



92 OCT 15 12:11:56

TRANSMITTAL LETTER

FROM: SCOTT MACLEOD

DATE: 10/13/92

TO: JENNIFER FERRIE
ALDEH
80 SWAN WAY, PO BOX 200
OAKLAND, CA 94621

VIA: First Class Mail
 Fax ___ pages
 UPS (Surface)
 Federal Express
 Courier

SUBJECT: 29 WILDWOOD AVE
PIEDMONT

JOB: 81-463-100

AS: We discussed on the telephone on 10/7
 You requested _____
 We believe you may be interested
 Is required

WE ARE SENDING: Enclosed
 Under Separate Cover Via _____

BORING LOGS FOR SOIL BORINGS AND MONITORING WELLS

3 ← 100
↓

FOR: Your information
 Your use
 Your review & comments
 Return to you

PLEASE: Keep this material
 Return within 2 weeks
 Acknowledge receipt

MESSAGE: PLEASE LET ME KNOW IF YOU'D LIKE ANYTHING ELSE

CC: DAN KIRK, SHELL
D:\ALL\TRANS\FE1.WP

LOG OF EXPLORATORY BORING

PROJECT NUMBER 438-37.01

BORING NO. XXXXXXXXXX

BY BH DATE 8/15/84

SURFACE ELEV. -

CLASSIFICATION DATA			FIELD DATA		Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index	Compressive Strength (TSF)	Penetration (Blows/Ft.)				
					29	5		2-inch Asphalt and 4-inch Baserock (SC) Very dark grayish brown (10YR 3/2) clayey SAND - damp (CL) Dark olive gray (5Y 3/2) sandy CLAY - damp (SC) Dark olive gray (5Y 3/2) clayey SAND - damp (CL) Dark yellowish brown (10YR 3/6) fine sandy CLAY - damp (brown (7.5YR 5/2) sandy - damp to dry) (contains thin gravelly interbeds) (dark brown (7.5YR 3/4) sandy damp)
					35	10		
					35	15		
					70	20		(gray (5Y 5/1) silty very fine sandy - damp to dry)
					58	25		(light olive gray (5Y 6/2) very fine sandy contains minor medium to coarse sand - damp to dry)
					55	30		(SM) Olive gray (5Y 5/2) silty fine XXXXXXXXXX
					65	35		(CL) Mottled brown (7.5YR 4/2) and dark yellowish brown (10YR 4/6) CLAY - damp to dry (mottled brown (7.5YR 4/2) and yellowish brown (10YR 5/6) sandy contains thin gravelly interbeds - damp to dry
								BOTTOM OF BORING

REMARKS: Boring was converted to a ground-water monitoring well with the installation of 35 feet of 3-inch PVC casing. The lower 12 feet of casing was slotted and the annular space backfilled to 15 feet with coarse aquarium sand. A bentonite-concrete seal was placed from 15 feet to 1 foot. The well was capped with a protective vault box and a locking device.



LOG OF EXPLORATORY BORING

PROJECT NUMBER 438-37.01

BORING NO. E-1

BY BH DATE 8/15/84

SURFACE ELEV. -

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index	Compressive Strength (TSF)	Penetration (Blows/Ft.)					
						5			4-inch Concrete FILL - Dark gray (2.5Y N4/0) fine SAND has a very strong product odor - damp (very dark grayish brown (2.5Y 3/2) sandy CLAY has product sheen - wet)
						10			BOTTOM OF BORING

REMARKS: Boring was backfilled to 4-inch with cuttings and capped with 4-inches of concrete.



LOG OF EXPLORATORY BORING

PROJECT NUMBER 438-37.01

BORING NO. E-2

BY BH DATE 8/15/84

SURFACE ELEV. -

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index	Compressive Strength (TSF)	Penetration (Blows/Ft.)					
				9	5	5	5	5	4-inch Concrete FILL - Black (2.5Y N2/0) silty CLAY has strong product odor - damp (has strong product sheen) BOTTOM OF BORING
					10				

REMARKS: Boring was backfilled to 4-inches with cuttings and capped with 4-inches of concrete.



LOG OF EXPLORATORY BORING

PROJECT NUMBER 438-37.01

BORING NO. E-3

BY BH DATE 8/15/84

SURFACE ELEV. -

CLASSIFICATION DATA			FIELD DATA		Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (No. 200)	Liquid Limit	Plasticity Index	Compressive Strength (TSF)	Penetration (Blows/Ft.)				
				8 5	5		[Sample Box]	4-inch Concrete FILL - Dark olive gray (5Y 3/2) fine SAND has strong product odor - damp (has strong product sheen) BOTTOM OF BORING
					10			

REMARKS: Boring was backfilled to 4-inches with cuttings and capped with 4-inches of concrete.





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EXPLORATORY BORING LOG

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA

BORING NO. B-1

DATE DRILLED: 8/9/88

PROJECT NUMBER: 1856G

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lps.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				Asphalt - 3", baserock - 9"		
2			CH	SILTY CLAY, dark gray (7.5YR 4/0), some fine grained sands, petroleum odor, high plasticity, medium stiff, moist		
3			CL	SANDY CLAY, yellowish brown (10YR 5/6), fine grained sand up to 20%, slight petroleum odor, medium stiff, moist		
4						
5	B-1-1	11	CL	SANDY CLAY, light gray to olive yellow (2.5YR 7/0 to 2.5 YR 6/6), fine grained sand to 40%, possible petroleum odor, moist, stiff		0
6						
7						
8						
9			CL-SC	SANDY CLAY to CLAYEY SAND, mottled light gray to strong brown (7.5YR 7/0 to 7.5YR 5/8), fine grained sands at 40 to 60%, no petroleum odor, very stiff to medium dense, very moist to wet	▽	
10	B-1-2	30		8/9/88, Groundwater encountered - 9.5 ft. Increasing gravels, up to 0.5" across		0
11				Bottom of boring = 10.5 feet		
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						

SUPERVISED AND APPROVED BY R.G./C.E.G.



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EXPLORATORY BORING LOG

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA

BORING NO. B-2

DATE DRILLED: 8/9/88

PROJECT NUMBER: 1856G

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1	B-2-1	7		Asphalt - 3", baserock - 9"	▽	175
2			CH	SILTY CLAY, dark gray (7.5YR 4/0), some fine grained sands, no petroleum odor, high plasticity medium stiff, moist		
3			SC	CLAYEY SAND, dark brown (10YR 3/3), fine to medium grained sands, some gravels up to 0.5" across, faint petroleum odor, loose, moist		
4			SW	SAND, dark gray (10YR 4/1), fine to medium grained, strong petroleum odor, loose, very moist, something very hard and resistant at 7 feet, large fragments of red chert 6" across in cuttings		
5				8/9/88, Groundwater encountered - 6 ft.		
6				Refusal at 7 feet		
7						
8						
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12						
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15						
16						
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18						
19						
20						
21						

SUPERVISED AND APPROVED BY R.G./C.E.G.



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EXPLORATORY BORING LOG

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA

BORING NO. B-3

DATE DRILLED: 8/10/88

PROJECT NUMBER: 1856G

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1	B-3-1	6		Concrete - 6"	▽	90
2				Pea gravel backfill		
3						
4	B-3-1	6	SC	CLAYEY SAND, brown (10YR 5/3), fine grained sands up to 60%, petroleum odor, loose, moist to very moist	▽	90
5			CH	SILTY CLAY, black (2.5YR 2/0), some isolated gravels, petroleum odor, high plasticity, medium stiff, moist to very moist		
6	B-3-2	20		8/10/88, Groundwater encountered - 8 ft.	▽	>200
7						
8						
9	B-3-2	20	CL-SC	SANDY CLAY to CLAYEY SAND, dark gray to gray (2.5y 4/0 to 2.5Y 6/0), fine grained sands, localized clayey and sandy areas, some gravels up to 2" across, strong petroleum odor, medium dense to very stiff, wet	▽	>200
10						
11	B-3-3	74			▽	10
12						
13			CL	SILTY CLAY, reddish brown (5YR 4/3), some medium grained sands, possible petroleum odor, hard, damp to moist		
14	B-3-3	74			▽	10
15						
16				Bottom of boring = 15.5 feet		
17						
18	B-3-3	74			▽	10
19						
20						
21	B-3-3	74			▽	10
22						

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EXPLORATORY BORING LOG

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA
PROJECT NUMBER: 1856G

BORING NO. B-4
DATE DRILLED: 8/10/88
LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft./lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				Concrete - 6"		
2				Pea gravel backfill		
3						
4						
5		3		No sample recovery		
6						
7			SP	SAND, dark gray to very dark gray (7.5YR 4/0 to 7.5YR 3/0), fine grained sand, up to 10% clay, strong petroleum odor, loose, very moist to wet, petroleum sheen on sand	▽	
8				8/10/88, Groundwater encountered - 8 ft.		
9						
10	B-4-1	13				250
11			SC	CLAYEY SAND, greenish gray (5G 5/1), fine grained sands up to 60%, some rounded gravels up to 2" across, slight petroleum odor, loose, moist		
12						
13			CL	SILTY CLAY, reddish brown (5YR 4/3), some medium grained sands, slight petroleum odor, hard, damp		
14						
15	B-4-2	68				20
16				Bottom of boring = 15 feet		
17						
18						
19						
20						
21						

SUPERVISED AND APPROVED BY R.G.C.E.G.



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EXPLORATORY BORING LOG

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA

BORING NO. B-5
DATE DRILLED: 8/10/88

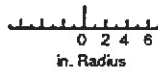
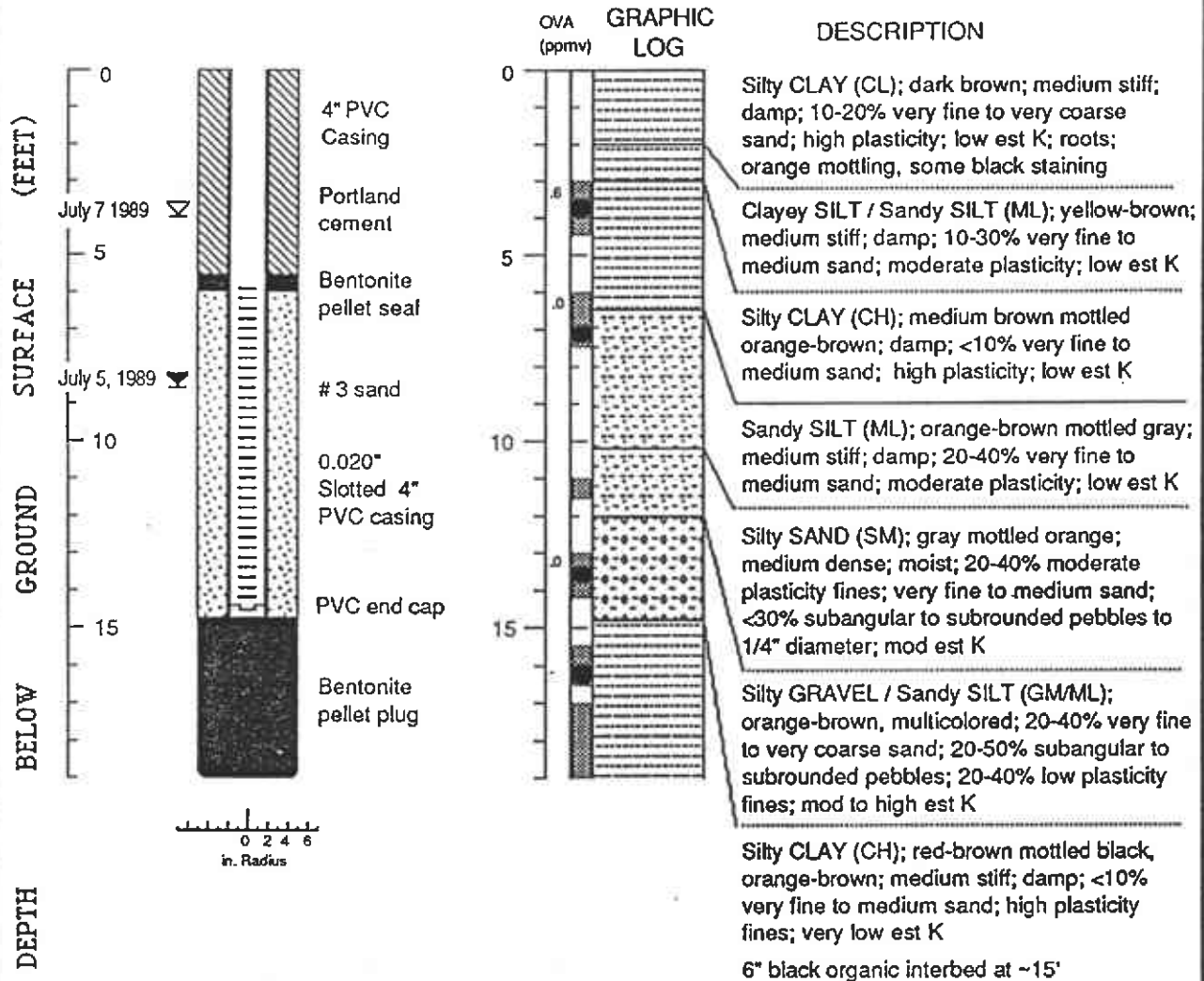
PROJECT NUMBER: 1856G

LOGGED BY: FAG

DEPTH (ft.)	SAMPLE No	BLOYS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				Asphalt - 4", baserock - 8"		
2			CH	SILTY CLAY, grayish brown (10YR 5/2), no petroleum odor, high plasticity, stiff, moist		
3			CH	SILTY CLAY, very dark grayish brown (10YR 3/2), some fine sands and medium gravels, high plasticity, slight petroleum odor, stiff, moist		
4			CH	SILTY CLAY, very dark grayish brown (10YR 3/2), some fine sands and medium gravels, high plasticity, slight petroleum odor, stiff, moist		
5	B-5-1	16	CL	SILTY CLAY to SANDY CLAY, mottled dark gray to strong brown (10YR 4/0 to 10YR 4/6), fine grained sands up to 40%, some medium sized gravels, petroleum odor, stiff, moist		20
6			CL	SILTY CLAY to SANDY CLAY, mottled dark gray to strong brown (10YR 4/0 to 10YR 4/6), fine grained sands up to 40%, some medium sized gravels, petroleum odor, stiff, moist		
7			CL-SC	SANDY CLAY to CLAYEY SAND, mottled dark grayish brown to dark brown (10YR 4/2 to 10YR 4/3), 40 to 60% fine grained sands, no petroleum odor, stiff to medium dense, moist		
8			SC	SANDY CLAY to CLAYEY SAND, mottled dark grayish brown to dark brown (10YR 4/2 to 10YR 4/3), 40 to 60% fine grained sands, no petroleum odor, stiff to medium dense, moist	8/10/88, Water level - 9 ft.	
9			SC	CLAYEY SAND, light yellowish brown, fine grained sands up to 70%, no petroleum odor, medium dense, moist		
10	B-5-2	14	SC-SP	CLAYEY SAND to SAND, mottled light gray to yellowish brown (10YR 7/1 to 10YR 5/6), 70 to 90% fine grained sands, no petroleum odor, medium dense, wet		0
11			SC-SP	CLAYEY SAND to SAND, mottled light gray to yellowish brown (10YR 7/1 to 10YR 5/6), 70 to 90% fine grained sands, no petroleum odor, medium dense, wet		
12				Bottom of boring = 10.5 feet		
13						
14						
15						
16						
17						
18						
19						
20						
21						

SUPERVISED AND APPROVED BY R.G./C.E.G.

WELL MW-1 (BH-A)

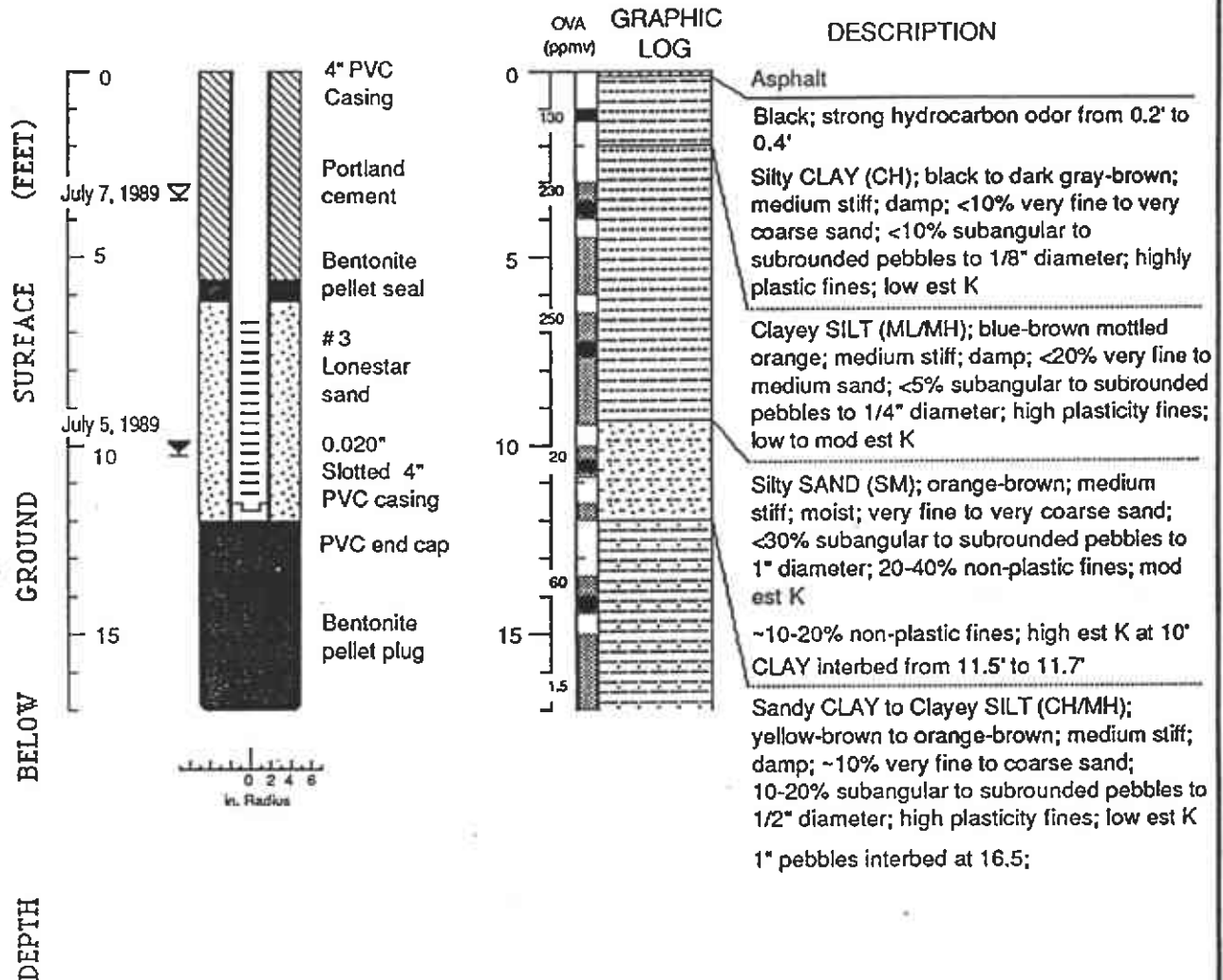


EXPLANATION








- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged by: Jack Gardner
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Bay Area Exploration, Suisun, CA
 Driller: Carr / Mossman
 Drilling Method: Hollow stem auger
 Dates Drilled: July 5 to 6, 1989
 Well Head Completion: Locking cap with traffic-rated vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

WELL MW-2 (BH-B)

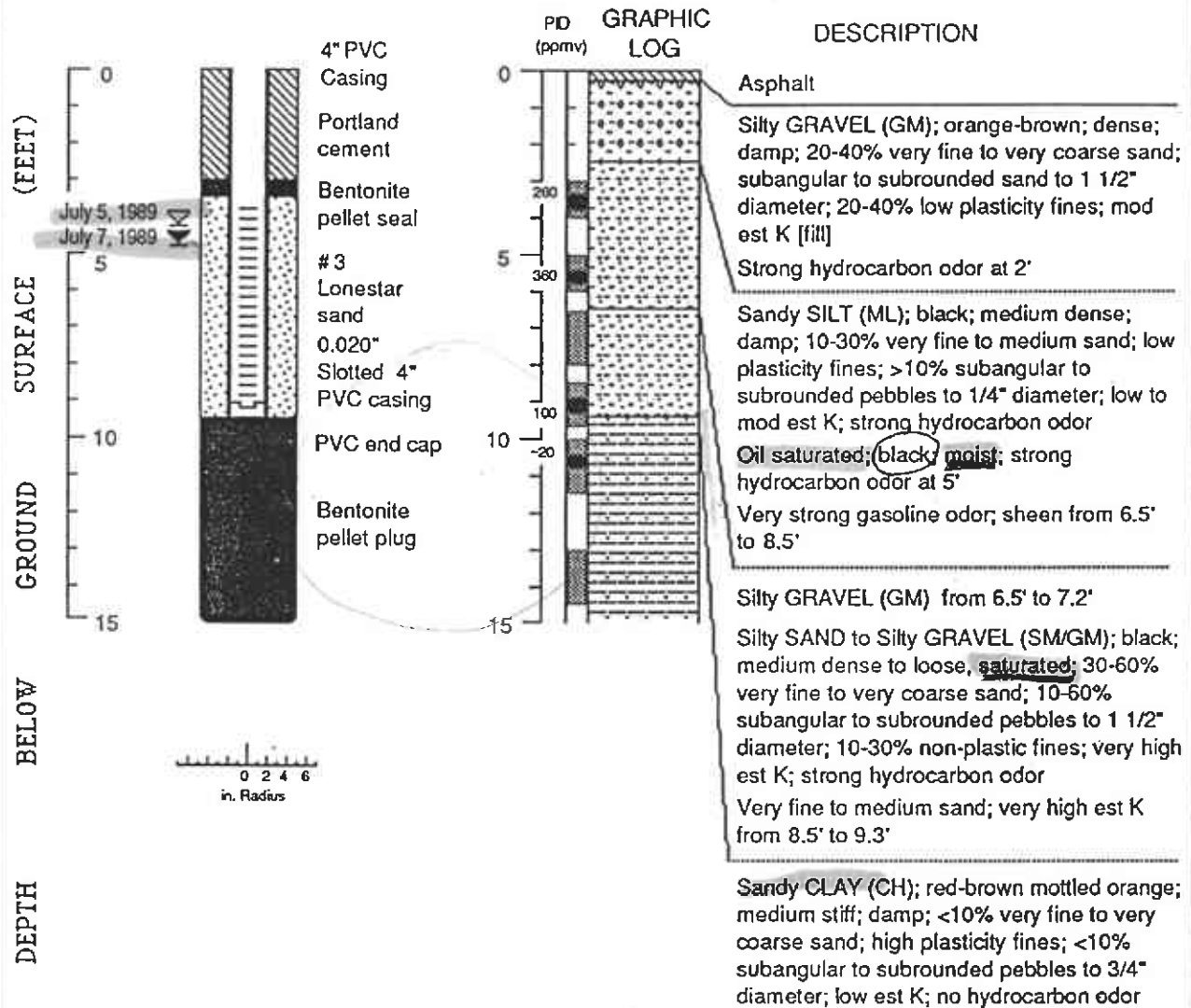


EXPLANATION

-  Water level during drilling (date)
-  Water level (date)
-  Contact (dotted where approx.)
-  Uncertain contact
-  Location of recovered drive sample
-  Location of drive sample sealed for chemical analysis
-  Cutting sample
- K** = Estimated hydraulic conductivity

Logged by: Jack Gardner
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Bay Area Exploration, Suisun, CA
 Driller: Carr/Mossman
 Drilling Method: Hollow stem auger
 Dates Drilled: July 5, 1989
 Well Head Completion: Locking cap with traffic-rated vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

WELL MW-3 (BH-C)

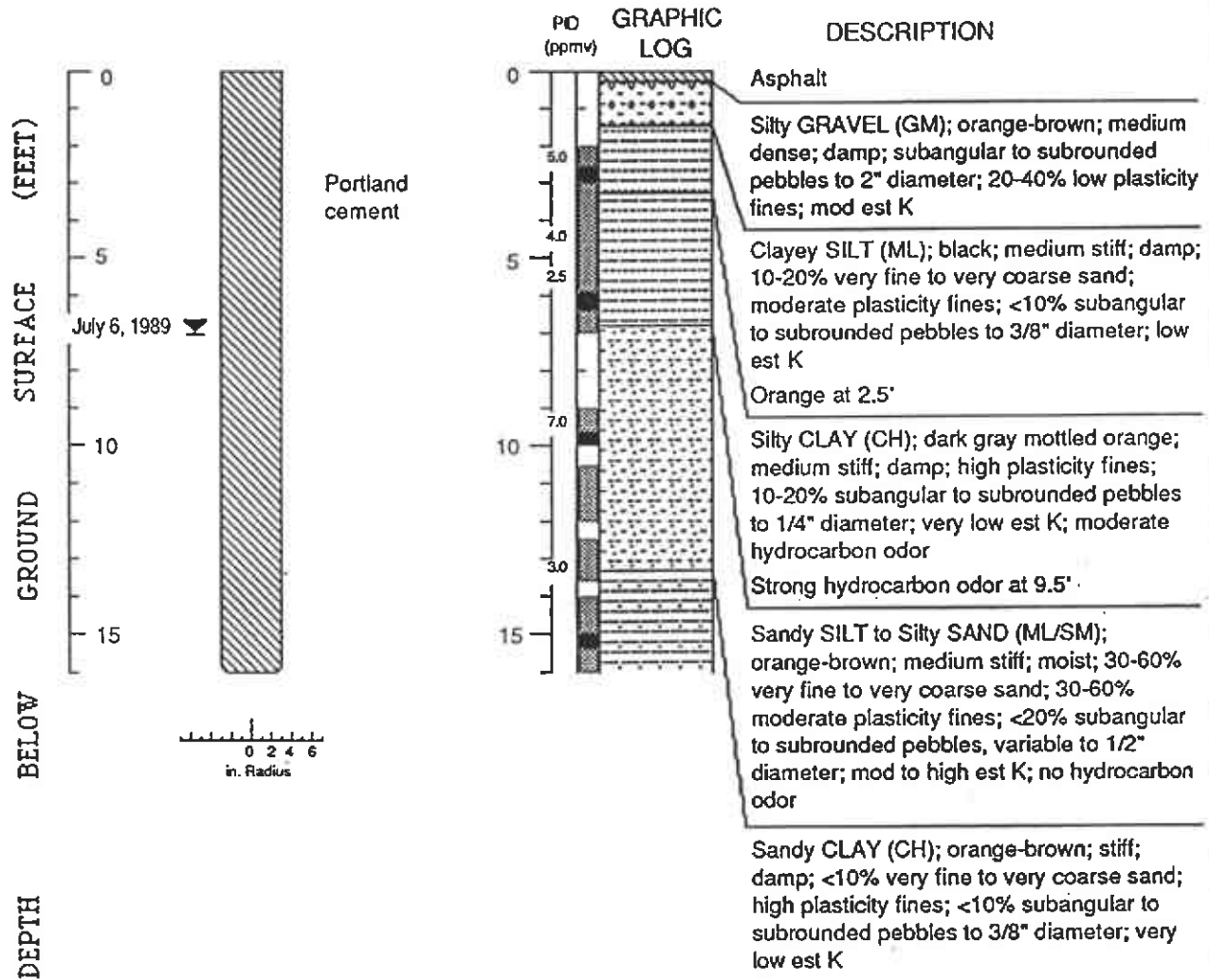


EXPLANATION








- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K** = Estimated hydraulic conductivity

Logged by: Jack Gardner
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Bay Area Exploration, Suisun, CA
 Driller: Carr/Mossman
 Drilling Method: Hollow stem auger
 Dates Drilled: July 5 to 6, 1989
 Well Head Completion: Locking cap with traffic-rated vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

BORING BH-D

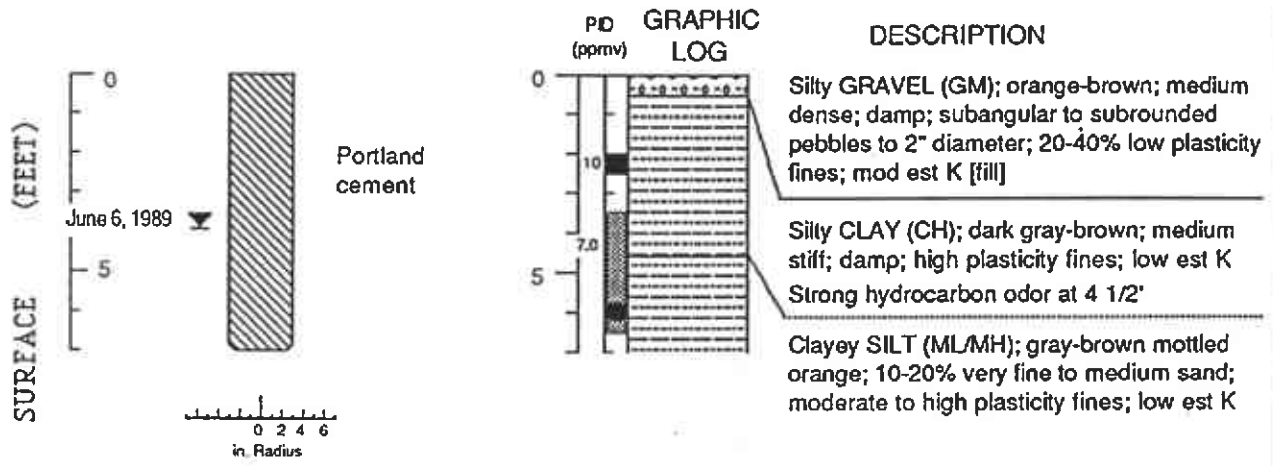


EXPLANATION

-  Water level during drilling (date)
-  Water level (date)
-  Contact (dotted where approx.)
-  Uncertain contact
-  Location of recovered drive sample
-  Location of drive sample sealed for chemical analysis
-  Cutting sample
- K** = Estimated hydraulic conductivity

Logged by: Jack Gardner
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Bay Area Exploration, Suisun, CA
 Driller: Carr/Mossman
 Drilling Method: Hollow stem auger
 Dates Drilled: July 6, 1989
 Well Head Completion: Locking-cap with traffic-rated vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

BORING BH-E



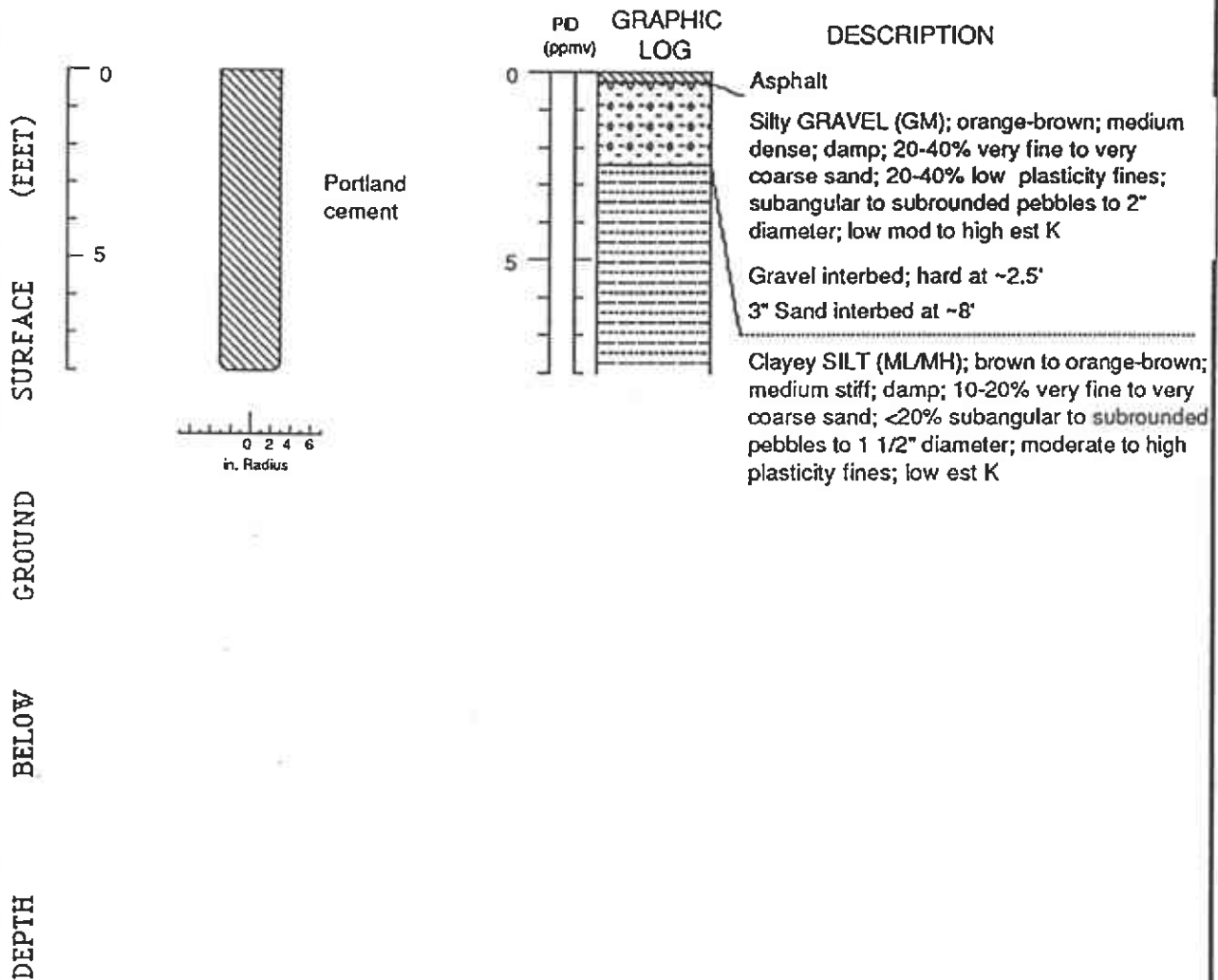
SURFACE
GROUND
BELOW
DEPTH

EXPLANATION








- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K** = Estimated hydraulic conductivity

Logged by: Jack Gardner
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Bay Area Exploration, Suisun, CA
 Driller: Carr/Mossman
 Drilling Method: Hollow stem auger
 Dates Drilled: July 6, 1989
 Well Head Completion: Locking-cap-with-traffic-rated-vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

BORING BH-F

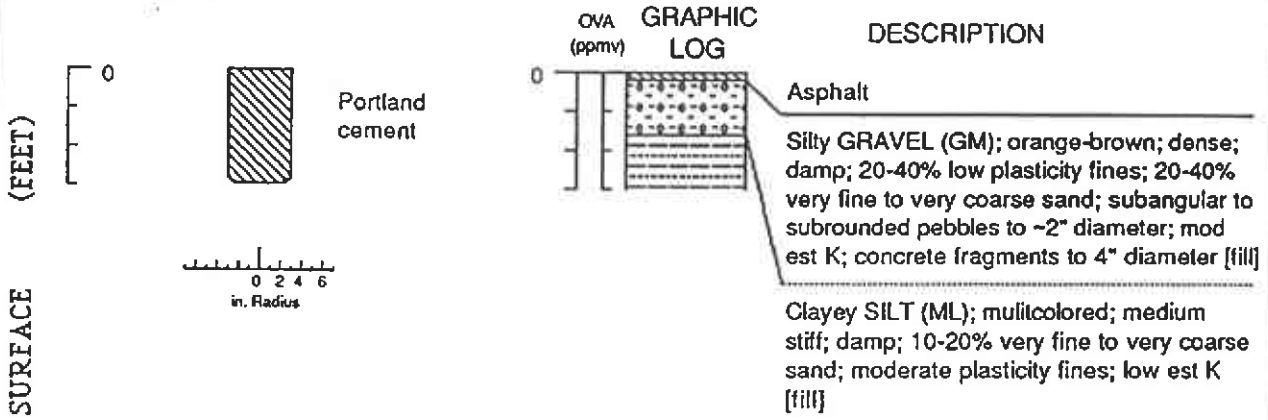


EXPLANATION









-  Water level during drilling (date)
-  Water level (date)
-  Contact (dotted where approx.)
-  Uncertain contact
-  Location of recovered drive sample
-  Location of drive sample sealed for chemical analysis
-  Cutting sample
- K = Estimated hydraulic conductivity

Logged by: Jack Gardner
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Bay Area Exploration, Suisun, CA
 Driller: Carr/Mossman
 Drilling Method: Hollow stem auger
 Dates Drilled: July 6, 1989
 Well Head Completion: Locking cap with traffic-rated vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

BORING BH-G

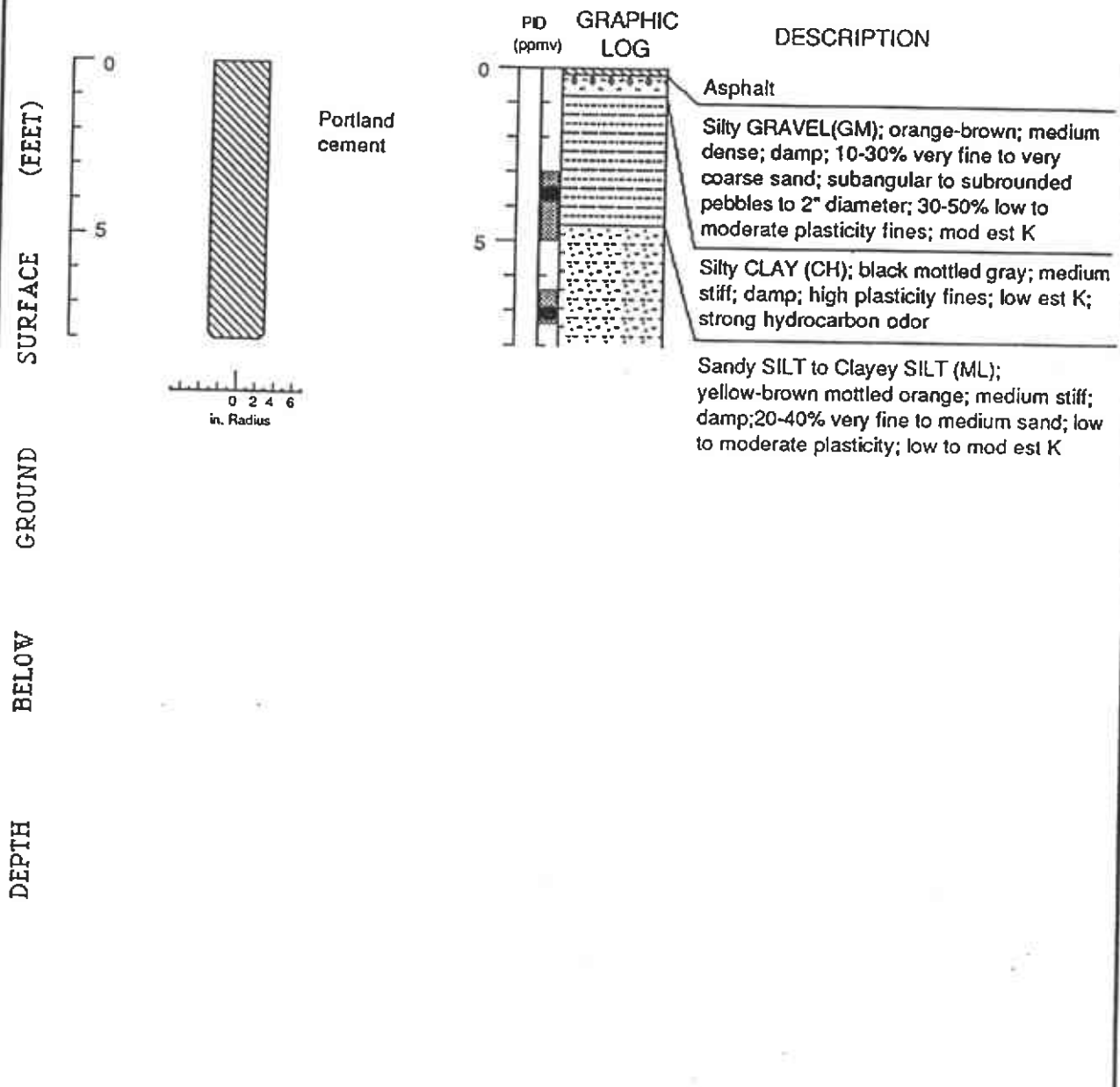


EXPLANATION








-  Water level during drilling (date)
-  Water level (date)
-  Contact (dotted where approx.)
-  Uncertain contact
-  Location of recovered drive sample
-  Location of drive sample sealed for chemical analysis
-  Cutting sample
-  K = Estimated hydraulic conductivity

Logged by: Jack Gardner
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Bay Area Exploration, Suisun, CA
 Driller: Carr/Mossman
 Drilling Method: Hollow stem auger
 Dates Drilled: July 6, 1989
 Well Head Completion: Locking cap with traffic-rated vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

BORING BH-H



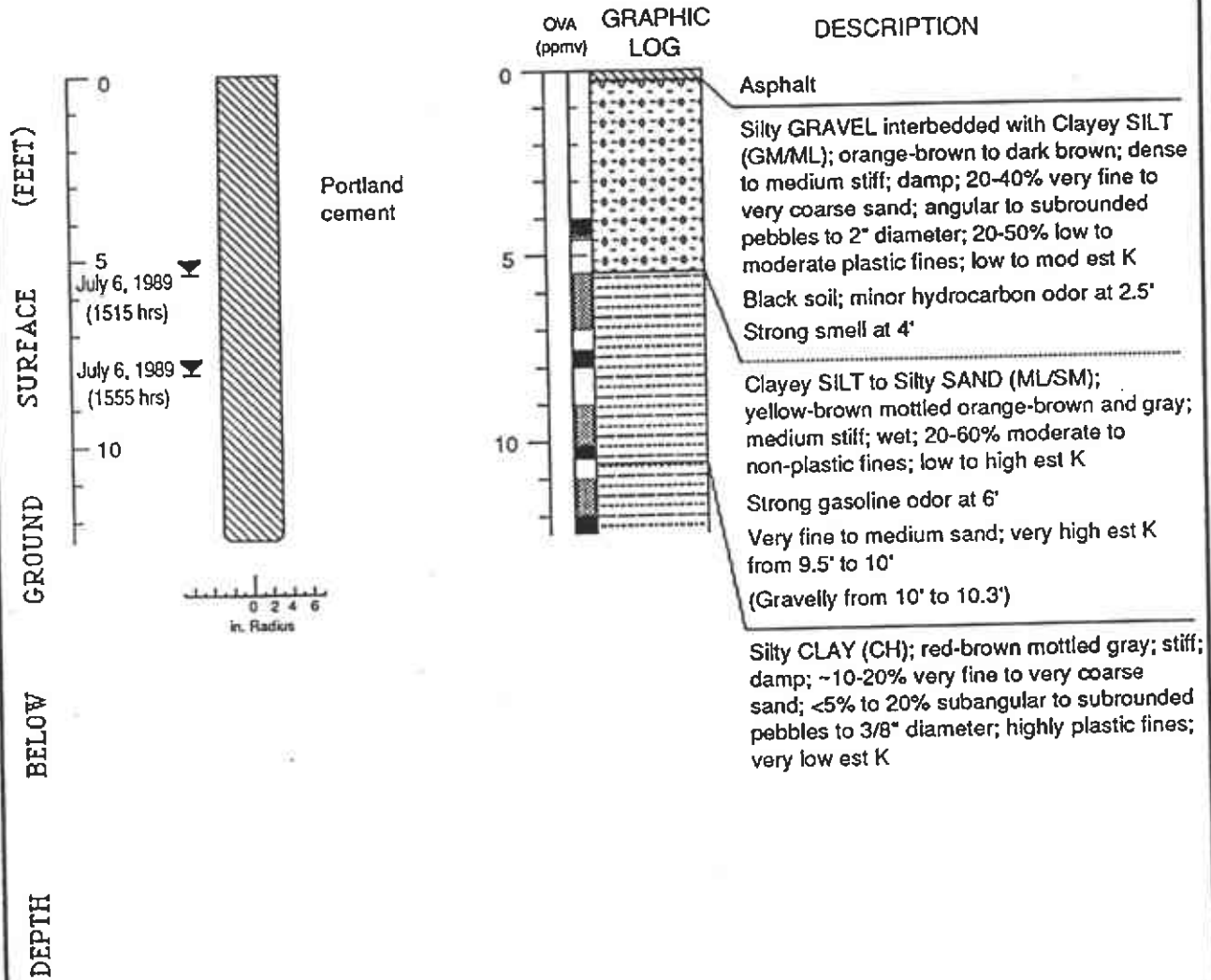
EXPLANATION

-  Water level during drilling (date)
-  Water level (date)
-  Contact (dotted where approx.)
-  Uncertain contact
-  Location of recovered drive sample
-  Location of drive sample sealed for chemical analysis
-  Cutting sample
- K** = Estimated hydraulic conductivity

Logged by: Jack Gardner
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Bay Area Exploration, Suisun, CA
 Driller: Carr/Mossman
 Drilling Method: Hollow stem auger
 Dates Drilled: July 6, 1989
 Well Head Completion: Locking cap with traffic-rated vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)



BORING BH-I

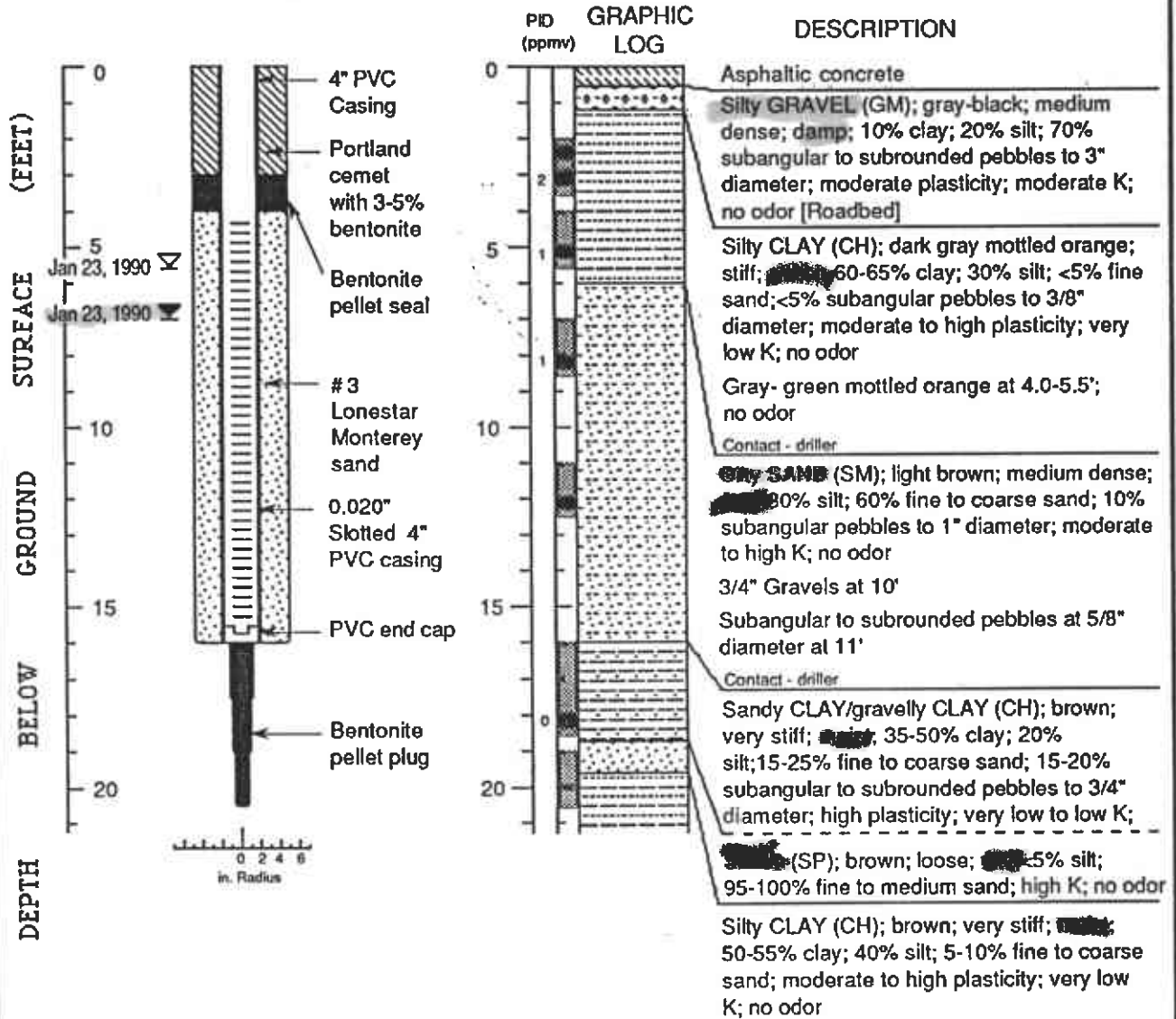


EXPLANATION








- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K** = Estimated hydraulic conductivity

Logged by: Jack Gardner
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Bay Area Exploration, Suisun, CA
 Driller: Carr/Mossman
 Drilling Method: Hollow stem auger
 Dates Drilled: July 6, 1989
 Well Head Completion: Locking cap with traffic-rated vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

WELL MW-4 (BH-J)



EXPLANATION

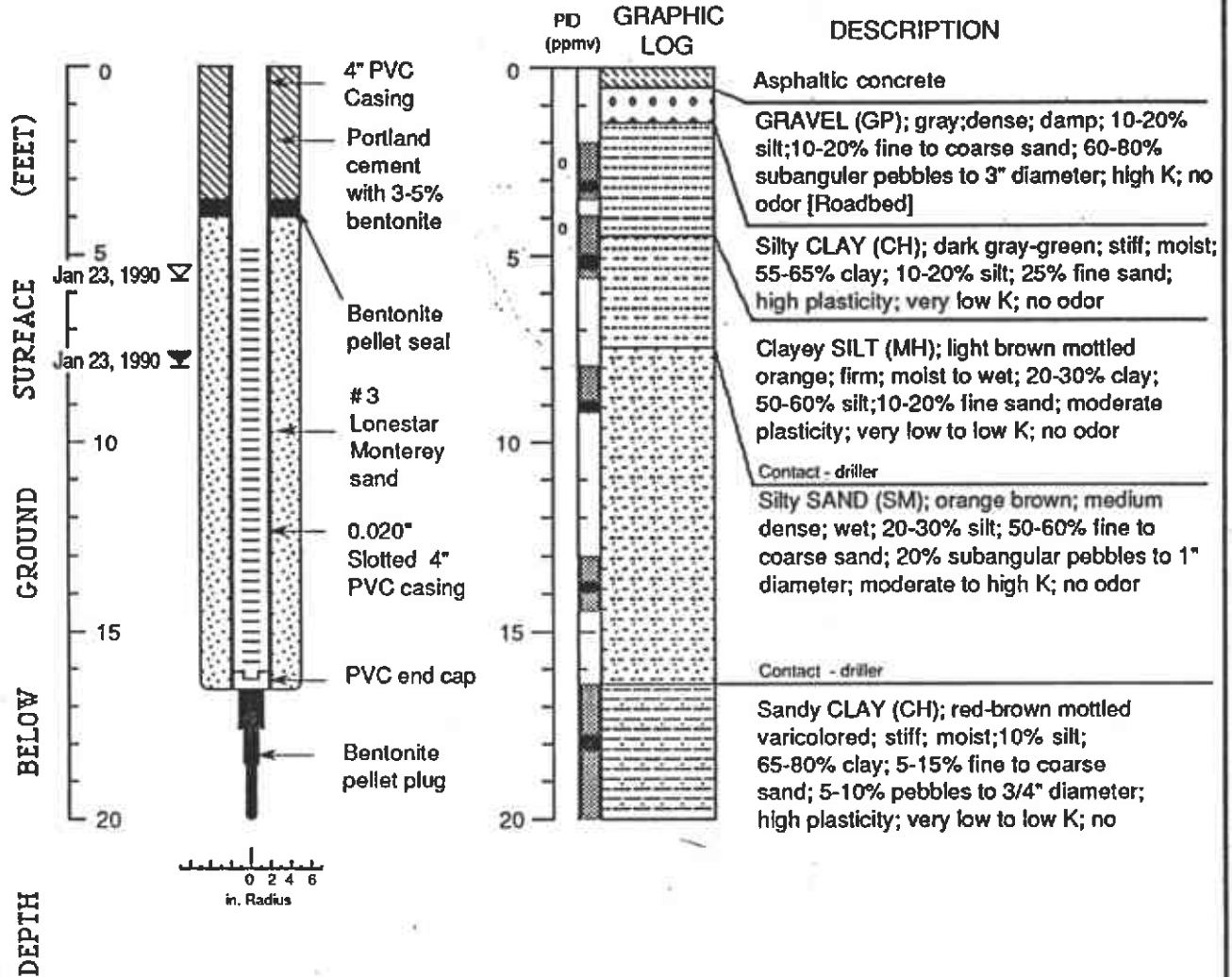
-  Water level during drilling (date)
-  Water level (date)
-  Contact (dotted where approx.)
-  Uncertain contact
-  Location of recovered drive sample
-  Location of drive sample sealed for chemical analysis
-  Cutting sample
- K = Estimated hydraulic conductivity

Logged by: N. Scott MacLeod
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Soil Exploration Services
 Driller: Russ Ellis
 Drilling Method: Hollow stem auger
 Date Drilled: ~~Jan 23, 1990~~
 Well Head Completion: Locking wellcap, traffic-rated vault
 Type of Sampler: Split barrel (1.5", 2.0", 2.5" I.D.)
 Ground Surface Elevation: 34.03'

Well Construction and Boring Log - Well MW-4 (BH-J)

Shell Service Station
 WIC #204-6001-0109
 Piedmont, California

WELL MW-5 (BH-K)



EXPLANATION

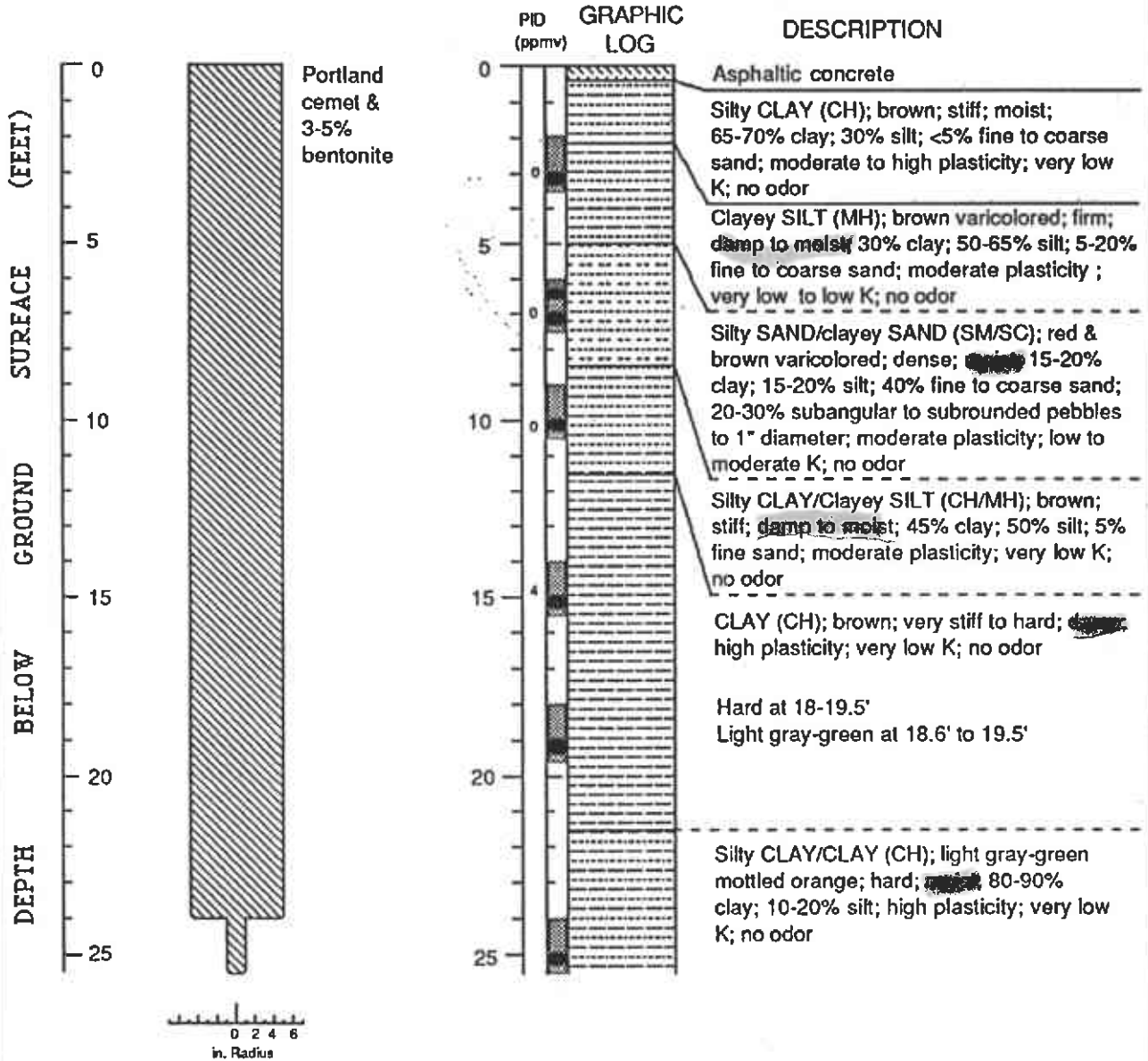
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K** = Estimated hydraulic conductivity

Logged by: N. Scott MacLeod
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Soils Exploration Services
 Driller: Russ Ellis
 Drilling Method: Hollow stem auger
 Date Drilled: January 23, 1990
 Well Head Completion: Locking wellcap, traffic-rated vault
 Type of sampler: Split barrel (1.5", 2.0", 2.5" I.D.)
 Ground Surface Elevation: 31.61'

Well Construction and Boring Log - Well MW-5 (BH-K)

Shell Service Station
 WIC #204-6001-0109
 Piedmont, California

BORING BH-L



EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approx.)
- - - - - Uncertain contact
- ▨ Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- ⊗ Cutting sample
- K = Estimated hydraulic conductivity

Logged by: N. Scott MacLeod
 Supervisor: Richard Weiss; EG 1112
 Drilling Company: Soils Exploration Services
 Driller: Russ Ellis
 Drilling Method: Hollow stem auger
 Date Drilled: ~~January 24, 1990~~
 Type of sampler: Split barrel (2.0" I.D.)