

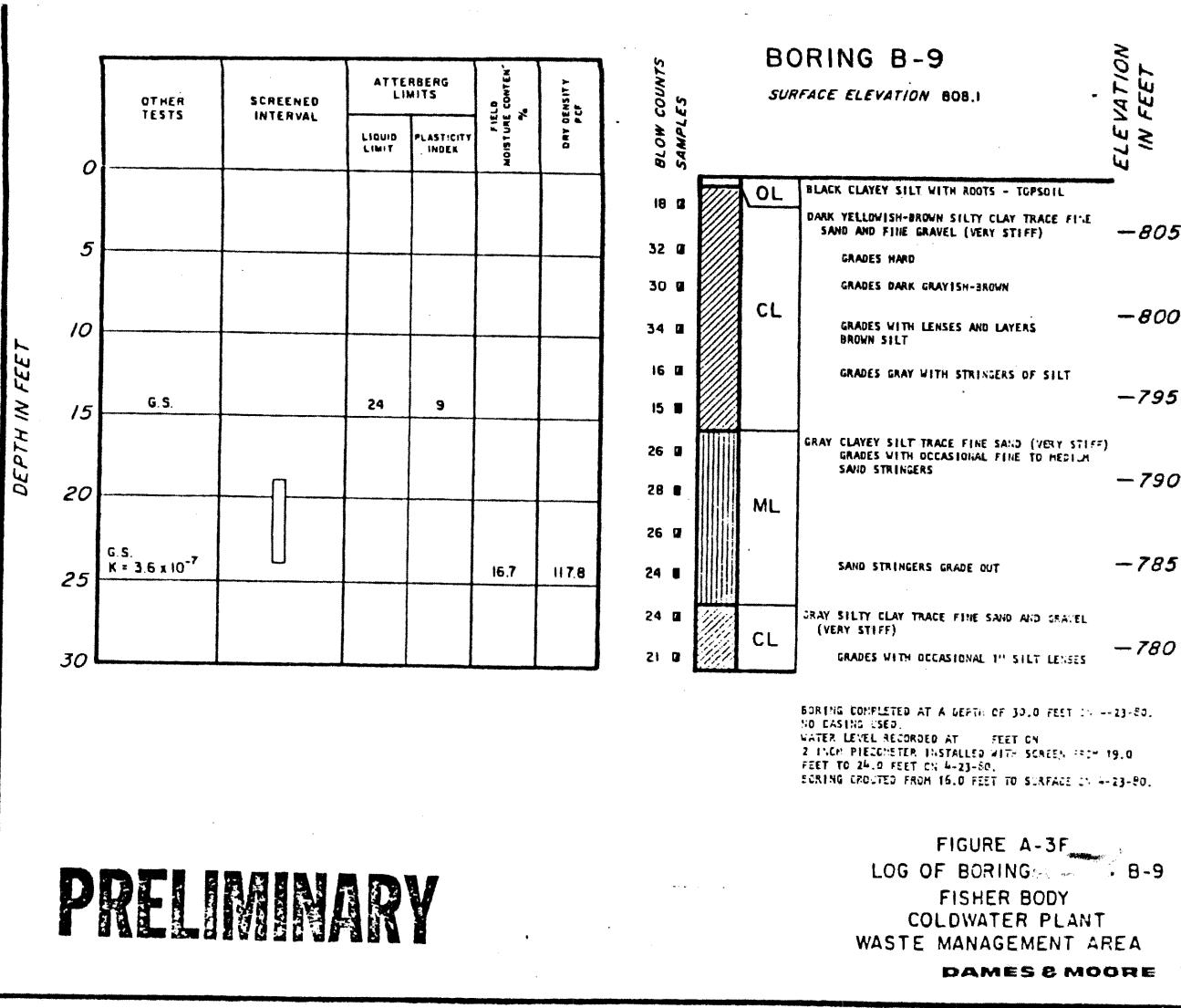
NOTES:
 1) Reference System:
 Vertical - NAVD 1988.
 Horizontal - NAD 83(1994)
 Michigan South zone 2113.
 2) Aerial Photo Date: 3/25/00
 Date of Mapping: April 2000.

SOURCE:
 NOVA CONSULTANTS, INC. MAY 26, 2000



figure 1
 HISTORIC TOPOGRAPHY AND GEOTECHNICAL BORING LOCATIONS
 FORMER PEREGRINE (US), INC. COLDWATER ROAD FACILITY
 Genesee Township, Michigan

00299-052-07





OBRIEN & GERE
ENGINEERS, INC.

SOIL BORING LOG

BORING I.D.: B-27D

Boring Location: South side of landfill, approximately 10 ft east of B-23DR

Surface Elevation (ft MSL):
Top of Casing Elevation (ft MSL):

CLIENT: REALM
PROJECT NAME: Zinc Assessment
PROJECT LOCATION: Coldwater Road Landfill
FILE NO.: 4966/36295 #4

Drilling equipment: CME-750 (ATV rig)
Sampling equipment: 2 ft length stainless steel split barrel
Borehole Diameter: 14 inches (grade to 36 fbg); 8 inches (36 to 88 fbg)
Total Depth: 88 fbg

Depth to ground water: 80.5 fbg (11/16/05)

BORING COMPANY: Mateco
FOREMAN: John Pitsch
OBG GEOLOGIST: Mike Robison

Start date: 11/9/2005
Completion date: 11/14/2005

LEGEND: / Cement/grout / Screen
#0 Sand Pack Riser
Bentonite seal

DEPTH BELOW GRADE	CORE INTERVAL (ft bg)	PENETR/ RECOVERY (ft bg)	Blow Counts	SAMPLE DESCRIPTION	STRATUM CHANGE GENERAL DESCRIPT	Equipment Installed		Field Testing	
								PID Headspace	Notes
24				Augered from surface to 26 fbg (no split barrels collected). Refer to boring log B-23DR for so descriptions from surface to 26 fbg.		/	/		
25						/	/		
26	26 - 28	Full	2	medium gray (N5), moist, silty CLAY	26' CL	/	/		
27			4			/	/		
28	28 - 30	Full	3	medium gray (N5), wet, clayey SILT	27.5' ML	/	/	0.0	
29			4			/	/		
30	30 - 32	Full	3	medium gray (N5), moist, silty CLAY, medium plasticity	28.5' CL	/	/		
31			6			/	/		
32	32 - 34	Full	4	medium gray (N5), moist, silty CLAY, trace small grave	30'	/	/		
33			5			/	/		
34	34 - 36	Full	3			/	/	0.0	
35			4			/	/		
36			6			/	/		
37			9			/	/		
38						/	/		
39						/	/		
40						/	/		
41						/	/		
42						/	/		
43						/	/		
44						/	/		
45						/	/		
46	46 - 48	Full	4	medium gray (N5), damp, silty CLAY, medium plasticity, trace grave	46'	/	/	0.0	
47			6			/	/		
48			6			/	/		
49			9			/	/		
50						/	/		
51						/	/		
52						/	/		
53	53-55	Full	5	medium gray (N5), damp, silty CLAY, medium plasticity, trace grave	53'	/	/	0.0	
54			7			/	/		
55			8			/	/		
56			9			/	/		
57						/	/		
58						/	/		
59						/	/		
60	60 - 62	Full	5	medium gray (N5), damp, silty CLAY, medium plasticity, trace grave	60'	/	/	0.0	
61			6			/	/		
62			10			/	/		
63						/	/		
64						/	/		
65						/	/		
66						/	/		
67	67-69	Full	5	medium gray (N5), damp, silty CLAY, medium plasticity, trace grave	67'	/	/	0.0	
68			6			/	/		
69			10			/	/		

O'BRIEN & GERE ENGINEERS, INC.				SOIL BORING LOG		BORING I.D.: B-27D													
CLIENT: REALM PROJECT NAME: Zinc Assessment PROJECT LOCATION: Coldwater Road Landfill FILE NO.: 4966/36295 #4				Boring Location: South side of landfill, approximately 10 ft east of B-23DR Drilling equipment: CME-750 (ATV rig) Sampling equipment: 2 ft length stainless steel split barrel Borehole Diameter: 14 inches (grade to 36 fbg); 8 inches (36 to 88 fbg) Total Depth: 88 fbg		Surface Elevation (ft MSL): Top of Casing Elevation (ft MSL): Depth to ground water: 80.5 fbg (11/16/05)													
BORING COMPANY: Mateco FOREMAN: John Pitsch OBG GEOLOGIST: Mike Robison				Start date: 11/9/2005 Completion date: 11/14/2005		LEGEND: <table border="1"> <tr> <td>/ /</td> <td>Cement/grout</td> <td>===</td> <td>Screen</td> </tr> <tr> <td>█</td> <td>#0 Sand Pack</td> <td>□</td> <td>Riser</td> </tr> <tr> <td>█</td> <td>Bentonite seal</td> <td></td> <td></td> </tr> </table>		/ /	Cement/grout	===	Screen	█	#0 Sand Pack	□	Riser	█	Bentonite seal		
/ /	Cement/grout	===	Screen																
█	#0 Sand Pack	□	Riser																
█	Bentonite seal																		
DEPTH BELOW GRADE	CORE INTERVAL (ft bg)	PENETR/RECOVERY (ft bg)	Blow Counts	SAMPLE DESCRIPTION	STRATUM CHANGE GENERAL DESCRIPT	Equipment Installed	Field Testing												
							PID Headspace	Notes											
70						/ /													
71						/ /													
72	72 - 74	Full	4	medium gray (N5), damp, silty CLAY, medium plasticity, trace grave	72'	█	0.0												
73			7			/ /													
74	74-76	Full	7	medium gray (N5), damp, silty CLAY, medium plasticity, trace grave	74'	█	0.0												
75			9			/ /													
76	76-78	Full	5	medium gray (N5), damp, silty CLAY, medium plasticity, trace grave	76'	█	0.0												
77			8			/ /													
78	78-80	Full	8	medium gray (N5), damp, silty CLAY, medium plasticity, trace grave	78'	█													
79			10			/ /													
80	80-82	Full	10	medium gray (N5), wet, SILT	79.5' OL	█													
81			12			/ /													
82	82-84	Full	7	medium gray (N5), wet very fine SAND and SILT	82'	█													
83			3			/ /													
84	84-86	Full	7	medium gray (N5), grey, wet, SILT	84' OL	█													
85			11	medium gray (N5), soft, silty CLAY	84.5' CL	/ /													
86	86-88	Full	5	medium gray (N5), moist, silty CLAY	85' OL	█													
87			4		86' CL	/ /													
			5			/ /													
			7			/ /													

- Notes:
- Soil boring augered to 26'; began collecting splitspoons (4.25" augers) at 26 fbg.
 - At 36 fbg, pulled 4.25" augers and advanced 12.25" augers (grade to 36 fbg) to install 10-inch diameter steel casing in borehole. Used tremie-pipe to fill annulus between steel casing and borehole with cement.
 - Subsequent to soil sampling activities, a monitoring well was constructed of 2 inch diameter Schedule 40 PVC flush-threaded to a 10 ft length of No. 10 slot PVC well screen extending from 77 to 87 fbg.
 - Monitoring well B-27 was completed with an approximate 2.5 ft above-grade casing, covered with a steel-protective outer casing.

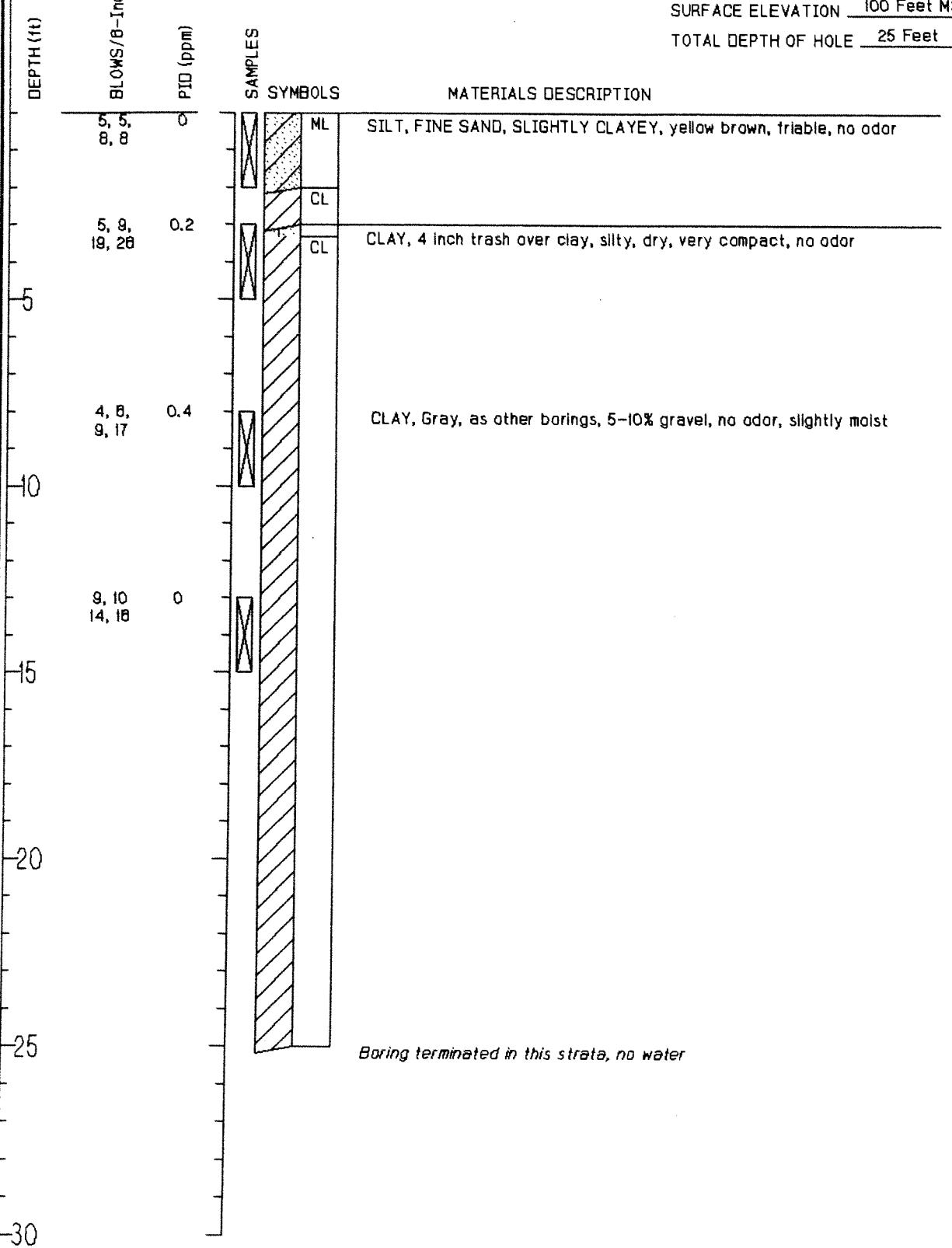
BORING MW-5 (Page 1 of 1)

CLIENT NAME JLL/Peregrine

DATE DRILLED 11/5/98

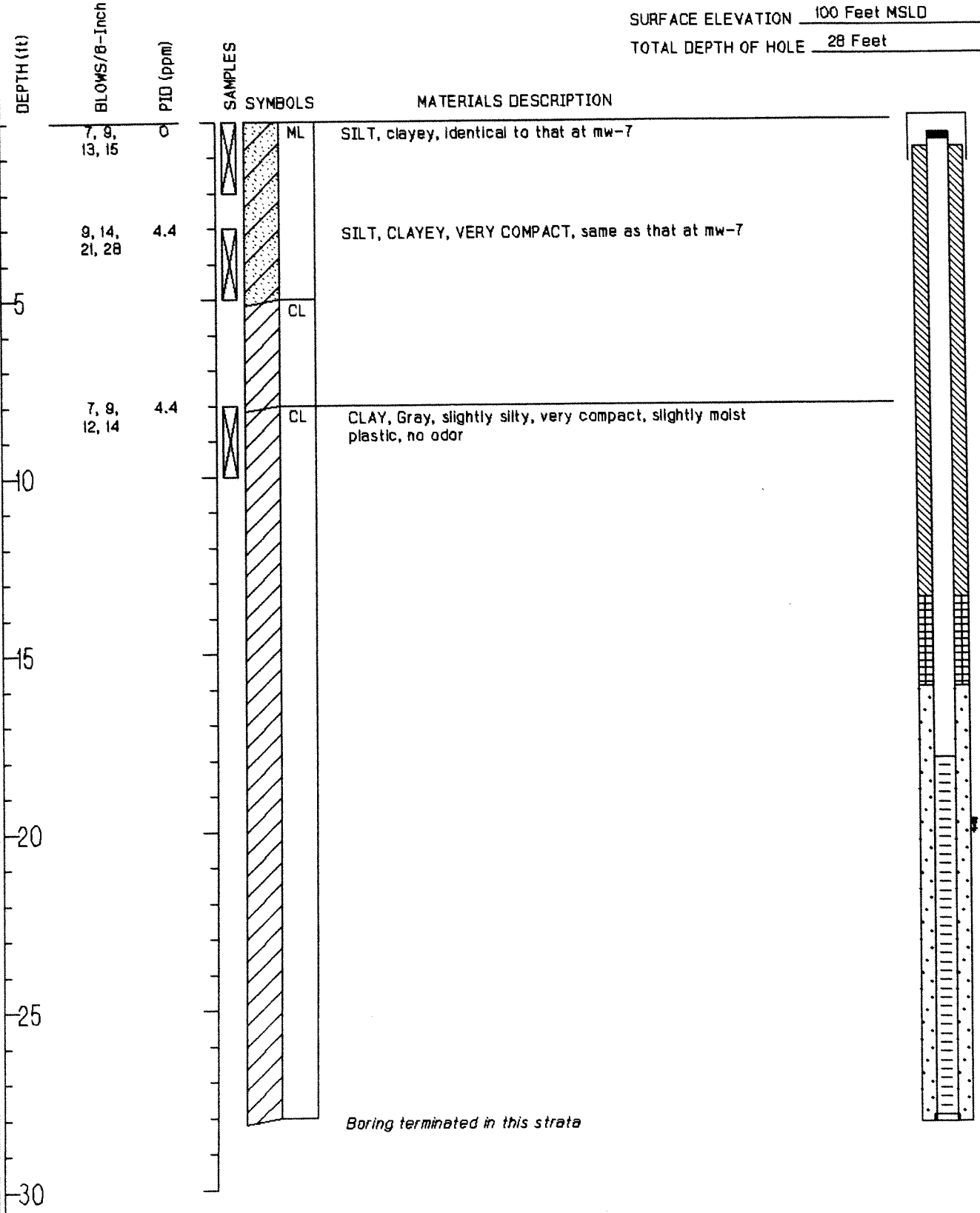
SURFACE ELEVATION 100 Feet MSLD

TOTAL DEPTH OF HOLE 25 Feet



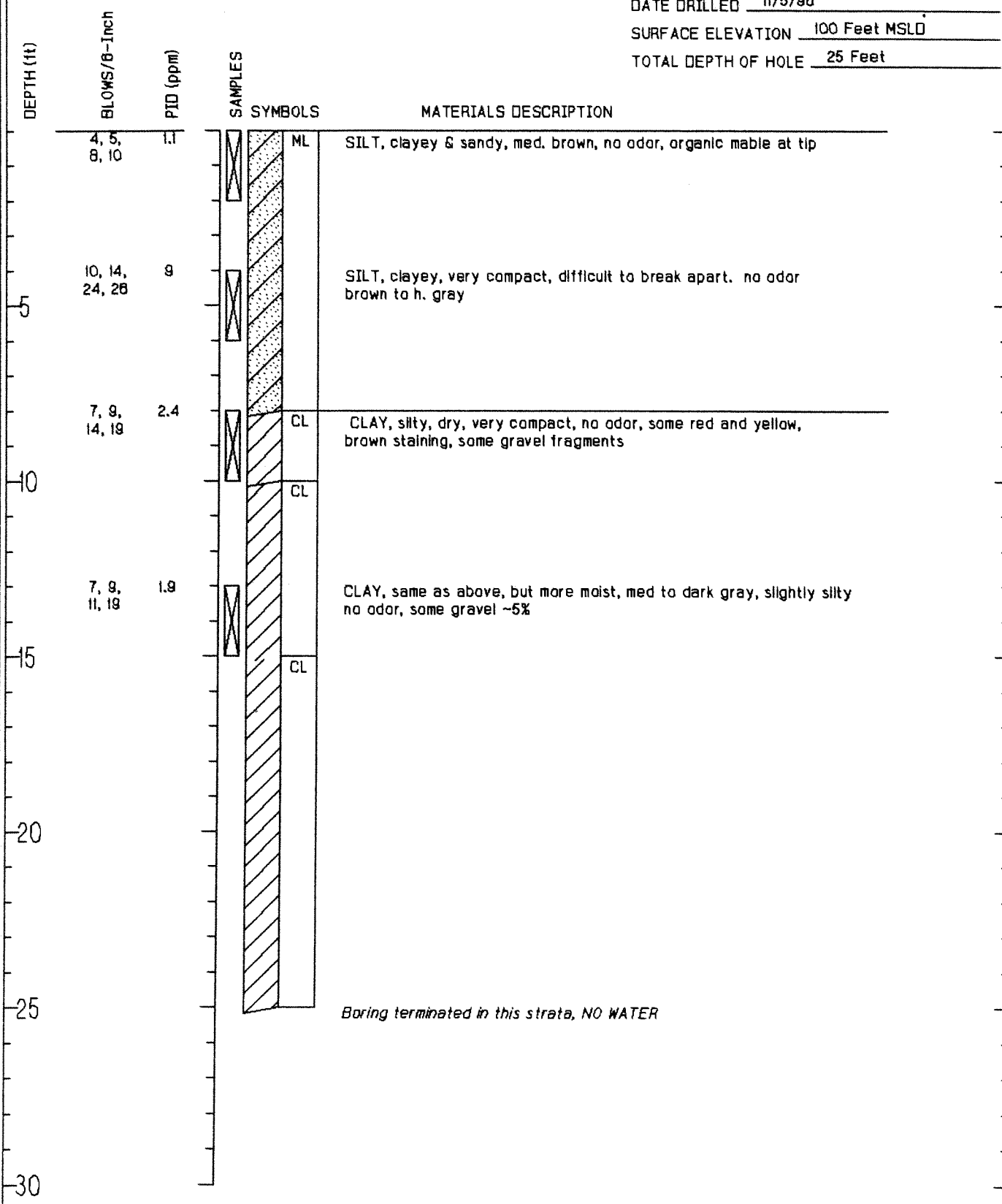
WELL MW-6 (Page 1 of 1)

CLIENT NAME JLL/Peregrine
 DATE DRILLED 11/5/98
 SURFACE ELEVATION 100 Feet MSLD
 TOTAL DEPTH OF HOLE 28 Feet



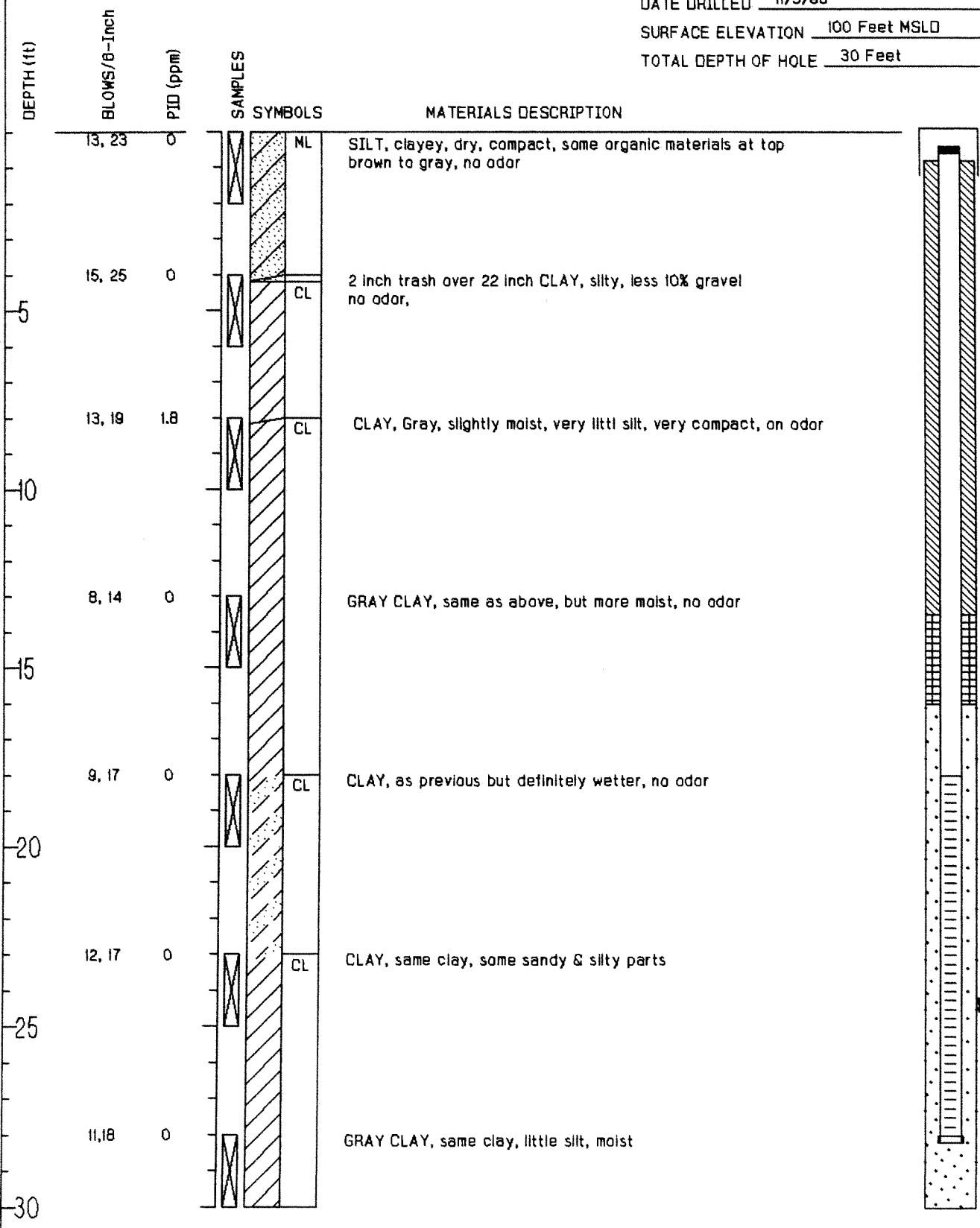
BORING MW-7 (Page 1 of 1)

CLIENT NAME JLL/Peregrine
 DATE DRILLED 11/5/98
 SURFACE ELEVATION 100 Feet MSLD
 TOTAL DEPTH OF HOLE 25 Feet



WELL MW-8 (Page 1 of 1)

CLIENT NAME JLL/Peregrine
 DATE DRILLED 11/5/98
 SURFACE ELEVATION 100 Feet MSLD
 TOTAL DEPTH OF HOLE 30 Feet



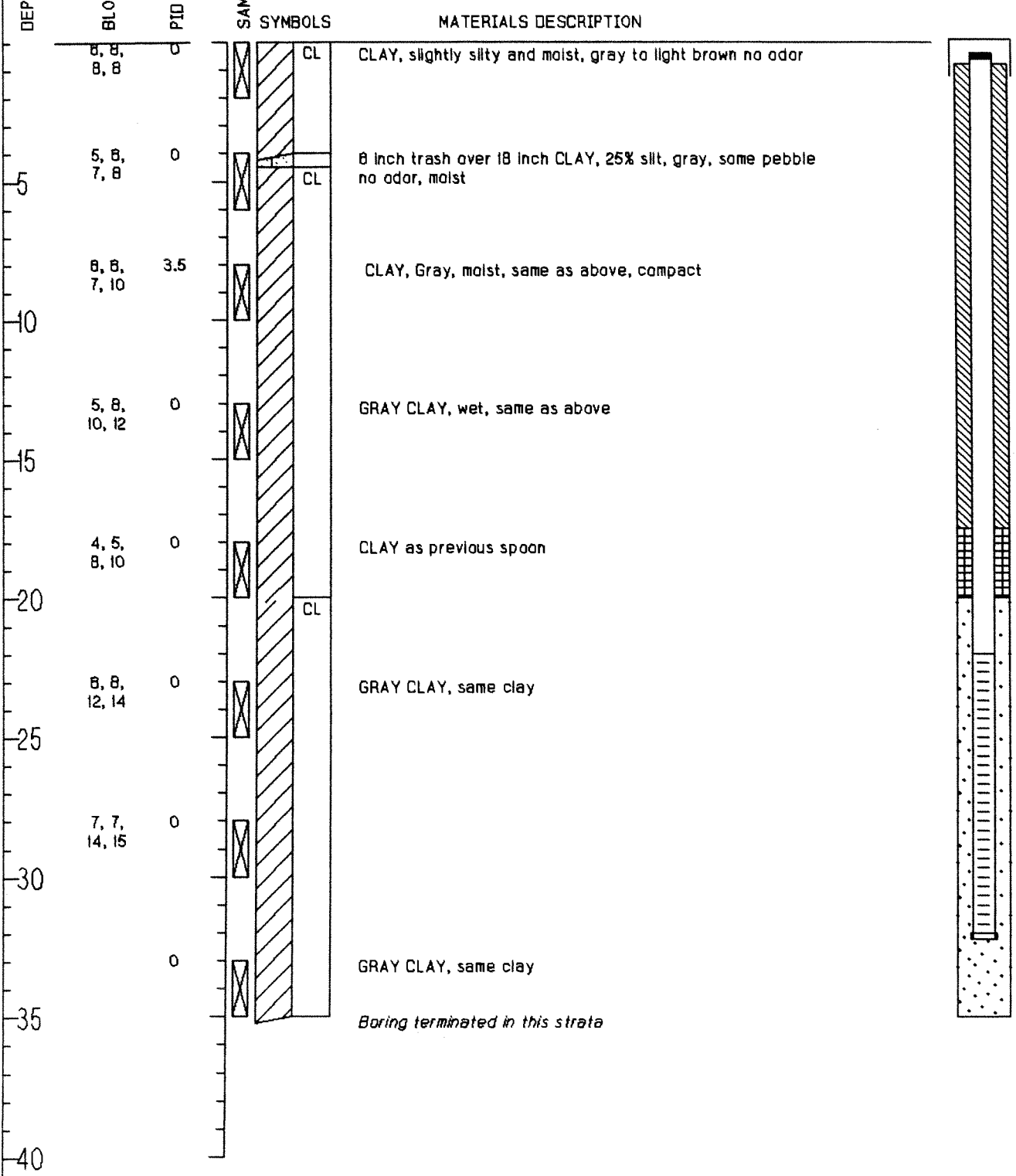
WELL MW-9 (Page 1 of 1)

CLIENT NAME JLL/Peregrine

DATE DRILLED 11/4/98

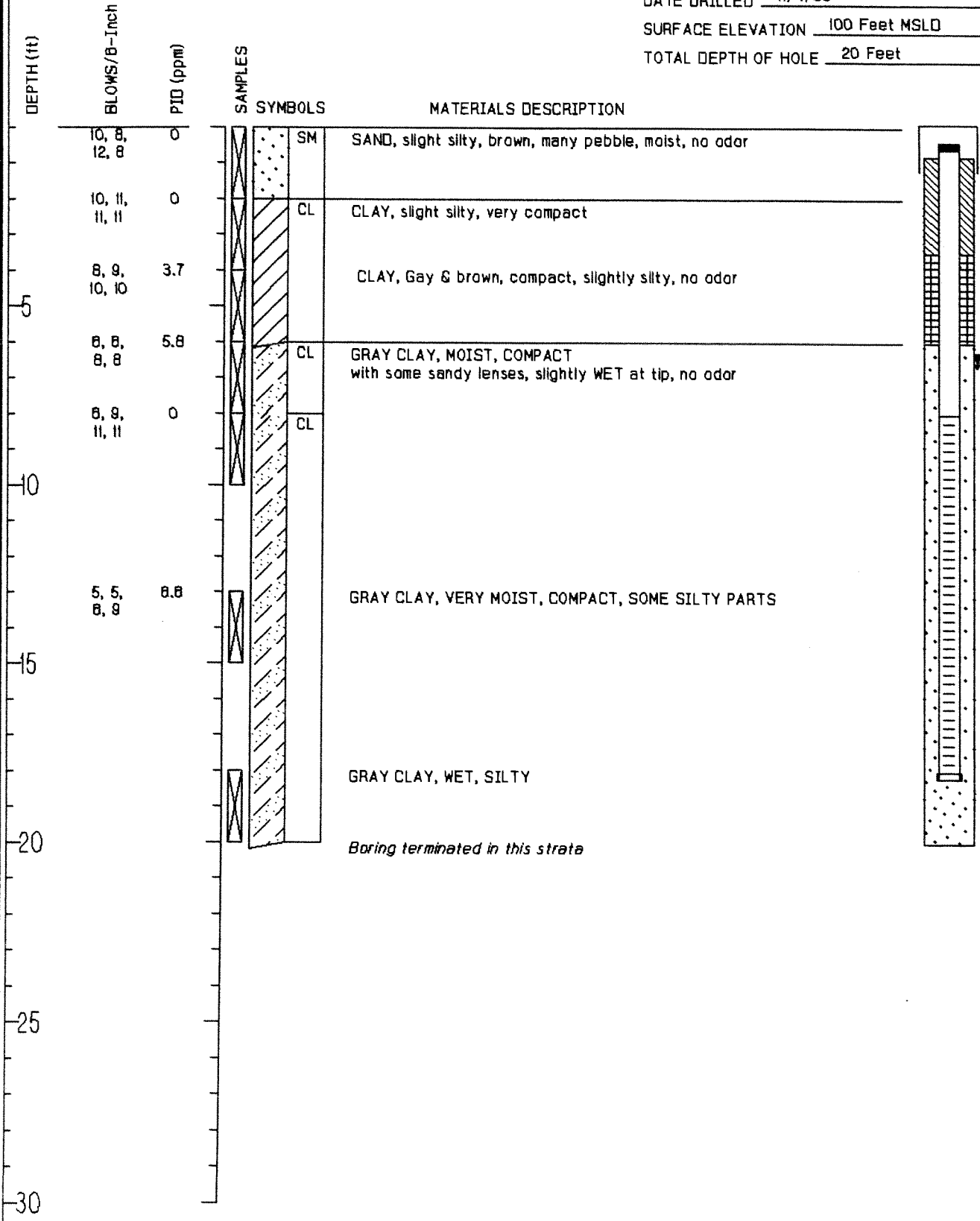
SURFACE ELEVATION 100 Feet MSLD

TOTAL DEPTH OF HOLE 35 Feet



WELL MW-10 (Page 1 of 1)

CLIENT NAME JLL/Peregrine
 DATE DRILLED 11/4/88
 SURFACE ELEVATION 100 Feet MSLD
 TOTAL DEPTH OF HOLE 20 Feet



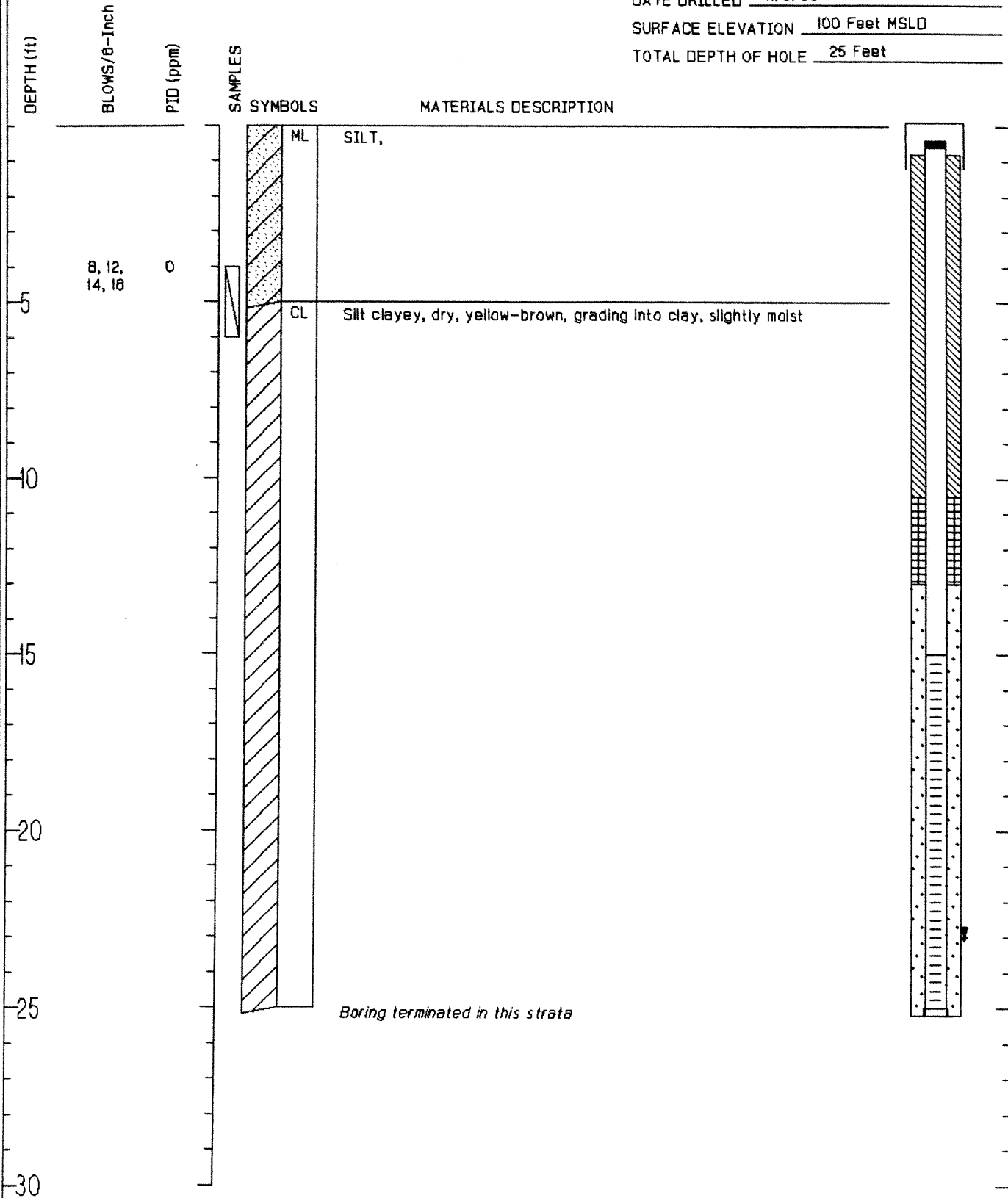
WELL MW-13 (Page 1 of 1)

CLIENT NAME JLL/Peregrine

DATE DRILLED 11/8/98

SURFACE ELEVATION 100 Feet MSLD

TOTAL DEPTH OF HOLE 25 Feet



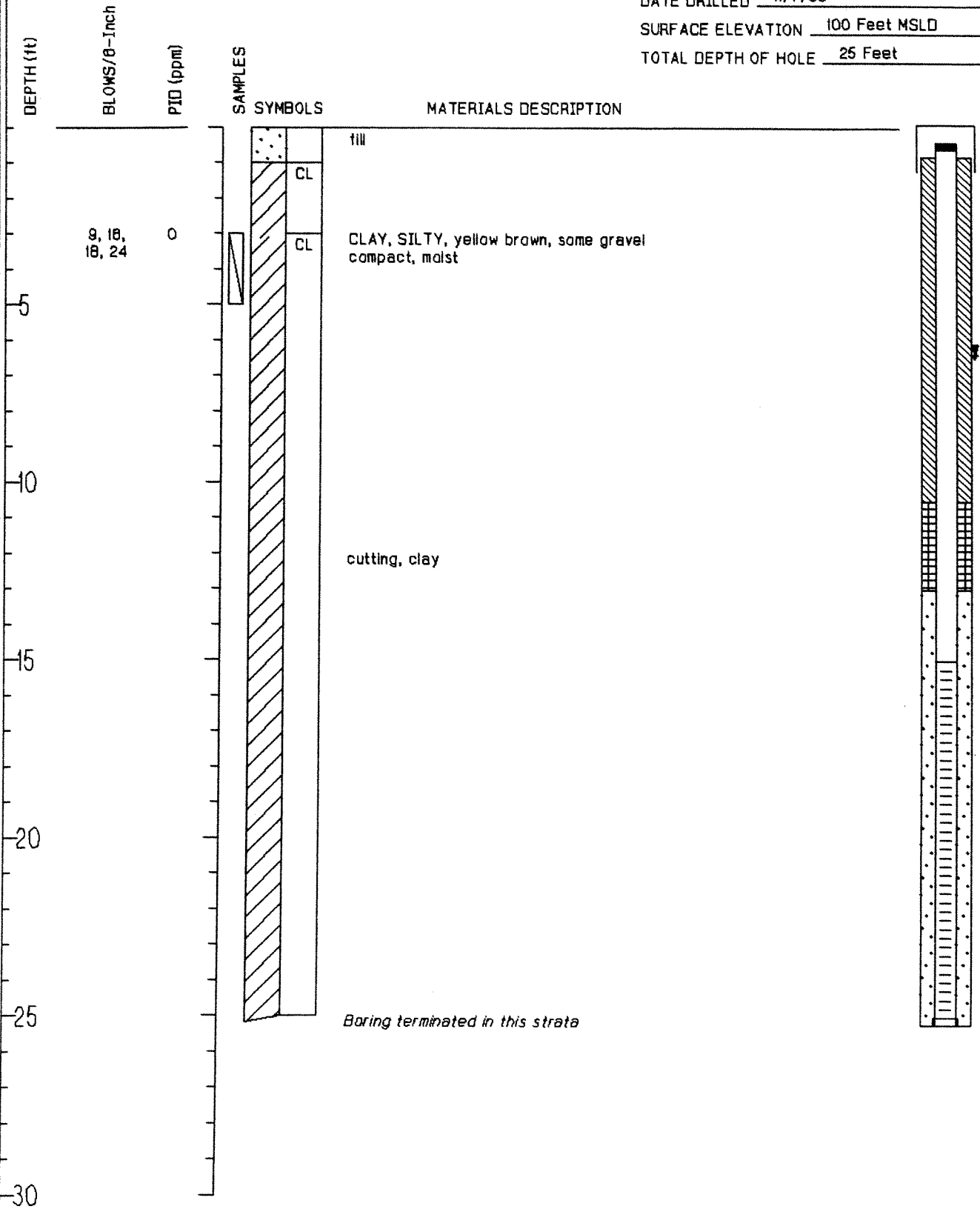
WELL MW-14 (Page 1 of 1)

CLIENT NAME JLL/Peregrine

DATE DRILLED 11/7/98

SURFACE ELEVATION 100 Feet MSLD

TOTAL DEPTH OF HOLE 25 Feet





LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-1
 SHEET NO. 1 OF 7
 PROJECT NO. 4036.05
 INSTALLATION 3-13-97
 SURFACE ELEV. 99.6
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES					DEPTH	VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID			
NO.	TYPE	N	IN				
1	SS	17	16	0.6	0	Asphalt, broken. Fill: well-graded sand with gravel, little silt, little clay, brown, wet.	
2	SS	15	18	0	0	SANDY LEAN CLAY (CL), little fine to coarse sand, few fine to coarse gravel, slightly plastic, brown 10YR 4/3 with some mottling to grayish brown and yellowish brown, moist, (hard Pp > 4.5) (Glacial Till). As above (CL), very stiff from 2 to 2.5 ft.	
3	SS	16	24	0	5	As above (CL), fractured, very stiff (Pp=3.4) below 5.7 feet.	
4	SS	15	24	0		As above (CL), becoming mottled brown, dark grayish brown and dark gray 10YR 4/1 - 4/2.	
5	SS	22	24	0		As above (CL), wet at sand partings @ 8.5' and 9.1', brown, trace fractures.	
6	SS	16	24	0	10		

GENERAL NOTES
 DATE STARTED 12 MAR 97
 DATE COMPLETED 13 MAR 97
 RIG CME 750 ATV
 CREW CHIEF R. BENNETT
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS
 WHILE DRILLING 78.0 ft. bgl
 AT COMPLETION _____
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-1
 SHEET NO. 2 OF 7
 PROJECT NO. 4036.05
 INSTALLATION 3-13-97
 SURFACE ELEV. 99.6
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
7	SS	15	24			As above (CL), stiff to very stiff, (Pp = 1.6 to 2.7).	
					15	As above (CL). WELL-GRADED SAND WITH SILT (SW), fine to medium, trace gravel, few clay, brown 10YR 4/3, moist, pieces of clay till.	
						SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, brown 10YR 4/3, moist, stiff to very stiff (Glacial Till).	
8	SS	15	24	0		As above (CL), hard (Pp > 4).	
					20	As above (CL).	
9	SS	19	24	0		LEAN CLAY (CL), gradational areas of	



LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. PFW-1
SHEET NO. 3 OF 7
PROJECT NO. 4036.05
INSTALLATION 3-13-97
SURFACE ELEV. 99.6
BOREHOLE DIA. 8 IN.

PROJECT NAME PEREGRINE FLINT
LOCATION FLINT, MICHIGAN
CONTRACTOR STEARNS DRILLING CO
DRILLING METHOD 4.25" HSA

SAMPLING NOTES					VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID		
NO.	TYPE	N	IN	DEPTH		
10	SS	40	24	0	<p>25</p> <p>clayey silt and sandy silt, slightly plastic, mottled brown, dark yellowish brown, and brownish gray, hard, fractured, friable, (Glacial Till). SILTY SAND (SM), fine, brown, wet.</p> <p>30</p> <p>LEAN CLAY (CL), slightly plastic, brown with dark yellowish brown and black precipitate along fractures, mostly dark grayish brown below 29.6', moist to wet along silt partings, very hard, faint lamination (Glaciolacustrine).</p> <p>35</p>	



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-1
 SHEET NO. 4 OF 7
 PROJECT NO. 4036.05
 INSTALLATION 3-13-97
 SURFACE ELEV. 99.6
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
11	SS	20	0			As above (CL), gray 10YR 5/1 (based on cuttings).	
12	SS	17	24	0.6		As above (CL), wet along silt partings, very stiff (Pp = 3.2 to 3.7).	
					45	SILT (ML), grading from above clay, nonplastic, gray 10YR 5/1, moist, very stiff.	



LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. PFW-1
 SHEET NO. 5 OF 7
 PROJECT NO. 4036.05
 INSTALLATION 3-13-97
 SURFACE ELEV. 99.6
 BOREHOLE DIA. 8 IN.

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
13	SS	14	24	0.3	50	LEAN CLAY (CL), trace fine gravel, trace fine to coarse sand, medium plastic, gray IOYR 5/1, moist, very stiff (Pp = 2.3 to 2.7), faint lamination (Glaciolacustrine).	
					55		
					60		



LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. PFW-1
 SHEET NO. 6 OF 7
 PROJECT NO. 4036.05
 INSTALLATION 3-13-97
 SURFACE ELEV. 99.6
 BOREHOLE DIA. 8 IN.

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

SAMPLING NOTES					DEPTH	VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID			
NO.	TYPE	N	IN				
14	SS	16	24	0.2	65	As above (CL), abundant silt partings.	
15	SS	88	18		70	<--- Drillers note change in resistance @ 71 feet.	
					75	POORLY-GRADED SAND (SP), fine, trace silt, light gray 10YR 7/1, moist to dry, faint stratification.	



LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. PFW-1
 SHEET NO. 7 OF 7
 PROJECT NO. 4036.05
 INSTALLATION 3-13-97
 SURFACE ELEV. 99.6
 BOREHOLE DIA. 8 IN.

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
16	SS	23	18		▽	As above (SP), some medium sand, gray 10YR 6/1, wet.	[Patterned]
17	SS	40	24		80		
					85	LEAN CLAY (CL). End of boring at 85 feet.	[Patterned]



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-2
 SHEET NO. 1 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-14-97
 SURFACE ELEV. 98.5
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH	VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
		N	IN				
1	SS	26	18	0		Topsoil, wet.	
2	SS	15	16	0		SANDY LEAN CLAY WITH GRAVEL (CL), some fine to coarse sand, little fine to coarse gravel, slightly plastic, brown 10YR 4/3 with some dark yellowish brown mottling, moist, hard (Pp > 4.5).	
3	SS	12	16	0		As above (CL), increasing moisture below 3 feet, stiff (Pp = 1.2 to 1.5).	
4	SS	5	18	0		As above (CL), some brownish gray mottling, some very stiff areas (Pp = 2.5).	
5	SS	1	18	0		As above (CL), with gray areas.	
6	SS	2	6		10	WELL-GRADED SAND WITH CLAY (SW-SC), fine to medium sand, little coarse sand, few clay, trace gravel, brown 10YR 4/3, wet.	
						As above (SW-SC), 2" to 4" zone stiff sandy clay.	

GENERAL NOTES

DATE STARTED 14 MAR 97
 DATE COMPLETED 14 MAR 97
 RIG CME 750 ATV
 CREW CHIEF R. BENNETT
 LOGGED DPR CHECKED IDL

WATER LEVEL OBSERVATIONS

WHILE DRILLING 7.3 ft. bgl
 AT COMPLETION _____
 AFTER DRILLING _____
 GROUND-WATER: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-2
 SHEET NO. 2 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-14-97
 SURFACE ELEV. 98.5
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL		RECOVERY		PID	DEPTH
NO.	TYPE	N	IN		

7	SS	4	20		
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VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

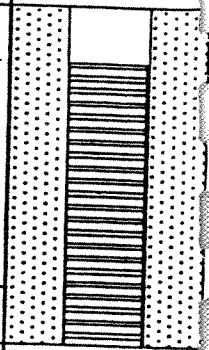
As above (SP-SC), trace clay, dark yellowish brown 10YR 4/4.

WELL-GRADED SAND (SW), fine to coarse, trace silt, trace clay, dark yellowish brown becoming dark grayish brown @ 13.4' with black streaks, diesel hydrocarbon odor.

SANDY LEAN CLAY (CL), some sand, trace fine to coarse gravel, slightly plastic, dark grayish brown, moist, hard (Pp > 4).

End of boring at 14 feet.

GENERAL WELL CONSTRUCT.



15

20



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-3
 SHEET NO. 1 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-17-97
 SURFACE ELEV. 100.3
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL		RECOVERY		PID	DEPTH	VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
NO.	TYPE	N	IN				
1	SS	49	18	0.6		Fill: sand, gravel crushed limestone, upper few inches frozen.	
2	SS	17	16	0.2		SANDY LEAN CLAY (CL), some fine to coarse sand, trace fine gravel, slightly plastic, brown 10YR 4/3 with some gray and dark yellowish brown mottling, moist, hard.	
						WELL-GRADED SAND WITH CLAY (SW-SC), fine to coarse, dark brown 10YR 3/3, moist.	
3	SS	6	18	0.2		SANDY LEAN CLAY WITH GRAVEL (CL), little coarse gravel, dark grayish brown 10YR 4/2, moist, hard.	
						SILTY SAND (SM), fine, brown 10YR 4/3, moist.	
4	SS	12	20		5	SANDY LEAN CLAY WITH GRAVEL (CL), some fine to coarse sand, little fine to coarse gravel, moderately plastic, dark gray 10YR 4/1, moist, very stiff (Pp = 2.6).	
						As above (CL).	
5	SS	14	24			As above (CL), stiff (Pp = 1.3 to 2.0).	
6	SS	12	24		10	As above (CL).	

GENERAL NOTES

DATE STARTED 17 MAR 97
 DATE COMPLETED 17 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING none observed
 AT COMPLETION
 AFTER DRILLING
 CAVE-IN: DATE/TIME DEPTH
 WATER: DATE/TIME DEPTH



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-3
 SHEET NO. 2 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-17-97
 SURFACE ELEV. 100.3
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH	VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
		N	IN				
7	SS	14	24				
8	SS	15	24		15	POORLY-GRADED SAND WITH SILT (SP-SM), fine, gray, moist. SANDY LEAN CLAY (CL), some sand, little fine to coarse gravel, slightly plastic, dark gray 10YR 4/1, moist, stiff. As above (CL), medium stiff (Pp = 1.0).	
9	SS	11	24			As above (CL), (Pp = 0.5).	
10	SS	10	24		20	As above (CL), (Pp = 1.0). End of boring at 20 feet.	

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-4
 SHEET NO. 1 OF 3
 PROJECT NO. 4036.05
 INSTALLATION 3-17-97
 SURFACE ELEV. 99.8
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	23	18	0.2	
2	SS	31	24	0	
3	SS	29	24		5

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

GENERAL WELL CONSTRUCTION

Concrete.

Fill: sand and gravel, few fines, pale brown, moist.

SANDY LEAN CLAY WITH GRAVEL (CL), some fine to coarse sand, little fine gravel, slightly plastic, brown 10YR 4/3 with pale brown along occasional silt partings and fractures, some dark yellowish brown mottling, no odor, moist, hard (Pp > 4).

Silt and silty sand stringers at 4.4 feet.

SANDY LEAN CLAY (CL) as above to 4.4 feet, wet sand parting at 4.8 feet.

As above (CL), some dark yellowish brown along fractures, occasional wet

GENERAL NOTES

DATE STARTED 17 MAR 97
 DATE COMPLETED 17 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ none observed
 AT COMPLETION ∇
 AFTER DRILLING _____
 GAGE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-4
 SHEET NO. 2 OF 3
 PROJECT NO. 4036.05
 INSTALLATION 3-17-97
 SURFACE ELEV. 99.8
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		DEPTH
		N	IN	

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

GENERAL WELL CONSTRUCT.

4	SS	21	24	
5	SS	30	24	
6	SS	28	24	10

sand partings, very stiff.

As above (CL).

SILTY SAND (SM), brown, wet, laminated.

SANDY LEAN CLAY as above to 7.3 feet, very stiff to hard.

SILT (ML), little clay, few fine sand, brown with dark yellowish brown mottling, wet, nonlaminated.

SANDY LEAN CLAY WITH GRAVEL (CL), slightly plastic, dark grayish brown 10YR 4/2 with dark yellowish brown along fractures, moist, very stiff, sand partings.

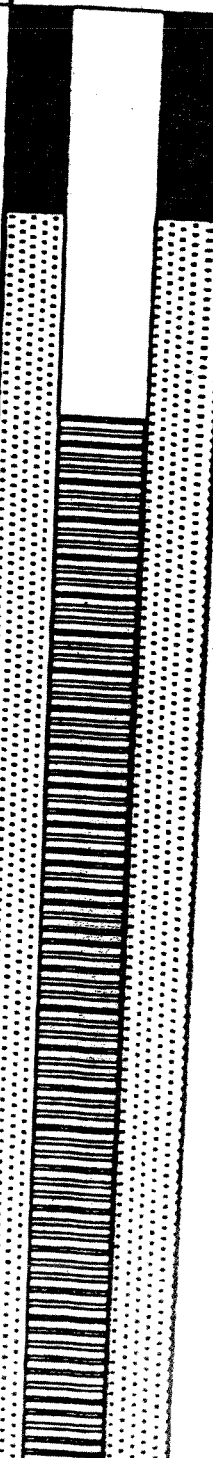
SILT (ML), some clay, few sand, mottled dark grayish brown and dark yellowish brown, moist.

SANDY LEAN CLAY WITH GRAVEL (CL), slightly plastic, dark grayish brown 10YR 4/2 with dark yellowish brown along fractures, moist, very stiff, sand partings.

SILTY SAND (SM), fine to medium, trace clay, brown, wet.

SANDY LEAN CLAY WITH GRAVEL (CL), dark grayish brown, slightly plastic, 10YR 4/2, moist, very stiff.

SILT (ML), mottled grays and dark yellowish brown, moist to wet, nonlaminated, fractured.



ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-4
 SHEET NO. 3 OF 3
 PROJECT NO. 4036.05
 INSTALLATION 3-17-97
 SURFACE ELEV. 99.8
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
7	SS	44	24		
8	SS	16	24		15
					20

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

GENERAL WELL CONSTRUCTION

SANDY LEAN CLAY (CL), brown to dark yellowish brown, hard.
SILT (ML), little clay, few fine sand, brown, nonlaminated, moist to wet.
SILTY SAND (SM), trace clay, brown to dark yellowish brown to dark grayish brown, stratified.
SANDY LEAN CLAY (CL), dark grayish brown, moist.
SILTY SAND (SM), trace clay, dark grayish brown, wet, stratified.
SANDY LEAN CLAY (CL), some sand, few fine gravel, medium plastic, dark gray 10YR 4/1, moist, very stiff (Pp = 3.0).

End of boring at 17 feet.



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-5
 SHEET NO. 1 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-18-97
 SURFACE ELEV. 98.9
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	8	20	0.1	
2	SS	9	22	0.1	
3	SS	2	12	0	
4	SS	1	0		
5	SS	2	20		
6	SS	10	16		

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

Interval 1: Fill: mostly medium sand, little fine to coarse rounded gravel, brown to 15 inches, then dark yellowish brown, no odor, moist.

Interval 2: As above.

Interval 3: Fill: fine to medium sand, dark yellowish brown, becoming brown and wet @ 3.7 ft.

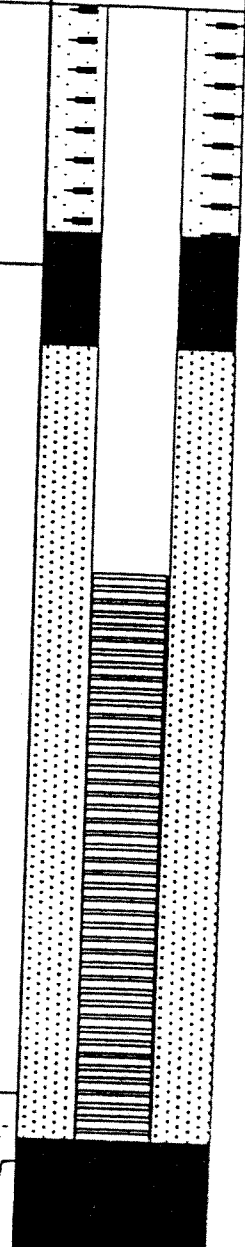
Interval 4: As above, dark grayish brown.

Interval 5: As above (based on blow counts and contents of 8 to 10 ft. sample).

Interval 6: As above.

Interval 6: SANDY LEAN CLAY (CL), medium plastic, gray.
 SILT (ML), dark gray, laminated with clayey silt and sandy silt, wet.

GENERAL WELL CONSTRUCT.



GENERAL NOTES

DATE STARTED 18 MAR 97
 DATE COMPLETED 18 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ 3.7 ft. bgl
 AT COMPLETION ∇ _____
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____



LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. PFW-5
 SHEET NO. 2 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-18-97
 SURFACE ELEV. 98.9
 BOREHOLE DIA. 8 IN.

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
7	SS	10	18			<p>SANDY LEAN CLAY (CL), some fine to coarse sand, few fine gravel, slightly plastic, dark gray 10YR 4/1, moist, very stiff (Pp = 3.0 to 3.7).</p> <p>As above (CL).</p>	
					15	End of boring at 14 feet.	
					20		

ENVIRONMENTAL AUDIT REPORT
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LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-6
 SHEET NO. 1 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-18-97
 SURFACE ELEV. 98.6
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
1	SS	16	18	9.4		Asphalt. Concrete. Fill: medium to coarse sand with coarse rounded gravel, few silt, few clay, dark grayish brown, wet. SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, brown 10YR 4/3 with some gray mottling, no odor, moist, hard (Pp > 4.0), fractured.	
2	SS	25	20	10.2		As above (CL).	
3	SS	22	24		5	As above (CL).	
4	SS	21	24			As above (CL), dark gray 10YR 4/1 below 7.3 feet, very stiff (Pp = 2.7 to 3.5).	
5	SS	23	6		10	As above (CL).	

GENERAL NOTES
 DATE STARTED 18 MAR 97
 DATE COMPLETED 18 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS
 WHILE DRILLING none observed
 AT COMPLETION
 AFTER DRILLING _____
 GAGE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-6
 SHEET NO. 2 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-18-97
 SURFACE ELEV. 98.6
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH	VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
		N	IN				
6	SS	16	24			As above (CL), stiff (Pp = 1.4 to 1.7).	
7	SS	17	24			As above (CL), medium stiff (Pp = 1.0).	
					15	End of boring at 15 feet.	
					20		

ENVIRONMENTAL AUDIT REPORT:
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-7
 SHEET NO. 1 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-18-97
 SURFACE ELEV. _____
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	24	16	0	
2	SS	29	20	0	
3	SS	29	24	0	
4	SS	20	24	0	
5	SS	18	18	2.2	
6	SS	14	24	0	

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

Concrete.

Fill: fine to medium sand, dark yellowish brown, no odor, moist.

SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, dark brown to brown, dry to moist, hard (Pp > 4.5), fractured, some areas of fill sand as above.

SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, brown with some gray and dark yellowish brown mottling, no odor, dry to moist, hard (Pp > 4.5), fractured.

As above (CL), dark gray below 7 feet, dark yellowish brown along sporadic fractures, very stiff (Pp = 2.5 to 3.5).

As above (CL), dark yellowish brown to dark brown along fracture from 9 to 9.5 feet, hard.

As above (CL), dark gray with occasional dark yellow brown zones, stiff (Pp = 1.5).

GENERAL NOTES

DATE STARTED 18 MAR 97
 DATE COMPLETED 18 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ 22.5 ft. bgl
 AT COMPLETION ∇ _____
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING



F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-7
 SHEET NO. 2 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-18-97
 SURFACE ELEV. _____
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
7	SS	14	24	0	
8	SS	16	24	0	
9	SS	14	24	0	
10	SS	16	24	0	
11	SS	13	24	0	
12	SS	15	24	0	

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

As above (CL).

15
As above (CL), all dark gray below 14.3 feet, stiff to very stiff (Pp = 1.5 to 2.2).

As above (CL), stiff (Pp = 1.5 to 1.7).

As above (CL).

20
As above (CL).

As above (CL), 1/4-inch wet fine to coarse sand stringer @ 22.5'.

LEAN CLAY (CL), moderately plastic, pale red 10YR 6/2, moist.

SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, dark gray, moist, stiff.

End of boring at 24 feet.

25

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-8
 SHEET NO. 1 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-19-97
 SURFACE ELEV. 101.1
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	18	24	0	
2	SS	19	18	0	
3	SS	17	18	0	5
4	SS	18	21	0.4	
5	SS	17	24	0	
6	SS	21	24	0	10

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

SANDY LEAN CLAY (CL), some sand, few fine to coarse gravel, slightly plastic, dark grayish brown 10YR 4/2 with some dark yellowish brown and dark gray mottling, black precipitate along fractures, moist, hard (Pp > 4.5) (Glacial Till).

As above (CL), dark gray below 2.5 feet, (Pp = 4.2 to 4.5).

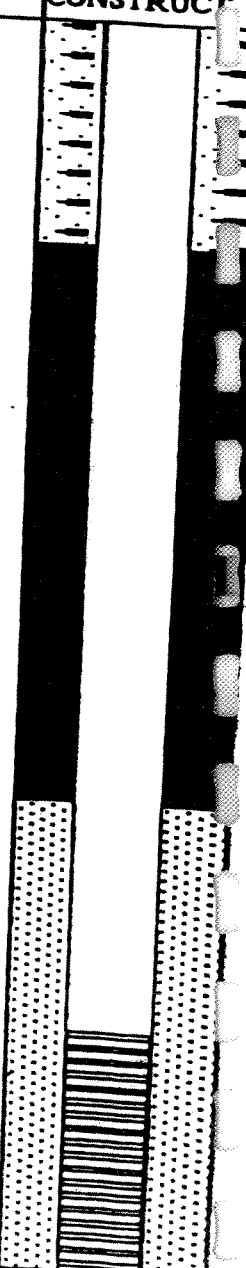
As above (CL).

As above (CL), very stiff (Pp = 3.2 to 3.5).

As above (CL), stiff (Pp = 1.4 to 1.7).

As above (CL).

GENERAL WELL CONSTRUCTION



GENERAL NOTES

DATE STARTED 19 MAR 97
 DATE COMPLETED 19 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING none observed
 AT COMPLETION
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-8
 SHEET NO. 2 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-19-97
 SURFACE ELEV. 101.1
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL		RECOVERY		PID	DEPTH	VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
NO.	TYPE	N	IN				
7	SS	14	24	0		As above (CL).	
8	SS	15	24	0	15	As above (CL), medium stiff (Pp = 0.5 to 1.0).	
9	SS	12	24	0		As above (CL).	
						End of boring at 18 feet.	
						20	



LOG OF TEST BORING

F-203 (R 01-87)


BORING NO. PFW-9
SHEET NO. 1 OF 2
PROJECT NO. 4036.05
INSTALLATION 3-19-97
SURFACE ELEV. 98.8
BOREHOLE DIA. 8 IN.

PROJECT NAME PEREGRINE FLINT
LOCATION FLINT, MICHIGAN
CONTRACTOR STEARNS DRILLING CO
DRILLING METHOD 4.25" HSA


SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
1	SS	7	20	0		SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, mottled brown, dark yellowish brown, and gray, moist, very stiff to hard, fractured (Glacial Till).	
2	SS	13	24	0		As above (CL).	
3	SS	6	20	0	5	WELL-GRADED SAND (SW), fine to coarse, trace silt, trace clay, dark yellowish brown 10YR 3/6, moist.	
						SILT (ML), dark yellowish brown, moist, laminated.	
4	SS	5	20	0		WELL-GRADED SAND (SW), fine to coarse, trace silt, trace clay, dark yellowish brown 10Y R3/6, moist.	
						SANDY LEAN CLAY (CL), few fine to coarse gravel, slightly plastic, brown, moist, stiff (Pp = 1.5), abundant moist to wet sand partings below 5 feet (Glacial Till).	
5	SS	8	19	0		As above (CL), very stiff (Pp = 2.2).	
6	SS	16	24	0	10	PEAT, black humic material, some plant fragments, no odor.	
						SANDY LEAN CLAY (CL), brown 10YR 4/3 with yellowish brown and gray mottling and fractures, moist, hard.	


GENERAL NOTES
DATE STARTED 19 MAR 97
DATE COMPLETED 19 MAR 97
RIG CME LC 60
CREW CHIEF M. HEFFERAN
LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS
WHILE DRILLING ∇ 5.0 ft. bgl
AT COMPLETION ∇ _____
AFTER DRILLING _____
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

	LOG OF TEST BORING			BORING NO. <u>PFW-9</u>
	F-203 (R 01-87)			SHEET NO. <u>2</u> OF <u>2</u>
	PROJECT NAME <u>PEREGRINE FLINT</u>			PROJECT NO. <u>4036.05</u>
	LOCATION <u>FLINT, MICHIGAN</u>			INSTALLATION <u>3-19-97</u>
	CONTRACTOR <u>STEARNS DRILLING CO</u>			SURFACE ELEV. <u>98.8</u>
DRILLING METHOD <u>4.25" HSA</u>			BOREHOLE DIA. <u>8 IN.</u>	

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
7	SS	17	24	0	-	As above (CL), very stiff (Pp = 3.5 to 4.0), olive brown, continued mottling.	
					-	As above (CL).	
8	SS	37	24	0	-	As above (CL), hard (Pp > 4.5), mostly brown 10YR 4/3, gray along fractures.	
					15		
9	SS	39	24	0	-	As above (CL), fewer fractures.	
					-		
10	SS	46	24	0	-	As above (CL).	
					-		
					20		
					-	End of boring at 20 feet. Original boring backfilled with bentonite slurry. Moved 5 feet northwest to install well.	

	LOG OF TEST BORING			BORING NO. <u>PFW-10</u>
	F-203 (R 01-87)			SHEET NO. <u>1</u> OF <u>2</u>
	PROJECT NAME	<u>PEREGRINE FLINT</u>		PROJECT NO. <u>4036.05</u>
	LOCATION	<u>FLINT, MICHIGAN</u>		INSTALLATION <u>3-20-97</u>
	CONTRACTOR	<u>STEARNS DRILLING CO</u>		SURFACE ELEV. <u>100.5</u>
	DRILLING METHOD	<u>4.25" HSA</u>		BOREHOLE DIA. <u>8 IN.</u>

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
1	SS	11	15	0.1		<p>Asphalt.</p> <p>Fill: fine to medium sand, little coarse gravel, dark yellowish brown, moist to wet.</p>	
2	SS	12	20	0.2		<p>SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, brown 10YR 4/3 with some gray mottling along fractures, moist, hard (Pp > 4.5) (Glacial Till).</p>	
3	SS	18	24	0		<p>As above (CL), very dark gray 10YR 3/1 to olive brown 2.5Y 3/6 to grayish brown 10YR 4/2, stiff to very stiff (Pp = 1.5 to 2.5).</p>	
4	SS	29	24	0	5	<p>As above (CL), brown 10YR 4/3, hard (Pp = 4.4) below 5 feet.</p>	
5	SS	29	24	0		<p>As above (CL), less gray mottling below 7 feet.</p>	
6	SS	24	24	0	10	<p>As above (CL), (Pp = 4.0 to 4.5), fracture from 9.2 to 9.8 ft.</p>	
6	SS	24	24	0		<p>As above (CL), fracture 11.5 to 11.8'.</p>	

GENERAL NOTES	
DATE STARTED	<u>20 MAR 97</u>
DATE COMPLETED	<u>20 MAR 97</u>
RIG	<u>CME LC 60</u>
CREW CHIEF	<u>M. HEFFERAN</u>
LOGGED	<u>DPR</u> CHECKED <u>LPL</u>

WATER LEVEL OBSERVATIONS	
WHILE DRILLING	<u>13.8 ft. bgl</u>
AT COMPLETION	
AFTER DRILLING	
CAVE-IN: DATE/TIME	DEPTH
WATER: DATE/TIME	DEPTH




LOG OF TEST BORING

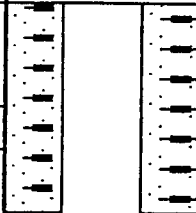



F-203 (R 01-87)

BORING NO. PFW-10
SHEET NO. 2 OF 2
PROJECT NO. 4036.05
INSTALLATION 3-20-97
SURFACE ELEV. 100.5
BOREHOLE DIA. 8 IN.



PROJECT NAME PEREGRINE FLINT
LOCATION FLINT, MICHIGAN
CONTRACTOR STEARNS DRILLING CO
DRILLING METHOD 4.25" HSA

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
7	SS	24	22	0		As above (CL), areas of dark grayish brown below 12.2 ft, very stiff (Pp = 2.5 to 3.5).	
8	SS	19	24	0	▽	<--- Wet sand parting at 13.8 feet.	
9	SS	14	24	0	15	As above (CL), dark gray 10YR 4/1, stiff (Pp = 1.7).	
10	SS	13	24	0		As above (CL).	
					20	End of boring at 20 feet.	

	LOG OF TEST BORING			BORING NO. <u>PFW-11</u>
	F-203 (R 01-87)			SHEET NO. <u>1</u> OF <u>2</u>
	PROJECT NAME <u>PEREGRINE FLINT</u>			PROJECT NO. <u>4036.05</u>
	LOCATION <u>FLINT, MICHIGAN</u>			INSTALLATION <u>3-20-97</u>
	CONTRACTOR <u>STEARNS DRILLING CO</u>			SURFACE ELEV. <u>101.3</u>
	DRILLING METHOD <u>4.25" HSA</u>			BOREHOLE DIA. <u>8 IN.</u>

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
1	SS	19	18	0		<div style="border: 1px solid black; padding: 2px;">Asphalt and concrete.</div> <div style="border: 1px solid black; padding: 2px;">Fill: medium sand, dark yellowish brown, moist.</div> <div style="border: 1px solid black; padding: 2px;">SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, brown 10YR 4/3 with some yellowish brown mottling and gray along fractures, moist, hard (Pp > 4.5) (Glacial Till).</div>	
2	SS	23	24	0		<div style="border: 1px solid black; padding: 2px;">As above (CL).</div>	
3	SS	24	24	0		<div style="border: 1px solid black; padding: 2px;">SILT (ML), dark yellowish brown, moist, stratified.</div>	
					5	<div style="border: 1px solid black; padding: 2px;">LEAN CLAY (CL), dark grayish brown, hard, moist, laminated.</div> <div style="border: 1px solid black; padding: 2px;">SILT (ML), brown, moist, laminated.</div>	

GENERAL NOTES	
DATE STARTED <u>20 MAR 97</u>	DATE COMPLETED <u>20 MAR 97</u>
RIG <u>CME LC 60</u>	CREW CHIEF <u>M. HEFFERAN</u>
LOGGED <u>DPR</u>	CHECKED <u>LPL</u>

WATER LEVEL OBSERVATIONS	
WHILE DRILLING  <u>6.9 ft. bgl</u>	AT COMPLETION  _____
AFTER DRILLING	
CAVE-IN: DATE/TIME _____	DEPTH _____
WATER: DATE/TIME _____	DEPTH _____



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-11
 SHEET NO. 2 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-20-97
 SURFACE ELEV. 101.3
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		PID	DEPTH		
NO.	TYPE	N	IN				
4	SS	19	20	0		SILTY SAND (SM), fine, very pale brown 10YR 7/3, moist. SANDY LEAN CLAY (CL), gray 10YR 5/1, moist, very stiff. SANDY SILT (ML), little fine sand, gray 10YR 5/1, moist to wet, stratified and laminated.	
5	SS	21	24		As above (ML). POORLY-GRADED SAND (SP), wet. SANDY SILT (ML), wet. POORLY-GRADED SAND (SP), wet.		
6	SS	14	20		SILT (ML), wet. SANDY SILT (ML), wet. POORLY-GRADED SAND (SP), wet. SANDY SILT (ML), wet. SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, dark gray 10YR 4/1, moist, very stiff (Pp = 3.3).		
						End of boring at 12 feet.	

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-12
 SHEET NO. 1 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-21-97
 SURFACE ELEV. 101.7
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	21	15	12	
2	SS	26	24	8.1	
3	SS	28	24	23.3	
4	SS	23	24	28.3	
5	SS	23	24	5.6	
6	SS	20	24	0	10

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

GENERAL WELL CONSTRUCT.

Concrete.

Fill: wood blocks.

SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, dark grayish brown to brown 10YR 4/3 with gray mottling, moist, very stiff to hard, fractures, strong hydrocarbon odor.

As above (CL), hard, less hydrocarbon odor.

As above (CL), heavy fracturing with dark red precipitate along with gray fractures.

As above (CL).

As above (CL), fewer fractures, dark grayish brown.

GENERAL NOTES

DATE STARTED 21 MAR 97
 DATE COMPLETED 21 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING 17.8 ft. bgl
 AT COMPLETION _____
 AFTER DRILLING _____
 GAGE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFW-12
 SHEET NO. 2 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-21-97
 SURFACE ELEV. 101.7
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL		RECOVERY		PID	DEPTH	VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCTION
NO.	TYPE	N	IN				
7	SS	20	24	6		As above (CL), no odor.	
						As above (CL).	
8	SS	24	24	3.1		WELL-GRADED SAND (SW), fine to coarse, trace silt, trace clay, yellow to brown to dark gray and black, hydrocarbon odor, moist.	
					15	SANDY LEAN CLAY (CL), some fine to coarse sand, few fine to coarse gravel, slightly plastic, dark grayish brown, moist, stiff (Pp = 1.5 to 2.0), some sand partings.	
9	SS	16	24	0		SANDY SILT (ML), dark grayish brown, moist.	
						SILTY SAND (SM), dark grayish brown, wet, some laminated with sandy silt and clayey silt.	
10	SS	8	20			SANDY LEAN CLAY (CL), slightly plastic, dark gray 10YR 4/1, medium stiff (Pp = 0.8), moist. End of boring at 20 feet.	

ENVIRONMENTAL AUDIT REPORT:
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-13
 SHEET NO. 1 OF 1
 PROJECT NO. 4036.05
 INSTALLATION 3-24-97
 SURFACE ELEV. 101.7
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL NO.	TYPE	RECOVERY N	IN	PID	DEPTH	
1	SS	12	13	0.8		Concrete. Fill: sand and coarse gravel, brown, no odor, dry to moist.
2	SS	15	19	0		SANDY LEAN CLAY (CL), some fine to coarse sand, few gravel, slightly plastic, grayish brown 10YR 5/2 to dark grayish brown 10YR 5/3 with gray along fractures, dry to moist, hard (Pp > 4.5) (Glacial Till).
3	SS	13	18	0		As above (CL), no odor, moist, very stiff (Pp = 3.6), fracture at 3.3'.
4	SS	17	20	0		As above (CL), few fractures.
5	SS	28	24	0		As above (CL), little gravel, mottled dark grayish brown, dark gray, and dark yellowish brown, very stiff to hard (Pp = 3.3 to 4.5).
					10	As above (CL), brown 10YR 4/3, dark gray along occasional fractures.
						End of boring at 10 feet. Boring backfilled with bentonite chips.

GENERAL NOTES
 DATE STARTED 24 MAR 97
 DATE COMPLETED 24 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS
 WHILE DRILLING ∇ none observed
 AT COMPLETION ∇
 AFTER DRILLING _____
 GAGE-IM: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT:
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-14
 SHEET NO. 1 OF 1
 PROJECT NO. 4036.05
 INSTALLATION 3-25-97
 SURFACE ELEV. 101.7
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	NA	12		
2	SS	NA	16		
3	SS	12	12	29.2	
4	SS	10	22	23.2	
5	SS	12	24	11.2	

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

Concrete.

Fill: medium sand, dark yellowish brown, no odor, moist (backfill from die cast area pit).

Split spoon refusal at 4.2 feet.

Concrete.

Fill: medium to coarse sand, dark gray, moist, strong hydrocarbon odor.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, dark gray 10YR 4/1, strong hydrocarbon odor, moist, stiff (Pp = 1.6) (Glacial Till).

As above (CL), less odor.

As above (CL), medium stiff (Pp = 0.8), 1/8" sand parting @ 8.3 feet.

End of boring at 10 feet. Boring backfilled with bentonite chips.

GENERAL NOTES

DATE STARTED 24 MAR 97
 DATE COMPLETED 25 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING none observed
 AT COMPLETION none observed
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-15
 SHEET NO. 1 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-24-97
 SURFACE ELEV. _____
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	15	17	0	
2	SS	35	15	0	
3	SS	19	20	0	
4	SS	18	22	0	5
5	SS	17	24	0	
6	SS	18	24	0	10

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

Concrete.

Fill: medium sand, dark yellowish brown, no odor, moist.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, brown 10YR 4/3, no odor, moist, hard (Pp > 4.5), occasional fracture.

As above (CL), dark grayish brown 10YR 4/2 below 3.1 ft.

As above (CL), hard to stiff, no fracturing.

As above (CL).

As above (CL).

GENERAL NOTES

DATE STARTED 24 MAR 97
 DATE COMPLETED 24 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ none observed
 AT COMPLETION ∇ _____
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT:
PRIVILEGED DOCUMENT

LOG OF TEST BORING



F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-15
 SHEET NO. 2 OF 2
 PROJECT NO. 4036.05
 INSTALLATION 3-24-97
 SURFACE ELEV. _____
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

VISUAL CLASSIFICATION
AND GENERAL OBSERVATIONS

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
7	SS	17	24	0	

As above (CL), 1/4" sand parting @ 11.2 ft, no odor.

As above (CL).

End of boring at 14 feet. Boring backfilled with bentonite chips.

15

20

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-16
 SHEET NO. 1 OF 1
 PROJECT NO. 4036.05
 INSTALLATION 3-25-97
 SURFACE ELEV. 101.7
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	6	12		
2	SS	5	6		
3	SS	15	22	32.2	
4	SS	15	24	4.4	5
5	SS	16	24	5.6	
6	SS	6	12	22.2	10

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

Concrete.

Fill: fine to medium sand, dark yellowish brown, moist, no odor.

Concrete.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, dark gray 10YR 4/1, no odor, moist, very stiff (Pp = 3.3), occasional fracture.

As above (CL), 1/8" silty sand parting @ 5.4 ft, no fractures.

As above (CL), (Pp = 2.2 to 2.5).

As above (CL).

End of boring at 10 feet. Boring backfilled with bentonite chips.

GENERAL NOTES

DATE STARTED 25 MAR 97
 DATE COMPLETED 25 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING none observed
 AT COMPLETION
 AFTER DRILLING
 CAVE-IN: DATE/TIME DEPTH
 WATER: DATE/TIME DEPTH

ENVIRONMENTAL AUDIT REPORT:
PRIVILEGED DOCUMENT

LOG OF TEST BORING



F-203 (R 01-87)

BORING NO. PFB-17
SHEET NO. 1 OF 1
PROJECT NO. 4036.05
INSTALLATION 3-26-97
SURFACE ELEV. _____
BOREHOLE DIA. 8 IN.

PROJECT NAME PEREGRINE FLINT
LOCATION FLINT, MICHIGAN
CONTRACTOR STEARNS DRILLING CO
DRILLING METHOD 4.25" HSA

SAMPLING NOTES

INTERVAL		RECOVERY		PID	DEPTH
NO.	TYPE	N	IN		
1	SS	10	15	0	
2	SS	4	22	0	
3	SS	10	24	0	
4	SS	26	20	0	
5	SS	14	20	0	

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

Concrete.

Fill: fine sand, brown 10YR 4/3, pieces of dark gray sandy lean clay, no odor, dry to moist.

As above.

As above, dark yellowish brown.

Fill: silty fine sand, small pieces of dark gray sandy lean clay, brown to grayish brown, no odor, dry to moist.

SANDY SILT (ML), light brownish gray 10YR 6/2, dry to moist, laminated and stratified.

LEAN CLAY (CL), medium plastic, dark gray, moist, stiff (Pp = 1.4), increasingly laminated.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, dark gray 10YR 4/1, moist, stiff (Glacial Till).

End of boring at 10 feet. Boring backfilled with bentonite chips.

GENERAL NOTES

DATE STARTED 26 MAR 97
DATE COMPLETED 26 MAR 97
RIG CME LC 60
CREW CHIEF M. HEFFERAN
LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ none observed
AT COMPLETION ∇
AFTER DRILLING _____
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING



F-203 (R 01-87)

PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-18
 SHEET NO. 1 OF 1
 PROJECT NO. 4036.05
 INSTALLATION 3-26-97
 SURFACE ELEV. _____
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	15	16	0.6	
2	SS	19	24	0	
3	SS	12	24	0	
4	SS	13	18	0	
5	SS	15	24	0	

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

Concrete.

Fill: fine sand with silt, dark yellowish brown, dry to moist.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, dark gray 10YR 4/1, no odor, dry to moist, hard, occasional gray silt parting (Glacial Till).

As above (CL), moist, very stiff (Pp = 3.3 to 3.8).

As above (CL).

As above (CL), (Pp = 2.7 to 3.3).

SANDY SILT (ML), dark grayish brown, moist.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, dark gray 10YR 4/1, no odor, moist, stiff (Pp = 1.7), no silt partings.

End of boring at 10 feet. Boring backfilled with bentonite chips.

GENERAL NOTES

DATE STARTED 26 MAR 97
 DATE COMPLETED 26 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ none observed
 AT COMPLETION ∇ _____
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT:
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-19
 SHEET NO. 1 OF 1
 PROJECT NO. 4036.05
 INSTALLATION 3-26-97
 SURFACE ELEV. _____
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	12	16	0	
2	SS	12	24	0	
3	SS	14	20	0	
4	SS	12	24	0	
5	SS	12	24	0	

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

Concrete.

Fill: silty fine sand, dark yellowish brown, dry to moist.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, dark gray 10YR 4/1, no odor, dry to moist, hard (Pp > 4.5) (Glacial Till).

As above (CL), dark yellowish brown along fractures, very stiff (Pp = 2.7 to 3.3).

As above (CL), no fractures.

As above (CL), (Pp = 2.1).

<— 1/8" moist gray silty sand parting @ 8.3 ft.

As above (CL), but gray to dark gray along occasional fractures, stiff (Pp = 1.0).

End of boring at 10 feet. Boring backfilled with bentonite chips.

GENERAL NOTES

DATE STARTED 26 MAR 97
 DATE COMPLETED 26 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ none observed
 AT COMPLETION ∇ _____
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

ENVIRONMENTAL AUDIT REPORT
PRIVILEGED DOCUMENT

LOG OF TEST BORING

F-203 (R 01-87)



PROJECT NAME PEREGRINE FLINT
 LOCATION FLINT, MICHIGAN
 CONTRACTOR STEARNS DRILLING CO
 DRILLING METHOD 4.25" HSA

BORING NO. PFB-20
 SHEET NO. 1 OF 1
 PROJECT NO. 4036.05
 INSTALLATION 3-26-97
 SURFACE ELEV. _____
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES

INTERVAL NO.	TYPE	RECOVERY		PID	DEPTH
		N	IN		
1	SS	17	20	0	
2	SS	11	22	0	
3	SS	8	24	0	5
4	SS	NA	24	0	
5	SS	NA	12	0	10

VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS

Concrete.

Fill: silty fine sand, dark yellowish brown, no odor, moist.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, dark gray 10YR 4/1, dry to moist, hard (Pp > 4.5), occasional fractures (Glacial Till).

SANDY SILT (ML), pale brown, moist.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, dark gray 10YR 4/1, dry to moist, very stiff (Pp = 3.3 to 3.8), occasional fractures.

SANDY SILT (ML), dark yellowish brown, moist.

SANDY LEAN CLAY (CL), some sand, few gravel, slightly plastic, dark gray 10YR 4/1, dry to moist, stiff (Pp = 1.4 to 1.8), gray along occasional fractures.

As above (CL), no fractures.

As above (CL).

End of boring at 10 feet. Boring backfilled with bentonite chips.

GENERAL NOTES

DATE STARTED 26 MAR 97
 DATE COMPLETED 26 MAR 97
 RIG CME LC 60
 CREW CHIEF M. HEFFERAN
 LOGGED DPR CHECKED LPL

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ none observed
 AT COMPLETION ∇ _____
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____