	2.55	02/26/90	
W7-21(A1)	TOM	7.38	7.86	1.94	02/26/90	
W7-1(A1)	TOC	11.20	11.31	5.61	05/24/90	
W7-4(A2)	TOC	10.08	10.31	1.68	05/24/90	
W7-8(A2)	TOC	9.59	9.90	----	05/24/90	UNABLE TO READ
W7-13(A1)	TOC	11.28	11.31	4.06	05/24/90	
W7-15(A2)	TOC	8.10	8.30	3.07	05/24/90	
W7-16(C)	TOM	10.39	11.15	8.71	05/24/90	
W7-18(A2)	TOM	10.79	11.19	5.76	05/24/90	
W7-19(A1)	TOM	8.95	9.40	1.20	05/24/90	
W7-20(A2)	TOM	10.20	10.51	----	05/24/90	UNABLE TO READ
W7-21(A1)	TOM	7.38	7.86	2.58	05/24/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 8

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W8-1(A2)	TOM	8.03	8.16	.59	02/22/90	
W8-2(A2)	TOM	7.24	7.79	.42	02/22/90	
W8-3(C)	TOM	13.50	7.90	13.50	02/22/90	
W8-4(A1)	TOM	7.47	7.91	.63	02/22/90	
W8-5(A2)	TOM	6.03	6.55	.28	02/22/90	
W8-6(A2)	TOM	7.42	7.86	.53	02/22/90	
W8-1(A2)	TOM	8.03	8.16	-.37	05/25/90	
W8-2(A2)	TOM	7.24	7.79	-.56	05/25/90	
W8-3(C)	TOM	13.50	7.90	----	05/25/90	FLOWING WELL
W8-4(A1)	TOM	7.47	7.91	-1.31	05/25/90	
W8-5(A2)	TOM	6.03	6.55	-.78	05/25/90	
W8-6(A2)	TOM	7.42	7.86	-.51	05/25/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 9

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W9-1(A1)	TOC	18.72	18.86	10.27	02/22/90	
W9-2(A1)	TOC	19.44	19.63	11.71	02/22/90	
W9-3(C)	TOM	19.70	20.00	15.44	02/22/90	
W9-4(B2)	TOM	13.34	13.86	7.24	02/22/90	
W9-5(B3)	TOM	13.32	13.72	8.31	02/22/90	
W9-6(A1)	TOM	18.23	18.50	10.37	02/22/90	
W9-7(A2)	TOM	19.22	19.66	11.46	02/22/90	
W9-13(A2)	TOM	19.32	19.60	11.56	02/22/90	
W9-14(A2)	TOM	20.53	20.90	13.99	02/22/90	
W9-15(B2)	TOM	18.34	18.77	12.69	02/22/90	
W9-27(A2)	TOM	16.39	16.79	7.56	02/22/90	
W9-1(A1)	TOC	18.72	18.86	9.81	05/25/90	
W9-2(A1)	TOC	19.44	19.63	10.99	05/25/90	
W9-3(C)	TOM	19.70	20.00	15.63	05/25/90	
W9-4(B2)	TOM	13.34	13.86	6.14	05/25/90	
W9-5(B3)	TOM	13.32	13.72	7.26	05/25/90	
W9-6(A1)	TOM	18.23	18.50	9.72	05/25/90	
W9-7(A2)	TOM	19.22	19.66	11.97	05/25/90	
W9-13(A2)	TOM	19.32	19.60	11.07	05/25/90	
W9-14(A2)	TOM	20.53	20.90	13.52	05/25/90	
W9-15(B2)	TOM	18.34	18.77	12.16	05/25/90	
W9-27(A2)	TOM	16.39	16.79	7.13	05/25/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 10

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W10-2(A1)	TOC	15.55	15.50	10.80	02/23/90	
W10-3(B2)	TOC	15.58	15.55	10.75	02/23/90	
W10-4(A2)	TOC	9.77	9.80	5.08	02/23/90	
W10-5(A1)	TOM	9.05	9.72	4.47	02/23/90	
W10-6(C)	TOM	18.06	18.85	12.36	02/23/90	
W10-2(A1)	TOC	15.55	15.50	9.85	05/24/90	
W10-3(B2)	TOC	15.58	15.55	9.78	05/24/90	
W10-4(A2)	TOC	9.77	9.80	----	05/24/90	UNABLE TO READ
W10-5(A1)	TOM	9.05	9.72	3.66	05/24/90	
W10-6(C)	TOM	18.06	18.85	12.37	05/24/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 11

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W11-1(A1)	TOM	4.13	1.44	-5.00	02/22/90	
W11-2(A1)	TOM	4.86	1.67	-4.25	02/22/90	
W11-1(A1)	TOM	4.13	1.44	-5.12	05/25/90	
W11-2(A1)	TOM	4.86	1.67	-4.62	05/25/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 12

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W12-1(A2)	TOM	8.31	8.88	1.51	02/22/90	
W12-2(A2)	TOM	8.54	8.99	.75	02/22/90	
W12-3(A1)	TOM	5.42	5.79	.48	02/22/90	
W12-1(A2)	TOM	8.31	8.88	.55	05/25/90	
W12-2(A2)	TOM	8.54	8.99	-.21	05/25/90	
W12-3(A1)	TOM	5.42	5.79	-.44	05/25/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 14

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W14-1(A2)	TOM	29.94	30.33	21.81	02/26/90	
W14-2(A1)	TOM	29.85	30.51	21.39	02/26/90	
W14-3(A1)	TOM	31.37	31.65	22.07	02/26/90	
W14-4(A1)	TOM	29.09	29.54	21.12	02/26/90	
W14-5(A2)	TOM	31.25	31.62	22.29	02/26/90	
W14-6(A2)	TOM	29.19	29.63	21.51	02/26/90	
W14-1(A2)	TOM	29.94	30.33	21.03	05/25/90	
W14-2(A1)	TOM	29.85	30.51	20.61	05/25/90	
W14-3(A1)	TOM	31.37	31.65	21.31	05/25/90	
W14-4(A1)	TOM	29.09	29.54	20.32	05/25/90	
W14-5(A2)	TOM	31.25	31.62	21.52	05/25/90	
W14-6(A2)	TOM	29.19	29.63	20.90	05/25/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

NAS Moffett Field
Quarterly Water Level Measurements
Sorted by Site,Date,Well
Site 19

Report date: 08/10/90

Well Number	Pt. of Ref.	Elevation Reference Point (ft. MSL)	Elevation Ground Level (ft. MSL)	Elevation Water Level (ft. MSL)	Measure-ment Date	Remarks
W19-1(A2)	TOM	9.26	9.78	.62	02/23/90	
W19-2(A2)	TOM	10.02	10.31	1.03	02/23/90	
W19-3(A2)	TOM	7.68	8.18	.49	02/23/90	
W19-4(A2)	TOM	7.77	8.25	.38	02/23/90	
W19-1(A2)	TOM	9.26	9.78	----	05/24/90	FLOWING WELL
W19-2(A2)	TOM	10.02	10.31	----	05/24/90	FLOWING WELL
W19-3(A2)	TOM	7.68	8.18	.12	05/24/90	
W19-4(A2)	TOM	7.77	8.25	.01	05/24/90	

FOOTNOTE:

TOC : Measurement taken from Top of Well Casing.
TOM : Measurement taken from Top of Steel Well Monument.
CBX : Measurement taken from Top of Christy Box installation cover.

APPENDIX F

SUMMARY OF MAJOR/SIGNIFICANT MEETINGS

MAJOR/SIGNIFICANT PROJECT MEETINGS

Meetings with regulatory agencies and others have been conducted on an as-needed basis. Meetings that have been held since April 1, 1990, are as follows:

- Date: April 24, 1990
- Topic: Project Planning Meeting
- Location: CDM Office, San Francisco, California
- Attendees: EPA, DHS, RWQCB, SCVWD, WESTDIV., NAS Moffett Field, IT Corp., PRC, J.M. Montgomery

- Meeting Summary: Reviewed progress of field work. Other disucssion topics included; Quarterly Reports, Phase I Characterization Report, Vertical Conduits, Phase II plans, Monthly Reports, Tank removal FFA Deadlines.

- Date: May 16, 1990
- Topic: Technical Review Committee Meeting
- Location: NAS Moffett Field
- Attendees: Technical Review Committee Members

- Meeting Summary: Progress of the CPT/HP work was reviewed. Additionally, the approach to the evaluation and abandonment of old irrigation wells was presented.

- Date: May 15, 1990
- Topic: Project Planning Meeting
- Location: NAS Moffett Field
- Attendees: EPA, DHS, RWQCB, WESTDIV., NAS Moffett Field, NASA, IT Corp., PRC, J.M. Montgomery, Reidel, CDM.

- Meeting Summary: NASA presented status of their investigation, Quarterly Reports, Operable units and Tank removals were also discussed.

MAJOR/SIGNIFICANT PROJECT MEETINGS

(Continued)

- Date: June 22, 1990
- Topic: Project Planning Meeting
- Location: DHS Berkeley, California
- Attendees: EPA, RWQCB, DHS, WESTDIV, NAS Moffett Field, Energy Systems, IT Corp., PRC, J.M. Montgomery

- Meeting Summary: PRC presented an update of their activities at Sites 13 and 14, IT Corp., gave a status report on vertical conduit invetigation.

APPENDIX G
PROJECT VARIANCES

PROJECT VARIANCES

No project variances were completed during the period from April 1, 1990 to June 30, 1990.

APPENDIX H

~~CORE~~ PENETRATION TEST (CPT LOGS) AND INTERPRETED DATA*

* CPT Logs and interpretation data not presented here were published in the May 1990 Moffett Quarterly

N00296.000930
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX H

CONE PENETRATION TEST (CPT)
LOGS AND INTERPRETED DATA
CONE PENETRATION TEST DATA

QUARTERLY REPORT
1ST QUARTER 1990
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

DATED 15 MAY 1990

IS FILED AS ADMINISTRATIVE RECORD NO.
N00296.000844

1.0 INTERPRETED CPT TEST DATA SITE 3

PIONEER DRILLING

Engineer IT
On Site Loc: CPT/3-1
Job No. :409700
Tot. Unit Wt. (avg) : 115 pcf

CPT Date :02/27/90 IT COR
Cone Used :IV
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Bq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	16.70	1.15	6.91	0.02	clay	UNDFND	UNDFD	16	1.1
0.50	1.64	14.20	1.00	7.06	0.07	clay	UNDFND	UNDFD	14	.9
0.75	2.46	12.94	0.83	6.45	0.12	clay	UNDFND	UNDFD	12	.8
1.00	3.28	7.94	0.43	5.37	0.17	clay	UNDFND	UNDFD	8	.5
1.35	4.43	8.38	0.36	4.25	0.22	clay	UNDFND	UNDFD	8	.5
1.60	5.25	3.60	0.16	4.56	0.28	clay	UNDFND	UNDFD	3	.2
1.90	6.23	10.38	0.39	3.80	0.33	clay	UNDFND	UNDFD	10	.6
2.15	7.05	16.74	0.58	3.44	0.38	silty clay to clay	UNDFND	UNDFD	11	1.0
2.40	7.87	23.06	0.94	4.06	0.43	silty clay to clay	UNDFND	UNDFD	15	1.5
2.65	8.69	19.00	0.81	4.25	0.48	clay	UNDFND	UNDFD	18	1.2
2.90	9.51	20.86	0.75	3.58	0.52	silty clay to clay	UNDFND	UNDFD	13	1.3
3.15	10.33	17.82	0.79	4.42	0.57	clay	UNDFND	UNDFD	17	1.1
3.40	11.15	19.46	0.84	4.34	0.59	clay	UNDFND	UNDFD	19	1.2
3.65	11.98	24.20	0.89	3.69	0.61	silty clay to clay	UNDFND	UNDFD	15	1.5
3.90	12.80	19.24	0.62	3.23	0.63	clayey silt to silty clay	UNDFND	UNDFD	9	1.2
4.15	13.62	22.72	0.91	4.01	0.65	silty clay to clay	UNDFND	UNDFD	15	1.4
4.40	14.44	168.76	1.21	0.72	0.68	sand	80-90	44-46	32	UNDEFINED
4.65	15.26	191.26	0.67	0.35	0.70	sand	>90	44-46	37	UNDEFINED
4.90	16.08	229.28	0.77	0.33	0.72	sand	>90	44-46	44	UNDEFINED
5.15	16.90	130.62	0.33	0.25	0.74	sand	70-80	42-44	25	UNDEFINED
5.40	17.72	55.90	1.25	2.24	0.76	sandy silt to clayey silt	UNDFND	UNDFD	21	3.6
5.65	18.54	15.92	0.44	2.78	0.78	clayey silt to silty clay	UNDFND	UNDFD	8	.9
5.90	19.36	22.56	0.77	3.40	0.81	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
6.15	20.18	32.06	1.30	4.05	0.83	silty clay to clay	UNDFND	UNDFD	20	2.0
6.40	21.00	27.02	0.94	3.48	0.85	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
6.65	21.82	26.28	0.69	2.64	0.87	clayey silt to silty clay	UNDFND	UNDFD	13	1.6
6.90	22.64	18.50	0.38	2.08	0.89	clayey silt to silty clay	UNDFND	UNDFD	9	1.1
7.15	23.46	21.12	0.70	3.31	0.91	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
7.40	24.28	23.92	0.93	3.89	0.93	silty clay to clay	UNDFND	UNDFD	15	1.5
7.65	25.10	23.40	0.81	3.47	0.96	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
7.90	25.92	20.28	0.52	2.57	0.98	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
8.15	26.74	25.82	0.72	2.79	1.00	clayey silt to silty clay	UNDFND	UNDFD	12	1.6
8.40	27.56	21.06	0.79	3.76	1.02	silty clay to clay	UNDFND	UNDFD	13	1.3
8.65	28.38	18.44	0.40	2.18	1.04	clayey silt to silty clay	UNDFND	UNDFD	9	1.1
8.90	29.20	23.78	0.85	3.56	1.06	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
9.15	30.02	40.50	0.92	2.26	1.09	sandy silt to clayey silt	UNDFND	UNDFD	16	2.5
9.40	30.84	16.26	0.46	2.80	1.11	clayey silt to silty clay	UNDFND	UNDFD	8	.9
9.65	31.66	12.28	0.25	2.07	1.13	clayey silt to silty clay	UNDFND	UNDFD	6	.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT/3-1

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Bq - Dr (%)	PHI deg.	SPT N	Su tsf
9.95	32.64	14.58	0.42	2.89	1.15	clayey silt to silty clay	UNDFND	UNDFD	7	.8
10.20	33.46	23.44	0.67	2.84	1.18	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
10.45	34.28	34.30	0.81	2.37	1.20	sandy silt to clayey silt	UNDFND	UNDFD	13	2.1
10.70	35.10	44.52	1.16	2.60	1.22	sandy silt to clayey silt	UNDFND	UNDFD	17	2.8
10.95	35.93	52.08	0.92	1.77	1.24	silty sand to sandy silt	40-50	36-38	17	UNDEFINED
11.20	36.75	37.08	0.82	2.22	1.26	sandy silt to clayey silt	UNDFND	UNDFD	14	2.3
11.45	37.57	13.36	0.23	1.75	1.28	clayey silt to silty clay	UNDFND	UNDFD	6	.7
11.70	38.39	14.60	0.32	2.19	1.31	clayey silt to silty clay	UNDFND	UNDFD	7	.8
11.95	39.21	15.30	0.31	2.01	1.33	clayey silt to silty clay	UNDFND	UNDFD	7	.8
12.20	40.03	36.52	0.70	1.93	1.35	sandy silt to clayey silt	UNDFND	UNDFD	14	2.2
12.45	40.85	191.30	1.50	0.78	1.37	sand	80-90	42-44	37	UNDEFINED
12.70	41.67	114.12	2.04	1.79	1.39	silty sand to sandy silt	60-70	40-42	36	UNDEFINED
13.00	42.65	28.04	0.83	2.95	1.41	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
13.25	43.47	19.04	0.73	3.84	1.44	silty clay to clay	UNDFND	UNDFD	12	1.1
13.50	44.29	28.84	1.26	4.36	1.46	silty clay to clay	UNDFND	UNDFD	18	1.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

2.0 INTERPRETED CPT TEST DATA SITE 4

PIONEER DRILLING

Engineer IT
On Site Loc:CPT4-8
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/18/90/14:50
Cone Used :VIII
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	79.40	1.88	2.37	0.02	sandy silt to clayey silt	UNDFND	UNDFD	30	5.2
0.50	1.64	24.60	1.17	4.76	0.07	clay	UNDFND	UNDFD	24	1.6
0.75	2.46	13.80	0.73	5.30	0.11	clay	UNDFND	UNDFD	13	.9
1.00	3.28	15.00	0.84	5.61	0.16	clay	UNDFND	UNDFD	14	.9
1.25	4.10	16.40	0.66	4.00	0.20	silty clay to clay	UNDFND	UNDFD	10	1.0
1.50	4.92	21.20	0.72	3.41	0.25	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
1.75	5.74	19.40	0.68	3.52	0.29	silty clay to clay	UNDFND	UNDFD	12	1.2
2.00	6.56	12.20	0.43	3.54	0.34	silty clay to clay	UNDFND	UNDFD	8	.7
2.25	7.38	11.80	0.40	3.36	0.38	silty clay to clay	UNDFND	UNDFD	8	.7
2.50	8.20	12.60	0.35	2.76	0.43	silty clay to clay	UNDFND	UNDFD	8	.8
2.75	9.02	14.80	0.45	3.07	0.47	silty clay to clay	UNDFND	UNDFD	9	.9
3.00	9.84	13.20	0.60	4.53	0.52	clay	UNDFND	UNDFD	13	.8
3.25	10.66	18.60	0.87	4.70	0.55	clay	UNDFND	UNDFD	18	1.2
3.50	11.48	13.00	0.38	2.91	0.57	silty clay to clay	UNDFND	UNDFD	8	.8
3.75	12.30	21.60	0.94	4.36	0.59	clay	UNDFND	UNDFD	21	1.3
4.00	13.12	14.00	0.48	3.44	0.61	silty clay to clay	UNDFND	UNDFD	9	.8
4.25	13.94	17.20	0.59	3.43	0.63	silty clay to clay	UNDFND	UNDFD	11	1.0
4.50	14.76	15.00	0.42	2.79	0.65	clayey silt to silty clay	UNDFND	UNDFD	7	.9
4.75	15.58	19.20	0.48	2.50	0.67	clayey silt to silty clay	UNDFND	UNDFD	9	1.2
5.00	16.40	37.60	0.48	1.28	0.69	silty sand to sandy silt	40-50	38-40	12	UNDEFINED
5.25	17.22	175.80	1.00	0.57	0.71	sand	80-90	44-46	34	UNDEFINED
5.50	18.04	296.60	1.32	0.45	0.73	gravelly sand to sand	>90	46-48	47	UNDEFINED
5.75	18.86	342.40	1.13	0.33	0.75	gravelly sand to sand	>90	46-48	>50	UNDEFINED
6.00	19.69	246.60	0.59	0.24	0.77	gravelly sand to sand	>90	44-46	39	UNDEFINED
6.25	20.51	131.60	1.49	1.13	0.79	sand to silty sand	70-80	42-44	32	UNDEFINED
6.50	21.33	50.20	1.73	3.44	0.80	clayey silt to silty clay	UNDFND	UNDFD	24	3.2
6.75	22.15	32.80	1.14	3.46	0.82	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
7.00	22.97	37.00	1.51	4.08	0.84	silty clay to clay	UNDFND	UNDFD	24	2.3
7.25	23.79	37.20	1.38	3.72	0.86	clayey silt to silty clay	UNDFND	UNDFD	18	2.3
7.50	24.61	36.00	1.64	4.54	0.88	silty clay to clay	UNDFND	UNDFD	23	2.3
7.75	25.43	52.40	2.35	4.49	0.90	silty clay to clay	UNDFND	UNDFD	33	3.4
8.00	26.25	39.40	1.44	3.65	0.92	clayey silt to silty clay	UNDFND	UNDFD	19	2.5
8.25	27.07	23.00	0.52	2.28	0.94	sandy silt to clayey silt	UNDFND	UNDFD	9	1.4
8.50	27.89	34.40	1.02	2.97	0.96	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
8.75	28.71	31.40	0.80	2.55	0.98	sandy silt to clayey silt	UNDFND	UNDFD	12	1.9
9.00	29.53	16.40	0.49	3.01	1.00	clayey silt to silty clay	UNDFND	UNDFD	8	.9
9.25	30.35	9.00	0.13	1.44	1.02	clayey silt to silty clay	UNDFND	UNDFD	4	.4
9.50	31.17	7.60	0.07	0.97	1.04	sensitive fine grained	UNDFND	UNDFD	4	.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT | On Site Loc:CPT4-8 |

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Rq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	7.20	0.03	0.47	1.06	sensitive fine grained	UNDFND	UNDFD	3	.3
10.00	32.81	8.00	0.08	1.00	1.08	clayey silt to silty clay	UNDFND	UNDFD	4	.4
10.25	33.63	9.60	0.17	1.81	1.10	clayey silt to silty clay	UNDFND	UNDFD	5	.5
10.50	34.45	18.40	0.44	2.39	1.12	clayey silt to silty clay	UNDFND	UNDFD	9	1.1
10.75	35.27	27.80	0.88	3.17	1.14	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
11.00	36.09	22.60	0.59	2.63	1.16	clayey silt to silty clay	UNDFND	UNDFD	11	1.3
11.25	36.91	12.60	1.84	14.59	1.18	undefined	UNDFND	UNDFD	UDF	UNDEFINED
11.50	37.73	10.20	0.04	0.37	1.19	sandy silt to clayey silt	UNDFND	UNDFD	4	.5
11.75	38.55	12.00	0.09	0.75	1.21	sandy silt to clayey silt	UNDFND	UNDFD	5	.6
12.00	39.37	14.20	0.21	1.46	1.23	clayey silt to silty clay	UNDFND	UNDFD	7	.8
12.25	40.19	23.60	0.66	2.81	1.25	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
12.50	41.01	22.00	0.70	3.16	1.27	clayey silt to silty clay	UNDFND	UNDFD	11	1.3
12.75	41.83	23.00	0.95	4.11	1.29	silty clay to clay	UNDFND	UNDFD	15	1.3
13.00	42.65	21.40	0.68	3.18	1.31	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
13.25	43.47	18.00	0.51	2.83	1.33	clayey silt to silty clay	UNDFND	UNDFD	9	1.0
13.50	44.29	16.00	0.44	2.74	1.35	clayey silt to silty clay	UNDFND	UNDFD	8	.9
13.75	45.11	20.60	0.53	2.58	1.37	clayey silt to silty clay	UNDFND	UNDFD	10	1.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

3.0 INTERPRETED CPT TEST DATA SITE 5

PIONEER DRILLING

Engineer IT
On Site Loc:CPT/5-2
Job No. :409700
Tot. Unit Wt. (avg) : 115 pcf

CPT Date :03/02/90 IT COR
Cone Used :IV
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	25.48	1.36	5.35	0.02	clay	UNDFND	UNDFD	24	1.6
0.50	1.64	15.26	1.12	7.31	0.07	clay	UNDFND	UNDFD	15	1.0
0.75	2.46	23.28	1.39	5.98	0.12	clay	UNDFND	UNDFD	22	1.5
1.05	3.44	36.22	1.66	4.58	0.17	silty clay to clay	UNDFND	UNDFD	23	2.4
1.30	4.27	23.64	1.05	4.46	0.22	clay	UNDFND	UNDFD	23	1.5
1.55	5.09	27.80	0.71	2.56	0.27	sandy silt to clayey silt	UNDFND	UNDFD	11	1.8
1.80	5.91	8.10	0.32	3.98	0.32	clay	UNDFND	UNDFD	8	.5
2.05	6.73	6.52	0.36	5.52	0.36	clay	UNDFND	UNDFD	6	.4
2.35	7.71	19.12	0.63	3.31	0.41	clayey silt to silty clay	UNDFND	UNDFD	9	1.2
2.60	8.53	24.60	0.93	3.79	0.47	silty clay to clay	UNDFND	UNDFD	16	1.6
2.85	9.35	22.90	1.02	4.46	0.51	clay	UNDFND	UNDFD	22	1.4
3.15	10.33	13.32	0.54	4.07	0.57	clay	UNDFND	UNDFD	13	.8
3.40	11.15	18.98	0.85	4.48	0.59	clay	UNDFND	UNDFD	18	1.2
3.65	11.98	21.86	1.11	5.09	0.61	clay	UNDFND	UNDFD	21	1.4
3.90	12.80	28.36	1.39	4.90	0.63	clay	UNDFND	UNDFD	27	1.8
4.15	13.62	37.28	1.72	4.62	0.65	silty clay to clay	UNDFND	UNDFD	24	2.4
4.40	14.44	21.86	0.69	3.16	0.68	clayey silt to silty clay	UNDFND	UNDFD	10	1.4
4.70	15.42	23.52	0.81	3.44	0.70	clayey silt to silty clay	UNDFND	UNDFD	11	1.5
4.95	16.24	19.88	0.65	3.26	0.72	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
5.20	17.06	23.24	0.77	3.32	0.74	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
5.45	17.88	25.32	0.78	3.09	0.77	clayey silt to silty clay	UNDFND	UNDFD	12	1.6
5.70	18.70	17.38	0.46	2.64	0.79	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
5.95	19.52	52.86	0.88	1.66	0.81	silty sand to sandy silt	50-60	38-40	17	UNDEFINED
6.20	20.34	34.28	1.19	3.47	0.83	clayey silt to silty clay	UNDFND	UNDFD	16	2.2
6.45	21.16	25.70	0.86	3.34	0.85	clayey silt to silty clay	UNDFND	UNDFD	12	1.6
6.70	21.98	32.90	1.17	3.56	0.87	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
6.95	22.80	35.26	1.40	3.96	0.90	clayey silt to silty clay	UNDFND	UNDFD	17	2.2
7.20	23.62	30.04	1.33	4.42	0.92	silty clay to clay	UNDFND	UNDFD	19	1.9
7.45	24.44	31.84	1.28	4.03	0.94	silty clay to clay	UNDFND	UNDFD	20	2.0
7.70	25.26	49.34	2.19	4.44	0.96	silty clay to clay	UNDFND	UNDFD	32	3.1
7.95	26.08	40.54	2.09	5.17	0.98	clay	UNDFND	UNDFD	39	2.6
8.25	27.07	41.56	1.62	3.89	1.01	clayey silt to silty clay	UNDFND	UNDFD	20	2.6
8.50	27.89	17.58	0.44	2.53	1.03	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
8.75	28.71	11.62	1.89	16.28	1.05	undefined	UNDFND	UNDFD	UDF	UNDEFINED
9.00	29.53	15.44	0.46	2.97	1.07	clayey silt to silty clay	UNDFND	UNDFD	7	.9
9.25	30.35	15.80	0.70	4.44	1.09	clay	UNDFND	UNDFD	15	.9
9.50	31.17	16.96	0.61	3.58	1.12	silty clay to clay	UNDFND	UNDFD	11	1.0
9.75	31.99	27.42	1.23	4.47	1.14	silty clay to clay	UNDFND	UNDFD	18	1.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT | On Site Loc:CPT/5-2 |

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.00	32.81	17.46	0.54	3.09	1.16	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
10.25	33.63	20.66	0.70	3.39	1.18	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
10.50	34.45	25.92	1.12	4.32	1.20	silty clay to clay	UNDFND	UNDFD	17	1.5
10.80	35.43	24.40	0.90	3.67	1.23	silty clay to clay	UNDFND	UNDFD	16	1.4
11.05	36.25	30.16	1.21	4.02	1.25	silty clay to clay	UNDFND	UNDFD	19	1.8
11.30	37.07	31.72	1.39	4.39	1.27	silty clay to clay	UNDFND	UNDFD	20	1.9
11.60	38.06	30.34	1.30	4.30	1.29	silty clay to clay	UNDFND	UNDFD	19	1.8
11.90	39.04	34.22	2.60	7.60	1.32	clay	UNDFND	UNDFD	33	2.1
12.15	39.86	31.34	1.61	5.12	1.34	clay	UNDFND	UNDFD	30	1.9
12.50	41.01	35.70	1.84	5.14	1.37	clay	UNDFND	UNDFD	34	2.2
12.75	41.83	34.06	1.76	5.16	1.40	clay	UNDFND	UNDFD	33	2.1
13.00	42.65	26.86	1.32	4.91	1.42	clay	UNDFND	UNDFD	26	1.6
13.25	43.47	26.62	1.36	5.09	1.44	clay	UNDFND	UNDFD	25	1.6
13.50	44.29	28.08	1.28	4.57	1.46	clay	UNDFND	UNDFD	27	1.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT/S-4
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/06/90/11:12
Cone Used :IV
Water table (meters) : 2.2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	7.14	0.41	5.75	0.01	clay	UNDFND	UNDFD	7	.7
0.25	0.82	6.02	0.62	10.33	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.38	1.25	4.40	0.56	12.69	0.06	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.50	1.64	8.60	0.80	9.26	0.08	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.63	2.07	13.40	0.97	7.24	0.10	clay	UNDFND	UNDFD	13	1.3
0.75	2.46	14.74	1.07	7.28	0.12	clay	UNDFND	UNDFD	14	1.4
0.87	2.85	25.00	1.31	5.26	0.15	clay	UNDFND	UNDFD	24	2.4
1.00	3.28	22.76	1.36	5.97	0.17	clay	UNDFND	UNDFD	22	2.2
1.13	3.71	15.76	0.81	5.15	0.19	clay	UNDFND	UNDFD	15	1.5
1.25	4.10	6.42	0.58	8.99	0.21	undefined	UNDFND	UNDFD	UDF	UNDEFINED
1.37	4.49	6.84	0.43	6.33	0.24	clay	UNDFND	UNDFD	7	.6
1.50	4.92	4.58	0.36	7.87	0.26	organic material	UNDFND	UNDFD	4	.4
1.62	5.31	5.26	0.32	6.00	0.28	clay	UNDFND	UNDFD	5	.4
1.75	5.74	3.52	0.21	5.88	0.30	clay	UNDFND	UNDFD	3	.3
1.87	6.14	6.30	0.23	3.34	0.33	clay	UNDFND	UNDFD	7	.6
2.00	6.56	79.40	0.53	0.67	0.35	sand to silty sand	70-80	44-46	19	UNDEFINED
2.12	6.96	30.90	0.58	1.89	0.37	sandy silt to clayey silt	UNDFND	UNDFD	12	3.0
2.25	7.38	9.44	0.27	2.89	0.39	silty clay to clay	UNDFND	UNDFD	6	.9
2.38	7.81	10.32	0.25	2.47	0.41	silty clay to clay	UNDFND	UNDFD	7	.9
2.50	8.20	12.82	0.41	3.22	0.42	silty clay to clay	UNDFND	UNDFD	8	1.2
2.62	8.60	17.14	0.80	4.67	0.43	clay	UNDFND	UNDFD	16	1.6
2.75	9.02	18.22	0.99	5.44	0.43	clay	UNDFND	UNDFD	17	1.7
2.87	9.42	16.08	1.02	6.36	0.44	clay	UNDFND	UNDFD	15	1.5
3.00	9.84	13.60	0.85	6.24	0.45	clay	UNDFND	UNDFD	13	1.3
3.12	10.24	11.84	0.60	5.05	0.46	clay	UNDFND	UNDFD	11	1.1
3.25	10.66	13.82	0.61	4.44	0.47	clay	UNDFND	UNDFD	13	1.3
3.37	11.06	14.98	0.65	4.34	0.48	clay	UNDFND	UNDFD	14	1.4
3.50	11.48	19.36	1.14	5.87	0.49	clay	UNDFND	UNDFD	19	1.8
3.63	11.91	19.26	1.15	5.99	0.50	clay	UNDFND	UNDFD	18	1.8
3.75	12.30	19.02	1.10	5.77	0.51	clay	UNDFND	UNDFD	18	1.8
3.87	12.70	21.68	1.29	5.93	0.52	clay	UNDFND	UNDFD	21	2.0
4.00	13.12	56.44	2.45	4.35	0.53	clayey silt to silty clay	UNDFND	UNDFD	27	5.5
4.12	13.52	31.52	1.33	4.23	0.54	silty clay to clay	UNDFND	UNDFD	20	3.0
4.25	13.94	19.00	1.10	5.78	0.55	clay	UNDFND	UNDFD	18	1.8
4.37	14.34	20.72	1.17	5.66	0.56	clay	UNDFND	UNDFD	20	1.9
4.50	14.76	50.26	2.11	4.21	0.57	clayey silt to silty clay	UNDFND	UNDFD	24	4.9
4.62	15.16	33.82	1.83	5.40	0.58	clay	UNDFND	UNDFD	32	3.3
4.75	15.58	27.54	1.30	4.71	0.59	clay	UNDFND	UNDFD	26	2.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-4

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	91.96	2.50	2.72	0.60	sandy silt to clayey silt	UNDFND	UNDFD	35	9.1
5.00	16.40	217.66	1.92	0.88	0.61	sand	>90	46-48	42	UNDEFINED
5.12	16.80	229.96	1.24	0.54	0.62	sand	>90	46-48	44	UNDEFINED
5.25	17.22	189.10	0.72	0.38	0.63	sand	>90	44-46	36	UNDEFINED
5.38	17.65	171.60	0.57	0.33	0.64	sand	80-90	44-46	33	UNDEFINED
5.50	18.04	155.46	0.59	0.38	0.65	sand	80-90	44-46	30	UNDEFINED
5.62	18.44	180.74	0.61	0.34	0.66	sand	80-90	44-46	35	UNDEFINED
5.75	18.86	213.70	0.46	0.21	0.67	gravelly sand to sand	>90	44-46	34	UNDEFINED
5.87	19.26	163.82	0.44	0.27	0.68	sand	80-90	44-46	31	UNDEFINED
6.00	19.69	160.02	0.17	0.11	0.69	sand	80-90	44-46	31	UNDEFINED
6.12	20.08	182.12	0.35	0.19	0.70	sand	80-90	44-46	35	UNDEFINED
6.25	20.51	135.98	0.25	0.18	0.71	sand	80-90	42-44	26	UNDEFINED
6.38	20.93	60.84	0.45	0.74	0.72	sand to silty sand	50-60	40-42	15	UNDEFINED
6.50	21.33	16.04	0.14	0.88	0.73	sandy silt to clayey silt	UNDFND	UNDFD	6	1.4
6.63	21.75	17.40	0.20	1.16	0.74	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6
6.75	22.15	18.90	0.27	1.42	0.75	sandy silt to clayey silt	UNDFND	UNDFD	7	1.7
6.88	22.57	21.80	0.47	2.16	0.76	sandy silt to clayey silt	UNDFND	UNDFD	8	2.0
7.00	22.97	25.22	0.87	3.47	0.77	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
7.12	23.36	24.30	0.69	2.83	0.78	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
7.25	23.79	28.92	0.57	1.98	0.79	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7
7.37	24.18	20.46	0.72	3.50	0.80	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
7.50	24.61	22.64	0.43	1.88	0.81	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
7.62	25.00	20.52	0.57	2.77	0.81	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
7.75	25.43	40.70	1.42	3.49	0.82	clayey silt to silty clay	UNDFND	UNDFD	19	3.9
7.88	25.85	33.30	1.40	4.22	0.83	silty clay to clay	UNDFND	UNDFD	21	3.1
8.00	26.25	28.92	1.33	4.59	0.84	clay	UNDFND	UNDFD	28	2.7
8.13	26.67	22.16	0.87	3.92	0.85	silty clay to clay	UNDFND	UNDFD	14	2.0
8.25	27.07	15.62	0.36	2.31	0.86	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
8.38	27.49	12.38	0.31	2.47	0.87	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
8.50	27.89	21.50	0.44	2.05	0.88	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
8.62	28.28	31.86	0.64	2.01	0.89	sandy silt to clayey silt	UNDFND	UNDFD	12	3.0
8.75	28.71	40.46	1.34	3.31	0.90	clayey silt to silty clay	UNDFND	UNDFD	19	3.8
8.87	29.10	59.50	2.09	3.51	0.91	clayey silt to silty clay	UNDFND	UNDFD	28	5.7
9.00	29.53	52.74	2.17	4.12	0.92	clayey silt to silty clay	UNDFND	UNDFD	25	5.1
9.12	29.92	31.12	1.53	4.90	0.93	clay	UNDFND	UNDFD	30	2.9
9.25	30.35	20.86	0.34	1.62	0.94	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
9.37	30.74	21.18	0.41	1.93	0.95	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
9.50	31.17	25.32	0.64	2.53	0.96	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
9.63	31.59	22.72	0.94	4.13	0.97	silty clay to clay	UNDFND	UNDFD	15	2.0
9.75	31.99	31.52	1.33	4.23	0.98	silty clay to clay	UNDFND	UNDFD	20	2.9
9.88	32.41	51.74	1.25	2.43	0.99	sandy silt to clayey silt	UNDFND	UNDFD	20	4.9
10.00	32.81	78.30	1.18	1.51	1.00	silty sand to sandy silt	50-60	38-40	25	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-4 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	54.94	1.80	3.28	1.01	clayey silt to silty clay	UNDFND	UNDFD	26	5.3
10.25	33.63	25.34	0.80	3.14	1.02	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
10.37	34.02	34.22	1.65	4.83	1.03	clay	UNDFND	UNDFD	33	3.2
10.50	34.45	35.28	1.34	5.51	1.04	clay	UNDFND	UNDFD	34	3.3
10.62	34.84	23.12	0.96	4.16	1.05	silty clay to clay	UNDFND	UNDFD	15	2.1
10.75	35.27	22.54	0.76	3.35	1.06	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
10.87	35.66	21.44	0.69	3.23	1.07	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
11.00	36.09	23.18	0.97	4.19	1.08	silty clay to clay	UNDFND	UNDFD	15	2.1
11.13	36.52	28.38	1.44	5.07	1.09	clay	UNDFND	UNDFD	27	2.6
11.25	36.91	32.32	1.57	4.86	1.10	clay	UNDFND	UNDFD	31	3.0
11.37	37.30	28.36	1.32	4.67	1.11	clay	UNDFND	UNDFD	27	2.6
11.50	37.73	33.68	1.69	5.02	1.12	clay	UNDFND	UNDFD	32	3.1
11.62	38.12	28.76	1.40	4.87	1.13	clay	UNDFND	UNDFD	28	2.6
11.75	38.55	26.28	1.13	4.30	1.14	silty clay to clay	UNDFND	UNDFD	17	2.4
11.87	38.94	27.94	0.98	3.51	1.15	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
12.00	39.37	29.50	1.04	3.53	1.16	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
12.12	39.76	27.52	0.93	3.39	1.17	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
12.25	40.19	22.94	0.76	3.33	1.18	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
12.37	40.58	24.06	0.68	2.82	1.19	clayey silt to silty clay	UNDFND	UNDFD	12	2.1
12.50	41.01	26.66	1.25	4.68	1.20	clay	UNDFND	UNDFD	26	2.4
12.62	41.40	29.78	1.70	5.70	1.20	clay	UNDFND	UNDFD	29	2.7
12.75	41.83	28.10	1.71	6.09	1.21	clay	UNDFND	UNDFD	27	2.5
12.87	42.22	26.88	1.50	5.58	1.22	clay	UNDFND	UNDFD	26	2.4
13.00	42.65	25.66	1.34	5.20	1.23	clay	UNDFND	UNDFD	25	2.3
13.12	43.04	24.38	1.31	5.37	1.24	clay	UNDFND	UNDFD	23	2.2
13.25	43.47	21.80	1.17	5.36	1.25	clay	UNDFND	UNDFD	21	1.9
13.37	43.86	22.24	0.90	4.07	1.26	silty clay to clay	UNDFND	UNDFD	14	1.9
13.50	44.29	20.18	1.23	6.11	1.27	clay	UNDFND	UNDFD	19	1.7
13.62	44.69	21.14	0.96	4.56	1.28	clay	UNDFND	UNDFD	20	1.8
13.75	45.11	22.58	0.69	3.03	1.29	clayey silt to silty clay	UNDFND	UNDFD	11	2.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTRI (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT/S-3
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/06/90/13:28
Cone Used :IV
Water table (meters) : 2.4

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	8.26	0.38	4.57	0.01	clay	UNDFND	UNDFD	8	.8
0.25	0.82	11.38	0.66	5.82	0.03	clay	UNDFND	UNDFD	11	1.1
0.38	1.25	12.60	0.79	6.26	0.06	clay	UNDFND	UNDFD	12	1.2
0.50	1.64	12.64	0.76	6.02	0.08	clay	UNDFND	UNDFD	12	1.2
0.63	2.07	15.92	0.92	5.78	0.10	clay	UNDFND	UNDFD	15	1.5
0.75	2.46	16.50	0.97	5.90	0.12	clay	UNDFND	UNDFD	16	1.6
0.87	2.85	23.44	1.11	4.74	0.15	clay	UNDFND	UNDFD	22	2.3
1.00	3.28	14.06	0.59	4.21	0.17	clay	UNDFND	UNDFD	13	1.3
1.13	3.71	7.42	0.55	7.44	0.19	clay	UNDFND	UNDFD	7	.7
1.25	4.10	21.56	0.48	2.21	0.21	clayey silt to silty clay	UNDFND	UNDFD	10	2.1
1.37	4.49	27.18	0.36	1.32	0.24	sandy silt to clayey silt	UNDFND	UNDFD	10	2.6
1.50	4.92	7.52	0.26	3.42	0.26	clay	UNDFND	UNDFD	7	.7
1.62	5.31	7.32	0.33	4.46	0.28	clay	UNDFND	UNDFD	7	.7
1.75	5.74	10.82	0.46	4.29	0.30	clay	UNDFND	UNDFD	10	1.0
1.87	6.14	37.34	0.54	1.44	0.33	silty sand to sandy silt	50-60	40-42	12	UNDEFINED
2.00	6.56	59.52	1.00	1.68	0.35	silty sand to sandy silt	60-70	42-44	19	UNDEFINED
2.12	6.96	14.90	0.41	2.74	0.37	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
2.25	7.38	7.78	0.22	2.81	0.39	silty clay to clay	UNDFND	UNDFD	5	.7
2.38	7.81	8.30	0.11	1.37	0.42	clayey silt to silty clay	UNDFND	UNDFD	4	.7
2.50	8.20	9.96	0.22	2.24	0.44	clayey silt to silty clay	UNDFND	UNDFD	5	.9
2.62	8.60	15.52	0.48	3.09	0.45	clayey silt to silty clay	UNDFND	UNDFD	7	1.5
2.75	9.02	18.88	0.72	3.80	0.46	silty clay to clay	UNDFND	UNDFD	12	1.8
2.87	9.42	21.10	1.21	5.74	0.46	clay	UNDFND	UNDFD	20	2.0
3.00	9.84	41.42	1.39	3.36	0.47	clayey silt to silty clay	UNDFND	UNDFD	20	4.0
3.12	10.24	38.50	0.75	1.95	0.48	sandy silt to clayey silt	UNDFND	UNDFD	15	3.7
3.25	10.66	27.74	0.74	2.68	0.49	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
3.37	11.06	15.02	0.60	3.98	0.50	clay	UNDFND	UNDFD	14	1.4
3.50	11.48	17.56	1.12	6.37	0.51	clay	UNDFND	UNDFD	17	1.6
3.63	11.91	15.54	1.05	6.73	0.52	clay	UNDFND	UNDFD	15	1.4
3.75	12.30	16.72	0.78	4.67	0.53	clay	UNDFND	UNDFD	16	1.6
3.87	12.70	14.76	0.55	3.70	0.54	silty clay to clay	UNDFND	UNDFD	9	1.4
4.00	13.12	17.70	0.79	4.48	0.55	clay	UNDFND	UNDFD	17	1.6
4.12	13.52	19.12	0.57	3.00	0.56	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
4.25	13.94	17.30	0.88	5.06	0.57	clay	UNDFND	UNDFD	17	1.6
4.37	14.34	15.58	0.83	5.30	0.58	clay	UNDFND	UNDFD	15	1.4
4.50	14.76	15.58	0.67	4.30	0.59	clay	UNDFND	UNDFD	15	1.4
4.62	15.16	17.60	0.58	3.31	0.60	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
4.75	15.58	16.74	0.57	3.41	0.61	silty clay to clay	UNDFND	UNDFD	11	1.5

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-9

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	40.86	1.32	3.22	0.62	clayey silt to silty clay	UNDFND	UNDFD	20	3.3
5.00	16.40	123.90	1.22	0.98	0.63	sand to silty sand	70-80	42-44	30	UNDEFINED
5.12	16.80	46.12	1.64	3.55	0.64	clayey silt to silty clay	UNDFND	UNDFD	22	4.5
5.25	17.22	18.26	0.64	3.50	0.65	silty clay to clay	UNDFND	UNDFD	12	1.7
5.38	17.65	15.70	0.44	2.80	0.66	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
5.50	18.04	18.12	0.44	2.45	0.67	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
5.62	18.44	19.28	0.48	2.47	0.68	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
5.75	18.86	16.32	0.25	1.52	0.69	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
5.87	19.26	15.30	0.17	1.08	0.70	sandy silt to clayey silt	UNDFND	UNDFD	6	1.4
6.00	19.69	15.34	0.15	0.96	0.71	sandy silt to clayey silt	UNDFND	UNDFD	6	1.4
6.12	20.08	17.26	0.53	3.05	0.72	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
6.25	20.51	31.98	0.95	2.96	0.73	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
6.38	20.93	56.22	1.34	2.38	0.74	sandy silt to clayey silt	UNDFND	UNDFD	22	5.5
6.50	21.33	33.38	1.12	3.36	0.75	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
6.63	21.75	28.48	0.95	3.33	0.76	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
6.75	22.15	28.70	0.77	2.68	0.77	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
6.88	22.57	28.12	0.92	3.27	0.78	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
7.00	22.97	25.24	0.81	3.22	0.79	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
7.12	23.36	24.18	0.79	3.25	0.80	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
7.25	23.79	24.54	0.83	3.37	0.81	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
7.37	24.18	26.48	0.95	3.58	0.82	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
7.50	24.61	34.34	1.40	4.08	0.83	silty clay to clay	UNDFND	UNDFD	22	3.3
7.62	25.00	26.76	1.22	4.57	0.84	clay	UNDFND	UNDFD	26	2.5
7.75	25.43	17.74	0.79	4.43	0.85	clay	UNDFND	UNDFD	17	1.6
7.88	25.85	36.44	1.66	4.54	0.86	silty clay to clay	UNDFND	UNDFD	23	3.5
8.00	26.25	93.70	2.85	3.04	0.87	sandy silt to clayey silt	UNDFND	UNDFD	36	9.2
8.13	26.67	93.60	2.32	2.48	0.87	sandy silt to clayey silt	UNDFND	UNDFD	36	9.2
8.25	27.07	43.60	1.62	3.71	0.88	clayey silt to silty clay	UNDFND	UNDFD	21	4.2
8.38	27.49	31.90	1.36	4.26	0.89	silty clay to clay	UNDFND	UNDFD	20	3.0
8.50	27.89	32.08	1.31	4.09	0.90	silty clay to clay	UNDFND	UNDFD	20	3.0
8.62	28.28	35.84	2.05	5.72	0.91	clay	UNDFND	UNDFD	34	3.4
8.75	28.71	28.98	1.42	4.89	0.92	clay	UNDFND	UNDFD	28	2.7
8.87	29.10	27.30	1.18	4.34	0.93	silty clay to clay	UNDFND	UNDFD	17	2.5
9.00	29.53	27.32	1.13	4.12	0.94	silty clay to clay	UNDFND	UNDFD	17	2.5
9.12	29.92	25.14	1.12	4.44	0.95	silty clay to clay	UNDFND	UNDFD	16	2.3
9.25	30.35	24.24	0.97	4.01	0.96	silty clay to clay	UNDFND	UNDFD	15	2.2
9.37	30.74	19.60	0.75	3.81	0.97	silty clay to clay	UNDFND	UNDFD	13	1.7
9.50	31.17	19.12	0.62	3.25	0.98	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
9.63	31.59	22.24	0.84	3.76	0.99	silty clay to clay	UNDFND	UNDFD	14	2.0
9.75	31.99	21.00	0.85	4.05	1.00	silty clay to clay	UNDFND	UNDFD	13	1.9
9.88	32.41	19.50	0.78	4.02	1.01	silty clay to clay	UNDFND	UNDFD	12	1.7
10.00	32.81	19.32	0.85	4.40	1.02	clay	UNDFND	UNDFD	19	1.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-9

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	19.32	0.81	4.20	1.03	silty clay to clay	UNDFND	UNDFD	12	1.7
10.25	33.63	24.28	0.64	2.65	1.04	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
10.37	34.02	19.82	0.69	3.46	1.05	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
10.50	34.45	16.18	0.39	2.40	1.06	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
10.62	34.84	14.28	0.37	2.60	1.07	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
10.75	35.27	20.74	0.61	2.92	1.08	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
10.87	35.66	20.56	0.41	2.00	1.09	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
11.00	36.09	15.28	0.27	1.78	1.10	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
11.13	36.52	16.66	0.56	3.36	1.11	silty clay to clay	UNDFND	UNDFD	11	1.4
11.25	36.91	35.40	1.09	3.08	1.12	clayey silt to silty clay	UNDFND	UNDFD	17	3.3
11.37	37.30	49.56	1.38	2.78	1.13	sandy silt to clayey silt	UNDFND	UNDFD	19	4.7
11.50	37.73	108.74	0.84	0.77	1.14	sand to silty sand	60-70	40-42	26	UNDEFINED
11.62	38.12	128.84	0.64	0.49	1.15	sand	70-80	40-42	25	UNDEFINED
11.75	38.55	157.90	0.64	0.41	1.16	sand	70-80	42-44	30	UNDEFINED
11.87	38.94	163.54	1.39	0.85	1.17	sand	70-80	42-44	31	UNDEFINED
12.00	39.37	50.98	1.89	3.70	1.18	clayey silt to silty clay	UNDFND	UNDFD	24	4.8
12.12	39.76	38.78	1.79	4.63	1.19	silty clay to clay	UNDFND	UNDFD	25	3.6
12.25	40.19	27.48	0.89	3.25	1.20	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
12.37	40.58	21.60	1.00	4.63	1.21	clay	UNDFND	UNDFD	21	1.9
12.50	41.01	49.08	2.35	4.80	1.22	silty clay to clay	UNDFND	UNDFD	31	4.6
12.62	41.40	71.40	3.18	4.45	1.23	clayey silt to silty clay	UNDFND	UNDFD	34	6.9
12.75	41.83	27.38	1.82	6.66	1.24	clay	UNDFND	UNDFD	26	2.5
12.87	42.22	34.42	1.54	4.46	1.24	silty clay to clay	UNDFND	UNDFD	22	3.2
13.00	42.65	30.70	1.82	5.92	1.25	clay	UNDFND	UNDFD	29	2.8
13.12	43.04	30.46	1.94	6.37	1.26	clay	UNDFND	UNDFD	23	2.8
13.25	43.47	32.90	1.98	6.03	1.27	clay	UNDFND	UNDFD	32	3.0
13.37	43.86	30.92	1.79	5.78	1.28	clay	UNDFND	UNDFD	30	2.8
13.50	44.29	29.74	1.77	5.96	1.29	clay	UNDFND	UNDFD	28	2.7
13.62	44.69	25.68	1.38	5.36	1.30	clay	UNDFND	UNDFD	25	2.3
13.75	45.11	23.32	1.26	5.40	1.31	clay	UNDFND	UNDFD	22	2.0
13.87	45.51	18.76	0.17	0.93	1.32	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-15
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/11/90/12:25
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	56.55	0.70	1.24	0.02	silty sand to sandy silt	>90	>48	18	UNDEFINED
0.50	1.64	63.29	2.56	4.05	0.07	clayey silt to silty clay	UNDFND	UNDFD	30	6.3
0.75	2.46	50.38	2.15	4.27	0.11	clayey silt to silty clay	UNDFND	UNDFD	24	5.0
1.00	3.28	18.43	0.58	3.15	0.16	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
1.25	4.10	10.08	0.44	4.40	0.20	clay	UNDFND	UNDFD	10	.9
1.50	4.92	8.67	0.33	3.81	0.25	clay	UNDFND	UNDFD	8	.8
1.75	5.74	17.24	0.49	2.87	0.29	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
2.00	6.56	9.04	0.15	1.61	0.34	clayey silt to silty clay	UNDFND	UNDFD	4	.8
2.25	7.38	8.60	0.12	1.35	0.38	clayey silt to silty clay	UNDFND	UNDFD	4	.8
2.50	8.20	13.98	0.41	2.95	0.43	silty clay to clay	UNDFND	UNDFD	9	1.3
2.75	9.02	18.31	0.82	4.45	0.46	clay	UNDFND	UNDFD	18	1.7
3.00	9.84	12.74	0.51	4.04	0.48	clay	UNDFND	UNDFD	12	1.2
3.25	10.66	13.67	0.48	3.51	0.50	silty clay to clay	UNDFND	UNDFD	9	1.3
3.50	11.48	16.12	0.62	3.83	0.52	silty clay to clay	UNDFND	UNDFD	10	1.5
3.75	12.30	13.55	0.39	2.85	0.54	silty clay to clay	UNDFND	UNDFD	9	1.2
4.00	13.12	19.73	0.60	3.07	0.56	clayey silt to silty clay	UNDFND	UNDFD	9	1.9
4.25	13.94	21.41	0.79	3.69	0.58	silty clay to clay	UNDFND	UNDFD	14	2.0
4.50	14.76	31.58	1.23	3.90	0.60	silty clay to clay	UNDFND	UNDFD	20	3.0
4.75	15.58	29.24	0.94	3.21	0.62	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
5.00	16.40	13.78	0.35	2.54	0.64	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
5.25	17.22	32.04	0.78	2.42	0.66	sandy silt to clayey silt	UNDFND	UNDFD	12	3.1
5.50	18.04	18.19	0.52	2.88	0.68	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
5.75	18.86	15.44	0.25	1.65	0.69	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
6.00	19.69	12.57	0.18	1.41	0.71	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.25	20.51	15.28	0.19	1.25	0.73	sandy silt to clayey silt	UNDFND	UNDFD	6	1.4
6.50	21.33	16.42	0.25	1.50	0.75	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
6.75	22.15	10.80	0.08	0.72	0.77	sandy silt to clayey silt	UNDFND	UNDFD	4	.9
7.00	22.97	16.41	0.33	2.03	0.79	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.25	23.79	21.59	0.71	3.31	0.81	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
7.50	24.61	24.73	0.91	3.67	0.83	silty clay to clay	UNDFND	UNDFD	16	2.3
7.75	25.43	28.62	1.30	4.53	0.85	silty clay to clay	UNDFND	UNDFD	18	2.7
8.00	26.25	39.45	1.81	4.58	0.87	silty clay to clay	UNDFND	UNDFD	25	3.8
8.25	27.07	50.14	2.35	4.68	0.89	silty clay to clay	UNDFND	UNDFD	32	4.8
8.50	27.89	31.22	1.12	3.57	0.91	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
8.75	28.71	29.50	0.93	3.15	0.93	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
9.00	29.53	22.77	0.61	2.68	0.95	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
9.25	30.35	16.14	0.37	2.29	0.97	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
9.50	31.17	14.38	0.28	1.94	0.99	clayey silt to silty clay	UNDFND	UNDFD	7	1.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT5-15

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI Deg.	SPT N	Su tsf
9.75	31.99	19.79	0.28	2.93	1.01	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
10.00	32.81	19.29	0.29	2.48	1.03	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
10.25	33.63	19.19	0.26	2.09	1.05	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
10.50	34.45	21.07	0.58	2.82	1.07	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
10.75	35.27	24.50	0.93	3.78	1.08	silty clay to clay	UNDFND	UNDFD	16	2.2
11.00	36.09	24.91	1.14	4.56	1.10	clay	UNDFND	UNDFD	24	2.2
11.25	36.91	26.93	1.21	4.48	1.12	silty clay to clay	UNDFND	UNDFD	17	2.4
11.50	37.73	24.62	1.09	4.43	1.14	clay	UNDFND	UNDFD	24	2.2
11.75	38.55	22.58	1.03	4.57	1.16	clay	UNDFND	UNDFD	22	2.0
12.00	39.37	19.37	0.71	3.66	1.18	silty clay to clay	UNDFND	UNDFD	12	1.7
12.25	40.19	25.82	1.19	4.61	1.20	clay	UNDFND	UNDFD	25	2.3
12.50	41.01	28.13	1.43	4.82	1.22	clay	UNDFND	UNDFD	29	2.7
12.75	41.83	31.06	1.46	4.70	1.24	clay	UNDFND	UNDFD	30	2.8
13.00	42.65	32.14	1.53	4.76	1.26	clay	UNDFND	UNDFD	31	2.9
13.25	43.47	31.89	1.30	4.50	1.28	silty clay to clay	UNDFND	UNDFD	19	2.8
13.50	44.29	27.55	1.11	4.03	1.30	silty clay to clay	UNDFND	UNDFD	18	2.5
13.75	45.11	23.79	0.74	3.10	1.32	clayey silt to silty clay	UNDFND	UNDFD	11	2.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT5-16
Job No. :409700
Tot. Unit Wt. (avg) : 115 pcf

CPT Date :04/17/90/12:51
Cone Used :VIII
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	32.60	1.16	3.55	0.02	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
0.50	1.64	31.00	1.79	5.79	0.07	clay	UNDFND	UNDFD	30	2.0
0.75	2.46	32.20	1.73	5.37	0.12	clay	UNDFND	UNDFD	31	2.1
1.00	3.28	39.60	2.19	5.53	0.17	clay	UNDFND	UNDFD	38	2.6
1.25	4.10	32.00	1.45	4.54	0.21	silty clay to clay	UNDFND	UNDFD	20	2.1
1.50	4.92	60.80	0.53	0.88	0.26	sand to silty sand	70-80	44-46	15	UNDEFINED
1.75	5.74	28.00	0.65	2.33	0.31	sandy silt to clayey silt	UNDFND	UNDFD	11	1.8
2.00	6.56	16.40	0.54	3.30	0.35	silty clay to clay	UNDFND	UNDFD	10	1.0
2.25	7.38	11.00	0.21	1.91	0.40	clayey silt to silty clay	UNDFND	UNDFD	5	.7
2.50	8.20	10.20	0.11	1.06	0.45	clayey silt to silty clay	UNDFND	UNDFD	5	.6
2.75	9.02	12.40	0.30	2.44	0.50	clayey silt to silty clay	UNDFND	UNDFD	6	.7
3.00	9.84	19.80	0.87	4.37	0.54	clay	UNDFND	UNDFD	19	1.2
3.25	10.66	20.40	1.02	4.98	0.58	clay	UNDFND	UNDFD	20	1.3
3.50	11.48	19.20	1.04	5.40	0.60	clay	UNDFND	UNDFD	18	1.2
3.75	12.30	25.00	1.18	4.71	0.62	clay	UNDFND	UNDFD	24	1.6
4.00	13.12	26.60	1.23	4.62	0.64	clay	UNDFND	UNDFD	25	1.7
4.25	13.94	20.80	0.72	3.46	0.66	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
4.50	14.76	26.00	0.85	3.27	0.68	clayey silt to silty clay	UNDFND	UNDFD	12	1.6
4.75	15.58	20.60	0.63	3.05	0.71	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
5.00	16.40	16.00	0.38	2.39	0.73	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
5.25	17.22	20.00	0.54	2.68	0.75	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
5.50	18.04	17.40	0.41	2.36	0.77	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
5.75	18.86	14.40	0.40	2.76	0.79	clayey silt to silty clay	UNDFND	UNDFD	7	.8
6.00	19.69	15.60	0.31	1.96	0.81	clayey silt to silty clay	UNDFND	UNDFD	7	.9
6.25	20.51	13.20	0.17	1.32	0.84	clayey silt to silty clay	UNDFND	UNDFD	6	.8
6.50	21.33	14.00	0.13	0.91	0.86	sandy silt to clayey silt	UNDFND	UNDFD	5	.8
6.75	22.15	18.20	0.30	1.63	0.88	sandy silt to clayey silt	UNDFND	UNDFD	7	1.1
7.00	22.97	13.60	0.19	1.43	0.90	clayey silt to silty clay	UNDFND	UNDFD	7	.8
7.25	23.79	21.00	0.58	2.75	0.92	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
7.50	24.61	33.20	1.65	4.96	0.94	clay	UNDFND	UNDFD	32	2.1
7.75	25.43	34.40	1.73	5.03	0.96	clay	UNDFND	UNDFD	33	2.1
8.00	26.25	36.80	1.69	4.59	0.99	silty clay to clay	UNDFND	UNDFD	23	2.3
8.25	27.07	56.40	2.58	4.58	1.01	silty clay to clay	UNDFND	UNDFD	36	3.6
8.50	27.89	71.60	3.33	4.65	1.03	silty clay to clay	UNDFND	UNDFD	46	4.6
8.75	28.71	34.20	1.10	3.22	1.05	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
9.00	29.53	33.40	1.13	3.38	1.07	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
9.25	30.35	36.20	1.13	3.13	1.09	clayey silt to silty clay	UNDFND	UNDFD	17	2.2
9.50	31.17	22.40	0.65	2.91	1.12	clayey silt to silty clay	UNDFND	UNDFD	11	1.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-16

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	16.20	0.45	2.80	1.14	clayey silt to silty clay	UNDFND	UNDFD	8	.9
10.00	32.81	23.20	0.75	3.25	1.16	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
10.25	33.63	15.80	0.53	3.35	1.18	silty clay to clay	UNDFND	UNDFD	10	.9
10.50	34.45	18.00	0.46	2.58	1.20	clayey silt to silty clay	UNDFND	UNDFD	9	1.0
10.75	35.27	17.20	0.67	3.92	1.22	silty clay to clay	UNDFND	UNDFD	11	1.0
11.00	36.09	13.40	0.27	1.99	1.24	clayey silt to silty clay	UNDFND	UNDFD	6	.7
11.25	36.91	52.40	1.21	2.31	1.27	sandy silt to clayey silt	UNDFND	UNDFD	20	3.3
11.50	37.73	115.80	0.50	0.43	1.29	sand	60-70	40-42	22	UNDEFINED
11.75	38.55	124.00	0.23	0.19	1.31	sand	60-70	40-42	24	UNDEFINED
12.00	39.37	86.80	0.17	0.19	1.33	sand	50-60	38-40	17	UNDEFINED
12.25	40.19	103.80	0.29	0.28	1.35	sand	60-70	38-40	20	UNDEFINED
12.50	41.01	56.60	0.87	1.54	1.37	silty sand to sandy silt	40-50	36-38	18	UNDEFINED
12.75	41.83	15.80	0.17	1.06	1.40	sandy silt to clayey silt	UNDFND	UNDFD	6	.8
13.00	42.65	22.80	0.65	2.85	1.42	clayey silt to silty clay	UNDFND	UNDFD	11	1.3
13.25	43.47	28.20	0.92	3.26	1.44	clayey silt to silty clay	UNDFND	UNDFD	14	1.7
13.50	44.29	31.00	0.88	2.83	1.46	clayey silt to silty clay	UNDFND	UNDFD	15	1.8
13.75	45.11	31.20	1.03	3.31	1.48	clayey silt to silty clay	UNDFND	UNDFD	15	1.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ***

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-22
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/11/90/08:18
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	33.98	0.30	1.67	0.02	silty sand to sandy silt	>80	>40	17	UNDEFINED
0.50	1.64	36.70	2.06	5.78	0.07	clay	UNDFND	UNDFD	34	3.5
0.75	2.46	17.71	1.03	5.84	0.11	clay	UNDFND	UNDFD	17	1.7
1.00	3.28	29.16	1.05	3.59	0.16	clayey silt to silty clay	UNDFND	UNDFD	14	2.9
1.25	4.10	23.57	0.91	3.87	0.20	silty clay to clay	UNDFND	UNDFD	15	2.3
1.50	4.92	11.28	0.42	3.69	0.25	clay	UNDFND	UNDFD	11	1.1
1.75	5.74	11.05	0.36	3.30	0.29	silty clay to clay	UNDFND	UNDFD	7	1.0
2.00	6.56	12.27	0.44	3.62	0.34	silty clay to clay	UNDFND	UNDFD	8	1.1
2.25	7.38	14.23	0.44	3.07	0.38	silty clay to clay	UNDFND	UNDFD	9	1.3
2.50	8.20	17.33	0.52	3.13	0.43	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
2.75	9.02	17.68	0.64	3.63	0.46	silty clay to clay	UNDFND	UNDFD	11	1.7
3.00	9.84	18.72	0.64	3.45	0.48	silty clay to clay	UNDFND	UNDFD	12	1.8
3.25	10.66	18.54	0.87	4.67	0.50	clay	UNDFND	UNDFD	18	1.7
3.50	11.48	13.47	0.52	3.88	0.52	clay	UNDFND	UNDFD	13	1.2
3.75	12.30	14.50	0.41	2.82	0.54	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
4.00	13.12	25.64	1.09	4.25	0.56	silty clay to clay	UNDFND	UNDFD	16	2.4
4.25	13.94	22.50	0.88	3.90	0.58	silty clay to clay	UNDFND	UNDFD	14	2.1
4.50	14.76	31.01	1.26	4.06	0.60	silty clay to clay	UNDFND	UNDFD	20	3.0
4.75	15.58	31.02	0.98	3.15	0.62	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
5.00	16.40	41.95	1.47	3.51	0.64	clayey silt to silty clay	UNDFND	UNDFD	20	4.1
5.25	17.22	159.23	2.16	1.36	0.66	sand to silty sand	80-90	44-46	38	UNDEFINED
5.50	18.04	233.47	1.00	0.42	0.68	sand	>90	46-48	46	UNDEFINED
5.75	18.86	69.97	0.53	0.76	0.69	sand to silty sand	60-70	40-42	17	UNDEFINED
6.00	19.69	13.48	0.16	1.18	0.71	sandy silt to clayey silt	UNDFND	UNDFD	5	1.2
6.25	20.51	12.53	0.19	1.54	0.73	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.50	21.33	30.77	0.63	2.04	0.75	sandy silt to clayey silt	UNDFND	UNDFD	12	2.9
6.75	22.15	33.31	0.94	2.81	0.77	sandy silt to clayey silt	UNDFND	UNDFD	13	3.2
7.00	22.97	31.00	0.81	2.60	0.79	sandy silt to clayey silt	UNDFND	UNDFD	12	2.9
7.25	23.79	34.81	1.25	3.60	0.81	clayey silt to silty clay	UNDFND	UNDFD	17	3.3
7.50	24.61	33.59	1.11	3.29	0.83	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
7.75	25.43	25.15	0.82	3.26	0.85	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
8.00	26.25	49.40	1.23	2.49	0.87	sandy silt to clayey silt	UNDFND	UNDFD	19	4.7
8.25	27.07	97.92	1.03	1.05	0.89	sand to silty sand	60-70	40-42	23	UNDEFINED
8.50	27.89	146.15	2.47	1.69	0.91	sand to silty sand	70-80	42-44	35	UNDEFINED
8.75	28.71	114.00	2.20	1.93	0.93	silty sand to sandy silt	70-80	40-42	36	UNDEFINED
9.00	29.53	69.26	1.28	1.84	0.95	silty sand to sandy silt	50-60	38-40	22	UNDEFINED
9.25	30.35	63.43	1.91	3.02	0.97	sandy silt to clayey silt	UNDFND	UNDFD	24	6.1
9.50	31.17	117.36	5.26	4.48	0.99	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT5-22

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	33.78	1.30	3.84	1.01	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
10.00	32.81	23.30	0.68	2.93	1.03	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
10.25	33.63	22.40	0.68	3.06	1.05	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
10.50	34.45	25.35	0.69	2.72	1.07	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
10.75	35.27	29.67	0.94	3.16	1.08	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
11.00	36.09	44.78	1.82	4.06	1.10	clayey silt to silty clay	UNDFND	UNDFD	21	4.2
11.25	36.91	32.89	1.24	3.76	1.12	clayey silt to silty clay	UNDFND	UNDFD	16	3.0
11.50	37.73	32.75	1.20	3.66	1.14	clayey silt to silty clay	UNDFND	UNDFD	16	3.0
11.75	38.55	33.85	1.17	3.46	1.16	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
12.00	39.37	32.12	1.10	3.41	1.18	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
12.25	40.19	30.85	1.05	3.40	1.20	clayey silt to silty clay	UNDFND	UNDFD	15	2.8
12.50	41.01	35.00	1.59	4.53	1.22	silty clay to clay	UNDFND	UNDFD	22	3.2
12.75	41.83	34.00	1.47	4.33	1.24	silty clay to clay	UNDFND	UNDFD	22	3.1
13.00	42.65	34.82	1.50	4.32	1.26	silty clay to clay	UNDFND	UNDFD	22	3.2
13.25	43.47	27.37	1.07	3.84	1.28	silty clay to clay	UNDFND	UNDFD	18	2.5
13.50	44.29	24.14	0.88	3.63	1.30	clayey silt to silty clay	UNDFND	UNDFD	12	2.1
13.75	45.11	23.82	0.64	2.67	1.32	clayey silt to silty clay	UNDFND	UNDFD	11	2.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP.
On Site Loc:CPT/5-25
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/01/90
Cone Used :IV
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Dq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	29.44	1.28	4.35	0.02	silty clay to clay	UNDFND	UNDFD	19	1.9
0.50	1.64	16.04	1.23	7.64	0.07	clay	UNDFND	UNDFD	15	1.0
0.75	2.46	18.10	1.15	6.38	0.11	clay	UNDFND	UNDFD	17	1.1
1.00	3.28	24.94	1.14	4.57	0.16	clay	UNDFND	UNDFD	24	1.6
1.25	4.10	22.30	1.10	4.92	0.20	clay	UNDFND	UNDFD	21	1.4
1.50	4.92	16.50	0.33	2.01	0.25	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
1.75	5.74	2.00	0.09	4.30	0.29	clay	UNDFND	UNDFD	2	.1
2.10	6.89	45.56	0.20	0.44	0.35	sand to silty sand	50-60	42-44	11	UNDEFINED
2.35	7.71	81.66	0.21	0.26	0.40	sand to silty sand	70-80	44-46	20	UNDEFINED
2.60	8.53	111.82	0.42	0.38	0.45	sand	80-90	44-46	21	UNDEFINED
2.85	9.35	178.38	1.30	0.73	0.49	sand	>90	46-48	34	UNDEFINED
3.10	10.17	181.56	0.78	0.43	0.54	sand	>90	46-48	35	UNDEFINED
3.35	10.99	55.36	1.25	2.26	0.56	sandy silt to clayey silt	UNDFND	UNDFD	21	3.6
3.60	11.81	18.80	0.51	2.71	0.58	clayey silt to silty clay	UNDFND	UNDFD	9	1.2
3.90	12.80	14.90	0.27	1.80	0.60	clayey silt to silty clay	UNDFND	UNDFD	7	.9
4.15	13.62	16.64	0.44	2.62	0.62	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
4.40	14.44	20.62	0.51	2.46	0.64	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
4.65	15.26	13.20	0.27	2.02	0.66	clayey silt to silty clay	UNDFND	UNDFD	6	.8
4.90	16.08	15.60	0.35	2.24	0.68	clayey silt to silty clay	UNDFND	UNDFD	7	.9
5.15	16.90	16.42	0.28	1.73	0.70	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
5.40	17.72	14.88	0.26	1.75	0.72	clayey silt to silty clay	UNDFND	UNDFD	7	.9
5.65	18.54	15.72	0.31	1.98	0.74	clayey silt to silty clay	UNDFND	UNDFD	8	.9
5.90	19.36	16.44	0.37	2.26	0.76	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
6.20	20.34	18.50	0.31	1.68	0.78	sandy silt to clayey silt	UNDFND	UNDFD	7	1.1
6.45	21.16	22.26	0.40	1.80	0.80	sandy silt to clayey silt	UNDFND	UNDFD	9	1.4
6.70	21.98	23.28	0.60	2.56	0.82	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
6.95	22.80	41.34	0.68	1.65	0.84	silty sand to sandy silt	40-50	36-38	13	UNDEFINED
7.20	23.62	42.82	0.71	1.65	0.86	silty sand to sandy silt	40-50	36-38	14	UNDEFINED
7.45	24.44	109.60	1.15	1.05	0.88	sand to silty sand	70-80	40-42	26	UNDEFINED
7.70	25.26	65.50	1.38	2.11	0.90	silty sand to sandy silt	50-60	38-40	21	UNDEFINED
8.00	26.25	35.62	2.89	8.10	0.92	undefined	UNDFND	UNDFD	UDF	UNDEFINED
8.25	27.07	37.10	1.47	3.97	0.94	clayey silt to silty clay	UNDFND	UNDFD	18	2.3
8.50	27.89	39.30	1.45	3.69	0.96	clayey silt to silty clay	UNDFND	UNDFD	19	2.5
8.80	28.87	34.68	0.85	2.46	0.98	sandy silt to clayey silt	UNDFND	UNDFD	13	2.2
9.05	29.69	21.82	0.43	1.97	1.00	sandy silt to clayey silt	UNDFND	UNDFD	8	1.3
9.30	30.51	24.92	0.51	2.05	1.02	sandy silt to clayey silt	UNDFND	UNDFD	10	1.5
9.55	31.33	16.62	0.39	2.36	1.04	clayey silt to silty clay	UNDFND	UNDFD	8	.9
9.80	32.15	15.62	0.34	2.15	1.06	clayey silt to silty clay	UNDFND	UNDFD	7	.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP. On Site Loc:CPT/5-25

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Bq - Dr (%)	PHI deg.	SPT N	Su tsf
10.05	32.97	19.14	0.23	1.21	1.08	sandy silt to clayey silt	UNDFND	UNDFD	7	1.1
10.30	33.79	19.62	0.35	1.80	1.10	sandy silt to clayey silt	UNDFND	UNDFD	8	1.1
10.55	34.61	22.68	0.59	2.61	1.12	clayey silt to silty clay	UNDFND	UNDFD	11	1.3
10.80	35.43	29.66	0.96	3.24	1.14	clayey silt to silty clay	UNDFND	UNDFD	14	1.8
11.05	36.25	27.26	1.01	3.69	1.16	clayey silt to silty clay	UNDFND	UNDFD	13	1.6
11.30	37.07	28.74	2.92	10.16	1.18	undefined	UNDFND	UNDFD	UDF	UNDEFINED
11.55	37.89	77.52	0.49	0.63	1.20	sand to silty sand	50-60	38-40	19	UNDEFINED
11.80	38.71	19.28	0.38	1.96	1.22	sandy silt to clayey silt	UNDFND	UNDFD	7	1.1
12.05	39.53	24.30	0.42	1.72	1.24	sandy silt to clayey silt	UNDFND	UNDFD	9	1.4
12.30	40.35	26.06	2.17	8.34	1.26	undefined	UNDFND	UNDFD	UDF	UNDEFINED
12.55	41.17	35.18	4.60	13.09	1.28	undefined	UNDFND	UNDFD	UDF	UNDEFINED
12.80	41.99	94.66	1.64	1.74	1.30	silty sand to sandy silt	60-70	38-40	30	UNDEFINED
13.05	42.81	38.18	3.27	8.55	1.32	undefined	UNDFND	UNDFD	UDF	UNDEFINED
13.30	43.64	73.30	1.33	1.81	1.33	silty sand to sandy silt	50-60	38-40	23	UNDEFINED
13.55	44.46	147.56	5.02	3.40	1.35	sandy silt to clayey silt	UNDFND	UNDFD	>50	9.6
13.80	45.28	22.80	0.50	2.21	1.37	sandy silt to clayey silt	UNDFND	UNDFD	9	1.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-26
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/10/90/15:48
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	40.54	1.78	4.40	0.02	silty clay to clay	UNDFND	UNDFD	26	4.0
0.50	1.64	34.33	2.05	5.87	0.07	clay	UNDFND	UNDFD	33	3.4
0.75	2.46	24.59	1.48	6.00	0.11	clay	UNDFND	UNDFD	24	2.4
1.00	3.28	15.19	1.02	6.31	0.16	clay	UNDFND	UNDFD	18	1.9
1.25	4.10	21.79	0.90	4.12	0.20	silty clay to clay	UNDFND	UNDFD	14	2.1
1.50	4.92	23.92	0.92	3.99	0.25	silty clay to clay	UNDFND	UNDFD	15	2.2
1.75	5.74	13.75	0.56	4.10	0.29	clay	UNDFND	UNDFD	13	1.3
2.00	6.56	16.63	0.68	4.10	0.34	clay	UNDFND	UNDFD	16	1.6
2.25	7.38	13.25	0.44	3.34	0.38	silty clay to clay	UNDFND	UNDFD	8	1.2
2.50	8.20	10.78	0.21	1.95	0.43	clayey silt to silty clay	UNDFND	UNDFD	5	1.0
2.75	9.02	15.42	0.45	2.94	0.46	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
3.00	9.84	23.72	0.82	3.48	0.48	clayey silt to silty clay	UNDFND	UNDFD	11	2.3
3.25	10.66	30.63	1.13	3.70	0.50	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
3.50	11.48	28.50	1.08	3.80	0.52	silty clay to clay	UNDFND	UNDFD	18	2.7
3.75	12.30	19.67	0.63	3.20	0.54	clayey silt to silty clay	UNDFND	UNDFD	9	1.9
4.00	13.12	17.80	0.53	3.00	0.56	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
4.25	13.94	22.80	0.66	2.90	0.58	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
4.50	14.76	28.73	0.92	3.20	0.60	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
4.75	15.58	21.60	0.61	2.83	0.62	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
5.00	16.40	19.31	0.36	1.85	0.64	sandy silt to clayey silt	UNDFND	UNDFD	7	1.8
5.25	17.22	16.88	0.20	1.17	0.66	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
5.50	18.04	16.65	0.30	1.83	0.68	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
5.75	18.86	12.53	0.32	2.52	0.69	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.00	19.69	14.97	0.27	1.82	0.71	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
6.25	20.51	12.94	0.17	1.35	0.73	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.50	21.33	17.01	0.15	0.88	0.75	sandy silt to clayey silt	UNDFND	UNDFD	7	1.5
6.75	22.15	17.10	0.12	0.69	0.77	sandy silt to clayey silt	UNDFND	UNDFD	7	1.5
7.00	22.97	11.72	0.10	0.83	0.79	sandy silt to clayey silt	UNDFND	UNDFD	4	1.0
7.25	23.79	17.87	0.44	2.47	0.81	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
7.50	24.61	32.80	1.28	3.89	0.83	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
7.75	25.43	32.75	1.38	4.21	0.85	silty clay to clay	UNDFND	UNDFD	21	3.1
8.00	26.25	54.34	1.72	3.17	0.87	sandy silt to clayey silt	UNDFND	UNDFD	21	5.2
8.25	27.07	44.91	1.66	3.70	0.89	clayey silt to silty clay	UNDFND	UNDFD	22	4.3
8.50	27.89	33.78	0.93	2.77	0.91	sandy silt to clayey silt	UNDFND	UNDFD	13	3.2
8.75	28.71	21.70	0.56	2.58	0.93	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
9.00	29.53	16.68	0.28	1.74	0.95	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
9.25	30.35	16.89	0.34	2.02	0.97	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
9.50	31.17	21.36	0.57	2.69	0.99	clayey silt to silty clay	UNDFND	UNDFD	10	1.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

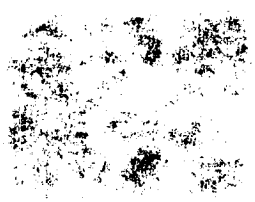
PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT5-26

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	17.07	0.44	2.59	1.01	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
10.00	32.81	15.05	0.43	2.83	1.03	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
10.25	33.63	20.46	0.73	3.59	1.05	silty clay to clay	UNDFND	UNDFD	13	1.8
10.50	34.45	21.36	0.59	2.68	1.07	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
10.75	35.27	24.33	0.55	2.22	1.08	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3
11.00	36.09	25.36	0.73	2.80	1.10	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
11.25	36.91	25.92	0.81	3.13	1.12	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
11.50	37.73	24.52	0.65	2.63	1.14	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
11.75	38.55	23.19	0.59	2.56	1.16	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
12.00	39.37	22.32	0.56	2.45	1.18	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
12.25	40.19	21.21	0.44	2.09	1.20	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
12.50	41.01	17.21	0.32	1.83	1.22	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
12.75	41.83	22.20	0.23	1.03	1.24	sandy silt to clayey silt	UNDFND	UNDFD	9	1.9
13.00	42.65	23.84	0.43	1.82	1.26	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
13.25	43.47	25.72	0.67	2.62	1.28	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
13.50	44.29	21.17	0.54	2.56	1.30	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
13.75	45.11	48.75	1.14	2.35	1.32	sandy silt to clayey silt	UNDFND	UNDFD	19	4.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****



PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-28
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/10/90/13:50
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	40.72	0.52	1.27	0.02	silty sand to sandy silt	>90	>48	13	UNDEFINED
0.50	1.64	62.95	1.72	2.72	0.07	sandy silt to clayey silt	UNDFND	UNDFD	24	6.2
0.75	2.46	62.13	3.02	4.86	0.11	silty clay to clay	UNDFND	UNDFD	40	6.2
1.00	3.28	48.66	3.00	6.17	0.16	clay	UNDFND	UNDFD	47	4.8
1.25	4.10	25.91	1.19	4.61	0.20	clay	UNDFND	UNDFD	25	2.5
1.50	4.92	64.02	0.71	1.11	0.25	silty sand to sandy silt	70-80	44-46	20	UNDEFINED
1.75	5.74	153.57	1.57	1.02	0.29	sand to silty sand	>90	46-48	37	UNDEFINED
2.00	6.56	143.14	0.82	0.57	0.34	sand	>90	46-48	27	UNDEFINED
2.25	7.38	121.00	0.58	0.48	0.38	sand	80-90	44-46	23	UNDEFINED
2.50	8.20	168.56	0.42	0.25	0.43	sand	>90	46-48	32	UNDEFINED
2.75	9.02	179.02	1.44	0.81	0.46	sand	>90	46-48	34	UNDEFINED
3.00	9.84	33.03	1.34	4.05	0.48	silty clay to clay	UNDFND	UNDFD	21	3.2
3.25	10.66	12.75	0.47	3.67	0.50	silty clay to clay	UNDFND	UNDFD	8	1.2
3.50	11.48	11.13	0.26	2.36	0.52	clayey silt to silty clay	UNDFND	UNDFD	5	1.0
3.75	12.30	14.90	0.51	3.43	0.54	silty clay to clay	UNDFND	UNDFD	10	1.4
4.00	13.12	22.26	0.69	3.11	0.56	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
4.25	13.94	22.52	0.54	2.41	0.58	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
4.50	14.76	23.44	0.73	3.12	0.60	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
4.75	15.58	15.70	0.39	2.49	0.62	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
5.00	16.40	12.83	0.20	1.54	0.64	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
5.25	17.22	19.68	0.38	1.95	0.66	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
5.50	18.04	16.75	0.54	3.21	0.68	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
5.75	18.86	10.59	0.26	2.42	0.69	silty clay to clay	UNDFND	UNDFD	7	.9
6.00	19.69	12.19	0.22	1.83	0.71	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.25	20.51	13.98	0.26	1.84	0.73	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
6.50	21.33	20.48	0.55	2.70	0.75	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
6.75	22.15	17.52	0.46	2.63	0.77	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
7.00	22.97	27.27	0.90	3.30	0.79	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
7.25	23.79	32.14	1.62	5.05	0.81	clay	UNDFND	UNDFD	31	3.0
7.50	24.61	41.89	1.89	4.51	0.83	silty clay to clay	UNDFND	UNDFD	27	4.0
7.75	25.43	57.89	2.38	4.12	0.85	clayey silt to silty clay	UNDFND	UNDFD	28	5.6
8.00	26.25	52.50	1.65	3.14	0.87	sandy silt to clayey silt	UNDFND	UNDFD	20	5.1
8.25	27.07	37.71	1.41	3.75	0.89	clayey silt to silty clay	UNDFND	UNDFD	18	3.6
8.50	27.89	36.17	1.17	3.24	0.91	clayey silt to silty clay	UNDFND	UNDFD	17	3.4
8.75	28.71	33.46	1.07	3.19	0.93	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
9.00	29.53	30.03	1.01	3.37	0.95	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
9.25	30.35	22.26	0.62	2.77	0.97	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
9.50	31.17	23.29	0.74	3.18	0.99	clayey silt to silty clay	UNDFND	UNDFD	11	2.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT5-28

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	15.50	0.40	2.56	1.01	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
10.00	32.81	15.87	0.29	1.81	1.03	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
10.25	33.63	19.74	0.60	3.04	1.05	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
10.50	34.45	71.48	2.15	3.01	1.07	sandy silt to clayey silt	UNDFND	UNDFD	27	6.9
10.75	35.27	226.60	2.84	1.25	1.08	sand	80-90	44-46	43	UNDEFINED
11.00	36.09	223.56	0.44	0.20	1.10	gravelly sand to sand	80-90	44-46	36	UNDEFINED
11.25	36.91	198.24	0.42	0.21	1.12	sand	80-90	42-44	38	UNDEFINED
11.50	37.73	70.04	0.40	0.57	1.14	sand to silty sand	50-60	38-40	17	UNDEFINED
11.75	38.55	24.59	0.39	1.58	1.16	sandy silt to clayey silt	UNDFND	UNDFD	9	2.2
12.00	39.37	26.52	0.63	2.39	1.18	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4
12.25	40.19	24.77	0.72	2.89	1.20	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
12.50	41.01	23.47	0.61	2.58	1.22	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
12.75	41.83	28.53	0.98	3.43	1.24	clayey silt to silty clay	UNDFND	UNDFD	14	2.6
13.00	42.65	33.99	1.45	4.25	1.26	silty clay to clay	UNDFND	UNDFD	22	3.1
13.25	43.47	35.45	1.40	3.94	1.28	clayey silt to silty clay	UNDFND	UNDFD	17	3.3
13.50	44.29	32.06	1.47	4.58	1.30	silty clay to clay	UNDFND	UNDFD	20	2.9
13.75	45.11	20.50	0.56	2.74	1.32	clayey silt to silty clay	UNDFND	UNDFD	10	1.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT5-29
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/13/90/14:14
Cone Used :IV
Water table (meters) : 2.3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	44.86	0.94	2.10	0.02	sandy silt to clayey silt	UNDFND	UNDFD	17	4.4
0.50	1.64	19.48	1.05	5.37	0.07	clay	UNDFND	UNDFD	19	1.9
0.75	2.46	21.28	1.07	5.01	0.11	clay	UNDFND	UNDFD	20	2.1
1.00	3.28	35.16	1.39	3.94	0.16	clayey silt to silty clay	UNDFND	UNDFD	17	3.5
1.25	4.10	29.00	0.96	3.30	0.20	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
1.50	4.92	35.52	0.96	2.71	0.25	sandy silt to clayey silt	UNDFND	UNDFD	14	3.5
1.75	5.74	13.70	0.58	4.24	0.29	clay	UNDFND	UNDFD	13	1.3
2.00	6.56	14.72	0.33	2.21	0.34	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
2.25	7.38	13.13	0.35	2.65	0.38	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
2.50	8.20	9.40	0.37	3.93	0.42	clay	UNDFND	UNDFD	9	.8
2.75	9.02	17.41	0.70	4.03	0.44	silty clay to clay	UNDFND	UNDFD	11	1.6
3.00	9.84	20.80	0.86	4.16	0.46	silty clay to clay	UNDFND	UNDFD	13	2.0
3.25	10.66	17.00	0.72	4.26	0.48	clay	UNDFND	UNDFD	16	1.6
3.50	11.48	19.12	0.96	5.02	0.50	clay	UNDFND	UNDFD	18	1.8
3.75	12.30	13.93	0.65	4.65	0.52	clay	UNDFND	UNDFD	13	1.3
4.00	13.12	23.52	0.98	4.17	0.54	silty clay to clay	UNDFND	UNDFD	15	2.2
4.25	13.94	24.86	1.41	5.68	0.56	clay	UNDFND	UNDFD	24	2.4
4.50	14.76	17.45	0.95	5.43	0.58	clay	UNDFND	UNDFD	17	1.6
4.75	15.58	15.63	0.60	3.85	0.60	silty clay to clay	UNDFND	UNDFD	10	1.4
5.00	16.40	15.36	0.53	3.45	0.62	silty clay to clay	UNDFND	UNDFD	10	1.4
5.25	17.22	11.69	0.39	3.32	0.64	silty clay to clay	UNDFND	UNDFD	7	1.0
5.50	18.04	13.93	0.45	3.22	0.65	silty clay to clay	UNDFND	UNDFD	9	1.2
5.75	18.86	15.74	0.42	2.66	0.67	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
6.00	19.69	12.66	0.28	2.21	0.69	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.25	20.51	17.98	0.47	2.61	0.71	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
6.50	21.33	19.02	0.56	2.94	0.73	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
6.75	22.15	24.80	0.76	3.07	0.75	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
7.00	22.97	34.17	1.00	2.93	0.77	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
7.25	23.79	29.28	1.06	3.60	0.79	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
7.50	24.61	35.23	1.41	4.02	0.81	silty clay to clay	UNDFND	UNDFD	22	3.3
7.75	25.43	32.04	1.20	3.76	0.83	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
8.00	26.25	30.53	1.07	3.51	0.85	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
8.25	27.07	19.55	0.71	3.61	0.87	silty clay to clay	UNDFND	UNDFD	12	1.8
8.50	27.89	16.98	0.48	2.89	0.89	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
8.75	28.71	7.21	0.09	1.32	0.91	undefined	UNDFND	UNDFD	UDF	UNDEFINED
9.00	29.53	6.82	0.08	1.10	0.93	sensitive fine grained	UNDFND	UNDFD	3	.5
9.25	30.35	22.83	0.60	2.64	0.95	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
9.50	31.17	18.46	0.64	3.46	0.97	silty clay to clay	UNDFND	UNDFD	12	1.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-29

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	18.81	0.37	1.96	0.99	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
10.00	32.81	18.66	0.74	3.97	1.01	silty clay to clay	UNDFND	UNDFD	12	1.6
10.25	33.63	26.75	1.02	3.80	1.03	silty clay to clay	UNDFND	UNDFD	17	2.4
10.50	34.45	24.01	0.77	3.21	1.04	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
10.75	35.27	21.55	0.89	4.14	1.06	silty clay to clay	UNDFND	UNDFD	14	1.9
11.00	36.09	24.96	0.91	3.66	1.08	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
11.25	36.91	15.32	0.47	2.92	1.10	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
11.50	37.73	21.28	0.69	3.22	1.12	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
11.75	38.55	27.07	1.21	4.48	1.14	silty clay to clay	UNDFND	UNDFD	17	2.4
12.00	39.37	21.08	0.90	4.28	1.16	silty clay to clay	UNDFND	UNDFD	13	1.8
12.25	40.19	25.11	1.04	4.13	1.18	silty clay to clay	UNDFND	UNDFD	16	2.2
12.50	41.01	27.62	1.25	4.53	1.20	clay	UNDFND	UNDFD	26	2.5
12.75	41.83	24.43	1.19	4.85	1.22	clay	UNDFND	UNDFD	23	2.2
13.00	42.65	23.88	1.00	4.19	1.24	silty clay to clay	UNDFND	UNDFD	15	2.1
13.25	43.47	19.35	0.84	4.37	1.26	clay	UNDFND	UNDFD	19	1.6
13.50	44.29	18.26	0.67	3.68	1.28	silty clay to clay	UNDFND	UNDFD	12	1.5
13.75	45.11	17.00	0.40	2.32	1.30	clayey silt to silty clay	UNDFND	UNDFD	8	1.4

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-31
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/05/90/12:02
Cone Used :VIII
Water table (meters) : 2.4

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	22.00	1.07	4.85	0.02	clay	UNDFND	UNDFD	21	2.1
0.50	1.64	17.57	1.05	5.95	0.07	clay	UNDFND	UNDFD	17	1.7
0.75	2.46	13.94	0.79	5.70	0.11	clay	UNDFND	UNDFD	13	1.3
1.00	3.28	19.26	0.88	4.58	0.16	clay	UNDFND	UNDFD	18	1.9
1.25	4.10	36.12	1.41	3.91	0.20	clayey silt to silty clay	UNDFND	UNDFD	17	3.5
1.50	4.92	25.32	1.19	4.71	0.25	clay	UNDFND	UNDFD	24	2.5
1.75	5.74	21.35	0.85	3.97	0.29	silty clay to clay	UNDFND	UNDFD	14	2.1
2.00	6.56	16.56	0.53	3.22	0.34	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
2.25	7.38	23.77	0.47	1.97	0.38	sandy silt to clayey silt	UNDFND	UNDFD	9	2.3
2.50	8.20	13.20	0.33	2.51	0.43	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
2.75	9.02	14.53	0.47	3.24	0.45	silty clay to clay	UNDFND	UNDFD	9	1.4
3.00	9.84	19.76	0.90	4.57	0.47	clay	UNDFND	UNDFD	19	1.9
3.25	10.66	31.91	1.29	4.05	0.49	silty clay to clay	UNDFND	UNDFD	20	3.1
3.50	11.48	26.41	1.06	4.01	0.51	silty clay to clay	UNDFND	UNDFD	17	2.5
3.75	12.30	11.57	0.38	3.27	0.53	silty clay to clay	UNDFND	UNDFD	7	1.0
4.00	13.12	14.67	0.48	3.30	0.55	silty clay to clay	UNDFND	UNDFD	9	1.3
4.25	13.94	19.19	0.80	4.17	0.57	silty clay to clay	UNDFND	UNDFD	12	1.8
4.50	14.76	18.29	0.74	4.04	0.59	silty clay to clay	UNDFND	UNDFD	12	1.7
4.75	15.58	17.44	0.70	3.99	0.61	silty clay to clay	UNDFND	UNDFD	11	1.6
5.00	16.40	18.51	0.35	1.87	0.63	sandy silt to clayey silt	UNDFND	UNDFD	7	1.7
5.25	17.22	11.89	0.31	2.57	0.65	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
5.50	18.04	15.96	0.42	2.64	0.67	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
5.75	18.86	12.17	0.30	2.46	0.68	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.00	19.69	12.13	0.22	1.78	0.70	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.25	20.51	12.25	0.11	0.93	0.72	sandy silt to clayey silt	UNDFND	UNDFD	5	1.1
6.50	21.33	14.85	0.21	1.42	0.74	sandy silt to clayey silt	UNDFND	UNDFD	6	1.3
6.75	22.15	30.78	0.98	3.20	0.76	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
7.00	22.97	27.53	0.80	2.92	0.78	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
7.25	23.79	31.34	1.16	3.71	0.80	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
7.50	24.61	32.48	1.07	3.29	0.82	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
7.75	25.43	37.04	1.27	3.43	0.84	clayey silt to silty clay	UNDFND	UNDFD	18	3.5
8.00	26.25	26.71	0.94	3.41	0.86	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
8.25	27.07	36.57	1.28	3.51	0.88	clayey silt to silty clay	UNDFND	UNDFD	18	3.5
8.50	27.89	24.70	0.59	2.37	0.90	sandy silt to clayey silt	UNDFND	UNDFD	9	2.3
8.75	28.71	19.49	0.47	2.39	0.92	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
9.00	29.53	23.14	0.85	3.67	0.94	silty clay to clay	UNDFND	UNDFD	15	2.1
9.25	30.35	26.11	0.91	3.49	0.96	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
9.50	31.17	40.68	1.37	3.38	0.98	clayey silt to silty clay	UNDFND	UNDFD	19	3.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT5-31

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	46.13	1.45	3.13	1.00	clayey silt to silty clay	UNDFND	UNDFD	22	4.4
10.00	32.81	28.79	1.03	3.56	1.02	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
10.25	33.63	22.62	0.71	3.12	1.04	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
10.50	34.45	17.28	0.54	3.15	1.06	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
10.75	35.27	27.66	0.98	3.54	1.07	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
11.00	36.09	25.68	0.72	2.81	1.09	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
11.25	36.91	20.39	0.67	3.30	1.11	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
11.50	37.73	27.52	1.05	3.81	1.13	silty clay to clay	UNDFND	UNDFD	18	2.5
11.75	38.55	29.03	1.25	4.30	1.15	silty clay to clay	UNDFND	UNDFD	19	2.6
12.00	39.37	22.36	0.95	4.25	1.17	silty clay to clay	UNDFND	UNDFD	14	2.0
12.25	40.19	11.32	0.43	3.59	1.19	silty clay to clay	UNDFND	UNDFD	8	.9
12.50	41.01	11.40	0.14	1.26	1.21	clayey silt to silty clay	UNDFND	UNDFD	5	.9
12.75	41.83	14.67	0.22	1.49	1.23	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
13.00	42.65	37.34	1.04	2.79	1.25	sandy silt to clayey silt	UNDFND	UNDFD	14	3.5
13.25	43.47	27.12	0.50	1.83	1.27	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4
13.50	44.29	39.68	1.02	2.58	1.29	sandy silt to clayey silt	UNDFND	UNDFD	15	3.7
13.75	45.11	55.80	1.03	1.85	1.31	silty sand to sandy silt	40-50	36-38	18	UNDEFINED
14.00	45.93	108.74	0.60	0.56	1.33	sand to silty sand	60-70	40-42	26	UNDEFINED
14.25	46.75	22.35	0.43	1.91	1.35	sandy silt to clayey silt	UNDFND	UNDFD	9	1.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT5-32
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/12/90:15:25
Cone Used :IV
Water table (meters) : 2.2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	22.62	1.57	6.92	0.01	clay	UNDFND	UNDFD	22	2.2
0.25	0.82	24.08	1.61	6.68	0.03	clay	UNDFND	UNDFD	23	2.4
0.38	1.25	26.68	1.68	6.28	0.06	clay	UNDFND	UNDFD	26	2.6
0.50	1.64	26.28	1.50	5.71	0.08	clay	UNDFND	UNDFD	25	2.6
0.63	2.07	25.46	1.41	5.54	0.10	clay	UNDFND	UNDFD	24	2.5
0.75	2.46	24.98	1.22	4.88	0.12	clay	UNDFND	UNDFD	24	2.4
0.87	2.85	14.30	1.01	7.04	0.15	clay	UNDFND	UNDFD	14	1.4
1.00	3.28	19.90	1.09	5.48	0.17	clay	UNDFND	UNDFD	19	1.9
1.13	3.71	25.44	1.23	4.82	0.19	clay	UNDFND	UNDFD	24	2.5
1.25	4.10	16.04	0.90	5.61	0.21	clay	UNDFND	UNDFD	15	1.5
1.37	4.49	12.68	0.62	4.85	0.24	clay	UNDFND	UNDFD	12	1.2
1.50	4.92	8.54	0.32	3.73	0.26	clay	UNDFND	UNDFD	8	.8
1.62	5.31	10.74	0.26	2.42	0.28	silty clay to clay	UNDFND	UNDFD	7	1.0
1.75	5.74	9.48	0.28	2.93	0.30	silty clay to clay	UNDFND	UNDFD	6	.9
1.87	6.14	10.10	0.32	3.15	0.33	silty clay to clay	UNDFND	UNDFD	6	.9
2.00	6.56	8.44	0.26	3.07	0.35	silty clay to clay	UNDFND	UNDFD	5	.8
2.12	6.96	12.16	0.36	2.97	0.37	silty clay to clay	UNDFND	UNDFD	8	1.1
2.25	7.38	14.26	0.56	3.91	0.39	silty clay to clay	UNDFND	UNDFD	9	1.3
2.38	7.81	15.98	0.61	3.79	0.41	silty clay to clay	UNDFND	UNDFD	10	1.5
2.50	8.20	18.12	0.63	3.48	0.42	silty clay to clay	UNDFND	UNDFD	12	1.7
2.62	8.60	27.66	0.96	3.49	0.43	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
2.75	9.02	30.32	1.04	3.42	0.43	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
2.87	9.42	45.36	1.52	3.35	0.44	clayey silt to silty clay	UNDFND	UNDFD	22	4.4
3.00	9.84	37.62	1.15	3.06	0.45	clayey silt to silty clay	UNDFND	UNDFD	18	3.7
3.12	10.24	19.18	0.88	4.58	0.46	clay	UNDFND	UNDFD	18	1.8
3.25	10.66	12.94	0.74	5.72	0.47	clay	UNDFND	UNDFD	12	1.2
3.37	11.06	11.60	0.56	4.83	0.48	clay	UNDFND	UNDFD	11	1.1
3.50	11.48	13.42	0.70	5.23	0.49	clay	UNDFND	UNDFD	13	1.2
3.63	11.91	15.08	0.79	5.22	0.50	clay	UNDFND	UNDFD	14	1.4
3.75	12.30	15.84	0.90	5.68	0.51	clay	UNDFND	UNDFD	15	1.5
3.87	12.70	15.90	0.81	5.07	0.52	clay	UNDFND	UNDFD	15	1.5
4.00	13.12	13.62	0.75	5.51	0.53	clay	UNDFND	UNDFD	13	1.2
4.12	13.52	11.04	0.60	5.44	0.54	clay	UNDFND	UNDFD	11	1.0
4.25	13.94	13.66	0.52	3.83	0.55	silty clay to clay	UNDFND	UNDFD	9	1.2
4.37	14.34	16.46	0.52	3.16	0.56	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
4.50	14.76	15.12	0.41	2.69	0.57	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
4.62	15.16	13.60	0.35	2.58	0.58	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
4.75	15.58	16.34	0.32	1.98	0.59	clayey silt to silty clay	UNDFND	UNDFD	8	1.5

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-32

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	15.36	0.53	3.43	0.60	silty clay to clay	UNDFND	UNDFD	10	1.4
5.00	16.40	18.12	0.57	3.16	0.61	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
5.12	16.80	16.88	0.59	3.49	0.62	silty clay to clay	UNDFND	UNDFD	11	1.5
5.25	17.22	15.06	0.57	3.76	0.63	silty clay to clay	UNDFND	UNDFD	10	1.4
5.38	17.65	13.54	0.54	3.97	0.64	clay	UNDFND	UNDFD	13	1.2
5.50	18.04	14.88	0.50	3.37	0.65	silty clay to clay	UNDFND	UNDFD	10	1.3
5.62	18.44	13.92	0.50	3.59	0.66	silty clay to clay	UNDFND	UNDFD	9	1.2
5.75	18.86	12.40	0.39	3.18	0.67	silty clay to clay	UNDFND	UNDFD	8	1.1
5.87	19.26	22.50	0.59	2.62	0.68	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
6.00	19.69	23.14	0.56	2.40	0.69	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
6.12	20.08	23.76	0.51	2.14	0.70	sandy silt to clayey silt	UNDFND	UNDFD	9	2.2
6.25	20.51	27.18	0.68	2.50	0.71	sandy silt to clayey silt	UNDFND	UNDFD	10	2.6
6.38	20.93	29.30	0.99	3.31	0.72	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
6.50	21.33	30.00	1.11	3.69	0.73	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
6.63	21.75	34.18	1.37	4.01	0.74	silty clay to clay	UNDFND	UNDFD	22	3.3
6.75	22.15	32.38	1.42	4.40	0.75	silty clay to clay	UNDFND	UNDFD	21	3.1
6.88	22.57	32.42	1.01	3.12	0.76	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
7.00	22.97	26.38	1.27	4.83	0.77	clay	UNDFND	UNDFD	25	2.5
7.12	23.36	32.80	1.27	3.87	0.78	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
7.25	23.79	27.46	1.39	5.06	0.79	clay	UNDFND	UNDFD	26	2.6
7.37	24.18	25.98	1.41	5.45	0.80	clay	UNDFND	UNDFD	25	2.4
7.50	24.61	46.62	2.04	4.37	0.81	silty clay to clay	UNDFND	UNDFD	30	4.5
7.62	25.00	41.56	1.39	3.36	0.81	clayey silt to silty clay	UNDFND	UNDFD	20	4.0
7.75	25.43	28.56	1.06	3.71	0.82	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
7.88	25.85	31.52	1.25	3.96	0.83	silty clay to clay	UNDFND	UNDFD	20	3.0
8.00	26.25	25.48	1.02	4.01	0.84	silty clay to clay	UNDFND	UNDFD	16	2.4
8.13	26.67	25.60	1.03	4.03	0.85	silty clay to clay	UNDFND	UNDFD	16	2.4
8.25	27.07	17.64	0.57	3.25	0.86	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
8.38	27.49	13.86	0.41	2.95	0.87	silty clay to clay	UNDFND	UNDFD	9	1.2
8.50	27.89	13.52	0.33	2.43	0.88	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
8.62	28.28	11.32	0.25	2.23	0.89	clayey silt to silty clay	UNDFND	UNDFD	5	.9
8.75	28.71	11.32	0.28	2.52	0.90	silty clay to clay	UNDFND	UNDFD	7	.9
8.87	29.10	10.28	0.24	2.33	0.91	silty clay to clay	UNDFND	UNDFD	7	.8
9.00	29.53	9.00	0.21	2.38	0.92	silty clay to clay	UNDFND	UNDFD	6	.7
9.12	29.92	8.70	0.25	2.86	0.93	silty clay to clay	UNDFND	UNDFD	6	.7
9.25	30.35	20.74	0.70	3.35	0.94	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
9.37	30.74	37.50	1.53	4.08	0.95	silty clay to clay	UNDFND	UNDFD	24	3.5
9.50	31.17	31.78	1.43	4.50	0.96	silty clay to clay	UNDFND	UNDFD	20	3.0
9.63	31.59	22.88	1.09	4.75	0.97	clay	UNDFND	UNDFD	22	2.1
9.75	31.99	15.06	0.68	4.50	0.98	clay	UNDFND	UNDFD	14	1.3
9.88	32.41	16.06	0.51	3.15	0.99	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
10.00	32.81	17.82	0.55	3.11	1.00	clayey silt to silty clay	UNDFND	UNDFD	9	1.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-32 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	11.12	0.40	3.63	1.01	clay	UNDFND	UNDFD	11	.9
10.25	33.63	9.30	0.27	2.92	1.02	silty clay to clay	UNDFND	UNDFD	6	.7
10.37	34.02	9.68	0.25	2.56	1.03	silty clay to clay	UNDFND	UNDFD	6	.7
10.50	34.45	7.12	0.13	1.82	1.04	silty clay to clay	UNDFND	UNDFD	5	.5
10.62	34.84	11.22	0.35	3.11	1.05	silty clay to clay	UNDFND	UNDFD	7	.9
10.75	35.27	55.20	0.31	0.56	1.06	sand to silty sand	40-50	36-38	13	UNDEFINED
10.87	35.66	35.92	0.25	0.26	1.07	sand	60-70	40-42	18	UNDEFINED
11.00	36.09	123.96	0.17	0.14	1.08	sand	70-80	40-42	24	UNDEFINED
11.13	36.52	115.30	0.24	0.20	1.09	sand	60-70	40-42	22	UNDEFINED
11.25	36.91	91.26	0.26	0.29	1.10	sand	60-70	40-42	17	UNDEFINED
11.37	37.30	28.42	0.43	1.53	1.11	sandy silt to clayey silt	UNDFND	UNDFD	11	2.6
11.50	37.73	17.64	0.44	2.50	1.12	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
11.62	38.12	17.42	0.48	2.76	1.13	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
11.75	38.55	18.34	0.46	2.52	1.14	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
11.87	38.94	21.04	0.56	2.67	1.15	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
12.00	39.37	20.30	0.63	3.11	1.16	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
12.12	39.76	22.74	0.84	3.68	1.17	silty clay to clay	UNDFND	UNDFD	15	2.0
12.25	40.19	24.24	0.85	3.52	1.18	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
12.37	40.58	24.86	0.94	3.79	1.19	silty clay to clay	UNDFND	UNDFD	16	2.2
12.50	41.01	23.76	1.00	4.22	1.20	silty clay to clay	UNDFND	UNDFD	15	2.1
12.62	41.40	22.66	1.11	4.89	1.20	clay	UNDFND	UNDFD	22	2.0
12.75	41.83	22.46	0.79	3.51	1.21	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
12.87	42.22	20.76	0.96	4.64	1.22	clay	UNDFND	UNDFD	20	1.8
13.00	42.65	21.08	0.73	3.48	1.23	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
13.12	43.04	20.76	0.75	3.59	1.24	silty clay to clay	UNDFND	UNDFD	13	1.8
13.25	43.47	21.22	0.72	3.42	1.25	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
13.37	43.86	16.58	0.51	3.09	1.26	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
13.50	44.29	15.22	0.41	2.72	1.27	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
13.62	44.69	14.92	0.31	2.10	1.28	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
13.75	45.11	19.88	0.32	1.58	1.29	sandy silt to clayey silt	UNDFND	UNDFD	8	1.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-33
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/05/90/10:48
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	20.00	0.75	3.75	0.02	silty clay to clay	UNDFND	UNDFD	13	1.9
0.50	1.64	14.42	0.79	5.47	0.07	clay	UNDFND	UNDFD	14	1.4
0.75	2.46	14.80	0.71	4.83	0.11	clay	UNDFND	UNDFD	14	1.4
1.00	3.28	32.33	1.30	4.01	0.16	silty clay to clay	UNDFND	UNDFD	21	3.2
1.25	4.10	38.46	1.70	4.41	0.20	silty clay to clay	UNDFND	UNDFD	25	3.8
1.50	4.92	21.28	1.17	5.52	0.25	clay	UNDFND	UNDFD	20	2.1
1.75	5.74	14.11	0.58	4.13	0.29	clay	UNDFND	UNDFD	14	1.3
2.00	6.56	21.99	0.56	2.54	0.34	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
2.25	7.38	15.11	0.36	2.39	0.38	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
2.50	8.20	14.10	0.40	2.86	0.43	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
2.75	9.02	15.58	0.57	3.69	0.46	silty clay to clay	UNDFND	UNDFD	10	1.5
3.00	9.84	16.15	0.59	3.66	0.48	silty clay to clay	UNDFND	UNDFD	10	1.5
3.25	10.66	16.45	0.23	1.38	0.50	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
3.50	11.48	17.30	0.27	1.55	0.52	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6
3.75	12.30	9.48	0.21	2.19	0.54	silty clay to clay	UNDFND	UNDFD	6	.8
4.00	13.12	13.26	0.51	3.87	0.56	clay	UNDFND	UNDFD	13	1.2
4.25	13.94	15.62	0.66	4.25	0.58	clay	UNDFND	UNDFD	15	1.4
4.50	14.76	33.89	1.28	3.79	0.60	clayey silt to silty clay	UNDFND	UNDFD	16	3.3
4.75	15.58	23.23	0.73	3.14	0.62	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
5.00	16.40	14.99	0.24	1.58	0.64	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
5.25	17.22	20.06	0.55	2.75	0.66	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
5.50	18.04	69.77	0.70	1.00	0.68	sand to silty sand	60-70	40-42	17	UNDEFINED
5.75	18.86	76.71	0.47	0.61	0.69	sand to silty sand	60-70	40-42	18	UNDEFINED
6.00	19.69	156.97	0.59	0.37	0.71	sand	80-90	44-46	30	UNDEFINED
6.25	20.51	41.95	1.02	2.44	0.73	sandy silt to clayey silt	UNDFND	UNDFD	16	4.0
6.50	21.33	10.66	0.17	1.60	0.75	clayey silt to silty clay	UNDFND	UNDFD	5	.9
6.75	22.15	22.53	0.77	3.44	0.77	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
7.00	22.97	28.05	1.07	3.81	0.79	silty clay to clay	UNDFND	UNDFD	18	2.6
7.25	23.79	28.79	1.13	3.92	0.81	silty clay to clay	UNDFND	UNDFD	18	2.7
7.50	24.61	29.14	1.36	4.68	0.83	clay	UNDFND	UNDFD	28	2.7
7.75	25.43	29.46	1.24	4.22	0.85	silty clay to clay	UNDFND	UNDFD	19	2.8
8.00	26.25	25.89	0.98	3.78	0.87	silty clay to clay	UNDFND	UNDFD	17	2.4
8.25	27.07	23.74	0.77	3.24	0.89	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
8.50	27.89	31.29	1.05	3.35	0.91	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
8.75	28.71	22.86	0.67	2.94	0.93	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
9.00	29.53	18.38	0.51	2.79	0.95	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
9.25	30.35	16.70	0.38	2.28	0.97	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
9.50	31.17	13.90	0.29	2.11	0.99	clayey silt to silty clay	UNDFND	UNDFD	7	1.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	17.88	0.27	1.49	1.01	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6
10.00	32.81	33.30	0.83	2.43	1.03	sandy silt to clayey silt	UNDFND	UNDFD	13	3.2
10.25	33.63	23.52	0.75	3.19	1.05	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
10.50	34.45	25.52	0.81	3.18	1.07	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
10.75	35.27	36.84	1.36	3.68	1.08	clayey silt to silty clay	UNDFND	UNDFD	18	3.4
11.00	36.09	33.23	1.27	3.83	1.10	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
11.25	36.91	31.92	1.30	4.07	1.12	silty clay to clay	UNDFND	UNDFD	20	2.9
11.50	37.73	32.53	1.35	4.17	1.14	silty clay to clay	UNDFND	UNDFD	21	3.0
11.75	38.55	27.99	1.06	3.80	1.16	silty clay to clay	UNDFND	UNDFD	18	2.5
12.00	39.37	19.11	0.46	2.39	1.18	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
12.25	40.19	35.40	0.77	2.16	1.20	sandy silt to clayey silt	UNDFND	UNDFD	14	3.3
12.50	41.01	41.75	1.39	3.33	1.22	clayey silt to silty clay	UNDFND	UNDFD	20	3.9
12.75	41.83	36.49	1.30	3.56	1.24	clayey silt to silty clay	UNDFND	UNDFD	17	3.4
13.00	42.65	38.92	1.03	2.65	1.26	sandy silt to clayey silt	UNDFND	UNDFD	15	3.6
13.25	43.47	15.94	0.27	1.72	1.28	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
13.50	44.29	19.73	0.69	3.48	1.30	silty clay to clay	UNDFND	UNDFD	13	1.7
13.75	45.11	19.31	0.32	1.68	1.32	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer : IT CORP
On Site Loc: CPT/S-34
Job No. : 409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date : 03/05/90 14:38
Cone Used : IV
Water table (meters) : 2.4

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	14.64	1.66	11.32	0.01	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.25	0.82	12.76	1.32	10.38	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.38	1.25	12.20	1.12	9.18	0.06	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.50	1.64	14.90	1.22	8.19	0.08	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.63	2.07	25.92	1.80	6.93	0.10	clay	UNDFND	UNDFD	25	2.5
0.75	2.46	31.08	2.07	6.65	0.12	clay	UNDFND	UNDFD	30	3.0
0.87	2.85	32.94	1.49	4.51	0.15	silty clay to clay	UNDFND	UNDFD	21	3.2
1.00	3.28	20.58	1.67	8.12	0.17	undefined	UNDFND	UNDFD	UDF	UNDEFINED
1.13	3.71	18.60	1.26	6.78	0.19	clay	UNDFND	UNDFD	18	1.8
1.25	4.10	20.80	1.17	5.65	0.21	clay	UNDFND	UNDFD	20	2.0
1.37	4.49	16.46	0.99	6.02	0.24	clay	UNDFND	UNDFD	16	1.6
1.50	4.92	12.36	0.60	4.88	0.26	clay	UNDFND	UNDFD	12	1.2
1.62	5.31	11.46	0.43	3.72	0.28	clay	UNDFND	UNDFD	11	1.1
1.75	5.74	13.28	0.49	3.67	0.30	silty clay to clay	UNDFND	UNDFD	8	1.2
1.87	6.14	14.56	0.39	2.68	0.33	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
2.00	6.56	12.06	0.48	4.00	0.35	clay	UNDFND	UNDFD	12	1.1
2.12	6.96	12.90	0.40	3.10	0.37	silty clay to clay	UNDFND	UNDFD	8	1.2
2.25	7.38	14.58	0.44	3.02	0.39	silty clay to clay	UNDFND	UNDFD	9	1.4
2.38	7.81	12.98	0.40	3.08	0.42	silty clay to clay	UNDFND	UNDFD	8	1.2
2.50	8.20	10.64	0.35	3.33	0.44	silty clay to clay	UNDFND	UNDFD	7	1.0
2.62	8.60	12.80	0.40	3.15	0.45	silty clay to clay	UNDFND	UNDFD	8	1.2
2.75	9.02	14.82	0.55	3.74	0.46	silty clay to clay	UNDFND	UNDFD	9	1.4
2.87	9.42	21.46	0.59	2.75	0.46	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
3.00	9.84	27.24	0.48	1.75	0.47	sandy silt to clayey silt	UNDFND	UNDFD	10	2.6
3.12	10.24	18.64	0.67	3.59	0.48	silty clay to clay	UNDFND	UNDFD	12	1.8
3.25	10.66	18.46	0.93	5.02	0.49	clay	UNDFND	UNDFD	18	1.7
3.37	11.06	26.20	1.51	5.75	0.50	clay	UNDFND	UNDFD	25	2.5
3.50	11.48	20.74	1.30	6.26	0.51	clay	UNDFND	UNDFD	20	2.0
3.63	11.91	16.46	0.83	5.04	0.52	clay	UNDFND	UNDFD	16	1.5
3.75	12.30	19.26	1.01	5.24	0.53	clay	UNDFND	UNDFD	18	1.8
3.87	12.70	17.06	0.63	3.71	0.54	silty clay to clay	UNDFND	UNDFD	11	1.6
4.00	13.12	14.18	0.58	4.10	0.55	clay	UNDFND	UNDFD	14	1.3
4.12	13.52	22.54	0.42	1.85	0.56	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
4.25	13.94	52.06	0.45	0.87	0.57	silty sand to sandy silt	50-60	40-42	17	UNDEFINED
4.37	14.34	29.58	0.86	2.92	0.58	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
4.50	14.76	63.02	1.67	2.65	0.59	sandy silt to clayey silt	UNDFND	UNDFD	24	6.2
4.62	15.16	41.36	1.41	3.42	0.60	clayey silt to silty clay	UNDFND	UNDFD	20	4.0
4.75	15.58	19.22	0.86	4.49	0.61	clay	UNDFND	UNDFD	18	1.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-34 Page No. 2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	17.32	0.45	2.62	0.62	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
5.00	16.40	46.48	0.68	1.47	0.63	silty sand to sandy silt	50-60	38-40	15	UNDEFINED
5.12	16.80	129.60	0.60	0.46	0.64	sand	80-90	44-46	25	UNDEFINED
5.25	17.22	141.10	0.77	0.55	0.65	sand	80-90	44-46	27	UNDEFINED
5.38	17.65	156.84	0.78	0.49	0.66	sand	80-90	44-46	30	UNDEFINED
5.50	18.04	184.22	0.51	0.28	0.67	sand	80-90	44-46	35	UNDEFINED
5.62	18.44	203.58	0.61	0.30	0.68	sand	>90	44-46	39	UNDEFINED
5.75	18.86	196.48	0.61	0.31	0.69	sand	>90	44-46	38	UNDEFINED
5.87	19.26	205.02	0.79	0.39	0.70	sand	>90	44-46	39	UNDEFINED
6.00	19.69	183.40	0.50	0.27	0.71	sand	80-90	44-46	35	UNDEFINED
6.12	20.08	103.70	0.81	0.78	0.72	sand to silty sand	70-80	42-44	25	UNDEFINED
6.25	20.51	48.26	1.07	2.23	0.73	sandy silt to clayey silt	UNDFND	UNDFD	18	4.7
6.38	20.93	65.00	1.05	1.61	0.74	silty sand to sandy silt	50-60	40-42	21	UNDEFINED
6.50	21.33	73.54	0.89	1.22	0.75	silty sand to sandy silt	60-70	40-42	23	UNDEFINED
6.63	21.75	34.32	1.10	3.21	0.76	clayey silt to silty clay	UNDFND	UNDFD	16	3.3
6.75	22.15	26.66	0.89	3.36	0.77	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
6.88	22.57	31.22	1.05	3.37	0.78	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
7.00	22.97	32.10	1.35	4.19	0.79	silty clay to clay	UNDFND	UNDFD	20	3.0
7.12	23.36	33.38	1.53	4.59	0.80	silty clay to clay	UNDFND	UNDFD	21	3.2
7.25	23.79	34.40	1.55	4.52	0.81	silty clay to clay	UNDFND	UNDFD	22	3.3
7.37	24.18	31.42	1.42	4.53	0.82	silty clay to clay	UNDFND	UNDFD	20	3.0
7.50	24.61	26.98	1.04	3.85	0.83	silty clay to clay	UNDFND	UNDFD	17	2.5
7.62	25.00	26.56	0.98	3.70	0.84	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
7.75	25.43	23.76	0.82	3.44	0.85	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
7.88	25.85	22.78	0.83	3.64	0.86	silty clay to clay	UNDFND	UNDFD	15	2.1
8.00	26.25	22.82	0.78	3.41	0.87	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
8.13	26.67	19.78	0.72	3.66	0.87	silty clay to clay	UNDFND	UNDFD	13	1.8
8.25	27.07	32.58	1.24	3.79	0.88	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
8.38	27.49	27.74	1.10	3.95	0.89	silty clay to clay	UNDFND	UNDFD	18	2.6
8.50	27.89	16.50	0.69	4.21	0.90	clay	UNDFND	UNDFD	16	1.4
8.62	28.28	13.54	0.54	4.01	0.91	clay	UNDFND	UNDFD	13	1.1
8.75	28.71	14.00	0.47	3.35	0.92	silty clay to clay	UNDFND	UNDFD	9	1.2
8.87	29.10	12.76	0.34	2.68	0.93	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
9.00	29.53	15.02	0.35	2.31	0.94	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
9.12	29.92	18.68	0.64	3.43	0.95	silty clay to clay	UNDFND	UNDFD	12	1.7
9.25	30.35	15.22	0.50	3.32	0.96	silty clay to clay	UNDFND	UNDFD	10	1.3
9.37	30.74	10.98	0.35	3.16	0.97	silty clay to clay	UNDFND	UNDFD	7	.9
9.50	31.17	12.42	0.36	2.87	0.98	silty clay to clay	UNDFND	UNDFD	8	1.0
9.63	31.59	20.68	0.61	2.94	0.99	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
9.75	31.99	21.64	0.83	3.82	1.00	silty clay to clay	UNDFND	UNDFD	14	1.9
9.88	32.41	26.76	0.77	2.89	1.01	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
10.00	32.81	26.30	0.63	2.40	1.02	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-34 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	24.98	0.51	2.06	1.03	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3
10.25	33.63	20.58	0.54	2.62	1.04	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
10.37	34.02	26.04	0.92	3.52	1.05	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
10.50	34.45	32.02	1.33	4.15	1.06	silty clay to clay	UNDFND	UNDFD	20	3.0
10.62	34.84	40.84	1.80	4.41	1.07	silty clay to clay	UNDFND	UNDFD	26	3.8
10.75	35.27	41.28	1.85	4.49	1.08	silty clay to clay	UNDFND	UNDFD	26	3.9
10.87	35.66	36.06	1.59	4.42	1.09	silty clay to clay	UNDFND	UNDFD	23	3.4
11.00	36.09	34.80	1.28	3.67	1.10	clayey silt to silty clay	UNDFND	UNDFD	17	3.2
11.13	36.52	31.26	1.77	5.67	1.11	clay	UNDFND	UNDFD	30	2.9
11.25	36.91	34.54	1.68	4.87	1.12	clay	UNDFND	UNDFD	33	3.2
11.37	37.30	31.46	1.52	4.84	1.13	clay	UNDFND	UNDFD	30	2.9
11.50	37.73	28.02	1.34	4.79	1.14	clay	UNDFND	UNDFD	27	2.5
11.62	38.12	24.56	1.18	4.80	1.15	clay	UNDFND	UNDFD	24	2.2
11.75	38.55	18.78	0.76	4.05	1.16	silty clay to clay	UNDFND	UNDFD	12	1.6
11.87	38.94	15.68	0.49	3.15	1.17	silty clay to clay	UNDFND	UNDFD	10	1.3
12.00	39.37	13.20	0.32	2.45	1.18	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
12.12	39.76	12.70	0.16	1.25	1.19	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.25	40.19	11.64	0.08	0.71	1.20	sandy silt to clayey silt	UNDFND	UNDFD	4	.9
12.37	40.58	13.60	0.13	0.93	1.21	sandy silt to clayey silt	UNDFND	UNDFD	5	1.1
12.50	41.01	13.08	0.17	1.26	1.22	sandy silt to clayey silt	UNDFND	UNDFD	5	1.0
12.62	41.40	11.18	0.06	0.55	1.23	sandy silt to clayey silt	UNDFND	UNDFD	4	.8
12.75	41.83	18.26	0.55	3.03	1.24	clayey silt to silty clay	UNDFND	UNDFD	9	1.5
12.87	42.22	56.40	0.68	1.21	1.24	silty sand to sandy silt	40-50	36-38	18	UNDEFINED
13.00	42.65	65.04	0.87	1.34	1.25	silty sand to sandy silt	50-60	36-38	21	UNDEFINED
13.12	43.04	40.82	1.01	2.47	1.26	sandy silt to clayey silt	UNDFND	UNDFD	16	3.8
13.25	43.47	52.06	1.01	1.94	1.27	silty sand to sandy silt	40-50	36-38	17	UNDEFINED
13.37	43.86	91.82	0.64	0.70	1.28	sand to silty sand	60-70	38-40	22	UNDEFINED
13.50	44.29	86.00	0.47	0.54	1.29	sand to silty sand	50-60	38-40	21	UNDEFINED
13.62	44.69	93.48	0.53	0.57	1.30	sand to silty sand	60-70	38-40	22	UNDEFINED
13.75	45.11	40.62	0.74	1.81	1.31	sandy silt to clayey silt	UNDFND	UNDFD	16	3.8
13.87	45.51	25.66	0.49	1.92	1.32	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

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PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-36
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/05/90/09:19
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	216.33	0.99	0.46	0.02	sand	>90	>48	41	UNDEFINED
0.50	1.64	59.26	1.57	2.65	0.07	sandy silt to clayey silt	UNDFND	UNDFD	23	5.9
0.75	2.46	18.71	0.88	4.68	0.11	clay	UNDFND	UNDFD	18	1.8
1.00	3.28	18.06	0.84	4.67	0.16	clay	UNDFND	UNDFD	17	1.7
1.25	4.10	22.48	0.86	3.81	0.20	silty clay to clay	UNDFND	UNDFD	14	2.2
1.50	4.92	31.58	1.23	3.89	0.25	silty clay to clay	UNDFND	UNDFD	20	3.1
1.75	5.74	26.78	1.22	4.56	0.29	clay	UNDFND	UNDFD	26	2.6
2.00	6.56	16.17	0.82	5.06	0.34	clay	UNDFND	UNDFD	15	1.5
2.25	7.38	14.76	0.63	4.26	0.38	clay	UNDFND	UNDFD	14	1.4
2.50	8.20	18.06	0.74	4.12	0.43	silty clay to clay	UNDFND	UNDFD	12	1.7
2.75	9.02	12.50	0.50	3.99	0.46	clay	UNDFND	UNDFD	12	1.2
3.00	9.84	11.74	0.39	3.32	0.48	silty clay to clay	UNDFND	UNDFD	7	1.1
3.25	10.66	10.26	0.35	3.45	0.50	clay	UNDFND	UNDFD	10	.9
3.50	11.48	21.25	0.50	2.34	0.52	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
3.75	12.30	19.41	0.52	2.68	0.54	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
4.00	13.12	5.59	0.21	3.70	0.56	clay	UNDFND	UNDFD	5	.4
4.25	13.94	8.13	0.30	3.65	0.58	clay	UNDFND	UNDFD	8	.7
4.50	14.76	12.12	0.55	4.56	0.60	clay	UNDFND	UNDFD	12	1.1
4.75	15.58	14.32	0.71	4.74	0.62	clay	UNDFND	UNDFD	14	1.4
5.00	16.40	16.12	0.54	3.35	0.64	silty clay to clay	UNDFND	UNDFD	10	1.5
5.25	17.22	13.32	0.48	3.59	0.66	silty clay to clay	UNDFND	UNDFD	9	1.2
5.50	18.04	25.61	0.58	2.27	0.68	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4
5.75	18.86	47.16	0.50	1.07	0.69	silty sand to sandy silt	50-60	38-40	15	UNDEFINED
6.00	19.69	95.63	0.33	0.34	0.71	sand	70-80	42-44	18	UNDEFINED
6.25	20.51	127.80	0.26	0.20	0.73	sand	70-80	42-44	24	UNDEFINED
6.50	21.33	174.05	0.43	0.25	0.75	sand	80-90	44-46	33	UNDEFINED
6.75	22.15	120.75	0.69	0.57	0.77	sand	70-80	42-44	23	UNDEFINED
7.00	22.97	21.67	0.32	1.50	0.79	sandy silt to clayey silt	UNDFND	UNDFD	8	2.0
7.25	23.79	26.51	0.69	2.61	0.81	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
7.50	24.61	33.12	1.21	3.64	0.83	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
7.75	25.43	35.72	1.48	4.15	0.85	silty clay to clay	UNDFND	UNDFD	23	3.4
8.00	26.25	38.78	1.39	3.58	0.87	clayey silt to silty clay	UNDFND	UNDFD	19	3.7
8.25	27.07	32.32	1.13	3.50	0.89	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
8.50	27.89	24.69	0.77	3.10	0.91	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
8.75	28.71	31.05	1.02	3.27	0.93	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
9.00	29.53	26.31	0.81	3.09	0.95	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
9.25	30.35	31.56	1.05	3.32	0.97	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
9.50	31.17	23.31	0.84	3.61	0.99	clayey silt to silty clay	UNDFND	UNDFD	11	2.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT5-36

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	21.24	0.66	3.11	1.01	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
10.00	32.81	14.21	0.34	2.43	1.03	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
10.25	33.63	34.33	0.33	0.95	1.05	silty sand to sandy silt	<40	34-36	11	UNDEFINED
10.50	34.45	143.37	0.39	0.27	1.07	sand	70-80	42-44	27	UNDEFINED
10.75	35.27	208.63	0.48	0.23	1.08	sand	80-90	42-44	40	UNDEFINED
11.00	36.09	232.17	0.85	0.37	1.10	sand	80-90	44-46	44	UNDEFINED
11.25	36.91	326.55	1.27	0.39	1.12	gravelly sand to sand	>90	44-46	>50	UNDEFINED
11.50	37.73	369.09	1.36	0.37	1.14	gravelly sand to sand	>90	44-46	>50	UNDEFINED
11.75	38.55	47.68	1.01	2.12	1.16	sandy silt to clayey silt	UNDFND	UNDFD	18	4.5
12.00	39.37	31.47	0.72	2.29	1.18	sandy silt to clayey silt	UNDFND	UNDFD	12	2.9
12.25	40.19	25.53	0.57	2.22	1.20	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3
12.50	41.01	19.73	0.30	1.50	1.22	sandy silt to clayey silt	UNDFND	UNDFD	8	1.7
12.75	41.83	45.68	1.36	2.97	1.24	sandy silt to clayey silt	UNDFND	UNDFD	18	4.3
13.00	42.65	92.82	1.25	1.34	1.26	sand to silty sand	60-70	38-40	22	UNDEFINED
13.25	43.47	46.82	0.65	1.39	1.28	silty sand to sandy silt	40-50	36-38	15	UNDEFINED
13.50	44.29	28.36	0.62	2.20	1.30	sandy silt to clayey silt	UNDFND	UNDFD	11	2.5
13.75	45.11	27.64	0.91	3.28	1.32	clayey silt to silty clay	UNDFND	UNDFD	13	2.5

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-37
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/05/90/08:07
Cone Used :VIII
Water table (meters) : 3.3

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	63.21	1.61	2.55	0.02	sandy silt to clayey silt	UNDFND	UNDFD	24	6.3
0.50	1.64	82.65	0.68	0.82	0.07	sand to silty sand	>90	>48	20	UNDEFINED
0.75	2.46	64.52	1.64	2.54	0.11	sandy silt to clayey silt	UNDFND	UNDFD	25	6.4
1.00	3.28	51.56	1.25	2.42	0.16	sandy silt to clayey silt	UNDFND	UNDFD	20	5.1
1.25	4.10	40.13	1.74	4.34	0.20	silty clay to clay	UNDFND	UNDFD	26	3.9
1.50	4.92	24.01	0.35	3.96	0.25	silty clay to clay	UNDFND	UNDFD	15	2.3
1.75	5.74	24.85	0.89	3.58	0.29	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
2.00	6.56	21.04	0.74	3.52	0.34	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
2.25	7.38	18.37	0.60	3.18	0.38	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
2.50	8.20	14.38	0.49	3.30	0.43	silty clay to clay	UNDFND	UNDFD	10	1.4
2.75	9.02	17.67	0.53	3.29	0.47	clayey silt to silty clay	UNDFND	UNDFD	8	1.7
3.00	9.84	13.06	0.53	3.10	0.52	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
3.25	10.66	21.32	0.63	2.97	0.56	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
3.50	11.48	25.46	0.92	3.61	0.60	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
3.75	12.30	16.09	0.41	2.56	0.62	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
4.00	13.12	11.19	0.39	3.45	0.64	silty clay to clay	UNDFND	UNDFD	7	1.0
4.25	13.94	16.00	0.58	3.62	0.66	silty clay to clay	UNDFND	UNDFD	10	1.5
4.50	14.76	19.58	0.72	3.66	0.68	silty clay to clay	UNDFND	UNDFD	13	1.8
4.75	15.58	21.65	0.69	3.19	0.70	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
5.00	16.40	18.37	0.66	3.59	0.72	silty clay to clay	UNDFND	UNDFD	12	1.7
5.25	17.22	17.15	0.50	2.93	0.74	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
5.50	18.04	15.95	0.35	2.18	0.76	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
5.75	18.86	13.37	0.26	1.92	0.78	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
6.00	19.69	13.59	0.23	1.68	0.80	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
6.25	20.51	27.68	0.87	3.15	0.82	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
6.50	21.33	79.30	0.68	0.86	0.84	sand to silty sand	60-70	40-42	19	UNDEFINED
6.75	22.15	89.64	1.59	1.77	0.85	silty sand to sandy silt	60-70	40-42	29	UNDEFINED
7.00	22.97	95.12	1.31	1.37	0.87	sand to silty sand	60-70	40-42	23	UNDEFINED
7.25	23.79	103.17	1.01	0.98	0.89	sand to silty sand	60-70	40-42	25	UNDEFINED
7.50	24.61	141.74	1.26	0.89	0.91	sand to silty sand	70-80	42-44	34	UNDEFINED
7.75	25.43	54.81	1.50	2.73	0.93	sandy silt to clayey silt	UNDFND	UNDFD	21	5.3
8.00	26.25	48.35	1.49	3.09	0.95	sandy silt to clayey silt	UNDFND	UNDFD	19	4.6
8.25	27.07	47.94	1.55	3.24	0.97	clayey silt to silty clay	UNDFND	UNDFD	23	4.6
8.50	27.89	52.21	1.47	2.81	0.99	sandy silt to clayey silt	UNDFND	UNDFD	20	5.0
8.75	28.71	46.43	1.42	3.06	1.01	sandy silt to clayey silt	UNDFND	UNDFD	18	4.4
9.00	29.53	52.55	1.82	3.46	1.03	clayey silt to silty clay	UNDFND	UNDFD	25	5.0
9.25	30.35	29.05	0.86	2.96	1.05	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
9.50	31.17	21.72	0.61	2.81	1.07	clayey silt to silty clay	UNDFND	UNDFD	10	2.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT5-37

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SBCW (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	21.19	0.64	3.02	1.09	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
10.00	32.81	13.25	0.40	3.03	1.11	silty clay to clay	UNDFND	UNDFD	8	1.1
10.25	33.63	15.73	0.49	3.10	1.13	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
10.50	34.45	19.38	0.74	3.81	1.15	silty clay to clay	UNDFND	UNDFD	12	1.7
10.75	35.27	11.50	0.34	2.95	1.17	silty clay to clay	UNDFND	UNDFD	7	.9
11.00	36.09	12.69	0.27	2.13	1.19	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.25	36.91	21.45	0.62	2.88	1.21	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
11.50	37.73	21.38	0.58	2.74	1.23	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
11.75	38.55	20.74	0.56	2.69	1.24	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
12.00	39.37	23.21	0.70	3.00	1.26	clayey silt to silty clay	UNDFND	UNDFD	14	2.2
12.25	40.19	19.73	0.77	3.92	1.28	sandy silt to clayey silt	UNDFND	UNDFD	12	2.3
12.50	41.01	34.03	1.35	3.97	1.30	silty clay to clay	UNDFND	UNDFD	22	3.1
12.75	41.83	36.22	1.35	3.62	1.32	clayey silt to silty clay	UNDFND	UNDFD	18	3.5
13.00	42.65	37.15	1.31	3.52	1.34	clayey silt to silty clay	UNDFND	UNDFD	18	3.4
13.25	43.47	27.60	0.93	3.38	1.36	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
13.50	44.29	27.96	0.94	3.38	1.38	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
13.75	45.11	23.26	0.60	2.59	1.40	clayey silt to silty clay	UNDFND	UNDFD	11	2.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT/5-38
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/06/90/9:41
Cone Used :IV
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	19.84	0.77	3.87	0.01	silty clay to clay	UNDFND	UNDFD	13	1.9
0.25	0.82	14.90	1.20	8.07	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.38	1.25	8.92	0.81	9.09	0.06	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.50	1.64	9.78	0.82	8.36	0.08	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.63	2.07	9.64	0.87	8.98	0.10	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.75	2.46	12.26	1.01	8.24	0.12	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.87	2.85	12.94	0.91	7.05	0.15	clay	UNDFND	UNDFD	12	1.2
1.00	3.28	18.68	1.06	5.69	0.17	clay	UNDFND	UNDFD	18	1.3
1.13	3.71	26.66	1.38	5.17	0.19	clay	UNDFND	UNDFD	26	2.6
1.25	4.10	29.04	1.63	5.61	0.21	clay	UNDFND	UNDFD	28	2.8
1.37	4.49	28.44	1.56	5.47	0.24	clay	UNDFND	UNDFD	27	2.8
1.50	4.92	23.79	1.17	4.91	0.26	clay	UNDFND	UNDFD	23	2.3
1.62	5.31	17.08	0.82	4.79	0.28	clay	UNDFND	UNDFD	16	1.6
1.75	5.74	15.78	0.81	5.14	0.30	clay	UNDFND	UNDFD	15	1.5
1.87	6.14	16.82	0.93	5.51	0.33	clay	UNDFND	UNDFD	16	1.6
2.00	6.56	18.18	0.89	4.92	0.35	clay	UNDFND	UNDFD	17	1.7
2.12	6.96	21.58	0.95	4.42	0.37	clay	UNDFND	UNDFD	21	2.1
2.25	7.38	21.32	0.87	4.10	0.39	silty clay to clay	UNDFND	UNDFD	14	2.0
2.38	7.81	19.22	0.81	4.23	0.42	clay	UNDFND	UNDFD	18	1.8
2.50	8.20	17.36	0.73	4.22	0.44	clay	UNDFND	UNDFD	17	1.6
2.62	8.60	18.52	0.84	4.56	0.46	clay	UNDFND	UNDFD	18	1.8
2.75	9.02	18.18	0.91	4.99	0.48	clay	UNDFND	UNDFD	17	1.7
2.87	9.42	18.64	0.79	4.24	0.51	clay	UNDFND	UNDFD	18	1.8
3.00	9.84	28.38	1.10	3.87	0.53	silty clay to clay	UNDFND	UNDFD	18	2.7
3.12	10.24	31.52	1.43	4.54	0.55	silty clay to clay	UNDFND	UNDFD	20	3.0
3.25	10.66	48.28	1.97	4.08	0.56	clayey silt to silty clay	UNDFND	UNDFD	23	4.7
3.37	11.06	66.36	2.10	3.17	0.57	sandy silt to clayey silt	UNDFND	UNDFD	25	6.5
3.50	11.48	68.92	2.64	3.83	0.58	clayey silt to silty clay	UNDFND	UNDFD	33	6.8
3.63	11.91	44.20	2.09	4.74	0.59	silty clay to clay	UNDFND	UNDFD	28	4.3
3.75	12.30	26.80	1.46	5.44	0.60	clay	UNDFND	UNDFD	26	2.6
3.87	12.70	15.74	0.68	4.31	0.60	clay	UNDFND	UNDFD	15	1.5
4.00	13.12	12.92	0.50	3.84	0.61	clay	UNDFND	UNDFD	12	1.2
4.12	13.52	13.72	0.53	3.86	0.62	silty clay to clay	UNDFND	UNDFD	9	1.2
4.25	13.94	15.84	0.75	4.74	0.63	clay	UNDFND	UNDFD	15	1.5
4.37	14.34	17.12	0.90	5.26	0.64	clay	UNDFND	UNDFD	16	1.6
4.50	14.76	17.56	0.84	4.76	0.65	clay	UNDFND	UNDFD	17	1.6
4.62	15.16	18.82	0.73	3.88	0.66	silty clay to clay	UNDFND	UNDFD	12	1.7
4.75	15.58	15.52	0.57	3.69	0.67	silty clay to clay	UNDFND	UNDFD	10	1.4

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-38

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	9.64	0.37	3.87	0.68	clay	UNDFND	UNDFD	9	.8
5.00	16.40	12.92	0.43	3.33	0.69	silty clay to clay	UNDFND	UNDFD	8	1.2
5.12	16.80	15.34	0.51	3.34	0.70	silty clay to clay	UNDFND	UNDFD	10	1.4
5.25	17.22	14.72	0.46	3.12	0.71	silty clay to clay	UNDFND	UNDFD	9	1.3
5.38	17.65	11.00	0.32	2.92	0.72	silty clay to clay	UNDFND	UNDFD	7	1.0
5.50	18.04	12.00	0.27	2.22	0.73	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
5.62	18.44	10.46	0.22	2.12	0.74	clayey silt to silty clay	UNDFND	UNDFD	5	.9
5.75	18.86	12.58	0.31	2.45	0.75	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
5.87	19.26	14.18	0.34	2.43	0.76	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
6.00	19.69	13.66	0.33	2.41	0.77	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
6.12	20.08	12.98	0.31	2.41	0.78	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.25	20.51	14.68	0.45	3.06	0.79	silty clay to clay	UNDFND	UNDFD	9	1.3
6.38	20.93	24.84	0.78	3.15	0.80	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
6.50	21.33	51.80	0.98	1.89	0.81	silty sand to sandy silt	50-60	38-40	17	UNDEFINED
6.63	21.75	77.12	0.79	1.02	0.82	sand to silty sand	60-70	40-42	18	UNDEFINED
6.75	22.15	67.62	0.58	0.85	0.83	sand to silty sand	50-60	40-42	16	UNDEFINED
6.88	22.57	39.00	0.76	1.95	0.84	sandy silt to clayey silt	UNDFND	UNDFD	15	3.7
7.00	22.97	20.38	0.59	2.92	0.85	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
7.12	23.36	16.44	0.37	2.24	0.86	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.25	23.79	17.12	0.34	2.01	0.87	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.37	24.18	19.08	0.44	2.30	0.88	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
7.50	24.61	19.94	0.56	2.83	0.89	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
7.62	25.00	21.18	0.63	2.97	0.90	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
7.75	25.43	30.44	1.37	4.50	0.91	silty clay to clay	UNDFND	UNDFD	19	2.9
7.88	25.85	40.12	2.08	5.18	0.92	clay	UNDFND	UNDFD	38	3.8
8.00	26.25	40.38	1.86	4.61	0.93	silty clay to clay	UNDFND	UNDFD	26	3.8
8.13	26.67	31.40	1.33	4.24	0.94	silty clay to clay	UNDFND	UNDFD	20	2.9
8.25	27.07	27.90	1.32	4.73	0.95	clay	UNDFND	UNDFD	27	2.6
8.38	27.49	32.58	1.28	3.92	0.96	silty clay to clay	UNDFND	UNDFD	21	3.1
8.50	27.89	32.60	1.45	4.46	0.97	silty clay to clay	UNDFND	UNDFD	21	3.1
8.62	28.28	38.72	1.83	4.74	0.97	silty clay to clay	UNDFND	UNDFD	25	3.7
8.75	28.71	37.62	1.82	4.83	0.98	clay	UNDFND	UNDFD	36	3.6
8.87	29.10	33.14	1.61	4.86	0.99	clay	UNDFND	UNDFD	32	3.1
9.00	29.53	32.60	1.37	4.20	1.00	silty clay to clay	UNDFND	UNDFD	21	3.0
9.12	29.92	38.86	1.78	4.57	1.01	silty clay to clay	UNDFND	UNDFD	25	3.7
9.25	30.35	35.06	1.70	4.84	1.02	clay	UNDFND	UNDFD	34	3.3
9.37	30.74	26.42	1.18	4.46	1.03	silty clay to clay	UNDFND	UNDFD	17	2.4
9.50	31.17	22.20	0.86	3.85	1.04	silty clay to clay	UNDFND	UNDFD	14	2.0
9.63	31.59	24.58	0.99	4.03	1.05	silty clay to clay	UNDFND	UNDFD	16	2.2
9.75	31.99	22.42	1.11	4.94	1.06	clay	UNDFND	UNDFD	21	2.0
9.88	32.41	13.34	0.55	4.13	1.07	clay	UNDFND	UNDFD	13	1.1
10.00	32.81	12.38	0.44	3.52	1.08	silty clay to clay	UNDFND	UNDFD	8	1.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/S-38 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	12.52	0.46	3.70	1.09	silty clay to clay	UNDFND	UNDFD	8	1.0
10.25	33.63	15.82	0.45	2.87	1.10	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
10.37	34.02	20.56	0.63	3.06	1.11	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
10.50	34.45	23.52	0.81	3.46	1.12	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
10.62	34.84	22.30	0.92	4.12	1.13	silty clay to clay	UNDFND	UNDFD	14	2.0
10.75	35.27	18.34	0.88	4.79	1.14	clay	UNDFND	UNDFD	18	1.6
10.87	35.66	13.40	0.46	3.41	1.15	silty clay to clay	UNDFND	UNDFD	9	1.1
11.00	36.09	14.70	0.47	3.16	1.16	silty clay to clay	UNDFND	UNDFD	9	1.2
11.13	36.52	14.48	0.47	3.23	1.17	silty clay to clay	UNDFND	UNDFD	9	1.2
11.25	36.91	10.16	0.18	1.73	1.18	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.37	37.30	8.62	0.10	1.17	1.19	clayey silt to silty clay	UNDFND	UNDFD	4	.6
11.50	37.73	10.30	0.22	2.11	1.20	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.62	38.12	33.64	0.89	2.66	1.21	sandy silt to clayey silt	UNDFND	UNDFD	13	3.1
11.75	38.55	119.50	0.79	0.66	1.22	sand to silty sand	60-70	40-42	29	UNDEFINED
11.87	38.94	203.06	0.72	0.35	1.23	sand	80-90	42-44	39	UNDEFINED
12.00	39.37	221.12	0.63	0.29	1.24	sand	80-90	42-44	42	UNDEFINED
12.12	39.76	176.42	0.62	0.35	1.25	sand	70-80	42-44	34	UNDEFINED
12.25	40.19	187.10	0.61	0.33	1.26	sand	80-90	42-44	36	UNDEFINED
12.37	40.58	171.06	0.48	0.28	1.27	sand	70-80	42-44	33	UNDEFINED
12.50	41.01	190.24	0.56	0.30	1.28	sand	80-90	42-44	36	UNDEFINED
12.62	41.40	178.42	0.97	0.55	1.29	sand	70-80	42-44	34	UNDEFINED
12.75	41.83	89.66	1.63	1.82	1.30	silty sand to sandy silt	50-60	38-40	29	UNDEFINED
12.87	42.22	26.94	0.68	2.54	1.31	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4
13.00	42.65	25.74	0.49	1.89	1.32	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3
13.12	43.04	27.38	0.63	2.30	1.33	sandy silt to clayey silt	UNDFND	UNDFD	10	2.5
13.25	43.47	28.60	0.74	2.59	1.34	sandy silt to clayey silt	UNDFND	UNDFD	11	2.6
13.37	43.86	30.36	0.93	3.06	1.35	clayey silt to silty clay	UNDFND	UNDFD	15	2.7
13.50	44.29	32.68	1.28	3.92	1.36	silty clay to clay	UNDFND	UNDFD	21	3.0
13.62	44.69	29.38	0.93	3.18	1.36	clayey silt to silty clay	UNDFND	UNDFD	14	2.6
13.75	45.11	29.82	0.66	2.21	1.37	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPTS-39
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/12/90/14:14
Cone Used :IV
Water table (meters) : 2.2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	202.88	2.21	1.09	0.01	sand	>90	UNDFD	39	UNDEFINED
0.25	0.82	311.60	3.88	1.25	0.03	sand	>90	>48	>50	UNDEFINED
0.38	1.25	244.02	3.74	1.53	0.06	sand to silty sand	>90	>48	>50	UNDEFINED
0.50	1.64	187.42	3.08	1.65	0.08	sand to silty sand	>90	>48	45	UNDEFINED
0.63	2.07	61.52	1.86	3.02	0.10	sandy silt to clayey silt	UNDFND	UNDFD	24	8.1
0.75	2.46	21.36	0.93	4.21	0.12	silty clay to clay	UNDFND	UNDFD	14	2.1
0.87	2.85	21.94	1.14	5.21	0.15	clay	UNDFND	UNDFD	21	3.1
1.00	3.28	22.12	1.01	4.58	0.17	clay	UNDFND	UNDFD	21	3.1
1.13	3.71	20.38	1.35	6.62	0.19	clay	UNDFND	UNDFD	20	3.0
1.25	4.10	28.32	1.46	5.17	0.21	clay	UNDFND	UNDFD	27	3.8
1.37	4.49	35.06	1.62	4.61	0.24	silty clay to clay	UNDFND	UNDFD	22	3.4
1.50	4.92	38.62	1.92	4.97	0.26	clay	UNDFND	UNDFD	37	5.8
1.62	5.31	38.90	1.66	4.26	0.28	silty clay to clay	UNDFND	UNDFD	25	3.8
1.75	5.74	25.00	1.32	5.26	0.30	clay	UNDFND	UNDFD	24	3.4
1.87	6.14	18.14	0.90	4.94	0.33	clay	UNDFND	UNDFD	17	1.7
2.00	6.56	16.04	0.70	4.38	0.35	clay	UNDFND	UNDFD	15	1.5
2.12	6.96	17.50	0.74	4.26	0.37	clay	UNDFND	UNDFD	17	1.7
2.25	7.38	16.86	0.71	4.23	0.39	clay	UNDFND	UNDFD	16	1.6
2.38	7.81	17.52	0.72	4.12	0.41	clay	UNDFND	UNDFD	17	1.7
2.50	8.20	19.86	0.95	4.76	0.42	clay	UNDFND	UNDFD	19	1.9
2.62	8.60	22.68	1.05	4.62	0.43	clay	UNDFND	UNDFD	22	2.2
2.75	9.02	20.44	0.94	4.62	0.43	clay	UNDFND	UNDFD	20	1.9
2.87	9.42	23.62	1.20	5.09	0.44	clay	UNDFND	UNDFD	23	2.3
3.00	9.84	23.98	1.27	5.28	0.45	clay	UNDFND	UNDFD	23	2.3
3.12	10.24	20.88	1.15	5.53	0.46	clay	UNDFND	UNDFD	20	2.0
3.25	10.66	19.66	1.09	5.54	0.47	clay	UNDFND	UNDFD	19	1.9
3.37	11.06	28.88	1.36	4.71	0.48	clay	UNDFND	UNDFD	28	2.8
3.50	11.48	34.02	1.37	4.02	0.49	silty clay to clay	UNDFND	UNDFD	22	3.3
3.63	11.91	18.52	0.68	3.67	0.50	silty clay to clay	UNDFND	UNDFD	12	1.7
3.75	12.30	26.06	1.10	4.22	0.51	silty clay to clay	UNDFND	UNDFD	17	2.5
3.87	12.70	25.50	1.17	4.57	0.52	clay	UNDFND	UNDFD	24	2.4
4.00	13.12	18.96	0.89	4.69	0.53	clay	UNDFND	UNDFD	18	1.8
4.12	13.52	18.24	0.94	5.14	0.54	clay	UNDFND	UNDFD	17	1.7
4.25	13.94	10.96	0.49	4.50	0.55	clay	UNDFND	UNDFD	10	1.0
4.37	14.34	13.90	0.63	4.52	0.56	clay	UNDFND	UNDFD	13	1.3
4.50	14.76	15.48	0.70	4.52	0.57	clay	UNDFND	UNDFD	15	1.4
4.62	15.16	18.26	0.87	4.79	0.58	clay	UNDFND	UNDFD	17	1.7
4.75	15.58	22.56	1.05	4.67	0.59	clay	UNDFND	UNDFD	22	2.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTB1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-39 Page No. 2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	20.28	0.91	4.48	0.60	clay	UNDFND	UNDFD	19	1.9
5.00	16.40	19.34	0.69	3.59	0.61	silty clay to clay	UNDFND	UNDFD	12	1.8
5.12	16.80	15.56	0.56	3.61	0.62	silty clay to clay	UNDFND	UNDFD	10	1.4
5.25	17.22	13.42	0.47	3.50	0.63	silty clay to clay	UNDFND	UNDFD	9	1.2
5.38	17.65	18.58	0.48	2.61	0.64	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
5.50	18.04	14.26	0.40	2.83	0.65	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
5.62	18.44	13.98	0.35	2.53	0.66	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
5.75	18.86	14.18	0.36	2.56	0.67	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
5.87	19.26	11.94	0.31	2.59	0.68	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
6.00	19.69	10.36	0.25	2.41	0.69	silty clay to clay	UNDFND	UNDFD	7	.9
6.12	20.08	13.72	0.38	2.74	0.70	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
6.25	20.51	15.50	0.43	2.78	0.71	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
6.38	20.93	17.80	0.53	3.00	0.72	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
6.50	21.33	13.20	0.48	3.64	0.73	silty clay to clay	UNDFND	UNDFD	8	1.2
6.63	21.76	28.56	0.82	2.86	0.74	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
6.75	22.15	51.62	1.12	2.17	0.75	sandy silt to clayey silt	UNDFND	UNDFD	20	5.0
6.88	22.57	51.56	1.30	2.52	0.76	sandy silt to clayey silt	UNDFND	UNDFD	20	5.0
7.00	22.97	31.74	0.79	2.47	0.77	sandy silt to clayey silt	UNDFND	UNDFD	12	3.0
7.12	23.36	17.44	0.46	2.61	0.78	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
7.25	23.79	26.22	0.92	3.50	0.79	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
7.37	24.18	26.00	0.99	3.79	0.80	silty clay to clay	UNDFND	UNDFD	17	2.4
7.50	24.61	25.66	0.86	3.35	0.81	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
7.62	25.00	29.20	0.75	2.58	0.81	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7
7.75	25.43	43.40	0.93	2.15	0.82	sandy silt to clayey silt	UNDFND	UNDFD	17	4.2
7.88	25.85	41.44	1.09	2.64	0.83	sandy silt to clayey silt	UNDFND	UNDFD	16	4.0
8.00	26.25	38.82	1.16	2.99	0.84	clayey silt to silty clay	UNDFND	UNDFD	19	3.7
8.13	26.67	35.44	1.40	3.94	0.85	clayey silt to silty clay	UNDFND	UNDFD	17	3.3
8.25	27.07	31.98	1.24	3.88	0.86	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
8.38	27.49	28.28	1.21	4.29	0.87	silty clay to clay	UNDFND	UNDFD	18	2.6
8.50	27.89	24.68	1.03	4.17	0.88	silty clay to clay	UNDFND	UNDFD	16	2.3
8.62	28.28	22.66	0.97	4.26	0.89	silty clay to clay	UNDFND	UNDFD	14	2.1
8.75	28.71	36.76	1.22	3.33	0.90	clayey silt to silty clay	UNDFND	UNDFD	18	3.5
8.87	29.10	34.56	1.18	3.42	0.91	clayey silt to silty clay	UNDFND	UNDFD	17	3.2
9.00	29.53	29.60	1.22	4.11	0.92	silty clay to clay	UNDFND	UNDFD	19	2.7
9.12	29.92	28.66	1.24	4.31	0.93	silty clay to clay	UNDFND	UNDFD	18	2.7
9.25	30.35	31.64	1.15	3.63	0.94	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
9.37	30.74	24.68	0.83	3.79	0.95	silty clay to clay	UNDFND	UNDFD	16	2.3
9.50	31.17	22.72	0.71	3.14	0.96	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
9.63	31.59	26.14	1.06	4.07	0.97	silty clay to clay	UNDFND	UNDFD	17	2.4
9.75	31.99	31.70	1.03	3.23	0.98	clayey silt to silty clay	UNDFND	UNDFD	15	2.3
9.88	32.41	40.82	1.52	3.74	0.99	clayey silt to silty clay	UNDFND	UNDFD	20	3.9
10.00	32.81	71.30	0.98	1.38	1.00	silty sand to sandy silt	50-60	38-40	23	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-39 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	107.38	0.43	0.40	1.01	sand	60-70	40-42	21	UNDEFINED
10.25	33.63	119.84	0.39	0.33	1.02	sand	70-80	40-42	23	UNDEFINED
10.37	34.02	108.16	0.48	0.45	1.03	sand	60-70	40-42	21	UNDEFINED
10.50	34.45	120.32	0.46	0.38	1.04	sand	70-80	40-42	23	UNDEFINED
10.62	34.84	109.42	0.94	0.85	1.05	sand to silty sand	60-70	40-42	26	UNDEFINED
10.75	35.27	29.20	0.66	2.25	1.06	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7
10.87	35.66	17.74	0.44	2.48	1.07	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
11.00	36.09	15.02	0.42	2.78	1.08	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
11.13	36.52	12.90	0.35	2.73	1.09	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.25	36.91	11.02	0.24	2.19	1.10	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.37	37.30	11.32	0.25	2.17	1.11	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.50	37.73	13.12	0.36	2.77	1.12	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
11.62	38.12	11.24	0.26	2.31	1.13	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.75	38.55	10.08	0.17	1.68	1.14	clayey silt to silty clay	UNDFND	UNDFD	5	.7
11.87	38.94	9.46	0.15	1.62	1.15	clayey silt to silty clay	UNDFND	UNDFD	5	.7
12.00	39.37	12.26	0.28	2.25	1.16	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.12	39.76	13.44	0.39	2.89	1.17	silty clay to clay	UNDFND	UNDFD	9	1.1
12.25	40.19	13.86	0.39	2.85	1.18	clayey silt to silty clay	UNDFND	UNDFD	7	1.1
12.37	40.58	68.44	0.65	0.95	1.19	sand to silty sand	50-60	38-40	16	UNDEFINED
12.50	41.01	37.78	0.82	2.18	1.20	sandy silt to clayey silt	UNDFND	UNDFD	14	3.5
12.62	41.40	147.90	0.53	0.36	1.20	sand	70-80	40-42	28	UNDEFINED
12.75	41.83	188.36	0.43	0.23	1.21	sand	80-90	42-44	36	UNDEFINED
12.87	42.22	198.40	0.40	0.20	1.22	sand	80-90	42-44	38	UNDEFINED
13.00	42.65	127.30	0.90	0.71	1.23	sand	70-80	40-42	24	UNDEFINED
13.12	43.04	38.26	1.29	3.38	1.24	clayey silt to silty clay	UNDFND	UNDFD	18	3.5
13.25	43.47	29.64	1.23	4.14	1.25	silty clay to clay	UNDFND	UNDFD	19	2.7
13.37	43.86	30.30	1.21	3.98	1.26	silty clay to clay	UNDFND	UNDFD	19	2.7
13.50	44.29	31.44	1.23	3.92	1.27	silty clay to clay	UNDFND	UNDFD	20	2.8
13.62	44.69	31.64	1.13	3.58	1.28	clayey silt to silty clay	UNDFND	UNDFD	15	2.8
13.75	45.11	30.62	0.63	2.06	1.29	sandy silt to clayey silt	UNDFND	UNDFD	12	2.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP.
On Site Loc:CPT5-41
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/19/90/11:57
Cone Used :VIII
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Dq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	153.60	2.17	1.41	0.02	sand to silty sand	>90	>48	37	UNDEFINED
0.50	1.64	47.60	1.23	2.58	0.07	sandy silt to clayey silt	UNDFND	UNDFD	18	3.1
0.75	2.46	13.20	0.86	6.48	0.11	clay	UNDFND	UNDFD	13	.8
1.00	3.28	16.40	0.94	5.76	0.16	clay	UNDFND	UNDFD	16	1.0
1.25	4.10	24.40	1.11	4.56	0.20	clay	UNDFND	UNDFD	23	1.6
1.50	4.92	34.40	1.42	4.13	0.25	silty clay to clay	UNDFND	UNDFD	22	2.2
1.75	5.74	22.60	0.97	4.31	0.29	silty clay to clay	UNDFND	UNDFD	14	1.4
2.00	6.56	18.40	0.81	4.42	0.34	clay	UNDFND	UNDFD	18	1.2
2.25	7.38	14.40	0.61	4.21	0.38	clay	UNDFND	UNDFD	14	.9
2.50	8.20	16.00	0.63	3.94	0.43	silty clay to clay	UNDFND	UNDFD	10	1.0
2.75	9.02	19.60	0.84	4.28	0.47	clay	UNDFND	UNDFD	19	1.2
3.00	9.84	23.20	1.04	4.50	0.52	clay	UNDFND	UNDFD	22	1.5
3.25	10.66	33.40	1.72	5.15	0.55	clay	UNDFND	UNDFD	32	2.1
3.50	11.48	55.00	2.97	5.40	0.57	clay	UNDFND	UNDFD	>50	3.6
3.75	12.30	24.80	1.08	4.34	0.59	silty clay to clay	UNDFND	UNDFD	16	1.6
4.00	13.12	15.60	0.71	4.55	0.61	clay	UNDFND	UNDFD	15	.9
4.25	13.94	13.60	0.53	3.93	0.63	clay	UNDFND	UNDFD	13	.8
4.50	14.76	16.40	0.65	3.98	0.65	silty clay to clay	UNDFND	UNDFD	10	1.0
4.75	15.58	23.00	1.03	4.46	0.67	clay	UNDFND	UNDFD	22	1.4
5.00	16.40	23.00	0.91	3.96	0.69	silty clay to clay	UNDFND	UNDFD	15	1.4
5.25	17.22	18.80	0.52	2.78	0.71	clayey silt to silty clay	UNDFND	UNDFD	9	1.1
5.50	18.04	15.80	0.34	2.14	0.73	clayey silt to silty clay	UNDFND	UNDFD	8	.9
5.75	18.86	17.00	0.40	2.33	0.75	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
6.00	19.69	22.20	0.65	2.92	0.77	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
6.25	20.51	43.20	1.20	2.77	0.79	sandy silt to clayey silt	UNDFND	UNDFD	17	2.8
6.50	21.33	14.40	0.31	2.13	0.80	clayey silt to silty clay	UNDFND	UNDFD	7	.8
6.75	22.15	35.80	0.60	1.69	0.82	sandy silt to clayey silt	UNDFND	UNDFD	14	2.3
7.00	22.97	98.80	0.31	0.31	0.84	sand	60-70	40-42	19	UNDEFINED
7.25	23.79	104.80	0.85	0.81	0.86	sand to silty sand	70-80	40-42	25	UNDEFINED
7.50	24.61	21.80	0.49	2.24	0.88	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
7.75	25.43	27.00	0.73	2.72	0.90	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
8.00	26.25	39.00	1.53	3.93	0.92	clayey silt to silty clay	UNDFND	UNDFD	19	2.5
8.25	27.07	34.40	1.38	4.00	0.94	silty clay to clay	UNDFND	UNDFD	22	2.1
8.50	27.89	31.20	1.14	3.65	0.96	clayey silt to silty clay	UNDFND	UNDFD	15	1.9
8.75	28.71	44.40	1.68	3.79	0.98	clayey silt to silty clay	UNDFND	UNDFD	21	2.8
9.00	29.53	32.20	1.02	3.17	1.00	clayey silt to silty clay	UNDFND	UNDFD	15	2.0
9.25	30.35	25.80	0.86	3.33	1.02	clayey silt to silty clay	UNDFND	UNDFD	12	1.6
9.50	31.17	16.20	0.53	3.28	1.04	silty clay to clay	UNDFND	UNDFD	10	.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-42
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/11/90/10:04
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	19.91	0.97	4.89	0.02	clay	UNDFND	UNDFD	19	1.9
0.50	1.64	27.93	1.87	6.70	0.07	clay	UNDFND	UNDFD	27	2.7
0.75	2.46	45.84	2.59	5.66	0.11	clay	UNDFND	UNDFD	44	4.5
1.00	3.28	51.76	2.89	5.58	0.16	clay	UNDFND	UNDFD	50	5.1
1.25	4.10	63.88	2.97	4.65	0.20	silty clay to clay	UNDFND	UNDFD	41	6.3
1.50	4.92	96.98	3.61	3.72	0.25	clayey silt to silty clay	UNDFND	UNDFD	46	9.6
1.75	5.74	96.71	3.58	3.70	0.29	sandy silt to clayey silt	UNDFND	UNDFD	37	9.6
2.00	6.56	80.39	2.71	3.35	0.34	sandy silt to clayey silt	UNDFND	UNDFD	31	8.0
2.25	7.38	61.01	2.22	3.63	0.38	clayey silt to silty clay	UNDFND	UNDFD	23	6.0
2.50	8.20	36.57	2.05	5.61	0.43	clay	UNDFND	UNDFD	35	3.6
2.75	9.02	21.77	0.81	3.72	0.46	silty clay to clay	UNDFND	UNDFD	14	2.1
3.00	9.84	32.68	1.15	3.53	0.48	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
3.25	10.66	27.48	0.92	3.36	0.50	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
3.50	11.48	24.57	0.95	3.87	0.52	silty clay to clay	UNDFND	UNDFD	16	2.3
3.75	12.30	24.32	0.90	3.70	0.54	silty clay to clay	UNDFND	UNDFD	16	2.3
4.00	13.12	13.07	0.58	4.41	0.56	clay	UNDFND	UNDFD	13	1.2
4.25	13.94	13.94	0.57	4.10	0.58	clay	UNDFND	UNDFD	13	1.3
4.50	14.76	20.44	0.81	3.97	0.60	silty clay to clay	UNDFND	UNDFD	13	1.9
4.75	15.58	18.12	0.61	3.36	0.62	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
5.00	16.40	15.21	0.56	3.67	0.64	silty clay to clay	UNDFND	UNDFD	10	1.4
5.25	17.22	21.18	0.47	2.20	0.66	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
5.50	18.04	16.18	0.37	2.30	0.68	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
5.75	18.86	13.64	0.20	1.50	0.69	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
6.00	19.69	22.03	0.46	2.07	0.71	sandy silt to clayey silt	UNDFND	UNDFD	8	2.0
6.25	20.51	51.08	1.13	2.21	0.73	sandy silt to clayey silt	UNDFND	UNDFD	20	4.9
6.50	21.33	33.14	1.07	3.24	0.75	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
6.75	22.15	15.35	0.45	2.85	0.77	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
7.00	22.97	50.83	0.96	1.88	0.79	silty sand to sandy silt	50-60	38-40	16	UNDEFINED
7.25	23.79	53.36	1.66	3.11	0.81	sandy silt to clayey silt	UNDFND	UNDFD	20	5.2
7.50	24.61	30.88	0.85	2.75	0.83	sandy silt to clayey silt	UNDFND	UNDFD	12	2.9
7.75	25.43	18.24	0.42	2.31	0.85	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
8.00	26.25	19.61	0.52	2.65	0.87	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
8.25	27.07	28.52	0.92	3.22	0.89	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
8.50	27.89	17.79	0.40	2.27	0.91	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
8.75	28.71	16.41	0.37	2.28	0.93	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
9.00	29.53	13.08	0.34	2.63	0.95	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
9.25	30.35	13.94	0.40	2.87	0.97	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
9.50	31.17	18.85	0.68	3.63	0.99	silty clay to clay	UNDFND	UNDFD	12	1.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT5-42

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	11.72	0.25	2.12	1.01	clayey silt to silty clay	UNDFND	UNDFD	6	.9
10.00	32.81	12.15	0.27	2.24	1.03	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
10.25	33.63	13.75	0.42	3.03	1.05	silty clay to clay	UNDFND	UNDFD	9	1.1
10.50	34.45	25.48	1.01	3.95	1.07	silty clay to clay	UNDFND	UNDFD	16	2.3
10.75	35.27	25.14	1.12	4.46	1.08	clay	UNDFND	UNDFD	24	2.3
11.00	36.09	14.68	0.59	4.03	1.10	clay	UNDFND	UNDFD	14	1.2
11.25	36.91	15.71	0.50	3.20	1.12	silty clay to clay	UNDFND	UNDFD	10	1.3
11.50	37.73	12.88	0.29	2.29	1.14	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.75	38.55	21.59	0.78	3.63	1.16	silty clay to clay	UNDFND	UNDFD	14	1.9
12.00	39.37	33.62	1.48	4.40	1.18	silty clay to clay	UNDFND	UNDFD	21	3.1
12.25	40.19	25.85	1.11	4.31	1.20	silty clay to clay	UNDFND	UNDFD	17	2.3
12.50	41.01	23.75	0.92	3.87	1.22	silty clay to clay	UNDFND	UNDFD	15	2.1
12.75	41.83	26.92	1.09	4.06	1.24	silty clay to clay	UNDFND	UNDFD	17	2.4
13.00	42.65	30.00	1.27	4.24	1.26	silty clay to clay	UNDFND	UNDFD	19	2.7
13.25	43.47	27.33	0.94	3.45	1.28	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
13.50	44.29	35.76	1.07	2.99	1.30	clayey silt to silty clay	UNDFND	UNDFD	17	3.3
13.75	45.11	22.75	0.47	2.07	1.32	sandy silt to clayey silt	UNDFND	UNDFD	9	2.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT/5-43
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/07/90/16:07
Cone Used :IV
Water table (meters) : 2.9

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	33.36	1.29	3.88	0.01	clayey silt to silty clay	UNDFND	UNDFD	16	3.3
0.25	0.82	31.36	2.17	6.91	0.03	clay	UNDFND	UNDFD	30	3.1
0.38	1.25	27.28	1.88	6.88	0.06	clay	UNDFND	UNDFD	26	2.7
0.50	1.64	21.00	1.56	7.42	0.08	clay	UNDFND	UNDFD	20	2.0
0.63	2.07	20.52	1.36	6.65	0.10	clay	UNDFND	UNDFD	20	2.0
0.75	2.46	21.00	1.52	7.22	0.12	clay	UNDFND	UNDFD	20	2.0
0.87	2.85	20.34	1.38	6.80	0.15	clay	UNDFND	UNDFD	19	2.0
1.00	3.28	21.42	1.35	6.30	0.17	clay	UNDFND	UNDFD	21	2.1
1.13	3.71	25.30	0.94	3.70	0.19	silty clay to clay	UNDFND	UNDFD	16	2.5
1.25	4.10	12.88	0.68	5.25	0.21	clay	UNDFND	UNDFD	12	1.2
1.37	4.49	16.50	0.95	5.77	0.24	clay	UNDFND	UNDFD	16	1.6
1.50	4.92	18.24	1.18	6.49	0.26	clay	UNDFND	UNDFD	17	1.7
1.62	5.31	20.76	1.17	5.63	0.28	clay	UNDFND	UNDFD	20	2.0
1.75	5.74	22.84	1.25	5.47	0.30	clay	UNDFND	UNDFD	22	2.2
1.87	6.14	24.44	1.20	4.90	0.33	clay	UNDFND	UNDFD	23	2.4
2.00	6.56	20.66	1.06	5.15	0.35	clay	UNDFND	UNDFD	20	2.0
2.12	6.96	13.80	0.58	4.18	0.37	clay	UNDFND	UNDFD	13	1.3
2.25	7.38	13.66	0.62	4.57	0.39	clay	UNDFND	UNDFD	13	1.3
2.38	7.81	20.14	0.94	4.65	0.42	clay	UNDFND	UNDFD	19	1.9
2.50	8.20	20.16	1.02	5.07	0.44	clay	UNDFND	UNDFD	19	1.9
2.62	8.60	19.28	1.02	5.30	0.46	clay	UNDFND	UNDFD	18	1.8
2.75	9.02	20.74	1.10	5.28	0.48	clay	UNDFND	UNDFD	20	2.0
2.87	9.42	21.24	1.21	5.70	0.51	clay	UNDFND	UNDFD	20	2.0
3.00	9.84	19.34	1.16	5.99	0.53	clay	UNDFND	UNDFD	19	1.8
3.12	10.24	27.42	1.36	4.96	0.54	clay	UNDFND	UNDFD	26	2.6
3.25	10.66	38.10	1.70	4.45	0.55	silty clay to clay	UNDFND	UNDFD	24	3.7
3.37	11.06	18.98	0.89	4.70	0.56	clay	UNDFND	UNDFD	18	1.8
3.50	11.48	18.16	0.83	4.58	0.56	clay	UNDFND	UNDFD	17	1.7
3.63	11.91	26.12	0.85	3.25	0.58	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
3.75	12.30	21.08	0.98	4.67	0.58	clay	UNDFND	UNDFD	20	2.0
3.87	12.70	39.76	0.63	1.59	0.59	silty sand to sandy silt	40-50	38-40	13	UNDEFINED
4.00	13.12	44.40	0.90	2.02	0.60	sandy silt to clayey silt	UNDFND	UNDFD	17	4.3
4.12	13.52	24.88	0.76	3.05	0.61	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
4.25	13.94	11.30	0.40	3.51	0.62	silty clay to clay	UNDFND	UNDFD	7	1.0
4.37	14.34	17.18	0.55	3.21	0.63	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
4.50	14.76	22.24	0.73	3.30	0.64	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
4.62	15.16	28.18	1.04	3.72	0.65	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
4.75	15.58	23.02	0.61	2.65	0.66	clayey silt to silty clay	UNDFND	UNDFD	11	2.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-43

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	20.60	0.50	2.42	0.67	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
5.00	16.40	18.28	0.46	2.50	0.68	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
5.12	16.80	16.22	0.35	2.15	0.69	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
5.25	17.22	21.04	0.35	4.54	0.70	clay	UNDFND	UNDFD	20	2.0
5.38	17.65	24.60	0.94	3.83	0.71	silty clay to clay	UNDFND	UNDFD	16	2.3
5.50	18.04	17.44	0.34	1.93	0.72	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
5.62	18.44	17.20	0.38	2.19	0.73	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
5.75	18.86	19.42	0.43	2.21	0.74	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
5.87	19.26	17.62	0.52	2.95	0.75	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
6.00	19.69	12.26	0.28	2.28	0.76	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.12	20.08	15.00	0.38	2.52	0.77	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
6.25	20.51	14.46	0.36	2.52	0.78	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
6.38	20.93	13.92	0.34	2.47	0.79	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
6.50	21.33	12.52	0.25	1.97	0.80	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.63	21.75	10.86	0.17	1.57	0.81	clayey silt to silty clay	UNDFND	UNDFD	5	.9
6.75	22.15	13.88	0.47	3.42	0.82	silty clay to clay	UNDFND	UNDFD	9	1.2
6.88	22.57	31.72	0.82	2.59	0.83	sandy silt to clayey silt	UNDFND	UNDFD	12	3.0
7.00	22.97	20.32	0.43	2.12	0.84	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
7.12	23.36	12.78	0.14	1.06	0.85	sandy silt to clayey silt	UNDFND	UNDFD	5	1.1
7.25	23.79	20.72	0.36	1.71	0.86	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
7.37	24.18	23.70	1.05	4.41	0.87	clay	UNDFND	UNDFD	23	2.2
7.50	24.61	27.00	0.87	3.21	0.88	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
7.62	25.00	28.16	0.86	3.06	0.89	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
7.75	25.43	31.70	0.97	3.06	0.90	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
7.88	25.85	30.38	0.91	3.01	0.91	clayey silt to silty clay	UNDFND	UNDFD	15	2.8
8.00	26.25	25.64	0.67	2.59	0.92	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
8.13	26.67	21.00	0.63	3.01	0.93	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
8.25	27.07	17.50	0.45	2.55	0.94	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
8.38	27.49	28.52	1.42	4.97	0.95	clay	UNDFND	UNDFD	27	2.7
8.50	27.89	31.30	1.17	3.73	0.96	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
8.62	28.28	34.08	1.13	3.31	0.96	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
8.75	28.71	67.68	1.07	1.58	0.97	silty sand to sandy silt	50-60	38-40	22	UNDEFINED
8.87	29.10	88.10	0.81	0.92	0.98	sand to silty sand	60-70	40-42	21	UNDEFINED
9.00	29.53	99.82	0.68	0.68	0.99	sand to silty sand	60-70	40-42	24	UNDEFINED
9.12	29.92	103.02	0.67	0.65	1.00	sand to silty sand	60-70	40-42	25	UNDEFINED
9.25	30.35	74.70	0.59	0.78	1.01	sand to silty sand	50-60	38-40	18	UNDEFINED
9.37	30.74	52.20	0.83	1.59	1.02	silty sand to sandy silt	40-50	36-38	17	UNDEFINED
9.50	31.17	58.14	1.01	1.73	1.03	silty sand to sandy silt	50-60	38-40	19	UNDEFINED
9.63	31.59	109.06	0.84	0.77	1.04	sand to silty sand	60-70	40-42	26	UNDEFINED
9.75	31.99	156.12	0.33	0.21	1.05	sand	70-80	42-44	30	UNDEFINED
9.88	32.41	153.24	0.33	0.22	1.06	sand	70-80	42-44	29	UNDEFINED
10.00	32.81	79.00	0.77	0.97	1.07	sand to silty sand	50-60	38-40	19	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/S-43 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	37.94	0.72	1.91	1.08	sandy silt to clayey silt	UNDFND	UNDFD	15	3.6
10.25	33.63	32.54	0.58	1.79	1.09	sandy silt to clayey silt	UNDFND	UNDFD	12	3.0
10.37	34.02	30.14	0.41	1.37	1.10	sandy silt to clayey silt	UNDFND	UNDFD	12	2.8
10.50	34.45	15.90	0.44	2.78	1.11	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
10.62	34.84	16.56	0.25	1.52	1.12	sandy silt to clayey silt	UNDFND	UNDFD	6	1.4
10.75	35.27	13.56	0.31	2.26	1.13	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
10.87	35.66	16.84	0.30	1.79	1.14	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
11.00	36.09	12.22	0.13	1.08	1.15	sandy silt to clayey silt	UNDFND	UNDFD	5	1.0
11.13	36.52	12.34	0.17	1.39	1.16	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.25	36.91	11.32	0.17	1.52	1.17	clayey silt to silty clay	UNDFND	UNDFD	5	.9
11.37	37.30	10.14	0.18	1.80	1.18	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.50	37.73	10.44	0.24	2.31	1.19	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.62	38.12	10.68	0.15	1.44	1.20	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.75	38.55	31.22	1.12	3.58	1.21	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
11.87	38.94	141.56	1.16	0.82	1.22	sand	70-80	40-42	27	UNDEFINED
12.00	39.37	195.86	0.66	0.34	1.23	sand	80-90	42-44	38	UNDEFINED
12.12	39.76	199.40	0.70	0.35	1.24	sand	80-90	42-44	38	UNDEFINED
12.25	40.19	175.12	0.40	0.23	1.25	sand	70-80	42-44	34	UNDEFINED
12.37	40.58	163.50	0.33	0.20	1.26	sand	70-80	42-44	31	UNDEFINED
12.50	41.01	178.82	1.11	0.62	1.27	sand	70-80	42-44	34	UNDEFINED
12.62	41.40	161.82	0.90	0.56	1.28	sand	70-80	42-44	31	UNDEFINED
12.75	41.83	124.10	1.16	0.94	1.29	sand to silty sand	60-70	40-42	30	UNDEFINED
12.87	42.22	55.84	1.33	2.38	1.30	sandy silt to clayey silt	UNDFND	UNDFD	21	5.3
13.00	42.65	31.50	0.98	3.12	1.31	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
13.12	43.04	27.36	0.81	2.96	1.32	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
13.25	43.47	30.38	0.67	2.22	1.33	sandy silt to clayey silt	UNDFND	UNDFD	12	2.8
13.37	43.86	30.82	1.29	4.19	1.34	silty clay to clay	UNDFND	UNDFD	20	2.8
13.50	44.29	31.04	1.13	3.65	1.34	clayey silt to silty clay	UNDFND	UNDFD	15	2.8
13.62	44.69	27.02	0.87	3.23	1.35	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
13.75	45.11	28.90	0.66	2.30	1.36	sandy silt to clayey silt	UNDFND	UNDFD	11	2.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT/S-44
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/08/90/07:42
Cone Used :IV
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	48.26	0.44	0.92	0.01	silty sand to sandy silt	>90	>48	15	UNDEFINED
0.25	0.82	35.40	2.19	6.20	0.03	clay	UNDFND	UNDFD	34	3.5
0.38	1.25	29.60	2.35	7.93	0.06	clay	UNDFND	UNDFD	28	2.9
0.50	1.64	21.92	1.86	8.49	0.08	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.63	2.07	17.80	1.57	8.79	0.10	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.75	2.46	16.56	1.38	8.31	0.12	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.87	2.85	17.00	1.33	7.83	0.15	clay	UNDFND	UNDFD	16	1.6
1.00	3.28	17.48	1.29	7.39	0.17	clay	UNDFND	UNDFD	17	1.7
1.13	3.71	23.06	0.96	4.15	0.19	silty clay to clay	UNDFND	UNDFD	15	2.2
1.25	4.10	18.06	1.36	7.56	0.21	clay	UNDFND	UNDFD	17	1.7
1.37	4.49	17.80	1.20	6.73	0.24	clay	UNDFND	UNDFD	17	1.7
1.50	4.92	20.08	1.15	5.72	0.26	clay	UNDFND	UNDFD	19	1.9
1.62	5.31	20.76	0.87	4.18	0.28	silty clay to clay	UNDFND	UNDFD	13	2.0
1.75	5.74	25.50	0.50	1.95	0.30	sandy silt to clayey silt	UNDFND	UNDFD	10	2.5
1.87	6.14	26.12	0.84	3.23	0.33	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
2.00	6.56	14.24	0.73	5.11	0.35	clay	UNDFND	UNDFD	14	1.3
2.12	6.96	13.30	0.38	2.84	0.37	silty clay to clay	UNDFND	UNDFD	8	1.2
2.25	7.38	14.58	0.54	3.70	0.39	silty clay to clay	UNDFND	UNDFD	9	1.4
2.38	7.81	20.94	0.98	4.69	0.42	clay	UNDFND	UNDFD	20	2.0
2.50	8.20	18.80	0.85	4.52	0.44	clay	UNDFND	UNDFD	18	1.8
2.62	8.60	17.56	0.74	4.22	0.46	clay	UNDFND	UNDFD	17	1.7
2.75	9.02	16.44	0.76	4.61	0.48	clay	UNDFND	UNDFD	16	1.5
2.87	9.42	18.66	0.92	4.93	0.51	clay	UNDFND	UNDFD	18	1.8
3.00	9.84	23.40	0.89	3.79	0.53	silty clay to clay	UNDFND	UNDFD	15	2.2
3.12	10.24	29.60	1.03	3.48	0.55	clayey silt to silty clay	UNDFND	UNDFD	14	2.9
3.25	10.66	48.02	1.58	3.29	0.56	clayey silt to silty clay	UNDFND	UNDFD	23	4.7
3.37	11.06	55.08	1.64	2.98	0.57	sandy silt to clayey silt	UNDFND	UNDFD	21	5.4
3.50	11.48	45.26	2.16	4.77	0.58	silty clay to clay	UNDFND	UNDFD	29	4.4
3.63	11.91	32.44	1.54	4.74	0.59	clay	UNDFND	UNDFD	31	3.1
3.75	12.30	28.04	1.17	4.19	0.60	silty clay to clay	UNDFND	UNDFD	18	2.7
3.87	12.70	20.96	1.03	4.90	0.60	clay	UNDFND	UNDFD	20	2.0
4.00	13.12	21.82	0.83	3.83	0.61	silty clay to clay	UNDFND	UNDFD	14	2.1
4.12	13.52	14.96	0.59	3.95	0.62	silty clay to clay	UNDFND	UNDFD	10	1.4
4.25	13.94	12.92	0.42	3.22	0.63	silty clay to clay	UNDFND	UNDFD	8	1.2
4.37	14.34	12.50	0.51	4.08	0.64	clay	UNDFND	UNDFD	12	1.1
4.50	14.76	18.34	0.63	3.45	0.65	silty clay to clay	UNDFND	UNDFD	12	1.7
4.62	15.16	22.18	0.78	3.52	0.66	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
4.75	15.58	23.42	0.87	3.70	0.67	silty clay to clay	UNDFND	UNDFD	15	2.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-44

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	21.08	0.57	2.70	0.68	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
5.00	16.40	22.10	0.56	2.55	0.69	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
5.12	16.80	26.36	0.95	3.51	0.70	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
5.25	17.22	33.50	0.80	2.37	0.71	sandy silt to clayey silt	UNDFND	UNDFD	13	3.2
5.38	17.65	30.24	0.97	3.21	0.72	clayey silt to silty clay	UNDFND	UNDFD	14	2.9
5.50	18.04	19.26	0.88	4.57	0.73	clay	UNDFND	UNDFD	18	1.8
5.62	18.44	34.06	0.80	2.34	0.74	sandy silt to clayey silt	UNDFND	UNDFD	13	3.3
5.75	18.86	18.66	0.37	1.99	0.75	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
5.87	19.26	15.62	0.57	3.65	0.76	silty clay to clay	UNDFND	UNDFD	10	1.4
6.00	19.69	17.66	0.76	4.31	0.77	clay	UNDFND	UNDFD	17	1.6
6.12	20.08	15.30	0.62	4.02	0.78	clay	UNDFND	UNDFD	15	1.4
6.25	20.51	15.38	0.42	2.72	0.79	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
6.38	20.93	13.02	0.57	4.41	0.80	clay	UNDFND	UNDFD	12	1.1
6.50	21.33	15.54	0.60	3.85	0.81	silty clay to clay	UNDFND	UNDFD	10	1.4
6.63	21.75	17.52	0.75	4.27	0.82	clay	UNDFND	UNDFD	17	1.6
6.75	22.15	19.36	0.76	3.91	0.83	silty clay to clay	UNDFND	UNDFD	12	1.8
6.88	22.57	17.66	0.60	3.38	0.84	silty clay to clay	UNDFND	UNDFD	11	1.6
7.00	22.97	23.94	1.09	4.56	0.85	clay	UNDFND	UNDFD	23	2.2
7.12	23.36	34.78	1.72	4.94	0.86	clay	UNDFND	UNDFD	33	3.3
7.25	23.79	39.14	1.45	3.71	0.87	clayey silt to silty clay	UNDFND	UNDFD	19	3.7
7.37	24.18	23.26	1.03	4.44	0.88	clay	UNDFND	UNDFD	22	2.1
7.50	24.61	16.84	0.38	2.27	0.89	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.62	25.00	19.16	0.39	2.05	0.90	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
7.75	25.43	21.78	0.52	2.38	0.91	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
7.88	25.85	26.18	0.72	2.74	0.92	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
8.00	26.25	23.20	0.52	2.26	0.93	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
8.13	26.67	28.84	1.00	3.46	0.94	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
8.25	27.07	28.62	0.86	3.00	0.95	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
8.38	27.49	26.84	1.38	5.15	0.96	clay	UNDFND	UNDFD	26	2.5
8.50	27.89	27.12	1.19	4.40	0.97	silty clay to clay	UNDFND	UNDFD	17	2.5
8.62	28.28	22.24	0.95	4.27	0.97	silty clay to clay	UNDFND	UNDFD	14	2.0
8.75	28.71	24.70	1.04	4.20	0.98	silty clay to clay	UNDFND	UNDFD	16	2.3
8.87	29.10	37.38	1.35	3.62	0.99	clayey silt to silty clay	UNDFND	UNDFD	18	3.5
9.00	29.53	29.78	1.12	3.77	1.00	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
9.12	29.92	27.84	1.05	3.77	1.01	silty clay to clay	UNDFND	UNDFD	18	2.6
9.25	30.35	31.02	1.23	3.97	1.02	silty clay to clay	UNDFND	UNDFD	20	2.9
9.37	30.74	25.38	0.98	3.87	1.03	silty clay to clay	UNDFND	UNDFD	16	2.3
9.50	31.17	23.06	1.09	4.72	1.04	clay	UNDFND	UNDFD	22	2.1
9.63	31.59	15.68	0.63	4.00	1.05	silty clay to clay	UNDFND	UNDFD	10	1.3
9.75	31.99	15.30	0.47	3.09	1.06	silty clay to clay	UNDFND	UNDFD	10	1.3
9.88	32.41	17.50	0.65	3.70	1.07	silty clay to clay	UNDFND	UNDFD	11	1.5
10.00	32.81	20.68	0.87	4.23	1.08	silty clay to clay	UNDFND	UNDFD	13	1.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-44 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	16.74	0.80	4.75	1.09	clay	UNDFND	UNDFD	16	1.4
10.25	33.63	14.38	0.35	2.46	1.10	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
10.37	34.02	9.68	0.22	2.29	1.11	silty clay to clay	UNDFND	UNDFD	6	.7
10.50	34.45	13.20	0.58	3.02	1.12	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
10.62	34.84	12.42	0.56	4.48	1.13	clay	UNDFND	UNDFD	12	1.0
10.75	35.27	11.44	0.37	3.25	1.14	silty clay to clay	UNDFND	UNDFD	7	.9
10.87	35.66	12.38	0.36	2.87	1.15	silty clay to clay	UNDFND	UNDFD	8	1.0
11.00	36.09	12.30	0.39	3.15	1.16	silty clay to clay	UNDFND	UNDFD	8	1.0
11.13	36.52	10.60	0.37	3.49	1.17	clay	UNDFND	UNDFD	10	.8
11.25	36.91	12.46	0.40	3.22	1.18	silty clay to clay	UNDFND	UNDFD	8	1.0
11.37	37.30	13.82	0.44	3.21	1.19	silty clay to clay	UNDFND	UNDFD	9	1.1
11.50	37.73	12.62	0.62	4.91	1.20	clay	UNDFND	UNDFD	12	1.0
11.62	38.12	11.82	0.32	2.75	1.21	silty clay to clay	UNDFND	UNDFD	8	.9
11.75	38.55	9.28	0.23	2.47	1.22	silty clay to clay	UNDFND	UNDFD	6	.7
11.87	38.94	3.30	0.31	3.34	1.23	clay	UNDFND	UNDFD	9	.7
12.00	39.37	11.74	0.47	3.98	1.24	clay	UNDFND	UNDFD	11	.9
12.12	39.76	10.54	0.36	3.44	1.25	silty clay to clay	UNDFND	UNDFD	7	.8
12.25	40.19	18.98	0.66	3.50	1.26	silty clay to clay	UNDFND	UNDFD	12	1.6
12.37	40.58	22.26	0.69	3.09	1.27	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
12.50	41.01	19.12	0.69	3.60	1.28	silty clay to clay	UNDFND	UNDFD	12	1.6
12.62	41.40	21.42	1.01	4.72	1.29	clay	UNDFND	UNDFD	21	1.9
12.75	41.83	13.28	0.69	5.20	1.30	clay	UNDFND	UNDFD	13	1.0
12.87	42.22	12.24	0.49	4.00	1.31	clay	UNDFND	UNDFD	12	.9
13.00	42.65	27.78	1.04	3.73	1.32	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
13.12	43.04	37.66	1.70	4.51	1.33	silty clay to clay	UNDFND	UNDFD	24	3.5
13.25	43.47	28.68	1.50	5.22	1.34	clay	UNDFND	UNDFD	27	2.6
13.37	43.86	20.64	0.77	3.75	1.35	silty clay to clay	UNDFND	UNDFD	13	1.8
13.50	44.29	19.26	0.89	4.61	1.36	clay	UNDFND	UNDFD	18	1.6
13.62	44.69	23.34	0.94	4.01	1.36	silty clay to clay	UNDFND	UNDFD	15	2.0
13.75	45.11	22.44	0.78	3.48	1.37	clayey silt to silty clay	UNDFND	UNDFD	11	1.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT/5-45
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/06/90/19:25
Cone Used :IV
Water table (meters) : 2.4

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	8.12	0.55	6.73	0.01	clay	UNDFND	UNDFD	8	.8
0.25	0.82	9.48	0.77	8.08	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.38	1.25	10.88	1.01	9.29	0.06	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.50	1.64	15.22	1.32	8.65	0.08	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.63	2.07	18.56	1.71	9.20	0.10	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.75	2.46	31.68	2.58	8.15	0.12	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.87	2.85	42.40	3.68	8.68	0.15	undefined	UNDFND	UNDFD	UDF	UNDEFINED
1.00	3.28	27.34	1.89	6.93	0.17	clay	UNDFND	UNDFD	26	2.7
1.13	3.71	9.92	0.58	5.88	0.19	clay	UNDFND	UNDFD	10	.9
1.25	4.10	13.52	1.24	9.15	0.21	undefined	UNDFND	UNDFD	UDF	UNDEFINED
1.37	4.49	31.74	1.95	6.14	0.24	clay	UNDFND	UNDFD	30	3.1
1.50	4.92	25.48	1.87	7.35	0.26	clay	UNDFND	UNDFD	24	2.5
1.62	5.31	19.52	1.50	7.67	0.28	clay	UNDFND	UNDFD	19	1.9
1.75	5.74	18.04	1.34	7.44	0.30	clay	UNDFND	UNDFD	17	1.7
1.87	6.14	15.36	0.99	6.44	0.33	clay	UNDFND	UNDFD	15	1.5
2.00	6.56	20.22	1.01	5.00	0.35	clay	UNDFND	UNDFD	19	1.9
2.12	6.96	22.96	1.05	4.58	0.37	clay	UNDFND	UNDFD	22	2.2
2.25	7.38	15.40	0.85	5.54	0.39	clay	UNDFND	UNDFD	15	1.5
2.38	7.81	10.54	0.37	3.52	0.42	clay	UNDFND	UNDFD	10	1.0
2.50	8.20	12.14	0.47	3.85	0.44	clay	UNDFND	UNDFD	12	1.1
2.62	8.60	14.66	0.64	4.39	0.45	clay	UNDFND	UNDFD	14	1.4
2.75	9.02	13.62	0.63	4.65	0.46	clay	UNDFND	UNDFD	13	1.3
2.87	9.42	11.60	0.44	3.76	0.46	clay	UNDFND	UNDFD	11	1.1
3.00	9.84	14.48	0.46	3.20	0.47	silty clay to clay	UNDFND	UNDFD	9	1.3
3.12	10.24	15.38	0.43	2.78	0.48	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
3.25	10.66	46.08	1.75	3.80	0.49	clayey silt to silty clay	UNDFND	UNDFD	22	4.5
3.37	11.06	46.50	2.63	5.65	0.50	clay	UNDFND	UNDFD	45	4.5
3.50	11.48	83.88	4.32	5.15	0.51	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
3.63	11.91	67.20	2.88	4.29	0.52	clayey silt to silty clay	UNDFND	UNDFD	32	6.6
3.75	12.30	61.56	0.83	1.34	0.53	silty sand to sandy silt	60-70	40-42	20	UNDEFINED
3.87	12.70	66.54	0.39	0.59	0.54	sand to silty sand	60-70	40-42	16	UNDEFINED
4.00	13.12	52.16	0.35	0.68	0.55	sand to silty sand	50-60	40-42	12	UNDEFINED
4.12	13.52	58.08	0.32	0.55	0.56	sand to silty sand	50-60	40-42	14	UNDEFINED
4.25	13.94	50.06	0.43	0.86	0.57	silty sand to sandy silt	50-60	40-42	16	UNDEFINED
4.37	14.34	61.44	0.45	0.73	0.58	sand to silty sand	60-70	40-42	15	UNDEFINED
4.50	14.76	74.72	0.28	0.38	0.59	sand to silty sand	60-70	42-44	18	UNDEFINED
4.62	15.16	75.42	0.27	0.36	0.60	sand to silty sand	60-70	40-42	18	UNDEFINED
4.75	15.58	52.38	0.25	0.47	0.61	sand to silty sand	50-60	40-42	13	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-45

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	84.32	0.17	0.20	0.62	sand	60-70	42-44	16	UNDEFINED
5.00	16.40	75.84	0.93	1.22	0.63	silty sand to sandy silt	60-70	40-42	24	UNDEFINED
5.12	16.80	35.20	1.51	4.28	0.64	silty clay to clay	UNDFND	UNDFD	22	3.4
5.25	17.22	27.26	0.90	3.30	0.65	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
5.38	17.65	18.58	0.57	3.08	0.66	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
5.50	18.04	17.28	0.43	2.50	0.67	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
5.62	18.44	13.72	0.27	1.95	0.68	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
5.75	18.86	12.24	0.21	1.70	0.69	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
5.87	19.26	11.20	0.31	2.79	0.70	silty clay to clay	UNDFND	UNDFD	7	1.0
6.00	19.69	13.90	0.49	3.51	0.71	silty clay to clay	UNDFND	UNDFD	9	1.2
6.12	20.08	15.32	0.72	4.71	0.72	clay	UNDFND	UNDFD	15	1.3
6.25	20.51	17.04	0.64	3.74	0.73	silty clay to clay	UNDFND	UNDFD	11	1.5
6.38	20.93	15.62	0.63	4.02	0.74	clay	UNDFND	UNDFD	15	1.4
6.50	21.33	20.16	0.85	4.21	0.75	silty clay to clay	UNDFND	UNDFD	13	1.9
6.63	21.75	34.26	0.66	1.93	0.76	sandy silt to clayey silt	UNDFND	UNDFD	13	3.3
6.75	22.15	15.24	0.43	2.81	0.77	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
6.88	22.57	6.96	0.15	2.20	0.78	silty clay to clay	UNDFND	UNDFD	4	.5
7.00	22.97	15.78	0.35	2.25	0.79	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
7.12	23.36	23.74	0.76	3.21	0.80	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
7.25	23.79	27.34	1.14	4.16	0.81	silty clay to clay	UNDFND	UNDFD	17	2.6
7.37	24.18	29.68	1.36	4.59	0.82	silty clay to clay	UNDFND	UNDFD	19	2.8
7.50	24.61	30.78	1.72	5.57	0.83	clay	UNDFND	UNDFD	29	2.9
7.62	25.00	30.32	1.70	5.61	0.84	clay	UNDFND	UNDFD	29	2.8
7.75	25.43	31.96	1.52	4.75	0.85	clay	UNDFND	UNDFD	31	3.0
7.88	25.85	29.96	1.69	5.64	0.86	clay	UNDFND	UNDFD	29	2.8
8.00	26.25	30.74	1.55	5.04	0.87	clay	UNDFND	UNDFD	29	2.9
8.13	26.67	40.78	2.23	5.46	0.87	clay	UNDFND	UNDFD	39	3.9
8.25	27.07	38.74	1.66	4.28	0.88	silty clay to clay	UNDFND	UNDFD	25	3.7
8.38	27.49	32.36	1.78	5.50	0.89	clay	UNDFND	UNDFD	31	3.0
8.50	27.89	30.08	1.50	4.98	0.90	clay	UNDFND	UNDFD	29	2.8
8.62	28.28	34.36	1.63	4.74	0.91	clay	UNDFND	UNDFD	33	3.2
8.75	28.71	41.46	1.67	4.03	0.92	clayey silt to silty clay	UNDFND	UNDFD	20	3.9
8.87	29.10	30.30	1.15	3.81	0.93	clayey silt to silty clay	UNDFND	UNDFD	15	2.8
9.00	29.53	25.36	0.92	3.61	0.94	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
9.12	29.92	29.40	1.00	3.41	0.95	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
9.25	30.35	34.36	1.48	4.30	0.96	silty clay to clay	UNDFND	UNDFD	22	3.2
9.37	30.74	21.34	1.04	4.86	0.97	clay	UNDFND	UNDFD	20	1.9
9.50	31.17	12.58	0.53	4.24	0.98	clay	UNDFND	UNDFD	12	1.0
9.63	31.59	20.14	0.79	3.95	0.99	silty clay to clay	UNDFND	UNDFD	13	1.8
9.75	31.99	64.30	0.71	1.10	1.00	silty sand to sandy silt	50-60	38-40	21	UNDEFINED
9.88	32.41	171.74	1.22	0.71	1.01	sand	80-90	42-44	33	UNDEFINED
10.00	32.81	237.64	1.18	0.50	1.02	sand	>90	44-46	46	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/5-45

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	184.20	1.21	0.66	1.03	sand	80-90	42-44	35	UNDEFINED
10.25	33.63	138.60	1.94	1.40	1.04	sand to silty sand	70-80	42-44	33	UNDEFINED
10.37	34.02	221.36	1.12	0.51	1.05	sand	80-90	44-46	42	UNDEFINED
10.50	34.45	124.18	2.05	1.65	1.06	sand to silty sand	70-80	40-42	30	UNDEFINED
10.62	34.84	30.42	1.70	5.58	1.07	clay	UNDFND	UNDFD	29	2.8
10.75	35.27	16.98	0.79	4.67	1.08	clay	UNDFND	UNDFD	16	1.5
10.87	35.66	13.96	0.58	4.17	1.09	clay	UNDFND	UNDFD	13	1.2
11.00	36.09	13.32	0.43	3.25	1.10	silty clay to clay	UNDFND	UNDFD	9	1.1
11.13	36.52	12.08	0.45	3.75	1.11	clay	UNDFND	UNDFD	12	1.0
11.25	36.91	13.42	0.51	3.77	1.12	silty clay to clay	UNDFND	UNDFD	9	1.1
11.37	37.30	12.74	0.59	4.67	1.13	clay	UNDFND	UNDFD	12	1.0
11.50	37.73	11.70	0.41	3.48	1.14	silty clay to clay	UNDFND	UNDFD	7	.9
11.62	38.12	11.34	0.30	2.60	1.15	silty clay to clay	UNDFND	UNDFD	7	.9
11.75	38.55	13.64	0.47	3.46	1.16	silty clay to clay	UNDFND	UNDFD	9	1.1
11.87	38.94	33.18	0.79	2.37	1.17	sandy silt to clayey silt	UNDFND	UNDFD	13	3.1
12.00	39.37	19.12	0.49	2.57	1.18	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
12.12	39.76	12.80	0.43	3.36	1.19	silty clay to clay	UNDFND	UNDFD	8	1.0
12.25	40.19	40.68	1.00	2.47	1.20	sandy silt to clayey silt	UNDFND	UNDFD	16	3.8
12.37	40.58	61.62	2.14	3.47	1.21	clayey silt to silty clay	UNDFND	UNDFD	30	5.9
12.50	41.01	46.18	2.40	5.20	1.22	clay	UNDFND	UNDFD	44	4.3
12.62	41.40	35.80	1.87	5.22	1.23	clay	UNDFND	UNDFD	34	3.3
12.75	41.83	32.30	1.36	4.23	1.24	silty clay to clay	UNDFND	UNDFD	21	3.0
12.87	42.22	33.22	1.50	4.52	1.24	silty clay to clay	UNDFND	UNDFD	21	3.0
13.00	42.65	33.18	1.30	3.91	1.25	clayey silt to silty clay	UNDFND	UNDFD	16	3.0
13.12	43.04	35.82	1.74	4.85	1.26	clay	UNDFND	UNDFD	34	3.3
13.25	43.47	36.10	1.47	4.07	1.27	silty clay to clay	UNDFND	UNDFD	23	3.2
13.37	43.86	27.22	1.41	5.18	1.28	clay	UNDFND	UNDFD	26	2.4
13.50	44.29	30.40	1.20	3.94	1.29	silty clay to clay	UNDFND	UNDFD	19	2.7
13.62	44.69	28.40	1.12	3.94	1.30	silty clay to clay	UNDFND	UNDFD	18	2.5
13.75	45.11	24.60	0.35	1.42	1.31	sandy silt to clayey silt	UNDFND	UNDFD	9	2.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT5-48
Job No. :409700
Tot. Unit Wt. (avg) : 120 pcf

CPT Date :04/17/90/15:32
Cone Used :VIII
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Bq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	22.60	1.29	5.69	0.02	clay	UNDFND	UNDFD	22	1.5
0.50	1.64	17.80	1.06	5.97	0.07	clay	UNDFND	UNDFD	17	1.1
0.75	2.46	20.00	1.02	5.08	0.12	clay	UNDFND	UNDFD	19	1.3
1.00	3.28	34.00	1.57	4.63	0.17	silty clay to clay	UNDFND	UNDFD	22	2.2
1.25	4.10	38.00	1.80	4.73	0.22	silty clay to clay	UNDFND	UNDFD	24	2.5
1.50	4.92	23.00	1.20	5.23	0.27	clay	UNDFND	UNDFD	22	1.5
1.75	5.74	17.60	0.86	4.86	0.32	clay	UNDFND	UNDFD	17	1.1
2.00	6.56	17.40	0.77	4.43	0.37	clay	UNDFND	UNDFD	17	1.1
2.25	7.38	12.00	0.44	3.67	0.42	silty clay to clay	UNDFND	UNDFD	8	.7
2.50	8.20	9.80	0.27	2.80	0.47	silty clay to clay	UNDFND	UNDFD	6	.6
2.75	9.02	18.40	0.71	3.85	0.52	silty clay to clay	UNDFND	UNDFD	12	1.1
3.00	9.84	26.60	0.96	3.62	0.57	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
3.25	10.66	43.60	1.88	4.31	0.60	silty clay to clay	UNDFND	UNDFD	28	2.8
3.50	11.48	40.20	1.83	4.54	0.63	silty clay to clay	UNDFND	UNDFD	26	2.6
3.75	12.30	37.60	2.16	5.74	0.65	clay	UNDFND	UNDFD	36	2.4
4.00	13.12	26.80	1.40	5.22	0.67	clay	UNDFND	UNDFD	26	1.7
4.25	13.94	14.40	0.60	4.15	0.70	clay	UNDFND	UNDFD	14	.9
4.50	14.76	16.40	0.73	4.45	0.72	clay	UNDFND	UNDFD	16	1.0
4.75	15.58	19.80	0.78	3.94	0.74	silty clay to clay	UNDFND	UNDFD	13	1.2
5.00	16.40	15.00	0.36	2.37	0.77	clayey silt to silty clay	UNDFND	UNDFD	7	.9
5.25	17.22	21.40	0.54	2.52	0.79	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
5.50	18.04	13.60	0.29	2.10	0.81	clayey silt to silty clay	UNDFND	UNDFD	7	.8
5.75	18.86	15.60	0.16	1.03	0.84	sandy silt to clayey silt	UNDFND	UNDFD	6	.9
6.00	19.69	14.00	0.33	2.36	0.86	clayey silt to silty clay	UNDFND	UNDFD	7	.8
6.25	20.51	14.40	0.47	3.25	0.89	silty clay to clay	UNDFND	UNDFD	9	.8
6.50	21.33	14.40	0.35	2.44	0.91	clayey silt to silty clay	UNDFND	UNDFD	7	.8
6.75	22.15	27.60	0.64	2.33	0.93	sandy silt to clayey silt	UNDFND	UNDFD	11	1.7
7.00	22.97	26.40	0.60	2.27	0.96	sandy silt to clayey silt	UNDFND	UNDFD	10	1.6
7.25	23.79	20.20	0.48	2.38	0.98	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
7.50	24.61	20.60	0.53	2.55	1.00	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
7.75	25.43	28.40	0.94	3.30	1.03	clayey silt to silty clay	UNDFND	UNDFD	14	1.7
8.00	26.25	27.00	0.92	3.41	1.05	clayey silt to silty clay	UNDFND	UNDFD	13	1.6
8.25	27.07	26.20	1.03	3.94	1.07	silty clay to clay	UNDFND	UNDFD	17	1.6
8.50	27.89	24.80	0.87	3.51	1.10	clayey silt to silty clay	UNDFND	UNDFD	12	1.5
8.75	28.71	31.60	1.27	4.03	1.12	silty clay to clay	UNDFND	UNDFD	20	1.9
9.00	29.53	46.60	1.85	3.97	1.15	clayey silt to silty clay	UNDFND	UNDFD	22	2.9
9.25	30.35	23.00	0.57	2.48	1.17	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
9.50	31.17	20.60	15.04	73.01	1.19	undefined	UNDFND	UNDFD	UDF	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-48

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Bq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	21.00	0.76	3.61	1.22	silty clay to clay	UNDFND	UNDFD	13	1.2
10.00	32.81	10.80	0.26	2.44	1.24	silty clay to clay	UNDFND	UNDFD	7	.5
10.25	33.63	9.00	0.21	2.38	1.26	silty clay to clay	UNDFND	UNDFD	6	.4
10.50	34.45	22.20	0.98	4.40	1.29	clay	UNDFND	UNDFD	21	1.3
10.75	35.27	27.80	1.24	4.45	1.31	silty clay to clay	UNDFND	UNDFD	18	1.7
11.00	36.09	19.00	0.85	4.45	1.33	clay	UNDFND	UNDFD	18	1.1
11.25	36.91	15.40	0.53	3.44	1.36	silty clay to clay	UNDFND	UNDFD	10	.8
11.50	37.73	20.00	0.66	3.30	1.38	clayey silt to silty clay	UNDFND	UNDFD	10	1.1
11.75	38.55	22.20	0.76	3.41	1.40	clayey silt to silty clay	UNDFND	UNDFD	11	1.3
12.00	39.37	21.80	0.68	3.12	1.43	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
12.25	40.19	28.20	1.20	4.26	1.45	silty clay to clay	UNDFND	UNDFD	18	1.7
12.50	41.01	22.80	0.80	3.51	1.48	clayey silt to silty clay	UNDFND	UNDFD	11	1.3
12.75	41.83	26.40	0.85	3.22	1.50	clayey silt to silty clay	UNDFND	UNDFD	13	1.5
13.00	42.65	32.80	1.08	3.30	1.52	clayey silt to silty clay	UNDFND	UNDFD	16	2.0
13.25	43.47	31.00	0.90	2.90	1.55	clayey silt to silty clay	UNDFND	UNDFD	15	1.8
13.50	44.29	28.80	0.92	3.19	1.57	clayey silt to silty clay	UNDFND	UNDFD	14	1.7
13.75	45.11	32.60	0.90	2.75	1.59	sandy silt to clayey silt	UNDFND	UNDFD	12	1.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ***

PIONEER DRILLING

Engineer IT
On Site Loc:CPT5-49A
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/19/90/10:31
Cone Used :VIII
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Bq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	50.20	1.19	2.37	0.02	sandy silt to clayey silt	UNDFND	UNDFD	19	3.3
0.50	1.64	40.00	1.54	3.86	0.07	clayey silt to silty clay	UNDFND	UNDFD	19	2.6
0.75	2.46	19.40	0.78	4.02	0.11	silty clay to clay	UNDFND	UNDFD	12	1.2
1.00	3.28	18.40	0.76	4.13	0.16	silty clay to clay	UNDFND	UNDFD	12	1.2
1.25	4.10	16.00	0.55	3.45	0.20	silty clay to clay	UNDFND	UNDFD	10	1.0
1.50	4.92	11.00	0.52	4.69	0.25	clay	UNDFND	UNDFD	11	.7
1.75	5.74	7.20	0.39	5.44	0.29	clay	UNDFND	UNDFD	7	.4
2.00	6.56	9.40	0.46	4.94	0.34	clay	UNDFND	UNDFD	9	.6
2.25	7.38	7.20	0.35	4.83	0.38	clay	UNDFND	UNDFD	7	.4
2.50	8.20	6.80	0.36	5.29	0.43	clay	UNDFND	UNDFD	7	.4
2.75	9.02	6.80	0.38	5.65	0.47	clay	UNDFND	UNDFD	7	.4
3.00	9.84	5.00	0.33	6.60	0.52	clay	UNDFND	UNDFD	5	.2
3.25	10.66	19.20	0.98	5.08	0.55	clay	UNDFND	UNDFD	18	1.2
3.50	11.48	34.60	1.11	3.21	0.57	clayey silt to silty clay	UNDFND	UNDFD	17	2.2
3.75	12.30	45.20	1.17	2.60	0.59	sandy silt to clayey silt	UNDFND	UNDFD	17	2.9
4.00	13.12	28.40	1.27	4.47	0.61	silty clay to clay	UNDFND	UNDFD	18	1.8
4.25	13.94	18.80	0.60	3.21	0.63	clayey silt to silty clay	UNDFND	UNDFD	9	1.2
4.50	14.76	15.20	0.57	3.74	0.65	silty clay to clay	UNDFND	UNDFD	10	.9
4.75	15.58	20.00	0.69	3.47	0.67	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
5.00	16.40	19.60	0.55	2.80	0.69	clayey silt to silty clay	UNDFND	UNDFD	9	1.2
5.25	17.22	20.40	0.61	2.99	0.71	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
5.50	18.04	65.00	1.04	1.61	0.73	silty sand to sandy silt	50-60	40-42	21	UNDEFINED
5.75	18.86	40.00	1.04	2.60	0.75	sandy silt to clayey silt	UNDFND	UNDFD	15	2.5
6.00	19.69	14.00	0.41	2.96	0.77	silty clay to clay	UNDFND	UNDFD	9	.8
6.25	20.51	23.80	0.91	3.84	0.79	silty clay to clay	UNDFND	UNDFD	15	1.5
6.50	21.33	19.60	0.66	3.38	0.80	clayey silt to silty clay	UNDFND	UNDFD	9	1.2
6.75	22.15	39.00	1.42	3.63	0.82	clayey silt to silty clay	UNDFND	UNDFD	19	2.5
7.00	22.97	48.20	1.84	3.81	0.84	clayey silt to silty clay	UNDFND	UNDFD	23	3.1
7.25	23.79	20.20	0.56	2.79	0.86	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
7.50	24.61	17.20	0.30	1.74	0.88	sandy silt to clayey silt	UNDFND	UNDFD	7	1.0
7.75	25.43	25.00	0.60	2.39	0.90	sandy silt to clayey silt	UNDFND	UNDFD	10	1.5
8.00	26.25	29.40	0.87	2.97	0.92	clayey silt to silty clay	UNDFND	UNDFD	14	1.8
8.25	27.07	32.40	1.07	3.30	0.94	clayey silt to silty clay	UNDFND	UNDFD	16	2.0
8.50	27.89	26.20	0.92	3.50	0.96	clayey silt to silty clay	UNDFND	UNDFD	13	1.6
8.75	28.71	30.40	0.68	2.23	0.98	sandy silt to clayey silt	UNDFND	UNDFD	12	1.9
9.00	29.53	30.20	0.66	2.17	1.00	sandy silt to clayey silt	UNDFND	UNDFD	12	1.9
9.25	30.35	30.20	0.82	2.72	1.02	sandy silt to clayey silt	UNDFND	UNDFD	12	1.9
9.50	31.17	35.20	1.20	3.41	1.04	clayey silt to silty clay	UNDFND	UNDFD	17	2.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ***

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-49A

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Rq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	23.00	0.67	2.93	1.06	clayey silt to silty clay	UNDFND	UNDFD	11	1.4
10.00	32.81	22.60	0.79	3.51	1.08	clayey silt to silty clay	UNDFND	UNDFD	11	1.3
10.25	33.63	17.00	0.54	3.20	1.10	clayey silt to silty clay	UNDFND	UNDFD	8	1.0
10.50	34.45	11.60	0.22	1.91	1.12	clayey silt to silty clay	UNDFND	UNDFD	6	.6
10.75	35.27	12.20	0.29	2.39	1.14	clayey silt to silty clay	UNDFND	UNDFD	6	.6
11.00	36.09	14.40	0.38	2.61	1.16	clayey silt to silty clay	UNDFND	UNDFD	7	.8
11.25	36.91	22.60	0.91	4.01	1.18	silty clay to clay	UNDFND	UNDFD	14	1.3
11.50	37.73	49.60	0.99	2.00	1.19	sandy silt to clayey silt	UNDFND	UNDFD	19	3.1
11.75	38.55	19.60	0.27	1.38	1.21	sandy silt to clayey silt	UNDFND	UNDFD	8	1.1
12.00	39.37	94.00	2.36	2.51	1.23	sandy silt to clayey silt	UNDFND	UNDFD	36	6.1
12.25	40.19	205.00	2.66	1.30	1.25	sand	80-90	42-44	39	UNDEFINED
12.50	41.01	40.20	1.18	2.93	1.27	sandy silt to clayey silt	UNDFND	UNDFD	15	2.5
12.75	41.83	24.40	0.53	2.17	1.29	sandy silt to clayey silt	UNDFND	UNDFD	9	1.4
13.00	42.65	28.40	0.73	2.58	1.31	sandy silt to clayey silt	UNDFND	UNDFD	11	1.7
13.25	43.47	22.40	0.65	2.90	1.33	clayey silt to silty clay	UNDFND	UNDFD	11	1.3
13.50	44.29	23.40	0.66	2.84	1.35	clayey silt to silty clay	UNDFND	UNDFD	11	1.3
13.75	45.11	32.60	0.86	2.63	1.37	sandy silt to clayey silt	UNDFND	UNDFD	12	2.0

Dr - All sands (Janiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ***

PIONEER DRILLING

Engineer IT
On Site Loc:CPT5-51
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/18/90/10:50
Cone Used :VIII
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	75.00	1.10	1.47	0.02	silty sand to sandy silt	>90	>48	24	UNDEFINED
0.50	1.64	15.80	0.90	5.67	0.07	clay	UNDFND	UNDFD	15	1.0
0.75	2.46	14.80	0.75	5.09	0.11	clay	UNDFND	UNDFD	14	.9
1.00	3.28	21.80	0.98	4.51	0.16	clay	UNDFND	UNDFD	21	1.4
1.25	4.10	26.60	1.27	4.77	0.20	clay	UNDFND	UNDFD	25	1.7
1.50	4.92	22.00	1.01	4.60	0.25	clay	UNDFND	UNDFD	21	1.4
1.75	5.74	12.40	0.64	5.13	0.29	clay	UNDFND	UNDFD	12	.8
2.00	6.56	9.40	0.43	4.62	0.34	clay	UNDFND	UNDFD	9	.6
2.25	7.38	13.40	0.53	3.99	0.38	clay	UNDFND	UNDFD	13	.8
2.50	8.20	12.80	0.50	3.88	0.43	clay	UNDFND	UNDFD	12	.8
2.75	9.02	12.80	0.58	4.52	0.47	clay	UNDFND	UNDFD	12	.8
3.00	9.84	20.40	0.83	4.08	0.52	silty clay to clay	UNDFND	UNDFD	13	1.3
3.25	10.66	44.60	1.55	3.47	0.55	clayey silt to silty clay	UNDFND	UNDFD	21	2.9
3.50	11.48	19.60	0.77	3.95	0.57	silty clay to clay	UNDFND	UNDFD	13	1.2
3.75	12.30	22.40	0.49	2.20	0.59	sandy silt to clayey silt	UNDFND	UNDFD	9	1.4
4.00	13.12	23.00	0.46	2.00	0.61	sandy silt to clayey silt	UNDFND	UNDFD	9	1.4
4.25	13.94	38.40	0.79	2.05	0.63	sandy silt to clayey silt	UNDFND	UNDFD	15	2.5
4.50	14.76	41.40	0.67	1.61	0.65	silty sand to sandy silt	40-50	38-40	13	UNDEFINED
4.75	15.58	51.80	0.54	1.03	0.67	silty sand to sandy silt	50-60	38-40	17	UNDEFINED
5.00	16.40	46.80	0.73	1.55	0.69	silty sand to sandy silt	50-60	38-40	15	UNDEFINED
5.25	17.22	24.80	0.66	2.65	0.71	clayey silt to silty clay	UNDFND	UNDFD	12	1.5
5.50	18.04	26.20	0.80	3.05	0.73	clayey silt to silty clay	UNDFND	UNDFD	13	1.6
5.75	18.86	21.00	0.74	3.50	0.75	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
6.00	19.69	19.60	0.79	4.01	0.77	silty clay to clay	UNDFND	UNDFD	13	1.2
6.25	20.51	27.80	0.99	3.57	0.79	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
6.50	21.33	12.80	0.41	3.19	0.80	silty clay to clay	UNDFND	UNDFD	8	.7
6.75	22.15	16.20	0.80	4.91	0.82	clay	UNDFND	UNDFD	16	1.0
7.00	22.97	13.20	0.40	3.06	0.84	silty clay to clay	UNDFND	UNDFD	8	.7
7.25	23.79	20.40	0.64	3.13	0.86	clayey silt to silty clay	UNDFND	UNDFD	10	1.2
7.50	24.61	32.00	1.34	4.19	0.88	silty clay to clay	UNDFND	UNDFD	20	2.0
7.75	25.43	27.40	0.90	3.29	0.90	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
8.00	26.25	27.80	1.01	3.63	0.92	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
8.25	27.07	30.80	1.14	3.70	0.94	clayey silt to silty clay	UNDFND	UNDFD	15	1.9
8.50	27.89	29.80	1.18	3.96	0.96	silty clay to clay	UNDFND	UNDFD	19	1.8
8.75	28.71	21.20	0.65	3.07	0.98	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
9.00	29.53	35.60	1.42	3.99	1.00	silty clay to clay	UNDFND	UNDFD	23	2.2
9.25	30.35	43.20	2.27	5.26	1.02	clay	UNDFND	UNDFD	41	2.7
9.50	31.17	27.40	1.07	3.90	1.04	silty clay to clay	UNDFND	UNDFD	17	1.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-51

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	22.80	0.85	3.71	1.06	silty clay to clay	UNDFND	UNDFD	15	1.4
10.00	32.81	15.60	0.50	3.18	1.08	silty clay to clay	UNDFND	UNDFD	10	.9
10.25	33.63	11.80	0.35	2.95	1.10	silty clay to clay	UNDFND	UNDFD	8	.6
10.50	34.45	11.20	0.41	3.66	1.12	clay	UNDFND	UNDFD	11	.6
10.75	35.27	10.80	0.24	2.20	1.14	clayey silt to silty clay	UNDFND	UNDFD	5	.5
11.00	36.09	20.00	0.70	3.50	1.16	silty clay to clay	UNDFND	UNDFD	13	1.2
11.25	36.91	17.80	0.62	3.49	1.18	silty clay to clay	UNDFND	UNDFD	11	1.0
11.50	37.73	16.40	0.51	3.09	1.19	clayey silt to silty clay	UNDFND	UNDFD	8	.9
11.75	38.55	19.60	0.63	3.21	1.21	clayey silt to silty clay	UNDFND	UNDFD	9	1.1
12.00	39.37	23.60	0.92	3.89	1.23	silty clay to clay	UNDFND	UNDFD	15	1.4
12.25	40.19	27.40	1.23	4.50	1.25	silty clay to clay	UNDFND	UNDFD	17	1.6
12.50	41.01	26.60	0.97	3.66	1.27	clayey silt to silty clay	UNDFND	UNDFD	13	1.6
12.75	41.83	29.00	1.03	3.54	1.29	clayey silt to silty clay	UNDFND	UNDFD	14	1.7
13.00	42.65	32.40	1.27	3.92	1.31	silty clay to clay	UNDFND	UNDFD	21	2.0
13.25	43.47	32.00	1.47	4.60	1.33	silty clay to clay	UNDFND	UNDFD	20	1.9
13.50	44.29	23.80	1.08	4.54	1.35	clay	UNDFND	UNDFD	23	1.4
13.75	45.11	28.80	1.14	3.94	1.37	silty clay to clay	UNDFND	UNDFD	18	1.7

Dr - All sands (Janiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT5-53
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/13/90/16:30
Cone Used :IV
Water table (meters) : 2.3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	7.96	0.62	7.81	0.02	clay	UNDFND	UNDFD	8	.7
0.50	1.64	8.31	0.68	8.15	0.07	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.75	2.46	14.07	0.83	5.91	0.11	clay	UNDFND	UNDFD	13	1.3
1.00	3.28	25.18	1.23	4.90	0.16	clay	UNDFND	UNDFD	24	2.5
1.25	4.10	24.62	0.91	3.68	0.20	silty clay to clay	UNDFND	UNDFD	16	2.4
1.50	4.92	15.99	0.87	5.46	0.25	clay	UNDFND	UNDFD	15	1.5
1.75	5.74	8.79	0.52	5.97	0.29	clay	UNDFND	UNDFD	8	.8
2.00	6.56	3.84	0.15	3.93	0.34	clay	UNDFND	UNDFD	4	.3
2.25	7.38	3.74	0.16	4.70	0.38	clay	UNDFND	UNDFD	3	.3
2.50	8.20	12.22	0.56	4.59	0.42	clay	UNDFND	UNDFD	12	1.1
2.75	9.02	18.57	0.91	4.90	0.44	clay	UNDFND	UNDFD	18	1.8
3.00	9.84	26.11	1.07	4.09	0.46	silty clay to clay	UNDFND	UNDFD	17	2.5
3.25	10.66	21.06	0.93	4.43	0.48	clay	UNDFND	UNDFD	20	2.0
3.50	11.48	16.89	0.63	3.74	0.50	silty clay to clay	UNDFND	UNDFD	11	1.6
3.75	12.30	14.21	0.66	4.68	0.52	clay	UNDFND	UNDFD	14	1.3
4.00	13.12	15.15	0.83	5.46	0.54	clay	UNDFND	UNDFD	15	1.4
4.25	13.94	16.45	0.79	4.82	0.56	clay	UNDFND	UNDFD	16	1.5
4.50	14.76	14.14	0.74	5.22	0.58	clay	UNDFND	UNDFD	14	1.3
4.75	15.58	16.02	0.70	4.34	0.60	clay	UNDFND	UNDFD	15	1.5
5.00	16.40	16.02	0.53	3.28	0.62	silty clay to clay	UNDFND	UNDFD	10	1.5
5.25	17.22	12.28	0.30	2.44	0.64	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
5.50	18.04	10.50	0.24	2.26	0.65	clayey silt to silty clay	UNDFND	UNDFD	5	.9
5.75	18.86	16.23	0.48	2.93	0.67	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
6.00	19.69	13.17	0.41	3.11	0.69	silty clay to clay	UNDFND	UNDFD	8	1.2
6.25	20.51	9.55	0.27	2.78	0.71	silty clay to clay	UNDFND	UNDFD	6	.8
6.50	21.33	15.25	0.44	2.91	0.73	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
6.75	22.15	16.62	0.43	2.57	0.75	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.00	22.97	5.43	0.18	3.24	0.77	clay	UNDFND	UNDFD	5	.4
7.25	23.79	17.85	0.58	3.28	0.79	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
7.50	24.61	39.12	1.58	4.05	0.81	clayey silt to silty clay	UNDFND	UNDFD	19	3.7
7.75	25.43	60.13	2.88	4.80	0.83	silty clay to clay	UNDFND	UNDFD	38	5.8
8.00	26.25	43.67	2.19	5.01	0.85	clay	UNDFND	UNDFD	42	4.2
8.25	27.07	44.59	1.83	4.11	0.87	clayey silt to silty clay	UNDFND	UNDFD	21	4.3
8.50	27.89	156.02	2.09	1.34	0.89	sand to silty sand	80-90	42-44	37	UNDEFINED
8.75	28.71	217.26	0.73	0.34	0.91	sand	>90	44-46	42	UNDEFINED
9.00	29.53	208.15	0.88	0.42	0.93	sand	80-90	44-46	40	UNDEFINED
9.25	30.35	65.27	0.76	1.17	0.95	silty sand to sandy silt	50-60	38-40	21	UNDEFINED
9.50	31.17	20.24	0.44	2.15	0.97	clayey silt to silty clay	UNDFND	UNDFD	10	1.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-53

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	22.62	0.80	3.52	0.99	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
10.00	32.81	19.66	0.79	4.04	1.01	silty clay to clay	UNDFND	UNDFD	13	1.7
10.25	33.63	14.70	0.44	2.97	1.03	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
10.50	34.45	13.45	0.31	2.33	1.04	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
10.75	35.27	13.21	0.39	2.98	1.06	silty clay to clay	UNDFND	UNDFD	8	1.1
11.00	36.09	172.84	1.19	0.69	1.08	sand	80-90	42-44	33	UNDEFINED
11.25	36.91	240.68	0.99	0.41	1.10	sand	>90	44-46	46	UNDEFINED
11.50	37.73	289.61	1.36	0.47	1.12	gravelly sand to sand	>90	44-46	46	UNDEFINED
11.75	38.55	243.54	1.14	0.47	1.14	sand	>90	44-46	47	UNDEFINED
12.00	39.37	43.15	0.87	2.03	1.16	sandy silt to clayey silt	UNDFND	UNDFD	17	4.1
12.25	40.19	38.97	1.04	2.66	1.18	sandy silt to clayey silt	UNDFND	UNDFD	15	3.6
12.50	41.01	38.33	1.62	4.22	1.20	silty clay to clay	UNDFND	UNDFD	24	3.3
12.75	41.83	37.23	1.81	4.86	1.22	clay	UNDFND	UNDFD	36	3.4
13.00	42.65	34.36	1.59	4.62	1.24	silty clay to clay	UNDFND	UNDFD	22	3.2
13.25	43.47	33.58	1.35	4.01	1.26	silty clay to clay	UNDFND	UNDFD	21	3.1
13.50	44.29	27.85	0.97	3.50	1.28	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
13.75	45.11	19.09	0.45	2.34	1.30	clayey silt to silty clay	UNDFND	UNDFD	9	1.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT5-54A
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/04/90/16:25
Cone Used :VIII
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	40.37	0.66	1.63	0.02	silty sand to sandy silt	>90	>48	13	UNDEFINED
0.50	1.64	35.40	1.98	5.59	0.07	clay	UNDFND	UNDFD	34	3.5
0.75	2.46	43.73	2.12	4.84	0.11	silty clay to clay	UNDFND	UNDFD	23	4.3
1.00	3.28	33.98	1.72	5.07	0.16	clay	UNDFND	UNDFD	33	3.3
1.25	4.10	33.76	1.27	3.76	0.20	clayey silt to silty clay	UNDFND	UNDFD	16	3.3
1.50	4.92	22.81	1.04	4.55	0.25	clay	UNDFND	UNDFD	22	2.2
1.75	5.74	13.90	0.64	4.60	0.29	clay	UNDFND	UNDFD	13	1.3
2.00	6.56	11.36	0.34	3.02	0.34	silty clay to clay	UNDFND	UNDFD	7	1.1
2.25	7.38	13.54	0.43	3.17	0.38	silty clay to clay	UNDFND	UNDFD	9	1.3
2.50	8.20	13.87	0.46	3.29	0.43	silty clay to clay	UNDFND	UNDFD	9	1.3
2.75	9.02	16.33	0.61	3.76	0.47	silty clay to clay	UNDFND	UNDFD	10	1.5
3.00	9.84	17.02	0.52	3.06	0.52	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
3.25	10.66	18.50	0.54	2.91	0.55	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
3.50	11.48	19.74	0.70	3.55	0.57	silty clay to clay	UNDFND	UNDFD	13	1.9
3.75	12.30	13.42	0.42	3.11	0.59	silty clay to clay	UNDFND	UNDFD	9	1.2
4.00	13.12	14.86	0.53	3.59	0.61	silty clay to clay	UNDFND	UNDFD	9	1.4
4.25	13.94	20.54	0.86	4.20	0.63	silty clay to clay	UNDFND	UNDFD	13	1.9
4.50	14.76	17.81	0.57	3.22	0.65	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
4.75	15.58	17.42	0.56	3.22	0.67	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
5.00	16.40	15.50	0.39	2.50	0.69	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
5.25	17.22	17.57	0.49	2.81	0.71	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
5.50	18.04	13.43	0.35	2.60	0.73	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
5.75	18.86	13.18	0.33	2.50	0.75	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
6.00	19.69	10.86	0.21	1.94	0.77	clayey silt to silty clay	UNDFND	UNDFD	5	.9
6.25	20.51	19.64	0.35	1.77	0.79	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
6.50	21.33	17.66	0.39	2.18	0.80	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
6.75	22.15	23.91	0.67	2.82	0.82	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
7.00	22.97	31.74	1.13	3.57	0.84	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
7.25	23.79	41.12	1.77	4.30	0.86	silty clay to clay	UNDFND	UNDFD	26	3.9
7.50	24.61	26.06	0.72	2.75	0.88	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
7.75	25.43	28.31	0.80	2.83	0.90	clayey silt to silty clay	UNDFND	UNDFD	14	2.6
8.00	26.25	27.38	0.80	2.91	0.92	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
8.25	27.07	35.14	0.96	2.72	0.94	sandy silt to clayey silt	UNDFND	UNDFD	13	3.3
8.50	27.89	29.54	0.88	2.99	0.96	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
8.75	28.71	16.11	0.34	2.12	0.98	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
9.00	29.53	17.75	0.36	2.01	1.00	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
9.25	30.35	18.94	0.52	2.77	1.02	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
9.50	31.17	20.37	0.48	2.36	1.04	clayey silt to silty clay	UNDFND	UNDFD	10	1.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT5-54A

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	29.44	0.72	2.46	1.06	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7
10.00	32.81	49.07	0.36	1.95	1.08	sandy silt to clayey silt	UNDFND	UNDFD	19	4.7
10.25	33.63	70.57	0.70	1.00	1.10	sand to silty sand	50-60	38-40	17	UNDEFINED
10.50	34.45	163.19	0.64	0.39	1.12	sand	70-80	42-44	31	UNDEFINED
10.75	35.27	223.76	0.64	0.29	1.14	sand	80-90	42-44	43	UNDEFINED
11.00	36.09	232.68	0.71	0.31	1.16	sand	80-90	44-46	45	UNDEFINED
11.25	36.91	242.37	1.03	0.43	1.18	sand	80-90	44-46	46	UNDEFINED
11.50	37.73	131.42	1.31	1.00	1.19	sand to silty sand	70-80	40-42	31	UNDEFINED
11.75	38.55	21.98	0.27	1.25	1.21	sandy silt to clayey silt	UNDFND	UNDFD	8	1.3
12.00	39.37	24.34	0.54	2.21	1.23	sandy silt to clayey silt	UNDFND	UNDFD	9	2.2
12.25	40.19	29.40	0.96	3.27	1.25	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
12.50	41.01	29.86	1.11	3.70	1.27	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
12.75	41.83	27.56	0.93	3.36	1.29	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
13.00	42.65	26.78	1.04	3.87	1.31	silty clay to clay	UNDFND	UNDFD	17	2.4
13.25	43.47	26.40	0.89	3.35	1.33	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
13.50	44.29	26.86	0.88	3.27	1.35	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
13.75	45.11	22.64	0.61	2.71	1.37	clayey silt to silty clay	UNDFND	UNDFD	11	2.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

4.0 INTERPRETED CPT TEST DATA SITE 7

PIONEER DRILLING

Engineer IT CORP.
On Site Loc:CPT7-1
Job No. :409700
Tol. Unit Wt. (avg) : 110 pcf

CPT Date :04/20/90/12:40
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	99.87	3.34	3.34	0.02	sandy silt to clayey silt	UNDFND	UNDFD	38	9.9
0.50	1.64	43.11	1.21	2.82	0.07	sandy silt to clayey silt	UNDFND	UNDFD	17	4.3
0.75	2.46	23.48	1.00	4.28	0.11	silty clay to clay	UNDFND	UNDFD	15	2.3
1.00	3.28	15.23	0.67	4.42	0.16	clay	UNDFND	UNDFD	15	1.5
1.25	4.10	6.52	0.34	5.29	0.20	clay	UNDFND	UNDFD	6	.6
1.50	4.92	12.58	0.41	3.23	0.25	silty clay to clay	UNDFND	UNDFD	8	1.2
1.75	5.74	301.83	3.09	1.02	0.29	sand	[illegible]	[illegible]	[illegible]	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP.
On Site Loc:CPT7-1A
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/20/90/12:59
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	237.41	4.46	1.88	0.02	sand to silty sand	>90	UNDFD	80	UNDEFINED
0.50	1.64	38.53	1.44	3.74	0.07	clayey silt to silty clay	UNDFND	UNDFD	18	3.6
0.75	2.46	25.49	1.08	4.23	0.11	silty clay to clay	UNDFND	UNDFD	12	2.5
1.00	3.28	26.55	1.11	4.19	0.16	silty clay to clay	UNDFND	UNDFD	17	2.6
1.25	4.10	29.00	1.21	4.18	0.20	silty clay to clay	UNDFND	UNDFD	19	2.8
1.50	4.92	50.07	1.43	2.87	0.25	sandy silt to clayey silt	UNDFND	UNDFD	13	4.9
1.75	5.74	445.89	4.23	0.96	0.29	sand	>90	>48	>50	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Di: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 2.04) ****

5.0 INTERPRETED CPT TEST DATA SITE 8

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/H8-17
DATE : 01/24/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 7

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	12.8	0.4	2.73	CLAYEY SILT AND SILTY CLAY	6	22	---	--	---	0.01	0.80
0.3	195.6	1.0	0.50	SAND	28	92	1.55	--	---	0.01	--
0.4	189.6	1.8	0.94	SAND	31	94	1.14	--	---	0.02	--
0.6	212.2	2.3	1.08	SAND	36	99	1.07	--	---	0.03	--
0.8	141.4	2.7	1.93	SILTY SAND	38	99	0.10	--	---	0.04	--
0.9	73.4	2.7	3.68	SANDY SILT AND SILT	29	75	0.02	--	---	0.05	--
1.1	43.4	2.5	5.72	CLAY	43	99	---	--	---	0.06	2.71
1.2	41.6	2.4	5.74	CLAY	42	99	---	--	---	0.07	2.60
1.4	67.2	2.4	3.62	SANDY SILT AND SILT	26	63	0.02	--	---	0.08	--
1.6	42.2	2.1	4.89	CLAYEY SILT AND SILTY CLAY	23	53	---	--	---	0.09	2.63
1.7	38.0	1.7	4.42	CLAYEY SILT AND SILTY CLAY	19	43	---	--	---	0.10	2.37
1.9	30.6	1.4	4.44	CLAYEY SILT AND SILTY CLAY	16	35	---	--	---	0.10	1.91
2.1	31.3	1.5	4.80	CLAYEY SILT AND SILTY CLAY	17	37	---	--	---	0.11	1.95
2.2	25.8	1.3	4.99	CLAY	26	55	---	--	---	0.12	1.61
2.4	21.2	1.2	5.52	CLAY	21	45	---	--	---	0.13	1.32
2.6	24.3	1.4	5.77	CLAY	24	50	---	--	---	0.14	1.51
2.7	28.2	1.6	5.67	CLAY	28	57	---	--	---	0.15	1.75
2.9	28.6	1.9	6.72	CLAY	29	57	---	--	---	0.16	1.78
3.1	30.8	2.0	6.53	CLAY	31	61	---	--	---	0.17	1.91
3.2	29.9	1.9	6.48	CLAY	30	58	---	--	---	0.18	1.86
3.4	29.2	1.8	6.22	CLAY	29	56	---	--	---	0.19	1.82
3.5	27.0	1.7	6.14	CLAY	27	51	---	--	---	0.19	1.68
3.7	24.5	1.5	6.00	CLAY	24	46	---	--	---	0.20	1.52
3.9	23.8	1.3	5.59	CLAY	24	44	---	--	---	0.21	1.47
4.0	23.1	1.3	5.54	CLAY	23	42	---	--	---	0.22	1.43
4.2	22.2	1.3	5.76	CLAY	22	40	---	--	---	0.23	1.38
4.3	21.1	1.2	5.59	CLAY	21	38	---	--	---	0.24	1.31
4.5	21.8	1.2	5.28	CLAY	22	38	---	--	---	0.25	1.34
4.7	22.1	1.1	5.16	CLAY	22	38	---	--	---	0.26	1.37
4.8	22.6	1.2	5.27	CLAY	23	39	---	--	---	0.27	1.39
5.0	22.6	1.2	5.27	CLAY	23	38	---	--	---	0.27	1.39
5.2	24.0	1.1	4.71	CLAYEY SILT AND SILTY CLAY	13	23	---	--	---	0.28	1.48
5.3	25.6	1.2	4.60	CLAYEY SILT AND SILTY CLAY	14	23	---	--	---	0.29	1.58
5.5	28.5	1.2	4.31	CLAYEY SILT AND SILTY CLAY	15	24	---	--	---	0.30	1.76

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	29.9	1.3	4.21	CLAYEY SILT AND SILTY CLAY	15	24	---	--	---	0.31	1.85
5.8	30.5	1.2	3.87	CLAYEY SILT AND SILTY CLAY	14	23	---	--	---	0.32	1.89
6.0	31.5	1.2	3.93	CLAYEY SILT AND SILTY CLAY	15	24	---	--	---	0.33	1.95
6.1	32.3	1.2	3.84	CLAYEY SILT AND SILTY CLAY	15	24	---	--	---	0.34	2.00
6.3	35.9	1.3	3.68	CLAYEY SILT AND SILTY CLAY	16	25	---	--	---	0.35	2.22
6.5	32.8	1.2	3.77	CLAYEY SILT AND SILTY CLAY	15	24	---	--	---	0.36	2.03
6.6	35.8	1.2	3.46	SANDY SILT AND SILT	15	24	0.01	40	49	0.36	--
6.8	31.3	1.3	4.28	CLAYEY SILT AND SILTY CLAY	16	24	---	--	---	0.37	1.93
7.0	26.1	1.1	4.18	CLAYEY SILT AND SILTY CLAY	13	20	---	--	---	0.38	1.61
7.1	19.8	0.8	4.24	CLAYEY SILT AND SILTY CLAY	10	16	---	--	---	0.39	1.21
7.3	16.2	0.6	3.45	CLAYEY SILT AND SILTY CLAY	8	12	---	--	---	0.39	0.99
7.4	14.8	0.6	3.71	CLAYEY SILT AND SILTY CLAY	7	11	---	--	---	0.40	0.90
7.6	12.2	0.5	4.41	CLAY	12	18	---	--	---	0.40	0.74
7.8	10.8	0.4	3.69	CLAYEY SILT AND SILTY CLAY	6	9	---	--	---	0.40	0.65
7.9	9.8	0.4	3.79	CLAYEY SILT AND SILTY CLAY	5	8	---	--	---	0.41	0.58
8.1	11.8	0.5	4.23	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.41	0.71
8.3	12.1	0.5	4.39	CLAY	12	18	---	--	---	0.42	0.73
8.4	11.5	0.5	4.27	CLAY	11	17	---	--	---	0.42	0.69
8.6	16.8	0.6	3.57	CLAYEY SILT AND SILTY CLAY	8	12	---	--	---	0.42	1.02
8.8	15.2	0.8	4.94	CLAY	15	22	---	--	---	0.43	0.92
8.9	15.8	0.7	4.44	CLAYEY SILT AND SILTY CLAY	9	13	---	--	---	0.43	0.95
9.1	21.3	0.8	3.57	CLAYEY SILT AND SILTY CLAY	10	15	---	--	---	0.43	1.30
9.3	21.0	0.0	0.19	SILTY SAND	6	8	0.09	37	31	0.44	--
9.4	19.5	0.7	3.33	CLAYEY SILT AND SILTY CLAY	9	13	---	--	---	0.44	1.19
9.6	7.5	0.5	7.09	CLAY	7	11	---	--	---	0.45	0.43
9.7	17.0	0.5	2.88	SANDY SILT AND SILT	7	11	0.01	36	25	0.45	--
9.9	15.3	0.5	3.28	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.45	0.92
10.1	19.9	0.7	3.66	CLAYEY SILT AND SILTY CLAY	10	14	---	--	---	0.46	1.21
10.2	28.9	1.3	4.47	CLAYEY SILT AND SILTY CLAY	15	21	---	--	---	0.46	1.77
10.4	46.4	1.3	2.76	SANDY SILT AND SILT	16	22	0.04	40	51	0.47	--
10.6	31.9	1.2	3.76	CLAYEY SILT AND SILTY CLAY	15	21	---	--	---	0.47	1.96
10.7	26.5	1.1	4.30	CLAYEY SILT AND SILTY CLAY	14	19	---	--	---	0.47	1.62
10.9	32.3	1.6	4.95	CLAYEY SILT AND SILTY CLAY	18	26	---	--	---	0.48	1.98
11.1	34.8	1.8	5.29	CLAY	35	49	---	--	---	0.48	2.14
11.2	32.2	1.6	5.10	CLAY	32	45	---	--	---	0.49	1.97
11.4	37.2	1.3	3.58	SANDY SILT AND SILT	16	23	0.01	39	44	0.49	--
11.5	47.0	1.0	2.02	SILTY SAND	14	19	0.06	40	50	0.49	--
11.7	50.4	0.7	1.31	SILTY SAND	14	19	0.08	40	52	0.50	--
11.9	47.9	0.5	1.13	SILTY SAND	13	18	0.09	40	51	0.50	--
12.0	47.5	0.5	0.95	SILTY SAND	13	18	0.09	40	50	0.50	--
12.2	42.1	0.6	1.31	SILTY SAND	12	16	0.08	39	47	0.51	--
12.4	27.2	0.6	2.25	SANDY SILT AND SILT	9	13	0.04	37	35	0.51	--
12.5	18.8	0.5	2.87	SANDY SILT AND SILT	8	11	0.01	35	25	0.52	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	18.1	0.5	2.82	SANDY SILT AND SILT	8	10	0.01	35	24	0.52	--
12.9	18.3	0.6	3.00	SANDY SILT AND SILT	8	11	0.01	35	24	0.52	--
13.0	20.1	0.7	3.34	CLAYEY SILT AND SILTY CLAY	9	12	---	--	---	0.53	1.21
13.2	20.1	0.7	3.49	CLAYEY SILT AND SILTY CLAY	9	13	---	--	---	0.53	1.21
13.4	19.0	0.7	3.57	CLAYEY SILT AND SILTY CLAY	9	12	---	--	---	0.54	1.14
13.5	17.7	0.6	3.44	CLAYEY SILT AND SILTY CLAY	8	11	---	--	---	0.54	1.06
13.7	16.3	0.5	3.19	CLAYEY SILT AND SILTY CLAY	8	10	---	--	---	0.54	0.97
13.8	15.6	0.5	2.88	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.55	0.93
14.0	13.8	0.3	2.40	SANDY SILT AND SILT	6	8	0.02	34	20	0.55	--
14.2	12.8	0.2	1.88	SANDY SILT AND SILT	5	6	0.03	33	20	0.56	--
14.3	11.6	0.2	1.55	SANDY SILT AND SILT	4	6	0.03	33	20	0.56	--
14.5	10.9	0.2	1.65	SANDY SILT AND SILT	4	5	0.03	32	20	0.56	--
14.7	10.9	0.2	2.11	SANDY SILT AND SILT	4	6	0.02	32	20	0.57	--
14.8	12.3	0.3	2.69	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.57	0.72
15.0	14.3	0.4	2.93	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.58	0.84
15.2	16.0	0.5	2.94	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.58	0.95
15.3	15.6	0.5	2.96	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.58	0.92
15.5	15.5	0.4	2.84	SANDY SILT AND SILT	7	9	0.01	34	20	0.59	--
15.7	15.6	0.5	3.01	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.59	0.92
15.8	17.1	0.5	3.15	CLAYEY SILT AND SILTY CLAY	8	10	---	--	---	0.60	1.02
16.0	19.0	0.5	2.78	SANDY SILT AND SILT	8	10	0.02	35	22	0.60	--
16.2	18.7	0.5	2.73	SANDY SILT AND SILT	8	10	0.02	35	21	0.60	--
16.3	18.2	0.4	2.25	SANDY SILT AND SILT	7	9	0.03	34	20	0.61	--
16.5	16.2	0.3	1.61	SANDY SILT AND SILT	6	7	0.04	34	20	0.61	--
16.7	14.5	0.2	1.31	SANDY SILT AND SILT	5	6	0.04	33	20	0.62	--
16.8	14.2	0.2	1.40	SANDY SILT AND SILT	5	6	0.04	33	20	0.62	--
17.0	15.0	0.2	1.33	SANDY SILT AND SILT	5	6	0.04	33	20	0.62	--
17.2	15.6	0.3	1.86	SANDY SILT AND SILT	6	7	0.03	34	20	0.63	--
17.3	18.0	0.4	2.06	SANDY SILT AND SILT	7	8	0.03	34	20	0.63	--
17.5	17.9	0.4	2.07	SANDY SILT AND SILT	6	8	0.03	34	20	0.63	--
17.7	15.7	0.3	1.84	SANDY SILT AND SILT	6	7	0.03	34	20	0.64	--
17.8	15.0	0.3	1.94	SANDY SILT AND SILT	6	7	0.03	33	20	0.64	--
18.0	16.4	0.3	1.65	SANDY SILT AND SILT	6	7	0.04	34	20	0.65	--
18.1	15.6	0.3	1.66	SANDY SILT AND SILT	5	7	0.03	33	20	0.65	--
18.3	14.8	0.3	1.76	SANDY SILT AND SILT	5	7	0.03	33	20	0.65	--
18.5	15.0	0.3	1.74	SANDY SILT AND SILT	5	7	0.03	33	20	0.66	--
18.6	15.0	0.3	1.80	SANDY SILT AND SILT	5	7	0.03	33	20	0.66	--
18.8	15.8	0.3	2.03	SANDY SILT AND SILT	6	7	0.03	33	20	0.67	--
19.0	17.0	0.4	2.18	SANDY SILT AND SILT	6	8	0.03	34	20	0.67	--
19.1	16.4	0.4	2.50	SANDY SILT AND SILT	7	8	0.02	33	20	0.67	--
19.3	16.3	0.4	2.14	SANDY SILT AND SILT	6	7	0.03	33	20	0.68	--
19.5	17.0	0.4	2.24	SANDY SILT AND SILT	6	8	0.03	34	20	0.68	--
19.6	19.0	0.5	2.73	SANDY SILT AND SILT	8	9	0.02	34	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	19.0	0.5	2.84	SANDY SILT AND SILT	8	10	0.02	34	20	0.69	--
19.9	18.4	0.5	2.94	SANDY SILT AND SILT	8	10	0.01	34	20	0.69	--
20.1	17.7	0.6	3.11	CLAYEY SILT AND SILTY CLAY	8	10	---	--	---	0.70	1.04
20.3	16.3	0.5	3.06	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.70	0.95
20.4	17.0	0.4	2.59	SANDY SILT AND SILT	7	8	0.02	33	20	0.70	--
20.6	17.3	0.5	2.67	SANDY SILT AND SILT	7	8	0.02	33	20	0.71	--
20.8	18.2	0.5	2.64	SANDY SILT AND SILT	7	9	0.02	34	20	0.71	--
20.9	18.1	0.5	2.99	SANDY SILT AND SILT	8	9	0.01	34	20	0.72	--
21.1	16.8	0.5	3.10	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.72	0.97
21.3	14.8	0.5	3.10	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.72	0.85
21.4	11.6	0.4	3.20	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.73	0.65
21.6	10.3	0.3	3.11	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.73	0.57
21.8	9.7	0.3	3.10	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.74	0.53
21.9	8.2	0.3	3.19	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.74	0.43
22.1	8.2	0.2	2.57	CLAYEY SILT AND SILTY CLAY	4	4	---	--	---	0.74	0.43
22.2	8.8	0.2	2.38	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.75	0.48
22.4	9.5	0.3	2.63	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.75	0.52
22.6	11.2	0.2	2.06	SANDY SILT AND SILT	5	5	0.02	31	20	0.76	--
22.7	10.0	0.4	3.72	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.76	0.54
22.9	14.1	0.4	2.56	SANDY SILT AND SILT	6	7	0.01	32	20	0.76	--
23.1	15.1	0.3	2.05	SANDY SILT AND SILT	6	7	0.03	32	20	0.77	--
23.2	20.4	0.3	1.42	SANDY SILT AND SILT	6	7	0.05	34	20	0.77	--
23.4	17.0	0.3	1.59	SANDY SILT AND SILT	6	7	0.04	33	20	0.78	--
23.6	13.6	0.3	2.28	SANDY SILT AND SILT	6	6	0.02	32	20	0.78	--
23.7	15.7	0.2	1.46	SANDY SILT AND SILT	5	6	0.04	33	20	0.78	--
23.9	10.9	0.2	1.93	SANDY SILT AND SILT	4	5	0.02	31	20	0.79	--
24.0	10.9	0.2	1.38	SANDY SILT AND SILT	4	4	0.03	31	20	0.79	--
24.2	11.6	0.2	1.30	SANDY SILT AND SILT	4	5	0.03	31	20	0.79	--
24.4	14.5	0.2	1.45	SANDY SILT AND SILT	5	6	0.04	32	20	0.80	--
24.5	17.6	0.3	1.42	SANDY SILT AND SILT	6	6	0.04	33	20	0.80	--
24.7	18.9	0.3	1.80	SANDY SILT AND SILT	6	7	0.04	33	20	0.81	--
24.9	22.5	0.6	2.71	SANDY SILT AND SILT	9	10	0.02	34	20	0.81	--
25.0	29.9	0.8	2.71	SANDY SILT AND SILT	11	12	0.03	36	25	0.81	--
25.2	28.8	0.9	3.26	SANDY SILT AND SILT	12	14	0.01	35	24	0.82	--
25.4	24.5	0.9	3.59	CLAYEY SILT AND SILTY CLAY	11	13	---	--	---	0.82	1.44
25.5	19.7	0.8	4.01	CLAYEY SILT AND SILTY CLAY	10	11	---	--	---	0.83	1.14
25.7	16.1	0.8	4.66	CLAY	16	18	---	--	---	0.83	0.92
25.9	13.6	0.2	1.54	SANDY SILT AND SILT	5	5	0.03	32	20	0.83	--
26.0	11.3	0.6	5.06	CLAY	11	12	---	--	---	0.84	0.61
26.2	6.1	0.4	7.03	CLAY	6	7	---	--	---	0.84	0.29
26.3	9.6	0.3	2.93	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.85	0.51
26.5	9.4	0.2	2.34	SANDY SILT AND SILT	4	5	0.01	30	20	0.85	--
26.7	10.9	0.3	2.56	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.85	0.59

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	13.6	0.3	2.43	SANDY SILT AND SILT	6	6	0.02	31	20	0.86	--
27.0	15.0	0.4	2.67	SANDY SILT AND SILT	6	7	0.01	32	20	0.86	--
27.2	12.1	0.3	2.39	SANDY SILT AND SILT	5	6	0.01	31	20	0.86	--
27.3	9.5	0.2	1.89	SANDY SILT AND SILT	4	4	0.02	30	20	0.87	--
27.5	8.6	0.1	1.39	SANDY SILT AND SILT	3	4	0.03	29	20	0.87	--
27.7	8.0	0.1	1.00	SANDY SILT AND SILT	3	3	0.03	29	20	0.88	--
27.8	8.1	0.1	0.99	SANDY SILT AND SILT	3	3	0.03	29	20	0.88	--
28.0	8.8	0.1	0.90	SANDY SILT AND SILT	3	3	0.03	29	20	0.88	--
28.1	10.2	0.2	1.76	SANDY SILT AND SILT	4	4	0.02	30	20	0.89	--
28.3	13.1	0.3	1.98	SANDY SILT AND SILT	5	5	0.02	31	20	0.89	--
28.5	13.5	0.2	1.48	SANDY SILT AND SILT	5	5	0.03	31	20	0.90	--
28.6	11.1	0.2	2.06	SANDY SILT AND SILT	5	5	0.02	30	20	0.90	--
28.8	13.6	0.3	2.13	SANDY SILT AND SILT	5	6	0.02	31	20	0.90	--
29.0	11.9	0.3	2.51	SANDY SILT AND SILT	5	5	0.01	30	20	0.91	--
29.1	10.2	0.2	2.35	SANDY SILT AND SILT	4	5	0.01	30	20	0.91	--
29.3	13.7	0.2	1.46	SANDY SILT AND SILT	5	5	0.04	31	20	0.92	--
29.5	15.7	0.3	1.85	SANDY SILT AND SILT	6	6	0.03	32	20	0.92	--
29.6	16.3	0.3	2.02	SANDY SILT AND SILT	6	6	0.03	32	20	0.92	--
29.8	15.0	0.3	2.21	SANDY SILT AND SILT	6	6	0.02	31	20	0.93	--
30.0	13.9	0.3	1.95	SANDY SILT AND SILT	5	5	0.03	31	20	0.93	--
30.1	12.9	0.2	1.55	SANDY SILT AND SILT	5	5	0.03	31	20	0.94	--
30.3	12.9	0.2	1.16	SANDY SILT AND SILT	4	4	0.04	31	20	0.94	--
30.4	11.6	0.1	0.87	SANDY SILT AND SILT	4	4	0.04	30	20	0.94	--
30.6	11.6	0.1	0.78	SANDY SILT AND SILT	4	4	0.04	30	20	0.95	--
30.8	12.8	0.1	0.62	SANDY SILT AND SILT	4	4	0.05	31	20	0.95	--
30.9	13.4	0.1	0.60	SILTY SAND	4	4	0.05	31	20	0.95	--
31.1	13.8	0.1	0.87	SANDY SILT AND SILT	4	4	0.05	31	20	0.96	--
31.3	15.6	0.2	1.15	SANDY SILT AND SILT	5	5	0.05	31	20	0.96	--
31.4	17.1	0.3	1.52	SANDY SILT AND SILT	6	6	0.04	32	20	0.97	--
31.6	17.7	0.3	1.87	SANDY SILT AND SILT	6	6	0.03	32	20	0.97	--
31.8	18.4	0.4	2.29	SANDY SILT AND SILT	7	7	0.03	32	20	0.97	--
31.9	18.4	0.4	2.17	SANDY SILT AND SILT	7	7	0.03	32	20	0.98	--
32.1	19.1	0.4	1.83	SANDY SILT AND SILT	7	7	0.04	32	20	0.98	--
32.3	16.5	0.3	1.51	SANDY SILT AND SILT	6	6	0.04	32	20	0.99	--
32.4	13.8	0.2	1.38	SANDY SILT AND SILT	5	5	0.04	31	20	0.99	--
32.6	12.6	0.1	0.95	SANDY SILT AND SILT	4	4	0.04	30	20	0.99	--
32.7	12.9	0.1	1.08	SANDY SILT AND SILT	4	4	0.04	30	20	1.00	--
32.9	13.2	0.2	1.21	SANDY SILT AND SILT	4	4	0.04	30	20	1.00	--
33.1	13.3	0.2	1.80	SANDY SILT AND SILT	5	5	0.03	30	20	1.01	--
33.2	15.6	0.4	2.49	SANDY SILT AND SILT	6	6	0.02	31	20	1.01	--
33.4	19.4	0.4	2.17	SANDY SILT AND SILT	7	7	0.03	32	20	1.01	--
33.6	18.7	0.3	1.82	SANDY SILT AND SILT	6	6	0.04	32	20	1.02	--
33.7	16.5	0.4	2.55	SANDY SILT AND SILT	7	7	0.02	31	20	1.02	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	17.0	0.6	3.65	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.02	0.95
34.1	26.6	1.0	3.73	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.03	1.54
34.2	53.0	0.7	1.28	SILTY SAND	15	14	0.09	37	36	1.03	--
34.4	62.6	0.6	0.94	SAND	15	15	0.28	38	41	1.04	--
34.5	39.8	0.6	1.61	SILTY SAND	12	11	0.07	36	27	1.04	--
34.7	23.8	0.7	2.90	SANDY SILT AND SILT	10	9	0.02	33	20	1.04	--
34.9	20.4	0.5	2.65	SANDY SILT AND SILT	8	8	0.02	32	20	1.05	--
35.0	19.2	0.5	2.71	SANDY SILT AND SILT	8	8	0.02	32	20	1.05	--
35.2	17.0	0.5	2.65	SANDY SILT AND SILT	7	7	0.02	31	20	1.06	--
35.4	14.4	0.3	2.08	SANDY SILT AND SILT	6	5	0.02	31	20	1.06	--
35.5	13.6	0.2	1.62	SANDY SILT AND SILT	5	5	0.03	30	20	1.06	--
35.7	14.7	0.2	1.43	SANDY SILT AND SILT	5	5	0.04	31	20	1.07	--
35.9	15.6	0.2	1.34	SANDY SILT AND SILT	5	5	0.04	31	20	1.07	--
36.0	16.0	0.3	1.94	SANDY SILT AND SILT	6	6	0.03	31	20	1.08	--
36.2	17.3	0.4	2.02	SANDY SILT AND SILT	6	6	0.03	31	20	1.08	--
36.4	15.7	0.3	1.59	SANDY SILT AND SILT	5	5	0.04	31	20	1.08	--
36.5	15.7	0.3	1.65	SANDY SILT AND SILT	5	5	0.04	31	20	1.09	--
36.7	19.0	0.4	2.26	SANDY SILT AND SILT	7	7	0.03	32	20	1.09	--
36.8	25.2	0.7	2.70	SANDY SILT AND SILT	10	9	0.02	33	20	1.10	--
37.0	26.6	0.9	3.24	SANDY SILT AND SILT	11	11	0.01	33	20	1.10	--
37.2	27.9	0.9	3.05	SANDY SILT AND SILT	11	11	0.02	34	20	1.10	--
37.3	27.2	0.9	3.27	SANDY SILT AND SILT	12	11	0.01	34	20	1.11	--
37.5	27.2	0.9	3.13	SANDY SILT AND SILT	11	11	0.02	34	20	1.11	--
37.7	28.0	0.9	3.18	SANDY SILT AND SILT	12	11	0.02	34	20	1.11	--
37.8	30.8	0.9	3.05	SANDY SILT AND SILT	12	12	0.02	34	20	1.12	--
38.0	32.6	1.1	3.46	SANDY SILT AND SILT	14	13	0.01	34	20	1.12	--
38.2	35.4	1.3	3.79	CLAYEY SILT AND SILTY CLAY	16	15	---	--	---	1.13	2.08
38.3	37.4	1.5	3.96	CLAYEY SILT AND SILTY CLAY	17	17	---	--	---	1.13	2.21
38.5	36.7	1.5	4.06	CLAYEY SILT AND SILTY CLAY	17	16	---	--	---	1.13	2.16
38.6	37.7	1.4	3.80	CLAYEY SILT AND SILTY CLAY	17	16	---	--	---	1.14	2.22
38.8	37.2	1.4	3.63	SANDY SILT AND SILT	16	16	0.01	35	22	1.14	--
39.0	36.7	1.3	3.62	SANDY SILT AND SILT	16	15	0.01	35	22	1.15	--
39.1	36.5	1.2	3.15	SANDY SILT AND SILT	14	13	0.02	35	21	1.15	--
39.3	35.4	1.3	3.70	CLAYEY SILT AND SILTY CLAY	16	15	---	--	---	1.15	2.07
39.5	34.7	1.3	3.78	CLAYEY SILT AND SILTY CLAY	16	15	---	--	---	1.16	2.03
39.6	36.7	1.3	3.51	SANDY SILT AND SILT	16	15	0.01	35	21	1.16	--
39.8	37.7	1.3	3.39	SANDY SILT AND SILT	16	15	0.02	35	22	1.17	--
40.0	40.1	1.3	3.29	SANDY SILT AND SILT	16	15	0.02	35	24	1.17	--
40.1	44.2	1.5	3.30	SANDY SILT AND SILT	17	16	0.02	36	27	1.17	--
40.3	47.4	1.5	3.06	SANDY SILT AND SILT	17	16	0.03	36	29	1.18	--
40.5	47.9	1.6	3.30	SANDY SILT AND SILT	18	17	0.02	36	30	1.18	--
40.6	50.3	1.5	2.90	SANDY SILT AND SILT	17	16	0.04	36	31	1.19	--
40.8	49.3	1.7	3.41	SANDY SILT AND SILT	19	18	0.02	36	30	1.19	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	51.0	1.5	3.02	SANDY SILT AND SILT	18	17	0.03	36	31	1.19	--
41.1	45.6	1.5	3.25	SANDY SILT AND SILT	17	16	0.02	36	27	1.20	--
41.3	44.8	1.4	3.02	SANDY SILT AND SILT	16	15	0.03	36	27	1.20	--
41.4	45.6	1.2	2.72	SANDY SILT AND SILT	15	14	0.04	36	27	1.20	--
41.6	48.3	1.3	2.71	SANDY SILT AND SILT	16	15	0.04	36	29	1.21	--
41.8	46.1	1.4	3.00	SANDY SILT AND SILT	17	15	0.03	36	27	1.21	--
41.9	40.4	1.2	3.07	SANDY SILT AND SILT	15	14	0.03	35	23	1.22	--
42.1	35.4	0.9	2.63	SANDY SILT AND SILT	12	11	0.03	34	20	1.22	--
42.3	33.4	0.9	2.63	SANDY SILT AND SILT	12	11	0.03	34	20	1.22	--
42.4	29.7	0.8	2.83	SANDY SILT AND SILT	11	10	0.03	33	20	1.23	--
42.6	29.3	0.9	2.97	SANDY SILT AND SILT	11	10	0.02	33	20	1.23	--
42.7	38.8	1.2	2.99	SANDY SILT AND SILT	14	13	0.03	35	21	1.24	--
42.9	31.8	1.1	3.30	SANDY SILT AND SILT	13	12	0.02	34	20	1.24	--
43.1	20.4	0.8	3.68	CLAYEY SILT AND SILTY CLAY	10	9	---	--	---	1.24	1.13
43.2	16.1	0.6	3.80	CLAYEY SILT AND SILTY CLAY	8	7	---	--	---	1.25	0.86
43.4	15.2	0.5	2.96	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.25	0.80
43.6	12.9	0.4	3.10	CLAYEY SILT AND SILTY CLAY	6	5	---	--	---	1.26	0.66
43.7	12.6	0.3	2.38	SANDY SILT AND SILT	5	5	0.02	29	20	1.26	--
43.9	10.3	0.2	2.24	SANDY SILT AND SILT	4	4	0.01	28	20	1.26	--
44.1	10.0	0.5	5.08	CLAY	10	9	---	--	---	1.27	0.48
44.2	19.7	0.7	3.30	CLAYEY SILT AND SILTY CLAY	9	8	---	--	---	1.27	1.08
44.4	60.5	0.6	0.98	SAND	15	14	0.16	37	35	1.27	--
44.6	114.4	0.4	0.31	SAND	16	14	1.64	40	58	1.28	--
44.7	151.6										
44.9	135.3										

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT8-18
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/10/90/12:05
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	22.60	0.90	3.97	0.02	silty clay to clay	UNDFND	UNDFD	14	2.2
0.50	1.64	26.40	1.53	5.78	0.07	clay	UNDFND	UNDFD	25	2.6
0.75	2.46	17.18	0.97	5.63	0.11	clay	UNDFND	UNDFD	16	1.7
1.00	3.28	20.46	0.76	3.72	0.16	silty clay to clay	UNDFND	UNDFD	13	2.0
1.25	4.10	21.42	0.71	3.33	0.20	clayey silt to silty clay	UNDFND	UNDFD	10	2.1
1.50	4.92	18.94	0.59	3.14	0.25	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
1.75	5.74	12.59	0.32	2.57	0.29	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
2.00	6.56	19.60	0.62	3.17	0.34	clayey silt to silty clay	UNDFND	UNDFD	9	1.9
2.25	7.38	16.01	0.56	3.51	0.38	silty clay to clay	UNDFND	UNDFD	10	1.5
2.50	8.20	12.68	0.43	3.39	0.43	silty clay to clay	UNDFND	UNDFD	8	1.2
2.75	9.02	44.00	0.53	1.21	0.46	silty sand to sandy silt	50-60	40-42	14	UNDEFINED
3.00	9.84	23.62	0.76	3.23	0.48	clayey silt to silty clay	UNDFND	UNDFD	11	2.3
3.25	10.66	17.29	0.61	3.50	0.50	silty clay to clay	UNDFND	UNDFD	11	1.6
3.50	11.48	12.83	0.36	2.81	0.52	silty clay to clay	UNDFND	UNDFD	8	1.2
3.75	12.30	13.11	0.42	3.21	0.54	silty clay to clay	UNDFND	UNDFD	8	1.2
4.00	13.12	13.05	0.35	2.67	0.56	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
4.25	13.94	15.35	0.40	2.59	0.58	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
4.50	14.76	13.69	0.24	1.73	0.60	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
4.75	15.58	14.18	0.25	1.76	0.62	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
5.00	16.40	20.42	0.63	3.11	0.64	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
5.25	17.22	27.37	0.90	3.28	0.66	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
5.50	18.04	30.34	1.03	3.39	0.68	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
5.75	18.86	35.83	1.07	3.00	0.69	clayey silt to silty clay	UNDFND	UNDFD	17	3.4
6.00	19.69	29.04	1.01	3.49	0.71	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
6.25	20.51	31.05	1.24	3.98	0.73	silty clay to clay	UNDFND	UNDFD	20	2.9
6.50	21.33	32.82	1.43	4.35	0.75	silty clay to clay	UNDFND	UNDFD	21	3.1
6.75	22.15	36.27	1.33	3.66	0.77	clayey silt to silty clay	UNDFND	UNDFD	17	3.5
7.00	22.97	40.29	1.31	3.25	0.79	clayey silt to silty clay	UNDFND	UNDFD	19	3.9
7.25	23.79	43.08	1.36	3.16	0.81	clayey silt to silty clay	UNDFND	UNDFD	21	4.1
7.50	24.61	34.55	1.12	3.23	0.83	clayey silt to silty clay	UNDFND	UNDFD	17	3.3
7.75	25.43	18.65	0.57	3.06	0.85	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
8.00	26.25	17.08	0.45	2.62	0.87	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
8.25	27.07	18.16	0.46	2.55	0.89	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
8.50	27.89	13.31	0.14	1.07	0.91	sandy silt to clayey silt	UNDFND	UNDFD	5	1.1
8.75	28.71	15.84	0.34	2.12	0.93	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
9.00	29.53	8.73	0.07	0.83	0.95	clayey silt to silty clay	UNDFND	UNDFD	4	.7
9.25	30.35	29.97	0.52	1.72	0.97	sandy silt to clayey silt	UNDFND	UNDFD	11	2.8
9.50	31.17	24.81	0.32	1.28	0.99	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT8-18

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	26.75	0.68	2.53	1.01	sandy silt to clayey silt	UNDFND	UNDFD	10	2.5
10.00	32.81	30.02	1.00	3.34	1.03	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
10.25	33.63	28.84	1.15	3.97	1.05	silty clay to clay	UNDFND	UNDFD	18	2.7
10.50	34.45	29.66	1.02	3.45	1.07	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
10.75	35.27	34.03	1.26	3.71	1.08	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
11.00	36.09	34.83	1.32	3.78	1.10	clayey silt to silty clay	UNDFND	UNDFD	17	3.2
11.25	36.91	40.59	1.27	3.14	1.12	clayey silt to silty clay	UNDFND	UNDFD	19	3.8
11.50	37.73	55.62	1.92	3.44	1.14	clayey silt to silty clay	UNDFND	UNDFD	27	5.3
11.75	38.55	46.71	1.75	3.74	1.16	clayey silt to silty clay	UNDFND	UNDFD	22	4.4
12.00	39.37	43.23	1.66	3.84	1.18	clayey silt to silty clay	UNDFND	UNDFD	21	4.1
12.25	40.19	38.62	1.32	3.41	1.20	clayey silt to silty clay	UNDFND	UNDFD	18	3.6
12.50	41.01	40.32	1.41	3.49	1.22	clayey silt to silty clay	UNDFND	UNDFD	19	3.8
12.75	41.83	31.69	0.97	3.05	1.24	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
13.00	42.65	15.94	0.32	1.99	1.26	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
13.25	43.47	23.02	0.62	2.71	1.28	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
13.50	44.29	50.79	1.17	2.31	1.30	sandy silt to clayey silt	UNDFND	UNDFD	19	4.8
13.75	45.11	79.71	1.01	1.27	1.32	silty sand to sandy silt	50-60	38-40	25	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT8-19
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/10/90/10:33
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	32.48	1.17	3.59	0.02	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
0.50	1.64	33.34	1.93	5.77	0.07	clay	UNDFND	UNDFD	32	3.3
0.75	2.46	19.27	1.15	5.98	0.11	clay	UNDFND	UNDFD	13	1.9
1.00	3.28	15.92	0.63	3.96	0.16	silty clay to clay	UNDFND	UNDFD	10	1.5
1.25	4.10	16.08	0.55	3.44	0.20	silty clay to clay	UNDFND	UNDFD	10	1.5
1.50	4.92	15.87	0.49	3.10	0.25	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
1.75	5.74	16.58	0.34	2.03	0.29	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
2.00	6.56	27.35	0.97	3.53	0.34	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
2.25	7.38	28.27	1.11	3.92	0.38	silty clay to clay	UNDFND	UNDFD	18	2.7
2.50	8.20	21.53	0.86	3.97	0.43	silty clay to clay	UNDFND	UNDFD	14	2.1
2.75	9.02	31.93	1.11	3.47	0.46	clayey silt to silty clay	UNDFND	UNDFD	15	3.1
3.00	9.84	18.75	0.74	3.95	0.48	silty clay to clay	UNDFND	UNDFD	12	1.8
3.25	10.66	19.94	0.80	4.00	0.50	silty clay to clay	UNDFND	UNDFD	13	1.9
3.50	11.48	15.32	0.39	2.56	0.52	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
3.75	12.30	15.30	0.59	3.88	0.54	silty clay to clay	UNDFND	UNDFD	10	1.4
4.00	13.12	15.99	0.60	3.76	0.56	silty clay to clay	UNDFND	UNDFD	10	1.5
4.25	13.94	14.63	0.36	2.46	0.58	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
4.50	14.76	12.65	0.26	2.07	0.60	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
4.75	15.58	19.18	0.62	3.24	0.62	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
5.00	16.40	21.50	0.64	3.00	0.64	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
5.25	17.22	22.42	0.63	2.79	0.66	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
5.50	18.04	31.40	1.11	3.52	0.68	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
5.75	18.86	34.38	1.20	3.50	0.69	clayey silt to silty clay	UNDFND	UNDFD	16	3.3
6.00	19.69	40.37	1.52	3.77	0.71	clayey silt to silty clay	UNDFND	UNDFD	19	3.9
6.25	20.51	40.70	1.69	4.15	0.73	silty clay to clay	UNDFND	UNDFD	26	3.9
6.50	21.33	40.35	1.75	4.33	0.75	silty clay to clay	UNDFND	UNDFD	26	3.9
6.75	22.15	35.37	1.41	3.98	0.77	silty clay to clay	UNDFND	UNDFD	23	3.4
7.00	22.97	30.35	1.09	3.59	0.79	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
7.25	23.79	23.16	0.58	2.50	0.81	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
7.50	24.61	71.45	1.16	1.63	0.83	silty sand to sandy silt	50-60	40-42	33	UNDEFINED
7.75	25.43	295.40	1.39	0.47	0.85	gravelly sand to sand	>90	46-48	47	UNDEFINED
8.00	26.25	285.12	1.18	0.41	0.87	gravelly sand to sand	>90	46-48	48	UNDEFINED
8.25	27.07	204.74	0.57	0.28	0.89	sand	80-90	44-46	33	UNDEFINED
8.50	27.89	41.54	1.51	3.64	0.91	clayey silt to silty clay	UNDFND	UNDFD	20	4.0
8.75	28.71	28.23	0.79	2.81	0.93	clayey silt to silty clay	UNDFND	UNDFD	14	2.6
9.00	29.53	37.03	1.56	4.22	0.95	silty clay to clay	UNDFND	UNDFD	24	3.5
9.25	30.35	25.82	0.80	3.09	0.97	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
9.50	31.17	22.92	0.51	2.22	0.99	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT8-19

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	19.41	0.44	2.26	1.01	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
10.00	32.81	16.74	0.31	1.82	1.03	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
10.25	33.63	18.25	0.37	2.05	1.05	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
10.50	34.45	16.91	0.34	2.01	1.07	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
10.75	35.27	20.76	0.40	1.94	1.08	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
11.00	36.09	232.50	0.69	0.29	1.10	gravelly sand to sand	80-90	44-46	37	UNDEFINED
11.25	36.91	188.38	1.54	0.82	1.12	sand	80-90	42-44	36	UNDEFINED
11.50	37.73	44.49	1.63	3.65	1.14	clayey silt to silty clay	UNDFND	UNDFD	21	4.2
11.75	38.55	42.16	1.45	3.43	1.16	clayey silt to silty clay	UNDFND	UNDFD	20	4.0
12.00	39.37	37.32	1.26	3.38	1.18	clayey silt to silty clay	UNDFND	UNDFD	18	3.5
12.25	40.19	30.34	1.00	3.31	1.20	clayey silt to silty clay	UNDFND	UNDFD	15	2.8
12.50	41.01	21.84	0.50	2.28	1.22	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
12.75	41.83	14.71	0.25	1.67	1.24	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
13.00	42.65	11.16	0.09	0.79	1.26	sandy silt to clayey silt	UNDFND	UNDFD	4	.8
13.25	43.47	20.55	0.49	2.41	1.28	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
13.50	44.29	36.81	0.80	2.17	1.30	sandy silt to clayey silt	UNDFND	UNDFD	14	3.4
13.75	45.11	81.48	1.29	1.59	1.32	silty sand to sandy silt	50-60	38-40	26	UNDEFINED
14.00	45.93	43.79	1.45	3.32	1.34	clayey silt to silty clay	UNDFND	UNDFD	21	4.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP.
On Site Loc:CPT8-20
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/20/90/14:27
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	23.71	1.08	3.76	0.02	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
0.50	1.64	40.27	2.65	6.38	0.07	clay	UNDFND	UNDFD	22	4.0
0.75	2.46	46.82	2.26	4.65	0.11	silty clay to clay	UNDFND	UNDFD	32	4.3
1.00	3.28	30.57	2.29	7.51	0.16	clay	UNDFND	UNDFD	23	3.0
1.25	4.10	24.00	2.12	8.70	0.20	undefined	UNDFND	UNDFD	[illegible]	UNDEFINED
1.50	4.92	17.44	1.22	[illegible]	0.25	clay	UNDFND	UNDFD	17	1.7
1.75	5.74	21.16	1.28	6.04	0.29	clay	UNDFND	UNDFD	20	2.0
2.00	6.56	22.10	1.38	6.24	0.34	clay	UNDFND	UNDFD	21	2.1
2.25	7.38	16.50	0.97	5.89	0.38	clay	UNDFND	UNDFD	16	1.6
2.50	8.20	16.20	0.97	5.99	0.43	clay	UNDFND	UNDFD	16	1.5
2.75	9.02	19.39	1.17	6.02	0.46	clay	UNDFND	UNDFD	19	1.8
3.00	9.84	12.91	0.71	5.53	0.48	clay	UNDFND	UNDFD	12	1.2
3.25	10.66	12.92	0.71	5.52	0.50	clay	UNDFND	UNDFD	12	1.2
3.50	11.48	14.97	0.74	4.93	0.52	clay	UNDFND	UNDFD	14	1.4
3.75	12.30	16.54	1.05	6.36	0.54	clay	UNDFND	UNDFD	16	1.5
4.00	13.12	13.27	1.22	9.33	0.56	clay	UNDFND	UNDFD	18	1.8
4.25	13.94	14.39	0.87	6.05	0.58	clay	UNDFND	UNDFD	14	1.3
4.50	14.76	19.53	1.18	6.05	0.60	clay	UNDFND	UNDFD	19	1.8
4.75	15.58	17.81	0.72	4.07	0.62	silty clay to clay	UNDFND	UNDFD	11	1.6
5.00	16.40	26.70	0.84	3.15	0.64	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
5.25	17.22	83.76	1.07	1.28	0.66	sand to silty sand	60-70	42-44	20	UNDEFINED
5.50	18.04	23.88	0.86	3.61	0.68	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
5.75	18.86	28.60	1.16	4.05	0.69	silty clay to clay	UNDFND	UNDFD	18	2.7
6.00	19.69	31.33	1.55	4.85	0.71	clay	UNDFND	UNDFD	31	3.0
6.25	20.51	36.90	1.51	4.10	0.73	silty clay to clay	UNDFND	UNDFD	24	3.5
6.50	21.33	20.53	0.75	3.63	0.75	silty clay to clay	UNDFND	UNDFD	13	1.9
6.75	22.15	33.27	1.97	5.93	0.77	clay	UNDFND	UNDFD	32	3.2
7.00	22.97	39.01	2.27	5.82	0.79	clay	UNDFND	UNDFD	37	3.7
7.25	23.79	44.83	2.54	5.66	0.81	clay	UNDFND	UNDFD	43	4.3
7.50	24.61	28.02	1.44	5.14	0.83	clay	UNDFND	UNDFD	27	2.6
7.75	25.43	18.72	0.77	4.09	0.85	silty clay to clay	UNDFND	UNDFD	12	1.7
8.00	26.25	19.19	0.84	4.38	0.87	clay	UNDFND	UNDFD	18	1.7
8.25	27.07	21.61	0.99	4.58	0.89	clay	UNDFND	UNDFD	21	2.0
8.50	27.89	17.61	0.39	2.22	0.91	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
8.75	28.71	16.34	0.45	2.76	0.93	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
9.00	29.53	13.06	0.36	2.78	0.95	silty clay to clay	UNDFND	UNDFD	8	1.1
9.25	30.35	25.59	0.74	2.89	0.97	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
9.50	31.17	22.94	0.92	4.00	0.99	silty clay to clay	UNDFND	UNDFD	15	2.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP. On Site Loc:CPT8-20

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	20.49	0.82	3.99	1.01	silty clay to clay	UNDFND	UNDFD	13	1.8
10.00	32.81	16.60	0.52	3.14	1.03	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
10.25	33.63	25.18	0.94	3.73	1.05	silty clay to clay	UNDFND	UNDFD	16	2.3
10.50	34.45	35.51	1.62	4.57	1.07	silty clay to clay	UNDFND	UNDFD	23	3.3
10.75	35.27	38.13	1.73	4.53	1.08	clay	UNDFND	UNDFD	25	3.4
11.00	36.09	43.44	2.00	4.34	1.10	clay	UNDFND	UNDFD	28	3.8
11.25	36.91	43.15	2.25	5.21	1.12	clay	UNDFND	UNDFD	41	4.1
11.50	37.73	39.39	1.88	4.78	1.14	silty clay to clay	UNDFND	UNDFD	25	3.7
11.75	38.55	37.72	1.60	4.24	1.16	silty clay to clay	UNDFND	UNDFD	24	3.5
12.00	39.37	39.98	2.12	5.31	1.18	clay	UNDFND	UNDFD	38	3.7
12.25	40.19	36.02	1.90	5.27	1.20	clay	UNDFND	UNDFD	35	3.3
12.50	41.01	35.46	1.74	4.90	1.22	clay	UNDFND	UNDFD	34	3.3
12.75	41.83	40.58	1.94	4.78	1.24	silty clay to clay	UNDFND	UNDFD	26	3.8
13.00	42.65	33.05	1.38	4.17	1.26	silty clay to clay	UNDFND	UNDFD	21	3.0
13.25	43.47	19.36	0.53	2.73	1.28	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
13.50	44.29	19.55	0.56	2.85	1.30	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
13.75	45.11	18.33	0.56	3.05	1.32	clayey silt to silty clay	UNDFND	UNDFD	9	1.5

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP.
On Site Loc:CPT8-21
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/23/90/15:22
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	22.42	1.12	4.99	0.02	clay	UNDFND	UNDFD	21	2.2
0.50	1.64	20.40	2.00	8.33	0.07	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.75	2.46	25.53	2.17	8.51	0.11	undefined	UNDFND	UNDFD	UDF	UNDEFINED
1.00	3.28	17.95	1.22	6.80	0.16	clay	UNDFND	UNDFD	17	1.7
1.25	4.10	18.32	1.07	5.82	0.20	clay	UNDFND	UNDFD	18	1.8
1.50	4.92	18.69	1.03	5.49	0.25	clay	UNDFND	UNDFD	18	1.8
1.75	5.74	12.01	0.70	5.83	0.29	clay	UNDFND	UNDFD	12	1.1
2.00	6.56	13.17	0.67	5.06	0.34	clay	UNDFND	UNDFD	13	1.2
2.25	7.38	13.34	0.81	6.04	0.38	clay	UNDFND	UNDFD	13	1.2
2.50	8.20	4.33	0.36	7.87	0.43	organic material	UNDFND	UNDFD	4	.4
2.75	9.02	6.57	0.23	4.34	0.46	clay	UNDFND	UNDFD	6	.6
3.00	9.84	20.87	0.74	2.77	0.48	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
3.25	10.66	18.35	0.90	4.91	0.50	clay	UNDFND	UNDFD	17	1.7
3.50	11.48	16.13	1.00	6.19	0.52	clay	UNDFND	UNDFD	15	1.5
3.75	12.30	13.66	0.81	5.95	0.54	clay	UNDFND	UNDFD	13	1.3
4.00	13.12	15.88	0.86	5.42	0.56	clay	UNDFND	UNDFD	15	1.5
4.25	13.94	20.82	0.80	3.83	0.58	silty clay to clay	UNDFND	UNDFD	13	2.0
4.50	14.76	52.43	1.32	2.52	0.60	sandy silt to clayey silt	UNDFND	UNDFD	20	5.1
4.75	15.58	86.01	0.88	1.03	0.62	sand to silty sand	60-70	42-44	21	UNDEFINED
5.00	16.40	25.60	0.77	3.00	0.64	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
5.25	17.22	18.55	0.73	3.91	0.66	silty clay to clay	UNDFND	UNDFD	12	1.7
5.50	18.04	21.00	0.86	4.10	0.68	silty clay to clay	UNDFND	UNDFD	13	2.0
5.75	18.86	18.66	0.46	2.49	0.69	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
6.00	19.69	15.91	0.37	2.31	0.71	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
6.25	20.51	22.97	0.96	4.20	0.73	silty clay to clay	UNDFND	UNDFD	15	2.1
6.50	21.33	62.85	0.55	0.88	0.75	sand to silty sand	50-60	40-42	15	UNDEFINED
6.75	22.15	89.14	0.32	0.36	0.77	sand to silty sand	60-70	40-42	21	UNDEFINED
7.00	22.97	87.74	0.25	0.28	0.79	sand	60-70	40-42	17	UNDEFINED
7.25	23.79	88.79	0.24	0.27	0.81	sand	60-70	40-42	17	UNDEFINED
7.50	24.61	133.35	0.40	0.30	0.83	sand	70-80	42-44	26	UNDEFINED
7.75	25.43	215.14	0.62	0.29	0.85	sand	>90	44-46	41	UNDEFINED
8.00	26.25	203.58	0.65	0.32	0.87	sand	80-90	44-46	39	UNDEFINED
8.25	27.07	109.95	0.97	0.88	0.89	sand to silty sand	70-80	40-42	26	UNDEFINED
8.50	27.89	26.71	0.70	2.63	0.91	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
8.75	28.71	23.95	0.64	2.66	0.93	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
9.00	29.53	18.71	0.62	3.32	0.95	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
9.25	30.35	14.24	0.32	2.22	0.97	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
9.50	31.17	22.09	0.61	2.77	0.99	clayey silt to silty clay	UNDFND	UNDFD	11	2.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP. On Site Loc:CPT8-21

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	13.81	0.42	2.12	1.01	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
10.00	32.81	24.35	0.77	3.10	1.03	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
10.25	33.63	31.76	1.25	3.92	1.05	silty clay to clay	UNDFND	UNDFD	20	2.9
10.50	34.45	33.00	1.13	3.44	1.07	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
10.75	35.27	28.83	0.68	2.36	1.08	sandy silt to clayey silt	UNDFND	UNDFD	11	2.6
11.00	36.09	23.77	0.46	1.92	1.10	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
11.25	36.91	27.37	1.05	3.74	1.12	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
11.50	37.73	33.28	1.78	4.54	1.14	silty clay to clay	UNDFND	UNDFD	25	3.7
11.75	38.55	40.37	2.11	5.22	1.16	clay	UNDFND	UNDFD	39	3.8
12.00	39.37	41.27	2.01	4.88	1.18	silty clay to clay	UNDFND	UNDFD	28	3.9
12.25	40.19	41.60	2.18	5.23	1.20	clay	UNDFND	UNDFD	40	3.8
12.50	41.01	33.33	1.47	4.42	1.22	silty clay to clay	UNDFND	UNDFD	21	3.1
12.75	41.83	31.11	1.24	3.98	1.24	silty clay to clay	UNDFND	UNDFD	20	2.8
13.00	42.65	20.03	0.48	2.38	1.26	clayey silt to silty clay	UNDFND	UNDFD	10	1.7
13.25	43.47	13.51	0.34	2.79	1.28	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
13.50	44.29	37.67	1.08	2.88	1.30	sandy silt to clayey silt	UNDFND	UNDFD	14	3.5
13.75	45.11	65.03	1.74	2.67	1.32	sandy silt to clayey silt	UNDFND	UNDFD	25	6.2
14.00	45.93	45.97	1.79	3.88	1.34	clayey silt to silty clay	UNDFND	UNDFD	22	4.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

6.0 INTERPRETED CPT TEST DATA SITE 9

PIONEER DRILLING

Engineer : IT CORP
On Site Loc: CPT9-1
Job No. : 409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date : 04/03/90/14:57
Cone Used : VIII
Water table (meters) : 2.1

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	133.74	1.64	1.23	0.02	sand to silty sand	>90	>48	32	UNDEFINED
0.50	1.64	31.27	1.28	4.11	0.07	silty clay to clay	UNDFND	UNDFD	20	3.1
0.75	2.46	31.19	1.31	4.21	0.11	silty clay to clay	UNDFND	UNDFD	20	3.1
1.00	3.28	23.54	1.23	5.24	0.16	clay	UNDFND	UNDFD	23	2.3
1.25	4.10	24.14	1.26	5.20	0.20	clay	UNDFND	UNDFD	23	2.3
1.50	4.92	26.12	1.21	4.64	0.25	clay	UNDFND	UNDFD	25	2.5
1.75	5.74	27.37	1.13	4.14	0.29	silty clay to clay	UNDFND	UNDFD	17	2.7
2.00	6.56	30.18	1.24	4.12	0.34	silty clay to clay	UNDFND	UNDFD	19	2.9
2.25	7.38	34.41	1.37	3.99	0.38	silty clay to clay	UNDFND	UNDFD	22	3.4
2.50	8.20	11.08	0.48	4.33	0.40	clay	UNDFND	UNDFD	11	1.0
2.75	9.02	14.46	0.35	2.45	0.42	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
3.00	9.84	14.76	0.54	3.63	0.44	silty clay to clay	UNDFND	UNDFD	9	1.4
3.25	10.66	15.70	0.61	3.90	0.46	silty clay to clay	UNDFND	UNDFD	10	1.5
3.50	11.48	12.59	0.46	3.63	0.48	silty clay to clay	UNDFND	UNDFD	8	1.1
3.75	12.30	12.41	0.28	2.22	0.50	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
4.00	13.12	12.27	0.37	2.98	0.52	silty clay to clay	UNDFND	UNDFD	8	1.1
4.25	13.94	9.46	0.43	4.53	0.54	clay	UNDFND	UNDFD	9	.8
4.50	14.76	7.61	0.37	4.80	0.56	clay	UNDFND	UNDFD	7	.6
4.75	15.58	4.23	0.11	2.52	0.58	clay	UNDFND	UNDFD	4	.3
5.00	16.40	7.21	0.27	3.73	0.60	clay	UNDFND	UNDFD	7	.6
5.25	17.22	7.43	0.29	3.85	0.61	clay	UNDFND	UNDFD	7	.6
5.50	18.04	11.29	0.34	3.05	0.63	silty clay to clay	UNDFND	UNDFD	7	1.0
5.75	18.86	96.61	0.27	0.28	0.65	sand	70-80	42-44	19	UNDEFINED
6.00	19.69	32.30	0.18	0.56	0.67	silty sand to sandy silt	<40	36-38	10	UNDEFINED
6.25	20.51	6.88	0.08	1.23	0.69	sensitive fine grained	UNDFND	UNDFD	3	.5
6.50	21.33	7.18	0.12	1.61	0.71	clayey silt to silty clay	UNDFND	UNDFD	3	.6
6.75	22.15	8.62	0.15	1.78	0.73	clayey silt to silty clay	UNDFND	UNDFD	4	.7
7.00	22.97	16.59	0.45	2.69	0.75	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.25	23.79	25.02	0.87	3.48	0.77	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
7.50	24.61	18.59	0.60	3.24	0.79	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
7.75	25.43	13.38	0.28	2.11	0.81	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
8.00	26.25	19.20	0.39	1.98	0.83	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
8.25	27.07	25.28	0.84	3.32	0.85	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
8.50	27.89	25.52	0.95	3.74	0.87	silty clay to clay	UNDFND	UNDFD	16	2.4
8.75	28.71	21.76	0.80	3.69	0.89	silty clay to clay	UNDFND	UNDFD	14	2.0
9.00	29.53	20.57	0.71	3.47	0.91	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
9.25	30.35	19.06	0.53	2.77	0.93	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
9.50	31.17	25.54	1.25	4.89	0.95	clay	UNDFND	UNDFD	24	2.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983. Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc CPT9-1

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	47.24	2.18	4.62	0.97	silty clay to clay	UNDFND	UNDFD	30	4.5
10.00	32.81	19.27	0.45	2.32	0.99	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
10.25	33.63	18.15	0.47	2.61	1.00	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
10.50	34.45	38.40	0.71	1.85	1.02	sandy silt to clayey silt	UNDFND	UNDFD	15	3.6
10.75	35.27	17.20	0.54	3.14	1.04	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
11.00	36.09	25.42	0.75	2.94	1.06	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
11.25	36.91	20.64	0.64	3.10	1.08	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
11.50	37.73	12.86	0.33	2.60	1.10	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.75	38.55	11.95	0.23	1.96	1.12	clayey silt to silty clay	UNDFND	UNDFD	6	.9
12.00	39.37	39.53	0.74	1.88	1.14	sandy silt to clayey silt	UNDFND	UNDFD	15	3.7
12.25	40.19	369.15	3.51	0.95	1.16	sand	>90	44-46	>50	UNDEFINED
12.50	41.01	328.51	1.19	0.36	1.18	gravelly sand to sand	>90	44-46	>50	UNDEFINED
12.75	41.83	31.54	0.73	2.31	1.20	sandy silt to clayey silt	UNDFND	UNDFD	12	2.9
13.00	42.65	23.90	0.45	1.89	1.22	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
13.25	43.47	14.34	0.18	1.23	1.24	sandy silt to clayey silt	UNDFND	UNDFD	5	1.1
13.50	44.29	11.55	0.07	0.63	1.26	sandy silt to clayey silt	UNDFND	UNDFD	4	.9
13.75	45.11	21.63	0.41	1.92	1.28	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-2
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/22/90/09:29
Cone Used :CONE II
Water table (meters) : 2.1

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	73.77	2.07	2.81	0.02	sandy silt to clayey silt	UNDFND	UNDFD	28	7.3
0.50	1.64	84.37	2.60	3.06	0.07	sandy silt to clayey silt	UNDFND	UNDFD	33	8.4
0.75	2.46	46.23	1.51	3.26	0.11	clayey silt to silty clay	UNDFND	UNDFD	22	4.6
1.00	3.28	26.76	1.07	4.01	0.16	silty clay to clay	UNDFND	UNDFD	17	2.6
1.25	4.10	28.49	0.92	3.23	0.20	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
1.50	4.92	32.65	0.99	3.02	0.25	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
1.75	5.74	43.44	1.19	2.74	0.29	sandy silt to clayey silt	UNDFND	UNDFD	17	4.3
2.00	6.56	55.57	1.52	2.73	0.34	sandy silt to clayey silt	UNDFND	UNDFD	21	5.5
2.25	7.38	45.96	0.84	1.83	0.38	silty sand to sandy silt	50-60	40-42	15	UNDEFINED
2.50	8.20	56.55	0.85	1.50	0.40	silty sand to sandy silt	60-70	42-44	18	UNDEFINED
2.75	9.02	175.45	0.86	0.49	0.42	sand	>90	46-48	34	UNDEFINED
3.00	9.84	132.58	0.55	0.41	0.44	sand	80-90	44-46	25	UNDEFINED
3.25	10.66	159.51	0.54	0.34	0.46	sand	>90	46-48	31	UNDEFINED
3.50	11.48	167.10	0.83	0.50	0.48	sand	>90	46-48	32	UNDEFINED
3.75	12.30	140.20	0.35	0.25	0.50	sand	80-90	44-46	27	UNDEFINED
4.00	13.12	25.35	0.47	1.87	0.52	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4
4.25	13.94	10.69	0.19	1.82	0.54	clayey silt to silty clay	UNDFND	UNDFD	5	.9
4.50	14.76	8.53	0.13	1.49	0.56	clayey silt to silty clay	UNDFND	UNDFD	4	.7
4.75	15.58	13.72	0.08	0.55	0.58	sandy silt to clayey silt	UNDFND	UNDFD	5	1.2
5.00	16.40	7.77	0.12	1.55	0.60	clayey silt to silty clay	UNDFND	UNDFD	4	.6
5.25	17.22	9.75	0.22	2.21	0.61	clayey silt to silty clay	UNDFND	UNDFD	5	.8
5.50	18.04	19.66	0.36	1.83	0.63	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
5.75	18.86	26.02	0.53	2.06	0.65	sandy silt to clayey silt	UNDFND	UNDFD	10	2.5
6.00	19.69	26.66	0.60	2.25	0.67	sandy silt to clayey silt	UNDFND	UNDFD	10	2.5
6.25	20.51	19.15	0.42	2.18	0.69	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
6.50	21.33	16.75	0.16	0.96	0.71	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
6.75	22.15	12.69	0.17	1.33	0.73	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
7.00	22.97	15.19	0.25	1.66	0.75	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
7.25	23.79	16.96	0.24	1.41	0.77	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
7.50	24.61	55.46	0.87	1.57	0.79	silty sand to sandy silt	50-60	38-40	18	UNDEFINED
7.75	25.43	77.49	0.67	0.86	0.81	sand to silty sand	60-70	40-42	19	UNDEFINED
8.00	26.25	35.47	0.63	1.78	0.83	sandy silt to clayey silt	UNDFND	UNDFD	14	3.4
8.25	27.07	25.90	0.70	2.70	0.85	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
8.50	27.89	33.68	0.88	2.60	0.87	sandy silt to clayey silt	UNDFND	UNDFD	13	3.2
8.75	28.71	83.45	0.83	0.99	0.89	sand to silty sand	60-70	40-42	20	UNDEFINED
9.00	29.53	389.35	3.11	0.80	0.91	gravelly sand to sand	>90	46-48	>50	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-26

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	10.04	0.46	4.63	0.97	clay	UNDFND	UNDFD	10	.8
10.00	32.81	10.05	0.47	4.68	0.99	clay	UNDFND	UNDFD	10	.8
10.25	33.63	13.58	0.45	3.35	1.00	silty clay to clay	UNDFND	UNDFD	9	1.1
10.50	34.45	12.71	0.35	2.77	1.02	silty clay to clay	UNDFND	UNDFD	8	1.0
10.75	35.27	16.16	0.57	3.54	1.04	silty clay to clay	UNDFND	UNDFD	10	1.4
11.00	36.09	350.11	2.96	0.84	1.06	sand	>90	46-48	>50	UNDEFINED
11.25	36.91	272.51	2.62	0.96	1.08	sand	>90	44-46	>50	UNDEFINED
11.50	37.73	234.48	1.17	0.50	1.10	sand	80-90	44-46	45	UNDEFINED
11.75	38.55	22.93	0.50	2.17	1.12	sandy silt to clayey silt	UNDFND	UNDFD	9	2.0
12.00	39.37	18.50	0.43	2.31	1.14	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
12.25	40.19	20.72	0.48	2.30	1.16	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
12.50	41.01	47.18	0.83	1.75	1.18	silty sand to sandy silt	40-50	36-38	15	UNDEFINED
12.75	41.83	20.39	0.50	2.46	1.20	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
13.00	42.65	33.36	0.93	2.75	1.22	sandy silt to clayey silt	UNDFND	UNDFD	13	3.1
13.25	43.47	20.13	0.57	2.82	1.24	clayey silt to silty clay	UNDFND	UNDFD	10	1.7
13.50	44.29	35.89	1.44	4.02	1.26	silty clay to clay	UNDFND	UNDFD	23	3.3
13.75	45.11	45.60	1.47	3.23	1.28	clayey silt to silty clay	UNDFND	UNDFD	22	4.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-2A
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/04/90/08:06
Cone Used :VIII
Water table (meters) : 2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	213.15	3.38	1.81	0.02	sand to silty sand	>90	>48	>50	UNDEFINED
0.50	1.64	73.12	2.70	3.41	0.07	sandy silt to clayey silt	UNDFND	UNDFD	30	7.2
0.75	2.46	27.25	1.00	3.66	0.11	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
1.00	3.28	28.38	0.84	2.96	0.16	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
1.25	4.10	27.69	0.87	3.16	0.20	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
1.50	4.92	26.88	0.78	2.91	0.25	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
1.75	5.74	28.10	0.85	3.03	0.29	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
2.00	6.56	21.19	0.67	3.15	0.34	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
2.25	7.38	34.90	1.10	3.14	0.37	clayey silt to silty clay	UNDFND	UNDFD	17	3.4
2.50	8.20	123.02	1.40	1.14	0.39	sand to silty sand	80-90	44-46	29	UNDEFINED
2.75	9.02	164.08	1.04	0.63	0.41	sand	>90	46-48	31	UNDEFINED
3.00	9.84	147.27	0.82	0.55	0.43	sand	80-90	46-48	28	UNDEFINED
3.25	10.66	137.38	0.91	0.66	0.45	sand	80-90	44-46	26	UNDEFINED
3.50	11.48	134.94	0.27	0.20	0.47	sand	80-90	44-46	26	UNDEFINED
3.75	12.30	88.29	0.36	0.40	0.49	sand to silty sand	70-80	42-44	21	UNDEFINED
4.00	13.12	11.67	0.36	3.12	0.51	silty clay to clay	UNDFND	UNDFD	7	1.0
4.25	13.94	7.24	0.15	2.09	0.53	silty clay to clay	UNDFND	UNDFD	5	.6
4.50	14.76	7.27	0.13	1.84	0.55	silty clay to clay	UNDFND	UNDFD	5	.6
4.75	15.58	10.71	0.10	0.90	0.57	sandy silt to clayey silt	UNDFND	UNDFD	4	.9
5.00	16.40	8.59	0.13	1.51	0.59	clayey silt to silty clay	UNDFND	UNDFD	4	.7
5.25	17.22	14.53	0.30	2.04	0.60	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
5.50	18.04	26.39	0.26	1.00	0.62	sandy silt to clayey silt	UNDFND	UNDFD	10	2.5
5.75	18.86	25.58	0.81	3.17	0.64	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
6.00	19.69	18.29	0.49	2.69	0.66	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
6.25	20.51	12.34	0.29	2.39	0.68	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.50	21.33	7.84	0.09	1.20	0.70	clayey silt to silty clay	UNDFND	UNDFD	4	.8
6.75	22.15	5.46	0.03	0.63	0.72	sensitive fine grained	UNDFND	UNDFD	3	.4
7.00	22.97	8.30	0.14	1.60	0.74	clayey silt to silty clay	UNDFND	UNDFD	4	.7
7.25	23.79	9.76	0.14	1.40	0.76	clayey silt to silty clay	UNDFND	UNDFD	5	.8
7.50	24.61	38.91	0.37	0.96	0.78	silty sand to sandy silt	40-50	36-38	12	UNDEFINED
7.75	25.43	51.21	0.52	1.02	0.80	silty sand to sandy silt	50-60	38-40	16	UNDEFINED
8.00	26.25	29.38	0.39	1.32	0.82	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7
8.25	27.07	21.43	0.55	2.57	0.84	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
8.50	27.89	21.42	0.59	2.77	0.86	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
8.75	28.71	142.90	0.90	0.63	0.88	sand	70-80	42-44	27	UNDEFINED
9.00	29.53	521.24	2.87	0.55	0.90	gravelly sand to sand	>90	>48	>50	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-2B
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/04/90/09:10
Cone Used :VIII
Water table (meters) : 2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	235.21	2.35	1.00	0.02	sand	>90	UNDFD	45	UNDEFINED
0.50	1.64	95.84	3.13	3.27	0.07	sandy silt to clayey silt	UNDFND	UNDFD	37	3.5
0.75	2.46	32.89	1.10	3.33	0.11	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
1.00	3.28	29.99	0.98	3.27	0.16	clayey silt to silty clay	UNDFND	UNDFD	14	2.9
1.25	4.10	37.31	1.24	3.32	0.20	clayey silt to silty clay	UNDFND	UNDFD	18	3.7
1.50	4.92	32.16	1.05	3.26	0.25	clayey silt to silty clay	UNDFND	UNDFD	15	3.1
1.75	5.74	34.24	1.05	3.06	0.29	clayey silt to silty clay	UNDFND	UNDFD	16	3.3
2.00	6.56	23.32	0.70	3.02	0.34	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
2.25	7.38	33.44	1.07	3.21	0.37	clayey silt to silty clay	UNDFND	UNDFD	16	3.3
2.50	8.20	138.63	1.25	0.90	0.39	sand to silty sand	80-90	46-48	33	UNDEFINED
2.75	9.02	162.46	0.99	0.61	0.41	sand	>90	46-48	31	UNDEFINED
3.00	9.84	102.91	0.38	0.37	0.43	sand	70-80	44-46	20	UNDEFINED
3.25	10.66	111.32	0.52	0.46	0.45	sand	80-90	44-46	21	UNDEFINED
3.50	11.48	144.32	0.27	0.18	0.47	sand	80-90	44-46	28	UNDEFINED
3.75	12.30	76.13	0.31	0.40	0.49	sand to silty sand	60-70	42-44	18	UNDEFINED
4.00	13.12	15.44	0.52	3.36	0.51	silty clay to clay	UNDFND	UNDFD	10	1.4
4.25	13.94	9.43	0.28	3.01	0.53	silty clay to clay	UNDFND	UNDFD	6	.8
4.50	14.76	8.58	0.26	3.02	0.55	silty clay to clay	UNDFND	UNDFD	5	.7
4.75	15.58	9.62	0.07	0.75	0.57	clayey silt to silty clay	UNDFND	UNDFD	5	.8
5.00	16.40	10.02	0.12	1.23	0.59	clayey silt to silty clay	UNDFND	UNDFD	5	.9
5.25	17.22	12.19	0.27	2.21	0.60	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
5.50	18.04	23.85	0.43	1.81	0.62	sandy silt to clayey silt	UNDFND	UNDFD	9	2.2
5.75	18.86	25.47	0.88	3.44	0.64	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
6.00	19.69	21.89	0.68	3.11	0.66	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
6.25	20.51	13.49	0.38	2.82	0.68	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
6.50	21.33	11.69	0.19	1.59	0.70	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
6.75	22.15	9.96	0.15	1.50	0.72	clayey silt to silty clay	UNDFND	UNDFD	5	.8
7.00	22.97	10.21	0.18	1.76	0.74	clayey silt to silty clay	UNDFND	UNDFD	5	.8
7.25	23.79	11.41	0.21	1.81	0.76	clayey silt to silty clay	UNDFND	UNDFD	5	1.0
7.50	24.61	37.67	0.42	1.11	0.78	silty sand to sandy silt	40-50	36-38	12	UNDEFINED
7.75	25.43	77.84	0.50	0.64	0.80	sand to silty sand	60-70	40-42	19	UNDEFINED
8.00	26.25	20.93	0.31	1.50	0.82	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
8.25	27.07	17.50	0.37	2.13	0.84	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
8.50	27.89	43.40	1.06	2.45	0.86	sandy silt to clayey silt	UNDFND	UNDFD	17	4.1
8.75	28.71	164.64	2.91	1.77	0.88	sand to silty sand	80-90	42-44	39	UNDEFINED
9.00	29.53	189.95	2.94	1.55	0.90	sand to silty sand	80-90	44-46	45	UNDEFINED
9.25	30.35	51.03	0.81	1.60	0.92	silty sand to sandy silt	40-50	38-40	16	UNDEFINED
9.50	31.17	25.85	0.50	1.92	0.94	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-2B

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	20.85	0.40	1.90	0.96	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
10.00	32.81	17.16	0.33	1.93	0.98	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
10.25	33.63	15.12	0.35	2.30	0.99	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
10.50	34.45	17.59	0.46	2.61	1.01	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
10.75	35.27	14.94	0.39	2.62	1.03	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
11.00	36.09	16.69	0.31	1.85	1.05	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
11.25	36.91	18.52	0.46	2.48	1.07	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
11.50	37.73	12.87	0.26	2.05	1.09	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.75	38.55	12.42	0.18	1.47	1.11	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.00	39.37	21.93	0.47	2.15	1.13	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
12.25	40.19	442.34	3.48	0.79	1.15	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.50	41.01	236.10	1.34	0.57	1.17	sand	80-90	44-46	45	UNDEFINED
12.75	41.83	23.50	0.25	1.06	1.19	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
13.00	42.65	19.26	0.08	0.39	1.21	silty sand to sandy silt	<40	30-32	6	UNDEFINED
13.25	43.47	20.81	0.14	0.66	1.23	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
13.50	44.29	19.04	0.08	0.39	1.25	silty sand to sandy silt	<40	30-32	6	UNDEFINED
13.75	45.11	18.75	0.19	0.99	1.27	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6
14.00	45.93	33.32	1.08	3.25	1.29	clayey silt to silty clay	UNDFND	UNDFD	16	3.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT9-04
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/13/90/12:07
Cone Used :IV
Water table (meters) : 2.9

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	65.12	1.05	1.62	0.02	silty sand to sandy silt	>90	>48	21	UNDEFINED
0.50	1.64	18.56	1.12	6.05	0.07	clay	UNDFND	UNDFD	18	1.8
0.75	2.46	29.44	1.14	3.89	0.11	silty clay to clay	UNDFND	UNDFD	19	2.9
1.00	3.28	30.91	0.98	3.17	0.16	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
1.25	4.10	25.24	0.68	2.71	0.20	clayey silt to silty clay	UNDFND	UNDFD	12	2.5
1.50	4.92	25.30	0.64	2.54	0.25	clayey silt to silty clay	UNDFND	UNDFD	12	2.5
1.75	5.74	22.93	0.50	2.20	0.29	sandy silt to clayey silt	UNDFND	UNDFD	9	2.2
2.00	6.56	14.45	0.29	2.02	0.34	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
2.25	7.38	11.26	0.22	1.95	0.38	clayey silt to silty clay	UNDFND	UNDFD	5	1.0
2.50	8.20	8.58	0.18	2.13	0.43	silty clay to clay	UNDFND	UNDFD	5	.8
2.75	9.02	4.50	0.08	1.77	0.47	sensitive fine grained	UNDFND	UNDFD	2	.4
3.00	9.84	8.71	0.21	2.44	0.52	silty clay to clay	UNDFND	UNDFD	6	.8
3.25	10.66	10.16	0.20	1.98	0.54	clayey silt to silty clay	UNDFND	UNDFD	5	.9
3.50	11.48	7.48	0.08	1.13	0.56	undefined	UNDFND	UNDFD	UDF	UNDEFINED
3.75	12.30	6.76	0.19	2.79	0.58	clay	UNDFND	UNDFD	6	.6
4.00	13.12	6.46	0.25	3.91	0.60	clay	UNDFND	UNDFD	6	.5
4.25	13.94	3.83	0.05	1.34	0.62	sensitive fine grained	UNDFND	UNDFD	2	.3
4.50	14.76	3.89	0.03	0.73	0.64	sensitive fine grained	UNDFND	UNDFD	2	.3
4.75	15.58	4.40	0.05	1.09	0.66	sensitive fine grained	UNDFND	UNDFD	2	.3
5.00	16.40	96.88	0.82	0.85	0.68	sand to silty sand	70-80	42-44	23	UNDEFINED
5.25	17.22	225.09	1.25	0.56	0.70	sand	>90	46-48	43	UNDEFINED
5.50	18.04	191.25	0.76	0.40	0.72	sand	>90	44-46	37	UNDEFINED
5.75	18.86	163.89	0.48	0.29	0.74	sand	80-90	44-46	31	UNDEFINED
6.00	19.69	17.83	0.24	1.34	0.76	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6
6.25	20.51	9.12	0.14	1.52	0.77	clayey silt to silty clay	UNDFND	UNDFD	4	.8
6.50	21.33	7.45	0.11	1.45	0.79	clayey silt to silty clay	UNDFND	UNDFD	4	.6
6.75	22.15	7.90	0.10	1.32	0.81	clayey silt to silty clay	UNDFND	UNDFD	4	.6
7.00	22.97	9.17	0.17	1.85	0.83	clayey silt to silty clay	UNDFND	UNDFD	4	.7
7.25	23.79	8.22	0.13	1.59	0.85	clayey silt to silty clay	UNDFND	UNDFD	4	.6
7.50	24.61	20.27	0.38	1.88	0.87	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
7.75	25.43	33.27	0.56	1.68	0.89	sandy silt to clayey silt	UNDFND	UNDFD	13	3.1
8.00	26.25	21.84	0.52	2.40	0.91	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
8.25	27.07	15.58	0.41	2.62	0.93	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
8.50	27.89	24.60	0.63	2.54	0.95	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
8.75	28.71	24.74	0.64	2.60	0.97	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
9.00	29.53	21.54	0.30	1.38	0.99	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
9.25	30.35	21.24	0.49	2.29	1.01	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
9.50	31.17	20.82	0.56	2.70	1.03	clayey silt to silty clay	UNDFND	UNDFD	10	1.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT | On Site Loc:CPT9-04 |

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	20.36	0.77	3.79	1.05	silty clay to clay	UNDFND	UNDFD	13	1.8
10.00	32.81	28.89	0.71	2.46	1.07	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7
10.25	33.63	28.54	0.33	3.26	1.09	clayey silt to silty clay	UNDFND	UNDFD	14	2.6
10.50	34.45	11.10	0.21	1.88	1.11	clayey silt to silty clay	UNDFND	UNDFD	5	.3
10.75	35.27	12.02	0.26	2.12	1.13	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.00	36.09	10.30	0.19	1.86	1.15	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.25	36.91	10.77	0.09	0.81	1.16	sandy silt to clayey silt	UNDFND	UNDFD	4	.8
11.50	37.73	12.29	0.21	1.74	1.18	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.75	38.55	14.28	0.18	1.24	1.20	sandy silt to clayey silt	UNDFND	UNDFD	5	1.2
12.00	39.37	36.85	0.81	2.21	1.22	sandy silt to clayey silt	UNDFND	UNDFD	14	3.4
12.25	40.19	34.63	1.47	1.55	1.24	silty sand to sandy silt	60-70	38-40	20	UNDEFINED
12.50	41.01	199.75	1.34	0.97	1.26	sand	80-90	42-44	38	UNDEFINED
12.75	41.83	300.55	1.45	0.48	1.28	gravelly sand to sand	>90	44-46	48	UNDEFINED
13.00	42.65	291.72	0.86	0.30	1.30	gravelly sand to sand	>90	44-46	47	UNDEFINED
13.25	43.47	132.61	1.18	0.89	1.32	sand to silty sand	70-80	40-42	32	UNDEFINED
13.50	44.29	82.25	0.98	1.19	1.34	sand to silty sand	50-60	38-40	20	UNDEFINED
13.75	45.11	20.26	0.32	1.58	1.36	sandy silt to clayey silt	UNDFND	UNDFD	8	1.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

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PIONEER DRILLING

Engineer IT
On Site Loc:CPT9-5
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/15/90/15:50
Cone Used :IV
Water table (meters) : 2.3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	56.53	2.23	3.95	0.02	clayey silt to silty clay	UNDFND	UNDFD	27	5.6
0.50	1.64	21.65	1.55	7.16	0.07	clay	UNDFND	UNDFD	21	2.1
0.75	2.46	18.91	0.86	5.09	0.11	clay	UNDFND	UNDFD	18	1.8
1.00	3.28	22.50	0.86	3.81	0.16	silty clay to clay	UNDFND	UNDFD	14	2.2
1.25	4.10	23.75	1.09	4.59	0.20	clay	UNDFND	UNDFD	23	2.3
1.50	4.92	21.69	0.76	3.49	0.25	clayey silt to silty clay	UNDFND	UNDFD	10	2.1
1.75	5.74	127.59	1.26	0.98	0.29	sand to silty sand	>90	46-48	31	UNDEFINED
2.00	6.56	228.29	1.56	0.68	0.34	sand	>90	>48	44	UNDEFINED
2.25	7.38	231.25	1.40	0.48	0.38	gravelly sand to sand	>90	>48	46	UNDEFINED
2.50	8.20	291.67	1.03	0.35	0.42	gravelly sand to sand	>90	>48	47	UNDEFINED
2.75	9.02	31.09	0.16	0.51	0.44	sand to silty sand	70-80	44-46	22	UNDEFINED
3.00	9.84	187.84	0.47	0.25	0.46	sand	>90	46-48	36	UNDEFINED
3.25	10.66	188.50	0.52	0.28	0.48	sand	>90	46-48	36	UNDEFINED
3.50	11.48	142.66	0.49	0.35	0.50	sand	80-90	44-46	27	UNDEFINED
3.75	12.30	18.01	0.43	2.39	0.52	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
4.00	13.12	8.15	0.22	2.66	0.54	silty clay to clay	UNDFND	UNDFD	5	.7
4.25	13.94	5.66	0.14	2.43	0.56	silty clay to clay	UNDFND	UNDFD	4	.4
4.50	14.76	4.31	0.09	1.99	0.58	silty clay to clay	UNDFND	UNDFD	3	.3
4.75	15.58	4.10	0.07	1.73	0.60	sensitive fine grained	UNDFND	UNDFD	2	.3
5.00	16.40	4.07	0.10	2.40	0.62	clay	UNDFND	UNDFD	4	.3
5.25	17.22	33.64	0.44	1.32	0.64	silty sand to sandy silt	40-50	36-38	11	UNDEFINED
5.50	18.04	34.19	0.52	1.51	0.65	sandy silt to clayey silt	UNDFND	UNDFD	13	3.3
5.75	18.86	8.34	0.16	1.96	0.67	silty clay to clay	UNDFND	UNDFD	5	.7
6.00	19.69	5.26	0.14	2.67	0.69	clay	UNDFND	UNDFD	5	.4
6.25	20.51	4.76	0.15	3.13	0.71	clay	UNDFND	UNDFD	5	.3
6.50	21.33	5.25	0.12	2.25	0.73	silty clay to clay	UNDFND	UNDFD	3	.4
6.75	22.15	6.87	0.14	2.02	0.75	silty clay to clay	UNDFND	UNDFD	4	.5
7.00	22.97	5.48	0.08	1.40	0.77	sensitive fine grained	UNDFND	UNDFD	3	.4
7.25	23.79	4.05	0.07	1.69	0.79	sensitive fine grained	UNDFND	UNDFD	2	.2
7.50	24.61	23.33	0.34	1.46	0.81	sandy silt to clayey silt	UNDFND	UNDFD	9	2.2
7.75	25.43	6.50	0.18	2.71	0.83	clay	UNDFND	UNDFD	6	.5
8.00	26.25	7.67	0.22	2.87	0.85	silty clay to clay	UNDFND	UNDFD	5	.6
8.25	27.07	21.18	0.72	3.41	0.87	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
8.50	27.89	15.46	0.44	2.88	0.89	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
8.75	28.71	12.61	0.22	1.74	0.91	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
9.00	29.53	10.99	0.18	1.64	0.93	clayey silt to silty clay	UNDFND	UNDFD	5	.9
9.25	30.35	15.28	0.43	2.83	0.95	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
9.50	31.17	16.88	0.60	3.56	0.97	silty clay to clay	UNDFND	UNDFD	11	1.5

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT9-5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su (tsf
9.75	31.99	18.38	0.57	3.10	0.99	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
10.00	32.81	25.20	0.57	2.26	1.01	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3
10.25	33.63	24.59	0.70	2.84	1.03	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
10.50	34.45	17.61	0.42	2.38	1.04	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
10.75	35.27	12.03	0.23	1.94	1.06	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.00	36.09	20.51	0.43	2.11	1.08	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
11.25	36.91	18.91	0.35	1.85	1.10	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6
11.50	37.73	10.77	0.21	1.91	1.12	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.75	38.55	10.35	0.22	2.02	1.14	clayey silt to silty clay	UNDFND	UNDFD	5	.8
12.00	39.37	14.38	0.23	1.61	1.16	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
12.25	40.19	38.05	0.51	1.34	1.18	silty sand to sandy silt	340	34-36	12	UNDEFINED
12.50	41.01	192.04	1.26	0.65	1.20	sand	80-90	42-44	37	UNDEFINED
12.75	41.83	24.03	0.57	2.36	1.22	clayey silt to silty clay	UNDFND	UNDFD	12	2.1
13.00	42.65	10.31	0.16	1.46	1.24	clayey silt to silty clay	UNDFND	UNDFD	5	.8
13.25	43.47	12.57	0.24	1.90	1.26	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
13.50	44.29	11.60	0.13	1.16	1.28	clayey silt to silty clay	UNDFND	UNDFD	6	.9
13.75	45.11	16.54	0.31	1.89	1.30	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
14.00	45.93	18.37	0.59	3.24	1.32	clayey silt to silty clay	UNDFND	UNDFD	9	1.5

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

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P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-6
DATE : 01/29/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 7

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	66.9	0.2	0.33	SAND	10	38	1.44	--	---	0.01	--
0.3	157.0	0.6	0.38	SAND	22	72	1.62	--	---	0.01	--
0.4	188.4	1.2	0.64	SAND	28	85	1.42	--	---	0.02	--
0.6	129.2	1.5	1.18	SAND	25	72	0.70	--	---	0.03	--
0.8	63.2	1.7	2.64	SANDY SILT AND SILT	20	54	0.05	--	---	0.04	--
0.9	40.2	1.5	3.71	CLAYEY SILT AND SILTY CLAY	18	47	---	--	---	0.05	2.51
1.1	33.7	1.0	3.06	SANDY SILT AND SILT	13	33	0.02	--	---	0.06	--
1.2	28.9	0.7	2.35	SANDY SILT AND SILT	10	24	0.04	--	---	0.07	--
1.4	24.4	0.5	2.22	SANDY SILT AND SILT	8	20	0.04	--	---	0.08	--
1.6	23.6	0.5	1.99	SANDY SILT AND SILT	8	18	0.04	--	---	0.09	--
1.7	22.2	0.5	2.25	SANDY SILT AND SILT	8	18	0.03	--	---	0.10	--
1.9	20.4	0.5	2.40	SANDY SILT AND SILT	8	17	0.03	--	---	0.10	--
2.1	21.1	0.6	2.66	SANDY SILT AND SILT	8	18	0.02	--	---	0.11	--
2.2	23.8	0.0	0.04	SILTY SAND	6	13	0.10	--	---	0.12	--
2.4	24.6	0.6	2.48	SANDY SILT AND SILT	9	19	0.03	--	---	0.13	--
2.6	1.7	0.6	36.47	CLAY	2	4	---	--	---	0.14	0.10
2.7	22.2	0.6	2.66	SANDY SILT AND SILT	9	18	0.02	--	---	0.15	--
2.9	20.1	0.5	2.59	SANDY SILT AND SILT	8	16	0.02	--	---	0.16	--
3.1	19.3	0.5	2.33	SANDY SILT AND SILT	7	14	0.03	--	---	0.17	--
3.2	16.7	0.4	2.58	SANDY SILT AND SILT	7	13	0.02	--	---	0.18	--
3.4	18.0	0.4	2.06	SANDY SILT AND SILT	7	12	0.03	--	---	0.19	--
3.5	19.0	0.4	2.21	SANDY SILT AND SILT	7	13	0.03	--	---	0.19	--
3.7	21.6	0.5	2.51	SANDY SILT AND SILT	8	15	0.03	--	---	0.20	--
3.9	25.3	0.6	2.34	SANDY SILT AND SILT	9	16	0.03	--	---	0.21	--
4.0	29.3	0.8	2.56	SANDY SILT AND SILT	10	19	0.03	--	---	0.22	--
4.2	27.0	0.9	3.33	SANDY SILT AND SILT	12	21	0.01	--	---	0.23	--
4.3	24.5	0.9	3.59	CLAYEY SILT AND SILTY CLAY	11	20	---	--	---	0.24	1.52
4.5	21.5	0.8	3.81	CLAYEY SILT AND SILTY CLAY	10	18	---	--	---	0.25	1.33
4.7	17.6	0.6	3.47	CLAYEY SILT AND SILTY CLAY	8	15	---	--	---	0.26	1.08
4.8	14.9	0.5	3.02	CLAYEY SILT AND SILTY CLAY	7	12	---	--	---	0.27	0.92
5.0	13.4	0.4	2.76	CLAYEY SILT AND SILTY CLAY	6	10	---	--	---	0.27	0.82
5.2	12.5	0.4	3.04	CLAYEY SILT AND SILTY CLAY	6	10	---	--	---	0.28	0.76
5.3	15.0	0.4	2.41	SANDY SILT AND SILT	6	10	0.02	37	31	0.29	--
5.5	20.7	0.3	1.50	SANDY SILT AND SILT	7	11	0.05	39	38	0.30	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	26.5	0.2	0.64	SILTY SAND	7	12	0.08	40	43	0.31	--
5.8	26.5	0.2	0.57	SILTY SAND	7	12	0.08	39	43	0.32	--
6.0	26.5	0.1	0.49	SILTY SAND	7	12	0.09	39	42	0.33	--
6.1	25.2	0.2	0.87	SILTY SAND	7	11	0.07	39	41	0.34	--
6.3	22.7	0.3	1.28	SILTY SAND	7	11	0.06	38	38	0.35	--
6.5	20.4	0.4	2.06	SANDY SILT AND SILT	7	11	0.03	38	34	0.36	--
6.6	27.0	0.6	2.18	SANDY SILT AND SILT	9	14	0.04	39	41	0.36	--
6.8	27.9	0.9	3.08	SANDY SILT AND SILT	11	17	0.02	39	42	0.37	--
7.0	25.1	0.8	3.26	SANDY SILT AND SILT	11	17	0.01	38	39	0.38	--
7.1	20.1	0.6	2.94	SANDY SILT AND SILT	8	13	0.01	37	33	0.39	--
7.3	18.4	0.6	3.00	SANDY SILT AND SILT	8	12	0.01	37	30	0.39	--
7.4	18.4	0.8	4.08	CLAYEY SILT AND SILTY CLAY	10	14	---	--	---	0.40	1.12
7.6	25.8	0.8	3.17	SANDY SILT AND SILT	11	16	0.01	38	39	0.40	--
7.8	26.5	0.6	2.22	SANDY SILT AND SILT	9	13	0.04	38	39	0.40	--
7.9	23.6	0.4	1.57	SANDY SILT AND SILT	7	11	0.05	38	36	0.41	--
8.1	17.7	0.5	2.88	SANDY SILT AND SILT	8	11	0.01	36	28	0.41	--
8.3	17.0	0.6	3.53	CLAYEY SILT AND SILTY CLAY	8	12	---	--	---	0.42	1.03
8.4	23.8	0.7	2.90	SANDY SILT AND SILT	10	14	0.02	38	35	0.42	--
8.6	29.4	0.8	2.59	SANDY SILT AND SILT	11	15	0.03	39	41	0.42	--
8.8	30.6	0.9	2.81	SANDY SILT AND SILT	11	17	0.03	39	42	0.43	--
8.9	26.8	0.0	0.11	SILTY SAND	7	10	0.10	38	38	0.43	--
9.1	26.6	0.5	2.03	SANDY SILT AND SILT	9	13	0.04	38	38	0.43	--
9.3	6.2	0.8	12.24	CLAY	6	9	---	--	---	0.44	0.36
9.4	26.5	0.8	2.87	SANDY SILT AND SILT	10	15	0.02	38	37	0.44	--
9.6	20.4	0.7	3.24	CLAYEY SILT AND SILTY CLAY	9	13	---	--	---	0.45	1.24
9.7	14.5	0.5	3.52	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.45	0.87
9.9	13.6	0.4	3.16	CLAYEY SILT AND SILTY CLAY	6	9	---	--	---	0.45	0.82
10.1	11.6	0.4	3.37	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.46	0.69
10.2	11.6	0.4	3.81	CLAYEY SILT AND SILTY CLAY	6	9	---	--	---	0.46	0.69
10.4	13.6	0.5	3.74	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.47	0.82
10.6	23.0	0.7	2.88	SANDY SILT AND SILT	9	13	0.02	37	32	0.47	--
10.7	26.5	0.8	2.83	SANDY SILT AND SILT	10	14	0.02	38	36	0.47	--
10.9	23.2	0.7	3.20	SANDY SILT AND SILT	10	14	0.01	37	32	0.48	--
11.1	16.3	0.7	4.35	CLAYEY SILT AND SILTY CLAY	9	13	---	--	---	0.48	0.98
11.2	11.1	0.5	4.43	CLAY	11	15	---	--	---	0.49	0.65
11.4	9.4	0.4	3.71	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.49	0.55
11.5	8.8	0.3	3.05	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.49	0.51
11.7	10.2	0.3	3.04	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.50	0.60
11.9	13.5	0.4	3.19	CLAYEY SILT AND SILTY CLAY	6	9	---	--	---	0.50	0.80
12.0	21.8	0.7	3.03	SANDY SILT AND SILT	9	13	0.01	36	29	0.50	--
12.2	32.1	0.7	2.15	SANDY SILT AND SILT	10	14	0.04	38	40	0.51	--
12.4	26.6	0.7	2.60	SANDY SILT AND SILT	10	13	0.03	37	34	0.51	--
12.5	25.2	0.9	3.42	CLAYEY SILT AND SILTY CLAY	11	15	---	--	---	0.52	1.53

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	40.1	1.3	3.14	SANDY SILT AND SILT	15	21	0.02	39	45	0.52	--
12.9	40.6	1.3	3.27	SANDY SILT AND SILT	16	22	0.02	39	45	0.52	--
13.0	32.4	1.4	4.38	CLAYEY SILT AND SILTY CLAY	16	22	---	--	---	0.53	1.98
13.2	33.5	1.3	3.92	CLAYEY SILT AND SILTY CLAY	16	21	---	--	---	0.53	2.05
13.4	42.1	1.3	3.07	SANDY SILT AND SILT	16	21	0.03	39	46	0.54	--
13.5	46.8	1.0	2.20	SILTY SAND	14	19	0.05	40	48	0.54	--
13.7	32.9	0.8	2.43	SANDY SILT AND SILT	11	15	0.04	38	39	0.54	--
13.8	26.4	0.8	2.99	SANDY SILT AND SILT	11	14	0.02	37	32	0.55	--
14.0	27.1	1.0	3.65	CLAYEY SILT AND SILTY CLAY	13	17	---	--	---	0.55	1.65
14.2	43.5	1.3	2.87	SANDY SILT AND SILT	15	20	0.03	39	46	0.56	--
14.3	57.4	1.2	2.16	SILTY SAND	17	22	0.06	41	54	0.56	--
14.5	82.9	0.7	0.81	SAND	15	20	0.85	42	65	0.56	--
14.7	103.5	0.6	0.57	SAND	16	21	1.29	43	72	0.57	--
14.8	129.2	0.5	0.42	SAND	18	24	1.54	44	79	0.57	--
15.0	183.9	0.8	0.45	SAND	26	34	1.59	46	92	0.58	--
15.2	228.6	0.6	0.24	SAND	30	38	1.87	47	99	0.58	--
15.3	255.6	0.8	0.32	SAND	33	43	1.87	48	100	0.58	--
15.5	250.2	1.3	0.52	SAND	34	44	1.68	48	100	0.59	--
15.7	263.8	0.0	0.00	SAND AND GRAVEL	26	34	4.94	48	100	0.59	--
15.8	263.0	0.8	0.32	SAND	34	43	1.89	48	100	0.60	--
16.0	25.2	0.7	2.74	SANDY SILT AND SILT	10	12	0.02	36	29	0.60	--
16.2	223.0	0.5	0.21	SAND	29	37	1.88	47	97	0.60	--
16.3	169.8	0.4	0.22	SAND	23	29	1.79	45	88	0.61	--
16.5	129.8	0.3	0.22	SAND	17	22	1.76	44	78	0.61	--
16.7	94.5	0.2	0.16	SAND	13	16	1.79	43	68	0.62	--
16.8	71.2	0.1	0.14	SAND	9	12	1.77	41	59	0.62	--
17.0	58.6	0.1	0.15	SAND	8	10	1.70	40	52	0.62	--
17.2	54.4	0.1	0.20	SAND	8	10	1.56	40	50	0.63	--
17.3	53.6	0.1	0.24	SAND	8	10	1.46	40	49	0.63	--
17.5	59.0	0.1	0.20	SAND	8	10	1.61	40	52	0.63	--
17.7	69.4	0.2	0.25	SAND	10	12	1.60	41	57	0.64	--
17.8	87.0	0.2	0.24	SAND	12	15	1.67	42	65	0.64	--
18.0	106.1	0.2	0.23	SAND	14	18	1.72	43	71	0.65	--
18.1	81.9	0.6	0.77	SAND	15	18	0.89	42	62	0.65	--
18.3	40.8	1.0	2.38	SANDY SILT AND SILT	13	16	0.04	38	41	0.65	--
18.5	22.7	0.6	2.82	SANDY SILT AND SILT	9	11	0.02	35	24	0.66	--
18.6	17.7	0.3	1.75	SANDY SILT AND SILT	6	7	0.04	34	20	0.66	--
18.8	15.0	0.2	1.14	SANDY SILT AND SILT	5	6	0.04	33	20	0.67	--
19.0	13.6	0.2	1.47	SANDY SILT AND SILT	5	6	0.03	33	20	0.67	--
19.1	12.9	0.0	0.08	SILTY SAND	3	4	0.09	32	20	0.67	--
19.3	11.5	0.2	1.57	SANDY SILT AND SILT	4	5	0.03	32	20	0.68	--
19.5	5.5	0.2	2.74	CLAYEY SILT AND SILTY CLAY	3	3	---	--	---	0.68	0.28
19.6	10.6	0.1	1.22	SANDY SILT AND SILT	4	5	0.03	31	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	10.2	0.1	0.98	SANDY SILT AND SILT	4	4	0.04	31	20	0.69	--
19.9	9.5	0.1	0.95	SANDY SILT AND SILT	3	4	0.04	31	20	0.69	--
20.1	9.5	0.1	0.74	SANDY SILT AND SILT	3	4	0.04	31	20	0.70	--
20.3	9.5	0.1	0.74	SANDY SILT AND SILT	3	4	0.04	31	20	0.70	--
20.4	10.2	0.1	0.69	SANDY SILT AND SILT	3	4	0.04	31	20	0.70	--
20.6	10.8	0.1	0.84	SANDY SILT AND SILT	4	4	0.04	31	20	0.71	--
20.8	11.3	0.1	0.98	SANDY SILT AND SILT	4	4	0.04	31	20	0.71	--
20.9	13.1	0.2	1.15	SANDY SILT AND SILT	4	5	0.04	32	20	0.72	--
21.1	14.3	0.2	1.19	SANDY SILT AND SILT	5	6	0.04	32	20	0.72	--
21.3	14.3	0.2	1.33	SANDY SILT AND SILT	5	6	0.04	32	20	0.72	--
21.4	15.0	0.2	1.47	SANDY SILT AND SILT	5	6	0.04	33	20	0.73	--
21.6	15.0	0.4	2.47	SANDY SILT AND SILT	6	7	0.02	33	20	0.73	--
21.8	17.7	0.4	2.49	SANDY SILT AND SILT	7	8	0.02	33	20	0.74	--
21.9	24.1	0.4	1.58	SANDY SILT AND SILT	7	9	0.05	35	22	0.74	--
22.1	17.4	0.2	1.32	SANDY SILT AND SILT	6	6	0.04	33	20	0.74	--
22.2	11.7	0.1	1.19	SANDY SILT AND SILT	4	5	0.04	31	20	0.75	--
22.4	10.8	0.2	1.58	SANDY SILT AND SILT	4	5	0.03	31	20	0.75	--
22.6	11.0	0.4	3.45	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.76	0.61
22.7	17.7	0.6	3.34	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.76	1.03
22.9	20.4	0.6	2.74	SANDY SILT AND SILT	8	9	0.02	34	20	0.76	--
23.1	25.5	0.3	1.29	SILTY SAND	8	9	0.06	35	23	0.77	--
23.2	21.8	0.3	1.24	SILTY SAND	7	7	0.06	34	20	0.77	--
23.4	13.6	0.2	1.76	SANDY SILT AND SILT	5	6	0.03	32	20	0.78	--
23.6	9.8	0.1	1.32	SANDY SILT AND SILT	4	4	0.03	30	20	0.78	--
23.7	9.5	0.1	0.95	SANDY SILT AND SILT	3	4	0.04	30	20	0.78	--
23.9	8.9	0.1	0.90	SANDY SILT AND SILT	3	4	0.03	30	20	0.79	--
24.0	8.9	0.1	1.35	SANDY SILT AND SILT	3	4	0.03	30	20	0.79	--
24.2	11.0	0.2	1.73	SANDY SILT AND SILT	4	5	0.02	31	20	0.79	--
24.4	12.2	0.3	2.04	SANDY SILT AND SILT	5	5	0.02	31	20	0.80	--
24.5	13.8	0.3	2.46	SANDY SILT AND SILT	6	6	0.02	32	20	0.80	--
24.7	14.7	0.4	2.52	SANDY SILT AND SILT	6	7	0.02	32	20	0.81	--
24.9	13.6	0.4	2.65	SANDY SILT AND SILT	6	7	0.01	32	20	0.81	--
25.0	12.9	0.3	2.40	SANDY SILT AND SILT	5	6	0.02	31	20	0.81	--
25.2	15.0	0.4	2.34	SANDY SILT AND SILT	6	7	0.02	32	20	0.82	--
25.4	17.0	0.5	2.71	SANDY SILT AND SILT	7	8	0.02	33	20	0.82	--
25.5	17.8	0.5	2.70	SANDY SILT AND SILT	7	8	0.02	33	20	0.83	--
25.7	19.0	0.5	2.63	SANDY SILT AND SILT	8	8	0.02	33	20	0.83	--
25.9	20.4	0.5	2.40	SANDY SILT AND SILT	8	8	0.03	34	20	0.83	--
26.0	20.4	0.6	2.79	SANDY SILT AND SILT	8	9	0.02	33	20	0.84	--
26.2	20.4	0.6	2.85	SANDY SILT AND SILT	8	9	0.02	33	20	0.84	--
26.3	21.1	0.6	2.70	SANDY SILT AND SILT	8	9	0.02	34	20	0.85	--
26.5	21.6	0.6	2.64	SANDY SILT AND SILT	8	9	0.02	34	20	0.85	--
26.7	21.1	0.5	2.47	SANDY SILT AND SILT	8	9	0.03	34	20	0.85	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	19.7	0.5	2.64	SANDY SILT AND SILT	8	8	0.02	33	20	0.86	--
27.0	17.0	0.4	2.35	SANDY SILT AND SILT	7	7	0.02	32	20	0.86	--
27.2	14.9	0.3	2.08	SANDY SILT AND SILT	6	6	0.03	32	20	0.86	--
27.3	12.4	0.2	1.93	SANDY SILT AND SILT	5	5	0.02	31	20	0.87	--
27.5	11.6	0.2	1.73	SANDY SILT AND SILT	4	5	0.03	30	20	0.87	--
27.7	11.0	0.2	1.64	SANDY SILT AND SILT	4	4	0.03	30	20	0.88	--
27.8	11.7	0.2	1.71	SANDY SILT AND SILT	4	5	0.03	31	20	0.88	--
28.0	12.9	0.2	1.70	SANDY SILT AND SILT	5	5	0.03	31	20	0.88	--
28.1	12.9	0.3	2.55	SANDY SILT AND SILT	6	6	0.01	31	20	0.89	--
28.3	15.0	0.7	4.68	CLAY	15	16	---	--	---	0.89	0.84
28.5	23.8	1.1	4.71	CLAYEY SILT AND SILTY CLAY	13	14	---	--	---	0.90	1.39
28.6	27.2	1.3	4.60	CLAYEY SILT AND SILTY CLAY	15	16	---	--	---	0.90	1.60
28.8	28.4	1.0	3.49	CLAYEY SILT AND SILTY CLAY	13	13	---	--	---	0.90	1.67
29.0	28.6	1.1	3.82	CLAYEY SILT AND SILTY CLAY	13	14	---	--	---	0.91	1.69
29.1	29.9	1.7	5.58	CLAY	30	31	---	--	---	0.91	1.77
29.3	39.4	1.7	4.34	CLAYEY SILT AND SILTY CLAY	19	20	---	--	---	0.92	2.36
29.5	70.0	1.2	1.76	SILTY SAND	20	20	0.08	39	48	0.92	--
29.6	89.4	0.8	0.92	SAND	17	18	0.75	40	58	0.92	--
29.8	87.0	1.0	1.10	SAND	19	20	0.48	40	56	0.93	--
30.0	83.0	1.0	1.24	SAND	20	21	0.23	40	54	0.93	--
30.1	133.3	0.7	0.55	SAND	20	21	1.41	42	71	0.94	--
30.3	163.2	0.3	0.19	SAND	22	22	1.81	43	79	0.94	--
30.4	185.0	0.5	0.26	SAND	25	26	1.76	44	83	0.94	--
30.6	202.7	0.6	0.28	SAND	27	28	1.76	44	87	0.95	--
30.8	223.8	0.7	0.33	SAND	30	31	1.78	45	91	0.95	--
30.9	248.1	0.6	0.23	SAND	32	32	1.93	45	94	0.95	--
31.1	250.2	0.5	0.22	SAND	32	32	1.95	45	94	0.96	--
31.3	249.4	0.5	0.22	SAND	32	32	1.95	45	94	0.96	--
31.4	218.9	0.6	0.28	SAND	29	29	1.81	44	90	0.97	--
31.6	223.8	0.7	0.29	SAND	30	30	1.81	45	91	0.97	--
31.8	227.8	0.5	0.22	SAND	29	30	1.88	45	91	0.97	--
31.9	204.6	0.5	0.22	SAND	27	27	1.81	44	87	0.98	--
32.1	176.2	0.4	0.24	SAND	23	24	1.78	43	81	0.98	--
32.3	174.1	0.4	0.22	SAND	23	23	1.79	43	80	0.99	--
32.4	186.7	0.4	0.19	SAND	25	25	1.82	44	83	0.99	--
32.6	184.8	0.2	0.11	SAND	24	24	1.90	43	82	0.99	--
32.7	177.7	0.2	0.14	SAND	23	23	1.87	43	81	1.00	--
32.9	150.3	0.2	0.16	SAND	20	20	1.84	42	74	1.00	--
33.1	154.0	0.2	0.11	SAND	20	20	1.89	43	75	1.01	--
33.2	152.3	0.1	0.08	SAND	19	19	1.92	42	74	1.01	--
33.4	142.1	0.2	0.11	SAND	18	18	1.89	42	72	1.01	--
33.6	107.1	0.9	0.85	SAND	19	19	0.97	41	62	1.02	--
33.7	46.9	0.9	1.88	SILTY SAND	14	14	0.06	37	33	1.02	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	27.0	0.6	2.37	SANDY SILT AND SILT	9	9	0.03	34	20	1.02	--
34.1	22.9	0.3	1.09	SILTY SAND	7	7	0.06	33	20	1.03	--
34.2	24.9	0.3	1.28	SILTY SAND	7	7	0.06	33	20	1.03	--
34.4	21.3	0.4	1.92	SANDY SILT AND SILT	7	7	0.04	33	20	1.04	--
34.5	19.7	0.5	2.33	SANDY SILT AND SILT	7	7	0.03	32	20	1.04	--
34.7	19.2	0.5	2.71	SANDY SILT AND SILT	8	8	0.02	32	20	1.04	--
34.9	20.0	0.5	2.65	SANDY SILT AND SILT	8	8	0.02	32	20	1.05	--
35.0	17.6	0.3	1.88	SANDY SILT AND SILT	6	6	0.03	32	20	1.05	--
35.2	15.5	0.2	1.42	SANDY SILT AND SILT	5	5	0.04	31	20	1.06	--
35.4	15.1	0.2	1.33	SANDY SILT AND SILT	5	5	0.04	31	20	1.06	--
35.5	14.3	0.2	1.26	SANDY SILT AND SILT	5	5	0.04	31	20	1.06	--
35.7	14.3	0.2	1.26	SANDY SILT AND SILT	5	5	0.04	31	20	1.07	--
35.9	13.8	0.2	1.30	SANDY SILT AND SILT	5	5	0.04	30	20	1.07	--
36.0	14.2	0.2	1.27	SANDY SILT AND SILT	5	5	0.04	30	20	1.08	--
36.2	13.1	0.2	1.30	SANDY SILT AND SILT	4	4	0.04	30	20	1.08	--
36.4	12.9	0.2	1.39	SANDY SILT AND SILT	5	4	0.03	30	20	1.08	--
36.5	12.9	0.2	1.32	SANDY SILT AND SILT	4	4	0.04	30	20	1.09	--
36.7	12.8	0.2	1.72	SANDY SILT AND SILT	5	5	0.03	30	20	1.09	--
36.8	13.7	0.3	1.82	SANDY SILT AND SILT	5	5	0.03	30	20	1.10	--
37.0	14.3	0.2	1.68	SANDY SILT AND SILT	5	5	0.03	30	20	1.10	--
37.2	12.9	0.2	1.55	SANDY SILT AND SILT	5	4	0.03	30	20	1.10	--
37.3	12.9	0.2	1.70	SANDY SILT AND SILT	5	5	0.03	30	20	1.11	--
37.5	13.6	0.3	1.92	SANDY SILT AND SILT	5	5	0.03	30	20	1.11	--
37.7	13.5	0.3	2.07	SANDY SILT AND SILT	5	5	0.02	30	20	1.11	--
37.8	13.1	0.3	1.98	SANDY SILT AND SILT	5	5	0.02	30	20	1.12	--
38.0	14.0	0.3	2.35	SANDY SILT AND SILT	6	5	0.02	30	20	1.12	--
38.2	14.5	0.4	3.03	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.13	0.78
38.3	15.4	0.4	2.79	SANDY SILT AND SILT	7	6	0.01	31	20	1.13	--
38.5	14.4	0.4	2.57	SANDY SILT AND SILT	6	6	0.01	30	20	1.13	--
38.6	13.2	0.3	2.04	SANDY SILT AND SILT	5	5	0.02	30	20	1.14	--
38.8	12.6	0.2	1.91	SANDY SILT AND SILT	5	5	0.02	30	20	1.14	--
39.0	13.6	0.3	2.21	SANDY SILT AND SILT	5	5	0.02	30	20	1.15	--
39.1	16.1	0.4	2.23	SANDY SILT AND SILT	6	6	0.02	31	20	1.15	--
39.3	19.0	0.6	3.26	CLAYEY SILT AND SILTY CLAY	9	8	---	--	---	1.15	1.05
39.5	46.2	0.5	1.02	SILTY SAND	13	12	0.09	36	29	1.16	--
39.6	77.6	0.3	0.40	SAND	12	11	1.40	38	46	1.16	--
39.8	77.5	0.4	0.54	SAND	12	12	1.19	38	45	1.17	--
40.0	52.5	0.5	0.99	SILTY SAND	14	13	0.09	36	32	1.17	--
40.1	30.6	0.5	1.70	SILTY SAND	9	9	0.05	34	20	1.17	--
40.3	25.9	0.9	3.39	CLAYEY SILT AND SILTY CLAY	12	11	---	--	---	1.18	1.48
40.5	72.1	1.1	1.54	SILTY SAND	20	18	0.09	38	43	1.18	--
40.6	97.3	1.1	1.09	SAND	20	18	0.60	39	54	1.19	--
40.8	76.6	1.0	1.32	SILTY SAND	20	19	0.10	38	44	1.19	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	44.9	1.2	2.72	SANDY SILT AND SILT	15	14	0.04	36	27	1.19	--
41.1	28.6	1.1	3.82	CLAYEY SILT AND SILTY CLAY	13	12	---	--	---	1.20	1.64
41.3	17.0	0.6	3.71	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.20	0.92
41.4	13.6	0.4	2.72	SANDY SILT AND SILT	6	6	0.01	30	20	1.20	--
41.6	12.2	0.3	2.53	SANDY SILT AND SILT	5	5	0.01	29	20	1.21	--
41.8	13.1	0.3	2.22	SANDY SILT AND SILT	5	5	0.02	29	20	1.21	--
41.9	13.6	0.3	1.91	SANDY SILT AND SILT	5	5	0.03	30	20	1.22	--
42.1	12.9	0.2	1.47	SANDY SILT AND SILT	5	4	0.03	29	20	1.22	--
42.3	12.3	0.2	1.30	SANDY SILT AND SILT	4	4	0.04	29	20	1.22	--
42.4	12.8	0.1	1.09	SANDY SILT AND SILT	4	4	0.04	29	20	1.23	--
42.6	12.9	0.2	1.24	SANDY SILT AND SILT	4	4	0.04	29	20	1.23	--
42.7	13.3	0.2	1.35	SANDY SILT AND SILT	5	4	0.04	29	20	1.24	--
42.9	13.4	0.2	1.50	SANDY SILT AND SILT	5	4	0.03	29	20	1.24	--
43.1	13.0	0.2	1.46	SANDY SILT AND SILT	5	4	0.03	29	20	1.24	--
43.2	13.1	0.2	1.45	SANDY SILT AND SILT	5	4	0.03	29	20	1.25	--
43.4	13.3	0.2	1.35	SANDY SILT AND SILT	5	4	0.04	29	20	1.25	--
43.6	13.8	0.2	1.45	SANDY SILT AND SILT	5	4	0.04	30	20	1.26	--
43.7	14.3	0.2	1.47	SANDY SILT AND SILT	5	4	0.04	30	20	1.26	--
43.9	14.3	0.3	1.75	SANDY SILT AND SILT	5	5	0.03	30	20	1.26	--
44.1	14.9	0.3	2.08	SANDY SILT AND SILT	6	5	0.02	30	20	1.27	--
44.2	17.0	0.3	1.76	SANDY SILT AND SILT	6	5	0.04	31	20	1.27	--
44.4	19.7	0.3	1.67	SANDY SILT AND SILT	6	6	0.04	31	20	1.27	--
44.6	21.1	0.4	1.71	SANDY SILT AND SILT	7	6	0.04	32	20	1.28	--
44.7	21.1										
44.9	19.7										

F-23

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-8
DATE : 01/31/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
NO GROUNDWATER ENCOUNTERED IN TEST HOLE

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	304.5	0.5	0.17	SAND AND GRAVEL	34	99	3.31	--	---	0.01	--
0.3	674.4	1.6	0.23	SAND AND GRAVEL	71	99	4.15	--	---	0.01	--
0.4	536.9	2.6	0.48	SAND AND GRAVEL	63	99	2.88	--	---	0.02	--
0.6	396.1	2.3	0.59	SAND	51	99	1.91	--	---	0.03	--
0.8	254.5	1.3	0.49	SAND	35	94	1.72	--	---	0.04	--
0.9	155.3	1.1	0.70	SAND	24	63	1.30	--	---	0.05	--
1.1	78.0	1.6	2.09	SILTY SAND	22	57	0.07	--	---	0.06	--
1.2	46.2	1.7	3.75	SANDY SILT AND SILT	20	50	0.01	--	---	0.07	--
1.4	24.8	1.5	5.92	CLAY	25	59	---	--	---	0.08	1.55
1.6	23.6	0.9	3.78	CLAYEY SILT AND SILTY CLAY	11	26	---	--	---	0.09	1.47
1.7	22.6	0.8	3.41	CLAYEY SILT AND SILTY CLAY	10	23	---	--	---	0.10	1.41
1.9	21.7	0.8	3.78	CLAYEY SILT AND SILTY CLAY	10	23	---	--	---	0.10	1.35
2.1	28.2	1.0	3.51	CLAYEY SILT AND SILTY CLAY	13	28	---	--	---	0.11	1.75
2.2	30.2	1.1	3.68	CLAYEY SILT AND SILTY CLAY	14	30	---	--	---	0.12	1.88
2.4	49.4	1.2	2.39	SANDY SILT AND SILT	15	32	0.05	--	---	0.13	--
2.6	71.7	1.1	1.49	SILTY SAND	19	40	0.09	--	---	0.14	--
2.7	60.9	0.8	1.28	SILTY SAND	16	33	0.09	--	---	0.15	--
2.9	54.5	0.4	0.79	SAND	13	26	0.30	--	---	0.16	--
3.1	51.3	0.4	0.74	SAND	12	24	0.26	--	---	0.17	--
3.2	50.7	0.4	0.71	SAND	12	23	0.30	--	---	0.18	--
3.4	44.7	0.4	0.92	SILTY SAND	12	23	0.09	--	---	0.19	--
3.5	39.3	0.4	0.97	SILTY SAND	11	20	0.09	--	---	0.19	--
3.7	33.0	0.3	1.03	SILTY SAND	9	17	0.08	--	---	0.20	--
3.9	29.6	0.3	0.91	SILTY SAND	8	15	0.08	--	---	0.21	--
4.0	27.5	0.1	0.25	SILTY SAND	7	13	0.09	--	---	0.22	--
4.2	33.0										
4.3	295.0	OBSTRUCTION									

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-8A
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/19/90/14:53
Cone Used :IV
Water table (meters) : 2.5

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	191.37	1.79	0.93	0.02	sand	>90	>48	37	UNDEFINED
0.50	1.64	22.72	1.31	5.76	0.07	clay	UNDFND	UNDFD	22	2.2
0.75	2.46	22.53	1.14	5.06	0.11	clay	UNDFND	UNDFD	22	2.2
1.00	3.28	22.47	1.06	4.72	0.16	clay	UNDFND	UNDFD	22	2.2
1.25	4.10	24.19	0.87	3.60	0.20	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
1.50	4.92	24.24	0.71	2.95	0.25	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
1.75	5.74	22.85	0.68	2.96	0.29	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
2.00	6.56	21.48	0.81	3.76	0.34	silty clay to clay	UNDFND	UNDFD	14	2.1
2.25	7.38	26.61	0.94	3.54	0.38	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
2.50	8.20	20.84	0.70	3.36	0.43	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
2.75	9.02	14.64	0.51	3.48	0.46	silty clay to clay	UNDFND	UNDFD	9	1.4
3.00	9.84	16.57	0.61	3.67	0.48	silty clay to clay	UNDFND	UNDFD	11	1.6
3.25	10.66	18.70	0.62	3.33	0.50	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
3.50	11.48	9.66	0.40	4.09	0.52	clay	UNDFND	UNDFD	9	.9
3.75	12.30	6.58	0.29	4.34	0.54	clay	UNDFND	UNDFD	6	.5
4.00	13.12	7.32	0.38	5.19	0.56	clay	UNDFND	UNDFD	7	.6
4.25	13.94	5.46	0.28	5.04	0.58	clay	UNDFND	UNDFD	5	.4
4.50	14.76	7.40	0.21	2.81	0.60	silty clay to clay	UNDFND	UNDFD	5	.6
4.75	15.58	13.30	0.28	2.09	0.62	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
5.00	16.40	32.83	0.63	1.93	0.64	sandy silt to clayey silt	UNDFND	UNDFD	13	3.1
5.25	17.22	88.33	0.63	0.71	0.66	sand to silty sand	60-70	42-44	21	UNDEFINED
5.50	18.04	47.38	0.61	1.29	0.68	silty sand to sandy silt	50-60	38-40	15	UNDEFINED
5.75	18.86	39.91	0.97	2.44	0.69	sandy silt to clayey silt	UNDFND	UNDFD	15	3.8
6.00	19.69	19.39	0.17	0.86	0.71	sandy silt to clayey silt	UNDFND	UNDFD	7	1.8
6.25	20.51	9.72	0.22	2.28	0.73	silty clay to clay	UNDFND	UNDFD	6	.8
6.50	21.33	9.60	0.22	2.32	0.75	silty clay to clay	UNDFND	UNDFD	6	.8
6.75	22.15	19.53	0.29	1.46	0.77	sandy silt to clayey silt	UNDFND	UNDFD	7	1.8
7.00	22.97	8.97	0.21	2.35	0.79	silty clay to clay	UNDFND	UNDFD	6	.7
7.25	23.79	6.51	0.14	2.19	0.81	silty clay to clay	UNDFND	UNDFD	4	.5
7.50	24.61	8.54	0.23	2.75	0.83	silty clay to clay	UNDFND	UNDFD	5	.7
7.75	25.43	17.31	0.50	2.82	0.85	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
8.00	26.25	7.68	0.18	2.36	0.87	silty clay to clay	UNDFND	UNDFD	5	.6
8.25	27.07	12.37	0.43	3.49	0.89	silty clay to clay	UNDFND	UNDFD	8	1.0
8.50	27.89	15.20	0.53	3.47	0.91	silty clay to clay	UNDFND	UNDFD	10	1.3
8.75	28.71	12.41	0.50	3.99	0.93	clay	UNDFND	UNDFD	12	1.0
9.00	29.53	46.48	0.90	1.93	0.95	sandy silt to clayey silt	UNDFND	UNDFD	18	4.4
9.25	30.35	22.81	0.75	3.27	0.97	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
9.50	31.17	86.36	1.08	1.25	0.99	sand to silty sand	60-70	40-42	21	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-8A

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	183.77	1.61	0.87	1.01	sand	80-90	42-44	35	UNDEFINED
10.00	32.81	218.50	1.44	0.66	1.03	sand	80-90	44-46	42	UNDEFINED
10.25	33.63	306.79	1.53	0.50	1.05	gravelly sand to sand	>90	44-46	49	UNDEFINED
10.50	34.45	320.42	1.19	0.37	1.07	gravelly sand to sand	>90	44-46	>50	UNDEFINED
10.75	35.27	301.57	1.52	0.50	1.08	gravelly sand to sand	>90	44-46	48	UNDEFINED
11.00	36.09	247.48	1.39	0.56	1.10	sand	>90	44-46	47	UNDEFINED
11.25	36.91	226.66	0.69	0.30	1.12	sand	80-90	44-46	43	UNDEFINED
11.50	37.73	135.18	0.80	0.59	1.14	sand	70-80	40-42	26	UNDEFINED
11.75	38.55	15.71	0.24	1.54	1.16	sandy silt to clayey silt	UNDFND	UNDFD	6	1.3
12.00	39.37	15.34	0.30	1.98	1.18	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
12.25	40.19	10.89	0.17	1.56	1.20	clayey silt to silty clay	UNDFND	UNDFD	5	.8
12.50	41.01	10.80	0.27	2.54	1.22	silty clay to clay	UNDFND	UNDFD	7	.8
12.75	41.83	43.42	1.17	2.70	1.24	sandy silt to clayey silt	UNDFND	UNDFD	17	4.1
13.00	42.65	51.38	1.37	2.67	1.26	sandy silt to clayey silt	UNDFND	UNDFD	20	4.9
13.25	43.47	20.84	0.73	3.49	1.28	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
13.50	44.29	12.76	0.39	3.03	1.30	silty clay to clay	UNDFND	UNDFD	8	1.0
13.75	45.11	10.71	0.19	1.79	1.32	clayey silt to silty clay	UNDFND	UNDFD	5	.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-9
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/19/90/17:45
Cone Used :IV
Water table (meters) : 2.1

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	72.50	2.12	2.33	0.02	sandy silt to clayey silt	UNDFND	UNDFD	28	7.2
0.50	1.64	33.52	1.18	3.51	0.07	clayey silt to silty clay	UNDFND	UNDFD	16	3.3
0.75	2.46	27.08	0.92	3.39	0.11	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
1.00	3.28	27.45	0.78	2.85	0.16	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
1.25	4.10	24.48	0.89	3.65	0.20	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
1.50	4.92	28.87	1.16	4.01	0.25	silty clay to clay	UNDFND	UNDFD	18	2.8
1.75	5.74	19.88	0.76	3.83	0.29	silty clay to clay	UNDFND	UNDFD	13	1.9
2.00	6.56	12.18	0.40	3.32	0.34	silty clay to clay	UNDFND	UNDFD	8	1.1
2.25	7.38	11.16	0.38	3.38	0.38	silty clay to clay	UNDFND	UNDFD	7	1.0
2.50	8.20	2.60	0.09	3.54	0.40	clay	UNDFND	UNDFD	2	.2
2.75	9.02	8.38	0.14	1.58	0.42	clayey silt to silty clay	UNDFND	UNDFD	4	.8
3.00	9.84	13.72	0.49	3.58	0.44	silty clay to clay	UNDFND	UNDFD	9	1.3
3.25	10.66	8.85	0.51	5.76	0.46	clay	UNDFND	UNDFD	8	.8
3.50	11.48	7.83	0.43	5.52	0.48	clay	UNDFND	UNDFD	8	.7
3.75	12.30	6.00	0.33	5.56	0.50	clay	UNDFND	UNDFD	6	.5
4.00	13.12	5.17	0.19	3.68	0.52	clay	UNDFND	UNDFD	5	.4
4.25	13.94	5.62	0.11	2.00	0.54	silty clay to clay	UNDFND	UNDFD	4	.4
4.50	14.76	5.39	0.08	1.53	0.56	sensitive fine grained	UNDFND	UNDFD	3	.4
4.75	15.58	7.22	0.16	2.20	0.58	silty clay to clay	UNDFND	UNDFD	5	.6
5.00	16.40	13.46	0.32	2.38	0.60	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
5.25	17.22	50.96	0.28	0.54	0.61	sand to silty sand	50-60	40-42	12	UNDEFINED
5.50	18.04	8.41	0.13	1.59	0.63	clayey silt to silty clay	UNDFND	UNDFD	4	.7
5.75	18.86	11.94	0.40	3.34	0.65	silty clay to clay	UNDFND	UNDFD	8	1.0
6.00	19.69	9.91	0.33	3.34	0.67	silty clay to clay	UNDFND	UNDFD	6	.8
6.25	20.51	6.02	0.11	1.89	0.69	silty clay to clay	UNDFND	UNDFD	4	.4
6.50	21.33	9.55	0.17	1.79	0.71	clayey silt to silty clay	UNDFND	UNDFD	5	.8
6.75	22.15	8.99	0.19	2.08	0.73	silty clay to clay	UNDFND	UNDFD	6	.7
7.00	22.97	17.37	0.54	3.11	0.75	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
7.25	23.79	7.58	0.17	2.26	0.77	silty clay to clay	UNDFND	UNDFD	5	.6
7.50	24.61	10.60	0.20	1.92	0.79	clayey silt to silty clay	UNDFND	UNDFD	5	.9
7.75	25.43	15.68	0.34	2.18	0.81	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
8.00	26.25	13.47	0.29	2.17	0.83	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
8.25	27.07	15.14	0.26	1.69	0.85	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
8.50	27.89	27.49	0.61	2.20	0.87	sandy silt to clayey silt	UNDFND	UNDFD	11	2.5
8.75	28.71	92.22	1.03	1.11	0.89	sand to silty sand	60-70	40-42	22	UNDEFINED
9.00	29.53	119.30	0.50	0.42	0.91	sand	70-80	42-44	23	UNDEFINED
9.25	30.35	29.11	0.45	1.56	0.93	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7
9.50	31.17	50.65	1.02	2.01	0.95	sandy silt to clayey silt	UNDFND	UNDFD	19	4.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-9

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	182.63	0.92	0.50	0.97	sand	80-90	42-44	35	UNDEFINED
10.00	32.81	272.12	0.96	0.35	0.99	gravelly sand to sand	>90	44-46	43	UNDEFINED
10.25	33.63	233.75	1.02	0.44	1.00	sand	>90	44-46	45	UNDEFINED
10.50	34.45	211.13	1.36	0.64	1.02	sand	80-90	44-46	40	UNDEFINED
10.75	35.27	227.31	0.82	0.36	1.04	sand	80-90	44-46	44	UNDEFINED
11.00	36.09	281.06	1.35	0.48	1.06	gravelly sand to sand	>90	44-46	45	UNDEFINED
11.25	36.91	370.78	1.80	0.49	1.08	gravelly sand to sand	>90	46-48	>50	UNDEFINED
11.50	37.73	136.70	0.98	0.72	1.10	sand	70-80	40-42	26	UNDEFINED
11.75	38.55	16.10	0.18	1.12	1.12	sandy silt to clayey silt	UNDFND	UNDFD	6	1.4
12.00	39.37	50.71	1.37	2.69	1.14	sandy silt to clayey silt	UNDFND	UNDFD	19	4.3
12.25	40.19	135.24	1.09	0.81	1.16	sand to silty sand	70-80	40-42	32	UNDEFINED
12.50	41.01	44.24	1.16	2.63	1.18	sandy silt to clayey silt	UNDFND	UNDFD	17	4.2
12.75	41.83	9.15	0.47	5.15	1.20	clay	UNDFND	UNDFD	9	.6
13.00	42.65	15.19	0.44	2.89	1.22	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
13.25	43.47	11.34	0.25	2.15	1.24	clayey silt to silty clay	UNDFND	UNDFD	6	.9
13.50	44.29	14.83	0.28	1.89	1.26	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
13.75	45.11	17.77	0.27	1.50	1.28	sandy silt to clayey silt	UNDFND	UNDFD	7	1.5

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-10
DATE : 01/29/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
NO GROUNDWATER ENCOUNTERED IN TEST HOLE

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	9.4	0.3	3.62	CLAYEY SILT AND SILTY CLAY	5	19	---	--	---	0.01	0.59
0.3	20.9	0.7	3.16	SANDY SILT AND SILT	9	30	0.01	--	---	0.01	--
0.4	24.3	0.7	2.88	SANDY SILT AND SILT	10	30	0.02	--	---	0.02	--
0.6	26.4	0.9	3.26	SANDY SILT AND SILT	11	33	0.01	--	---	0.03	--
0.8	26.2	1.1	4.16	CLAYEY SILT AND SILTY CLAY	13	36	---	--	---	0.04	1.64
0.9	23.2	1.4	5.87	CLAY	23	61	---	--	---	0.05	1.44
1.1	23.7	1.4	5.90	CLAY	24	60	---	--	---	0.06	1.48
1.2	24.3	1.3	5.40	CLAY	24	60	---	--	---	0.07	1.51
1.4	23.0	1.2	5.18	CLAY	23	55	---	--	---	0.08	1.43
1.6	27.1	1.1	4.03	CLAYEY SILT AND SILTY CLAY	13	31	---	--	---	0.09	1.69
1.7	38.5	1.0	2.70	SANDY SILT AND SILT	13	30	0.03	--	---	0.10	--
1.9	51.3	1.1	2.06	SILTY SAND	15	34	0.06	--	---	0.10	--
2.1	59.0	1.0	1.73	SILTY SAND	17	36	0.08	--	---	0.11	--
2.2	57.6	1.1	1.98	SILTY SAND	17	36	0.07	--	---	0.12	--
2.4	54.3	1.1	2.03	SILTY SAND	16	34	0.06	--	---	0.13	--
2.6	52.2	1.1	2.14	SILTY SAND	16	32	0.06	--	---	0.14	--
2.7	44.8	0.9	2.10	SILTY SAND	14	28	0.05	--	---	0.15	--
2.9	40.2	1.0	2.39	SANDY SILT AND SILT	13	26	0.04	--	---	0.16	--
3.1	38.6	0.9	2.30	SANDY SILT AND SILT	12	24	0.05	--	---	0.17	--
3.2	39.8	0.9	2.19	SANDY SILT AND SILT	12	24	0.05	--	---	0.18	--
3.4	41.4	1.1	2.56	SANDY SILT AND SILT	14	26	0.04	--	---	0.19	--
3.5	46.1	1.5	3.17	SANDY SILT AND SILT	17	33	0.03	--	---	0.19	--
3.7	53.3	2.3	4.22	CLAYEY SILT AND SILTY CLAY	25	46	---	--	---	0.20	3.32
3.9	54.3	2.6	4.86	CLAYEY SILT AND SILTY CLAY	28	52	---	--	---	0.21	3.38
4.0	47.5	2.6	5.44	CLAY	47	86	---	--	---	0.22	2.95
4.2	42.0	2.4	5.78	CLAY	42	76	---	--	---	0.23	2.61
4.3	35.4	2.2	6.08	CLAY	35	63	---	--	---	0.24	2.20
4.5	30.1	1.7	5.64	CLAY	30	53	---	--	---	0.25	1.87
4.7	27.4	1.3	4.78	CLAYEY SILT AND SILTY CLAY	15	27	---	--	---	0.26	1.70
4.8	26.0	1.1	4.27	CLAYEY SILT AND SILTY CLAY	13	23	---	--	---	0.27	1.61
5.0	25.8	1.0	3.72	CLAYEY SILT AND SILTY CLAY	12	21	---	--	---	0.27	1.60
5.2	25.7	0.9	3.42	CLAYEY SILT AND SILTY CLAY	12	19	---	--	---	0.28	1.59
5.3	23.7	0.8	3.30	CLAYEY SILT AND SILTY CLAY	11	18	---	--	---	0.29	1.46
5.5	22.3	0.7	3.05	SANDY SILT AND SILT	9	16	0.01	39	40	0.30	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	20.9	0.6	2.73	SANDY SILT AND SILT	8	14	0.02	38	37	0.31	--
5.8	20.5	0.5	2.64	SANDY SILT AND SILT	8	13	0.02	38	36	0.32	--
6.0	21.6	0.5	2.45	SANDY SILT AND SILT	8	13	0.03	38	37	0.33	--
6.1	21.4	0.5	2.25	SANDY SILT AND SILT	8	12	0.03	38	37	0.34	--
6.3	23.4	0.5	2.31	SANDY SILT AND SILT	8	13	0.03	38	39	0.35	--
6.5	26.2	0.8	3.17	SANDY SILT AND SILT	11	17	0.01	39	41	0.36	--
6.6	32.6	1.2	3.56	CLAYEY SILT AND SILTY CLAY	15	22	---	--	---	0.36	2.01
6.8	31.8	1.3	4.00	CLAYEY SILT AND SILTY CLAY	15	23	---	--	---	0.37	1.96
7.0	33.2	1.3	3.92	CLAYEY SILT AND SILTY CLAY	16	24	---	--	---	0.38	2.05
7.1	31.2	1.2	3.98	CLAYEY SILT AND SILTY CLAY	15	22	---	--	---	0.39	1.92
7.3	28.4	1.0	3.52	CLAYEY SILT AND SILTY CLAY	13	19	---	--	---	0.40	1.75
7.4	23.7	0.7	3.04	SANDY SILT AND SILT	10	15	0.02	38	36	0.41	--
7.6	21.0	0.5	2.58	SANDY SILT AND SILT	8	12	0.02	37	32	0.42	--
7.8	18.7	0.5	2.62	SANDY SILT AND SILT	8	11	0.02	36	29	0.43	--
7.9	17.7	0.4	2.38	SANDY SILT AND SILT	7	10	0.02	36	27	0.44	--
8.1	17.3	0.4	2.08	SANDY SILT AND SILT	6	9	0.03	36	26	0.45	--
8.3	15.5	0.4	2.32	SANDY SILT AND SILT	6	9	0.02	35	23	0.45	--
8.4	15.5	0.4	2.32	SANDY SILT AND SILT	6	9	0.02	35	23	0.46	--
8.6	14.7	0.4	2.45	SANDY SILT AND SILT	6	8	0.02	35	21	0.47	--
8.8	13.5	0.3	2.45	SANDY SILT AND SILT	6	8	0.02	34	20	0.48	--
8.9	12.4	0.3	2.51	SANDY SILT AND SILT	5	7	0.01	34	20	0.49	--
9.1	11.2	0.3	2.41	SANDY SILT AND SILT	5	7	0.01	33	20	0.50	--
9.3	10.0	0.2	2.21	SANDY SILT AND SILT	4	6	0.01	32	20	0.51	--
9.4	8.9	0.2	2.36	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.52	0.52
9.6	8.6	0.2	2.32	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.53	0.51
9.7	9.1	0.2	2.21	SANDY SILT AND SILT	4	5	0.01	32	20	0.54	--
9.9	9.4	0.2	2.34	SANDY SILT AND SILT	4	6	0.01	32	20	0.54	--
10.1	10.1	0.3	2.58	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.55	0.59
10.2	10.1	0.3	2.58	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.56	0.59
10.4	9.4	0.2	2.56	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.57	0.55
10.6	9.4	0.2	2.24	SANDY SILT AND SILT	4	5	0.01	31	20	0.58	--
10.7	10.1	0.2	1.99	SANDY SILT AND SILT	4	5	0.02	32	20	0.59	--
10.9	10.2	0.2	1.95	SANDY SILT AND SILT	4	5	0.02	32	20	0.60	--
11.1	10.9	0.2	1.84	SANDY SILT AND SILT	4	5	0.02	32	20	0.61	--
11.2	11.6	0.2	1.72	SANDY SILT AND SILT	4	6	0.03	32	20	0.62	--
11.4	12.4	0.2	1.61	SANDY SILT AND SILT	5	6	0.03	32	20	0.63	--
11.5	13.4	0.2	1.79	SANDY SILT AND SILT	5	6	0.03	33	20	0.64	--
11.7	13.8	0.3	2.17	SANDY SILT AND SILT	5	7	0.02	33	20	0.64	--
11.9	14.4	0.4	2.64	SANDY SILT AND SILT	6	8	0.01	33	20	0.65	--
12.0	14.8	0.4	2.49	SANDY SILT AND SILT	6	8	0.02	33	20	0.66	--
12.2	15.1	0.4	2.39	SANDY SILT AND SILT	6	7	0.02	33	20	0.67	--
12.4	14.8	0.3	2.29	SANDY SILT AND SILT	6	7	0.02	33	20	0.68	--
12.5	13.6	0.3	2.36	SANDY SILT AND SILT	6	7	0.02	32	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	13.1	0.3	2.59	SANDY SILT AND SILT	6	7	0.01	32	20	0.70	--
12.9	12.5	0.3	2.72	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.71	0.74
13.0	12.6	0.4	2.78	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.72	0.74
13.2	13.5	0.4	2.60	SANDY SILT AND SILT	6	7	0.01	32	20	0.73	--
13.4	13.5	0.3	2.45	SANDY SILT AND SILT	6	7	0.02	32	20	0.73	--
13.5	12.8	0.3	2.42	SANDY SILT AND SILT	5	6	0.01	32	20	0.74	--
13.7	12.7	0.3	2.20	SANDY SILT AND SILT	5	6	0.02	32	20	0.75	--
13.8	12.3	0.3	2.20	SANDY SILT AND SILT	5	6	0.02	31	20	0.76	--
14.0	12.8	0.3	2.12	SANDY SILT AND SILT	5	6	0.02	32	20	0.77	--
14.2	12.8	0.3	2.19	SANDY SILT AND SILT	5	6	0.02	32	20	0.78	--
14.3	12.8	0.3	2.27	SANDY SILT AND SILT	5	6	0.02	31	20	0.79	--
14.5	13.5	0.3	2.30	SANDY SILT AND SILT	5	6	0.02	32	20	0.80	--
14.7	14.2	0.3	2.33	SANDY SILT AND SILT	6	6	0.02	32	20	0.81	--
14.8	14.4	0.4	2.91	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.82	0.85
15.0	15.5	0.4	2.59	SANDY SILT AND SILT	6	7	0.02	32	20	0.82	--
15.2	14.8	0.4	2.63	SANDY SILT AND SILT	6	7	0.01	32	20	0.83	--
15.3	12.1	0.4	3.06	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.84	0.70
15.5	12.5	0.3	2.09	SANDY SILT AND SILT	5	5	0.02	31	20	0.85	--
15.7	11.7	0.2	1.71	SANDY SILT AND SILT	4	5	0.03	31	20	0.86	--
15.8	9.6	0.2	2.29	SANDY SILT AND SILT	4	5	0.01	30	20	0.87	--
16.0	9.4	0.3	2.88	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.88	0.53
16.2	11.2	0.3	2.95	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.89	0.64
16.3	14.8	0.3	1.75	SANDY SILT AND SILT	5	6	0.03	32	20	0.90	--
16.5	18.2	0.2	0.88	SILTY SAND	5	6	0.06	33	20	0.91	--
16.7	12.6	0.2	1.19	SANDY SILT AND SILT	4	4	0.04	31	20	0.92	--
16.8	10.4	0.2	1.93	SANDY SILT AND SILT	4	4	0.02	30	20	0.93	--
17.0	12.5	0.2	1.20	SANDY SILT AND SILT	4	4	0.04	31	20	0.93	--
17.2	13.4	0.2	1.64	SANDY SILT AND SILT	5	5	0.03	31	20	0.94	--
17.3	13.5	0.3	1.86	SANDY SILT AND SILT	5	5	0.03	31	20	0.95	--
17.5	13.5	0.3	2.00	SANDY SILT AND SILT	5	5	0.02	31	20	0.96	--
17.7	12.1	0.3	2.06	SANDY SILT AND SILT	5	5	0.02	30	20	0.97	--
17.8	10.7	0.2	2.05	SANDY SILT AND SILT	4	4	0.02	30	20	0.98	--
18.0	10.0	0.2	1.51	SANDY SILT AND SILT	4	4	0.03	29	20	0.99	--
18.1	9.4	0.1	1.17	SANDY SILT AND SILT	3	3	0.03	29	20	1.00	--
18.3	8.8	0.1	1.02	SANDY SILT AND SILT	3	3	0.03	28	20	1.01	--
18.5	9.4	0.1	0.96	SANDY SILT AND SILT	3	3	0.03	29	20	1.02	--
18.6	10.8	0.1	1.02	SANDY SILT AND SILT	4	4	0.04	29	20	1.02	--
18.8	11.4	0.1	1.06	SANDY SILT AND SILT	4	4	0.04	30	20	1.03	--
19.0	11.4	0.1	0.87	SANDY SILT AND SILT	4	4	0.04	30	20	1.04	--
19.1	10.8	0.1	1.02	SANDY SILT AND SILT	4	4	0.04	29	20	1.05	--
19.3	10.1	0.1	0.60	SANDY SILT AND SILT	3	3	0.04	29	20	1.06	--
19.5	15.5	0.5	2.90	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.07	0.90
19.6	10.1	0.6	5.56	CLAY	10	10	---	--	---	1.08	0.56

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	39.1	0.7	1.74	SILTY SAND	12	11	0.06	35	25	1.09	--
19.9	35.9	0.5	1.25	SILTY SAND	10	10	0.07	35	22	1.10	--
20.1	34.9	0.3	0.97	SILTY SAND	10	9	0.08	35	21	1.11	--
20.3	21.6	0.3	1.21	SILTY SAND	6	6	0.06	32	20	1.12	--
20.4	12.7	0.2	1.58	SANDY SILT AND SILT	5	4	0.03	30	20	1.12	--
20.6	11.9	0.2	1.43	SANDY SILT AND SILT	4	4	0.03	29	20	1.13	--
20.8	12.1	0.2	1.32	SANDY SILT AND SILT	4	4	0.03	29	20	1.14	--
20.9	11.5	0.1	1.22	SANDY SILT AND SILT	4	4	0.03	29	20	1.15	--
21.1	11.0	0.2	1.46	SANDY SILT AND SILT	4	4	0.03	29	20	1.16	--
21.3	11.3	0.2	1.77	SANDY SILT AND SILT	4	4	0.02	29	20	1.17	--
21.4	11.8	0.2	1.95	SANDY SILT AND SILT	5	4	0.02	29	20	1.18	--
21.6	14.8	0.3	2.29	SANDY SILT AND SILT	6	5	0.02	30	20	1.19	--
21.8	15.9	0.4	2.38	SANDY SILT AND SILT	6	6	0.02	31	20	1.20	--
21.9	16.3	0.3	1.84	SANDY SILT AND SILT	6	5	0.03	31	20	1.21	--
22.1	11.3	0.2	2.03	SANDY SILT AND SILT	5	4	0.02	29	20	1.21	--
22.2	10.8	0.1	1.30	SANDY SILT AND SILT	4	4	0.03	28	20	1.22	--
22.4	10.1	0.1	1.28	SANDY SILT AND SILT	4	3	0.03	28	20	1.23	--
22.6	10.1	0.2	1.59	SANDY SILT AND SILT	4	3	0.02	28	20	1.24	--
22.7	10.8	0.3	2.50	CLAYEY SILT AND SILTY CLAY	5	4	---	--	---	1.25	0.60
22.9	13.6	0.3	1.91	SANDY SILT AND SILT	5	5	0.03	29	20	1.26	--
23.1	13.3	0.2	1.66	SANDY SILT AND SILT	5	4	0.03	29	20	1.27	--
23.2	10.1	0.2	2.18	SANDY SILT AND SILT	4	4	0.01	28	20	1.28	--
23.4	10.4	0.2	2.03	SANDY SILT AND SILT	4	4	0.02	28	20	1.29	--
23.6	10.8	0.2	1.86	SANDY SILT AND SILT	4	4	0.02	28	20	1.30	--
23.7	10.2	0.2	1.95	SANDY SILT AND SILT	4	4	0.02	28	20	1.30	--
23.9	10.5	0.2	1.80	SANDY SILT AND SILT	4	4	0.02	28	20	1.31	--
24.0	10.1	0.2	1.69	SANDY SILT AND SILT	4	3	0.02	28	20	1.32	--
24.2	9.6	0.2	1.55	SANDY SILT AND SILT	4	3	0.02	28	20	1.33	--
24.4	9.4	0.2	1.70	SANDY SILT AND SILT	4	3	0.02	27	20	1.34	--
24.5	9.9	0.2	1.52	SANDY SILT AND SILT	4	3	0.03	28	20	1.35	--
24.7	10.0	0.2	1.51	SANDY SILT AND SILT	4	3	0.03	28	20	1.36	--
24.9	10.1	0.2	1.59	SANDY SILT AND SILT	4	3	0.02	28	20	1.37	--
25.0	11.2	0.1	1.25	SANDY SILT AND SILT	4	3	0.03	28	20	1.38	--
25.2	11.5	0.2	1.57	SANDY SILT AND SILT	4	4	0.03	28	20	1.39	--
25.4	13.6	0.5	3.98	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.39	0.76
25.5	29.2	0.9	3.12	SANDY SILT AND SILT	12	10	0.02	33	20	1.40	--
25.7	42.5	1.1	2.47	SANDY SILT AND SILT	14	12	0.04	35	20	1.41	--
25.9	45.4	1.5	3.19	SANDY SILT AND SILT	17	15	0.03	35	22	1.42	--
26.0	58.4	1.1	1.87	SILTY SAND	17	14	0.07	36	30	1.43	--
26.2	133.1	0.8	0.58	SAND	20	17	1.38	40	61	1.44	--
26.3	139.0	0.5	0.36	SAND	19	16	1.62	40	62	1.45	--
26.5	174.9	0.4	0.23	SAND	23	19	1.78	41	71	1.46	--
26.7	166.7	0.5	0.31	SAND	23	19	1.70	41	69	1.47	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	103.2	0.8	0.81	SAND	18	15	0.99	39	49	1.48	--
27.0	45.7	1.1	2.30	SANDY SILT AND SILT	14	12	0.05	35	21	1.49	--
27.2	22.0	0.8	3.77	CLAYEY SILT AND SILTY CLAY	11	9	---	--	---	1.49	1.28
27.3	14.2	0.3	2.25	SANDY SILT AND SILT	6	5	0.02	29	20	1.50	--
27.5	14.1	0.2	1.35	SANDY SILT AND SILT	5	4	0.04	29	20	1.51	--
27.7	14.2	0.2	1.26	SANDY SILT AND SILT	5	4	0.04	29	20	1.52	--
27.8	15.0	0.2	1.13	SANDY SILT AND SILT	5	4	0.04	29	20	1.53	--
28.0	14.3	0.2	1.40	SANDY SILT AND SILT	5	4	0.04	29	20	1.54	--
28.1	14.8	0.3	1.69	SANDY SILT AND SILT	5	4	0.03	29	20	1.55	--
28.3	15.2	0.3	1.71	SANDY SILT AND SILT	5	4	0.03	29	20	1.56	--
28.5	13.4	0.3	2.32	SANDY SILT AND SILT	5	4	0.02	28	20	1.57	--
28.6	13.4	0.3	2.46	SANDY SILT AND SILT	6	5	0.02	28	20	1.58	--
28.8	14.2	0.4	2.53	SANDY SILT AND SILT	6	5	0.02	29	20	1.58	--
29.0	14.8	0.4	2.63	SANDY SILT AND SILT	6	5	0.01	29	20	1.59	--
29.1	15.2	0.4	2.64	SANDY SILT AND SILT	6	5	0.01	29	20	1.60	--
29.3	14.8	0.4	2.97	CLAYEY SILT AND SILTY CLAY	7	5	---	--	---	1.61	0.83
29.5	16.7	0.5	3.11	CLAYEY SILT AND SILTY CLAY	8	6	---	--	---	1.62	0.94
29.6	19.6	0.6	2.86	SANDY SILT AND SILT	8	6	0.02	30	20	1.63	--
29.8	19.9	0.6	2.82	SANDY SILT AND SILT	8	6	0.02	30	20	1.64	--
30.0	21.0	0.6	2.67	SANDY SILT AND SILT	8	6	0.02	30	20	1.65	--
30.1	21.8	0.6	2.67	SANDY SILT AND SILT	9	7	0.02	30	20	1.66	--
30.3	21.7	0.6	2.77	SANDY SILT AND SILT	9	7	0.02	30	20	1.67	--
30.4	23.0	0.7	2.91	SANDY SILT AND SILT	9	7	0.02	31	20	1.67	--
30.6	22.3	0.7	3.00	SANDY SILT AND SILT	9	7	0.02	30	20	1.68	--
30.8	22.3	0.7	2.91	SANDY SILT AND SILT	9	7	0.02	30	20	1.69	--
30.9	21.6	0.7	3.20	SANDY SILT AND SILT	10	7	0.01	30	20	1.70	--
31.1	21.7	0.7	3.36	CLAYEY SILT AND SILTY CLAY	10	8	---	--	---	1.71	1.25
31.3	21.0	0.7	3.53	CLAYEY SILT AND SILTY CLAY	10	7	---	--	---	1.72	1.20
31.4	20.3	0.7	3.55	CLAYEY SILT AND SILTY CLAY	10	7	---	--	---	1.73	1.16
31.6	19.6	0.7	3.62	CLAYEY SILT AND SILTY CLAY	9	7	---	--	---	1.74	1.12
31.8	18.2	0.7	3.95	CLAYEY SILT AND SILTY CLAY	9	7	---	--	---	1.75	1.03
31.9	16.7	0.7	4.38	CLAYEY SILT AND SILTY CLAY	9	7	---	--	---	1.76	0.93
32.1	16.2	0.7	4.26	CLAYEY SILT AND SILTY CLAY	9	7	---	--	---	1.76	0.90
32.3	14.8	0.6	3.84	CLAYEY SILT AND SILTY CLAY	8	6	---	--	---	1.77	0.82
32.4	14.8	0.5	3.44	CLAYEY SILT AND SILTY CLAY	7	5	---	--	---	1.78	0.82
32.6	15.5	0.4	2.77	SANDY SILT AND SILT	7	5	0.01	28	20	1.79	--
32.7	14.9	0.4	2.75	SANDY SILT AND SILT	7	5	0.01	28	20	1.80	--
32.9	14.2	0.4	2.69	SANDY SILT AND SILT	6	5	0.01	28	20	1.81	--
33.1	13.5	0.3	2.52	SANDY SILT AND SILT	6	4	0.01	28	20	1.82	--
33.2	12.8	0.3	2.35	SANDY SILT AND SILT	5	4	0.02	27	20	1.83	--
33.4	13.1	0.3	2.14	SANDY SILT AND SILT	5	4	0.02	27	20	1.84	--
33.6	13.9	0.3	2.30	SANDY SILT AND SILT	6	4	0.02	28	20	1.85	--
33.7	16.2	0.4	2.41	SANDY SILT AND SILT	6	5	0.02	28	20	1.85	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH. FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	18.2	0.5	2.91	SANDY SILT AND SILT	8	6	0.01	29	20	1.86	--
34.1	19.0	0.6	3.15	CLAYEY SILT AND SILTY CLAY	9	6	---	--	---	1.87	1.07
34.2	19.6	0.6	3.06	SANDY SILT AND SILT	9	6	0.01	29	20	1.88	--
34.4	18.2	0.6	3.02	SANDY SILT AND SILT	8	6	0.01	29	20	1.89	--
34.5	17.2	0.3	1.98	SANDY SILT AND SILT	6	4	0.03	29	20	1.90	--
34.7	14.8	0.2	1.42	SANDY SILT AND SILT	5	4	0.04	28	20	1.91	--
34.9	12.9	0.2	1.79	SANDY SILT AND SILT	5	3	0.03	27	20	1.92	--
35.0	14.2	0.3	2.18	SANDY SILT AND SILT	6	4	0.02	28	20	1.93	--
35.2	15.5	0.4	2.26	SANDY SILT AND SILT	6	4	0.02	28	20	1.94	--
35.4	14.9	0.3	2.28	SANDY SILT AND SILT	6	4	0.02	28	20	1.95	--
35.5	16.8	0.4	2.33	SANDY SILT AND SILT	7	5	0.02	28	20	1.95	--
35.7	21.0	0.5	2.39	SANDY SILT AND SILT	8	6	0.03	29	20	1.96	--
35.9	24.4	0.6	2.42	SANDY SILT AND SILT	9	6	0.03	30	20	1.97	--
36.0	29.0	0.7	2.34	SANDY SILT AND SILT	10	7	0.04	31	20	1.98	--
36.2	31.2	0.8	2.47	SANDY SILT AND SILT	11	8	0.04	31	20	1.99	--
36.4	32.6	0.9	2.70	SANDY SILT AND SILT	12	8	0.03	32	20	2.00	--
36.5	31.4	0.9	2.96	SANDY SILT AND SILT	12	8	0.02	31	20	2.01	--
36.7	30.1	0.9	2.82	SANDY SILT AND SILT	11	8	0.03	31	20	2.02	--
36.8	29.4	0.8	2.86	SANDY SILT AND SILT	11	8	0.02	31	20	2.03	--
37.0	28.5	0.9	3.02	SANDY SILT AND SILT	11	8	0.02	31	20	2.04	--
37.2	27.5	0.9	3.27	SANDY SILT AND SILT	12	8	0.01	31	20	2.04	--
37.3	25.7	0.8	3.03	SANDY SILT AND SILT	11	7	0.02	30	20	2.05	--
37.5	22.4	0.9	3.83	CLAYEY SILT AND SILTY CLAY	11	7	---	--	---	2.06	1.27
37.7	21.6	0.7	3.10	SANDY SILT AND SILT	9	6	0.01	29	20	2.07	--
37.8	20.0	0.6	3.00	SANDY SILT AND SILT	9	6	0.01	29	20	2.08	--
38.0	19.6	1.0	5.10	CLAY	20	13	---	--	---	2.09	1.09
38.2	35.9	1.2	3.23	SANDY SILT AND SILT	14	10	0.02	32	20	2.10	--
38.3	38.0	0.9	2.40	SANDY SILT AND SILT	12	8	0.04	32	20	2.11	--
38.5	21.9	0.7	3.10	SANDY SILT AND SILT	9	6	0.01	29	20	2.12	--
38.6	18.9	0.5	2.75	SANDY SILT AND SILT	8	5	0.02	29	20	2.13	--
38.8	19.1	0.4	2.31	SANDY SILT AND SILT	7	5	0.03	29	20	2.13	--
39.0	17.1	0.4	2.11	SANDY SILT AND SILT	6	4	0.03	28	20	2.14	--
39.1	15.5	0.4	2.26	SANDY SILT AND SILT	6	4	0.02	27	20	2.15	--
39.3	15.7	0.4	2.48	SANDY SILT AND SILT	6	4	0.02	28	20	2.16	--
39.5	16.6	0.5	2.83	SANDY SILT AND SILT	7	5	0.01	28	20	2.17	--
39.6	16.9	0.6	3.32	CLAYEY SILT AND SILTY CLAY	8	5	---	--	---	2.18	0.92
39.8	19.9	0.5	2.26	SANDY SILT AND SILT	7	5	0.03	29	20	2.19	--
40.0	22.4	0.4	1.79	SANDY SILT AND SILT	7	5	0.04	29	20	2.20	--
40.1	17.3	0.4	2.49	SANDY SILT AND SILT	7	5	0.02	28	20	2.21	--
40.3	16.9	0.4	2.13	SANDY SILT AND SILT	6	4	0.03	28	20	2.22	--
40.5	17.3	0.3	1.74	SANDY SILT AND SILT	6	4	0.04	28	20	2.22	--
40.6	15.6	0.3	1.73	SANDY SILT AND SILT	6	4	0.03	27	20	2.23	--
40.8	15.8	0.3	2.02	SANDY SILT AND SILT	6	4	0.03	27	20	2.24	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	17.9	0.3	1.62	SANDY SILT AND SILT	6	4	0.04	28	20	2.25	--
41.1	17.5	0.2	1.37	SANDY SILT AND SILT	6	4	0.04	28	20	2.26	--
41.3	15.2	0.2	1.52	SANDY SILT AND SILT	5	3	0.04	27	20	2.27	--
41.4	15.1	0.2	1.39	SANDY SILT AND SILT	5	3	0.04	27	20	2.28	--
41.6	16.4	0.2	1.46	SANDY SILT AND SILT	5	3	0.04	27	20	2.29	--
41.8	18.1	0.3	1.38	SANDY SILT AND SILT	6	4	0.04	28	20	2.30	--
41.9	20.1	0.3	1.55	SANDY SILT AND SILT	6	4	0.04	28	20	2.31	--
42.1	20.3	0.3	1.68	SANDY SILT AND SILT	7	4	0.04	28	20	2.32	--
42.3	19.6	0.4	1.89	SANDY SILT AND SILT	7	4	0.04	28	20	2.32	--
42.4	20.3	0.4	1.92	SANDY SILT AND SILT	7	4	0.04	28	20	2.33	--
42.6	20.1	0.4	1.79	SANDY SILT AND SILT	7	4	0.04	28	20	2.34	--
42.7	19.5	0.5	2.30	SANDY SILT AND SILT	7	5	0.03	28	20	2.35	--
42.9	19.0	0.5	2.53	SANDY SILT AND SILT	7	5	0.02	28	20	2.36	--
43.1	19.6	0.5	2.45	SANDY SILT AND SILT	7	5	0.02	28	20	2.37	--
43.2	18.9	0.5	2.54	SANDY SILT AND SILT	7	5	0.02	28	20	2.38	--
43.4	18.2	0.5	2.80	SANDY SILT AND SILT	8	5	0.02	28	20	2.39	--
43.6	18.3	0.5	2.79	SANDY SILT AND SILT	8	5	0.02	28	20	2.40	--
43.7	18.2	0.5	2.63	SANDY SILT AND SILT	7	5	0.02	28	20	2.41	--
43.9	17.9	0.4	2.40	SANDY SILT AND SILT	7	4	0.02	28	20	2.41	--
44.1	17.5	0.4	2.28	SANDY SILT AND SILT	7	4	0.03	28	20	2.42	--
44.2	16.9	0.4	2.43	SANDY SILT AND SILT	7	4	0.02	27	20	2.43	--
44.4	16.2	0.4	2.52	SANDY SILT AND SILT	7	4	0.02	27	20	2.44	--
44.6	17.5	0.4	2.51	SANDY SILT AND SILT	7	4	0.02	27	20	2.45	--
44.7	18.7										
44.9	15.4										

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-11
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/19/90/16:16
Cone Used :IV
Water table (meters) : 2.1

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	53.57	1.33	2.48	0.02	sandy silt to clayey silt	UNDFND	UNDFD	21	5.3
0.50	1.64	21.41	0.88	4.13	0.07	silty clay to clay	UNDFND	UNDFD	14	2.1
0.75	2.46	15.16	0.68	4.52	0.11	clay	UNDFND	UNDFD	15	1.5
1.00	3.28	11.29	0.64	5.65	0.16	clay	UNDFND	UNDFD	11	1.1
1.25	4.10	15.90	0.87	5.47	0.20	clay	UNDFND	UNDFD	15	1.5
1.50	4.92	20.11	0.67	3.32	0.25	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
1.75	5.74	24.00	0.69	2.89	0.29	clayey silt to silty clay	UNDFND	UNDFD	11	2.3
2.00	6.56	16.78	0.51	3.02	0.34	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
2.25	7.38	13.82	0.44	3.20	0.38	silty clay to clay	UNDFND	UNDFD	9	1.3
2.50	8.20	12.20	0.37	3.06	0.40	silty clay to clay	UNDFND	UNDFD	8	1.1
2.75	9.02	11.25	0.42	3.76	0.42	clay	UNDFND	UNDFD	11	1.0
3.00	9.84	8.12	0.30	3.73	0.44	clay	UNDFND	UNDFD	8	.7
3.25	10.66	7.37	0.20	2.72	0.46	silty clay to clay	UNDFND	UNDFD	5	.6
3.50	11.48	7.63	0.29	3.84	0.48	clay	UNDFND	UNDFD	7	.7
3.75	12.30	7.11	0.27	3.82	0.50	clay	UNDFND	UNDFD	7	.6
4.00	13.12	8.18	0.28	3.41	0.52	clay	UNDFND	UNDFD	8	.7
4.25	13.94	9.51	0.36	3.78	0.54	clay	UNDFND	UNDFD	9	.8
4.50	14.76	12.52	0.43	3.42	0.56	silty clay to clay	UNDFND	UNDFD	8	1.1
4.75	15.58	11.44	0.35	3.03	0.58	silty clay to clay	UNDFND	UNDFD	7	1.0
5.00	16.40	13.07	0.31	2.38	0.60	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
5.25	17.22	18.44	0.31	1.67	0.61	sandy silt to clayey silt	UNDFND	UNDFD	7	1.7
5.50	18.04	19.85	0.40	2.01	0.63	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
5.75	18.86	7.78	0.07	0.96	0.65	sensitive fine grained	UNDFND	UNDFD	4	.6
6.00	19.69	59.96	0.85	1.42	0.67	silty sand to sandy silt	50-60	40-42	19	UNDEFINED
6.25	20.51	40.37	0.54	1.33	0.69	silty sand to sandy silt	40-50	38-40	13	UNDEFINED
6.50	21.33	16.45	0.25	1.53	0.71	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
6.75	22.15	37.81	0.62	1.65	0.73	sandy silt to clayey silt	UNDFND	UNDFD	14	3.6
7.00	22.97	28.98	0.69	2.39	0.75	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7
7.25	23.79	17.35	0.29	1.65	0.77	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6
7.50	24.61	11.94	0.23	1.92	0.79	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
7.75	25.43	48.47	0.82	1.69	0.81	silty sand to sandy silt	40-50	38-40	15	UNDEFINED
8.00	26.25	251.67	0.92	0.37	0.83	gravelly sand to sand	>90	44-46	40	UNDEFINED
8.25	27.07	81.56	0.81	1.00	0.85	sand to silty sand	60-70	40-42	20	UNDEFINED
8.50	27.89	13.28	0.25	1.89	0.87	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
8.75	28.71	14.52	0.24	1.64	0.89	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
9.00	29.53	12.03	0.21	1.76	0.91	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
9.25	30.35	11.75	0.27	2.26	0.93	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
9.50	31.17	9.89	0.19	1.89	0.95	clayey silt to silty clay	UNDFND	UNDFD	5	.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-11

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	9.93	0.15	1.55	0.97	clayey silt to silty clay	UNDFND	UNDFD	5	.8
10.00	32.81	10.68	0.26	2.47	0.99	silty clay to clay	UNDFND	UNDFD	7	.8
10.25	33.63	13.33	0.39	2.90	1.00	silty clay to clay	UNDFND	UNDFD	9	1.1
10.50	34.45	13.53	0.26	1.90	1.02	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
10.75	35.27	16.04	0.43	2.67	1.04	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
11.00	36.09	22.92	0.68	2.95	1.06	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
11.25	36.91	24.22	1.19	4.93	1.08	clay	UNDFND	UNDFD	23	2.2
11.50	37.73	34.55	1.32	3.82	1.10	clayey silt to silty clay	UNDFND	UNDFD	17	3.2
11.75	38.55	74.64	1.59	2.13	1.12	silty sand to sandy silt	50-60	38-40	24	UNDEFINED
12.00	39.37	18.84	0.53	2.82	1.14	clayey silt to silty clay	UNDFND	UNDFD	3	1.6
12.25	40.19	24.27	0.71	2.92	1.16	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
12.50	41.01	19.68	0.32	1.63	1.18	sandy silt to clayey silt	UNDFND	UNDFD	8	1.7
12.75	41.83	23.47	0.56	2.40	1.20	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
13.00	42.65	21.87	0.60	2.75	1.22	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
13.25	43.47	23.92	0.60	2.50	1.24	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
13.50	44.29	28.72	0.67	2.33	1.26	sandy silt to clayey silt	UNDFND	UNDFD	11	2.6
13.75	45.11	18.74	0.34	1.82	1.28	sandy silt to clayey silt	UNDFND	UNDFD	7	1.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-13
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/03/90/16:23
Cone Used :VIII
Water table (meters) : 2.1

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	50.75	1.36	2.67	0.02	sandy silt to clayey silt	UNDFND	UNDFD	19	5.0
0.50	1.64	26.17	1.16	4.45	0.07	silty clay to clay	UNDFND	UNDFD	17	2.6
0.75	2.46	20.82	1.07	5.12	0.11	clay	UNDFND	UNDFD	20	2.0
1.00	3.28	19.05	0.99	5.17	0.16	clay	UNDFND	UNDFD	18	1.8
1.25	4.10	21.32	0.83	4.07	0.20	silty clay to clay	UNDFND	UNDFD	14	2.1
1.50	4.92	27.84	1.20	4.31	0.25	silty clay to clay	UNDFND	UNDFD	18	2.7
1.75	5.74	82.44	0.99	1.21	0.29	sand to silty sand	70-80	44-46	20	UNDEFINED
2.00	6.56	149.51	1.51	1.01	0.34	sand to silty sand	>90	46-48	36	UNDEFINED
2.25	7.38	150.01	0.87	0.58	0.38	sand	>90	46-48	29	UNDEFINED
2.50	8.20	31.17	0.72	2.31	0.40	sandy silt to clayey silt	UNDFND	UNDFD	12	3.0
2.75	9.02	9.36	0.12	1.30	0.42	clayey silt to silty clay	UNDFND	UNDFD	4	.8
3.00	9.84	14.11	0.19	1.34	0.44	sandy silt to clayey silt	UNDFND	UNDFD	5	1.3
3.25	10.66	44.99	0.52	1.15	0.46	silty sand to sandy silt	50-60	40-42	14	UNDEFINED
3.50	11.48	61.76	0.94	1.51	0.48	silty sand to sandy silt	60-70	42-44	20	UNDEFINED
3.75	12.30	32.38	1.21	3.74	0.50	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
4.00	13.12	25.06	1.15	4.59	0.52	clay	UNDFND	UNDFD	24	2.4
4.25	13.94	13.22	0.32	2.43	0.54	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
4.50	14.76	8.30	0.16	1.94	0.56	silty clay to clay	UNDFND	UNDFD	5	.7
4.75	15.58	13.87	0.14	1.00	0.58	sandy silt to clayey silt	UNDFND	UNDFD	5	1.3
5.00	16.40	5.85	0.14	2.37	0.60	silty clay to clay	UNDFND	UNDFD	4	.4
5.25	17.22	7.81	0.12	1.56	0.61	clayey silt to silty clay	UNDFND	UNDFD	4	.6
5.50	18.04	14.76	0.30	2.04	0.63	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
5.75	18.86	13.36	0.23	1.73	0.65	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
6.00	19.69	9.41	0.12	1.27	0.67	clayey silt to silty clay	UNDFND	UNDFD	5	.8
6.25	20.51	7.72	0.11	1.45	0.69	clayey silt to silty clay	UNDFND	UNDFD	4	.6
6.50	21.33	8.73	0.09	1.03	0.71	clayey silt to silty clay	UNDFND	UNDFD	4	.7
6.75	22.15	8.87	0.07	0.77	0.73	clayey silt to silty clay	UNDFND	UNDFD	4	.7
7.00	22.97	17.14	0.43	2.48	0.75	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.25	23.79	38.97	1.16	2.99	0.77	clayey silt to silty clay	UNDFND	UNDFD	19	3.7
7.50	24.61	53.89	0.88	1.64	0.79	silty sand to sandy silt	50-60	38-40	17	UNDEFINED
7.75	25.43	23.91	0.83	3.46	0.81	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
8.00	26.25	21.54	0.87	4.02	0.83	silty clay to clay	UNDFND	UNDFD	14	2.0
8.25	27.07	20.29	0.63	3.09	0.85	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
8.50	27.89	16.16	0.39	2.41	0.87	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
8.75	28.71	12.49	0.21	1.66	0.89	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
9.00	29.53	20.46	0.46	2.24	0.91	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
9.25	30.35	18.77	0.31	1.65	0.93	sandy silt to clayey silt	UNDFND	UNDFD	7	1.7
9.50	31.17	18.17	0.44	2.41	0.95	clayey silt to silty clay	UNDFND	UNDFD	9	1.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-13

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	16.07	0.55	3.44	0.97	silty clay to clay	UNDFND	UNDFD	10	1.4
10.00	32.81	24.18	0.82	3.41	0.99	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
10.25	33.63	22.79	0.78	3.42	1.00	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
10.50	34.45	15.17	0.36	2.40	1.02	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
10.75	35.27	13.84	0.37	2.68	1.04	clayey silt to silty clay	UNDFND	UNDFD	7	1.1
11.00	36.09	15.10	0.28	1.89	1.06	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
11.25	36.91	23.06	0.39	1.67	1.08	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
11.50	37.73	17.33	0.30	1.69	1.10	sandy silt to clayey silt	UNDFND	UNDFD	7	1.5
11.75	38.55	12.99	0.19	1.44	1.12	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.00	39.37	13.04	0.19	1.45	1.14	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.25	40.19	13.30	0.18	1.38	1.16	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
12.50	41.01	11.59	0.09	0.79	1.18	sandy silt to clayey silt	UNDFND	UNDFD	4	.9
12.75	41.83	13.00	0.19	1.44	1.20	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
13.00	42.65	11.33	0.15	1.26	1.22	clayey silt to silty clay	UNDFND	UNDFD	6	.9
13.25	43.47	12.49	0.17	1.38	1.24	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
13.50	44.29	14.34	0.28	1.38	1.26	clayey silt to silty clay	UNDFND	UNDFD	7	1.1
13.75	45.11	19.76	0.39	2.00	1.28	sandy silt to clayey silt	UNDFND	UNDFD	8	1.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/H9-14
DATE : 01/26/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 7

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	10.6	0.0	0.09	SILTY SAND	3	11	0.08	--	---	0.01	--
0.3	18.5	0.3	1.57	SANDY SILT AND SILT	6	20	0.04	--	---	0.01	--
0.4	16.5	0.6	3.34	CLAYEY SILT AND SILTY CLAY	8	24	---	--	---	0.02	1.03
0.6	17.9	0.7	3.90	CLAYEY SILT AND SILTY CLAY	9	26	---	--	---	0.03	1.12
0.8	18.7	0.7	3.63	CLAYEY SILT AND SILTY CLAY	9	25	---	--	---	0.04	1.17
0.9	21.1	0.6	3.04	SANDY SILT AND SILT	9	24	0.01	--	---	0.05	--
1.1	22.6	0.7	3.10	SANDY SILT AND SILT	10	24	0.01	--	---	0.06	--
1.2	23.6	0.8	3.52	CLAYEY SILT AND SILTY CLAY	11	27	---	--	---	0.07	1.47
1.4	22.2	0.9	4.01	CLAYEY SILT AND SILTY CLAY	11	27	---	--	---	0.08	1.38
1.6	20.2	0.8	4.17	CLAYEY SILT AND SILTY CLAY	10	24	---	--	---	0.09	1.25
1.7	18.8	0.8	4.36	CLAYEY SILT AND SILTY CLAY	10	23	---	--	---	0.10	1.17
1.9	18.1	0.8	4.47	CLAYEY SILT AND SILTY CLAY	10	22	---	--	---	0.10	1.13
2.1	17.5	0.9	4.87	CLAY	17	38	---	--	---	0.11	1.08
2.2	18.5	0.7	3.99	CLAYEY SILT AND SILTY CLAY	9	20	---	--	---	0.12	1.15
2.4	18.1	0.7	3.98	CLAYEY SILT AND SILTY CLAY	9	19	---	--	---	0.13	1.12
2.6	18.1	0.7	3.75	CLAYEY SILT AND SILTY CLAY	9	18	---	--	---	0.14	1.12
2.7	16.8	0.6	3.81	CLAYEY SILT AND SILTY CLAY	8	17	---	--	---	0.15	1.04
2.9	16.7	0.6	3.48	CLAYEY SILT AND SILTY CLAY	8	16	---	--	---	0.16	1.03
3.1	16.8	0.5	3.09	CLAYEY SILT AND SILTY CLAY	8	15	---	--	---	0.17	1.04
3.2	18.1	0.5	2.93	SANDY SILT AND SILT	8	15	0.01	--	---	0.18	--
3.4	18.1	0.5	2.82	SANDY SILT AND SILT	8	15	0.01	--	---	0.19	--
3.5	18.1	0.5	2.65	SANDY SILT AND SILT	7	14	0.02	--	---	0.19	--
3.7	18.1	0.5	2.60	SANDY SILT AND SILT	7	14	0.02	--	---	0.20	--
3.9	18.1	0.5	2.82	SANDY SILT AND SILT	8	14	0.01	--	---	0.21	--
4.0	17.5	0.5	2.68	SANDY SILT AND SILT	7	13	0.02	--	---	0.22	--
4.2	16.8	0.4	2.57	SANDY SILT AND SILT	7	12	0.02	--	---	0.23	--
4.3	17.1	0.4	2.28	SANDY SILT AND SILT	7	12	0.02	--	---	0.24	--
4.5	17.8	0.4	2.42	SANDY SILT AND SILT	7	12	0.02	--	---	0.25	--
4.7	18.8	0.4	2.34	SANDY SILT AND SILT	7	12	0.03	39	38	0.26	--
4.8	18.2	0.5	2.47	SANDY SILT AND SILT	7	12	0.02	39	37	0.27	--
5.0	14.0	0.5	3.28	CLAYEY SILT AND SILTY CLAY	7	11	---	--	---	0.27	0.86
5.2	10.0	0.4	3.62	CLAYEY SILT AND SILTY CLAY	5	9	---	--	---	0.28	0.60
5.3	7.0	0.2	2.43	CLAYEY SILT AND SILTY CLAY	3	5	---	--	---	0.29	0.42
5.5	7.2	0.2	3.32	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.30	0.43

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	12.7	0.3	1.97	SANDY SILT AND SILT	5	8	0.02	36	25	0.31	--
5.8	9.9	0.3	2.93	CLAYEY SILT AND SILTY CLAY	5	8	---	--	---	0.32	0.60
6.0	7.1	0.2	2.54	CLAYEY SILT AND SILTY CLAY	3	5	---	--	---	0.33	0.42
6.1	5.9	0.1	2.21	CLAYEY SILT AND SILTY CLAY	3	4	---	--	---	0.34	0.35
6.3	7.2	0.2	2.77	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.35	0.43
6.5	18.8	0.3	1.70	SANDY SILT AND SILT	6	10	0.04	37	32	0.36	--
6.6	21.5	0.4	2.05	SANDY SILT AND SILT	7	12	0.04	38	35	0.36	--
6.8	20.5	0.5	2.20	SANDY SILT AND SILT	7	11	0.03	37	34	0.37	--
7.0	19.3	0.5	2.53	SANDY SILT AND SILT	8	11	0.02	37	32	0.38	--
7.1	16.8	0.4	2.33	SANDY SILT AND SILT	7	10	0.02	36	28	0.39	--
7.3	13.4	0.3	2.55	SANDY SILT AND SILT	6	9	0.01	35	22	0.39	--
7.4	13.1	0.3	2.37	SANDY SILT AND SILT	5	8	0.02	35	22	0.40	--
7.6	13.7	0.3	2.26	SANDY SILT AND SILT	6	8	0.02	35	23	0.40	--
7.8	13.4	0.3	2.23	SANDY SILT AND SILT	5	8	0.02	35	22	0.40	--
7.9	12.7	0.3	2.13	SANDY SILT AND SILT	5	8	0.02	35	21	0.41	--
8.1	12.2	0.3	2.38	SANDY SILT AND SILT	5	8	0.01	34	20	0.41	--
8.3	10.6	0.3	2.45	SANDY SILT AND SILT	5	7	0.01	34	20	0.42	--
8.4	9.6	0.2	2.50	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.42	0.57
8.6	8.1	0.2	2.60	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.42	0.48
8.8	7.9	0.0	0.13	SANDY SILT AND SILT	2	4	0.05	32	20	0.43	--
8.9	7.9	0.2	1.90	SANDY SILT AND SILT	3	5	0.02	32	20	0.43	--
9.1	4.1	0.1	3.43	CLAY	4	6	---	--	---	0.43	0.22
9.3	7.3	0.2	2.05	SANDY SILT AND SILT	3	5	0.01	32	20	0.44	--
9.4	7.7	0.1	1.69	SANDY SILT AND SILT	3	5	0.02	32	20	0.44	--
9.6	7.2	0.2	2.07	CLAYEY SILT AND SILTY CLAY	3	5	---	--	---	0.45	0.42
9.7	9.1	0.3	3.08	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.45	0.54
9.9	12.7	0.3	1.97	SANDY SILT AND SILT	5	7	0.02	34	20	0.45	--
10.1	14.0	0.3	2.14	SANDY SILT AND SILT	5	8	0.02	35	21	0.46	--
10.2	14.0	0.4	3.14	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.46	0.84
10.4	16.5	0.5	3.09	CLAYEY SILT AND SILTY CLAY	7	11	---	--	---	0.47	1.00
10.6	20.2	0.3	1.69	SANDY SILT AND SILT	7	9	0.04	36	29	0.47	--
10.7	19.5	0.5	2.52	SANDY SILT AND SILT	8	11	0.02	36	28	0.47	--
10.9	18.2	0.5	2.75	SANDY SILT AND SILT	8	11	0.02	36	26	0.48	--
11.1	18.8	0.6	3.41	CLAYEY SILT AND SILTY CLAY	9	12	---	--	---	0.48	1.14
11.2	19.5	0.7	3.60	CLAYEY SILT AND SILTY CLAY	9	13	---	--	---	0.49	1.18
11.4	23.8	0.8	3.24	SANDY SILT AND SILT	10	14	0.01	37	32	0.49	--
11.5	21.2	0.7	3.16	SANDY SILT AND SILT	9	13	0.01	36	29	0.49	--
11.7	18.8	0.6	3.03	SANDY SILT AND SILT	8	11	0.01	36	26	0.50	--
11.9	17.7	0.5	2.94	SANDY SILT AND SILT	8	11	0.01	35	24	0.50	--
12.0	18.8	0.4	1.97	SANDY SILT AND SILT	7	9	0.03	36	25	0.50	--
12.2	20.0	0.6	2.95	SANDY SILT AND SILT	8	12	0.01	36	27	0.51	--
12.4	23.6	0.8	3.44	CLAYEY SILT AND SILTY CLAY	11	15	---	--	---	0.51	1.43
12.5	24.3	0.9	3.75	CLAYEY SILT AND SILTY CLAY	12	16	---	--	---	0.52	1.47

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	26.3	0.8	2.85	SANDY SILT AND SILT	10	14	0.02	37	33	0.52	--
12.9	25.5	0.6	2.36	SANDY SILT AND SILT	9	12	0.03	37	32	0.52	--
13.0	20.7	0.6	3.10	SANDY SILT AND SILT	9	12	0.01	36	27	0.53	--
13.2	18.1	0.6	3.04	SANDY SILT AND SILT	8	11	0.01	35	23	0.53	--
13.4	18.8	0.4	2.34	SANDY SILT AND SILT	7	10	0.03	35	24	0.54	--
13.5	16.1	0.4	2.18	SANDY SILT AND SILT	6	8	0.03	34	20	0.54	--
13.7	14.1	0.4	2.70	SANDY SILT AND SILT	6	8	0.01	34	20	0.54	--
13.8	13.4	0.3	2.25	SANDY SILT AND SILT	5	7	0.02	33	20	0.55	--
14.0	12.0	0.3	2.17	SANDY SILT AND SILT	5	6	0.02	33	20	0.55	--
14.2	10.1	0.2	2.27	SANDY SILT AND SILT	4	6	0.01	32	20	0.56	--
14.3	10.0	0.2	2.21	SANDY SILT AND SILT	4	6	0.01	32	20	0.56	--
14.5	10.0	0.2	1.81	SANDY SILT AND SILT	4	5	0.02	32	20	0.56	--
14.7	9.3	0.2	1.73	SANDY SILT AND SILT	4	5	0.02	32	20	0.57	--
14.8	8.6	0.1	1.63	SANDY SILT AND SILT	3	4	0.02	31	20	0.57	--
15.0	8.4	0.1	1.67	SANDY SILT AND SILT	3	4	0.02	31	20	0.58	--
15.2	8.6	0.2	1.75	SANDY SILT AND SILT	3	4	0.02	31	20	0.58	--
15.3	8.6	0.1	1.63	SANDY SILT AND SILT	3	4	0.02	31	20	0.58	--
15.5	9.3	0.1	1.19	SANDY SILT AND SILT	3	4	0.03	31	20	0.59	--
15.7	9.9	0.1	1.22	SANDY SILT AND SILT	4	5	0.03	32	20	0.59	--
15.8	10.4	0.2	1.54	SANDY SILT AND SILT	4	5	0.03	32	20	0.60	--
16.0	10.6	0.2	1.51	SANDY SILT AND SILT	4	5	0.03	32	20	0.60	--
16.2	10.6	0.2	1.51	SANDY SILT AND SILT	4	5	0.03	32	20	0.60	--
16.3	10.0	0.3	2.61	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.61	0.57
16.5	12.2	0.3	2.45	SANDY SILT AND SILT	5	7	0.01	33	20	0.61	--
16.7	14.9	0.3	2.01	SANDY SILT AND SILT	6	7	0.03	33	20	0.62	--
16.8	13.3	0.3	2.18	SANDY SILT AND SILT	5	7	0.02	33	20	0.62	--
17.0	16.1	0.2	1.06	SANDY SILT AND SILT	5	6	0.05	34	20	0.62	--
17.2	14.7	0.1	0.95	SANDY SILT AND SILT	5	6	0.05	33	20	0.63	--
17.3	12.5	0.3	2.56	SANDY SILT AND SILT	5	7	0.01	32	20	0.63	--
17.5	19.8	0.6	2.78	SANDY SILT AND SILT	8	10	0.02	35	21	0.63	--
17.7	58.9	0.7	1.21	SILTY SAND	16	20	0.09	40	52	0.64	--
17.8	81.4	0.5	0.59	SAND	13	17	1.15	42	62	0.64	--
18.0	78.0	0.4	0.45	SAND	12	15	1.33	41	61	0.65	--
18.1	52.6	0.5	1.03	SILTY SAND	14	17	0.09	39	48	0.65	--
18.3	26.2	0.7	2.59	SANDY SILT AND SILT	10	12	0.03	36	28	0.65	--
18.5	14.7	0.4	2.72	SANDY SILT AND SILT	6	8	0.01	33	20	0.66	--
18.6	9.9	0.2	1.93	SANDY SILT AND SILT	4	5	0.02	31	20	0.66	--
18.8	8.6	0.1	1.04	SANDY SILT AND SILT	3	4	0.03	30	20	0.67	--
19.0	8.6	0.1	1.16	SANDY SILT AND SILT	3	4	0.03	30	20	0.67	--
19.1	8.6	0.1	1.16	SANDY SILT AND SILT	3	4	0.03	30	20	0.67	--
19.3	8.7	0.1	1.26	SANDY SILT AND SILT	3	4	0.03	30	20	0.68	--
19.5	9.1	0.1	1.20	SANDY SILT AND SILT	3	4	0.03	31	20	0.68	--
19.6	9.2	0.1	1.41	SANDY SILT AND SILT	3	4	0.03	31	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	9.7	0.1	1.44	SANDY SILT AND SILT	4	4	0.03	31	20	0.69	--
19.9	10.0	0.1	1.40	SANDY SILT AND SILT	4	4	0.03	31	20	0.69	--
20.1	10.1	0.2	1.48	SANDY SILT AND SILT	4	5	0.03	31	20	0.70	--
20.3	10.6	0.2	1.98	SANDY SILT AND SILT	4	5	0.02	31	20	0.70	--
20.4	12.0	0.2	1.75	SANDY SILT AND SILT	5	5	0.03	32	20	0.70	--
20.6	12.6	0.2	1.35	SANDY SILT AND SILT	4	5	0.03	32	20	0.71	--
20.8	11.2	0.2	1.43	SANDY SILT AND SILT	4	5	0.03	31	20	0.71	--
20.9	10.2	0.1	1.28	SANDY SILT AND SILT	4	4	0.03	31	20	0.72	--
21.1	9.3	0.1	1.40	SANDY SILT AND SILT	3	4	0.03	30	20	0.72	--
21.3	9.3	0.1	1.29	SANDY SILT AND SILT	3	4	0.03	30	20	0.72	--
21.4	9.4	0.1	0.96	SANDY SILT AND SILT	3	4	0.03	30	20	0.73	--
21.6	9.9	0.2	1.52	SANDY SILT AND SILT	4	4	0.03	31	20	0.73	--
21.8	14.0	0.2	1.71	SANDY SILT AND SILT	5	6	0.03	32	20	0.74	--
21.9	13.4	0.4	2.70	SANDY SILT AND SILT	6	7	0.01	32	20	0.74	--
22.1	19.0	0.3	1.69	SANDY SILT AND SILT	6	7	0.04	34	20	0.74	--
22.2	11.3	0.3	2.65	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.75	0.63
22.4	11.3	0.3	2.83	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.75	0.63
22.6	14.2	0.5	3.82	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.76	0.81
22.7	30.4	0.7	2.14	SANDY SILT AND SILT	10	11	0.04	36	28	0.76	--
22.9	47.3	0.7	1.40	SILTY SAND	13	15	0.08	38	41	0.76	--
23.1	63.0	0.7	1.08	SILTY SAND	17	19	0.10	39	50	0.77	--
23.2	56.8	0.9	1.55	SILTY SAND	16	18	0.08	39	46	0.77	--
23.4	43.7	1.0	2.17	SILTY SAND	13	15	0.05	38	38	0.78	--
23.6	73.2	1.1	1.46	SILTY SAND	20	22	0.09	40	54	0.78	--
23.7	89.6	1.0	1.12	SAND	19	22	0.49	41	62	0.78	--
23.9	79.1	1.4	1.72	SILTY SAND	22	25	0.09	40	57	0.79	--
24.0	64.4	1.1	1.76	SILTY SAND	18	20	0.08	39	50	0.79	--
24.2	66.3	1.1	1.64	SILTY SAND	18	21	0.08	40	50	0.79	--
24.4	56.2	1.0	1.74	SILTY SAND	16	18	0.07	39	45	0.80	--
24.5	39.1	0.8	2.02	SILTY SAND	12	13	0.05	37	34	0.80	--
24.7	21.6	0.7	3.39	CLAYEY SILT AND SILTY CLAY	10	11	---	--	---	0.81	1.26
24.9	35.8	0.7	1.98	SILTY SAND	11	12	0.05	36	31	0.81	--
25.0	29.1	0.4	1.41	SILTY SAND	9	10	0.06	35	25	0.81	--
25.2	16.1	0.3	2.05	SANDY SILT AND SILT	6	7	0.03	32	20	0.82	--
25.4	13.1	0.3	2.07	SANDY SILT AND SILT	5	6	0.02	31	20	0.82	--
25.5	14.0	0.0	0.21	SILTY SAND	4	4	0.09	32	20	0.83	--
25.7	16.0	0.3	2.06	SANDY SILT AND SILT	6	7	0.03	32	20	0.83	--
25.9	7.2	0.4	5.81	CLAY	7	8	---	--	---	0.83	0.36
26.0	20.2	0.5	2.53	SANDY SILT AND SILT	8	9	0.02	33	20	0.84	--
26.2	21.6	0.6	2.55	SANDY SILT AND SILT	8	9	0.02	34	20	0.84	--
26.3	23.0	0.6	2.70	SANDY SILT AND SILT	9	10	0.02	34	20	0.85	--
26.5	24.7	0.7	2.64	SANDY SILT AND SILT	9	10	0.03	34	20	0.85	--
26.7	25.6	0.8	3.09	SANDY SILT AND SILT	11	12	0.02	35	20	0.85	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	26.8	0.9	3.21	SANDY SILT AND SILT	11	12	0.01	35	21	0.86	--
27.0	35.1	1.2	3.28	SANDY SILT AND SILT	14	15	0.02	36	29	0.86	--
27.2	31.2	1.3	4.04	CLAYEY SILT AND SILTY CLAY	15	16	---	--	---	0.86	1.85
27.3	25.0	1.0	4.04	CLAYEY SILT AND SILTY CLAY	12	13	---	--	---	0.87	1.47
27.5	22.5	0.7	3.20	SANDY SILT AND SILT	10	11	0.01	34	20	0.87	--
27.7	21.9	0.7	3.11	SANDY SILT AND SILT	9	10	0.01	34	20	0.88	--
27.8	22.9	0.8	3.40	CLAYEY SILT AND SILTY CLAY	10	11	---	--	---	0.88	1.34
28.0	25.6	0.8	3.13	SANDY SILT AND SILT	11	11	0.02	34	20	0.88	--
28.1	26.3	0.8	3.08	SANDY SILT AND SILT	11	12	0.02	34	20	0.89	--
28.3	27.0	0.8	3.11	SANDY SILT AND SILT	11	12	0.02	35	20	0.89	--
28.5	27.0	0.8	3.12	SANDY SILT AND SILT	11	12	0.02	35	20	0.90	--
28.6	23.7	0.8	3.46	CLAYEY SILT AND SILTY CLAY	11	11	---	--	---	0.90	1.38
28.8	20.5	0.7	3.31	CLAYEY SILT AND SILTY CLAY	9	10	---	--	---	0.90	1.18
29.0	17.5	0.6	3.66	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	0.91	0.99
29.1	16.8	0.5	3.22	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	0.91	0.95
29.3	14.3	0.5	3.15	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.92	0.79
29.5	14.7	0.4	2.52	SANDY SILT AND SILT	6	6	0.02	31	20	0.92	--
29.6	12.7	0.3	2.53	SANDY SILT AND SILT	5	6	0.01	31	20	0.92	--
29.8	12.3	0.4	2.84	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.93	0.67
30.0	13.4	0.4	2.76	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.93	0.74
30.1	15.2	0.4	2.50	SANDY SILT AND SILT	6	6	0.02	31	20	0.94	--
30.3	14.7	0.4	2.45	SANDY SILT AND SILT	6	6	0.02	31	20	0.94	--
30.4	14.2	0.4	2.47	SANDY SILT AND SILT	6	6	0.02	31	20	0.94	--
30.6	14.6	0.4	2.39	SANDY SILT AND SILT	6	6	0.02	31	20	0.95	--
30.8	15.4	0.3	2.08	SANDY SILT AND SILT	6	6	0.03	31	20	0.95	--
30.9	14.6	0.3	2.12	SANDY SILT AND SILT	6	6	0.02	31	20	0.95	--
31.1	14.0	0.3	2.07	SANDY SILT AND SILT	5	6	0.02	31	20	0.96	--
31.3	14.0	0.2	1.50	SANDY SILT AND SILT	5	5	0.04	31	20	0.96	--
31.4	14.7	0.2	1.30	SANDY SILT AND SILT	5	5	0.04	31	20	0.97	--
31.6	13.1	0.2	1.52	SANDY SILT AND SILT	5	5	0.03	31	20	0.97	--
31.8	13.4	0.2	1.72	SANDY SILT AND SILT	5	5	0.03	31	20	0.97	--
31.9	14.7	0.3	1.84	SANDY SILT AND SILT	5	5	0.03	31	20	0.98	--
32.1	15.6	0.3	1.85	SANDY SILT AND SILT	6	6	0.03	31	20	0.98	--
32.3	15.4	0.1	0.32	SILTY SAND	4	4	0.08	31	20	0.99	--
32.4	16.8	0.5	3.04	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	0.99	0.94
32.6	10.5	0.6	5.43	CLAY	11	11	---	--	---	0.99	0.54
32.7	23.6	0.3	1.44	SILTY SAND	7	7	0.05	33	20	1.00	--
32.9	16.8	0.6	3.70	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.00	0.93
33.1	24.6	0.6	2.52	SANDY SILT AND SILT	9	9	0.03	34	20	1.01	--
33.2	132.4	0.8	0.57	SAND	20	20	1.39	42	69	1.01	--
33.4	189.9	1.1	0.56	SAND	28	27	1.49	43	83	1.01	--
33.6	219.1	0.9	0.43	SAND	30	30	1.68	44	89	1.02	--
33.7	236.7	0.9	0.37	SAND	32	31	1.78	45	91	1.02	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	235.7	0.8	0.32	SAND	31	31	1.82	45	91	1.02	--
34.1	209.2	0.7	0.34	SAND	28	28	1.72	44	87	1.03	--
34.2	156.2	2.0	1.26	SAND	30	30	0.74	42	75	1.03	--
34.4	78.0	1.7	2.16	SILTY SAND	22	22	0.07	39	49	1.04	--
34.5	37.8	1.3	3.54	SANDY SILT AND SILT	16	16	0.01	35	25	1.04	--
34.7	31.7	0.8	2.59	SANDY SILT AND SILT	11	11	0.03	35	20	1.04	--
34.9	29.1	0.7	2.23	SANDY SILT AND SILT	10	10	0.04	34	20	1.05	--
35.0	25.6	0.5	2.03	SANDY SILT AND SILT	8	8	0.04	33	20	1.05	--
35.2	22.1	0.5	2.12	SANDY SILT AND SILT	8	8	0.03	33	20	1.06	--
35.4	18.8	0.4	2.13	SANDY SILT AND SILT	7	7	0.03	32	20	1.06	--
35.5	16.8	0.3	1.79	SANDY SILT AND SILT	6	6	0.03	31	20	1.06	--
35.7	16.5	0.2	1.27	SANDY SILT AND SILT	5	5	0.04	31	20	1.07	--
35.9	16.1	0.2	1.31	SANDY SILT AND SILT	5	5	0.04	31	20	1.07	--
36.0	16.1	0.2	1.31	SANDY SILT AND SILT	5	5	0.04	31	20	1.08	--
36.2	15.9	0.2	1.20	SANDY SILT AND SILT	5	5	0.04	31	20	1.08	--
36.4	16.1	0.2	1.24	SANDY SILT AND SILT	5	5	0.04	31	20	1.08	--
36.5	16.8	0.2	1.31	SANDY SILT AND SILT	5	5	0.04	31	20	1.09	--
36.7	17.5	0.3	1.43	SANDY SILT AND SILT	6	5	0.04	31	20	1.09	--
36.8	19.5	0.3	1.54	SANDY SILT AND SILT	6	6	0.04	32	20	1.10	--
37.0	20.1	0.3	1.64	SANDY SILT AND SILT	7	6	0.04	32	20	1.10	--
37.2	19.0	0.3	1.48	SANDY SILT AND SILT	6	6	0.04	32	20	1.10	--
37.3	18.0	0.3	1.44	SANDY SILT AND SILT	6	6	0.04	32	20	1.11	--
37.5	17.5	0.3	1.65	SANDY SILT AND SILT	6	6	0.04	31	20	1.11	--
37.7	19.5	0.3	1.59	SANDY SILT AND SILT	6	6	0.04	32	20	1.11	--
37.8	20.4	0.4	1.76	SANDY SILT AND SILT	7	6	0.04	32	20	1.12	--
38.0	20.9	0.3	1.63	SANDY SILT AND SILT	7	6	0.04	32	20	1.12	--
38.2	20.7	0.3	1.40	SANDY SILT AND SILT	6	6	0.05	32	20	1.13	--
38.3	20.8	0.3	1.58	SANDY SILT AND SILT	7	6	0.04	32	20	1.13	--
38.5	20.1	0.3	1.69	SANDY SILT AND SILT	7	6	0.04	32	20	1.13	--
38.6	20.2	0.4	1.74	SANDY SILT AND SILT	7	6	0.04	32	20	1.14	--
38.8	19.7	0.4	1.83	SANDY SILT AND SILT	7	6	0.04	32	20	1.14	--
39.0	19.0	0.1	0.63	SILTY SAND	5	5	0.07	32	20	1.15	--
39.1	18.1	0.3	1.83	SANDY SILT AND SILT	6	6	0.04	31	20	1.15	--
39.3	9.7	0.3	2.79	CLAYEY SILT AND SILTY CLAY	5	4	---	--	---	1.15	0.47
39.5	16.1	0.2	1.49	SANDY SILT AND SILT	5	5	0.04	31	20	1.16	--
39.6	15.4	0.3	1.69	SANDY SILT AND SILT	5	5	0.03	30	20	1.16	--
39.8	17.6	0.3	1.76	SANDY SILT AND SILT	6	6	0.04	31	20	1.17	--
40.0	20.2	0.4	2.03	SANDY SILT AND SILT	7	7	0.03	32	20	1.17	--
40.1	21.5	0.5	2.23	SANDY SILT AND SILT	8	7	0.03	32	20	1.17	--
40.3	22.4	0.6	2.63	SANDY SILT AND SILT	9	8	0.02	32	20	1.18	--
40.5	21.5	0.7	3.08	SANDY SILT AND SILT	9	9	0.01	32	20	1.18	--
40.6	19.5	0.6	2.98	SANDY SILT AND SILT	8	8	0.01	32	20	1.19	--
40.8	17.9	0.5	2.73	SANDY SILT AND SILT	7	7	0.02	31	20	1.19	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	16.8	0.5	2.75	SANDY SILT AND SILT	7	7	0.01	31	20	1.19	--
41.1	16.1	0.5	2.92	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.20	0.86
41.3	14.2	0.4	2.67	SANDY SILT AND SILT	6	6	0.01	30	20	1.20	--
41.4	12.0	0.3	2.09	SANDY SILT AND SILT	5	4	0.02	29	20	1.20	--
41.6	11.3	0.2	1.95	SANDY SILT AND SILT	4	4	0.02	29	20	1.21	--
41.8	13.4	0.2	1.71	SANDY SILT AND SILT	5	4	0.03	30	20	1.21	--
41.9	15.5	0.3	1.68	SANDY SILT AND SILT	5	5	0.03	30	20	1.22	--
42.1	14.7	0.3	1.70	SANDY SILT AND SILT	5	5	0.03	30	20	1.22	--
42.3	13.4	0.2	1.42	SANDY SILT AND SILT	5	4	0.04	30	20	1.22	--
42.4	12.8	0.2	1.32	SANDY SILT AND SILT	4	4	0.04	29	20	1.23	--
42.6	13.4	0.2	1.50	SANDY SILT AND SILT	5	4	0.03	30	20	1.23	--
42.7	14.7	0.2	1.50	SANDY SILT AND SILT	5	5	0.04	30	20	1.24	--
42.9	15.6	0.3	1.67	SANDY SILT AND SILT	5	5	0.03	30	20	1.24	--
43.1	15.9	0.3	1.88	SANDY SILT AND SILT	6	5	0.03	30	20	1.24	--
43.2	17.3	0.3	1.79	SANDY SILT AND SILT	6	5	0.04	31	20	1.25	--
43.4	17.4	0.3	1.95	SANDY SILT AND SILT	6	6	0.03	31	20	1.25	--
43.6	17.2	0.4	2.27	SANDY SILT AND SILT	7	6	0.02	31	20	1.26	--
43.7	18.8	0.3	1.81	SANDY SILT AND SILT	6	6	0.04	31	20	1.26	--
43.9	20.7	0.2	0.92	SILTY SAND	6	5	0.07	32	20	1.26	--
44.1	18.1	0.3	1.38	SANDY SILT AND SILT	6	5	0.04	31	20	1.27	--
44.2	17.0	0.3	1.76	SANDY SILT AND SILT	6	5	0.04	31	20	1.27	--
44.4	17.4	0.3	1.84	SANDY SILT AND SILT	6	5	0.03	31	20	1.27	--
44.6	17.4	0.4	2.53	SANDY SILT AND SILT	7	6	0.02	31	20	1.28	--
44.7	19.3	0.5	2.69	SANDY SILT AND SILT	8	7	0.02	31	20	1.28	--
44.9	21.5										

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-15
DATE : 01/31/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 8

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	173.2	1.3	0.73	SAND	27	99	1.30	--	---	0.01	--
0.3	168.0	1.4	0.85	SAND	27	89	1.19	--	---	0.01	--
0.4	158.5	1.8	1.12	SAND	29	87	0.89	--	---	0.02	--
0.6	137.2	2.1	1.53	SAND	31	89	0.37	--	---	0.03	--
0.8	68.8	2.0	2.86	SANDY SILT AND SILT	22	61	0.04	--	---	0.04	--
0.9	31.6	2.0	6.36	CLAY	32	83	---	--	---	0.05	1.97
1.1	27.2	1.3	4.85	CLAYEY SILT AND SILTY CLAY	15	39	---	--	---	0.06	1.70
1.2	29.3	1.0	3.38	SANDY SILT AND SILT	13	31	0.01	--	---	0.07	--
1.4	24.7	0.9	3.80	CLAYEY SILT AND SILTY CLAY	12	28	---	--	---	0.08	1.54
1.6	19.8	0.9	4.55	CLAYEY SILT AND SILTY CLAY	11	26	---	--	---	0.09	1.23
1.7	18.3	0.8	4.59	CLAYEY SILT AND SILTY CLAY	10	24	---	--	---	0.10	1.14
1.9	18.4	0.9	4.63	CLAYEY SILT AND SILTY CLAY	10	23	---	--	---	0.10	1.14
2.1	19.6	0.9	4.58	CLAYEY SILT AND SILTY CLAY	11	24	---	--	---	0.11	1.22
2.2	19.0	0.9	4.84	CLAY	19	41	---	--	---	0.12	1.18
2.4	19.0	0.9	4.69	CLAY	19	40	---	--	---	0.13	1.18
2.6	18.5	0.9	4.88	CLAY	18	38	---	--	---	0.14	1.14
2.7	18.4	0.9	4.89	CLAY	18	37	---	--	---	0.15	1.14
2.9	19.1	0.9	4.93	CLAY	19	38	---	--	---	0.16	1.18
3.1	19.8	1.1	5.36	CLAY	20	39	---	--	---	0.17	1.22
3.2	23.2	1.1	4.91	CLAY	23	45	---	--	---	0.18	1.44
3.4	25.2	1.2	4.77	CLAYEY SILT AND SILTY CLAY	14	27	---	--	---	0.19	1.56
3.5	26.6	1.3	4.74	CLAYEY SILT AND SILTY CLAY	15	28	---	--	---	0.19	1.65
3.7	27.2	1.3	4.71	CLAYEY SILT AND SILTY CLAY	15	28	---	--	---	0.20	1.69
3.9	28.7	1.3	4.46	CLAYEY SILT AND SILTY CLAY	15	28	---	--	---	0.21	1.78
4.0	29.2	1.3	4.38	CLAYEY SILT AND SILTY CLAY	15	27	---	--	---	0.22	1.81
4.2	29.8	1.3	4.46	CLAYEY SILT AND SILTY CLAY	16	28	---	--	---	0.23	1.85
4.3	30.6	1.4	4.50	CLAYEY SILT AND SILTY CLAY	16	29	---	--	---	0.24	1.90
4.5	30.6	1.4	4.51	CLAYEY SILT AND SILTY CLAY	16	28	---	--	---	0.25	1.90
4.7	29.9	1.3	4.38	CLAYEY SILT AND SILTY CLAY	15	27	---	--	---	0.26	1.85
4.8	29.8	1.3	4.27	CLAYEY SILT AND SILTY CLAY	15	26	---	--	---	0.27	1.84
5.0	30.6	1.3	4.08	CLAYEY SILT AND SILTY CLAY	15	25	---	--	---	0.27	1.90
5.2	32.0	0.1	0.16	SAND	8	14	0.17	41	50	0.28	--
5.3	34.1	1.3	3.72	CLAYEY SILT AND SILTY CLAY	16	26	---	--	---	0.29	2.11
5.5	10.5	1.2	11.76	CLAY	11	17	---	--	---	0.30	0.64

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	37.4	1.1	2.99	SANDY SILT AND SILT	14	23	0.03	41	52	0.31	--
5.8	41.2	1.1	2.67	SANDY SILT AND SILT	14	23	0.04	42	54	0.32	--
6.0	44.9	1.1	2.45	SANDY SILT AND SILT	14	23	0.04	42	56	0.33	--
6.1	43.5	1.1	2.55	SANDY SILT AND SILT	14	23	0.04	42	55	0.34	--
6.3	39.4	1.1	2.90	SANDY SILT AND SILT	14	22	0.03	41	52	0.35	--
6.5	34.6	1.0	2.98	SANDY SILT AND SILT	13	21	0.03	40	48	0.36	--
6.6	31.8	1.0	3.28	SANDY SILT AND SILT	13	20	0.02	40	45	0.36	--
6.8	29.9	1.0	3.45	SANDY SILT AND SILT	13	20	0.01	39	43	0.37	--
7.0	32.3	1.1	3.43	SANDY SILT AND SILT	14	21	0.01	40	45	0.38	--
7.1	32.2	1.1	3.32	SANDY SILT AND SILT	14	20	0.02	39	44	0.39	--
7.3	29.9	0.8	2.67	SANDY SILT AND SILT	11	16	0.03	39	42	0.40	--
7.4	25.8	0.9	3.33	SANDY SILT AND SILT	11	17	0.01	38	38	0.41	--
7.6	27.9	0.9	3.34	SANDY SILT AND SILT	12	18	0.01	38	40	0.42	--
7.8	26.5	1.0	3.89	CLAYEY SILT AND SILTY CLAY	13	19	---	--	---	0.43	1.63
7.9	30.5	1.1	3.44	SANDY SILT AND SILT	13	19	0.01	39	41	0.44	--
8.1	27.9	1.0	3.41	SANDY SILT AND SILT	12	18	0.01	38	39	0.44	--
8.3	20.8	0.8	3.95	CLAYEY SILT AND SILTY CLAY	10	15	---	--	---	0.45	1.27
8.4	21.8	0.7	3.39	CLAYEY SILT AND SILTY CLAY	10	14	---	--	---	0.45	1.33
8.6	18.9	0.6	3.33	CLAYEY SILT AND SILTY CLAY	9	12	---	--	---	0.45	1.15
8.8	23.1	0.7	3.07	SANDY SILT AND SILT	10	14	0.01	37	33	0.46	--
8.9	15.0	0.6	3.87	CLAYEY SILT AND SILTY CLAY	8	11	---	--	---	0.46	0.91
9.1	15.6	0.5	3.32	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.47	0.95
9.3	18.5	0.5	2.71	SANDY SILT AND SILT	8	11	0.02	36	27	0.47	--
9.4	15.7	0.4	2.81	SANDY SILT AND SILT	7	10	0.01	35	23	0.47	--
9.6	15.6	0.4	2.49	SANDY SILT AND SILT	6	9	0.02	35	22	0.48	--
9.7	12.9	0.3	2.32	SANDY SILT AND SILT	5	7	0.02	34	20	0.48	--
9.9	10.8	0.3	2.40	SANDY SILT AND SILT	5	7	0.01	33	20	0.49	--
10.1	11.6	0.3	2.77	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.49	0.69
10.2	10.8	0.4	3.53	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.49	0.64
10.4	13.6	0.4	2.57	SANDY SILT AND SILT	6	8	0.01	34	20	0.50	--
10.6	14.3	0.4	2.65	SANDY SILT AND SILT	6	8	0.01	34	20	0.50	--
10.7	13.6	0.4	2.87	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.50	0.81
10.9	14.3	0.4	2.80	CLAYEY SILT AND SILTY CLAY	6	9	---	--	---	0.51	0.86
11.1	15.5	0.5	3.17	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.51	0.93
11.2	13.7	0.6	4.15	CLAYEY SILT AND SILTY CLAY	8	10	---	--	---	0.52	0.82
11.4	16.3	0.5	2.94	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.52	0.98
11.5	31.9	0.4	1.16	SILTY SAND	9	12	0.07	38	39	0.52	--
11.7	36.0	0.3	0.81	SILTY SAND	10	13	0.09	39	42	0.53	--
11.9	35.4	0.3	0.96	SILTY SAND	10	13	0.08	38	41	0.53	--
12.0	29.1	0.6	2.06	SANDY SILT AND SILT	9	13	0.04	37	36	0.54	--
12.2	22.2	0.6	2.56	SANDY SILT AND SILT	8	11	0.03	36	28	0.54	--
12.4	16.3	0.6	3.49	CLAYEY SILT AND SILTY CLAY	8	10	---	--	---	0.54	0.98
12.5	14.2	0.5	3.73	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.55	0.84

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH. FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	13.4	0.5	3.87	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.55	0.80
12.9	15.0	0.5	3.21	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.56	0.89
13.0	13.9	0.4	2.96	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.56	0.82
13.2	12.5	0.3	2.63	SANDY SILT AND SILT	6	7	0.01	33	20	0.56	--
13.4	11.1	0.2	2.15	SANDY SILT AND SILT	5	6	0.02	32	20	0.57	--
13.5	11.4	0.2	2.01	SANDY SILT AND SILT	5	6	0.02	33	20	0.57	--
13.7	11.4	0.3	2.71	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.58	0.67
13.8	11.6	0.3	2.42	SANDY SILT AND SILT	5	6	0.01	33	20	0.58	--
14.0	11.0	0.3	2.46	SANDY SILT AND SILT	5	6	0.01	32	20	0.58	--
14.2	9.3	0.2	2.37	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.59	0.53
14.3	8.2	0.2	1.96	SANDY SILT AND SILT	3	4	0.01	31	20	0.59	--
14.5	7.6	0.1	1.85	SANDY SILT AND SILT	3	4	0.02	30	20	0.59	--
14.7	8.8	0.2	2.71	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.60	0.50
14.8	12.0	0.4	3.08	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.60	0.70
15.0	13.5	0.5	3.77	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.61	0.79
15.2	12.3	0.5	4.07	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.61	0.72
15.3	10.9	0.4	3.94	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.61	0.63
15.5	10.5	0.4	3.43	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.62	0.60
15.7	9.7	0.3	3.19	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.62	0.55
15.8	9.5	0.3	2.84	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.63	0.54
16.0	9.0	0.2	2.68	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.63	0.51
16.2	8.2	0.2	2.45	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.63	0.45
16.3	8.1	0.2	1.85	SANDY SILT AND SILT	3	4	0.02	30	20	0.64	--
16.5	7.9	0.2	1.90	SANDY SILT AND SILT	3	4	0.02	30	20	0.64	--
16.7	7.5	0.2	2.01	SANDY SILT AND SILT	3	4	0.01	30	20	0.65	--
16.8	7.5	0.1	1.86	SANDY SILT AND SILT	3	4	0.01	30	20	0.65	--
17.0	7.5	0.1	1.74	SANDY SILT AND SILT	3	4	0.02	30	20	0.65	--
17.2	7.1	0.1	1.70	SANDY SILT AND SILT	3	4	0.02	29	20	0.66	--
17.3	6.8	0.1	1.32	SANDY SILT AND SILT	3	3	0.02	29	20	0.66	--
17.5	6.8	0.1	0.88	SANDY SILT AND SILT	2	3	0.03	29	20	0.67	--
17.7	6.4	0.1	1.56	SANDY SILT AND SILT	3	3	0.02	29	20	0.67	--
17.8	7.7	0.1	1.43	SANDY SILT AND SILT	3	4	0.02	30	20	0.67	--
18.0	8.0	0.1	1.38	SANDY SILT AND SILT	3	4	0.02	30	20	0.68	--
18.1	7.4	0.0	0.54	SANDY SILT AND SILT	2	3	0.04	30	20	0.68	--
18.3	12.2	0.3	2.29	SANDY SILT AND SILT	5	6	0.02	32	20	0.69	--
18.5	3.2	0.3	8.36	CLAY	3	4	---	--	---	0.69	0.14
18.6	11.2	0.3	2.58	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.69	0.64
18.8	10.9	0.3	2.48	SANDY SILT AND SILT	5	6	0.01	31	20	0.70	--
19.0	8.8	0.3	3.17	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.70	0.49
19.1	8.2	0.3	3.31	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.70	0.44
19.3	15.6	0.3	1.80	SANDY SILT AND SILT	6	7	0.03	33	20	0.71	--
19.5	30.4	0.3	0.95	SILTY SAND	9	10	0.08	36	30	0.71	--
19.6	42.5	0.4	0.99	SILTY SAND	12	14	0.09	38	39	0.72	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	66.0	0.4	0.65	SAND	12	14	0.87	40	53	0.72	--
19.9	102.0	0.3	0.27	SAND	14	17	1.66	42	68	0.72	--
20.1	115.0	0.2	0.19	SAND	15	18	1.78	43	72	0.73	--
20.3	87.3	0.5	0.56	SAND	14	16	1.23	41	62	0.73	--
20.4	51.0	0.7	1.43	SILTY SAND	14	17	0.08	39	44	0.74	--
20.6	34.0	0.8	2.29	SANDY SILT AND SILT	11	13	0.04	37	32	0.74	--
20.8	25.2	0.5	1.99	SANDY SILT AND SILT	8	10	0.04	35	23	0.74	--
20.9	18.4	0.4	2.29	SANDY SILT AND SILT	7	8	0.03	34	20	0.75	--
21.1	11.5	0.3	2.35	SANDY SILT AND SILT	5	6	0.01	31	20	0.75	--
21.3	9.4	0.2	1.93	SANDY SILT AND SILT	4	4	0.02	30	20	0.76	--
21.4	10.2	0.2	1.66	SANDY SILT AND SILT	4	5	0.02	31	20	0.76	--
21.6	12.2	0.2	1.47	SANDY SILT AND SILT	4	5	0.03	31	20	0.76	--
21.8	11.6	0.1	0.87	SANDY SILT AND SILT	4	4	0.04	31	20	0.77	--
21.9	10.2	0.1	1.18	SANDY SILT AND SILT	4	4	0.03	30	20	0.77	--
22.1	10.2	0.1	1.18	SANDY SILT AND SILT	4	4	0.03	30	20	0.78	--
22.2	10.2	0.1	1.18	SANDY SILT AND SILT	4	4	0.03	30	20	0.78	--
22.4	10.6	0.1	0.66	SANDY SILT AND SILT	3	4	0.04	31	20	0.78	--
22.6	10.1	0.0	0.40	SANDY SILT AND SILT	3	4	0.05	30	20	0.79	--
22.7	8.2	0.0	0.49	SANDY SILT AND SILT	3	3	0.04	29	20	0.79	--
22.9	8.2	0.1	1.35	SANDY SILT AND SILT	3	3	0.03	29	20	0.79	--
23.1	10.0	0.1	1.00	SANDY SILT AND SILT	3	4	0.04	30	20	0.80	--
23.2	9.5	0.1	1.26	SANDY SILT AND SILT	3	4	0.03	30	20	0.80	--
23.4	9.3	0.1	1.40	SANDY SILT AND SILT	3	4	0.03	30	20	0.81	--
23.6	9.5	0.1	1.47	SANDY SILT AND SILT	4	4	0.03	30	20	0.81	--
23.7	9.5	0.2	1.69	SANDY SILT AND SILT	4	4	0.02	30	20	0.81	--
23.9	9.7	0.2	2.48	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.82	0.52
24.0	12.2	0.2	1.80	SANDY SILT AND SILT	5	5	0.03	31	20	0.82	--
24.2	12.3	0.4	2.92	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.83	0.69
24.4	16.3	0.4	2.45	SANDY SILT AND SILT	7	7	0.02	32	20	0.83	--
24.5	19.1	0.3	1.73	SANDY SILT AND SILT	6	7	0.04	33	20	0.83	--
24.7	13.6	0.3	1.91	SANDY SILT AND SILT	5	6	0.03	31	20	0.84	--
24.9	12.2	0.3	2.04	SANDY SILT AND SILT	5	5	0.02	31	20	0.84	--
25.0	14.5	0.3	2.14	SANDY SILT AND SILT	6	6	0.02	32	20	0.85	--
25.2	15.5	0.4	2.78	SANDY SILT AND SILT	7	7	0.01	32	20	0.85	--
25.4	15.6	0.3	2.12	SANDY SILT AND SILT	6	6	0.03	32	20	0.85	--
25.5	12.2	0.3	2.63	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.86	0.67
25.7	15.7	0.4	2.30	SANDY SILT AND SILT	6	7	0.02	32	20	0.86	--
25.9	34.8	0.4	1.12	SILTY SAND	10	11	0.08	36	28	0.86	--
26.0	35.2	0.7	1.99	SILTY SAND	11	12	0.05	36	29	0.87	--
26.2	39.9	0.8	2.06	SILTY SAND	12	13	0.05	37	32	0.87	--
26.3	77.5	0.4	0.57	SAND	13	14	1.15	40	53	0.88	--
26.5	98.6	0.2	0.24	SAND	13	14	1.69	41	62	0.88	--
26.7	89.8	0.3	0.33	SAND	13	14	1.55	40	59	0.88	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	79.9	0.8	0.96	SAND	16	17	0.59	40	54	0.89	--
27.0	72.3	1.5	2.05	SILTY SAND	21	22	0.07	39	50	0.89	--
27.2	64.2	2.1	3.23	SANDY SILT AND SILT	23	24	0.03	39	46	0.90	--
27.3	51.4	1.7	3.35	SANDY SILT AND SILT	20	21	0.02	38	39	0.90	--
27.5	36.0	1.2	3.19	SANDY SILT AND SILT	14	15	0.02	36	28	0.90	--
27.7	29.2	0.9	3.21	SANDY SILT AND SILT	12	13	0.02	35	22	0.91	--
27.8	28.2	0.9	3.05	SANDY SILT AND SILT	11	12	0.02	35	21	0.91	--
28.0	25.8	0.8	3.21	SANDY SILT AND SILT	11	12	0.01	34	20	0.92	--
28.1	25.9	0.8	2.97	SANDY SILT AND SILT	10	11	0.02	34	20	0.92	--
28.3	25.8	0.7	2.83	SANDY SILT AND SILT	10	11	0.02	34	20	0.92	--
28.5	25.3	0.7	2.61	SANDY SILT AND SILT	9	10	0.03	34	20	0.93	--
28.6	25.3	0.7	2.57	SANDY SILT AND SILT	9	10	0.03	34	20	0.93	--
28.8	25.2	0.6	2.31	SANDY SILT AND SILT	9	9	0.03	34	20	0.94	--
29.0	25.5	0.6	2.19	SANDY SILT AND SILT	9	9	0.04	34	20	0.94	--
29.1	24.8	0.4	1.73	SANDY SILT AND SILT	8	8	0.05	34	20	0.94	--
29.3	23.2	0.4	1.81	SANDY SILT AND SILT	8	8	0.04	34	20	0.95	--
29.5	23.6	0.4	1.69	SANDY SILT AND SILT	7	8	0.05	34	20	0.95	--
29.6	24.5	0.5	1.92	SANDY SILT AND SILT	8	8	0.04	34	20	0.95	--
29.8	29.9	0.5	1.74	SILTY SAND	9	9	0.05	35	21	0.96	--
30.0	33.9	0.8	2.33	SANDY SILT AND SILT	11	11	0.04	35	24	0.96	--
30.1	46.2	2.0	4.30	CLAYEY SILT AND SILTY CLAY	22	23	---	--	---	0.97	2.79
30.3	76.0	2.8	3.65	SANDY SILT AND SILT	29	30	0.02	39	50	0.97	--
30.4	66.8	2.6	3.94	SANDY SILT AND SILT	29	29	0.01	39	45	0.97	--
30.6	59.8	2.1	3.53	SANDY SILT AND SILT	23	24	0.02	38	41	0.98	--
30.8	43.2	1.4	3.27	SANDY SILT AND SILT	17	17	0.02	36	31	0.98	--
30.9	34.3	1.0	2.94	SANDY SILT AND SILT	13	13	0.03	35	24	0.99	--
31.1	33.4	1.1	3.33	SANDY SILT AND SILT	14	14	0.02	35	23	0.99	--
31.3	36.7	1.4	3.68	CLAYEY SILT AND SILTY CLAY	16	16	---	--	---	0.99	2.19
31.4	32.6	1.3	4.08	CLAYEY SILT AND SILTY CLAY	16	16	---	--	---	1.00	1.93
31.6	32.0	1.2	3.88	CLAYEY SILT AND SILTY CLAY	15	15	---	--	---	1.00	1.89
31.8	30.6	1.2	4.05	CLAYEY SILT AND SILTY CLAY	15	15	---	--	---	1.01	1.80
31.9	28.6	1.2	4.24	CLAYEY SILT AND SILTY CLAY	14	14	---	--	---	1.01	1.68
32.1	29.0	1.1	3.93	CLAYEY SILT AND SILTY CLAY	14	14	---	--	---	1.01	1.70
32.3	26.5	0.9	3.39	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.02	1.55
32.4	23.2	0.8	3.45	CLAYEY SILT AND SILTY CLAY	11	10	---	--	---	1.02	1.34
32.6	19.6	0.7	3.62	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	1.02	1.12
32.7	17.2	0.6	3.32	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.03	0.96
32.9	16.7	0.4	2.64	SANDY SILT AND SILT	7	7	0.02	31	20	1.03	--
33.1	15.6	0.4	2.43	SANDY SILT AND SILT	6	6	0.02	31	20	1.04	--
33.2	14.3	0.3	2.31	SANDY SILT AND SILT	6	6	0.02	31	20	1.04	--
33.4	12.9	0.4	2.71	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	1.04	0.69
33.6	13.6	0.4	2.73	SANDY SILT AND SILT	6	6	0.01	30	20	1.05	--
33.7	14.5	0.3	2.28	SANDY SILT AND SILT	6	6	0.02	31	20	1.05	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	13.9	0.4	2.73	SANDY SILT AND SILT	6	6	0.01	30	20	1.06	--
34.1	17.7	0.4	2.32	SANDY SILT AND SILT	7	7	0.02	32	20	1.06	--
34.2	21.1	0.5	2.18	SANDY SILT AND SILT	8	7	0.03	32	20	1.06	--
34.4	25.2	0.4	1.71	SANDY SILT AND SILT	8	8	0.05	33	20	1.07	--
34.5	21.8	0.5	2.11	SANDY SILT AND SILT	8	7	0.03	33	20	1.07	--
34.7	19.6	0.4	2.25	SANDY SILT AND SILT	7	7	0.03	32	20	1.08	--
34.9	17.8	0.4	2.14	SANDY SILT AND SILT	7	6	0.03	32	20	1.08	--
35.0	19.7	0.4	1.93	SANDY SILT AND SILT	7	7	0.04	32	20	1.08	--
35.2	19.0	0.5	2.57	SANDY SILT AND SILT	8	7	0.02	32	20	1.09	--
35.4	21.9	0.6	2.52	SANDY SILT AND SILT	8	8	0.03	33	20	1.09	--
35.5	20.5	0.6	2.83	SANDY SILT AND SILT	8	8	0.02	32	20	1.10	--
35.7	16.9	0.5	2.96	SANDY SILT AND SILT	7	7	0.01	31	20	1.10	--
35.9	16.3	0.4	2.15	SANDY SILT AND SILT	6	6	0.03	31	20	1.10	--
36.0	12.4	0.3	2.18	SANDY SILT AND SILT	5	5	0.02	30	20	1.11	--
36.2	10.9	0.4	3.22	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	1.11	0.56
36.4	17.9	0.5	2.74	SANDY SILT AND SILT	7	7	0.02	31	20	1.11	--
36.5	21.3	0.6	2.91	SANDY SILT AND SILT	9	8	0.02	32	20	1.12	--
36.7	21.8	0.6	2.90	SANDY SILT AND SILT	9	9	0.02	32	20	1.12	--
36.8	20.4	0.6	2.74	SANDY SILT AND SILT	8	8	0.02	32	20	1.13	--
37.0	17.8	0.4	2.42	SANDY SILT AND SILT	7	7	0.02	31	20	1.13	--
37.2	15.0	0.4	2.54	SANDY SILT AND SILT	6	6	0.02	30	20	1.13	--
37.3	12.2	0.2	1.96	SANDY SILT AND SILT	5	5	0.02	29	20	1.14	--
37.5	11.3	0.2	1.68	SANDY SILT AND SILT	4	4	0.03	29	20	1.14	--
37.7	15.1	0.4	2.33	SANDY SILT AND SILT	6	6	0.02	30	20	1.15	--
37.8	21.6	0.6	2.87	SANDY SILT AND SILT	9	8	0.02	32	20	1.15	--
38.0	25.9	0.8	3.25	SANDY SILT AND SILT	11	10	0.01	33	20	1.15	--
38.2	30.1	1.1	3.56	CLAYEY SILT AND SILTY CLAY	14	13	---	--	---	1.16	1.75
38.3	31.6	1.2	3.64	CLAYEY SILT AND SILTY CLAY	14	13	---	--	---	1.16	1.84
38.5	27.9	0.5	1.94	SANDY SILT AND SILT	9	8	0.05	33	20	1.17	--
38.6	23.8	1.0	4.29	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.17	1.35
38.8	18.4	0.9	5.05	CLAY	18	17	---	--	---	1.17	1.02
39.0	20.6	0.9	4.12	CLAYEY SILT AND SILTY CLAY	11	10	---	--	---	1.18	1.15
39.1	19.0	0.8	3.94	CLAYEY SILT AND SILTY CLAY	10	9	---	--	---	1.18	1.06
39.3	19.8	0.6	2.94	SANDY SILT AND SILT	8	8	0.01	32	20	1.19	--
39.5	18.4	0.6	3.16	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.19	1.01
39.6	17.7	0.5	2.94	SANDY SILT AND SILT	8	7	0.01	31	20	1.19	--
39.8	16.3	0.5	2.82	SANDY SILT AND SILT	7	7	0.01	31	20	1.20	--
40.0	14.3	0.4	2.59	SANDY SILT AND SILT	6	6	0.01	30	20	1.20	--
40.1	12.9	0.3	2.17	SANDY SILT AND SILT	5	5	0.02	29	20	1.20	--
40.3	12.8	0.3	1.95	SANDY SILT AND SILT	5	5	0.02	29	20	1.21	--
40.5	14.1	0.2	1.63	SANDY SILT AND SILT	5	5	0.03	30	20	1.21	--
40.6	14.1	0.2	1.63	SANDY SILT AND SILT	5	5	0.03	30	20	1.22	--
40.8	13.9	0.2	1.59	SANDY SILT AND SILT	5	4	0.03	30	20	1.22	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	14.3	0.3	2.10	SANDY SILT AND SILT	6	5	0.02	30	20	1.22	--
41.1	15.1	0.4	2.45	SANDY SILT AND SILT	6	6	0.02	30	20	1.23	--
41.3	14.3	0.3	2.17	SANDY SILT AND SILT	6	5	0.02	30	20	1.23	--
41.4	14.3	0.2	1.47	SANDY SILT AND SILT	5	4	0.04	30	20	1.24	--
41.6	15.6	0.3	1.67	SANDY SILT AND SILT	5	5	0.03	30	20	1.24	--
41.8	19.2	0.5	2.71	SANDY SILT AND SILT	8	7	0.02	31	20	1.24	--
41.9	29.2	0.4	1.23	SILTY SAND	9	8	0.07	33	20	1.25	--
42.1	32.6	0.3	0.80	SILTY SAND	9	8	0.08	34	20	1.25	--
42.3	20.4	0.3	1.67	SANDY SILT AND SILT	7	6	0.04	31	20	1.26	--
42.4	17.8	0.3	1.58	SANDY SILT AND SILT	6	5	0.04	31	20	1.26	--
42.6	16.3	0.3	1.53	SANDY SILT AND SILT	6	5	0.04	30	20	1.26	--
42.7	15.1	0.3	1.66	SANDY SILT AND SILT	5	5	0.03	30	20	1.27	--
42.9	15.5	0.2	1.55	SANDY SILT AND SILT	5	5	0.04	30	20	1.27	--
43.1	15.9	0.3	1.57	SANDY SILT AND SILT	5	5	0.04	30	20	1.27	--
43.2	13.6	0.2	1.40	SANDY SILT AND SILT	5	4	0.04	29	20	1.28	--
43.4	12.2	0.2	1.88	SANDY SILT AND SILT	5	4	0.02	29	20	1.28	--
43.6	13.5	0.3	1.92	SANDY SILT AND SILT	5	5	0.03	29	20	1.29	--
43.7	13.6	0.3	1.91	SANDY SILT AND SILT	5	5	0.03	29	20	1.29	--
43.9	14.3	0.3	2.03	SANDY SILT AND SILT	5	5	0.02	30	20	1.29	--
44.1	15.3	0.3	2.03	SANDY SILT AND SILT	6	5	0.03	30	20	1.30	--
44.2	15.3	0.3	2.03	SANDY SILT AND SILT	6	5	0.03	30	20	1.30	--
44.4	15.0	0.3	2.01	SANDY SILT AND SILT	6	5	0.03	30	20	1.31	--
44.6	14.2	0.3	1.76	SANDY SILT AND SILT	5	5	0.03	30	20	1.31	--
44.7	13.2										
44.9	13.4										

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-17
DATE : 01/31/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
NO GROUNDWATER ENCOUNTERED IN TEST HOLE

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	10.9	0.0	0.18	SILTY SAND	3	12	0.07	--	---	0.01	--
0.3	243.7	0.6	0.26	SAND	31	99	1.90	--	---	0.01	--
0.4	150.3	0.8	0.53	SAND	22	67	1.46	--	---	0.02	--
0.6	119.3	0.3	0.22	SAND	16	46	1.75	--	---	0.03	--
0.8	82.3	1.3	1.62	SILTY SAND	22	61	0.09	--	---	0.04	--
0.9	66.8	1.3	1.98	SILTY SAND	19	50	0.07	--	---	0.05	--
1.1	35.4	1.6	4.58	CLAYEY SILT AND SILTY CLAY	18	47	---	--	---	0.06	2.21
1.2	25.9	1.1	4.05	CLAYEY SILT AND SILTY CLAY	13	31	---	--	---	0.07	1.62
1.4	18.3	0.8	4.21	CLAYEY SILT AND SILTY CLAY	10	23	---	--	---	0.08	1.14
1.6	17.7	0.6	3.22	CLAYEY SILT AND SILTY CLAY	8	19	---	--	---	0.09	1.10
1.7	17.1	0.6	3.21	CLAYEY SILT AND SILTY CLAY	8	18	---	--	---	0.10	1.06
1.9	18.4	0.6	3.00	SANDY SILT AND SILT	8	18	0.01	--	---	0.10	--
2.1	19.6	0.6	2.96	SANDY SILT AND SILT	8	18	0.01	--	---	0.11	--
2.2	19.1	0.6	2.99	SANDY SILT AND SILT	8	18	0.01	--	---	0.12	--
2.4	17.7	0.5	2.71	SANDY SILT AND SILT	7	15	0.02	--	---	0.13	--
2.6	15.7	0.4	2.74	SANDY SILT AND SILT	7	14	0.01	--	---	0.14	--
2.7	12.5	0.4	3.29	CLAYEY SILT AND SILTY CLAY	6	12	---	--	---	0.15	0.77
2.9	11.6	0.4	3.03	CLAYEY SILT AND SILTY CLAY	5	11	---	--	---	0.16	0.71
3.1	10.3	0.3	3.00	CLAYEY SILT AND SILTY CLAY	5	10	---	--	---	0.17	0.64
3.2	10.9	0.3	2.76	CLAYEY SILT AND SILTY CLAY	5	10	---	--	---	0.18	0.67
3.4	15.0	0.3	2.20	SANDY SILT AND SILT	6	11	0.02	--	---	0.19	--
3.5	17.0	0.3	1.76	SANDY SILT AND SILT	6	11	0.04	--	---	0.19	--
3.7	14.5	0.3	1.72	SANDY SILT AND SILT	5	10	0.03	--	---	0.20	--
3.9	11.6	0.3	2.16	SANDY SILT AND SILT	5	9	0.02	--	---	0.21	--
4.0	11.0	0.3	2.73	CLAYEY SILT AND SILTY CLAY	5	9	---	--	---	0.22	0.67
4.2	12.3	0.3	2.69	CLAYEY SILT AND SILTY CLAY	6	10	---	--	---	0.23	0.75
4.3	12.7	0.3	2.68	CLAYEY SILT AND SILTY CLAY	6	10	---	--	---	0.24	0.78
4.5	14.3	0.4	2.58	SANDY SILT AND SILT	6	11	0.01	--	---	0.25	--
4.7	16.3	0.4	2.57	SANDY SILT AND SILT	7	12	0.02	38	34	0.26	--
4.8	16.9	0.4	2.43	SANDY SILT AND SILT	7	11	0.02	38	35	0.27	--
5.0	13.6	0.4	2.57	SANDY SILT AND SILT	6	10	0.01	37	30	0.27	--
5.2	11.4	0.3	2.73	CLAYEY SILT AND SILTY CLAY	5	9	---	--	---	0.28	0.69
5.3	9.6	0.3	2.82	CLAYEY SILT AND SILTY CLAY	5	8	---	--	---	0.29	0.58
5.5	8.3	0.2	2.76	CLAYEY SILT AND SILTY CLAY	4	7	---	--	---	0.30	0.50

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	7.5	0.2	2.13	CLAYEY SILT AND SILTY CLAY	3	5	---	--	---	0.31	0.45
5.8	6.8	0.1	1.46	SANDY SILT AND SILT	3	4	0.02	33	20	0.32	--
6.0	8.2	0.1	0.98	SANDY SILT AND SILT	3	5	0.03	34	20	0.33	--
6.1	9.5	0.2	2.10	SANDY SILT AND SILT	4	6	0.01	34	20	0.34	--
6.3	12.8	0.3	2.04	SANDY SILT AND SILT	5	8	0.02	36	23	0.35	--
6.5	12.2	0.3	2.21	SANDY SILT AND SILT	5	8	0.02	35	22	0.36	--
6.6	11.7	0.2	2.05	SANDY SILT AND SILT	5	7	0.02	35	21	0.36	--
6.8	10.4	0.2	1.92	SANDY SILT AND SILT	4	6	0.02	34	20	0.37	--
7.0	9.6	0.2	1.67	SANDY SILT AND SILT	4	6	0.02	34	20	0.38	--
7.1	9.5	0.1	1.48	SANDY SILT AND SILT	4	5	0.03	33	20	0.39	--
7.3	10.0	0.2	1.81	SANDY SILT AND SILT	4	6	0.02	34	20	0.40	--
7.4	10.2	0.3	2.64	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.41	0.61
7.6	12.3	0.2	1.87	SANDY SILT AND SILT	5	7	0.02	34	20	0.42	--
7.8	12.3	0.2	1.70	SANDY SILT AND SILT	5	7	0.03	34	20	0.43	--
7.9	12.0	0.3	2.41	SANDY SILT AND SILT	5	7	0.01	34	20	0.44	--
8.1	13.6	0.4	2.64	SANDY SILT AND SILT	6	9	0.01	35	21	0.45	--
8.3	13.8	0.4	2.53	SANDY SILT AND SILT	6	8	0.01	35	21	0.45	--
8.4	13.3	0.4	2.79	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.46	0.80
8.6	13.0	0.3	2.31	SANDY SILT AND SILT	5	8	0.02	34	20	0.47	--
8.8	13.8	0.3	2.25	SANDY SILT AND SILT	6	8	0.02	34	20	0.48	--
8.9	15.7	0.3	2.04	SANDY SILT AND SILT	6	8	0.03	35	22	0.49	--
9.1	15.0	0.3	2.27	SANDY SILT AND SILT	6	8	0.02	35	21	0.50	--
9.3	13.7	0.4	2.63	SANDY SILT AND SILT	6	8	0.01	34	20	0.51	--
9.4	14.3	0.4	2.72	SANDY SILT AND SILT	6	9	0.01	34	20	0.52	--
9.6	14.6	0.4	2.54	SANDY SILT AND SILT	6	8	0.02	34	20	0.53	--
9.7	13.7	0.3	2.26	SANDY SILT AND SILT	6	7	0.02	34	20	0.54	--
9.9	13.6	0.3	2.42	SANDY SILT AND SILT	6	8	0.02	34	20	0.54	--
10.1	15.1	0.5	3.46	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.55	0.91
10.2	23.2	0.7	3.07	SANDY SILT AND SILT	10	13	0.01	36	28	0.56	--
10.4	32.7	0.9	2.85	SANDY SILT AND SILT	12	16	0.03	38	37	0.57	--
10.6	30.4	0.8	2.76	SANDY SILT AND SILT	11	15	0.03	37	35	0.58	--
10.7	22.5	0.7	2.98	SANDY SILT AND SILT	9	12	0.02	36	26	0.59	--
10.9	17.1	0.6	3.57	CLAYEY SILT AND SILTY CLAY	8	11	---	--	---	0.60	1.03
11.1	15.6	0.5	3.32	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.61	0.94
11.2	15.0	0.4	2.73	SANDY SILT AND SILT	7	8	0.01	33	20	0.62	--
11.4	12.2	0.3	2.47	SANDY SILT AND SILT	5	7	0.01	32	20	0.63	--
11.5	10.9	0.2	2.01	SANDY SILT AND SILT	4	6	0.02	32	20	0.64	--
11.7	10.0	0.2	2.21	SANDY SILT AND SILT	4	5	0.01	31	20	0.64	--
11.9	9.1	0.2	2.21	SANDY SILT AND SILT	4	5	0.01	31	20	0.65	--
12.0	9.6	0.3	2.93	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.66	0.56
12.2	11.7	0.3	2.57	SANDY SILT AND SILT	5	6	0.01	32	20	0.67	--
12.4	13.5	0.4	2.88	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.68	0.80
12.5	16.4	0.3	1.77	SANDY SILT AND SILT	6	7	0.03	33	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	36.7	0.3	0.74	SILTY SAND	10	12	0.09	37	36	0.70	--
12.9	38.8	0.4	1.13	SILTY SAND	11	13	0.08	37	37	0.71	--
13.0	36.0	0.3	0.95	SILTY SAND	10	12	0.08	37	34	0.72	--
13.2	31.4	0.3	0.83	SILTY SAND	9	10	0.08	36	30	0.73	--
13.4	21.1	0.2	1.04	SILTY SAND	6	7	0.06	34	20	0.73	--
13.5	12.4	0.2	1.37	SANDY SILT AND SILT	4	5	0.03	32	20	0.74	--
13.7	10.2	0.1	1.38	SANDY SILT AND SILT	4	4	0.03	31	20	0.75	--
13.8	11.0	0.2	1.45	SANDY SILT AND SILT	4	5	0.03	31	20	0.76	--
14.0	12.3	0.2	1.95	SANDY SILT AND SILT	5	5	0.02	31	20	0.77	--
14.2	14.3	0.3	2.09	SANDY SILT AND SILT	6	6	0.02	32	20	0.78	--
14.3	15.5	0.3	2.00	SANDY SILT AND SILT	6	6	0.03	32	20	0.79	--
14.5	18.2	0.6	3.03	SANDY SILT AND SILT	8	9	0.01	33	20	0.80	--
14.7	28.3	0.7	2.37	SANDY SILT AND SILT	10	11	0.04	35	24	0.81	--
14.8	100.9	0.7	0.68	SAND	17	18	1.14	41	65	0.82	--
15.0	143.8	0.9	0.63	SAND	22	24	1.35	43	77	0.82	--
15.2	180.3	0.7	0.39	SAND	25	28	1.64	44	85	0.83	--
15.3	176.9	1.4	0.79	SAND	28	30	1.26	44	84	0.84	--
15.5	169.4	2.2	1.30	SAND	32	35	0.75	44	82	0.85	--
15.7	214.0	2.0	0.93	SAND	34	37	1.21	45	91	0.86	--
15.8	268.5	1.4	0.53	SAND	36	39	1.72	46	98	0.87	--
16.0	239.9	1.1	0.48	SAND	33	35	1.69	45	94	0.88	--
16.2	170.5	0.6	0.32	SAND	23	25	1.69	44	81	0.89	--
16.3	127.2	0.6	0.44	SAND	18	19	1.51	42	71	0.90	--
16.5	64.6	0.9	1.41	SILTY SAND	18	18	0.09	39	46	0.91	--
16.7	34.2	0.7	2.10	SANDY SILT AND SILT	11	11	0.05	36	26	0.92	--
16.8	13.2	0.5	3.87	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.93	0.77
17.0	11.9	0.2	1.26	SANDY SILT AND SILT	4	4	0.04	30	20	0.93	--
17.2	10.5	0.1	1.14	SANDY SILT AND SILT	4	4	0.03	30	20	0.94	--
17.3	10.5	0.1	1.24	SANDY SILT AND SILT	4	4	0.03	30	20	0.95	--
17.5	10.7	0.2	1.59	SANDY SILT AND SILT	4	4	0.03	30	20	0.96	--
17.7	11.8	0.2	1.27	SANDY SILT AND SILT	4	4	0.03	30	20	0.97	--
17.8	11.3	0.2	1.33	SANDY SILT AND SILT	4	4	0.03	30	20	0.98	--
18.0	10.9	0.2	1.38	SANDY SILT AND SILT	4	4	0.03	30	20	0.99	--
18.1	12.7	0.3	2.05	SANDY SILT AND SILT	5	5	0.02	30	20	1.00	--
18.3	15.0	0.3	2.00	SANDY SILT AND SILT	6	6	0.03	31	20	1.01	--
18.5	14.9	0.5	3.09	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.02	0.87
18.6	16.4	0.6	3.79	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.02	0.96
18.8	23.8	0.9	3.57	CLAYEY SILT AND SILTY CLAY	11	11	---	--	---	1.03	1.43
19.0	61.3	0.6	0.95	SAND	15	15	0.24	38	41	1.04	--
19.1	66.4	0.9	1.34	SILTY SAND	18	17	0.09	38	43	1.05	--
19.3	54.4	0.1	0.22	SAND	8	8	1.52	37	36	1.06	--
19.5	44.2	1.2	2.74	SANDY SILT AND SILT	15	15	0.04	36	30	1.07	--
19.6	16.4	1.1	6.78	CLAY	16	16	---	--	---	1.08	0.96

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	44.2	1.0	2.15	SILTY SAND	13	13	0.05	36	29	1.09	--
19.9	30.5	0.6	2.06	SANDY SILT AND SILT	10	9	0.05	34	20	1.10	--
20.1	20.5	0.8	4.10	CLAYEY SILT AND SILTY CLAY	11	10	---	--	---	1.11	1.21
20.3	30.6	0.9	3.07	SANDY SILT AND SILT	12	12	0.02	34	20	1.12	--
20.4	30.6	0.8	2.55	SANDY SILT AND SILT	11	10	0.03	34	20	1.12	--
20.6	22.7	0.6	2.56	SANDY SILT AND SILT	9	8	0.03	33	20	1.13	--
20.8	17.7	0.5	2.65	SANDY SILT AND SILT	7	7	0.02	31	20	1.14	--
20.9	14.8	0.4	2.37	SANDY SILT AND SILT	6	6	0.02	30	20	1.15	--
21.1	14.4	0.3	2.37	SANDY SILT AND SILT	6	5	0.02	30	20	1.16	--
21.3	15.7	0.5	2.87	SANDY SILT AND SILT	7	6	0.01	31	20	1.17	--
21.4	19.8	0.4	1.97	SANDY SILT AND SILT	7	6	0.04	32	20	1.18	--
21.6	15.0	0.4	2.53	SANDY SILT AND SILT	6	6	0.02	30	20	1.19	--
21.8	15.6	0.5	2.96	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.20	0.90
21.9	34.5	0.7	2.09	SANDY SILT AND SILT	11	10	0.05	34	20	1.21	--
22.1	43.3	0.9	2.01	SILTY SAND	13	12	0.06	35	25	1.21	--
22.2	67.5	0.8	1.25	SILTY SAND	18	16	0.10	37	40	1.22	--
22.4	78.9	0.6	0.81	SAND	15	13	0.80	38	45	1.23	--
22.6	69.5	0.8	1.21	SILTY SAND	18	17	0.10	38	40	1.24	--
22.7	58.5	0.6	0.99	SILTY SAND	15	14	0.10	37	34	1.25	--
22.9	43.7	0.6	1.37	SILTY SAND	12	11	0.08	35	24	1.26	--
23.1	27.2	0.5	1.76	SANDY SILT AND SILT	8	8	0.05	33	20	1.27	--
23.2	17.3	0.4	2.43	SANDY SILT AND SILT	7	6	0.02	31	20	1.28	--
23.4	21.1	0.4	2.08	SANDY SILT AND SILT	7	7	0.03	32	20	1.29	--
23.6	21.8	0.6	2.71	SANDY SILT AND SILT	9	8	0.02	32	20	1.30	--
23.7	22.7	0.6	2.81	SANDY SILT AND SILT	9	8	0.02	32	20	1.30	--
23.9	21.8	0.7	3.30	CLAYEY SILT AND SILTY CLAY	10	9	---	--	---	1.31	1.28
24.0	23.0	0.9	3.96	CLAYEY SILT AND SILTY CLAY	11	10	---	--	---	1.32	1.35
24.2	24.9	1.1	4.26	CLAYEY SILT AND SILTY CLAY	13	11	---	--	---	1.33	1.47
24.4	25.9	1.2	4.64	CLAYEY SILT AND SILTY CLAY	14	12	---	--	---	1.34	1.53
24.5	25.5	1.2	4.75	CLAYEY SILT AND SILTY CLAY	14	12	---	--	---	1.35	1.51
24.7	24.5	1.0	4.16	CLAYEY SILT AND SILTY CLAY	12	11	---	--	---	1.36	1.45
24.9	22.8	0.8	3.55	CLAYEY SILT AND SILTY CLAY	11	9	---	--	---	1.37	1.34
25.0	22.4	0.9	3.84	CLAYEY SILT AND SILTY CLAY	11	9	---	--	---	1.38	1.31
25.2	36.2	0.8	2.07	SANDY SILT AND SILT	11	10	0.05	34	20	1.39	--
25.4	25.6	0.7	2.77	SANDY SILT AND SILT	10	8	0.02	32	20	1.39	--
25.5	36.7	0.5	1.42	SILTY SAND	11	9	0.07	34	20	1.40	--
25.7	28.1	0.5	1.78	SANDY SILT AND SILT	9	7	0.05	32	20	1.41	--
25.9	23.2	0.6	2.37	SANDY SILT AND SILT	8	7	0.03	32	20	1.42	--
26.0	16.0	0.5	2.93	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.43	0.91
26.2	14.1	0.4	2.55	SANDY SILT AND SILT	6	5	0.01	29	20	1.44	--
26.3	12.5	0.3	2.23	SANDY SILT AND SILT	5	4	0.02	28	20	1.45	--
26.5	10.9	0.2	2.01	SANDY SILT AND SILT	4	4	0.02	28	20	1.46	--
26.7	11.1	0.2	1.89	SANDY SILT AND SILT	4	4	0.02	28	20	1.47	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	11.7	0.2	1.88	SANDY SILT AND SILT	5	4	0.02	28	20	1.48	--
27.0	12.3	0.3	2.12	SANDY SILT AND SILT	5	4	0.02	28	20	1.49	--
27.2	13.1	0.3	2.53	SANDY SILT AND SILT	6	5	0.01	28	20	1.49	--
27.3	15.0	0.5	3.40	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.50	0.84
27.5	19.1	0.9	4.45	CLAYEY SILT AND SILTY CLAY	11	9	---	--	---	1.51	1.10
27.7	24.1	1.2	4.90	CLAY	24	20	---	--	---	1.52	1.41
27.8	38.1	1.2	3.15	SANDY SILT AND SILT	15	12	0.02	34	20	1.53	--
28.0	66.7	1.0	1.42	SILTY SAND	18	15	0.09	36	33	1.54	--
28.1	117.1	0.5	0.39	SAND	17	14	1.55	39	53	1.55	--
28.3	138.8	0.4	0.25	SAND	19	15	1.73	40	61	1.56	--
28.5	133.3	0.7	0.50	SAND	20	16	1.47	40	59	1.57	--
28.6	138.1	1.6	1.17	SAND	26	21	0.76	40	60	1.58	--
28.8	142.3	1.4	0.99	SAND	25	20	0.97	40	61	1.58	--
29.0	152.3	0.9	0.62	SAND	23	18	1.38	40	63	1.59	--
29.1	214.9	0.6	0.27	SAND	28	23	1.80	42	78	1.60	--
29.3	269.3	0.9	0.34	SAND	35	28	1.89	43	87	1.61	--
29.5	283.7	1.1	0.40	SAND	37	29	1.87	43	89	1.62	--
29.6	250.3	0.9	0.38	SAND	33	26	1.81	43	84	1.63	--
29.8	235.3	0.8	0.33	SAND	31	24	1.81	42	81	1.64	--
30.0	233.4	0.9	0.37	SAND	31	24	1.77	42	81	1.65	--
30.1	233.3	0.9	0.39	SAND	31	24	1.75	42	80	1.66	--
30.3	210.2	0.7	0.31	SAND	28	22	1.75	42	76	1.67	--
30.4	164.5	1.0	0.63	SAND	25	19	1.39	40	65	1.67	--
30.6	89.0	1.3	1.40	SILTY SAND	23	18	0.10	37	41	1.68	--
30.8	41.9	1.1	2.62	SANDY SILT AND SILT	14	11	0.04	34	20	1.69	--
30.9	30.0	0.6	2.00	SANDY SILT AND SILT	10	7	0.05	32	20	1.70	--
31.1	28.6	0.3	1.19	SILTY SAND	8	6	0.07	32	20	1.71	--
31.3	31.4	0.5	1.63	SILTY SAND	9	7	0.06	32	20	1.72	--
31.4	33.4	0.5	1.56	SILTY SAND	10	8	0.06	32	20	1.73	--
31.6	27.9	0.5	1.76	SANDY SILT AND SILT	9	7	0.05	31	20	1.74	--
31.8	24.7	0.4	1.78	SANDY SILT AND SILT	8	6	0.05	31	20	1.75	--
31.9	22.1	0.4	1.81	SANDY SILT AND SILT	7	5	0.04	30	20	1.76	--
32.1	21.2	0.4	1.98	SANDY SILT AND SILT	7	5	0.04	30	20	1.76	--
32.3	20.9	0.4	1.82	SANDY SILT AND SILT	7	5	0.04	30	20	1.77	--
32.4	21.9	0.5	2.06	SANDY SILT AND SILT	8	6	0.04	30	20	1.78	--
32.6	21.0	0.5	2.58	SANDY SILT AND SILT	8	6	0.02	30	20	1.79	--
32.7	19.7	0.5	2.43	SANDY SILT AND SILT	8	6	0.03	30	20	1.80	--
32.9	17.7	0.5	2.60	SANDY SILT AND SILT	7	5	0.02	29	20	1.81	--
33.1	16.2	0.5	2.79	SANDY SILT AND SILT	7	5	0.01	29	20	1.82	--
33.2	15.0	0.4	2.60	SANDY SILT AND SILT	6	5	0.01	28	20	1.83	--
33.4	13.7	0.3	2.41	SANDY SILT AND SILT	6	4	0.02	28	20	1.84	--
33.6	13.0	0.3	1.93	SANDY SILT AND SILT	5	4	0.02	27	20	1.85	--
33.7	13.6	0.2	1.76	SANDY SILT AND SILT	5	4	0.03	28	20	1.85	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	13.8	0.2	1.67	SANDY SILT AND SILT	5	4	0.03	28	20	1.86	--
34.1	14.3	0.2	1.54	SANDY SILT AND SILT	5	4	0.03	28	20	1.87	--
34.2	12.9	0.2	1.48	SANDY SILT AND SILT	5	3	0.03	27	20	1.88	--
34.4	12.5	0.2	1.29	SANDY SILT AND SILT	4	3	0.04	27	20	1.89	--
34.5	14.6	0.2	1.30	SANDY SILT AND SILT	5	4	0.04	28	20	1.90	--
34.7	18.4	0.3	1.85	SANDY SILT AND SILT	6	5	0.04	29	20	1.91	--
34.9	21.8	0.4	1.88	SANDY SILT AND SILT	7	5	0.04	30	20	1.92	--
35.0	21.2	0.5	2.22	SANDY SILT AND SILT	8	5	0.03	30	20	1.93	--
35.2	21.9	0.4	2.01	SANDY SILT AND SILT	7	5	0.04	30	20	1.94	--
35.4	22.4	0.5	2.05	SANDY SILT AND SILT	8	5	0.04	30	20	1.95	--
35.5	22.5	0.5	2.22	SANDY SILT AND SILT	8	6	0.03	30	20	1.95	--
35.7	20.5	0.5	2.29	SANDY SILT AND SILT	8	5	0.03	29	20	1.96	--
35.9	17.7	0.4	2.31	SANDY SILT AND SILT	7	5	0.02	29	20	1.97	--
36.0	15.0	0.3	2.27	SANDY SILT AND SILT	6	4	0.02	28	20	1.98	--
36.2	13.6	0.3	1.99	SANDY SILT AND SILT	5	4	0.02	27	20	1.99	--
36.4	12.3	0.2	1.87	SANDY SILT AND SILT	5	3	0.02	27	20	2.00	--
36.5	11.6	0.2	2.07	SANDY SILT AND SILT	5	3	0.02	26	20	2.01	--
36.7	12.1	0.3	2.15	SANDY SILT AND SILT	5	3	0.02	27	20	2.02	--
36.8	12.9	0.2	1.48	SANDY SILT AND SILT	5	3	0.03	27	20	2.03	--
37.0	11.9	0.2	1.34	SANDY SILT AND SILT	4	3	0.03	26	20	2.04	--
37.2	13.0	0.3	2.62	SANDY SILT AND SILT	6	4	0.01	27	20	2.04	--
37.3	23.2	0.4	1.60	SANDY SILT AND SILT	7	5	0.05	30	20	2.05	--
37.5	26.5	0.3	1.09	SILTY SAND	8	5	0.07	30	20	2.06	--
37.7	20.4	0.5	2.35	SANDY SILT AND SILT	8	5	0.03	29	20	2.07	--
37.8	17.7	0.5	2.77	SANDY SILT AND SILT	7	5	0.02	28	20	2.08	--
38.0	15.6	0.4	2.69	SANDY SILT AND SILT	7	5	0.01	28	20	2.09	--
38.2	15.7	0.4	2.30	SANDY SILT AND SILT	6	4	0.02	28	20	2.10	--
38.3	15.6	0.3	2.05	SANDY SILT AND SILT	6	4	0.03	28	20	2.11	--
38.5	14.3	0.3	1.96	SANDY SILT AND SILT	5	4	0.03	27	20	2.12	--
38.6	13.0	0.2	1.69	SANDY SILT AND SILT	5	3	0.03	27	20	2.13	--
38.8	12.3	0.2	1.95	SANDY SILT AND SILT	5	3	0.02	26	20	2.13	--
39.0	13.6	0.3	2.27	SANDY SILT AND SILT	6	4	0.02	27	20	2.14	--
39.1	14.8	0.4	2.51	SANDY SILT AND SILT	6	4	0.02	27	20	2.15	--
39.3	14.3	0.4	2.51	SANDY SILT AND SILT	6	4	0.02	27	20	2.16	--
39.5	15.0	0.3	2.20	SANDY SILT AND SILT	6	4	0.02	27	20	2.17	--
39.6	15.1	0.2	1.53	SANDY SILT AND SILT	5	3	0.04	27	20	2.18	--
39.8	14.3	0.3	2.03	SANDY SILT AND SILT	5	4	0.03	27	20	2.19	--
40.0	15.9	0.4	2.26	SANDY SILT AND SILT	6	4	0.02	28	20	2.20	--
40.1	19.0	0.3	1.31	SANDY SILT AND SILT	6	4	0.05	28	20	2.21	--
40.3	13.5	0.2	1.78	SANDY SILT AND SILT	5	3	0.03	27	20	2.22	--
40.5	12.2	0.2	1.39	SANDY SILT AND SILT	4	3	0.03	26	20	2.22	--
40.6	11.6	0.2	1.29	SANDY SILT AND SILT	4	3	0.03	26	20	2.23	--
40.8	11.8	0.1	1.02	SANDY SILT AND SILT	4	3	0.04	26	20	2.24	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	10.9	0.1	1.19	SANDY SILT AND SILT	4	2	0.03	26	20	2.25	--
41.1	12.3	0.1	0.98	SANDY SILT AND SILT	4	3	0.04	26	20	2.26	--
41.3	12.3	0.1	0.89	SANDY SILT AND SILT	4	3	0.04	26	20	2.27	--
41.4	12.2	0.1	1.14	SANDY SILT AND SILT	4	3	0.04	26	20	2.28	--
41.6	13.7	0.2	1.46	SANDY SILT AND SILT	5	3	0.04	27	20	2.29	--
41.8	15.1	0.6	3.72	CLAYEY SILT AND SILTY CLAY	8	5	---	--	---	2.30	0.80
41.9	23.2	1.1	4.88	CLAY	23	15	---	--	---	2.31	1.30
42.1	46.4	0.9	1.92	SILTY SAND	14	9	0.06	33	20	2.32	--
42.3	42.5	0.4	0.97	SILTY SAND	12	7	0.09	32	20	2.32	--
42.4	46.2	0.4	0.82	SILTY SAND	12	8	0.10	32	20	2.33	--
42.6	31.3	0.3	1.05	SILTY SAND	9	6	0.07	31	20	2.34	--
42.7	32.3	0.2	0.59	SILTY SAND	9	6	0.09	31	20	2.35	--
42.9	18.8	0.4	1.96	SANDY SILT AND SILT	7	4	0.03	28	20	2.36	--
43.1	21.1	0.4	1.66	SANDY SILT AND SILT	7	4	0.04	29	20	2.37	--
43.2	18.1	0.5	2.71	SANDY SILT AND SILT	7	5	0.02	28	20	2.38	--
43.4	18.4	0.6	3.21	CLAYEY SILT AND SILTY CLAY	8	5	---	--	---	2.39	1.00
43.6	23.2	0.5	2.25	SANDY SILT AND SILT	8	5	0.03	29	20	2.40	--
43.7	25.5	0.4	1.37	SILTY SAND	8	5	0.06	29	20	2.41	--
43.9	18.1	0.4	2.32	SANDY SILT AND SILT	7	4	0.03	28	20	2.41	--
44.1	19.1	0.5	2.36	SANDY SILT AND SILT	7	4	0.03	28	20	2.42	--
44.2	19.8	0.6	2.78	SANDY SILT AND SILT	8	5	0.02	28	20	2.43	--
44.4	19.5	0.9	4.46	CLAYEY SILT AND SILTY CLAY	11	7	---	--	---	2.44	1.07
44.6	19.1	0.8	3.98	CLAYEY SILT AND SILTY CLAY	10	6	---	--	---	2.45	1.04
44.7	23.9										
44.9	26.2										

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/H9-18
DATE : 01/26/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 7

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	5.7	0.0	0.35	SANDY SILT AND SILT	2	7	0.04	--	---	0.01	--
0.3	4.1	0.2	5.88	CLAY	4	13	---	--	---	0.01	0.25
0.4	198.8	0.4	0.21	SAND	26	80	1.81	--	---	0.02	--
0.6	151.1	0.9	0.60	SAND	23	65	1.39	--	---	0.03	--
0.8	54.6	1.2	2.27	SILTY SAND	17	45	0.05	--	---	0.04	--
0.9	32.2	1.3	3.95	CLAYEY SILT AND SILTY CLAY	15	40	---	--	---	0.05	2.01
1.1	24.0	1.1	4.75	CLAYEY SILT AND SILTY CLAY	14	34	---	--	---	0.06	1.50
1.2	36.9	1.2	3.14	SANDY SILT AND SILT	14	35	0.02	--	---	0.07	--
1.4	32.8	1.3	3.84	CLAYEY SILT AND SILTY CLAY	15	36	---	--	---	0.08	2.05
1.6	32.1	1.3	4.01	CLAYEY SILT AND SILTY CLAY	15	36	---	--	---	0.09	2.00
1.7	36.9	1.2	3.28	SANDY SILT AND SILT	15	34	0.02	--	---	0.10	--
1.9	32.5	1.2	3.72	CLAYEY SILT AND SILTY CLAY	15	33	---	--	---	0.10	2.03
2.1	28.8	1.1	3.96	CLAYEY SILT AND SILTY CLAY	14	30	---	--	---	0.11	1.79
2.2	30.2	1.1	3.61	CLAYEY SILT AND SILTY CLAY	14	29	---	--	---	0.12	1.88
2.4	31.5	1.0	3.27	SANDY SILT AND SILT	13	28	0.02	--	---	0.13	--
2.6	32.2	1.0	3.08	SANDY SILT AND SILT	13	26	0.02	--	---	0.14	--
2.7	30.8	1.2	3.73	CLAYEY SILT AND SILTY CLAY	14	29	---	--	---	0.15	1.92
2.9	26.7	1.2	4.30	CLAYEY SILT AND SILTY CLAY	14	27	---	--	---	0.16	1.66
3.1	26.3	1.1	4.00	CLAYEY SILT AND SILTY CLAY	13	25	---	--	---	0.17	1.63
3.2	26.0	1.0	3.66	CLAYEY SILT AND SILTY CLAY	12	23	---	--	---	0.18	1.61
3.4	27.4	0.9	3.25	SANDY SILT AND SILT	12	22	0.01	--	---	0.19	--
3.5	27.1	0.9	3.32	SANDY SILT AND SILT	12	22	0.01	--	---	0.19	--
3.7	26.1	0.9	3.45	CLAYEY SILT AND SILTY CLAY	12	22	---	--	---	0.20	1.62
3.9	25.5	0.8	3.29	SANDY SILT AND SILT	11	21	0.01	--	---	0.21	--
4.0	25.3	0.8	3.01	SANDY SILT AND SILT	10	19	0.02	--	---	0.22	--
4.2	23.9	0.7	3.01	SANDY SILT AND SILT	10	18	0.02	--	---	0.23	--
4.3	22.7	0.7	3.09	SANDY SILT AND SILT	10	17	0.01	--	---	0.24	--
4.5	22.7	0.7	2.95	SANDY SILT AND SILT	9	16	0.02	--	---	0.25	--
4.7	21.9	0.6	2.83	SANDY SILT AND SILT	9	15	0.02	40	42	0.26	--
4.8	21.0	0.6	2.67	SANDY SILT AND SILT	8	14	0.02	39	40	0.27	--
5.0	20.0	0.5	2.50	SANDY SILT AND SILT	8	13	0.02	39	38	0.27	--
5.2	19.9	0.5	2.51	SANDY SILT AND SILT	8	13	0.02	39	38	0.28	--
5.3	23.4	0.5	2.26	SANDY SILT AND SILT	8	14	0.03	39	41	0.29	--
5.5	29.4	0.5	1.70	SILTY SAND	9	15	0.05	40	46	0.30	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH. FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	30.7	0.6	1.79	SILTY SAND	9	15	0.05	40	47	0.31	--
5.8	29.5	0.6	2.00	SANDY SILT AND SILT	9	15	0.05	40	45	0.32	--
6.0	27.4	0.6	2.15	SANDY SILT AND SILT	9	15	0.04	40	43	0.33	--
6.1	24.7	0.6	2.31	SANDY SILT AND SILT	9	14	0.03	39	41	0.34	--
6.3	22.8	0.5	2.33	SANDY SILT AND SILT	8	13	0.03	38	38	0.35	--
6.5	19.3	0.5	2.81	SANDY SILT AND SILT	8	12	0.02	37	33	0.36	--
6.6	21.3	0.6	2.59	SANDY SILT AND SILT	8	13	0.02	38	35	0.36	--
6.8	20.4	0.6	2.75	SANDY SILT AND SILT	8	13	0.02	37	33	0.37	--
7.0	16.5	0.4	2.30	SANDY SILT AND SILT	6	10	0.02	36	28	0.38	--
7.1	17.3	0.3	1.79	SANDY SILT AND SILT	6	9	0.03	36	29	0.39	--
7.3	16.5	0.3	1.95	SANDY SILT AND SILT	6	9	0.03	36	27	0.39	--
7.4	17.2	0.4	2.03	SANDY SILT AND SILT	6	9	0.03	36	28	0.40	--
7.6	18.0	0.4	2.17	SANDY SILT AND SILT	7	10	0.03	36	29	0.40	--
7.8	18.5	0.4	2.22	SANDY SILT AND SILT	7	10	0.03	37	30	0.40	--
7.9	19.1	0.3	1.67	SANDY SILT AND SILT	6	9	0.04	37	31	0.41	--
8.1	19.0	0.4	2.00	SANDY SILT AND SILT	7	10	0.03	37	30	0.41	--
8.3	19.9	0.4	2.06	SANDY SILT AND SILT	7	10	0.03	37	31	0.42	--
8.4	20.7	0.4	1.93	SANDY SILT AND SILT	7	10	0.04	37	32	0.42	--
8.6	20.6	0.5	2.18	SANDY SILT AND SILT	7	11	0.03	37	32	0.42	--
8.8	20.7	0.5	2.27	SANDY SILT AND SILT	8	11	0.03	37	32	0.43	--
8.9	20.6	0.5	2.33	SANDY SILT AND SILT	8	11	0.03	37	31	0.43	--
9.1	20.1	0.5	2.34	SANDY SILT AND SILT	7	11	0.03	37	30	0.43	--
9.3	19.5	0.6	2.82	SANDY SILT AND SILT	8	12	0.02	36	30	0.44	--
9.4	17.9	0.5	2.79	SANDY SILT AND SILT	8	11	0.01	36	27	0.44	--
9.6	18.1	0.5	2.48	SANDY SILT AND SILT	7	10	0.02	36	27	0.45	--
9.7	14.5	0.4	2.75	SANDY SILT AND SILT	6	9	0.01	35	22	0.45	--
9.9	16.0	0.4	2.56	SANDY SILT AND SILT	7	9	0.02	35	24	0.45	--
10.1	16.6	0.5	2.77	SANDY SILT AND SILT	7	10	0.01	35	24	0.46	--
10.2	18.5	0.5	2.54	SANDY SILT AND SILT	7	10	0.02	36	27	0.46	--
10.4	17.6	0.5	2.79	SANDY SILT AND SILT	7	11	0.01	36	26	0.47	--
10.6	16.5	0.5	2.96	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.47	1.00
10.7	17.2	0.5	2.79	SANDY SILT AND SILT	7	10	0.01	35	25	0.47	--
10.9	17.9	0.5	2.91	SANDY SILT AND SILT	8	11	0.01	36	25	0.48	--
11.1	19.3	0.6	3.06	SANDY SILT AND SILT	8	12	0.01	36	27	0.48	--
11.2	20.5	0.7	3.27	CLAYEY SILT AND SILTY CLAY	9	13	---	--	---	0.49	1.24
11.4	23.2	0.7	3.15	SANDY SILT AND SILT	10	14	0.01	37	32	0.49	--
11.5	23.4	0.7	2.95	SANDY SILT AND SILT	10	13	0.02	37	32	0.49	--
11.7	40.9	0.9	2.30	SANDY SILT AND SILT	13	18	0.05	39	46	0.50	--
11.9	48.5	1.3	2.58	SANDY SILT AND SILT	16	22	0.04	40	51	0.50	--
12.0	38.3	1.2	3.24	SANDY SILT AND SILT	15	21	0.02	39	44	0.50	--
12.2	32.0	1.3	4.04	CLAYEY SILT AND SILTY CLAY	15	21	---	--	---	0.51	1.96
12.4	42.7	1.3	3.02	SANDY SILT AND SILT	16	21	0.03	40	47	0.51	--
12.5	34.3	1.1	3.26	SANDY SILT AND SILT	14	19	0.02	38	41	0.52	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	23.3	1.0	4.11	CLAYEY SILT AND SILTY CLAY	12	16	---	--	---	0.52	1.41
12.9	19.3	0.7	3.43	CLAYEY SILT AND SILTY CLAY	9	12	---	--	---	0.52	1.16
13.0	20.5	0.5	2.44	SANDY SILT AND SILT	8	10	0.03	36	27	0.53	--
13.2	17.2	0.3	1.86	SANDY SILT AND SILT	6	8	0.03	35	22	0.53	--
13.4	17.1	0.4	2.11	SANDY SILT AND SILT	6	8	0.03	35	22	0.54	--
13.5	19.3	0.4	1.87	SANDY SILT AND SILT	7	9	0.04	35	24	0.54	--
13.7	22.7	0.6	2.43	SANDY SILT AND SILT	8	11	0.03	36	29	0.54	--
13.8	31.5	0.9	2.95	SANDY SILT AND SILT	12	16	0.02	38	37	0.55	--
14.0	37.8	1.2	3.04	SANDY SILT AND SILT	14	19	0.03	39	42	0.55	--
14.2	27.9	0.9	3.26	SANDY SILT AND SILT	12	16	0.01	37	33	0.56	--
14.3	22.7	0.7	3.00	SANDY SILT AND SILT	9	12	0.02	36	28	0.56	--
14.5	17.2	0.5	2.61	SANDY SILT AND SILT	7	9	0.02	35	21	0.56	--
14.7	13.1	0.3	2.51	SANDY SILT AND SILT	6	7	0.01	33	20	0.57	--
14.8	11.3	0.2	2.12	SANDY SILT AND SILT	5	6	0.02	32	20	0.57	--
15.0	11.5	0.2	1.56	SANDY SILT AND SILT	4	6	0.03	33	20	0.58	--
15.2	11.8	0.2	1.44	SANDY SILT AND SILT	4	5	0.03	33	20	0.58	--
15.3	12.5	0.3	2.41	SANDY SILT AND SILT	5	7	0.01	33	20	0.58	--
15.5	17.1	0.4	2.34	SANDY SILT AND SILT	7	9	0.02	34	20	0.59	--
15.7	34.1	0.5	1.50	SILTY SAND	10	13	0.06	38	38	0.59	--
15.8	49.4	0.4	0.87	SILTY SAND	13	17	0.10	40	48	0.60	--
16.0	55.7	0.4	0.70	SAND	12	15	0.54	40	51	0.60	--
16.2	62.1	0.7	1.16	SILTY SAND	17	21	0.10	41	55	0.60	--
16.3	65.8	0.7	1.06	SAND	17	21	0.15	41	56	0.61	--
16.5	53.9	0.5	0.98	SILTY SAND	14	18	0.10	40	50	0.61	--
16.7	28.9	0.5	1.77	SILTY SAND	9	11	0.05	37	32	0.62	--
16.8	17.2	0.4	2.27	SANDY SILT AND SILT	7	8	0.02	34	20	0.62	--
17.0	11.8	0.2	1.87	SANDY SILT AND SILT	5	6	0.02	32	20	0.62	--
17.2	11.5	0.2	1.74	SANDY SILT AND SILT	4	5	0.03	32	20	0.63	--
17.3	11.1	0.2	1.80	SANDY SILT AND SILT	4	5	0.02	32	20	0.63	--
17.5	11.1	0.2	2.07	SANDY SILT AND SILT	5	6	0.02	32	20	0.63	--
17.7	11.7	0.3	2.15	SANDY SILT AND SILT	5	6	0.02	32	20	0.64	--
17.8	11.9	0.2	2.01	SANDY SILT AND SILT	5	6	0.02	32	20	0.64	--
18.0	11.7	0.2	1.88	SANDY SILT AND SILT	5	6	0.02	32	20	0.65	--
18.1	11.2	0.3	2.24	SANDY SILT AND SILT	5	6	0.02	32	20	0.65	--
18.3	12.6	0.3	2.07	SANDY SILT AND SILT	5	6	0.02	32	20	0.65	--
18.5	13.3	0.3	1.89	SANDY SILT AND SILT	5	6	0.03	33	20	0.66	--
18.6	12.5	0.3	2.01	SANDY SILT AND SILT	5	6	0.02	32	20	0.66	--
18.8	13.1	0.3	2.13	SANDY SILT AND SILT	5	6	0.02	32	20	0.67	--
19.0	13.8	0.4	2.61	SANDY SILT AND SILT	6	7	0.01	33	20	0.67	--
19.1	16.5	0.4	2.12	SANDY SILT AND SILT	6	8	0.03	34	20	0.67	--
19.3	24.4	0.3	1.31	SILTY SAND	7	9	0.06	35	25	0.68	--
19.5	27.7	0.4	1.44	SILTY SAND	8	10	0.06	36	28	0.68	--
19.6	20.7	0.4	1.69	SANDY SILT AND SILT	7	8	0.04	35	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	13.8	0.3	2.10	SANDY SILT AND SILT	5	6	0.02	33	20	0.69	--
19.9	11.2	0.2	1.97	SANDY SILT AND SILT	4	5	0.02	31	20	0.69	--
20.1	11.7	0.2	1.72	SANDY SILT AND SILT	4	5	0.03	32	20	0.70	--
20.3	11.2	0.2	1.97	SANDY SILT AND SILT	4	5	0.02	31	20	0.70	--
20.4	11.6	0.3	2.33	SANDY SILT AND SILT	5	6	0.01	32	20	0.70	--
20.6	11.7	0.3	2.22	SANDY SILT AND SILT	5	6	0.02	32	20	0.71	--
20.8	11.8	0.3	2.21	SANDY SILT AND SILT	5	6	0.02	32	20	0.71	--
20.9	11.1	0.2	1.89	SANDY SILT AND SILT	4	5	0.02	31	20	0.72	--
21.1	10.7	0.2	1.87	SANDY SILT AND SILT	4	5	0.02	31	20	0.72	--
21.3	10.4	0.2	1.54	SANDY SILT AND SILT	4	5	0.03	31	20	0.72	--
21.4	9.7	0.2	1.75	SANDY SILT AND SILT	4	5	0.02	31	20	0.73	--
21.6	9.7	0.1	1.34	SANDY SILT AND SILT	4	4	0.03	30	20	0.73	--
21.8	9.2	0.2	2.61	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.74	0.50
21.9	10.0	0.4	4.02	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.74	0.55
22.1	49.2	0.5	1.10	SILTY SAND	13	16	0.09	38	43	0.74	--
22.2	67.2	0.7	1.03	SAND	16	19	0.25	40	52	0.75	--
22.4	47.1	0.9	1.91	SILTY SAND	14	16	0.06	38	41	0.75	--
22.6	25.5	0.5	1.80	SANDY SILT AND SILT	8	9	0.05	35	23	0.76	--
22.7	13.0	0.3	2.39	SANDY SILT AND SILT	5	6	0.02	32	20	0.76	--
22.9	11.4	0.2	1.76	SANDY SILT AND SILT	4	5	0.02	31	20	0.76	--
23.1	11.1	0.2	1.80	SANDY SILT AND SILT	4	5	0.02	31	20	0.77	--
23.2	12.5	0.1	0.88	SANDY SILT AND SILT	4	5	0.04	31	20	0.77	--
23.4	10.1	0.0	0.10	SILTY SAND	3	3	0.08	30	20	0.78	--
23.6	9.1	0.1	1.44	SANDY SILT AND SILT	3	4	0.03	30	20	0.78	--
23.7	18.2	0.7	3.79	CLAYEY SILT AND SILTY CLAY	9	10	---	--	---	0.78	1.06
23.9	40.3	0.9	2.28	SANDY SILT AND SILT	13	14	0.05	37	35	0.79	--
24.0	37.4	1.2	3.31	SANDY SILT AND SILT	15	17	0.02	37	33	0.79	--
24.2	44.0	1.4	3.28	SANDY SILT AND SILT	17	19	0.02	38	37	0.79	--
24.4	44.5	1.6	3.51	SANDY SILT AND SILT	18	21	0.02	38	38	0.80	--
24.5	41.1	1.6	3.89	CLAYEY SILT AND SILTY CLAY	19	21	---	--	---	0.80	2.48
24.7	48.5	1.6	3.24	SANDY SILT AND SILT	18	20	0.03	38	40	0.81	--
24.9	79.1	1.0	1.24	SAND	20	22	0.17	40	56	0.81	--
25.0	118.6	0.4	0.37	SAND	17	19	1.57	42	71	0.81	--
25.2	119.9	0.7	0.54	SAND	18	20	1.38	42	71	0.82	--
25.4	100.2	1.2	1.24	SAND	22	24	0.43	41	64	0.82	--
25.5	50.7	0.9	1.74	SILTY SAND	15	16	0.07	38	41	0.83	--
25.7	30.5	0.9	3.02	SANDY SILT AND SILT	12	13	0.02	35	25	0.83	--
25.9	36.3	1.2	3.39	SANDY SILT AND SILT	15	17	0.02	36	31	0.83	--
26.0	27.0	1.0	3.74	CLAYEY SILT AND SILTY CLAY	13	14	---	--	---	0.84	1.60
26.2	22.7	0.8	3.39	CLAYEY SILT AND SILTY CLAY	10	11	---	--	---	0.84	1.33
26.3	23.3	0.6	2.70	SANDY SILT AND SILT	9	10	0.02	34	20	0.85	--
26.5	22.7	0.6	2.52	SANDY SILT AND SILT	9	9	0.03	34	20	0.85	--
26.7	22.5	0.6	2.80	SANDY SILT AND SILT	9	10	0.02	34	20	0.85	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	22.7	0.7	3.27	CLAYEY SILT AND SILTY CLAY	10	11	---	--	---	0.86	1.32
27.0	26.4	0.9	3.45	CLAYEY SILT AND SILTY CLAY	12	13	---	--	---	0.86	1.55
27.2	30.0	1.1	3.57	CLAYEY SILT AND SILTY CLAY	14	15	---	--	---	0.86	1.78
27.3	28.9	1.3	4.40	CLAYEY SILT AND SILTY CLAY	15	16	---	--	---	0.87	1.71
27.5	28.8	1.4	4.69	CLAYEY SILT AND SILTY CLAY	16	17	---	--	---	0.87	1.70
27.7	26.1	1.0	3.86	CLAYEY SILT AND SILTY CLAY	13	13	---	--	---	0.88	1.54
27.8	22.3	0.7	3.00	SANDY SILT AND SILT	9	10	0.02	34	20	0.88	--
28.0	19.3	0.5	2.81	SANDY SILT AND SILT	8	9	0.02	33	20	0.88	--
28.1	25.4	0.5	2.13	SANDY SILT AND SILT	9	9	0.04	34	20	0.89	--
28.3	33.4	0.5	1.62	SILTY SAND	10	11	0.06	36	26	0.89	--
28.5	31.6	0.7	2.09	SANDY SILT AND SILT	10	11	0.05	35	24	0.90	--
28.6	26.5	0.7	2.49	SANDY SILT AND SILT	10	10	0.03	34	20	0.90	--
28.8	20.7	0.5	2.61	SANDY SILT AND SILT	8	9	0.02	33	20	0.90	--
29.0	16.5	0.4	2.49	SANDY SILT AND SILT	7	7	0.02	32	20	0.91	--
29.1	13.9	0.3	2.02	SANDY SILT AND SILT	5	6	0.02	31	20	0.91	--
29.3	13.3	0.2	1.35	SANDY SILT AND SILT	5	5	0.04	31	20	0.92	--
29.5	12.5	0.2	1.29	SANDY SILT AND SILT	4	4	0.04	31	20	0.92	--
29.6	13.1	0.1	0.84	SANDY SILT AND SILT	4	4	0.05	31	20	0.92	--
29.8	13.1	0.2	1.60	SANDY SILT AND SILT	5	5	0.03	31	20	0.93	--
30.0	16.5	0.4	2.37	SANDY SILT AND SILT	6	7	0.02	32	20	0.93	--
30.1	32.8	0.6	1.83	SILTY SAND	10	10	0.05	35	24	0.94	--
30.3	41.7	0.6	1.51	SILTY SAND	12	12	0.07	36	31	0.94	--
30.4	46.4	0.4	0.95	SILTY SAND	13	13	0.09	37	34	0.94	--
30.6	44.5	0.4	0.88	SILTY SAND	12	12	0.09	37	33	0.95	--
30.8	26.7	0.4	1.61	SILTY SAND	8	8	0.05	34	20	0.95	--
30.9	15.9	0.3	2.15	SANDY SILT AND SILT	6	6	0.03	32	20	0.95	--
31.1	14.0	0.3	1.78	SANDY SILT AND SILT	5	5	0.03	31	20	0.96	--
31.3	13.8	0.3	2.24	SANDY SILT AND SILT	6	6	0.02	31	20	0.96	--
31.4	18.7	0.4	2.30	SANDY SILT AND SILT	7	7	0.03	32	20	0.97	--
31.6	22.3	0.6	2.47	SANDY SILT AND SILT	8	8	0.03	33	20	0.97	--
31.8	22.7	0.7	2.91	SANDY SILT AND SILT	9	9	0.02	33	20	0.97	--
31.9	22.0	0.7	3.14	SANDY SILT AND SILT	10	10	0.01	33	20	0.98	--
32.1	19.4	0.7	3.61	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	0.98	1.10
32.3	17.2	0.6	3.72	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	0.99	0.96
32.4	13.8	0.5	3.77	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.99	0.75
32.6	11.4	0.4	3.07	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.99	0.60
32.7	11.1	0.2	2.16	SANDY SILT AND SILT	5	5	0.02	30	20	1.00	--
32.9	10.4	0.2	2.31	SANDY SILT AND SILT	4	4	0.01	29	20	1.00	--
33.1	10.5	0.3	2.68	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	1.01	0.54
33.2	11.8	0.4	3.14	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	1.01	0.62
33.4	12.6	0.5	3.58	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	1.01	0.67
33.6	15.2	0.5	3.30	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.02	0.83
33.7	19.3	0.7	3.58	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	1.02	1.09

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	23.8	0.8	3.24	SANDY SILT AND SILT	10	10	0.01	33	20	1.02	--
34.1	26.7	1.0	3.55	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.03	1.55
34.2	30.2	1.0	3.18	SANDY SILT AND SILT	12	12	0.02	34	20	1.03	--
34.4	31.5	1.1	3.56	CLAYEY SILT AND SILTY CLAY	14	14	---	--	---	1.04	1.85
34.5	31.7	1.0	3.28	SANDY SILT AND SILT	13	13	0.02	35	20	1.04	--
34.7	26.7	0.9	3.22	SANDY SILT AND SILT	11	11	0.01	34	20	1.04	--
34.9	22.4	0.7	2.99	SANDY SILT AND SILT	9	9	0.02	33	20	1.05	--
35.0	18.6	0.5	2.53	SANDY SILT AND SILT	7	7	0.02	32	20	1.05	--
35.2	16.4	0.4	2.57	SANDY SILT AND SILT	7	7	0.02	31	20	1.06	--
35.4	15.6	0.4	2.56	SANDY SILT AND SILT	6	6	0.02	31	20	1.06	--
35.5	15.2	0.4	2.63	SANDY SILT AND SILT	6	6	0.01	31	20	1.06	--
35.7	13.8	0.4	2.61	SANDY SILT AND SILT	6	6	0.01	30	20	1.07	--
35.9	15.2	0.5	3.03	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.07	0.82
36.0	19.3	0.6	3.11	SANDY SILT AND SILT	9	8	0.01	32	20	1.08	--
36.2	18.6	0.7	3.49	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	1.08	1.04
36.4	15.1	0.6	4.19	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.08	0.82
36.5	14.1	0.4	2.91	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	1.09	0.76
36.7	13.8	0.3	2.10	SANDY SILT AND SILT	5	5	0.02	30	20	1.09	--
36.8	11.1	0.2	2.16	SANDY SILT AND SILT	5	4	0.02	29	20	1.10	--
37.0	11.2	0.2	1.52	SANDY SILT AND SILT	4	4	0.03	29	20	1.10	--
37.2	11.5	0.2	1.74	SANDY SILT AND SILT	4	4	0.03	29	20	1.10	--
37.3	12.5	0.2	1.93	SANDY SILT AND SILT	5	5	0.02	30	20	1.11	--
37.5	14.3	0.3	1.82	SANDY SILT AND SILT	5	5	0.03	30	20	1.11	--
37.7	17.2	0.3	1.86	SANDY SILT AND SILT	6	6	0.03	31	20	1.11	--
37.8	21.3	0.4	2.07	SANDY SILT AND SILT	7	7	0.03	32	20	1.12	--
38.0	25.0	0.5	2.08	SANDY SILT AND SILT	8	8	0.04	33	20	1.12	--
38.2	26.1	0.6	2.19	SANDY SILT AND SILT	9	8	0.04	33	20	1.13	--
38.3	26.5	0.5	2.00	SANDY SILT AND SILT	9	8	0.04	33	20	1.13	--
38.5	25.4	0.5	2.01	SANDY SILT AND SILT	8	8	0.04	33	20	1.13	--
38.6	21.7	0.5	2.12	SANDY SILT AND SILT	8	7	0.03	32	20	1.14	--
38.8	18.7	0.4	2.14	SANDY SILT AND SILT	7	6	0.03	32	20	1.14	--
39.0	16.5	0.3	2.06	SANDY SILT AND SILT	6	6	0.03	31	20	1.15	--
39.1	14.9	0.1	0.60	SILTY SAND	4	4	0.06	30	20	1.15	--
39.3	14.9	0.3	2.15	SANDY SILT AND SILT	6	5	0.02	30	20	1.15	--
39.5	9.7	0.4	3.61	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	1.16	0.47
39.6	14.5	0.3	2.14	SANDY SILT AND SILT	6	5	0.02	30	20	1.16	--
39.8	13.6	0.3	2.13	SANDY SILT AND SILT	5	5	0.02	30	20	1.17	--
40.0	13.1	0.3	2.44	SANDY SILT AND SILT	6	5	0.01	30	20	1.17	--
40.1	13.1	0.4	2.74	CLAYEY SILT AND SILTY CLAY	6	5	---	--	---	1.17	0.68
40.3	14.5	0.4	2.70	SANDY SILT AND SILT	6	6	0.01	30	20	1.18	--
40.5	15.2	0.4	2.50	SANDY SILT AND SILT	6	6	0.02	30	20	1.18	--
40.6	14.8	0.4	2.70	SANDY SILT AND SILT	6	6	0.01	30	20	1.19	--
40.8	14.8	0.4	2.50	SANDY SILT AND SILT	6	6	0.02	30	20	1.19	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	13.8	0.3	2.39	SANDY SILT AND SILT	6	5	0.02	30	20	1.19	--
41.1	13.1	0.3	1.90	SANDY SILT AND SILT	5	5	0.03	30	20	1.20	--
41.3	13.1	0.2	1.83	SANDY SILT AND SILT	5	5	0.03	30	20	1.20	--
41.4	13.8	0.8	5.81	CLAY	14	13	---	--	---	1.20	0.72
41.6	45.1	0.9	2.06	SILTY SAND	14	12	0.06	36	27	1.21	--
41.8	81.3	1.5	1.80	SILTY SAND	22	21	0.08	38	46	1.21	--
41.9	76.3	1.4	1.79	SILTY SAND	21	19	0.08	38	44	1.22	--
42.1	90.0	1.3	1.49	SILTY SAND	24	22	0.10	39	50	1.22	--
42.3	81.4	1.2	1.50	SILTY SAND	22	20	0.09	38	46	1.22	--
42.4	34.0	0.7	1.91	SILTY SAND	10	9	0.05	34	20	1.23	--
42.6	15.4	0.4	2.40	SANDY SILT AND SILT	6	6	0.02	30	20	1.23	--
42.7	17.2	0.3	1.57	SANDY SILT AND SILT	6	5	0.04	31	20	1.24	--
42.9	17.2	0.3	1.51	SANDY SILT AND SILT	6	5	0.04	31	20	1.24	--
43.1	15.8	0.3	1.65	SANDY SILT AND SILT	5	5	0.04	30	20	1.24	--
43.2	15.2	0.3	1.85	SANDY SILT AND SILT	6	5	0.03	30	20	1.25	--
43.4	15.1	0.3	1.86	SANDY SILT AND SILT	5	5	0.03	30	20	1.25	--
43.6	14.5	0.3	1.86	SANDY SILT AND SILT	5	5	0.03	30	20	1.26	--
43.7	13.8	0.3	1.81	SANDY SILT AND SILT	5	5	0.03	30	20	1.26	--
43.9	13.2	0.2	1.44	SANDY SILT AND SILT	5	4	0.03	29	20	1.26	--
44.1	13.4	0.2	1.57	SANDY SILT AND SILT	5	4	0.03	29	20	1.27	--
44.2	14.1	0.2	1.63	SANDY SILT AND SILT	5	4	0.03	30	20	1.27	--
44.4	14.5	0.2	1.38	SANDY SILT AND SILT	5	4	0.04	30	20	1.27	--
44.6	15.2	0.2	1.19	SANDY SILT AND SILT	5	4	0.04	30	20	1.28	--
44.7	15.9										
44.9	15.9										

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT/9-13
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/08/90/09:43
Cone Used :IV
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	1.04	0.21	20.42	0.01	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.25	0.82	35.26	1.78	5.04	0.03	clay	UNDFND	UNDFD	34	3.5
0.38	1.25	29.50	1.77	5.99	0.06	clay	UNDFND	UNDFD	28	2.9
0.50	1.64	24.50	1.36	5.53	0.08	clay	UNDFND	UNDFD	23	2.4
0.63	2.07	27.52	1.44	5.25	0.10	clay	UNDFND	UNDFD	26	2.7
0.75	2.46	38.58	1.77	4.58	0.12	silty clay to clay	UNDFND	UNDFD	25	3.8
0.87	2.85	40.18	1.98	4.94	0.15	clay	UNDFND	UNDFD	38	4.0
1.00	3.28	35.14	1.53	4.34	0.17	silty clay to clay	UNDFND	UNDFD	22	3.4
1.13	3.71	31.52	1.24	3.94	0.19	silty clay to clay	UNDFND	UNDFD	20	3.1
1.25	4.10	27.70	1.03	3.71	0.21	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
1.37	4.49	29.20	0.94	3.22	0.24	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
1.50	4.92	28.42	0.93	3.28	0.26	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
1.62	5.31	27.38	0.94	3.42	0.28	clayey silt to silty clay	UNDFND	UNDFD	13	2.7
1.75	5.74	19.32	0.88	4.54	0.30	clay	UNDFND	UNDFD	19	1.9
1.87	6.14	15.16	0.60	3.93	0.33	silty clay to clay	UNDFND	UNDFD	10	1.4
2.00	6.56	14.22	0.37	2.63	0.35	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
2.12	6.96	16.88	0.57	3.38	0.37	silty clay to clay	UNDFND	UNDFD	11	1.6
2.25	7.38	15.56	0.47	2.99	0.39	clayey silt to silty clay	UNDFND	UNDFD	7	1.5
2.38	7.81	10.76	0.34	3.20	0.42	silty clay to clay	UNDFND	UNDFD	7	1.0
2.50	8.20	7.72	0.22	2.87	0.44	silty clay to clay	UNDFND	UNDFD	5	.7
2.62	8.60	6.30	0.17	2.77	0.46	clay	UNDFND	UNDFD	6	.5
2.75	9.02	4.92	0.15	3.12	0.48	clay	UNDFND	UNDFD	5	.4
2.87	9.42	7.12	0.22	3.03	0.51	clay	UNDFND	UNDFD	7	.6
3.00	9.84	8.70	0.34	3.96	0.53	clay	UNDFND	UNDFD	8	.8
3.12	10.24	9.98	0.43	4.27	0.55	clay	UNDFND	UNDFD	10	.9
3.25	10.66	10.98	0.35	3.22	0.56	silty clay to clay	UNDFND	UNDFD	7	1.0
3.37	11.06	11.16	0.39	3.49	0.57	silty clay to clay	UNDFND	UNDFD	7	1.0
3.50	11.48	9.54	0.30	3.18	0.58	silty clay to clay	UNDFND	UNDFD	6	.8
3.63	11.91	7.34	0.28	3.81	0.59	clay	UNDFND	UNDFD	7	.6
3.75	12.30	5.44	0.20	3.70	0.60	clay	UNDFND	UNDFD	5	.4
3.87	12.70	9.02	0.31	3.41	0.60	clay	UNDFND	UNDFD	9	.8
4.00	13.12	10.10	0.58	5.73	0.61	clay	UNDFND	UNDFD	10	.9
4.12	13.52	7.62	0.38	4.93	0.62	clay	UNDFND	UNDFD	7	.6
4.25	13.94	5.78	0.35	6.04	0.63	clay	UNDFND	UNDFD	6	.5
4.37	14.34	4.32	0.19	4.36	0.64	clay	UNDFND	UNDFD	4	.3
4.50	14.76	4.32	0.15	3.58	0.65	clay	UNDFND	UNDFD	4	.3
4.62	15.16	4.74	0.19	4.09	0.66	clay	UNDFND	UNDFD	5	.3
4.75	15.58	5.18	0.20	3.92	0.67	clay	UNDFND	UNDFD	5	.4

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/9-19 Page No. 2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	4.66	0.13	2.87	0.68	clay	UNDFND	UNDFD	4	.3
5.00	16.40	5.98	0.15	2.45	0.69	silty clay to clay	UNDFND	UNDFD	4	.5
5.12	16.80	6.40	0.15	2.33	0.70	silty clay to clay	UNDFND	UNDFD	4	.5
5.25	17.22	6.04	0.15	2.51	0.71	silty clay to clay	UNDFND	UNDFD	4	.5
5.38	17.65	5.48	0.16	2.93	0.72	clay	UNDFND	UNDFD	5	.4
5.50	18.04	5.18	0.18	3.45	0.73	clay	UNDFND	UNDFD	5	.4
5.62	18.44	11.76	0.32	2.72	0.74	silty clay to clay	UNDFND	UNDFD	8	1.0
5.75	18.86	26.64	0.52	1.97	0.75	sandy silt to clayey silt	UNDFND	UNDFD	10	2.5
5.87	19.26	38.54	0.35	0.92	0.76	silty sand to sandy silt	40-50	36-38	12	UNDEFINED
6.00	19.69	13.26	0.28	2.13	0.77	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
6.12	20.08	9.96	0.33	3.31	0.78	silty clay to clay	UNDFND	UNDFD	6	.8
6.25	20.51	9.88	0.35	3.53	0.79	clay	UNDFND	UNDFD	9	.8
6.38	20.93	10.04	0.35	3.45	0.80	clay	UNDFND	UNDFD	10	.8
6.50	21.33	10.14	0.36	3.58	0.81	clay	UNDFND	UNDFD	10	.8
6.63	21.75	9.24	0.36	3.88	0.82	clay	UNDFND	UNDFD	9	.8
6.75	22.15	8.56	0.27	3.18	0.83	clay	UNDFND	UNDFD	8	.7
6.88	22.57	11.04	0.30	2.69	0.84	silty clay to clay	UNDFND	UNDFD	7	.9
7.00	22.97	12.18	0.29	2.42	0.85	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
7.12	23.36	8.56	0.23	2.72	0.86	silty clay to clay	UNDFND	UNDFD	5	.7
7.25	23.79	8.92	0.19	2.07	0.87	silty clay to clay	UNDFND	UNDFD	6	.7
7.37	24.18	7.24	0.16	2.21	0.88	silty clay to clay	UNDFND	UNDFD	5	.5
7.50	24.61	9.66	0.33	3.39	0.89	clay	UNDFND	UNDFD	9	.8
7.62	25.00	50.32	0.42	0.83	0.90	silty sand to sandy silt	40-50	38-40	16	UNDEFINED
7.75	25.43	95.30	0.39	0.40	0.91	sand to silty sand	60-70	40-42	23	UNDEFINED
7.88	25.85	112.52	0.38	0.34	0.92	sand	70-80	40-42	22	UNDEFINED
8.00	26.25	112.54	0.47	0.42	0.93	sand	70-80	40-42	22	UNDEFINED
8.13	26.67	73.24	0.75	1.03	0.94	sand to silty sand	50-60	38-40	18	UNDEFINED
8.25	27.07	26.18	0.81	3.09	0.95	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
8.38	27.49	22.82	0.64	2.79	0.96	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
8.50	27.89	22.08	0.60	2.70	0.97	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
8.62	28.28	24.70	0.64	2.61	0.97	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
8.75	28.71	27.18	0.68	2.50	0.98	sandy silt to clayey silt	UNDFND	UNDFD	10	2.5
8.87	29.10	32.40	0.94	2.91	0.99	clayey silt to silty clay	UNDFND	UNDFD	16	3.0
9.00	29.53	25.78	0.77	2.98	1.00	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
9.12	29.92	22.30	0.73	3.27	1.01	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
9.25	30.35	21.72	0.82	3.77	1.02	silty clay to clay	UNDFND	UNDFD	14	2.0
9.37	30.74	19.82	0.63	3.20	1.03	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
9.50	31.17	21.76	0.89	4.07	1.04	silty clay to clay	UNDFND	UNDFD	14	2.0
9.63	31.59	13.60	0.71	5.19	1.05	clay	UNDFND	UNDFD	13	1.1
9.75	31.99	10.66	0.39	3.69	1.06	clay	UNDFND	UNDFD	10	.8
9.88	32.41	12.66	0.43	3.39	1.07	silty clay to clay	UNDFND	UNDFD	8	1.0
10.00	32.81	12.88	0.33	2.58	1.08	clayey silt to silty clay	UNDFND	UNDFD	6	1.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

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PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/9-19 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	12.76	0.38	3.00	1.09	silty clay to clay	UNDFND	UNDFD	8	1.0
10.25	33.63	87.78	1.51	1.72	1.10	silty sand to sandy silt	60-70	40-42	28	UNDEFINED
10.37	34.02	145.22	1.94	1.34	1.11	sand to silty sand	70-80	42-44	35	UNDEFINED
10.50	34.45	34.58	1.28	3.69	1.12	clayey silt to silty clay	UNDFND	UNDFD	17	3.2
10.62	34.84	21.80	0.85	3.90	1.13	silty clay to clay	UNDFND	UNDFD	14	1.9
10.75	35.27	19.74	0.73	3.72	1.14	silty clay to clay	UNDFND	UNDFD	13	1.7
10.87	35.66	15.66	0.46	2.94	1.15	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
11.00	36.09	13.92	0.35	2.53	1.16	clayey silt to silty clay	UNDFND	UNDFD	7	1.1
11.13	36.52	12.00	0.33	2.75	1.17	silty clay to clay	UNDFND	UNDFD	8	1.0
11.25	36.91	13.36	0.48	3.60	1.18	silty clay to clay	UNDFND	UNDFD	9	1.1
11.37	37.30	14.56	0.32	2.18	1.19	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
11.50	37.73	14.22	0.28	2.00	1.20	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
11.62	38.12	16.92	0.44	2.63	1.21	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
11.75	38.55	14.96	0.53	3.56	1.22	silty clay to clay	UNDFND	UNDFD	10	1.2
11.87	38.94	11.28	0.32	2.79	1.23	silty clay to clay	UNDFND	UNDFD	7	.9
12.00	39.37	9.92	0.21	2.11	1.24	clayey silt to silty clay	UNDFND	UNDFD	5	.7
12.12	39.76	9.88	0.20	1.99	1.25	clayey silt to silty clay	UNDFND	UNDFD	5	.7
12.25	40.19	9.02	0.16	1.81	1.26	clayey silt to silty clay	UNDFND	UNDFD	4	.6
12.37	40.58	8.98	0.16	1.74	1.27	clayey silt to silty clay	UNDFND	UNDFD	4	.6
12.50	41.01	8.52	0.14	1.59	1.28	clayey silt to silty clay	UNDFND	UNDFD	4	.6
12.62	41.40	8.86	0.10	1.18	1.29	clayey silt to silty clay	UNDFND	UNDFD	4	.6
12.75	41.83	8.92	0.25	2.78	1.30	silty clay to clay	UNDFND	UNDFD	6	.6
12.87	42.22	147.24	1.78	1.21	1.31	sand to silty sand	70-80	40-42	35	UNDEFINED
13.00	42.65	184.08	5.65	3.07	1.32	silty sand to sandy silt	80-90	42-44	>50	UNDEFINED
13.12	43.04	69.54	3.72	5.35	1.33	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
13.25	43.47	39.50	2.01	5.08	1.34	clay	UNDFND	UNDFD	38	3.7
13.37	43.86	32.88	0.93	2.82	1.35	sandy silt to clayey silt	UNDFND	UNDFD	13	3.0
13.50	44.29	29.76	0.69	2.33	1.36	sandy silt to clayey silt	UNDFND	UNDFD	11	2.7
13.62	44.69	22.38	0.48	2.13	1.36	sandy silt to clayey silt	UNDFND	UNDFD	9	1.9
13.75	45.11	16.42	0.18	1.07	1.37	sandy silt to clayey silt	UNDFND	UNDFD	6	1.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

(*) overconsolidated or cemented

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PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-20A
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/08/90/13:08
Cone Used :1V
Water table (meters) : 2.2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	15.94	1.63	10.22	0.01	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.25	0.82	15.36	1.54	9.65	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.38	1.25	15.56	1.17	7.51	0.06	clay	UNDFND	UNDFD	15	1.5
0.50	1.64	24.56	1.43	5.81	0.08	clay	UNDFND	UNDFD	24	2.4
0.63	2.07	34.88	1.68	4.81	0.10	clay	UNDFND	UNDFD	33	3.4
0.75	2.46	44.46	2.14	4.82	0.12	silty clay to clay	UNDFND	UNDFD	28	4.4
0.87	2.85	52.16	2.12	4.07	0.15	clayey silt to silty clay	UNDFND	UNDFD	25	5.2
1.00	3.28	54.76	2.52	4.61	0.17	silty clay to clay	UNDFND	UNDFD	35	5.4
1.13	3.71	46.40	2.58	5.57	0.19	clay	UNDFND	UNDFD	44	4.6
1.25	4.10	33.26	1.99	5.99	0.21	clay	UNDFND	UNDFD	32	3.3
1.37	4.49	25.80	1.26	4.87	0.24	clay	UNDFND	UNDFD	25	2.5
1.50	4.92	20.48	0.77	3.76	0.26	silty clay to clay	UNDFND	UNDFD	13	2.0
1.62	5.31	16.66	0.55	3.31	0.28	silty clay to clay	UNDFND	UNDFD	11	1.6
1.75	5.74	16.78	0.51	3.02	0.30	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
1.87	6.14	12.76	0.36	2.84	0.33	silty clay to clay	UNDFND	UNDFD	8	1.2
2.00	6.56	12.30	0.28	2.25	0.35	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
2.12	6.96	10.82	0.17	1.59	0.37	clayey silt to silty clay	UNDFND	UNDFD	5	1.0
2.25	7.38	10.06	0.32	3.20	0.39	silty clay to clay	UNDFND	UNDFD	6	.9
2.38	7.81	9.70	0.29	2.99	0.41	silty clay to clay	UNDFND	UNDFD	6	.9
2.50	8.20	8.06	0.24	3.03	0.42	undefined	UNDFND	UNDFD	UDF	UNDEFINED
2.62	8.60	7.74	0.18	2.37	0.43	silty clay to clay	UNDFND	UNDFD	5	.7
2.75	9.02	10.04	0.23	2.31	0.43	silty clay to clay	UNDFND	UNDFD	6	.9
2.87	9.42	14.10	0.53	3.78	0.44	silty clay to clay	UNDFND	UNDFD	9	1.3
3.00	9.84	22.82	0.95	4.17	0.45	silty clay to clay	UNDFND	UNDFD	15	2.2
3.12	10.24	50.76	0.90	1.77	0.46	silty sand to sandy silt	50-60	40-42	16	UNDEFINED
3.25	10.66	60.62	0.47	0.78	0.47	sand to silty sand	60-70	42-44	15	UNDEFINED
3.37	11.06	31.64	0.38	1.22	0.48	silty sand to sandy silt	40-50	38-40	10	UNDEFINED
3.50	11.48	12.46	0.26	2.09	0.49	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
3.63	11.91	10.56	0.24	2.28	0.50	clayey silt to silty clay	UNDFND	UNDFD	5	.9
3.75	12.30	9.92	0.28	2.82	0.51	silty clay to clay	UNDFND	UNDFD	6	.9
3.87	12.70	10.14	0.24	2.40	0.52	silty clay to clay	UNDFND	UNDFD	6	.9
4.00	13.12	9.64	0.29	2.97	0.53	silty clay to clay	UNDFND	UNDFD	6	.8
4.12	13.52	10.92	0.31	2.86	0.54	silty clay to clay	UNDFND	UNDFD	7	1.0
4.25	13.94	8.04	0.28	3.43	0.55	clay	UNDFND	UNDFD	8	.7
4.37	14.34	6.52	0.17	2.62	0.56	silty clay to clay	UNDFND	UNDFD	4	.5
4.50	14.76	5.94	0.12	2.00	0.57	silty clay to clay	UNDFND	UNDFD	4	.5
4.62	15.16	6.26	0.10	1.60	0.58	sensitive fine grained	UNDFND	UNDFD	3	.5
4.75	15.58	5.64	0.08	1.51	0.59	sensitive fine grained	UNDFND	UNDFD	3	.4

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-20A

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	6.54	0.18	2.73	0.60	clay	UNDFND	UNDFD	6	.5
5.00	16.40	12.24	0.27	2.23	0.61	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
5.12	16.80	13.08	0.31	2.40	0.62	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
5.25	17.22	36.72	0.50	1.36	0.63	silty sand to sandy silt	40-50	38-40	12	UNDEFINED
5.38	17.65	46.42	0.52	1.12	0.64	silty sand to sandy silt	50-60	38-40	15	UNDEFINED
5.50	18.04	22.22	0.38	1.73	0.65	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
5.62	18.44	8.70	0.17	1.92	0.66	clayey silt to silty clay	UNDFND	UNDFD	4	.7
5.75	18.86	8.14	0.13	1.65	0.67	clayey silt to silty clay	UNDFND	UNDFD	4	.7
5.87	19.26	16.86	0.23	1.35	0.68	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
6.00	19.69	79.16	0.30	0.37	0.69	sand to silty sand	60-70	40-42	19	UNDEFINED
6.12	20.08	51.56	0.43	0.84	0.70	silty sand to sandy silt	50-60	38-40	16	UNDEFINED
6.25	20.51	10.00	0.28	2.82	0.71	silty clay to clay	UNDFND	UNDFD	6	.8
6.38	20.93	9.06	0.31	3.38	0.72	clay	UNDFND	UNDFD	9	.7
6.50	21.33	7.96	0.23	2.92	0.73	silty clay to clay	UNDFND	UNDFD	5	.6
6.63	21.75	7.10	0.16	2.19	0.74	silty clay to clay	UNDFND	UNDFD	5	.5
6.75	22.15	8.64	0.17	1.96	0.75	clayey silt to silty clay	UNDFND	UNDFD	4	.7
6.88	22.57	8.62	0.23	2.71	0.76	silty clay to clay	UNDFND	UNDFD	6	.7
7.00	22.97	19.56	0.76	3.86	0.77	silty clay to clay	UNDFND	UNDFD	12	1.8
7.12	23.36	40.74	0.93	2.28	0.78	sandy silt to clayey silt	UNDFND	UNDFD	16	3.9
7.25	23.79	56.86	1.73	3.04	0.79	sandy silt to clayey silt	UNDFND	UNDFD	22	5.5
7.37	24.18	54.46	1.59	2.92	0.80	sandy silt to clayey silt	UNDFND	UNDFD	21	5.3
7.50	24.61	16.04	0.64	4.02	0.81	silty clay to clay	UNDFND	UNDFD	10	1.4
7.62	25.00	18.30	0.44	2.40	0.81	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
7.75	25.43	19.22	0.58	3.02	0.82	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
7.88	25.85	12.62	0.38	3.01	0.83	silty clay to clay	UNDFND	UNDFD	8	1.1
8.00	26.25	10.12	0.43	4.30	0.84	clay	UNDFND	UNDFD	10	.8
8.13	26.67	10.74	0.44	4.10	0.85	clay	UNDFND	UNDFD	10	.9
8.25	27.07	26.52	1.13	4.27	0.86	silty clay to clay	UNDFND	UNDFD	17	2.5
8.38	27.49	29.76	1.27	4.27	0.87	silty clay to clay	UNDFND	UNDFD	19	2.8
8.50	27.89	24.12	0.86	3.59	0.88	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
8.62	28.28	19.18	0.68	3.53	0.89	silty clay to clay	UNDFND	UNDFD	12	1.7
8.75	28.71	12.54	0.44	3.50	0.90	silty clay to clay	UNDFND	UNDFD	8	1.0
8.87	29.10	20.58	0.64	3.12	0.91	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
9.00	29.53	112.42	0.38	0.34	0.92	sand	70-80	40-42	22	UNDEFINED
9.12	29.92	104.18	0.69	0.66	0.93	sand to silty sand	60-70	40-42	25	UNDEFINED
9.25	30.35	40.84	0.93	2.28	0.94	sandy silt to clayey silt	UNDFND	UNDFD	16	3.9
9.37	30.74	23.14	0.77	3.31	0.95	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
9.50	31.17	16.32	0.96	5.91	0.96	clay	UNDFND	UNDFD	16	1.4
9.63	31.59	8.94	0.49	5.43	0.97	clay	UNDFND	UNDFD	9	.7
9.75	31.99	7.16	0.22	3.03	0.98	clay	UNDFND	UNDFD	7	.5
9.88	32.41	7.22	0.26	3.58	0.99	clay	UNDFND	UNDFD	7	.5
10.00	32.81	7.52	0.38	5.07	1.00	clay	UNDFND	UNDFD	7	.5

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-20A Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	48.70	0.96	1.96	1.01	sandy silt to clayey silt	UNDFND	UNDFD	19	4.6
10.25	33.63	33.90	0.58	1.71	1.02	sandy silt to clayey silt	UNDFND	UNDFD	13	3.2
10.37	34.02	11.42	0.24	2.07	1.03	clayey silt to silty clay	UNDFND	UNDFD	5	.9
10.50	34.45	10.16	0.19	1.85	1.04	clayey silt to silty clay	UNDFND	UNDFD	5	.8
10.62	34.84	10.12	0.18	1.74	1.05	clayey silt to silty clay	UNDFND	UNDFD	5	.8
10.75	35.27	10.48	0.21	1.99	1.06	clayey silt to silty clay	UNDFND	UNDFD	5	.8
10.87	35.66	13.38	0.29	2.18	1.07	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
11.00	36.09	17.28	0.68	3.92	1.08	silty clay to clay	UNDFND	UNDFD	11	1.5
11.13	36.52	19.44	0.55	2.83	1.09	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
11.25	36.91	12.28	0.25	2.00	1.10	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.37	37.30	11.28	0.19	1.70	1.11	clayey silt to silty clay	UNDFND	UNDFD	5	.9
11.50	37.73	10.46	0.21	2.04	1.12	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.62	38.12	11.04	0.26	2.36	1.13	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.75	38.55	18.80	0.58	3.09	1.14	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
11.87	38.94	15.40	0.55	3.56	1.15	silty clay to clay	UNDFND	UNDFD	10	1.3
12.00	39.37	15.70	0.57	3.65	1.16	silty clay to clay	UNDFND	UNDFD	10	1.3
12.12	39.76	25.38	0.97	3.81	1.17	silty clay to clay	UNDFND	UNDFD	16	2.3
12.25	40.19	19.64	0.61	3.10	1.18	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
12.37	40.58	13.56	0.32	2.36	1.19	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
12.50	41.01	14.36	0.28	1.94	1.20	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
12.62	41.40	12.00	0.23	1.93	1.20	clayey silt to silty clay	UNDFND	UNDFD	6	.9
12.75	41.83	10.68	0.21	1.98	1.21	clayey silt to silty clay	UNDFND	UNDFD	5	.8
12.87	42.22	9.48	0.18	1.92	1.22	clayey silt to silty clay	UNDFND	UNDFD	5	.7
13.00	42.65	9.48	0.13	1.35	1.23	clayey silt to silty clay	UNDFND	UNDFD	5	.7
13.12	43.04	10.14	0.14	1.37	1.24	clayey silt to silty clay	UNDFND	UNDFD	5	.7
13.25	43.47	11.52	0.25	2.19	1.25	clayey silt to silty clay	UNDFND	UNDFD	6	.9
13.37	43.86	10.72	0.20	1.87	1.26	clayey silt to silty clay	UNDFND	UNDFD	5	.8
13.50	44.29	12.46	0.34	2.71	1.27	silty clay to clay	UNDFND	UNDFD	8	1.0
13.62	44.69	60.72	0.91	1.50	1.28	silty sand to sandy silt	40-50	36-38	19	UNDEFINED
13.75	45.11	111.36	0.59	0.53	1.29	sand	60-70	40-42	21	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT/9-21
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/08/90/11:08
Cone Used :IV
Water table (meters) : 1

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	31.00	1.97	6.36	0.01	clay	UNDFND	UNDFD	30	3.0
0.25	0.82	36.74	2.42	6.59	0.03	clay	UNDFND	UNDFD	35	3.6
0.38	1.25	26.04	2.17	8.33	0.06	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.50	1.64	18.80	1.36	7.24	0.08	clay	UNDFND	UNDFD	18	1.8
0.63	2.07	17.70	1.02	5.76	0.10	clay	UNDFND	UNDFD	17	1.7
0.75	2.46	20.50	0.91	4.44	0.12	clay	UNDFND	UNDFD	20	2.0
0.87	2.85	23.34	0.94	3.94	0.15	silty clay to clay	UNDFND	UNDFD	15	2.3
1.00	3.28	23.00	0.90	3.93	0.17	silty clay to clay	UNDFND	UNDFD	15	2.2
1.13	3.71	18.02	0.75	4.15	0.19	clay	UNDFND	UNDFD	17	1.7
1.25	4.10	19.06	0.87	4.59	0.20	clay	UNDFND	UNDFD	18	1.8
1.37	4.49	17.96	0.89	4.95	0.20	clay	UNDFND	UNDFD	17	1.7
1.50	4.92	16.62	0.77	4.62	0.21	clay	UNDFND	UNDFD	16	1.6
1.62	5.31	14.44	0.67	4.63	0.22	clay	UNDFND	UNDFD	14	1.4
1.75	5.74	15.44	0.64	4.13	0.23	clay	UNDFND	UNDFD	15	1.5
1.87	6.14	15.00	0.60	4.01	0.24	clay	UNDFND	UNDFD	14	1.4
2.00	6.56	12.02	0.44	3.66	0.25	silty clay to clay	UNDFND	UNDFD	8	1.1
2.12	6.96	13.56	0.44	3.28	0.26	silty clay to clay	UNDFND	UNDFD	9	1.3
2.25	7.38	7.92	0.24	2.97	0.27	silty clay to clay	UNDFND	UNDFD	5	.7
2.38	7.81	5.26	0.14	2.71	0.28	clay	UNDFND	UNDFD	5	.4
2.50	8.20	5.36	0.26	4.84	0.29	clay	UNDFND	UNDFD	5	.4
2.62	8.60	21.46	0.64	3.00	0.30	clayey silt to silty clay	UNDFND	UNDFD	10	2.1
2.75	9.02	81.06	0.66	0.82	0.31	sand to silty sand	70-80	44-46	19	UNDEFINED
2.87	9.42	110.20	0.29	0.26	0.32	sand	80-90	46-48	21	UNDEFINED
3.00	9.84	104.18	0.25	0.24	0.33	sand	80-90	44-46	20	UNDEFINED
3.12	10.24	57.50	0.46	0.80	0.34	sand to silty sand	60-70	42-44	14	UNDEFINED
3.25	10.66	21.10	0.39	1.85	0.35	sandy silt to clayey silt	UNDFND	UNDFD	8	2.0
3.37	11.06	16.16	0.43	2.67	0.36	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
3.50	11.48	9.66	0.28	2.94	0.37	silty clay to clay	UNDFND	UNDFD	6	.9
3.63	11.91	10.50	0.26	2.44	0.38	silty clay to clay	UNDFND	UNDFD	7	.9
3.75	12.30	8.62	0.19	2.20	0.39	silty clay to clay	UNDFND	UNDFD	6	.7
3.87	12.70	9.20	0.24	2.59	0.40	silty clay to clay	UNDFND	UNDFD	6	.8
4.00	13.12	10.88	0.29	2.66	0.41	silty clay to clay	UNDFND	UNDFD	7	1.0
4.12	13.52	11.22	0.25	2.21	0.42	clayey silt to silty clay	UNDFND	UNDFD	5	1.0
4.25	13.94	8.52	0.31	3.66	0.43	clay	UNDFND	UNDFD	8	.7
4.37	14.34	7.08	0.19	2.66	0.44	silty clay to clay	UNDFND	UNDFD	5	.6
4.50	14.76	7.54	0.16	2.14	0.45	silty clay to clay	UNDFND	UNDFD	5	.6
4.62	15.16	4.54	0.12	2.72	0.46	clay	UNDFND	UNDFD	4	.3
4.75	15.58	5.04	0.09	1.71	0.47	sensitive fine grained	UNDFND	UNDFD	2	.4

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/9-21

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	6.58	0.15	2.31	0.48	silty clay to clay	UNDFND	UNDFD	4	.5
5.00	16.40	7.14	0.14	1.92	0.49	silty clay to clay	UNDFND	UNDFD	5	.6
5.12	16.80	8.24	0.21	2.49	0.50	silty clay to clay	UNDFND	UNDFD	5	.7
5.25	17.22	35.48	0.82	2.32	0.51	sandy silt to clayey silt	UNDFND	UNDFD	14	3.4
5.38	17.65	55.74	0.91	1.63	0.52	silty sand to sandy silt	50-60	40-42	18	UNDEFINED
5.50	18.04	37.98	0.27	0.71	0.53	silty sand to sandy silt	40-50	38-40	12	UNDEFINED
5.62	18.44	9.28	0.16	1.73	0.54	clayey silt to silty clay	UNDFND	UNDFD	4	.8
5.75	18.86	5.88	0.11	1.94	0.55	silty clay to clay	UNDFND	UNDFD	4	.4
5.87	19.26	5.80	0.15	2.52	0.56	clay	UNDFND	UNDFD	6	.4
6.00	19.69	5.36	0.14	2.53	0.57	clay	UNDFND	UNDFD	5	.4
6.12	20.08	6.02	0.13	2.13	0.58	silty clay to clay	UNDFND	UNDFD	4	.4
6.25	20.51	5.22	0.11	2.12	0.58	silty clay to clay	UNDFND	UNDFD	3	.4
6.38	20.93	5.30	0.13	2.37	0.59	clay	UNDFND	UNDFD	5	.4
6.50	21.33	6.06	0.13	2.15	0.60	silty clay to clay	UNDFND	UNDFD	4	.4
6.63	21.75	6.32	0.13	2.13	0.61	silty clay to clay	UNDFND	UNDFD	4	.5
6.75	22.15	6.78	0.12	1.82	0.62	silty clay to clay	UNDFND	UNDFD	4	.5
6.88	22.57	7.18	0.14	1.96	0.63	silty clay to clay	UNDFND	UNDFD	5	.5
7.00	22.97	13.76	0.44	3.21	0.64	silty clay to clay	UNDFND	UNDFD	9	1.2
7.12	23.36	17.72	0.60	3.37	0.65	silty clay to clay	UNDFND	UNDFD	11	1.6
7.25	23.79	14.78	0.56	3.80	0.66	silty clay to clay	UNDFND	UNDFD	9	1.3
7.37	24.18	8.62	0.28	3.26	0.67	clay	UNDFND	UNDFD	8	.7
7.50	24.61	8.48	0.19	2.20	0.68	silty clay to clay	UNDFND	UNDFD	5	.7
7.62	25.00	10.32	0.31	2.99	0.69	silty clay to clay	UNDFND	UNDFD	7	.8
7.75	25.43	7.08	0.23	3.24	0.70	clay	UNDFND	UNDFD	7	.5
7.88	25.85	7.18	0.25	3.43	0.71	clay	UNDFND	UNDFD	7	.5
8.00	26.25	10.60	0.33	3.15	0.72	silty clay to clay	UNDFND	UNDFD	7	.9
8.13	26.67	14.66	0.34	2.33	0.73	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
8.25	27.07	15.42	0.57	3.67	0.74	silty clay to clay	UNDFND	UNDFD	10	1.3
8.38	27.49	20.88	0.74	3.52	0.75	silty clay to clay	UNDFND	UNDFD	13	1.9
8.50	27.89	26.80	1.16	4.31	0.76	silty clay to clay	UNDFND	UNDFD	17	2.5
8.62	28.28	21.08	1.11	5.27	0.77	clay	UNDFND	UNDFD	20	1.9
8.75	28.71	11.98	0.51	4.26	0.78	clay	UNDFND	UNDFD	11	1.0
8.87	29.10	10.18	0.35	3.47	0.79	clay	UNDFND	UNDFD	10	.8
9.00	29.53	12.50	0.37	2.98	0.80	silty clay to clay	UNDFND	UNDFD	8	1.0
9.12	29.92	10.68	0.30	2.80	0.81	silty clay to clay	UNDFND	UNDFD	7	.9
9.25	30.35	10.76	0.29	2.66	0.82	silty clay to clay	UNDFND	UNDFD	7	.9
9.37	30.74	10.00	0.20	1.98	0.83	clayey silt to silty clay	UNDFND	UNDFD	5	.8
9.50	31.17	18.70	0.48	2.54	0.84	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
9.63	31.59	25.94	1.02	3.93	0.85	silty clay to clay	UNDFND	UNDFD	17	2.4
9.75	31.99	44.84	1.03	2.29	0.86	sandy silt to clayey silt	UNDFND	UNDFD	17	4.3
9.88	32.41	108.30	0.94	0.87	0.87	sand to silty sand	70-80	40-42	26	UNDEFINED
10.00	32.81	135.32	1.75	1.29	0.88	sand to silty sand	70-80	42-44	32	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT/9-21

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	171.78	1.29	0.75	0.89	sand	80-90	42-44	33	UNDEFINED
10.25	33.63	177.00	1.38	0.78	0.90	sand	80-90	44-46	34	UNDEFINED
10.37	34.02	221.84	0.88	0.40	0.91	sand	>90	44-46	42	UNDEFINED
10.50	34.45	268.08	0.73	0.27	0.92	gravelly sand to sand	>90	44-46	43	UNDEFINED
10.62	34.84	196.56	0.38	0.19	0.93	sand	80-90	44-46	38	UNDEFINED
10.75	35.27	177.22	0.45	0.26	0.94	sand	80-90	42-44	34	UNDEFINED
10.87	35.66	207.80	0.34	0.16	0.95	gravelly sand to sand	80-90	44-46	33	UNDEFINED
11.00	36.09	204.12	0.22	0.11	0.96	gravelly sand to sand	80-90	44-46	33	UNDEFINED
11.13	36.52	200.38	1.20	0.60	0.97	sand	80-90	44-46	38	UNDEFINED
11.25	36.91	219.26	0.61	0.28	0.98	sand	80-90	44-46	42	UNDEFINED
11.37	37.30	195.52	0.62	0.32	0.98	sand	80-90	44-46	37	UNDEFINED
11.50	37.73	193.86	1.28	0.66	0.99	sand	80-90	42-44	37	UNDEFINED
11.62	38.12	167.44	1.28	0.76	1.00	sand	80-90	42-44	32	UNDEFINED
11.75	38.55	102.14	1.23	1.20	1.01	sand to silty sand	60-70	40-42	24	UNDEFINED
11.87	38.94	69.08	1.02	1.48	1.02	silty sand to sandy silt	50-60	38-40	22	UNDEFINED
12.00	39.37	75.48	0.66	0.88	1.03	sand to silty sand	50-60	38-40	18	UNDEFINED
12.12	39.76	38.28	0.47	1.22	1.04	silty sand to sandy silt	<40	36-38	12	UNDEFINED
12.25	40.19	15.88	0.31	1.98	1.05	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
12.37	40.58	30.76	0.79	2.56	1.06	sandy silt to clayey silt	UNDFND	UNDFD	12	2.8
12.50	41.01	101.60	1.54	1.52	1.07	silty sand to sandy silt	60-70	40-42	32	UNDEFINED
12.62	41.40	165.50	1.17	0.71	1.08	sand	70-80	42-44	32	UNDEFINED
12.75	41.83	203.64	0.72	0.35	1.09	sand	80-90	42-44	39	UNDEFINED
12.87	42.22	158.04	0.92	0.58	1.10	sand	70-80	42-44	30	UNDEFINED
13.00	42.65	34.12	0.58	1.70	1.11	sandy silt to clayey silt	UNDFND	UNDFD	13	3.1
13.12	43.04	24.32	0.29	1.17	1.12	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
13.25	43.47	184.20	0.71	0.38	1.13	sand	80-90	42-44	35	UNDEFINED
13.37	43.86	217.28	0.31	0.14	1.14	gravelly sand to sand	80-90	42-44	35	UNDEFINED
13.50	44.29	183.44	0.51	0.28	1.15	sand	80-90	42-44	35	UNDEFINED
13.62	44.69	52.98	1.57	2.96	1.16	sandy silt to clayey silt	UNDFND	UNDFD	20	5.0
13.75	45.11	43.30	0.77	1.78	1.17	silty sand to sandy silt	40-50	36-38	14	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-22
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/19/90/11:17
Cone Used :IV
Water table (meters) : 2.1

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	3.70	0.58	5.39	0.02	clay	UNDFND	UNDFD	3	.9
0.50	1.64	5.33	0.47	7.98	0.07	clay	UNDFND	UNDFD	6	.5
0.75	2.46	9.15	0.47	5.18	0.11	clay	UNDFND	UNDFD	9	.9
1.00	3.28	12.82	0.39	3.00	0.16	silty clay to clay	UNDFND	UNDFD	8	1.2
1.25	4.10	12.73	0.48	3.79	0.20	clay	UNDFND	UNDFD	12	1.2
1.50	4.92	12.18	0.58	4.72	0.25	clay	UNDFND	UNDFD	12	1.1
1.75	5.74	11.71	0.48	4.13	0.29	clay	UNDFND	UNDFD	11	1.1
2.00	6.56	12.63	0.45	3.53	0.34	silty clay to clay	UNDFND	UNDFD	8	1.2
2.25	7.38	11.81	0.41	3.56	0.38	silty clay to clay	UNDFND	UNDFD	7	1.1
2.50	8.20	6.85	0.23	4.30	0.40	clay	UNDFND	UNDFD	7	.6
2.75	9.02	5.10	0.25	4.90	0.42	clay	UNDFND	UNDFD	5	.4
3.00	9.84	7.42	0.42	5.65	0.44	clay	UNDFND	UNDFD	7	.6
3.25	10.66	10.02	0.51	5.07	0.46	clay	UNDFND	UNDFD	10	.9
3.50	11.48	8.48	0.38	4.47	0.48	clay	UNDFND	UNDFD	8	.7
3.75	12.30	6.48	0.22	3.44	0.50	clay	UNDFND	UNDFD	6	.5
4.00	13.12	9.28	0.27	2.92	0.52	silty clay to clay	UNDFND	UNDFD	6	.8
4.25	13.94	15.07	0.40	2.67	0.54	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
4.50	14.76	9.46	0.24	2.52	0.56	silty clay to clay	UNDFND	UNDFD	6	.8
4.75	15.58	6.65	0.11	1.68	0.58	silty clay to clay	UNDFND	UNDFD	4	.5
5.00	16.40	7.12	0.09	1.33	0.60	undefined	UNDFND	UNDFD	UDF	UNDEFINED
5.25	17.22	22.55	0.29	1.29	0.61	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
5.50	18.04	40.97	0.32	0.77	0.63	silty sand to sandy silt	40-50	38-40	13	UNDEFINED
5.75	18.86	18.47	0.50	2.70	0.65	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
6.00	19.69	14.55	0.38	2.60	0.67	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
6.25	20.51	10.07	0.24	2.40	0.69	silty clay to clay	UNDFND	UNDFD	6	.8
6.50	21.33	13.88	0.21	1.52	0.71	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
6.75	22.15	12.14	0.22	1.80	0.73	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
7.00	22.97	14.65	0.36	2.46	0.75	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
7.25	23.79	34.47	0.58	1.68	0.77	sandy silt to clayey silt	UNDFND	UNDFD	13	3.3
7.50	24.61	9.57	0.16	1.66	0.79	clayey silt to silty clay	UNDFND	UNDFD	5	.8
7.75	25.43	10.29	0.24	2.29	0.81	clayey silt to silty clay	UNDFND	UNDFD	5	.8
8.00	26.25	23.41	0.49	2.11	0.83	sandy silt to clayey silt	UNDFND	UNDFD	9	2.1
8.25	27.07	19.50	0.40	2.06	0.85	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
8.50	27.89	15.97	0.40	2.49	0.87	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
8.75	28.71	27.28	0.73	2.69	0.89	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
9.00	29.53	27.93	0.77	2.77	0.91	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
9.25	30.35	73.73	0.67	0.91	0.93	sand to silty sand	50-60	40-42	18	UNDEFINED
9.50	31.17	140.18	0.46	0.33	0.95	sand	70-80	42-44	27	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-22

DEPTH- (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	217.93	0.82	0.38	0.97	sand	80-90	44-46	42	UNDEFINED
10.00	32.81	246.30	0.55	0.22	0.99	gravelly sand to sand	>90	44-46	39	UNDEFINED
10.25	33.63	230.18	0.36	0.15	1.00	gravelly sand to sand	>90	44-46	37	UNDEFINED
10.50	34.45	186.81	0.35	0.19	1.02	sand	80-90	42-44	36	UNDEFINED
10.75	35.27	268.72	0.82	0.31	1.04	gravelly sand to sand	>90	44-46	43	UNDEFINED
11.00	36.09	452.21	2.23	0.49	1.06	gravelly sand to sand	>90	46-48	>50	UNDEFINED
11.25	36.91	470.07	2.37	0.50	1.08	gravelly sand to sand	>90	46-48	>50	UNDEFINED
11.50	37.73	589.76	3.77	0.64	1.10	gravelly sand to sand	>90	46-48	>50	UNDEFINED
11.75	38.55	442.83	1.90	0.43	1.12	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.00	39.37	541.83	2.28	0.42	1.14	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.25	40.19	413.72	1.87	0.45	1.16	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.50	41.01	441.00	1.96	0.44	1.18	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.75	41.83	317.91	0.87	0.27	1.20	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.00	42.65	64.18	0.54	0.85	1.22	sand to silty sand	50-60	36-38	15	UNDEFINED
13.25	43.47	14.77	0.12	0.80	1.24	sandy silt to clayey silt	UNDFND	UNDFD	6	1.2
13.50	44.29	13.57	0.13	0.93	1.26	sandy silt to clayey silt	UNDFND	UNDFD	5	1.1
13.75	45.11	10.96	0.10	0.87	1.28	sandy silt to clayey silt	UNDFND	UNDFD	4	.8
14.00	45.93	10.89	0.12	1.11	1.30	clayey silt to silty clay	UNDFND	UNDFD	5	.8
14.25	46.75	11.89	0.22	1.86	1.32	clayey silt to silty clay	UNDFND	UNDFD	6	.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-23
DATE : 01/29/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 7

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	33.2	0.2	0.57	SILTY SAND	9	35	0.09	--	---	0.01	--
0.3	192.4	0.5	0.28	SAND	26	85	1.75	--	---	0.01	--
0.4	218.0	0.8	0.38	SAND	30	90	1.72	--	---	0.02	--
0.6	205.9	1.1	0.51	SAND	29	84	1.56	--	---	0.03	--
0.8	215.7	0.8	0.37	SAND	29	80	1.72	--	---	0.04	--
0.9	248.7	1.5	0.60	SAND	35	91	1.61	--	---	0.05	--
1.1	219.8	1.5	0.66	SAND	32	81	1.47	--	---	0.06	--
1.2	187.0	2.1	1.12	SAND	33	80	0.97	--	---	0.07	--
1.4	162.5	0.9	0.54	SAND	24	57	1.47	--	---	0.08	--
1.6	147.1	0.8	0.53	SAND	22	50	1.46	--	---	0.09	--
1.7	66.6	1.6	2.40	SILTY SAND	20	46	0.06	--	---	0.10	--
1.9	51.7	1.7	3.27	SANDY SILT AND SILT	19	43	0.03	--	---	0.10	--
2.1	19.7	1.4	7.15	CLAY	20	43	---	--	---	0.11	1.23
2.2	18.9	0.5	2.86	SANDY SILT AND SILT	8	17	0.01	--	---	0.12	--
2.4	16.0	0.4	2.75	SANDY SILT AND SILT	7	14	0.01	--	---	0.13	--
2.6	13.6	0.4	2.88	CLAYEY SILT AND SILTY CLAY	6	13	---	--	---	0.14	0.84
2.7	12.9	0.4	3.10	CLAYEY SILT AND SILTY CLAY	6	12	---	--	---	0.15	0.80
2.9	13.3	0.4	3.01	CLAYEY SILT AND SILTY CLAY	6	12	---	--	---	0.16	0.82
3.1	13.6	0.4	2.57	SANDY SILT AND SILT	6	12	0.01	--	---	0.17	--
3.2	13.6	0.4	2.65	SANDY SILT AND SILT	6	12	0.01	--	---	0.18	--
3.4	13.9	0.3	2.16	SANDY SILT AND SILT	5	10	0.02	--	---	0.19	--
3.5	12.9	0.3	2.09	SANDY SILT AND SILT	5	10	0.02	--	---	0.19	--
3.7	11.8	0.3	2.54	SANDY SILT AND SILT	5	10	0.01	--	---	0.20	--
3.9	15.0	0.3	2.27	SANDY SILT AND SILT	6	11	0.02	--	---	0.21	--
4.0	16.3	0.5	2.76	SANDY SILT AND SILT	7	13	0.01	--	---	0.22	--
4.2	15.0	0.6	3.68	CLAYEY SILT AND SILTY CLAY	8	14	---	--	---	0.23	0.92
4.3	15.6	0.7	4.16	CLAYEY SILT AND SILTY CLAY	8	15	---	--	---	0.24	0.96
4.5	20.4	0.7	3.19	CLAYEY SILT AND SILTY CLAY	9	16	---	--	---	0.25	1.26
4.7	16.3	0.4	2.70	SANDY SILT AND SILT	7	12	0.01	38	34	0.26	--
4.8	13.1	0.3	2.61	SANDY SILT AND SILT	6	10	0.01	37	29	0.27	--
5.0	11.6	0.3	2.77	CLAYEY SILT AND SILTY CLAY	5	9	---	--	---	0.27	0.71
5.2	11.7	0.3	2.74	CLAYEY SILT AND SILTY CLAY	5	9	---	--	---	0.28	0.71
5.3	10.2	0.2	2.16	SANDY SILT AND SILT	4	7	0.01	35	22	0.29	--
5.5	9.7	0.2	2.06	SANDY SILT AND SILT	4	7	0.02	35	20	0.30	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	9.5	0.2	1.79	SANDY SILT AND SILT	4	6	0.02	35	20	0.31	--
5.8	8.8	0.1	1.58	SANDY SILT AND SILT	3	6	0.02	34	20	0.32	--
6.0	7.7	0.1	1.56	SANDY SILT AND SILT	3	5	0.02	33	20	0.33	--
6.1	6.1	0.1	1.14	SANDY SILT AND SILT	2	4	0.02	32	20	0.34	--
6.3	5.4	0.1	1.29	SANDY SILT AND SILT	2	3	0.02	31	20	0.35	--
6.5	2.8	0.0	1.45	CLAYEY SILT AND SILTY CLAY	1	2	---	--	---	0.36	0.15
6.6	3.3	0.1	1.53	CLAYEY SILT AND SILTY CLAY	2	2	---	--	---	0.36	0.18
6.8	6.5	0.1	1.85	SANDY SILT AND SILT	3	4	0.01	32	20	0.37	--
7.0	9.5	0.1	0.84	SANDY SILT AND SILT	3	5	0.04	34	20	0.38	--
7.1	7.5	0.1	0.94	SANDY SILT AND SILT	3	4	0.03	32	20	0.39	--
7.3	5.7	0.1	1.58	SANDY SILT AND SILT	2	4	0.01	31	20	0.39	--
7.4	6.8	0.1	1.47	SANDY SILT AND SILT	3	4	0.02	32	20	0.40	--
7.6	7.9	0.1	1.53	SANDY SILT AND SILT	3	5	0.02	32	20	0.40	--
7.8	8.2	0.1	1.35	SANDY SILT AND SILT	3	5	0.03	33	20	0.40	--
7.9	8.0	0.1	1.38	SANDY SILT AND SILT	3	5	0.02	32	20	0.41	--
8.1	8.8	0.1	1.47	SANDY SILT AND SILT	3	5	0.02	33	20	0.41	--
8.3	9.4	0.2	1.59	SANDY SILT AND SILT	4	5	0.02	33	20	0.42	--
8.4	10.2	0.2	1.56	SANDY SILT AND SILT	4	6	0.03	33	20	0.42	--
8.6	10.2	0.2	1.87	SANDY SILT AND SILT	4	6	0.02	33	20	0.42	--
8.8	9.5	0.2	2.42	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.43	0.56
8.9	9.7	0.2	2.26	SANDY SILT AND SILT	4	6	0.01	33	20	0.43	--
9.1	8.8	0.2	2.71	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.43	0.52
9.3	9.0	0.3	3.22	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.44	0.53
9.4	10.2	0.4	3.73	CLAYEY SILT AND SILTY CLAY	5	8	---	--	---	0.44	0.61
9.6	15.6	0.3	1.67	SANDY SILT AND SILT	5	8	0.03	35	24	0.45	--
9.7	14.5	0.4	2.48	SANDY SILT AND SILT	6	9	0.02	35	22	0.45	--
9.9	18.3	0.4	2.07	SANDY SILT AND SILT	7	9	0.03	36	27	0.45	--
10.1	42.8	0.4	0.93	SILTY SAND	12	17	0.09	40	49	0.46	--
10.2	33.1	0.5	1.54	SILTY SAND	10	14	0.06	39	42	0.46	--
10.4	20.3	0.6	2.76	SANDY SILT AND SILT	8	12	0.02	36	29	0.47	--
10.6	12.9	0.4	2.72	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.47	0.77
10.7	9.9	0.2	1.82	SANDY SILT AND SILT	4	6	0.02	33	20	0.47	--
10.9	10.9	0.2	1.74	SANDY SILT AND SILT	4	6	0.02	33	20	0.48	--
11.1	11.6	0.3	2.25	SANDY SILT AND SILT	5	7	0.02	33	20	0.48	--
11.2	13.4	0.3	2.54	SANDY SILT AND SILT	6	8	0.01	34	20	0.49	--
11.4	14.5	0.4	2.75	SANDY SILT AND SILT	6	9	0.01	34	20	0.49	--
11.5	15.0	0.5	3.07	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.49	0.90
11.7	17.8	0.6	3.60	CLAYEY SILT AND SILTY CLAY	9	12	---	--	---	0.50	1.07
11.9	35.4	0.9	2.55	SANDY SILT AND SILT	12	17	0.04	39	42	0.50	--
12.0	46.0	0.8	1.78	SILTY SAND	13	18	0.07	40	49	0.50	--
12.2	53.3	0.6	1.05	SILTY SAND	14	20	0.09	41	53	0.51	--
12.4	53.0	0.4	0.75	SAND	12	17	0.31	41	53	0.51	--
12.5	51.6	0.4	0.70	SAND	12	16	0.37	40	52	0.52	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	50.3	0.5	0.89	SILTY SAND	13	18	0.10	40	51	0.52	--
12.9	53.7	0.3	0.48	SAND	10	13	0.93	41	53	0.52	--
13.0	54.4	0.3	0.61	SAND	11	14	0.69	41	53	0.53	--
13.2	53.0	0.3	0.49	SAND	10	13	0.90	40	52	0.53	--
13.4	51.6	0.2	0.37	SAND	8	11	1.14	40	51	0.54	--
13.5	47.6	0.3	0.59	SAND	10	14	0.43	40	49	0.54	--
13.7	43.5	0.3	0.67	SILTY SAND	12	15	0.10	39	46	0.54	--
13.8	42.3	0.3	0.69	SILTY SAND	11	15	0.10	39	45	0.55	--
14.0	32.9	0.4	1.12	SILTY SAND	9	12	0.07	38	39	0.55	--
14.2	21.2	0.5	2.55	SANDY SILT AND SILT	8	11	0.02	36	26	0.56	--
14.3	19.6	0.6	2.95	SANDY SILT AND SILT	8	11	0.01	35	24	0.56	--
14.5	24.1	0.5	2.20	SANDY SILT AND SILT	8	11	0.04	36	29	0.56	--
14.7	26.8	0.5	1.76	SANDY SILT AND SILT	8	11	0.05	37	32	0.57	--
14.8	31.3	0.3	0.99	SILTY SAND	9	12	0.08	37	36	0.57	--
15.0	32.0	0.4	1.34	SILTY SAND	9	12	0.07	38	37	0.58	--
15.2	27.6	0.5	1.88	SANDY SILT AND SILT	9	11	0.05	37	32	0.58	--
15.3	26.4	0.5	1.82	SANDY SILT AND SILT	8	11	0.05	37	31	0.58	--
15.5	29.2	0.5	1.68	SILTY SAND	9	11	0.05	37	33	0.59	--
15.7	28.7	0.5	1.64	SILTY SAND	9	11	0.05	37	33	0.59	--
15.8	37.9	0.2	0.58	SILTY SAND	10	13	0.10	38	41	0.60	--
16.0	46.2	0.2	0.37	SAND	8	10	0.97	39	46	0.60	--
16.2	53.8	0.1	0.19	SAND	8	10	1.59	40	50	0.60	--
16.3	55.7	0.2	0.29	SAND	8	11	1.40	40	51	0.61	--
16.5	58.7	0.5	0.89	SAND	14	18	0.27	40	53	0.61	--
16.7	78.9	0.7	0.92	SAND	16	20	0.63	42	62	0.62	--
16.8	139.9	1.2	0.84	SAND	23	29	1.11	44	81	0.62	--
17.0	204.3	1.2	0.59	SAND	30	37	1.49	46	94	0.62	--
17.2	236.5	0.8	0.33	SAND	31	39	1.81	47	99	0.63	--
17.3	239.3	0.4	0.16	SAND	30	38	1.97	47	99	0.63	--
17.5	246.7	0.4	0.15	SAND AND GRAVEL	31	38	2.03	47	100	0.63	--
17.7	235.9	0.5	0.20	SAND	30	37	1.93	47	98	0.64	--
17.8	194.3	0.6	0.29	SAND	26	32	1.73	46	92	0.64	--
18.0	125.2	1.1	0.87	SAND	21	26	1.03	44	76	0.65	--
18.1	52.4	1.1	2.01	SILTY SAND	15	19	0.06	39	48	0.65	--
18.3	23.3	0.8	3.35	CLAYEY SILT AND SILTY CLAY	10	13	---	--	---	0.65	1.39
18.5	15.0	0.4	2.34	SANDY SILT AND SILT	6	7	0.02	33	20	0.66	--
18.6	13.0	0.3	1.93	SANDY SILT AND SILT	5	6	0.02	32	20	0.66	--
18.8	12.9	0.3	2.40	SANDY SILT AND SILT	5	7	0.02	32	20	0.67	--
19.0	11.9	0.3	2.26	SANDY SILT AND SILT	5	6	0.02	32	20	0.67	--
19.1	10.5	0.2	1.82	SANDY SILT AND SILT	4	5	0.02	31	20	0.67	--
19.3	9.7	0.2	1.65	SANDY SILT AND SILT	4	5	0.02	31	20	0.68	--
19.5	9.6	0.1	1.46	SANDY SILT AND SILT	4	4	0.03	31	20	0.68	--
19.6	10.2	0.1	1.18	SANDY SILT AND SILT	4	4	0.03	31	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	10.2	0.1	1.18	SANDY SILT AND SILT	4	4	0.03	31	20	0.69	--
19.9	10.9	0.1	1.10	SANDY SILT AND SILT	4	5	0.04	31	20	0.69	--
20.1	11.6	0.1	1.12	SANDY SILT AND SILT	4	5	0.04	32	20	0.70	--
20.3	12.1	0.1	1.16	SANDY SILT AND SILT	4	5	0.04	32	20	0.70	--
20.4	13.2	0.2	1.51	SANDY SILT AND SILT	5	6	0.03	32	20	0.70	--
20.6	14.3	0.2	1.54	SANDY SILT AND SILT	5	6	0.03	33	20	0.71	--
20.8	14.3	0.2	1.47	SANDY SILT AND SILT	5	6	0.04	33	20	0.71	--
20.9	12.9	0.2	1.47	SANDY SILT AND SILT	5	5	0.03	32	20	0.72	--
21.1	11.6	0.2	1.47	SANDY SILT AND SILT	4	5	0.03	31	20	0.72	--
21.3	10.7	0.2	1.59	SANDY SILT AND SILT	4	5	0.03	31	20	0.72	--
21.4	10.9	0.2	1.47	SANDY SILT AND SILT	4	5	0.03	31	20	0.73	--
21.6	11.6	0.2	1.38	SANDY SILT AND SILT	4	5	0.03	31	20	0.73	--
21.8	12.2	0.2	1.39	SANDY SILT AND SILT	4	5	0.03	32	20	0.74	--
21.9	10.2	0.1	1.18	SANDY SILT AND SILT	4	4	0.03	31	20	0.74	--
22.1	9.2	0.1	1.42	SANDY SILT AND SILT	3	4	0.03	30	20	0.74	--
22.2	10.5	0.2	2.19	SANDY SILT AND SILT	4	5	0.01	31	20	0.75	--
22.4	15.7	0.0	0.25	SILTY SAND	4	5	0.09	33	20	0.75	--
22.6	21.1	0.4	1.80	SANDY SILT AND SILT	7	8	0.04	34	20	0.76	--
22.7	14.0	0.4	2.93	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.76	0.80
22.9	30.6	0.4	1.34	SILTY SAND	9	10	0.06	36	28	0.76	--
23.1	19.7	0.3	1.32	SANDY SILT AND SILT	6	7	0.05	34	20	0.77	--
23.2	12.2	0.2	1.23	SANDY SILT AND SILT	4	5	0.04	31	20	0.77	--
23.4	9.5	0.1	0.95	SANDY SILT AND SILT	3	4	0.04	30	20	0.78	--
23.6	9.0	0.1	1.11	SANDY SILT AND SILT	3	4	0.03	30	20	0.78	--
23.7	10.1	0.1	1.09	SANDY SILT AND SILT	4	4	0.03	30	20	0.78	--
23.9	13.0	0.2	1.47	SANDY SILT AND SILT	5	5	0.03	32	20	0.79	--
24.0	17.7	0.2	1.30	SANDY SILT AND SILT	6	6	0.05	33	20	0.79	--
24.2	16.3	0.2	1.04	SANDY SILT AND SILT	5	6	0.05	33	20	0.79	--
24.4	13.6	0.2	1.18	SANDY SILT AND SILT	5	5	0.04	32	20	0.80	--
24.5	10.9	0.2	1.47	SANDY SILT AND SILT	4	4	0.03	31	20	0.80	--
24.7	10.8	0.2	2.03	SANDY SILT AND SILT	4	5	0.02	31	20	0.81	--
24.9	11.4	0.3	2.27	SANDY SILT AND SILT	5	5	0.02	31	20	0.81	--
25.0	11.5	0.3	2.35	SANDY SILT AND SILT	5	5	0.01	31	20	0.81	--
25.2	10.9	0.2	2.21	SANDY SILT AND SILT	5	5	0.02	31	20	0.82	--
25.4	10.2	0.2	2.17	SANDY SILT AND SILT	4	5	0.01	30	20	0.82	--
25.5	9.5	0.2	2.21	SANDY SILT AND SILT	4	5	0.01	30	20	0.83	--
25.7	9.5	0.2	2.21	SANDY SILT AND SILT	4	5	0.01	30	20	0.83	--
25.9	9.5	0.1	1.47	SANDY SILT AND SILT	4	4	0.03	30	20	0.83	--
26.0	9.7	0.2	2.48	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.84	0.52
26.2	8.7	0.3	3.00	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.84	0.45
26.3	10.9	0.3	2.76	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.85	0.59
26.5	10.9	0.3	2.76	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.85	0.59
26.7	10.9	0.3	2.57	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.85	0.59

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	10.9	0.3	2.48	SANDY SILT AND SILT	5	5	0.01	30	20	0.86	--
27.0	10.3	0.2	2.24	SANDY SILT AND SILT	4	5	0.01	30	20	0.86	--
27.2	9.9	0.2	2.13	SANDY SILT AND SILT	4	4	0.01	30	20	0.86	--
27.3	9.7	0.2	2.06	SANDY SILT AND SILT	4	4	0.02	30	20	0.87	--
27.5	9.6	0.2	1.67	SANDY SILT AND SILT	4	4	0.02	30	20	0.87	--
27.7	9.5	0.2	1.58	SANDY SILT AND SILT	4	4	0.02	30	20	0.88	--
27.8	10.0	0.1	1.40	SANDY SILT AND SILT	4	4	0.03	30	20	0.88	--
28.0	9.5	0.1	1.26	SANDY SILT AND SILT	3	4	0.03	29	20	0.88	--
28.1	9.4	0.1	1.17	SANDY SILT AND SILT	3	4	0.03	29	20	0.89	--
28.3	10.2	0.1	1.18	SANDY SILT AND SILT	4	4	0.03	30	20	0.89	--
28.5	10.5	0.1	0.95	SANDY SILT AND SILT	4	4	0.04	30	20	0.90	--
28.6	10.3	0.1	0.87	SANDY SILT AND SILT	3	4	0.04	30	20	0.90	--
28.8	10.2	0.1	1.18	SANDY SILT AND SILT	4	4	0.03	30	20	0.90	--
29.0	13.4	0.2	1.34	SANDY SILT AND SILT	5	5	0.04	31	20	0.91	--
29.1	14.4	0.1	0.70	SILTY SAND	4	5	0.06	31	20	0.91	--
29.3	12.1	0.3	2.64	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.92	0.66
29.5	17.3	0.8	4.73	CLAY	17	18	---	--	---	0.92	0.98
29.6	71.5	1.4	1.97	SILTY SAND	20	21	0.07	39	49	0.92	--
29.8	129.9	2.6	2.00	SILTY SAND	35	37	0.09	42	71	0.93	--
30.0	102.6	2.2	2.17	SILTY SAND	29	30	0.08	41	62	0.93	--
30.1	179.1	1.3	0.74	SAND	28	29	1.31	44	82	0.94	--
30.3	240.1	0.9	0.37	SAND	32	33	1.79	45	93	0.94	--
30.4	224.7	0.6	0.27	SAND	29	30	1.83	45	91	0.94	--
30.6	120.4	1.4	1.12	SAND	23	24	0.72	42	67	0.95	--
30.8	51.0	1.2	2.43	SANDY SILT AND SILT	16	16	0.05	37	37	0.95	--
30.9	26.1	1.0	3.75	CLAYEY SILT AND SILTY CLAY	12	13	---	--	---	0.95	1.52
31.1	16.7	0.4	2.22	SANDY SILT AND SILT	6	6	0.03	32	20	0.96	--
31.3	15.5	0.3	1.87	SANDY SILT AND SILT	6	6	0.03	31	20	0.96	--
31.4	15.7	0.2	1.40	SANDY SILT AND SILT	5	5	0.04	31	20	0.97	--
31.6	18.2	0.3	1.48	SANDY SILT AND SILT	6	6	0.04	32	20	0.97	--
31.8	19.5	0.3	1.54	SANDY SILT AND SILT	6	6	0.04	33	20	0.97	--
31.9	20.9	0.3	1.53	SANDY SILT AND SILT	7	7	0.05	33	20	0.98	--
32.1	23.3	0.5	1.93	SANDY SILT AND SILT	8	8	0.04	33	20	0.98	--
32.3	25.8	0.6	2.17	SANDY SILT AND SILT	9	9	0.04	34	20	0.99	--
32.4	23.1	0.5	1.95	SANDY SILT AND SILT	8	8	0.04	33	20	0.99	--
32.6	20.3	0.4	2.02	SANDY SILT AND SILT	7	7	0.03	33	20	0.99	--
32.7	20.6	0.3	1.65	SANDY SILT AND SILT	7	7	0.04	33	20	1.00	--
32.9	23.2	0.3	1.25	SILTY SAND	7	7	0.06	33	20	1.00	--
33.1	18.5	0.2	1.24	SANDY SILT AND SILT	6	6	0.05	32	20	1.01	--
33.2	17.0	0.2	1.00	SILTY SAND	5	5	0.05	32	20	1.01	--
33.4	16.3	0.2	0.92	SILTY SAND	5	5	0.05	31	20	1.01	--
33.6	14.5	0.1	0.97	SANDY SILT AND SILT	5	5	0.05	31	20	1.02	--
33.7	16.3	0.4	2.70	SANDY SILT AND SILT	7	7	0.01	31	20	1.02	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	31.6	0.5	1.52	SILTY SAND	9	9	0.06	35	20	1.02	--
34.1	26.5	0.3	1.09	SILTY SAND	8	8	0.07	34	20	1.03	--
34.2	14.4	0.2	1.60	SANDY SILT AND SILT	5	5	0.03	31	20	1.03	--
34.4	16.2	0.3	2.09	SANDY SILT AND SILT	6	6	0.03	31	20	1.04	--
34.5	15.3	0.5	3.08	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.04	0.83
34.7	47.1	0.6	1.30	SILTY SAND	13	13	0.08	37	32	1.04	--
34.9	43.5	0.9	2.00	SILTY SAND	13	13	0.06	36	30	1.05	--
35.0	27.9	0.5	1.83	SANDY SILT AND SILT	9	9	0.05	34	20	1.05	--
35.2	16.5	0.3	1.82	SANDY SILT AND SILT	6	6	0.03	31	20	1.06	--
35.4	14.9	0.3	1.81	SANDY SILT AND SILT	5	5	0.03	31	20	1.06	--
35.5	15.0	0.3	1.80	SANDY SILT AND SILT	5	5	0.03	31	20	1.06	--
35.7	14.5	0.2	1.59	SANDY SILT AND SILT	5	5	0.03	31	20	1.07	--
35.9	14.3	0.2	1.12	SANDY SILT AND SILT	5	5	0.04	31	20	1.07	--
36.0	12.9	0.1	1.01	SANDY SILT AND SILT	4	4	0.04	30	20	1.08	--
36.2	12.9	0.1	0.70	SANDY SILT AND SILT	4	4	0.05	30	20	1.08	--
36.4	12.3	0.1	0.73	SANDY SILT AND SILT	4	4	0.05	30	20	1.08	--
36.5	12.4	0.1	0.81	SANDY SILT AND SILT	4	4	0.04	30	20	1.09	--
36.7	12.7	0.1	0.95	SANDY SILT AND SILT	4	4	0.04	30	20	1.09	--
36.8	13.6	0.2	1.10	SANDY SILT AND SILT	4	4	0.04	30	20	1.10	--
37.0	13.6	0.1	0.96	SANDY SILT AND SILT	4	4	0.04	30	20	1.10	--
37.2	12.4	0.1	1.05	SANDY SILT AND SILT	4	4	0.04	30	20	1.10	--
37.3	13.0	0.2	1.31	SANDY SILT AND SILT	4	4	0.04	30	20	1.11	--
37.5	14.3	0.2	1.40	SANDY SILT AND SILT	5	5	0.04	30	20	1.11	--
37.7	14.4	0.2	1.39	SANDY SILT AND SILT	5	5	0.04	30	20	1.11	--
37.8	15.0	0.3	1.74	SANDY SILT AND SILT	5	5	0.03	31	20	1.12	--
38.0	16.2	0.4	2.47	SANDY SILT AND SILT	7	6	0.02	31	20	1.12	--
38.2	16.8	0.5	3.03	CLAYEY SILT AND SILTY CLAY	8	7	---	--	---	1.13	0.92
38.3	14.5	0.2	1.59	SANDY SILT AND SILT	5	5	0.03	30	20	1.13	--
38.5	13.6	0.2	1.32	SANDY SILT AND SILT	5	4	0.04	30	20	1.13	--
38.6	14.3	0.2	1.40	SANDY SILT AND SILT	5	5	0.04	30	20	1.14	--
38.8	16.3	0.2	1.41	SANDY SILT AND SILT	5	5	0.04	31	20	1.14	--
39.0	17.0	0.1	0.59	SILTY SAND	5	5	0.07	31	20	1.15	--
39.1	13.7	0.0	0.07	SILTY SAND	4	3	0.09	30	20	1.15	--
39.3	13.6	0.2	1.54	SANDY SILT AND SILT	5	5	0.03	30	20	1.15	--
39.5	21.2	0.2	0.90	SILTY SAND	6	6	0.07	32	20	1.16	--
39.6	25.3	0.4	1.47	SILTY SAND	8	7	0.05	33	20	1.16	--
39.8	27.0	0.6	2.22	SANDY SILT AND SILT	9	9	0.04	33	20	1.17	--
40.0	43.4	0.7	1.68	SILTY SAND	13	12	0.07	36	26	1.17	--
40.1	69.9	1.1	1.55	SILTY SAND	19	18	0.09	38	42	1.17	--
40.3	40.0	0.6	1.60	SILTY SAND	12	11	0.07	35	24	1.18	--
40.5	20.5	0.6	2.73	SANDY SILT AND SILT	8	8	0.02	32	20	1.18	--
40.6	21.6	0.4	1.71	SANDY SILT AND SILT	7	6	0.04	32	20	1.19	--
40.8	18.2	0.2	0.99	SILTY SAND	5	5	0.06	31	20	1.19	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	12.8	0.1	0.78	SANDY SILT AND SILT	4	4	0.05	29	20	1.19	--
41.1	12.2	0.1	0.49	SILTY SAND	4	3	0.05	29	20	1.20	--
41.3	10.9	0.1	0.46	SANDY SILT AND SILT	3	3	0.05	29	20	1.20	--
41.4	10.5	0.1	0.47	SANDY SILT AND SILT	3	3	0.05	28	20	1.20	--
41.6	10.5	0.0	0.38	SANDY SILT AND SILT	3	3	0.05	28	20	1.21	--
41.8	10.2	0.1	0.49	SANDY SILT AND SILT	3	3	0.05	28	20	1.21	--
41.9	10.9	0.1	0.64	SANDY SILT AND SILT	4	3	0.04	29	20	1.22	--
42.1	10.9	0.1	0.55	SANDY SILT AND SILT	3	3	0.05	29	20	1.22	--
42.3	10.9	0.1	0.46	SANDY SILT AND SILT	3	3	0.05	29	20	1.22	--
42.4	10.9	0.1	0.46	SANDY SILT AND SILT	3	3	0.05	29	20	1.23	--
42.6	11.0	0.0	0.36	SANDY SILT AND SILT	3	3	0.05	29	20	1.23	--
42.7	12.2	0.1	0.41	SILTY SAND	4	3	0.06	29	20	1.24	--
42.9	12.3	0.1	1.05	SANDY SILT AND SILT	4	4	0.04	29	20	1.24	--
43.1	14.8	0.1	0.88	SANDY SILT AND SILT	5	4	0.05	30	20	1.24	--
43.2	15.7	0.2	0.96	SANDY SILT AND SILT	5	4	0.05	30	20	1.25	--
43.4	15.0	0.2	1.53	SANDY SILT AND SILT	5	5	0.04	30	20	1.25	--
43.6	17.0	0.3	1.88	SANDY SILT AND SILT	6	5	0.03	31	20	1.26	--
43.7	17.0	0.4	2.06	SANDY SILT AND SILT	6	6	0.03	31	20	1.26	--
43.9	16.8	0.4	2.44	SANDY SILT AND SILT	7	6	0.02	31	20	1.26	--
44.1	15.7	0.4	2.61	SANDY SILT AND SILT	7	6	0.02	30	20	1.27	--
44.2	16.4	0.4	2.26	SANDY SILT AND SILT	6	6	0.02	30	20	1.27	--
44.4	17.7	0.5	2.94	SANDY SILT AND SILT	8	7	0.01	31	20	1.27	--
44.6	36.0	0.7	1.80	SILTY SAND	11	10	0.06	34	20	1.28	--
44.7	33.4	1.0	2.88	SANDY SILT AND SILT	12	11	0.03	34	20	1.28	--
44.9	41.6	0.8	1.80	SILTY SAND	12	11	0.06	35	22	1.29	--
45.0	44.4	0.7	1.60	SILTY SAND	13	11	0.07	35	24	1.29	--
45.2	33.4	0.7	2.01	SANDY SILT AND SILT	10	9	0.05	34	20	1.29	--
45.4	27.2	0.5	1.65	SILTY SAND	8	7	0.05	33	20	1.30	--
45.5	20.4	0.2	1.18	SILTY SAND	6	5	0.06	31	20	1.30	--
45.7	16.8	0.3	1.55	SANDY SILT AND SILT	6	5	0.04	30	20	1.31	--
45.9	23.2	0.8	3.27	CLAYEY SILT AND SILTY CLAY	10	9	---	--	---	1.31	1.29
46.0	33.8	1.1	3.32	SANDY SILT AND SILT	14	12	0.02	34	20	1.31	--
46.2	36.8	1.5	4.05	CLAYEY SILT AND SILTY CLAY	17	15	---	--	---	1.32	2.14
46.4	35.4	1.3	3.54	SANDY SILT AND SILT	15	14	0.01	34	20	1.32	--
46.5	32.3	1.1	3.47	SANDY SILT AND SILT	14	12	0.01	33	20	1.33	--
46.7	32.0	1.1	3.47	SANDY SILT AND SILT	14	12	0.01	33	20	1.33	--
46.8	33.3	1.2	3.69	CLAYEY SILT AND SILTY CLAY	15	13	---	--	---	1.33	1.92
47.0	35.5	1.4	4.03	CLAYEY SILT AND SILTY CLAY	17	15	---	--	---	1.34	2.05
47.2	37.5	1.6	4.32	CLAYEY SILT AND SILTY CLAY	19	16	---	--	---	1.34	2.18
47.3	37.4	1.5	4.12	CLAYEY SILT AND SILTY CLAY	18	16	---	--	---	1.35	2.17
47.5	34.6	1.4	3.94	CLAYEY SILT AND SILTY CLAY	16	14	---	--	---	1.35	2.00
47.7	33.3	1.2	3.48	SANDY SILT AND SILT	14	13	0.01	34	20	1.35	--
47.8	33.3	1.2	3.51	SANDY SILT AND SILT	15	13	0.01	34	20	1.36	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
48.0	35.5	1.2	3.41	SANDY SILT AND SILT	15	13	0.02	34	20	1.36	--
48.2	34.7	1.2	3.46	SANDY SILT AND SILT	15	13	0.01	34	20	1.36	--
48.3	32.6	1.0	2.94	SANDY SILT AND SILT	12	11	0.02	33	20	1.37	--
48.5	34.0	0.9	2.71	SANDY SILT AND SILT	12	10	0.03	34	20	1.37	--
48.7	38.4	1.0	2.55	SANDY SILT AND SILT	13	11	0.04	34	20	1.38	--
48.8	45.5	1.0	2.18	SILTY SAND	14	12	0.05	35	23	1.38	--
49.0	45.7	1.5	3.37	SANDY SILT AND SILT	18	16	0.02	35	23	1.38	--
49.1	77.5	0.0	0.05	SAND	10	8	1.92	38	41	1.39	--
49.3	61.8	2.4	3.92	SANDY SILT AND SILT	27	23	0.01	36	33	1.39	--
49.5	28.8	2.4	8.22	CLAY	29	25	---	--	---	1.40	1.63
49.6	41.0	1.6	3.85	CLAYEY SILT AND SILTY CLAY	19	16	---	--	---	1.40	2.39
49.8	28.3	0.8	2.87	SANDY SILT AND SILT	11	9	0.02	33	20	1.40	--
50.0	24.1	0.7	2.90	SANDY SILT AND SILT	10	8	0.02	32	20	1.41	--
50.1	28.4	0.7	2.57	SANDY SILT AND SILT	10	9	0.03	33	20	1.41	--
50.3	23.8	0.7	2.90	SANDY SILT AND SILT	10	8	0.02	32	20	1.42	--
50.5	19.7	0.5	2.74	SANDY SILT AND SILT	8	7	0.02	31	20	1.42	--
50.6	16.3	0.4	2.46	SANDY SILT AND SILT	7	6	0.02	30	20	1.42	--
50.8	15.7	0.3	1.79	SANDY SILT AND SILT	6	5	0.03	30	20	1.43	--
51.0	15.9	0.3	1.82	SANDY SILT AND SILT	6	5	0.03	30	20	1.43	--
51.1	18.2	0.3	1.65	SANDY SILT AND SILT	6	5	0.04	30	20	1.43	--
51.3	20.6	0.4	1.90	SANDY SILT AND SILT	7	6	0.04	31	20	1.44	--
51.4	21.1	0.4	1.99	SANDY SILT AND SILT	7	6	0.04	31	20	1.44	--
51.6	20.2	0.4	2.13	SANDY SILT AND SILT	7	6	0.03	31	20	1.45	--
51.8	19.0	0.4	1.94	SANDY SILT AND SILT	7	6	0.03	30	20	1.45	--
51.9	16.7	0.3	1.62	SANDY SILT AND SILT	6	5	0.04	30	20	1.45	--
52.1	14.7	0.2	1.43	SANDY SILT AND SILT	5	4	0.04	29	20	1.46	--
52.3	14.8	0.2	1.22	SANDY SILT AND SILT	5	4	0.04	29	20	1.46	--
52.4	14.8	0.2	1.15	SANDY SILT AND SILT	5	4	0.04	29	20	1.47	--
52.6	14.2	0.2	1.19	SANDY SILT AND SILT	5	4	0.04	29	20	1.47	--
52.8	12.2	0.1	1.06	SANDY SILT AND SILT	4	3	0.04	28	20	1.47	--
52.9	13.0	0.2	1.23	SANDY SILT AND SILT	4	4	0.04	28	20	1.48	--
53.1	14.5	0.5	3.09	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.48	0.73
53.2	33.1	0.6	1.75	SILTY SAND	10	8	0.06	33	20	1.49	--
53.4	43.5	0.6	1.33	SILTY SAND	12	10	0.08	34	20	1.49	--
53.6	37.7	0.4	0.93	SILTY SAND	10	9	0.08	34	20	1.49	--
53.7	26.5	0.2	0.72	SILTY SAND	7	6	0.08	32	20	1.50	--
53.9	17.7	0.2	1.02	SILTY SAND	5	4	0.05	30	20	1.50	--
54.1	16.5	0.2	1.21	SANDY SILT AND SILT	5	4	0.05	30	20	1.51	--
54.2	16.4	0.3	1.65	SANDY SILT AND SILT	6	5	0.04	30	20	1.51	--
54.4	16.2	0.3	1.66	SANDY SILT AND SILT	6	5	0.04	29	20	1.51	--
54.6	16.1										
54.7	16.3										

PIONEER DRILLING

Engineer IT
On Site Loc:CPT9-25
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/19/90/11:17
Cone Used :IV
Water table (meters) : 2.1

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	67.02	1.66	2.47	0.02	sandy silt to clayey silt	UNDFND	UNDFD	26	6.7
0.50	1.64	24.33	0.96	3.93	0.07	silty clay to clay	UNDFND	UNDFD	16	2.4
0.75	2.46	19.17	0.69	3.59	0.11	silty clay to clay	UNDFND	UNDFD	12	1.9
1.00	3.28	15.85	0.65	4.12	0.16	clay	UNDFND	UNDFD	15	1.5
1.25	4.10	16.06	0.87	5.40	0.20	clay	UNDFND	UNDFD	15	1.5
1.50	4.92	13.74	0.63	4.61	0.25	clay	UNDFND	UNDFD	13	1.3
1.75	5.74	12.82	0.50	3.91	0.29	clay	UNDFND	UNDFD	12	1.2
2.00	6.56	16.60	0.51	3.08	0.34	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
2.25	7.38	13.19	0.52	3.95	0.38	clay	UNDFND	UNDFD	13	1.2
2.50	8.20	10.83	0.41	3.81	0.40	clay	UNDFND	UNDFD	10	1.0
2.75	9.02	8.37	0.36	4.02	0.42	clay	UNDFND	UNDFD	9	.8
3.00	9.84	7.80	0.23	2.97	0.44	silty clay to clay	UNDFND	UNDFD	5	.7
3.25	10.66	13.73	0.50	3.63	0.46	silty clay to clay	UNDFND	UNDFD	9	1.3
3.50	11.48	43.73	0.78	1.79	0.48	silty sand to sandy silt	50-60	40-42	14	UNDEFINED
3.75	12.30	21.80	0.61	2.80	0.50	clayey silt to silty clay	UNDFND	UNDFD	10	2.1
4.00	13.12	15.22	0.48	3.14	0.52	silty clay to clay	UNDFND	UNDFD	10	1.4
4.25	13.94	20.46	0.53	2.61	0.54	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
4.50	14.76	15.25	0.35	2.32	0.56	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
4.75	15.58	33.86	1.08	3.18	0.58	clayey silt to silty clay	UNDFND	UNDFD	16	3.3
5.00	16.40	142.19	0.73	0.51	0.60	sand	80-90	44-46	27	UNDEFINED
5.25	17.22	190.48	1.05	0.55	0.61	sand	>90	44-46	36	UNDEFINED
5.50	18.04	412.42	1.60	0.39	0.63	gravelly sand to sand	>90	>48	>50	UNDEFINED
5.75	18.86	311.01	1.05	0.34	0.65	gravelly sand to sand	>90	46-48	50	UNDEFINED
6.00	19.69	98.89	0.69	0.70	0.67	sand to silty sand	70-80	42-44	24	UNDEFINED
6.25	20.51	9.35	0.15	1.59	0.69	clayey silt to silty clay	UNDFND	UNDFD	4	.8
6.50	21.33	7.43	0.20	2.68	0.71	silty clay to clay	UNDFND	UNDFD	5	.6
6.75	22.15	9.68	0.23	2.35	0.73	silty clay to clay	UNDFND	UNDFD	6	.8
7.00	22.97	33.25	0.70	2.11	0.75	sandy silt to clayey silt	UNDFND	UNDFD	13	3.2
7.25	23.79	40.58	0.54	1.32	0.77	silty sand to sandy silt	40-50	36-38	13	UNDEFINED
7.50	24.61	12.31	0.35	2.84	0.79	silty clay to clay	UNDFND	UNDFD	8	1.0
7.75	25.43	37.25	1.07	2.86	0.81	sandy silt to clayey silt	UNDFND	UNDFD	14	3.5
8.00	26.25	15.13	0.46	3.07	0.83	silty clay to clay	UNDFND	UNDFD	10	1.3
8.25	27.07	23.46	0.82	3.49	0.85	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
8.50	27.89	23.98	0.91	3.79	0.87	silty clay to clay	UNDFND	UNDFD	15	2.2
8.75	28.71	20.89	0.85	4.09	0.89	silty clay to clay	UNDFND	UNDFD	13	1.9
9.00	29.53	12.77	0.50	3.89	0.91	clay	UNDFND	UNDFD	12	1.1
9.25	30.35	8.89	0.25	2.87	0.93	silty clay to clay	UNDFND	UNDFD	6	.7
9.50	31.17	10.01	0.22	2.18	0.95	clayey silt to silty clay	UNDFND	UNDFD	5	.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT | On Site Loc:CPT9-25 |

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	11.32	0.36	3.06	0.97	silty clay to clay	UNDFND	UNDFD	8	1.0
10.00	32.81	10.83	0.44	4.03	0.99	clay	UNDFND	UNDFD	10	.9
10.25	33.63	11.16	0.30	2.70	1.00	silty clay to clay	UNDFND	UNDFD	7	.9
10.50	34.45	16.06	0.44	2.74	1.02	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
10.75	35.27	19.60	0.60	3.04	1.04	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
11.00	36.09	12.72	0.29	2.27	1.06	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.25	36.91	13.30	0.27	2.02	1.08	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
11.50	37.73	12.52	0.25	1.97	1.10	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
11.75	38.55	17.91	0.39	2.20	1.12	clayey silt to silty clay	UNDFND	UNDFD	9	1.5
12.00	39.37	15.58	0.23	1.50	1.14	sandy silt to clayey silt	UNDFND	UNDFD	6	1.3
12.25	40.19	14.83	0.26	1.75	1.16	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
12.50	41.01	14.25	0.30	2.10	1.18	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
12.75	41.83	13.79	0.34	2.46	1.20	clayey silt to silty clay	UNDFND	UNDFD	7	1.1
13.00	42.65	11.98	0.22	1.86	1.22	clayey silt to silty clay	UNDFND	UNDFD	6	.9
13.25	43.47	15.30	0.39	2.46	1.24	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
13.50	44.29	15.53	0.28	1.80	1.26	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
13.75	45.11	11.30	0.18	1.56	1.28	clayey silt to silty clay	UNDFND	UNDFD	5	.8

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-26
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/21/90/07:53
Cone Used :IV
Water table (meters) : 2.1

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	155.65	1.42	0.91	0.02	sand	>90	>48	30	UNDEFINED
0.50	1.64	45.08	1.75	3.89	0.07	clayey silt to silty clay	UNDFND	UNDFD	22	4.5
0.75	2.46	14.21	0.88	6.22	0.11	clay	UNDFND	UNDFD	14	1.4
1.00	3.28	12.61	0.81	6.42	0.16	clay	UNDFND	UNDFD	12	1.2
1.25	4.10	14.44	0.91	6.27	0.20	clay	UNDFND	UNDFD	14	1.4
1.50	4.92	14.20	0.83	5.85	0.25	clay	UNDFND	UNDFD	14	1.3
1.75	5.74	14.65	0.83	5.64	0.29	clay	UNDFND	UNDFD	14	1.4
2.00	6.56	13.48	0.72	5.38	0.34	clay	UNDFND	UNDFD	13	1.3
2.25	7.38	30.36	1.28	4.20	0.38	silty clay to clay	UNDFND	UNDFD	19	2.9
2.50	8.20	135.23	1.39	1.03	0.40	sand to silty sand	80-90	46-48	32	UNDEFINED
2.75	9.02	48.89	0.76	1.56	0.42	silty sand to sandy silt	50-60	40-42	16	UNDEFINED
3.00	9.84	19.27	0.40	2.08	0.44	clayey silt to silty clay	UNDFND	UNDFD	9	1.3
3.25	10.66	6.84	0.17	2.50	0.46	silty clay to clay	UNDFND	UNDFD	4	.6
3.50	11.48	8.54	0.21	2.48	0.48	silty clay to clay	UNDFND	UNDFD	5	.7
3.75	12.30	8.58	0.29	3.33	0.50	clay	UNDFND	UNDFD	8	.7
4.00	13.12	18.72	0.51	2.70	0.52	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
4.25	13.94	120.93	2.66	2.20	0.54	silty sand to sandy silt	80-90	44-46	39	UNDEFINED
4.50	14.76	311.01	1.71	0.55	0.56	gravelly sand to sand	>90	>48	50	UNDEFINED
4.75	15.58	285.46	1.22	0.43	0.58	gravelly sand to sand	>90	46-48	46	UNDEFINED
5.00	16.40	273.78	1.05	0.38	0.60	gravelly sand to sand	>90	46-48	44	UNDEFINED
5.25	17.22	250.89	1.04	0.42	0.61	sand	>90	46-48	48	UNDEFINED
5.50	18.04	279.43	1.14	0.41	0.63	gravelly sand to sand	>90	46-48	45	UNDEFINED
5.75	18.86	377.41	2.58	0.68	0.65	gravelly sand to sand	>90	>48	>50	UNDEFINED
6.00	19.69	339.40	1.06	0.31	0.67	gravelly sand to sand	>90	46-48	>50	UNDEFINED
6.25	20.51	282.03	0.84	0.30	0.69	gravelly sand to sand	>90	46-48	45	UNDEFINED
6.50	21.33	298.39	1.07	0.36	0.71	gravelly sand to sand	>90	46-48	48	UNDEFINED
6.75	22.15	328.04	1.25	0.38	0.73	gravelly sand to sand	>90	46-48	>50	UNDEFINED
7.00	22.97	108.35	0.80	0.74	0.75	sand to silty sand	70-80	42-44	26	UNDEFINED
7.25	23.79	14.25	0.28	2.00	0.77	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
7.50	24.61	23.31	0.83	3.57	0.79	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
7.75	25.43	172.56	1.29	0.75	0.81	sand	80-90	44-46	33	UNDEFINED
8.00	26.25	332.87	1.07	0.32	0.83	gravelly sand to sand	>90	46-48	>50	UNDEFINED
8.25	27.07	235.67	0.57	0.24	0.85	gravelly sand to sand	>90	44-46	38	UNDEFINED
8.50	27.89	54.38	0.58	1.07	0.87	silty sand to sandy silt	50-60	38-40	17	UNDEFINED
8.75	28.71	15.06	0.52	3.45	0.89	silty clay to clay	UNDFND	UNDFD	10	1.3
9.00	29.53	11.67	0.44	3.81	0.91	clay	UNDFND	UNDFD	11	1.0
9.25	30.35	21.66	0.69	3.20	0.93	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
9.50	31.17	15.65	0.61	3.89	0.95	silty clay to clay	UNDFND	UNDFD	10	1.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT9-28
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/13/90/09:13
Cone Used :IV
Water table (meters) : 2.7

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	13.48	1.30	6.67	0.01	clay	UNDFND	UNDFD	19	1.3
0.25	0.82	17.66	1.19	6.71	0.03	clay	UNDFND	UNDFD	17	1.7
0.38	1.25	14.64	1.28	8.73	0.06	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.50	1.64	20.66	1.22	5.88	0.08	clay	UNDFND	UNDFD	20	2.0
0.63	2.07	17.70	1.30	7.36	0.10	clay	UNDFND	UNDFD	17	1.7
0.75	2.46	17.84	1.32	7.42	0.12	clay	UNDFND	UNDFD	17	1.7
0.87	2.85	20.26	1.33	6.56	0.15	clay	UNDFND	UNDFD	19	2.0
1.00	3.28	22.70	1.51	6.67	0.17	clay	UNDFND	UNDFD	22	2.2
1.13	3.71	24.28	1.51	6.23	0.19	clay	UNDFND	UNDFD	23	2.4
1.25	4.10	26.26	1.46	5.54	0.21	clay	UNDFND	UNDFD	25	2.6
1.37	4.49	29.00	1.54	5.30	0.24	clay	UNDFND	UNDFD	28	2.8
1.50	4.92	32.40	1.54	4.77	0.26	clay	UNDFND	UNDFD	31	3.2
1.62	5.31	31.16	1.30	4.18	0.28	silty clay to clay	UNDFND	UNDFD	20	3.0
1.75	5.74	30.64	1.15	3.75	0.30	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
1.87	6.14	37.68	1.55	4.11	0.33	silty clay to clay	UNDFND	UNDFD	24	3.7
2.00	6.56	32.20	1.46	4.53	0.35	silty clay to clay	UNDFND	UNDFD	21	3.1
2.12	6.96	21.72	0.83	3.80	0.37	silty clay to clay	UNDFND	UNDFD	14	2.1
2.25	7.38	16.32	0.53	3.23	0.39	silty clay to clay	UNDFND	UNDFD	10	1.5
2.38	7.81	18.52	0.50	2.73	0.42	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
2.50	8.20	10.80	0.29	2.64	0.44	silty clay to clay	UNDFND	UNDFD	7	1.0
2.62	8.60	13.20	0.42	3.17	0.46	silty clay to clay	UNDFND	UNDFD	8	1.2
2.75	9.02	12.86	0.39	3.04	0.48	silty clay to clay	UNDFND	UNDFD	8	1.2
2.87	9.42	14.12	0.33	2.35	0.50	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
3.00	9.84	17.06	0.62	3.62	0.51	silty clay to clay	UNDFND	UNDFD	11	1.6
3.12	10.24	16.34	0.68	4.18	0.52	clay	UNDFND	UNDFD	16	1.5
3.25	10.66	11.26	0.40	3.55	0.52	silty clay to clay	UNDFND	UNDFD	7	1.0
3.37	11.06	10.70	0.38	3.54	0.53	clay	UNDFND	UNDFD	10	1.0
3.50	11.48	17.42	0.46	2.66	0.54	clayey silt to silty clay	UNDFND	UNDFD	8	1.6
3.63	11.91	16.22	0.22	1.35	0.55	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
3.75	12.30	9.82	0.25	2.49	0.56	silty clay to clay	UNDFND	UNDFD	6	.9
3.87	12.70	10.72	0.39	3.61	0.57	clay	UNDFND	UNDFD	10	1.0
4.00	13.12	11.62	0.60	5.19	0.58	clay	UNDFND	UNDFD	11	1.0
4.12	13.52	9.24	0.55	6.01	0.59	clay	UNDFND	UNDFD	9	.8
4.25	13.94	6.54	0.28	4.24	0.60	clay	UNDFND	UNDFD	6	.5
4.37	14.34	5.70	0.20	3.49	0.61	clay	UNDFND	UNDFD	5	.4
4.50	14.76	4.68	0.13	2.79	0.62	clay	UNDFND	UNDFD	4	.3
4.62	15.16	6.78	0.06	0.90	0.63	sensitive fine grained	UNDFND	UNDFD	3	.5
4.75	15.58	4.76	-0.13	-2.64	0.64	undefined	UNDFND	UNDFD	UDF	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT9-28 Page No. 2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	6.56	0.01	0.16	0.65	sensitive fine grained	UNDFND	UNDFD	3	.5
5.00	16.40	8.82	0.24	2.71	0.66	silty clay to clay	UNDFND	UNDFD	6	.7
5.12	16.80	10.12	0.36	3.55	0.67	clay	UNDFND	UNDFD	10	.9
5.25	17.22	9.10	0.29	3.20	0.68	silty clay to clay	UNDFND	UNDFD	6	.8
5.38	17.65	9.26	0.07	0.75	0.69	clayey silt to silty clay	UNDFND	UNDFD	4	.8
5.50	18.04	32.00	0.52	1.64	0.70	sandy silt to clayey silt	UNDFND	UNDFD	12	3.1
5.62	18.44	29.78	0.67	2.24	0.71	sandy silt to clayey silt	UNDFND	UNDFD	11	2.8
5.75	18.86	32.02	0.79	2.48	0.72	sandy silt to clayey silt	UNDFND	UNDFD	12	3.0
5.87	19.26	54.02	0.62	1.16	0.73	silty sand to sandy silt	50-60	38-40	17	UNDEFINED
6.00	19.69	34.26	0.64	1.87	0.74	sandy silt to clayey silt	UNDFND	UNDFD	13	3.3
6.12	20.08	16.02	0.30	1.85	0.75	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
6.25	20.51	13.20	0.52	3.95	0.76	clay	UNDFND	UNDFD	13	1.2
6.38	20.93	14.80	0.58	3.94	0.77	silty clay to clay	UNDFND	UNDFD	9	1.3
6.50	21.33	15.16	0.50	3.30	0.78	silty clay to clay	UNDFND	UNDFD	10	1.4
6.63	21.75	15.02	0.51	3.43	0.79	silty clay to clay	UNDFND	UNDFD	10	1.3
6.75	22.15	15.82	0.60	3.76	0.80	silty clay to clay	UNDFND	UNDFD	10	1.4
6.88	22.57	15.16	0.56	3.70	0.81	silty clay to clay	UNDFND	UNDFD	10	1.3
7.00	22.97	13.32	0.49	3.68	0.82	silty clay to clay	UNDFND	UNDFD	9	1.2
7.12	23.36	16.98	0.45	2.64	0.83	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.25	23.79	15.24	0.52	3.41	0.84	silty clay to clay	UNDFND	UNDFD	10	1.3
7.37	24.18	22.28	0.55	2.48	0.85	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
7.50	24.61	15.84	0.37	2.36	0.86	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
7.62	25.00	14.14	0.36	2.51	0.87	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
7.75	25.43	25.88	0.90	3.47	0.88	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
7.88	25.85	26.14	0.91	3.48	0.89	clayey silt to silty clay	UNDFND	UNDFD	13	2.4
8.00	26.25	25.64	1.10	4.31	0.90	silty clay to clay	UNDFND	UNDFD	16	2.4
8.13	26.67	17.60	0.92	5.25	0.91	clay	UNDFND	UNDFD	17	1.6
8.25	27.07	33.80	1.17	3.46	0.92	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
8.38	27.49	26.58	1.03	3.88	0.93	silty clay to clay	UNDFND	UNDFD	17	2.5
8.50	27.89	14.58	0.46	3.17	0.93	silty clay to clay	UNDFND	UNDFD	9	1.3
8.62	28.28	15.36	0.46	3.01	0.94	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
8.75	28.71	20.58	0.56	2.74	0.95	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
8.87	29.10	21.68	0.55	2.52	0.96	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
9.00	29.53	25.84	0.97	3.76	0.97	silty clay to clay	UNDFND	UNDFD	17	2.4
9.12	29.92	30.46	1.38	4.55	0.98	silty clay to clay	UNDFND	UNDFD	19	2.8
9.25	30.35	20.72	0.99	4.79	0.99	clay	UNDFND	UNDFD	20	1.9
9.37	30.74	14.66	0.59	4.05	1.00	clay	UNDFND	UNDFD	14	1.2
9.50	31.17	10.40	0.26	2.52	1.01	silty clay to clay	UNDFND	UNDFD	7	.8
9.63	31.59	13.34	0.34	2.56	1.02	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
9.75	31.99	32.96	1.16	3.51	1.03	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
9.88	32.41	44.12	1.88	4.26	1.04	silty clay to clay	UNDFND	UNDFD	28	4.2
10.00	32.81	44.60	1.63	3.66	1.05	clayey silt to silty clay	UNDFND	UNDFD	21	4.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTRI (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT9-28 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	71.44	2.00	2.80	1.06	sandy silt to clayey silt	UNDFND	UNDFD	27	6.3
10.25	33.63	34.18	1.15	3.36	1.07	clayey silt to silty clay	UNDFND	UNDFD	16	3.2
10.37	34.02	63.44	1.34	2.12	1.08	silty sand to sandy silt	50-60	38-40	20	UNDEFINED
10.50	34.45	24.20	0.73	3.02	1.09	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
10.62	34.84	22.92	0.71	3.12	1.10	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
10.75	35.27	16.70	0.56	3.36	1.11	silty clay to clay	UNDFND	UNDFD	11	1.4
10.87	35.66	16.34	0.53	3.27	1.12	silty clay to clay	UNDFND	UNDFD	10	1.4
11.00	36.09	20.40	0.48	2.34	1.13	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
11.13	36.52	22.84	0.62	2.72	1.14	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
11.25	36.91	26.72	1.10	4.13	1.15	silty clay to clay	UNDFND	UNDFD	17	2.4
11.37	37.30	21.80	1.10	5.07	1.16	clay	UNDFND	UNDFD	21	1.3
11.50	37.73	14.34	0.62	4.32	1.17	clay	UNDFND	UNDFD	14	1.2
11.62	38.12	10.84	0.33	3.02	1.18	silty clay to clay	UNDFND	UNDFD	7	.8
11.75	38.55	10.40	0.25	2.44	1.19	silty clay to clay	UNDFND	UNDFD	7	.8
11.87	38.94	10.40	0.24	2.27	1.20	clayey silt to silty clay	UNDFND	UNDFD	5	.8
12.00	39.37	11.18	0.26	2.28	1.21	clayey silt to silty clay	UNDFND	UNDFD	5	.9
12.12	39.76	11.76	0.24	2.08	1.22	clayey silt to silty clay	UNDFND	UNDFD	6	.9
12.25	40.19	10.38	0.15	1.43	1.23	clayey silt to silty clay	UNDFND	UNDFD	5	.8
12.37	40.58	10.34	0.14	1.33	1.24	clayey silt to silty clay	UNDFND	UNDFD	5	.8
12.50	41.01	11.00	0.16	1.41	1.25	clayey silt to silty clay	UNDFND	UNDFD	5	.8
12.62	41.40	10.30	0.13	1.23	1.26	clayey silt to silty clay	UNDFND	UNDFD	5	.8
12.75	41.83	8.74	0.15	1.69	1.27	clayey silt to silty clay	UNDFND	UNDFD	4	.6
12.87	42.22	11.64	0.28	2.42	1.28	clayey silt to silty clay	UNDFND	UNDFD	6	.9
13.00	42.65	13.46	0.36	2.70	1.29	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
13.12	43.04	11.04	0.25	2.24	1.30	clayey silt to silty clay	UNDFND	UNDFD	5	.8
13.25	43.47	10.66	0.19	1.74	1.30	clayey silt to silty clay	UNDFND	UNDFD	5	.8
13.37	43.86	10.88	0.18	1.62	1.31	clayey silt to silty clay	UNDFND	UNDFD	5	.8
13.50	44.29	9.82	0.20	2.01	1.32	clayey silt to silty clay	UNDFND	UNDFD	5	.7
13.62	44.69	11.26	0.32	2.85	1.33	silty clay to clay	UNDFND	UNDFD	7	.8
13.75	45.11	14.08	0.15	1.07	1.34	sandy silt to clayey silt	UNDFND	UNDFD	5	1.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-29
DATE : 01/31/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 8

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	39.9	0.1	0.18	SAND	6	23	1.33	--	---	0.01	--
0.3	83.4	0.6	0.76	SAND	15	49	0.93	--	---	0.01	--
0.4	294.1	1.5	0.49	SAND	39	99	1.81	--	---	0.02	--
0.6	290.7	1.8	0.63	SAND	40	99	1.68	--	---	0.03	--
0.8	204.9	2.6	1.25	SAND	37	99	0.90	--	---	0.04	--
0.9	69.7	2.3	3.30	SANDY SILT AND SILT	25	66	0.03	--	---	0.05	--
1.1	37.1	1.8	4.80	CLAYEY SILT AND SILTY CLAY	20	51	---	--	---	0.06	2.32
1.2	28.9	1.1	3.81	CLAYEY SILT AND SILTY CLAY	14	33	---	--	---	0.07	1.80
1.4	30.6	0.9	2.95	SANDY SILT AND SILT	12	28	0.02	--	---	0.08	--
1.6	28.9	0.9	3.11	SANDY SILT AND SILT	12	27	0.02	--	---	0.09	--
1.7	27.6	0.9	3.08	SANDY SILT AND SILT	11	26	0.02	--	---	0.10	--
1.9	25.0	0.9	3.49	CLAYEY SILT AND SILTY CLAY	11	25	---	--	---	0.10	1.55
2.1	22.8	0.0	0.04	SILTY SAND	6	13	0.10	--	---	0.11	--
2.2	22.8	1.0	4.52	CLAYEY SILT AND SILTY CLAY	12	27	---	--	---	0.12	1.42
2.4	5.8	0.9	16.09	CLAY	6	12	---	--	---	0.13	0.35
2.6	20.7	0.9	4.19	CLAYEY SILT AND SILTY CLAY	11	22	---	--	---	0.14	1.29
2.7	21.0	0.9	4.10	CLAYEY SILT AND SILTY CLAY	11	22	---	--	---	0.15	1.30
2.9	17.5	0.9	5.25	CLAY	18	35	---	--	---	0.16	1.08
3.1	16.7	0.9	5.46	CLAY	17	33	---	--	---	0.17	1.03
3.2	16.0	0.9	5.57	CLAY	16	31	---	--	---	0.18	0.99
3.4	18.7	0.9	4.88	CLAY	19	36	---	--	---	0.19	1.15
3.5	20.9	1.0	4.97	CLAY	21	39	---	--	---	0.19	1.29
3.7	21.5	1.2	5.45	CLAY	21	40	---	--	---	0.20	1.33
3.9	22.1	1.2	5.34	CLAY	22	41	---	--	---	0.21	1.37
4.0	22.8	1.2	5.31	CLAY	23	41	---	--	---	0.22	1.41
4.2	22.1	1.2	5.48	CLAY	22	40	---	--	---	0.23	1.37
4.3	22.3	1.2	5.25	CLAY	22	40	---	--	---	0.24	1.38
4.5	22.1	1.1	5.02	CLAY	22	39	---	--	---	0.25	1.37
4.7	22.8	1.1	4.74	CLAYEY SILT AND SILTY CLAY	13	22	---	--	---	0.26	1.41
4.8	23.5	1.1	4.56	CLAYEY SILT AND SILTY CLAY	13	22	---	--	---	0.27	1.45
5.0	24.1	1.1	4.61	CLAYEY SILT AND SILTY CLAY	13	23	---	--	---	0.27	1.49
5.2	24.8	1.2	4.67	CLAYEY SILT AND SILTY CLAY	14	23	---	--	---	0.28	1.53
5.3	24.8	1.1	4.55	CLAYEY SILT AND SILTY CLAY	13	22	---	--	---	0.29	1.53
5.5	24.8	1.1	4.55	CLAYEY SILT AND SILTY CLAY	13	22	---	--	---	0.30	1.53

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	25.5	1.1	4.35	CLAYEY SILT AND SILTY CLAY	13	22	---	--	---	0.31	1.57
5.8	26.2	1.1	4.28	CLAYEY SILT AND SILTY CLAY	13	22	---	--	---	0.32	1.62
6.0	26.2	1.2	4.51	CLAYEY SILT AND SILTY CLAY	14	22	---	--	---	0.33	1.62
6.1	28.2	1.2	4.19	CLAYEY SILT AND SILTY CLAY	14	22	---	--	---	0.34	1.74
6.3	30.3	1.2	4.10	CLAYEY SILT AND SILTY CLAY	15	23	---	--	---	0.35	1.87
6.5	31.7	1.2	3.89	CLAYEY SILT AND SILTY CLAY	15	23	---	--	---	0.36	1.96
6.6	33.5	1.2	3.58	CLAYEY SILT AND SILTY CLAY	15	23	---	--	---	0.36	2.07
6.8	37.1	1.2	3.26	SANDY SILT AND SILT	15	23	0.02	40	49	0.37	--
7.0	43.2	1.3	3.03	SANDY SILT AND SILT	16	24	0.03	41	53	0.38	--
7.1	43.0	1.4	3.16	SANDY SILT AND SILT	16	25	0.03	41	52	0.39	--
7.3	37.3	1.4	3.62	SANDY SILT AND SILT	16	25	0.01	40	48	0.40	--
7.4	30.8	1.3	4.22	CLAYEY SILT AND SILTY CLAY	15	23	---	--	---	0.41	1.90
7.6	26.3	1.2	4.61	CLAYEY SILT AND SILTY CLAY	14	21	---	--	---	0.42	1.62
7.8	25.7	1.0	4.05	CLAYEY SILT AND SILTY CLAY	13	19	---	--	---	0.43	1.58
7.9	24.8	1.2	4.68	CLAYEY SILT AND SILTY CLAY	14	20	---	--	---	0.44	1.52
8.1	32.3	1.2	3.68	CLAYEY SILT AND SILTY CLAY	15	21	---	--	---	0.44	1.99
8.3	35.0	1.3	3.60	SANDY SILT AND SILT	16	22	0.01	39	44	0.45	--
8.4	37.5	1.2	3.20	SANDY SILT AND SILT	15	21	0.02	40	46	0.45	--
8.6	33.2	1.0	2.96	SANDY SILT AND SILT	13	18	0.02	39	43	0.45	--
8.8	32.3	0.9	2.85	SANDY SILT AND SILT	12	17	0.03	39	42	0.46	--
8.9	44.5	0.9	2.04	SILTY SAND	13	19	0.06	40	50	0.46	--
9.1	40.5	1.0	2.40	SANDY SILT AND SILT	13	18	0.04	40	47	0.47	--
9.3	32.3	0.6	1.86	SILTY SAND	10	14	0.05	39	41	0.47	--
9.4	23.5	0.6	2.73	SANDY SILT AND SILT	9	13	0.02	37	33	0.47	--
9.6	16.0	0.4	2.69	SANDY SILT AND SILT	7	9	0.01	35	23	0.48	--
9.7	10.5	0.2	1.71	SANDY SILT AND SILT	4	6	0.02	33	20	0.48	--
9.9	10.5	0.1	1.14	SANDY SILT AND SILT	4	5	0.03	33	20	0.49	--
10.1	13.3	0.2	1.51	SANDY SILT AND SILT	5	6	0.03	34	20	0.49	--
10.2	12.6	0.2	1.83	SANDY SILT AND SILT	5	7	0.03	34	20	0.49	--
10.4	15.1	0.3	1.93	SANDY SILT AND SILT	6	8	0.03	35	21	0.50	--
10.6	13.7	0.3	2.34	SANDY SILT AND SILT	6	8	0.02	34	20	0.50	--
10.7	15.1	0.3	1.92	SANDY SILT AND SILT	6	8	0.03	35	21	0.50	--
10.9	15.3	0.2	1.57	SANDY SILT AND SILT	5	7	0.04	35	21	0.51	--
11.1	13.3	0.3	2.49	SANDY SILT AND SILT	6	8	0.01	34	20	0.51	--
11.2	15.3	0.5	3.53	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.52	0.92
11.4	22.1	0.9	3.94	CLAYEY SILT AND SILTY CLAY	11	15	---	--	---	0.52	1.34
11.5	34.1	1.1	3.25	SANDY SILT AND SILT	14	19	0.02	38	41	0.52	--
11.7	35.7	1.2	3.22	SANDY SILT AND SILT	14	19	0.02	38	42	0.53	--
11.9	25.5	0.6	2.43	SANDY SILT AND SILT	9	12	0.03	37	32	0.53	--
12.0	17.9	0.4	2.18	SANDY SILT AND SILT	7	9	0.03	35	23	0.54	--
12.2	16.0	0.5	2.94	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.54	0.96
12.4	18.7	0.5	2.57	SANDY SILT AND SILT	7	10	0.02	35	24	0.54	--
12.5	17.3	0.5	2.60	SANDY SILT AND SILT	7	9	0.02	35	22	0.55	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	15.4	0.4	2.46	SANDY SILT AND SILT	6	8	0.02	34	20	0.55	--
12.9	13.4	0.4	2.62	SANDY SILT AND SILT	6	8	0.01	33	20	0.56	--
13.0	11.9	0.2	2.01	SANDY SILT AND SILT	5	6	0.02	33	20	0.56	--
13.2	11.2	0.3	2.68	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.56	0.65
13.4	14.4	0.3	2.16	SANDY SILT AND SILT	6	7	0.02	34	20	0.57	--
13.5	16.4	0.4	2.38	SANDY SILT AND SILT	6	8	0.02	34	20	0.57	--
13.7	20.7	0.3	1.64	SANDY SILT AND SILT	7	9	0.04	35	25	0.58	--
13.8	23.8	0.3	1.30	SILTY SAND	7	9	0.06	36	28	0.58	--
14.0	16.0	0.4	2.31	SANDY SILT AND SILT	6	8	0.02	34	20	0.58	--
14.2	13.3	0.4	2.64	SANDY SILT AND SILT	6	7	0.01	33	20	0.59	--
14.3	12.6	0.3	2.15	SANDY SILT AND SILT	5	6	0.02	33	20	0.59	--
14.5	12.6	0.2	1.58	SANDY SILT AND SILT	5	6	0.03	33	20	0.59	--
14.7	11.1	0.3	2.24	SANDY SILT AND SILT	5	6	0.02	32	20	0.60	--
14.8	11.5	0.3	2.69	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.60	0.67
15.0	12.5	0.4	3.20	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.61	0.73
15.2	12.6	0.5	3.74	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.61	0.73
15.3	11.3	0.5	4.07	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.61	0.65
15.5	10.3	0.4	4.28	CLAY	10	13	---	--	---	0.62	0.59
15.7	9.1	0.4	3.96	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.62	0.51
15.8	9.2	0.3	3.16	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.63	0.52
16.0	8.9	0.2	2.59	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.63	0.50
16.2	8.4	0.2	2.49	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.63	0.47
16.3	8.5	0.2	2.00	SANDY SILT AND SILT	4	4	0.01	31	20	0.64	--
16.5	9.2	0.2	1.74	SANDY SILT AND SILT	4	5	0.02	31	20	0.64	--
16.7	8.7	0.2	2.19	SANDY SILT AND SILT	4	5	0.01	31	20	0.65	--
16.8	8.8	0.2	2.51	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.65	0.49
17.0	9.2	0.2	2.29	SANDY SILT AND SILT	4	5	0.01	31	20	0.65	--
17.2	8.5	0.2	2.35	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.66	0.47
17.3	8.4	0.2	2.26	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.66	0.47
17.5	8.4	0.2	2.14	SANDY SILT AND SILT	4	4	0.01	30	20	0.67	--
17.7	7.9	0.2	2.28	CLAYEY SILT AND SILTY CLAY	4	4	---	--	---	0.67	0.43
17.8	8.5	0.2	2.12	SANDY SILT AND SILT	4	4	0.01	30	20	0.67	--
18.0	8.4	0.2	2.03	SANDY SILT AND SILT	4	4	0.01	30	20	0.68	--
18.1	7.8	0.1	1.79	SANDY SILT AND SILT	3	4	0.02	30	20	0.68	--
18.3	7.8	0.1	1.67	SANDY SILT AND SILT	3	4	0.02	30	20	0.69	--
18.5	7.8	0.2	1.92	SANDY SILT AND SILT	3	4	0.01	30	20	0.69	--
18.6	8.3	0.1	1.58	SANDY SILT AND SILT	3	4	0.02	30	20	0.69	--
18.8	7.8	0.1	1.28	SANDY SILT AND SILT	3	4	0.03	30	20	0.70	--
19.0	9.2	0.3	3.04	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.70	0.51
19.1	18.1	0.3	1.38	SANDY SILT AND SILT	6	7	0.04	34	20	0.70	--
19.3	16.1	0.3	1.80	SANDY SILT AND SILT	6	7	0.03	33	20	0.71	--
19.5	15.3	0.5	2.94	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.71	0.89
19.6	29.6	0.6	2.03	SANDY SILT AND SILT	9	11	0.05	36	29	0.72	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	41.7	0.5	1.17	SILTY SAND	12	14	0.08	38	39	0.72	--
19.9	40.1	0.5	1.25	SILTY SAND	11	13	0.08	38	37	0.72	--
20.1	24.1	0.5	1.99	SANDY SILT AND SILT	8	9	0.04	35	23	0.73	--
20.3	17.7	0.5	2.93	SANDY SILT AND SILT	8	9	0.01	33	20	0.73	--
20.4	18.0	0.6	3.45	CLAYEY SILT AND SILTY CLAY	8	10	---	--	---	0.74	1.05
20.6	19.8	0.9	4.35	CLAYEY SILT AND SILTY CLAY	11	12	---	--	---	0.74	1.16
20.8	26.9	1.1	4.24	CLAYEY SILT AND SILTY CLAY	14	16	---	--	---	0.74	1.61
20.9	38.4	1.0	2.71	SANDY SILT AND SILT	13	16	0.03	37	35	0.75	--
21.1	52.2	0.7	1.40	SILTY SAND	14	17	0.08	39	44	0.75	--
21.3	33.0	0.6	1.88	SILTY SAND	10	12	0.05	36	31	0.76	--
21.4	20.1	0.5	2.64	SANDY SILT AND SILT	8	9	0.02	34	20	0.76	--
21.6	13.5	0.4	2.66	SANDY SILT AND SILT	6	7	0.01	32	20	0.76	--
21.8	11.8	0.2	1.86	SANDY SILT AND SILT	5	5	0.02	31	20	0.77	--
21.9	10.7	0.2	1.96	SANDY SILT AND SILT	4	5	0.02	31	20	0.77	--
22.1	11.1	0.2	2.08	SANDY SILT AND SILT	5	5	0.02	31	20	0.78	--
22.2	11.8	0.3	2.28	SANDY SILT AND SILT	5	6	0.02	31	20	0.78	--
22.4	11.9	0.3	2.27	SANDY SILT AND SILT	5	6	0.02	31	20	0.78	--
22.6	10.7	0.2	2.25	SANDY SILT AND SILT	5	5	0.01	31	20	0.79	--
22.7	10.5	0.2	2.28	SANDY SILT AND SILT	5	5	0.01	31	20	0.79	--
22.9	10.4	0.2	1.92	SANDY SILT AND SILT	4	5	0.02	30	20	0.79	--
23.1	9.9	0.2	1.72	SANDY SILT AND SILT	4	4	0.02	30	20	0.80	--
23.2	9.9	0.2	2.03	SANDY SILT AND SILT	4	5	0.02	30	20	0.80	--
23.4	9.9	0.2	1.93	SANDY SILT AND SILT	4	4	0.02	30	20	0.81	--
23.6	9.5	0.2	1.89	SANDY SILT AND SILT	4	4	0.02	30	20	0.81	--
23.7	9.2	0.2	2.51	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.81	0.49
23.9	10.5	0.3	2.75	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.82	0.58
24.0	11.9	0.4	3.19	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.82	0.66
24.2	14.3	0.4	2.72	SANDY SILT AND SILT	6	7	0.01	32	20	0.83	--
24.4	15.3	0.5	3.33	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.83	0.87
24.5	17.3	0.6	3.17	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.83	1.00
24.7	17.3	0.6	3.46	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.84	1.00
24.9	13.9	0.5	3.37	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.84	0.79
25.0	11.9	0.4	3.11	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.85	0.66
25.2	13.9	0.3	2.30	SANDY SILT AND SILT	6	6	0.02	32	20	0.85	--
25.4	13.9	0.4	2.74	SANDY SILT AND SILT	6	7	0.01	31	20	0.85	--
25.5	14.6	0.6	4.38	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.86	0.83
25.7	17.7	0.7	3.78	CLAYEY SILT AND SILTY CLAY	9	10	---	--	---	0.86	1.02
25.9	48.6	0.8	1.54	SILTY SAND	14	15	0.07	38	38	0.86	--
26.0	90.1	0.7	0.75	SAND	16	17	0.98	41	60	0.87	--
26.2	111.9	0.6	0.52	SAND	17	18	1.38	42	67	0.87	--
26.3	132.8	0.5	0.39	SAND	19	20	1.58	42	73	0.88	--
26.5	122.7	0.5	0.41	SAND	18	19	1.54	42	70	0.88	--
26.7	118.7	0.7	0.58	SAND	18	19	1.33	42	69	0.88	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	104.4	0.9	0.89	SAND	19	20	0.90	41	64	0.89	--
27.0	92.4	0.9	0.94	SAND	18	19	0.75	41	60	0.89	--
27.2	55.9	0.8	1.49	SILTY SAND	16	16	0.08	38	42	0.90	--
27.3	31.5	0.6	2.03	SANDY SILT AND SILT	10	11	0.05	35	24	0.90	--
27.5	20.7	0.4	2.03	SANDY SILT AND SILT	7	8	0.04	33	20	0.90	--
27.7	18.6	0.4	2.09	SANDY SILT AND SILT	7	7	0.03	33	20	0.91	--
27.8	19.9	0.5	2.66	SANDY SILT AND SILT	8	8	0.02	33	20	0.91	--
28.0	23.5	0.7	2.90	SANDY SILT AND SILT	10	10	0.02	34	20	0.92	--
28.1	26.8	0.9	3.17	SANDY SILT AND SILT	11	12	0.02	34	20	0.92	--
28.3	31.6	1.0	3.07	SANDY SILT AND SILT	12	13	0.02	35	23	0.92	--
28.5	32.8	1.1	3.42	SANDY SILT AND SILT	14	15	0.01	35	24	0.93	--
28.6	33.2	1.0	3.08	SANDY SILT AND SILT	13	14	0.02	35	24	0.93	--
28.8	34.3	1.1	3.29	SANDY SILT AND SILT	14	15	0.02	35	25	0.94	--
29.0	36.8	1.3	3.56	SANDY SILT AND SILT	16	17	0.01	36	28	0.94	--
29.1	40.4	1.6	4.06	CLAYEY SILT AND SILTY CLAY	19	20	---	--	---	0.94	2.43
29.3	43.2	1.7	3.87	CLAYEY SILT AND SILTY CLAY	20	20	---	--	---	0.95	2.60
29.5	39.8	1.3	3.32	SANDY SILT AND SILT	16	16	0.02	36	30	0.95	--
29.6	34.3	1.1	3.23	SANDY SILT AND SILT	14	14	0.02	35	25	0.95	--
29.8	30.4	1.0	3.22	SANDY SILT AND SILT	13	13	0.02	35	21	0.96	--
30.0	28.9	0.9	2.98	SANDY SILT AND SILT	11	12	0.02	35	20	0.96	--
30.1	30.8	0.9	2.82	SANDY SILT AND SILT	12	12	0.03	35	21	0.97	--
30.3	33.8	0.9	2.75	SANDY SILT AND SILT	12	12	0.03	35	24	0.97	--
30.4	37.7	1.0	2.70	SANDY SILT AND SILT	13	13	0.03	36	27	0.97	--
30.6	37.7	1.2	3.10	SANDY SILT AND SILT	14	15	0.02	36	27	0.98	--
30.8	39.1	1.3	3.27	SANDY SILT AND SILT	16	16	0.02	36	28	0.98	--
30.9	39.1	1.5	3.71	CLAYEY SILT AND SILTY CLAY	17	18	---	--	---	0.99	2.34
31.1	36.0	1.4	3.77	CLAYEY SILT AND SILTY CLAY	16	16	---	--	---	0.99	2.15
31.3	35.9	1.3	3.68	CLAYEY SILT AND SILTY CLAY	16	16	---	--	---	0.99	2.13
31.4	37.1	1.4	3.67	CLAYEY SILT AND SILTY CLAY	17	17	---	--	---	1.00	2.21
31.6	34.3	1.4	4.16	CLAYEY SILT AND SILTY CLAY	17	17	---	--	---	1.00	2.04
31.8	31.2	1.3	4.07	CLAYEY SILT AND SILTY CLAY	15	15	---	--	---	1.01	1.84
31.9	28.9	1.1	3.81	CLAYEY SILT AND SILTY CLAY	14	13	---	--	---	1.01	1.70
32.1	28.9	1.0	3.29	SANDY SILT AND SILT	12	12	0.01	34	20	1.01	--
32.3	28.2	1.0	3.47	CLAYEY SILT AND SILTY CLAY	13	13	---	--	---	1.02	1.65
32.4	27.7	0.9	3.28	SANDY SILT AND SILT	12	12	0.01	34	20	1.02	--
32.6	26.3	0.8	3.15	SANDY SILT AND SILT	11	11	0.02	34	20	1.02	--
32.7	24.8	0.9	3.75	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.03	1.44
32.9	23.5	1.0	4.22	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.03	1.35
33.1	20.8	1.0	4.81	CLAY	21	20	---	--	---	1.04	1.19
33.2	21.4	0.9	4.39	CLAYEY SILT AND SILTY CLAY	11	11	---	--	---	1.04	1.22
33.4	26.2	0.9	3.28	SANDY SILT AND SILT	11	11	0.01	34	20	1.04	--
33.6	26.9	1.0	3.61	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.05	1.56
33.7	26.9	0.9	3.46	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.05	1.56

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	27.5	0.9	3.10	SANDY SILT AND SILT	11	11	0.02	34	20	1.06	--
34.1	27.5	0.9	3.30	SANDY SILT AND SILT	12	12	0.01	34	20	1.06	--
34.2	28.2	0.9	3.30	SANDY SILT AND SILT	12	12	0.01	34	20	1.06	--
34.4	31.1	1.0	3.21	SANDY SILT AND SILT	13	12	0.02	34	20	1.07	--
34.5	34.8	1.2	3.50	SANDY SILT AND SILT	15	15	0.01	35	22	1.07	--
34.7	37.0	1.2	3.22	SANDY SILT AND SILT	15	14	0.02	35	24	1.08	--
34.9	32.9	0.9	2.85	SANDY SILT AND SILT	12	12	0.03	35	20	1.08	--
35.0	30.0	1.0	3.23	SANDY SILT AND SILT	12	12	0.02	34	20	1.08	--
35.2	29.5	1.1	3.63	CLAYEY SILT AND SILTY CLAY	13	13	---	--	---	1.09	1.72
35.4	25.5	0.9	3.50	CLAYEY SILT AND SILTY CLAY	12	11	---	--	---	1.09	1.47
35.5	23.1	0.8	3.42	CLAYEY SILT AND SILTY CLAY	10	10	---	--	---	1.10	1.32
35.7	25.0	0.8	3.04	SANDY SILT AND SILT	10	10	0.02	33	20	1.10	--
35.9	26.7	0.8	3.00	SANDY SILT AND SILT	11	10	0.02	33	20	1.10	--
36.0	24.8	0.8	3.34	CLAYEY SILT AND SILTY CLAY	11	11	---	--	---	1.11	1.43
36.2	25.5	0.9	3.48	CLAYEY SILT AND SILTY CLAY	12	11	---	--	---	1.11	1.47
36.4	26.2	0.9	3.51	CLAYEY SILT AND SILTY CLAY	12	11	---	--	---	1.11	1.51
36.5	25.6	1.0	3.82	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.12	1.48
36.7	21.6	0.8	3.81	CLAYEY SILT AND SILTY CLAY	10	10	---	--	---	1.12	1.22
36.8	18.2	0.7	3.64	CLAYEY SILT AND SILTY CLAY	9	8	---	--	---	1.13	1.01
37.0	17.3	0.6	3.23	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.13	0.96
37.2	18.9	0.7	3.55	CLAYEY SILT AND SILTY CLAY	9	8	---	--	---	1.13	1.05
37.3	26.2	0.8	3.17	SANDY SILT AND SILT	11	10	0.01	33	20	1.14	--
37.5	27.6	0.8	2.72	SANDY SILT AND SILT	10	10	0.03	33	20	1.14	--
37.7	21.1	0.6	2.89	SANDY SILT AND SILT	9	8	0.02	32	20	1.15	--
37.8	20.2	0.5	2.67	SANDY SILT AND SILT	8	8	0.02	32	20	1.15	--
38.0	21.3	0.6	2.96	SANDY SILT AND SILT	9	8	0.02	32	20	1.15	--
38.2	22.8	0.7	2.99	SANDY SILT AND SILT	9	9	0.02	32	20	1.16	--
38.3	24.1	0.8	3.11	SANDY SILT AND SILT	10	10	0.01	33	20	1.16	--
38.5	24.8	0.7	2.90	SANDY SILT AND SILT	10	9	0.02	33	20	1.17	--
38.6	24.1	0.7	2.98	SANDY SILT AND SILT	10	9	0.02	33	20	1.17	--
38.8	23.2	0.7	2.89	SANDY SILT AND SILT	9	9	0.02	32	20	1.17	--
39.0	23.1	0.7	2.94	SANDY SILT AND SILT	9	9	0.02	32	20	1.18	--
39.1	23.5	0.7	2.98	SANDY SILT AND SILT	10	9	0.02	32	20	1.18	--
39.3	22.5	0.7	2.89	SANDY SILT AND SILT	9	9	0.02	32	20	1.19	--
39.5	20.8	0.7	3.31	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	1.19	1.17
39.6	18.0	0.6	3.44	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.19	0.99
39.8	16.0	0.5	3.25	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.20	0.86
40.0	14.6	0.4	2.74	SANDY SILT AND SILT	6	6	0.01	30	20	1.20	--
40.1	15.0	0.4	2.53	SANDY SILT AND SILT	6	6	0.02	30	20	1.20	--
40.3	15.3	0.4	2.61	SANDY SILT AND SILT	6	6	0.01	30	20	1.21	--
40.5	13.9	0.4	2.87	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	1.21	0.73
40.6	13.0	0.4	2.77	CLAYEY SILT AND SILTY CLAY	6	5	---	--	---	1.22	0.67
40.8	12.6	0.3	2.70	CLAYEY SILT AND SILTY CLAY	6	5	---	--	---	1.22	0.65

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	13.3	0.3	2.56	SANDY SILT AND SILT	6	5	0.01	30	20	1.22	--
41.1	13.3	0.3	2.49	SANDY SILT AND SILT	6	5	0.01	29	20	1.23	--
41.3	13.6	0.3	2.35	SANDY SILT AND SILT	6	5	0.02	30	20	1.23	--
41.4	13.9	0.3	2.37	SANDY SILT AND SILT	6	5	0.02	30	20	1.24	--
41.6	14.8	0.3	1.96	SANDY SILT AND SILT	6	5	0.03	30	20	1.24	--
41.8	16.0	0.4	2.57	SANDY SILT AND SILT	7	6	0.02	30	20	1.24	--
41.9	20.1	0.6	2.74	SANDY SILT AND SILT	8	7	0.02	31	20	1.25	--
42.1	20.7	0.7	3.14	SANDY SILT AND SILT	9	8	0.01	32	20	1.25	--
42.3	16.7	0.6	3.60	CLAYEY SILT AND SILTY CLAY	8	7	---	--	---	1.26	0.90
42.4	15.9	0.4	2.63	SANDY SILT AND SILT	7	6	0.02	30	20	1.26	--
42.6	13.9	0.4	2.51	SANDY SILT AND SILT	6	5	0.01	30	20	1.26	--
42.7	15.3	0.4	2.29	SANDY SILT AND SILT	6	5	0.02	30	20	1.27	--
42.9	14.5	0.3	2.28	SANDY SILT AND SILT	6	5	0.02	30	20	1.27	--
43.1	13.3	0.3	2.04	SANDY SILT AND SILT	5	5	0.02	29	20	1.27	--
43.2	12.2	0.2	1.97	SANDY SILT AND SILT	5	4	0.02	29	20	1.28	--
43.4	12.4	0.2	1.93	SANDY SILT AND SILT	5	4	0.02	29	20	1.28	--
43.6	12.8	0.2	1.88	SANDY SILT AND SILT	5	4	0.03	29	20	1.29	--
43.7	13.9	0.3	2.01	SANDY SILT AND SILT	5	5	0.02	29	20	1.29	--
43.9	17.3	0.4	2.20	SANDY SILT AND SILT	6	6	0.03	31	20	1.29	--
44.1	19.3	0.5	2.33	SANDY SILT AND SILT	7	6	0.03	31	20	1.30	--
44.2	18.8	0.5	2.50	SANDY SILT AND SILT	7	7	0.02	31	20	1.30	--
44.4	18.7	0.4	2.29	SANDY SILT AND SILT	7	6	0.03	31	20	1.31	--
44.6	18.5	0.4	2.33	SANDY SILT AND SILT	7	6	0.03	31	20	1.31	--
44.7	18.0										
44.9	16.7										

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-30
DATE : 01/31/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 8

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	31.8	0.3	0.97	SILTY SAND	9	34	0.08	--	---	0.01	--
0.3	262.8	1.5	0.56	SAND	36	99	1.67	--	---	0.01	--
0.4	241.7	2.1	0.85	SAND	37	99	1.36	--	---	0.02	--
0.6	110.5	3.3	2.98	SILTY SAND	34	97	0.05	--	---	0.03	--
0.8	53.6	2.6	4.85	CLAYEY SILT AND SILTY CLAY	28	76	---	--	---	0.04	3.35
0.9	36.6	1.9	5.06	CLAYEY SILT AND SILTY CLAY	21	54	---	--	---	0.05	2.28
1.1	37.4	1.7	4.63	CLAYEY SILT AND SILTY CLAY	20	49	---	--	---	0.06	2.33
1.2	30.7	1.8	5.77	CLAY	31	75	---	--	---	0.07	1.91
1.4	27.1	1.6	5.91	CLAY	27	65	---	--	---	0.08	1.69
1.6	25.0	1.4	5.63	CLAY	25	58	---	--	---	0.09	1.56
1.7	25.7	1.4	5.33	CLAY	26	58	---	--	---	0.10	1.60
1.9	26.5	1.4	5.29	CLAY	26	59	---	--	---	0.10	1.65
2.1	27.1	1.7	6.32	CLAY	27	59	---	--	---	0.11	1.68
2.2	30.7	1.8	5.96	CLAY	31	66	---	--	---	0.12	1.91
2.4	29.2	1.9	6.47	CLAY	29	61	---	--	---	0.13	1.82
2.6	30.7	2.0	6.44	CLAY	31	63	---	--	---	0.14	1.91
2.7	35.9	2.2	6.07	CLAY	36	73	---	--	---	0.15	2.24
2.9	38.3	2.3	5.98	CLAY	38	77	---	--	---	0.16	2.38
3.1	38.5	2.2	5.82	CLAY	39	76	---	--	---	0.17	2.40
3.2	36.6	2.1	5.66	CLAY	37	71	---	--	---	0.18	2.28
3.4	33.7	1.9	5.59	CLAY	34	64	---	--	---	0.19	2.09
3.5	32.5	1.7	5.36	CLAY	32	61	---	--	---	0.19	2.02
3.7	30.9	1.7	5.33	CLAY	31	58	---	--	---	0.20	1.92
3.9	30.1	1.6	5.24	CLAY	30	55	---	--	---	0.21	1.87
4.0	29.5	1.5	5.06	CLAY	29	54	---	--	---	0.22	1.83
4.2	29.1	1.4	4.88	CLAYEY SILT AND SILTY CLAY	16	29	---	--	---	0.23	1.81
4.3	29.1	1.4	4.77	CLAYEY SILT AND SILTY CLAY	16	29	---	--	---	0.24	1.80
4.5	29.8	1.4	4.63	CLAYEY SILT AND SILTY CLAY	16	28	---	--	---	0.25	1.85
4.7	29.7	1.4	4.55	CLAYEY SILT AND SILTY CLAY	16	27	---	--	---	0.26	1.84
4.8	30.6	1.3	4.28	CLAYEY SILT AND SILTY CLAY	15	27	---	--	---	0.27	1.90
5.0	31.8	1.3	3.96	CLAYEY SILT AND SILTY CLAY	15	26	---	--	---	0.27	1.97
5.2	33.2	1.2	3.68	CLAYEY SILT AND SILTY CLAY	15	25	---	--	---	0.28	2.06
5.3	35.2	1.2	3.41	SANDY SILT AND SILT	15	25	0.01	41	52	0.29	--
5.5	38.5	1.3	3.48	SANDY SILT AND SILT	16	27	0.01	42	53	0.30	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	39.1	1.3	3.40	SANDY SILT AND SILT	16	26	0.02	42	53	0.31	--
5.8	40.1	1.4	3.51	SANDY SILT AND SILT	17	27	0.01	42	53	0.32	--
6.0	38.9	1.4	3.67	SANDY SILT AND SILT	17	28	0.01	41	52	0.33	--
6.1	34.6	1.3	3.88	CLAYEY SILT AND SILTY CLAY	16	26	---	--	---	0.34	2.14
6.3	30.7	1.2	3.81	CLAYEY SILT AND SILTY CLAY	14	23	---	--	---	0.35	1.90
6.5	27.8	1.0	3.68	CLAYEY SILT AND SILTY CLAY	13	20	---	--	---	0.36	1.71
6.6	26.3	1.0	3.61	CLAYEY SILT AND SILTY CLAY	12	19	---	--	---	0.36	1.62
6.8	25.1	1.0	3.99	CLAYEY SILT AND SILTY CLAY	12	19	---	--	---	0.37	1.54
7.0	26.4	1.1	4.14	CLAYEY SILT AND SILTY CLAY	13	20	---	--	---	0.38	1.62
7.1	30.5	1.1	3.58	CLAYEY SILT AND SILTY CLAY	14	21	---	--	---	0.39	1.88
7.3	41.2	1.4	3.32	SANDY SILT AND SILT	16	25	0.02	41	51	0.40	--
7.4	38.6	1.4	3.68	CLAYEY SILT AND SILTY CLAY	17	25	---	--	---	0.41	2.39
7.6	33.2	1.3	3.77	CLAYEY SILT AND SILTY CLAY	15	22	---	--	---	0.42	2.05
7.8	31.9	1.0	3.23	SANDY SILT AND SILT	13	19	0.02	39	43	0.43	--
7.9	35.9	1.2	3.26	SANDY SILT AND SILT	14	21	0.02	39	45	0.44	--
8.1	37.3	1.3	3.46	SANDY SILT AND SILT	16	23	0.01	40	46	0.44	--
8.3	40.7	1.4	3.32	SANDY SILT AND SILT	16	23	0.02	40	48	0.45	--
8.4	40.7	1.4	3.37	SANDY SILT AND SILT	16	24	0.02	40	48	0.45	--
8.6	38.9	1.3	3.21	SANDY SILT AND SILT	15	22	0.02	40	47	0.45	--
8.8	32.6	1.3	4.02	CLAYEY SILT AND SILTY CLAY	16	22	---	--	---	0.46	2.00
8.9	29.4	1.4	4.79	CLAYEY SILT AND SILTY CLAY	16	23	---	--	---	0.46	1.81
9.1	31.2	1.2	3.91	CLAYEY SILT AND SILTY CLAY	15	21	---	--	---	0.47	1.92
9.3	35.9	1.5	4.07	CLAYEY SILT AND SILTY CLAY	17	24	---	--	---	0.47	2.21
9.4	48.7	1.7	3.45	SANDY SILT AND SILT	19	27	0.02	41	52	0.47	--
9.6	40.7	1.4	3.49	SANDY SILT AND SILT	17	24	0.02	40	47	0.48	--
9.7	33.7	1.3	3.89	CLAYEY SILT AND SILTY CLAY	16	22	---	--	---	0.48	2.07
9.9	32.9	1.4	4.22	CLAYEY SILT AND SILTY CLAY	16	23	---	--	---	0.49	2.02
10.1	41.1	1.4	3.39	SANDY SILT AND SILT	17	23	0.02	40	47	0.49	--
10.2	56.1	0.9	1.60	SILTY SAND	16	22	0.08	41	55	0.49	--
10.4	65.8	0.8	1.28	SILTY SAND	18	24	0.09	42	60	0.50	--
10.6	50.2	0.9	1.83	SILTY SAND	15	20	0.07	40	52	0.50	--
10.7	28.8	0.6	1.98	SANDY SILT AND SILT	9	13	0.05	38	37	0.50	--
10.9	16.2	0.4	2.66	SANDY SILT AND SILT	7	9	0.02	35	22	0.51	--
11.1	13.5	0.5	3.41	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.51	0.80
11.2	13.5	0.5	3.34	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.52	0.80
11.4	15.0	0.3	2.07	SANDY SILT AND SILT	6	8	0.03	34	20	0.52	--
11.5	15.7	0.5	3.44	CLAYEY SILT AND SILTY CLAY	8	10	---	--	---	0.52	0.94
11.7	24.4	0.6	2.42	SANDY SILT AND SILT	9	12	0.03	37	31	0.53	--
11.9	27.8	0.6	2.16	SANDY SILT AND SILT	9	12	0.04	37	34	0.53	--
12.0	19.6	0.7	3.52	CLAYEY SILT AND SILTY CLAY	9	12	---	--	---	0.54	1.18
12.2	16.9	0.7	4.15	CLAYEY SILT AND SILTY CLAY	9	12	---	--	---	0.54	1.01
12.4	14.8	0.6	3.73	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.54	0.88
12.5	15.5	0.5	3.16	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.55	0.93

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	14.2	0.5	3.60	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.55	0.84
12.9	14.2	0.4	3.04	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.56	0.84
13.0	13.4	0.4	2.61	SANDY SILT AND SILT	6	8	0.01	33	20	0.56	--
13.2	12.5	0.3	2.15	SANDY SILT AND SILT	5	7	0.02	33	20	0.56	--
13.4	11.6	0.2	1.90	SANDY SILT AND SILT	5	6	0.02	33	20	0.57	--
13.5	10.7	0.2	1.87	SANDY SILT AND SILT	4	6	0.02	32	20	0.57	--
13.7	10.1	0.2	1.59	SANDY SILT AND SILT	4	5	0.02	32	20	0.58	--
13.8	9.8	0.2	1.53	SANDY SILT AND SILT	4	5	0.03	32	20	0.58	--
14.0	9.8	0.1	1.12	SANDY SILT AND SILT	3	5	0.03	32	20	0.58	--
14.2	9.5	0.1	1.37	SANDY SILT AND SILT	4	5	0.03	31	20	0.59	--
14.3	10.1	0.2	2.17	SANDY SILT AND SILT	4	6	0.01	32	20	0.59	--
14.5	12.1	0.4	2.89	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.59	0.71
14.7	12.8	0.4	3.44	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.60	0.75
14.8	12.8	0.5	3.74	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.60	0.75
15.0	13.1	0.5	3.73	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.61	0.77
15.2	12.8	0.5	3.60	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.61	0.75
15.3	12.2	0.4	3.11	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.61	0.71
15.5	11.4	0.4	3.06	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.62	0.66
15.7	10.1	0.3	3.18	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.62	0.58
15.8	10.1	0.4	3.46	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.63	0.58
16.0	11.1	0.3	2.26	SANDY SILT AND SILT	5	6	0.01	32	20	0.63	--
16.2	13.5	0.2	1.11	SANDY SILT AND SILT	4	6	0.04	33	20	0.63	--
16.3	11.4	0.2	1.49	SANDY SILT AND SILT	4	5	0.03	32	20	0.64	--
16.5	9.4	0.1	1.49	SANDY SILT AND SILT	4	4	0.03	31	20	0.64	--
16.7	8.1	0.1	1.36	SANDY SILT AND SILT	3	4	0.03	30	20	0.65	--
16.8	7.4	0.1	1.36	SANDY SILT AND SILT	3	3	0.02	30	20	0.65	--
17.0	7.4	0.1	1.50	SANDY SILT AND SILT	3	4	0.02	30	20	0.65	--
17.2	8.0	0.2	2.00	SANDY SILT AND SILT	3	4	0.01	30	20	0.66	--
17.3	9.4	0.2	2.13	SANDY SILT AND SILT	4	5	0.01	31	20	0.66	--
17.5	9.4	0.2	2.13	SANDY SILT AND SILT	4	5	0.01	31	20	0.67	--
17.7	9.4	0.2	2.02	SANDY SILT AND SILT	4	5	0.02	31	20	0.67	--
17.8	9.5	0.2	1.69	SANDY SILT AND SILT	4	5	0.02	31	20	0.67	--
18.0	8.8	0.1	1.48	SANDY SILT AND SILT	3	4	0.02	30	20	0.68	--
18.1	8.0	0.1	1.49	SANDY SILT AND SILT	3	4	0.02	30	20	0.68	--
18.3	8.5	0.1	1.41	SANDY SILT AND SILT	3	4	0.02	30	20	0.69	--
18.5	8.8	0.1	1.59	SANDY SILT AND SILT	3	4	0.02	30	20	0.69	--
18.6	8.8	0.1	1.60	SANDY SILT AND SILT	3	4	0.02	30	20	0.69	--
18.8	8.7	0.2	2.30	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.70	0.48
19.0	8.7	0.3	3.21	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.70	0.48
19.1	31.8	0.3	0.85	SILTY SAND	9	11	0.08	37	31	0.70	--
19.3	59.0	0.2	0.39	SAND	9	11	1.24	40	49	0.71	--
19.5	68.6	0.2	0.26	SAND	10	12	1.56	40	54	0.71	--
19.6	59.0	0.4	0.63	SAND	11	13	0.78	39	49	0.72	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH. FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	42.0	0.6	1.36	SILTY SAND	12	14	0.08	38	39	0.72	--
19.9	47.4	0.4	0.84	SILTY SAND	13	15	0.10	38	42	0.72	--
20.1	65.8	0.4	0.64	SAND	12	14	0.89	40	52	0.73	--
20.3	41.3	0.7	1.79	SILTY SAND	12	14	0.06	38	38	0.73	--
20.4	21.0	0.7	3.15	SANDY SILT AND SILT	9	11	0.01	34	20	0.74	--
20.6	15.6	0.5	3.27	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.74	0.90
20.8	10.8	0.3	2.41	SANDY SILT AND SILT	5	5	0.01	31	20	0.74	--
20.9	9.5	0.1	1.48	SANDY SILT AND SILT	4	4	0.03	30	20	0.75	--
21.1	9.9	0.1	1.11	SANDY SILT AND SILT	3	4	0.03	30	20	0.75	--
21.3	9.6	0.1	1.15	SANDY SILT AND SILT	3	4	0.03	30	20	0.76	--
21.4	10.3	0.1	1.16	SANDY SILT AND SILT	4	4	0.03	31	20	0.76	--
21.6	10.4	0.1	1.25	SANDY SILT AND SILT	4	4	0.03	31	20	0.76	--
21.8	10.8	0.1	0.93	SANDY SILT AND SILT	4	4	0.04	31	20	0.77	--
21.9	10.1	0.1	0.99	SANDY SILT AND SILT	3	4	0.04	30	20	0.77	--
22.1	10.8	0.3	2.98	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.78	0.60
22.2	12.9	0.4	3.42	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.78	0.73
22.4	20.3	0.4	1.83	SANDY SILT AND SILT	7	8	0.04	34	20	0.78	--
22.6	20.9	0.2	0.77	SILTY SAND	6	7	0.07	34	20	0.79	--
22.7	16.9	0.2	1.07	SANDY SILT AND SILT	5	6	0.05	33	20	0.79	--
22.9	12.8	0.3	2.27	SANDY SILT AND SILT	5	6	0.02	31	20	0.79	--
23.1	16.9	0.3	1.90	SANDY SILT AND SILT	6	7	0.03	33	20	0.80	--
23.2	16.9	0.3	1.54	SANDY SILT AND SILT	6	6	0.04	33	20	0.80	--
23.4	14.3	0.3	1.89	SANDY SILT AND SILT	5	6	0.03	32	20	0.81	--
23.6	10.3	0.2	1.94	SANDY SILT AND SILT	4	5	0.02	30	20	0.81	--
23.7	9.3	0.2	2.37	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.81	0.50
23.9	11.3	0.2	2.13	SANDY SILT AND SILT	5	5	0.02	31	20	0.82	--
24.0	12.1	0.3	2.48	SANDY SILT AND SILT	5	6	0.01	31	20	0.82	--
24.2	12.7	0.3	2.44	SANDY SILT AND SILT	5	6	0.01	31	20	0.83	--
24.4	12.0	0.3	2.74	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.83	0.67
24.5	11.9	0.3	2.61	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.83	0.66
24.7	12.8	0.3	2.11	SANDY SILT AND SILT	5	6	0.02	31	20	0.84	--
24.9	14.2	0.3	2.05	SANDY SILT AND SILT	5	6	0.02	32	20	0.84	--
25.0	16.8	0.4	2.26	SANDY SILT AND SILT	6	7	0.02	32	20	0.85	--
25.2	20.0	0.5	2.65	SANDY SILT AND SILT	8	9	0.02	33	20	0.85	--
25.4	21.3	0.3	1.36	SILTY SAND	7	7	0.05	34	20	0.85	--
25.5	22.3	1.0	4.57	CLAYEY SILT AND SILTY CLAY	12	13	---	--	---	0.86	1.31
25.7	16.7	1.0	5.87	CLAY	17	18	---	--	---	0.86	0.96
25.9	53.7	0.6	1.08	SILTY SAND	14	16	0.09	38	41	0.86	--
26.0	69.2	0.4	0.53	SAND	11	12	1.12	39	50	0.87	--
26.2	73.3	0.6	0.78	SAND	14	15	0.78	40	51	0.87	--
26.3	73.3	0.8	1.04	SAND	17	18	0.37	40	51	0.88	--
26.5	77.3	0.9	1.19	SAND	19	20	0.21	40	53	0.88	--
26.7	88.2	0.8	0.93	SAND	17	18	0.73	40	58	0.88	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	73.4	1.2	1.59	SILTY SAND	20	21	0.09	39	51	0.89	--
27.0	43.4	1.0	2.37	SANDY SILT AND SILT	14	15	0.05	37	34	0.89	--
27.2	32.5	1.0	3.14	SANDY SILT AND SILT	13	14	0.02	35	25	0.90	--
27.3	30.6	0.9	3.07	SANDY SILT AND SILT	12	13	0.02	35	23	0.90	--
27.5	27.1	0.9	3.25	SANDY SILT AND SILT	12	12	0.01	34	20	0.90	--
27.7	23.7	0.7	3.04	SANDY SILT AND SILT	10	10	0.02	34	20	0.91	--
27.8	24.0	0.7	2.71	SANDY SILT AND SILT	9	10	0.02	34	20	0.91	--
28.0	23.6	0.7	2.97	SANDY SILT AND SILT	10	10	0.02	34	20	0.92	--
28.1	23.1	0.7	3.08	SANDY SILT AND SILT	10	10	0.01	34	20	0.92	--
28.3	24.3	0.7	3.00	SANDY SILT AND SILT	10	10	0.02	34	20	0.92	--
28.5	25.0	0.7	2.84	SANDY SILT AND SILT	10	10	0.02	34	20	0.93	--
28.6	23.7	0.7	2.78	SANDY SILT AND SILT	9	10	0.02	34	20	0.93	--
28.8	24.4	0.7	3.00	SANDY SILT AND SILT	10	10	0.02	34	20	0.94	--
29.0	23.7	0.7	3.13	SANDY SILT AND SILT	10	10	0.01	34	20	0.94	--
29.1	24.4	0.7	2.87	SANDY SILT AND SILT	10	10	0.02	34	20	0.94	--
29.3	23.2	0.6	2.59	SANDY SILT AND SILT	9	9	0.03	34	20	0.95	--
29.5	22.4	0.6	2.76	SANDY SILT AND SILT	9	9	0.02	33	20	0.95	--
29.6	24.4	0.8	3.12	SANDY SILT AND SILT	10	11	0.01	34	20	0.95	--
29.8	31.8	1.2	3.68	CLAYEY SILT AND SILTY CLAY	14	15	---	--	---	0.96	1.88
30.0	37.3	1.2	3.25	SANDY SILT AND SILT	15	15	0.02	36	27	0.96	--
30.1	29.8	1.3	4.24	CLAYEY SILT AND SILTY CLAY	15	15	---	--	---	0.97	1.76
30.3	34.5	1.5	4.47	CLAYEY SILT AND SILTY CLAY	18	18	---	--	---	0.97	2.05
30.4	76.0	2.2	2.84	SANDY SILT AND SILT	24	24	0.05	39	50	0.97	--
30.6	74.3	2.2	3.02	SANDY SILT AND SILT	25	25	0.04	39	49	0.98	--
30.8	42.0	1.2	2.95	SANDY SILT AND SILT	15	15	0.03	36	30	0.98	--
30.9	25.2	0.6	2.31	SANDY SILT AND SILT	9	9	0.03	34	20	0.99	--
31.1	21.6	0.4	1.76	SANDY SILT AND SILT	7	7	0.04	33	20	0.99	--
31.3	21.9	0.4	1.69	SANDY SILT AND SILT	7	7	0.04	33	20	0.99	--
31.4	18.0	0.3	1.78	SANDY SILT AND SILT	6	6	0.04	32	20	1.00	--
31.6	16.9	0.2	1.36	SANDY SILT AND SILT	5	5	0.04	32	20	1.00	--
31.8	15.5	0.2	1.42	SANDY SILT AND SILT	5	5	0.04	31	20	1.01	--
31.9	15.0	0.2	1.47	SANDY SILT AND SILT	5	5	0.04	31	20	1.01	--
32.1	14.2	0.2	1.41	SANDY SILT AND SILT	5	5	0.04	31	20	1.01	--
32.3	14.2	0.3	1.77	SANDY SILT AND SILT	5	5	0.03	31	20	1.02	--
32.4	15.6	0.3	2.18	SANDY SILT AND SILT	6	6	0.02	31	20	1.02	--
32.6	16.9	0.4	2.25	SANDY SILT AND SILT	6	6	0.02	32	20	1.02	--
32.7	16.8	0.3	1.78	SANDY SILT AND SILT	6	6	0.03	32	20	1.03	--
32.9	14.8	0.3	1.89	SANDY SILT AND SILT	5	5	0.03	31	20	1.03	--
33.1	15.1	0.3	1.66	SANDY SILT AND SILT	5	5	0.03	31	20	1.04	--
33.2	15.5	0.2	1.35	SANDY SILT AND SILT	5	5	0.04	31	20	1.04	--
33.4	14.8	0.1	0.81	SILTY SAND	5	4	0.05	31	20	1.04	--
33.6	13.5	0.3	1.86	SANDY SILT AND SILT	5	5	0.03	30	20	1.05	--
33.7	14.8	0.7	4.52	CLAY	15	15	---	--	---	1.05	0.81

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	42.7	1.0	2.37	SANDY SILT AND SILT	14	13	0.05	36	29	1.06	--
34.1	138.6	1.5	1.05	SAND	25	24	0.89	42	70	1.06	--
34.2	182.8	3.1	1.70	SAND	41	39	0.42	43	80	1.06	--
34.4	102.6	3.2	3.12	SANDY SILT AND SILT	33	32	0.04	40	59	1.07	--
34.5	71.4	3.1	4.36	CLAYEY SILT AND SILTY CLAY	33	32	---	--	---	1.07	4.34
34.7	84.4	2.4	2.89	SANDY SILT AND SILT	27	26	0.05	39	51	1.08	--
34.9	91.7	2.0	2.19	SILTY SAND	26	25	0.07	40	54	1.08	--
35.0	135.9	2.3	1.71	SAND	34	33	0.18	42	69	1.08	--
35.2	156.3	3.3	2.12	SILTY SAND	42	41	0.09	42	74	1.09	--
35.4	97.5	4.0	4.07	SANDY SILT AND SILT	41	39	0.02	40	56	1.09	--
35.5	54.6	2.7	4.89	CLAYEY SILT AND SILTY CLAY	29	28	---	--	---	1.10	3.29
35.7	42.0	2.2	5.17	CLAYEY SILT AND SILTY CLAY	24	23	---	--	---	1.10	2.50
35.9	30.5	1.6	5.09	CLAY	30	29	---	--	---	1.10	1.78
36.0	25.0	1.0	4.04	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	1.11	1.44
36.2	24.4	0.9	3.53	CLAYEY SILT AND SILTY CLAY	11	11	---	--	---	1.11	1.40
36.4	21.0	0.7	3.47	CLAYEY SILT AND SILTY CLAY	10	9	---	--	---	1.11	1.19
36.5	18.2	0.6	3.02	SANDY SILT AND SILT	8	8	0.01	32	20	1.12	--
36.7	17.5	0.5	2.75	SANDY SILT AND SILT	7	7	0.02	31	20	1.12	--
36.8	17.5	0.5	2.56	SANDY SILT AND SILT	7	7	0.02	31	20	1.13	--
37.0	18.2	0.4	2.25	SANDY SILT AND SILT	7	6	0.03	31	20	1.13	--
37.2	18.2	0.6	3.19	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.13	1.01
37.3	20.3	0.6	2.86	SANDY SILT AND SILT	8	8	0.02	32	20	1.14	--
37.5	20.3	0.4	2.12	SANDY SILT AND SILT	7	7	0.03	32	20	1.14	--
37.7	17.0	0.6	3.54	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.15	0.93
37.8	23.7	0.7	2.78	SANDY SILT AND SILT	9	9	0.02	33	20	1.15	--
38.0	29.8	0.7	2.42	SANDY SILT AND SILT	10	10	0.04	34	20	1.15	--
38.2	26.0	0.6	2.42	SANDY SILT AND SILT	9	9	0.03	33	20	1.16	--
38.3	26.3	0.5	2.05	SANDY SILT AND SILT	9	8	0.04	33	20	1.16	--
38.5	25.5	0.6	2.15	SANDY SILT AND SILT	9	8	0.04	33	20	1.17	--
38.6	23.7	0.6	2.53	SANDY SILT AND SILT	9	8	0.03	33	20	1.17	--
38.8	22.5	0.7	2.89	SANDY SILT AND SILT	9	9	0.02	32	20	1.17	--
39.0	22.3	0.7	3.09	SANDY SILT AND SILT	10	9	0.01	32	20	1.18	--
39.1	22.3	0.7	3.00	SANDY SILT AND SILT	9	9	0.02	32	20	1.18	--
39.3	22.1	0.7	3.26	CLAYEY SILT AND SILTY CLAY	10	9	---	--	---	1.19	1.25
39.5	22.4	0.7	2.91	SANDY SILT AND SILT	9	8	0.02	32	20	1.19	--
39.6	21.0	0.6	3.01	SANDY SILT AND SILT	9	8	0.01	32	20	1.19	--
39.8	20.2	0.5	2.68	SANDY SILT AND SILT	8	7	0.02	32	20	1.20	--
40.0	18.3	0.5	2.68	SANDY SILT AND SILT	7	7	0.02	31	20	1.20	--
40.1	16.9	0.4	2.49	SANDY SILT AND SILT	7	6	0.02	31	20	1.20	--
40.3	15.5	0.4	2.39	SANDY SILT AND SILT	6	6	0.02	30	20	1.21	--
40.5	14.5	0.3	2.35	SANDY SILT AND SILT	6	5	0.02	30	20	1.21	--
40.6	14.8	0.3	2.23	SANDY SILT AND SILT	6	5	0.02	30	20	1.22	--
40.8	14.9	0.3	2.22	SANDY SILT AND SILT	6	5	0.02	30	20	1.22	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	14.2	0.3	2.25	SANDY SILT AND SILT	6	5	0.02	30	20	1.22	--
41.1	14.8	0.3	1.82	SANDY SILT AND SILT	5	5	0.03	30	20	1.23	--
41.3	14.6	0.3	1.78	SANDY SILT AND SILT	5	5	0.03	30	20	1.23	--
41.4	15.5	0.2	1.55	SANDY SILT AND SILT	5	5	0.04	30	20	1.24	--
41.6	15.4	0.3	1.75	SANDY SILT AND SILT	5	5	0.03	30	20	1.24	--
41.8	15.9	0.3	1.96	SANDY SILT AND SILT	6	5	0.03	30	20	1.24	--
41.9	14.8	0.3	1.82	SANDY SILT AND SILT	5	5	0.03	30	20	1.25	--
42.1	14.2	0.3	1.91	SANDY SILT AND SILT	5	5	0.03	30	20	1.25	--
42.3	16.2	0.4	2.47	SANDY SILT AND SILT	7	6	0.02	30	20	1.26	--
42.4	16.7	0.4	2.40	SANDY SILT AND SILT	7	6	0.02	30	20	1.26	--
42.6	14.6	0.4	2.54	SANDY SILT AND SILT	6	5	0.02	30	20	1.26	--
42.7	13.1	0.3	2.52	SANDY SILT AND SILT	6	5	0.01	29	20	1.27	--
42.9	15.3	0.3	2.03	SANDY SILT AND SILT	6	5	0.03	30	20	1.27	--
43.1	14.7	0.3	2.05	SANDY SILT AND SILT	6	5	0.03	30	20	1.27	--
43.2	14.5	0.3	2.28	SANDY SILT AND SILT	6	5	0.02	30	20	1.28	--
43.4	14.8	0.3	2.30	SANDY SILT AND SILT	6	5	0.02	30	20	1.28	--
43.6	14.2	0.3	1.91	SANDY SILT AND SILT	5	5	0.03	30	20	1.29	--
43.7	13.5	0.2	1.48	SANDY SILT AND SILT	5	4	0.03	29	20	1.29	--
43.9	12.8	0.2	1.25	SANDY SILT AND SILT	4	4	0.04	29	20	1.29	--
44.1	12.8	0.2	1.17	SANDY SILT AND SILT	4	4	0.04	29	20	1.30	--
44.2	13.5	0.2	1.11	SANDY SILT AND SILT	4	4	0.04	29	20	1.30	--
44.4	13.7	0.2	1.17	SANDY SILT AND SILT	5	4	0.04	29	20	1.31	--
44.6	14.8	0.2	1.63	SANDY SILT AND SILT	5	5	0.03	30	20	1.31	--
44.7	19.2	0.6	3.34	CLAYEY SILT AND SILTY CLAY	9	8	---	--	---	1.31	1.04
44.9	29.9	1.2	3.94	CLAYEY SILT AND SILTY CLAY	14	13	---	--	---	1.32	1.72
45.0	52.2	1.4	2.66	SANDY SILT AND SILT	17	15	0.04	36	29	1.32	--
45.2	58.0	1.5	2.52	SANDY SILT AND SILT	18	16	0.05	36	32	1.33	--
45.4	67.6	0.6	0.90	SAND	15	13	0.47	37	37	1.33	--
45.5	66.5	0.5	0.75	SAND	13	11	0.71	37	37	1.33	--
45.7	26.9	0.5	2.01	SANDY SILT AND SILT	9	8	0.04	33	20	1.34	--
45.9	27.8	0.3	1.12	SILTY SAND	8	7	0.07	33	20	1.34	--
46.0	17.5	0.3	1.48	SANDY SILT AND SILT	6	5	0.04	30	20	1.35	--
46.2	15.1	0.2	1.53	SANDY SILT AND SILT	5	5	0.04	30	20	1.35	--
46.4	16.2	0.3	1.54	SANDY SILT AND SILT	5	5	0.04	30	20	1.35	--
46.5	17.1	0.6	3.50	CLAYEY SILT AND SILTY CLAY	8	7	---	--	---	1.36	0.91
46.7	30.6	0.7	2.39	SANDY SILT AND SILT	10	9	0.04	33	20	1.36	--
46.8	29.7	1.3	4.44	CLAYEY SILT AND SILTY CLAY	15	13	---	--	---	1.36	1.70
47.0	45.4	1.6	3.61	SANDY SILT AND SILT	19	17	0.01	35	23	1.37	--
47.2	39.8	1.8	4.55	CLAYEY SILT AND SILTY CLAY	20	18	---	--	---	1.37	2.33
47.3	24.4	1.2	5.08	CLAY	24	21	---	--	---	1.38	1.36
47.5	18.2	0.8	4.17	CLAYEY SILT AND SILTY CLAY	10	8	---	--	---	1.38	0.98
47.7	16.2	0.5	3.08	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.38	0.85
47.8	16.9	0.5	2.90	SANDY SILT AND SILT	7	6	0.01	30	20	1.39	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
48.0	18.2	0.6	3.18	CLAYEY SILT AND SILTY CLAY	8	7	---	--	---	1.39	0.97
48.2	18.7	0.6	3.38	CLAYEY SILT AND SILTY CLAY	9	7	---	--	---	1.40	1.00
48.3	16.9	0.7	3.97	CLAYEY SILT AND SILTY CLAY	9	7	---	--	---	1.40	0.89
48.5	15.2	0.6	3.68	CLAYEY SILT AND SILTY CLAY	8	6	---	--	---	1.40	0.78
48.7	15.9	0.7	4.48	CLAYEY SILT AND SILTY CLAY	9	8	---	--	---	1.41	0.82
48.8	28.4	1.0	3.48	CLAYEY SILT AND SILTY CLAY	13	11	---	--	---	1.41	1.61
49.0	31.9	1.5	4.67	CLAYEY SILT AND SILTY CLAY	17	15	---	--	---	1.42	1.83
49.1	33.2	1.6	4.79	CLAYEY SILT AND SILTY CLAY	18	15	---	--	---	1.42	1.91
49.3	33.2	1.3	4.01	CLAYEY SILT AND SILTY CLAY	16	13	---	--	---	1.42	1.90
49.5	33.7	1.2	3.50	SANDY SILT AND SILT	15	12	0.01	33	20	1.43	--
49.6	35.5	1.3	3.63	CLAYEY SILT AND SILTY CLAY	16	13	---	--	---	1.43	2.05
49.8	40.0	1.6	4.08	CLAYEY SILT AND SILTY CLAY	19	16	---	--	---	1.43	2.33
50.0	40.6	1.7	4.24	CLAYEY SILT AND SILTY CLAY	20	17	---	--	---	1.44	2.37
50.1	36.6	1.5	4.04	CLAYEY SILT AND SILTY CLAY	17	15	---	--	---	1.44	2.12
50.3	34.6	1.2	3.47	SANDY SILT AND SILT	15	12	0.01	33	20	1.45	--
50.5	35.2	1.2	3.33	SANDY SILT AND SILT	15	12	0.02	33	20	1.45	--
50.6	33.8	1.1	3.16	SANDY SILT AND SILT	14	11	0.02	33	20	1.45	--
50.8	34.6	1.1	3.04	SANDY SILT AND SILT	13	11	0.02	33	20	1.46	--
51.0	37.3	1.1	2.84	SANDY SILT AND SILT	14	11	0.03	34	20	1.46	--
51.1	41.3	1.3	3.22	SANDY SILT AND SILT	16	13	0.02	34	20	1.47	--
51.3	40.3	1.2	2.91	SANDY SILT AND SILT	15	12	0.03	34	20	1.47	--
51.4	28.1	0.9	3.20	SANDY SILT AND SILT	12	10	0.02	32	20	1.47	--
51.6	25.5	0.5	2.12	SANDY SILT AND SILT	9	7	0.04	32	20	1.48	--
51.8	21.0	0.4	1.71	SANDY SILT AND SILT	7	6	0.04	31	20	1.48	--
51.9	17.0	0.3	1.58	SANDY SILT AND SILT	6	5	0.04	30	20	1.49	--
52.1	18.2										
52.3	18.2										

PIONEER DRILLING

Engineer IT
On Site Loc:CPT9-31
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/16/90/08:34
Cone Used :IV
Water table (meters) : 2.1

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	70.02	1.67	2.38	0.02	sandy silt to clayey silt	UNDFND	UNDFD	27	7.0
0.50	1.64	22.30	1.24	5.43	0.07	clay	UNDFND	UNDFD	22	2.2
0.75	2.46	16.63	1.21	7.30	0.11	clay	UNDFND	UNDFD	16	1.6
1.00	3.28	15.02	1.06	7.08	0.16	clay	UNDFND	UNDFD	14	1.4
1.25	4.10	16.17	0.90	5.54	0.20	clay	UNDFND	UNDFD	15	1.5
1.50	4.92	15.03	0.67	4.49	0.25	clay	UNDFND	UNDFD	14	1.4
1.75	5.74	12.34	0.55	4.48	0.29	clay	UNDFND	UNDFD	12	1.2
2.00	6.56	16.74	0.58	3.45	0.34	silty clay to clay	UNDFND	UNDFD	11	1.6
2.25	7.38	29.17	0.59	2.02	0.38	sandy silt to clayey silt	UNDFND	UNDFD	11	2.8
2.50	8.20	8.09	0.25	3.09	0.40	clay	UNDFND	UNDFD	8	.7
2.75	9.02	12.59	0.18	1.44	0.42	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
3.00	9.84	8.15	0.32	3.87	0.44	clay	UNDFND	UNDFD	8	.7
3.25	10.66	6.37	0.23	3.27	0.46	clay	UNDFND	UNDFD	7	.6
3.50	11.48	4.47	0.22	4.85	0.48	clay	UNDFND	UNDFD	4	.3
3.75	12.30	5.22	0.34	6.45	0.50	clay	UNDFND	UNDFD	5	.4
4.00	13.12	4.27	0.25	5.80	0.52	clay	UNDFND	UNDFD	4	.3
4.25	13.94	3.89	0.21	5.42	0.54	clay	UNDFND	UNDFD	4	.3
4.50	14.76	3.69	0.18	4.84	0.56	clay	UNDFND	UNDFD	4	.2
4.75	15.58	22.15	0.23	1.06	0.58	sandy silt to clayey silt	UNDFND	UNDFD	8	2.1
5.00	16.40	60.76	0.27	0.44	0.60	sand to silty sand	50-60	40-42	15	UNDEFINED
5.25	17.22	20.85	0.20	0.95	0.61	sandy silt to clayey silt	UNDFND	UNDFD	8	1.9
5.50	18.04	16.49	0.09	0.55	0.63	sandy silt to clayey silt	UNDFND	UNDFD	6	1.5
5.75	18.86	8.49	0.17	2.00	0.65	silty clay to clay	UNDFND	UNDFD	5	.7
6.00	19.69	182.75	1.09	0.60	0.67	sand	80-90	44-46	35	UNDEFINED
6.25	20.51	292.10	1.83	0.63	0.69	sand	>90	46-48	>50	UNDEFINED
6.50	21.33	52.20	1.67	3.20	0.71	sandy silt to clayey silt	UNDFND	UNDFD	20	5.1
6.75	22.15	46.33	0.26	0.56	0.73	silty sand to sandy silt	40-50	38-40	15	UNDEFINED
7.00	22.97	146.61	1.29	0.88	0.75	sand	80-90	42-44	28	UNDEFINED
7.25	23.79	172.87	0.99	0.57	0.77	sand	80-90	44-46	33	UNDEFINED
7.50	24.61	16.76	0.31	1.83	0.79	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.75	25.43	12.86	0.42	3.29	0.81	silty clay to clay	UNDFND	UNDFD	8	1.1
8.00	26.25	22.69	0.53	2.32	0.83	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
8.25	27.07	13.33	0.29	2.16	0.85	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
8.50	27.89	27.59	0.72	2.62	0.87	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
8.75	28.71	35.65	0.62	1.74	0.89	sandy silt to clayey silt	UNDFND	UNDFD	14	3.4
9.00	29.53	19.21	0.78	4.05	0.91	silty clay to clay	UNDFND	UNDFD	12	1.7
9.25	30.35	14.37	0.37	2.58	0.93	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
9.50	31.17	14.50	0.36	2.52	0.95	clayey silt to silty clay	UNDFND	UNDFD	7	1.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT9-31

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	8.64	0.26	2.98	0.97	silty clay to clay	UNDFND	UNDFD	6	.6
10.00	32.81	9.10	0.23	2.56	0.99	silty clay to clay	UNDFND	UNDFD	6	.7
10.25	33.63	10.27	0.27	2.64	1.00	silty clay to clay	UNDFND	UNDFD	7	.9
10.50	34.45	17.96	0.44	2.55	1.02	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
10.75	35.27	11.11	0.20	1.82	1.04	clayey silt to silty clay	UNDFND	UNDFD	5	.9
11.00	36.09	10.13	0.17	1.64	1.06	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.25	36.91	10.29	0.06	0.63	1.08	sandy silt to clayey silt	UNDFND	UNDFD	4	.8
11.50	37.73	154.14	1.03	0.67	1.10	sand	70-80	42-44	30	UNDEFINED
11.75	38.55	153.70	1.14	0.74	1.12	sand	70-80	42-44	29	UNDEFINED
12.00	39.37	12.37	0.24	1.97	1.14	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.25	40.19	12.32	0.22	1.69	1.16	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.50	41.01	15.83	0.40	2.55	1.18	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
12.75	41.83	13.75	0.32	2.31	1.20	clayey silt to silty clay	UNDFND	UNDFD	7	1.1
13.00	42.65	12.41	0.25	2.02	1.22	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
13.25	43.47	21.77	0.74	3.41	1.24	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
13.50	44.29	35.56	1.71	4.82	1.26	clay	UNDFND	UNDFD	34	3.3
13.75	45.11	35.93	1.34	3.73	1.28	clayey silt to silty clay	UNDFND	UNDFD	17	3.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT/9-32

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	24.35	0.76	3.12	0.97	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
10.00	32.81	53.48	1.82	3.41	0.99	clayey silt to silty clay	UNDFND	UNDFD	26	5.1
10.25	33.63	40.77	1.45	3.57	1.00	clayey silt to silty clay	UNDFND	UNDFD	20	3.8
10.50	34.45	29.41	0.98	3.35	1.02	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
10.75	35.27	28.03	0.77	2.76	1.04	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
11.00	36.09	31.63	0.98	3.11	1.06	clayey silt to silty clay	UNDFND	UNDFD	15	2.9
11.25	36.91	29.42	1.05	3.57	1.08	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
11.50	37.73	30.19	0.55	1.84	1.10	sandy silt to clayey silt	UNDFND	UNDFD	12	2.8
11.75	38.55	17.07	0.17	0.97	1.12	sandy silt to clayey silt	UNDFND	UNDFD	7	1.4
12.00	39.37	26.08	0.43	1.67	1.14	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3
12.25	40.19	159.42	1.28	0.80	1.16	sand	70-80	42-44	31	UNDEFINED
12.50	41.01	202.05	0.67	0.33	1.18	sand	80-90	42-44	39	UNDEFINED
12.75	41.83	241.33	0.84	0.35	1.20	sand	80-90	44-46	46	UNDEFINED
13.00	42.65	349.96	0.84	0.24	1.22	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.25	43.47	338.29	1.07	0.32	1.24	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.50	44.29	332.83	0.83	0.25	1.26	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.75	45.11	153.42	0.77	0.50	1.28	sand	70-80	40-42	29	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT/9-32
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/16/90 12:42
Cone Used :IV
Water table (meters) : 2.1

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	240.32	1.66	0.69	0.02	sand	>90	UNDFD	46	UNDEFINED
0.50	1.64	119.30	3.00	2.51	0.07	silty sand to sandy silt	>90	>48	38	UNDEFINED
0.75	2.46	41.67	2.18	5.23	0.11	clay	UNDFND	UNDFD	40	4.1
1.00	3.28	32.33	1.62	4.93	0.16	clay	UNDFND	UNDFD	32	3.2
1.25	4.10	34.16	1.37	4.02	0.20	silty clay to clay	UNDFND	UNDFD	22	3.3
1.50	4.92	37.66	1.12	2.99	0.25	clayey silt to silty clay	UNDFND	UNDFD	18	3.7
1.75	5.74	38.13	1.12	2.93	0.29	sandy silt to clayey silt	UNDFND	UNDFD	15	3.7
2.00	6.56	28.25	0.84	2.96	0.34	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
2.25	7.38	14.86	0.49	3.30	0.38	silty clay to clay	UNDFND	UNDFD	3	1.4
2.50	8.20	10.62	0.39	3.66	0.40	clay	UNDFND	UNDFD	10	1.0
2.75	9.02	11.62	0.44	3.79	0.42	clay	UNDFND	UNDFD	11	1.1
3.00	9.84	10.36	0.35	3.41	0.44	silty clay to clay	UNDFND	UNDFD	7	.9
3.25	10.66	11.30	0.33	2.80	0.46	silty clay to clay	UNDFND	UNDFD	8	1.1
3.50	11.48	15.26	0.38	2.49	0.48	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
3.75	12.30	18.54	0.49	2.65	0.50	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
4.00	13.12	8.31	0.39	4.66	0.52	clay	UNDFND	UNDFD	8	.7
4.25	13.94	4.87	0.14	2.88	0.54	clay	UNDFND	UNDFD	5	.4
4.50	14.76	5.01	0.09	1.78	0.56	silty clay to clay	UNDFND	UNDFD	3	.4
4.75	15.58	7.32	0.13	1.82	0.58	silty clay to clay	UNDFND	UNDFD	5	.6
5.00	16.40	9.27	0.22	2.40	0.60	silty clay to clay	UNDFND	UNDFD	6	.8
5.25	17.22	5.94	0.13	2.13	0.61	silty clay to clay	UNDFND	UNDFD	4	.5
5.50	18.04	4.50	0.08	1.70	0.63	sensitive fine grained	UNDFND	UNDFD	2	.3
5.75	18.86	5.60	0.12	2.11	0.65	silty clay to clay	UNDFND	UNDFD	4	.4
6.00	19.69	4.31	0.10	1.96	0.67	silty clay to clay	UNDFND	UNDFD	3	.3
6.25	20.51	6.61	0.15	2.30	0.69	silty clay to clay	UNDFND	UNDFD	4	.5
6.50	21.33	6.70	0.12	1.75	0.71	silty clay to clay	UNDFND	UNDFD	4	.5
6.75	22.15	11.88	0.26	2.21	0.73	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
7.00	22.97	11.95	0.35	2.91	0.75	silty clay to clay	UNDFND	UNDFD	8	1.0
7.25	23.79	64.64	0.60	0.92	0.77	sand to silty sand	50-60	40-42	15	UNDEFINED
7.50	24.61	141.14	0.63	0.45	0.79	sand	70-80	42-44	27	UNDEFINED
7.75	25.43	20.14	0.39	1.95	0.81	sandy silt to clayey silt	UNDFND	UNDFD	8	1.8
8.00	26.25	12.51	0.18	1.43	0.83	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
8.25	27.07	19.61	0.42	2.15	0.85	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
8.50	27.89	26.82	0.75	2.79	0.87	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
8.75	28.71	22.15	0.68	3.08	0.89	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
9.00	29.53	15.37	0.44	2.83	0.91	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
9.25	30.35	16.90	0.60	3.52	0.93	silty clay to clay	UNDFND	UNDFD	11	1.5
9.50	31.17	17.96	0.52	2.90	0.95	clayey silt to silty clay	UNDFND	UNDFD	9	1.6

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT9-34
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/13/90/10:53
Cone Used :IV
Water table (meters) : 2.6

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	47.17	2.19	4.64	0.02	silty clay to clay	UNDFND	UNDFD	30	4.7
0.50	1.64	22.78	1.45	6.35	0.07	clay	UNDFND	UNDFD	22	2.2
0.75	2.46	26.52	1.43	5.41	0.11	clay	UNDFND	UNDFD	25	2.6
1.00	3.28	28.33	1.15	3.97	0.16	silty clay to clay	UNDFND	UNDFD	18	2.8
1.25	4.10	26.77	0.91	3.41	0.20	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
1.50	4.92	29.42	0.84	2.87	0.25	clayey silt to silty clay	UNDFND	UNDFD	14	2.9
1.75	5.74	29.54	0.85	2.89	0.29	clayey silt to silty clay	UNDFND	UNDFD	14	2.9
2.00	6.56	25.25	0.65	2.59	0.34	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
2.25	7.38	48.70	0.72	1.48	0.38	silty sand to sandy silt	50-60	42-44	16	UNDEFINED
2.50	8.20	91.24	2.39	2.62	0.43	sandy silt to clayey silt	UNDFND	UNDFD	35	9.0
2.75	9.02	54.31	2.10	3.82	0.47	clayey silt to silty clay	UNDFND	UNDFD	26	5.4
3.00	9.84	81.66	0.52	0.84	0.49	sand to silty sand	60-70	40-42	15	UNDEFINED
3.25	10.66	44.23	0.42	0.34	0.51	silty sand to sandy silt	50-60	40-42	14	UNDEFINED
3.50	11.48	20.76	0.45	2.16	0.53	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
3.75	12.30	12.63	0.26	2.07	0.55	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
4.00	13.12	7.88	0.24	3.09	0.57	clay	UNDFND	UNDFD	8	.7
4.25	13.94	8.63	0.50	5.80	0.59	clay	UNDFND	UNDFD	8	.7
4.50	14.76	3.95	0.13	3.35	0.61	clay	UNDFND	UNDFD	4	.3
4.75	15.58	4.54	0.09	1.94	0.63	silty clay to clay	UNDFND	UNDFD	3	.3
5.00	16.40	5.83	0.10	1.64	0.65	sensitive fine grained	UNDFND	UNDFD	3	.4
5.25	17.22	5.02	0.11	2.27	0.67	undefined	UNDFND	UNDFD	UDF	UNDEFINED
5.50	18.04	25.90	0.39	1.51	0.69	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4
5.75	18.86	72.53	0.51	0.70	0.71	sand to silty sand	60-70	40-42	17	UNDEFINED
6.00	19.69	9.41	0.26	2.80	0.72	silty clay to clay	UNDFND	UNDFD	6	.8
6.25	20.51	7.68	0.22	2.81	0.74	silty clay to clay	UNDFND	UNDFD	5	.6
6.50	21.33	7.32	0.14	1.86	0.76	silty clay to clay	UNDFND	UNDFD	5	.6
6.75	22.15	6.69	0.13	1.95	0.78	silty clay to clay	UNDFND	UNDFD	4	.5
7.00	22.97	8.75	0.21	2.40	0.80	silty clay to clay	UNDFND	UNDFD	6	.7
7.25	23.79	11.94	0.34	2.85	0.82	silty clay to clay	UNDFND	UNDFD	8	1.0
7.50	24.61	13.41	0.26	1.93	0.84	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
7.75	25.43	71.07	0.50	0.71	0.86	sand to silty sand	50-60	40-42	17	UNDEFINED
8.00	26.25	73.27	0.37	0.50	0.88	sand to silty sand	50-60	40-42	18	UNDEFINED
8.25	27.07	18.16	0.36	1.96	0.90	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
8.50	27.89	17.85	0.33	1.85	0.92	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
8.75	28.71	23.99	0.47	1.97	0.94	sandy silt to clayey silt	UNDFND	UNDFD	9	2.2
9.00	29.53	40.64	1.03	2.54	0.96	sandy silt to clayey silt	UNDFND	UNDFD	16	3.9
9.25	30.35	79.81	1.92	2.41	0.98	sandy silt to clayey silt	UNDFND	UNDFD	31	7.8
9.50	31.17	36.95	1.22	3.31	1.00	clayey silt to silty clay	UNDFND	UNDFD	18	3.5

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTRI (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT9-34

DEPTH (meters)	(feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	24.05	0.85	3.55	1.02	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
10.00	32.81	23.72	0.66	2.76	1.04	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
10.25	33.63	17.78	0.51	2.85	1.06	clayey silt to silty clay	UNDFND	UNDFD	9	1.5
10.50	34.45	15.42	0.50	3.26	1.08	silty clay to clay	UNDFND	UNDFD	10	1.3
10.75	35.27	13.23	0.33	2.49	1.10	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
11.00	36.09	10.35	0.16	1.57	1.11	clayey silt to silty clay	UNDFND	UNDFD	5	.8
11.25	36.91	17.85	0.56	3.15	1.13	clayey silt to silty clay	UNDFND	UNDFD	9	1.5
11.50	37.73	11.84	0.18	1.51	1.15	clayey silt to silty clay	UNDFND	UNDFD	6	.9
11.75	38.55	16.50	0.26	1.58	1.17	sandy silt to clayey silt	UNDFND	UNDFD	8	1.4
12.00	39.37	13.87	0.20	1.48	1.19	clayey silt to silty clay	UNDFND	UNDFD	7	1.1
12.25	40.19	18.21	0.41	2.23	1.21	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
12.50	41.01	155.85	1.48	0.95	1.23	sand	70-80	42-44	30	UNDEFINED
12.75	41.83	197.52	2.13	1.08	1.25	sand	80-90	42-44	38	UNDEFINED
13.00	42.65	18.57	0.48	2.60	1.27	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
13.25	43.47	26.15	0.29	1.11	1.29	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3
13.50	44.29	12.90	0.14	1.10	1.31	sandy silt to clayey silt	UNDFND	UNDFD	5	1.0
13.75	45.11	11.76	0.07	0.63	1.33	sandy silt to clayey silt	UNDFND	UNDFD	5	.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTRI (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT9-35
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/13/90/09:45
Cone Used :LV
Water table (meters) : 2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	23.58	0.07	0.30	0.01	silty sand to sandy silt	80-90	>48	8	UNDEFINED
0.25	0.82	34.10	1.90	5.56	0.03	clay	UNDFND	UNDFD	33	3.4
0.38	1.25	28.96	1.35	4.66	0.06	clay	UNDFND	UNDFD	28	2.8
0.50	1.64	30.78	0.93	3.01	0.08	clayey silt to silty clay	UNDFND	UNDFD	15	3.0
0.63	2.07	31.78	1.18	3.70	0.10	clayey silt to silty clay	UNDFND	UNDFD	15	3.1
0.75	2.46	29.08	1.04	3.58	0.12	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
0.87	2.85	25.06	0.85	3.40	0.15	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
1.00	3.28	22.42	0.78	3.50	0.17	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
1.13	3.71	24.88	0.85	3.43	0.19	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
1.25	4.10	24.08	0.78	3.24	0.21	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
1.37	4.49	27.38	0.68	2.49	0.24	sandy silt to clayey silt	UNDFND	UNDFD	10	2.7
1.50	4.92	28.36	0.76	2.66	0.26	clayey silt to silty clay	UNDFND	UNDFD	14	2.8
1.62	5.31	21.22	0.68	3.21	0.28	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
1.75	5.74	13.54	0.49	3.59	0.30	silty clay to clay	UNDFND	UNDFD	9	1.3
1.87	6.14	9.44	0.36	3.82	0.33	clay	UNDFND	UNDFD	9	.9
2.00	6.56	7.42	0.34	4.57	0.35	clay	UNDFND	UNDFD	7	.7
2.12	6.96	8.46	0.42	4.93	0.37	clay	UNDFND	UNDFD	8	.8
2.25	7.38	8.50	0.42	4.96	0.38	clay	UNDFND	UNDFD	8	.8
2.38	7.81	8.06	0.38	4.72	0.39	clay	UNDFND	UNDFD	8	.7
2.50	8.20	6.92	0.36	5.18	0.40	clay	UNDFND	UNDFD	7	.6
2.62	8.60	8.08	0.30	3.65	0.40	clay	UNDFND	UNDFD	8	.7
2.75	9.02	11.32	0.45	4.02	0.41	clay	UNDFND	UNDFD	11	1.0
2.87	9.42	12.52	0.46	3.66	0.42	silty clay to clay	UNDFND	UNDFD	8	1.2
3.00	9.84	11.84	0.40	3.37	0.43	silty clay to clay	UNDFND	UNDFD	8	1.1
3.12	10.24	12.84	0.44	3.41	0.44	silty clay to clay	UNDFND	UNDFD	8	1.2
3.25	10.66	13.78	0.37	2.65	0.45	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
3.37	11.06	14.34	0.34	2.39	0.46	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
3.50	11.48	8.98	0.42	4.65	0.47	clay	UNDFND	UNDFD	9	.8
3.63	11.91	9.74	0.58	5.96	0.48	clay	UNDFND	UNDFD	9	.9
3.75	12.30	6.90	0.47	6.77	0.49	clay	UNDFND	UNDFD	7	.6
3.87	12.70	5.16	0.32	6.13	0.50	clay	UNDFND	UNDFD	5	.4
4.00	13.12	3.92	0.24	6.16	0.51	clay	UNDFND	UNDFD	4	.3
4.12	13.52	3.90	0.23	5.91	0.52	clay	UNDFND	UNDFD	4	.3
4.25	13.94	3.06	0.16	5.37	0.53	clay	UNDFND	UNDFD	3	.2
4.37	14.34	2.84	0.10	3.61	0.54	clay	UNDFND	UNDFD	3	.2
4.50	14.76	4.76	0.17	3.58	0.55	clay	UNDFND	UNDFD	5	.3
4.62	15.16	6.60	0.14	2.10	0.56	silty clay to clay	UNDFND	UNDFD	4	.5
4.75	15.58	4.88	0.13	2.72	0.57	clay	UNDFND	UNDFD	5	.4

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT9-35

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	4.74	0.15	3.11	0.58	clay	UNDFND	UNDFD	5	.3
5.00	16.40	3.58	0.13	3.64	0.59	clay	UNDFND	UNDFD	3	.2
5.12	16.80	5.22	0.20	3.74	0.60	clay	UNDFND	UNDFD	5	.4
5.25	17.22	40.96	0.30	0.73	0.61	silty sand to sandy silt	40-50	38-40	13	UNDEFINED
5.38	17.65	55.70	0.39	0.71	0.62	sand to silty sand	50-60	40-42	13	UNDEFINED
5.50	18.04	25.66	0.51	1.99	0.63	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4
5.62	18.44	7.30	0.24	3.25	0.64	clay	UNDFND	UNDFD	7	.6
5.75	18.86	7.90	0.28	3.52	0.65	clay	UNDFND	UNDFD	8	.6
5.87	19.26	9.20	0.33	3.58	0.66	clay	UNDFND	UNDFD	9	.8
6.00	19.69	7.62	0.27	3.55	0.67	clay	UNDFND	UNDFD	7	.6
6.12	20.08	9.00	0.34	3.78	0.68	clay	UNDFND	UNDFD	9	.7
6.25	20.51	10.34	0.34	3.33	0.69	silty clay to clay	UNDFND	UNDFD	7	.9
6.38	20.93	8.12	0.26	3.19	0.70	clay	UNDFND	UNDFD	8	.6
6.50	21.33	9.40	0.33	3.47	0.71	clay	UNDFND	UNDFD	9	.8
6.63	21.75	14.74	0.42	2.87	0.72	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
6.75	22.15	13.26	0.33	2.49	0.73	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
6.88	22.57	13.68	0.31	2.26	0.74	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
7.00	22.97	14.32	0.34	2.35	0.75	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
7.12	23.36	17.88	-0.08	-0.47	0.76	undefined	UNDFND	UNDFD	UDF	UNDEFINED
7.25	23.79	23.10	0.56	2.44	0.77	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
7.37	24.18	40.14	0.34	0.84	0.78	silty sand to sandy silt	40-50	36-38	13	UNDEFINED
7.50	24.61	31.14	0.59	1.88	0.78	sandy silt to clayey silt	UNDFND	UNDFD	12	2.9
7.62	25.00	17.28	0.25	1.43	0.79	sandy silt to clayey silt	UNDFND	UNDFD	7	1.5
7.75	25.43	19.56	0.41	2.08	0.80	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
7.88	25.85	23.04	0.71	3.09	0.81	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
8.00	26.25	23.60	0.66	2.79	0.82	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
8.13	26.67	24.70	0.51	2.05	0.83	sandy silt to clayey silt	UNDFND	UNDFD	9	2.3
8.25	27.07	26.46	0.56	2.11	0.84	sandy silt to clayey silt	UNDFND	UNDFD	10	2.4
8.38	27.49	29.74	0.81	2.71	0.85	sandy silt to clayey silt	UNDFND	UNDFD	11	2.8
8.50	27.89	24.58	0.83	3.36	0.86	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
8.62	28.28	17.74	0.65	3.68	0.87	silty clay to clay	UNDFND	UNDFD	11	1.6
8.75	28.71	20.40	0.71	3.46	0.88	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
8.87	29.10	27.50	1.06	3.84	0.89	silty clay to clay	UNDFND	UNDFD	18	2.5
9.00	29.53	57.24	0.82	1.43	0.90	silty sand to sandy silt	50-60	38-40	18	UNDEFINED
9.12	29.92	40.02	0.99	2.48	0.91	sandy silt to clayey silt	UNDFND	UNDFD	15	3.8
9.25	30.35	22.50	0.93	4.14	0.92	silty clay to clay	UNDFND	UNDFD	14	2.0
9.37	30.74	18.64	0.81	4.34	0.93	clay	UNDFND	UNDFD	18	1.6
9.50	31.17	17.08	0.63	3.71	0.94	silty clay to clay	UNDFND	UNDFD	11	1.5
9.63	31.59	18.96	0.57	3.01	0.95	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
9.75	31.99	24.04	0.76	3.18	0.96	clayey silt to silty clay	UNDFND	UNDFD	12	2.2
9.88	32.41	23.42	0.74	3.17	0.97	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
10.00	32.81	23.96	0.62	2.59	0.98	clayey silt to silty clay	UNDFND	UNDFD	11	2.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT9-35 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	16.56	0.68	4.11	0.99	clay	UNDFND	UNDFD	16	1.4
10.25	33.63	21.20	0.77	3.64	1.00	silty clay to clay	UNDFND	UNDFD	14	1.3
10.37	34.02	16.92	0.79	4.64	1.01	clay	UNDFND	UNDFD	16	1.5
10.50	34.45	11.70	0.47	4.05	1.02	clay	UNDFND	UNDFD	11	.9
10.62	34.84	11.08	0.32	2.90	1.03	silty clay to clay	UNDFND	UNDFD	7	.9
10.75	35.27	12.06	0.36	3.02	1.04	silty clay to clay	UNDFND	UNDFD	8	1.0
10.87	35.66	15.58	0.49	3.13	1.05	silty clay to clay	UNDFND	UNDFD	10	1.3
11.00	36.09	15.02	0.46	3.06	1.06	silty clay to clay	UNDFND	UNDFD	10	1.3
11.13	36.52	14.16	0.41	2.88	1.07	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
11.25	36.91	15.20	0.40	2.62	1.08	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
11.37	37.30	16.08	0.43	2.69	1.09	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
11.50	37.73	18.62	0.83	4.48	1.10	clay	UNDFND	UNDFD	18	1.6
11.62	38.12	24.78	1.30	5.27	1.11	clay	UNDFND	UNDFD	24	2.2
11.75	38.55	181.20	1.92	1.06	1.12	sand	80-90	42-44	35	UNDEFINED
11.87	38.94	273.74	2.04	0.74	1.13	sand	>90	44-46	>50	UNDEFINED
12.00	39.37	353.36	1.17	0.33	1.14	gravelly sand to sand	>90	44-46	>50	UNDEFINED
12.12	39.76	382.14	1.88	0.49	1.15	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.25	40.19	510.50	2.76	0.54	1.16	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.37	40.58	421.44	2.96	0.70	1.17	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.50	41.01	311.70	4.57	1.47	1.17	sand to silty sand	>90	44-46	>50	UNDEFINED
12.62	41.40	358.26	3.36	0.94	1.18	sand	>90	44-46	>50	UNDEFINED
12.75	41.83	406.90	2.13	0.52	1.19	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.87	42.22	329.60	1.73	0.52	1.20	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.00	42.65	266.80	1.74	0.65	1.21	sand	>90	44-46	>50	UNDEFINED
13.12	43.04	212.36	1.35	0.63	1.22	sand	80-90	42-44	41	UNDEFINED
13.25	43.47	230.08	0.92	0.40	1.23	sand	80-90	42-44	44	UNDEFINED
13.37	43.86	178.56	1.00	0.56	1.24	sand	80-90	42-44	34	UNDEFINED
13.50	44.29	181.40	0.61	0.34	1.25	sand	80-90	42-44	35	UNDEFINED
13.62	44.69	260.92	0.99	0.38	1.26	gravelly sand to sand	>90	44-46	42	UNDEFINED
13.75	45.11	314.08	1.10	0.35	1.27	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.87	45.51	300.88	0.94	0.31	1.28	gravelly sand to sand	>90	44-46	48	UNDEFINED
14.00	45.93	248.58	0.87	0.35	1.29	gravelly sand to sand	80-90	42-44	40	UNDEFINED
14.12	46.33	84.76	1.10	1.29	1.30	sand to silty sand	50-60	38-40	20	UNDEFINED
14.25	46.75	34.30	0.99	2.89	1.31	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
14.37	47.15	25.72	0.83	3.21	1.32	clayey silt to silty clay	UNDFND	UNDFD	12	2.3
14.50	47.57	23.42	0.69	2.95	1.33	clayey silt to silty clay	UNDFND	UNDFD	11	2.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-36
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/04/90/14:06
Cone Used :VIII
Water table (meters) : 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	234.01	2.85	1.22	0.02	sand	>90	UNDFD	45	UNDEFINED
0.50	1.64	77.44	1.73	2.24	0.07	silty sand to sandy silt	>90	>48	25	UNDEFINED
0.75	2.46	14.83	0.59	3.95	0.11	silty clay to clay	UNDFND	UNDFD	9	1.4
1.00	3.28	19.45	0.77	3.96	0.16	silty clay to clay	UNDFND	UNDFD	12	1.9
1.25	4.10	22.96	0.99	4.32	0.20	silty clay to clay	UNDFND	UNDFD	15	2.2
1.50	4.92	20.09	0.77	3.85	0.25	sandy silt to clayey silt	UNDFND	UNDFD	11	2.8
1.75	5.74	20.72	0.68	3.30	0.29	clayey silt to silty clay	UNDFND	UNDFD	11	2.3
2.00	6.56	22.07	0.69	3.12	0.34	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
2.25	7.38	13.53	0.63	3.23	0.38	clayey silt to silty clay	UNDFND	UNDFD	9	1.9
2.50	8.20	10.21	0.50	2.72	0.43	clayey silt to silty clay	UNDFND	UNDFD	8	1.7
2.75	9.02	15.64	0.46	2.33	0.47	clayey silt to silty clay	UNDFND	UNDFD	7	1.5
3.00	9.84	3.32	0.32	3.41	0.52	clay	UNDFND	UNDFD	9	.8
3.25	10.66	15.49	0.46	2.95	0.55	clayey silt to silty clay	UNDFND	UNDFD	7	1.4
3.50	11.48	13.11	0.38	2.92	0.57	silty clay to clay	UNDFND	UNDFD	8	1.2
3.75	**12.30**	**7.14**	**0.21**	**3.00**	**0.59**	clay	UNDFND	UNDFD	7	.6
4.00	**13.12**	**7.60**	**0.32**	**4.15**	**0.61**	clay	UNDFND	UNDFD	7	.6
4.25	13.94	6.68	0.30	4.51	0.63	clay	UNDFND	UNDFD	6	.5
4.50	14.76	6.55	0.19	2.94	0.65	clay	UNDFND	UNDFD	6	.5
4.75	15.58	8.04	0.12	1.50	0.67	clayey silt to silty clay	UNDFND	UNDFD	4	.7
5.00	16.40	18.51	0.44	2.37	0.69	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
5.25	17.22	159.97	0.73	0.46	0.71	sand	80-90	44-46	31	UNDEFINED
5.50	18.04	177.25	0.56	0.31	0.73	sand	80-90	44-46	34	UNDEFINED
5.75	18.86	88.17	0.46	0.52	0.75	sand to silty sand	60-70	40-42	21	UNDEFINED
6.00	19.69	46.77	0.77	1.65	0.77	silty sand to sandy silt	40-50	38-40	15	UNDEFINED
6.25	20.51	12.24	0.21	1.68	0.79	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
6.50	21.33	8.01	0.05	0.62	0.80	sensitive fine grained	UNDFND	UNDFD	4	.6
6.75	22.15	17.08	0.51	2.98	0.82	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
7.00	22.97	12.38	0.25	2.05	0.84	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
7.25	23.79	12.59	0.26	2.03	0.86	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
7.50	24.61	10.33	0.27	2.51	0.88	silty clay to clay	UNDFND	UNDFD	7	.9
7.75	25.43	21.43	0.56	2.61	0.90	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
8.00	26.25	12.83	0.21	1.65	0.92	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
8.25	27.07	10.05	0.20	1.99	0.94	clayey silt to silty clay	UNDFND	UNDFD	5	.8
8.50	27.89	13.56	0.34	2.51	0.96	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
8.75	28.71	13.80	0.25	1.82	0.98	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
9.00	29.53	14.95	0.31	2.08	1.00	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
9.25	30.35	89.12	1.20	1.35	1.02	sand to silty sand	60-70	40-42	21	UNDEFINED
9.50	31.17	152.49	1.73	1.14	1.04	sand to silty sand	70-80	42-44	37	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-36

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	192.93	1.55	0.80	1.06	sand	80-90	42-44	37	UNDEFINED
10.00	32.81	233.79	1.30	0.55	1.08	sand	80-90	44-46	45	UNDEFINED
10.25	33.63	120.45	0.97	0.81	1.10	sand to silty sand	70-80	40-42	29	UNDEFINED
10.50	34.45	245.72	1.19	0.49	1.12	sand	>90	44-46	47	UNDEFINED
10.75	35.27	275.99	0.87	0.31	1.14	gravelly sand to sand	>90	44-46	44	UNDEFINED
11.00	36.09	271.59	0.99	0.36	1.16	gravelly sand to sand	>90	44-46	43	UNDEFINED
11.25	36.91	261.43	0.96	0.14	1.18	gravelly sand to sand	>90	44-46	42	UNDEFINED
11.50	37.73	133.79	0.71	0.35	1.19	sand	80-90	42-44	38	UNDEFINED
11.75	38.55	21.59	0.47	2.20	1.21	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
12.00	39.37	19.19	0.30	1.55	1.23	sandy silt to clayey silt	UNDFND	UNDFD	7	1.7
12.25	40.19	17.22	0.38	2.20	1.25	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
12.50	41.01	11.20	0.18	1.63	1.27	clayey silt to silty clay	UNDFND	UNDFD	5	.8
12.75	41.83	13.45	0.21	1.53	1.29	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
13.00	42.65	30.09	0.66	2.20	1.31	sandy silt to clayey silt	UNDFND	UNDFD	12	2.7
13.25	43.47	38.33	1.21	3.15	1.33	clayey silt to silty clay	UNDFND	UNDFD	18	3.5
13.50	44.29	17.18	0.53	3.10	1.35	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
13.75	45.11	11.82	0.28	2.35	1.37	clayey silt to silty clay	UNDFND	UNDFD	6	.9
14.00	45.93	12.03	0.17	1.44	1.39	clayey silt to silty clay	UNDFND	UNDFD	6	.9

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-37
DATE : 02/02/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 9

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	532.1	1.1	0.21	SAND AND GRAVEL	57	99	4.07	--	---	0.01	--
0.3	790.2	2.1	0.27	SAND AND GRAVEL	84	99	4.09	--	---	0.01	--
0.4	540.3	2.6	0.48	SAND AND GRAVEL	63	99	2.89	--	---	0.02	--
0.6	379.7	3.3	0.87	SAND	53	99	1.63	--	---	0.03	--
0.8	192.7	3.8	1.96	SAND	47	99	0.23	--	---	0.04	--
0.9	80.7	3.3	4.09	SANDY SILT AND SILT	35	92	0.01	--	---	0.05	--
1.1	44.5	2.5	5.61	CLAY	45	99	---	--	---	0.06	2.78
1.2	39.6	1.4	3.56	SANDY SILT AND SILT	17	42	0.01	--	---	0.07	--
1.4	35.6	1.2	3.28	SANDY SILT AND SILT	15	35	0.02	--	---	0.08	--
1.6	34.8	1.1	3.05	SANDY SILT AND SILT	13	31	0.02	--	---	0.09	--
1.7	34.8	1.3	3.62	CLAYEY SILT AND SILTY CLAY	16	35	---	--	---	0.10	2.17
1.9	38.3	1.2	3.08	SANDY SILT AND SILT	15	32	0.02	--	---	0.10	--
2.1	34.2	1.5	4.51	CLAYEY SILT AND SILTY CLAY	18	38	---	--	---	0.11	2.13
2.2	36.2	1.7	4.61	CLAYEY SILT AND SILTY CLAY	19	40	---	--	---	0.12	2.26
2.4	34.8	1.8	5.05	CLAYEY SILT AND SILTY CLAY	20	42	---	--	---	0.13	2.17
2.6	33.3	1.7	5.11	CLAY	33	69	---	--	---	0.14	2.07
2.7	32.1	1.6	4.92	CLAYEY SILT AND SILTY CLAY	18	37	---	--	---	0.15	2.00
2.9	31.5	1.4	4.58	CLAYEY SILT AND SILTY CLAY	17	33	---	--	---	0.16	1.96
3.1	32.8	1.4	4.11	CLAYEY SILT AND SILTY CLAY	16	31	---	--	---	0.17	2.04
3.2	32.8	1.3	3.93	CLAYEY SILT AND SILTY CLAY	15	30	---	--	---	0.18	2.04
3.4	34.2	1.2	3.54	SANDY SILT AND SILT	15	29	0.01	--	---	0.19	--
3.5	37.5	1.2	3.28	SANDY SILT AND SILT	15	28	0.02	--	---	0.19	--
3.7	43.0	1.2	2.70	SANDY SILT AND SILT	15	27	0.04	--	---	0.20	--
3.9	43.1	1.0	2.29	SANDY SILT AND SILT	13	25	0.05	--	---	0.21	--
4.0	35.8	0.8	2.12	SANDY SILT AND SILT	11	20	0.05	--	---	0.22	--
4.2	26.0	0.7	2.50	SANDY SILT AND SILT	9	17	0.03	--	---	0.23	--
4.3	21.6	0.6	2.59	SANDY SILT AND SILT	8	15	0.02	--	---	0.24	--
4.5	23.3	0.5	2.01	SANDY SILT AND SILT	8	14	0.04	--	---	0.25	--
4.7	24.0	0.5	1.92	SANDY SILT AND SILT	8	14	0.04	40	44	0.26	--
4.8	25.2	0.5	1.83	SANDY SILT AND SILT	8	14	0.05	40	44	0.27	--
5.0	24.7	0.5	1.86	SANDY SILT AND SILT	8	14	0.04	40	43	0.27	--
5.2	24.7	0.5	1.99	SANDY SILT AND SILT	8	14	0.04	40	43	0.28	--
5.3	24.0	0.5	2.09	SANDY SILT AND SILT	8	14	0.04	39	42	0.29	--
5.5	23.3	0.5	2.23	SANDY SILT AND SILT	8	14	0.03	39	41	0.30	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	23.0	0.6	2.56	SANDY SILT AND SILT	9	14	0.03	39	40	0.31	--
5.8	23.3	0.6	2.66	SANDY SILT AND SILT	9	15	0.02	39	40	0.32	--
6.0	22.6	0.6	2.70	SANDY SILT AND SILT	9	14	0.02	39	39	0.33	--
6.1	22.4	0.6	2.77	SANDY SILT AND SILT	9	14	0.02	38	38	0.34	--
6.3	22.0	0.6	2.72	SANDY SILT AND SILT	9	14	0.02	38	37	0.35	--
6.5	21.3	0.6	2.78	SANDY SILT AND SILT	9	13	0.02	38	35	0.36	--
6.6	20.7	0.6	2.80	SANDY SILT AND SILT	8	13	0.02	38	34	0.36	--
6.8	19.6	0.6	2.90	SANDY SILT AND SILT	8	13	0.01	37	33	0.37	--
7.0	19.2	0.6	3.03	SANDY SILT AND SILT	8	13	0.01	37	32	0.38	--
7.1	19.9	0.6	2.87	SANDY SILT AND SILT	8	13	0.02	37	32	0.39	--
7.3	19.9	0.6	2.82	SANDY SILT AND SILT	8	12	0.02	37	32	0.40	--
7.4	19.3	0.6	2.84	SANDY SILT AND SILT	8	12	0.02	37	31	0.41	--
7.6	19.3	0.5	2.65	SANDY SILT AND SILT	8	11	0.02	37	30	0.42	--
7.8	18.8	0.4	2.34	SANDY SILT AND SILT	7	10	0.03	36	29	0.43	--
7.9	19.0	0.4	2.22	SANDY SILT AND SILT	7	10	0.03	36	29	0.44	--
8.1	21.6	0.5	2.13	SANDY SILT AND SILT	8	11	0.03	37	32	0.45	--
8.3	22.5	0.5	2.14	SANDY SILT AND SILT	8	11	0.03	37	32	0.45	--
8.4	21.9	0.5	2.37	SANDY SILT AND SILT	8	11	0.03	37	31	0.46	--
8.6	21.3	0.6	2.78	SANDY SILT AND SILT	9	12	0.02	36	30	0.47	--
8.8	21.9	0.6	2.83	SANDY SILT AND SILT	9	12	0.02	37	31	0.48	--
8.9	20.7	0.7	3.15	SANDY SILT AND SILT	9	13	0.01	36	29	0.49	--
9.1	20.5	0.6	3.02	SANDY SILT AND SILT	9	12	0.01	36	28	0.50	--
9.3	18.7	0.6	3.00	SANDY SILT AND SILT	8	11	0.01	36	25	0.50	--
9.4	17.9	0.5	2.91	SANDY SILT AND SILT	8	11	0.01	35	24	0.50	--
9.6	17.3	0.5	2.84	SANDY SILT AND SILT	7	10	0.01	35	23	0.51	--
9.7	16.5	0.4	2.67	SANDY SILT AND SILT	7	9	0.02	35	22	0.51	--
9.9	16.1	0.4	2.74	SANDY SILT AND SILT	7	9	0.01	35	21	0.52	--
10.1	16.4	0.4	2.62	SANDY SILT AND SILT	7	9	0.02	35	22	0.52	--
10.2	16.2	0.4	2.48	SANDY SILT AND SILT	7	9	0.02	35	21	0.52	--
10.4	16.2	0.4	2.46	SANDY SILT AND SILT	7	9	0.02	35	21	0.53	--
10.6	16.5	0.4	2.60	SANDY SILT AND SILT	7	9	0.02	35	21	0.53	--
10.7	15.9	0.5	2.84	SANDY SILT AND SILT	7	9	0.01	34	20	0.54	--
10.9	15.2	0.4	2.89	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.54	0.91
11.1	13.7	0.4	2.84	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.54	0.82
11.2	13.0	0.4	3.01	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.55	0.77
11.4	14.5	0.5	3.18	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.55	0.86
11.5	15.9	0.5	3.08	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.56	0.95
11.7	19.9	0.6	3.12	SANDY SILT AND SILT	9	12	0.01	35	24	0.56	--
11.9	24.0	0.7	2.71	SANDY SILT AND SILT	9	12	0.02	36	29	0.56	--
12.0	34.8	0.7	2.04	SANDY SILT AND SILT	11	14	0.05	38	40	0.57	--
12.2	44.3	0.5	1.13	SILTY SAND	12	16	0.08	39	46	0.57	--
12.4	44.1	0.8	1.84	SILTY SAND	13	17	0.06	39	45	0.58	--
12.5	45.0	0.7	1.65	SILTY SAND	13	17	0.07	39	46	0.58	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	49.1	0.4	0.88	SILTY SAND	13	17	0.10	40	48	0.58	--
12.9	58.1	0.4	0.65	SAND	11	15	0.70	40	53	0.59	--
13.0	64.6	0.3	0.51	SAND	11	14	1.10	41	56	0.59	--
13.2	70.5	0.3	0.41	SAND	11	14	1.33	41	59	0.59	--
13.4	72.4	0.3	0.43	SAND	11	14	1.32	41	60	0.60	--
13.5	77.8	0.3	0.40	SAND	12	15	1.40	42	62	0.60	--
13.7	79.4	0.3	0.34	SAND	12	15	1.50	42	63	0.61	--
13.8	75.7	0.2	0.28	SAND	11	14	1.58	41	61	0.61	--
14.0	71.5	0.2	0.28	SAND	10	13	1.55	41	59	0.61	--
14.2	61.9	0.2	0.37	SAND	10	12	1.32	40	54	0.62	--
14.3	47.3	0.7	1.38	SILTY SAND	13	17	0.08	39	46	0.62	--
14.5	26.7	0.7	2.59	SANDY SILT AND SILT	10	12	0.03	36	30	0.63	--
14.7	16.9	0.5	2.79	SANDY SILT AND SILT	7	9	0.01	34	20	0.63	--
14.8	13.2	0.5	4.01	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.63	0.78
15.0	25.2	0.7	2.82	SANDY SILT AND SILT	10	12	0.02	36	27	0.64	--
15.2	58.0	1.2	2.05	SILTY SAND	17	21	0.06	40	51	0.64	--
15.3	76.3	1.4	1.86	SILTY SAND	21	26	0.08	41	60	0.65	--
15.5	39.6	1.2	3.08	SANDY SILT AND SILT	15	18	0.03	38	40	0.65	--
15.7	25.1	0.8	3.19	SANDY SILT AND SILT	11	13	0.01	36	26	0.65	--
15.8	17.2	0.6	3.38	CLAYEY SILT AND SILTY CLAY	8	10	---	--	---	0.66	1.02
16.0	17.0	0.5	3.11	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.66	1.01
16.2	17.8	0.5	2.98	SANDY SILT AND SILT	8	10	0.01	34	20	0.67	--
16.3	14.5	0.4	2.91	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.67	0.85
16.5	10.8	0.3	2.49	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.67	0.62
16.7	9.0	0.2	1.89	SANDY SILT AND SILT	4	4	0.02	31	20	0.68	--
16.8	8.2	0.1	1.47	SANDY SILT AND SILT	3	4	0.02	30	20	0.68	--
17.0	7.7	0.2	2.45	CLAYEY SILT AND SILTY CLAY	4	4	---	--	---	0.69	0.43
17.2	8.5	0.8	9.60	CLAY	9	10	---	--	---	0.69	0.47
17.3	70.2	1.9	2.68	SANDY SILT AND SILT	22	26	0.05	40	56	0.69	--
17.5	60.7	2.5	4.09	CLAYEY SILT AND SILTY CLAY	27	33	---	--	---	0.70	3.73
17.7	51.3	2.4	4.60	CLAYEY SILT AND SILTY CLAY	26	31	---	--	---	0.70	3.15
17.8	47.4	2.1	4.34	CLAYEY SILT AND SILTY CLAY	23	27	---	--	---	0.70	2.90
18.0	32.8	1.5	4.45	CLAYEY SILT AND SILTY CLAY	17	20	---	--	---	0.71	1.99
18.1	20.7	0.9	4.26	CLAYEY SILT AND SILTY CLAY	11	13	---	--	---	0.71	1.23
18.3	15.9	0.5	3.15	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.72	0.93
18.5	15.1	0.3	1.72	SANDY SILT AND SILT	5	6	0.03	33	20	0.72	--
18.6	11.4	0.1	1.23	SANDY SILT AND SILT	4	5	0.03	31	20	0.72	--
18.8	10.2	0.3	3.14	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.73	0.57
19.0	11.8	0.5	4.57	CLAY	12	14	---	--	---	0.73	0.67
19.1	24.7	0.7	3.00	SANDY SILT AND SILT	10	12	0.02	35	23	0.74	--
19.3	28.1	1.0	3.52	CLAYEY SILT AND SILTY CLAY	13	15	---	--	---	0.74	1.69
19.5	36.6	0.8	2.10	SANDY SILT AND SILT	11	13	0.05	37	34	0.74	--
19.6	43.7	0.9	1.99	SILTY SAND	13	15	0.06	38	39	0.75	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	25.4	0.6	2.16	SANDY SILT AND SILT	9	10	0.04	35	23	0.75	--
19.9	15.1	0.4	2.78	SANDY SILT AND SILT	7	8	0.01	33	20	0.76	--
20.1	14.0	0.3	2.36	SANDY SILT AND SILT	6	7	0.02	32	20	0.76	--
20.3	13.6	0.3	2.21	SANDY SILT AND SILT	5	6	0.02	32	20	0.76	--
20.4	13.1	0.3	2.06	SANDY SILT AND SILT	5	6	0.02	32	20	0.77	--
20.6	13.1	0.3	2.37	SANDY SILT AND SILT	5	6	0.02	32	20	0.77	--
20.8	12.4	0.3	2.01	SANDY SILT AND SILT	5	6	0.02	31	20	0.78	--
20.9	11.1	0.2	2.17	SANDY SILT AND SILT	5	5	0.02	31	20	0.78	--
21.1	11.7	0.3	2.75	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.78	0.66
21.3	12.4	0.4	2.83	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.79	0.70
21.4	11.7	0.3	2.90	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.79	0.66
21.6	11.7	0.3	2.22	SANDY SILT AND SILT	5	5	0.02	31	20	0.79	--
21.8	11.1	0.2	1.90	SANDY SILT AND SILT	4	5	0.02	31	20	0.80	--
21.9	9.7	0.2	1.75	SANDY SILT AND SILT	4	4	0.02	30	20	0.80	--
22.1	9.8	0.2	1.74	SANDY SILT AND SILT	4	4	0.02	30	20	0.81	--
22.2	10.5	0.2	1.81	SANDY SILT AND SILT	4	5	0.02	30	20	0.81	--
22.4	12.2	0.3	2.38	SANDY SILT AND SILT	5	6	0.01	31	20	0.81	--
22.6	15.2	0.4	2.70	SANDY SILT AND SILT	7	7	0.01	32	20	0.82	--
22.7	17.2	0.5	2.80	SANDY SILT AND SILT	7	8	0.01	33	20	0.82	--
22.9	15.5	0.5	2.91	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.83	0.89
23.1	14.5	0.4	2.84	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.83	0.82
23.2	12.8	0.3	2.26	SANDY SILT AND SILT	5	6	0.02	31	20	0.83	--
23.4	11.1	0.2	1.81	SANDY SILT AND SILT	4	5	0.02	30	20	0.84	--
23.6	10.6	0.1	1.32	SANDY SILT AND SILT	4	4	0.03	30	20	0.84	--
23.7	10.1	0.2	1.98	SANDY SILT AND SILT	4	5	0.02	30	20	0.85	--
23.9	11.4	0.3	2.37	SANDY SILT AND SILT	5	5	0.01	31	20	0.85	--
24.0	15.3	0.5	3.34	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.85	0.87
24.2	34.8	0.7	1.98	SILTY SAND	11	12	0.05	36	29	0.86	--
24.4	58.6	0.5	0.77	SAND	13	14	0.50	39	44	0.86	--
24.5	58.0	0.9	1.55	SILTY SAND	16	17	0.08	38	44	0.86	--
24.7	53.3	0.8	1.58	SILTY SAND	15	16	0.08	38	41	0.87	--
24.9	64.1	0.5	0.76	SAND	13	14	0.64	39	47	0.87	--
25.0	71.2	0.6	0.80	SAND	14	15	0.71	39	50	0.88	--
25.2	66.1	0.6	0.88	SAND	14	15	0.48	39	48	0.88	--
25.4	57.8	0.9	1.63	SILTY SAND	16	17	0.08	38	43	0.88	--
25.5	32.8	0.8	2.29	SANDY SILT AND SILT	11	12	0.04	36	26	0.89	--
25.7	19.9	0.7	3.27	CLAYEY SILT AND SILTY CLAY	9	10	---	--	---	0.89	1.15
25.9	18.5	0.4	2.32	SANDY SILT AND SILT	7	7	0.03	33	20	0.90	--
26.0	19.4	0.5	2.37	SANDY SILT AND SILT	7	8	0.03	33	20	0.90	--
26.2	19.2	0.4	2.14	SANDY SILT AND SILT	7	7	0.03	33	20	0.90	--
26.3	18.0	0.4	1.95	SANDY SILT AND SILT	6	7	0.03	32	20	0.91	--
26.5	19.9	0.4	1.91	SANDY SILT AND SILT	7	7	0.04	33	20	0.91	--
26.7	23.3	0.6	2.49	SANDY SILT AND SILT	9	9	0.03	34	20	0.92	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	28.1	0.7	2.60	SANDY SILT AND SILT	10	11	0.03	35	20	0.92	--
27.0	28.9	0.9	3.08	SANDY SILT AND SILT	12	12	0.02	35	21	0.92	--
27.2	31.2	0.8	2.63	SANDY SILT AND SILT	11	12	0.03	35	23	0.93	--
27.3	29.5	0.7	2.21	SANDY SILT AND SILT	10	10	0.04	35	21	0.93	--
27.5	31.5	0.6	1.88	SILTY SAND	10	10	0.05	35	23	0.94	--
27.7	33.7	0.8	2.29	SANDY SILT AND SILT	11	11	0.04	35	25	0.94	--
27.8	31.5	1.0	3.02	SANDY SILT AND SILT	12	13	0.02	35	23	0.94	--
28.0	27.3	0.9	3.15	SANDY SILT AND SILT	11	12	0.02	34	20	0.95	--
28.1	21.9	0.7	2.96	SANDY SILT AND SILT	9	9	0.02	33	20	0.95	--
28.3	17.3	0.5	2.89	SANDY SILT AND SILT	8	8	0.01	32	20	0.95	--
28.5	15.2	0.5	2.97	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.96	0.85
28.6	12.6	0.4	3.09	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.96	0.69
28.8	11.2	0.4	3.85	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.97	0.60
29.0	10.0	0.4	3.99	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.97	0.53
29.1	11.1	0.4	3.71	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.97	0.59
29.3	12.4	0.5	3.71	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.98	0.67
29.5	11.8	0.4	3.55	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.98	0.64
29.6	11.0	0.3	3.09	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.99	0.59
29.8	10.4	0.3	2.41	SANDY SILT AND SILT	5	5	0.01	29	20	0.99	--
30.0	9.8	0.2	2.15	SANDY SILT AND SILT	4	4	0.01	29	20	0.99	--
30.1	9.7	0.2	2.17	SANDY SILT AND SILT	4	4	0.01	29	20	1.00	--
30.3	10.4	0.2	1.93	SANDY SILT AND SILT	4	4	0.02	29	20	1.00	--
30.4	10.7	0.3	2.44	SANDY SILT AND SILT	5	5	0.01	29	20	1.01	--
30.6	13.7	0.4	2.62	SANDY SILT AND SILT	6	6	0.01	31	20	1.01	--
30.8	17.2	0.8	4.48	CLAYEY SILT AND SILTY CLAY	10	10	---	--	---	1.01	0.97
30.9	37.1	1.2	3.23	SANDY SILT AND SILT	15	15	0.02	35	25	1.02	--
31.1	64.1	1.1	1.72	SILTY SAND	18	18	0.08	38	42	1.02	--
31.3	92.7	0.9	0.93	SAND	18	17	0.77	40	56	1.02	--
31.4	103.5	0.5	0.43	SAND	15	15	1.46	40	60	1.03	--
31.6	98.1	0.5	0.50	SAND	15	15	1.36	40	58	1.03	--
31.8	68.9	1.0	1.45	SILTY SAND	19	18	0.09	38	44	1.04	--
31.9	42.9	1.0	2.29	SANDY SILT AND SILT	13	13	0.05	36	30	1.04	--
32.1	30.9	0.9	2.98	SANDY SILT AND SILT	12	12	0.02	34	20	1.04	--
32.3	21.9	0.6	2.55	SANDY SILT AND SILT	8	8	0.02	33	20	1.05	--
32.4	17.1	0.4	2.45	SANDY SILT AND SILT	7	7	0.02	32	20	1.05	--
32.6	17.3	0.5	3.06	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.06	0.97
32.7	23.3	0.8	3.61	CLAYEY SILT AND SILTY CLAY	11	11	---	--	---	1.06	1.34
32.9	32.0	1.2	3.68	CLAYEY SILT AND SILTY CLAY	15	14	---	--	---	1.06	1.89
33.1	32.5	1.4	4.25	CLAYEY SILT AND SILTY CLAY	16	16	---	--	---	1.07	1.92
33.2	29.1	1.5	5.16	CLAY	29	28	---	--	---	1.07	1.70
33.4	24.0	1.4	5.63	CLAY	24	23	---	--	---	1.08	1.38
33.6	16.5	1.0	5.94	CLAY	16	16	---	--	---	1.08	0.92
33.7	12.4	0.5	4.19	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.08	0.66

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	10.0	0.3	2.69	CLAYEY SILT AND SILTY CLAY	5	4	---	--	---	1.09	0.51
34.1	9.4	0.3	2.78	CLAYEY SILT AND SILTY CLAY	4	4	---	--	---	1.09	0.47
34.2	12.4	0.2	1.53	SANDY SILT AND SILT	4	4	0.03	30	20	1.10	--
34.4	11.7	0.1	1.19	SANDY SILT AND SILT	4	4	0.04	29	20	1.10	--
34.5	9.1	0.1	1.10	SANDY SILT AND SILT	3	3	0.03	28	20	1.10	--
34.7	9.7	0.2	1.55	SANDY SILT AND SILT	4	4	0.02	28	20	1.11	--
34.9	10.3	0.2	1.45	SANDY SILT AND SILT	4	4	0.03	29	20	1.11	--
35.0	10.5	0.2	1.53	SANDY SILT AND SILT	4	4	0.03	29	20	1.11	--
35.2	10.4	0.2	1.83	SANDY SILT AND SILT	4	4	0.02	29	20	1.12	--
35.4	11.3	0.2	1.78	SANDY SILT AND SILT	4	4	0.02	29	20	1.12	--
35.5	11.1	0.2	1.72	SANDY SILT AND SILT	4	4	0.02	29	20	1.13	--
35.7	10.8	0.1	1.21	SANDY SILT AND SILT	4	4	0.03	29	20	1.13	--
35.9	11.1	0.1	1.27	SANDY SILT AND SILT	4	4	0.03	29	20	1.13	--
36.0	11.1	0.2	1.36	SANDY SILT AND SILT	4	4	0.03	29	20	1.14	--
36.2	12.4	0.2	1.77	SANDY SILT AND SILT	5	4	0.03	30	20	1.14	--
36.4	14.5	0.5	3.32	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.15	0.78
36.5	19.9	0.3	1.41	SANDY SILT AND SILT	6	6	0.05	32	20	1.15	--
36.7	22.0	0.7	2.95	SANDY SILT AND SILT	9	9	0.02	32	20	1.15	--
36.8	23.8	0.9	3.95	CLAYEY SILT AND SILTY CLAY	12	11	---	--	---	1.16	1.36
37.0	74.6	1.0	1.30	SILTY SAND	20	18	0.10	38	44	1.16	--
37.2	109.9	1.3	1.14	SAND	22	21	0.64	40	60	1.17	--
37.3	103.0	2.3	2.24	SILTY SAND	29	27	0.07	40	56	1.17	--
37.5	79.6	2.5	3.13	SANDY SILT AND SILT	27	25	0.04	39	46	1.17	--
37.7	51.9	2.6	5.05	CLAYEY SILT AND SILTY CLAY	28	26	---	--	---	1.18	3.11
37.8	41.0	2.1	5.13	CLAYEY SILT AND SILTY CLAY	23	22	---	--	---	1.18	2.43
38.0	26.8	1.2	4.29	CLAYEY SILT AND SILTY CLAY	14	13	---	--	---	1.19	1.54
38.2	17.8	0.6	3.59	CLAYEY SILT AND SILTY CLAY	9	8	---	--	---	1.19	0.98
38.3	15.0	0.6	4.00	CLAYEY SILT AND SILTY CLAY	8	7	---	--	---	1.19	0.81
38.5	14.1	0.5	3.55	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.20	0.75
38.6	13.1	0.5	3.59	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.20	0.69
38.8	12.4	0.3	2.51	SANDY SILT AND SILT	5	5	0.01	29	20	1.20	--
39.0	12.5	0.3	2.17	SANDY SILT AND SILT	5	5	0.02	29	20	1.21	--
39.1	15.4	0.3	1.88	SANDY SILT AND SILT	6	5	0.03	30	20	1.21	--
39.3	15.1	0.3	2.05	SANDY SILT AND SILT	6	5	0.03	30	20	1.22	--
39.5	13.9	0.3	2.09	SANDY SILT AND SILT	5	5	0.02	30	20	1.22	--
39.6	12.3	0.2	1.87	SANDY SILT AND SILT	5	4	0.02	29	20	1.22	--
39.8	11.1	0.2	1.63	SANDY SILT AND SILT	4	4	0.03	29	20	1.23	--
40.0	11.0	0.2	1.36	SANDY SILT AND SILT	4	4	0.03	29	20	1.23	--
40.1	11.1	0.2	1.35	SANDY SILT AND SILT	4	4	0.03	29	20	1.24	--
40.3	11.8	0.2	1.44	SANDY SILT AND SILT	4	4	0.03	29	20	1.24	--
40.5	12.2	0.2	1.55	SANDY SILT AND SILT	4	4	0.03	29	20	1.24	--
40.6	13.0	0.2	1.38	SANDY SILT AND SILT	5	4	0.04	29	20	1.25	--
40.8	12.5	0.1	1.12	SANDY SILT AND SILT	4	4	0.04	29	20	1.25	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	11.7	0.1	1.02	SANDY SILT AND SILT	4	4	0.04	29	20	1.26	--
41.1	11.7	0.1	1.03	SANDY SILT AND SILT	4	4	0.04	29	20	1.26	--
41.3	12.4	0.1	0.81	SANDY SILT AND SILT	4	4	0.04	29	20	1.26	--
41.4	12.4	0.1	1.13	SANDY SILT AND SILT	4	4	0.04	29	20	1.27	--
41.6	15.4	0.2	1.56	SANDY SILT AND SILT	5	5	0.04	30	20	1.27	--
41.8	19.8	0.5	2.27	SANDY SILT AND SILT	7	7	0.03	31	20	1.27	--
41.9	17.8	0.4	2.36	SANDY SILT AND SILT	7	6	0.02	31	20	1.28	--
42.1	18.5	0.3	1.57	SANDY SILT AND SILT	6	5	0.04	31	20	1.28	--
42.3	17.2	0.2	1.16	SANDY SILT AND SILT	5	5	0.05	31	20	1.29	--
42.4	22.7	0.6	2.69	SANDY SILT AND SILT	9	8	0.02	32	20	1.29	--
42.6	42.4	1.1	2.48	SANDY SILT AND SILT	14	12	0.04	35	23	1.29	--
42.7	34.2	1.0	3.04	SANDY SILT AND SILT	13	12	0.02	34	20	1.30	--
42.9	29.5	1.1	3.57	CLAYEY SILT AND SILTY CLAY	13	12	---	--	---	1.30	1.69
43.1	28.1	0.9	3.06	SANDY SILT AND SILT	11	10	0.02	33	20	1.31	--
43.2	23.5	0.8	3.24	SANDY SILT AND SILT	10	9	0.01	32	20	1.31	--
43.4	20.5	0.6	2.92	SANDY SILT AND SILT	9	8	0.02	31	20	1.31	--
43.6	17.9	0.5	2.52	SANDY SILT AND SILT	7	6	0.02	31	20	1.32	--
43.7	17.2	0.4	2.15	SANDY SILT AND SILT	6	6	0.03	30	20	1.32	--
43.9	17.2	0.4	2.10	SANDY SILT AND SILT	6	6	0.03	30	20	1.33	--
44.1	17.1	0.4	2.22	SANDY SILT AND SILT	6	6	0.03	30	20	1.33	--
44.2	16.6	0.4	2.29	SANDY SILT AND SILT	6	6	0.02	30	20	1.33	--
44.4	15.2	0.4	2.31	SANDY SILT AND SILT	6	5	0.02	30	20	1.34	--
44.6	14.5	0.3	2.01	SANDY SILT AND SILT	5	5	0.03	29	20	1.34	--
44.7	13.9	0.4	3.17	CLAYEY SILT AND SILTY CLAY	7	6	---	--	---	1.35	0.71
44.9	25.3	0.9	3.63	CLAYEY SILT AND SILTY CLAY	12	10	---	--	---	1.35	1.43
45.0	106.2	1.2	1.17	SAND	22	19	0.57	39	53	1.35	--
45.2	160.6	1.6	0.98	SAND	27	24	1.03	41	70	1.36	--
45.4	203.5	2.3	1.14	SAND	35	31	0.99	42	79	1.36	--
45.5	238.9	4.0	1.67	SAND	48	42	0.62	43	86	1.36	--
45.7	257.0	4.5	1.73	SAND	52	45	0.61	44	89	1.37	--
45.9	304.9	4.4	1.46	SAND	53	46	0.96	44	95	1.37	--
46.0	329.3	5.6	1.69	SAND	62	53	0.80	45	98	1.38	--
46.2	342.9	5.0	1.45	SAND	58	50	1.04	45	100	1.38	--
46.4	368.0	3.6	0.99	SAND	53	46	1.50	45	100	1.38	--
46.5	350.2	1.7	0.48	SAND	45	38	1.93	45	100	1.39	--
46.7	297.3	2.4	0.80	SAND	43	36	1.54	44	94	1.39	--
46.8	231.2	4.6	1.99	SAND	54	46	0.31	43	84	1.40	--
47.0	151.8	4.9	3.20	SILTY SAND	47	40	0.05	41	67	1.40	--
47.2	185.2	4.8	2.61	SILTY SAND	52	44	0.08	42	75	1.40	--
47.3	152.5	4.3	2.81	SILTY SAND	45	38	0.07	41	67	1.41	--
47.5	98.4	4.1	4.18	SANDY SILT AND SILT	42	36	0.01	39	49	1.41	--
47.7	56.9	2.4	4.15	CLAYEY SILT AND SILTY CLAY	26	22	---	--	---	1.42	3.39
47.8	36.0	1.1	2.97	SANDY SILT AND SILT	14	11	0.03	34	20	1.42	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
48.0	33.5	0.9	2.62	SANDY SILT AND SILT	12	10	0.03	33	20	1.42	--
48.2	35.4	1.0	2.88	SANDY SILT AND SILT	13	11	0.03	34	20	1.43	--
48.3	35.9										
48.5	35.9										

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-38
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/09/90/07:56
Cone Used :IV
Water table (meters) : 2.2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.13	0.43	27.16	0.47	1.72	0.01	sandy silt to clayey silt	UNDFND	UNDFD	10	2.7
0.25	0.82	27.00	1.12	4.14	0.03	silty clay to clay	UNDFND	UNDFD	17	2.6
0.38	1.25	17.38	1.75	10.08	0.06	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.50	1.64	14.80	1.57	10.62	0.08	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.63	2.07	16.56	1.42	8.58	0.10	undefined	UNDFND	UNDFD	UDF	UNDEFINED
0.75	2.46	26.38	1.49	5.65	0.12	clay	UNDFND	UNDFD	25	2.6
0.87	2.85	43.34	1.23	2.83	0.15	sandy silt to clayey silt	UNDFND	UNDFD	17	4.3
1.00	3.28	91.76	1.71	1.86	0.17	silty sand to sandy silt	80-90	>48	29	UNDEFINED
1.13	3.71	104.08	2.40	2.30	0.19	silty sand to sandy silt	>90	>48	33	UNDEFINED
1.25	4.10	99.58	2.44	2.45	0.21	silty sand to sandy silt	80-90	46-48	32	UNDEFINED
1.37	4.49	87.18	2.99	3.43	0.24	sandy silt to clayey silt	UNDFND	UNDFD	33	8.6
1.50	4.92	65.02	3.34	5.14	0.26	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
1.62	5.31	44.96	2.30	5.12	0.28	clay	UNDFND	UNDFD	43	4.4
1.75	5.74	33.56	1.35	4.04	0.30	silty clay to clay	UNDFND	UNDFD	21	3.3
1.87	6.14	25.30	0.83	3.20	0.33	clayey silt to silty clay	UNDFND	UNDFD	12	2.5
2.00	6.56	18.68	0.67	3.59	0.35	silty clay to clay	UNDFND	UNDFD	12	1.8
2.12	6.96	14.64	0.48	3.29	0.37	silty clay to clay	UNDFND	UNDFD	9	1.4
2.25	7.38	17.48	0.45	2.57	0.39	clayey silt to silty clay	UNDFND	UNDFD	8	1.7
2.38	7.81	13.06	0.50	3.82	0.41	clay	UNDFND	UNDFD	13	1.2
2.50	8.20	14.78	0.51	3.48	0.42	silty clay to clay	UNDFND	UNDFD	9	1.4
2.62	8.60	15.74	0.45	2.87	0.43	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
2.75	9.02	13.78	0.56	4.04	0.43	clay	UNDFND	UNDFD	13	1.3
2.87	9.42	15.88	0.57	3.58	0.44	silty clay to clay	UNDFND	UNDFD	10	1.5
3.00	9.84	29.40	1.19	4.03	0.45	silty clay to clay	UNDFND	UNDFD	19	2.8
3.12	10.24	40.10	1.29	3.21	0.46	clayey silt to silty clay	UNDFND	UNDFD	19	3.9
3.25	10.66	26.40	0.70	2.64	0.47	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
3.37	11.06	11.92	0.35	2.92	0.48	silty clay to clay	UNDFND	UNDFD	8	1.1
3.50	11.48	11.68	0.33	2.87	0.49	silty clay to clay	UNDFND	UNDFD	7	1.1
3.63	11.91	13.84	0.40	2.90	0.50	silty clay to clay	UNDFND	UNDFD	9	1.3
3.75	12.30	13.50	0.42	3.13	0.51	silty clay to clay	UNDFND	UNDFD	9	1.2
3.87	12.70	12.50	0.39	3.14	0.52	silty clay to clay	UNDFND	UNDFD	8	1.1
4.00	13.12	11.54	0.38	3.31	0.53	silty clay to clay	UNDFND	UNDFD	7	1.0
4.12	13.52	13.90	-0.30	-2.13	0.54	undefined	UNDFND	UNDFD	UDF	UNDEFINED
4.25	13.94	15.98	-0.19	-1.22	0.55	undefined	UNDFND	UNDFD	UDF	UNDEFINED
4.37	14.34	17.84	0.36	2.02	0.56	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
4.50	14.76	12.06	-0.03	-0.25	0.57	undefined	UNDFND	UNDFD	UDF	UNDEFINED
4.62	15.16	13.22	0.15	1.10	0.58	sandy silt to clayey silt	UNDFND	UNDFD	5	1.2
4.75	15.58	11.22	0.19	1.72	0.59	clayey silt to silty clay	UNDFND	UNDFD	5	1.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-38 Page No. 2

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
4.87	15.98	11.06	0.27	2.45	0.60	clayey silt to silty clay	UNDFND	UNDFD	5	1.0
5.00	16.40	11.18	0.33	2.97	0.61	silty clay to clay	UNDFND	UNDFD	7	1.0
5.12	16.80	12.88	0.29	2.24	0.62	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
5.25	17.22	45.70	0.88	1.93	0.63	sandy silt to clayey silt	UNDFND	UNDFD	18	4.4
5.38	17.65	66.84	0.75	1.13	0.64	silty sand to sandy silt	60-70	40-42	21	UNDEFINED
5.50	18.04	68.16	0.64	0.94	0.65	sand to silty sand	60-70	40-42	16	UNDEFINED
5.62	18.44	45.54	0.52	1.13	0.66	silty sand to sandy silt	50-60	38-40	15	UNDEFINED
5.75	18.86	12.76	0.27	2.09	0.67	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
5.87	19.26	8.56	0.21	2.47	0.68	silty clay to clay	UNDFND	UNDFD	5	.7
6.00	19.69	9.18	0.27	2.98	0.69	silty clay to clay	UNDFND	UNDFD	6	.8
6.12	20.08	7.88	0.23	2.93	0.70	silty clay to clay	UNDFND	UNDFD	5	.6
6.25	20.51	7.70	0.21	2.71	0.71	silty clay to clay	UNDFND	UNDFD	5	.6
6.38	20.93	9.20	0.26	2.85	0.72	silty clay to clay	UNDFND	UNDFD	6	.8
6.50	21.33	14.94	0.42	2.82	0.73	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
6.63	21.75	20.80	0.59	2.83	0.74	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
6.75	22.15	18.36	0.57	3.03	0.75	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
6.88	22.57	15.14	0.51	3.34	0.76	silty clay to clay	UNDFND	UNDFD	10	1.3
7.00	22.97	17.52	0.64	3.67	0.77	silty clay to clay	UNDFND	UNDFD	11	1.6
7.12	23.36	41.16	0.90	2.19	0.78	sandy silt to clayey silt	UNDFND	UNDFD	16	3.9
7.25	23.79	101.82	0.64	0.63	0.79	sand to silty sand	70-80	42-44	24	UNDEFINED
7.37	24.18	106.88	0.48	0.45	0.80	sand	70-80	42-44	20	UNDEFINED
7.50	24.61	53.30	0.75	1.41	0.81	silty sand to sandy silt	50-60	38-40	17	UNDEFINED
7.62	25.00	13.44	0.38	2.82	0.81	clayey silt to silty clay	UNDFND	UNDFD	6	1.2
7.75	25.43	8.18	0.19	2.29	0.82	silty clay to clay	UNDFND	UNDFD	5	.6
7.88	25.85	9.96	0.23	2.34	0.83	silty clay to clay	UNDFND	UNDFD	6	.8
8.00	26.25	12.64	0.30	2.39	0.84	clayey silt to silty clay	UNDFND	UNDFD	6	1.1
8.13	26.67	15.86	0.42	2.67	0.85	clayey silt to silty clay	UNDFND	UNDFD	8	1.4
8.25	27.07	19.80	0.69	3.46	0.86	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
8.38	27.49	18.18	0.71	3.92	0.87	silty clay to clay	UNDFND	UNDFD	12	1.6
8.50	27.89	14.76	0.50	3.38	0.88	silty clay to clay	UNDFND	UNDFD	9	1.3
8.62	28.28	12.78	0.37	2.86	0.89	silty clay to clay	UNDFND	UNDFD	8	1.1
8.75	28.71	11.76	0.35	2.94	0.90	silty clay to clay	UNDFND	UNDFD	8	1.0
8.87	29.10	10.40	0.38	3.61	0.91	clay	UNDFND	UNDFD	10	.8
9.00	29.53	15.14	0.52	3.46	0.92	silty clay to clay	UNDFND	UNDFD	10	1.3
9.12	29.92	22.98	1.01	4.39	0.93	clay	UNDFND	UNDFD	22	2.1
9.25	30.35	17.36	0.38	2.19	0.94	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
9.37	30.74	14.96	0.54	3.58	0.95	silty clay to clay	UNDFND	UNDFD	10	1.3
9.50	31.17	106.66	0.63	0.59	0.96	sand to silty sand	60-70	40-42	26	UNDEFINED
9.63	31.59	151.66	1.03	0.68	0.97	sand	70-80	42-44	29	UNDEFINED
9.75	31.99	184.84	0.71	0.38	0.98	sand	80-90	42-44	35	UNDEFINED
9.88	32.41	178.66	0.46	0.26	0.99	sand	80-90	42-44	34	UNDEFINED
10.00	32.81	179.98	0.47	0.26	1.00	sand	80-90	42-44	34	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

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PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT9-38 Page No. 3

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
10.12	33.20	255.16	0.69	0.27	1.01	gravelly sand to sand	>90	44-46	41	UNDEFINED
10.25	33.63	352.02	1.46	0.42	1.02	gravelly sand to sand	>90	46-48	>50	UNDEFINED
10.37	34.02	384.08	1.31	0.34	1.03	gravelly sand to sand	>90	46-48	>50	UNDEFINED
10.50	34.45	335.72	1.10	0.33	1.04	gravelly sand to sand	>90	46-48	>50	UNDEFINED
10.62	34.84	230.00	1.66	0.72	1.05	sand	80-90	44-46	44	UNDEFINED
10.75	35.27	67.22	2.50	3.72	1.06	clayey silt to silty clay	UNDFND	UNDFD	32	6.5
10.87	35.66	44.62	1.11	2.48	1.07	sandy silt to clayey silt	UNDFND	UNDFD	17	4.2
11.00	36.09	39.30	1.16	2.94	1.08	sandy silt to clayey silt	UNDFND	UNDFD	15	3.7
11.13	36.52	40.58	1.50	3.70	1.09	clayey silt to silty clay	UNDFND	UNDFD	19	3.8
11.25	36.91	69.26	2.28	3.29	1.10	sandy silt to clayey silt	UNDFND	UNDFD	27	6.7
11.37	37.30	134.74	3.12	2.32	1.11	silty sand to sandy silt	70-80	40-42	43	UNDEFINED
11.50	37.73	77.94	3.73	4.78	1.12	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
11.62	38.12	31.58	1.51	4.78	1.13	clay	UNDFND	UNDFD	30	2.3
11.75	38.55	21.92	0.75	3.42	1.14	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
11.87	38.94	17.72	0.57	3.20	1.15	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
12.00	39.37	12.22	0.31	2.57	1.16	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.12	39.76	14.12	0.33	2.33	1.17	clayey silt to silty clay	UNDFND	UNDFD	7	1.1
12.25	40.19	14.34	0.37	2.61	1.18	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
12.37	40.58	19.88	0.60	3.00	1.19	clayey silt to silty clay	UNDFND	UNDFD	10	1.7
12.50	41.01	36.88	0.63	1.70	1.20	sandy silt to clayey silt	UNDFND	UNDFD	14	3.4
12.62	41.40	18.48	0.42	2.26	1.20	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
12.75	41.83	20.92	0.51	2.42	1.21	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
12.87	42.22	13.46	0.42	3.13	1.22	silty clay to clay	UNDFND	UNDFD	9	1.1
13.00	42.65	11.76	0.28	2.35	1.23	clayey silt to silty clay	UNDFND	UNDFD	6	.9
13.12	43.04	9.06	0.17	1.87	1.24	clayey silt to silty clay	UNDFND	UNDFD	4	.6
13.25	43.47	9.72	0.18	1.90	1.25	clayey silt to silty clay	UNDFND	UNDFD	5	.7
13.37	43.86	12.30	0.24	1.97	1.26	clayey silt to silty clay	UNDFND	UNDFD	6	.9
13.50	44.29	11.72	0.25	2.15	1.27	clayey silt to silty clay	UNDFND	UNDFD	6	.9
13.62	44.69	11.10	0.22	1.97	1.28	clayey silt to silty clay	UNDFND	UNDFD	5	.8
13.75	45.11	15.98	0.40	2.51	1.29	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
13.87	45.51	26.16	0.51	1.97	1.30	sandy silt to clayey silt	UNDFND	UNDFD	10	2.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

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P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-39
DATE : 01/29/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 7

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	43.5	0.9	2.02	SILTY SAND	13	50	0.06	--	---	0.01	--
0.3	23.0	1.0	4.27	CLAYEY SILT AND SILTY CLAY	12	39	---	--	---	0.01	1.43
0.4	16.8	1.0	5.84	CLAY	17	51	---	--	---	0.02	1.05
0.6	18.3	1.1	6.18	CLAY	18	52	---	--	---	0.03	1.14
0.8	19.0	1.3	6.59	CLAY	19	52	---	--	---	0.04	1.18
0.9	18.3	1.2	6.73	CLAY	18	48	---	--	---	0.05	1.14
1.1	17.4	1.0	5.98	CLAY	17	44	---	--	---	0.06	1.08
1.2	17.4	0.9	5.41	CLAY	17	43	---	--	---	0.07	1.08
1.4	18.4	0.9	4.73	CLAY	18	44	---	--	---	0.08	1.15
1.6	20.2	0.9	4.27	CLAYEY SILT AND SILTY CLAY	11	25	---	--	---	0.09	1.25
1.7	22.2	0.8	3.61	CLAYEY SILT AND SILTY CLAY	10	24	---	--	---	0.10	1.38
1.9	24.0	0.8	3.29	SANDY SILT AND SILT	11	24	0.01	--	---	0.10	--
2.1	25.4	0.0	0.04	SILTY SAND	7	15	0.10	--	---	0.11	--
2.2	25.1	0.8	3.15	SANDY SILT AND SILT	11	23	0.01	--	---	0.12	--
2.4	4.8	0.8	15.63	CLAY	5	10	---	--	---	0.13	0.29
2.6	25.5	0.7	2.74	SANDY SILT AND SILT	10	20	0.02	--	---	0.14	--
2.7	24.8	0.7	2.90	SANDY SILT AND SILT	10	20	0.02	--	---	0.15	--
2.9	25.0	0.7	2.76	SANDY SILT AND SILT	10	19	0.02	--	---	0.16	--
3.1	25.0	0.8	3.04	SANDY SILT AND SILT	10	20	0.02	--	---	0.17	--
3.2	23.0	0.8	3.43	CLAYEY SILT AND SILTY CLAY	10	20	---	--	---	0.18	1.43
3.4	22.6	0.8	3.37	CLAYEY SILT AND SILTY CLAY	10	20	---	--	---	0.19	1.40
3.5	23.2	0.8	3.40	CLAYEY SILT AND SILTY CLAY	11	20	---	--	---	0.19	1.44
3.7	24.7	0.8	3.41	CLAYEY SILT AND SILTY CLAY	11	21	---	--	---	0.20	1.53
3.9	28.1	0.9	3.07	SANDY SILT AND SILT	11	21	0.02	--	---	0.21	--
4.0	30.0	0.8	2.54	SANDY SILT AND SILT	11	19	0.03	--	---	0.22	--
4.2	28.3	0.5	1.87	SANDY SILT AND SILT	9	16	0.05	--	---	0.23	--
4.3	27.3	0.3	1.10	SILTY SAND	8	14	0.07	--	---	0.24	--
4.5	24.5	0.4	1.80	SANDY SILT AND SILT	8	14	0.04	--	---	0.25	--
4.7	25.0	0.5	2.04	SANDY SILT AND SILT	8	14	0.04	40	45	0.26	--
4.8	35.4	0.5	1.53	SILTY SAND	10	18	0.06	42	53	0.27	--
5.0	48.3	0.4	0.91	SILTY SAND	13	22	0.09	43	61	0.27	--
5.2	57.1	0.1	0.09	SAND	8	13	1.82	44	64	0.28	--
5.3	56.4	0.5	0.83	SAND	13	22	0.29	44	64	0.29	--
5.5	15.6	0.4	2.69	SANDY SILT AND SILT	7	11	0.01	37	31	0.30	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	52.4	0.4	0.78	SAND	13	21	0.21	43	61	0.31	--
5.8	60.5	0.4	0.69	SAND	12	19	0.69	44	65	0.32	--
6.0	99.2	1.0	0.96	SAND	19	30	0.78	46	77	0.33	--
6.1	178.7	1.2	0.69	SAND	27	43	1.36	48	97	0.34	--
6.3	223.9	1.8	0.79	SAND	34	53	1.37	48	100	0.35	--
6.5	266.0	1.8	0.68	SAND	38	59	1.57	48	100	0.36	--
6.6	258.5	1.7	0.64	SAND	36	56	1.59	48	100	0.36	--
6.8	274.7	1.6	0.60	SAND	38	58	1.67	48	100	0.37	--
7.0	289.1	1.7	0.58	SAND	39	60	1.72	48	100	0.38	--
7.1	287.1	1.9	0.65	SAND	40	60	1.65	48	100	0.39	--
7.3	276.1	1.8	0.66	SAND	39	58	1.62	48	100	0.39	--
7.4	285.4	1.5	0.53	SAND	38	58	1.75	48	100	0.40	--
7.6	295.8	1.2	0.41	SAND	38	57	1.89	48	100	0.40	--
7.8	284.7	1.1	0.38	SAND	37	55	1.89	48	100	0.40	--
7.9	285.6	1.1	0.38	SAND	37	55	1.89	48	100	0.41	--
8.1	258.2	0.9	0.36	SAND	34	50	1.85	48	100	0.41	--
8.3	265.3	0.8	0.31	SAND	34	50	1.90	48	100	0.42	--
8.4	270.4	1.5	0.57	SAND	37	55	1.68	48	100	0.42	--
8.6	297.1	0.5	0.18	SAND AND GRAVEL	34	50	3.16	48	100	0.42	--
8.8	308.4	1.1	0.35	SAND	39	57	1.97	48	100	0.43	--
8.9	320.9	2.3	0.71	SAND	44	64	1.66	48	100	0.43	--
9.1	278.7	1.9	0.67	SAND	39	57	1.61	48	100	0.43	--
9.3	221.8	1.0	0.45	SAND	31	44	1.67	48	100	0.44	--
9.4	170.7	1.1	0.64	SAND	26	37	1.38	47	92	0.44	--
9.6	120.7	1.1	0.92	SAND	21	31	0.95	45	80	0.45	--
9.7	80.9	1.0	1.19	SAND	19	28	0.28	43	69	0.45	--
9.9	42.8	0.7	1.64	SILTY SAND	12	18	0.07	40	49	0.45	--
10.1	23.8	0.4	1.60	SANDY SILT AND SILT	7	11	0.05	37	34	0.46	--
10.2	15.6	0.1	0.64	SILTY SAND	5	7	0.06	35	23	0.46	--
10.4	13.3	0.0	0.23	SILTY SAND	4	5	0.08	34	20	0.47	--
10.6	11.6	0.0	0.09	SILTY SAND	3	4	0.09	34	20	0.47	--
10.7	10.9	0.0	0.09	SILTY SAND	3	4	0.09	33	20	0.47	--
10.9	10.9	0.0	0.18	SILTY SAND	3	4	0.07	33	20	0.48	--
11.1	11.2	0.1	0.81	SANDY SILT AND SILT	4	5	0.04	33	20	0.48	--
11.2	13.6	0.2	1.39	SANDY SILT AND SILT	5	7	0.04	34	20	0.49	--
11.4	16.7	0.3	1.86	SANDY SILT AND SILT	6	8	0.03	35	23	0.49	--
11.5	23.1	0.3	1.38	SILTY SAND	7	10	0.05	37	31	0.49	--
11.7	25.3	0.4	1.43	SILTY SAND	8	11	0.06	37	33	0.50	--
11.9	19.7	0.2	0.91	SILTY SAND	6	8	0.06	36	27	0.50	--
12.0	13.6	0.1	1.03	SANDY SILT AND SILT	4	6	0.04	34	20	0.50	--
12.2	8.8	0.1	1.13	SANDY SILT AND SILT	3	4	0.03	32	20	0.51	--
12.4	9.6	0.1	1.46	SANDY SILT AND SILT	4	5	0.03	32	20	0.51	--
12.5	10.5	0.3	2.48	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.52	0.61

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	17.8	0.3	1.69	SANDY SILT AND SILT	6	8	0.04	35	23	0.52	--
12.9	16.3	0.3	1.84	SANDY SILT AND SILT	6	8	0.03	35	21	0.52	--
13.0	11.6	0.3	2.25	SANDY SILT AND SILT	5	6	0.02	33	20	0.53	--
13.2	9.5	0.2	2.00	SANDY SILT AND SILT	4	5	0.02	32	20	0.53	--
13.4	8.8	0.1	1.47	SANDY SILT AND SILT	3	5	0.02	32	20	0.54	--
13.5	8.6	0.1	1.51	SANDY SILT AND SILT	3	4	0.02	31	20	0.54	--
13.7	8.2	0.2	1.96	SANDY SILT AND SILT	3	5	0.01	31	20	0.54	--
13.8	8.2	0.1	1.71	SANDY SILT AND SILT	3	4	0.02	31	20	0.55	--
14.0	8.4	0.1	1.31	SANDY SILT AND SILT	3	4	0.03	31	20	0.55	--
14.2	8.8	0.1	1.24	SANDY SILT AND SILT	3	4	0.03	31	20	0.56	--
14.3	9.3	0.1	1.50	SANDY SILT AND SILT	4	5	0.02	32	20	0.56	--
14.5	9.7	0.2	1.65	SANDY SILT AND SILT	4	5	0.02	32	20	0.56	--
14.7	9.6	0.1	1.46	SANDY SILT AND SILT	4	5	0.03	32	20	0.57	--
14.8	9.0	0.1	1.22	SANDY SILT AND SILT	3	4	0.03	31	20	0.57	--
15.0	9.5	0.3	2.73	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.58	0.54
15.2	15.0	0.4	2.81	SANDY SILT AND SILT	7	9	0.01	34	20	0.58	--
15.3	52.4	0.7	1.38	SILTY SAND	15	19	0.08	40	50	0.58	--
15.5	85.6	0.6	0.65	SAND	14	18	1.09	42	66	0.59	--
15.7	91.1	0.4	0.41	SAND	13	17	1.46	43	68	0.59	--
15.8	82.3	0.5	0.55	SAND	13	17	1.22	42	64	0.60	--
16.0	72.8	0.4	0.48	SAND	12	15	1.24	41	60	0.60	--
16.2	62.1	0.5	0.82	SAND	13	17	0.50	41	55	0.60	--
16.3	52.4	0.9	1.62	SILTY SAND	15	19	0.07	40	49	0.61	--
16.5	54.4	0.8	1.43	SILTY SAND	15	19	0.08	40	50	0.61	--
16.7	56.7	0.4	0.78	SAND	13	16	0.42	40	51	0.62	--
16.8	36.5	0.6	1.64	SILTY SAND	11	14	0.06	38	39	0.62	--
17.0	20.1	0.5	2.34	SANDY SILT AND SILT	7	9	0.03	35	22	0.62	--
17.2	12.9	0.4	3.25	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.63	0.75
17.3	19.7	0.4	2.23	SANDY SILT AND SILT	7	9	0.03	35	21	0.63	--
17.5	18.2	0.4	2.25	SANDY SILT AND SILT	7	9	0.03	34	20	0.63	--
17.7	20.5	0.4	1.80	SANDY SILT AND SILT	7	9	0.04	35	22	0.64	--
17.8	15.6	0.4	2.62	SANDY SILT AND SILT	7	8	0.02	33	20	0.64	--
18.0	23.8	0.6	2.39	SANDY SILT AND SILT	9	11	0.03	36	25	0.65	--
18.1	17.7	0.3	1.64	SANDY SILT AND SILT	6	7	0.04	34	20	0.65	--
18.3	20.3	0.2	1.13	SILTY SAND	6	8	0.06	35	21	0.65	--
18.5	12.2	0.1	0.65	SANDY SILT AND SILT	4	5	0.05	32	20	0.66	--
18.6	10.5	0.2	1.53	SANDY SILT AND SILT	4	5	0.03	31	20	0.66	--
18.8	4.6	0.1	2.83	CLAYEY SILT AND SILTY CLAY	2	3	---	--	---	0.67	0.22
19.0	9.5	0.2	1.68	SANDY SILT AND SILT	4	5	0.02	31	20	0.67	--
19.1	9.5	0.2	2.00	SANDY SILT AND SILT	4	5	0.02	31	20	0.67	--
19.3	10.2	0.2	1.67	SANDY SILT AND SILT	4	5	0.02	31	20	0.68	--
19.5	9.9	0.2	1.72	SANDY SILT AND SILT	4	5	0.02	31	20	0.68	--
19.6	9.5	0.2	1.79	SANDY SILT AND SILT	4	5	0.02	31	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	10.0	0.1	1.30	SANDY SILT AND SILT	4	4	0.03	31	20	0.69	--
19.9	10.2	0.1	1.37	SANDY SILT AND SILT	4	4	0.03	31	20	0.69	--
20.1	10.9	0.2	1.65	SANDY SILT AND SILT	4	5	0.03	31	20	0.70	--
20.3	12.6	0.2	1.75	SANDY SILT AND SILT	5	6	0.03	32	20	0.70	--
20.4	13.5	0.3	1.93	SANDY SILT AND SILT	5	6	0.03	32	20	0.70	--
20.6	14.5	0.3	2.14	SANDY SILT AND SILT	6	7	0.02	33	20	0.71	--
20.8	15.3	0.3	2.09	SANDY SILT AND SILT	6	7	0.03	33	20	0.71	--
20.9	14.5	0.3	2.08	SANDY SILT AND SILT	6	7	0.02	33	20	0.72	--
21.1	12.9	0.3	1.93	SANDY SILT AND SILT	5	6	0.02	32	20	0.72	--
21.3	11.7	0.2	1.63	SANDY SILT AND SILT	4	5	0.03	31	20	0.72	--
21.4	11.6	0.2	1.82	SANDY SILT AND SILT	4	5	0.02	31	20	0.73	--
21.6	11.9	0.4	3.69	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.73	0.67
21.8	22.4	0.4	1.57	SANDY SILT AND SILT	7	8	0.05	35	20	0.74	--
21.9	34.1	0.4	1.29	SILTY SAND	10	11	0.07	37	32	0.74	--
22.1	32.0	0.4	1.16	SILTY SAND	9	11	0.07	36	30	0.74	--
22.2	23.1	0.3	1.39	SILTY SAND	7	8	0.05	35	21	0.75	--
22.4	15.8	0.4	2.66	SANDY SILT AND SILT	7	8	0.01	33	20	0.75	--
22.6	16.6	0.6	3.43	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.76	0.96
22.7	32.0	0.8	2.38	SANDY SILT AND SILT	11	12	0.04	36	30	0.76	--
22.9	50.8	0.7	1.40	SILTY SAND	14	16	0.08	38	43	0.76	--
23.1	67.3	0.6	0.94	SAND	15	17	0.41	40	52	0.77	--
23.2	72.9	0.6	0.86	SAND	15	17	0.64	40	55	0.77	--
23.4	74.0	1.0	1.39	SILTY SAND	20	23	0.09	40	55	0.78	--
23.6	74.8	0.9	1.18	SAND	19	21	0.18	40	55	0.78	--
23.7	81.6	0.9	1.13	SAND	19	21	0.37	41	58	0.78	--
23.9	44.0	0.7	1.50	SILTY SAND	13	14	0.07	38	38	0.79	--
24.0	22.4	0.5	2.23	SANDY SILT AND SILT	8	9	0.03	34	20	0.79	--
24.2	18.4	0.1	0.76	SILTY SAND	5	6	0.07	33	20	0.79	--
24.4	18.1	0.1	0.77	SILTY SAND	5	6	0.07	33	20	0.80	--
24.5	17.7	0.2	0.90	SILTY SAND	5	6	0.06	33	20	0.80	--
24.7	17.7	0.2	1.07	SILTY SAND	5	6	0.05	33	20	0.81	--
24.9	18.4	0.2	1.31	SANDY SILT AND SILT	6	6	0.05	33	20	0.81	--
25.0	19.0	0.3	1.42	SANDY SILT AND SILT	6	7	0.05	33	20	0.81	--
25.2	21.1	0.3	1.47	SANDY SILT AND SILT	7	7	0.05	34	20	0.82	--
25.4	22.4	0.4	1.60	SANDY SILT AND SILT	7	8	0.05	34	20	0.82	--
25.5	26.5	0.4	1.43	SILTY SAND	8	9	0.06	35	22	0.83	--
25.7	26.5	0.4	1.58	SILTY SAND	8	9	0.05	35	21	0.83	--
25.9	24.5	0.5	1.92	SANDY SILT AND SILT	8	9	0.04	34	20	0.83	--
26.0	23.6	0.5	1.95	SANDY SILT AND SILT	8	9	0.04	34	20	0.84	--
26.2	24.5	0.4	1.59	SANDY SILT AND SILT	8	8	0.05	34	20	0.84	--
26.3	27.6	0.4	1.49	SILTY SAND	8	9	0.06	35	22	0.85	--
26.5	28.9	0.5	1.59	SILTY SAND	9	9	0.06	35	23	0.85	--
26.7	29.2	0.6	1.95	SANDY SILT AND SILT	9	10	0.05	35	23	0.85	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	30.5	0.7	2.23	SANDY SILT AND SILT	10	11	0.04	35	24	0.86	--
27.0	29.9	0.8	2.77	SANDY SILT AND SILT	11	12	0.03	35	24	0.86	--
27.2	30.4	0.9	3.03	SANDY SILT AND SILT	12	13	0.02	35	24	0.86	--
27.3	27.5	0.9	3.24	SANDY SILT AND SILT	12	13	0.01	35	21	0.87	--
27.5	26.5	0.9	3.54	CLAYEY SILT AND SILTY CLAY	12	13	---	--	---	0.87	1.56
27.7	27.1	1.0	3.65	CLAYEY SILT AND SILTY CLAY	13	13	---	--	---	0.88	1.60
27.8	26.7	1.0	3.78	CLAYEY SILT AND SILTY CLAY	13	13	---	--	---	0.88	1.57
28.0	26.2	0.9	3.39	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	0.88	1.54
28.1	23.8	0.8	3.53	CLAYEY SILT AND SILTY CLAY	11	12	---	--	---	0.89	1.39
28.3	21.4	0.7	3.41	CLAYEY SILT AND SILTY CLAY	10	10	---	--	---	0.89	1.24
28.5	19.7	0.8	3.81	CLAYEY SILT AND SILTY CLAY	10	10	---	--	---	0.90	1.13
28.6	15.7	0.6	3.94	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.90	0.88
28.8	15.7	0.6	3.64	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	0.90	0.88
29.0	15.0	0.6	3.94	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	0.91	0.84
29.1	13.7	0.5	3.64	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.91	0.76
29.3	11.6	0.4	3.20	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.92	0.62
29.5	10.9	0.3	2.93	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.92	0.58
29.6	10.9	0.3	2.76	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.92	0.58
29.8	10.3	0.3	2.62	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.93	0.54
30.0	10.3	0.2	2.33	SANDY SILT AND SILT	4	5	0.01	30	20	0.93	--
30.1	10.9	0.3	2.30	SANDY SILT AND SILT	5	5	0.01	30	20	0.94	--
30.3	10.7	0.3	2.34	SANDY SILT AND SILT	5	5	0.01	30	20	0.94	--
30.4	10.3	0.2	2.33	SANDY SILT AND SILT	4	5	0.01	30	20	0.94	--
30.6	10.2	0.3	2.55	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.95	0.53
30.8	10.3	0.3	2.53	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.95	0.54
30.9	10.2	0.2	2.25	SANDY SILT AND SILT	4	4	0.01	29	20	0.95	--
31.1	10.2	0.2	2.25	SANDY SILT AND SILT	4	4	0.01	29	20	0.96	--
31.3	10.6	0.3	2.36	SANDY SILT AND SILT	5	5	0.01	30	20	0.96	--
31.4	10.2	0.2	2.35	SANDY SILT AND SILT	4	5	0.01	29	20	0.97	--
31.6	9.5	0.3	2.63	CLAYEY SILT AND SILTY CLAY	4	4	---	--	---	0.97	0.49
31.8	10.1	0.2	1.78	SANDY SILT AND SILT	4	4	0.02	29	20	0.97	--
31.9	9.3	0.2	1.72	SANDY SILT AND SILT	4	4	0.02	29	20	0.98	--
32.1	9.1	0.1	1.53	SANDY SILT AND SILT	4	4	0.02	29	20	0.98	--
32.3	8.8	0.1	0.90	SANDY SILT AND SILT	3	3	0.03	29	20	0.99	--
32.4	8.8	0.1	0.90	SANDY SILT AND SILT	3	3	0.03	29	20	0.99	--
32.6	11.5	0.2	1.56	SANDY SILT AND SILT	4	4	0.03	30	20	0.99	--
32.7	14.8	0.3	2.23	SANDY SILT AND SILT	6	6	0.02	31	20	1.00	--
32.9	22.4	0.3	1.52	SANDY SILT AND SILT	7	7	0.05	33	20	1.00	--
33.1	18.4	0.3	1.63	SANDY SILT AND SILT	6	6	0.04	32	20	1.01	--
33.2	17.0	0.3	1.58	SANDY SILT AND SILT	6	6	0.04	32	20	1.01	--
33.4	17.7	0.2	0.96	SILTY SAND	5	5	0.06	32	20	1.01	--
33.6	13.6	0.2	1.18	SANDY SILT AND SILT	5	4	0.04	31	20	1.02	--
33.7	12.7	0.2	1.42	SANDY SILT AND SILT	4	4	0.03	30	20	1.02	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	12.9	0.2	1.63	SANDY SILT AND SILT	5	5	0.03	30	20	1.02	--
34.1	13.0	0.2	1.77	SANDY SILT AND SILT	5	5	0.03	30	20	1.03	--
34.2	13.7	0.3	2.18	SANDY SILT AND SILT	5	5	0.02	31	20	1.03	--
34.4	14.6	0.3	2.19	SANDY SILT AND SILT	6	6	0.02	31	20	1.04	--
34.5	14.2	0.3	2.26	SANDY SILT AND SILT	6	6	0.02	31	20	1.04	--
34.7	13.6	0.3	1.99	SANDY SILT AND SILT	5	5	0.02	30	20	1.04	--
34.9	13.3	0.2	1.81	SANDY SILT AND SILT	5	5	0.03	30	20	1.05	--
35.0	14.3	0.2	1.26	SANDY SILT AND SILT	5	5	0.04	31	20	1.05	--
35.2	17.0	0.4	2.35	SANDY SILT AND SILT	7	6	0.02	31	20	1.06	--
35.4	18.2	0.7	3.57	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	1.06	1.02
35.5	20.8	0.8	3.98	CLAYEY SILT AND SILTY CLAY	10	10	---	--	---	1.06	1.18
35.7	25.2	0.9	3.62	CLAYEY SILT AND SILTY CLAY	12	11	---	--	---	1.07	1.45
35.9	27.9	1.3	4.73	CLAYEY SILT AND SILTY CLAY	15	15	---	--	---	1.07	1.62
36.0	40.8	0.7	1.81	SILTY SAND	12	12	0.06	36	27	1.08	--
36.2	43.5	0.8	1.79	SILTY SAND	13	12	0.06	36	29	1.08	--
36.4	25.2	0.7	2.90	SANDY SILT AND SILT	10	10	0.02	33	20	1.08	--
36.5	17.0	0.6	3.24	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.09	0.94
36.7	16.6	0.4	2.35	SANDY SILT AND SILT	6	6	0.02	31	20	1.09	--
36.8	15.8	0.3	2.16	SANDY SILT AND SILT	6	6	0.02	31	20	1.10	--
37.0	15.8	0.3	1.77	SANDY SILT AND SILT	6	5	0.03	31	20	1.10	--
37.2	16.2	0.3	1.54	SANDY SILT AND SILT	5	5	0.04	31	20	1.10	--
37.3	16.6	0.3	1.57	SANDY SILT AND SILT	6	5	0.04	31	20	1.11	--
37.5	15.6	0.3	1.66	SANDY SILT AND SILT	5	5	0.03	31	20	1.11	--
37.7	14.4	0.2	1.60	SANDY SILT AND SILT	5	5	0.03	30	20	1.11	--
37.8	15.6	0.3	1.66	SANDY SILT AND SILT	5	5	0.03	31	20	1.12	--
38.0	16.8	0.3	1.90	SANDY SILT AND SILT	6	6	0.03	31	20	1.12	--
38.2	17.0	0.3	1.88	SANDY SILT AND SILT	6	6	0.03	31	20	1.13	--
38.3	17.0	0.4	2.12	SANDY SILT AND SILT	6	6	0.03	31	20	1.13	--
38.5	19.6	0.6	2.95	SANDY SILT AND SILT	8	8	0.01	32	20	1.13	--
38.6	22.4	0.8	3.35	CLAYEY SILT AND SILTY CLAY	10	10	---	--	---	1.14	1.27
38.8	24.4	1.0	3.97	CLAYEY SILT AND SILTY CLAY	12	11	---	--	---	1.14	1.39
39.0	24.5	0.8	3.30	SANDY SILT AND SILT	11	10	0.01	33	20	1.15	--
39.1	27.2	0.9	3.46	CLAYEY SILT AND SILTY CLAY	12	11	---	--	---	1.15	1.57
39.3	29.2	0.9	3.18	SANDY SILT AND SILT	12	11	0.02	34	20	1.15	--
39.5	46.8	0.9	1.90	SILTY SAND	14	13	0.06	36	29	1.16	--
39.6	70.0	0.8	1.16	SAND	18	17	0.11	38	42	1.16	--
39.8	90.1	0.7	0.81	SAND	16	15	0.90	39	51	1.17	--
40.0	117.0	0.6	0.55	SAND	18	17	1.37	40	62	1.17	--
40.1	145.5	0.5	0.36	SAND	20	19	1.63	41	70	1.17	--
40.3	160.0	0.5	0.30	SAND	22	20	1.70	42	73	1.18	--
40.5	161.2	0.5	0.29	SAND	22	20	1.71	42	73	1.18	--
40.6	155.7	0.4	0.28	SAND	21	20	1.72	42	72	1.19	--
40.8	152.3	0.4	0.28	SAND	21	19	1.72	42	71	1.19	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	151.5	0.4	0.28	SAND	21	19	1.72	42	71	1.19	--
41.1	146.8	0.3	0.23	SAND	20	18	1.76	41	70	1.20	--
41.3	147.7	0.3	0.18	SAND	19	18	1.81	41	70	1.20	--
41.4	143.5	0.3	0.21	SAND	19	18	1.78	41	68	1.20	--
41.6	96.8	1.0	1.07	SAND	20	18	0.61	39	53	1.21	--
41.8	41.6	1.2	2.76	SANDY SILT AND SILT	14	13	0.03	35	24	1.21	--
41.9	22.5	0.9	4.09	CLAYEY SILT AND SILTY CLAY	11	10	---	--	---	1.22	1.26
42.1	15.6	0.3	1.85	SANDY SILT AND SILT	6	5	0.03	30	20	1.22	--
42.3	15.1	0.2	1.33	SANDY SILT AND SILT	5	5	0.04	30	20	1.22	--
42.4	14.1	0.2	1.20	SANDY SILT AND SILT	5	4	0.04	30	20	1.23	--
42.6	14.2	0.2	1.05	SANDY SILT AND SILT	5	4	0.04	30	20	1.23	--
42.7	14.3	0.1	0.98	SANDY SILT AND SILT	5	4	0.05	30	20	1.24	--
42.9	14.4	0.2	1.18	SANDY SILT AND SILT	5	4	0.04	30	20	1.24	--
43.1	15.2	0.2	1.12	SANDY SILT AND SILT	5	4	0.04	30	20	1.24	--
43.2	16.3	0.2	1.23	SANDY SILT AND SILT	5	5	0.04	30	20	1.25	--
43.4	16.9	0.3	1.60	SANDY SILT AND SILT	6	5	0.04	31	20	1.25	--
43.6	18.3	0.8	4.27	CLAYEY SILT AND SILTY CLAY	10	9	---	--	---	1.26	0.99
43.7	34.9	0.5	1.46	SILTY SAND	10	9	0.07	34	20	1.26	--
43.9	33.0	0.3	0.91	SILTY SAND	9	8	0.08	34	20	1.26	--
44.1	23.7	0.3	1.31	SILTY SAND	7	6	0.06	32	20	1.27	--
44.2	17.8	0.4	2.42	SANDY SILT AND SILT	7	6	0.02	31	20	1.27	--
44.4	18.4	0.6	3.05	SANDY SILT AND SILT	8	7	0.01	31	20	1.27	--
44.6	24.5	0.5	2.08	SANDY SILT AND SILT	8	7	0.04	32	20	1.28	--
44.7	25.0	0.6	2.36	SANDY SILT AND SILT	9	8	0.03	32	20	1.28	--
44.9	31.2										

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-40
DATE : 01/31/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 7

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	10.5	0.2	1.80	SANDY SILT AND SILT	4	16	0.02	--	---	0.01	--
0.3	119.0	0.4	0.34	SAND	17	55	1.60	--	---	0.01	--
0.4	110.1	0.5	0.49	SAND	16	50	1.41	--	---	0.02	--
0.6	60.1	0.6	1.03	SILTY SAND	16	45	0.10	--	---	0.03	--
0.8	30.1	0.7	2.26	SANDY SILT AND SILT	10	27	0.04	--	---	0.04	--
0.9	19.6	0.8	3.87	CLAYEY SILT AND SILTY CLAY	10	26	---	--	---	0.05	1.22
1.1	14.9	0.6	4.03	CLAYEY SILT AND SILTY CLAY	8	20	---	--	---	0.06	0.93
1.2	15.4	0.6	3.96	CLAYEY SILT AND SILTY CLAY	8	20	---	--	---	0.07	0.96
1.4	27.2	0.9	3.16	SANDY SILT AND SILT	11	27	0.02	--	---	0.08	--
1.6	28.5	1.0	3.65	CLAYEY SILT AND SILTY CLAY	13	30	---	--	---	0.09	1.78
1.7	27.7	1.0	3.43	CLAYEY SILT AND SILTY CLAY	12	28	---	--	---	0.10	1.73
1.9	22.1	1.0	4.52	CLAYEY SILT AND SILTY CLAY	12	27	---	--	---	0.10	1.38
2.1	19.6	0.0	0.05	SILTY SAND	5	11	0.10	--	---	0.11	--
2.2	15.2	0.8	4.99	CLAY	15	33	---	--	---	0.12	0.94
2.4	4.3	0.6	13.82	CLAY	4	9	---	--	---	0.13	0.26
2.6	13.6	0.6	4.28	CLAYEY SILT AND SILTY CLAY	8	16	---	--	---	0.14	0.84
2.7	12.8	0.5	3.92	CLAYEY SILT AND SILTY CLAY	7	14	---	--	---	0.15	0.79
2.9	12.2	0.4	3.04	CLAYEY SILT AND SILTY CLAY	6	11	---	--	---	0.16	0.75
3.1	10.8	0.4	3.43	CLAYEY SILT AND SILTY CLAY	5	11	---	--	---	0.17	0.66
3.2	10.4	0.3	3.09	CLAYEY SILT AND SILTY CLAY	5	10	---	--	---	0.18	0.64
3.4	8.9	0.3	3.27	CLAYEY SILT AND SILTY CLAY	5	9	---	--	---	0.19	0.54
3.5	9.4	0.3	2.75	CLAYEY SILT AND SILTY CLAY	4	8	---	--	---	0.19	0.58
3.7	8.8	0.2	2.71	CLAYEY SILT AND SILTY CLAY	4	8	---	--	---	0.20	0.54
3.9	8.8	0.2	2.74	CLAYEY SILT AND SILTY CLAY	4	8	---	--	---	0.21	0.53
4.0	7.5	0.2	2.93	CLAYEY SILT AND SILTY CLAY	4	7	---	--	---	0.22	0.46
4.2	7.4	0.2	2.59	CLAYEY SILT AND SILTY CLAY	3	6	---	--	---	0.23	0.45
4.3	6.7	0.2	2.85	CLAYEY SILT AND SILTY CLAY	3	6	---	--	---	0.24	0.40
4.5	5.4	0.2	3.68	CLAY	5	10	---	--	---	0.25	0.32
4.7	5.4	0.2	3.70	CLAY	5	9	---	--	---	0.26	0.32
4.8	5.4	0.2	3.54	CLAY	5	9	---	--	---	0.27	0.32
5.0	4.7	0.2	3.18	CLAYEY SILT AND SILTY CLAY	3	4	---	--	---	0.27	0.28
5.2	4.7	0.1	2.99	CLAYEY SILT AND SILTY CLAY	3	4	---	--	---	0.28	0.27
5.3	3.6	0.1	3.36	CLAY	4	6	---	--	---	0.29	0.20
5.5	3.3	0.1	2.11	CLAYEY SILT AND SILTY CLAY	2	3	---	--	---	0.30	0.19

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	3.4	0.1	1.79	CLAYEY SILT AND SILTY CLAY	2	3	---	--	---	0.31	0.19
5.8	3.0	0.0	1.32	CLAYEY SILT AND SILTY CLAY	1	2	---	--	---	0.32	0.17
6.0	3.1	0.0	1.31	CLAYEY SILT AND SILTY CLAY	1	2	---	--	---	0.33	0.17
6.1	3.3	0.0	0.30	SANDY SILT AND SILT	1	2	0.04	29	20	0.34	--
6.3	3.4	0.0	0.29	SANDY SILT AND SILT	1	2	0.04	29	20	0.35	--
6.5	46.2	0.9	2.01	SILTY SAND	14	22	0.06	42	56	0.36	--
6.6	41.8	1.0	2.37	SANDY SILT AND SILT	13	21	0.05	41	53	0.36	--
6.8	1.0	0.1	6.00	CLAY	1	2	---	--	---	0.37	0.04
7.0	3.8	0.1	1.83	CLAYEY SILT AND SILTY CLAY	2	3	---	--	---	0.38	0.22
7.1	4.4	0.1	2.74	CLAYEY SILT AND SILTY CLAY	2	4	---	--	---	0.39	0.25
7.3	18.0	0.3	1.55	SANDY SILT AND SILT	6	9	0.04	37	30	0.39	--
7.4	12.8	0.3	2.10	SANDY SILT AND SILT	5	8	0.02	35	21	0.40	--
7.6	10.1	0.2	2.37	SANDY SILT AND SILT	4	7	0.01	34	20	0.40	--
7.8	9.6	0.2	2.09	SANDY SILT AND SILT	4	6	0.01	33	20	0.40	--
7.9	10.8	0.3	2.41	SANDY SILT AND SILT	5	7	0.01	34	20	0.41	--
8.1	17.5	0.4	2.17	SANDY SILT AND SILT	7	10	0.03	36	28	0.41	--
8.3	18.4	0.4	2.39	SANDY SILT AND SILT	7	10	0.02	36	29	0.42	--
8.4	19.3	0.4	2.03	SANDY SILT AND SILT	7	10	0.03	37	30	0.42	--
8.6	21.3	0.1	0.24	SILTY SAND	6	8	0.09	37	32	0.42	--
8.8	24.2	0.5	2.07	SANDY SILT AND SILT	8	12	0.04	38	35	0.43	--
8.9	8.3	0.5	6.27	CLAY	8	12	---	--	---	0.43	0.49
9.1	26.4	0.7	2.53	SANDY SILT AND SILT	10	14	0.03	38	38	0.43	--
9.3	33.8	0.9	2.69	SANDY SILT AND SILT	12	17	0.03	39	44	0.44	--
9.4	34.6	1.0	2.80	SANDY SILT AND SILT	13	18	0.03	39	44	0.44	--
9.6	29.9	0.9	2.91	SANDY SILT AND SILT	12	17	0.02	38	40	0.45	--
9.7	36.0	0.8	2.28	SANDY SILT AND SILT	12	17	0.04	39	45	0.45	--
9.9	27.7	0.4	1.37	SILTY SAND	8	12	0.06	38	38	0.45	--
10.1	15.1	0.2	1.46	SANDY SILT AND SILT	5	7	0.04	35	22	0.46	--
10.2	13.0	0.2	1.16	SANDY SILT AND SILT	4	6	0.04	34	20	0.46	--
10.4	14.0	0.2	1.64	SANDY SILT AND SILT	5	7	0.03	35	21	0.47	--
10.6	15.6	0.3	2.12	SANDY SILT AND SILT	6	8	0.03	35	23	0.47	--
10.7	25.1	0.6	2.39	SANDY SILT AND SILT	9	13	0.03	37	34	0.47	--
10.9	20.9	0.6	2.87	SANDY SILT AND SILT	9	12	0.02	36	30	0.48	--
11.1	17.6	0.5	2.96	SANDY SILT AND SILT	8	11	0.01	35	25	0.48	--
11.2	13.5	0.4	3.25	CLAYEY SILT AND SILTY CLAY	6	9	---	--	---	0.49	0.81
11.4	11.5	0.4	3.31	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.49	0.68
11.5	12.2	0.3	2.71	CLAYEY SILT AND SILTY CLAY	5	8	---	--	---	0.49	0.72
11.7	11.6	0.2	2.08	SANDY SILT AND SILT	5	6	0.02	33	20	0.50	--
11.9	9.6	0.2	2.29	SANDY SILT AND SILT	4	6	0.01	32	20	0.50	--
12.0	9.5	0.2	2.11	SANDY SILT AND SILT	4	6	0.01	32	20	0.50	--
12.2	9.8	0.2	2.44	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.51	0.57
12.4	15.8	0.2	1.45	SANDY SILT AND SILT	5	7	0.04	35	21	0.51	--
12.5	17.0	0.2	1.12	SANDY SILT AND SILT	5	7	0.05	35	23	0.52	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH. FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	15.9	0.2	1.32	SANDY SILT AND SILT	5	7	0.04	35	21	0.52	--
12.9	12.6	0.2	1.51	SANDY SILT AND SILT	4	6	0.03	33	20	0.52	--
13.0	9.9	0.2	1.72	SANDY SILT AND SILT	4	5	0.02	32	20	0.53	--
13.2	7.9	0.2	2.93	CLAYEY SILT AND SILTY CLAY	4	5	---	--	---	0.53	0.45
13.4	8.8	0.2	2.05	SANDY SILT AND SILT	4	5	0.01	32	20	0.54	--
13.5	13.7	0.1	0.80	SANDY SILT AND SILT	4	6	0.05	34	20	0.54	--
13.7	12.2	0.1	0.57	SANDY SILT AND SILT	4	5	0.05	33	20	0.54	--
13.8	8.2	0.1	0.98	SANDY SILT AND SILT	3	4	0.03	31	20	0.55	--
14.0	7.4	0.1	1.22	SANDY SILT AND SILT	3	4	0.03	31	20	0.55	--
14.2	7.6	0.1	1.32	SANDY SILT AND SILT	3	4	0.03	31	20	0.56	--
14.3	8.1	0.1	1.36	SANDY SILT AND SILT	3	4	0.03	31	20	0.56	--
14.5	8.6	0.1	1.28	SANDY SILT AND SILT	3	4	0.03	31	20	0.56	--
14.7	8.2	0.1	1.47	SANDY SILT AND SILT	3	4	0.02	31	20	0.57	--
14.8	8.8	0.1	1.36	SANDY SILT AND SILT	3	4	0.03	31	20	0.57	--
15.0	9.6	0.1	1.25	SANDY SILT AND SILT	3	5	0.03	32	20	0.58	--
15.2	10.1	0.2	1.88	SANDY SILT AND SILT	4	5	0.02	32	20	0.58	--
15.3	12.8	0.2	1.41	SANDY SILT AND SILT	4	6	0.03	33	20	0.58	--
15.5	29.2	0.4	1.27	SILTY SAND	9	11	0.07	37	33	0.59	--
15.7	38.7	0.7	1.78	SILTY SAND	12	15	0.06	38	41	0.59	--
15.8	40.0	0.9	2.25	SANDY SILT AND SILT	13	16	0.05	38	42	0.60	--
16.0	53.6	0.7	1.29	SILTY SAND	15	19	0.09	40	50	0.60	--
16.2	57.9	0.5	0.93	SAND	15	19	0.15	40	52	0.60	--
16.3	47.4	0.9	1.79	SILTY SAND	14	18	0.07	39	46	0.61	--
16.5	38.3	0.9	2.41	SANDY SILT AND SILT	13	16	0.04	38	40	0.61	--
16.7	37.7	0.6	1.67	SILTY SAND	11	14	0.06	38	40	0.62	--
16.8	30.5	0.7	2.16	SANDY SILT AND SILT	10	13	0.04	37	33	0.62	--
17.0	18.3	0.4	2.24	SANDY SILT AND SILT	7	9	0.03	34	20	0.62	--
17.2	12.2	0.2	1.97	SANDY SILT AND SILT	5	6	0.02	32	20	0.63	--
17.3	12.8	0.2	1.79	SANDY SILT AND SILT	5	6	0.03	33	20	0.63	--
17.5	12.8	0.3	2.04	SANDY SILT AND SILT	5	6	0.02	33	20	0.63	--
17.7	12.2	0.2	1.81	SANDY SILT AND SILT	5	6	0.03	32	20	0.64	--
17.8	10.6	0.2	1.88	SANDY SILT AND SILT	4	5	0.02	32	20	0.64	--
18.0	10.0	0.2	1.71	SANDY SILT AND SILT	4	5	0.02	31	20	0.65	--
18.1	8.9	0.2	1.68	SANDY SILT AND SILT	4	4	0.02	31	20	0.65	--
18.3	9.3	0.1	1.51	SANDY SILT AND SILT	4	4	0.02	31	20	0.65	--
18.5	9.4	0.1	1.27	SANDY SILT AND SILT	3	4	0.03	31	20	0.66	--
18.6	9.2	0.1	1.42	SANDY SILT AND SILT	3	4	0.03	31	20	0.66	--
18.8	9.2	0.2	1.63	SANDY SILT AND SILT	4	4	0.02	31	20	0.67	--
19.0	9.4	0.2	1.82	SANDY SILT AND SILT	4	5	0.02	31	20	0.67	--
19.1	11.4	0.3	2.55	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.67	0.65
19.3	20.0	0.5	2.50	SANDY SILT AND SILT	8	9	0.02	34	20	0.68	--
19.5	24.4	0.8	3.16	SANDY SILT AND SILT	10	13	0.01	35	25	0.68	--
19.6	29.0	1.0	3.55	CLAYEY SILT AND SILTY CLAY	13	16	---	--	---	0.69	1.75

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	36.8	0.8	2.25	SANDY SILT AND SILT	12	14	0.05	37	36	0.69	--
19.9	51.7	0.7	1.43	SILTY SAND	14	17	0.08	39	46	0.69	--
20.1	46.8	0.4	0.94	SILTY SAND	13	15	0.09	38	43	0.70	--
20.3	27.2	0.4	1.55	SILTY SAND	8	10	0.06	36	27	0.70	--
20.4	15.9	0.3	1.64	SANDY SILT AND SILT	5	7	0.04	33	20	0.70	--
20.6	10.1	0.2	1.68	SANDY SILT AND SILT	4	5	0.02	31	20	0.71	--
20.8	9.5	0.1	1.48	SANDY SILT AND SILT	4	4	0.03	31	20	0.71	--
20.9	9.4	0.1	1.48	SANDY SILT AND SILT	4	4	0.03	30	20	0.72	--
21.1	9.9	0.1	1.22	SANDY SILT AND SILT	4	4	0.03	31	20	0.72	--
21.3	8.8	0.1	1.60	SANDY SILT AND SILT	3	4	0.02	30	20	0.72	--
21.4	8.9	0.2	1.69	SANDY SILT AND SILT	4	4	0.02	30	20	0.73	--
21.6	9.4	0.2	1.69	SANDY SILT AND SILT	4	4	0.02	30	20	0.73	--
21.8	10.1	0.2	1.48	SANDY SILT AND SILT	4	4	0.03	31	20	0.74	--
21.9	10.8	0.2	1.57	SANDY SILT AND SILT	4	5	0.03	31	20	0.74	--
22.1	12.0	0.2	1.92	SANDY SILT AND SILT	5	5	0.02	31	20	0.74	--
22.2	20.3	0.5	2.36	SANDY SILT AND SILT	8	9	0.03	34	20	0.75	--
22.4	29.6	0.7	2.23	SANDY SILT AND SILT	10	11	0.04	36	27	0.75	--
22.6	27.1	0.6	2.14	SANDY SILT AND SILT	9	10	0.04	35	25	0.76	--
22.7	28.4	0.5	1.69	SILTY SAND	9	10	0.05	36	26	0.76	--
22.9	23.8	0.3	1.43	SILTY SAND	7	8	0.05	35	21	0.76	--
23.1	14.9	0.3	2.08	SANDY SILT AND SILT	6	6	0.02	32	20	0.77	--
23.2	11.9	0.3	2.61	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.77	0.66
23.4	12.4	0.3	2.75	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	0.78	0.69
23.6	13.0	0.4	2.84	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.78	0.73
23.7	12.2	0.3	2.71	CLAYEY SILT AND SILTY CLAY	5	6	---	--	---	0.78	0.68
23.9	10.1	0.3	2.57	CLAYEY SILT AND SILTY CLAY	5	5	---	--	---	0.79	0.55
24.0	9.4	0.2	2.34	SANDY SILT AND SILT	4	5	0.01	30	20	0.79	--
24.2	10.1	0.2	2.27	SANDY SILT AND SILT	4	5	0.01	30	20	0.79	--
24.4	11.5	0.3	2.44	SANDY SILT AND SILT	5	6	0.01	31	20	0.80	--
24.5	13.6	0.3	2.43	SANDY SILT AND SILT	6	6	0.02	32	20	0.80	--
24.7	15.8	0.4	2.53	SANDY SILT AND SILT	6	7	0.02	32	20	0.81	--
24.9	17.8	0.5	2.70	SANDY SILT AND SILT	7	8	0.02	33	20	0.81	--
25.0	19.0	0.6	2.90	SANDY SILT AND SILT	8	9	0.01	33	20	0.81	--
25.2	20.1	0.6	2.89	SANDY SILT AND SILT	8	9	0.02	34	20	0.82	--
25.4	20.4	0.5	2.50	SANDY SILT AND SILT	8	9	0.02	34	20	0.82	--
25.5	19.6	0.5	2.65	SANDY SILT AND SILT	8	9	0.02	33	20	0.83	--
25.7	19.6	0.5	2.39	SANDY SILT AND SILT	7	8	0.03	33	20	0.83	--
25.9	21.0	0.5	2.38	SANDY SILT AND SILT	8	9	0.03	34	20	0.83	--
26.0	20.4	0.5	2.41	SANDY SILT AND SILT	8	8	0.03	33	20	0.84	--
26.2	20.3	0.5	2.32	SANDY SILT AND SILT	7	8	0.03	33	20	0.84	--
26.3	20.2	0.4	2.18	SANDY SILT AND SILT	7	8	0.03	33	20	0.85	--
26.5	20.6	0.4	1.99	SANDY SILT AND SILT	7	8	0.04	33	20	0.85	--
26.7	20.6	0.4	1.99	SANDY SILT AND SILT	7	8	0.04	33	20	0.85	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	21.0	0.4	1.86	SANDY SILT AND SILT	7	8	0.04	34	20	0.86	--
27.0	20.2	0.4	1.79	SANDY SILT AND SILT	7	7	0.04	33	20	0.86	--
27.2	20.3	0.5	2.41	SANDY SILT AND SILT	8	8	0.03	33	20	0.86	--
27.3	22.4	0.6	2.50	SANDY SILT AND SILT	8	9	0.03	34	20	0.87	--
27.5	22.4	0.6	2.68	SANDY SILT AND SILT	9	9	0.02	34	20	0.87	--
27.7	18.6	0.5	2.91	SANDY SILT AND SILT	8	9	0.01	33	20	0.88	--
27.8	15.6	0.5	2.96	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.88	0.88
28.0	13.5	0.4	2.59	SANDY SILT AND SILT	6	6	0.01	31	20	0.88	--
28.1	13.1	0.3	2.44	SANDY SILT AND SILT	6	6	0.01	31	20	0.89	--
28.3	14.2	0.3	2.11	SANDY SILT AND SILT	6	6	0.02	31	20	0.89	--
28.5	14.8	0.3	2.29	SANDY SILT AND SILT	6	6	0.02	32	20	0.90	--
28.6	15.3	0.3	2.22	SANDY SILT AND SILT	6	6	0.02	32	20	0.90	--
28.8	14.9	0.3	2.21	SANDY SILT AND SILT	6	6	0.02	32	20	0.90	--
29.0	14.6	0.3	2.26	SANDY SILT AND SILT	6	6	0.02	31	20	0.91	--
29.1	15.5	0.3	1.61	SANDY SILT AND SILT	5	6	0.04	32	20	0.91	--
29.3	14.0	0.2	1.22	SANDY SILT AND SILT	5	5	0.04	31	20	0.92	--
29.5	13.4	0.1	0.90	SANDY SILT AND SILT	4	4	0.05	31	20	0.92	--
29.6	13.1	0.1	0.92	SANDY SILT AND SILT	4	4	0.04	31	20	0.92	--
29.8	14.9	0.2	1.28	SANDY SILT AND SILT	5	5	0.04	31	20	0.93	--
30.0	19.0	0.3	1.69	SANDY SILT AND SILT	6	7	0.04	33	20	0.93	--
30.1	23.0	0.5	2.21	SANDY SILT AND SILT	8	8	0.03	34	20	0.94	--
30.3	26.4	0.6	2.38	SANDY SILT AND SILT	9	10	0.03	34	20	0.94	--
30.4	28.2	0.8	2.69	SANDY SILT AND SILT	10	11	0.03	34	20	0.94	--
30.6	31.6	0.8	2.66	SANDY SILT AND SILT	11	12	0.03	35	23	0.95	--
30.8	31.6	0.9	2.97	SANDY SILT AND SILT	12	13	0.02	35	22	0.95	--
30.9	31.9	0.9	2.76	SANDY SILT AND SILT	12	12	0.03	35	23	0.95	--
31.1	30.8	0.8	2.60	SANDY SILT AND SILT	11	11	0.03	35	21	0.96	--
31.3	31.5	0.7	2.35	SANDY SILT AND SILT	11	11	0.04	35	22	0.96	--
31.4	33.8	0.9	2.54	SANDY SILT AND SILT	12	12	0.04	35	24	0.97	--
31.6	34.6	0.8	2.17	SANDY SILT AND SILT	11	11	0.05	35	25	0.97	--
31.8	34.6	0.7	2.11	SANDY SILT AND SILT	11	11	0.05	35	24	0.97	--
31.9	31.8	0.6	2.01	SANDY SILT AND SILT	10	10	0.05	35	22	0.98	--
32.1	31.9	0.1	0.41	SILTY SAND	9	9	0.09	35	22	0.98	--
32.3	25.5	0.9	3.57	CLAYEY SILT AND SILTY CLAY	12	12	---	--	---	0.99	1.48
32.4	10.8	0.6	5.93	CLAY	11	11	---	--	---	0.99	0.56
32.6	17.6	0.5	2.61	SANDY SILT AND SILT	7	7	0.02	32	20	0.99	--
32.7	14.9	0.3	2.22	SANDY SILT AND SILT	6	6	0.02	31	20	1.00	--
32.9	14.1	0.3	2.13	SANDY SILT AND SILT	5	5	0.02	31	20	1.00	--
33.1	13.5	0.3	2.22	SANDY SILT AND SILT	5	5	0.02	31	20	1.01	--
33.2	13.5	0.3	2.29	SANDY SILT AND SILT	5	5	0.02	31	20	1.01	--
33.4	14.2	0.4	2.82	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	1.01	0.77
33.6	16.9	0.5	3.13	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.02	0.94
33.7	20.4	0.5	2.55	SANDY SILT AND SILT	8	8	0.02	33	20	1.02	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	18.5	0.5	2.71	SANDY SILT AND SILT	8	7	0.02	32	20	1.02	--
34.1	17.0	0.4	2.42	SANDY SILT AND SILT	7	7	0.02	32	20	1.03	--
34.2	18.3	0.5	2.46	SANDY SILT AND SILT	7	7	0.02	32	20	1.03	--
34.4	18.3	0.5	2.63	SANDY SILT AND SILT	7	7	0.02	32	20	1.04	--
34.5	16.9	0.5	2.96	SANDY SILT AND SILT	7	7	0.01	31	20	1.04	--
34.7	16.3	0.5	3.00	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.04	0.90
34.9	16.3	0.5	3.32	CLAYEY SILT AND SILTY CLAY	8	7	---	--	---	1.05	0.90
35.0	16.0	0.6	3.43	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.05	0.88
35.2	13.7	0.5	3.57	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.06	0.74
35.4	15.6	0.4	2.25	SANDY SILT AND SILT	6	6	0.02	31	20	1.06	--
35.5	13.5	0.4	3.11	CLAYEY SILT AND SILTY CLAY	6	6	---	--	---	1.06	0.72
35.7	13.4	0.5	3.75	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.07	0.71
35.9	13.5	0.6	4.07	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.07	0.72
36.0	16.2	0.6	3.53	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	1.08	0.89
36.2	19.0	0.7	3.47	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	1.08	1.07
36.4	20.3	0.7	3.20	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	1.08	1.15
36.5	21.0	0.7	3.24	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	1.09	1.19
36.7	22.2	0.7	3.20	SANDY SILT AND SILT	10	9	0.01	33	20	1.09	--
36.8	20.0	0.6	3.15	SANDY SILT AND SILT	9	9	0.01	32	20	1.10	--
37.0	17.6	0.5	2.56	SANDY SILT AND SILT	7	7	0.02	31	20	1.10	--
37.2	15.6	0.4	2.44	SANDY SILT AND SILT	6	6	0.02	31	20	1.10	--
37.3	15.6	0.4	2.63	SANDY SILT AND SILT	7	6	0.01	31	20	1.11	--
37.5	15.5	0.4	2.45	SANDY SILT AND SILT	6	6	0.02	31	20	1.11	--
37.7	14.9	0.3	2.22	SANDY SILT AND SILT	6	6	0.02	31	20	1.11	--
37.8	13.5	0.3	2.14	SANDY SILT AND SILT	5	5	0.02	30	20	1.12	--
38.0	12.5	0.3	2.07	SANDY SILT AND SILT	5	5	0.02	30	20	1.12	--
38.2	12.2	0.3	2.06	SANDY SILT AND SILT	5	5	0.02	29	20	1.13	--
38.3	12.1	0.3	2.24	SANDY SILT AND SILT	5	5	0.02	29	20	1.13	--
38.5	12.4	0.3	2.18	SANDY SILT AND SILT	5	5	0.02	30	20	1.13	--
38.6	13.8	0.3	2.17	SANDY SILT AND SILT	5	5	0.02	30	20	1.14	--
38.8	15.0	0.3	1.67	SANDY SILT AND SILT	5	5	0.03	30	20	1.14	--
39.0	13.5	0.2	1.55	SANDY SILT AND SILT	5	5	0.03	30	20	1.15	--
39.1	14.0	0.2	1.72	SANDY SILT AND SILT	5	5	0.03	30	20	1.15	--
39.3	14.5	0.3	2.35	SANDY SILT AND SILT	6	5	0.02	30	20	1.15	--
39.5	15.5	0.4	2.26	SANDY SILT AND SILT	6	6	0.02	31	20	1.16	--
39.6	14.8	0.4	2.49	SANDY SILT AND SILT	6	6	0.02	30	20	1.16	--
39.8	15.1	0.3	2.18	SANDY SILT AND SILT	6	5	0.02	30	20	1.17	--
40.0	14.4	0.3	2.15	SANDY SILT AND SILT	6	5	0.02	30	20	1.17	--
40.1	14.2	0.2	1.70	SANDY SILT AND SILT	5	5	0.03	30	20	1.17	--
40.3	13.5	0.2	1.55	SANDY SILT AND SILT	5	4	0.03	30	20	1.18	--
40.5	13.5	0.2	1.48	SANDY SILT AND SILT	5	4	0.03	30	20	1.18	--
40.6	14.7	0.2	1.09	SANDY SILT AND SILT	5	4	0.04	30	20	1.19	--
40.8	13.8	0.2	1.16	SANDY SILT AND SILT	5	4	0.04	30	20	1.19	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	12.2	0.2	1.81	SANDY SILT AND SILT	5	4	0.03	29	20	1.19	--
41.1	13.1	0.3	1.92	SANDY SILT AND SILT	5	5	0.02	30	20	1.20	--
41.3	13.4	0.3	2.02	SANDY SILT AND SILT	5	5	0.02	30	20	1.20	--
41.4	14.2	0.3	2.04	SANDY SILT AND SILT	5	5	0.02	30	20	1.20	--
41.6	14.5	0.3	2.06	SANDY SILT AND SILT	6	5	0.02	30	20	1.21	--
41.8	14.9	0.3	2.08	SANDY SILT AND SILT	6	5	0.02	30	20	1.21	--
41.9	14.2	0.3	2.04	SANDY SILT AND SILT	5	5	0.02	30	20	1.22	--
42.1	13.5	0.2	1.78	SANDY SILT AND SILT	5	5	0.03	30	20	1.22	--
42.3	13.5	0.2	1.63	SANDY SILT AND SILT	5	4	0.03	30	20	1.22	--
42.4	14.1	0.2	1.56	SANDY SILT AND SILT	5	5	0.03	30	20	1.23	--
42.6	14.1	0.2	1.63	SANDY SILT AND SILT	5	5	0.03	30	20	1.23	--
42.7	14.9	0.3	2.02	SANDY SILT AND SILT	6	5	0.03	30	20	1.24	--
42.9	16.2	0.4	2.52	SANDY SILT AND SILT	7	6	0.02	30	20	1.24	--
43.1	18.2	0.4	2.36	SANDY SILT AND SILT	7	6	0.02	31	20	1.24	--
43.2	17.6	0.5	2.78	SANDY SILT AND SILT	7	7	0.01	31	20	1.25	--
43.4	17.6	0.4	2.05	SANDY SILT AND SILT	6	6	0.03	31	20	1.25	--
43.6	15.2	0.3	1.78	SANDY SILT AND SILT	5	5	0.03	30	20	1.26	--
43.7	14.0	0.2	1.64	SANDY SILT AND SILT	5	5	0.03	30	20	1.26	--
43.9	14.2	0.2	1.62	SANDY SILT AND SILT	5	5	0.03	30	20	1.26	--
44.1	15.2	0.2	1.58	SANDY SILT AND SILT	5	5	0.04	30	20	1.27	--
44.2	17.0	0.3	1.88	SANDY SILT AND SILT	6	5	0.03	31	20	1.27	--
44.4	21.0	0.4	2.10	SANDY SILT AND SILT	7	7	0.03	32	20	1.27	--
44.6	27.8	0.6	2.09	SANDY SILT AND SILT	9	8	0.04	33	20	1.28	--
44.7	30.5	0.7	2.26	SANDY SILT AND SILT	10	9	0.04	33	20	1.28	--
44.9	32.6	0.8	2.58	SANDY SILT AND SILT	11	10	0.03	34	20	1.29	--
45.0	33.3	1.0	2.94	SANDY SILT AND SILT	13	11	0.03	34	20	1.29	--
45.2	35.3	1.1	3.23	SANDY SILT AND SILT	14	13	0.02	34	20	1.29	--
45.4	36.0	1.3	3.56	SANDY SILT AND SILT	16	14	0.01	34	20	1.30	--
45.5	35.3	1.2	3.49	SANDY SILT AND SILT	15	13	0.01	34	20	1.30	--
45.7	36.6	1.4	3.85	CLAYEY SILT AND SILTY CLAY	17	15	---	--	---	1.31	2.13
45.9	39.1	1.7	4.33	CLAYEY SILT AND SILTY CLAY	19	17	---	--	---	1.31	2.28
46.0	34.5	1.8	5.34	CLAY	34	30	---	--	---	1.31	2.00
46.2	33.5	1.9	5.80	CLAY	33	29	---	--	---	1.32	1.93
46.4	50.2	2.5	5.02	CLAYEY SILT AND SILTY CLAY	27	24	---	--	---	1.32	2.98
46.5	102.0	2.1	2.09	SILTY SAND	28	25	0.08	39	52	1.33	--
46.7	183.1	1.9	1.05	SAND	31	27	1.02	42	75	1.33	--
46.8	244.8	2.5	1.00	SAND	39	34	1.23	43	87	1.33	--
47.0	274.0	3.0	1.09	SAND	44	38	1.23	44	92	1.34	--
47.2	296.9	3.0	1.02	SAND	45	40	1.34	44	95	1.34	--
47.3	316.8	2.8	0.87	SAND	46	40	1.52	45	97	1.35	--
47.5	327.7	2.6	0.80	SAND	46	40	1.60	45	98	1.35	--
47.7	328.8	3.4	1.04	SAND	50	43	1.38	45	98	1.35	--
47.8	317.4	3.7	1.18	SAND	50	44	1.24	45	97	1.36	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
48.0	317.9	2.4	0.75	SAND	44	38	1.63	45	97	1.36	--
48.2	320.9	1.4	0.43	SAND	41	36	1.92	45	97	1.36	--
48.3	301.3	1.4	0.45	SAND	39	34	1.86	44	95	1.37	--
48.5	297.8	1.7	0.57	SAND	40	35	1.74	44	94	1.37	--
48.7	278.6	1.4	0.48	SAND	37	32	1.78	44	92	1.38	--
48.8	267.8	0.9	0.35	SAND	35	30	1.88	44	90	1.38	--
49.0	265.2	0.7	0.25	SAND	34	29	1.96	44	90	1.38	--
49.1	144.0	0.8	0.56	SAND	21	18	1.42	41	65	1.39	--
49.3	293.0	0.6	0.19	SAND AND GRAVEL	34	29	2.88	44	93	1.39	--
49.5	313.4	0.6	0.20	SAND AND GRAVEL	36	31	3.11	44	96	1.40	--
49.6	294.4	0.9	0.30	SAND	37	32	1.98	44	93	1.40	--
49.8	305.8	1.0	0.31	SAND	38	33	2.00	44	95	1.40	--
50.0	300.1	0.9	0.29	SAND AND GRAVEL	37	32	2.03	44	94	1.41	--
50.1	318.8	0.9	0.28	SAND AND GRAVEL	38	33	2.51	44	96	1.41	--
50.3	315.5	2.0	0.62	SAND	42	36	1.74	44	96	1.42	--
50.5	300.0	4.9	1.64	SAND	56	48	0.79	44	94	1.42	--
50.6	195.5	6.4	3.27	SILTY SAND	59	50	0.06	42	76	1.42	--
50.8	112.3	5.5	4.91	CLAYEY SILT AND SILTY CLAY	55	46	---	--	---	1.43	6.84
51.0	79.7	3.6	4.53	CLAYEY SILT AND SILTY CLAY	38	32	---	--	---	1.43	4.81
51.1	69.3	2.7	3.83	SANDY SILT AND SILT	29	24	0.02	37	36	1.43	--
51.3	46.8	2.0	4.31	CLAYEY SILT AND SILTY CLAY	23	19	---	--	---	1.44	2.75
51.4	30.0	1.0	3.47	SANDY SILT AND SILT	13	11	0.01	33	20	1.44	--
51.6	23.7	0.4	1.64	SANDY SILT AND SILT	7	6	0.05	32	20	1.45	--
51.8	22.7	0.4	1.89	SANDY SILT AND SILT	8	6	0.04	31	20	1.45	--
51.9	23.0	0.5	2.00	SANDY SILT AND SILT	8	6	0.04	31	20	1.45	--
52.1	23.3	0.5	2.06	SANDY SILT AND SILT	8	7	0.04	31	20	1.46	--
52.3	23.1										

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/9-41
DATE : 01/29/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
NO GROUNDWATER ENCOUNTERED IN TEST HOLE

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	53.1	0.4	0.79	SAND	13	50	0.23	--	---	0.01	--
0.3	192.1	0.8	0.43	SAND	27	89	1.61	--	---	0.01	--
0.4	157.3	0.9	0.58	SAND	23	71	1.42	--	---	0.02	--
0.6	64.6	1.3	2.03	SILTY SAND	19	54	0.07	--	---	0.03	--
0.8	30.0	1.2	3.84	CLAYEY SILT AND SILTY CLAY	14	38	---	--	---	0.04	1.87
0.9	22.5	0.8	3.56	CLAYEY SILT AND SILTY CLAY	10	27	---	--	---	0.05	1.40
1.1	20.4	0.6	2.84	SANDY SILT AND SILT	8	21	0.02	--	---	0.06	--
1.2	23.0	0.5	2.34	SANDY SILT AND SILT	8	20	0.03	--	---	0.07	--
1.4	27.3	0.6	2.02	SANDY SILT AND SILT	9	21	0.04	--	---	0.08	--
1.6	27.5	0.6	2.22	SANDY SILT AND SILT	9	22	0.04	--	---	0.09	--
1.7	23.8	0.6	2.47	SANDY SILT AND SILT	9	20	0.03	--	---	0.10	--
1.9	20.4	0.5	2.45	SANDY SILT AND SILT	8	17	0.03	--	---	0.10	--
2.1	17.7	0.4	2.31	SANDY SILT AND SILT	7	15	0.02	--	---	0.11	--
2.2	15.1	0.4	2.86	CLAYEY SILT AND SILTY CLAY	7	14	---	--	---	0.12	0.93
2.4	16.0	0.4	2.75	SANDY SILT AND SILT	7	14	0.01	--	---	0.13	--
2.6	18.5	0.5	2.59	SANDY SILT AND SILT	7	15	0.02	--	---	0.14	--
2.7	18.3	0.5	2.84	SANDY SILT AND SILT	8	16	0.01	--	---	0.15	--
2.9	16.4	0.5	3.17	CLAYEY SILT AND SILTY CLAY	8	15	---	--	---	0.16	1.02
3.1	16.8	0.5	2.80	SANDY SILT AND SILT	7	14	0.01	--	---	0.17	--
3.2	16.4	0.4	2.51	SANDY SILT AND SILT	7	13	0.02	--	---	0.18	--
3.4	16.3	0.4	2.27	SANDY SILT AND SILT	6	12	0.02	--	---	0.19	--
3.5	15.7	0.3	2.10	SANDY SILT AND SILT	6	11	0.03	--	---	0.19	--
3.7	16.2	0.3	1.79	SANDY SILT AND SILT	6	11	0.03	--	---	0.20	--
3.9	16.4	0.3	1.96	SANDY SILT AND SILT	6	11	0.03	--	---	0.21	--
4.0	15.5	0.4	2.33	SANDY SILT AND SILT	6	11	0.02	--	---	0.22	--
4.2	13.4	0.4	2.61	SANDY SILT AND SILT	6	10	0.01	--	---	0.23	--
4.3	11.0	0.3	2.46	SANDY SILT AND SILT	5	9	0.01	--	---	0.24	--
4.5	10.9	0.3	2.47	SANDY SILT AND SILT	5	8	0.01	--	---	0.25	--
4.7	12.9	0.3	2.40	SANDY SILT AND SILT	5	9	0.02	37	29	0.26	--
4.8	13.6	0.3	2.35	SANDY SILT AND SILT	6	10	0.02	37	30	0.27	--
5.0	11.6	0.3	2.93	CLAYEY SILT AND SILTY CLAY	5	9	---	--	---	0.27	0.71
5.2	11.7	0.3	2.75	CLAYEY SILT AND SILTY CLAY	5	9	---	--	---	0.28	0.71
5.3	11.0	0.3	2.72	CLAYEY SILT AND SILTY CLAY	5	8	---	--	---	0.29	0.67
5.5	11.5	0.3	2.34	SANDY SILT AND SILT	5	8	0.01	36	24	0.30	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	11.4	0.3	2.19	SANDY SILT AND SILT	5	8	0.02	36	23	0.31	--
5.8	9.8	0.2	2.15	SANDY SILT AND SILT	4	7	0.01	35	20	0.32	--
6.0	7.1	0.2	2.39	CLAYEY SILT AND SILTY CLAY	3	5	---	--	---	0.33	0.42
6.1	4.9	0.1	2.89	CLAYEY SILT AND SILTY CLAY	3	4	---	--	---	0.34	0.28
6.3	4.2	0.1	3.12	CLAYEY SILT AND SILTY CLAY	2	4	---	--	---	0.35	0.24
6.5	4.1	0.2	4.13	CLAY	4	6	---	--	---	0.36	0.24
6.6	8.8	0.2	2.38	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.36	0.53
6.8	11.5	0.3	2.17	SANDY SILT AND SILT	5	7	0.02	35	20	0.37	--
7.0	13.6	0.3	2.13	SANDY SILT AND SILT	5	8	0.02	35	23	0.38	--
7.1	15.1	0.3	2.25	SANDY SILT AND SILT	6	9	0.02	36	25	0.39	--
7.3	16.4	0.4	2.44	SANDY SILT AND SILT	7	10	0.02	36	27	0.40	--
7.4	17.7	0.5	2.77	SANDY SILT AND SILT	7	11	0.02	36	28	0.41	--
7.6	14.4	0.5	3.34	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.42	0.87
7.8	13.0	0.4	3.01	CLAYEY SILT AND SILTY CLAY	6	9	---	--	---	0.43	0.78
7.9	11.4	0.3	2.91	CLAYEY SILT AND SILTY CLAY	5	8	---	--	---	0.44	0.68
8.1	9.9	0.3	2.63	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.45	0.59
8.3	8.8	0.2	2.60	CLAYEY SILT AND SILTY CLAY	4	6	---	--	---	0.45	0.52
8.4	8.2	0.2	1.95	SANDY SILT AND SILT	3	5	0.01	32	20	0.46	--
8.6	7.6	0.2	2.25	CLAYEY SILT AND SILTY CLAY	3	5	---	--	---	0.47	0.44
8.8	8.2	0.2	2.20	SANDY SILT AND SILT	4	5	0.01	32	20	0.48	--
8.9	8.2	0.2	2.20	SANDY SILT AND SILT	4	5	0.01	32	20	0.49	--
9.1	7.4	0.2	2.45	CLAYEY SILT AND SILTY CLAY	3	5	---	--	---	0.50	0.43
9.3	7.6	0.0	0.26	SANDY SILT AND SILT	2	3	0.05	31	20	0.51	--
9.4	7.5	0.2	2.13	CLAYEY SILT AND SILTY CLAY	3	5	---	--	---	0.52	0.44
9.6	2.8	0.1	4.98	CLAY	3	4	---	--	---	0.53	0.14
9.7	7.1	0.1	1.54	SANDY SILT AND SILT	3	4	0.02	31	20	0.54	--
9.9	6.8	0.1	1.61	SANDY SILT AND SILT	3	4	0.02	30	20	0.54	--
10.1	6.9	0.1	1.31	SANDY SILT AND SILT	3	4	0.02	30	20	0.55	--
10.2	6.8	0.1	1.02	SANDY SILT AND SILT	3	3	0.03	30	20	0.56	--
10.4	7.2	0.1	1.11	SANDY SILT AND SILT	3	3	0.03	30	20	0.57	--
10.6	8.2	0.1	1.46	SANDY SILT AND SILT	3	4	0.02	31	20	0.58	--
10.7	9.0	0.2	1.78	SANDY SILT AND SILT	4	5	0.02	31	20	0.59	--
10.9	10.2	0.2	2.26	SANDY SILT AND SILT	4	6	0.01	32	20	0.60	--
11.1	11.4	0.2	2.10	SANDY SILT AND SILT	5	6	0.02	32	20	0.61	--
11.2	12.1	0.2	1.73	SANDY SILT AND SILT	5	6	0.03	32	20	0.62	--
11.4	11.3	0.2	1.86	SANDY SILT AND SILT	4	6	0.02	32	20	0.63	--
11.5	11.4	0.3	2.36	SANDY SILT AND SILT	5	6	0.01	32	20	0.64	--
11.7	13.0	0.3	2.24	SANDY SILT AND SILT	5	7	0.02	33	20	0.64	--
11.9	12.9	0.3	2.48	SANDY SILT AND SILT	6	7	0.01	32	20	0.65	--
12.0	13.1	0.4	2.91	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.66	0.77
12.2	15.1	0.4	2.39	SANDY SILT AND SILT	6	7	0.02	33	20	0.67	--
12.4	14.8	0.4	2.37	SANDY SILT AND SILT	6	7	0.02	33	20	0.68	--
12.5	15.0	0.4	2.47	SANDY SILT AND SILT	6	7	0.02	33	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	16.5	0.4	2.30	SANDY SILT AND SILT	6	8	0.02	33	20	0.70	--
12.9	16.4	0.5	2.75	SANDY SILT AND SILT	7	8	0.01	33	20	0.71	--
13.0	15.7	0.5	3.32	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.72	0.94
13.2	15.7	0.5	3.13	CLAYEY SILT AND SILTY CLAY	7	8	---	--	---	0.73	0.93
13.4	18.4	0.4	2.34	SANDY SILT AND SILT	7	8	0.03	34	20	0.73	--
13.5	13.0	0.3	2.24	SANDY SILT AND SILT	5	6	0.02	32	20	0.74	--
13.7	11.0	0.2	2.19	SANDY SILT AND SILT	5	5	0.02	31	20	0.75	--
13.8	10.3	0.2	2.13	SANDY SILT AND SILT	4	5	0.02	31	20	0.76	--
14.0	15.8	0.2	1.33	SANDY SILT AND SILT	5	6	0.04	33	20	0.77	--
14.2	21.1	0.5	2.41	SANDY SILT AND SILT	8	9	0.03	34	20	0.78	--
14.3	38.1	0.9	2.47	SANDY SILT AND SILT	13	14	0.04	37	33	0.79	--
14.5	39.4	1.2	2.97	SANDY SILT AND SILT	15	16	0.03	37	34	0.80	--
14.7	36.7	1.1	3.08	SANDY SILT AND SILT	14	16	0.02	37	32	0.81	--
14.8	20.4	0.7	3.23	CLAYEY SILT AND SILTY CLAY	9	10	---	--	---	0.82	1.23
15.0	11.6	0.3	2.16	SANDY SILT AND SILT	5	5	0.02	31	20	0.82	--
15.2	9.6	0.1	1.36	SANDY SILT AND SILT	4	4	0.03	30	20	0.83	--
15.3	9.4	0.1	1.06	SANDY SILT AND SILT	3	4	0.03	30	20	0.84	--
15.5	10.2	0.1	1.28	SANDY SILT AND SILT	4	4	0.03	30	20	0.85	--
15.7	10.2	0.1	1.37	SANDY SILT AND SILT	4	4	0.03	30	20	0.86	--
15.8	10.5	0.2	1.42	SANDY SILT AND SILT	4	4	0.03	30	20	0.87	--
16.0	10.6	0.0	0.38	SANDY SILT AND SILT	3	4	0.05	30	20	0.88	--
16.2	10.2	0.2	1.95	SANDY SILT AND SILT	4	4	0.02	30	20	0.89	--
16.3	5.5	0.2	3.98	CLAY	6	6	---	--	---	0.90	0.29
16.5	10.6	0.3	2.45	SANDY SILT AND SILT	5	5	0.01	30	20	0.91	--
16.7	11.5	0.3	2.26	SANDY SILT AND SILT	5	5	0.02	30	20	0.92	--
16.8	12.3	0.3	2.04	SANDY SILT AND SILT	5	5	0.02	31	20	0.93	--
17.0	13.1	0.3	2.13	SANDY SILT AND SILT	5	5	0.02	31	20	0.93	--
17.2	17.7	0.4	2.04	SANDY SILT AND SILT	6	7	0.03	32	20	0.94	--
17.3	35.4	0.5	1.38	SILTY SAND	10	11	0.07	36	26	0.95	--
17.5	41.2	0.6	1.51	SILTY SAND	12	12	0.07	36	30	0.96	--
17.7	43.6	0.4	0.99	SILTY SAND	12	12	0.09	36	32	0.97	--
17.8	35.6	0.5	1.32	SILTY SAND	10	10	0.07	35	25	0.98	--
18.0	24.4	0.4	1.43	SILTY SAND	7	7	0.05	34	20	0.99	--
18.1	17.7	0.3	1.41	SANDY SILT AND SILT	6	6	0.04	32	20	1.00	--
18.3	12.3	0.2	1.87	SANDY SILT AND SILT	5	5	0.02	30	20	1.01	--
18.5	10.7	0.2	1.59	SANDY SILT AND SILT	4	4	0.03	29	20	1.02	--
18.6	9.6	0.1	1.36	SANDY SILT AND SILT	4	4	0.03	29	20	1.02	--
18.8	8.8	0.1	1.36	SANDY SILT AND SILT	3	3	0.03	28	20	1.03	--
19.0	9.1	0.1	1.54	SANDY SILT AND SILT	4	3	0.02	28	20	1.04	--
19.1	9.8	0.2	1.64	SANDY SILT AND SILT	4	4	0.02	29	20	1.05	--
19.3	9.6	0.1	1.05	SANDY SILT AND SILT	3	3	0.03	29	20	1.06	--
19.5	8.6	0.1	1.40	SANDY SILT AND SILT	3	3	0.03	28	20	1.07	--
19.6	8.6	0.1	1.39	SANDY SILT AND SILT	3	3	0.03	28	20	1.08	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	8.9	0.1	1.13	SANDY SILT AND SILT	3	3	0.03	28	20	1.09	--
19.9	9.0	0.1	1.33	SANDY SILT AND SILT	3	3	0.03	28	20	1.10	--
20.1	8.9	0.1	1.35	SANDY SILT AND SILT	3	3	0.03	28	20	1.11	--
20.3	8.9	0.1	1.24	SANDY SILT AND SILT	3	3	0.03	28	20	1.12	--
20.4	9.0	0.2	1.67	SANDY SILT AND SILT	4	3	0.02	28	20	1.12	--
20.6	10.2	0.2	1.56	SANDY SILT AND SILT	4	4	0.03	29	20	1.13	--
20.8	10.6	0.1	1.23	SANDY SILT AND SILT	4	4	0.03	29	20	1.14	--
20.9	9.5	0.1	0.95	SANDY SILT AND SILT	3	3	0.04	28	20	1.15	--
21.1	8.9	0.1	0.90	SANDY SILT AND SILT	3	3	0.03	28	20	1.16	--
21.3	8.2	0.1	0.85	SANDY SILT AND SILT	3	3	0.03	27	20	1.17	--
21.4	7.7	0.1	1.03	SANDY SILT AND SILT	3	3	0.03	27	20	1.18	--
21.6	8.2	0.1	0.85	SANDY SILT AND SILT	3	3	0.03	27	20	1.19	--
21.8	8.2	0.1	0.85	SANDY SILT AND SILT	3	3	0.03	27	20	1.20	--
21.9	8.0	0.1	1.25	SANDY SILT AND SILT	3	3	0.03	27	20	1.21	--
22.1	9.1	0.1	0.77	SANDY SILT AND SILT	3	3	0.04	28	20	1.21	--
22.2	8.3	0.1	0.60	SANDY SILT AND SILT	3	3	0.04	27	20	1.22	--
22.4	7.5	0.0	0.40	SANDY SILT AND SILT	2	2	0.04	27	20	1.23	--
22.6	7.8	0.2	2.44	CLAYEY SILT AND SILTY CLAY	4	3	---	--	---	1.24	0.41
22.7	28.6	0.3	0.95	SILTY SAND	8	7	0.07	33	20	1.25	--
22.9	70.3	0.7	0.93	SAND	15	14	0.49	38	40	1.26	--
23.1	80.6	1.0	1.20	SAND	20	17	0.25	38	45	1.27	--
23.2	112.9	0.7	0.58	SAND	17	16	1.32	40	58	1.28	--
23.4	120.6	0.8	0.65	SAND	19	17	1.26	40	60	1.29	--
23.6	114.3	0.7	0.60	SAND	18	16	1.30	40	58	1.30	--
23.7	122.4	0.6	0.51	SAND	18	16	1.42	40	61	1.30	--
23.9	111.8	1.0	0.90	SAND	20	18	0.93	40	56	1.31	--
24.0	51.1	0.9	1.78	SILTY SAND	15	13	0.07	36	28	1.32	--
24.2	22.3	0.7	3.01	SANDY SILT AND SILT	9	8	0.02	32	20	1.33	--
24.4	11.8	0.2	1.87	SANDY SILT AND SILT	5	4	0.02	28	20	1.34	--
24.5	10.2	0.1	0.98	SANDY SILT AND SILT	4	3	0.04	28	20	1.35	--
24.7	10.2	0.1	0.69	SANDY SILT AND SILT	3	3	0.04	28	20	1.36	--
24.9	11.3	0.1	0.53	SANDY SILT AND SILT	4	3	0.05	28	20	1.37	--
25.0	11.6	0.1	0.78	SANDY SILT AND SILT	4	3	0.04	28	20	1.38	--
25.2	12.6	0.1	0.79	SANDY SILT AND SILT	4	3	0.05	29	20	1.39	--
25.4	10.5	0.1	1.33	SANDY SILT AND SILT	4	3	0.03	28	20	1.39	--
25.5	10.7	0.2	1.68	SANDY SILT AND SILT	4	3	0.02	28	20	1.40	--
25.7	13.0	0.3	1.93	SANDY SILT AND SILT	5	4	0.02	29	20	1.41	--
25.9	14.0	0.3	2.15	SANDY SILT AND SILT	5	5	0.02	29	20	1.42	--
26.0	16.0	0.2	1.31	SANDY SILT AND SILT	5	4	0.04	30	20	1.43	--
26.2	17.4	0.4	2.13	SANDY SILT AND SILT	6	5	0.03	30	20	1.44	--
26.3	17.3	0.5	2.60	SANDY SILT AND SILT	7	6	0.02	30	20	1.45	--
26.5	19.8	0.5	2.47	SANDY SILT AND SILT	8	6	0.02	31	20	1.46	--
26.7	20.5	0.6	2.73	SANDY SILT AND SILT	8	7	0.02	31	20	1.47	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	22.5	0.6	2.71	SANDY SILT AND SILT	9	7	0.02	31	20	1.48	--
27.0	23.7	0.7	3.13	SANDY SILT AND SILT	10	8	0.01	31	20	1.49	--
27.2	25.2	0.8	3.06	SANDY SILT AND SILT	10	9	0.02	32	20	1.49	--
27.3	24.9	0.8	3.37	CLAYEY SILT AND SILTY CLAY	11	9	---	--	---	1.50	1.46
27.5	25.0	0.8	3.16	SANDY SILT AND SILT	11	9	0.01	32	20	1.51	--
27.7	24.4	0.8	3.24	SANDY SILT AND SILT	11	9	0.01	31	20	1.52	--
27.8	24.5	0.8	3.30	SANDY SILT AND SILT	11	9	0.01	31	20	1.53	--
28.0	25.4	0.9	3.39	CLAYEY SILT AND SILTY CLAY	11	9	---	--	---	1.54	1.49
28.1	27.1	0.8	3.02	SANDY SILT AND SILT	11	9	0.02	32	20	1.55	--
28.3	23.9	0.7	3.10	SANDY SILT AND SILT	10	8	0.01	31	20	1.56	--
28.5	22.8	0.6	2.59	SANDY SILT AND SILT	9	7	0.03	31	20	1.57	--
28.6	21.8	0.5	2.48	SANDY SILT AND SILT	8	7	0.03	31	20	1.58	--
28.8	19.4	0.5	2.53	SANDY SILT AND SILT	8	6	0.02	30	20	1.58	--
29.0	18.5	0.4	2.28	SANDY SILT AND SILT	7	6	0.03	30	20	1.59	--
29.1	17.3	0.4	2.25	SANDY SILT AND SILT	7	5	0.03	29	20	1.60	--
29.3	16.5	0.3	1.88	SANDY SILT AND SILT	6	5	0.03	29	20	1.61	--
29.5	15.1	0.3	1.79	SANDY SILT AND SILT	5	4	0.03	29	20	1.62	--
29.6	13.6	0.2	1.70	SANDY SILT AND SILT	5	4	0.03	28	20	1.63	--
29.8	12.3	0.2	1.71	SANDY SILT AND SILT	5	4	0.03	28	20	1.64	--
30.0	12.1	0.2	1.24	SANDY SILT AND SILT	4	3	0.04	28	20	1.65	--
30.1	12.2	0.2	1.23	SANDY SILT AND SILT	4	3	0.04	28	20	1.66	--
30.3	12.5	0.3	2.23	SANDY SILT AND SILT	5	4	0.02	28	20	1.67	--
30.4	15.7	0.2	1.47	SANDY SILT AND SILT	5	4	0.04	29	20	1.67	--
30.6	19.8	0.2	0.91	SILTY SAND	6	4	0.06	30	20	1.68	--
30.8	16.4	0.3	2.08	SANDY SILT AND SILT	6	5	0.03	29	20	1.69	--
30.9	29.5	0.7	2.34	SANDY SILT AND SILT	10	8	0.04	32	20	1.70	--
31.1	37.4	1.1	2.91	SANDY SILT AND SILT	14	11	0.03	33	20	1.71	--
31.3	36.3	1.4	3.72	CLAYEY SILT AND SILTY CLAY	16	13	---	--	---	1.72	2.16
31.4	34.0	1.4	4.05	CLAYEY SILT AND SILTY CLAY	16	12	---	--	---	1.73	2.02
31.6	30.0	1.3	4.37	CLAYEY SILT AND SILTY CLAY	15	12	---	--	---	1.74	1.76
31.8	25.9	1.2	4.60	CLAYEY SILT AND SILTY CLAY	14	11	---	--	---	1.75	1.51
31.9	23.4	1.1	4.66	CLAYEY SILT AND SILTY CLAY	13	10	---	--	---	1.76	1.35
32.1	19.5	1.0	5.24	CLAY	19	15	---	--	---	1.76	1.11
32.3	17.7	0.8	4.46	CLAYEY SILT AND SILTY CLAY	10	7	---	--	---	1.77	1.00
32.4	15.7	0.6	3.57	CLAYEY SILT AND SILTY CLAY	8	6	---	--	---	1.78	0.87
32.6	13.8	0.4	2.76	CLAYEY SILT AND SILTY CLAY	6	5	---	--	---	1.79	0.75
32.7	14.2	0.3	2.39	SANDY SILT AND SILT	6	4	0.02	28	20	1.80	--
32.9	15.7	0.4	2.35	SANDY SILT AND SILT	6	5	0.02	28	20	1.81	--
33.1	17.7	0.4	2.37	SANDY SILT AND SILT	7	5	0.02	29	20	1.82	--
33.2	18.5	0.5	2.54	SANDY SILT AND SILT	7	5	0.02	29	20	1.83	--
33.4	19.7	0.5	2.54	SANDY SILT AND SILT	8	6	0.02	29	20	1.84	--
33.6	20.2	0.5	2.43	SANDY SILT AND SILT	8	6	0.03	30	20	1.85	--
33.7	23.0	0.6	2.39	SANDY SILT AND SILT	8	6	0.03	30	20	1.85	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	28.3	0.7	2.51	SANDY SILT AND SILT	10	7	0.03	31	20	1.86	--
34.1	31.9	0.8	2.44	SANDY SILT AND SILT	11	8	0.04	32	20	1.87	--
34.2	32.1	0.8	2.49	SANDY SILT AND SILT	11	8	0.04	32	20	1.88	--
34.4	28.3	0.8	2.72	SANDY SILT AND SILT	11	8	0.03	31	20	1.89	--
34.5	21.1	0.7	3.27	CLAYEY SILT AND SILTY CLAY	9	7	---	--	---	1.90	1.20
34.7	18.4	0.5	2.72	SANDY SILT AND SILT	8	5	0.02	29	20	1.91	--
34.9	18.0	0.4	1.94	SANDY SILT AND SILT	6	5	0.03	29	20	1.92	--
35.0	17.4	0.3	1.96	SANDY SILT AND SILT	6	4	0.03	29	20	1.93	--
35.2	16.9	0.5	2.79	SANDY SILT AND SILT	7	5	0.01	28	20	1.94	--
35.4	17.0	0.4	2.52	SANDY SILT AND SILT	7	5	0.02	28	20	1.95	--
35.5	17.0	0.4	2.17	SANDY SILT AND SILT	6	5	0.03	28	20	1.95	--
35.7	15.7	0.3	2.10	SANDY SILT AND SILT	6	4	0.03	28	20	1.96	--
35.9	14.5	0.3	2.21	SANDY SILT AND SILT	6	4	0.02	28	20	1.97	--
36.0	14.3	0.2	1.33	SANDY SILT AND SILT	5	3	0.04	28	20	1.98	--
36.2	13.0	0.2	1.61	SANDY SILT AND SILT	5	3	0.03	27	20	1.99	--
36.4	11.6	0.2	1.47	SANDY SILT AND SILT	4	3	0.03	26	20	2.00	--
36.5	12.3	0.2	1.22	SANDY SILT AND SILT	4	3	0.04	27	20	2.01	--
36.7	11.6	0.1	0.95	SANDY SILT AND SILT	4	3	0.04	26	20	2.02	--
36.8	11.6	0.1	1.03	SANDY SILT AND SILT	4	3	0.04	26	20	2.03	--
37.0	12.5	0.2	1.20	SANDY SILT AND SILT	4	3	0.04	27	20	2.04	--
37.2	15.0	0.1	0.73	SILTY SAND	5	3	0.06	28	20	2.04	--
37.3	14.3	0.1	0.77	SILTY SAND	4	3	0.05	27	20	2.05	--
37.5	14.8	0.1	0.95	SANDY SILT AND SILT	5	3	0.05	27	20	2.06	--
37.7	15.9	0.2	1.07	SANDY SILT AND SILT	5	3	0.05	28	20	2.07	--
37.8	17.0	0.2	1.23	SANDY SILT AND SILT	5	4	0.05	28	20	2.08	--
38.0	17.1	0.2	1.28	SANDY SILT AND SILT	5	4	0.05	28	20	2.09	--
38.2	16.4	0.2	1.22	SANDY SILT AND SILT	5	4	0.05	28	20	2.10	--
38.3	15.0	0.2	1.27	SANDY SILT AND SILT	5	3	0.04	27	20	2.11	--
38.5	14.2	0.2	1.20	SANDY SILT AND SILT	5	3	0.04	27	20	2.12	--
38.6	14.3	0.2	1.12	SANDY SILT AND SILT	5	3	0.04	27	20	2.13	--
38.8	15.0	0.2	1.47	SANDY SILT AND SILT	5	3	0.04	27	20	2.13	--
39.0	17.0	0.3	1.64	SANDY SILT AND SILT	6	4	0.04	28	20	2.14	--
39.1	18.4	0.4	1.96	SANDY SILT AND SILT	6	4	0.03	28	20	2.15	--
39.3	19.7	0.3	1.72	SANDY SILT AND SILT	7	4	0.04	29	20	2.16	--
39.5	20.4	0.4	1.72	SANDY SILT AND SILT	7	4	0.04	29	20	2.17	--
39.6	21.1	0.4	1.89	SANDY SILT AND SILT	7	5	0.04	29	20	2.18	--
39.8	22.4	0.5	2.06	SANDY SILT AND SILT	8	5	0.04	29	20	2.19	--
40.0	21.8	0.6	2.89	SANDY SILT AND SILT	9	6	0.02	29	20	2.20	--
40.1	22.0	0.6	2.91	SANDY SILT AND SILT	9	6	0.02	29	20	2.21	--
40.3	19.8	0.5	2.43	SANDY SILT AND SILT	8	5	0.03	29	20	2.22	--
40.5	17.3	0.4	2.02	SANDY SILT AND SILT	6	4	0.03	28	20	2.22	--
40.6	16.4	0.3	1.83	SANDY SILT AND SILT	6	4	0.03	28	20	2.23	--
40.8	15.7	0.3	1.66	SANDY SILT AND SILT	5	4	0.03	27	20	2.24	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	15.0	0.2	1.33	SANDY SILT AND SILT	5	3	0.04	27	20	2.25	--
41.1	14.7	0.2	1.09	SANDY SILT AND SILT	5	3	0.04	27	20	2.26	--
41.3	13.0	0.1	0.93	SANDY SILT AND SILT	4	3	0.04	26	20	2.27	--
41.4	12.2	0.1	0.90	SANDY SILT AND SILT	4	3	0.04	26	20	2.28	--
41.6	12.4	0.1	0.97	SANDY SILT AND SILT	4	3	0.04	26	20	2.29	--
41.8	14.4	0.1	0.97	SANDY SILT AND SILT	5	3	0.05	27	20	2.30	--
41.9	14.2	0.2	1.34	SANDY SILT AND SILT	5	3	0.04	27	20	2.31	--
42.1	14.8	0.1	0.95	SANDY SILT AND SILT	5	3	0.05	27	20	2.32	--
42.3	16.7	0.5	3.24	CLAYEY SILT AND SILTY CLAY	8	5	---	--	---	2.32	0.90
42.4	30.9	0.8	2.42	SANDY SILT AND SILT	11	7	0.04	30	20	2.33	--
42.6	68.0	0.6	0.84	SAND	14	9	0.59	34	23	2.34	--
42.7	120.6	0.6	0.47	SAND	18	11	1.46	37	43	2.35	--
42.9	125.0	1.1	0.90	SAND	22	14	1.00	37	45	2.36	--
43.1	125.8	1.2	0.98	SAND	22	14	0.91	37	45	2.37	--
43.2	131.8	0.6	0.49	SAND	19	12	1.47	38	46	2.38	--
43.4	132.6	0.6	0.41	SAND	19	12	1.55	38	46	2.39	--
43.6	116.5	0.5	0.46	SAND	17	11	1.46	37	42	2.40	--
43.7	72.0	0.9	1.19	SILTY SAND	19	12	0.10	34	24	2.41	--
43.9	32.7	0.7	2.11	SANDY SILT AND SILT	10	6	0.05	31	20	2.41	--
44.1	19.8	0.3	1.72	SANDY SILT AND SILT	7	4	0.04	28	20	2.42	--
44.2	19.8	0.3	1.57	SANDY SILT AND SILT	6	4	0.04	28	20	2.43	--
44.4	21.6	0.2	0.93	SILTY SAND	6	4	0.07	29	20	2.44	--
44.6	16.9	0.2	1.12	SANDY SILT AND SILT	5	3	0.05	27	20	2.45	--
44.7	17.0	0.2	1.41	SANDY SILT AND SILT	6	3	0.04	27	20	2.46	--
44.9	19.1	0.7	3.51	CLAYEY SILT AND SILTY CLAY	9	5	---	--	---	2.47	1.04
45.0	25.2										

PIONEER DRILLING

Engineer IT CORP
On Site Loc:CPT9-43
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :04/04/89 12:33
Cone Used :VIII
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	126.82	2.18	1.72	0.02	silty sand to sandy silt	>90	>48	40	UNDEFINED
0.50	1.64	21.88	0.78	3.55	0.07	clayey silt to silty clay	UNDFND	UNDFD	10	2.1
0.75	2.46	18.37	0.69	3.77	0.11	silty clay to clay	UNDFND	UNDFD	12	1.8
1.00	3.28	17.89	0.64	3.60	0.16	silty clay to clay	UNDFND	UNDFD	11	1.7
1.25	4.10	12.12	0.41	3.40	0.20	silty clay to clay	UNDFND	UNDFD	8	1.1
1.50	4.92	18.37	0.43	2.33	0.25	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
1.75	5.74	20.66	0.64	3.08	0.29	clayey silt to silty clay	UNDFND	UNDFD	10	2.0
2.00	6.56	17.87	0.51	2.88	0.34	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
2.25	7.38	13.76	0.46	3.36	0.38	silty clay to clay	UNDFND	UNDFD	9	1.3
2.50	8.20	7.84	0.26	3.32	0.43	clay	UNDFND	UNDFD	8	.7
2.75	9.02	5.73	0.19	3.36	0.46	clay	UNDFND	UNDFD	5	.5
3.00	9.84	6.50	0.16	2.41	0.48	silty clay to clay	UNDFND	UNDFD	4	.5
3.25	10.66	6.39	0.22	3.39	0.50	clay	UNDFND	UNDFD	6	.5
3.50	11.48	7.22	0.28	3.85	0.52	clay	UNDFND	UNDFD	7	.6
3.75	12.30	8.46	0.24	2.87	0.54	silty clay to clay	UNDFND	UNDFD	5	.7
4.00	13.12	11.25	0.36	3.17	0.56	silty clay to clay	UNDFND	UNDFD	7	1.0
4.25	13.94	10.43	0.28	2.67	0.58	silty clay to clay	UNDFND	UNDFD	7	.9
4.50	14.76	9.82	0.22	2.27	0.60	silty clay to clay	UNDFND	UNDFD	6	.9
4.75	15.58	5.63	0.05	0.91	0.62	sensitive fine grained	UNDFND	UNDFD	3	.4
5.00	16.40	5.67	0.03	0.57	0.64	sensitive fine grained	UNDFND	UNDFD	3	.4
5.25	17.22	11.12	0.14	1.23	0.66	clayey silt to silty clay	UNDFND	UNDFD	5	1.0
5.50	18.04	34.51	0.58	1.68	0.68	sandy silt to clayey silt	UNDFND	UNDFD	13	3.3
5.75	18.86	14.67	0.15	1.01	0.69	sandy silt to clayey silt	UNDFND	UNDFD	6	1.3
6.00	19.69	9.81	0.18	1.85	0.71	clayey silt to silty clay	UNDFND	UNDFD	5	.8
6.25	20.51	7.81	0.08	1.03	0.73	undefined	UNDFND	UNDFD	UDF	UNDEFINED
6.50	21.33	8.01	0.11	1.43	0.75	clayey silt to silty clay	UNDFND	UNDFD	4	.6
6.75	22.15	9.75	0.15	1.57	0.77	clayey silt to silty clay	UNDFND	UNDFD	5	.8
7.00	22.97	32.72	1.14	3.49	0.79	clayey silt to silty clay	UNDFND	UNDFD	16	3.1
7.25	23.79	85.01	1.12	1.32	0.81	silty sand to sandy silt	60-70	40-42	27	UNDEFINED
7.50	24.61	188.34	0.53	0.28	0.83	sand	80-90	44-46	36	UNDEFINED
7.75	25.43	137.29	0.61	0.44	0.85	sand	70-80	42-44	26	UNDEFINED
8.00	26.25	13.51	0.18	1.33	0.87	sandy silt to clayey silt	UNDFND	UNDFD	5	1.2
8.25	27.07	10.63	0.07	0.66	0.89	sandy silt to clayey silt	UNDFND	UNDFD	4	.9
8.50	27.89	18.31	0.42	2.31	0.91	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
8.75	28.71	21.98	0.58	2.63	0.93	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
9.00	29.53	19.79	0.61	3.10	0.95	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
9.25	30.35	14.80	0.50	3.39	0.97	silty clay to clay	UNDFND	UNDFD	9	1.3
9.50	31.17	12.64	0.27	2.16	0.99	clayey silt to silty clay	UNDFND	UNDFD	6	1.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT CORP On Site Loc:CPT3-43

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	17.25	0.48	2.79	1.01	clayey silt to silty clay	UNDFND	UNDFD	8	1.5
10.00	32.81	14.86	0.23	1.56	1.03	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
10.25	33.63	14.18	0.32	2.25	1.05	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
10.50	34.45	11.43	0.15	1.35	1.07	clayey silt to silty clay	UNDFND	UNDFD	5	.9
10.75	35.27	8.81	0.10	1.09	1.08	clayey silt to silty clay	UNDFND	UNDFD	4	.6
11.00	36.09	8.76	0.03	0.39	1.10	sensitive fine grained	UNDFND	UNDFD	4	.6
11.25	36.91	11.51	0.11	0.95	1.12	sandy silt to clayey silt	UNDFND	UNDFD	4	.9
11.50	37.73	28.07	0.31	1.10	1.14	sandy silt to clayey silt	UNDFND	UNDFD	11	2.6
11.75	38.55	12.80	0.18	1.37	1.16	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.00	39.37	18.71	0.36	1.95	1.18	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
12.25	40.19	13.15	0.25	1.91	1.20	clayey silt to silty clay	UNDFND	UNDFD	6	1.0
12.50	41.01	15.75	0.26	1.67	1.22	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
12.75	41.83	16.99	0.26	1.51	1.24	sandy silt to clayey silt	UNDFND	UNDFD	7	1.4
13.00	42.65	31.29	0.89	2.84	1.26	clayey silt to silty clay	UNDFND	UNDFD	15	2.8
13.25	43.47	30.28	1.13	3.38	1.28	sandy silt to clayey silt	UNDFND	UNDFD	15	3.6
13.50	44.29	15.36	0.30	1.85	1.30	clayey silt to silty clay	UNDFND	UNDFD	8	1.3
13.75	45.11	13.19	0.11	0.84	1.32	sandy silt to clayey silt	UNDFND	UNDFD	5	1.0
14.00	45.93	11.76	0.11	0.92	1.34	sandy silt to clayey silt	UNDFND	UNDFD	5	.9
14.25	46.75	14.25	0.24	1.71	1.36	clayey silt to silty clay	UNDFND	UNDFD	7	1.1

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/H9-44
DATE : 01/22/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 7

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	5.5	0.0	0.18	SANDY SILT AND SILT	2	7	0.05	--	---	0.01	--
0.3	7.5	0.2	2.13	CLAYEY SILT AND SILTY CLAY	3	11	---	--	---	0.01	0.47
0.4	190.2	0.5	0.27	SAND	26	77	1.76	--	---	0.02	--
0.6	189.9	1.2	0.62	SAND	28	81	1.43	--	---	0.03	--
0.8	107.4	1.7	1.58	SILTY SAND	28	77	0.10	--	---	0.04	--
0.9	42.0	1.4	3.41	SANDY SILT AND SILT	17	45	0.02	--	---	0.05	--
1.1	29.1	1.4	4.64	CLAYEY SILT AND SILTY CLAY	16	40	---	--	---	0.06	1.82
1.2	31.8	1.2	3.64	CLAYEY SILT AND SILTY CLAY	14	35	---	--	---	0.07	1.99
1.4	29.9	1.0	3.41	SANDY SILT AND SILT	13	31	0.01	--	---	0.08	--
1.6	34.6	0.8	2.31	SANDY SILT AND SILT	11	26	0.04	--	---	0.09	--
1.7	36.6	0.8	2.16	SANDY SILT AND SILT	11	26	0.05	--	---	0.10	--
1.9	35.2	0.9	2.61	SANDY SILT AND SILT	12	27	0.03	--	---	0.10	--
2.1	33.2	0.9	2.80	SANDY SILT AND SILT	12	27	0.03	--	---	0.11	--
2.2	24.4	0.8	3.41	CLAYEY SILT AND SILTY CLAY	11	23	---	--	---	0.12	1.51
2.4	22.1	0.6	2.85	SANDY SILT AND SILT	9	19	0.02	--	---	0.13	--
2.6	21.9	0.7	2.97	SANDY SILT AND SILT	9	19	0.02	--	---	0.14	--
2.7	23.0	0.8	3.26	SANDY SILT AND SILT	10	21	0.01	--	---	0.15	--
2.9	22.2	0.8	3.69	CLAYEY SILT AND SILTY CLAY	11	21	---	--	---	0.16	1.38
3.1	21.5	0.9	4.01	CLAYEY SILT AND SILTY CLAY	11	21	---	--	---	0.17	1.33
3.2	20.6	0.8	3.98	CLAYEY SILT AND SILTY CLAY	10	20	---	--	---	0.18	1.28
3.4	18.4	0.7	4.02	CLAYEY SILT AND SILTY CLAY	9	18	---	--	---	0.19	1.14
3.5	15.0	0.7	4.48	CLAY	15	28	---	--	---	0.19	0.92
3.7	11.1	0.6	5.68	CLAY	11	21	---	--	---	0.20	0.68
3.9	9.1	0.5	4.95	CLAY	9	17	---	--	---	0.21	0.56
4.0	17.9	0.5	2.97	SANDY SILT AND SILT	8	14	0.01	--	---	0.22	--
4.2	22.3	0.7	2.92	SANDY SILT AND SILT	9	17	0.02	--	---	0.23	--
4.3	21.0	0.7	3.14	SANDY SILT AND SILT	9	16	0.01	--	---	0.24	--
4.5	20.7	0.6	3.10	SANDY SILT AND SILT	9	16	0.01	--	---	0.25	--
4.7	18.4	0.6	3.38	CLAYEY SILT AND SILTY CLAY	9	15	---	--	---	0.26	1.13
4.8	18.8	0.6	3.19	CLAYEY SILT AND SILTY CLAY	8	15	---	--	---	0.27	1.16
5.0	18.4	0.6	3.49	CLAYEY SILT AND SILTY CLAY	9	15	---	--	---	0.27	1.13
5.2	32.0	0.8	2.56	SANDY SILT AND SILT	11	19	0.03	41	50	0.28	--
5.3	44.2	0.9	1.99	SILTY SAND	13	22	0.06	42	57	0.29	--
5.5	40.4	1.0	2.38	SANDY SILT AND SILT	13	21	0.04	42	54	0.30	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	48.5	0.6	1.30	SILTY SAND	13	22	0.08	43	59	0.31	--
5.8	74.4	0.6	0.85	SAND	15	24	0.69	45	71	0.32	--
6.0	72.7	0.9	1.29	SILTY SAND	19	31	0.10	44	70	0.33	--
6.1	65.9	1.0	1.46	SILTY SAND	18	29	0.09	44	66	0.34	--
6.3	67.0	1.1	1.66	SILTY SAND	19	29	0.08	44	66	0.35	--
6.5	70.0	1.0	1.42	SILTY SAND	19	29	0.09	44	67	0.36	--
6.6	82.8	0.6	0.77	SAND	15	23	0.90	44	72	0.36	--
6.8	96.6	0.3	0.26	SAND	13	20	1.67	45	75	0.37	--
7.0	100.3	0.6	0.56	SAND	16	24	1.29	45	76	0.38	--
7.1	114.2	0.5	0.39	SAND	16	25	1.54	46	80	0.39	--
7.3	115.6	0.5	0.45	SAND	17	25	1.48	46	80	0.39	--
7.4	140.0	1.0	0.68	SAND	22	33	1.29	47	87	0.40	--
7.6	194.6	1.5	0.79	SAND	30	45	1.29	48	98	0.40	--
7.8	238.6	1.8	0.73	SAND	35	52	1.46	48	100	0.40	--
7.9	262.4	1.6	0.62	SAND	37	55	1.62	48	100	0.41	--
8.1	272.2	1.2	0.43	SAND	36	53	1.82	48	100	0.41	--
8.3	264.3	0.7	0.26	SAND	34	50	1.95	48	100	0.42	--
8.4	232.1	0.6	0.26	SAND	30	44	1.86	48	100	0.42	--
8.6	213.8	0.4	0.20	SAND	28	41	1.87	48	100	0.42	--
8.8	178.5	0.3	0.16	SAND	23	34	1.85	47	94	0.43	--
8.9	144.0	0.2	0.12	SAND	19	27	1.88	46	87	0.43	--
9.1	86.9	0.4	0.45	SAND	13	19	1.38	44	71	0.43	--
9.3	38.7	0.8	2.02	SILTY SAND	12	17	0.05	40	47	0.44	--
9.4	21.4	0.7	3.08	SANDY SILT AND SILT	9	13	0.01	37	32	0.44	--
9.6	14.2	0.4	3.02	CLAYEY SILT AND SILTY CLAY	7	9	---	--	---	0.45	0.86
9.7	13.8	0.2	1.52	SANDY SILT AND SILT	5	7	0.03	35	21	0.45	--
9.9	13.2	0.2	1.44	SANDY SILT AND SILT	5	7	0.03	34	20	0.45	--
10.1	12.1	0.2	1.32	SANDY SILT AND SILT	4	6	0.03	34	20	0.46	--
10.2	11.0	0.1	1.00	SANDY SILT AND SILT	4	5	0.04	33	20	0.46	--
10.4	10.2	0.1	1.18	SANDY SILT AND SILT	4	5	0.03	33	20	0.47	--
10.6	10.8	0.1	0.92	SANDY SILT AND SILT	4	5	0.04	33	20	0.47	--
10.7	12.2	0.1	1.15	SANDY SILT AND SILT	4	6	0.04	34	20	0.47	--
10.9	13.4	0.3	2.09	SANDY SILT AND SILT	5	7	0.02	34	20	0.48	--
11.1	16.9	0.4	2.37	SANDY SILT AND SILT	7	9	0.02	35	24	0.48	--
11.2	19.6	0.6	3.06	SANDY SILT AND SILT	9	12	0.01	36	27	0.49	--
11.4	22.4	0.6	2.58	SANDY SILT AND SILT	9	12	0.02	37	31	0.49	--
11.5	22.2	0.6	2.61	SANDY SILT AND SILT	9	12	0.02	36	30	0.49	--
11.7	21.1	0.5	2.56	SANDY SILT AND SILT	8	11	0.02	36	29	0.50	--
11.9	20.1	0.5	2.64	SANDY SILT AND SILT	8	11	0.02	36	27	0.50	--
12.0	21.6	0.6	2.69	SANDY SILT AND SILT	8	12	0.02	36	29	0.50	--
12.2	19.0	0.6	3.26	CLAYEY SILT AND SILTY CLAY	9	12	---	--	---	0.51	1.15
12.4	15.8	0.5	3.10	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.51	0.95
12.5	14.5	0.4	2.61	SANDY SILT AND SILT	6	8	0.01	34	20	0.52	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	11.4	0.3	2.89	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.52	0.67
12.9	12.8	0.3	2.27	SANDY SILT AND SILT	5	7	0.02	33	20	0.52	--
13.0	14.2	0.2	1.55	SANDY SILT AND SILT	5	7	0.03	34	20	0.53	--
13.2	12.8	0.3	2.35	SANDY SILT AND SILT	5	7	0.02	33	20	0.53	--
13.4	13.5	0.4	3.04	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.54	0.80
13.5	24.3	0.5	2.10	SANDY SILT AND SILT	8	11	0.04	36	31	0.54	--
13.7	18.7	0.4	2.09	SANDY SILT AND SILT	7	9	0.03	35	24	0.54	--
13.8	13.5	0.4	2.82	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.55	0.79
14.0	11.4	0.3	2.97	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.55	0.67
14.2	11.2	0.3	2.33	SANDY SILT AND SILT	5	6	0.01	33	20	0.56	--
14.3	10.2	0.2	2.17	SANDY SILT AND SILT	4	6	0.01	32	20	0.56	--
14.5	9.4	0.1	1.27	SANDY SILT AND SILT	3	5	0.03	32	20	0.56	--
14.7	9.4	0.1	1.28	SANDY SILT AND SILT	3	5	0.03	32	20	0.57	--
14.8	8.6	0.1	1.62	SANDY SILT AND SILT	3	4	0.02	31	20	0.57	--
15.0	8.7	0.1	1.61	SANDY SILT AND SILT	3	4	0.02	31	20	0.58	--
15.2	8.7	0.1	1.26	SANDY SILT AND SILT	3	4	0.03	31	20	0.58	--
15.3	8.7	0.1	1.15	SANDY SILT AND SILT	3	4	0.03	31	20	0.58	--
15.5	8.9	0.1	1.13	SANDY SILT AND SILT	3	4	0.03	31	20	0.59	--
15.7	11.4	0.2	1.66	SANDY SILT AND SILT	4	6	0.03	32	20	0.59	--
15.8	16.2	0.3	1.91	SANDY SILT AND SILT	6	8	0.03	34	20	0.60	--
16.0	21.6	0.6	2.64	SANDY SILT AND SILT	8	11	0.02	35	25	0.60	--
16.2	25.3	0.7	2.57	SANDY SILT AND SILT	9	12	0.03	36	29	0.60	--
16.3	32.6	0.5	1.65	SILTY SAND	10	12	0.06	37	36	0.61	--
16.5	106.6	0.4	0.34	SAND	15	19	1.59	43	72	0.61	--
16.7	142.7	0.3	0.18	SAND	19	24	1.81	45	81	0.62	--
16.8	160.9	0.4	0.27	SAND	22	27	1.74	45	86	0.62	--
17.0	149.5	0.5	0.30	SAND	20	26	1.69	45	83	0.62	--
17.2	152.5	0.6	0.39	SAND	21	27	1.61	45	84	0.63	--
17.3	151.6	1.7	1.15	SAND	28	35	0.84	45	83	0.63	--
17.5	146.2	1.7	1.18	SAND	28	34	0.78	45	82	0.63	--
17.7	133.2	1.6	1.23	SAND	26	33	0.67	44	79	0.64	--
17.8	134.0	1.2	0.90	SAND	23	28	1.03	44	79	0.64	--
18.0	131.4	1.1	0.81	SAND	22	27	1.12	44	78	0.65	--
18.1	145.3	0.5	0.35	SAND	20	25	1.64	44	81	0.65	--
18.3	134.5	0.3	0.19	SAND	18	22	1.79	44	78	0.65	--
18.5	75.4	1.1	1.45	SILTY SAND	20	25	0.09	41	60	0.66	--
18.6	35.4	0.9	2.43	SANDY SILT AND SILT	12	14	0.04	37	36	0.66	--
18.8	17.0	0.5	2.88	SANDY SILT AND SILT	7	9	0.01	34	20	0.67	--
19.0	13.5	0.3	2.00	SANDY SILT AND SILT	5	6	0.02	33	20	0.67	--
19.1	13.4	0.2	1.34	SANDY SILT AND SILT	5	6	0.04	33	20	0.67	--
19.3	11.4	0.1	1.14	SANDY SILT AND SILT	4	5	0.04	32	20	0.68	--
19.5	11.3	0.1	0.88	SANDY SILT AND SILT	4	5	0.04	32	20	0.68	--
19.6	10.8	0.1	0.93	SANDY SILT AND SILT	4	4	0.04	31	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	11.0	0.1	1.27	SANDY SILT AND SILT	4	5	0.03	31	20	0.69	--
19.9	11.4	0.1	1.22	SANDY SILT AND SILT	4	5	0.03	32	20	0.69	--
20.1	10.8	0.2	1.49	SANDY SILT AND SILT	4	5	0.03	31	20	0.70	--
20.3	11.4	0.2	1.40	SANDY SILT AND SILT	4	5	0.03	31	20	0.70	--
20.4	11.7	0.2	1.46	SANDY SILT AND SILT	4	5	0.03	32	20	0.70	--
20.6	12.2	0.2	1.48	SANDY SILT AND SILT	4	5	0.03	32	20	0.71	--
20.8	12.2	0.2	1.40	SANDY SILT AND SILT	4	5	0.03	32	20	0.71	--
20.9	12.1	0.2	1.24	SANDY SILT AND SILT	4	5	0.04	32	20	0.72	--
21.1	11.3	0.2	1.33	SANDY SILT AND SILT	4	5	0.03	31	20	0.72	--
21.3	11.5	0.2	1.30	SANDY SILT AND SILT	4	5	0.03	31	20	0.72	--
21.4	12.8	0.1	0.70	SANDY SILT AND SILT	4	5	0.05	32	20	0.73	--
21.6	10.2	0.1	0.98	SANDY SILT AND SILT	4	4	0.04	31	20	0.73	--
21.8	10.8	0.1	1.12	SANDY SILT AND SILT	4	4	0.04	31	20	0.74	--
21.9	12.8	0.2	1.56	SANDY SILT AND SILT	5	5	0.03	32	20	0.74	--
22.1	14.8	0.3	1.97	SANDY SILT AND SILT	6	6	0.03	32	20	0.74	--
22.2	23.8	0.3	1.34	SILTY SAND	7	8	0.06	35	21	0.75	--
22.4	24.8	0.3	1.21	SILTY SAND	7	8	0.06	35	22	0.75	--
22.6	17.3	0.2	1.27	SANDY SILT AND SILT	6	6	0.05	33	20	0.76	--
22.7	11.5	0.2	2.00	SANDY SILT AND SILT	5	5	0.02	31	20	0.76	--
22.9	11.4	0.3	2.36	SANDY SILT AND SILT	5	6	0.01	31	20	0.76	--
23.1	13.5	0.3	1.86	SANDY SILT AND SILT	5	6	0.03	32	20	0.77	--
23.2	12.8	0.2	1.56	SANDY SILT AND SILT	5	5	0.03	32	20	0.77	--
23.4	12.1	0.2	1.49	SANDY SILT AND SILT	4	5	0.03	31	20	0.78	--
23.6	12.2	0.2	1.96	SANDY SILT AND SILT	5	5	0.02	31	20	0.78	--
23.7	14.4	0.4	2.57	SANDY SILT AND SILT	6	7	0.01	32	20	0.78	--
23.9	17.2	0.3	1.80	SANDY SILT AND SILT	6	7	0.03	33	20	0.79	--
24.0	15.5	0.3	2.13	SANDY SILT AND SILT	6	7	0.03	32	20	0.79	--
24.2	17.5	0.5	3.08	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.79	1.01
24.4	41.3	0.7	1.69	SILTY SAND	12	14	0.06	37	35	0.80	--
24.5	46.5	1.0	2.11	SILTY SAND	14	16	0.06	38	39	0.80	--
24.7	35.2	0.5	1.53	SILTY SAND	10	12	0.06	36	31	0.81	--
24.9	27.1	0.5	1.99	SANDY SILT AND SILT	9	10	0.04	35	23	0.81	--
25.0	21.6	0.6	2.60	SANDY SILT AND SILT	8	9	0.02	34	20	0.81	--
25.2	25.0	0.7	2.84	SANDY SILT AND SILT	10	11	0.02	35	20	0.82	--
25.4	14.8	0.5	3.05	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.82	0.83
25.5	10.6	0.1	0.94	SANDY SILT AND SILT	4	4	0.04	30	20	0.83	--
25.7	10.1	0.1	1.39	SANDY SILT AND SILT	4	4	0.03	30	20	0.83	--
25.9	6.6	0.1	2.11	CLAYEY SILT AND SILTY CLAY	3	3	---	--	---	0.83	0.33
26.0	10.6	0.2	1.69	SANDY SILT AND SILT	4	4	0.02	30	20	0.84	--
26.2	11.4	0.2	1.84	SANDY SILT AND SILT	4	5	0.02	31	20	0.84	--
26.3	12.7	0.3	2.13	SANDY SILT AND SILT	5	6	0.02	31	20	0.85	--
26.5	13.5	0.3	2.37	SANDY SILT AND SILT	6	6	0.02	31	20	0.85	--
26.7	14.8	0.4	2.90	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	0.85	0.84

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	17.8	0.5	3.03	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.86	1.02
27.0	18.5	0.6	3.24	CLAYEY SILT AND SILTY CLAY	8	9	---	--	---	0.86	1.07
27.2	19.3	0.6	3.11	SANDY SILT AND SILT	9	9	0.01	33	20	0.86	--
27.3	19.6	0.5	2.76	SANDY SILT AND SILT	8	9	0.02	33	20	0.87	--
27.5	19.6	0.6	2.81	SANDY SILT AND SILT	8	9	0.02	33	20	0.87	--
27.7	21.6	0.6	2.64	SANDY SILT AND SILT	8	9	0.02	34	20	0.88	--
27.8	21.6	0.6	2.87	SANDY SILT AND SILT	9	9	0.02	34	20	0.88	--
28.0	22.3	0.6	2.87	SANDY SILT AND SILT	9	10	0.02	34	20	0.88	--
28.1	23.0	0.7	3.00	SANDY SILT AND SILT	10	10	0.02	34	20	0.89	--
28.3	23.1	0.7	3.07	SANDY SILT AND SILT	10	10	0.01	34	20	0.89	--
28.5	22.8	0.7	3.20	SANDY SILT AND SILT	10	11	0.01	34	20	0.90	--
28.6	23.6	0.7	3.06	SANDY SILT AND SILT	10	10	0.02	34	20	0.90	--
28.8	23.7	0.7	3.04	SANDY SILT AND SILT	10	10	0.02	34	20	0.90	--
29.0	23.8	0.7	3.11	SANDY SILT AND SILT	10	11	0.01	34	20	0.91	--
29.1	23.7	0.7	3.00	SANDY SILT AND SILT	10	10	0.02	34	20	0.91	--
29.3	23.0	0.7	2.96	SANDY SILT AND SILT	9	10	0.02	34	20	0.92	--
29.5	22.3	0.6	2.60	SANDY SILT AND SILT	9	9	0.02	33	20	0.92	--
29.6	21.0	0.5	2.58	SANDY SILT AND SILT	8	8	0.02	33	20	0.92	--
29.8	18.6	0.5	2.79	SANDY SILT AND SILT	8	8	0.02	33	20	0.93	--
30.0	16.9	0.4	2.61	SANDY SILT AND SILT	7	7	0.02	32	20	0.93	--
30.1	14.8	0.4	2.56	SANDY SILT AND SILT	6	6	0.02	31	20	0.94	--
30.3	14.2	0.4	2.47	SANDY SILT AND SILT	6	6	0.02	31	20	0.94	--
30.4	15.5	0.4	2.58	SANDY SILT AND SILT	6	7	0.02	32	20	0.94	--
30.6	17.6	0.5	2.84	SANDY SILT AND SILT	8	8	0.01	32	20	0.95	--
30.8	19.3	0.4	2.12	SANDY SILT AND SILT	7	7	0.03	33	20	0.95	--
30.9	18.7	0.2	1.23	SANDY SILT AND SILT	6	6	0.05	32	20	0.95	--
31.1	18.3	0.2	0.98	SILTY SAND	5	6	0.06	32	20	0.96	--
31.3	19.7	0.3	1.57	SANDY SILT AND SILT	6	7	0.04	33	20	0.96	--
31.4	23.7	0.4	1.77	SANDY SILT AND SILT	8	8	0.04	34	20	0.97	--
31.6	24.4	0.5	2.09	SANDY SILT AND SILT	8	8	0.04	34	20	0.97	--
31.8	24.4	0.6	2.38	SANDY SILT AND SILT	9	9	0.03	34	20	0.97	--
31.9	24.3	0.6	2.63	SANDY SILT AND SILT	9	9	0.03	34	20	0.98	--
32.1	23.0	0.6	2.66	SANDY SILT AND SILT	9	9	0.02	33	20	0.98	--
32.3	20.4	0.5	2.55	SANDY SILT AND SILT	8	8	0.02	33	20	0.99	--
32.4	20.4	0.5	2.45	SANDY SILT AND SILT	8	8	0.03	33	20	0.99	--
32.6	22.1	0.6	2.48	SANDY SILT AND SILT	8	8	0.03	33	20	0.99	--
32.7	24.4	0.7	2.67	SANDY SILT AND SILT	9	9	0.02	33	20	1.00	--
32.9	25.3	0.6	2.53	SANDY SILT AND SILT	9	9	0.03	34	20	1.00	--
33.1	23.0	0.5	2.22	SANDY SILT AND SILT	8	8	0.03	33	20	1.01	--
33.2	22.5	0.4	1.64	SANDY SILT AND SILT	7	7	0.05	33	20	1.01	--
33.4	24.4	0.5	2.01	SANDY SILT AND SILT	8	8	0.04	33	20	1.01	--
33.6	28.4	0.6	1.94	SANDY SILT AND SILT	9	9	0.05	34	20	1.02	--
33.7	29.8	0.6	1.98	SANDY SILT AND SILT	9	9	0.05	34	20	1.02	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	30.7	0.7	2.15	SANDY SILT AND SILT	10	10	0.04	34	20	1.02	--
34.1	31.8	0.7	2.14	SANDY SILT AND SILT	10	10	0.04	35	20	1.03	--
34.2	32.0	0.7	2.22	SANDY SILT AND SILT	10	10	0.04	35	20	1.03	--
34.4	36.6	0.8	2.30	SANDY SILT AND SILT	12	12	0.04	35	24	1.04	--
34.5	37.3	0.9	2.52	SANDY SILT AND SILT	13	12	0.04	35	25	1.04	--
34.7	35.2	0.8	2.13	SANDY SILT AND SILT	11	11	0.05	35	23	1.04	--
34.9	29.7	0.6	2.16	SANDY SILT AND SILT	10	10	0.04	34	20	1.05	--
35.0	22.9	0.4	1.92	SANDY SILT AND SILT	8	7	0.04	33	20	1.05	--
35.2	19.6	0.3	1.68	SANDY SILT AND SILT	6	6	0.04	32	20	1.06	--
35.4	16.2	0.3	1.54	SANDY SILT AND SILT	5	5	0.04	31	20	1.06	--
35.5	14.2	0.2	1.47	SANDY SILT AND SILT	5	5	0.04	31	20	1.06	--
35.7	13.2	0.2	1.21	SANDY SILT AND SILT	4	4	0.04	30	20	1.07	--
35.9	13.4	0.2	1.12	SANDY SILT AND SILT	4	4	0.04	30	20	1.07	--
36.0	13.4	0.2	1.12	SANDY SILT AND SILT	4	4	0.04	30	20	1.08	--
36.2	12.8	0.2	1.25	SANDY SILT AND SILT	4	4	0.04	30	20	1.08	--
36.4	11.4	0.2	1.40	SANDY SILT AND SILT	4	4	0.03	29	20	1.08	--
36.5	12.0	0.1	1.08	SANDY SILT AND SILT	4	4	0.04	30	20	1.09	--
36.7	11.3	0.1	0.89	SANDY SILT AND SILT	4	4	0.04	29	20	1.09	--
36.8	10.8	0.1	0.83	SANDY SILT AND SILT	4	3	0.04	29	20	1.10	--
37.0	11.4	0.1	0.79	SANDY SILT AND SILT	4	4	0.04	29	20	1.10	--
37.2	11.4	0.1	0.61	SANDY SILT AND SILT	4	3	0.05	29	20	1.10	--
37.3	11.4	0.1	0.87	SANDY SILT AND SILT	4	4	0.04	29	20	1.11	--
37.5	11.4	0.1	0.61	SANDY SILT AND SILT	4	3	0.05	29	20	1.11	--
37.7	11.2	0.1	0.53	SANDY SILT AND SILT	4	3	0.05	29	20	1.11	--
37.8	10.6	0.1	0.57	SANDY SILT AND SILT	3	3	0.04	29	20	1.12	--
38.0	11.4	0.1	0.70	SANDY SILT AND SILT	4	3	0.04	29	20	1.12	--
38.2	12.1	0.1	0.66	SANDY SILT AND SILT	4	4	0.05	29	20	1.13	--
38.3	12.8	0.1	0.94	SANDY SILT AND SILT	4	4	0.04	30	20	1.13	--
38.5	13.3	0.1	0.90	SANDY SILT AND SILT	4	4	0.05	30	20	1.13	--
38.6	12.8	0.1	1.02	SANDY SILT AND SILT	4	4	0.04	30	20	1.14	--
38.8	12.1	0.1	0.41	SILTY SAND	4	3	0.06	29	20	1.14	--
39.0	11.4	0.1	0.79	SANDY SILT AND SILT	4	3	0.04	29	20	1.15	--
39.1	6.8	0.1	1.18	SANDY SILT AND SILT	3	2	0.03	27	20	1.15	--
39.3	12.0	0.1	0.67	SANDY SILT AND SILT	4	4	0.05	29	20	1.15	--
39.5	12.1	0.1	0.66	SANDY SILT AND SILT	4	4	0.05	29	20	1.16	--
39.6	12.8	0.1	0.78	SANDY SILT AND SILT	4	4	0.05	30	20	1.16	--
39.8	14.8	0.1	0.75	SILTY SAND	4	4	0.05	30	20	1.17	--
40.0	14.2	0.1	0.85	SANDY SILT AND SILT	4	4	0.05	30	20	1.17	--
40.1	14.2	0.1	0.78	SANDY SILT AND SILT	4	4	0.05	30	20	1.17	--
40.3	13.5	0.1	1.04	SANDY SILT AND SILT	4	4	0.04	30	20	1.18	--
40.5	14.8	0.2	1.62	SANDY SILT AND SILT	5	5	0.03	30	20	1.18	--
40.6	16.7	0.3	1.56	SANDY SILT AND SILT	6	5	0.04	31	20	1.19	--
40.8	16.2	0.2	1.48	SANDY SILT AND SILT	5	5	0.04	31	20	1.19	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	15.2	0.2	1.58	SANDY SILT AND SILT	5	5	0.04	30	20	1.19	--
41.1	14.1	0.2	1.35	SANDY SILT AND SILT	5	4	0.04	30	20	1.20	--
41.3	13.5	0.2	1.19	SANDY SILT AND SILT	4	4	0.04	30	20	1.20	--
41.4	14.2	0.1	0.99	SANDY SILT AND SILT	5	4	0.05	30	20	1.20	--
41.6	13.7	0.2	1.09	SANDY SILT AND SILT	4	4	0.04	30	20	1.21	--
41.8	13.6	0.2	1.10	SANDY SILT AND SILT	4	4	0.04	30	20	1.21	--
41.9	13.6	0.1	0.81	SANDY SILT AND SILT	4	4	0.05	30	20	1.22	--
42.1	13.6	0.1	0.73	SANDY SILT AND SILT	4	4	0.05	30	20	1.22	--
42.3	14.5	0.3	2.21	SANDY SILT AND SILT	6	5	0.02	30	20	1.22	--
42.4	16.8	0.3	2.02	SANDY SILT AND SILT	6	6	0.03	31	20	1.23	--
42.6	22.6	0.3	1.42	SILTY SAND	7	6	0.05	32	20	1.23	--
42.7	29.8	0.7	2.45	SANDY SILT AND SILT	10	9	0.04	33	20	1.24	--
42.9	55.6	1.1	1.89	SILTY SAND	16	15	0.07	36	33	1.24	--
43.1	114.2	0.9	0.81	SAND	19	17	1.06	40	59	1.24	--
43.2	167.1	0.8	0.50	SAND	24	22	1.51	42	73	1.25	--
43.4	184.5	0.7	0.35	SAND	25	23	1.67	42	77	1.25	--
43.6	201.2	0.7	0.33	SAND	27	25	1.71	43	81	1.26	--
43.7	196.4	0.7	0.33	SAND	27	24	1.70	43	80	1.26	--
43.9	163.0	0.6	0.37	SAND	23	20	1.63	42	72	1.26	--
44.1	91.0	1.3	1.45	SILTY SAND	24	22	0.10	39	49	1.27	--
44.2	47.4	1.3	2.76	SANDY SILT AND SILT	16	14	0.04	36	27	1.27	--
44.4	27.9	0.9	3.23	SANDY SILT AND SILT	12	11	0.01	33	20	1.27	--
44.6	21.0	0.3	1.19	SILTY SAND	6	6	0.06	32	20	1.28	--
44.7	21.7										
44.9	29.1										

PIONEER DRILLING

Engineer IT
On Site Loc:CPT/9-45
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/19/90/09:39
Cone Used :IV
Water table (meters) : 2.1

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	34.44	1.53	4.45	0.02	silty clay to clay	UNDFND	UNDFD	22	3.4
0.50	1.64	18.59	0.97	5.24	0.07	clay	UNDFND	UNDFD	18	1.8
0.75	2.46	16.60	0.86	5.18	0.11	clay	UNDFND	UNDFD	16	1.6
1.00	3.28	13.11	0.84	6.39	0.16	clay	UNDFND	UNDFD	13	1.2
1.25	4.10	12.43	0.78	6.26	0.20	clay	UNDFND	UNDFD	12	1.2
1.50	4.92	13.95	1.01	7.27	0.25	clay	UNDFND	UNDFD	13	1.3
1.75	5.74	13.10	0.87	6.65	0.29	clay	UNDFND	UNDFD	13	1.2
2.00	6.56	11.53	0.88	7.63	0.34	clay	UNDFND	UNDFD	11	1.1
2.25	7.38	3.75	0.80	8.17	0.38	undefined	UNDFND	UNDFD	UDF	UNDEFINED
2.50	8.20	11.22	0.85	7.59	0.40	clay	UNDFND	UNDFD	11	1.0
2.75	9.02	23.22	1.02	4.41	0.42	clay	UNDFND	UNDFD	22	2.2
3.00	9.84	30.47	1.38	4.53	0.44	silty clay to clay	UNDFND	UNDFD	19	2.9
3.25	10.66	49.44	1.77	3.58	0.46	clayey silt to silty clay	UNDFND	UNDFD	24	4.8
3.50	11.48	126.19	2.48	1.96	0.48	silty sand to sandy silt	80-90	44-46	40	UNDEFINED
3.75	12.30	116.70	1.63	1.39	0.50	sand to silty sand	80-90	44-46	28	UNDEFINED
4.00	13.12	19.50	0.61	3.12	0.52	clayey silt to silty clay	UNDFND	UNDFD	9	1.8
4.25	13.94	14.11	0.46	3.23	0.54	silty clay to clay	UNDFND	UNDFD	9	1.3
4.50	14.76	27.39	0.95	3.49	0.56	clayey silt to silty clay	UNDFND	UNDFD	13	2.6
4.75	15.58	137.37	1.60	1.17	0.58	sand to silty sand	80-90	44-46	33	UNDEFINED
5.00	16.40	250.96	1.47	0.59	0.60	sand	>90	46-48	43	UNDEFINED
5.25	17.22	245.71	1.39	0.57	0.61	sand	>90	46-48	47	UNDEFINED
5.50	18.04	299.13	1.53	0.51	0.63	gravelly sand to sand	>90	46-48	48	UNDEFINED
5.75	18.86	370.08	2.13	0.58	0.65	gravelly sand to sand	>90	>48	>50	UNDEFINED
6.00	19.69	264.57	0.65	0.24	0.67	gravelly sand to sand	>90	46-48	42	UNDEFINED
6.25	20.51	251.29	1.26	0.50	0.69	sand	>90	46-48	48	UNDEFINED
6.50	21.33	230.84	1.24	0.54	0.71	sand	>90	46-48	44	UNDEFINED
6.75	22.15	203.00	0.85	0.42	0.73	sand	>90	44-46	39	UNDEFINED
7.00	22.97	28.75	0.89	3.08	0.75	clayey silt to silty clay	UNDFND	UNDFD	14	2.7
7.25	23.79	32.66	0.56	1.73	0.77	sandy silt to clayey silt	UNDFND	UNDFD	13	3.1
7.50	24.61	14.56	0.33	2.24	0.79	clayey silt to silty clay	UNDFND	UNDFD	7	1.3
7.75	25.43	9.24	0.16	1.71	0.81	clayey silt to silty clay	UNDFND	UNDFD	4	.7
8.00	26.25	45.00	0.57	1.26	0.83	silty sand to sandy silt	40-50	38-40	14	UNDEFINED
8.25	27.07	271.14	1.20	0.44	0.85	gravelly sand to sand	>90	44-46	43	UNDEFINED
8.50	27.89	310.21	0.82	0.26	0.87	gravelly sand to sand	>90	46-48	50	UNDEFINED
8.75	28.71	98.71	0.73	0.74	0.89	sand to silty sand	60-70	40-42	24	UNDEFINED
9.00	29.53	10.41	0.15	1.48	0.91	clayey silt to silty clay	UNDFND	UNDFD	5	.8
9.25	30.35	11.64	0.19	1.60	0.93	clayey silt to silty clay	UNDFND	UNDFD	6	.9
9.50	31.17	8.98	0.17	1.88	0.95	clayey silt to silty clay	UNDFND	UNDFD	4	.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT/9-45

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	10.39	0.23	2.22	0.97	clayey silt to silty clay	UNDFND	UNDFD	5	.8
10.00	32.81	10.82	0.26	2.43	0.99	silty clay to clay	UNDFND	UNDFD	7	.9
10.25	33.63	11.19	0.35	3.17	1.00	silty clay to clay	UNDFND	UNDFD	7	.9
10.50	34.45	15.39	0.54	3.39	1.02	silty clay to clay	UNDFND	UNDFD	10	1.4
10.75	35.27	20.47	0.71	3.45	1.04	clayey silt to silty clay	UNDFND	UNDFD	10	1.8
11.00	36.09	22.35	0.55	2.38	1.06	clayey silt to silty clay	UNDFND	UNDFD	11	2.0
11.25	36.91	23.31	0.76	3.27	1.08	clayey silt to silty clay	UNDFND	UNDFD	11	2.1
11.50	37.73	160.72	1.42	0.88	1.10	sand	70-80	42-44	31	UNDEFINED
11.75	38.55	263.87	1.52	0.58	1.12	sand	>90	44-46	50	UNDEFINED
12.00	39.37	376.33	2.72	0.72	1.14	gravelly sand to sand	>90	46-48	>50	UNDEFINED
12.25	40.19	352.85	1.91	0.54	1.16	gravelly sand to sand	>90	44-46	>50	UNDEFINED
12.50	41.01	330.79	1.64	0.49	1.18	gravelly sand to sand	>90	44-46	>50	UNDEFINED
12.75	41.83	351.43	1.71	0.49	1.20	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.00	42.65	337.47	1.30	0.38	1.22	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.25	43.47	333.12	1.07	0.32	1.24	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.50	44.29	314.14	1.17	0.37	1.26	gravelly sand to sand	>90	44-46	>50	UNDEFINED
13.75	45.11	249.43	1.25	0.50	1.28	sand	80-90	42-44	48	UNDEFINED
14.00	45.93	70.01	1.50	2.15	1.30	silty sand to sandy silt	50-60	38-40	22	UNDEFINED
14.25	46.75	261.95	3.18	1.21	1.32	sand	>90	44-46	>50	UNDEFINED
14.50	47.57	356.54	1.08	0.30	1.34	gravelly sand to sand	>90	44-46	>50	UNDEFINED
14.75	48.39	46.16	0.61	1.33	1.36	silty sand to sandy silt	40-50	34-36	15	UNDEFINED
15.00	49.21	20.89	0.41	1.98	1.38	sandy silt to clayey silt	UNDFND	UNDFD	8	1.3
15.25	50.03	14.75	0.23	1.53	1.39	clayey silt to silty clay	UNDFND	UNDFD	7	1.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT
On Site Loc:CPT5-54
Job No. :409700
Tot. Unit Wt. (avg) : 110 pcf

CPT Date :03/13/90/15:20
Cone Used :IV
Water table (meters) : 2.5

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
0.25	0.82	14.69	1.05	7.15	0.02	clay	UNDFND	UNDFD	14	1.4
0.50	1.64	16.64	1.46	8.79	0.07	indefined	UNDFND	UNDFD	UDF	UNDEFINED
0.75	2.46	40.38	3.15	7.80	0.11	clay	UNDFND	UNDFD	39	4.0
1.00	3.28	42.18	2.83	6.71	0.16	clay	UNDFND	UNDFD	40	4.2
1.25	4.10	32.38	1.42	4.38	0.20	silty clay to clay	UNDFND	UNDFD	21	3.2
1.50	4.92	27.40	1.55	5.67	0.25	clay	UNDFND	UNDFD	26	2.7
1.75	5.74	18.85	1.15	6.10	0.29	clay	UNDFND	UNDFD	18	1.8
2.00	6.56	11.04	0.73	6.58	0.34	clay	UNDFND	UNDFD	11	1.0
2.25	7.38	11.74	0.59	5.06	0.38	clay	UNDFND	UNDFD	11	1.1
2.50	8.20	14.56	0.72	4.92	0.43	clay	UNDFND	UNDFD	14	1.4
2.75	9.02	17.48	0.86	4.95	0.46	clay	UNDFND	UNDFD	17	1.7
3.00	9.84	16.17	0.68	4.19	0.48	clay	UNDFND	UNDFD	15	1.5
3.25	10.66	24.25	0.98	4.03	0.50	silty clay to clay	UNDFND	UNDFD	15	2.3
3.50	11.48	26.26	1.23	4.68	0.52	clay	UNDFND	UNDFD	25	2.5
3.75	12.30	12.46	0.63	5.07	0.54	clay	UNDFND	UNDFD	12	1.1
4.00	13.12	12.63	0.63	5.02	0.56	clay	UNDFND	UNDFD	12	1.1
4.25	13.94	18.52	0.75	4.06	0.58	silty clay to clay	UNDFND	UNDFD	12	1.7
4.50	14.76	17.76	0.69	3.86	0.60	silty clay to clay	UNDFND	UNDFD	11	1.6
4.75	15.58	18.12	0.66	3.63	0.62	silty clay to clay	UNDFND	UNDFD	12	1.7
5.00	16.40	11.72	0.42	3.59	0.64	silty clay to clay	UNDFND	UNDFD	7	1.0
5.25	17.22	15.27	0.56	3.66	0.66	silty clay to clay	UNDFND	UNDFD	10	1.4
5.50	18.04	13.04	0.53	4.05	0.68	clay	UNDFND	UNDFD	12	1.2
5.75	18.86	33.14	1.52	4.58	0.69	silty clay to clay	UNDFND	UNDFD	21	3.2
6.00	19.69	25.57	0.84	3.29	0.71	clayey silt to silty clay	UNDFND	UNDFD	12	2.4
6.25	20.51	19.99	0.72	3.62	0.73	silty clay to clay	UNDFND	UNDFD	13	1.8
6.50	21.33	32.20	1.23	3.83	0.75	clayey silt to silty clay	UNDFND	UNDFD	15	3.1
6.75	22.15	65.59	0.59	0.90	0.77	sand to silty sand	50-60	40-42	16	UNDEFINED
7.00	22.97	39.95	0.55	1.38	0.79	silty sand to sandy silt	40-50	36-38	13	UNDEFINED
7.25	23.79	18.92	0.58	3.07	0.81	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
7.50	24.61	18.80	0.53	2.79	0.83	clayey silt to silty clay	UNDFND	UNDFD	9	1.7
7.75	25.43	14.11	0.32	2.28	0.85	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
8.00	26.25	100.48	0.78	0.78	0.87	sand to silty sand	60-70	40-42	24	UNDEFINED
8.25	27.07	122.25	2.49	2.04	0.89	silty sand to sandy silt	70-80	42-44	39	UNDEFINED
8.50	27.89	202.56	1.50	0.74	0.91	sand	80-90	44-46	39	UNDEFINED
8.75	28.71	21.03	0.58	2.77	0.93	clayey silt to silty clay	UNDFND	UNDFD	10	1.9
9.00	29.53	23.84	0.82	3.43	0.95	clayey silt to silty clay	UNDFND	UNDFD	11	2.2
9.25	30.35	29.14	1.18	4.06	0.97	silty clay to clay	UNDFND	UNDFD	19	2.7
9.50	31.17	25.01	0.90	3.62	0.99	clayey silt to silty clay	UNDFND	UNDFD	12	2.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.04) ****

PIONEER DRILLING

Engineer IT On Site Loc:CPT5-54

DEPTH (meters)	DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
9.75	31.99	23.47	0.88	3.74	1.01	silty clay to clay	UNDFND	UNDFD	15	2.1
10.00	32.81	22.93	0.87	3.79	1.03	silty clay to clay	UNDFND	UNDFD	15	2.1
10.25	33.63	17.33	0.59	3.31	1.05	clayey silt to silty clay	UNDFND	UNDFD	9	1.6
10.50	34.45	14.41	0.23	1.55	1.07	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
10.75	35.27	18.18	0.69	3.80	1.08	silty clay to clay	UNDFND	UNDFD	12	1.6
11.00	36.09	14.23	0.35	2.47	1.10	clayey silt to silty clay	UNDFND	UNDFD	7	1.2
11.25	36.91	21.12	1.20	5.67	1.12	clay	UNDFND	UNDFD	20	1.9
11.50	37.73	21.34	1.12	5.25	1.14	clay	UNDFND	UNDFD	20	1.9
11.75	38.55	25.40	1.00	3.94	1.16	silty clay to clay	UNDFND	UNDFD	16	2.3
12.00	39.37	28.92	1.02	3.52	1.18	clayey silt to silty clay	UNDFND	UNDFD	14	2.6
12.25	40.19	28.10	0.88	3.15	1.20	clayey silt to silty clay	UNDFND	UNDFD	13	2.5
12.50	41.01	33.13	1.43	4.30	1.22	silty clay to clay	UNDFND	UNDFD	21	3.0
12.75	41.83	30.44	1.27	4.18	1.24	silty clay to clay	UNDFND	UNDFD	19	2.8
13.00	42.65	25.78	1.11	4.32	1.26	silty clay to clay	UNDFND	UNDFD	16	2.3
13.25	43.47	26.52	1.15	4.33	1.28	silty clay to clay	UNDFND	UNDFD	17	2.4
13.50	44.29	26.44	1.13	4.28	1.30	silty clay to clay	UNDFND	UNDFD	17	2.4
13.75	45.11	22.51	0.78	3.46	1.32	clayey silt to silty clay	UNDFND	UNDFD	11	2.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Robertson and Campanella 1983 Su: Nk= 10

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTRI (v 3.04) ****

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

PROJECT NAME: IT CORP
PROJECT NO. : 409700
LOCATION : CPT/H14-1
DATE : 01/22/90
AVERAGE UNIT WEIGHT OF SOIL (PCF)-- 110
DEPTH TO GROUND WATER(FT)---------- 7

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF
0.1	6.3	0.5	7.84	CLAY	6	24	---	--	---	0.01	0.39
0.3	167.3	2.2	1.32	SAND	32	99	0.72	--	---	0.01	--
0.4	257.9	4.6	1.78	SAND	53	99	0.57	--	---	0.02	--
0.6	255.9	4.8	1.88	SAND	55	99	0.47	--	---	0.03	--
0.8	219.5	3.1	1.39	SAND	41	99	0.81	--	---	0.04	--
0.9	141.6	2.1	1.48	SAND	31	81	0.46	--	---	0.05	--
1.1	73.2	1.7	2.27	SILTY SAND	22	54	0.06	--	---	0.06	--
1.2	43.1	1.5	3.41	SANDY SILT AND SILT	17	43	0.02	--	---	0.07	--
1.4	31.4	1.1	3.54	CLAYEY SILT AND SILTY CLAY	14	33	---	--	---	0.08	1.96
1.6	25.3	0.7	2.89	SANDY SILT AND SILT	10	23	0.02	--	---	0.09	--
1.7	23.9	0.6	2.51	SANDY SILT AND SILT	9	20	0.03	--	---	0.10	--
1.9	23.3	0.6	2.49	SANDY SILT AND SILT	9	19	0.03	--	---	0.10	--
2.1	25.9	0.6	2.16	SANDY SILT AND SILT	9	19	0.04	--	---	0.11	--
2.2	29.3	0.8	2.70	SANDY SILT AND SILT	11	23	0.03	--	---	0.12	--
2.4	32.1	0.8	2.49	SANDY SILT AND SILT	11	23	0.04	--	---	0.13	--
2.6	33.6	0.8	2.26	SANDY SILT AND SILT	11	23	0.04	--	---	0.14	--
2.7	31.4	0.7	2.23	SANDY SILT AND SILT	10	21	0.04	--	---	0.15	--
2.9	30.6	0.7	2.26	SANDY SILT AND SILT	10	20	0.04	--	---	0.16	--
3.1	30.6	0.7	2.22	SANDY SILT AND SILT	10	20	0.04	--	---	0.17	--
3.2	29.4	0.6	2.18	SANDY SILT AND SILT	10	19	0.04	--	---	0.18	--
3.4	28.7	0.6	2.20	SANDY SILT AND SILT	10	18	0.04	--	---	0.19	--
3.5	28.4	0.7	2.39	SANDY SILT AND SILT	10	19	0.04	--	---	0.19	--
3.7	27.1	0.7	2.65	SANDY SILT AND SILT	10	19	0.03	--	---	0.20	--
3.9	25.3	0.7	2.73	SANDY SILT AND SILT	10	18	0.02	--	---	0.21	--
4.0	23.3	0.7	2.80	SANDY SILT AND SILT	9	17	0.02	--	---	0.22	--
4.2	23.9	0.7	2.89	SANDY SILT AND SILT	10	17	0.02	--	---	0.23	--
4.3	24.6	0.8	3.13	SANDY SILT AND SILT	10	19	0.01	--	---	0.24	--
4.5	24.0	0.8	3.42	CLAYEY SILT AND SILTY CLAY	11	19	---	--	---	0.25	1.48
4.7	24.5	0.8	3.43	CLAYEY SILT AND SILTY CLAY	11	19	---	--	---	0.26	1.51
4.8	23.9	0.8	3.51	CLAYEY SILT AND SILTY CLAY	11	19	---	--	---	0.27	1.48
5.0	24.5	0.8	3.35	CLAYEY SILT AND SILTY CLAY	11	19	---	--	---	0.27	1.51
5.2	25.3	0.8	3.32	SANDY SILT AND SILT	11	19	0.01	40	43	0.28	--
5.3	24.6	0.9	3.54	CLAYEY SILT AND SILTY CLAY	11	19	---	--	---	0.29	1.52
5.5	25.7	1.0	3.93	CLAYEY SILT AND SILTY CLAY	12	21	---	--	---	0.30	1.59

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
5.6	26.7	1.0	3.79	CLAYEY SILT AND SILTY CLAY	13	21	---	--	---	0.31	1.65
5.8	27.0	1.0	3.82	CLAYEY SILT AND SILTY CLAY	13	21	---	--	---	0.32	1.67
6.0	27.4	1.0	3.54	CLAYEY SILT AND SILTY CLAY	12	20	---	--	---	0.33	1.69
6.1	26.7	1.0	3.64	CLAYEY SILT AND SILTY CLAY	12	20	---	--	---	0.34	1.64
6.3	26.0	1.0	3.66	CLAYEY SILT AND SILTY CLAY	12	19	---	--	---	0.35	1.60
6.5	23.3	0.9	3.70	CLAYEY SILT AND SILTY CLAY	11	17	---	--	---	0.36	1.43
6.6	20.0	0.7	3.60	CLAYEY SILT AND SILTY CLAY	9	15	---	--	---	0.36	1.23
6.8	18.5	0.6	3.30	CLAYEY SILT AND SILTY CLAY	8	13	---	--	---	0.37	1.13
7.0	19.1	0.6	3.03	SANDY SILT AND SILT	8	13	0.01	37	32	0.38	--
7.1	21.9	0.6	2.60	SANDY SILT AND SILT	8	13	0.02	38	35	0.39	--
7.3	22.0	0.7	2.95	SANDY SILT AND SILT	9	14	0.02	38	35	0.39	--
7.4	20.6	0.7	3.59	CLAYEY SILT AND SILTY CLAY	10	15	---	--	---	0.40	1.26
7.6	20.5	0.7	3.51	CLAYEY SILT AND SILTY CLAY	10	14	---	--	---	0.40	1.26
7.8	24.2	0.7	2.81	SANDY SILT AND SILT	10	14	0.02	38	37	0.40	--
7.9	25.5	0.7	2.79	SANDY SILT AND SILT	10	15	0.02	38	38	0.41	--
8.1	25.3	0.7	2.93	SANDY SILT AND SILT	10	15	0.02	38	37	0.41	--
8.3	22.6	0.7	3.01	SANDY SILT AND SILT	9	14	0.02	37	34	0.42	--
8.4	20.5	0.7	3.26	CLAYEY SILT AND SILTY CLAY	9	14	---	--	---	0.42	1.25
8.6	19.4	0.7	3.35	CLAYEY SILT AND SILTY CLAY	9	13	---	--	---	0.42	1.18
8.8	17.9	0.6	3.08	CLAYEY SILT AND SILTY CLAY	8	12	---	--	---	0.43	1.09
8.9	17.1	0.5	2.92	SANDY SILT AND SILT	8	11	0.01	36	26	0.43	--
9.1	15.8	0.5	3.36	CLAYEY SILT AND SILTY CLAY	7	11	---	--	---	0.43	0.95
9.3	14.7	0.5	3.21	CLAYEY SILT AND SILTY CLAY	7	10	---	--	---	0.44	0.88
9.4	13.1	0.4	2.91	CLAYEY SILT AND SILTY CLAY	6	9	---	--	---	0.44	0.78
9.6	11.9	0.3	2.61	CLAYEY SILT AND SILTY CLAY	5	8	---	--	---	0.45	0.71
9.7	12.3	0.3	2.35	SANDY SILT AND SILT	5	7	0.02	34	20	0.45	--
9.9	12.4	0.3	2.34	SANDY SILT AND SILT	5	7	0.02	34	20	0.45	--
10.1	13.1	0.3	2.30	SANDY SILT AND SILT	5	8	0.02	34	20	0.46	--
10.2	14.2	0.3	2.32	SANDY SILT AND SILT	6	8	0.02	35	21	0.46	--
10.4	15.2	0.4	2.31	SANDY SILT AND SILT	6	9	0.02	35	22	0.47	--
10.6	16.5	0.4	2.31	SANDY SILT AND SILT	6	9	0.02	35	24	0.47	--
10.7	17.1	0.4	2.39	SANDY SILT AND SILT	7	9	0.02	35	25	0.47	--
10.9	17.8	0.4	2.41	SANDY SILT AND SILT	7	10	0.02	36	25	0.48	--
11.1	18.3	0.5	2.52	SANDY SILT AND SILT	7	10	0.02	36	26	0.48	--
11.2	19.1	0.5	2.56	SANDY SILT AND SILT	8	10	0.02	36	27	0.49	--
11.4	19.9	0.5	2.37	SANDY SILT AND SILT	7	10	0.03	36	28	0.49	--
11.5	18.5	0.4	2.22	SANDY SILT AND SILT	7	9	0.03	36	26	0.49	--
11.7	17.2	0.4	2.21	SANDY SILT AND SILT	6	9	0.03	35	24	0.50	--
11.9	15.8	0.3	2.16	SANDY SILT AND SILT	6	8	0.02	35	22	0.50	--
12.0	14.3	0.3	2.31	SANDY SILT AND SILT	6	8	0.02	34	20	0.50	--
12.2	13.1	0.4	2.76	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.51	0.77
12.4	12.3	0.4	2.92	CLAYEY SILT AND SILTY CLAY	6	8	---	--	---	0.51	0.73
12.5	11.7	0.3	2.74	CLAYEY SILT AND SILTY CLAY	5	7	---	--	---	0.52	0.69

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
12.7	10.4	0.3	2.40	SANDY SILT AND SILT	5	6	0.01	33	20	0.52	--
12.9	9.6	0.2	2.07	SANDY SILT AND SILT	4	5	0.02	32	20	0.52	--
13.0	9.6	0.2	2.07	SANDY SILT AND SILT	4	5	0.02	32	20	0.53	--
13.2	9.9	0.2	2.03	SANDY SILT AND SILT	4	5	0.02	32	20	0.53	--
13.4	10.4	0.2	1.92	SANDY SILT AND SILT	4	6	0.02	32	20	0.54	--
13.5	11.1	0.2	1.97	SANDY SILT AND SILT	4	6	0.02	33	20	0.54	--
13.7	11.6	0.3	2.33	SANDY SILT AND SILT	5	7	0.01	33	20	0.54	--
13.8	12.9	0.3	2.33	SANDY SILT AND SILT	5	7	0.02	33	20	0.55	--
14.0	14.1	0.3	2.27	SANDY SILT AND SILT	6	7	0.02	34	20	0.55	--
14.2	14.4	0.4	2.64	SANDY SILT AND SILT	6	8	0.01	34	20	0.56	--
14.3	17.3	0.5	2.61	SANDY SILT AND SILT	7	9	0.02	35	21	0.56	--
14.5	20.1	0.5	2.64	SANDY SILT AND SILT	8	10	0.02	35	24	0.56	--
14.7	22.7	0.6	2.77	SANDY SILT AND SILT	9	12	0.02	36	28	0.57	--
14.8	24.6	0.9	3.54	CLAYEY SILT AND SILTY CLAY	11	15	---	--	---	0.57	1.48
15.0	28.5	1.2	4.28	CLAYEY SILT AND SILTY CLAY	14	19	---	--	---	0.58	1.73
15.2	41.2	1.5	3.55	SANDY SILT AND SILT	17	23	0.01	39	43	0.58	--
15.3	46.6	1.3	2.79	SANDY SILT AND SILT	16	21	0.04	39	47	0.58	--
15.5	34.8	1.1	3.21	SANDY SILT AND SILT	14	18	0.02	38	39	0.59	--
15.7	23.0	0.8	3.31	CLAYEY SILT AND SILTY CLAY	10	13	---	--	---	0.59	1.38
15.8	19.5	0.6	2.92	SANDY SILT AND SILT	8	11	0.01	35	22	0.60	--
16.0	19.9	0.5	2.42	SANDY SILT AND SILT	8	10	0.03	35	23	0.60	--
16.2	23.1	0.4	1.78	SANDY SILT AND SILT	7	10	0.04	36	26	0.60	--
16.3	23.3	0.5	2.15	SANDY SILT AND SILT	8	10	0.04	36	26	0.61	--
16.5	24.0	0.7	3.08	SANDY SILT AND SILT	10	13	0.01	36	27	0.61	--
16.7	28.9	1.0	3.33	SANDY SILT AND SILT	12	16	0.01	37	32	0.62	--
16.8	38.0	1.2	3.19	SANDY SILT AND SILT	15	19	0.02	38	40	0.62	--
17.0	45.9	1.2	2.64	SANDY SILT AND SILT	15	19	0.04	39	45	0.62	--
17.2	54.0	1.2	2.30	SILTY SAND	16	21	0.05	40	50	0.63	--
17.3	39.3	1.4	3.49	SANDY SILT AND SILT	17	21	0.02	38	40	0.63	--
17.5	55.0	1.5	2.76	SANDY SILT AND SILT	18	23	0.04	40	50	0.63	--
17.7	83.1	1.8	2.11	SILTY SAND	24	29	0.07	42	63	0.64	--
17.8	104.5	1.9	1.83	SILTY SAND	28	35	0.09	43	71	0.64	--
18.0	112.2	1.9	1.67	SILTY SAND	30	37	0.10	43	73	0.65	--
18.1	103.2	1.6	1.53	SILTY SAND	27	34	0.10	43	70	0.65	--
18.3	85.0	1.2	1.36	SILTY SAND	22	28	0.10	42	64	0.65	--
18.5	52.5	0.9	1.75	SILTY SAND	15	19	0.07	39	47	0.66	--
18.6	28.0	0.6	2.18	SANDY SILT AND SILT	9	11	0.04	36	29	0.66	--
18.8	16.1	0.4	2.43	SANDY SILT AND SILT	6	8	0.02	33	20	0.67	--
19.0	13.1	0.3	1.99	SANDY SILT AND SILT	5	6	0.02	32	20	0.67	--
19.1	14.6	0.2	1.50	SANDY SILT AND SILT	5	6	0.04	33	20	0.67	--
19.3	12.5	0.2	1.61	SANDY SILT AND SILT	5	5	0.03	32	20	0.68	--
19.5	11.7	0.2	1.71	SANDY SILT AND SILT	4	5	0.03	32	20	0.68	--
19.6	11.9	0.2	1.60	SANDY SILT AND SILT	4	5	0.03	32	20	0.69	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
19.8	12.3	0.2	1.79	SANDY SILT AND SILT	5	6	0.03	32	20	0.69	--
19.9	12.9	0.2	1.55	SANDY SILT AND SILT	5	6	0.03	32	20	0.69	--
20.1	13.1	0.2	1.23	SANDY SILT AND SILT	4	5	0.04	32	20	0.70	--
20.3	12.4	0.2	1.78	SANDY SILT AND SILT	5	6	0.03	32	20	0.70	--
20.4	14.2	0.3	2.25	SANDY SILT AND SILT	6	7	0.02	33	20	0.70	--
20.6	30.7	0.4	1.17	SILTY SAND	9	11	0.07	36	30	0.71	--
20.8	27.9	0.3	1.18	SILTY SAND	8	10	0.07	36	27	0.71	--
20.9	18.9	0.5	2.59	SANDY SILT AND SILT	8	9	0.02	34	20	0.72	--
21.1	19.0	0.3	1.58	SANDY SILT AND SILT	6	7	0.04	34	20	0.72	--
21.3	23.8	0.2	0.96	SILTY SAND	7	8	0.07	35	22	0.72	--
21.4	15.8	0.3	2.03	SANDY SILT AND SILT	6	7	0.03	33	20	0.73	--
21.6	12.7	0.4	3.24	CLAYEY SILT AND SILTY CLAY	6	7	---	--	---	0.73	0.72
21.8	22.6	0.1	0.40	SILTY SAND	6	7	0.09	35	21	0.74	--
21.9	50.4	0.5	0.97	SILTY SAND	13	16	0.09	39	43	0.74	--
22.1	20.0	0.6	3.10	SANDY SILT AND SILT	9	10	0.01	34	20	0.74	--
22.2	49.1	0.9	1.73	SILTY SAND	14	16	0.07	38	42	0.75	--
22.4	39.6	0.7	1.87	SILTY SAND	12	14	0.06	37	36	0.75	--
22.6	45.0	0.6	1.24	SILTY SAND	13	14	0.08	38	40	0.76	--
22.7	28.1	0.5	1.64	SILTY SAND	9	10	0.05	36	26	0.76	--
22.9	16.8	0.4	2.27	SANDY SILT AND SILT	6	7	0.02	33	20	0.76	--
23.1	13.1	0.3	2.14	SANDY SILT AND SILT	5	6	0.02	32	20	0.77	--
23.2	13.3	0.3	2.48	SANDY SILT AND SILT	6	6	0.01	32	20	0.77	--
23.4	17.0	0.2	1.35	SANDY SILT AND SILT	6	6	0.04	33	20	0.78	--
23.6	33.5	0.2	0.72	SILTY SAND	9	10	0.09	36	30	0.78	--
23.7	24.1	0.3	1.12	SILTY SAND	7	8	0.06	35	21	0.78	--
23.9	14.8	0.3	1.75	SANDY SILT AND SILT	5	6	0.03	32	20	0.79	--
24.0	12.0	0.2	1.92	SANDY SILT AND SILT	5	5	0.02	31	20	0.79	--
24.2	12.3	0.3	2.11	SANDY SILT AND SILT	5	6	0.02	31	20	0.79	--
24.4	11.9	0.3	2.44	SANDY SILT AND SILT	5	6	0.01	31	20	0.80	--
24.5	11.1	0.3	2.26	SANDY SILT AND SILT	5	5	0.01	31	20	0.80	--
24.7	10.3	0.2	2.03	SANDY SILT AND SILT	4	5	0.02	30	20	0.81	--
24.9	10.3	0.2	1.74	SANDY SILT AND SILT	4	4	0.02	30	20	0.81	--
25.0	10.0	0.2	1.81	SANDY SILT AND SILT	4	4	0.02	30	20	0.81	--
25.2	10.0	0.2	2.00	SANDY SILT AND SILT	4	5	0.02	30	20	0.82	--
25.4	10.2	0.2	2.25	SANDY SILT AND SILT	4	5	0.01	30	20	0.82	--
25.5	10.3	0.3	2.43	SANDY SILT AND SILT	5	5	0.01	30	20	0.83	--
25.7	10.3	0.3	2.42	SANDY SILT AND SILT	5	5	0.01	30	20	0.83	--
25.9	11.0	0.2	1.91	SANDY SILT AND SILT	4	5	0.02	30	20	0.83	--
26.0	10.7	0.2	1.87	SANDY SILT AND SILT	4	5	0.02	30	20	0.84	--
26.2	12.4	0.2	1.29	SANDY SILT AND SILT	4	5	0.04	31	20	0.84	--
26.3	13.6	0.2	1.10	SANDY SILT AND SILT	4	5	0.04	31	20	0.85	--
26.5	13.7	0.2	1.31	SANDY SILT AND SILT	5	5	0.04	31	20	0.85	--
26.7	13.8	0.2	1.60	SANDY SILT AND SILT	5	5	0.03	31	20	0.85	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
26.8	13.7	0.2	1.68	SANDY SILT AND SILT	5	5	0.03	31	20	0.86	--
27.0	13.3	0.3	2.18	SANDY SILT AND SILT	5	6	0.02	31	20	0.86	--
27.2	13.6	0.3	1.99	SANDY SILT AND SILT	5	6	0.02	31	20	0.86	--
27.3	13.9	0.3	1.79	SANDY SILT AND SILT	5	6	0.03	31	20	0.87	--
27.5	13.4	0.3	2.01	SANDY SILT AND SILT	5	6	0.02	31	20	0.87	--
27.7	13.5	0.3	2.00	SANDY SILT AND SILT	5	6	0.02	31	20	0.88	--
27.8	14.4	0.4	2.57	SANDY SILT AND SILT	6	7	0.01	32	20	0.88	--
28.0	18.9	0.6	3.01	SANDY SILT AND SILT	8	9	0.01	33	20	0.88	--
28.1	29.3	0.9	3.01	SANDY SILT AND SILT	12	12	0.02	35	22	0.89	--
28.3	35.5	1.0	2.76	SANDY SILT AND SILT	13	14	0.03	36	28	0.89	--
28.5	36.8	1.1	2.91	SANDY SILT AND SILT	14	14	0.03	36	29	0.90	--
28.6	30.7	1.0	3.12	SANDY SILT AND SILT	12	13	0.02	35	23	0.90	--
28.8	24.5	0.9	3.59	CLAYEY SILT AND SILTY CLAY	11	12	---	--	---	0.90	1.43
29.0	21.2	0.7	3.40	CLAYEY SILT AND SILTY CLAY	10	10	---	--	---	0.91	1.22
29.1	19.8	0.6	2.93	SANDY SILT AND SILT	8	9	0.01	33	20	0.91	--
29.3	17.5	0.7	3.89	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	0.92	0.99
29.5	20.6	0.8	3.88	CLAYEY SILT AND SILTY CLAY	10	11	---	--	---	0.92	1.19
29.6	29.2	0.9	3.22	SANDY SILT AND SILT	12	13	0.02	35	21	0.92	--
29.8	26.7	1.1	4.02	CLAYEY SILT AND SILTY CLAY	13	14	---	--	---	0.93	1.56
30.0	28.1	1.0	3.49	CLAYEY SILT AND SILTY CLAY	13	13	---	--	---	0.93	1.65
30.1	35.2	0.8	2.38	SANDY SILT AND SILT	12	12	0.04	36	26	0.94	--
30.3	28.9	0.7	2.39	SANDY SILT AND SILT	10	10	0.04	35	20	0.94	--
30.4	19.5	0.6	3.13	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	0.94	1.11
30.6	15.8	0.6	3.49	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	0.95	0.88
30.8	17.3	0.5	3.12	CLAYEY SILT AND SILTY CLAY	8	8	---	--	---	0.95	0.98
30.9	19.2	0.6	2.92	SANDY SILT AND SILT	8	8	0.01	33	20	0.95	--
31.1	19.1	0.7	3.66	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	0.96	1.09
31.3	20.5	0.7	3.36	CLAYEY SILT AND SILTY CLAY	9	10	---	--	---	0.96	1.18
31.4	26.0	0.6	2.46	SANDY SILT AND SILT	9	10	0.03	34	20	0.97	--
31.6	33.5	0.5	1.41	SILTY SAND	10	10	0.07	35	23	0.97	--
31.8	36.2	0.7	1.94	SILTY SAND	11	11	0.05	36	26	0.97	--
31.9	33.0	0.6	1.79	SILTY SAND	10	10	0.05	35	23	0.98	--
32.1	26.7	0.7	2.70	SANDY SILT AND SILT	10	10	0.03	34	20	0.98	--
32.3	19.9	0.7	3.58	CLAYEY SILT AND SILTY CLAY	9	9	---	--	---	0.99	1.13
32.4	28.2	0.6	2.27	SANDY SILT AND SILT	10	10	0.04	34	20	0.99	--
32.6	34.8	0.7	1.90	SILTY SAND	11	11	0.05	35	24	0.99	--
32.7	47.7	0.6	1.26	SILTY SAND	13	13	0.08	37	34	1.00	--
32.9	48.4	0.8	1.61	SILTY SAND	14	14	0.07	37	34	1.00	--
33.1	43.7	1.1	2.43	SANDY SILT AND SILT	14	14	0.04	36	31	1.01	--
33.2	36.8	0.9	2.55	SANDY SILT AND SILT	13	12	0.04	35	25	1.01	--
33.4	27.1	0.7	2.62	SANDY SILT AND SILT	10	10	0.03	34	20	1.01	--
33.6	15.8	0.5	2.98	CLAYEY SILT AND SILTY CLAY	7	7	---	--	---	1.02	0.87
33.7	26.0	0.5	2.00	SANDY SILT AND SILT	9	8	0.04	34	20	1.02	--

P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
33.9	24.8	0.5	2.10	SANDY SILT AND SILT	8	8	0.04	33	20	1.02	--
34.1	51.8	0.4	0.79	SAND	13	13	0.16	37	35	1.03	--
34.2	43.6	0.5	1.10	SILTY SAND	12	12	0.08	36	30	1.03	--
34.4	23.9	0.5	2.05	SANDY SILT AND SILT	8	8	0.04	33	20	1.04	--
34.5	13.7	0.3	2.18	SANDY SILT AND SILT	5	5	0.02	30	20	1.04	--
34.7	9.0	0.2	2.68	CLAYEY SILT AND SILTY CLAY	4	4	---	--	---	1.04	0.44
34.9	11.0	0.2	2.09	SANDY SILT AND SILT	5	4	0.02	29	20	1.05	--
35.0	11.7	0.2	2.05	SANDY SILT AND SILT	5	5	0.02	30	20	1.05	--
35.2	9.4	0.3	2.75	CLAYEY SILT AND SILTY CLAY	4	4	---	--	---	1.06	0.47
35.4	11.8	0.4	2.97	CLAYEY SILT AND SILTY CLAY	6	5	---	--	---	1.06	0.61
35.5	12.5	0.3	2.47	SANDY SILT AND SILT	5	5	0.01	30	20	1.06	--
35.7	40.3	0.6	1.41	SILTY SAND	12	11	0.07	36	27	1.07	--
35.9	30.7	0.6	2.05	SANDY SILT AND SILT	10	9	0.05	34	20	1.07	--
36.0	16.8	0.4	2.44	SANDY SILT AND SILT	7	6	0.02	31	20	1.08	--
36.2	14.3	0.3	2.24	SANDY SILT AND SILT	6	5	0.02	30	20	1.08	--
36.4	21.2	0.5	2.12	SANDY SILT AND SILT	7	7	0.03	32	20	1.08	--
36.5	64.7	1.4	2.18	SILTY SAND	19	18	0.06	38	41	1.09	--
36.7	75.2	2.4	3.25	SANDY SILT AND SILT	26	25	0.03	39	46	1.09	--
36.8	62.6	2.8	4.49	CLAYEY SILT AND SILTY CLAY	30	29	---	--	---	1.10	3.79
37.0	40.0	1.7	4.33	CLAYEY SILT AND SILTY CLAY	20	19	---	--	---	1.10	2.37
37.2	27.8	1.0	3.41	SANDY SILT AND SILT	12	12	0.01	34	20	1.10	--
37.3	26.0	0.6	2.42	SANDY SILT AND SILT	9	9	0.03	33	20	1.11	--
37.5	27.4	0.7	2.37	SANDY SILT AND SILT	10	9	0.03	34	20	1.11	--
37.7	30.7	0.9	2.93	SANDY SILT AND SILT	12	11	0.02	34	20	1.11	--
37.8	33.5	1.1	3.29	SANDY SILT AND SILT	14	13	0.02	34	20	1.12	--
38.0	32.8	1.1	3.29	SANDY SILT AND SILT	14	13	0.02	34	20	1.12	--
38.2	31.1	1.0	3.09	SANDY SILT AND SILT	12	12	0.02	34	20	1.13	--
38.3	27.6	0.8	2.90	SANDY SILT AND SILT	11	10	0.02	34	20	1.13	--
38.5	26.0	0.7	2.66	SANDY SILT AND SILT	10	9	0.03	33	20	1.13	--
38.6	25.7	0.8	2.96	SANDY SILT AND SILT	10	10	0.02	33	20	1.14	--
38.8	27.3	0.7	2.71	SANDY SILT AND SILT	10	10	0.03	33	20	1.14	--
39.0	27.6	0.7	2.46	SANDY SILT AND SILT	10	9	0.03	33	20	1.15	--
39.1	28.7	0.6	2.16	SANDY SILT AND SILT	9	9	0.04	34	20	1.15	--
39.3	28.7	0.6	2.13	SANDY SILT AND SILT	9	9	0.04	34	20	1.15	--
39.5	26.7	0.6	2.21	SANDY SILT AND SILT	9	8	0.04	33	20	1.16	--
39.6	23.3	0.5	2.15	SANDY SILT AND SILT	8	8	0.04	33	20	1.16	--
39.8	20.9	0.4	2.11	SANDY SILT AND SILT	7	7	0.03	32	20	1.17	--
40.0	19.2	0.4	2.09	SANDY SILT AND SILT	7	6	0.03	32	20	1.17	--
40.1	17.3	0.3	1.91	SANDY SILT AND SILT	6	6	0.03	31	20	1.17	--
40.3	15.8	0.3	1.78	SANDY SILT AND SILT	6	5	0.03	31	20	1.18	--
40.5	14.4	0.2	1.53	SANDY SILT AND SILT	5	5	0.04	30	20	1.18	--
40.6	13.7	0.2	1.31	SANDY SILT AND SILT	5	4	0.04	30	20	1.19	--
40.8	13.3	0.2	1.13	SANDY SILT AND SILT	4	4	0.04	30	20	1.19	--

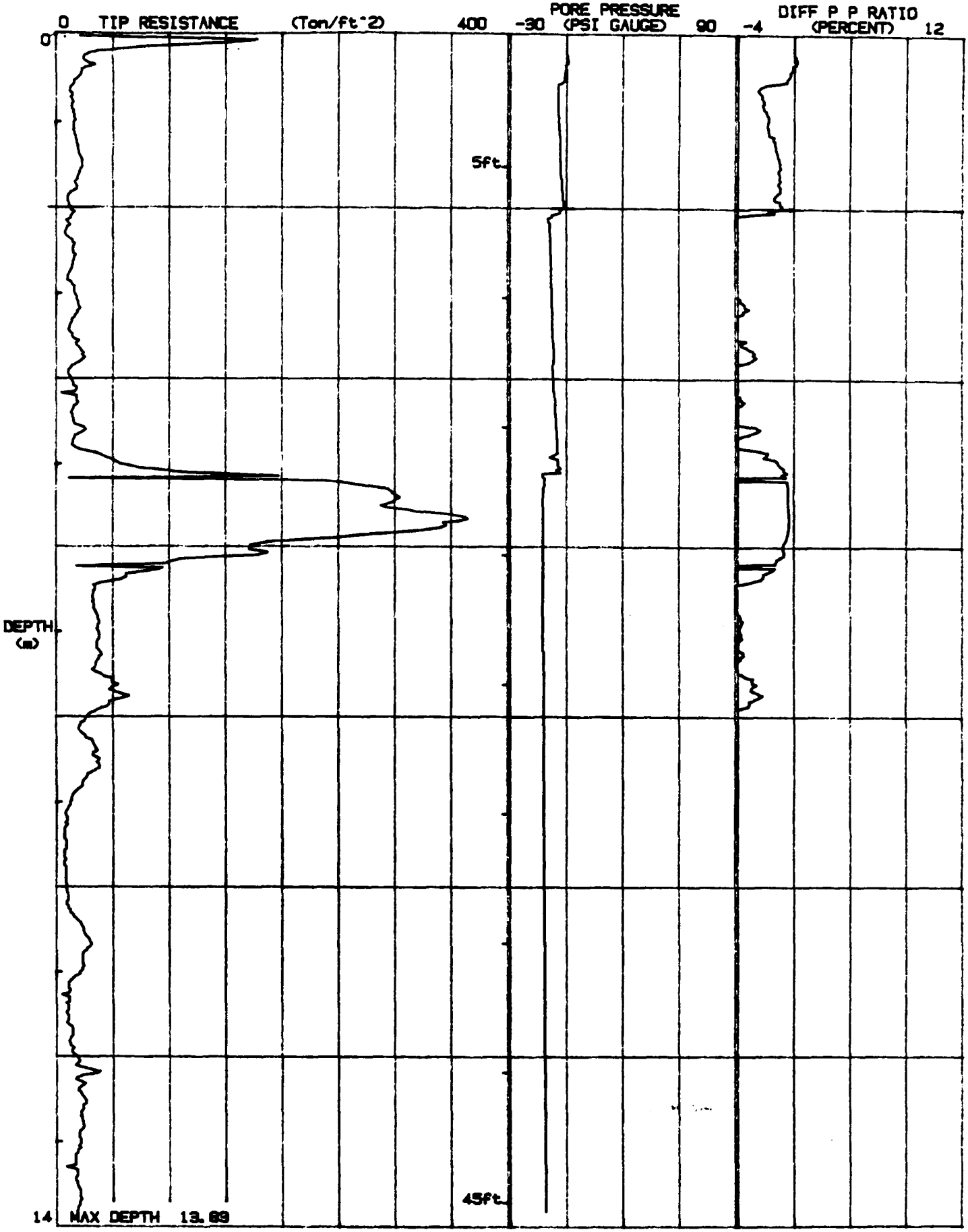
P I O N E E R D R I L L I N G

INTERPRETED CONE PENETRATION TEST DATA

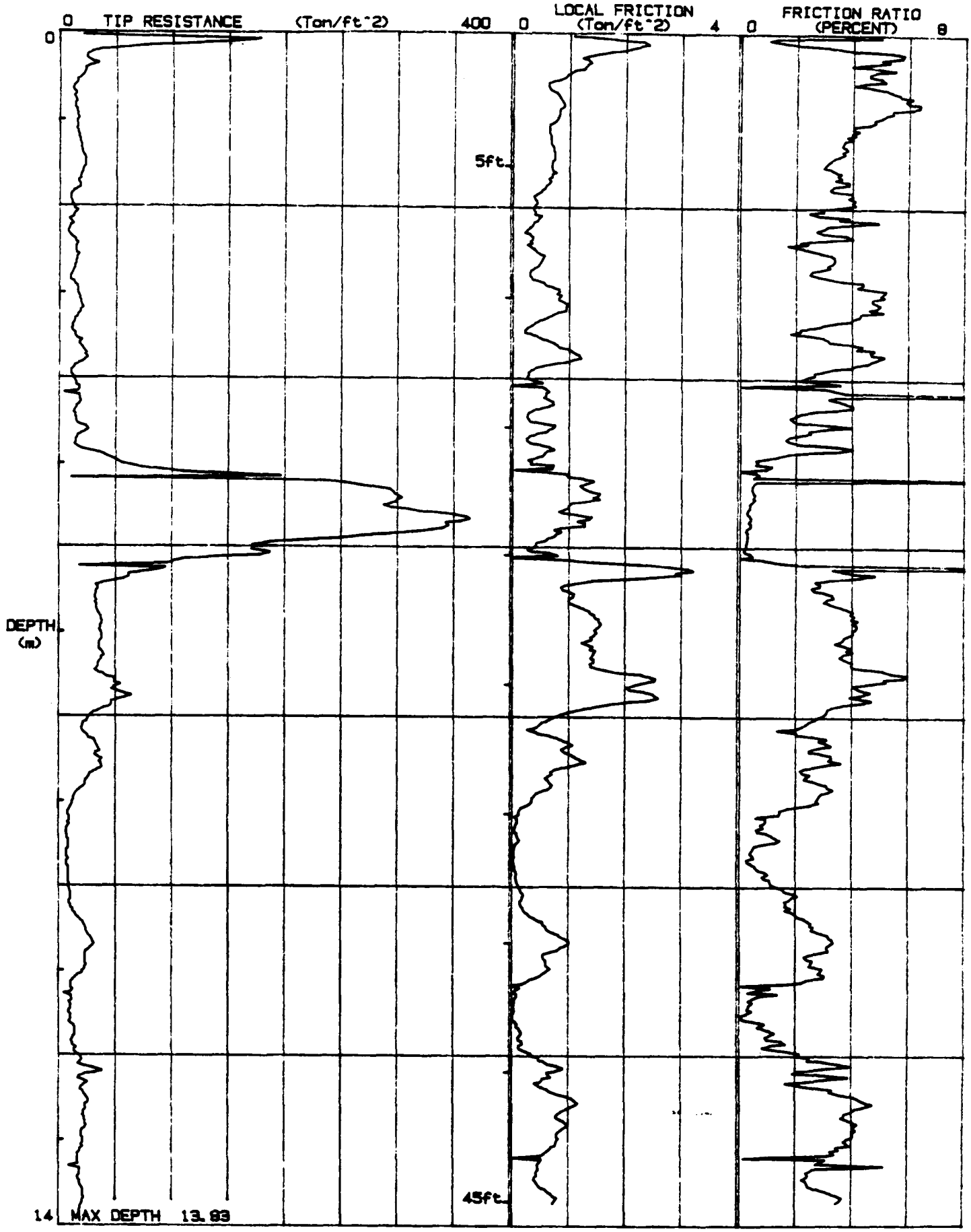
DEPTH FT.	QC TSF.	FS TSF.	FR %	SOIL BEHAVIOR TYPE	SPT N	SPT N1	D50 MM	PHI DEG	DR %	PO TSF	SU TSF.
40.9	13.1	0.2	1.15	SANDY SILT AND SILT	4	4	0.04	30	20	1.19	--
41.1	13.6	0.1	1.03	SANDY SILT AND SILT	4	4	0.04	30	20	1.20	--
41.3	14.1	0.2	1.13	SANDY SILT AND SILT	5	4	0.04	30	20	1.20	--
41.4	15.3	0.2	1.05	SANDY SILT AND SILT	5	4	0.05	30	20	1.20	--
41.6	15.9	0.2	1.13	SANDY SILT AND SILT	5	5	0.05	30	20	1.21	--
41.8	16.9	0.1	0.71	SILTY SAND	5	5	0.07	31	20	1.21	--
41.9	18.5	0.2	0.87	SILTY SAND	5	5	0.06	31	20	1.22	--
42.1	20.5	0.2	1.02	SILTY SAND	6	6	0.06	32	20	1.22	--
42.3	21.2	0.3	1.41	SANDY SILT AND SILT	7	6	0.05	32	20	1.22	--
42.4	22.6	0.4	1.55	SANDY SILT AND SILT	7	6	0.05	32	20	1.23	--
42.6	22.5	0.4	1.73	SANDY SILT AND SILT	7	7	0.04	32	20	1.23	--
42.7	22.6	0.4	1.82	SANDY SILT AND SILT	7	7	0.04	32	20	1.24	--
42.9	23.1	0.4	1.64	SANDY SILT AND SILT	7	7	0.05	32	20	1.24	--
43.1	21.8	0.3	1.51	SANDY SILT AND SILT	7	6	0.05	32	20	1.24	--
43.2	21.2	0.3	1.37	SILTY SAND	7	6	0.05	32	20	1.25	--
43.4	21.4	0.3	1.36	SILTY SAND	7	6	0.05	32	20	1.25	--
43.6	21.8	0.3	1.42	SANDY SILT AND SILT	7	6	0.05	32	20	1.26	--
43.7	22.6	0.3	1.28	SILTY SAND	7	6	0.06	32	20	1.26	--
43.9	21.2	0.3	1.32	SILTY SAND	6	6	0.05	32	20	1.26	--
44.1	20.1	0.3	1.40	SANDY SILT AND SILT	6	6	0.05	31	20	1.27	--
44.2	19.4	0.3	1.49	SANDY SILT AND SILT	6	6	0.04	31	20	1.27	--
44.4	18.0	0.2	1.28	SANDY SILT AND SILT	6	5	0.05	31	20	1.27	--
44.6	15.9	0.2	1.20	SANDY SILT AND SILT	5	5	0.04	30	20	1.28	--
44.7	15.1	0.1	0.86	SANDY SILT AND SILT	5	4	0.05	30	20	1.28	--
44.9	15.1	0.1	0.66	SILTY SAND	4	4	0.06	30	20	1.29	--
45.0	15.6										
45.2	15.2										

7.0 CPT LOGS, SITE 4

JOB # : 409700
DATE : 04/18/90/14:50
LOCATION : CPT4-8
FILE : FIL171

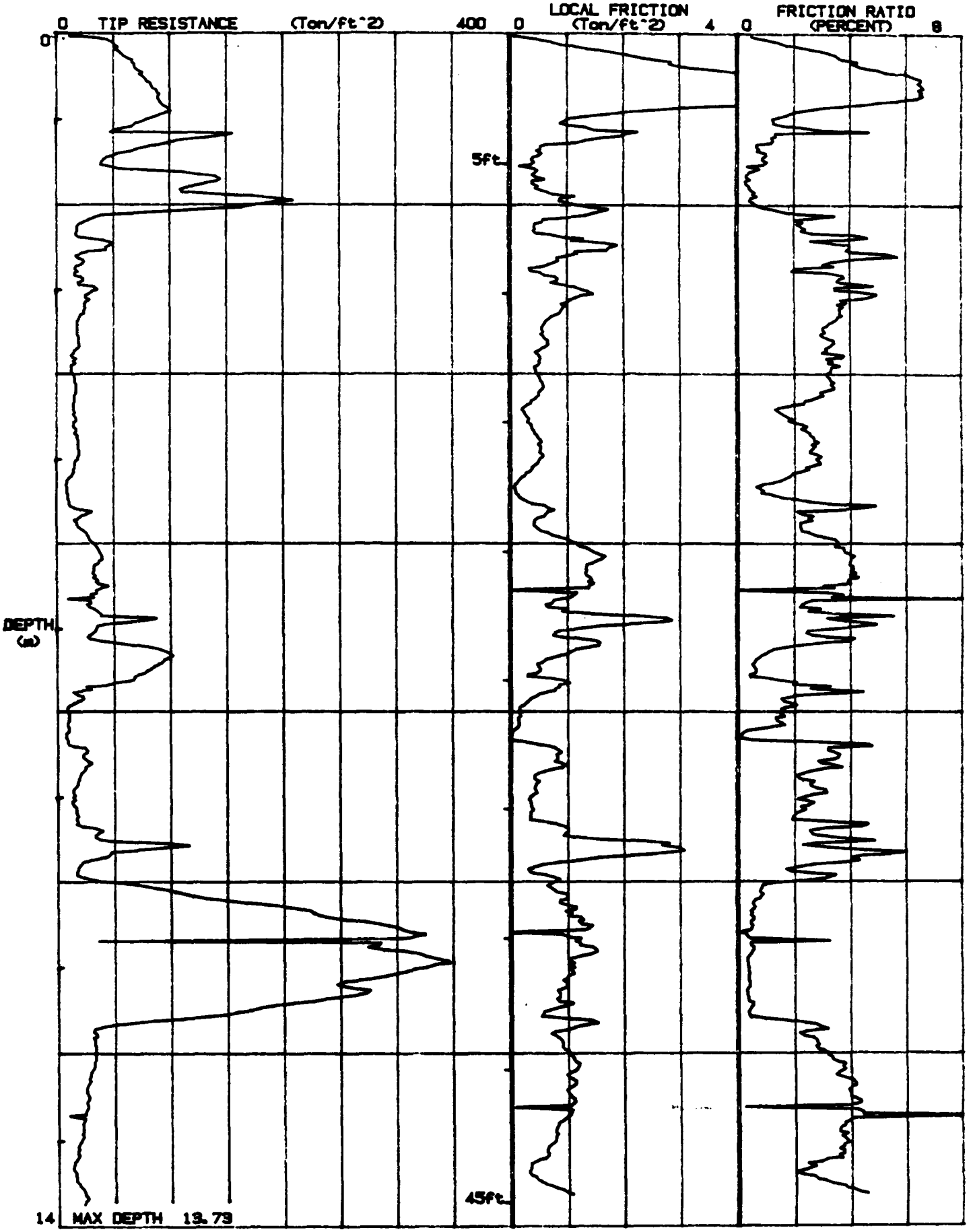


JOB # : 409700
DATE : 04/18/90/14:50
LOCATION : CPT4-8
FILE : FIL171

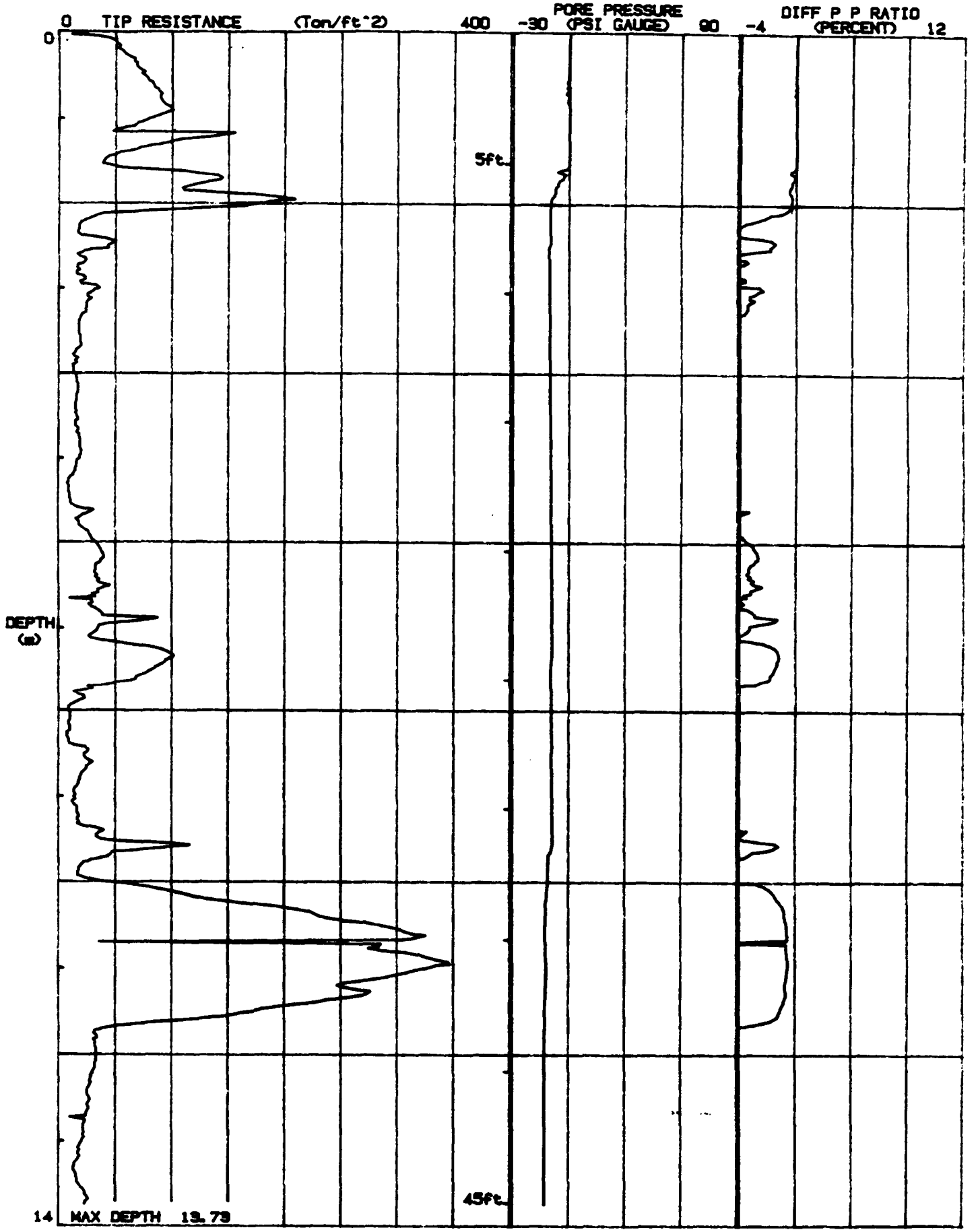


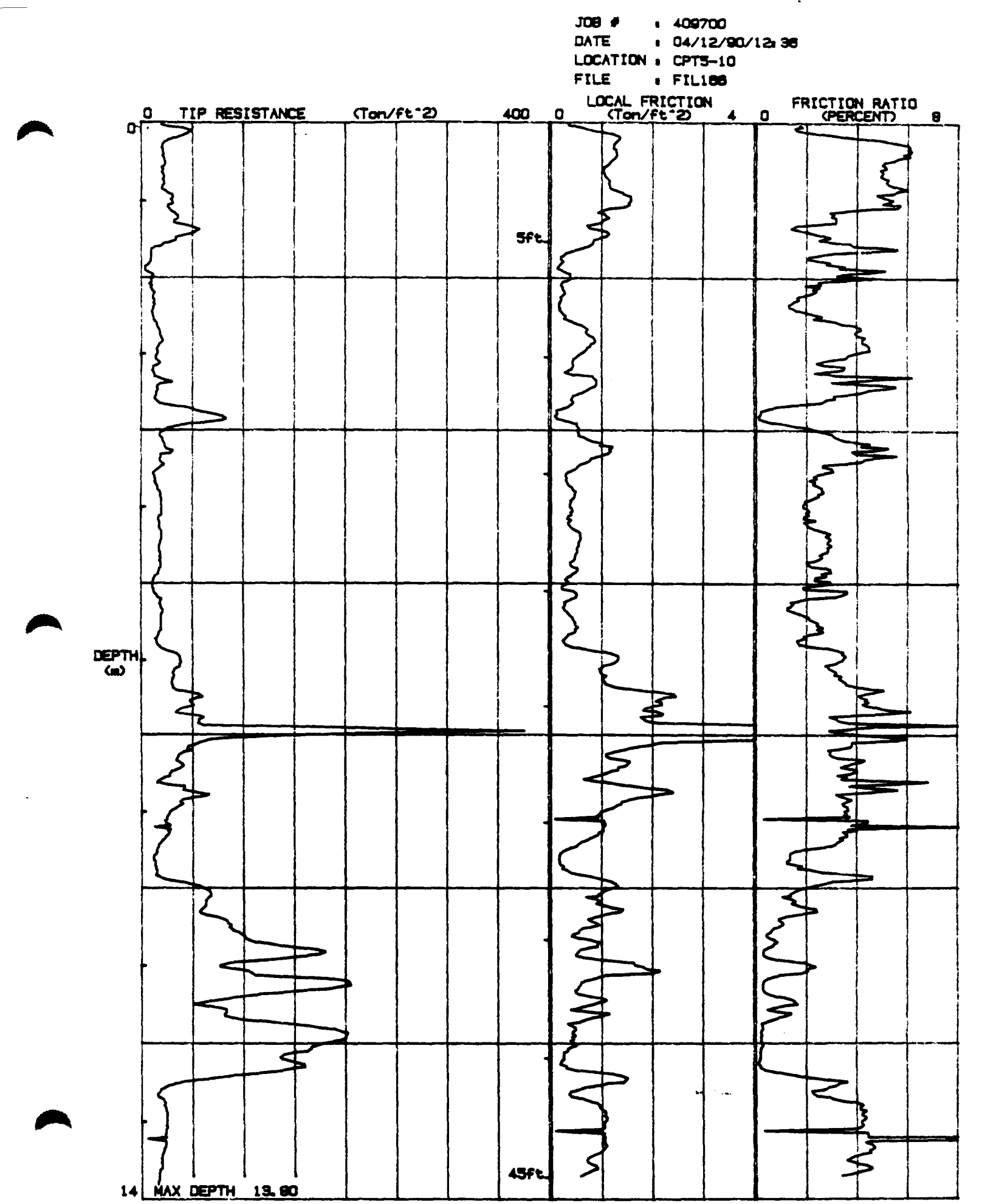
8.0 CPT LOGS, SITE 5

JOB # : 409700
DATE : 04/12/90/14: 20
LOCATION : CPT5-7
FILE : FIL187

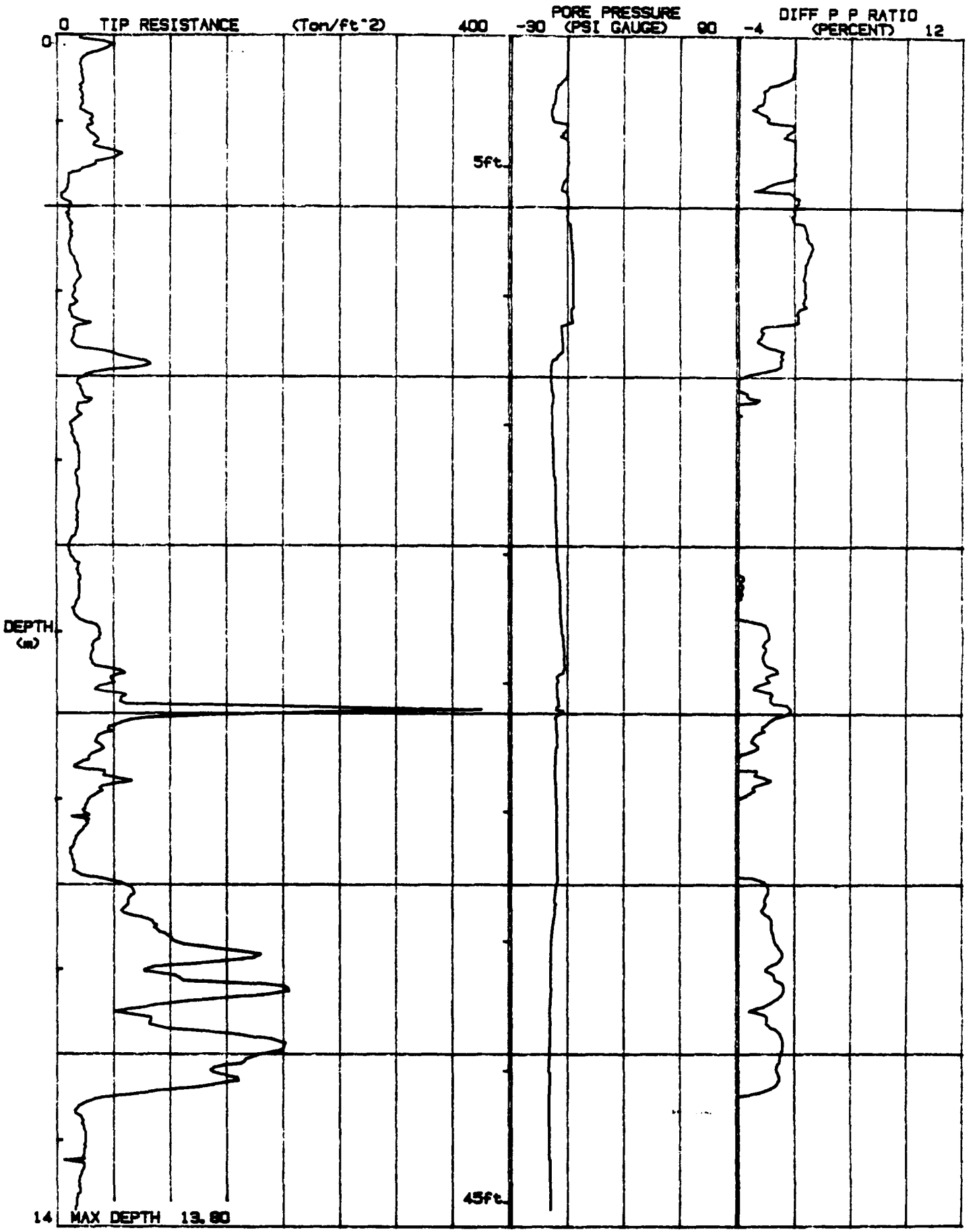


JOB # : 409700
DATE : 04/12/90/14: 20
LOCATION : CPT5-7
FILE : FIL167

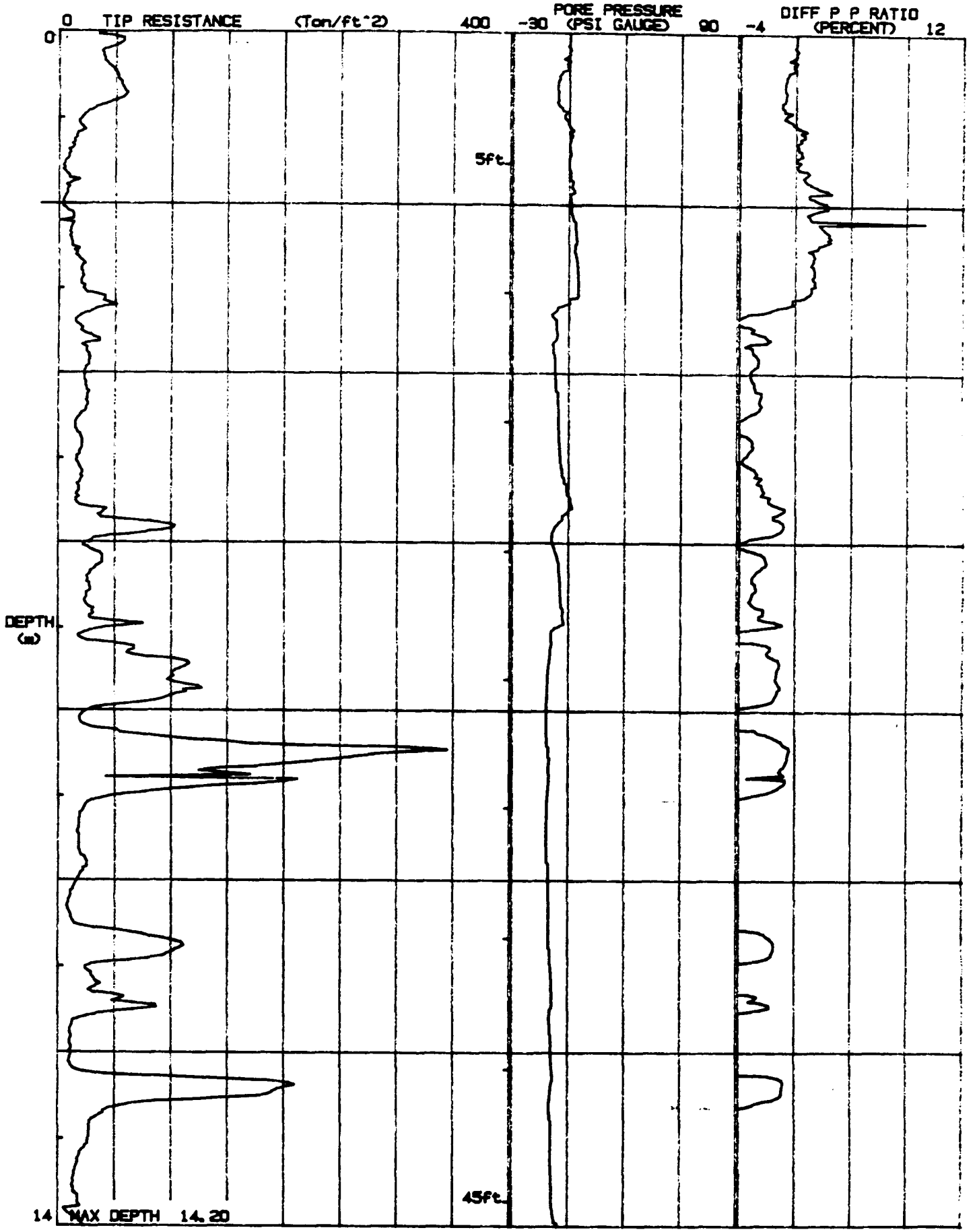



JOB # : 409700
DATE : 04/12/90/12:36
LOCATION : CPT5-10
FILE : FIL186
0 TIP RESISTANCE (Ton/ft^2) 400
LOCAL FRICTION (Ton/ft^2) 0 4
FRICTION RATIO (PERCENT) 0 8
0
5ft
DEPTH (m)
45ft
14 MAX DEPTH 13.80

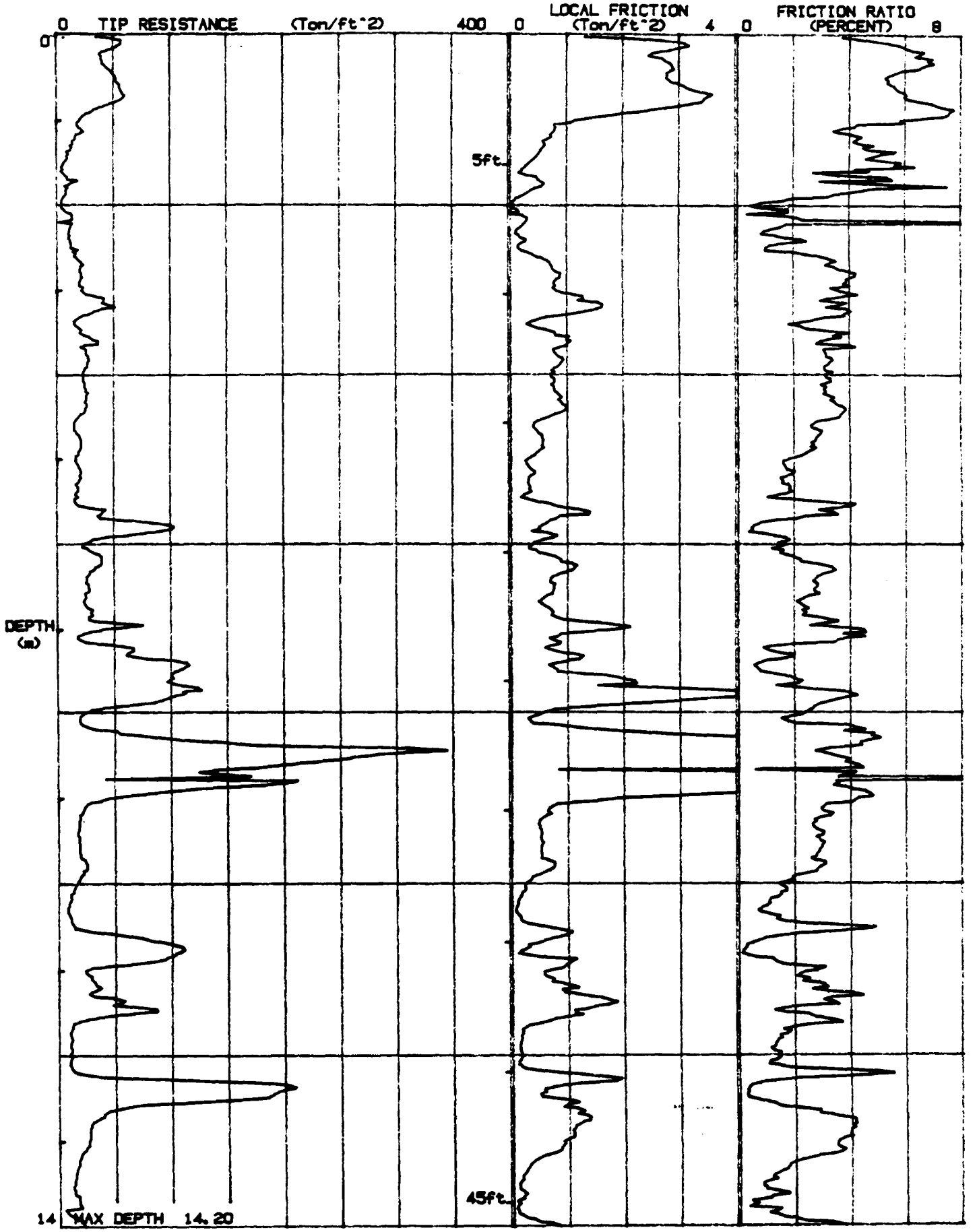
JOB # : 409700
DATE : 04/12/90/12:36
LOCATION : CPT5-10
FILE : FIL166



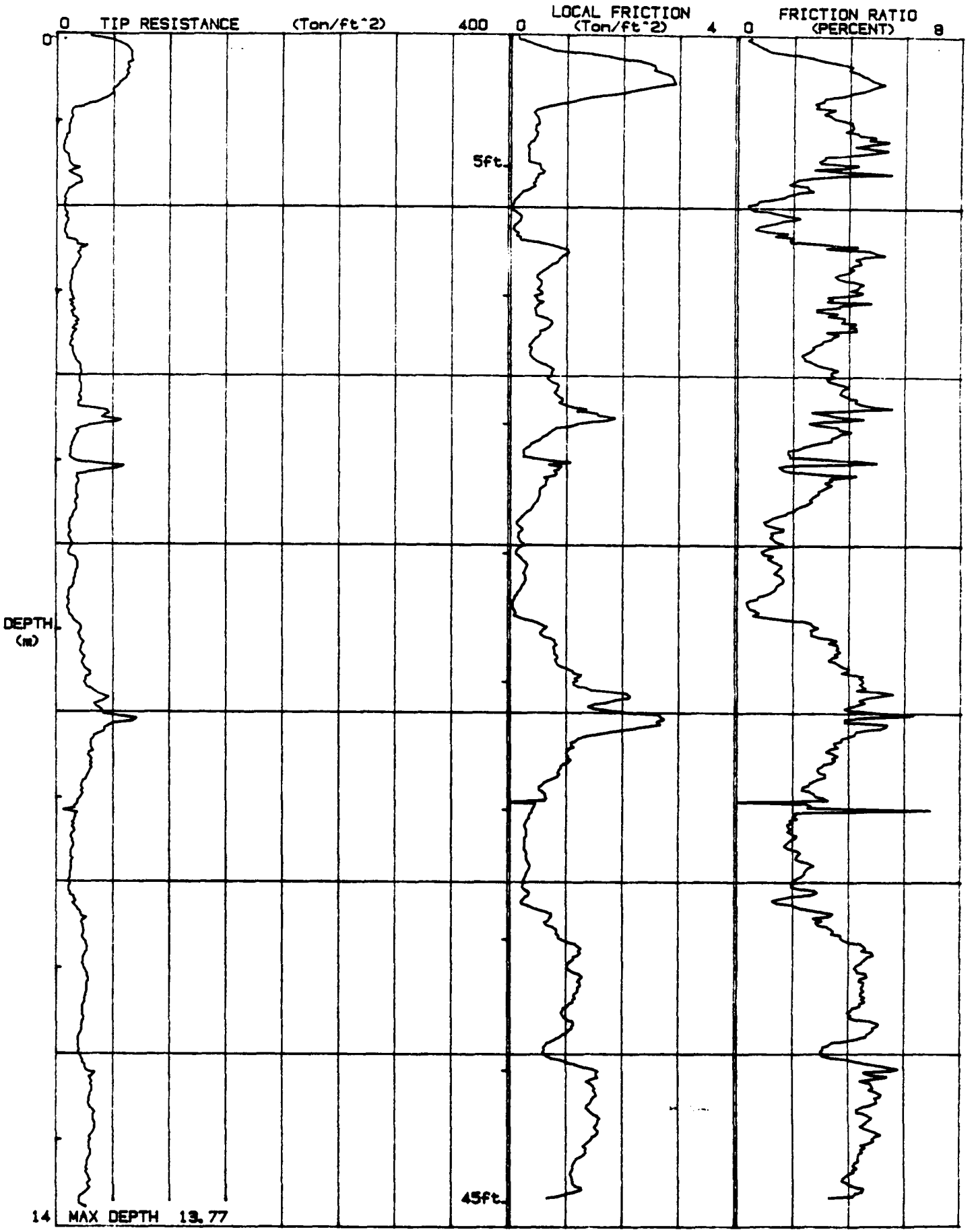
JOB # : 409700
DATE : 04/12/90/09:29
LOCATION : CPT5-13
FILE : FIL185



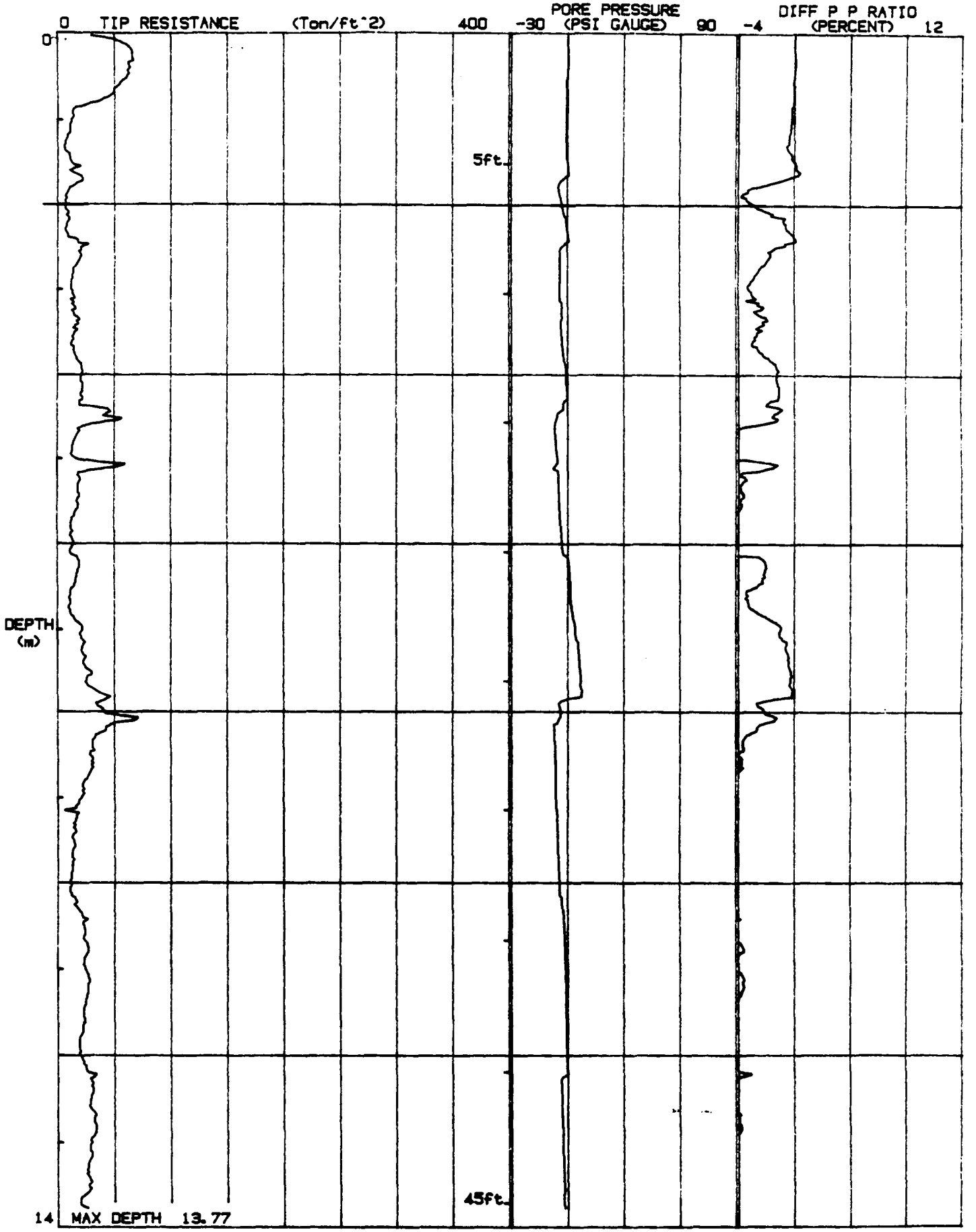
JOB # : 409700
DATE : 04/12/90/09: 29
LOCATION : CPT5-13
FILE : FIL185



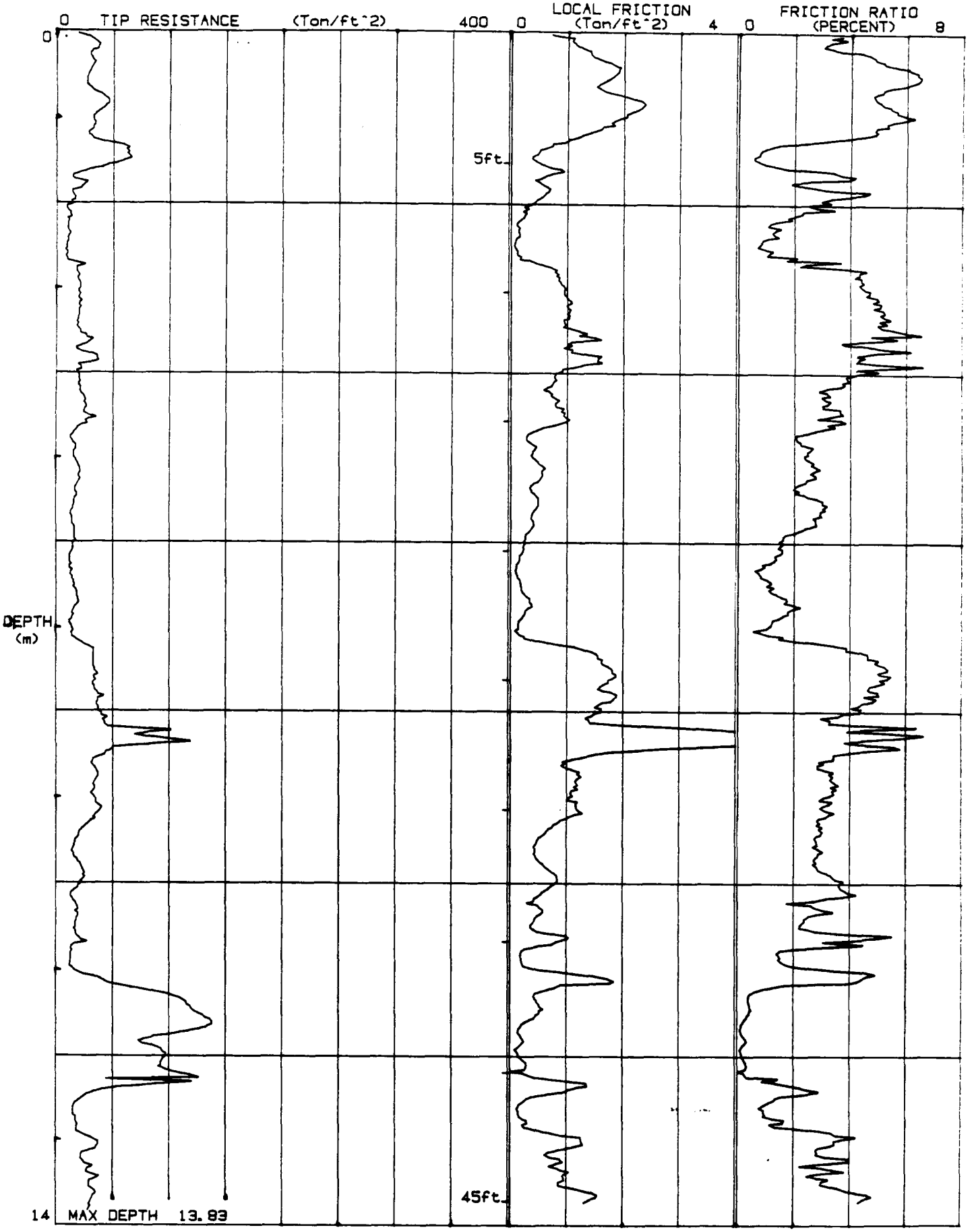
JOB # : 409700
DATE : 04/11/90/12:25
LOCATION : CPT5-15
FILE : FIL161



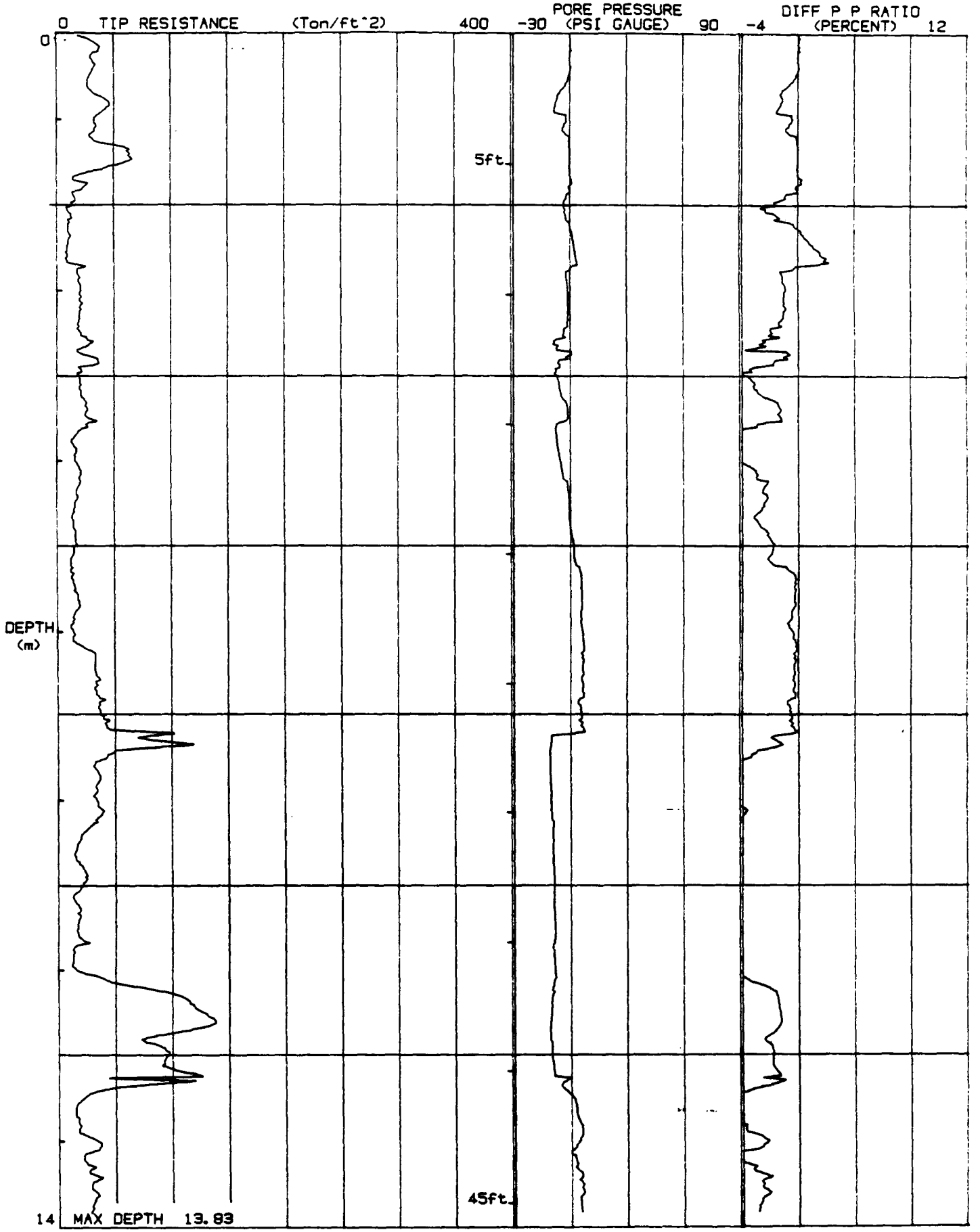
JOB # : 409700
DATE : 04/11/90/12:25
LOCATION : CPT5-15
FILE : FIL161



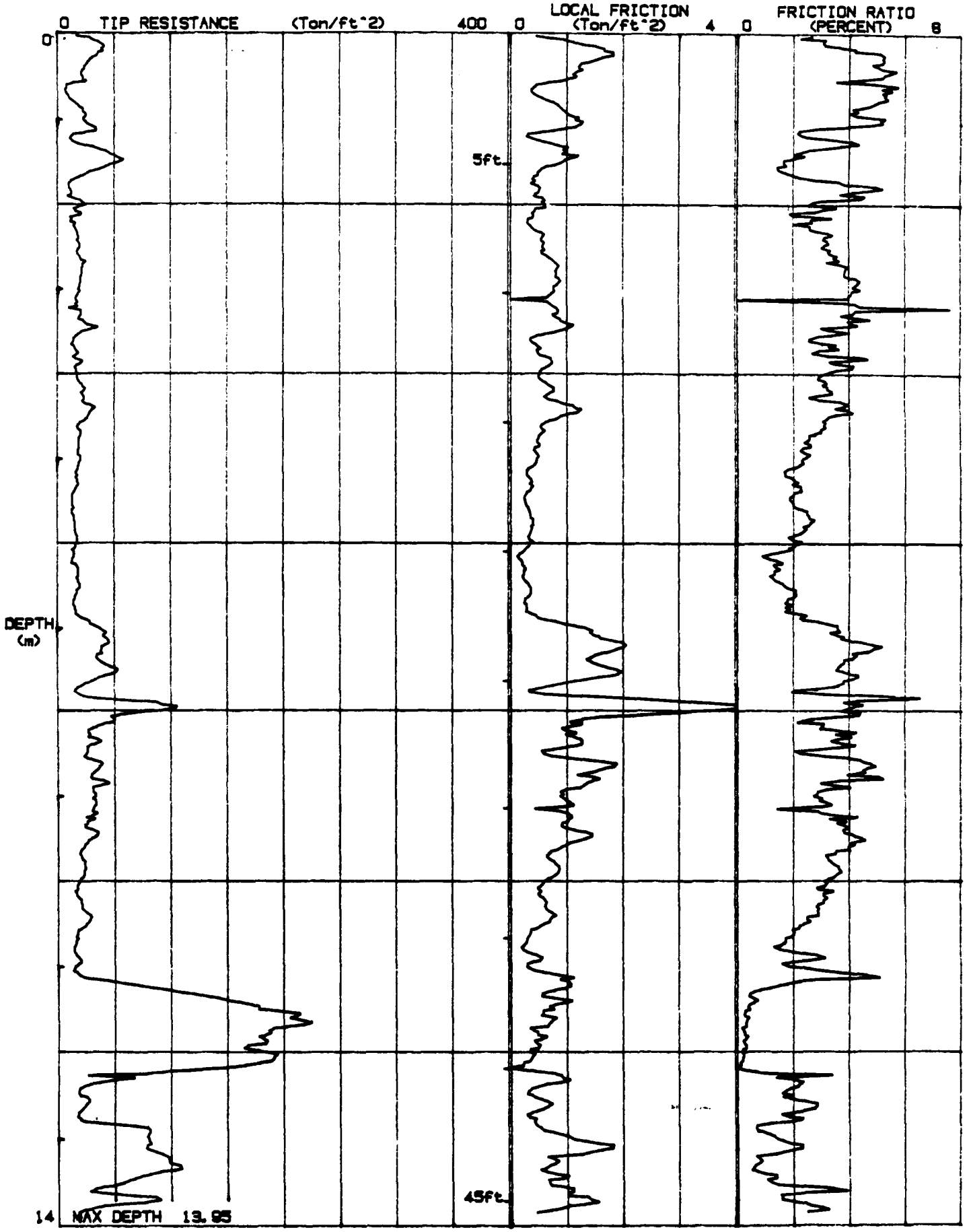
JOB # : 409700
DATE : 04/17/90/12:51
LOCATION : CPT5-16
FILE : FIL168



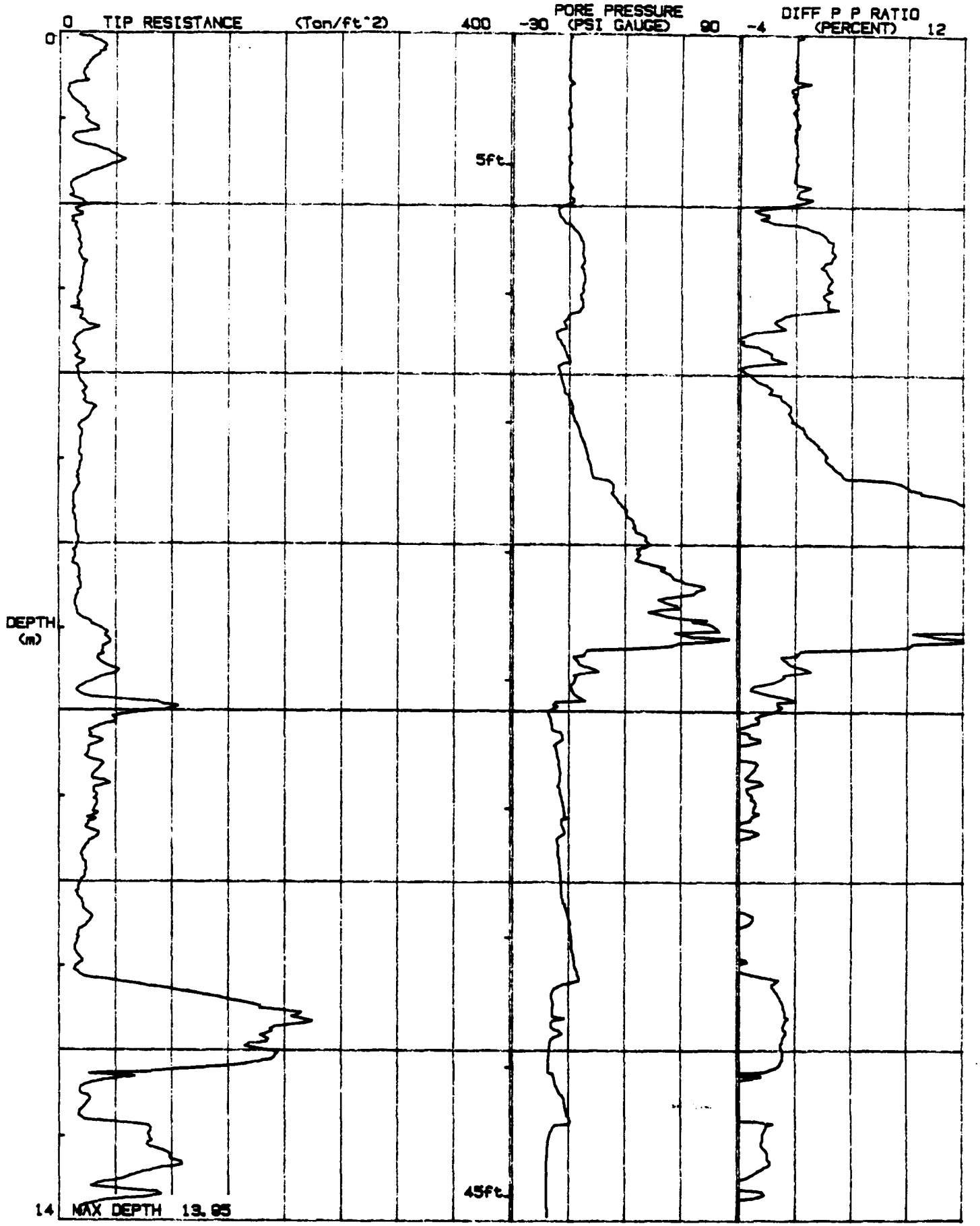
JOB # : 409700
DATE : 04/17/90/12:51
LOCATION : CPT5-16
FILE : FIL168



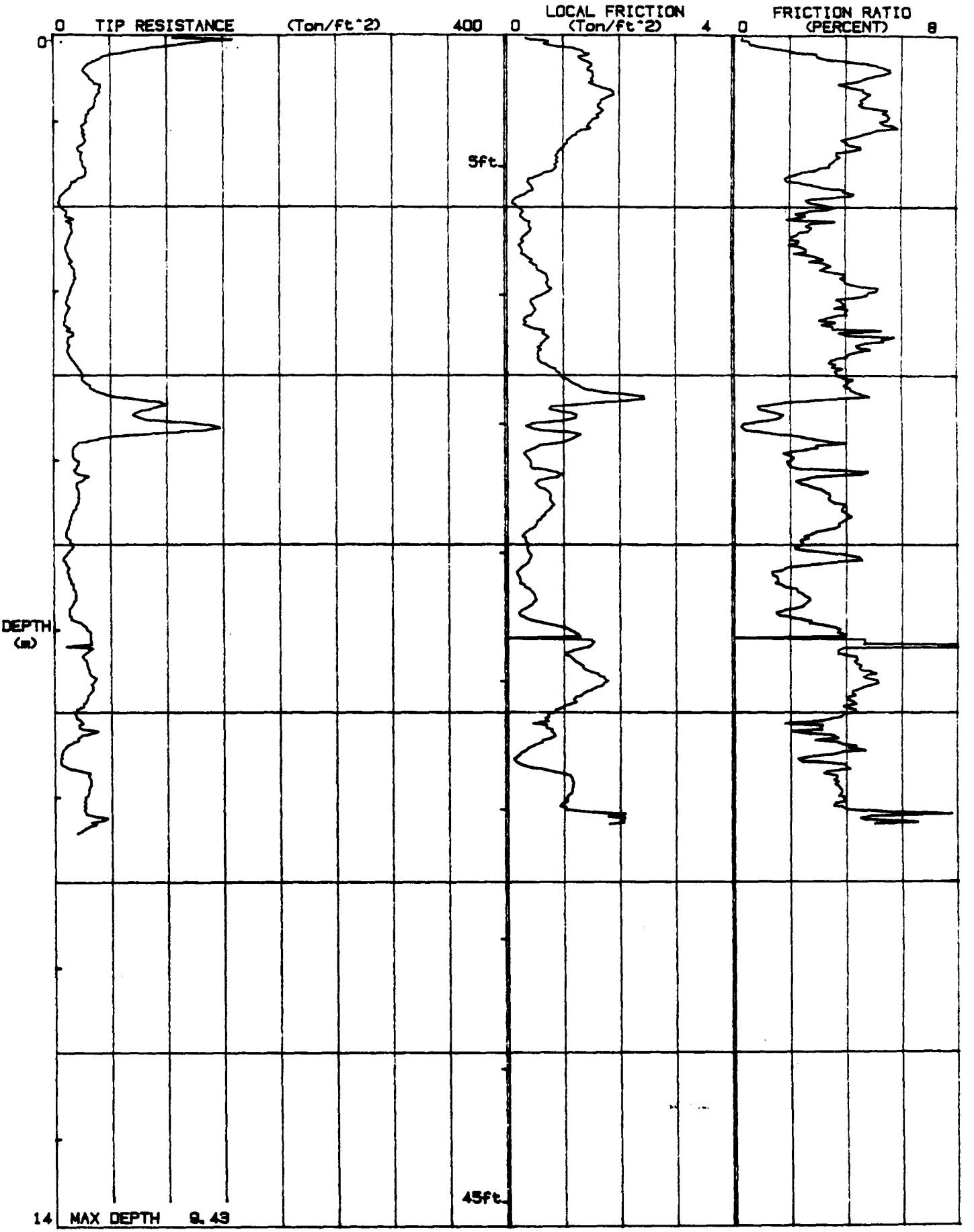
JOB # : 409700
DATE : 04/12/90/07:53
LOCATION : CPT5-18
FILE : FIL184



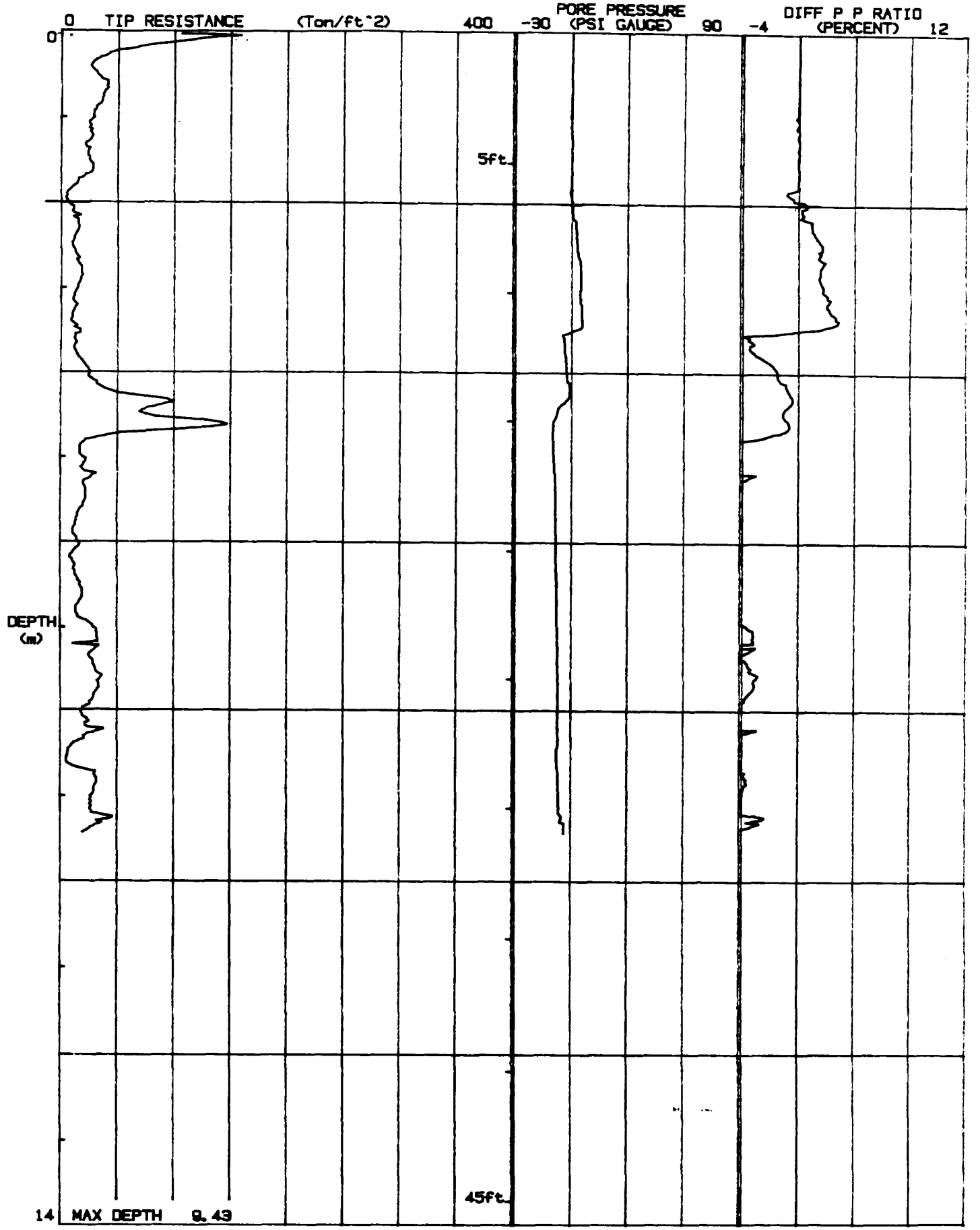
JOB # : 409700
DATE : 04/12/90/07:53
LOCATION : CPT5-18
FILE : FIL184



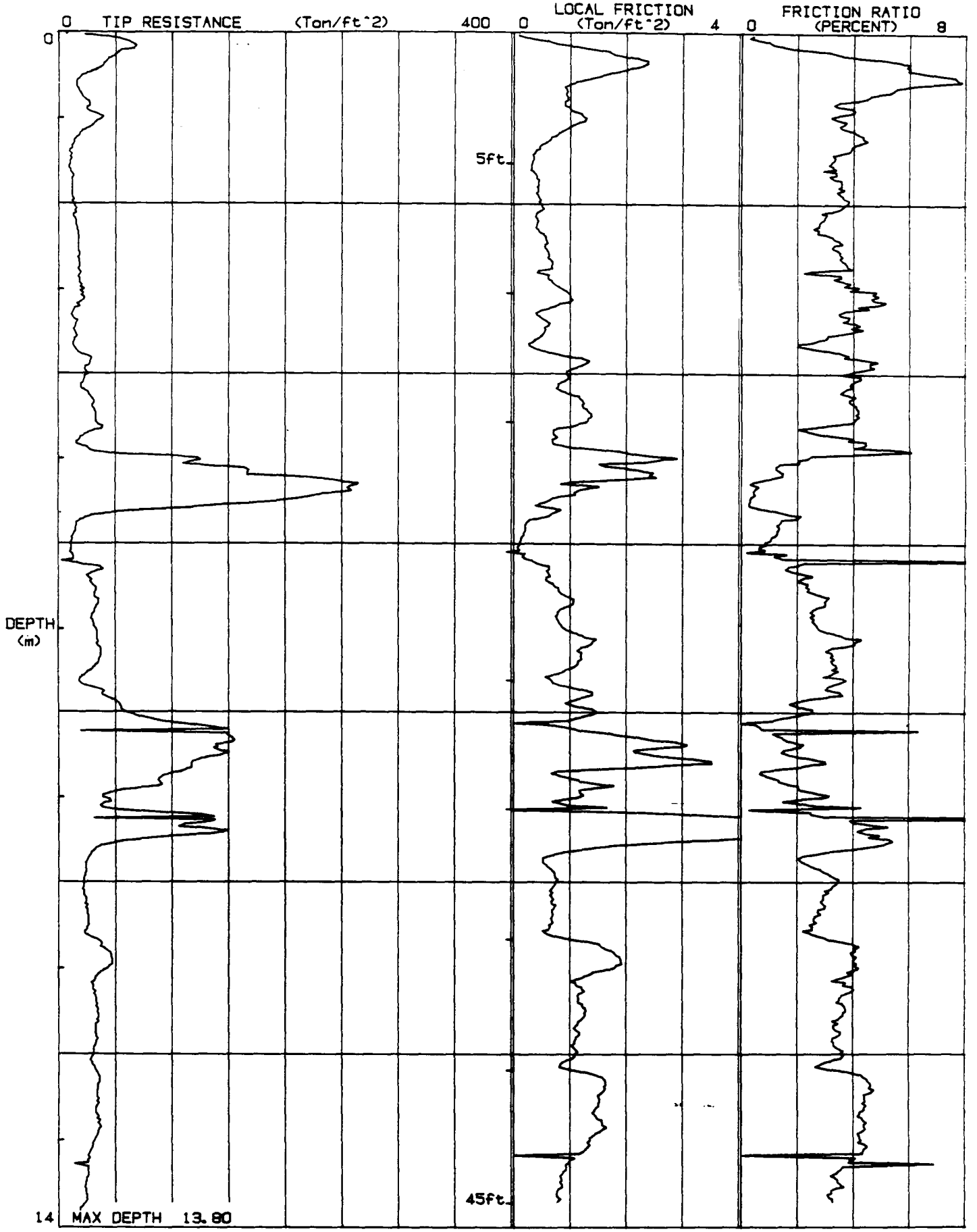
JOB # : 409700
DATE : 04/11/90/14:36
LOCATION : CPT5-19
FILE : FIL182



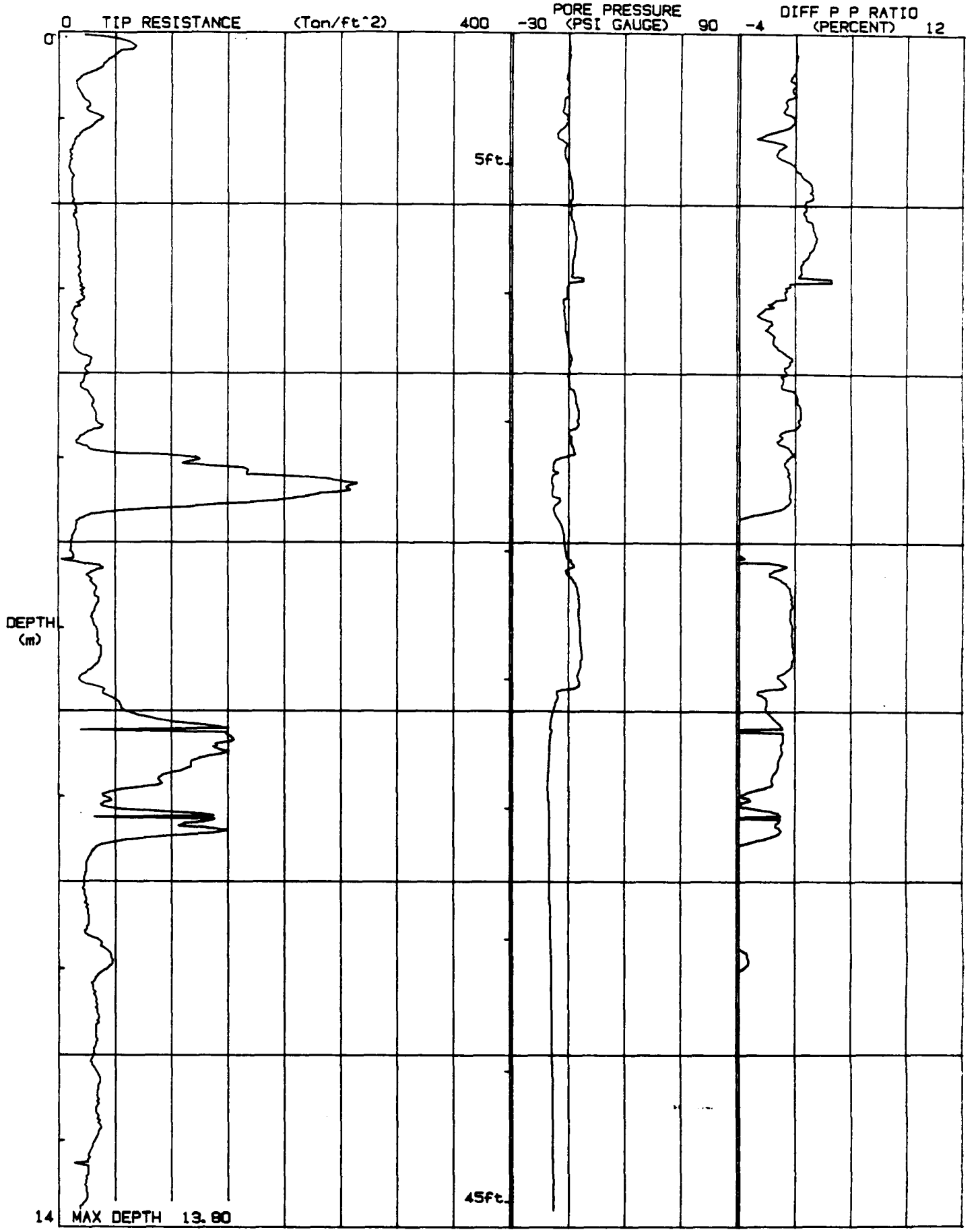
JOB # : 409700
DATE : 04/11/90/14:36
LOCATION : CPT5-19
FILE : FIL182



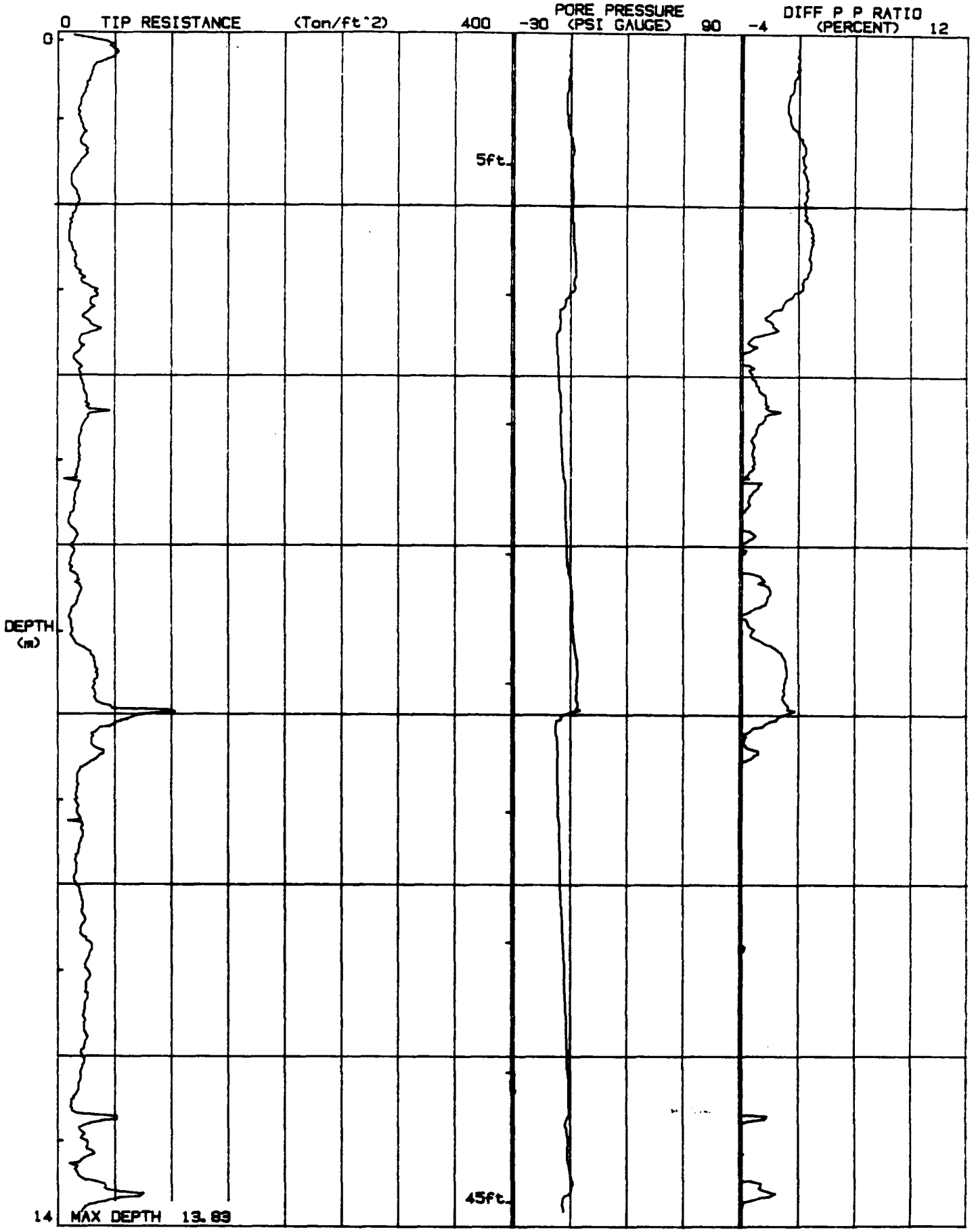
JOB # : 409700
DATE : 04/11/90/08: 18
LOCATION : CPT5-22
FILE : FIL159



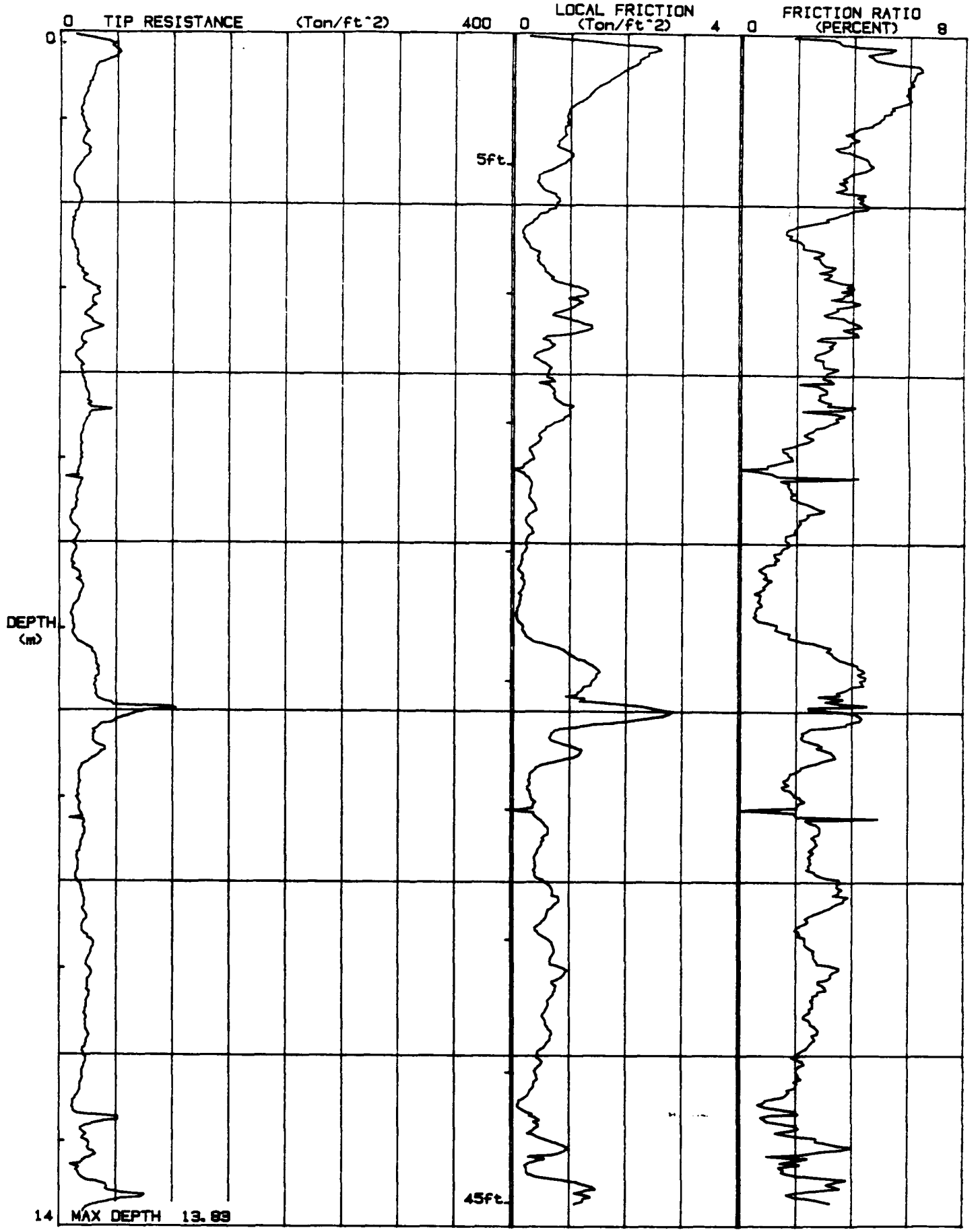
JOB # : 409700
DATE : 04/11/90/08: 18
LOCATION : CPT5-22
FILE : FIL159



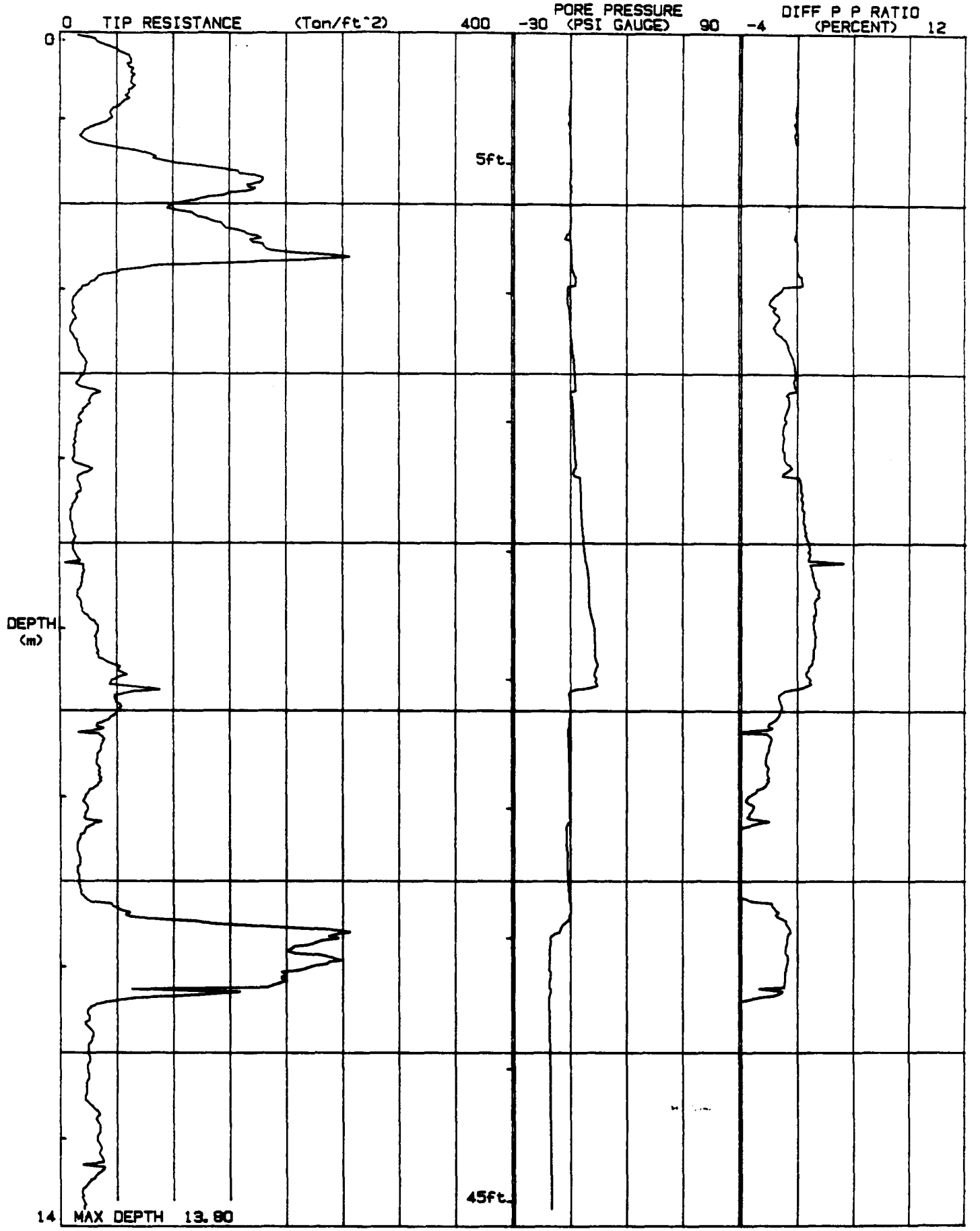
JOB # : 409700
DATE : 04/10/90/15: 48
LOCATION : CPT5-28
FILE : FIL158

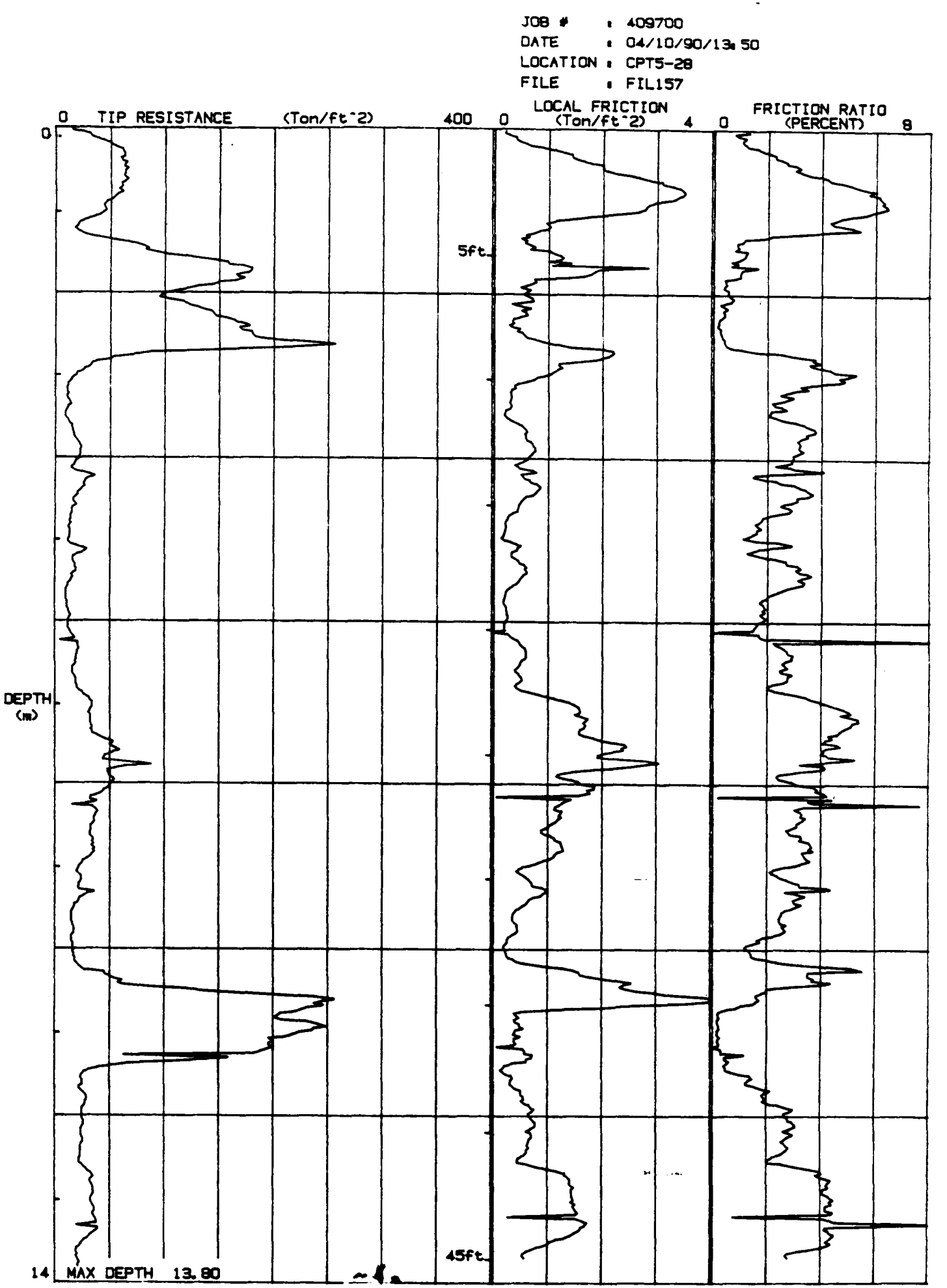


JOB # : 409700
DATE : 04/10/90/15: 48
LOCATION : CPT5-28
FILE : FIL158

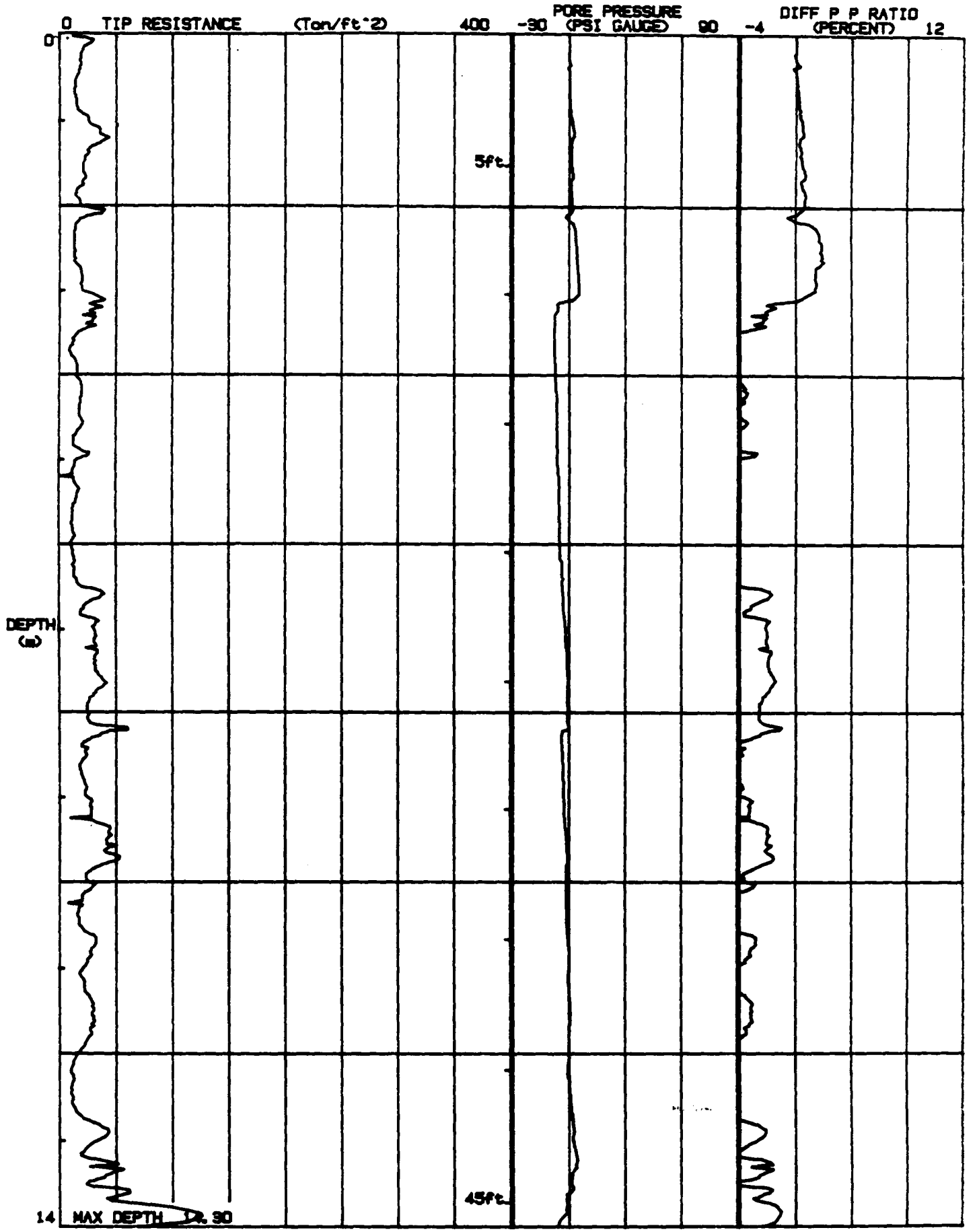


JOB # : 409700
DATE : 04/10/90/13:50
LOCATION : CPT5-28
FILE : FIL157

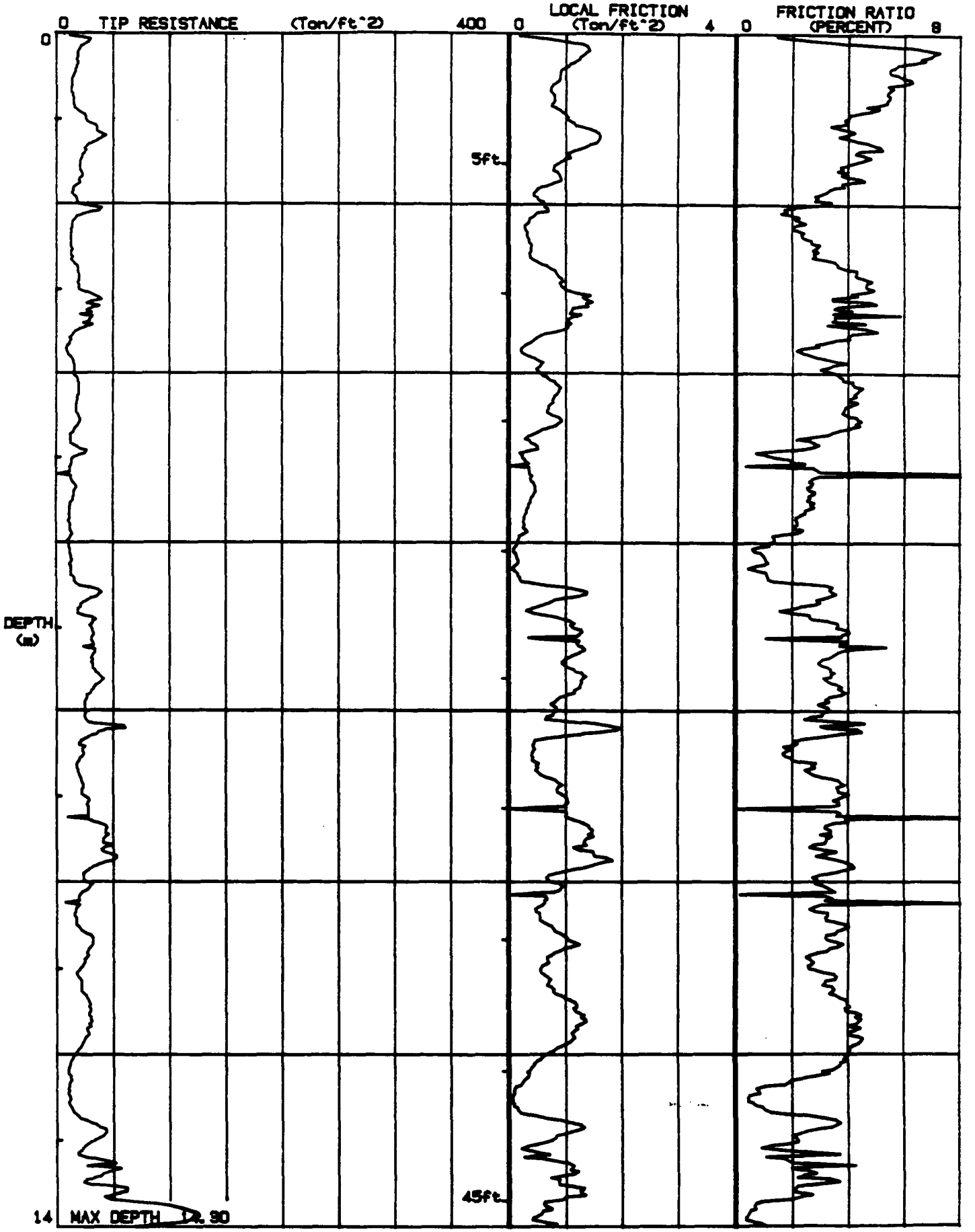



JOB # : 409700
DATE : 04/10/90/13: 50
LOCATION : CPT5-28
FILE : FIL157
0 TIP RESISTANCE (Ton/ft^2) 400
LOCAL FRICTION (Ton/ft^2) 0 4
FRICTION RATIO (PERCENT) 0 8
0
5ft
DEPTH (m)
45ft
14 MAX DEPTH 13.80

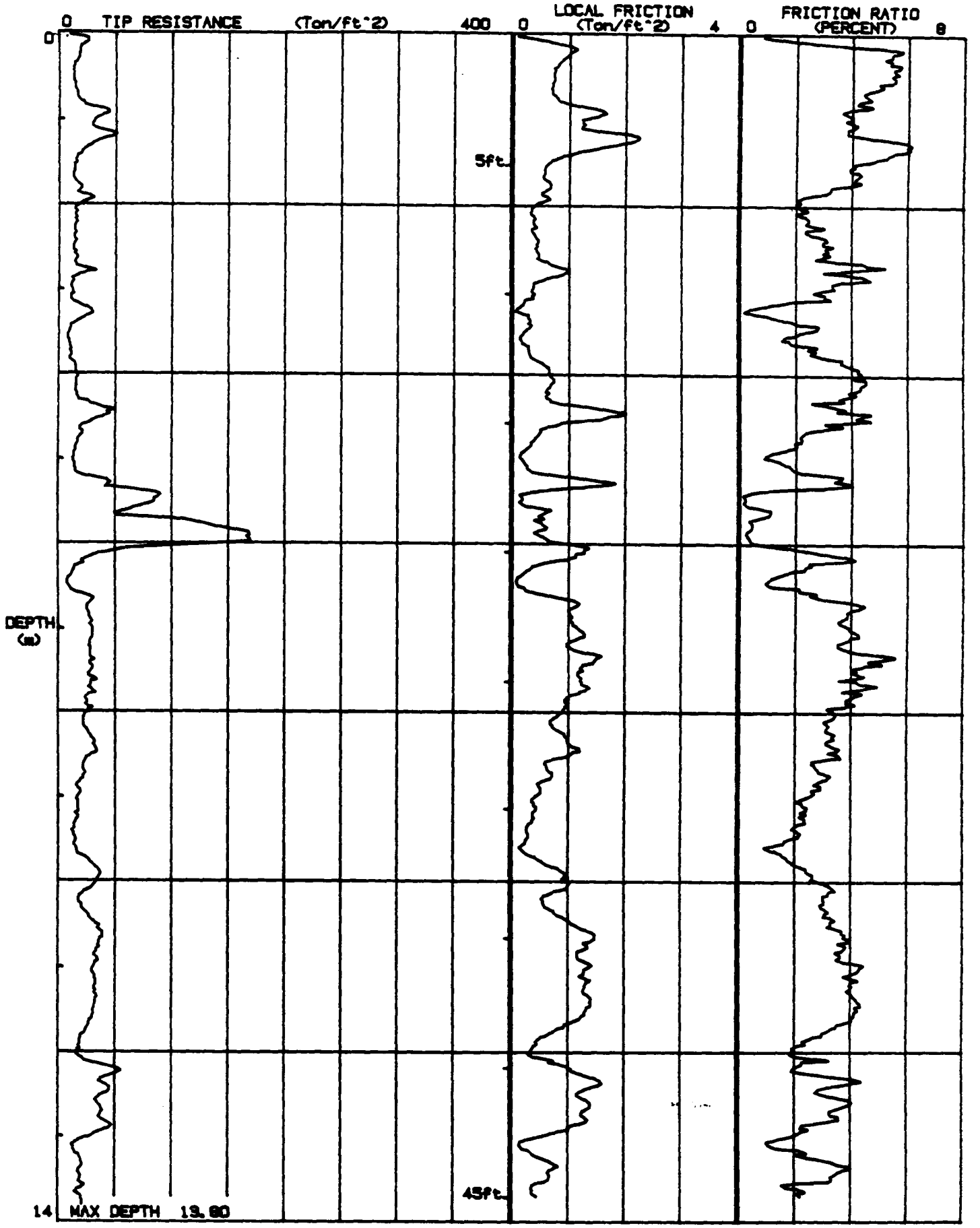
JOB # : 409700
DATE : 04/05/90/12:02
LOCATION : CPT5-91
FILE : FIL159



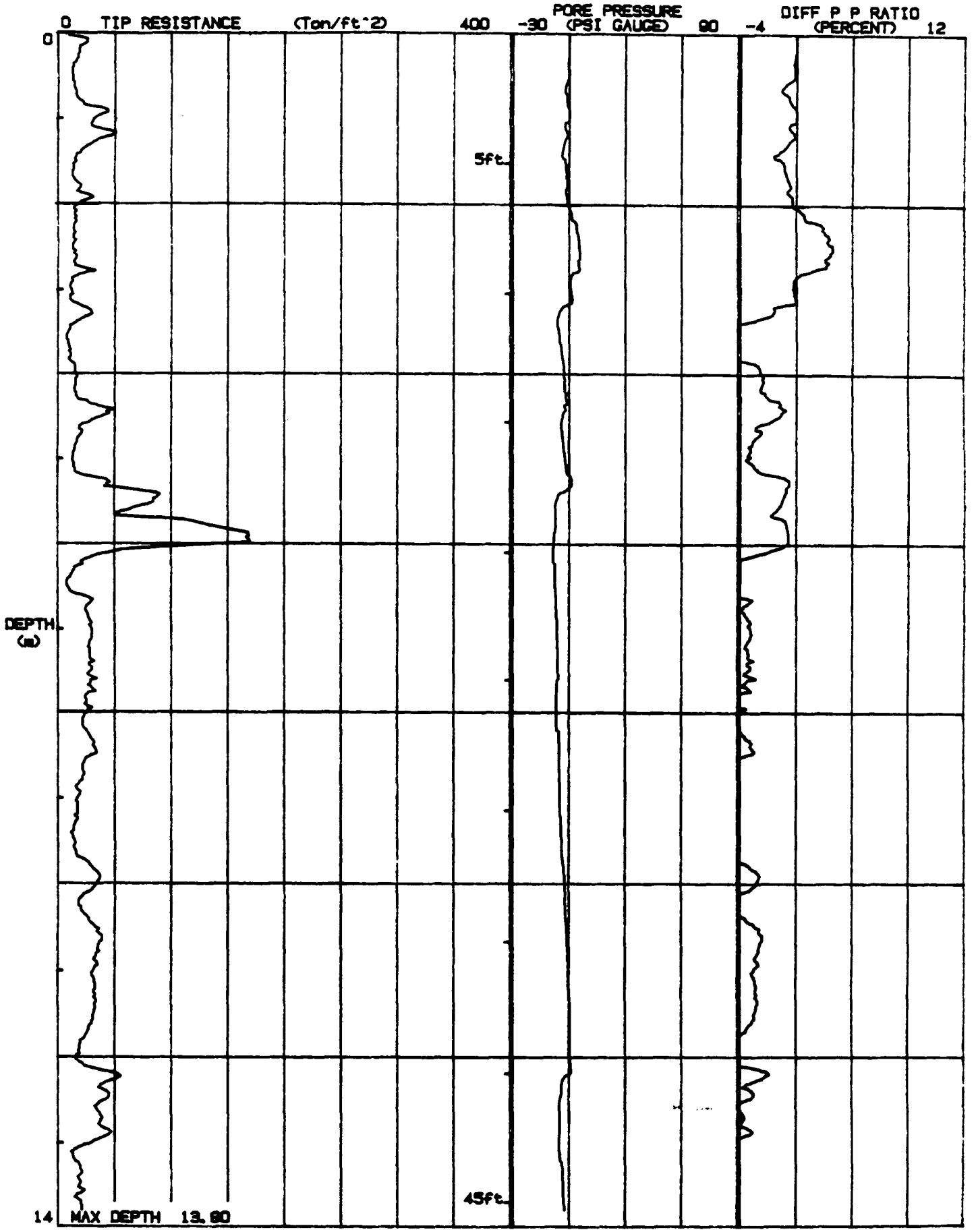
JOB # : 409700
DATE : 04/05/90/12:02
LOCATION : CPT5-31
FILE : FIL153



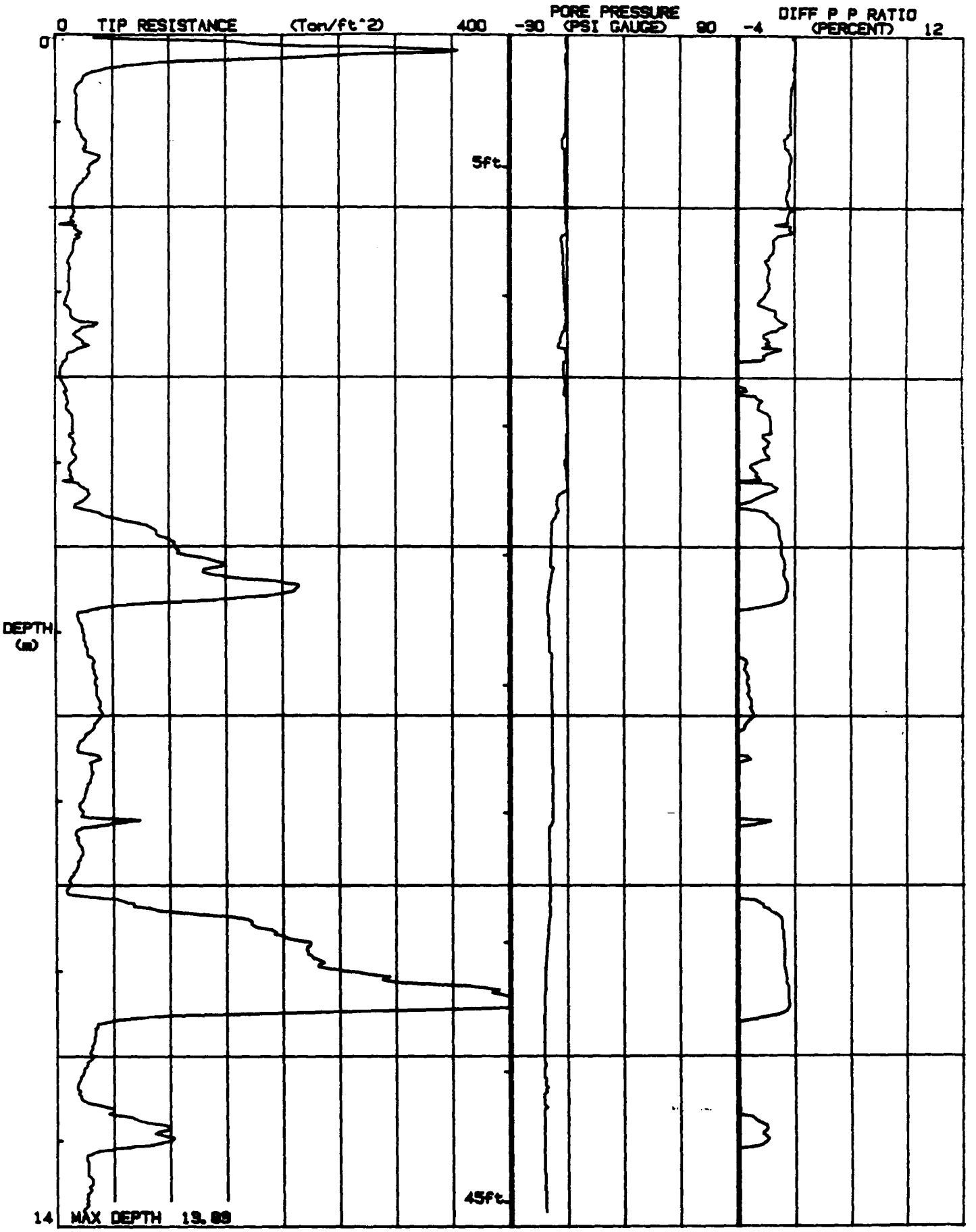
JOB # : 409700
DATE : 04/05/90/10:48
LOCATION : CPT5-39
FILE : FIL152

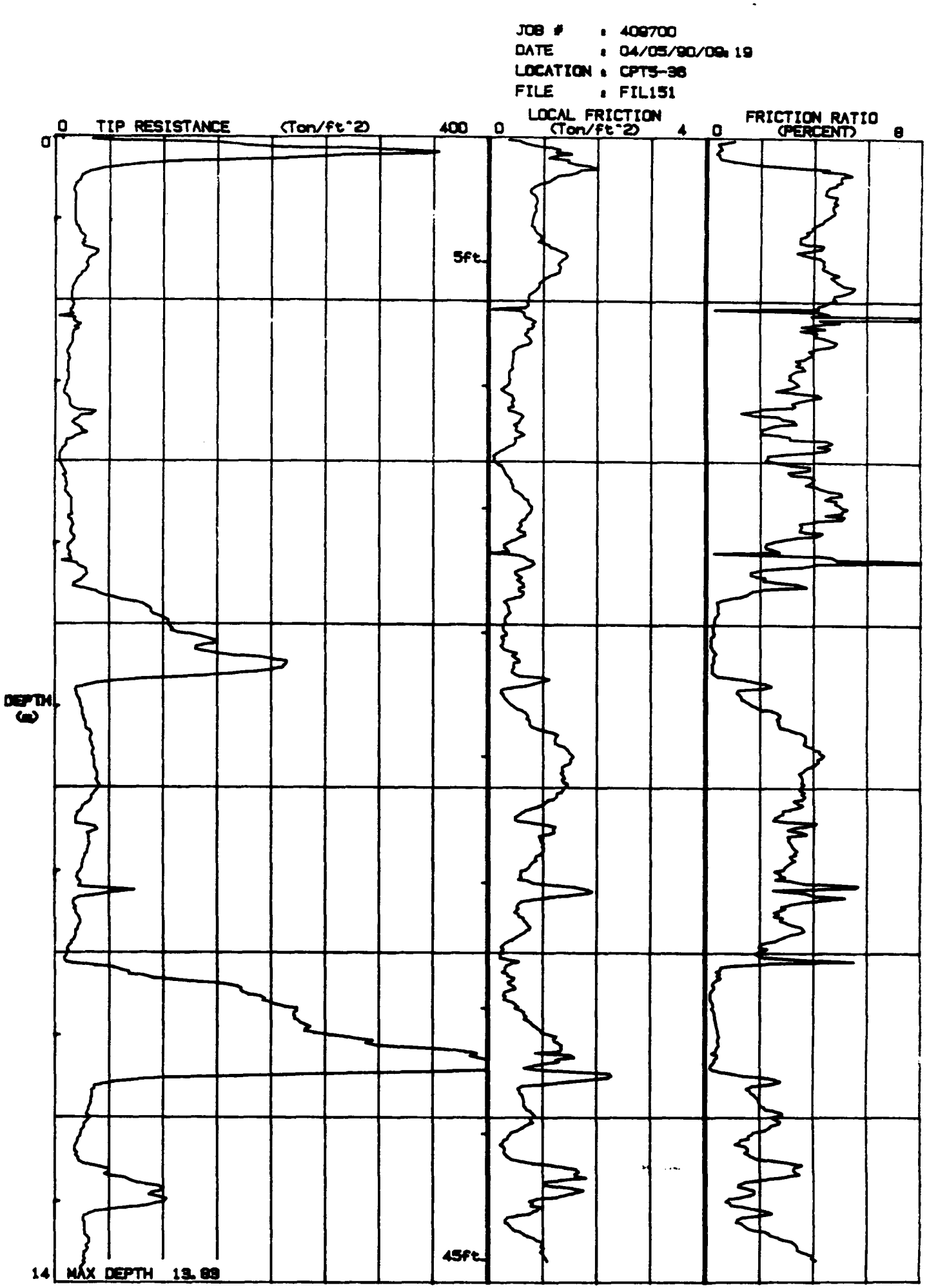


JOB # : 409700
DATE : 04/05/90/10:48
LOCATION : CPT5-39
FILE : FIL152

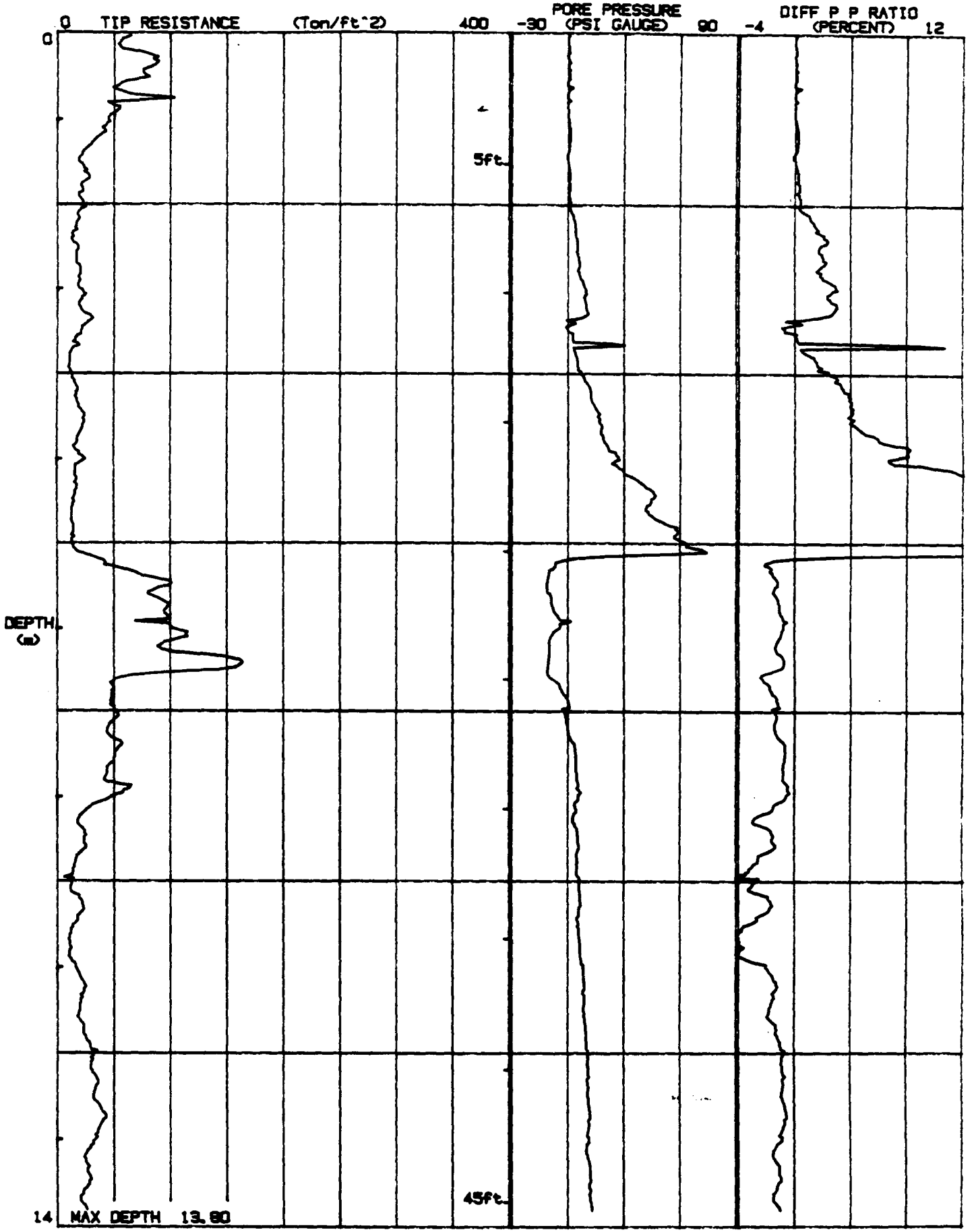


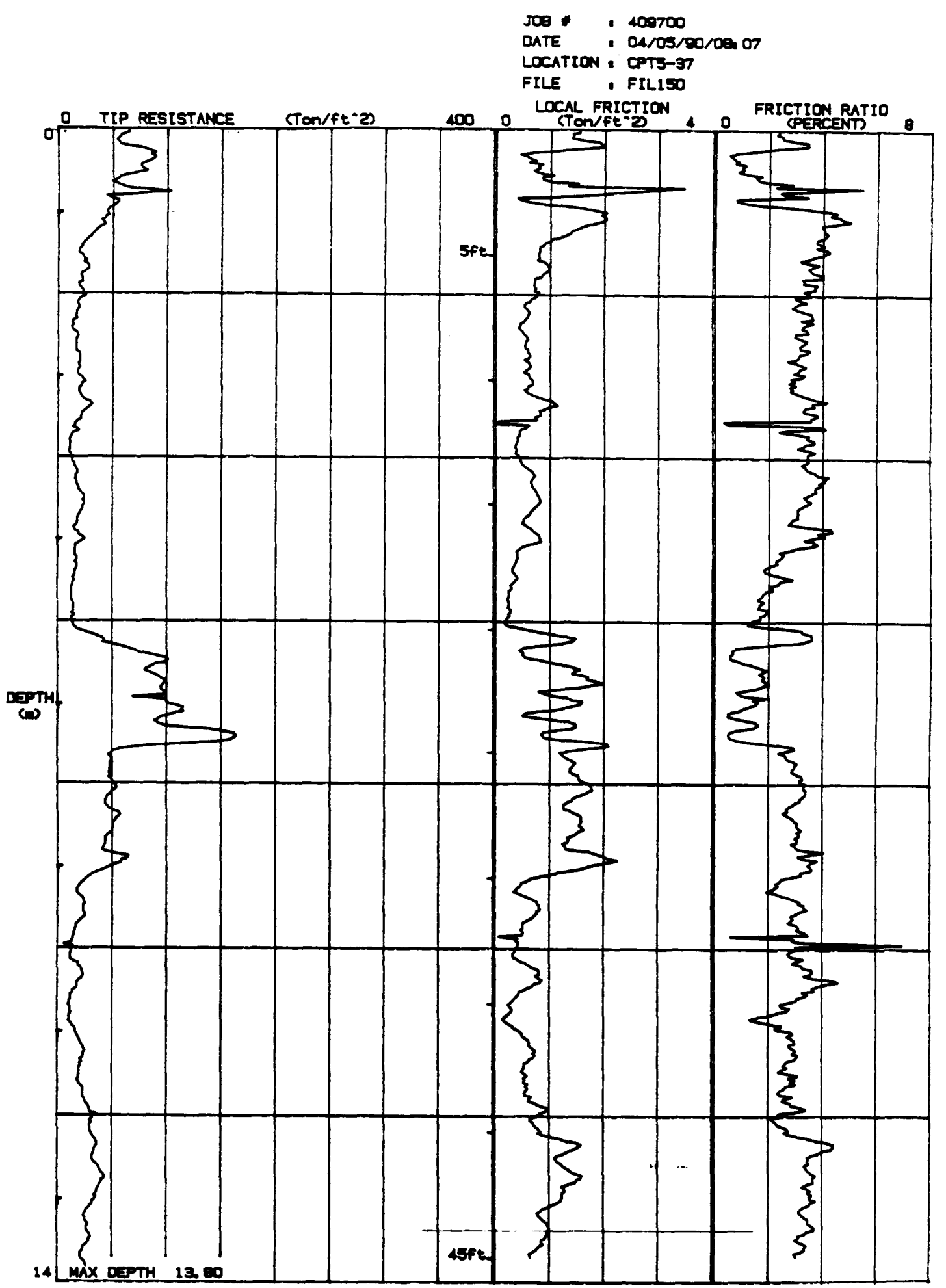
JOB # : 409700
DATE : 04/05/90/09:19
LOCATION : CPT5-98
FILE : FIL151



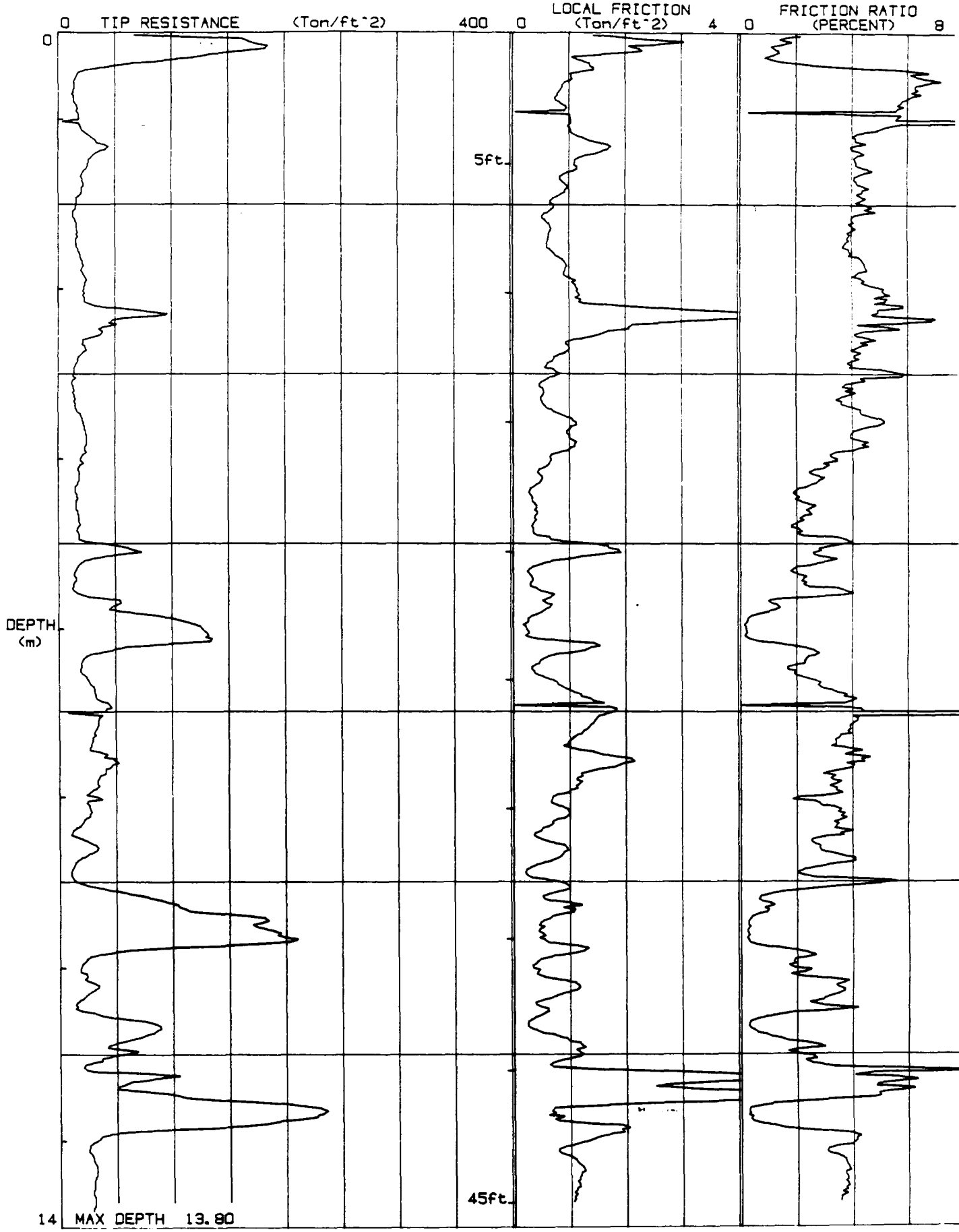

JOB # : 409700
DATE : 04/05/90/09: 19
LOCATION : CPT5-38
FILE : FIL151
0 TIP RESISTANCE (Ton/ft^2) 400
LOCAL FRICTION
0 (Ton/ft^2) 4
FRICTION RATIO
0 (PERCENT) 8
0
5ft
DEPTH (m)
45ft
14 MAX DEPTH 13.89

JOB # : 409700
DATE : 04/05/90/09:07
LOCATION : CPT3-37
FILE : FIL150

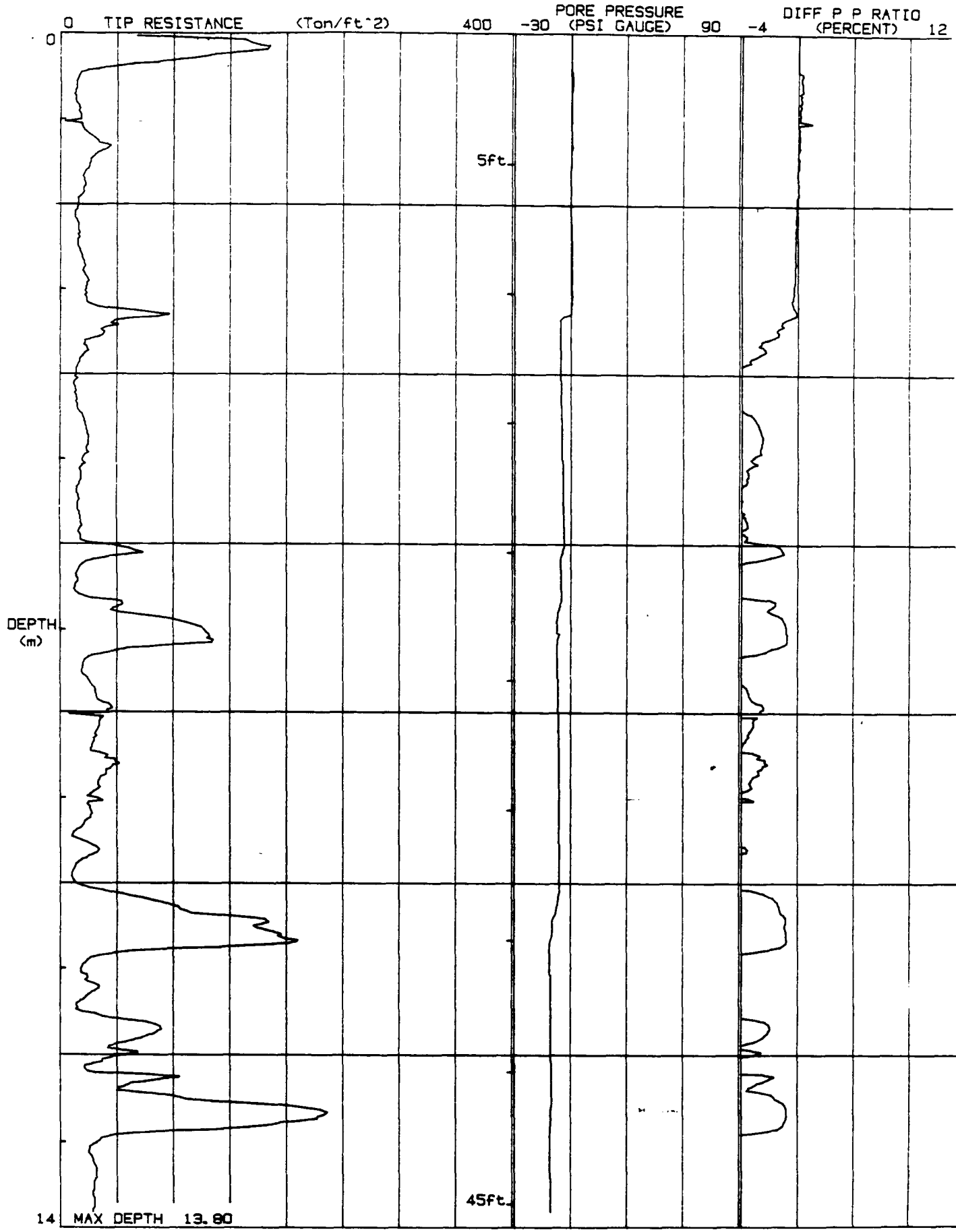



JOB # : 409700
DATE : 04/05/90/08:07
LOCATION : CPT5-37
FILE : FIL150
0 TIP RESISTANCE (Ton/ft^2) 400
LOCAL FRICTION (Ton/ft^2) 0 4
FRICTION RATIO (PERCENT) 0 8
0
5ft
DEPTH (m)
45ft
14 MAX DEPTH 13.80

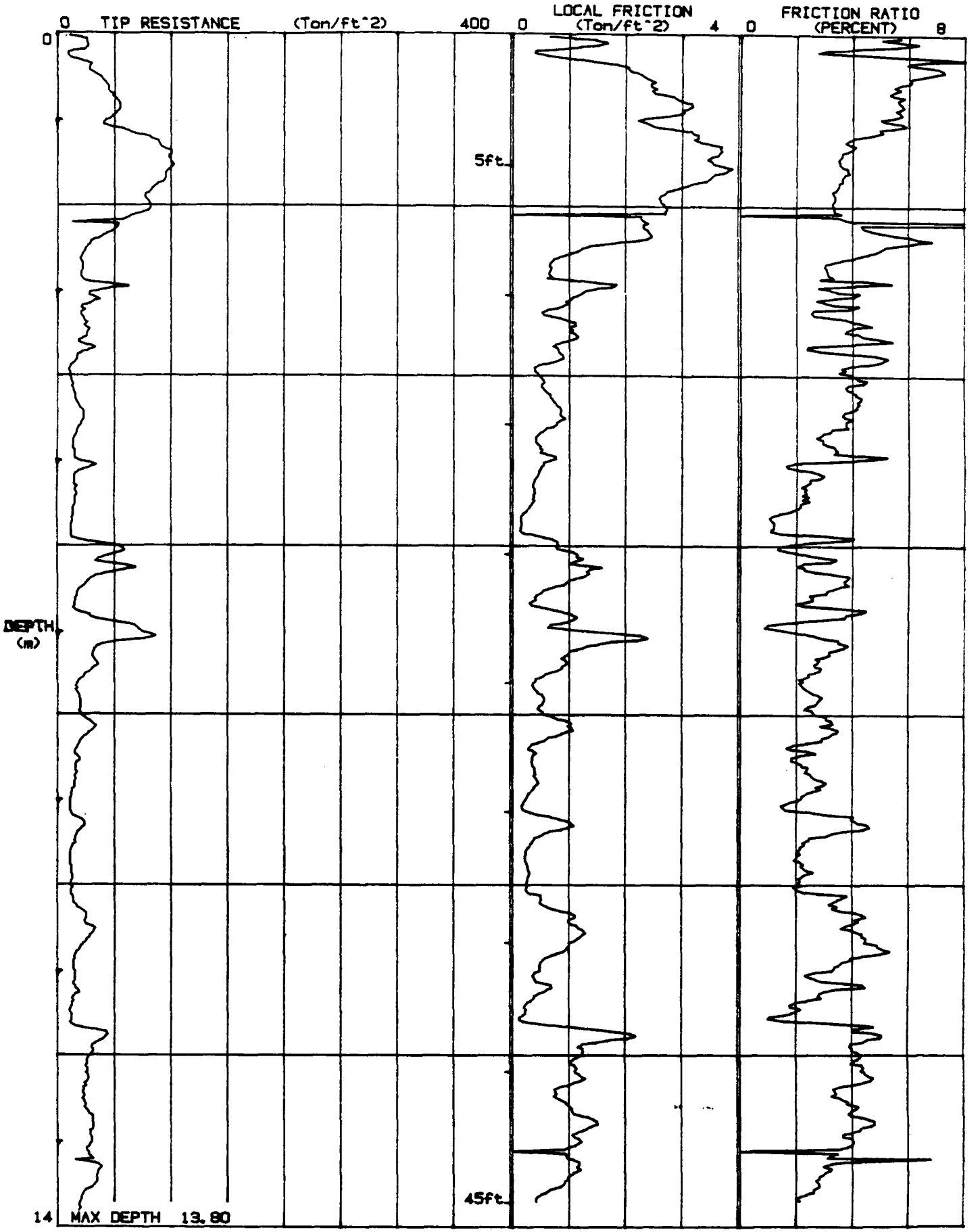
JOB # : 409700
DATE : 04/19/90/11:57
LOCATION : CPT5-41
FILE : FIL174



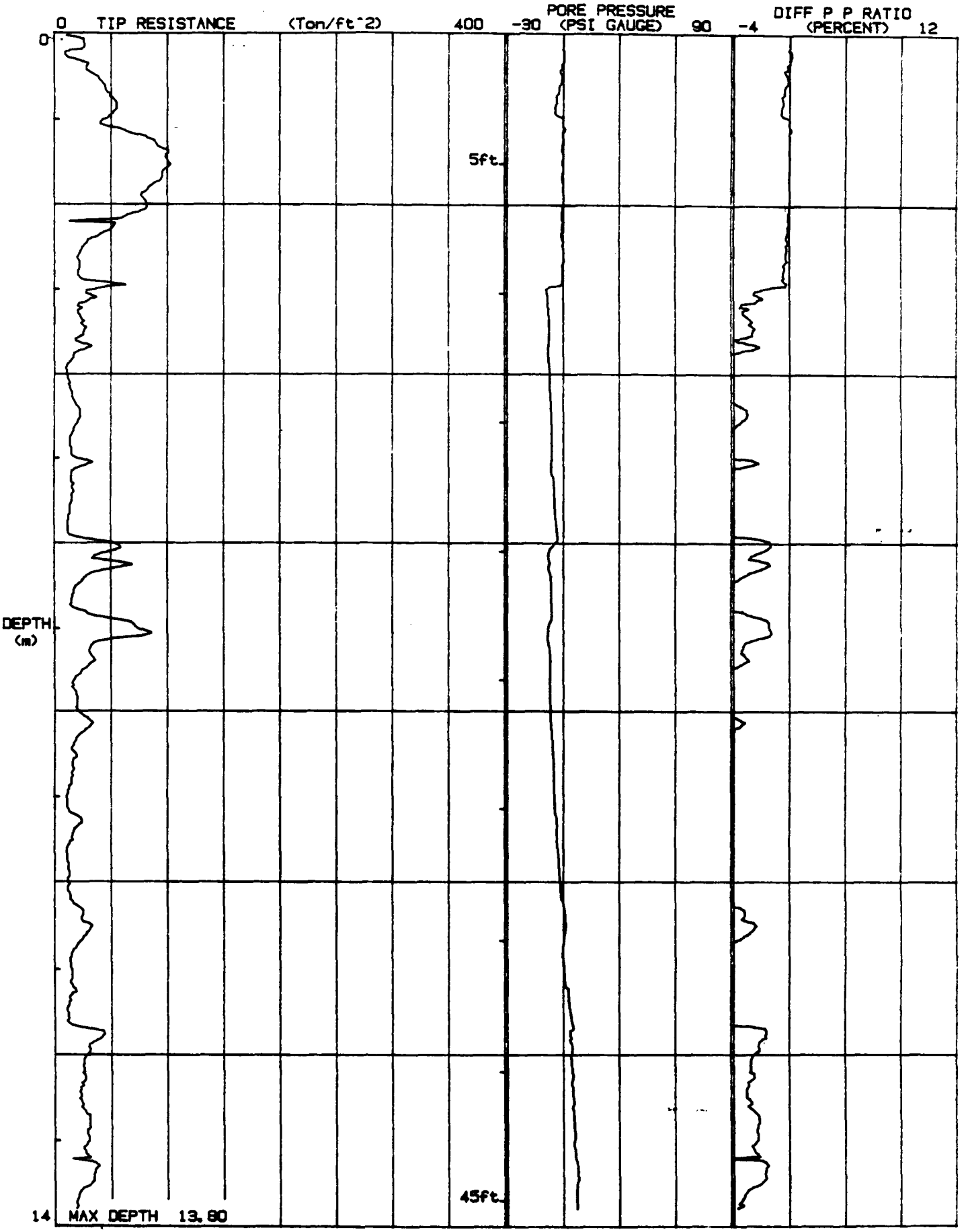
JOB # : 409700
DATE : 04/19/90/11:57
LOCATION : CPT5-41
FILE : FIL174



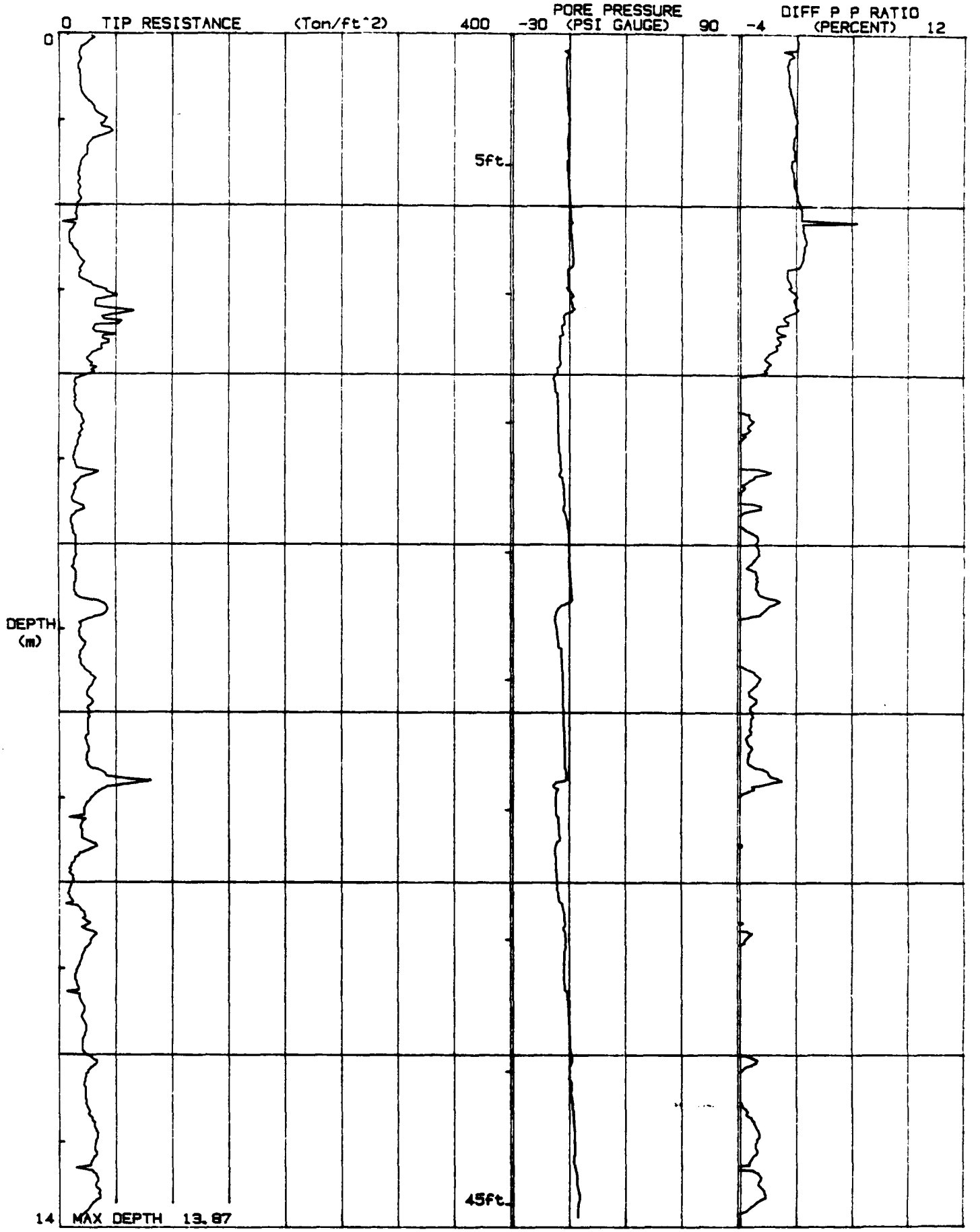
JOB # : 409700
DATE : 04/11/90/10:04
LOCATION : CPT5-42
FILE : FIL160



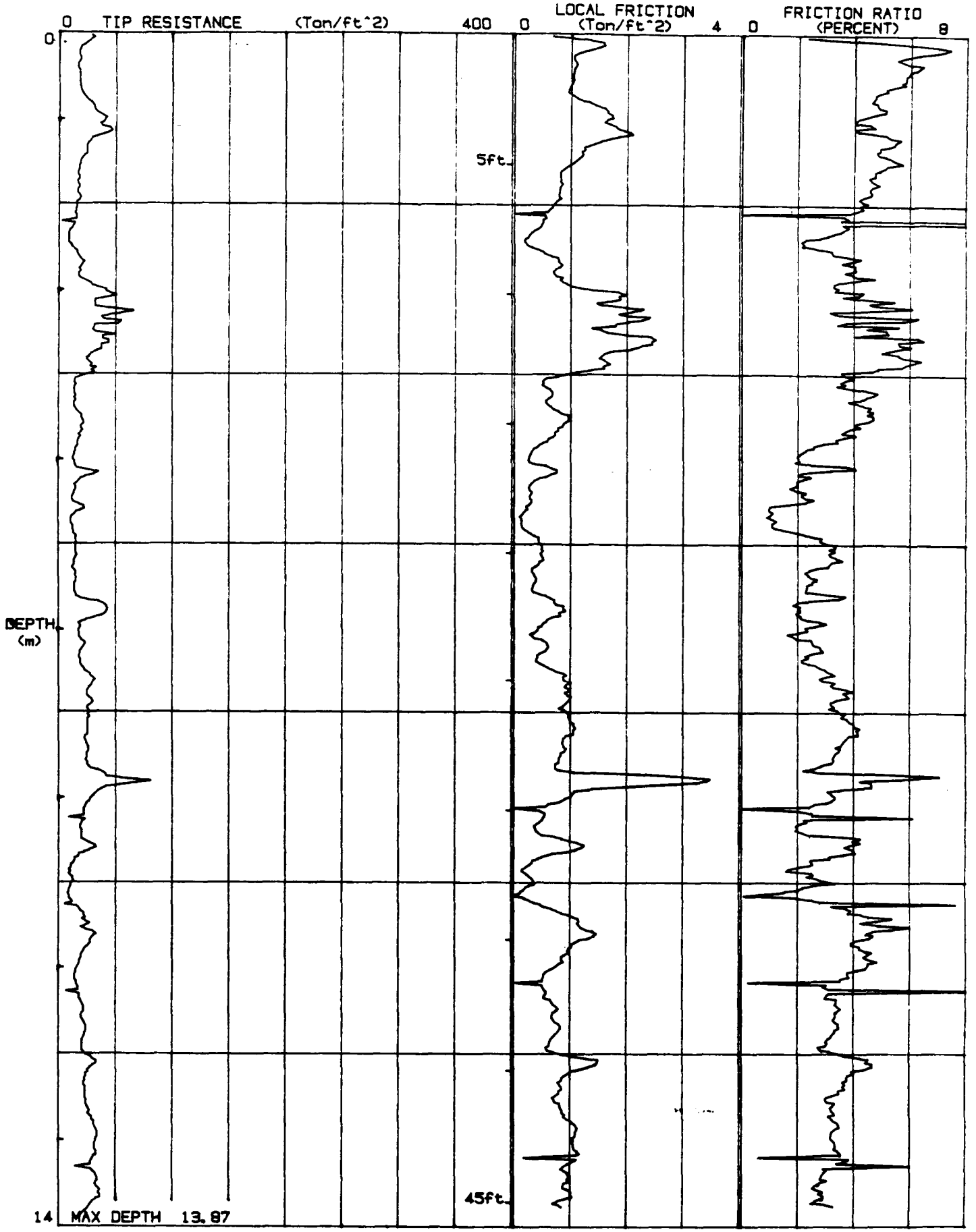
JOB # : 409700
DATE : 04/11/90/10:04
LOCATION : CPT5-42
FILE : FIL160



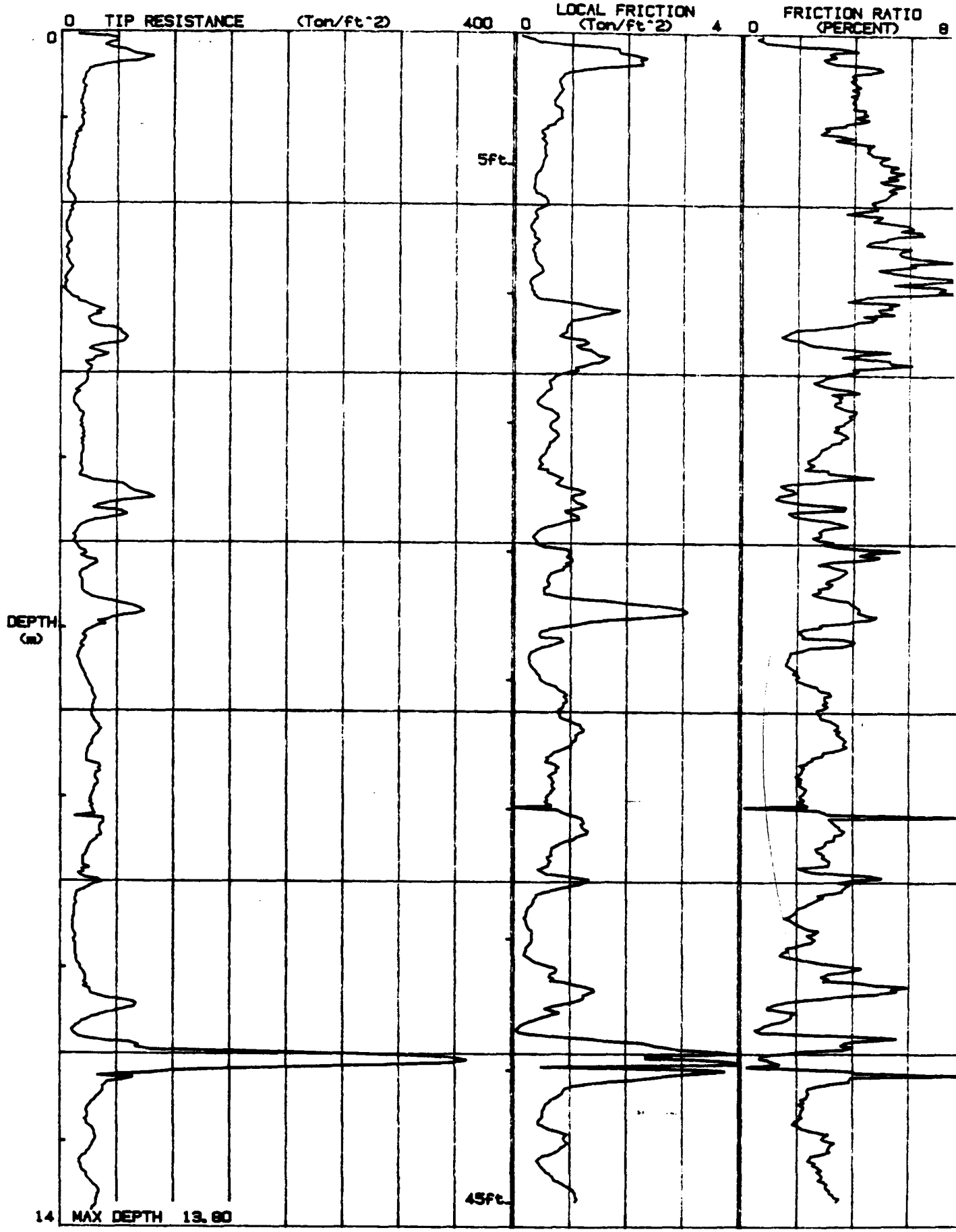
JOB # : 409700
DATE : 04/17/90/15:32
LOCATION : CPT5-48
FILE : FIL189



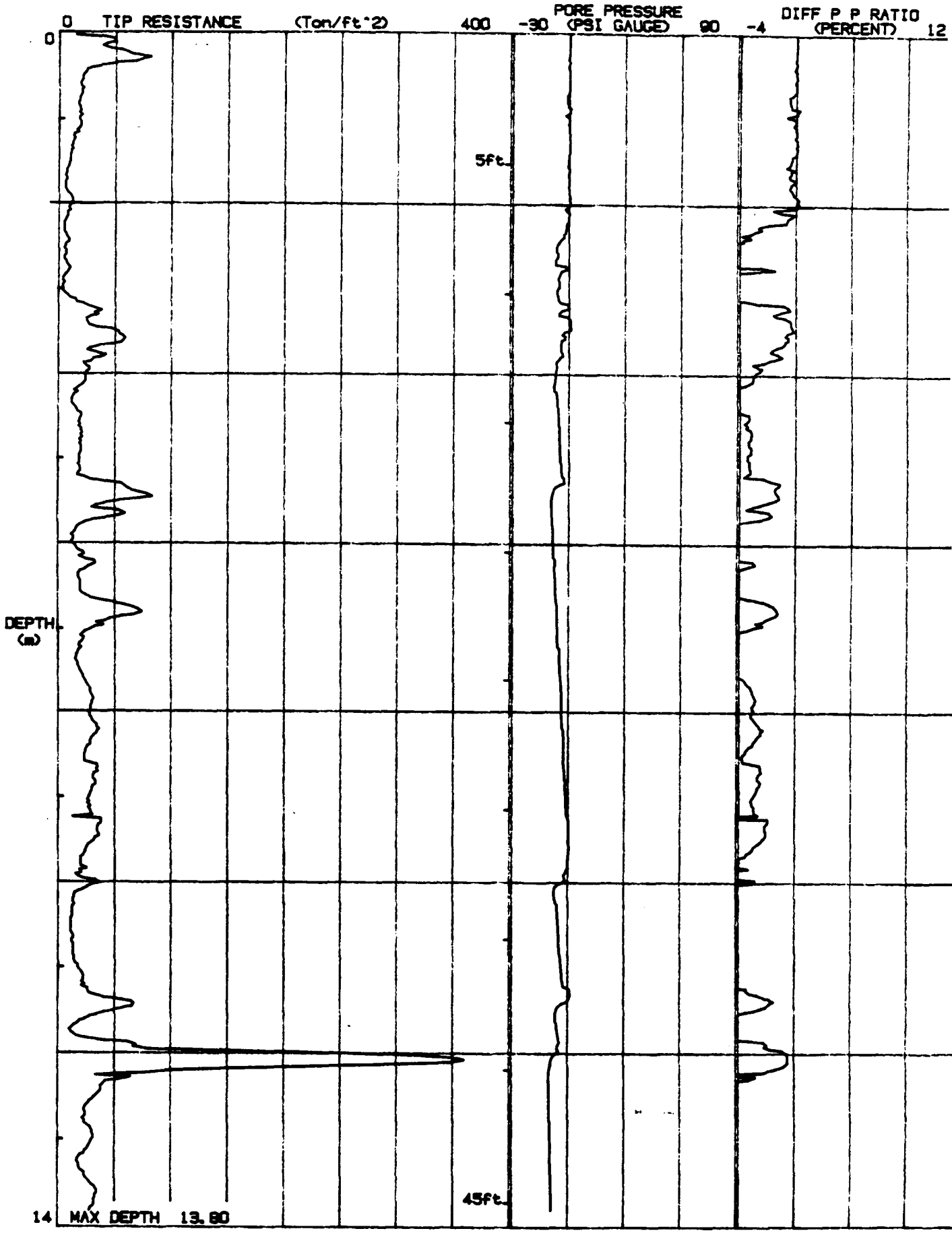
JOB # : 409700
DATE : 04/17/90/15:32
LOCATION : CPT5-48
FILE : FIL189

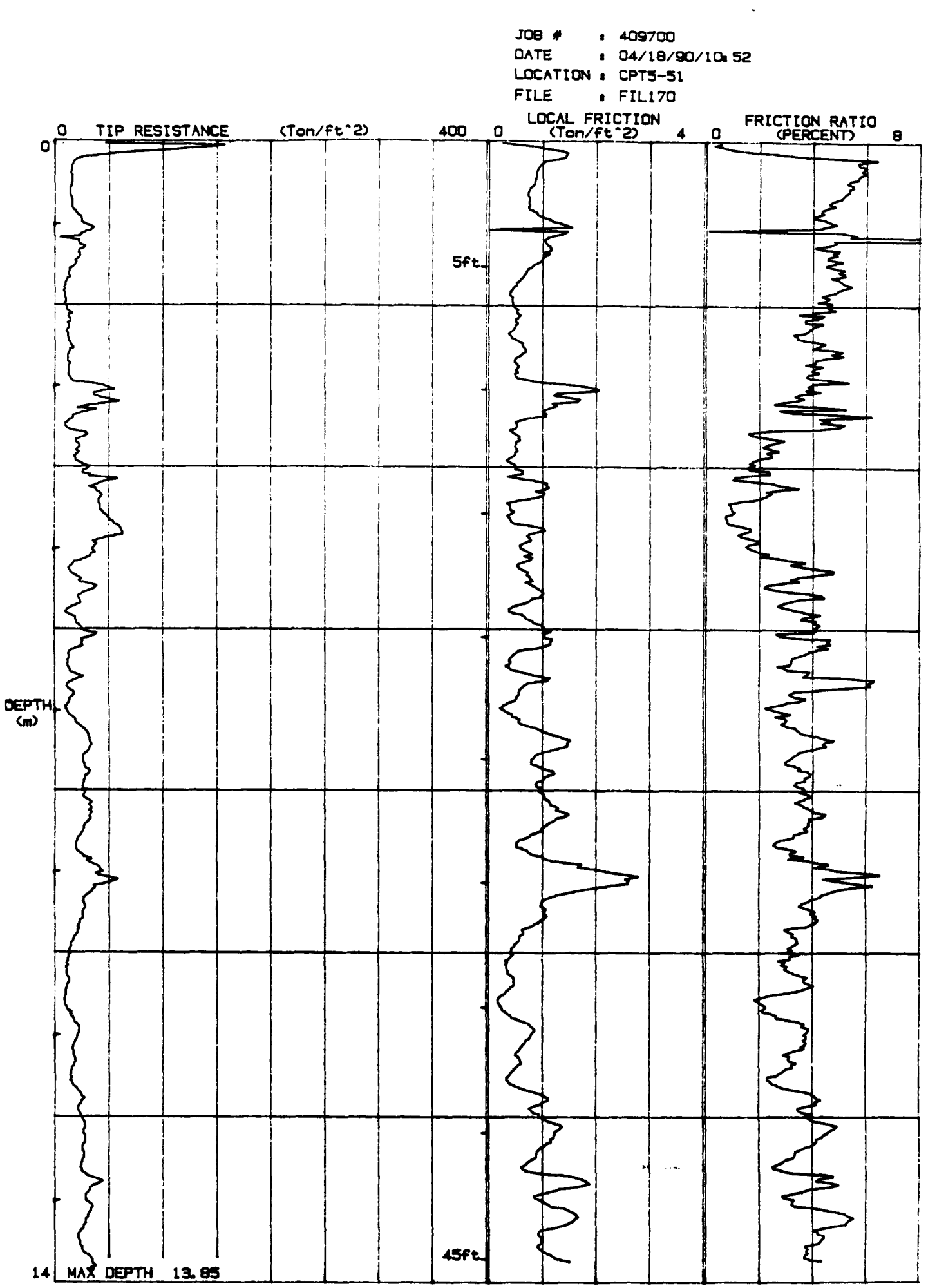


JOB # : 409700
DATE : 04/19/90/10:31
LOCATION : CPT5-49A
FILE : FIL173

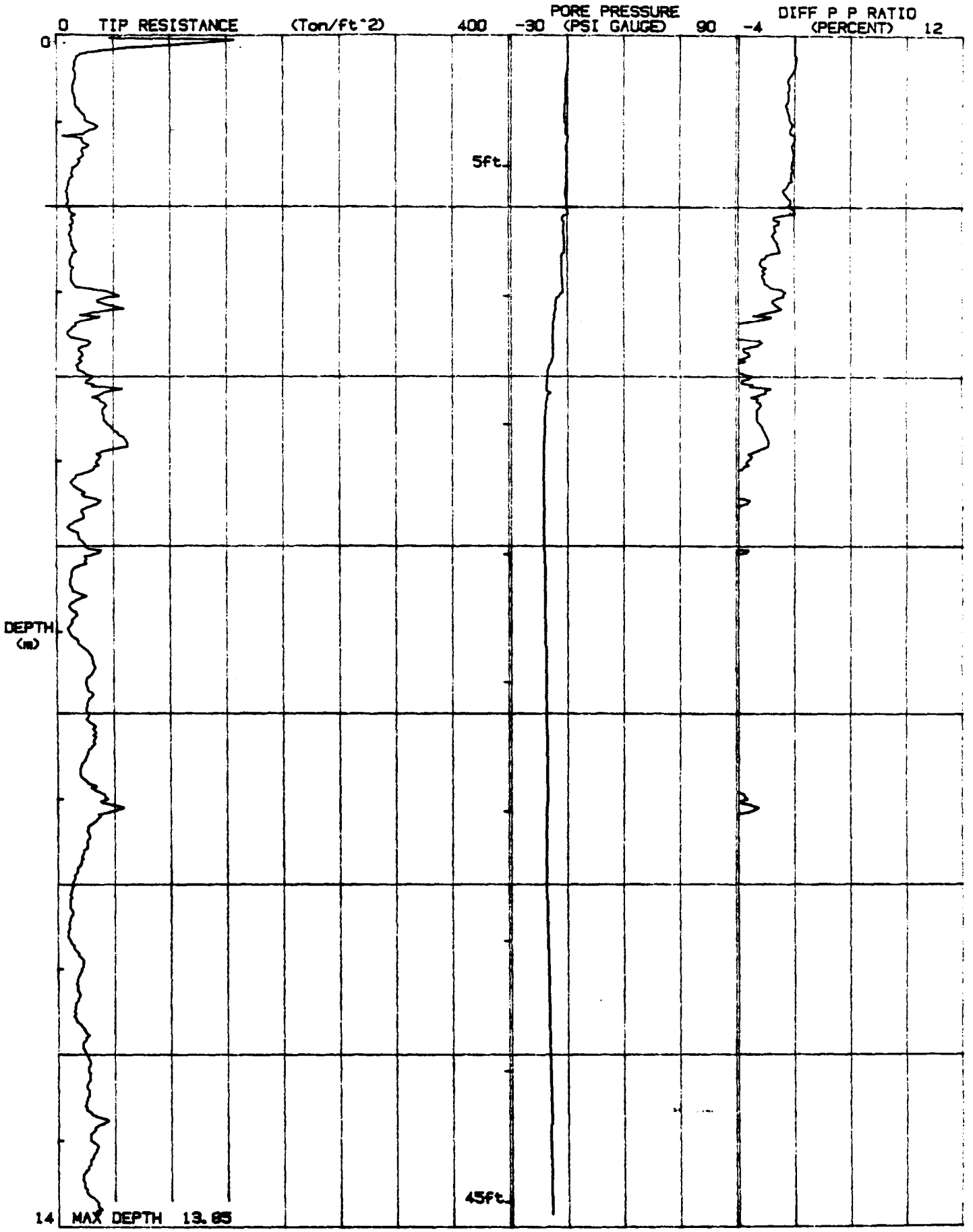


JOB # : 409700
DATE : 04/19/90/10: 31
LOCATION : CPT5-49A
FILE : FIL173

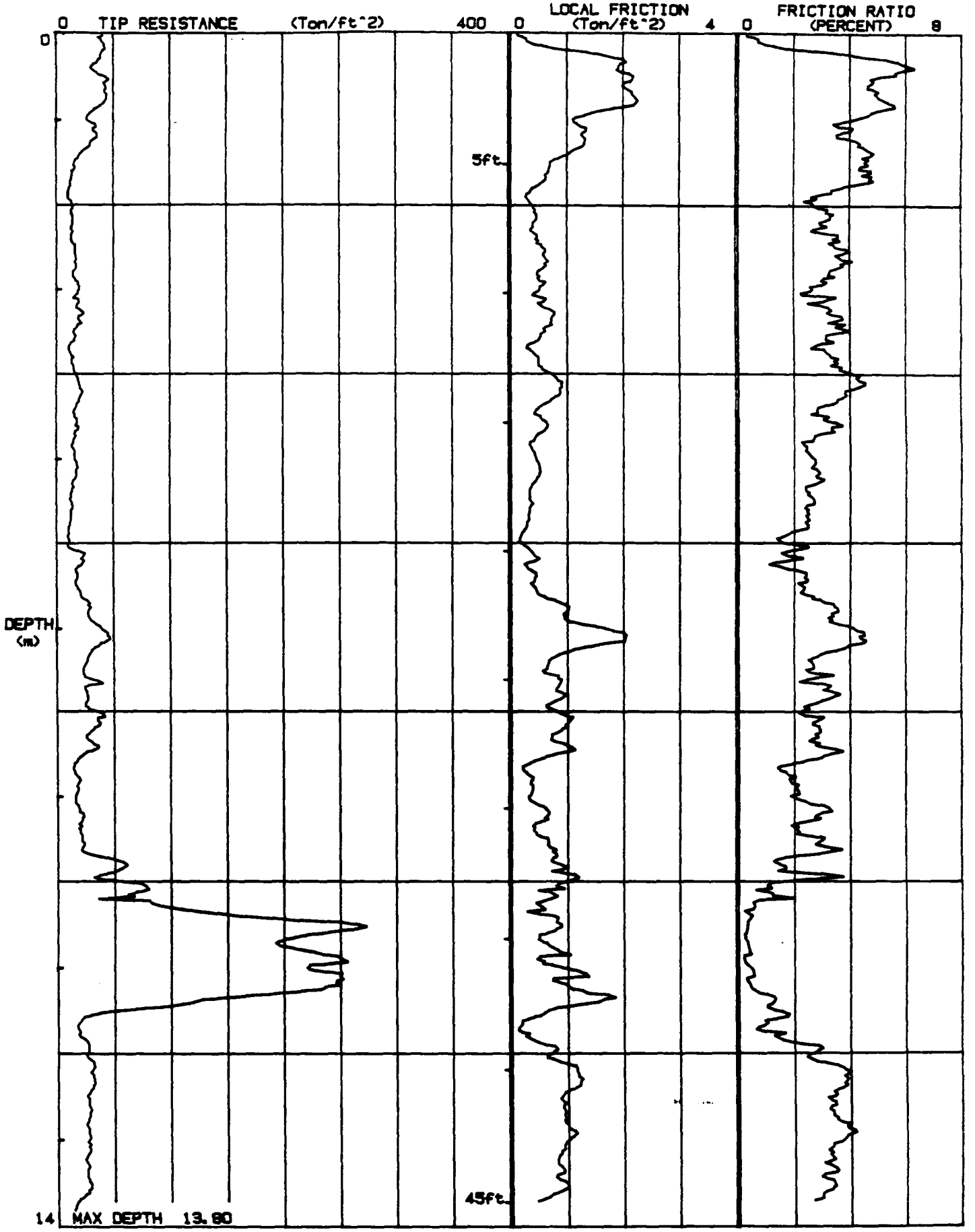



JOB # : 409700
DATE : 04/18/90/10:52
LOCATION : CPT5-51
FILE : FIL170
0 TIP RESISTANCE (Ton/ft^2) 400
LOCAL FRICTION (Ton/ft^2) 0 4
FRICTION RATIO (PERCENT) 0 8
0
5ft
DEPTH (m)
45ft
14 MAX DEPTH 13.85

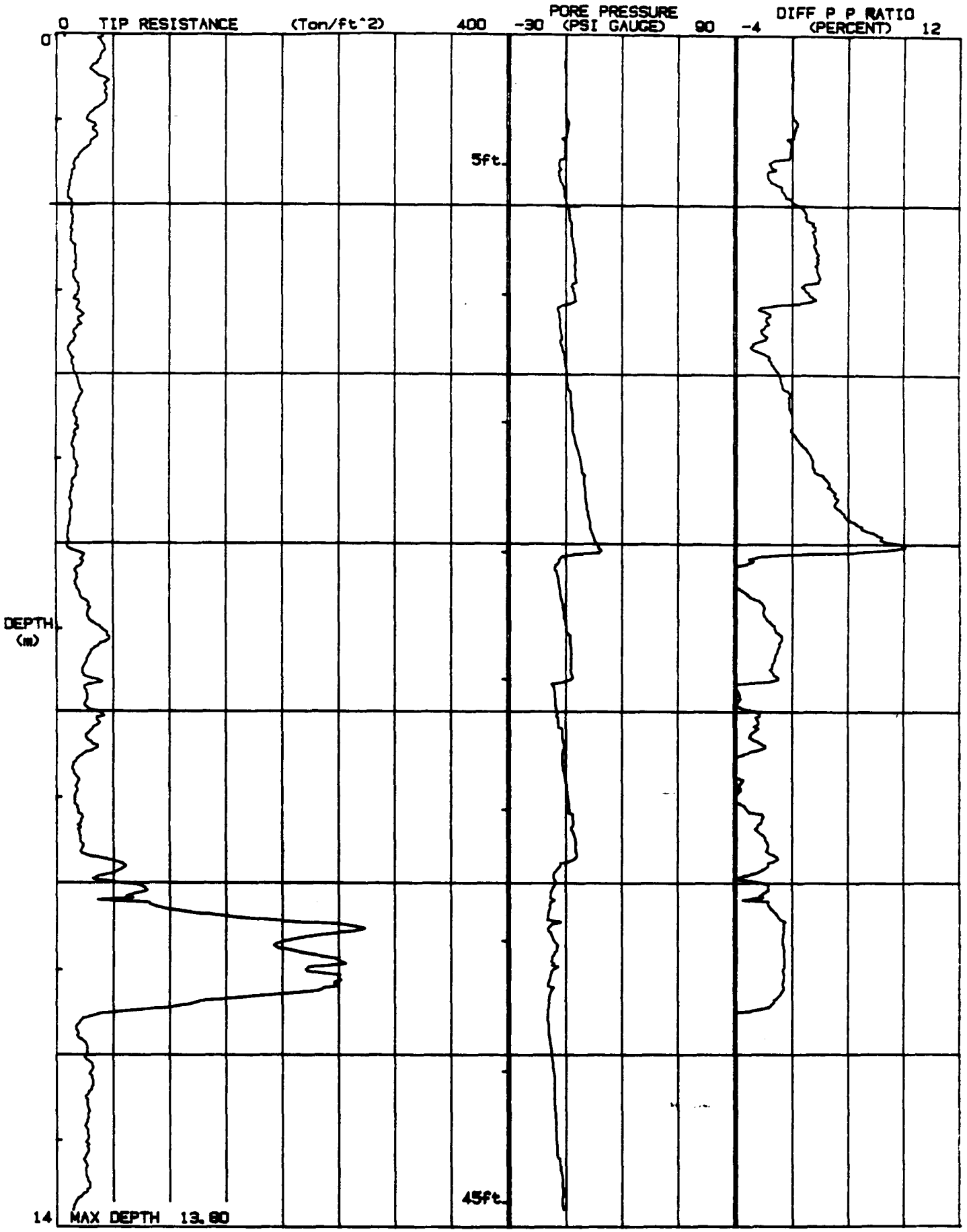
JOB # : 409700
DATE : 04/18/90/10:52
LOCATION : CPT5-51
FILE : FIL170



JOB # : 409700
DATE : 04/04/90/16:25
LOCATION : CPT5-54A
FILE : FIL149

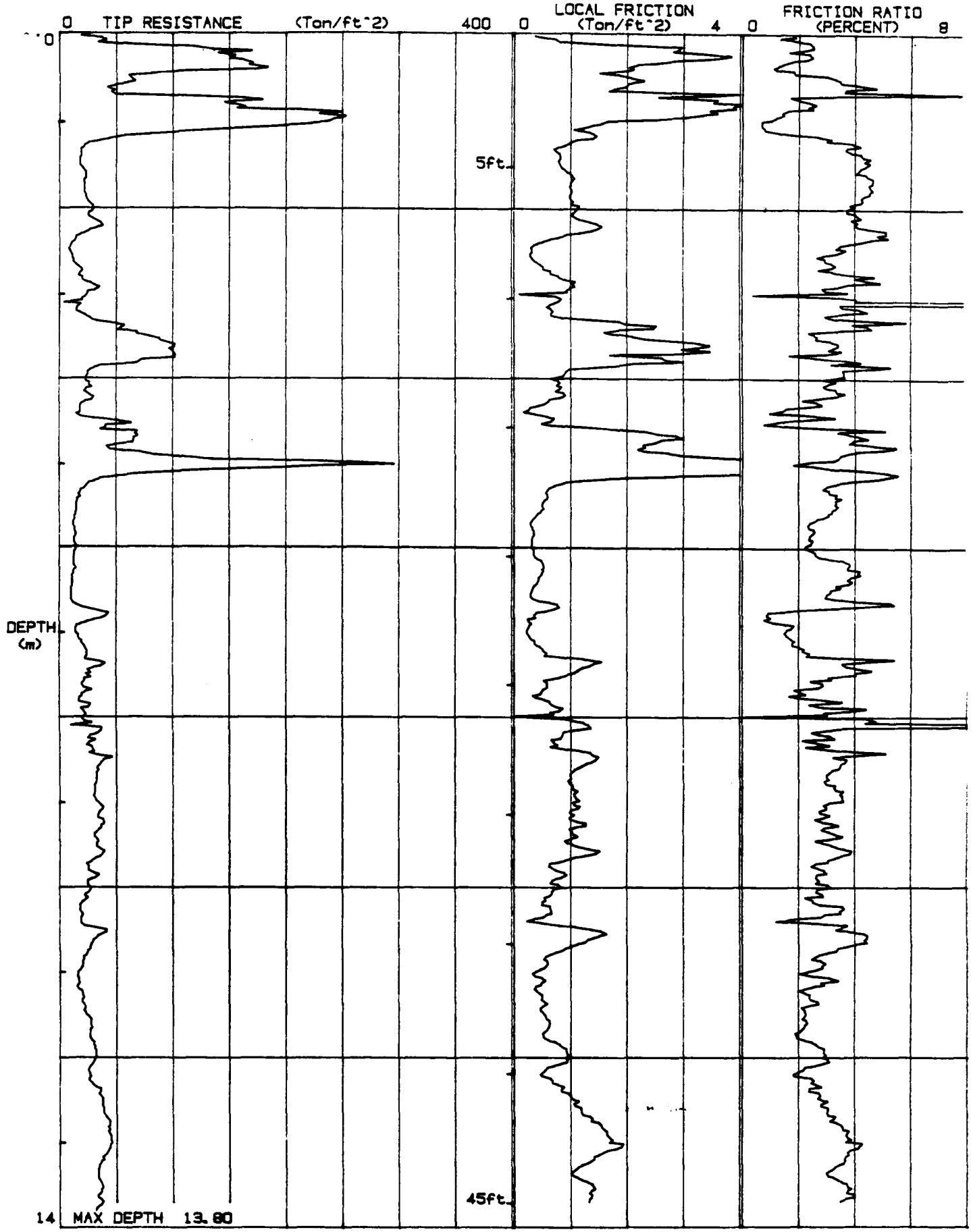


JOB # : 409700
DATE : 04/04/90/16:25
LOCATION : CPT5-54A
FILE : FIL149



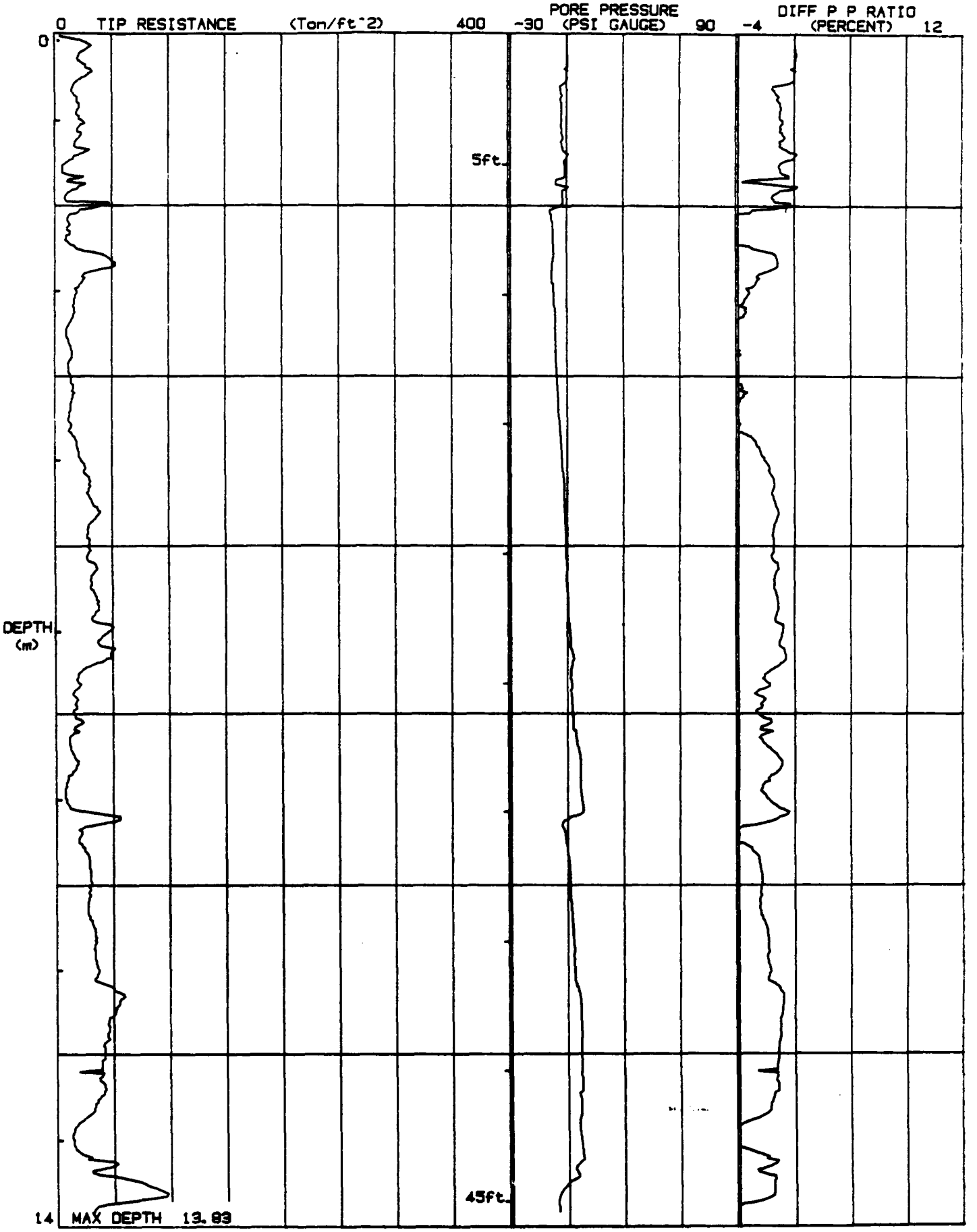
9.0 CPT LOGS, SITE 7

JOB # : 409700
DATE : 04/20/90/08:16
LOCATION : CPT [redacted] 7-2
FILE : FIL175

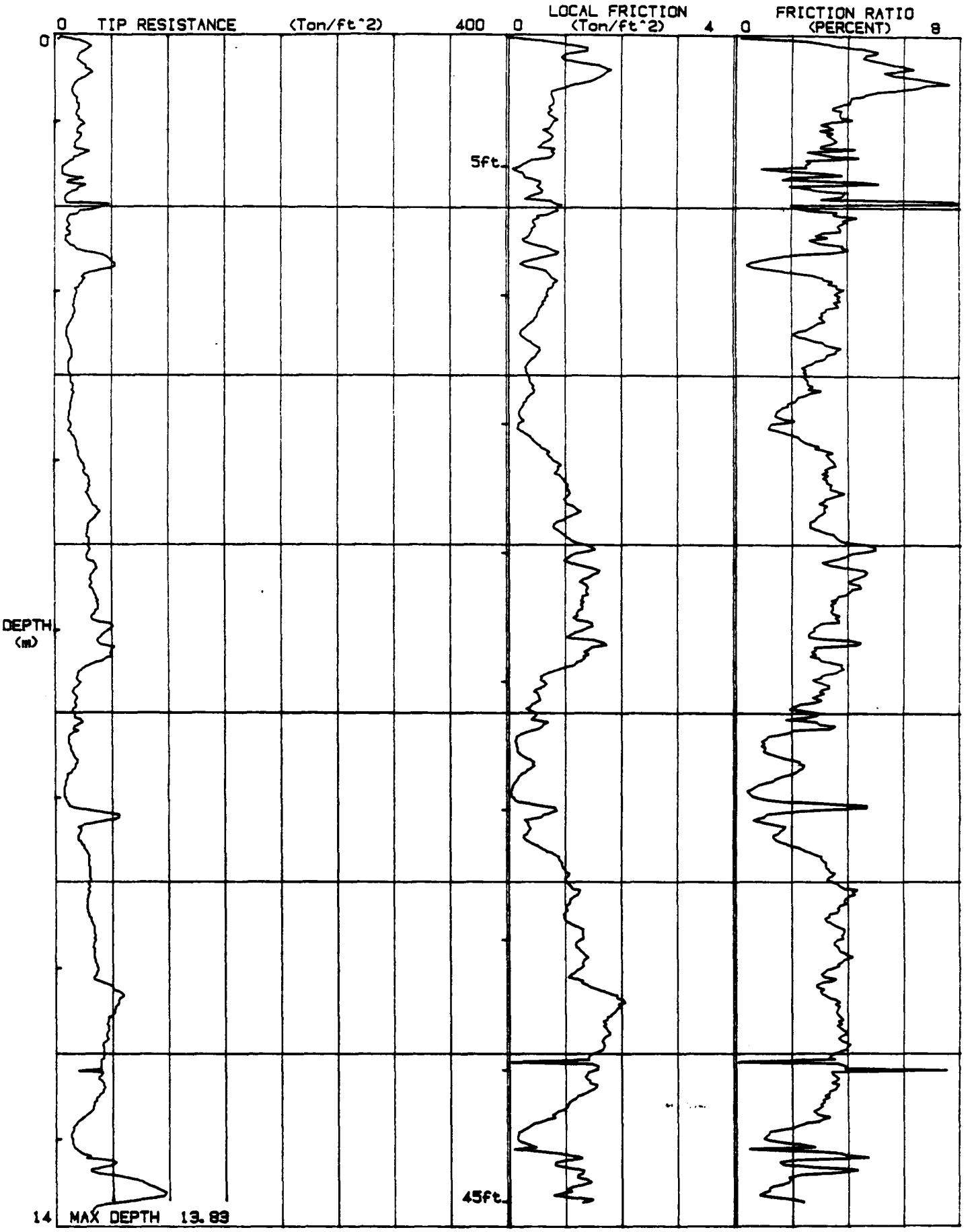


10.0 CPT LOGS, SITE 8

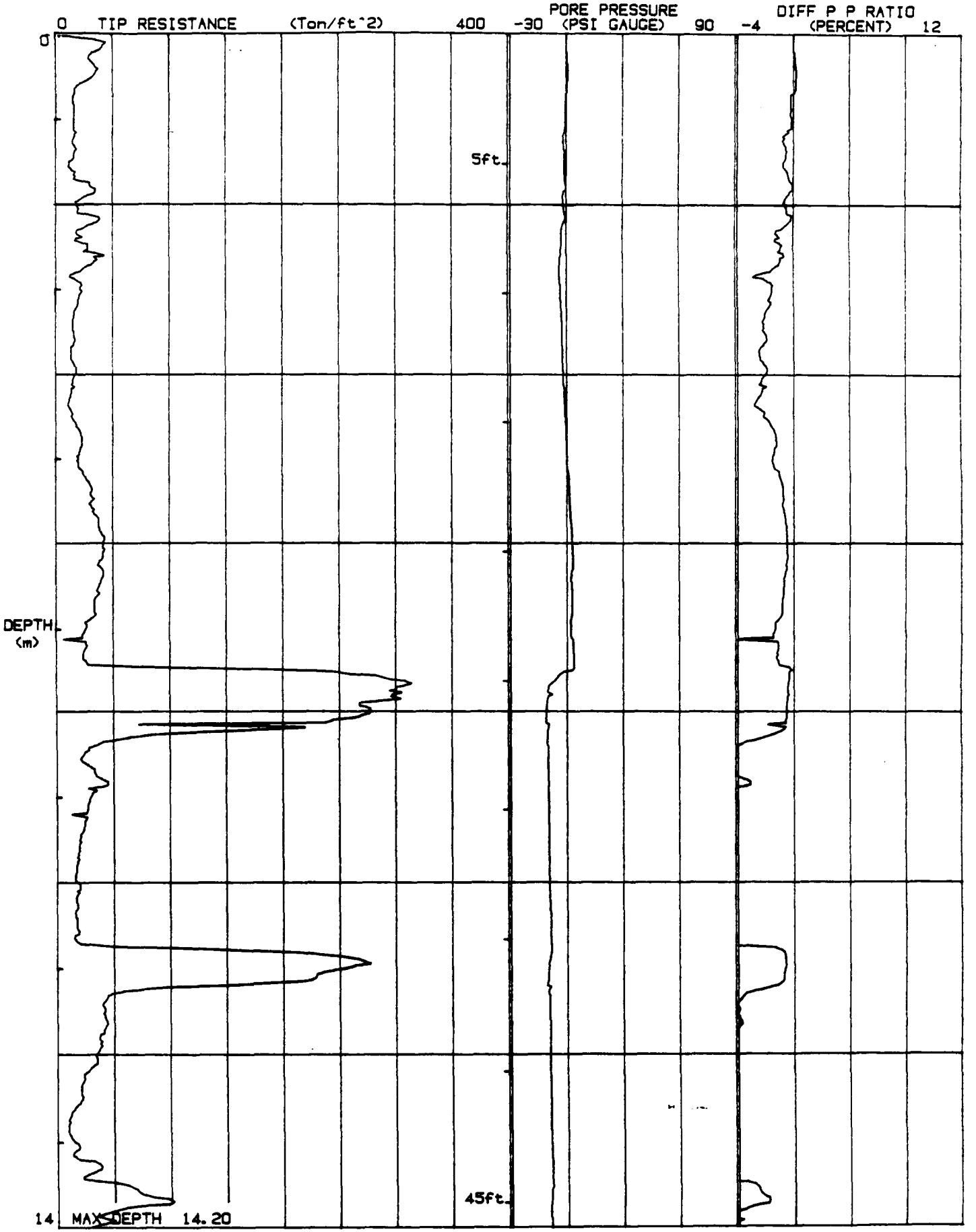
JOB # : 409700
DATE : 04/10/90/12:05
LOCATION : CPT8-18
FILE : FIL158



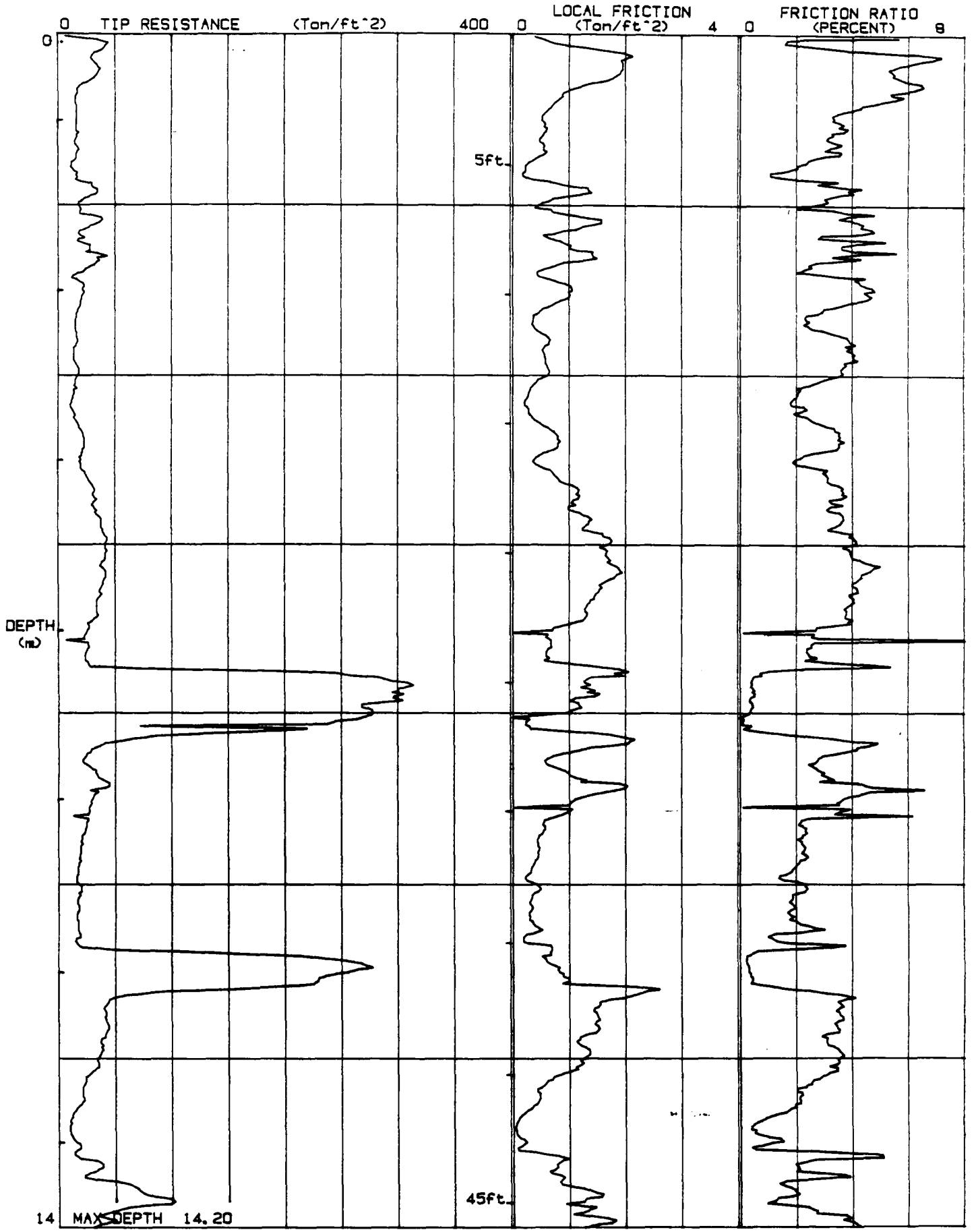
JOB # : 409700
DATE : 04/10/90/12:05
LOCATION : CPT8-18
FILE : FIL158



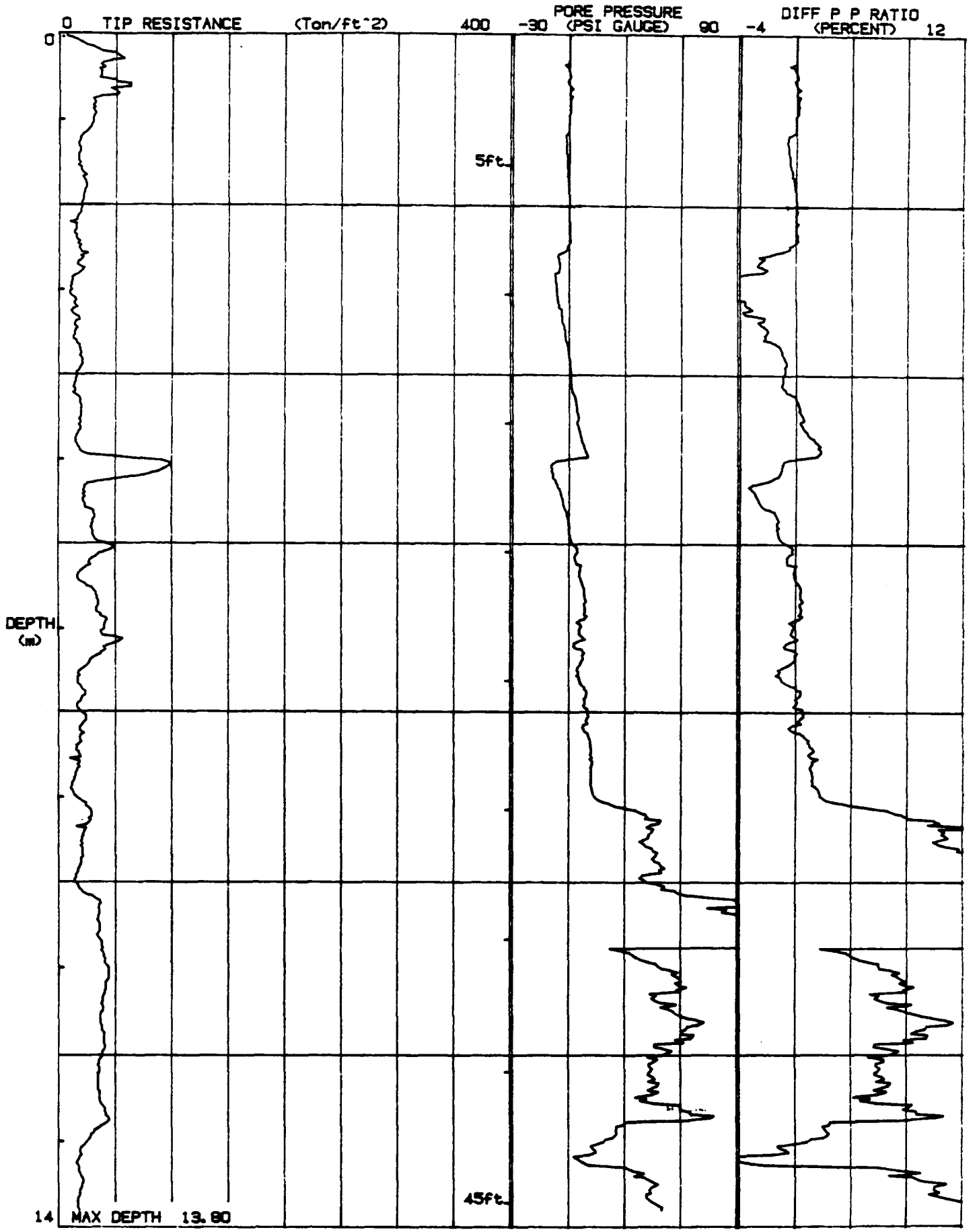
JOB # : 409700
DATE : 04/10/90/10:33
LOCATION : CPT8-19
FILE : FIL155



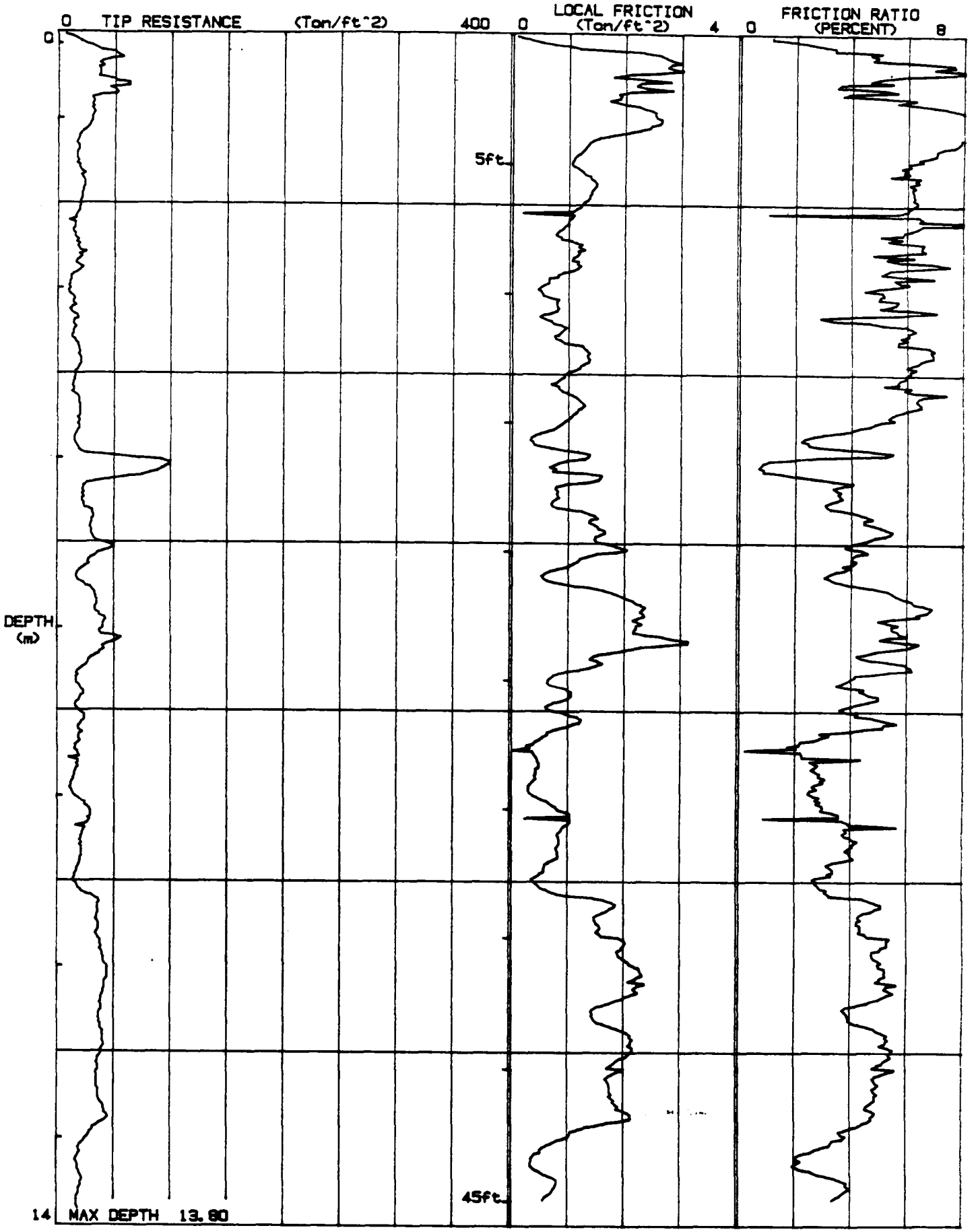
JOB # : 409700
DATE : 04/10/90/10:33
LOCATION : CPT8-19
FILE : FIL155



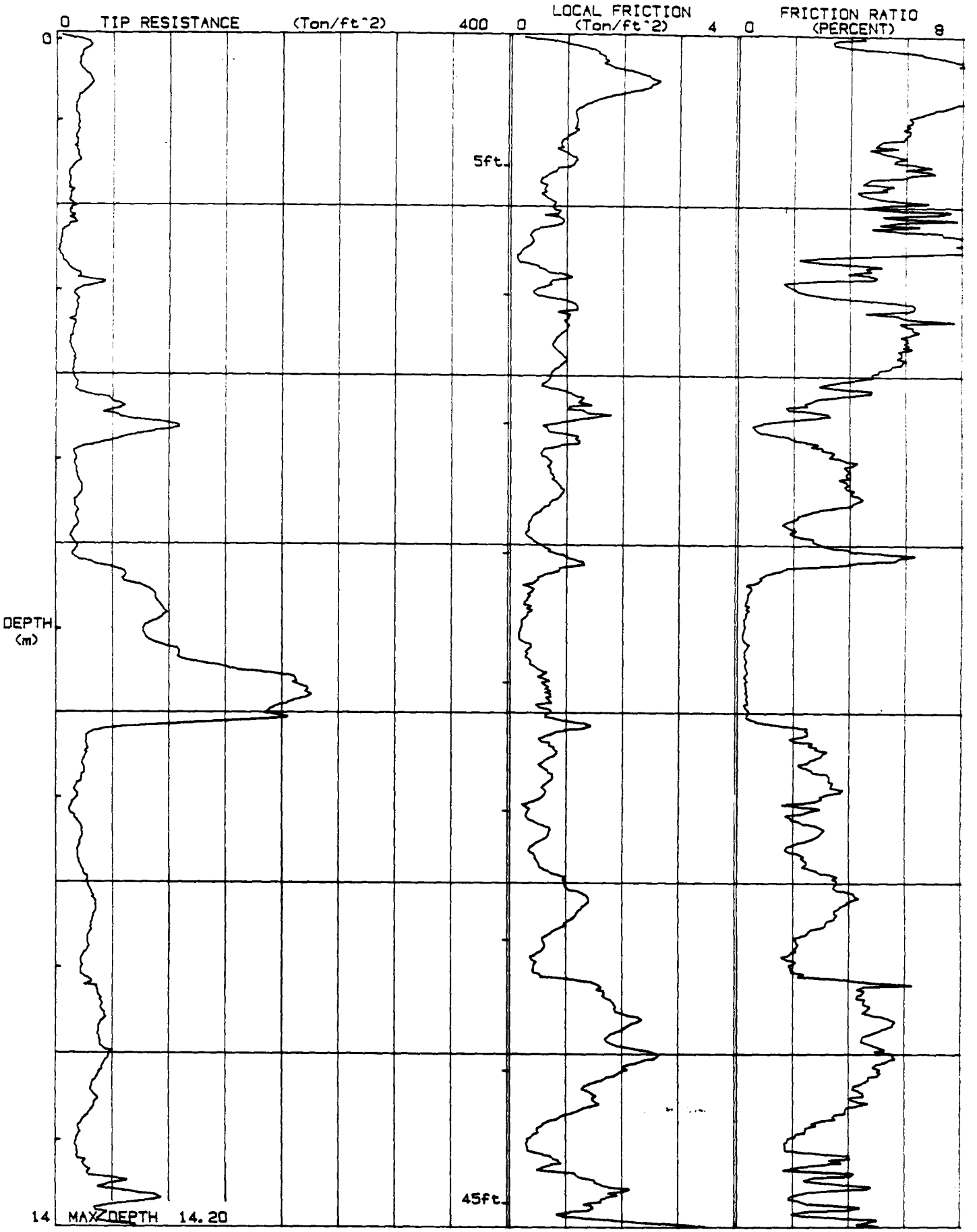
JOB # : 409700
DATE : 04/20/90/14: 27
LOCATION : CPT8-20
FILE : FIL178



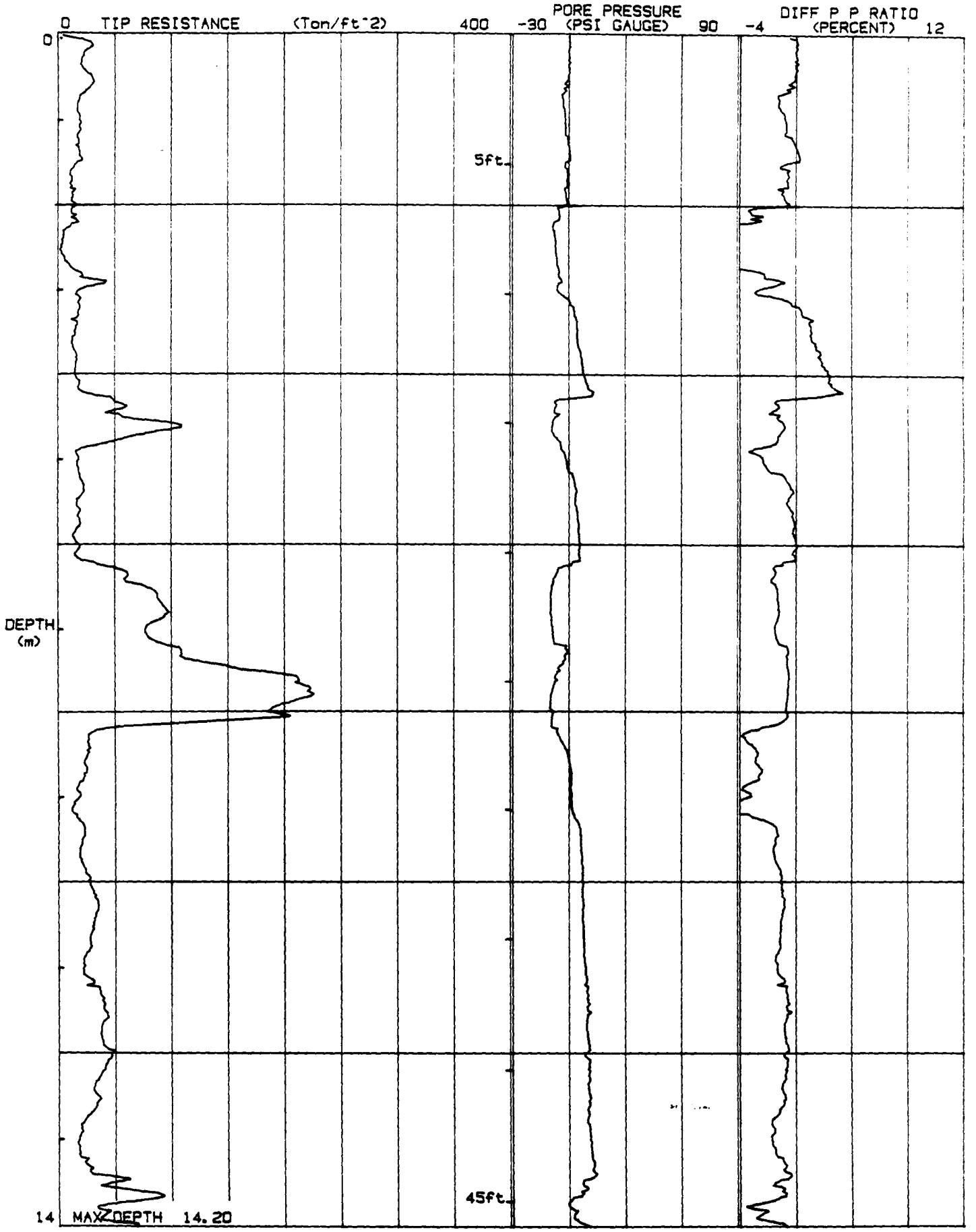
JOB # : 409700
DATE : 04/20/90/14: 27
LOCATION : CPT8-20
FILE : FIL178



JOB # : 409700
DATE : 04/23/90/15:22
LOCATION : CPT8-21
FILE : FIL179

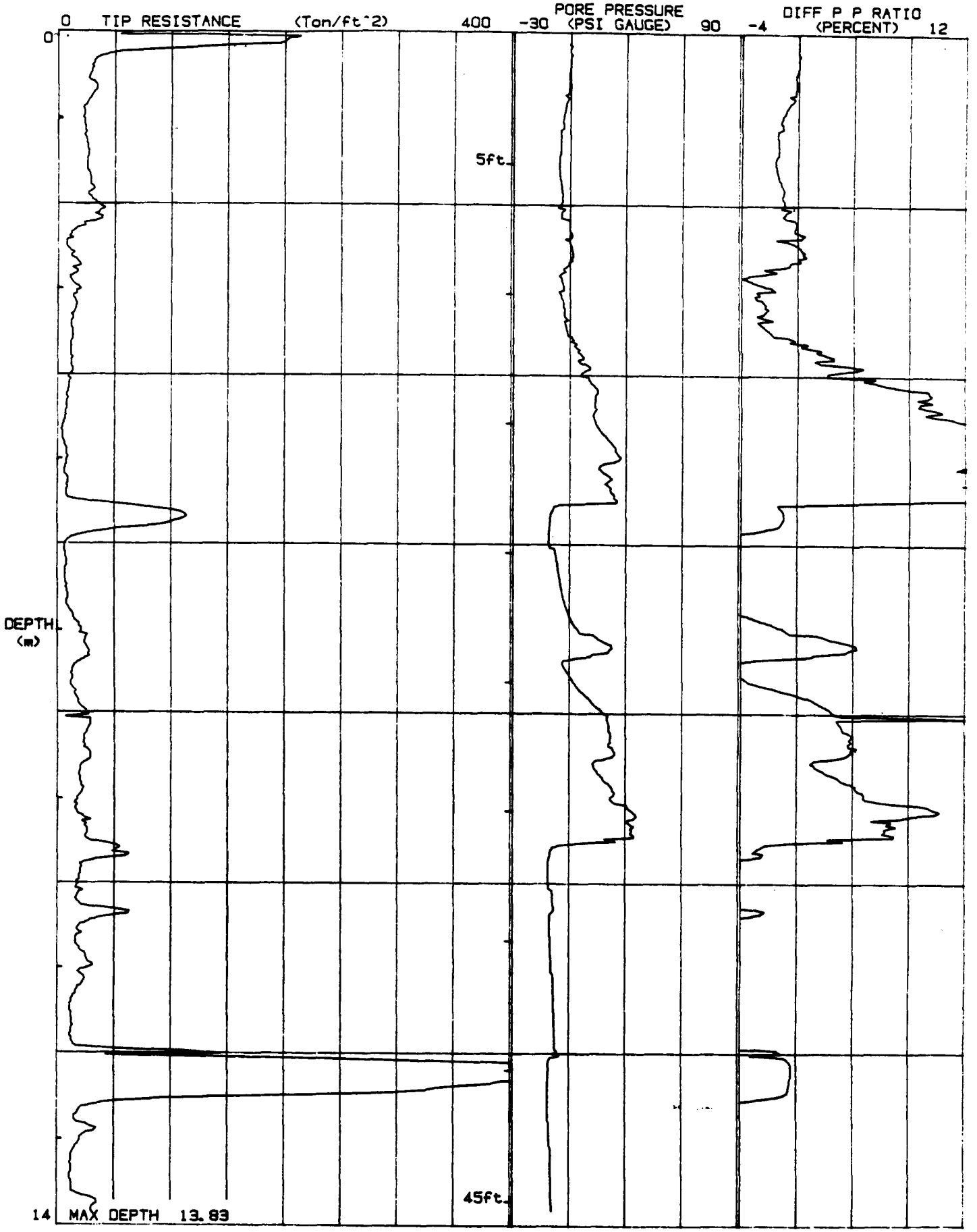


JOB # : 409700
DATE : 04/23/90/15:22
LOCATION : CPT8-21
FILE : FIL179

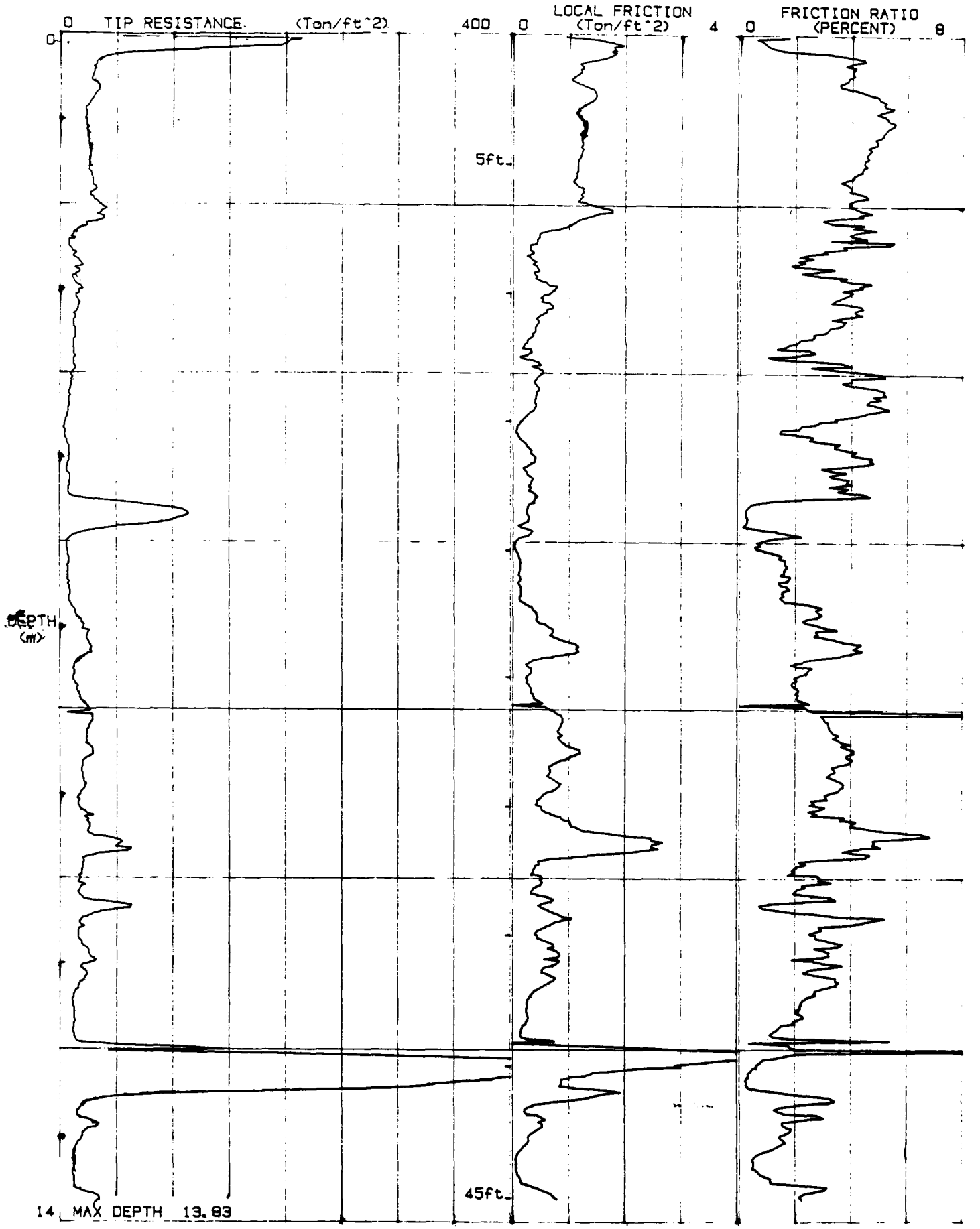


11.0 CPT LOGS, SITE 9

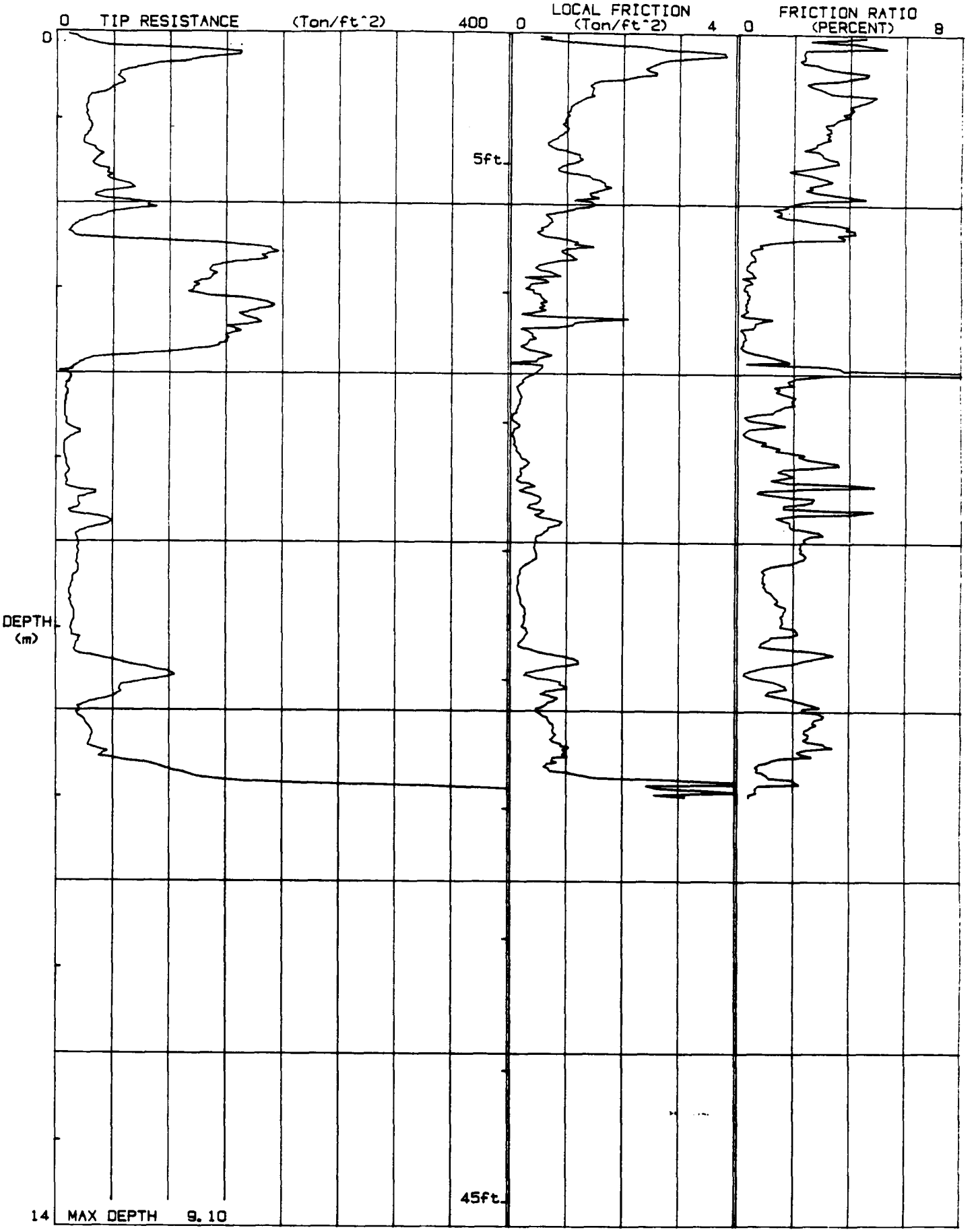
JOB # : 409700
DATE : 04/03/90/14:57
LOCATION : CPT9-1
FILE : FIL143



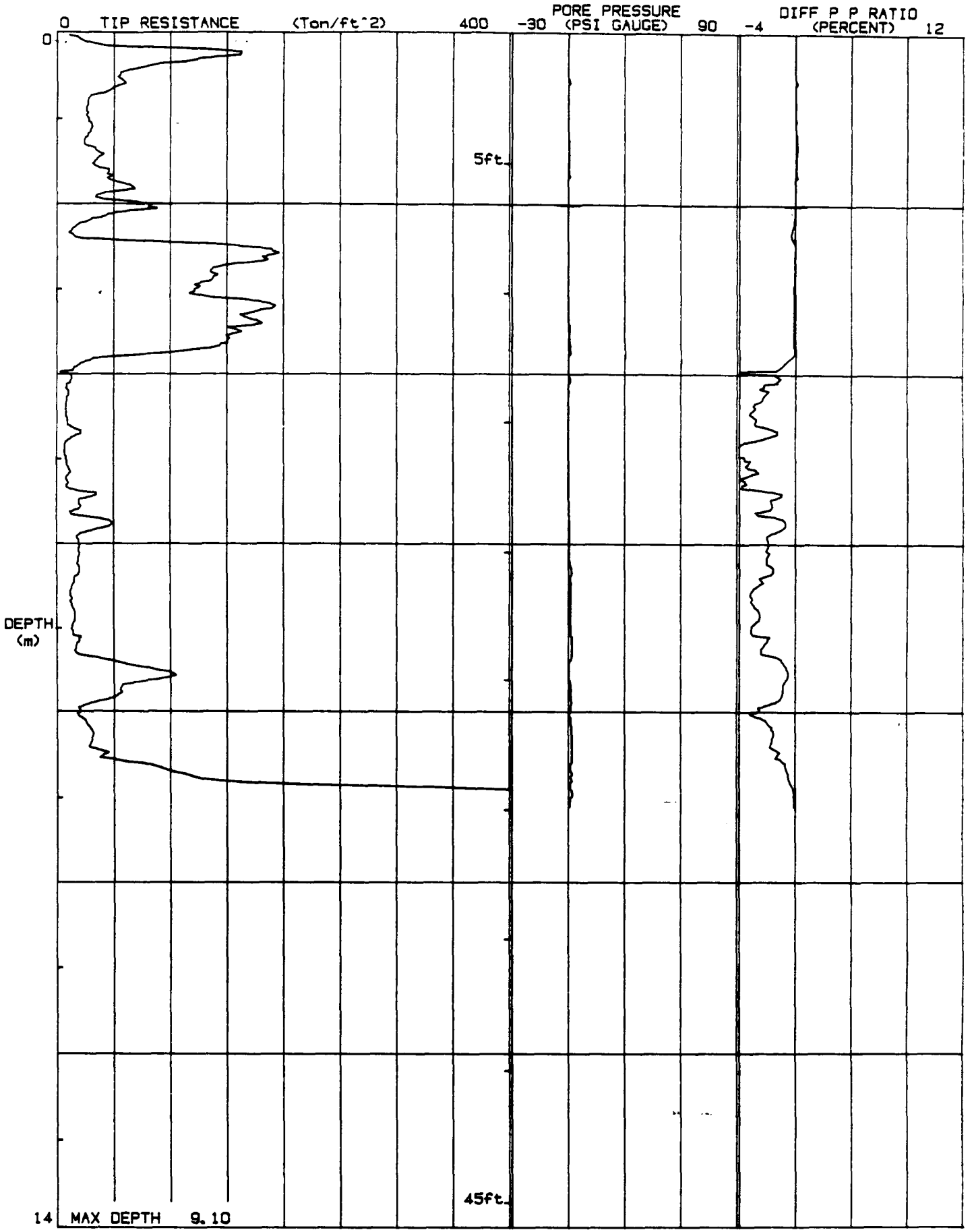
JOB # : 409700
DATE : 04/03/90/14:57
LOCATION : EPT-5
FILE : FIL143



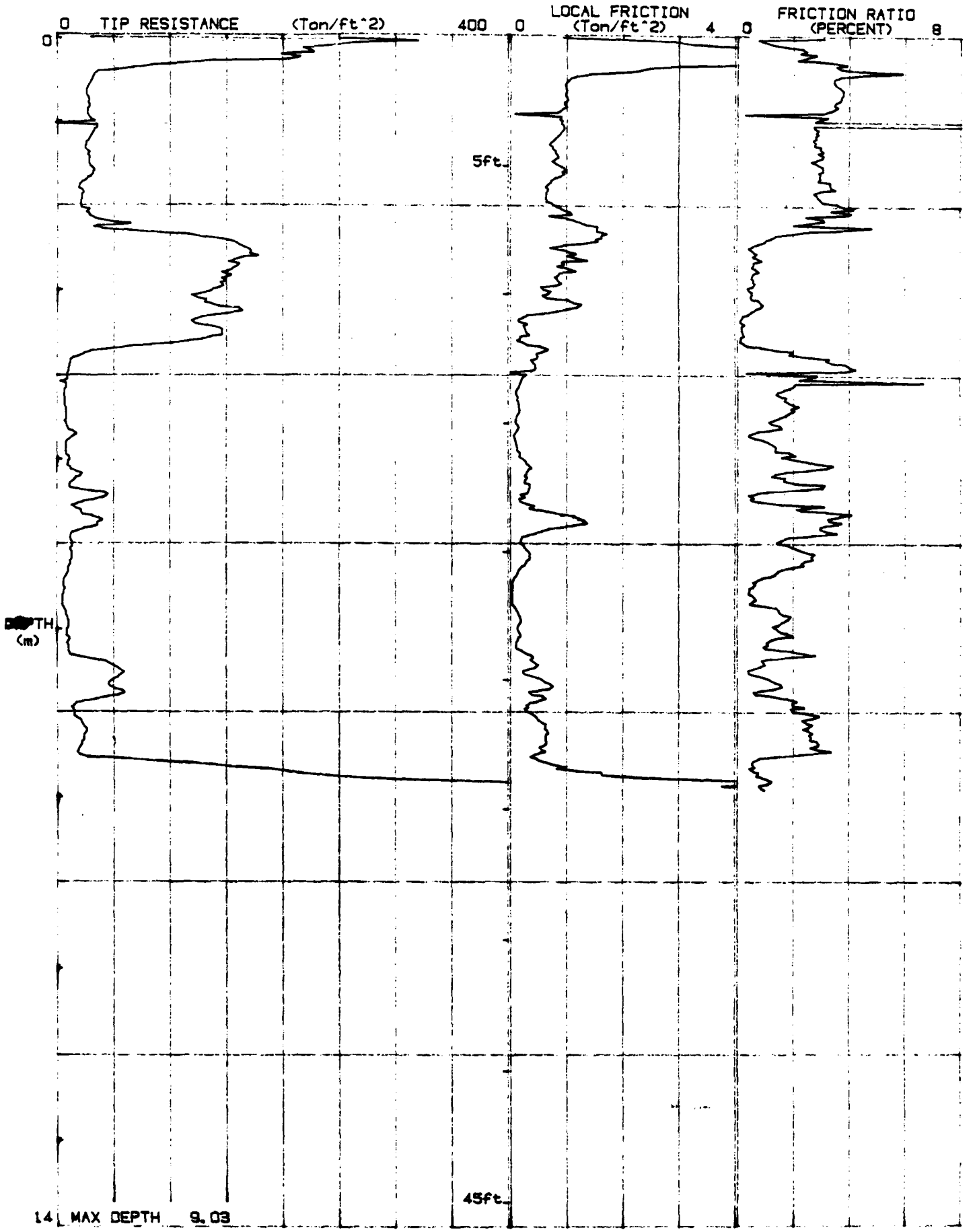
JOB # : 409700
DATE : 03/22/90/09: 29
LOCATION : CPT9-2
FILE : FIL139



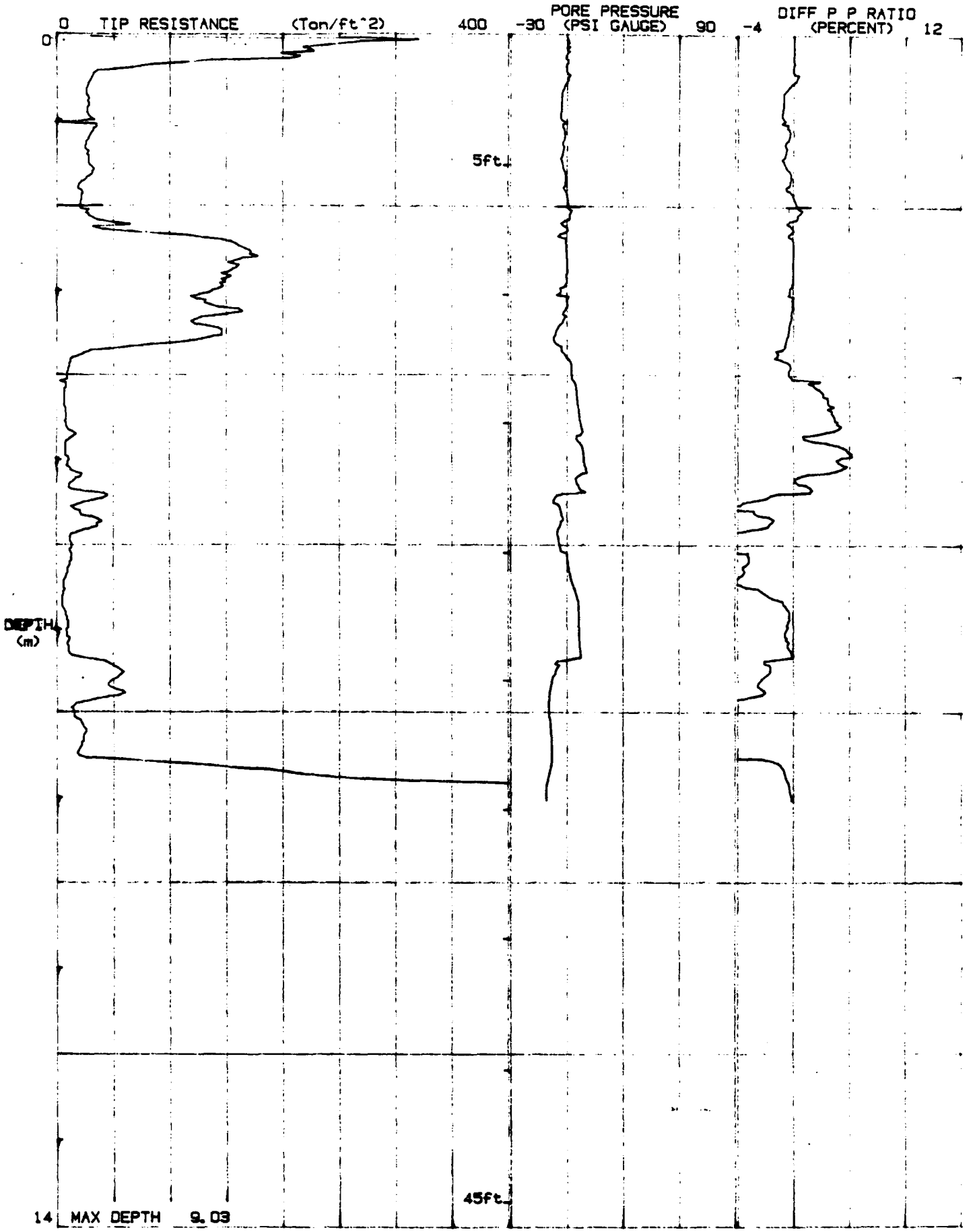
JOB # : 409700
DATE : 03/22/90/09:29
LOCATION : CPT9-2
FILE : FIL139



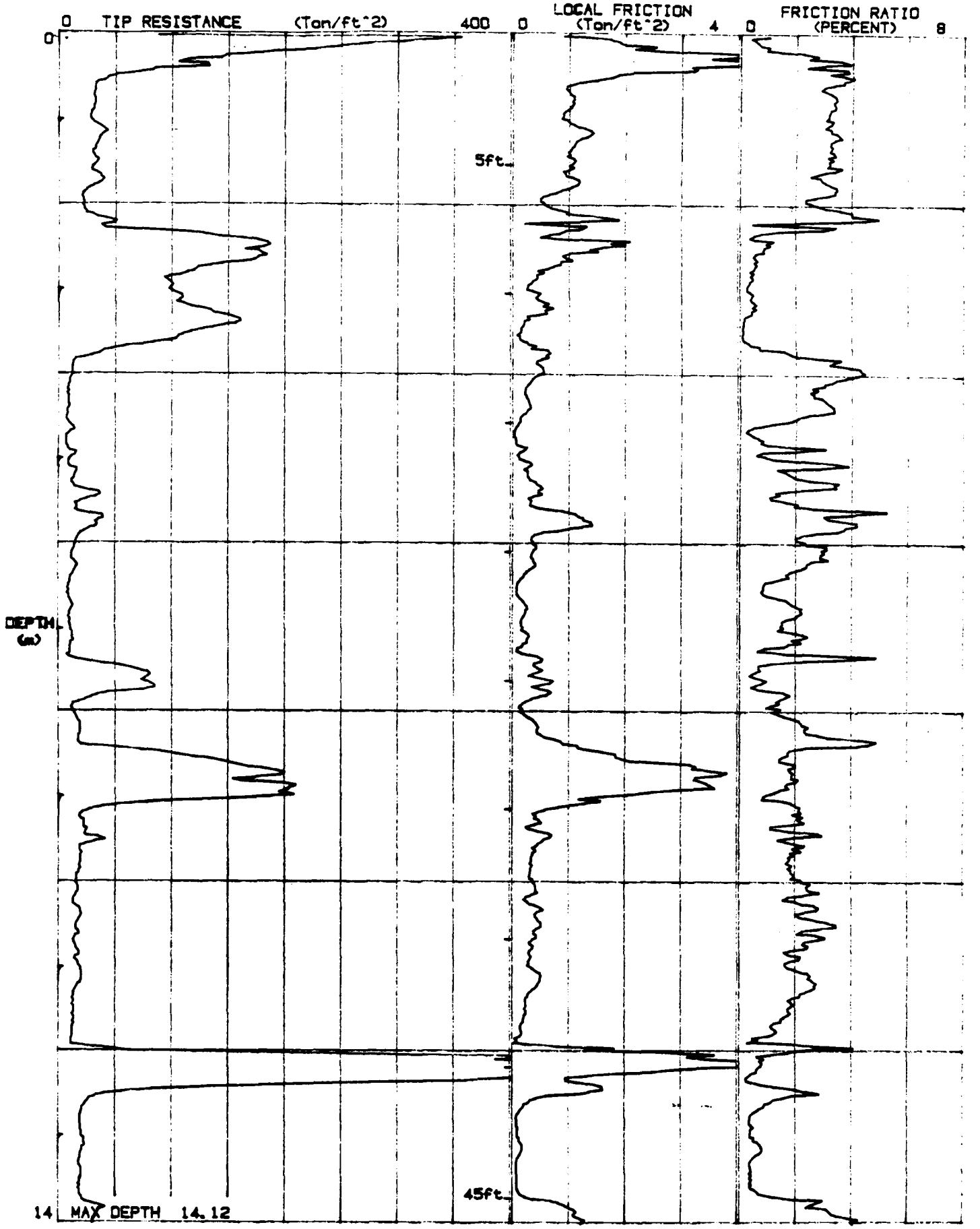
JOB # : 409700
DATE : 04/04/90/08:08
LOCATION : CPT9-2A
FILE : FIL145



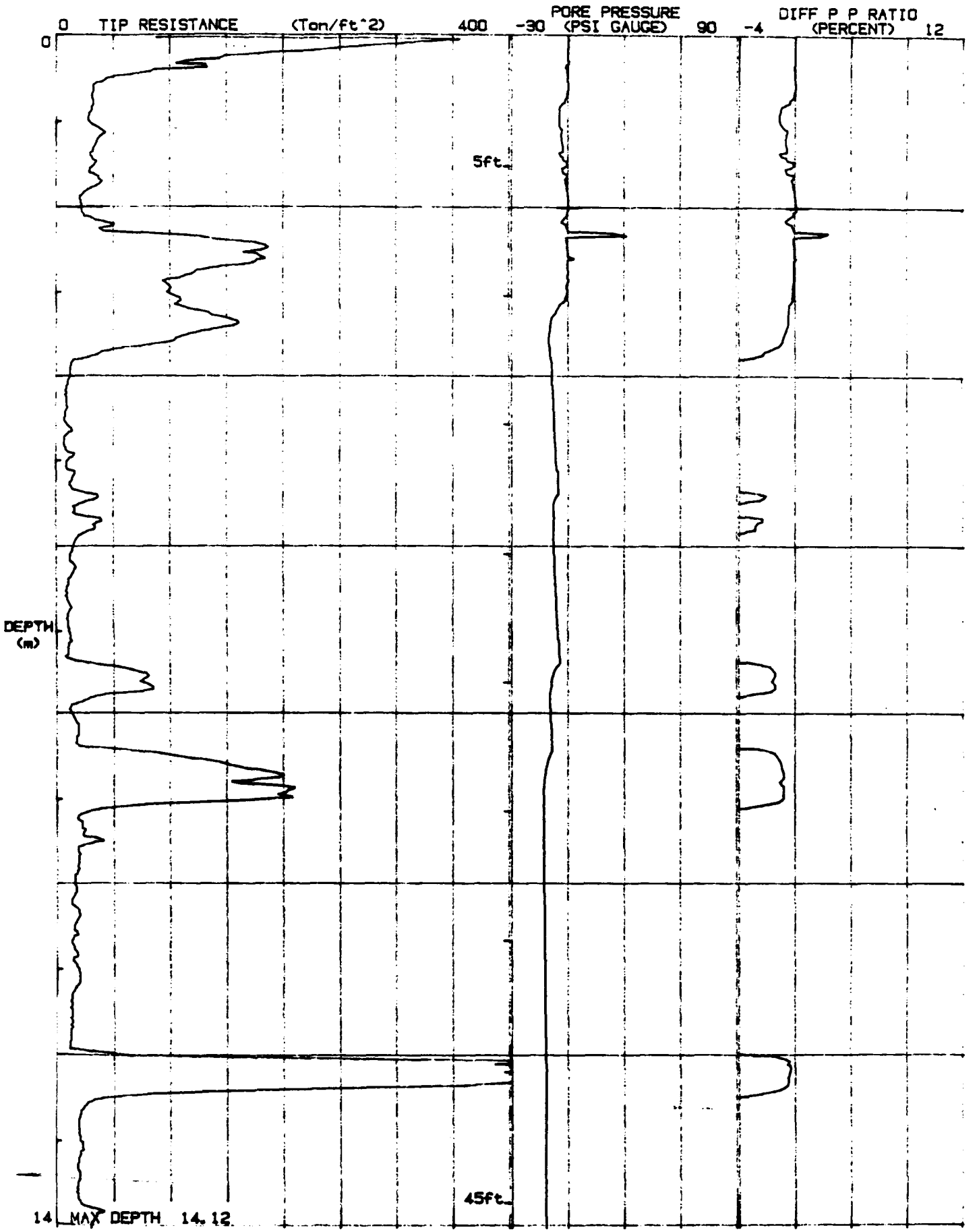
JOB # : 409700
DATE : 04/04/90/08: 08
LOCATION : CPT9-2A
FILE : FIL145



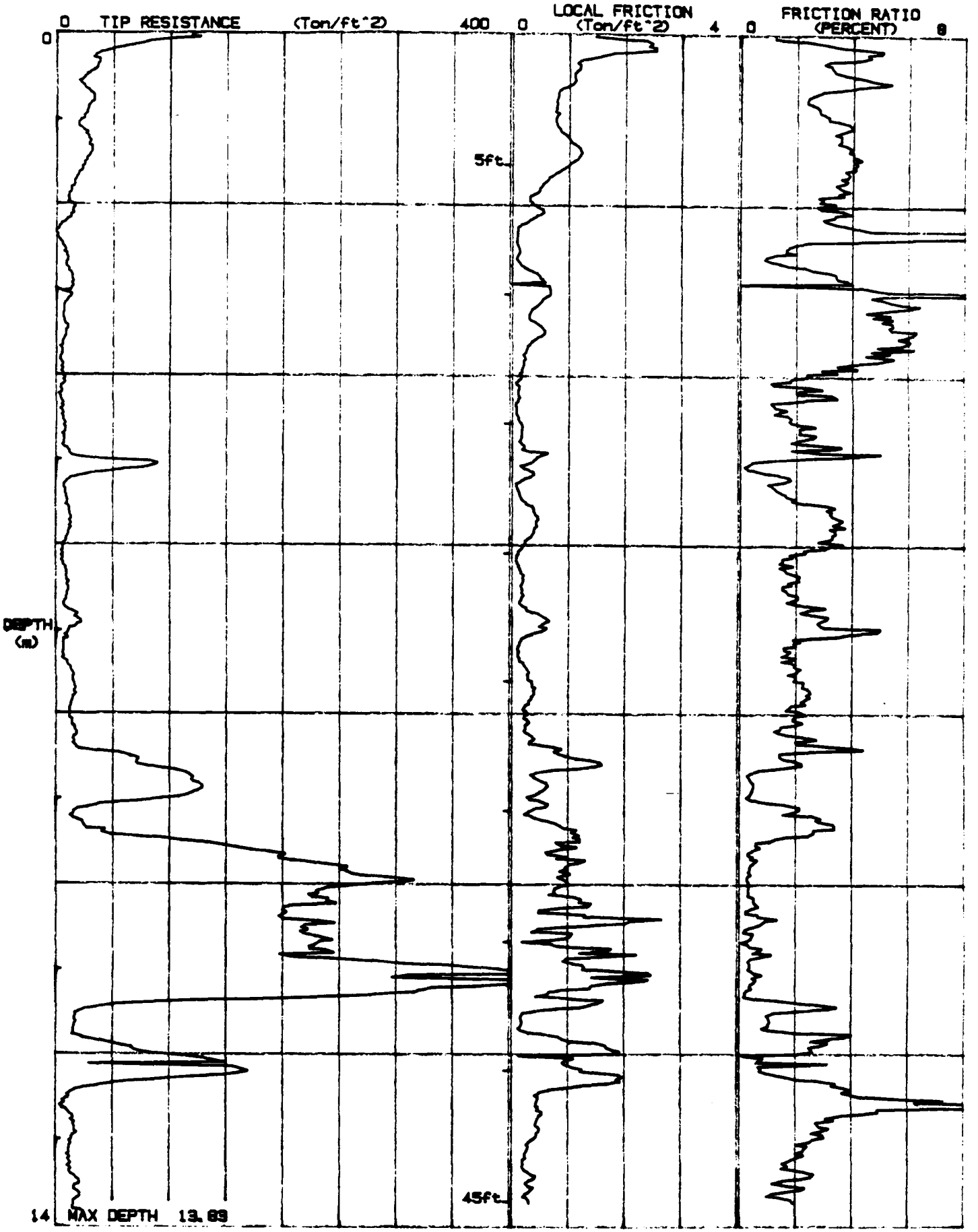
JOB # : 409700
DATE : 04/04/90/09:10
LOCATION : CPT8-28
FILE : FIL148



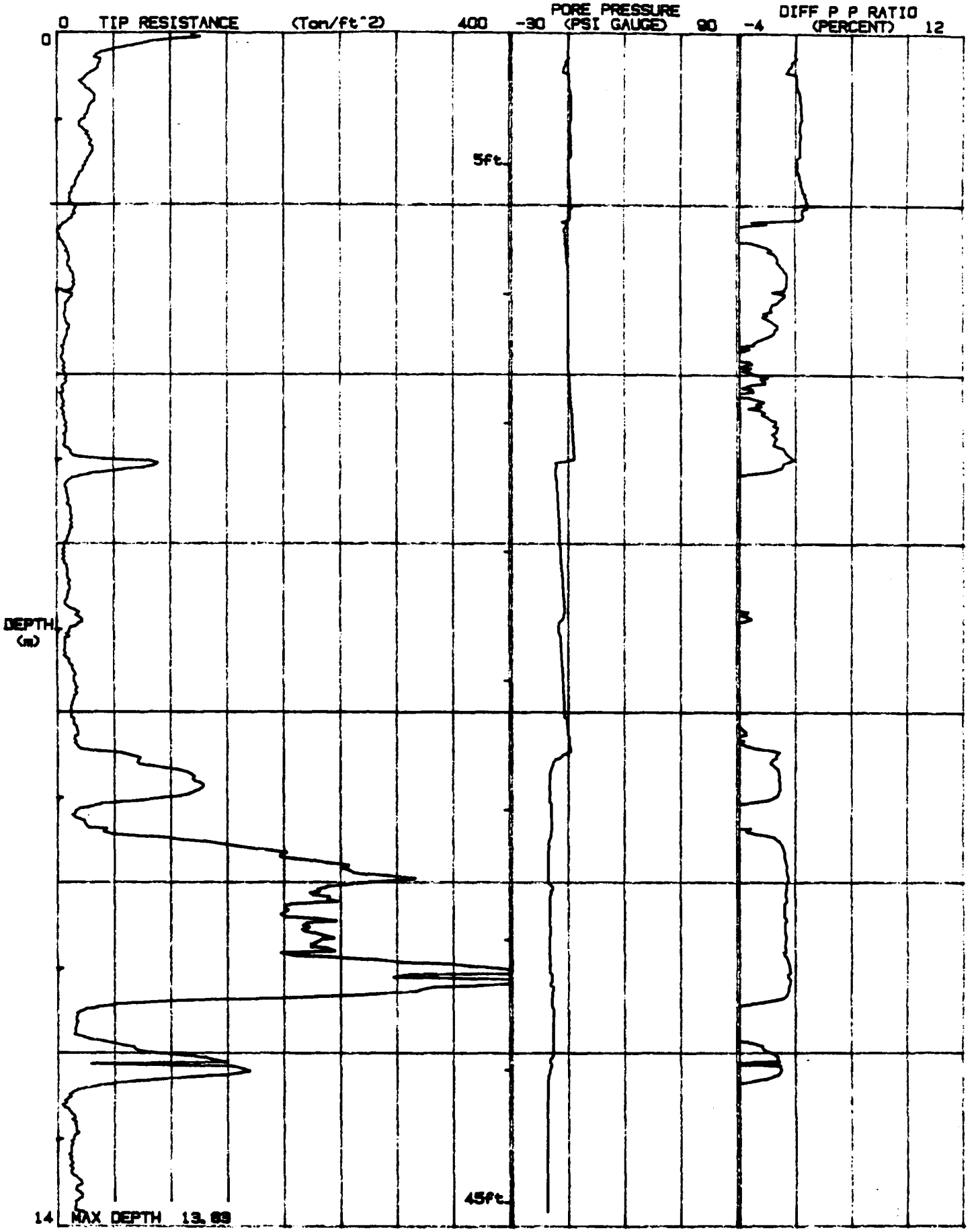
JOB # : 409700
DATE : 04/04/90/09:10
LOCATION : CPT9-28
FILE : FIL148



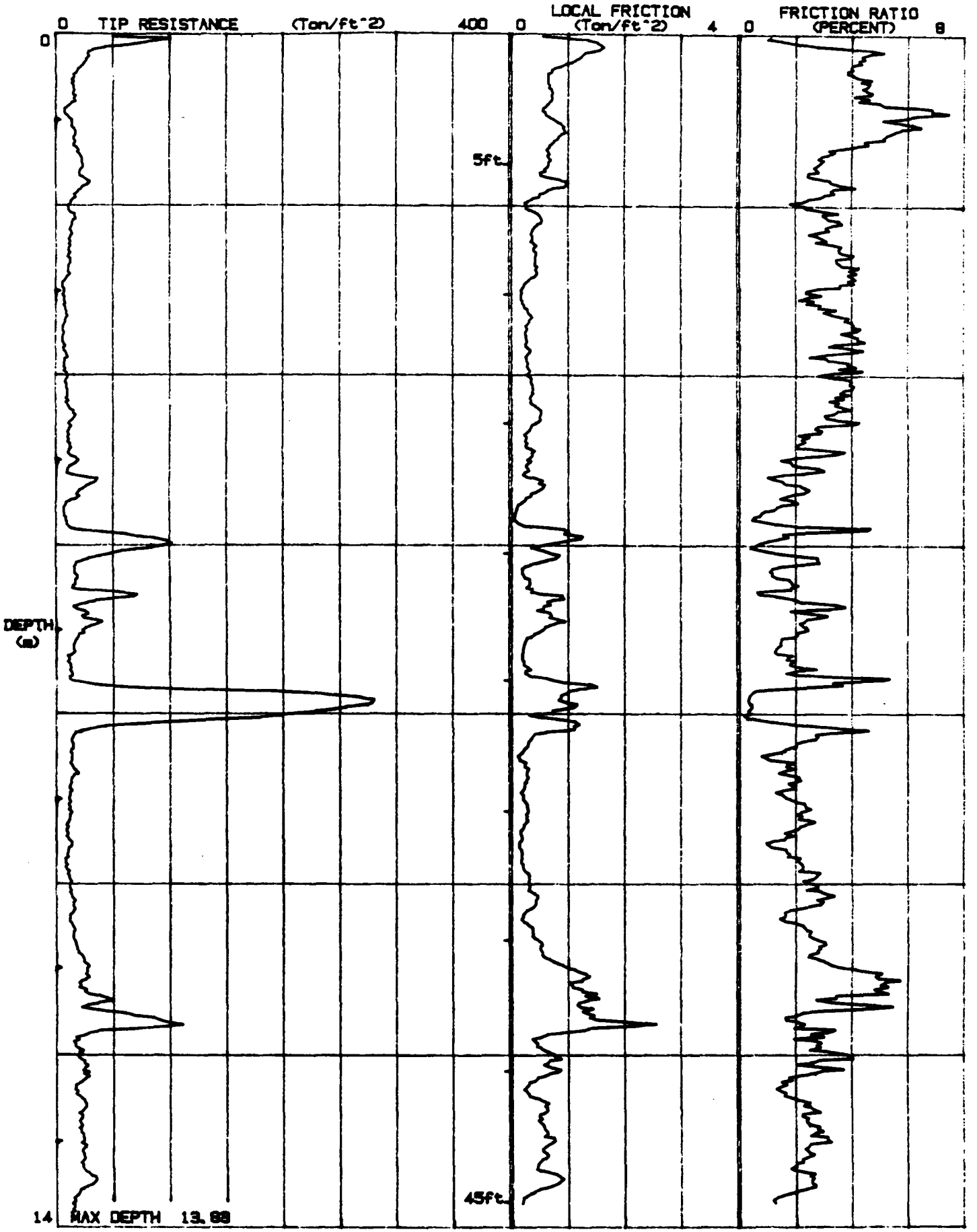
JOB # : 409700
DATE : 03/19/90/17:45
LOCATION : CPT9-9
FILE : FIL137



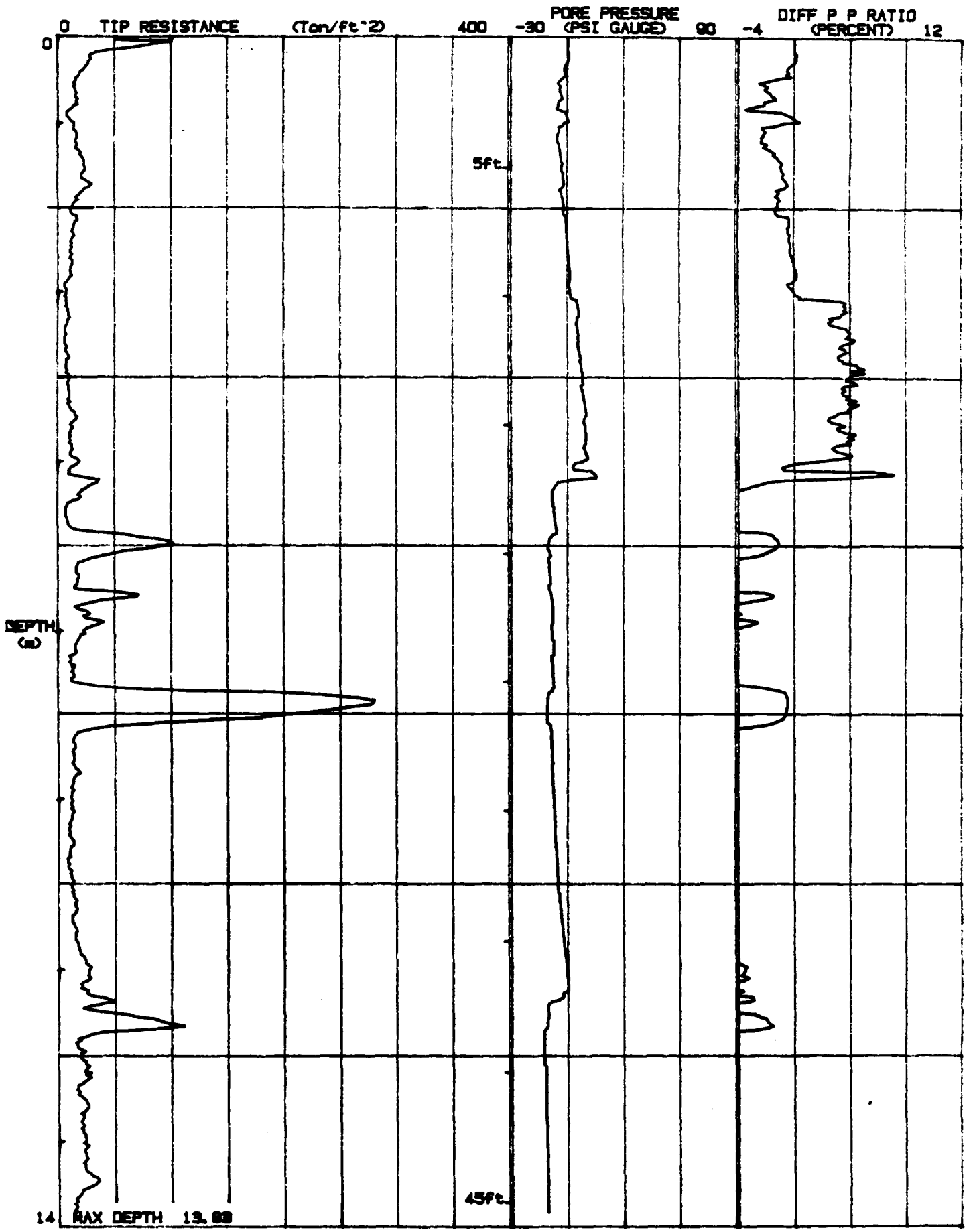
JOB # : 409700
DATE : 03/19/90/17:45
LOCATION : CPT8-8
FILE : FIL137



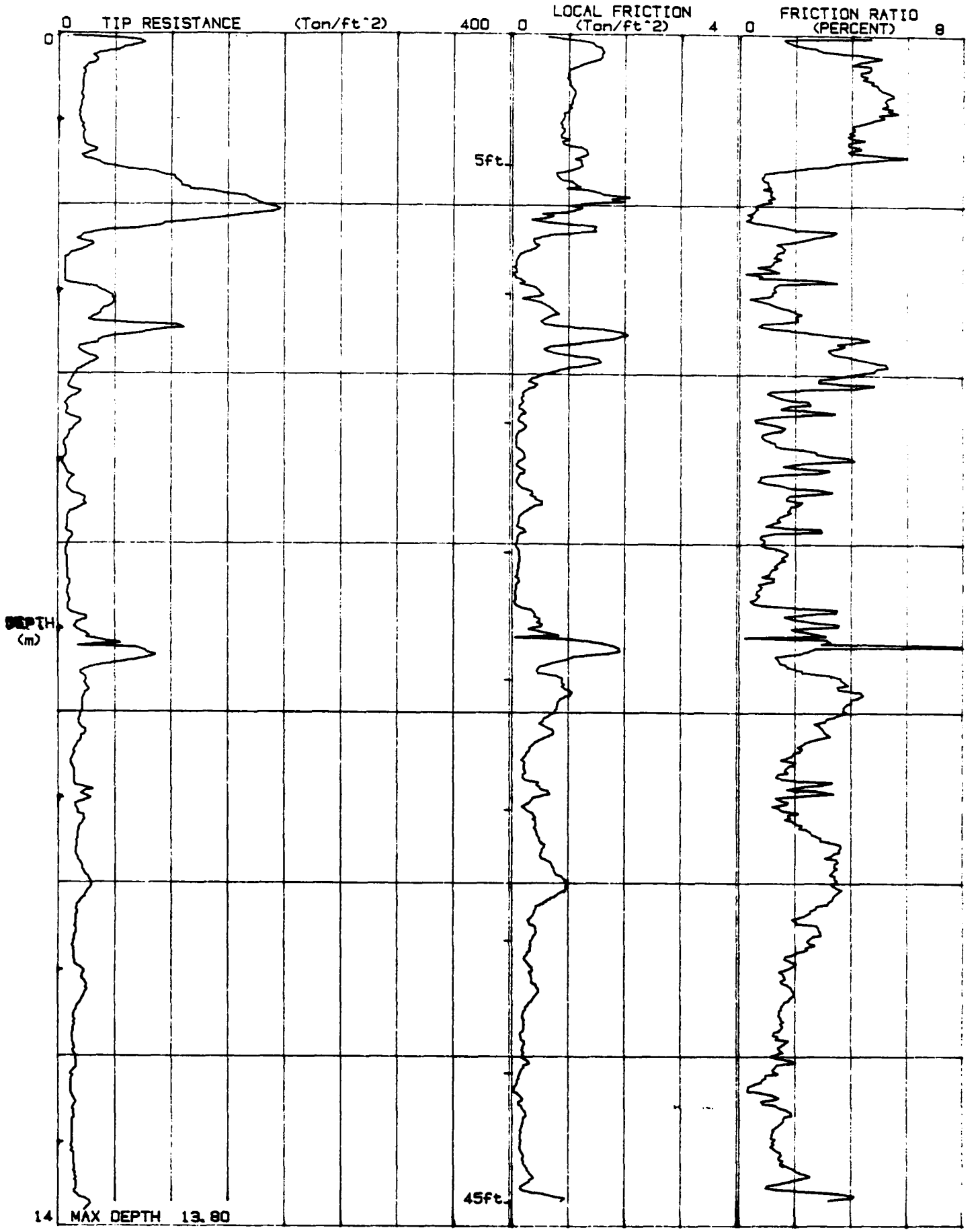
JOB # : 409700
DATE : 09/19/90/16: 16
LOCATION : CPT9-11
FILE : FIL138



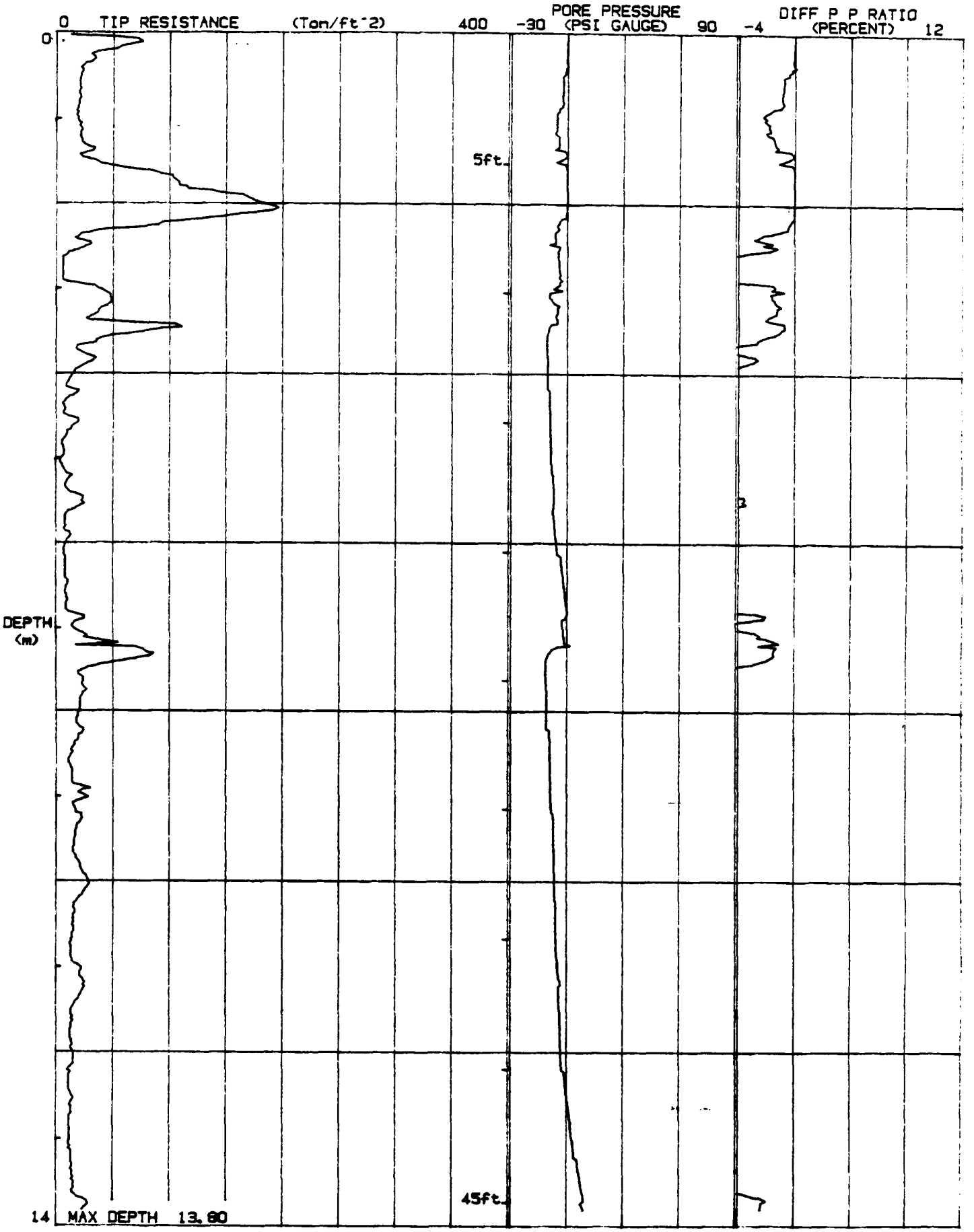
JOB # : 409700
DATE : 09/19/90/18:18
LOCATION : CPT8-11
FILE : FIL198



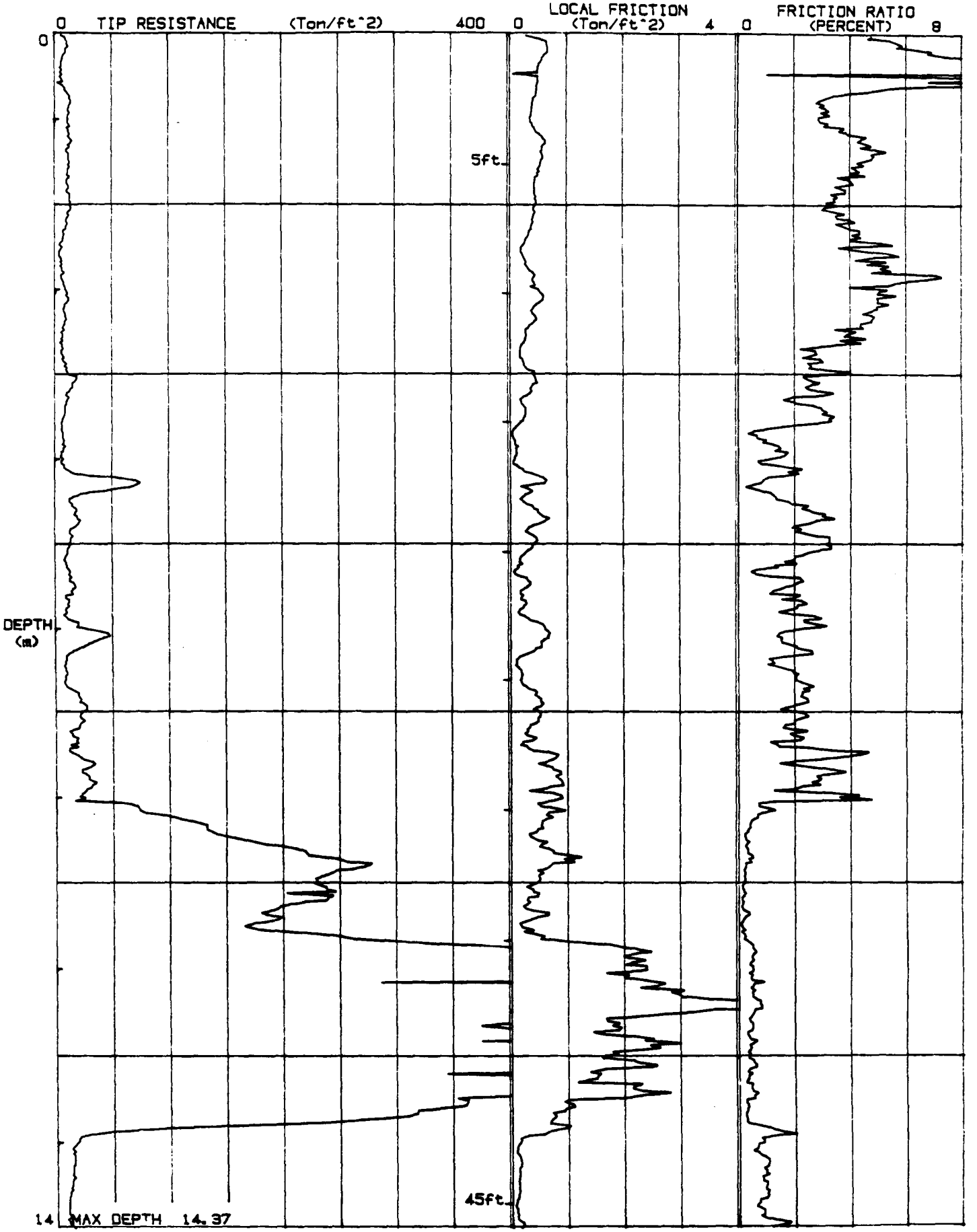
JOB # : 409700
DATE : 04/03/90/18:23
LOCATION : CPT9-13
FILE : FIL144



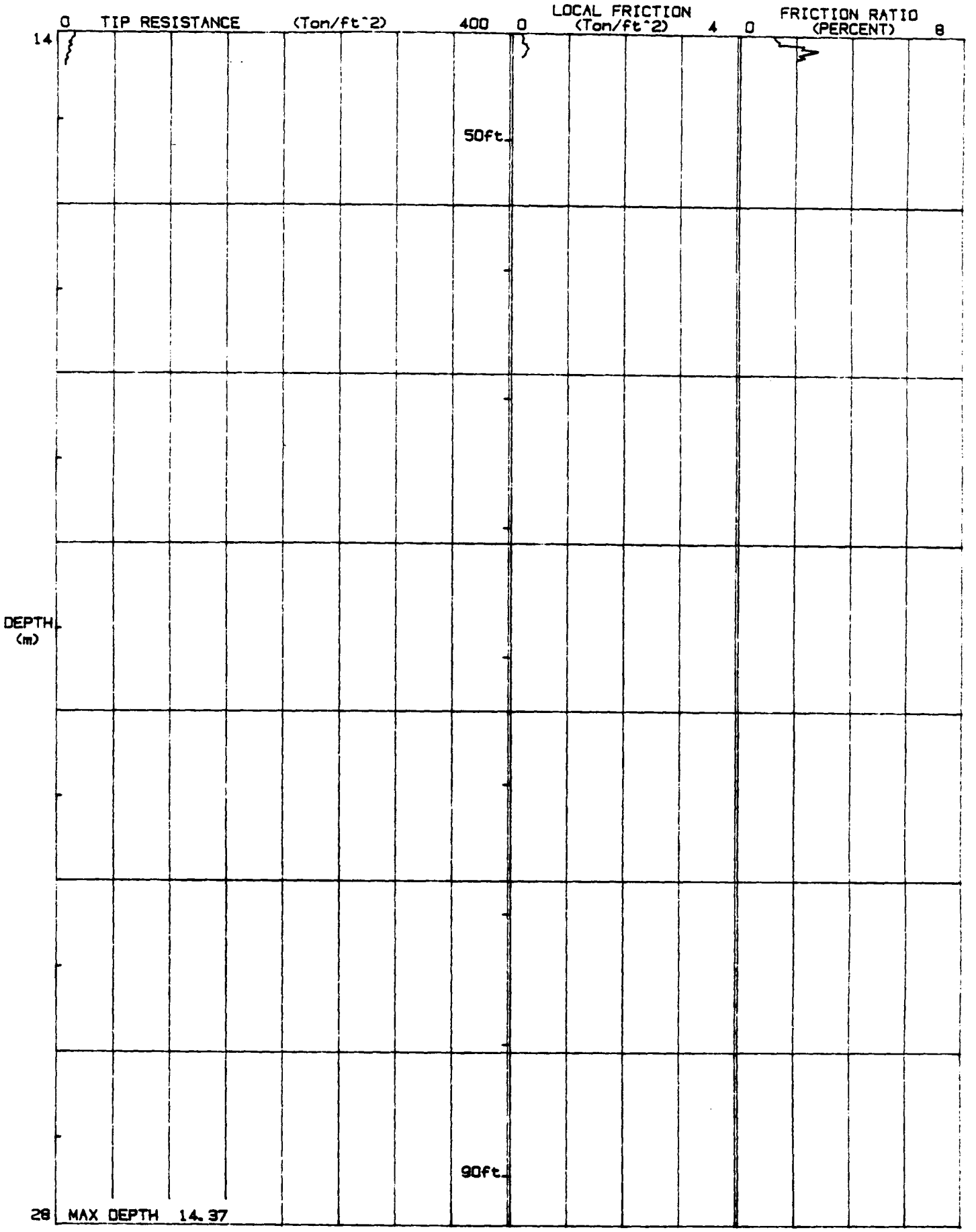
JOB # : 409700
DATE : 04/03/90/16:23
LOCATION : CPT9-13
FILE : FIL144



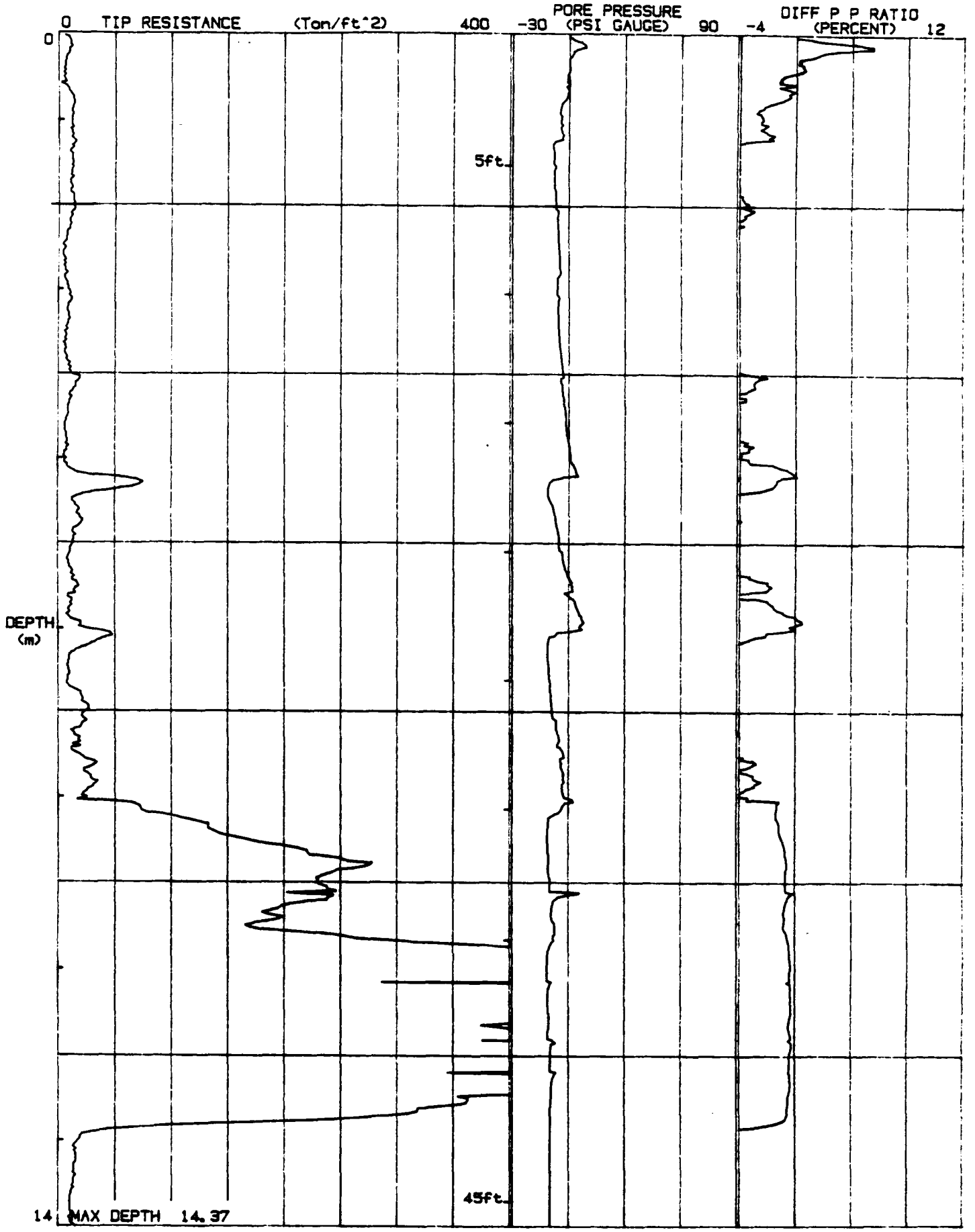
JOB # : 409700
DATE : 03/19/90/11:17
LOCATION : CPT9-22
FILE : FIL134



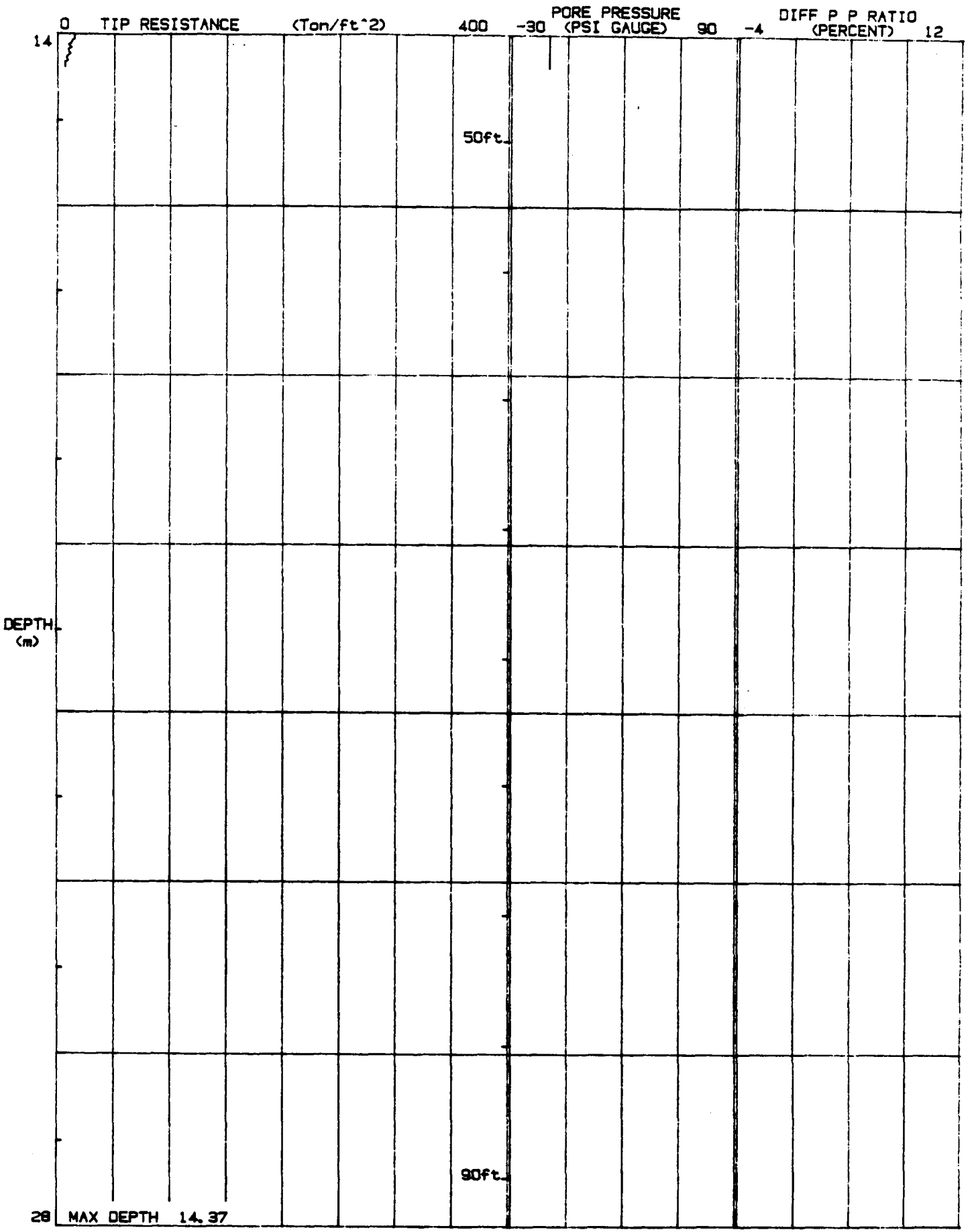
JOB # : 409700
DATE : 03/19/90/11:17
LOCATION : CPT9-22
FILE : FIL134



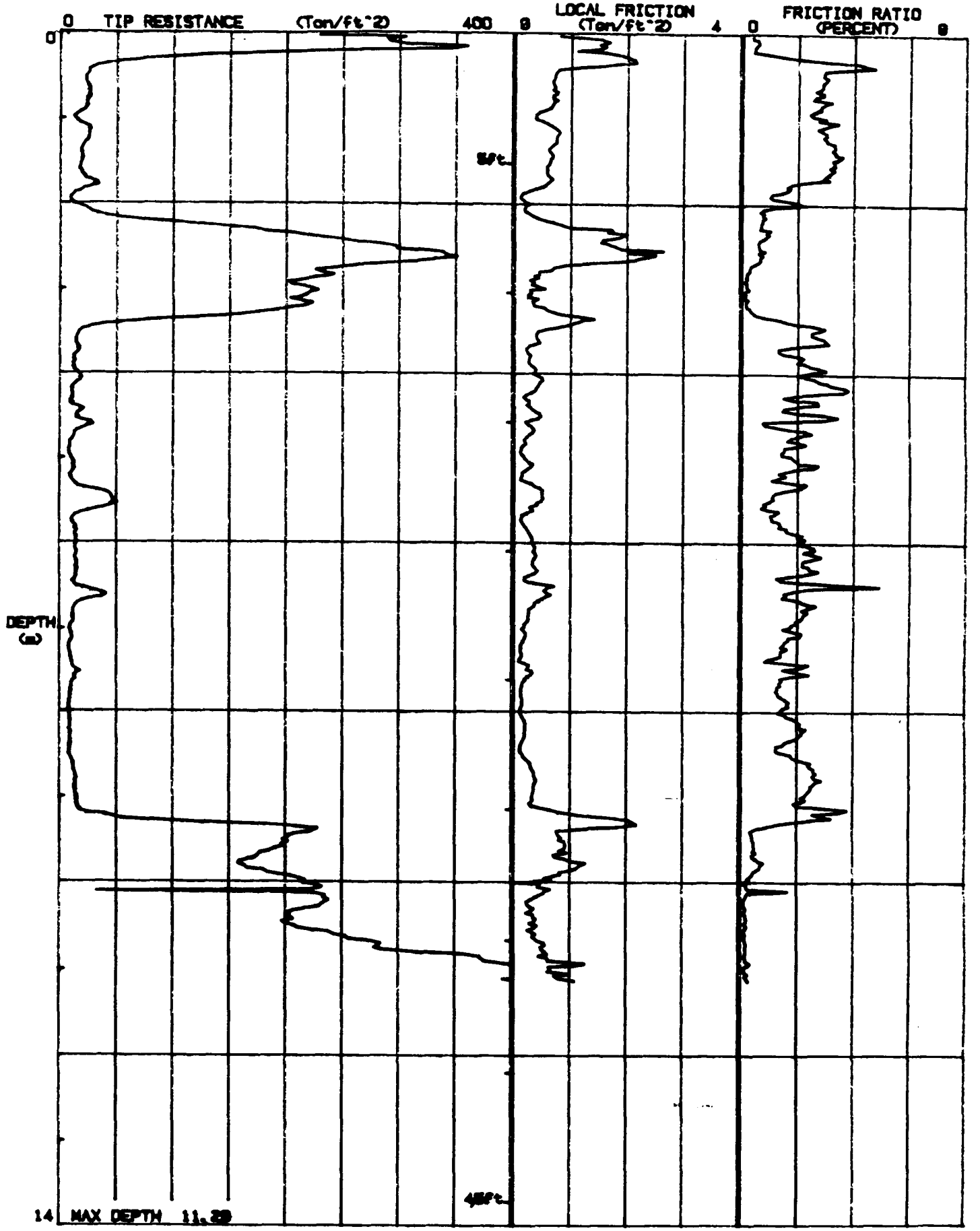
JOB # : 409700
DATE : 03/19/90/11:17
LOCATION : CPT9-22
FILE : FIL134

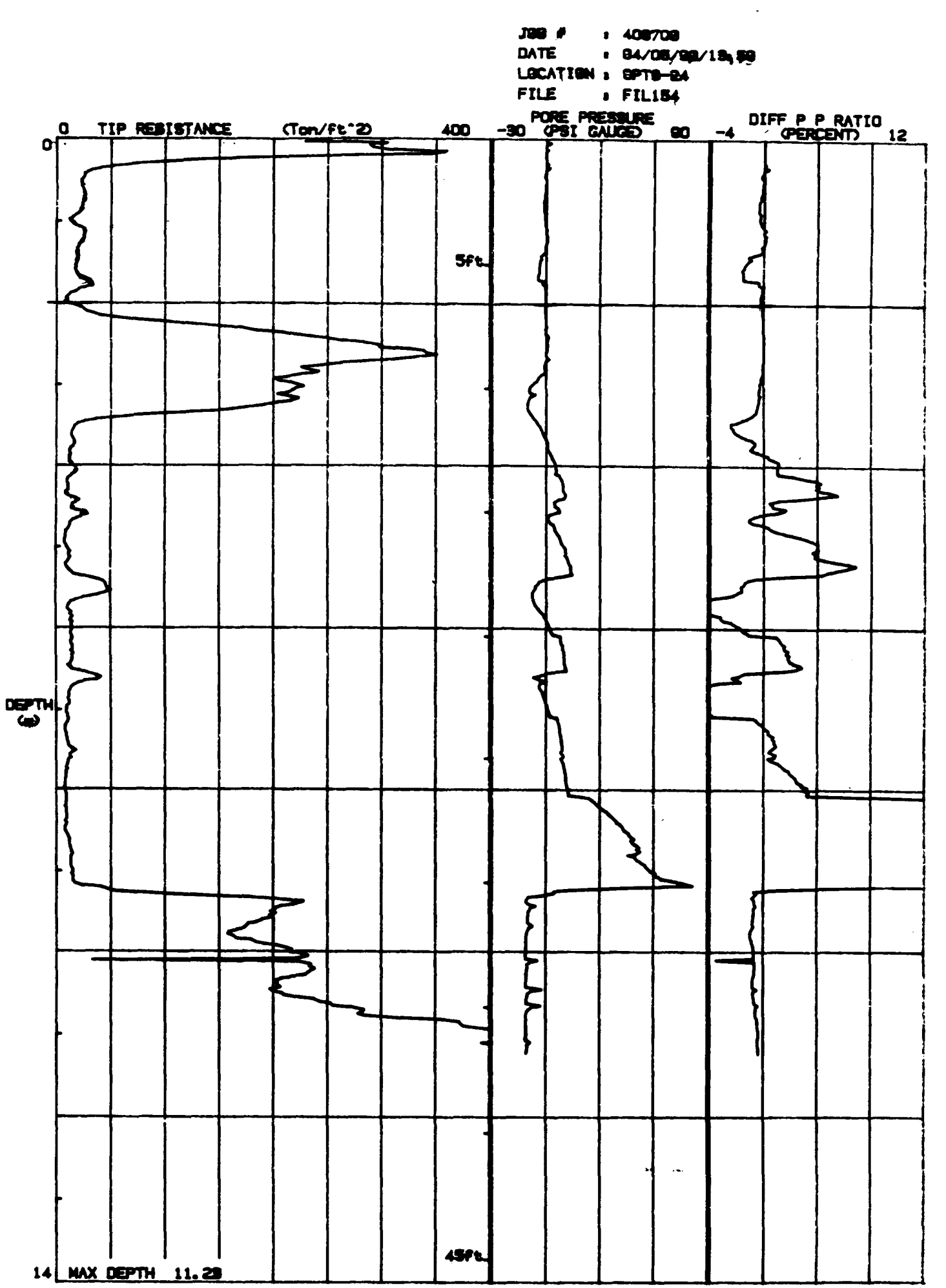


JOB # : 409700
DATE : 03/19/90/11:17
LOCATION : CPT9-22
FILE : FIL134

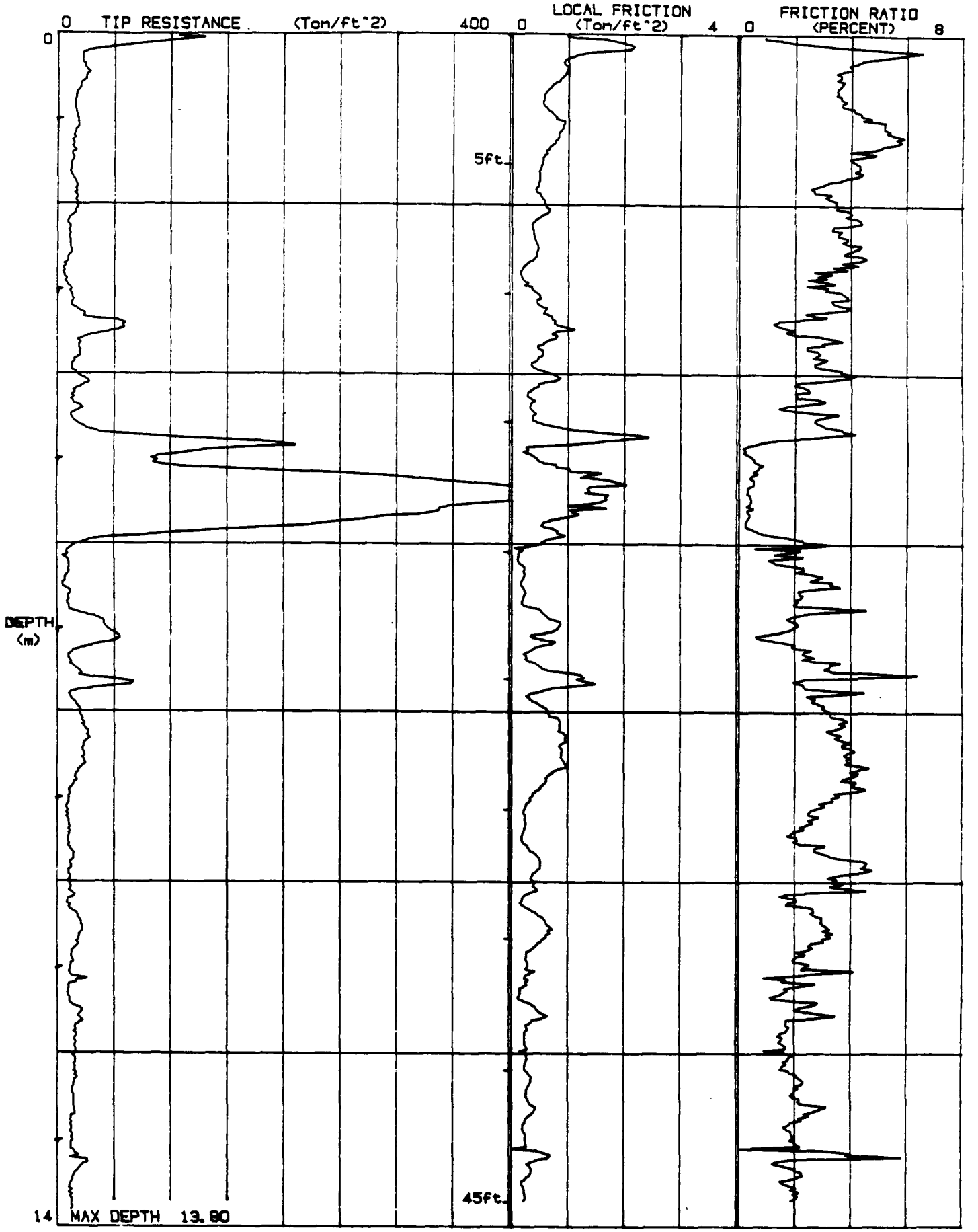


JOB # : 408700
DATE : 04/05/90/13:58
LOCATION : CPT8-24
FILE : FIL154

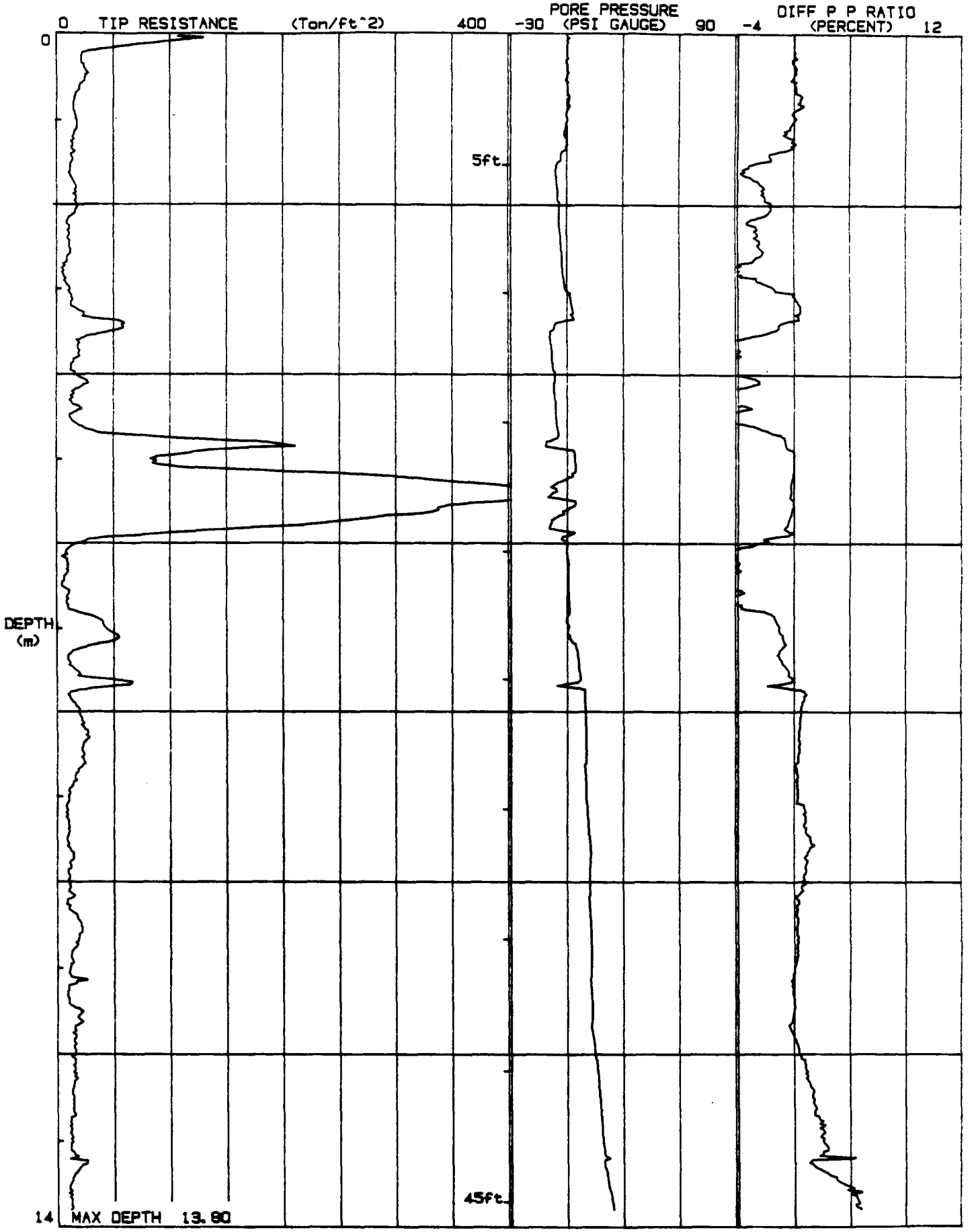



JOB # : 408708
DATE : 04/08/98/15:59
LOCATION : SPT8-24
FILE : FIL154
0 TIP RESISTANCE (Ton/Ft^2) 400
PORE PRESSURE -30 (PSI GAUGE) 90
DIFF P P RATIO -4 (PERCENT) 12
0
5ft
DEPTH (m)
45ft
14 MAX DEPTH 11.28

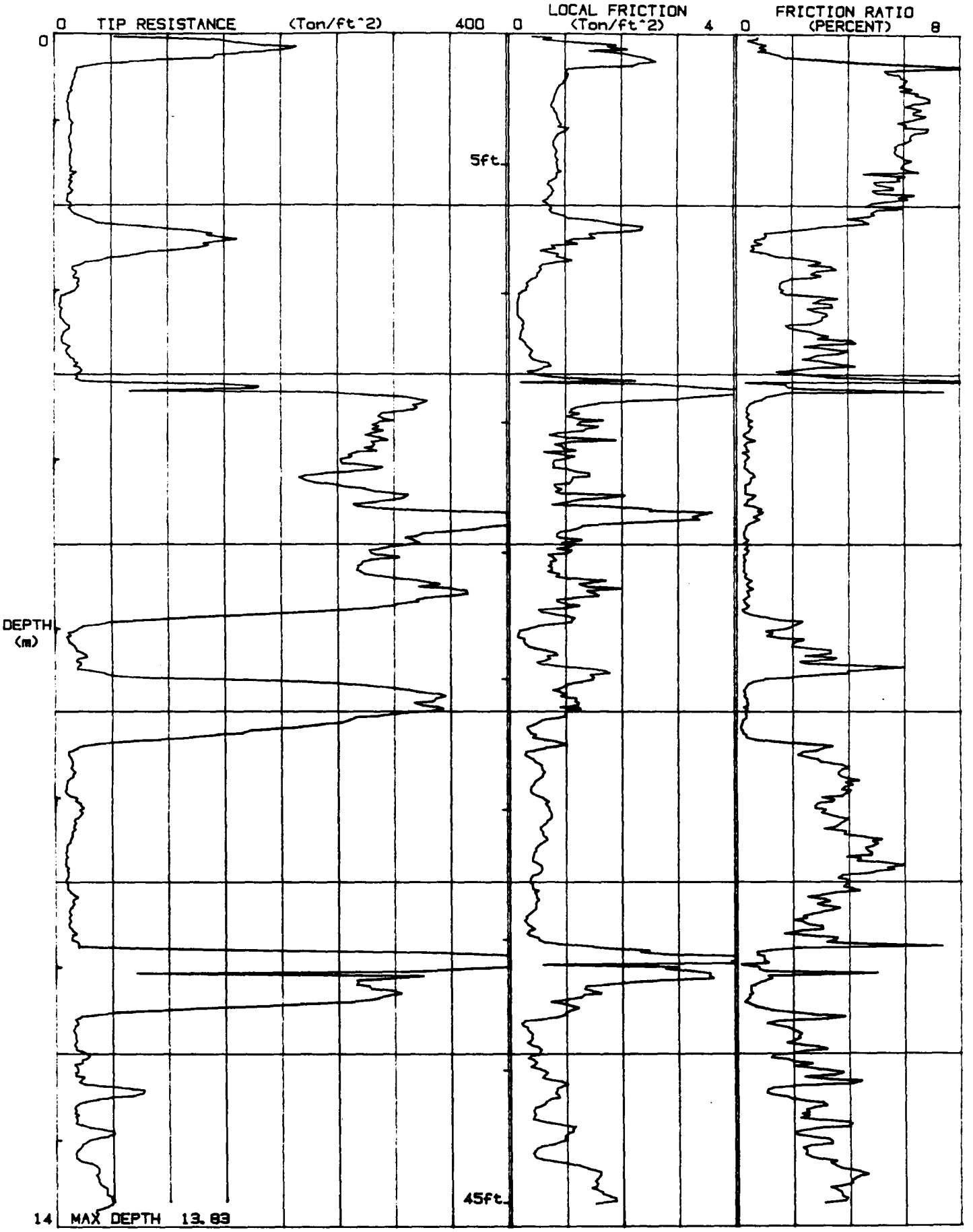
JOB # : 409700
DATE : 03/19/90/11:17
LOCATION : CPT9-25
FILE : FIL133



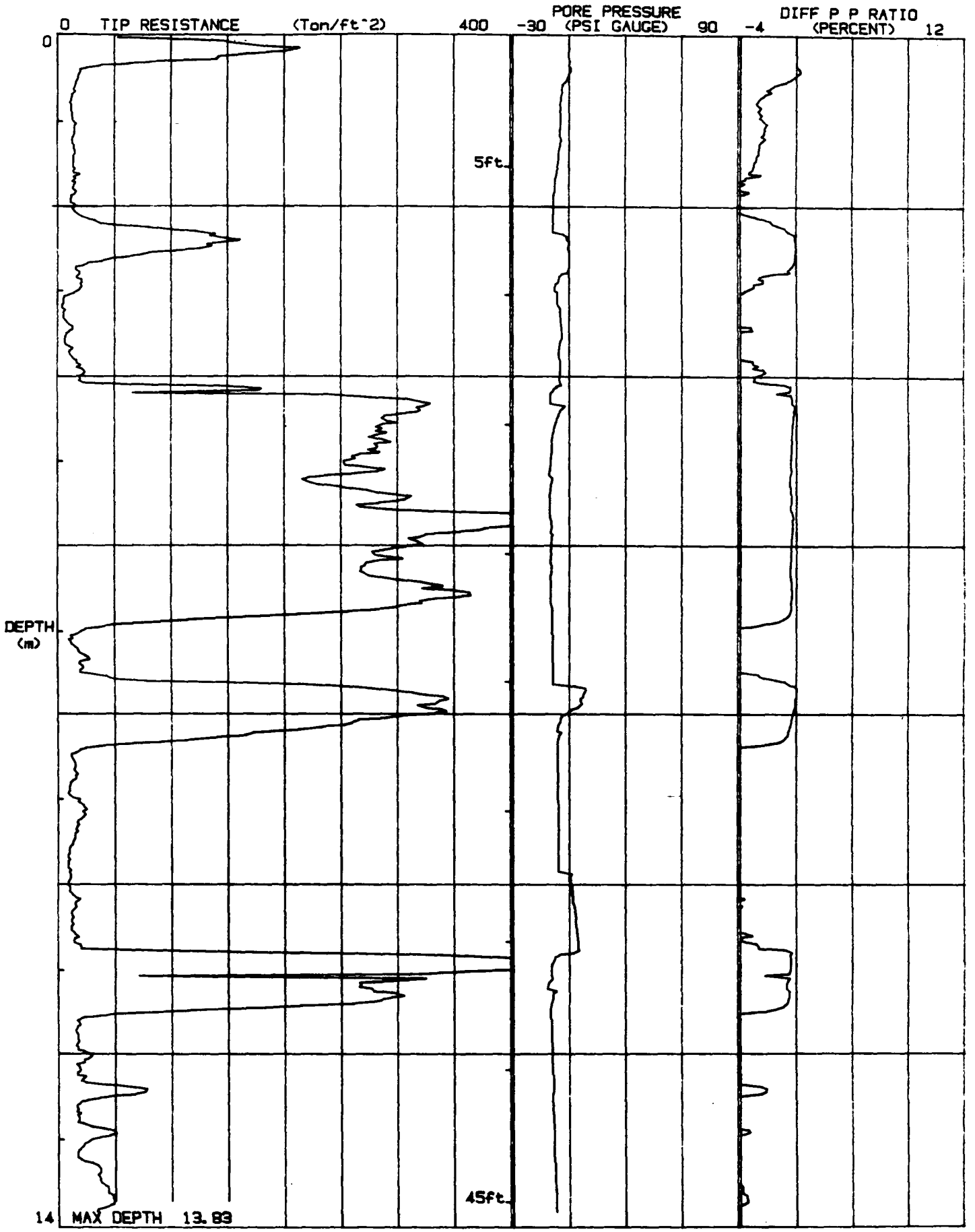
JOB # : 409700
DATE : 03/19/90/11:17
LOCATION : CPT9-25
FILE : FIL133



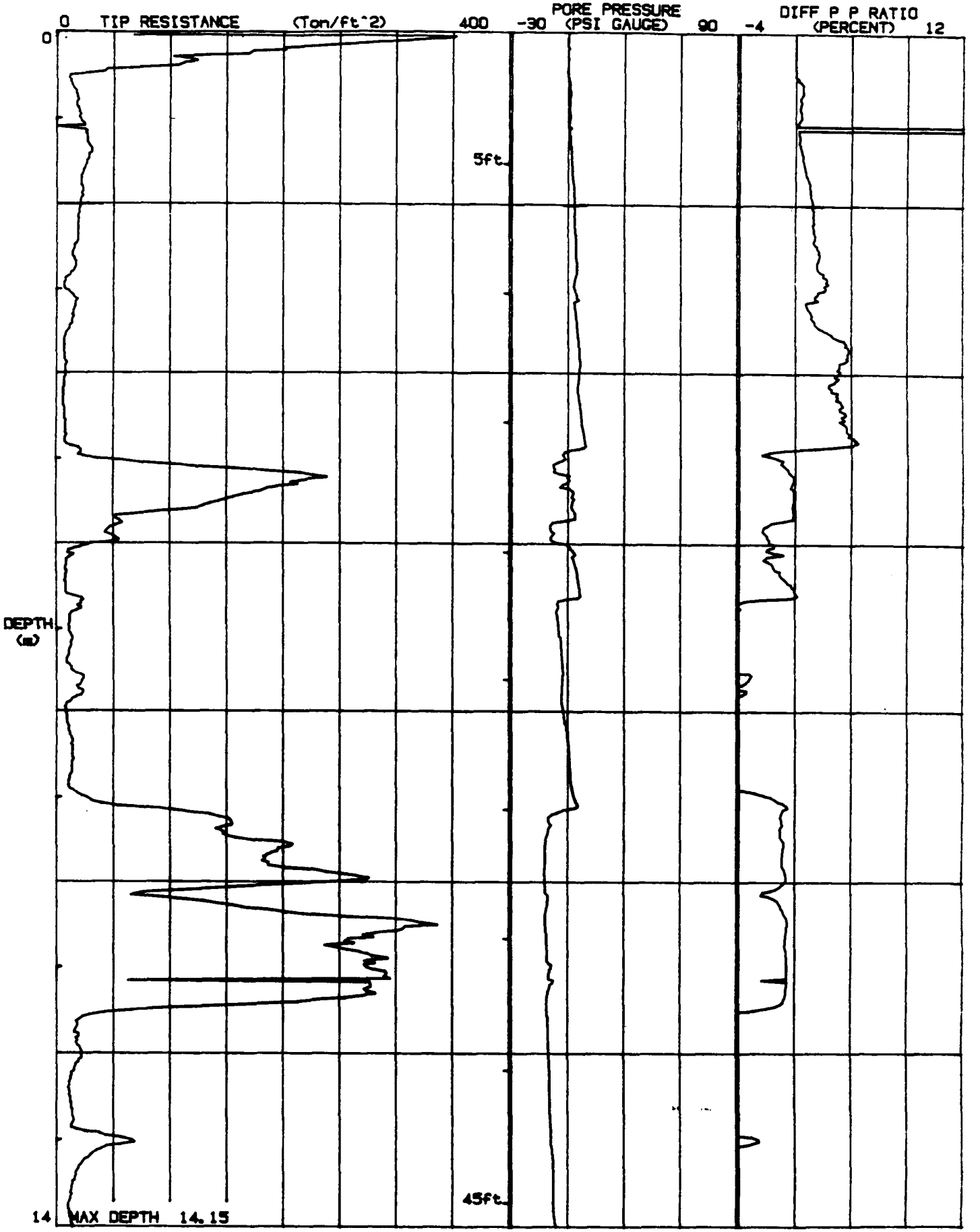
JOB # : 409700
DATE : 03/21/90/07:53
LOCATION : CPT9-26
FILE : FIL138



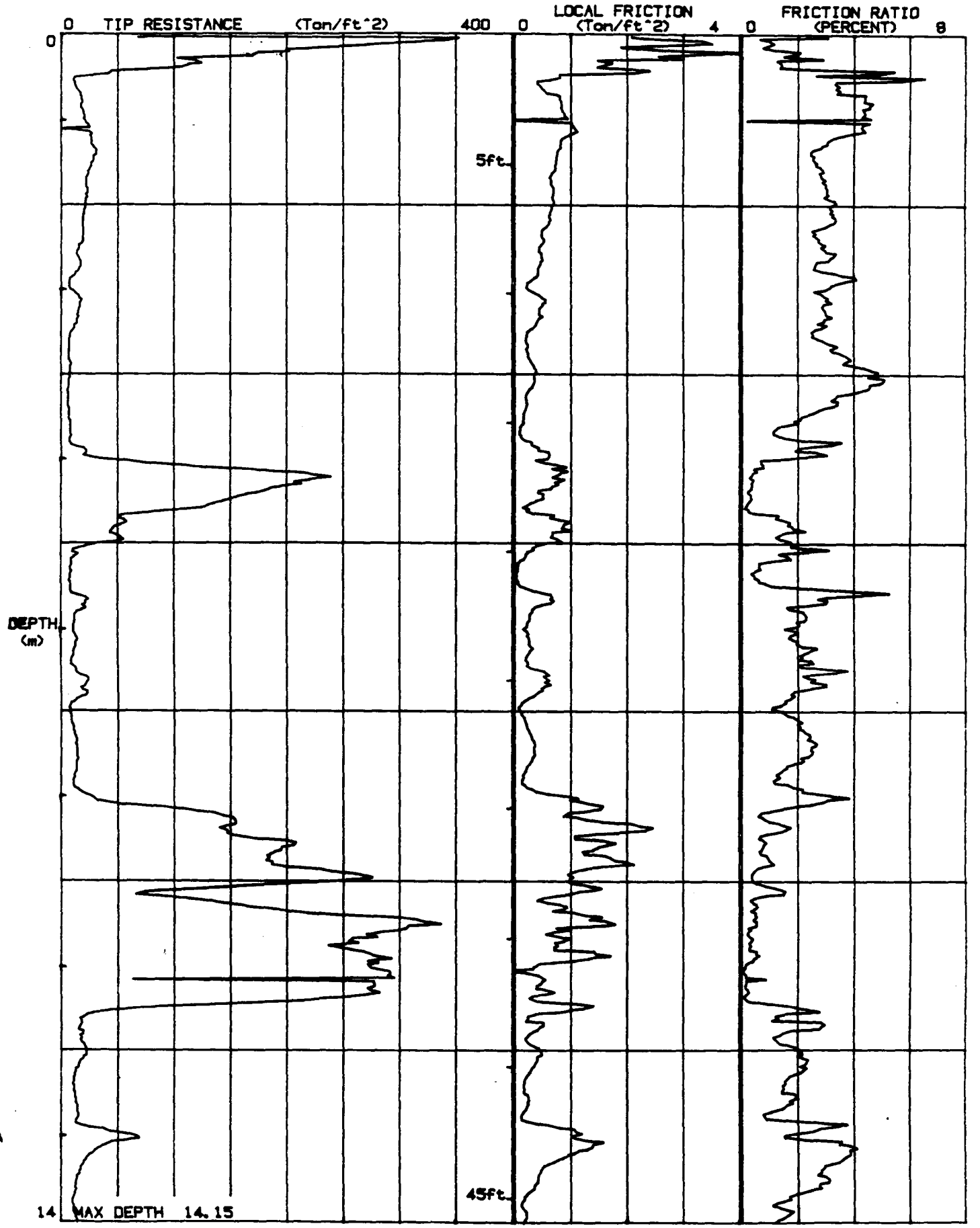
JOB # : 409700
DATE : 03/21/90/07:53
LOCATION : CPT9-26
FILE : FIL138



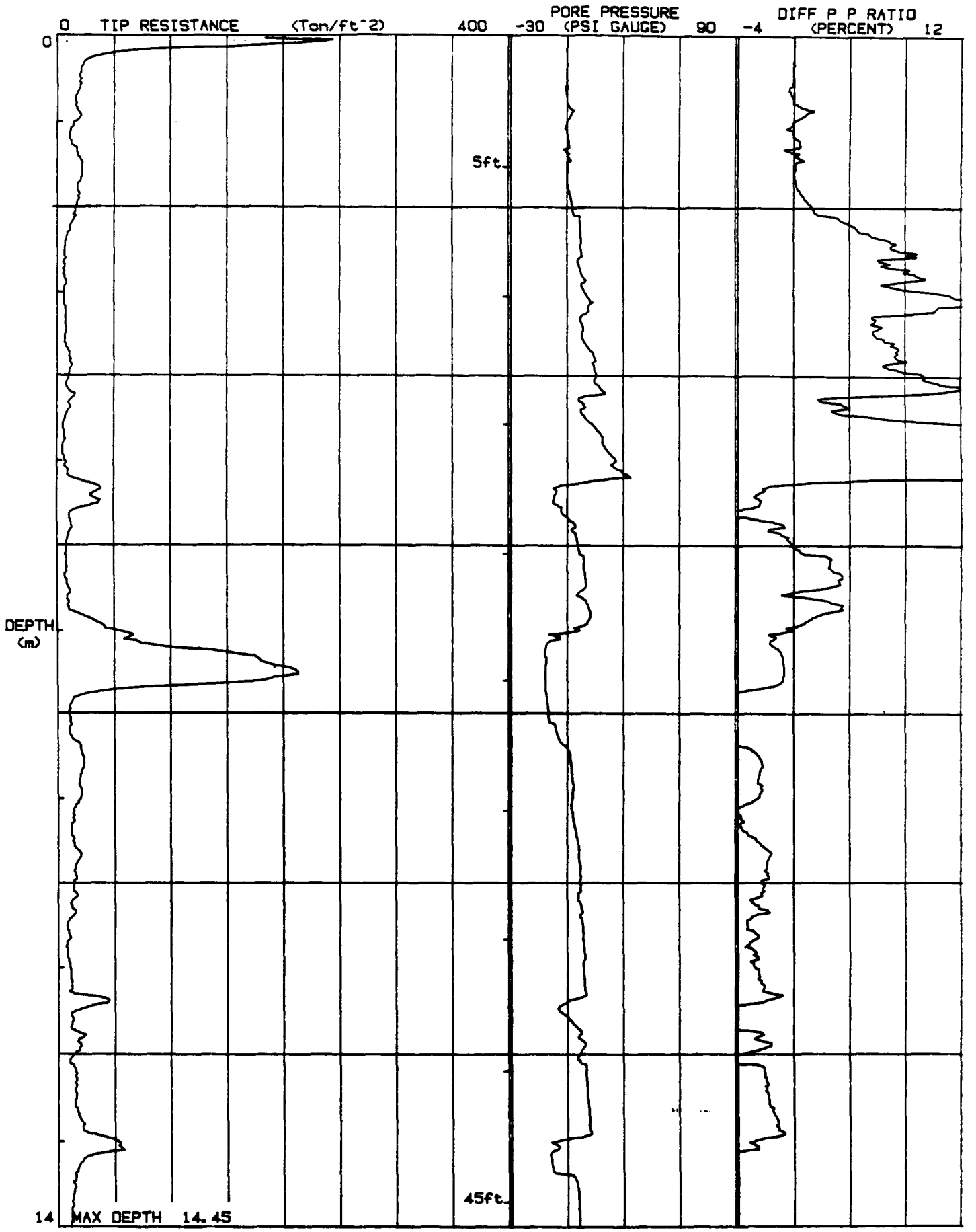
JOB # : 409700
DATE : 04/04/90/14:06
LOCATION : CPT9-38
FILE : FIL148



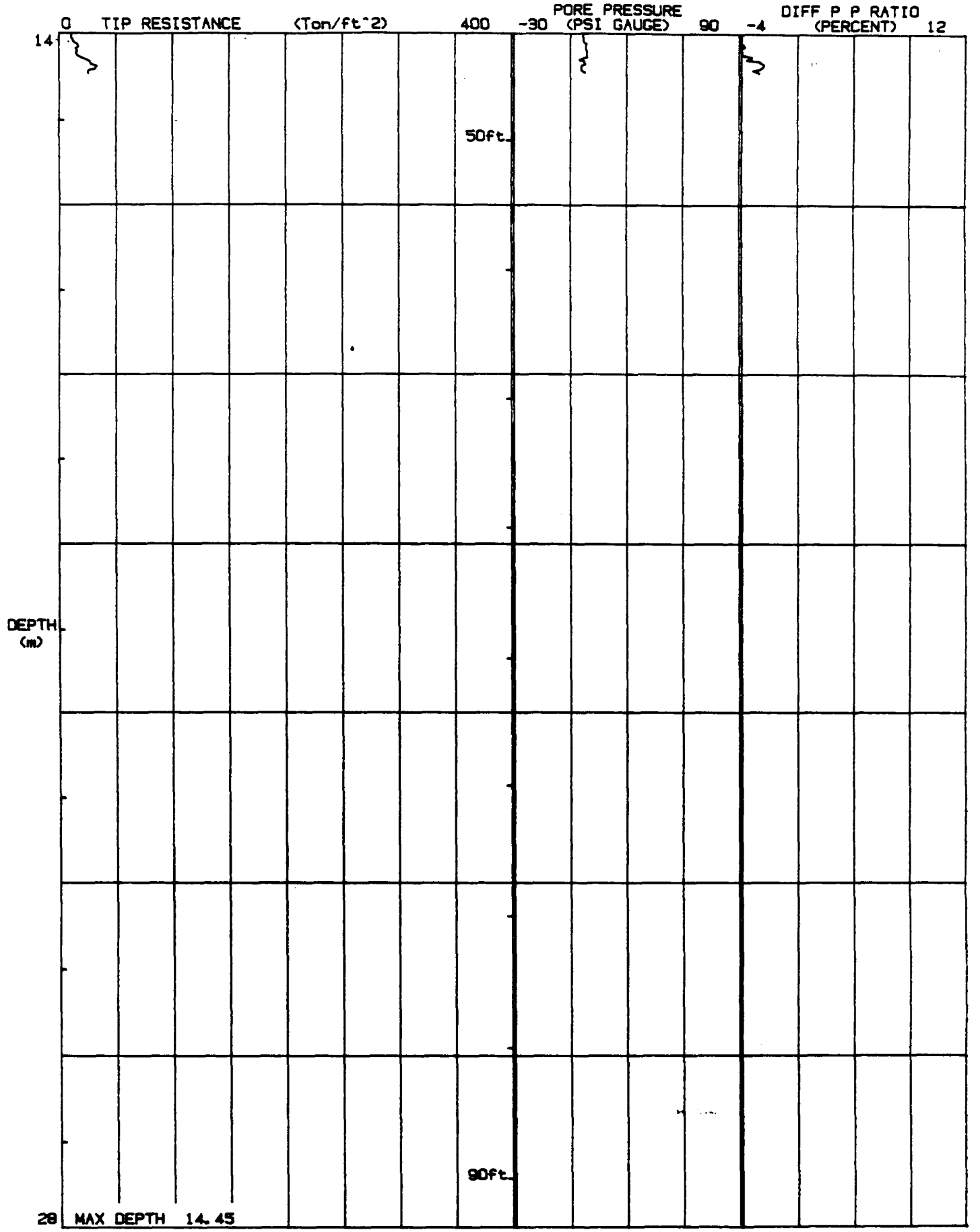
JOB # : 409700
DATE : 04/04/90/14:06
LOCATION : CPT9-36
FILE : FIL148



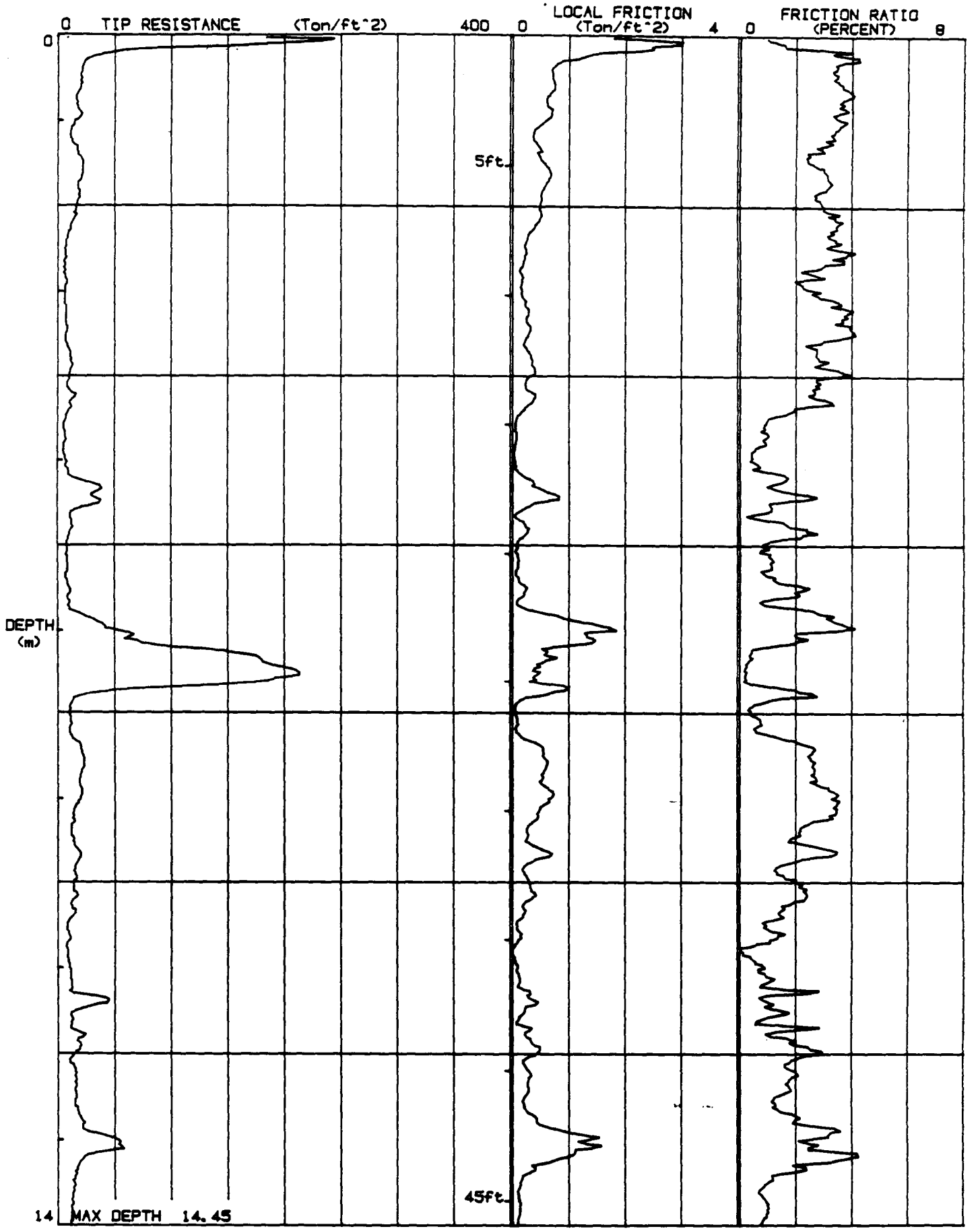
JOB # : 409700
DATE : 04/04/89 12:33
LOCATION : CPTG-[redacted]43
FILE : FIL147



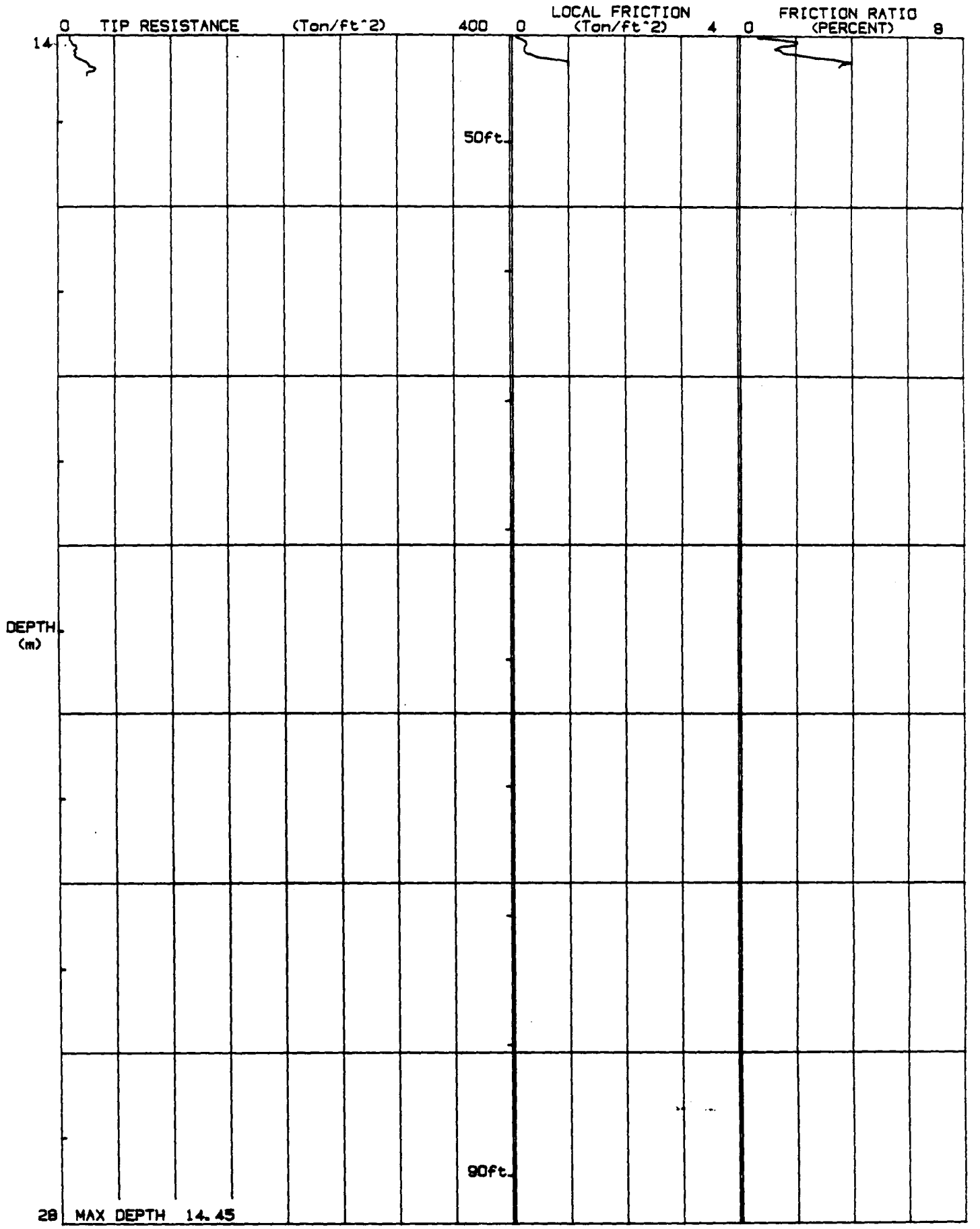
JOB # : 409700
DATE : 04/04/89 12:33
LOCATION : CPT9-[redacted]43
FILE : FIL147



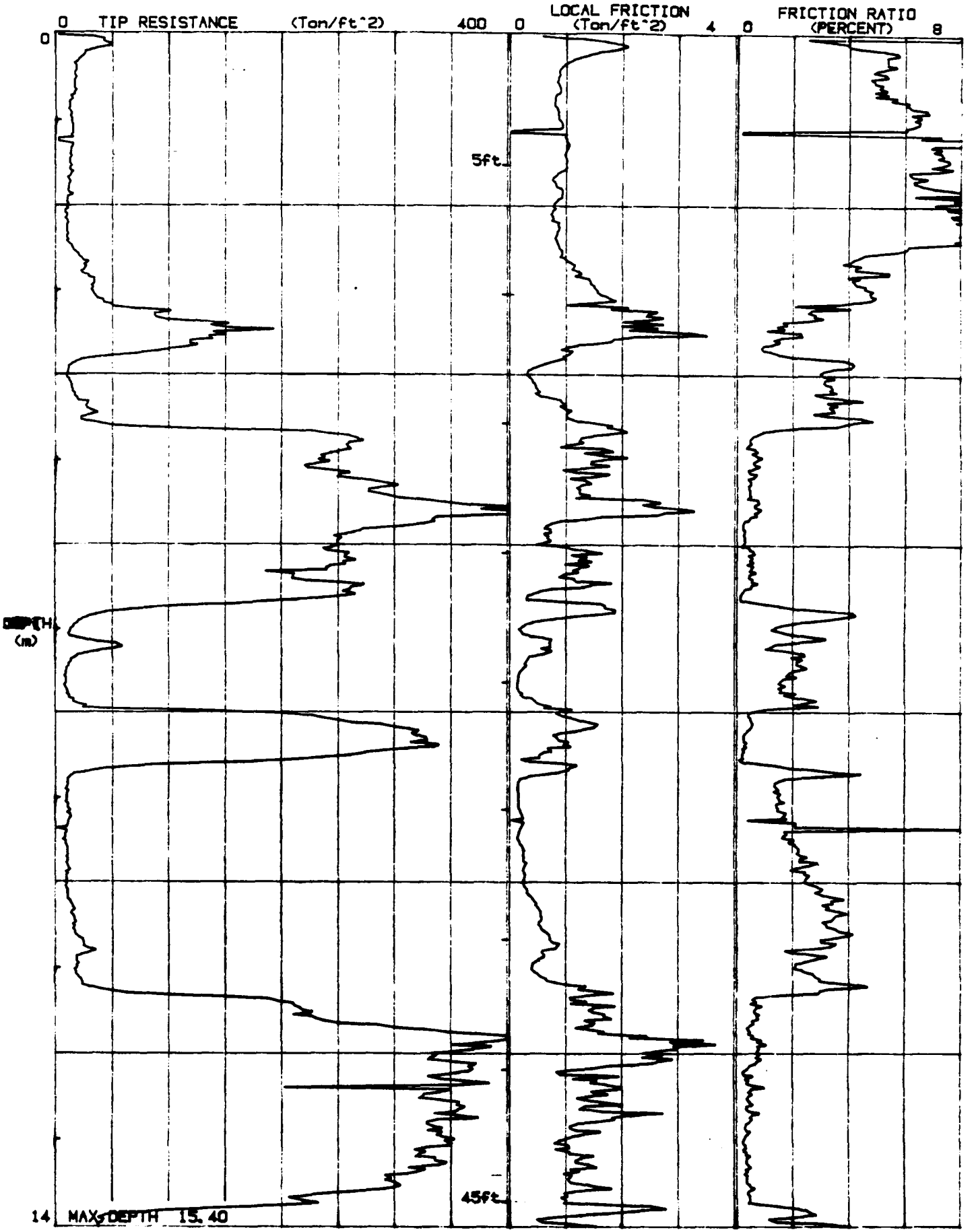
JOB # : 409700
DATE : 04/04/89 12:33
LOCATION : CPT8-[redacted]43
FILE : FIL147



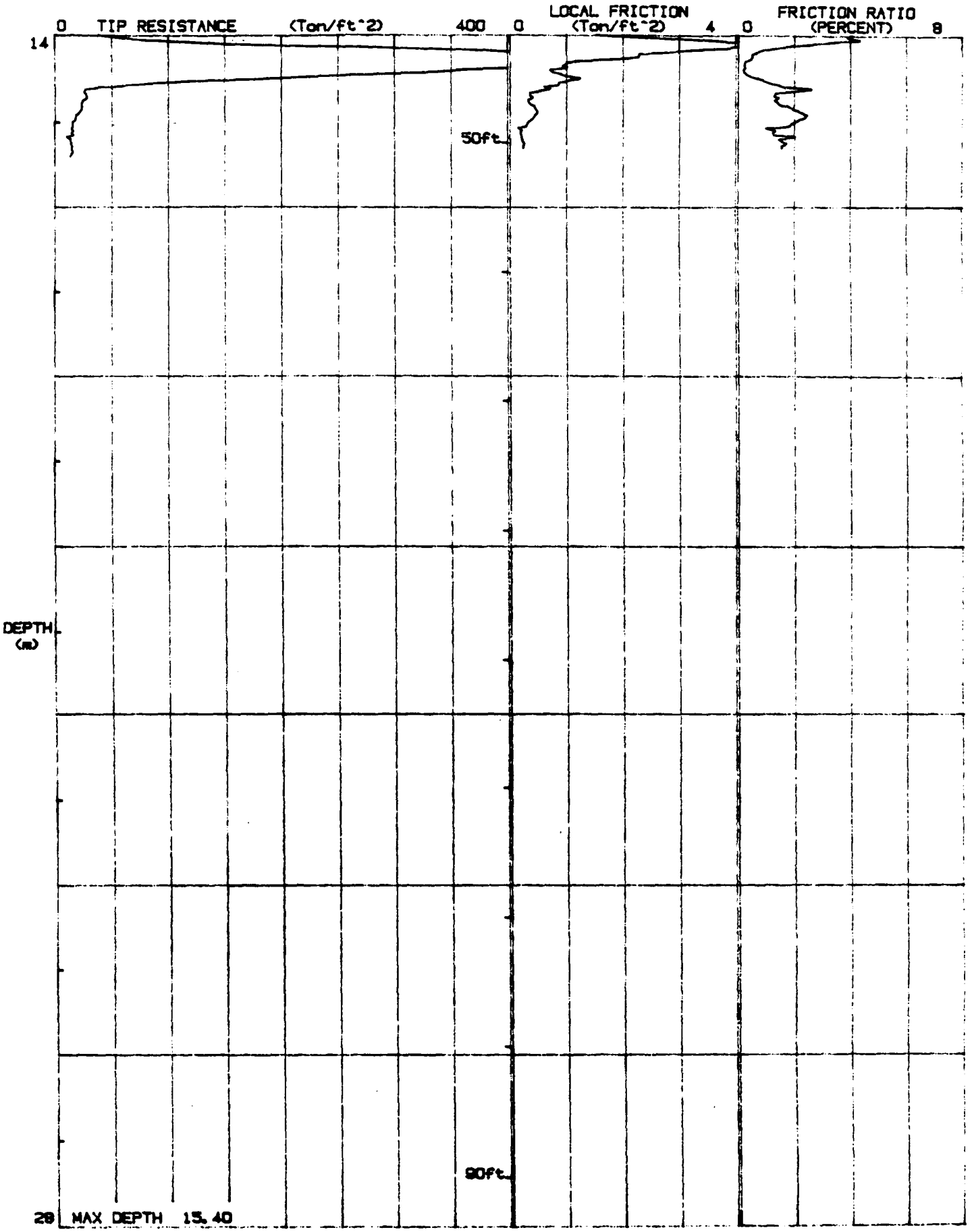
JOB # : 409700
DATE : 04/04/89 12:33
LOCATION : CPT9-43
FILE : FIL147



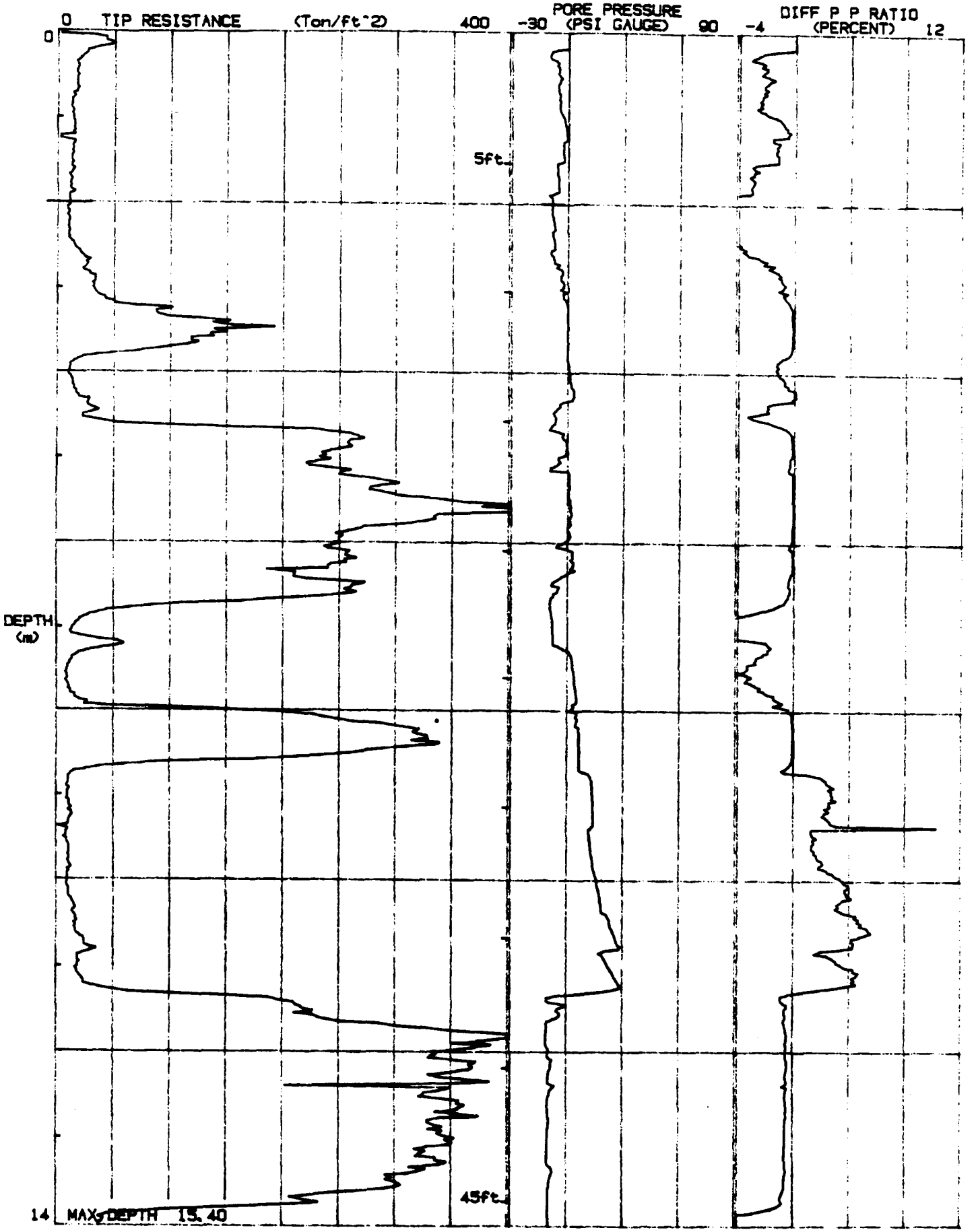
JOB # : 409700
DATE : 03/19/90/09: 39
LOCATION : CPT/9-45
FILE : FIL132



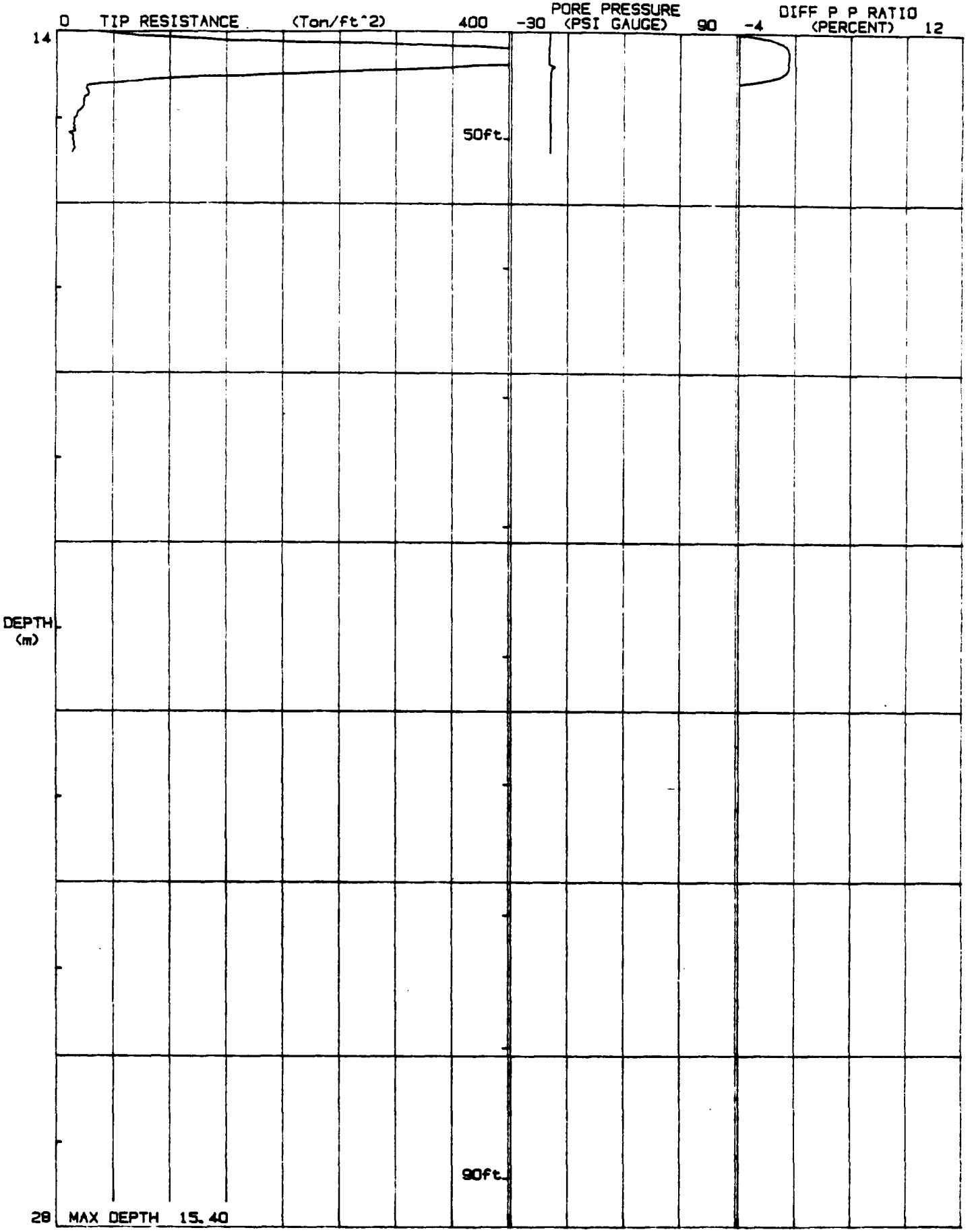
JOB # : 409700
DATE : 03/19/90/09:39
LOCATION : CPT/9-45
FILE : FIL132



JOB # : 409700
DATE : 03/19/90/09:39
LOCATION : CPT/B-45
FILE : FIL132



JOB # : 409700
DATE : 03/19/90/09:39
LOCATION : CPT/9-45
FILE : FIL132



APPENDIX I
BORING LOGS

PHASE II WELLS AND SOIL BORINGS (COMPLETED)

NAS MOFFETT FIELD[1]

SITE 8	SITE 9	
SB8-14[2]	FP9-1	W9-19(A1)
SB8-15	FP9-2	W9-20(A2)
SB8-16	SB9-1	W9-21(A2)
SB8-17	SB9-2	W9-22(A2)
W8-8(A1)	SB9-3	W9-23(A1)
W8-10(A2)	SB9-4	W9-24(A1)
W8-11(A2)	SB9-5	W9-25(A2)
W8-12(A2)	SB9-6	W9-26(A1)
	SB9-7	W9-28(A2)
	SB9-8	W9-29(A1)
	SB9-9	W9-30(A1)
	SB9-10	W9-31(A1)
	SB9-11	W9-33(A2)
	SB9-12	W9-34(A2)
	SB9-13	W9-35(A1)
	SB9-14	W9-36(A2)
	W9-8(A2)	W9-37(A1)
	W9-9(A2)	W9-38(A2)
	W9-10(A1)	W9-39(B2)
	W9-11(B2)	W9-40(B2)
	W9-12(B2)	W9-41(A2)
	W9-16(A1)	W9-42(A2)
	W9-17(A2)	W9-43(A2)
	W9-18(A1)	

1 Completed as of June 30, 1990

2 SB = Soil boring
W = Monitoring well
FP = Free product well

N00296.000930
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX I – BORING LOGS

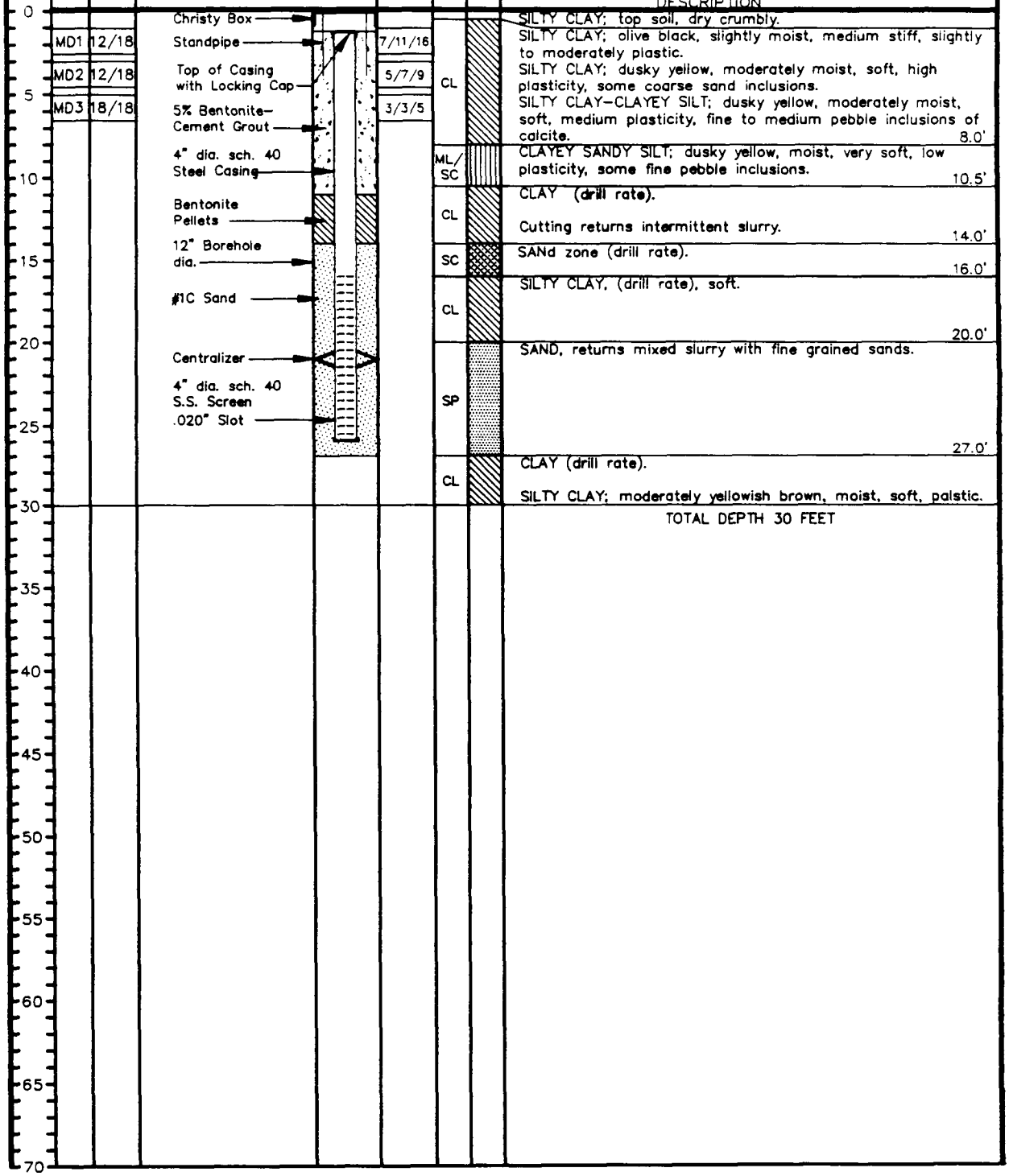
SECTION 1.0 – BORING LOGS SITE 8

QUARTERLY REPORT
2ND QUARTER 1990
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

DATED 15 AUGUST 1990

BORING NO. W8-8(A1)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner — DATE BEGAN 5/11/90
EDITED BY T. Ault — DATE FINISHED 5/11/90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 30 ft.



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

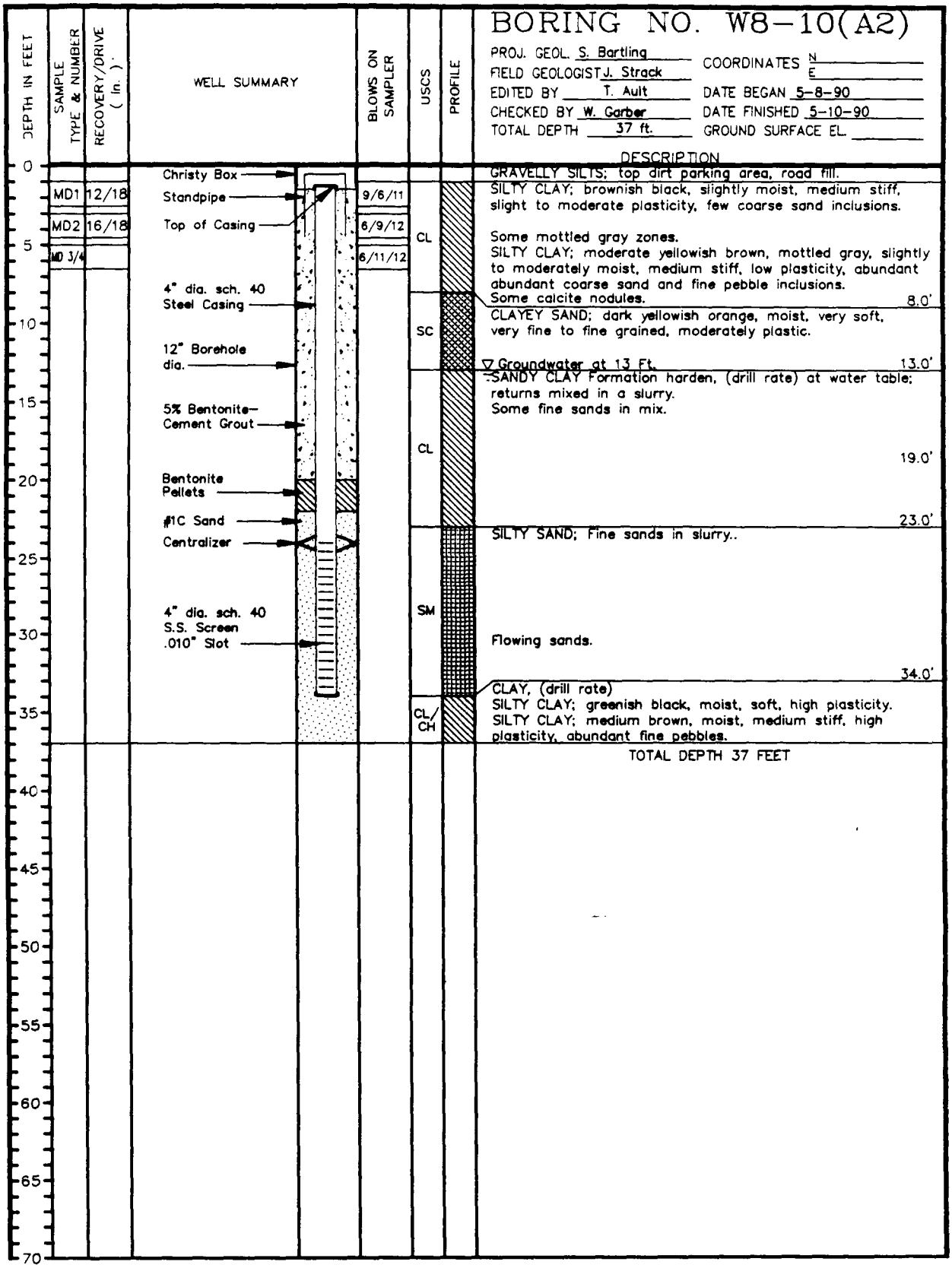
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

MF-W8-8(MF15)

BORING NO. W8-10(A2)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST J. Strack
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 37 ft.
COORDINATES N ____ E ____
DATE BEGAN 5-8-90
DATE FINISHED 5-10-90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PAGE 1 OF 1

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

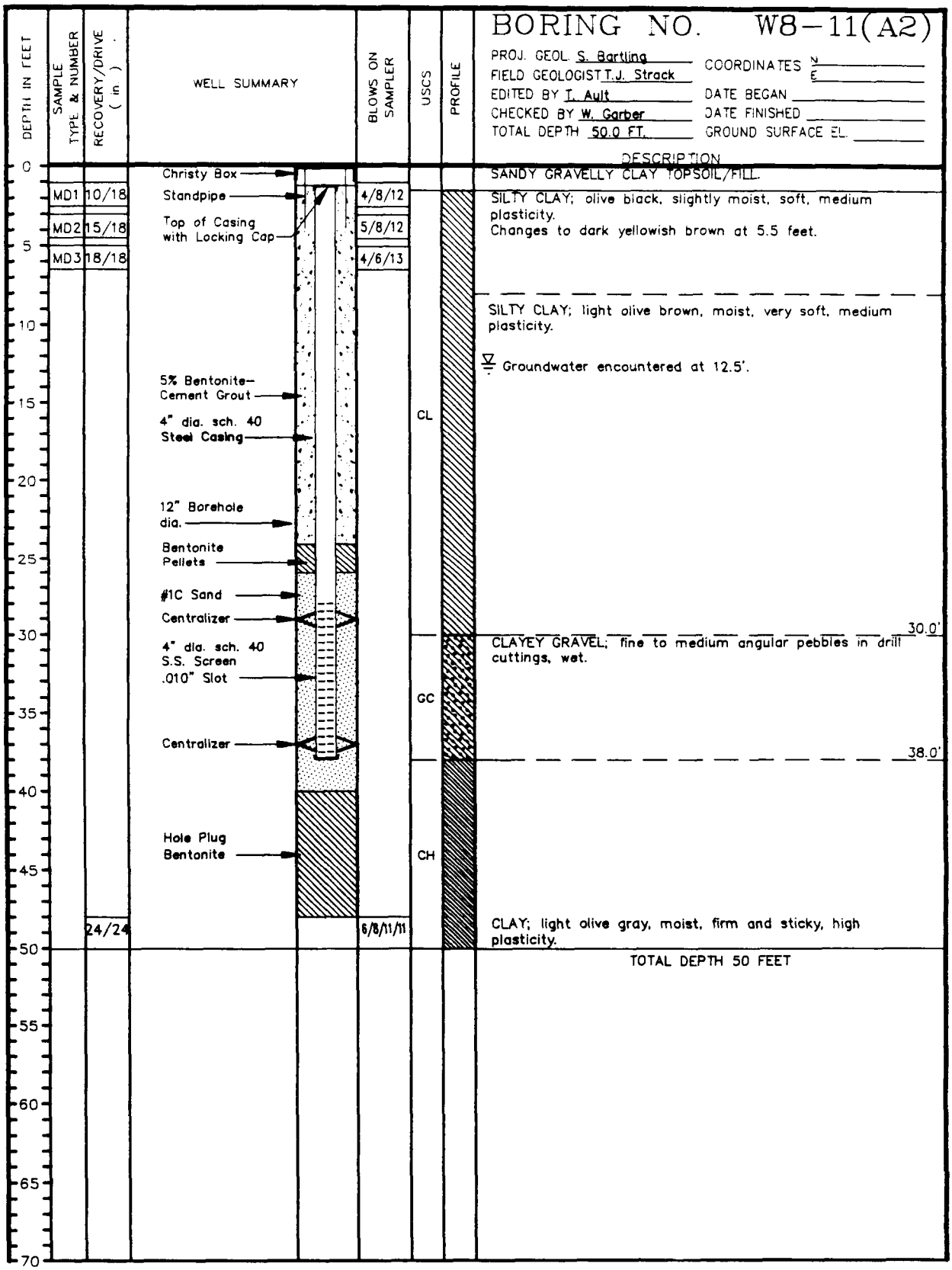
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W8-10(=MF14)

BORING NO. W8-11(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T.J. Strack — DATE BEGAN ____
EDITED BY T. Ault — DATE FINISHED ____
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 50.0 FT.



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (RIG CME-75)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

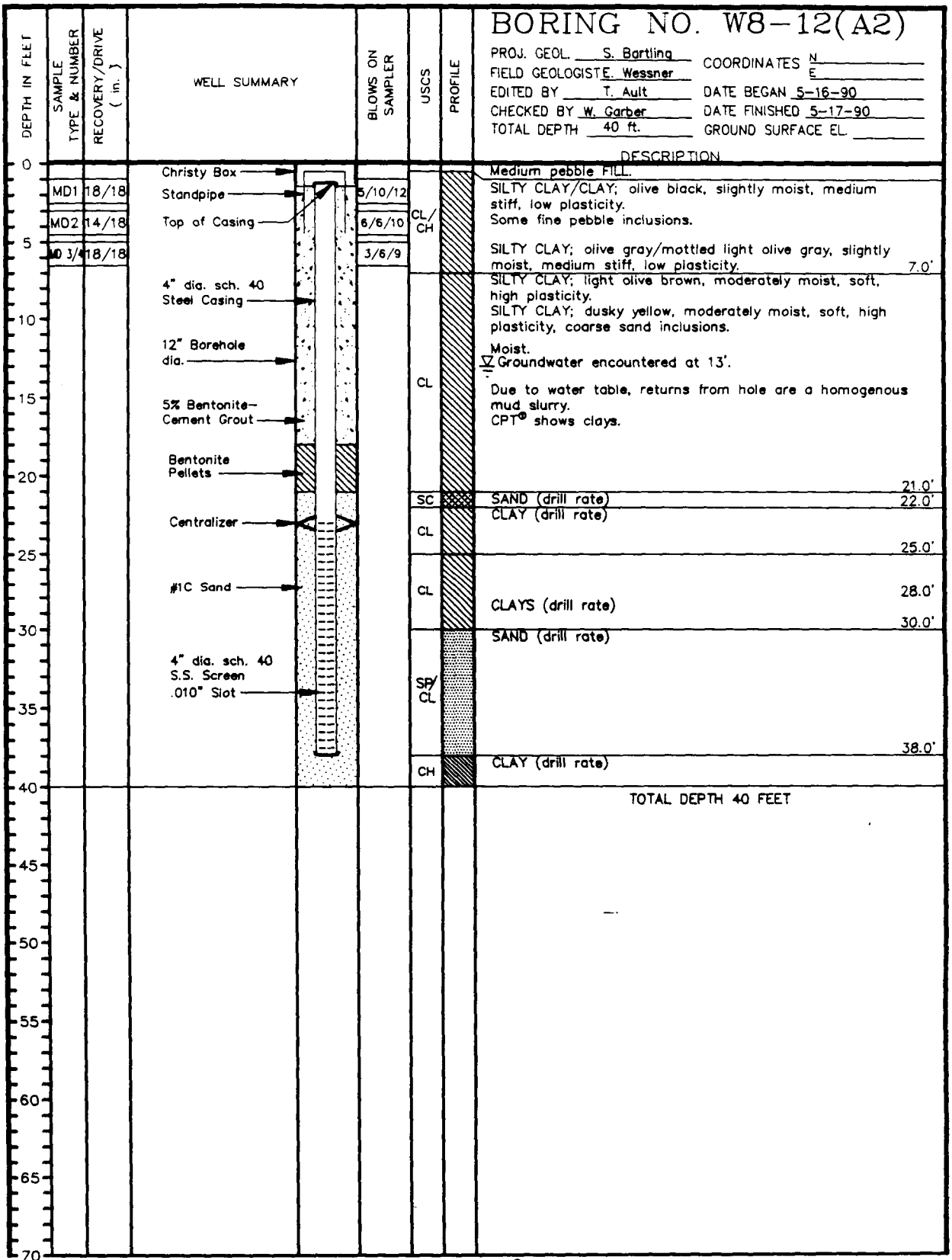
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W8-11(MF14)

BORING NO. W8-12(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault — DATE BEGAN 5-16-90
CHECKED BY W. Garber — DATE FINISHED 5-17-90
TOTAL DEPTH 40 ft. — GROUND SURFACE EL. ____



®drill rate used to refine lithology.

DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PAGE 1 OF 1

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

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W8-12(*MF14)

SOIL BORING NO. SB8-14

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner — DATE BEGAN 5/8/90
EDITED BY T. Ault — DATE FINISHED 5/8/90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 11.5 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0							Fill
	MD1	18/18		8/8/15	CH		**SILTY CLAY**;brown black, mod. moist, med. firm, plastic.
	MD2	18/18		8/11/16	CL		**SILTY CLAY**;brown black, mod. moist med. firm, mod. plastic. 5.5'
5	MD3	18/18		6/8/13	CL		**SILTY CLAY**; greyish olive mottled grey slightly moist, med. firm, crumbly mottled zones very silty. 8.0'
	MD4 MD5			9/5/9	ML		**CLAYEY SILTS**; dusky yellow, moist, very soft, mod. plastic coarse sand and fine gravel calcite inclusions.
10							TOTAL DEPTH 11.5 FT.
15							
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

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

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

INTERNATIONAL TECHNOLOGY CORPORATION

MFB-14(MF17)

SOIL BORING NO. SB8-15

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST J. Strack
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 11.5 ft
COORDINATES N ____ E ____
DATE BEGAN 5/9/90
DATE FINISHED 5/9/90
GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0							ASPHALT.
	MD1	12/18		6/13/20			SAND and GRAVEL, fill, some wood chips.
							SILTY CLAY, greenish black, slightly moist, soft, med. plasticity
	MD2	12/18		7/13/20			Changes to greyish black and firm at 4 Feet.
5	MD3	13/18		8/11/17	CL		
							▽ Groundwater at 10.5 Ft.
10	MD4	18/18		5/7/10			
					SM		SILTY CLAYEY SAND, fine to very fine grain, mod. olive brown, wet soft dense.
							TOTAL DEPTH 11.5 FT.
15							
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: **Water Developement**
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY

MFB-15(MF17)

SOIL BORING NO. SB8-16

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST J. Strack
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 13 ft.

COORDINATES N ____ E ____
DATE BEGAN 5-8-90
DATE FINISHED 5-8-90
GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0							ASPHALT
	MD1	15/18		6/10/14	CL		SILTY CLAY with gravel, fill material, greyish olive green, moist, firm medium plasticity.
	MD2	14/18		10/17/33			SILTY CLAY with fine to coarse fine gravel, olive black, moist, firm, medium.
5	MD3	16/18		8/15/22			color changes to greyish green at 5.5 Feet. Changes to dark greenish gray at 7 Feet.
							GROUNDWATER AT 12.5 FT.
10		1/18		5/8/10	CH		10.5' CLAY, moderate yellowish brown, moist, wet at 12 Feet, soft to very highly plastic.
	MD4	18/18		6/8/9			
15							TOTAL DEPTH 13 FEET
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

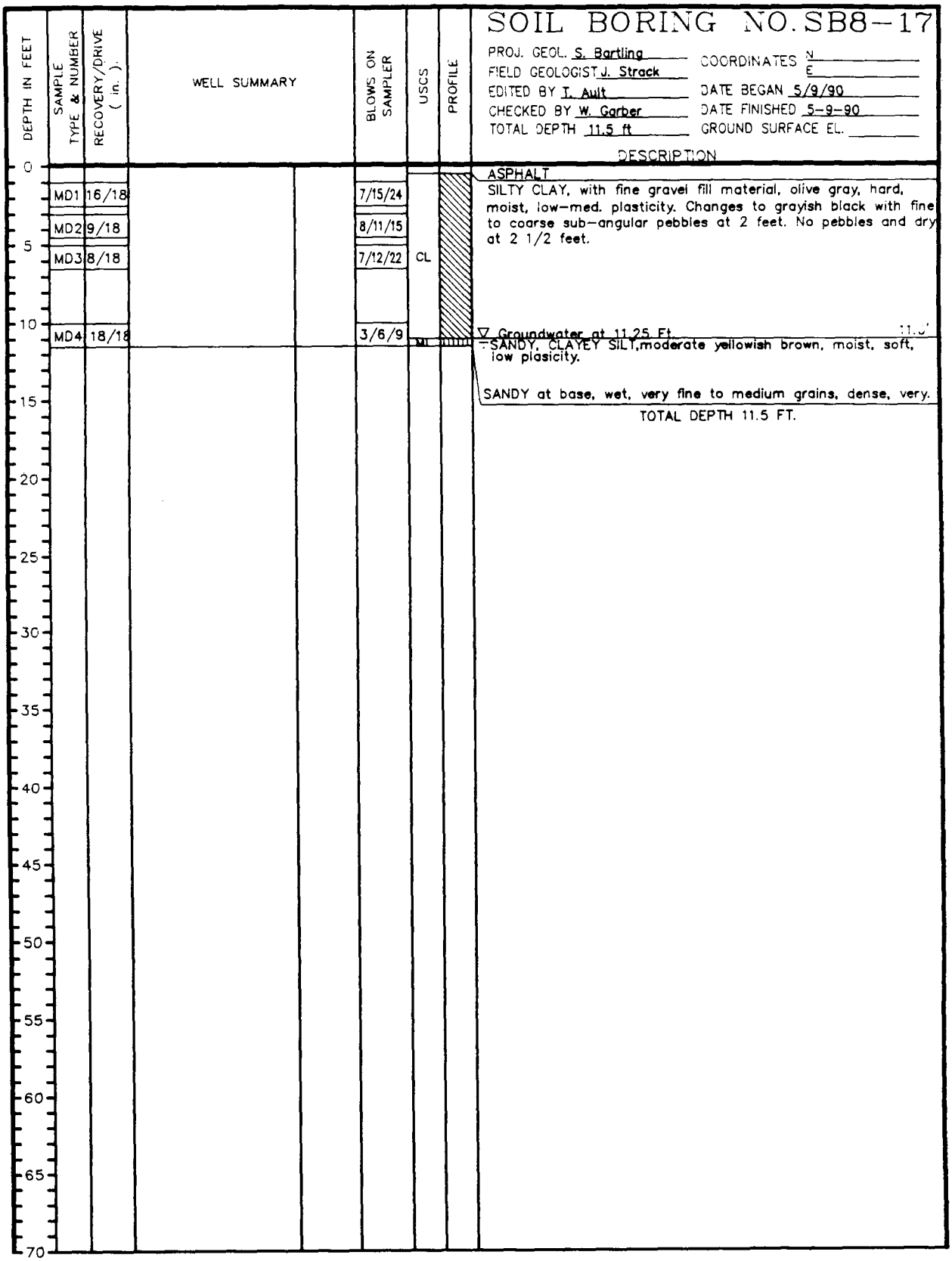
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF17B-16(MF17)

SOIL BORING NO. SB8-17

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST J. Strack
EDITED BY T. Ault — DATE BEGAN 5/9/90
CHECKED BY W. Garber — DATE FINISHED 5-9-90
TOTAL DEPTH 11.5 ft — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MFB-17(MF17)

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

INTERNATIONAL TECHNOLOGY CORPORATION

N00296.000930
MOFFETT FIELD
SSIC NO. 5090.3

APPENDIX I – BORING LOGS

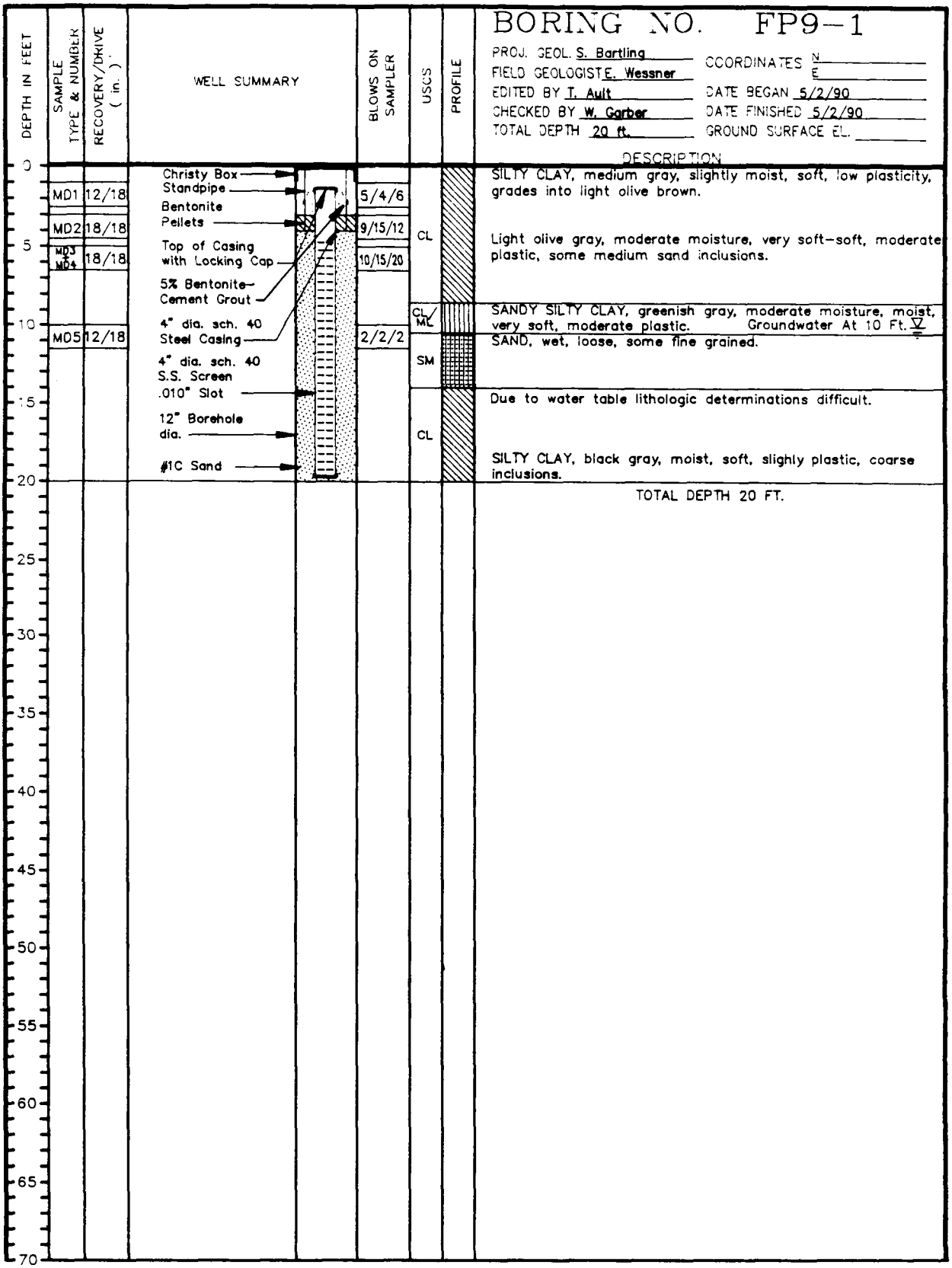
SECTION 2.0 – BORING LOGS SITE 9

QUARTERLY REPORT
2ND QUARTER 1990
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

DATED 15 AUGUST 1990

BORING NO. FP9-1

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 20 ft.
COORDINATES N ____ E ____
DATE BEGAN 5/2/90
DATE FINISHED 5/2/90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

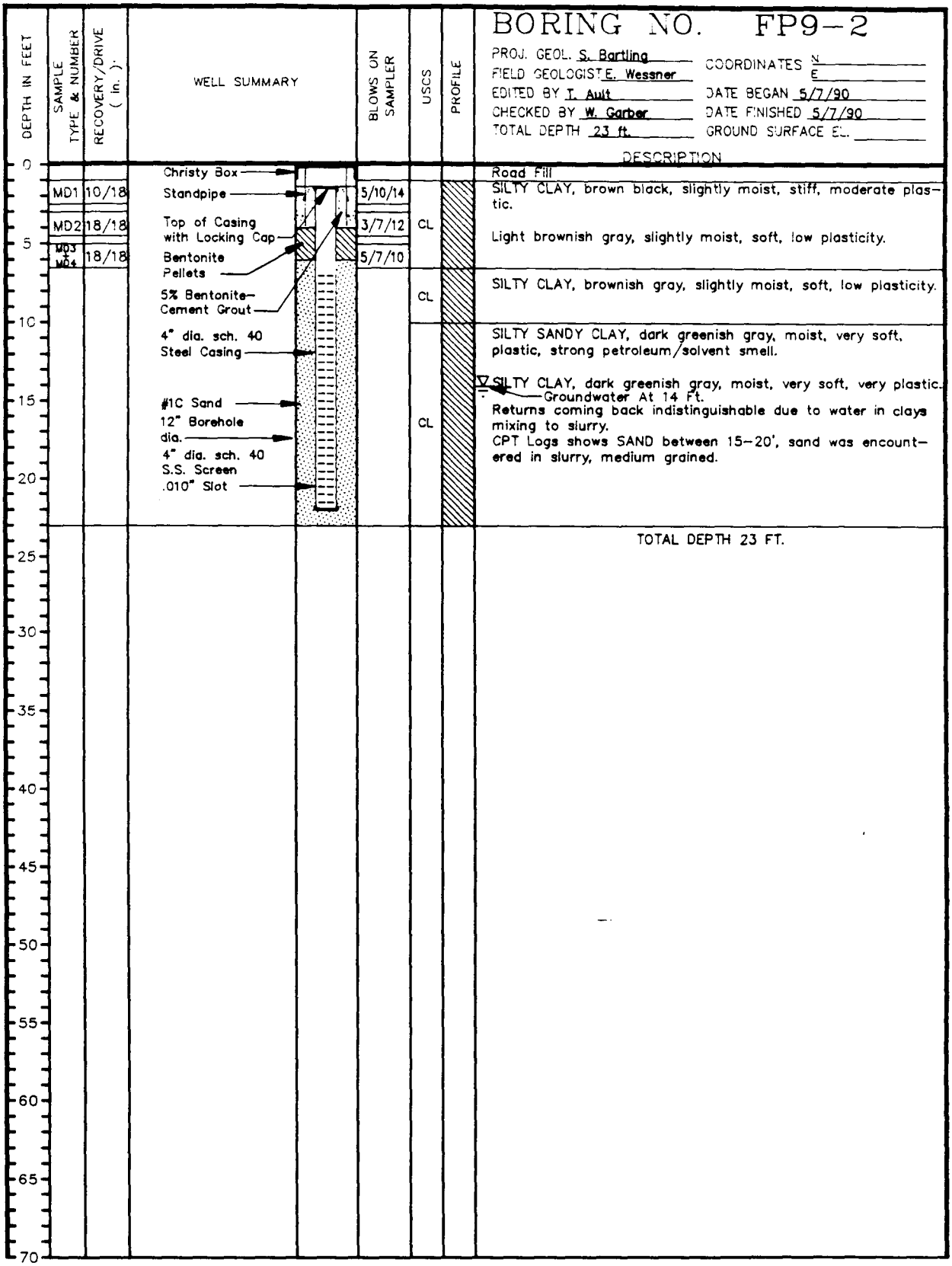
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-FP9-1(MF-19)

BORING NO. FP9-2

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault — DATE BEGAN 5/7/90
CHECKED BY W. Garber — DATE FINISHED 5/7/90
TOTAL DEPTH 23 ft. — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

MF-FP9-2(MF-19)

SOIL BORING NO. SB9-1

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 15 ft.
COORDINATES N ____ E ____
DATE BEGAN 5/23/90
DATE FINISHED 5/23/90
GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0							SANDY CLAY, (fill), olive grey, crushed rock.
	MD1	18/18		10/7/12	CL		SILTY CLAY, brown black, slightly moist, firm, low plasticity.
	MD2	18/18		8/12/20			
5	MD3	18/18		8/15/18			
					CL		SILTY CLAY, moderate olive brown, moderately moist, soft, friable.
							SILTY CLAY, greenish grey moist, low plasticity, 30% coarse sands.
10	MD4	18/18		3/4/4			SILTY CLAY, pale green, moist, soft, moderately plastic, some coarse sand.
							Groundwater at 13 ft. ▽
15							TOTAL DEPTH 15 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

SOIL BORING NO. SB9-2

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault — DATE BEGAN 5/23/90
CHECKED BY W. Garber — DATE FINISHED 5/23/90
TOTAL DEPTH 15 ft. — GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0					FILL		SANDY CLAY, fill with crushed bedrock base.
	MD1	18/18		12/7/10	CL		CLAY brownish black, slightly moist, stiff, low plasticity, mottled, roots.
	MD2	18/18		5/11/16	CL		SILTY CLAY, yellowish gray, sightly moist, very soft, friable, plastic.
5	MD3	18/18		5/9/12	ML		SANDY SILT, dusky yellow, moderately moist, very soft, friable, non-plastic.
					ML		CLAYEY SILT, green gray, moist, very soft, moderately plastic.
10	MD4	18/18		3/4/6	CL		SILTY CLAY, greenish gray mottled dusky yellow, moist, very soft, plastic. ▽ Groundwater at 12 Ft.
15							TOTAL DEPTH 15 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

SOIL BORING NO. SB9-3

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner — DATE BEGAN 5/22/90
EDITED BY T. Ault — DATE FINISHED 5/22/90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 15 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0					CL/ML		SANDY CLAY, fill, oxidized.
	MD1	18/18		12/10/15			SILTY CLAY–CLAY. brown black, dry–slightly moist, soft, friable, non–plastic.
	MD2	18/18		16/11/17			SILTY CLAY, dark greenish gray dry–slightly moist, stiff.
5	MD3 + MD5	18/18		6/8/11	CL		SILTY CLAY, pale green, slightly moist, soft, non–plastic, coarse pebble calcite inclusions.
10	MD4	18/18			SP		SAND, mafic minerals, medium coarse, dark, loose, wet, petroleum odor. Grades into a very fine grained sand at 11'–11.5'.
							Groundwater At 12 Ft. ▽
					CL		SILTY CLAY, olive gray, moist, soft, low plasticity.
15							TOTAL DEPTH 15 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

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

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MFC-3(MF17)

INTERNATIONAL TECHNOLOGY CORPORATION

SOIL BORING NO. SB9-4

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST T. D. Ault
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 11.5 FT.
COORDINATES N ____ E ____
DATE BEGAN 4/5/90
DATE FINISHED 4/5/90
GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0	MD1	12/18		12/11/18	ML		CLAYEY SILT, dark grey, dry to slightly moist, very soft, some loose sand.
	MD2	15/18		7/11/12	CL		SILTY CLAY, olive gray, hard, non-plastic,
5	MD3	15/18		11/12/19			color change to brownish black.
					ML		SILT, medium dusky yellow, dry, hard, non-plastic.
		60/60			CL		SANDY CLAY, grayish green, moist, medium plastic, soft. ▽ Groundwater at 9 Ft.
10	MD4	18/18		11/12/12	SM		SILTY SAND, medium bluish gray, very moist, loose.
							TOTAL DEPTH 11.5 FT.
15							
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

SOIL BORING NO. SB9-5

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST T. O. Ault
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 11.5 ft.
COORDINATES N ____ E ____
DATE BEGAN 4-5-90
DATE FINISHED 4-5-90
GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0					SW		SAND, dark brown, fine to coarse, loose, dry.
	MD1	6/18		8/15/29	OL		SILTY CLAY, brownish gray, dry, hard, non-plastic(organic).
	MD2	15/18		7/16/21			
5	MD3	15/18		7/12/21			Color changes to brownish gray.
		50/60			CL		SILTY CLAY, grrenish gray, mottled(green to black), dry to slightly moist, moderately hard, non-plastic.
10	MD4	7/18		6/12/18			GROUNDWATER AT 9.5 FT. ▽
							TOTAL DEPTH 11.5 FT.

15 20 25 30 35 40 45 50 55 60 65 70

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

MFC-5(MF17)

SOIL BORING NO. SB9-6

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 15 ft.

COORDINATES N ____ E ____
DATE BEGAN 5/22/90
DATE FINISHED 5/22/90
GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0							SANDY CLAY, fill.
	MD1	18/18		6/10/11	CL		SILTY CLAY; yellowish gray, slightly moist, moderately stiff, crumbly, non-plastic.
	MD2	18/18		4/4/6			Pale yellowish brown, moderately moist, soft, slightly plastic.
5	MD3 MD5	18/18		4/5/5	ML		SANDY SILT, greyish yellow, moderatly moist, crumbly, low plasticity some fine pebbles of calcite.
							SILT, medium light grey mottled dusky yellow, moist, medium stiff, non-plastic loose.
10	MD4	18/18		3/4/8	SP		SAND, fine to medium, dark minerals with quartz, loose wet. ▽ Groundwater At 12 Ft.
					ML		CLAYEY SILTS, light olive gray, moist, very soft, plastic.
15							TOTAL DEPTH 15 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

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

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MFC-6(MF17)

INTERNATIONAL TECHNOLOGY CORPORATION

SOIL BORING NO. SB9-7

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault — DATE BEGAN 5/21/90
CHECKED BY W. Garber — DATE FINISHED 5/21/90
TOTAL DEPTH 11.5 ft. — GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0	MD1	18/18		5/7/8	CL		SILTY CLAY, pale yellowish brown, soft, slightly moist to dry, non-plastic, crumbly.
	MD2	18/18		3/3/5	CL/SP		SILTY CLAY, moderate yellowish brown, slightly moist, medium firm. 1-2' interbeds of gravelly sand, medium grain.
5	MD3	18/18		12/16/18	SP		SANDS, gravelly, very fine to coarse sands, loose, very fine gravel, rounded sub-angular, moist to wet. ▽ Groundwater At 9 ft.
10	MD4			8/8/5	ML		CLAYEY SILT, some sand, dark yellowish orange, soft, moist, non-plastic. TOTAL DEPTH 11.5 FT.
15							
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

MFC-7(MF18)

SOIL BORING NO. SB9-8

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault — DATE BEGAN 5/22/90
CHECKED BY W. Garber — DATE FINISHED 5/22/90
TOTAL DEPTH 14 ft. — GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0					CL		SANDY CLAY & GRAVEL, fill.
	MD1	18/18		4/6/6	CL		CLAY, brownish black, medium firm, moderately moist, moderate plastic.
	MD2	18/18		3/4/6	CL		SILTY CLAY, yellowish gray, moderately moist, very soft, crumbly, low plasticity. Grayish olive, moist, very soft, moderate plastic.
5	MD3	18/18		3/4/4	ML		CLAYEY SILT, yellowish gray, moderately moist, very moist, very soft crumbly, low plasticity.
					SC		CLAYEY SAND, light olive gray, moist, very soft.
10	MD4	18/18		2/4/6	ML		SILT, medium grey, wet, loose, fine sands.
					SP		SAND, very fine to fine grained, wet, loose mafic mineral content. Groundwater At 12 Ft. ▽
					SC		CLAYEY SAND, moderately olive brown, wet, very soft.
15							TOTAL DEPTH 14 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

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

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MFC-8(MF18)

INTERNATIONAL TECHNOLOGY CORPORATION

SOIL BORING NO. SB9-9

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner — DATE BEGAN 5/22/90
EDITED BY T. Ault — DATE FINISHED 5/22/90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 15 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0							SANDY CLAY, fill.
	MD1	18/18		4/7/10	CL		SILTY CLAY, brownish black, stiff, moderately moist, slightly-moderately plastic.
	MD2	18/18		4/7/8	CL		SILTY CLAY, olive gray, slightly-moderately moist, medium stiff, low plasticity
5	MD3 & MD5	18/18		4/5/7			Medium gray mottled, light olive brown, moderately moist, soft, crumbly, low plasticity.
					ML		GRAVELLY SANDY SILT, light olive gray, moderately moist, loose. Calcite nodules.
10	MD4	18/18		3/3/4	CH		CLAY, light olive brown, moist, soft, highly plastic.
							▽ Groundwater At 14 Ft.
15							TOTAL DEPTH 15 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

MFC-9(MF18)

SOIL BORING NO. SB9-10

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 14 ft.
COORDINATES N ____ E ____
DATE BEGAN 5/21/90
DATE FINISHED 5/21/90
GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0							SANDY CLAY, fill.
	MD1	18/18		6/6/10	CL		CLAY, light olive gray, slightly moist, soft, low plasticity.
	MD2	18/18		4/5/7	CL		SILTY CLAY, brownish gray, slightly moist, soft, low plasticity, coarse sand inclusion.
5	MD3	18/18		2/2/4	CL/SC		SILTY SANDY CLAY, dusky yellow, moderately moist–moist, very soft, slightly plastic.
					CL		SILTY CLAY, light gray, moderately moist.
					SP		SAND, very fine grained, wet, loose.
10	MD4			3/2/4	CH/SC		SILTY SANDY CLAY, light gray, mottled dusky yellow, moist, soft, high plasticity. Groundwater At 12 Ft. ▽
15							TOTAL DEPTH 14 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

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

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MFC-10(MF18)

INTERNATIONAL TECHNOLOGY CORPORATION

SOIL BORING NO. SB9-11

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner — DATE BEGAN 5/21/90
EDITED BY T. Ault — DATE FINISHED 5/21/90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 14 ft.

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0	MD1	18/18		5/7/10	CL		SILTY CLAY, olive gray, slightly moist, soft, non-plastic.
5	MD2	18/18		5/7/9			Slightly-moderately moist, medium, firm, low plasticity nodules of fine sand, veins of gray silty clay. Coarse sands & fine pebbles.
	MD3	18/18		6/9/10	SW/GW		SANDS - fine gravel, fine-coarse sands, fine coarse pebbles, claymatrix 10% (olivine pebbles) moist.
10	MD4	18/18		6/6/7	SM		SILTY SAND, olive gray, moist, soft, non-plastic.
					ML		CLAYEY SILT, medium gray mottled dark yellowish orange (oxidized), moist, soft, non-plastic. ▽ Groundwater At 12 Ft.
15							TOTAL DEPTH 14 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PAGE 1 OF 1

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

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MFC-11(MF18)

INTERNATIONAL TECHNOLOGY CORPORATION

SOIL BORING NO. SB9-12

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault — DATE BEGAN 5/21/90
CHECKED BY W. Garber — DATE FINISHED 5/21/90
TOTAL DEPTH 15 ft. — GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0	MD1	18/18		8/9/7	CL		SILTY CLAY, light olive gray, slightly moist, soft, non-plastic.
	MD2	18/18		4/7/9			Olive gray, moderately moist, medium firm, moderately plastic, coarse inclusions.
5	MD3	18/18		5/8/7			
					CH		SILTY SANDY CLAY, dusky yellow, moist, very soft, highly plastic.
10	MD4	18/18		3/4/6	ML		CLAYEY SILT, light gray mottled oxidized orange, moist, low plasticity. Groundwater At 12 Ft. ▽
15							TOTAL DEPTH 15 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MFC-12(MF18)

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

IT INTERNATIONAL TECHNOLOGY CORPORATION

SOIL BORING NO. SB9-13

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault — DATE BEGAN 5/23/90
CHECKED BY W. Garber — DATE FINISHED 5/23/90
TOTAL DEPTH 15 ft. — GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0						Fill	SANDY CLAY, fill, some crushed gravel.
	MD1	18/18		3/5/5	CL		CLAY, brown black mottled gray green, moderately moist, moderate plastic.
	MD2	18/18		3/4/7	CL		SILTY CLAY, olive gray, moderately moist, stiff, slight plastic, mottled dusky yellow silt nodules.
5	MD3	18/18		3/4/7			Olive gray mottled light olive gray, moderately moist, soft, slight plastic.
					ML		SANDY SILT, moderate olive brown, moderately moist, loose, minor clay matrix.
10	MD4	18/18		2/3/5			CLAYEY SILT, light olive brown, moist, very soft, low plasticity.
					CH		SILTY CLAY, dark yellowish brown, moist, very soft, high plasticity. Groundwater At 14 Ft. ▽
15							TOTAL DEPTH 15 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

MFC-13(MF18)

SOIL BORING NO. SB9-14

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 15 ft.
COORDINATES N ____ E ____
DATE BEGAN 5/23/90
DATE FINISHED 5/23/90
GROUND SURFACE EL. ____

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	WELL SUMMARY	BLOWS ON SAMPLER	USCS	PROFILE	DESCRIPTION
0							SANDY CLAY, fill.
	MD1	18/18		7/5/6	CL		SILTY CLAY, yellowish brown, dry–slightly moist, bricky, soft, non–plastic, high root content, fine gravel calcite inclustions.
	MD2	18/18		5/6/8			
5	MD3	18/18		7/6/5			Dark yellowish brown, moderately moist, firm, low plasticity.
					ML		CLAYEY SILT, light olive gray, moderately moist, soft friable, non–plastic, high root content.
10	MD4	18/18		3/2/4			Light olive brown, moist, very soft, high plasticity. Increase silt content, low plasticity.
					CH		SITLY CLAY, moderate olive brown, moist, very soft, high plasticity.
15							Groundwater At 14 Ft. ▽
							TOTAL DEPTH 15 FT.
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							

DRILLING CO.: Water Developement
DRILL METHOD: 8" Hollow Stem Auger

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

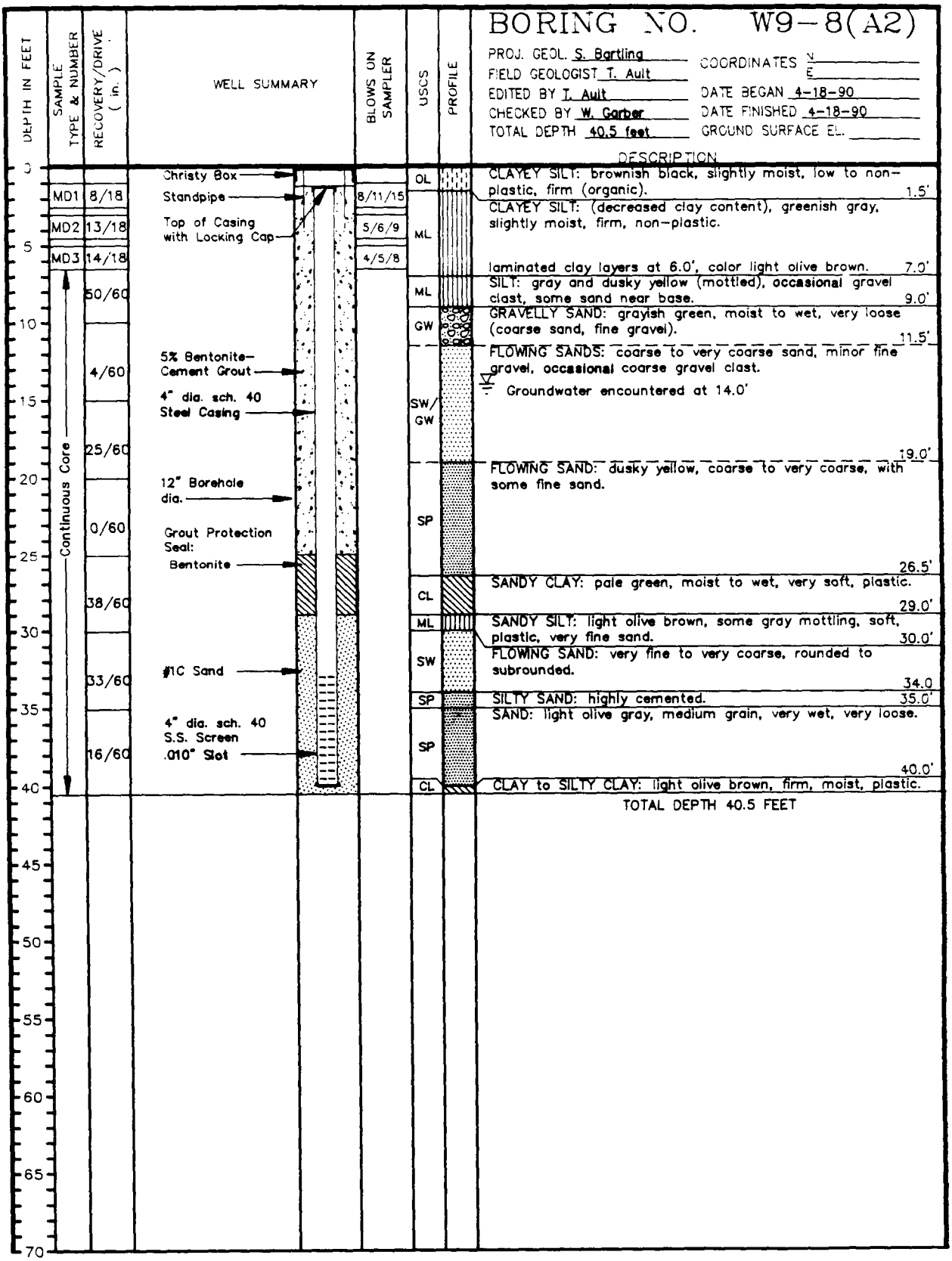
INTERNATIONAL TECHNOLOGY CORPORATION

MFC–14(MF18)

BORING NO. W9-8(A2)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 40.5 feet

COORDINATES N ____ E ____
DATE BEGAN 4-18-90
DATE FINISHED 4-18-90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

PAGE 1 OF 1

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

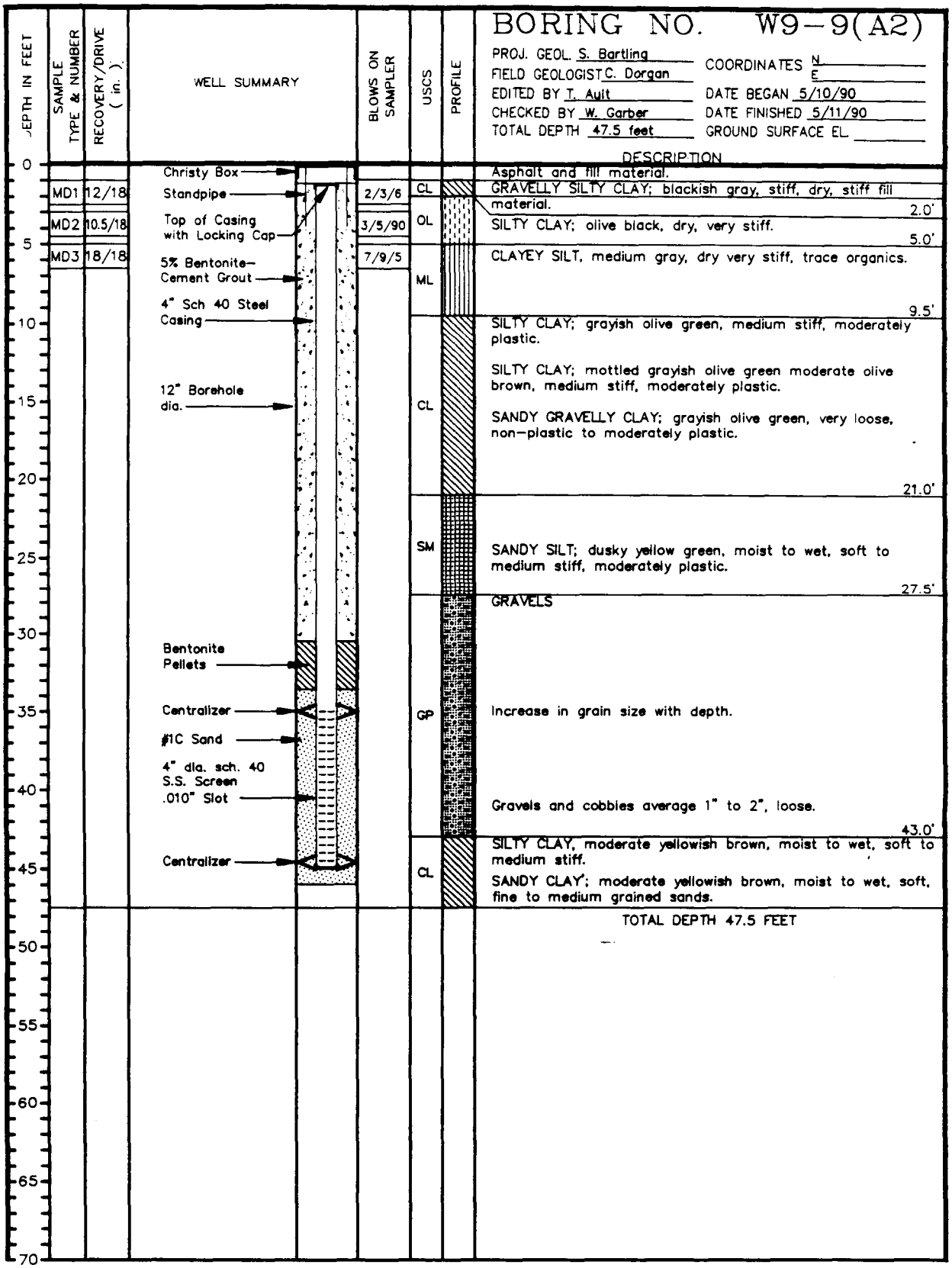
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

INTERNATIONAL TECHNOLOGY

MF-W9-8(MF13)

BORING NO. W9-9(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST C. Dorgan — DATE BEGAN 5/10/90
EDITED BY T. Ault — DATE FINISHED 5/11/90
CHECKED BY W. Garber — GROUND SURFACE EL ____
TOTAL DEPTH 47.5 feet



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

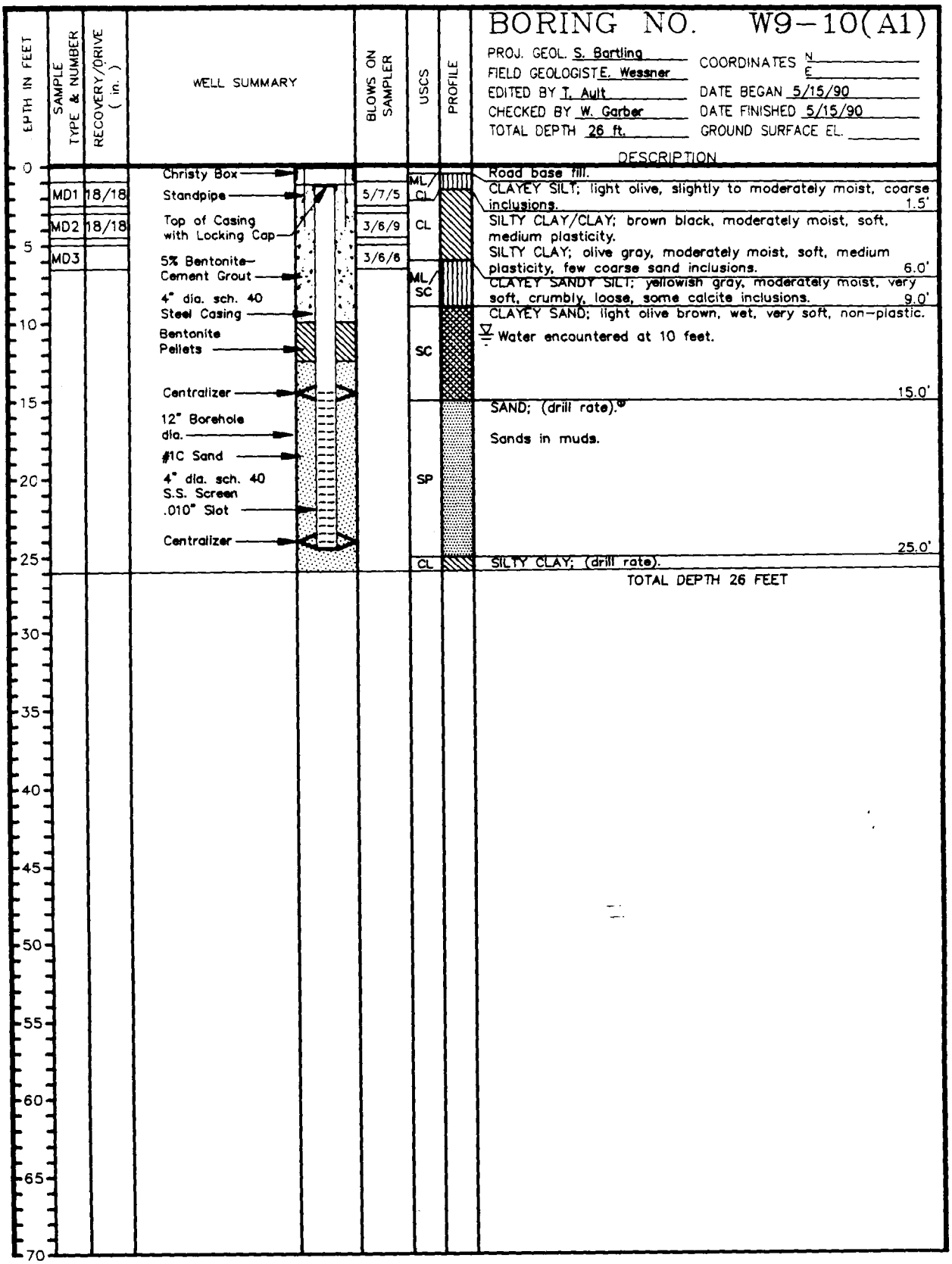
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-9(MF15)

BORING NO. W9-10(A1)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 26 ft.
COORDINATES N ____ E ____
DATE BEGAN 5/15/90
DATE FINISHED 5/15/90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

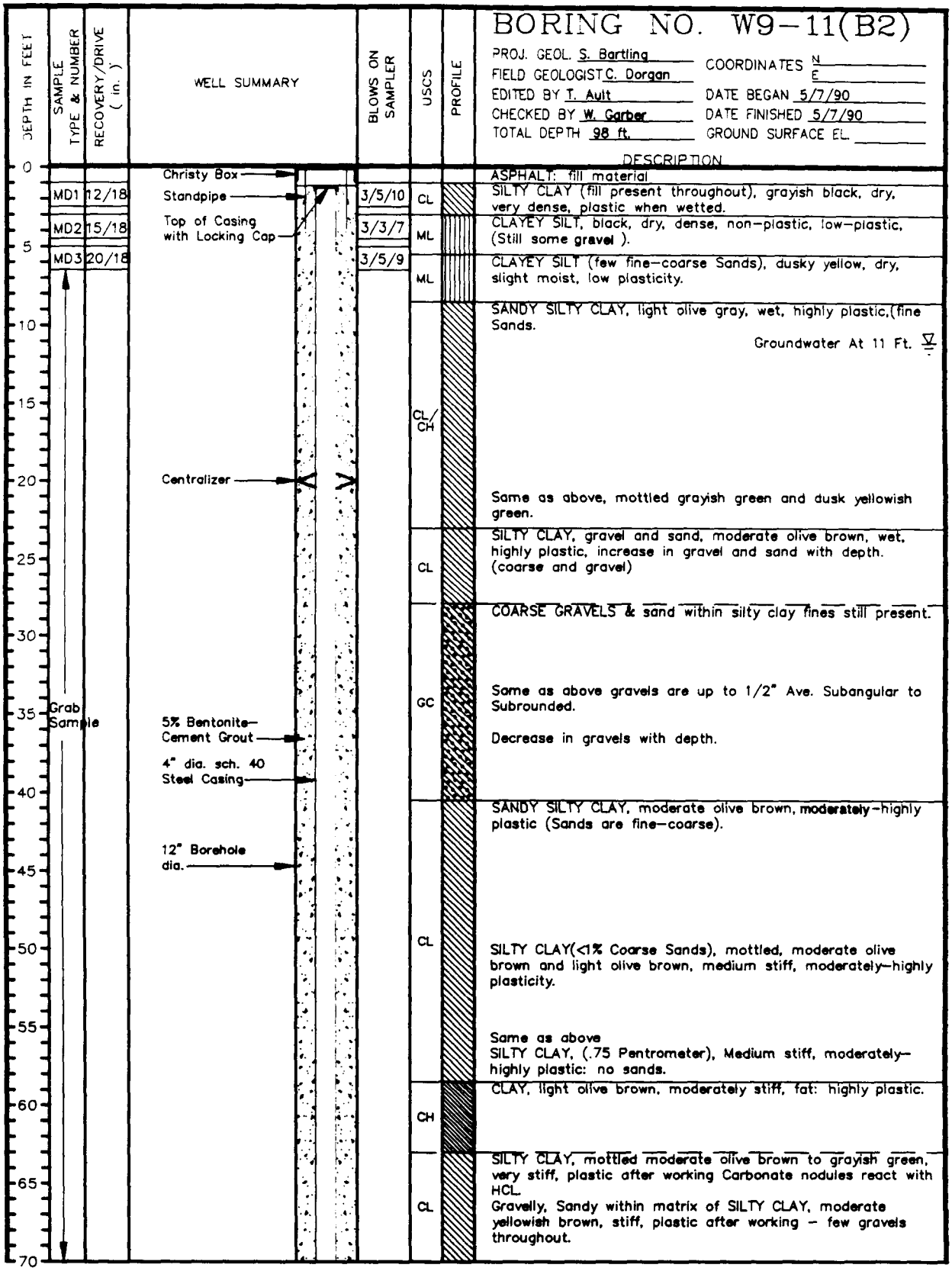
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-11(B2)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST C. Dorgan
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 98 ft.
COORDINATES N ____ E ____
DATE BEGAN 5/7/90
DATE FINISHED 5/7/90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Air Rotary with Drive Casing

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

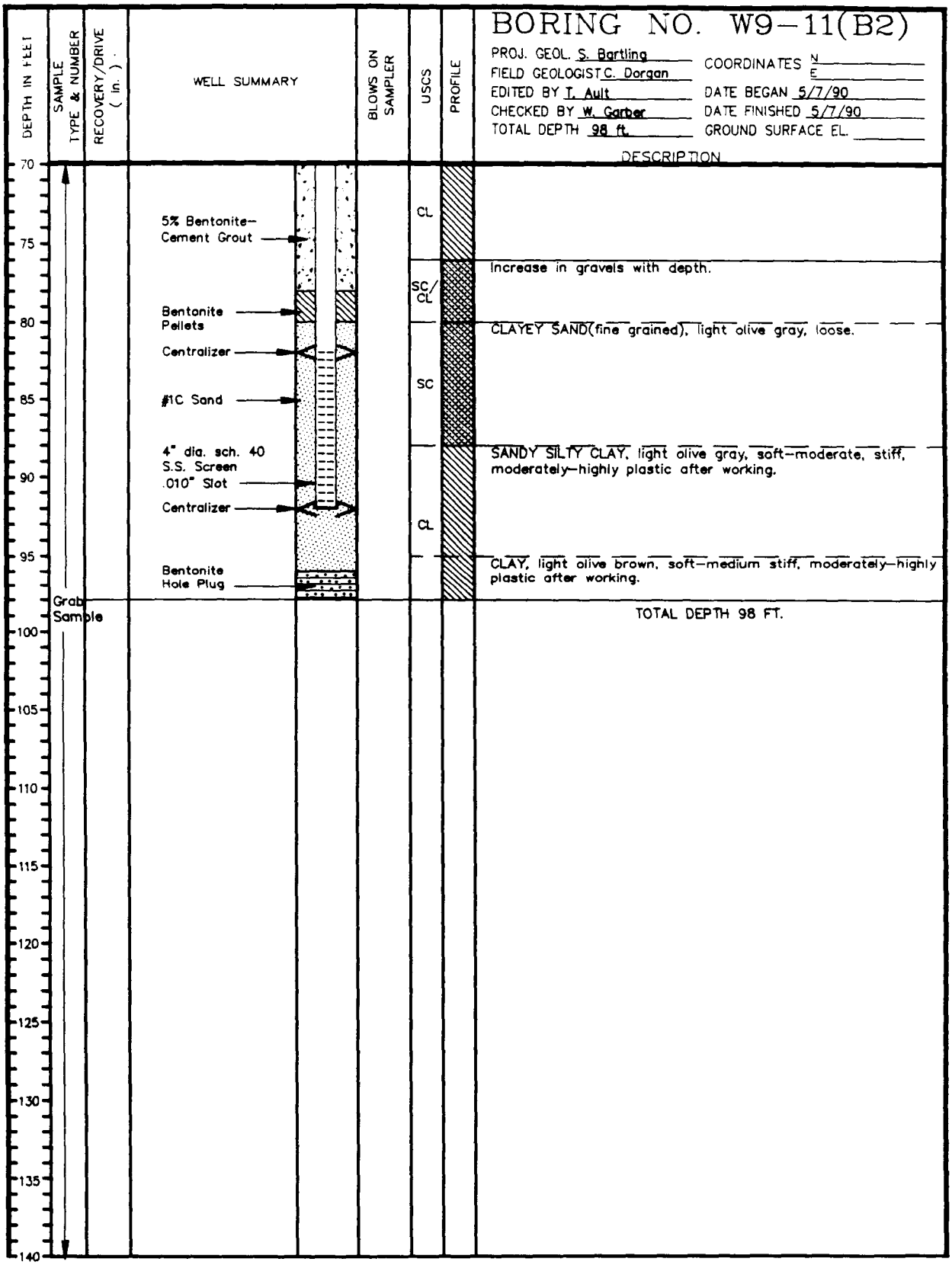
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-11(MF-19)

BORING NO. W9-11(B2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST C. Dorgan
EDITED BY T. Ault — DATE BEGAN 5/7/90
CHECKED BY W. Garber — DATE FINISHED 5/7/90
TOTAL DEPTH 98 ft. — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Air Rotary with Drive Casing

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

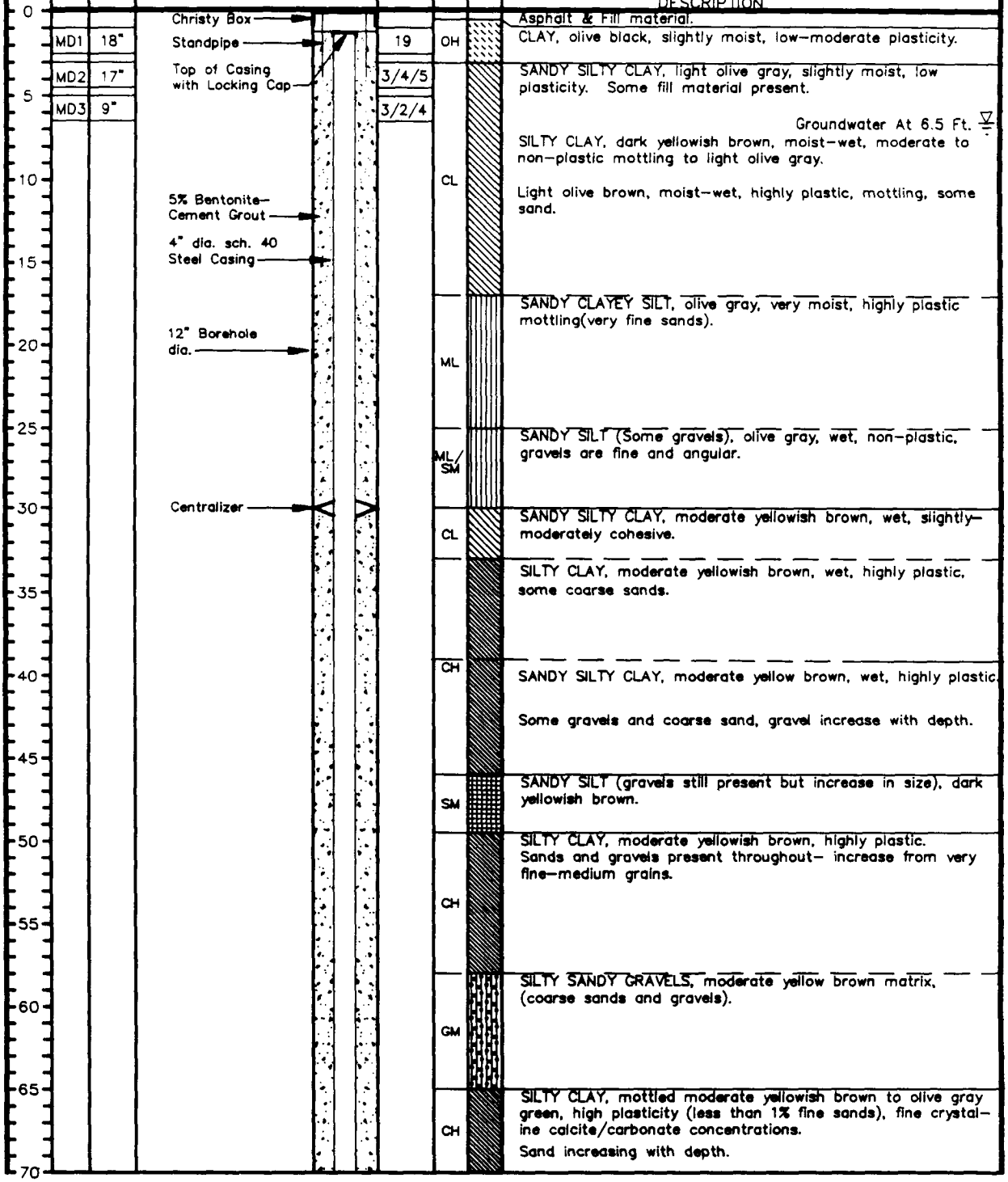
INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-11(MF-19)

BORING NO. W9-12(B2)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST C. Dorgan
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 100 ft.

COORDINATES N ____ E ____
DATE BEGAN 5/1/90
DATE FINISHED 5/2/90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Air Rotary with Drive Casing

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

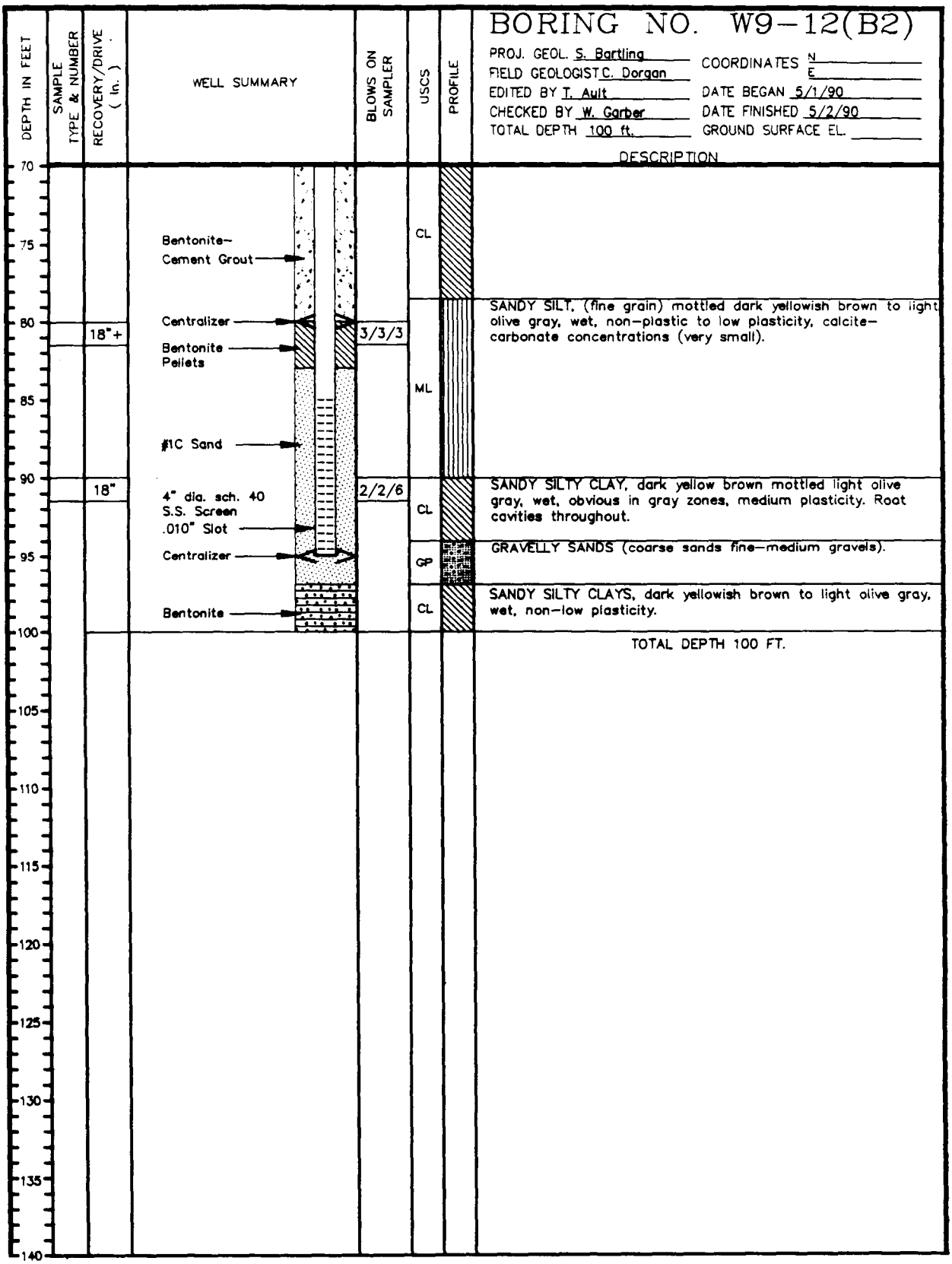
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-12(MF-19)

BORING NO. W9-12(B2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST C. Dorgan
EDITED BY T. Ault — DATE BEGAN 5/1/90
CHECKED BY W. Garber — DATE FINISHED 5/2/90
TOTAL DEPTH 100 ft. — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Air Rotary with Drive Casing

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

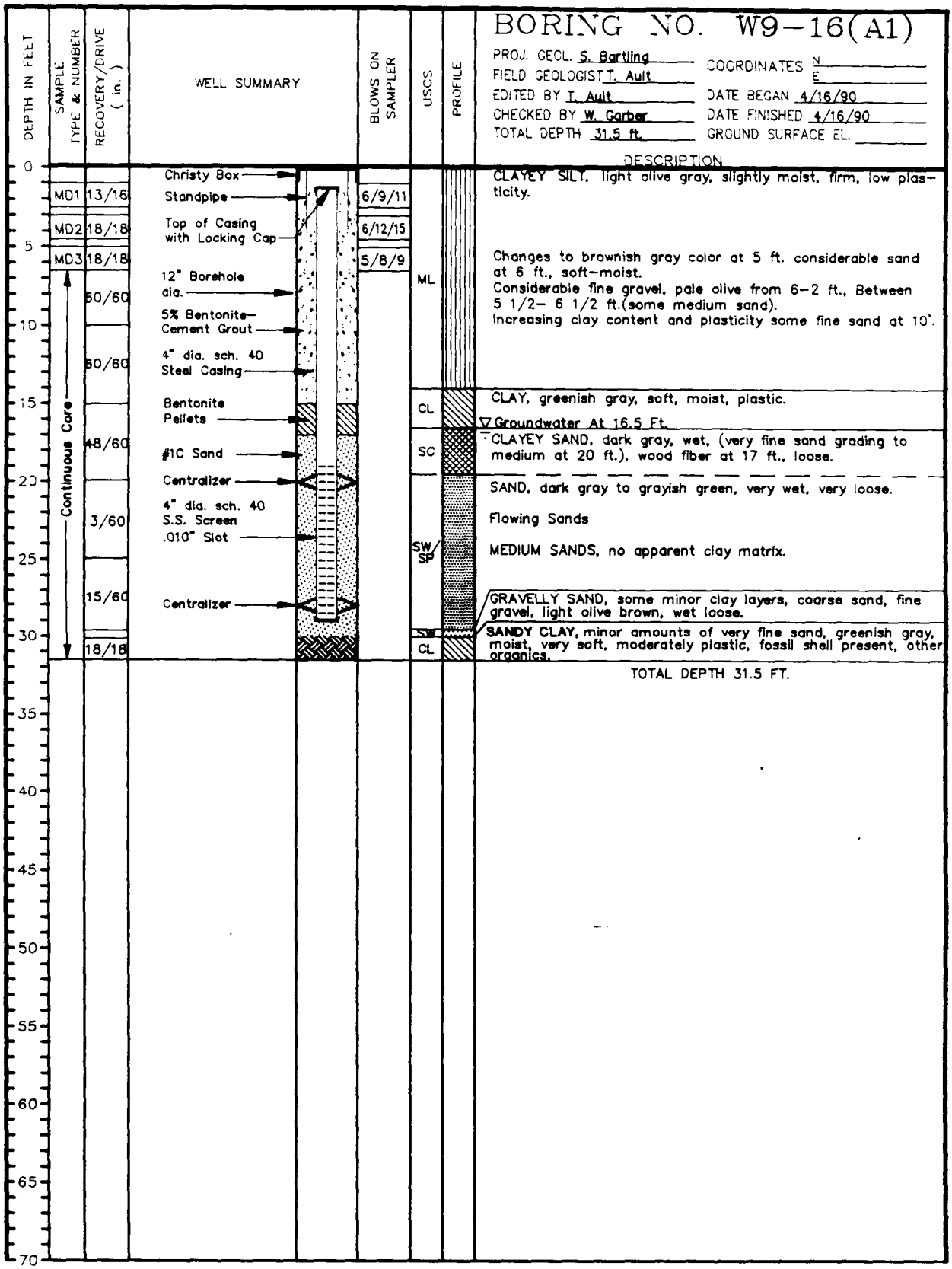
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-12(MF-19)

BORING NO. W9-16(A1)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault — DATE BEGAN 4/16/90
EDITED BY T. Ault — DATE FINISHED 4/16/90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 31.5 ft.



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

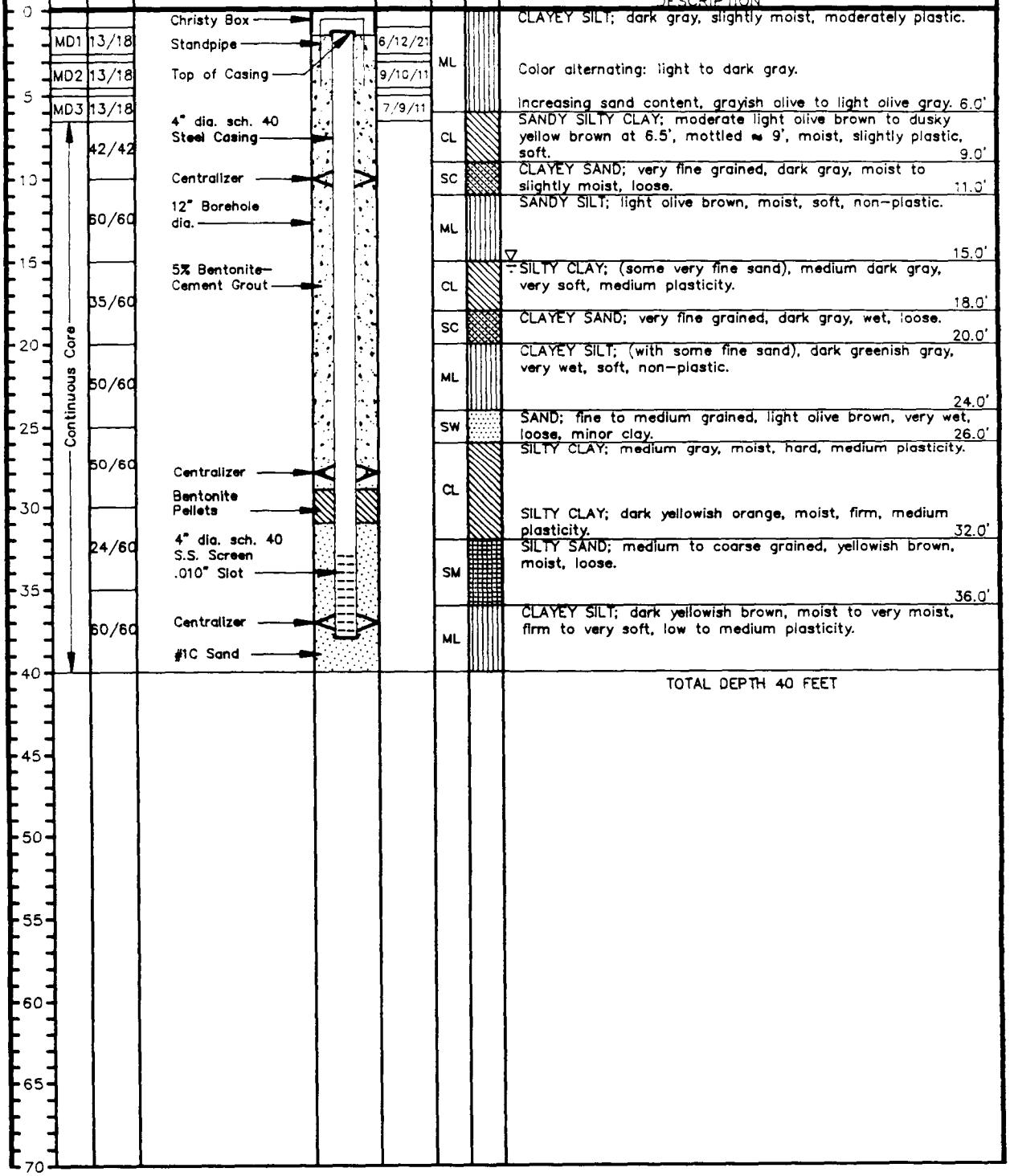
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-16(MF-19)

BORING NO. W9-17(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault — DATE BEGAN 4-3-90
CHECKED BY W. Garber — DATE FINISHED 4-4-90
TOTAL DEPTH 40 ft. — GROUND SURFACE EL. ____



0 — CLAYEY SILT; dark gray, slightly moist, moderately plastic. (ML)

Color alternating: light to dark gray.

Increasing sand content, grayish olive to light olive gray. 6.0'

SANDY SILTY CLAY; moderate light olive brown to dusky yellow brown at 6.5', mottled ≈ 9', moist, slightly plastic, soft. (CL) 9.0'

CLAYEY SAND; very fine grained, dark gray, moist to slightly moist, loose. (SC) 11.0'

SANDY SILT; light olive brown, moist, soft, non-plastic. (ML) 15.0'

▽ SILTY CLAY; (some very fine sand), medium dark gray, very soft, medium plasticity. (CL) 18.0'

CLAYEY SAND; very fine grained, dark gray, wet, loose. (SC) 20.0'

CLAYEY SILT; (with some fine sand), dark greenish gray, very wet, soft, non-plastic. (ML) 24.0'

SAND; fine to medium grained, light olive brown, very wet, loose, minor clay. (SW) 26.0'

SILTY CLAY; medium gray, moist, hard, medium plasticity. (CL)

SILTY CLAY; dark yellowish orange, moist, firm, medium plasticity. 32.0'

SILTY SAND; medium to coarse grained, yellowish brown, moist, loose. (SM) 36.0'

CLAYEY SILT; dark yellowish brown, moist to very moist, firm to very soft, low to medium plasticity. (ML)

TOTAL DEPTH 40 FEET

DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

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

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

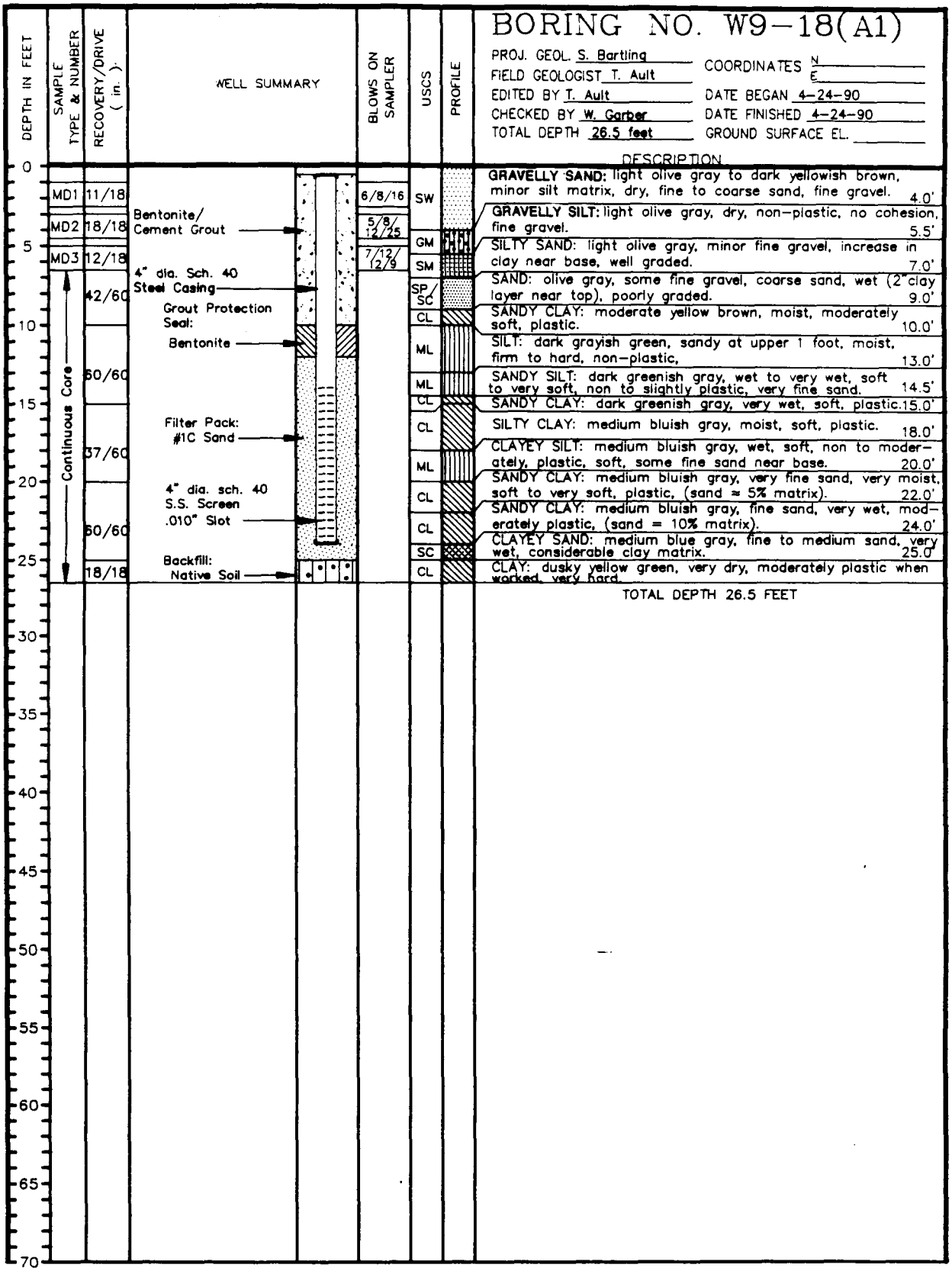
MF-W9-17(*MF13)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-18(A1)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 26.5 feet

COORDINATES N ____ E ____
DATE BEGAN 4-24-90
DATE FINISHED 4-24-90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

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

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

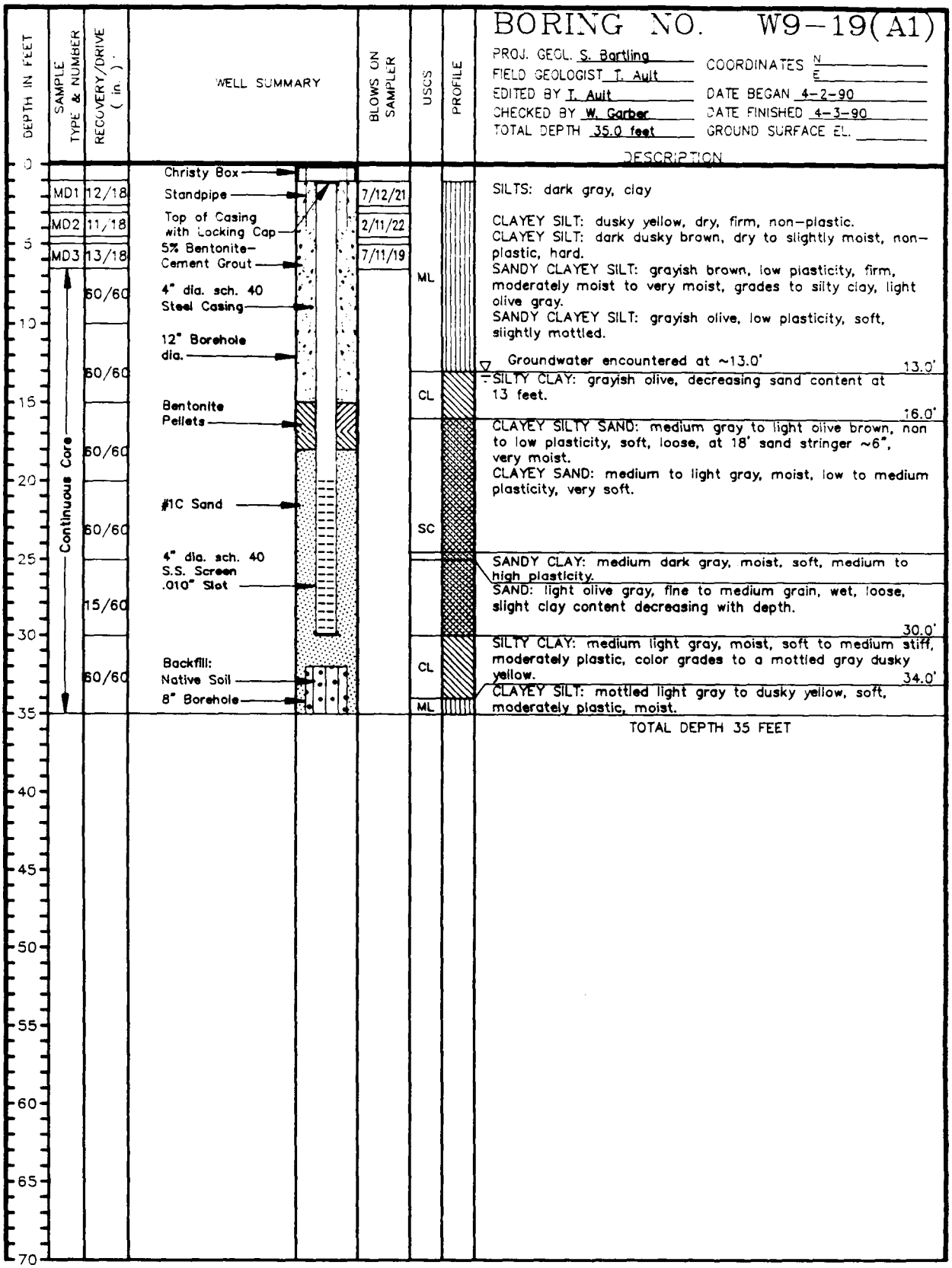
MF-W9-18(MF13)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-19(A1)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 35.0 feet

COORDINATES N ____ E ____
DATE BEGAN 4-2-90
DATE FINISHED 4-3-90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

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

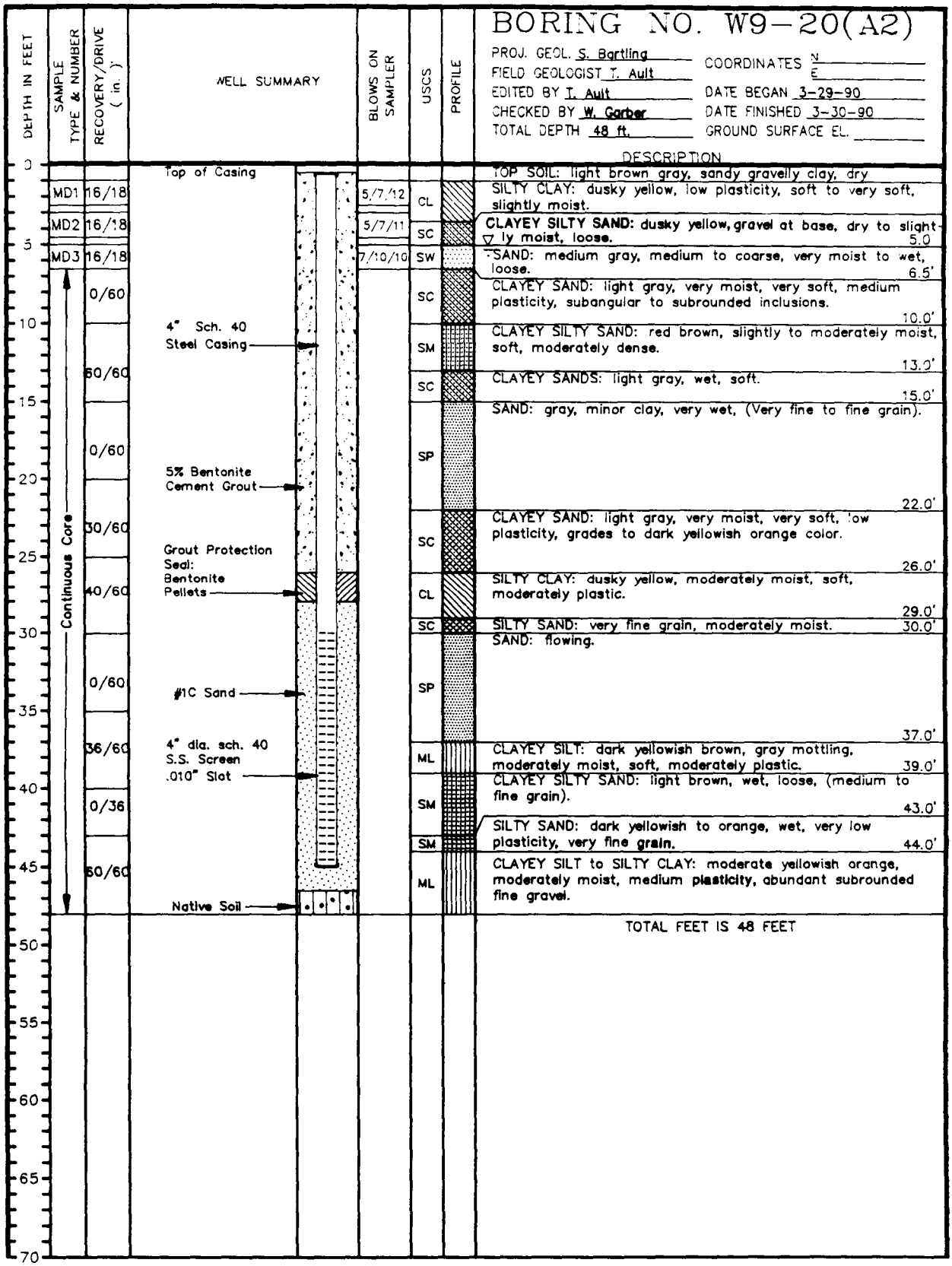
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MF-W9-19(MF13)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-20(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault — DATE BEGAN 3-29-90
CHECKED BY W. Garber — DATE FINISHED 3-30-90
TOTAL DEPTH 48 ft. — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

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

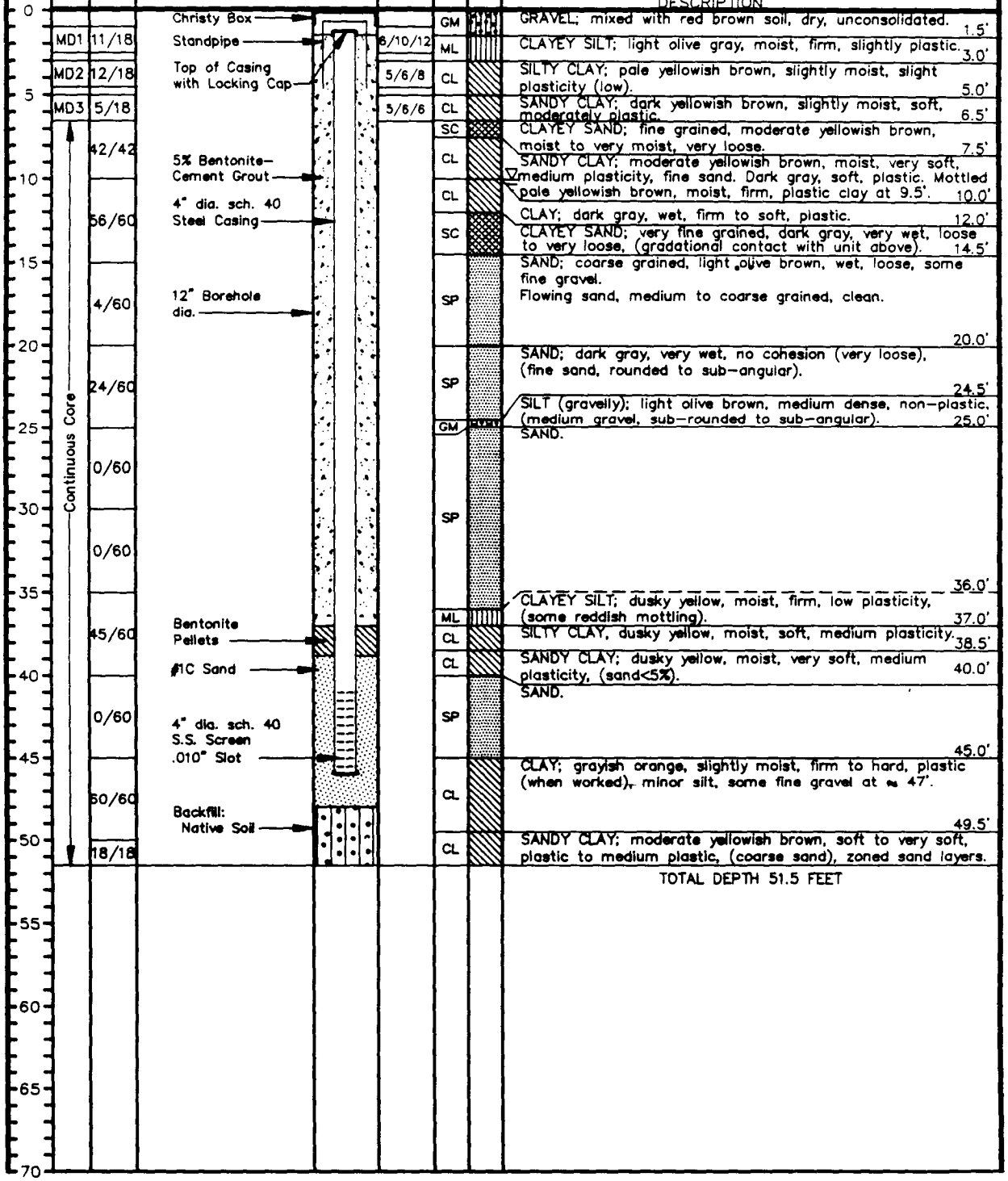
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MF-W9-20(MF13)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-21(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault — DATE BEGAN 4-19-90
CHECKED BY W. Garber — DATE FINISHED 4-23-90
TOTAL DEPTH 51.5 ft. — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

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

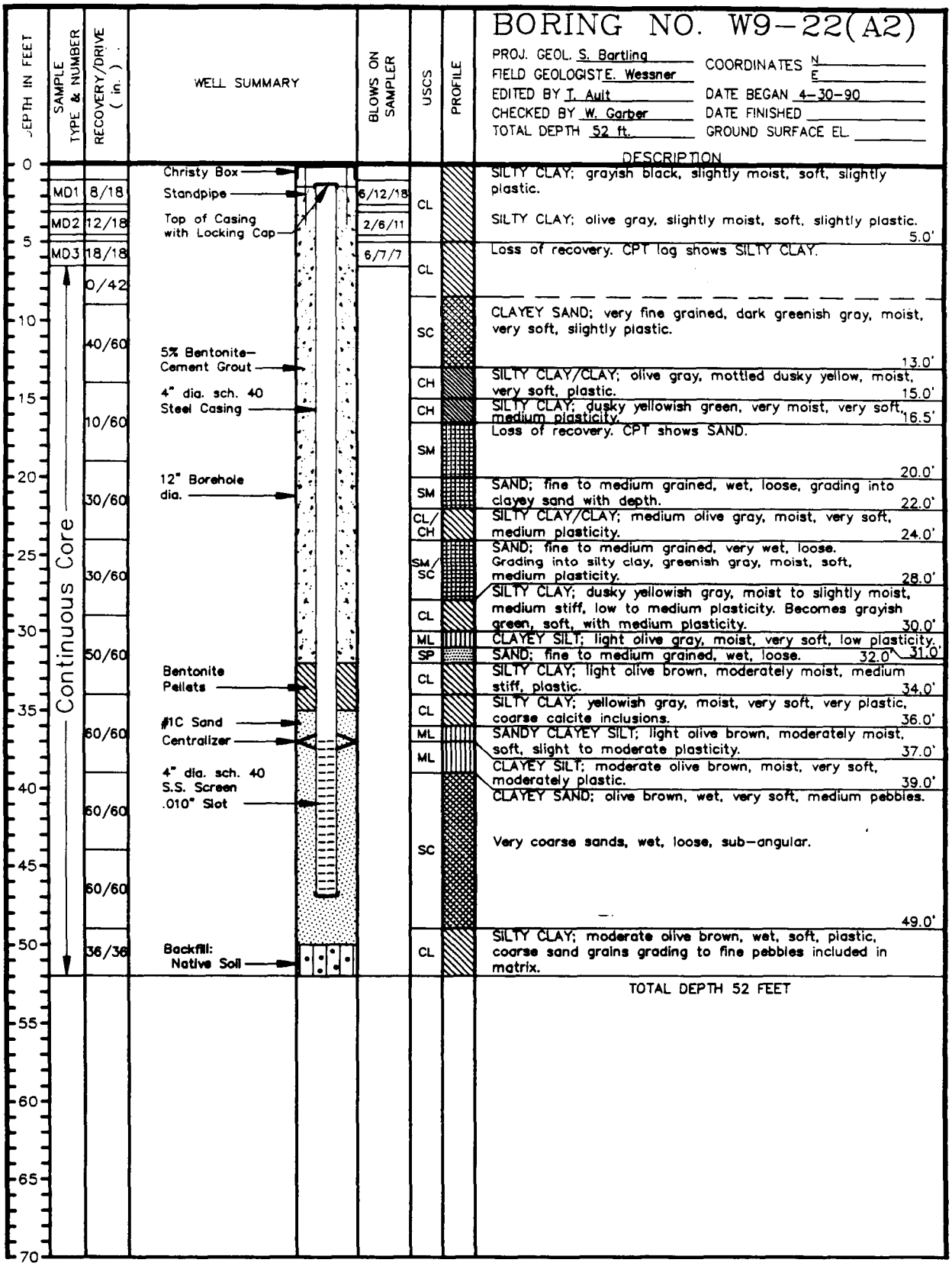
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

INTERNATIONAL TECHNOLOGY

MF-W9-21(*MF13)

BORING NO. W9-22(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault — DATE BEGAN 4-30-90
CHECKED BY W. Garber — DATE FINISHED ____
TOTAL DEPTH 52 ft. — GROUND SURFACE EL ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

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

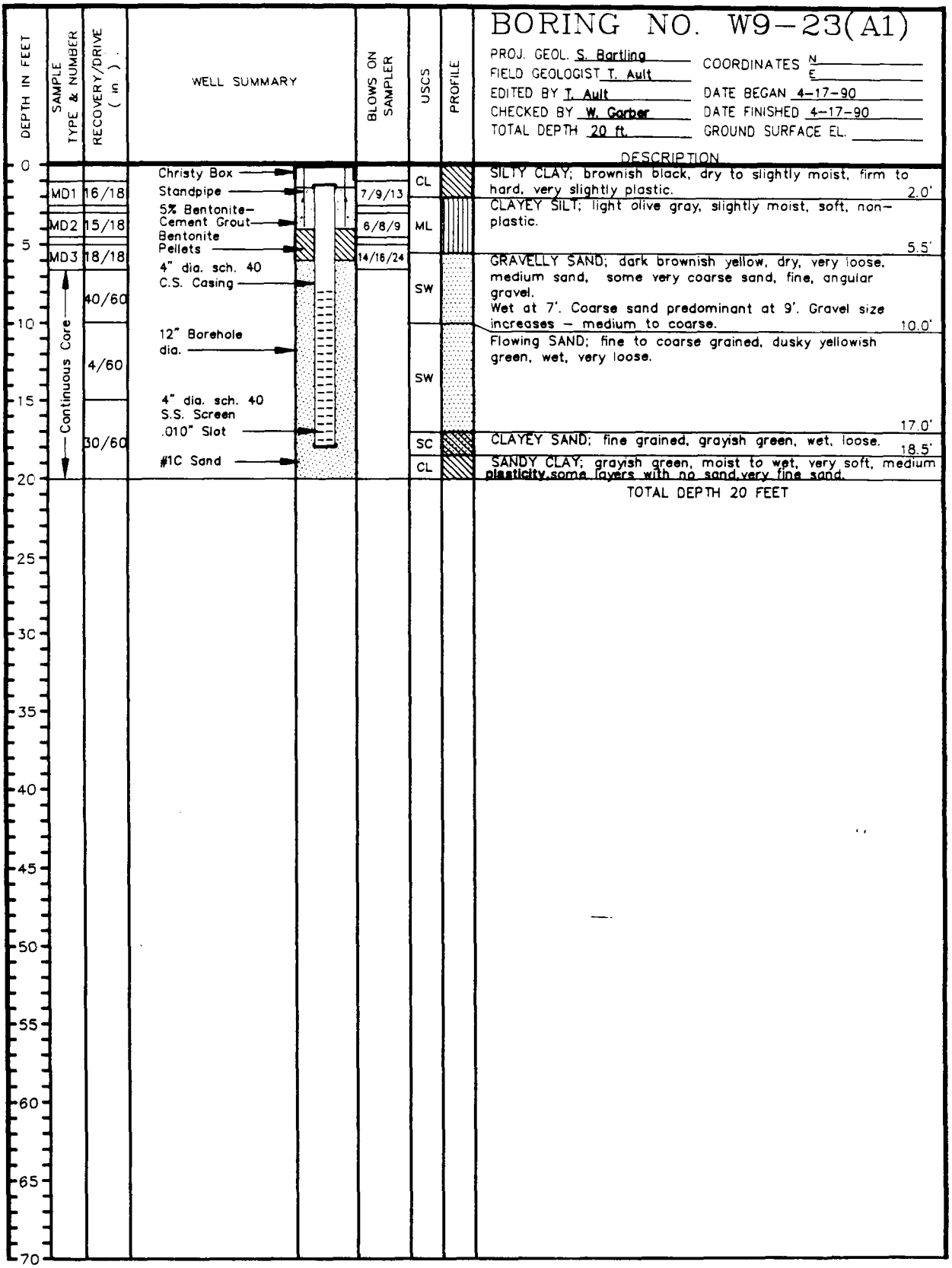
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MF-W9-22(=MF16)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-23(A1)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault — DATE BEGAN 4-17-90
CHECKED BY W. Garber — DATE FINISHED 4-17-90
TOTAL DEPTH 20 ft. — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

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

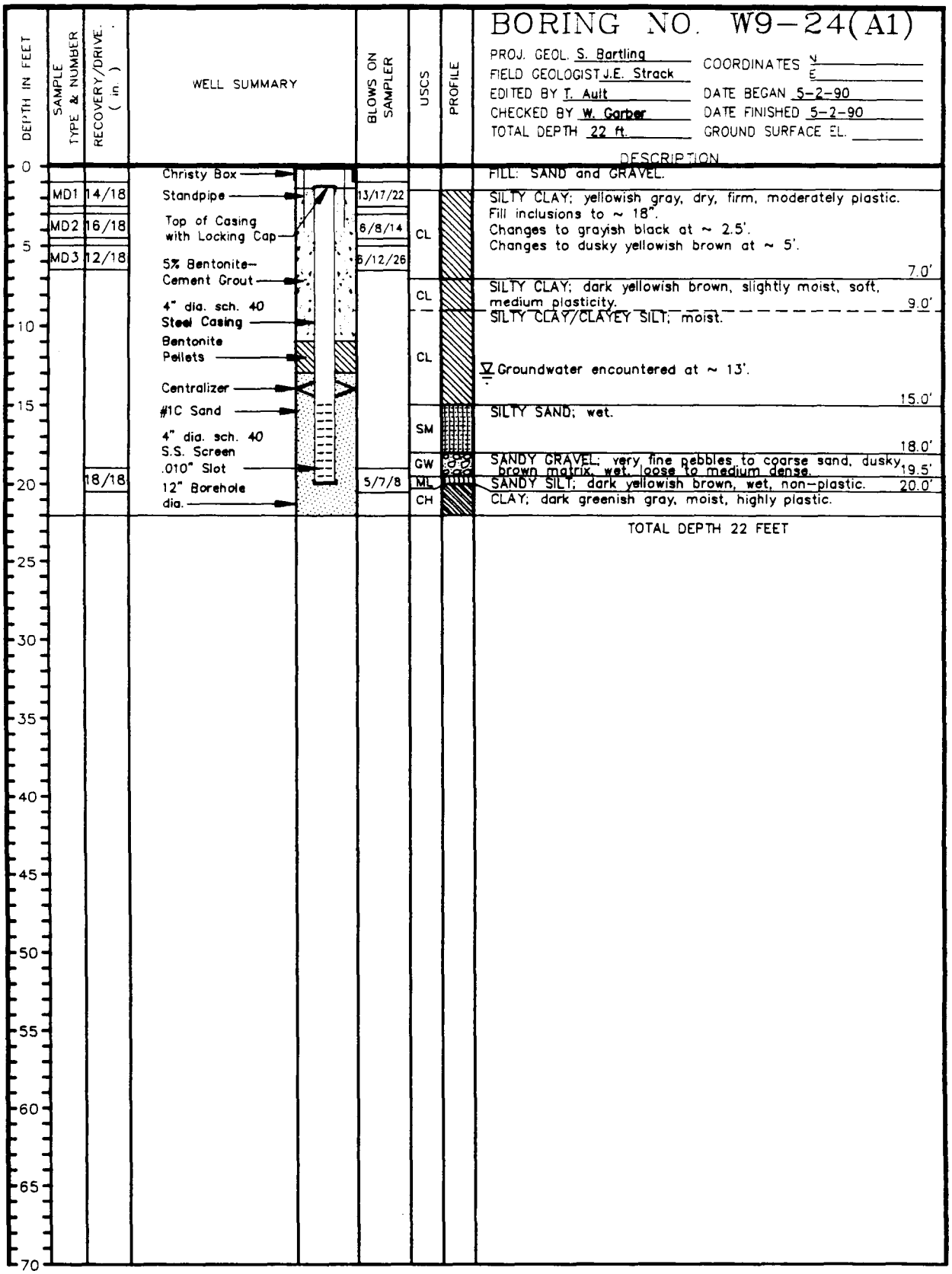
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MF-W9-23(•MF16)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-24(A1)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST J.E. Strack
EDITED BY T. Ault — DATE BEGAN 5-2-90
CHECKED BY W. Garber — DATE FINISHED 5-2-90
TOTAL DEPTH 22 ft. — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

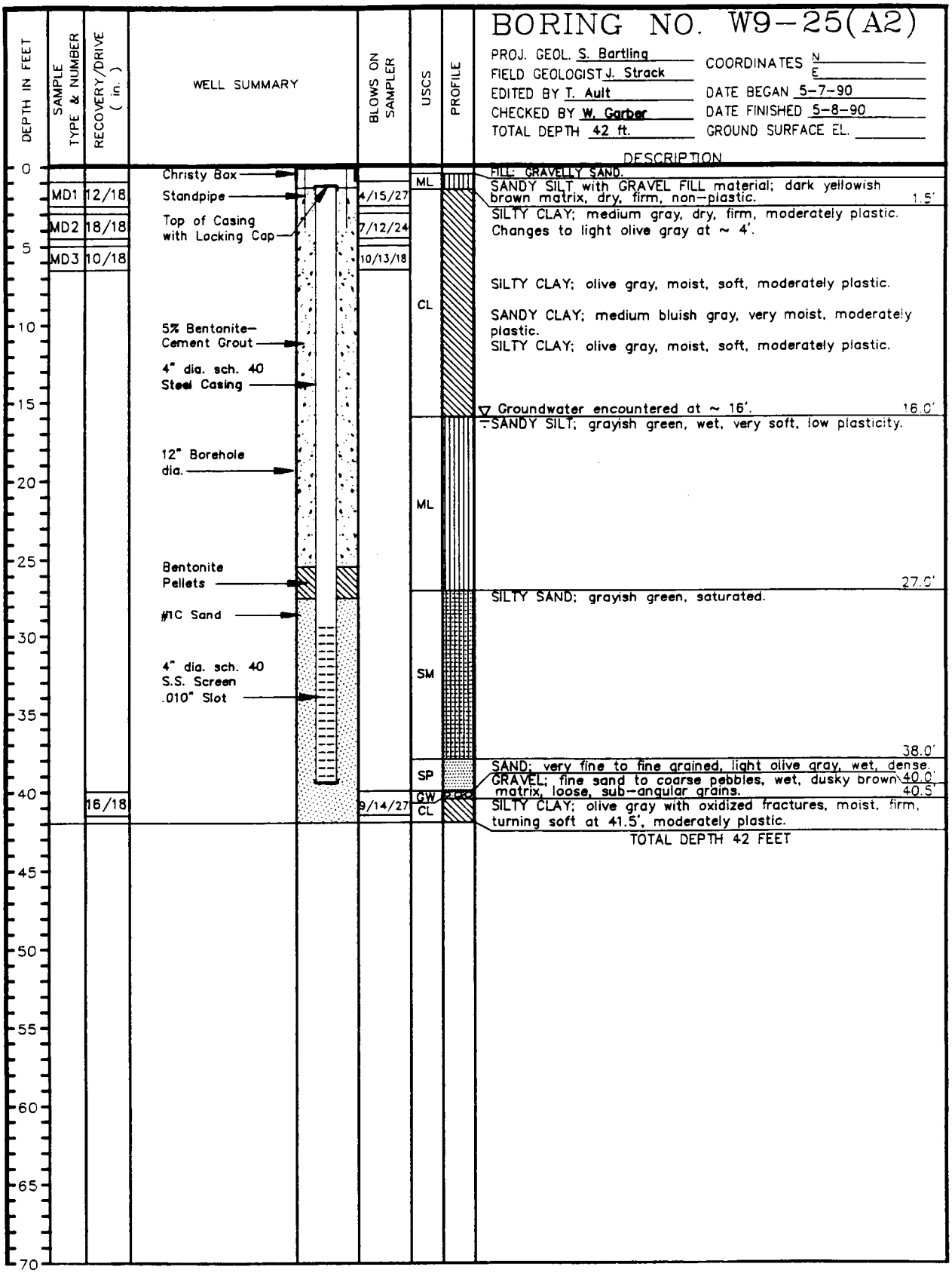
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

INTERNATIONAL TECHNOLOGY

BORING NO. W9-25(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST J. Strack — DATE BEGAN 5-7-90
EDITED BY T. Ault — DATE FINISHED 5-8-90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 42 ft.



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

PAGE 1 OF 1

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

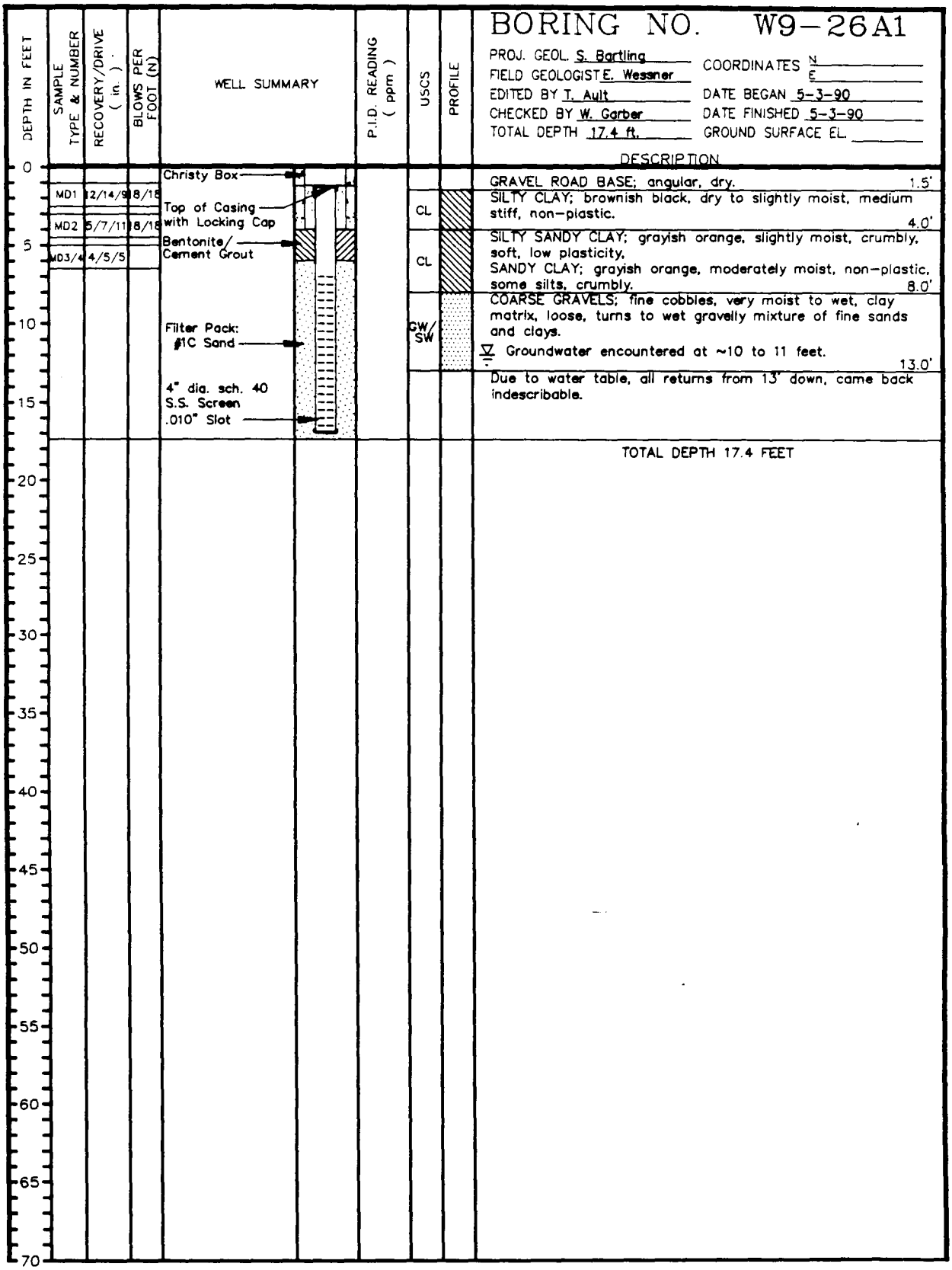
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-25(•MF16)

BORING NO. W9-26A1

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault — DATE BEGAN 5-3-90
CHECKED BY W. Garber — DATE FINISHED 5-3-90
TOTAL DEPTH 17.4 ft. — GROUND SURFACE EL. ____



DRILLING CO.:
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

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

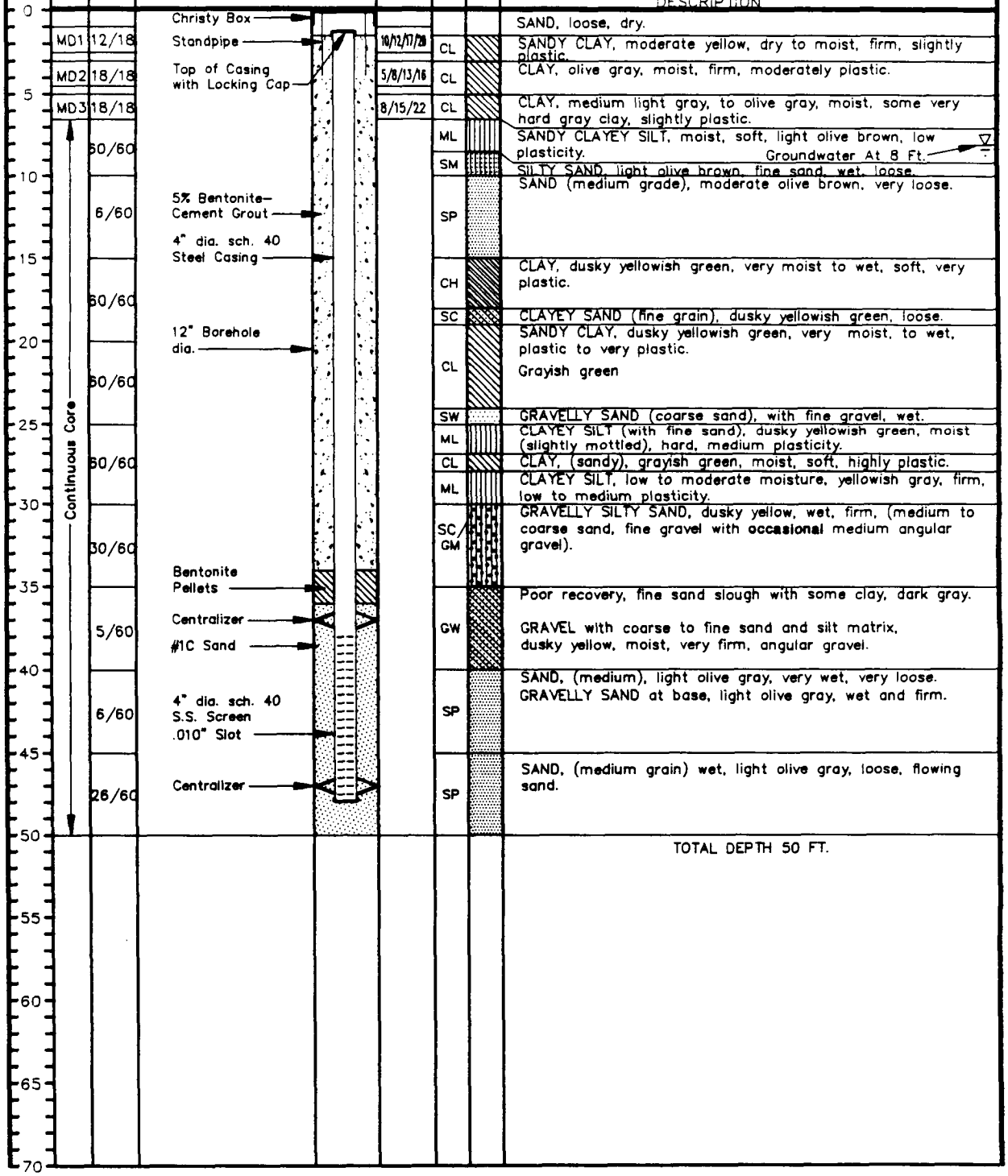
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MFW926A1(MF)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-28(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault — DATE BEGAN 4/27/90
CHECKED BY W. Garber — DATE FINISHED 4/27/90
TOTAL DEPTH 50 ft. — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

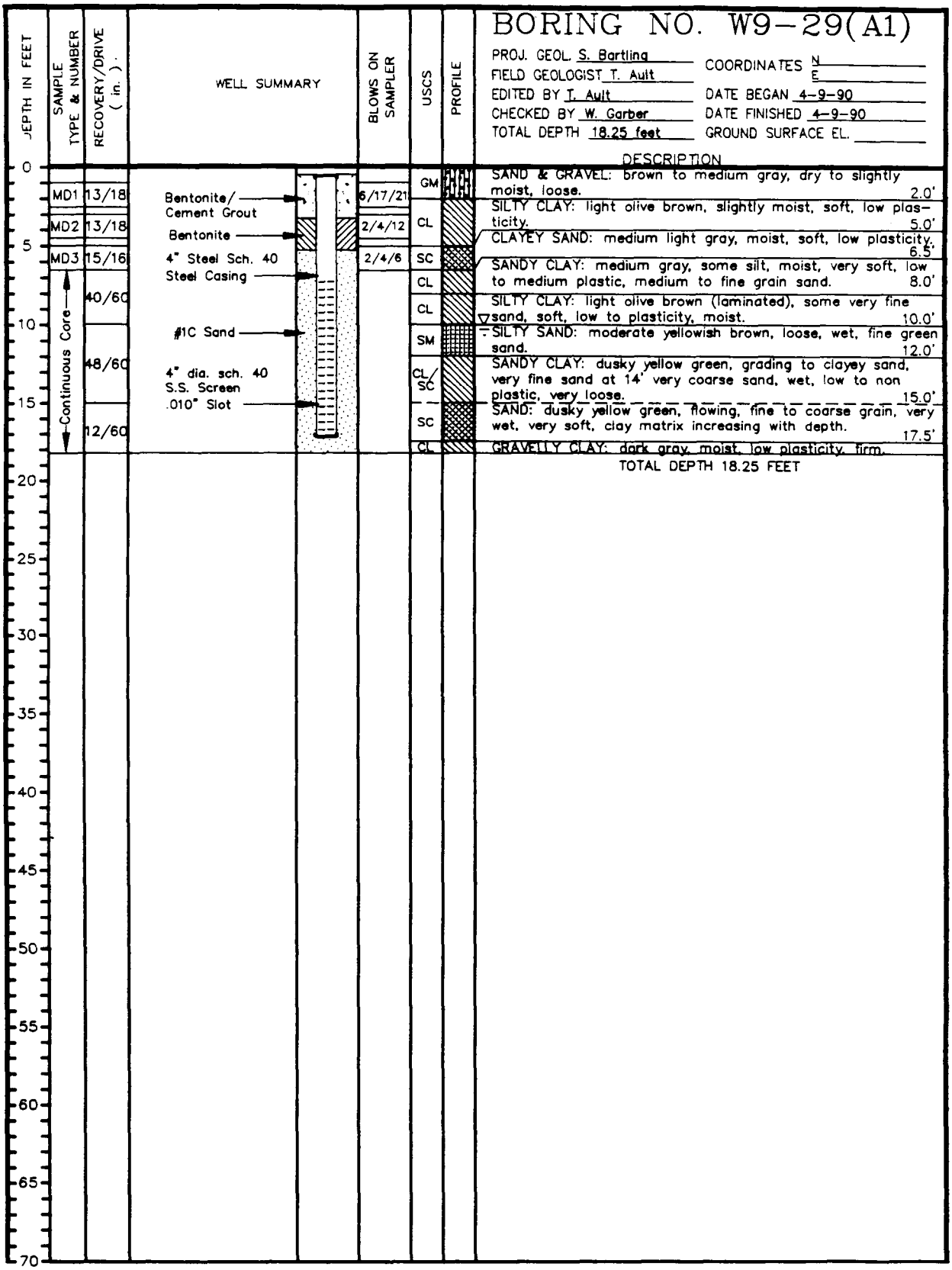
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-28(•MF16)

BORING NO. W9-29(A1)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault — DATE BEGAN 4-9-90
CHECKED BY W. Garber — DATE FINISHED 4-9-90
TOTAL DEPTH 18.25 feet — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

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

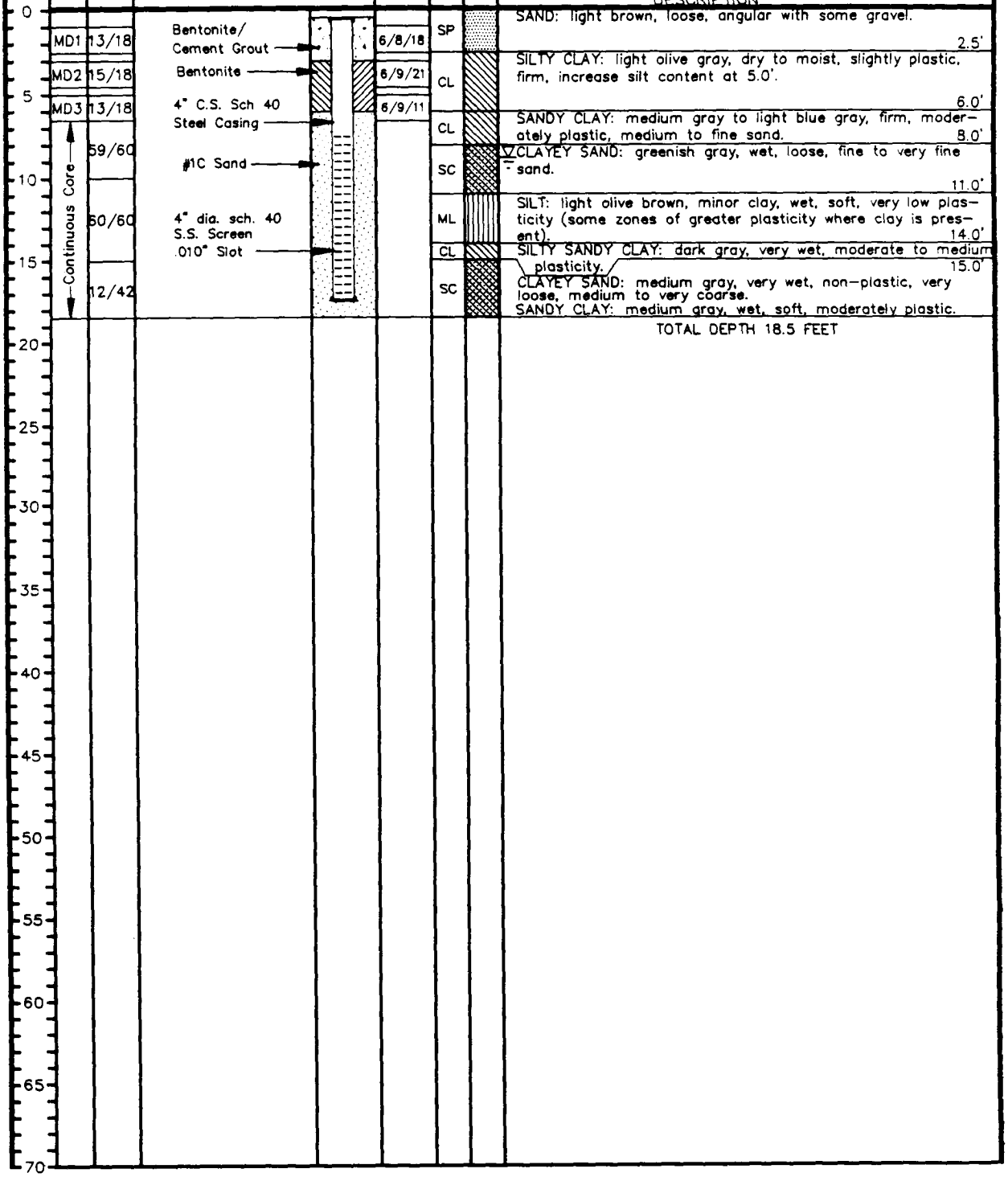
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

MF-W9-29(MF13)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-30(A1)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault — DATE BEGAN 4-6-90
EDITED BY T. Ault — DATE FINISHED 4-6-90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 18.5 ft



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

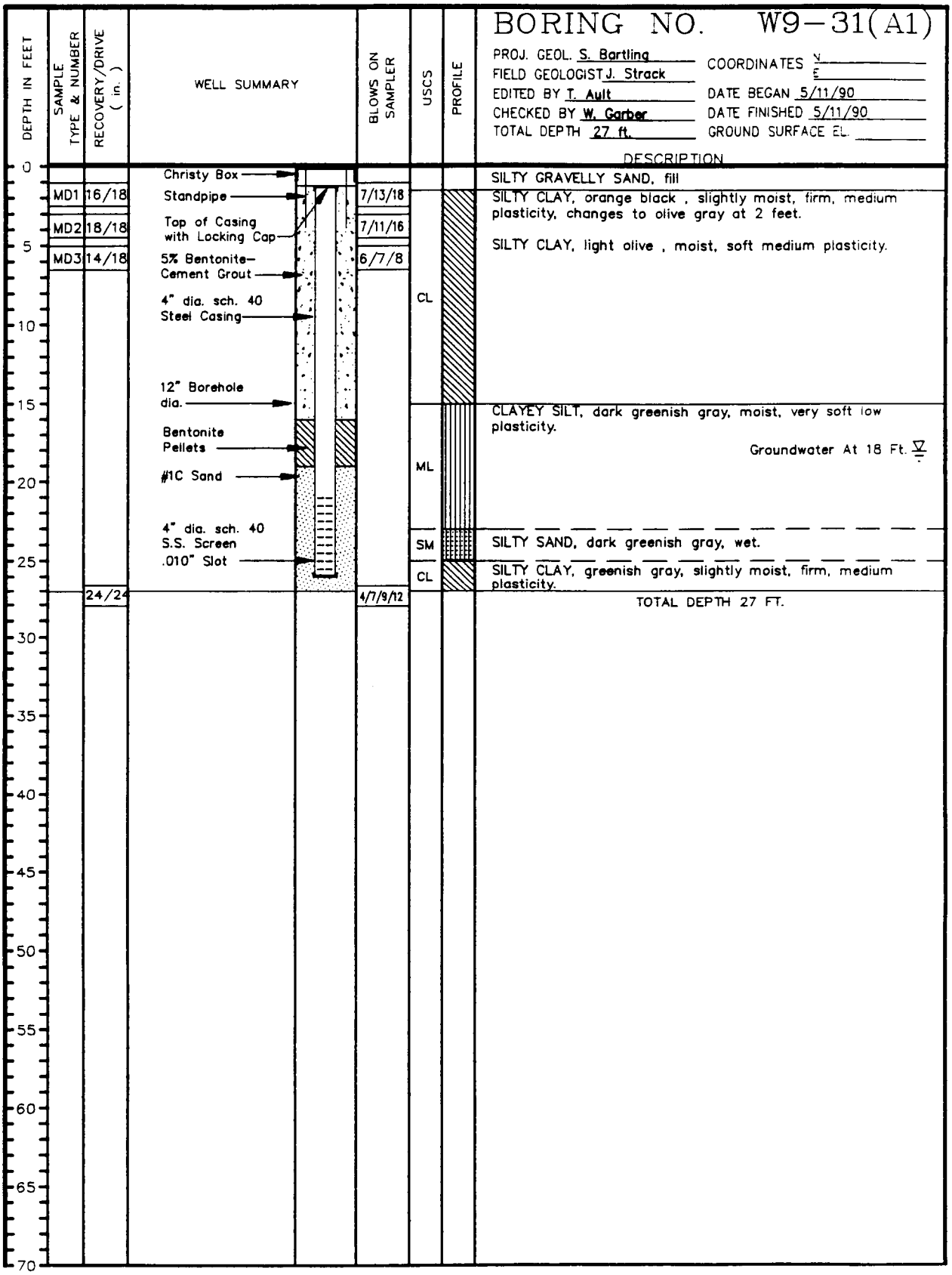
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-30(MF14)

BORING NO. W9-31(A1)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST J. Strack
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 27 ft.
COORDINATES N ____ E ____
DATE BEGAN 5/11/90
DATE FINISHED 5/11/90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

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

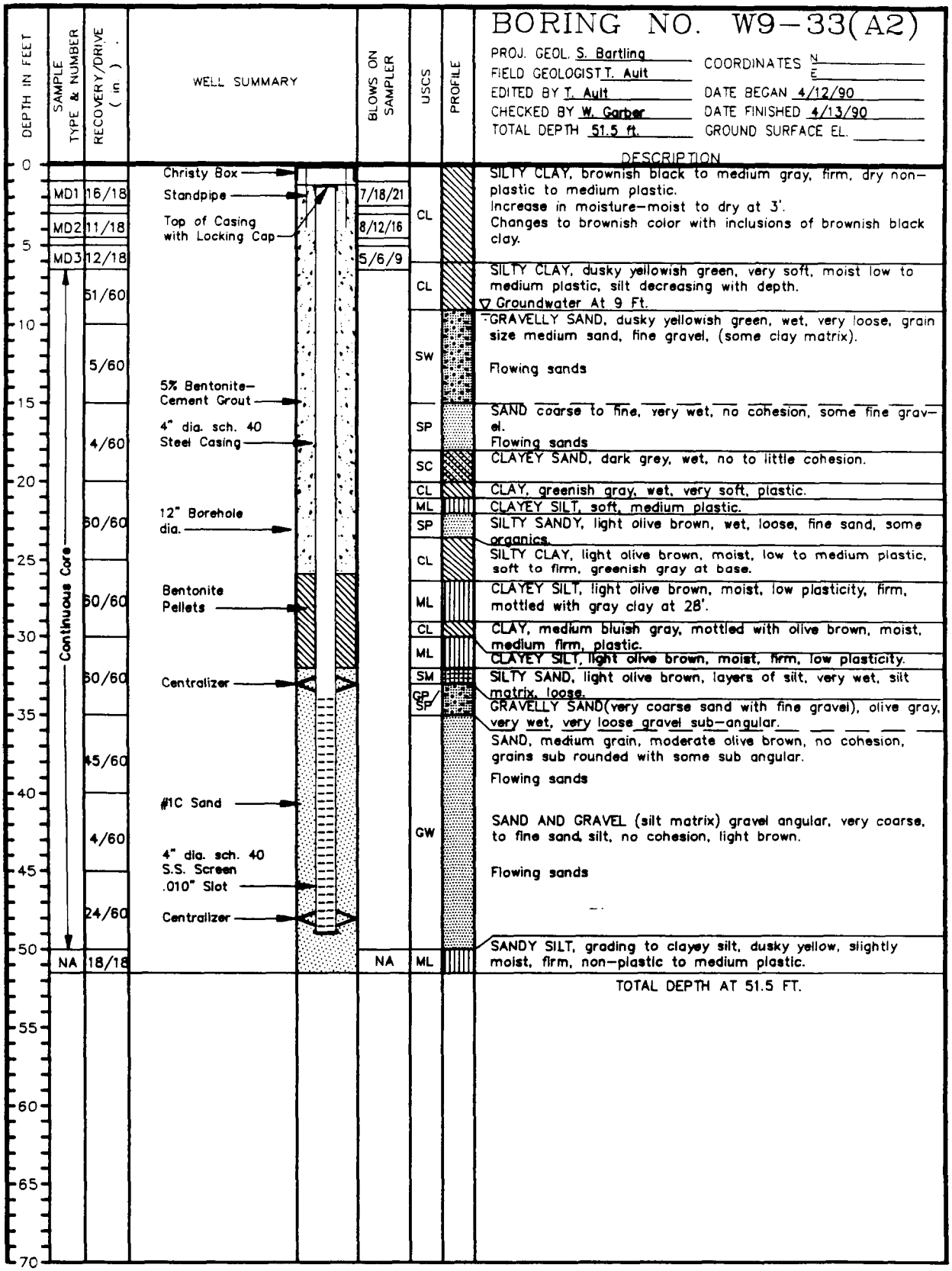
PROJECT NO.: 409700
CLIENT: Maffett Naval Air Station
LOCATION: Moffett Field, California

MF-W9-31(*MF16)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-33(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault — DATE BEGAN 4/12/90
EDITED BY T. Ault — DATE FINISHED 4/13/90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 51.5 ft.



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

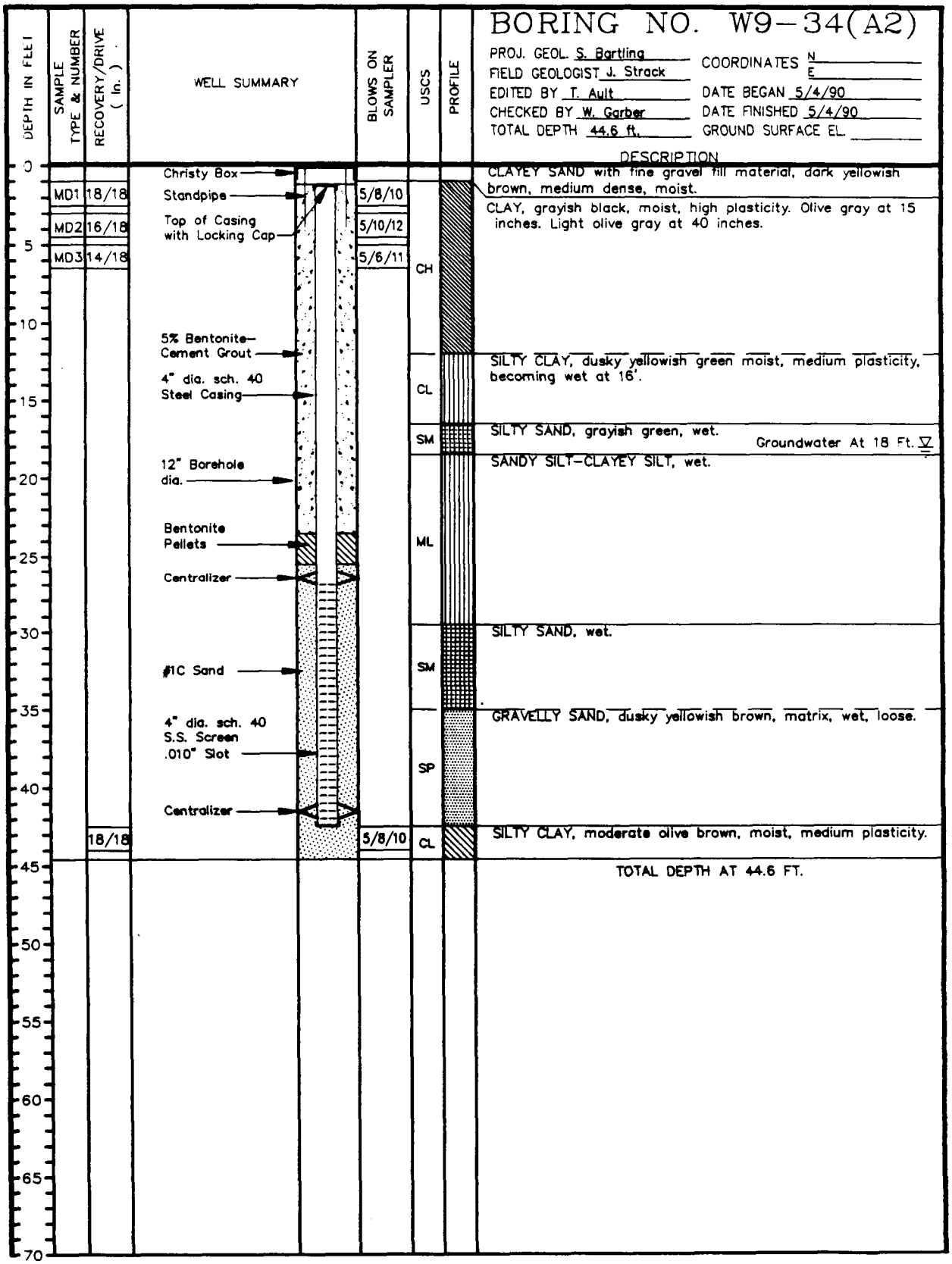
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-33(MF19)

BORING NO. W9-34(A2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST J. Strack — DATE BEGAN 5/4/90
EDITED BY T. Ault — DATE FINISHED 5/4/90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 44.6 ft.



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

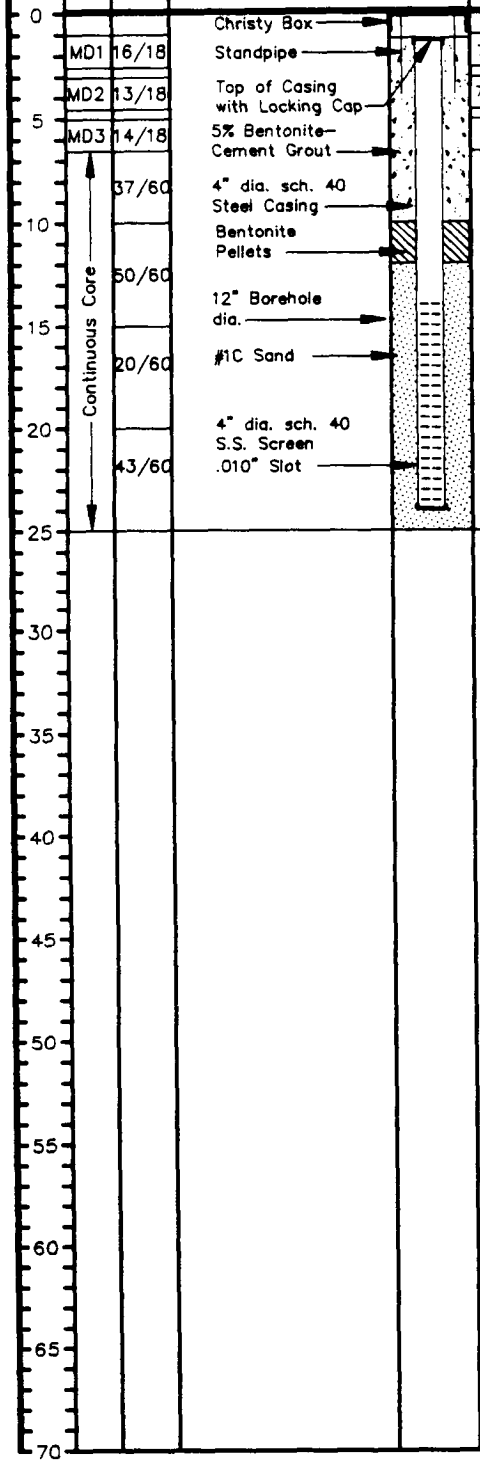
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-34(MF-19)

BORING NO. W9-35(A1)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault — DATE BEGAN 4-25-90
CHECKED BY W. Gorber — DATE FINISHED 4-25-90
TOTAL DEPTH 25.0 feet — GROUND SURFACE EL. ____



DESCRIPTION

SILTY SAND:

CLAYEY SILT: light olive gray, slightly moist, low to medium plasticity, firm to soft.

CLAYEY SILT: olive gray, moist, non-plastic, firm to very firm, some fine sand layers 1-2" in clay matrix. low plasticity near base.

CLAYEY SAND: light olive brown (gradational upper contact), soft to very soft, wet, low to medium plasticity to 8', non-plastic below, (medium to fine sand-trace fine gravel), light brown streaks near base, very low clay last 4".

CLAY: light olive brown, slightly moist, very firm, very plastic. 12.5'

SAND: light olive brown, medium rounded, fine to coarse, poorly graded, sharp contacts. 13.0'

SAND: olive brown, coarse grain, wet, very loose, subrounded to subangular, some fine to very fine gravel at 15.0', well graded. 15.0'

15-20' medium sand poorly graded, some very coarse sand >1%. 21.5'

CLAYEY SAND: light olive gray, fine sand, clay matrix 10-20% medium coarse, very wet.

SANDY CLAY: grayish green, medium plastic, wet, very fine sand 10-20%, soft.

SILTY CLAY to SILT: grayish green to grayish olive, moist to dry, plastic to non-plastic at base, firm at 24' hard at 25'.

TOTAL DEPTH 25 FEET

DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION:. Moffett Field, California

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

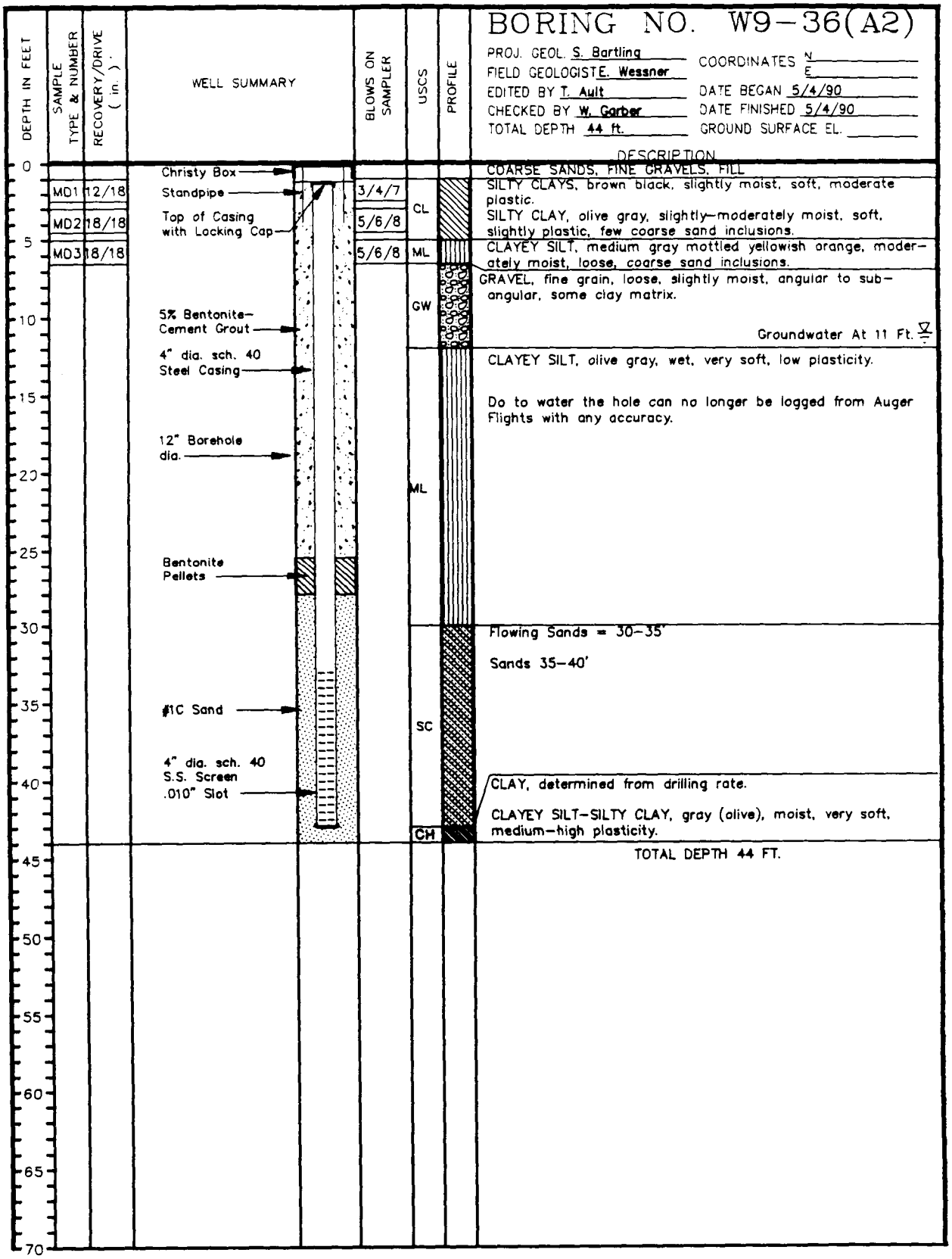
INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-35(MF14)

BORING NO. W9-36(A2)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST E. Wessner
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 44 ft.

COORDINATES N _____ E _____
DATE BEGAN 5/4/90
DATE FINISHED 5/4/90
GROUND SURFACE EL. _____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

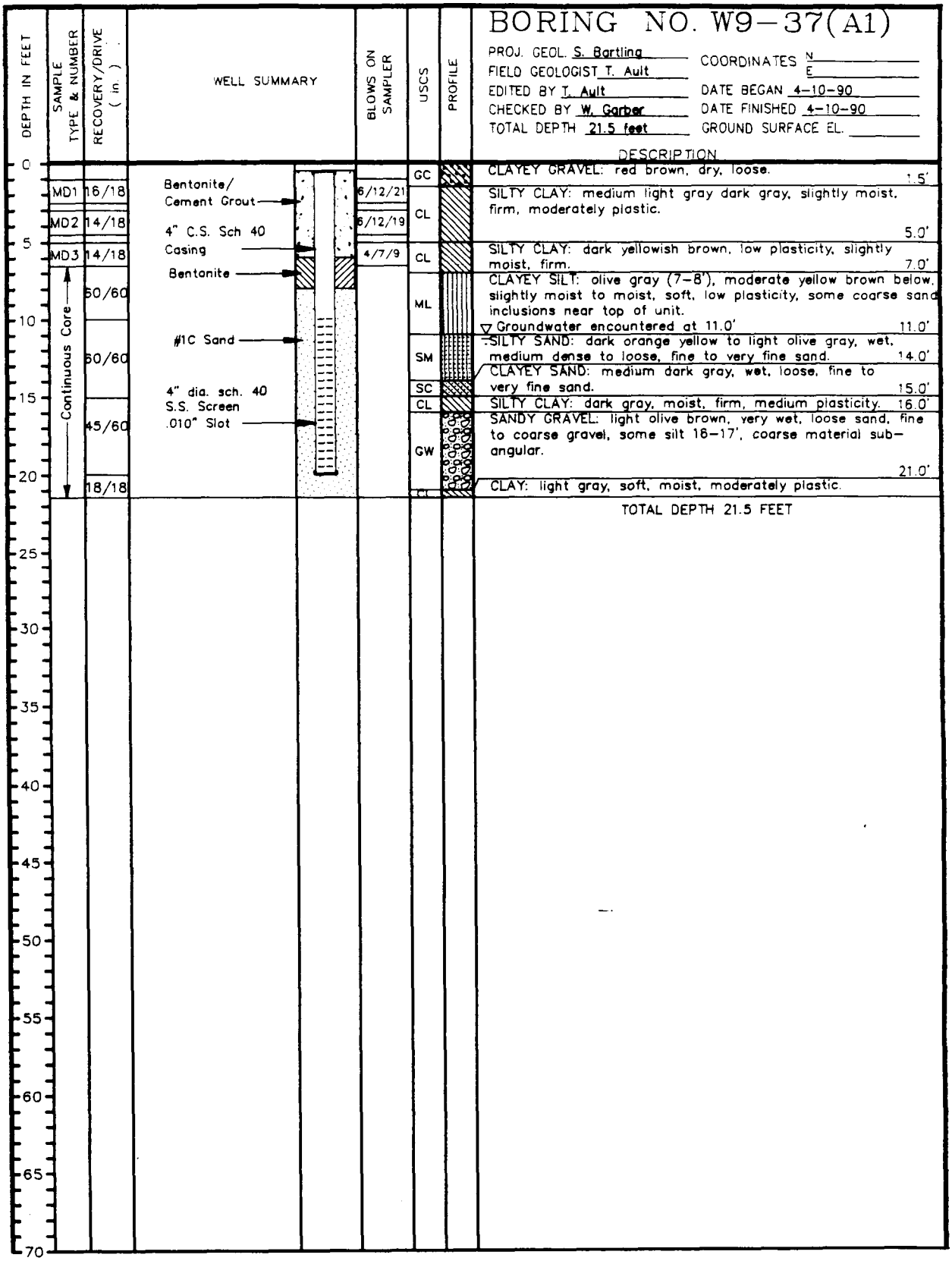
INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-36(MF-19)

BORING NO. W9-37(A1)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 21.5 feet

COORDINATES N ____ E ____
DATE BEGAN 4-10-90
DATE FINISHED 4-10-90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

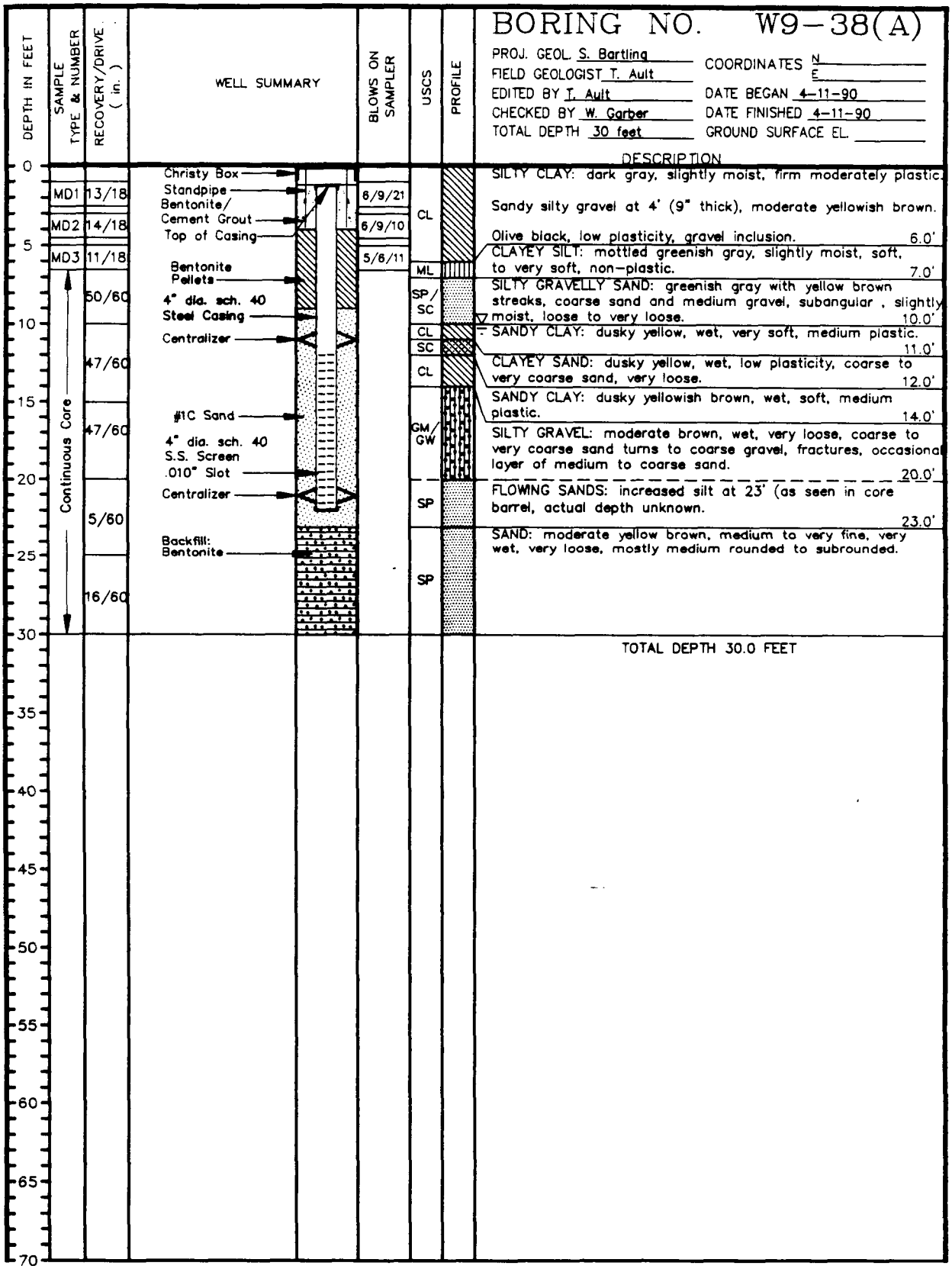
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-37(MF14)

BORING NO. W9-38(A)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST T. Ault — DATE BEGAN 4-11-90
EDITED BY T. Ault — DATE FINISHED 4-11-90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 30 feet



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

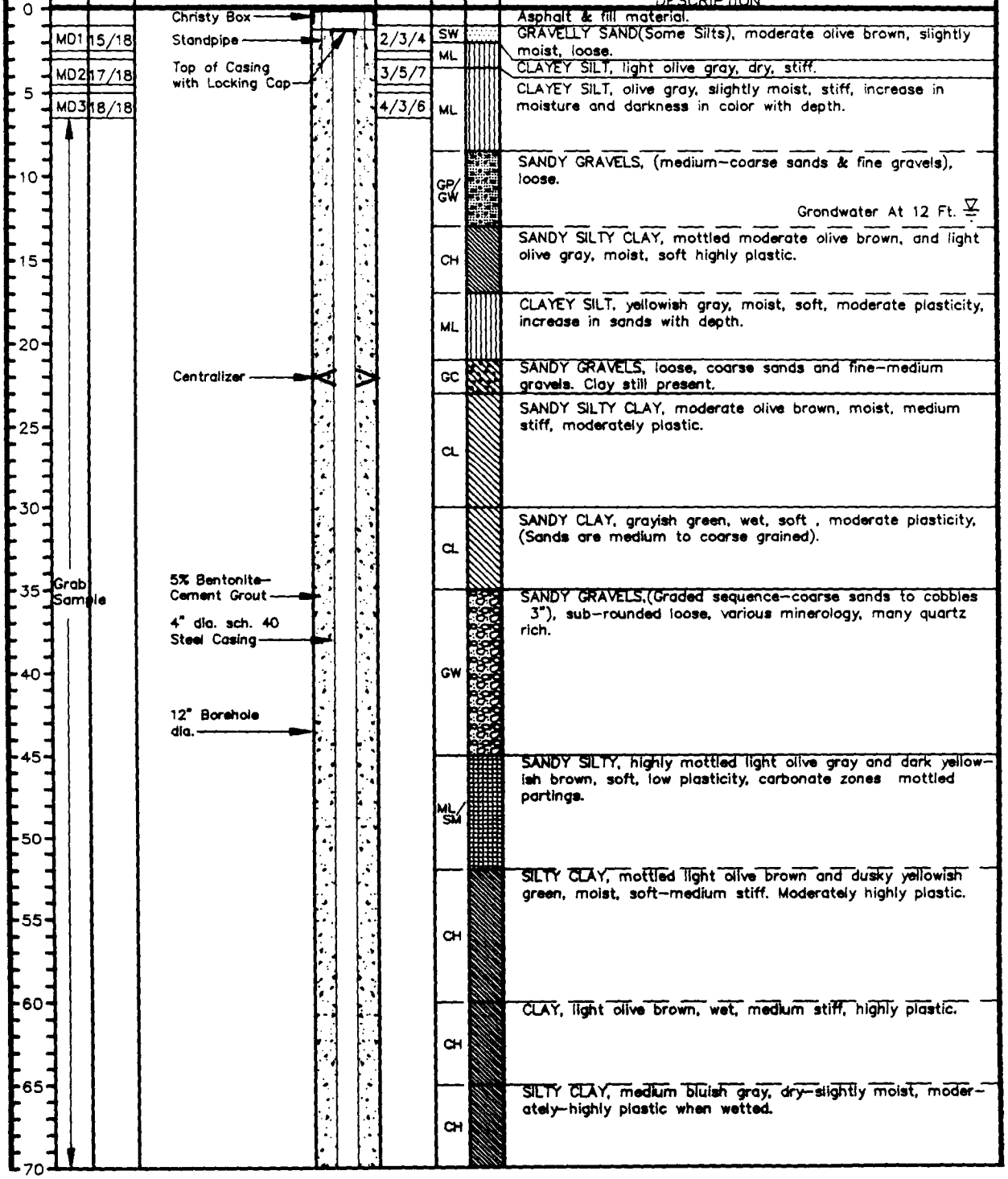
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

INTERNATIONAL TECHNOLOGY

BORING NO. W9-39(B2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST C. Dorgan — DATE BEGAN 5/9/90
EDITED BY T. Ault — DATE FINISHED 5/9/90
CHECKED BY W. Garber — GROUND SURFACE EL. ____
TOTAL DEPTH 97 ft.



DRILLING CO.: Water Developement
DRILL METHOD: Air Rotory with Drive Casing

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

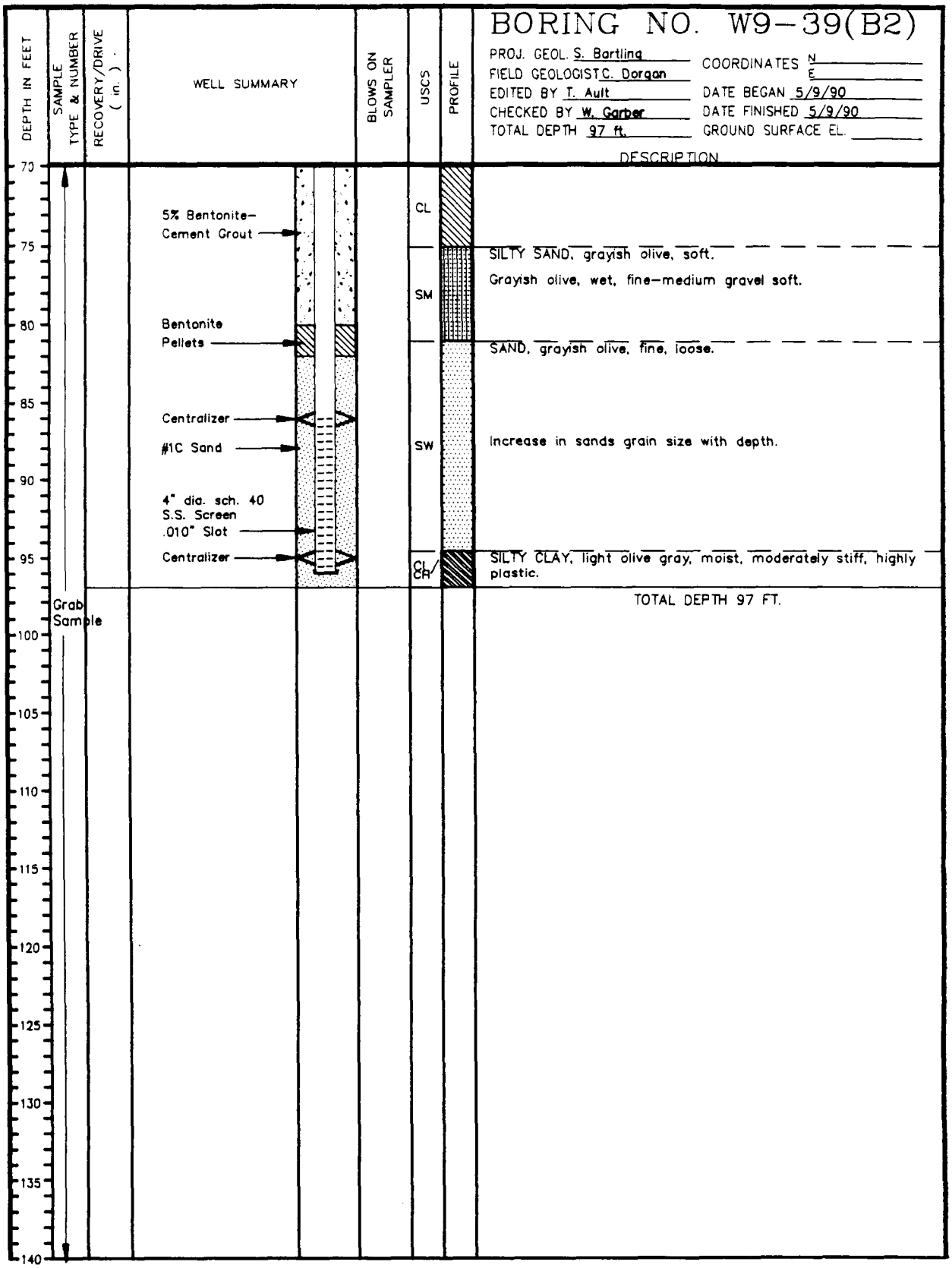
INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-39(MF-20)

BORING NO. W9-39(B2)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST C. Dorgan
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 97 ft.

COORDINATES N ____ E ____
DATE BEGAN 5/9/90
DATE FINISHED 5/9/90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Air Rotory with Drive Casing

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

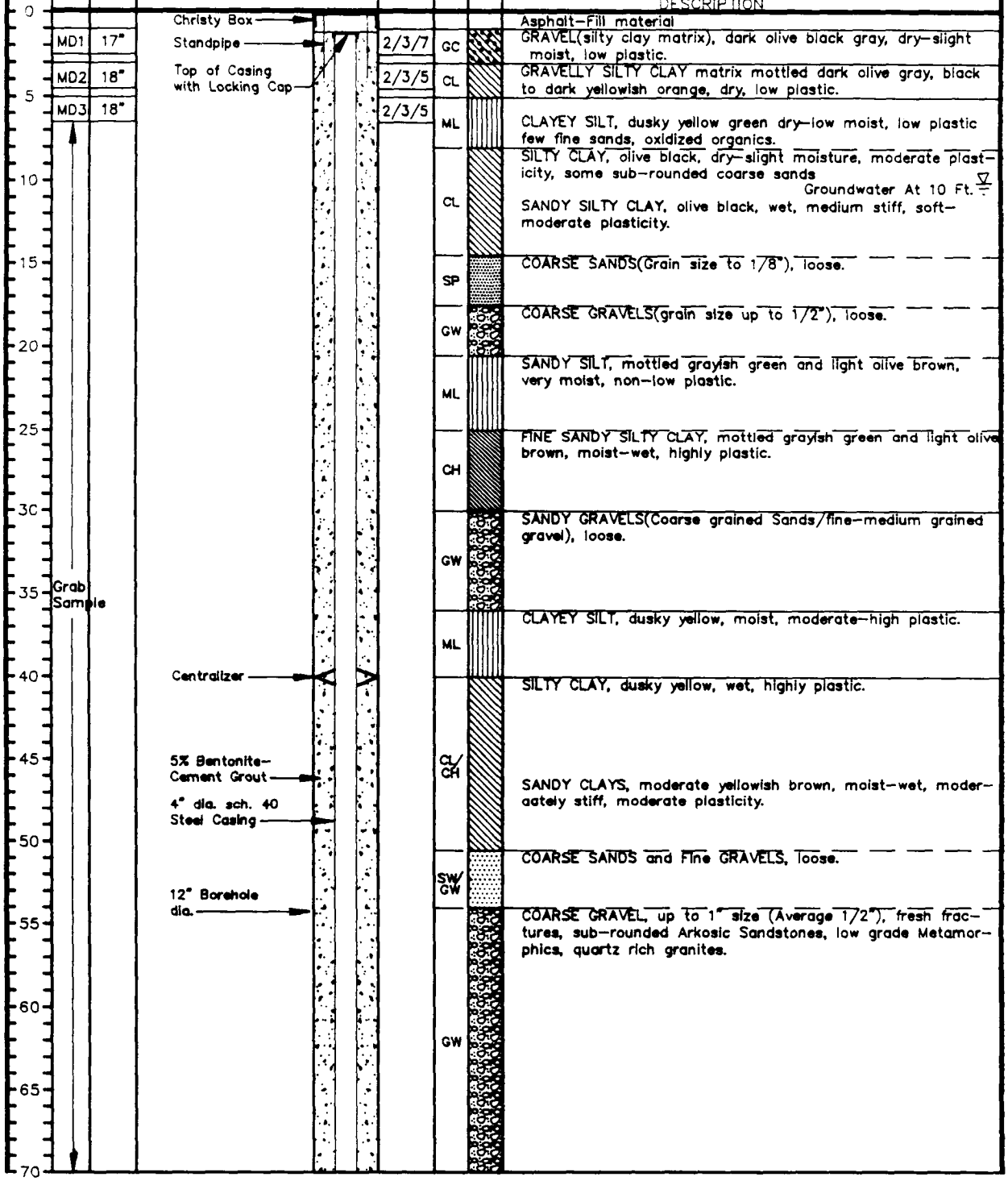
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

IT INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-39(MF-19)

BORING NO. W9-40(B2)

PROJ. GEOL. S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST C. Dorgan
EDITED BY T. Ault — DATE BEGAN 5/3/90
CHECKED BY W. Garber — DATE FINISHED 5/4/90
TOTAL DEPTH 107 ft. — GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Air Rotary with drive casing

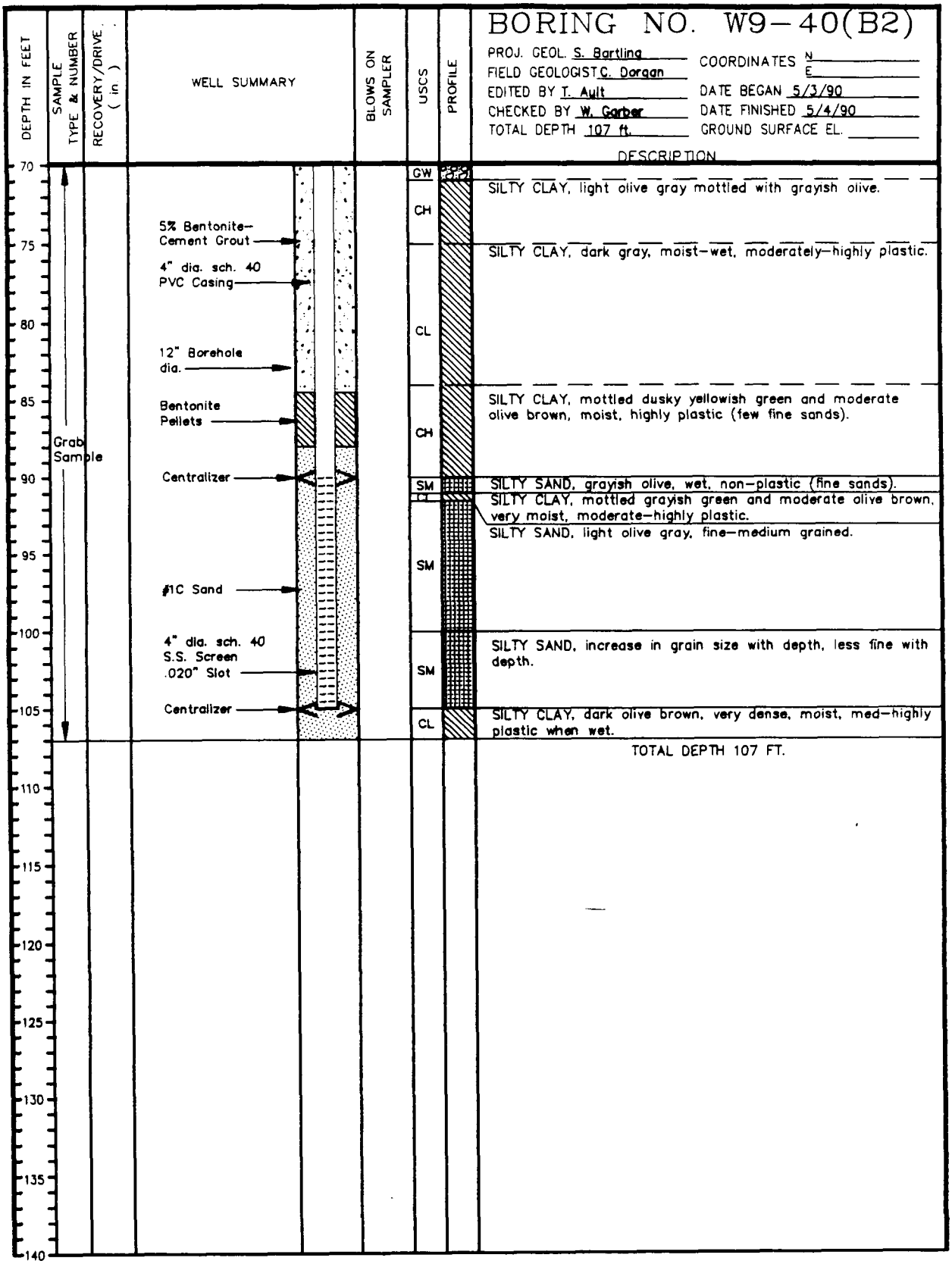
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. W9-40(B2)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST C. Dorgan
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 107 ft.
COORDINATES N ____ E ____
DATE BEGAN 5/3/90
DATE FINISHED 5/4/90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Air Rotary with drive casing

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

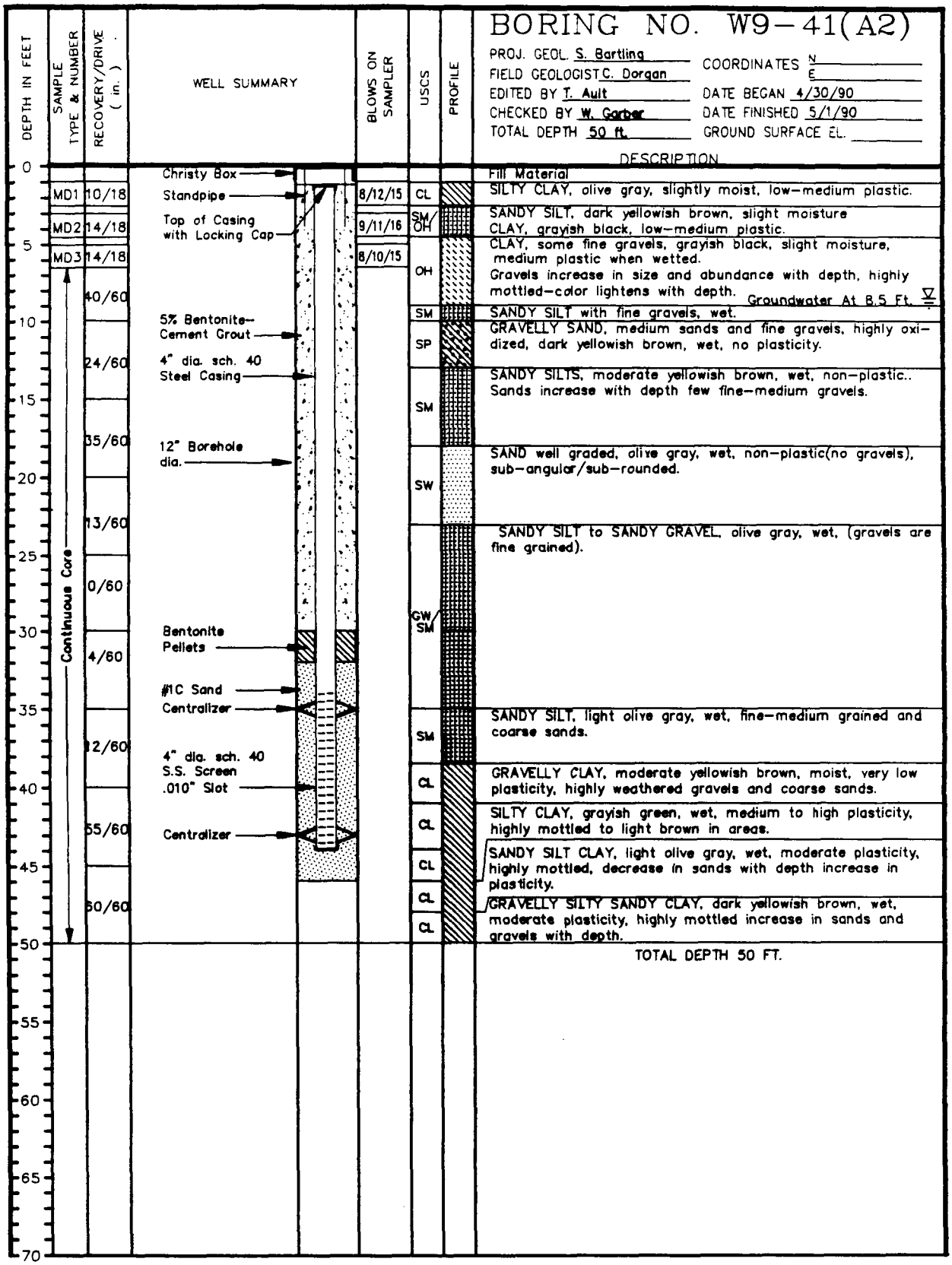
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY

BORING NO. W9-41(A2)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST C. Dorgan
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 50 ft.

COORDINATES N ____ E ____
DATE BEGAN 4/30/90
DATE FINISHED 5/1/90
GROUND SURFACE EL. ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

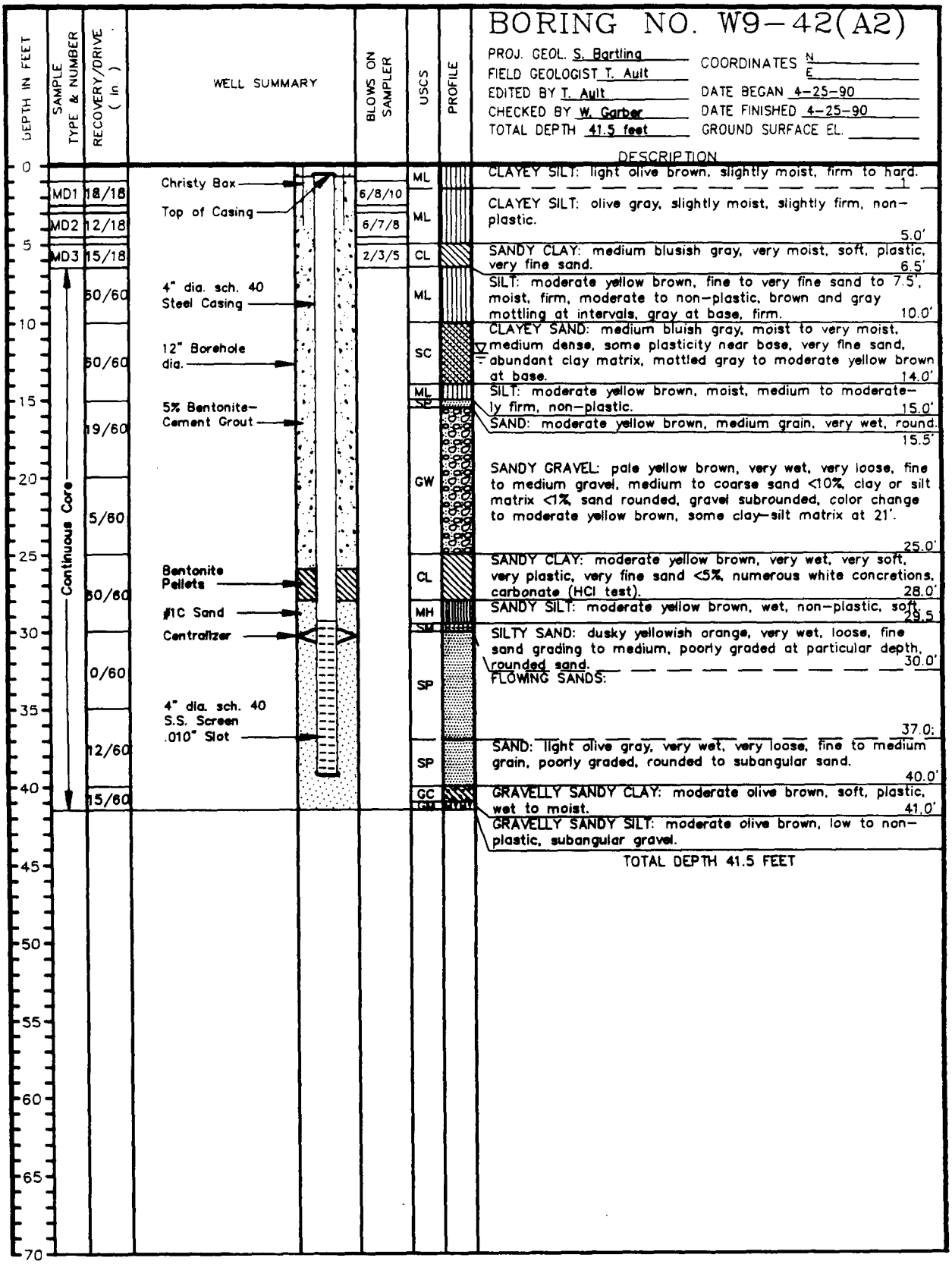
INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-41(MF-19)

BORING NO. W9-42(A2)

PROJ. GEOL. S. Bartling
FIELD GEOLOGIST T. Ault
EDITED BY T. Ault
CHECKED BY W. Garber
TOTAL DEPTH 41.5 feet

COORDINATES N ____ E ____
DATE BEGAN 4-25-90
DATE FINISHED 4-25-90
GROUND SURFACE EL. ____



DESCRIPTION

ML — CLAYEY SILT: light olive brown, slightly moist, firm to hard. 1'

ML — CLAYEY SILT: olive gray, slightly moist, slightly firm, non-plastic. 5.0'

CL — SANDY CLAY: medium blusish gray, very moist, soft, plastic, very fine sand. 6.5'

ML — SILT: moderate yellow brown, fine to very fine sand to 7.5', moist, firm, moderate to non-plastic, brown and gray mottling at intervals, gray at base, firm. 10.0'

SC — CLAYEY SAND: medium bluish gray, moist to very moist, medium dense, some plasticity near base, very fine sand, abundant clay matrix, mottled gray to moderate yellow brown at base. 14.0'

ML — SILT: moderate yellow brown, moist, medium to moderately firm, non-plastic. 15.0'

SP — SAND: moderate yellow brown, medium grain, very wet, round. 15.5'

GW — SANDY GRAVEL: pale yellow brown, very wet, very loose, fine to medium gravel, medium to coarse sand <10%, clay or silt matrix <1%, sand rounded, gravel subrounded, color change to moderate yellow brown, some clay-silt matrix at 21'. 25.0'

CL — SANDY CLAY: moderate yellow brown, very wet, very soft, very plastic, very fine sand <5%, numerous white concretions, carbonate (HCl test). 28.0'

MH — SANDY SILT: moderate yellow brown, wet, non-plastic, soft. 29.5'

SM — SILTY SAND: dusky yellowish orange, very wet, loose, fine sand grading to medium, poorly graded at particular depth, rounded sand. 30.0'

SP — FLOWING SANDS: 37.0'

SP — SAND: light olive gray, very wet, very loose, fine to medium grain, poorly graded, rounded to subangular sand. 40.0'

GC — GRAVELLY SANDY CLAY: moderate olive brown, soft, plastic, wet to moist. 41.0'

GM — GRAVELLY SANDY SILT: moderate olive brown, low to non-plastic, subangular gravel.

TOTAL DEPTH 41.5 FEET

DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-75)

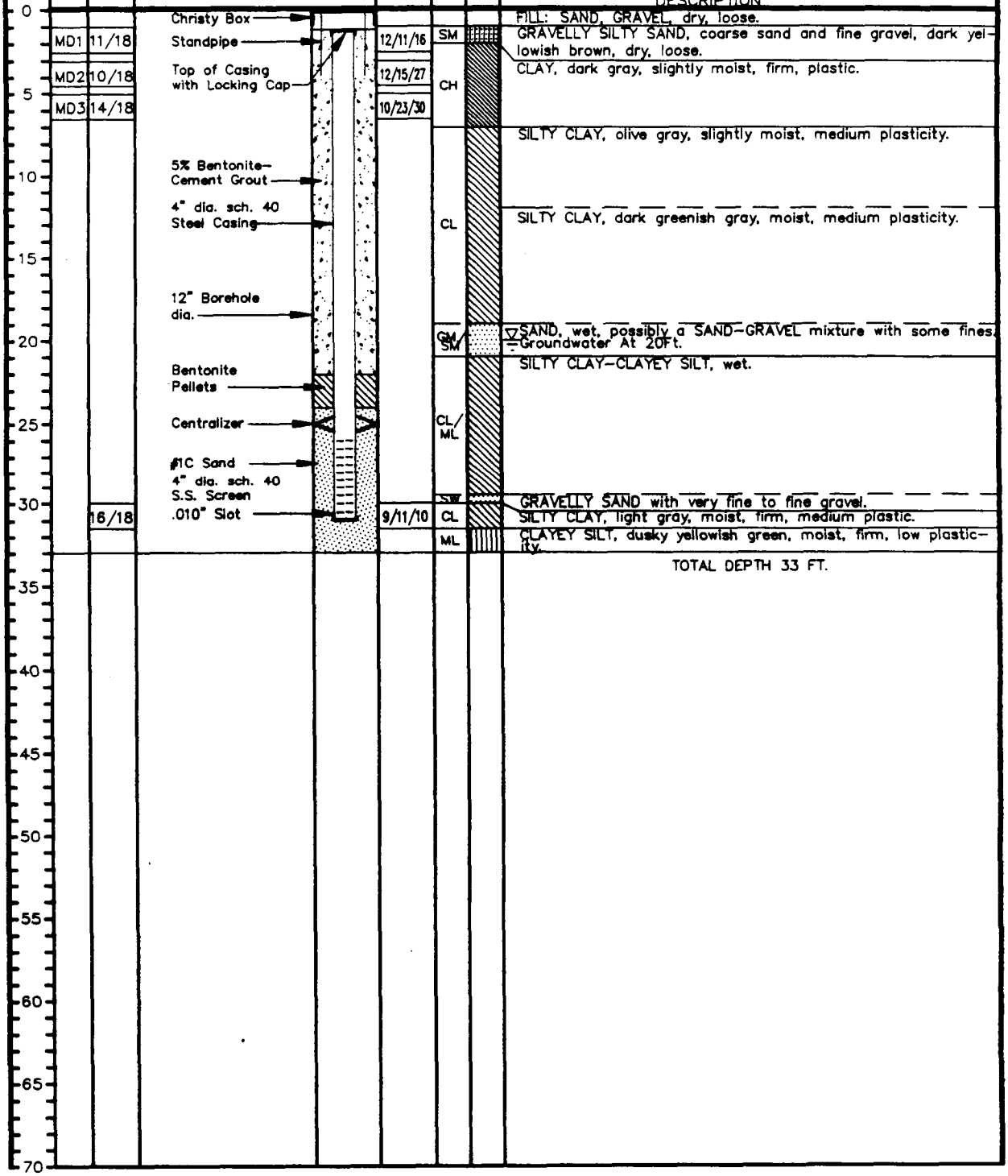
PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

MF-W9-42(MF14)

BORING NO. W9-43(A2)

PROJ. GEOL S. Bartling — COORDINATES N ____ E ____
FIELD GEOLOGIST J. Strack
EDITED BY T. Ault — DATE BEGAN 5/3/90
CHECKED BY W. Garber — DATE FINISHED 5/3/90
TOTAL DEPTH 33 ft. — GROUND SURFACE EL ____



DRILLING CO.: Water Developement
DRILL METHOD: Hollow Stem Auger (Rig CME-55)

PROJECT NO.: 409700
CLIENT: Moffett Naval Air Station
LOCATION: Moffett Field, California

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

INTERNATIONAL TECHNOLOGY CORPORATION

MF-W9-43(MF-20)