

# erSchy Environmental, Inc.

Alameda County  
FEB 17 2004  
Environmental Health

February 6, 2004  
Project A51-01.03

Mr. Barney Chan  
Alameda County  
Health Care Services Agency  
Environmental Health Services  
1131 Harbor Bay Parkway, Ste. 250  
Alameda, CA 94502-6577

20 127

**Re: Results of Vapor Extraction, Air Sparging, and Groundwater Extraction Well Installation, Alaska Gasoline Company, Oakland, California**

Dear Mr. Chan:

HerSchy Environmental, Inc. is pleased to present the results of drilling, soil sampling, and well installation at the above-referenced site. The site is located at 6211 San Pablo Avenue, which is on the northwest corner of San Pablo Avenue and 62<sup>nd</sup> Street in Oakland, Alameda County, California (Figure 1). This work was performed in accordance with the June 17, 2002 *"Results of Well Installation, Quarterly Groundwater Monitoring, and Interim Remedial Action Plan, Alaska Gasoline Company, Oakland, California"* prepared by HerSchy Environmental. This work was subsequently approved in the August 13, 2003 correspondence from your office regarding the site.

## **METHODS OF INVESTIGATION**

### Drilling and Soil Sampling:

Drilling was performed using a truck-mounted drill rig equipped with eight-inch hollow stem augers. For the groundwater extraction well (EX-1), 10-inch hollow stem augers were used. Augers were steam cleaned prior to arriving on site. Thirteen vapor extraction wells (VE-1 through VE-13), five air sparging wells (AS-1 through AS-5), one groundwater extraction well (EX-1), and one replacement groundwater monitoring well (MW-1R) were drilled and sampled at the site (Figure 2). Vapor extraction borings were drilled to a depth of 14 feet, air sparging borings to 26 feet, the groundwater extraction boring to 30 feet, and the groundwater monitoring boring to 23 feet.

Soil samples were collected using a California modified split spoon sampler equipped with brass liners. The samples were collected at the capillary fringe from each of the borings (three to six feet). Samples were collected by driving the sampler ahead of the drill bit. The sampler and liners were cleaned between sampling events.

Samples were placed in a cooler chest with frozen gel packs ("blue ice") and maintained at a temperature of four degrees Celsius or less until delivered to the laboratory. All samples were maintained, transported, and delivered to the laboratory under chain-of-custody documentation. Soil samples and drill cuttings were described in accordance with the Unified Soil Classification System by a geologist working under the direction of a California registered geologist. Drill cuttings were stockpiled between plastic sheets and stored on site as directed by the property owner. Boring logs with well construction details are presented in Appendix A.

#### Groundwater Extraction, Monitoring, Air Sparging, and Vapor Extraction Well Installation Procedures:

Well construction and annular materials were installed through the hollow stem augers. The groundwater monitoring well (MW-1R) was constructed with two-inch schedule 40 PVC well casing with screw joints. The screened interval was constructed with 20 feet of 0.020-inch factory slotted screen such that approximately 12 to 15 feet of the screened interval is below first encountered groundwater. Blank casing was installed from the top of the screened interval to surface grade. The monitoring well was completed flush with surface grade in a traffic-rated well cover with a locking well cap.

The groundwater extraction well (EX-1) was constructed with four-inch schedule 40 PVC well casing with screw joints. The screened interval was constructed with 25 feet of 0.020-inch factory slotted screen to accommodate greater drawdown associated with groundwater extraction. Blank casing was installed from the top of the screened interval to surface grade. The groundwater extraction well was completed flush with surface grade in a traffic-rated well cover with a locking well cap.

Air sparge wells (AS-1 through AS-5) were constructed with two-inch schedule 40 PVC well casing with screw joints. The screened intervals were constructed with five feet of 0.020-inch factory slotted screen at 21 to 26 feet below ground surface (BGS), such that the entire screened interval is well below first encountered groundwater. Blank casing was installed from the top of the screened interval to approximately one foot BGS in each of the air sparge wells.

Vapor extraction wells (VE-1 through VE-13) were constructed with two-inch schedule 40 PVC well casing with screw joints. The screened intervals were constructed with ten feet of 0.020-inch factory slotted screen. Blank casing was installed from the top of the screened interval to approximately one to two feet BGS.

Annular materials consist of #3 sand from the bottom of the borings to approximately two feet above the screened interval, followed by a minimum one-foot

bentonite seal, followed by concrete to the top of the well casing. In the case of the air sparge wells, the bentonite seal was followed by grout to the surface. With the exception of EX-1 and MW-1R, the top of the well casing was then covered by approximately six inches of #3 sand and then a concrete plug to the surface. This measure was taken to prevent the destruction of well casing during tank removal activities and subsequent repaving of the lot. Installation of horizontal piping will not take place until all tank removal and repaving activities are complete. A work plan for the installation of horizontal piping is included below.

#### Trenching and Pipe Installation Work Plan:

All of the piping for the SVES will be installed at a depth of 14 to 18 inches under concrete pavement. The pavement will be saw cut to accommodate a 14-inch wide trench. Pavement will be removed and taken to a pavement recycling facility. Pavement will be removed and trenching performed using a backhoe with a 14-inch trenching bucket. Two-inch schedule 40 PVC irrigation pipe will be used to install the horizontal piping of the SVES.

Horizontal piping will be attached to the vertical vapor extraction and air sparging wells with PVC "T's" and 90 degree elbows. Vapor extraction and air sparging lines will lead to two-inch above ground PVC ball valves within a fenced enclosure. The groundwater extraction well will be hooked into the horizontal PVC piping using 90 degree sweeps to accommodate hoses and electrical wiring for future installation of down-hole water extraction equipment at a later date. The water extraction piping will end above-ground within the equipment enclosure as a capped line.

Upon completion of trenching and installation of the horizontal lines, the trenches will be backfilled with native soil and compacted. The pavement will be replaced with concrete pavement. All of the vapor extraction and air sparge wells will be below ground beneath pavement.

## **RESULTS OF INVESTIGATION**

### Soil Conditions:

Soil beneath the site consists primarily of silty clay (CL) in the borings drilled during this investigation. Lesser intervals of silt, clayey silt, and very fine- to fine-grained sand (ML), and silty sand (SM) were encountered in some of the borings. Clayey gravel (GC) was also encountered during drilling. Boring logs with soil descriptions are presented in Appendix A.

All of the soil samples were submitted for laboratory analysis. Soil samples were analyzed for gasoline-range total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and for methyl tertiary butyl ether (MTBE). The two

most contaminated samples (AS-2 at 5' and AS-5 at 5') were also analyzed for lead (Pb) content. Certified analytical reports are presented in Appendix B and summarized in Table 1 below:

**Table 1**  
**Laboratory Analytical Results-Soil, Alaska Gasoline Company**

Sample	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
AS-1@6'	630	5.9	48	13	74	46
AS-2@5'	650	3.5	34	13	69	26
AS-3@5'	6.4	0.031	0.033	0.062	0.28	ND
AS-4@5'	370	2.7	24	7.2	44	85
AS-5@5'	3400	16	160	90	510	11
VE-1@4'	390	2.2	15	8.9	46	ND
VE-2@5'	590	4.5	29	14	73	1.3
VE-3@5'	32	0.84	1.1	0.82	4.4	18
VE-4@5'	52	0.28	1.6	1.2	6.3	0.99
VE-5@6'	83	2.2	9.5	1.7	10	59
VE-6@6'	390	1.6	14	9.8	56	5.3
VE-7@5'	500	1.5	20	9.9	57	43
VE-8@5'	170	0.39	2.4	3.0	18	6.2
VE-9@5'	200	0.43	2.4	4.5	22	5.5
VE-10@5'	26	0.13	0.11	0.42	2.0	8.7
VE-11@5'	270	1.3	0.67	6.9	35	20
VE-12@5'	270	2.1	16	6.1	36	33
VE-13@5'	410	2.7	22	9.2	53	47
EX-1@3'	230	2.2	13	5.5	27	4.6
MW-1R@5'	4.3	0.060	0.20	0.14	0.68	ND

All results presented in parts per million (ppm)

ND = below detectable limits

All of the soil samples collected during the most recent phase of drilling and sampling contained gasoline constituents. The highest concentrations were encountered in samples from AS-2 and AS-5, which were both collected at a depth of five feet. All of the samples contained detectable amounts of the fuel additive MTBE, with the exception of AS-3, VE-1, and MW-1R.


## CONCLUSIONS AND RECOMMENDATIONS

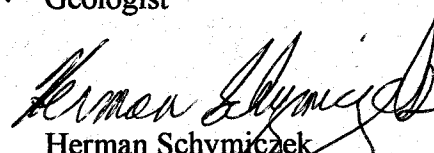
The first phase of the interim remedial action plan (RAP) is now complete. Horizontal piping will be installed upon completion of tank removal activities and repaving of the lot. Once horizontal piping has been installed, the thermal oxidizer will be hooked up and the SVES will be initiated. A startup test will be conducted, measuring flow rates and influent/effluent concentrations of VOCs. One soil vapor sample will be collected from each vapor extraction well upon startup of the SVES.

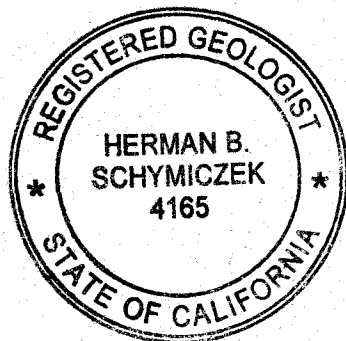
The unit will be monitored for influent/effluent concentrations and flow rates on a weekly basis, with additional vapor samples collected monthly. All soil vapor samples will be analyzed for gasoline-range total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and for methyl tertiary butyl ether (MTBE). The SVES will run until the proposed cleanup levels are met or until asymptotic conditions occur. The proposed cleanup levels are: <100 ppm TPHg, <1.0 ppm benzene, <10 ppm toluene, <5 ppm ethylbenzene, <20 ppm xylenes, and <5 ppm MTBE. When the proposed cleanup levels are achieved according to vapor analyses, six soil samples will be collected at 5 feet from six boring locations to be selected at a later time. These soil samples will be used to confirm the effectiveness of the SVES. Reports evaluating the progress of the SVES will be submitted quarterly and upon completion of remediation. It is anticipated that soil remediation at the site will begin during the second quarter of 2004. Groundwater monitoring will continue on a quarterly basis.

If you have any questions or require additional information, please contact us at the letterhead address or at (559) 641-7320.

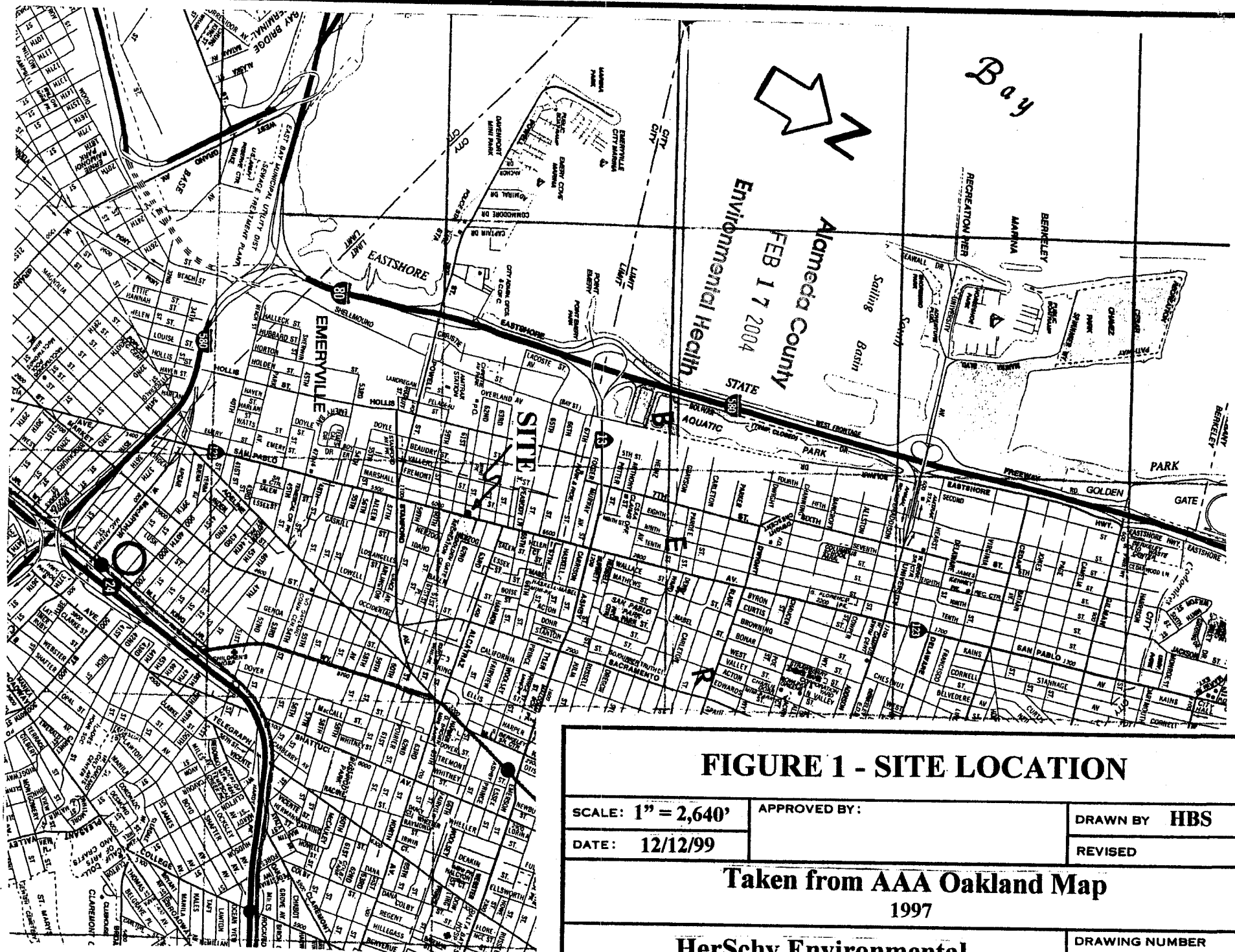
With best regards,  
Hersch Environmental, Inc.

  
Joshua A. Teves  
Geologist

  
Herman Schymiczek  
Registered Geologist #4165



pc: Mr. Pritpaul Sappal  
Mr. Syed Nawab, Alaska Gasoline Company  
Mr. Hernan Gomez, Oakland Fire Services Agency  
Mrs. Susan M. Torrence, Deputy District Attorney



## FIGURE 1 - SITE LOCATION

SCALE: 1" = 2,640'

APPROVED BY:

DRAWN BY HBS

DATE: 12/12/99

REVISED

Taken from AAA Oakland Map

1997

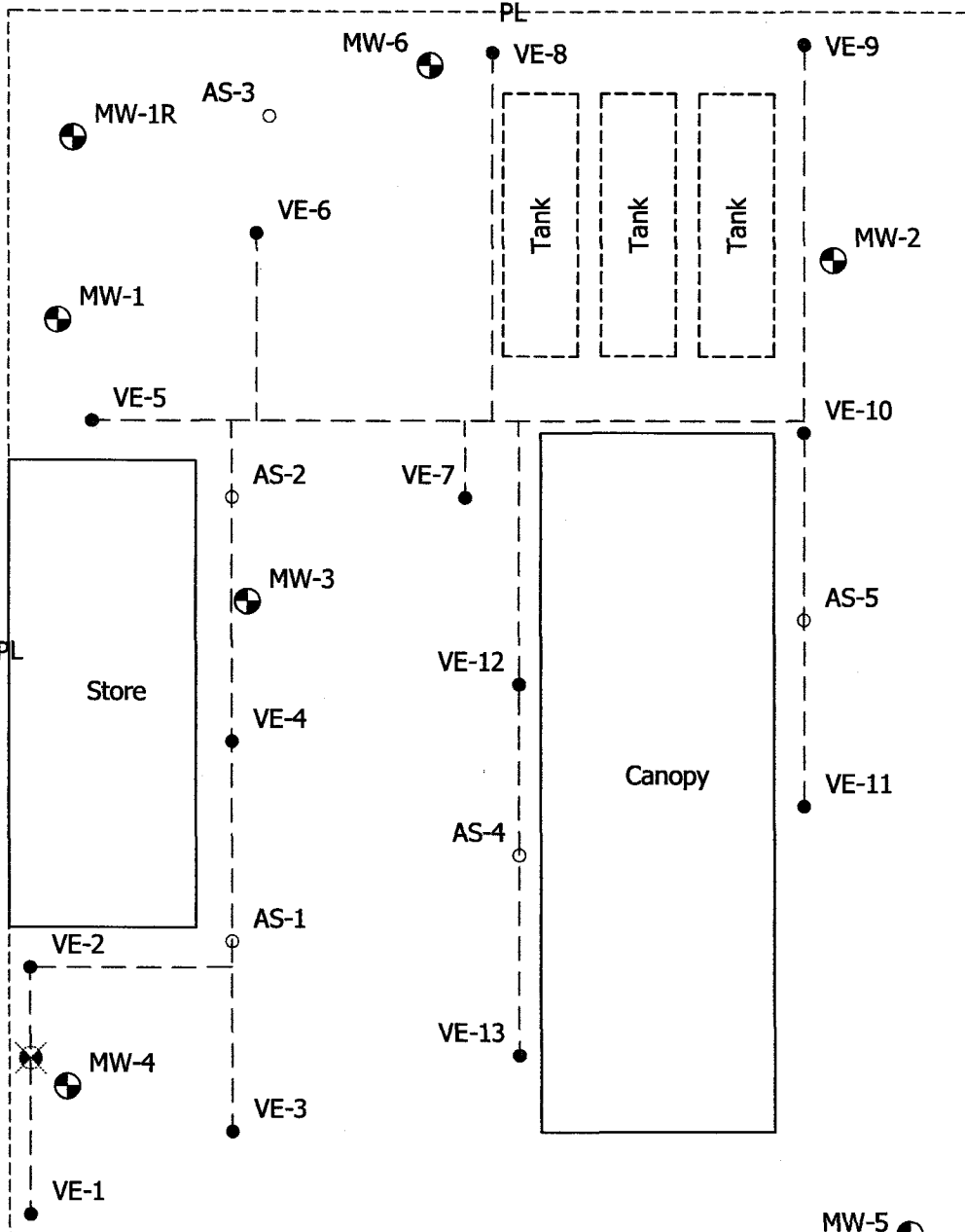
HerSchy Environmental

DRAWING NUMBER

Residential

Residential

San Pablo



62nd Street

**HerSchy Environmental, Inc.**  
 Environmental Consulting and Remediation

P. O. Box 229  
 Bass Lake, California 93604-0229  
 Tel. (559) 641-7320, Fax (559) 641-7340

VAPOR EXTRACTION SYSTEM WELL LOCATIONS

ALASKA GASOLINE COMPANY

6211 San Pablo Avenue, Oakland, California

DATE: January 2004

FILE NO.: A51-01.02

DRAWN BY: JSO

FIGURE  
2

**APPENDIX A**

**BORING LOGS**

**WITH WELL CONSTRUCTION DETAILS**



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## FIELD BOREHOLE LOG

BOREHOLE NO.: **EX-1**

TOTAL DEPTH: **30'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	<b>Alaska Gasoline Company</b>	DRILLING CO.:	<b>Consolidated Testing</b>
SITE LOCATION:	<b>Oakland</b>	SLOT SIZE:	<b>0.020"</b>
JOB NO.:	<b>A51-01.03</b>	CASING TYPE:	<b>4" Sch. 40 PVC</b>
LOGGED BY:	<b>J. Teves</b>	METHOD OF DRILLING:	<b>10" Hollow Stem Auger</b>
PROJECT MANAGER:	<b>J. Teves</b>	SAMPLING METHOD:	<b>California split spoon</b>
DATES DRILLED:	<b>1/12/04</b>	GRAVEL PACK:	<b>#3 Sand</b>

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete seal
-5		CL	@5': CLAY, black and green, medium strength, plastic, strong fuel odor	EX-1@3'				
-10		CL	@10': CLAY, gravel-rich, pebbles up to 1/4", green, strong fuel odor					#3 sand
-15		CL	@15': CLAY, sparse gravel, pebbles up to 1/4", green, strong fuel odor					
-20		ML	SILT: @20': SILT, clayey, green and brown, some coarse-grained sand, no odor					
-25		ML	@25': SILT, clayey, brown, no odor					
-30		ML	@30': SILT, sandy brown, no odor					

NOTES: Groundwater Extraction Well

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## FIELD BOREHOLE LOG

BOREHOLE NO.: MW-1R

TOTAL DEPTH: 25'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2" Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8" Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/12/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete seal
-5		CL	@5': CLAY, green, pebbles up to 1", strong fuel odor	MW-1R@5'				
-10		CL	@10': CLAY, coarse-grained sand, pebbles up to 1/2", plastic, strong fuel odor					#3 sand
-15		CL	@15': CLAY, coarse-grained sand, pebbles up to 3/4", green w/ orange, strong fuel odor					
-20		CL	@20': CLAY, brown & green, very coarse-grained sand, mild fuel odor					
-25		CL	@25': CLAY, brown, pebbles up to 1/4", high strength, no odor					

NOTES: Groundwater Monitoring Well

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## FIELD BOREHOLE LOG

BOREHOLE NO.: AS-1

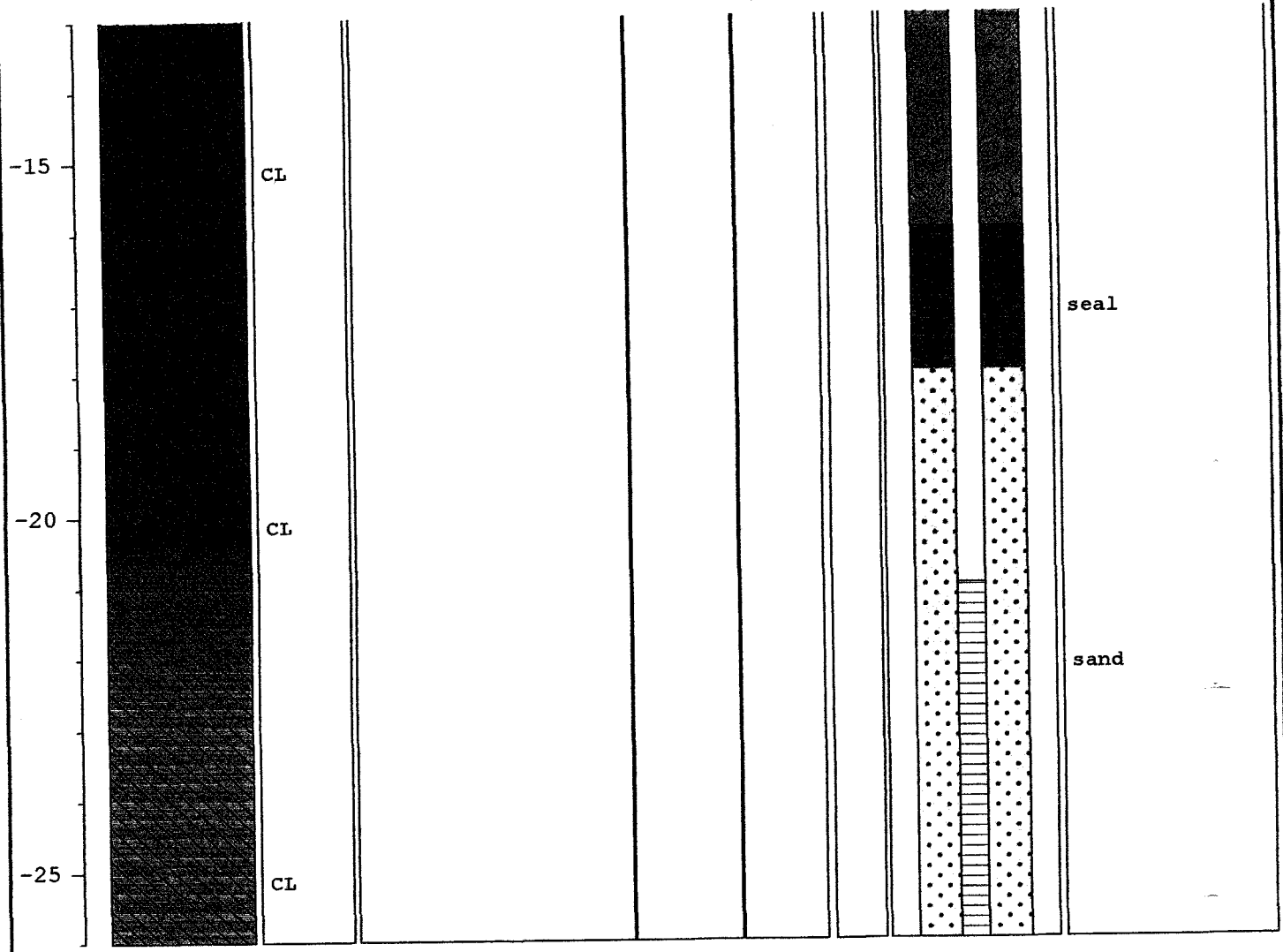
TOTAL DEPTH: 26'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2"Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8" Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/15/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
			CLAY, green, high strength, sparse pebbles, strong fuel odor					
-5		CL						
				AS-106'				
-10		ML	SILT: clayey, sparse pebbles, soft, strong fuel odor					grout

NOTES: Air Sparging Well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
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NOTES: Air Sparge Well

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## FIELD BOREHOLE LOG

BOREHOLE NO.: AS-2

TOTAL DEPTH: 26'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2"Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8"Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/15/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					Concrete plug
			CLAY, silty, sparse pebbles, green orange & yellow, strong fuel odor					
-5		CL	@10': CLAY, silty, sparse pebbles, dark green, strong fuel odor	AS-205'				
			@15': CLAY, silty, soft, no pebbles, fuel odor, brownish green					
-10		CL	@20': CLAY, silty, brown, soft, fuel odor					grout
			@25': CLAY, silty, brown soft, sparse pebbles, slight fuel odor					

NOTES: Air Sparging Well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
-15		CL	CLAY: high strength, gravel-rich, fuel odor					
		CL	@20': CLAY, silty, brown, gravel-rich, pockets of silt, fuel odor					seal
-20								
		ML	SILT: gravel-rich, up to 1/2" pebbles, brown, strong fuel odor					#3 sand
-25								

NOTES: Air Sparging Well

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## FIELD BOREHOLE LOG

BOREHOLE NO.: AS-3

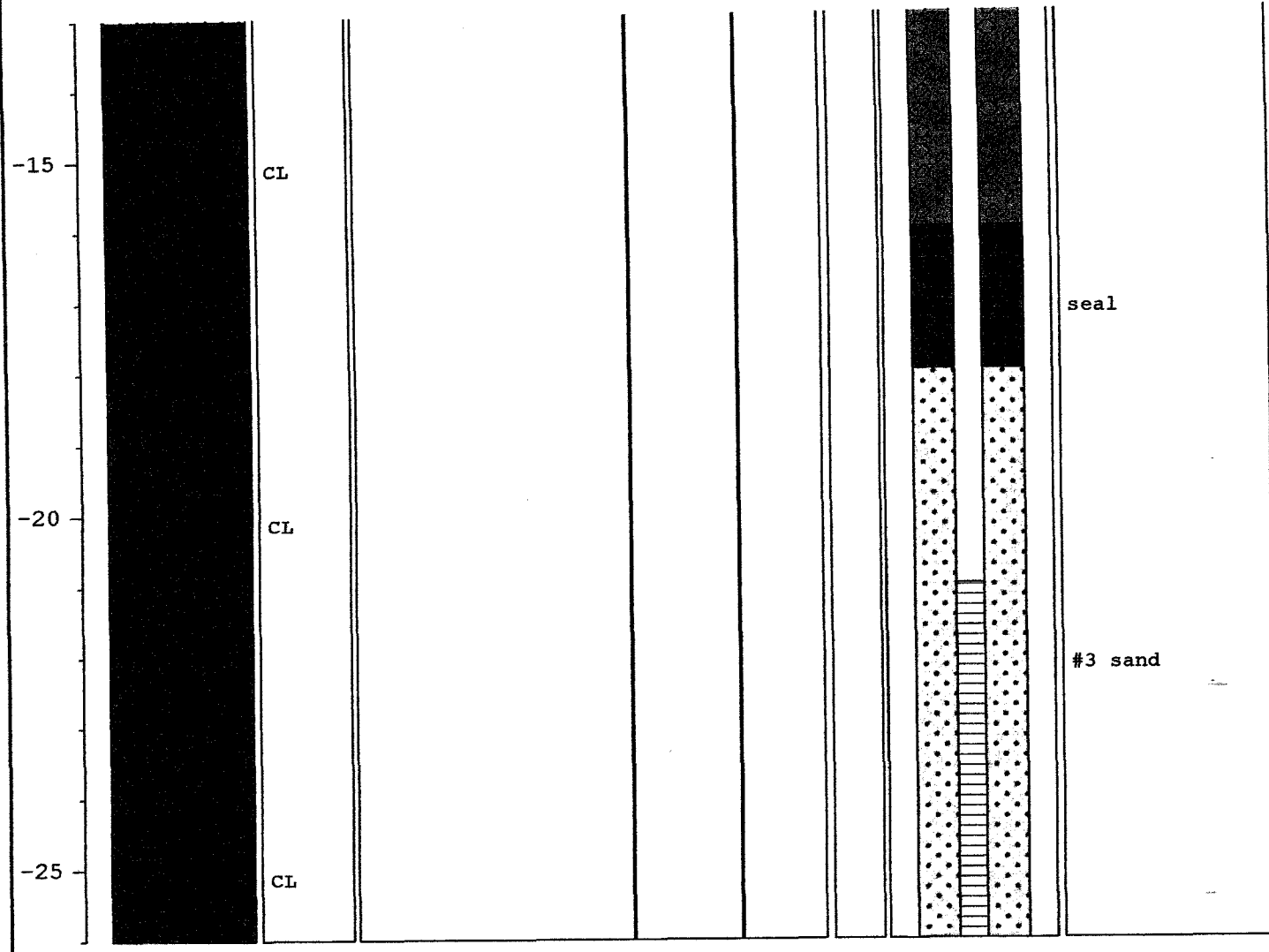
TOTAL DEPTH: 26'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2" Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8" Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/14/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
			@5': CLAY, gravel-rich, pebbles up to 1/2", green, high strength, strong fuel odor					
-5		CL	@10': CLAY, silty, sparse pebbles up to 1/2", green, soft, strong fuel odor	AS-305'				
			@15': CLAY, Same as at 10', with brown color					
-10		CL	@20': CLAY, green and brown, high strength, sparse pebbles up to 1/4", fuel odor					grout
			@25': Same as at 20'					

NOTES: Air Sparge Well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
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NOTES: Air Sparging Well



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**BOREHOLE NO.: AS-4**

**TOTAL DEPTH: 26'**

**PROJECT INFORMATION**

**DRILLING INFORMATION**

**PROJECT:** Alaska Gasoline Company  
**SITE LOCATION:** Oakland  
**JOB NO.:** A51-01.03  
**LOGGED BY:** J. Teves  
**PROJECT MANAGER:** J. Teves  
**DATES DRILLED:** 1/14/04

**DRILLING CO.:** Consolidated Testing  
**SLOT SIZE:** 0.020"  
**CASING TYPE:** 2" Sch. 40 PVC  
**METHOD OF DRILLING:** 8" Hollow Stem Auger  
**SAMPLING METHOD:** California split spoon  
**GRAVEL PACK:** #3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
			@5': CLAY, green and orange, high strength, sparse very coarse-grained sand, strong fuel odor					
-5		CL	@10': CLAY, silty, green, soft, strong fuel odor	AS-4@5'				
			@15': CLAY, gravel-rich, pebbles up to 1/4", brown, pockets of silt-rich clay					grout
-10		CL	@20': CLAY, same as at 15'					seal
			@25': CLAY, same as at 15', more orange					

NOTES: Air Sparge Well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
-15		CL						
-20		CL						
-25		CL						
								sand

NOTES: Air Sparge Well

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## FIELD BOREHOLE LOG

BOREHOLE NO.: AS-5

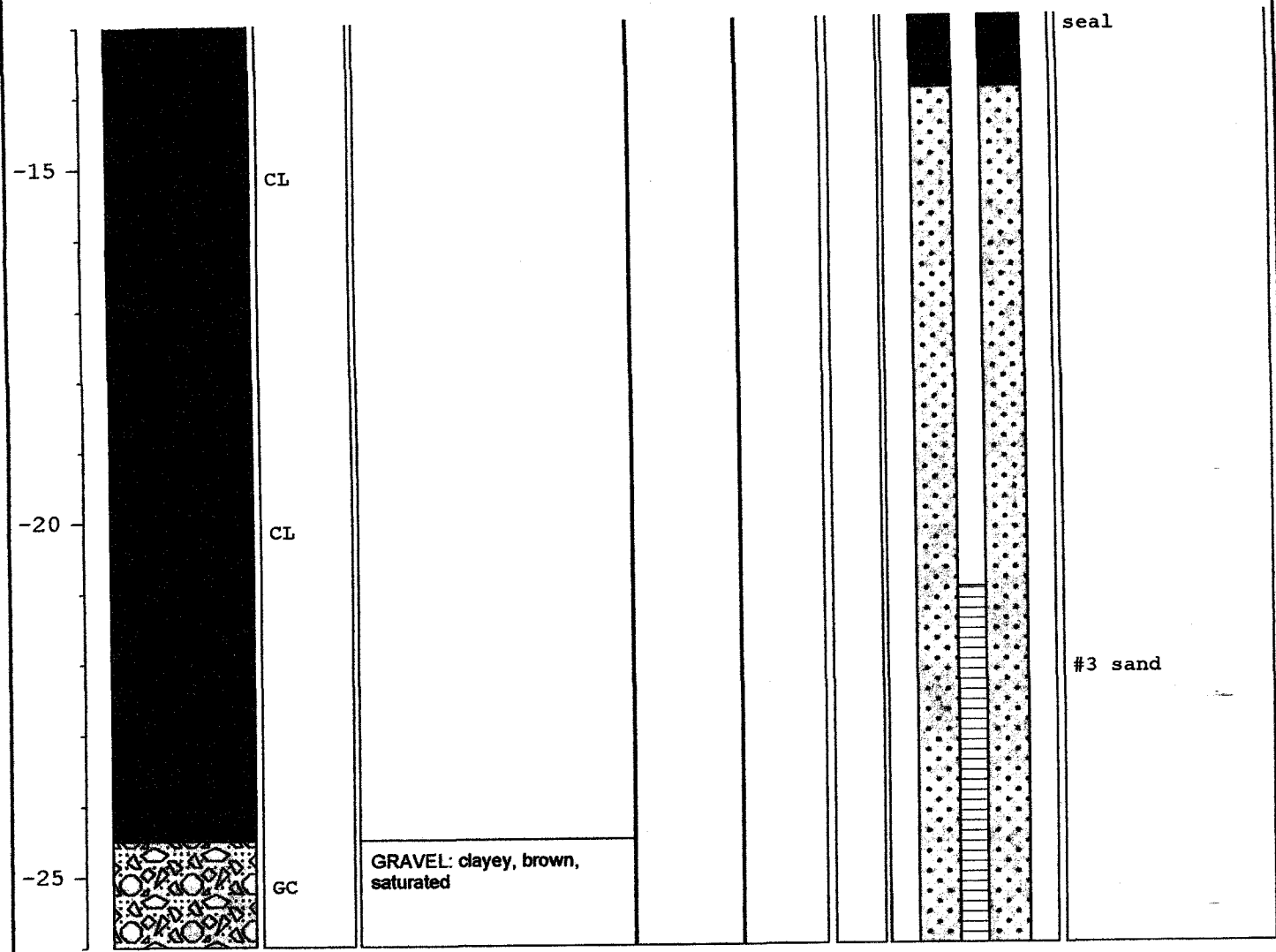
TOTAL DEPTH: 26'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2" Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8" Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/14/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
			@5': CLAY, green with black, yellow, and red, loosely consolidated, pebbles up to 3/4", strong fuel odor					
-5		CL	@10': CLAY, gravel-rich, pebbles up to 1/2", brown and black, soft, strong fuel odor	AS-5@5'				
			@15': CLAY, brown, soft, pebbles up to 1/4", fuel odor					grout
-10		CL	@20': CLAY, same as at 15', with more pebbles					
			@23': CLAY, brown, soft, sparse pebbles, fuel odor					

NOTES: Air Sparge Well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
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NOTES: Air Sparge Well

# HerSchy Environmental, Inc.

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 Bass Lake, CA 93604-0229  
 (559) 641-7320

## FIELD BOREHOLE LOG

BOREHOLE NO.: VE-1

TOTAL DEPTH: 13'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2" Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8" Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/13/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
								seal
-5		CL	@4': CLAY, pebbles up to 1/4", blue green, high strength, strong fuel odor	VE-104'				
-10		CL	@10': CLAY, same as at 4', w/ brown mottling, gravel-rich, strong odor					#3 sand
		CL	@13': CLAY, dark green, sparse very coarse-grained sand, pebbles present, strong fuel odor					

NOTES: Vapor Extraction Well

# HerSchy Environmental, Inc.

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 Bass Lake, CA 93604-0229  
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## FIELD BOREHOLE LOG

BOREHOLE NO.: VE-2

TOTAL DEPTH: 13'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2" Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8" Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/13/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
								seal
-5		CL	@5': CLAY, pebbles present up to 3/4", green w/ brown, strong fuel odor	VE-2@5'				sand
-10		CL	@10': CLAY, gravel-rich, pebbles up to 1/2", green and brown, strong fuel odor					

NOTES: Vapor Extraction Well

# HerSchy Environmental, Inc.

Environmental Consulting and Remediation

P. O. Box 229  
 Bass Lake, CA 93604-0229  
 (559) 641-7320

## FIELD BOREHOLE LOG

BOREHOLE NO.: VE-3

TOTAL DEPTH: 13'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2" Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8" Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/13/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
								seal
-5		CL	@5': CLAY, sparse pebbles, high plasticity, medium strength, black and green, strong fuel odor	VE-3@5'				
-10		SM	SAND: clayey, green and black, strong fuel odor					#3 sand
		CL	CLAY: same as at 5', with more green color					

NOTES: Vapor Extraction Well

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 (559) 641-7320

## FIELD BOREHOLE LOG

BOREHOLE NO.: VE-4

TOTAL DEPTH: 13.5'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2" Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8" Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/13/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
								seal
-5		CL	@5: CLAY, high strength, green w/ brown, sparse pebbles up to 1/2", strong fuel odor	VE-485'				
-10		CL	@10: CLAY, same as at 5', with pebbles up to 1/4"					#3 sand
			@13: CLAY, brown green, plastic, sparse very coarse-grained sand, fuel odor					

NOTES: Vapor Extraction Well



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 (559) 641-7320

## FIELD BOREHOLE LOG

BOREHOLE NO.: VE-5

TOTAL DEPTH: 13.5'

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Alaska Gasoline Company	DRILLING CO.:	Consolidated Testing
SITE LOCATION:	Oakland	SLOT SIZE:	0.020"
JOB NO.:	A51-01.03	CASING TYPE:	2" Sch. 40 PVC
LOGGED BY:	J. Teves	METHOD OF DRILLING:	8" Hollow Stem Auger
PROJECT MANAGER:	J. Teves	SAMPLING METHOD:	California split spoon
DATES DRILLED:	1/13/04	GRAVEL PACK:	#3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			SAND:					concrete plug
								seal
-5		SM	@6': SAND, silty, green, trace clay, strong fuel odor	VE-5@6'				
-10		SM	@10': SAND, silty, blue green, some clay, strong fuel odor					#3 sand
			@13': same as at 10', more clay					

NOTES: Vapor Extraction Well

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P. O. Box 229  
 Bass Lake, CA 93604-0229  
 (559) 641-7320

**BOREHOLE NO.: VE-6**

**TOTAL DEPTH: 13.5'**

**PROJECT INFORMATION**

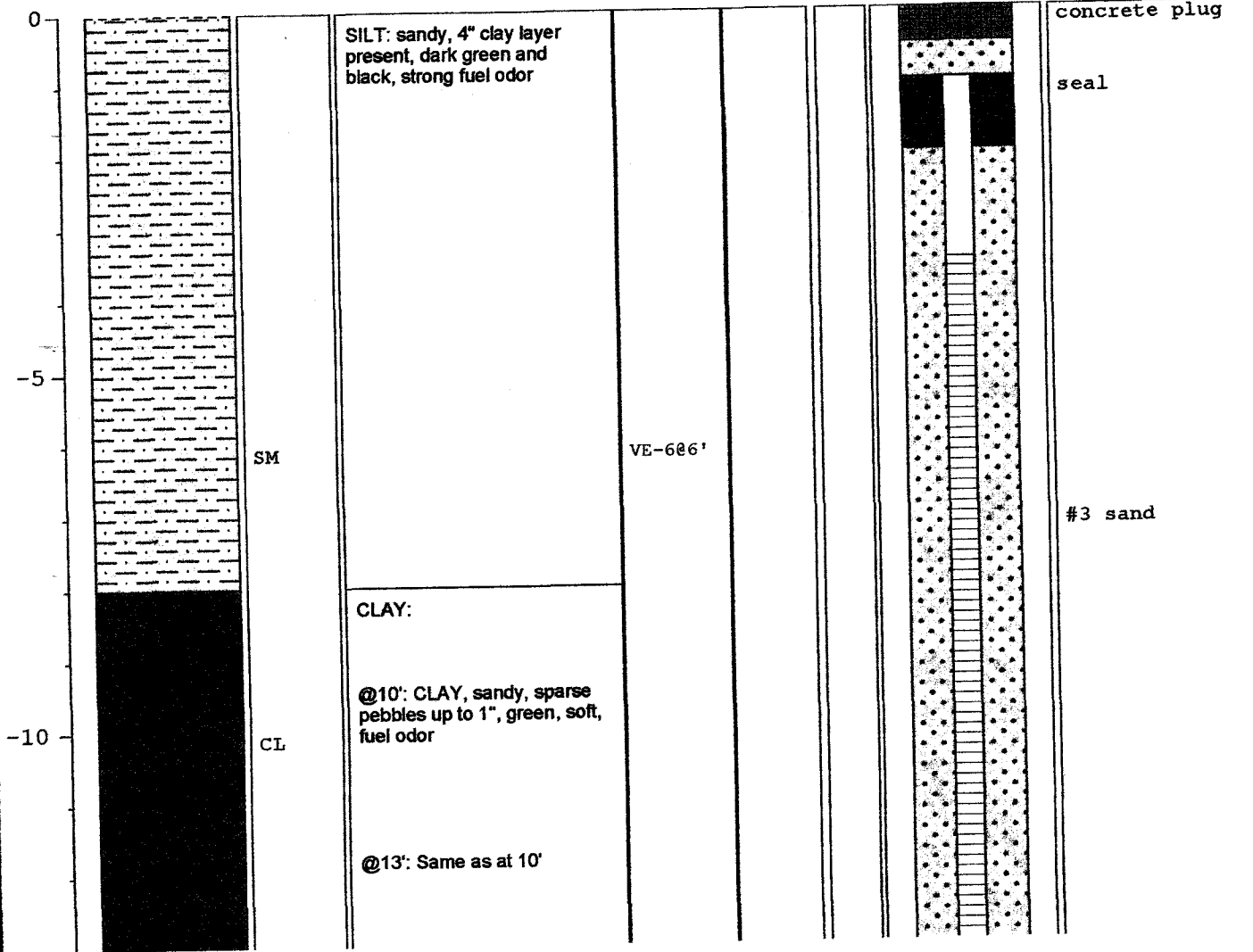
**PROJECT:** Alaska Gasoline Company  
**SITE LOCATION:** Oakland  
**JOB NO.:** A51-01.03  
**LOGGED BY:** J. Teves  
**PROJECT MANAGER:** J. Teves  
**DATES DRILLED:** 1/13/04

**DRILLING INFORMATION**

**DRILLING CO.:** Consolidated Testing  
**SLOT SIZE:** 0.020"  
**CASING TYPE:** 2" Sch. 40 PVC  
**METHOD OF DRILLING:** 8" Hollow Stem Auger  
**SAMPLING METHOD:** California split spoon  
**GRAVEL PACK:** #3 Sand

*(Screen 3.5 13.5)*

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
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NOTES: Vapor Extraction Well

**Environmental Consulting and Remediation**

P. O. Box 229  
 Bass Lake, CA 93604-0229  
 (559) 641-7320

**BOREHOLE NO.: VE-7**

**TOTAL DEPTH: 14'**

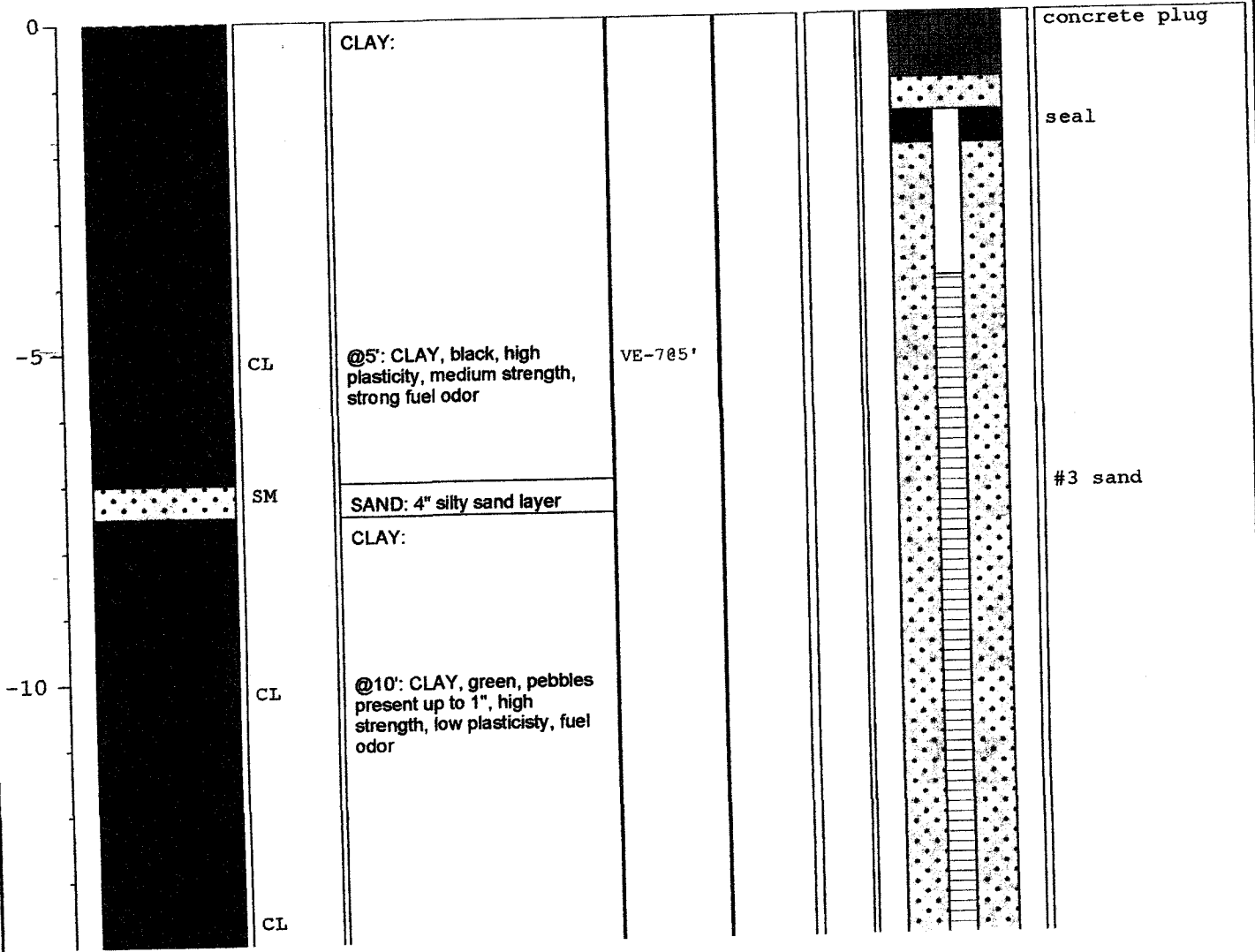
**PROJECT INFORMATION**

PROJECT: **Alaska Gasoline Company**  
 SITE LOCATION: **Oakland**  
 JOB NO.: **A51-01.03**  
 LOGGED BY: **J. Teves**  
 PROJECT MANAGER: **J. Teves**  
 DATES DRILLED: **1/13/04**

**DRILLING INFORMATION**

DRILLING CO.: **Consolidated Testing**  
 SLOT SIZE: **0.020"**  
 CASING TYPE: **2" Sch. 40 PVC**  
 METHOD OF DRILLING: **8" Hollow Stem Auger**  
 SAMPLING METHOD: **California split spoon**  
 GRAVEL PACK: **#3 Sand**

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
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NOTES: Vapor Extraction Well

**Environmental Consulting and Remediation**

P. O. Box 229  
 Bass Lake, CA 93604-0229  
 (559) 641-7320

**BOREHOLE NO.: VE-8**

**TOTAL DEPTH: 14'**

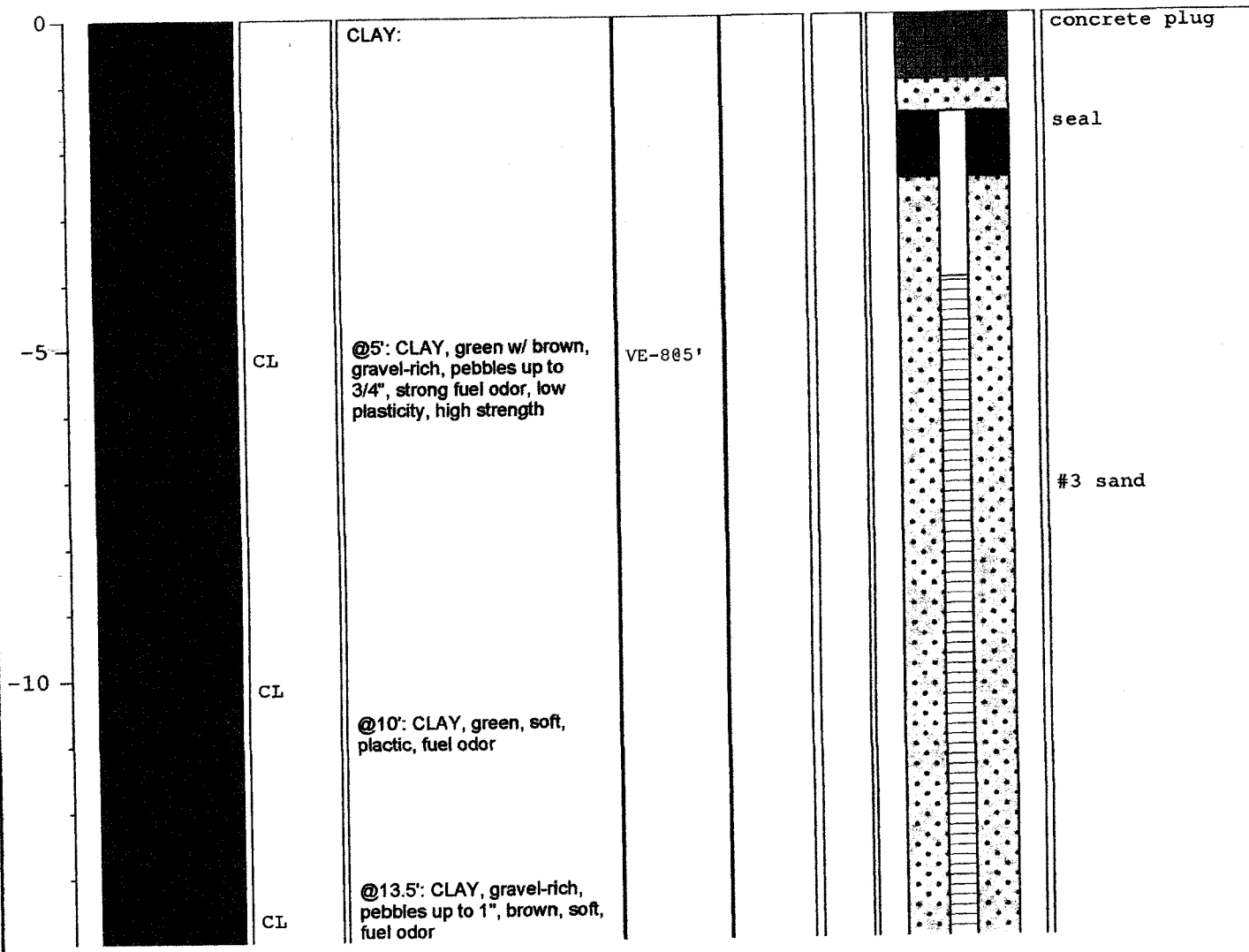
**PROJECT INFORMATION**

**PROJECT:** Alaska Gasoline Company  
**SITE LOCATION:** Oakland  
**JOB NO.:** A51-01.03  
**LOGGED BY:** J. Teves  
**PROJECT MANAGER:** J. Teves  
**DATES DRILLED:** 1/13/04

**DRILLING INFORMATION**

**DRILLING CO.:** Consolidated Testing  
**SLOT SIZE:** 0.020"  
**CASING TYPE:** 2" Sch. 40 PVC  
**METHOD OF DRILLING:** 8" Hollow Stem Auger  
**SAMPLING METHOD:** California split spoon  
**GRAVEL PACK:** #3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
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NOTES: Vapor Extraction Well

**Environmental Consulting and Remediation**

P. O. Box 229  
 Bass Lake, CA 93604-0229  
 (559) 641-7320

**BOREHOLE NO.: VE-9**

**TOTAL DEPTH: 14'**

**PROJECT INFORMATION**

**DRILLING INFORMATION**

**PROJECT:** Alaska Gasoline Company  
**SITE LOCATION:** Oakland  
**JOB NO.:** A51-01.03  
**LOGGED BY:** J. Teves  
**PROJECT MANAGER:** J. Teves  
**DATES DRILLED:** 1/13/04

**DRILLING CO.:** Consolidated Testing  
**SLOT SIZE:** 0.020"  
**CASING TYPE:** 2" Sch. 40 PVC  
**METHOD OF DRILLING:** 8" Hollow Stem Auger  
**SAMPLING METHOD:** California split spoon  
**GRAVEL PACK:** #3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
-5		CL	@5': CLAY, green w/ brown mottling, high strength, low plasticity, strong fuel odor	VE-985'				seal
-10		CL	@10': CLAY, green and brown, soft, pebbles up to 3/4", strong fuel odor					
		SM	SAND: silty, green, strong fuel odor					#3 sand

NOTES: Vapor Extraction Well

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P. O. Box 229  
 Bass Lake, CA 93604-0229  
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**BOREHOLE NO.: VE-10**

**TOTAL DEPTH: 14'**

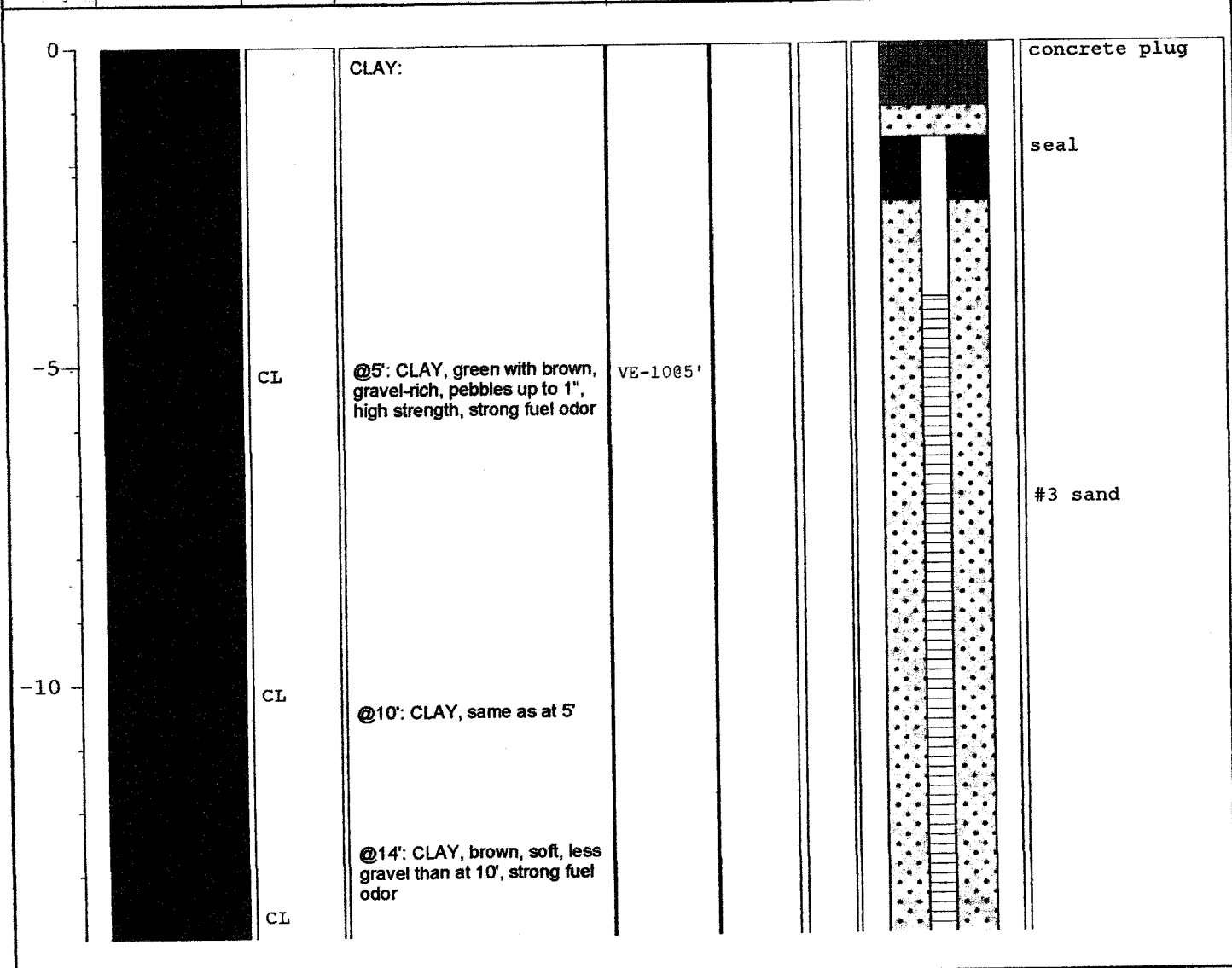
**PROJECT INFORMATION**

**DRILLING INFORMATION**

**PROJECT:** Alaska Gasoline Company  
**SITE LOCATION:** Oakland  
**JOB NO.:** A51-01.03  
**LOGGED BY:** J. Teves  
**PROJECT MANAGER:** J. Teves  
**DATES DRILLED:** 1/13/04

**DRILLING CO.:** Consolidated Testing  
**SLOT SIZE:** 0.020"  
**CASING TYPE:** 2" Sch. 40 PVC  
**METHOD OF DRILLING:** 8" Hollow Stem Auger  
**SAMPLING METHOD:** California split spoon  
**GRAVEL PACK:** #3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
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NOTES: Vapor Extraction Well

**Environmental Consulting and Remediation**

P. O. Box 229  
 Bass Lake, CA 93604-0229  
 (559) 641-7320

**BOREHOLE NO.: VE-11**

**TOTAL DEPTH: 14'**

**PROJECT INFORMATION**

**DRILLING INFORMATION**

**PROJECT:** Alaska Gasoline Company  
**SITE LOCATION:** Oakland  
**JOB NO.:** A51-01.03  
**LOGGED BY:** J. Teves  
**PROJECT MANAGER:** J. Teves  
**DATES DRILLED:** 1/14/04

**DRILLING CO.:** Consolidated Testing  
**SLOT SIZE:** 0.020"  
**CASING TYPE:** 2" Sch. 40 PVC  
**METHOD OF DRILLING:** 8" Hollow Stem Auger  
**SAMPLING METHOD:** California split spoon  
**GRAVEL PACK:** #3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
-5		CL	@5': CLAY, green & orange, high strength, sparse pebbles up to 1/2", strong fuel odor	VE-11@5'				seal
-10		CL	@10': CLAY, gravel-rich, pebbles up to 1/2", green, strong fuel odor					#3 sand
		CL	@14': CLAY, same as at 10', but brown color					

NOTES: Vapor Extraction Well

**Environmental Consulting and Remediation**

P. O. Box 229  
 Bass Lake, CA 93604-0229  
 (559) 641-7320

**BOREHOLE NO.: VE-12**

**TOTAL DEPTH: 14'**

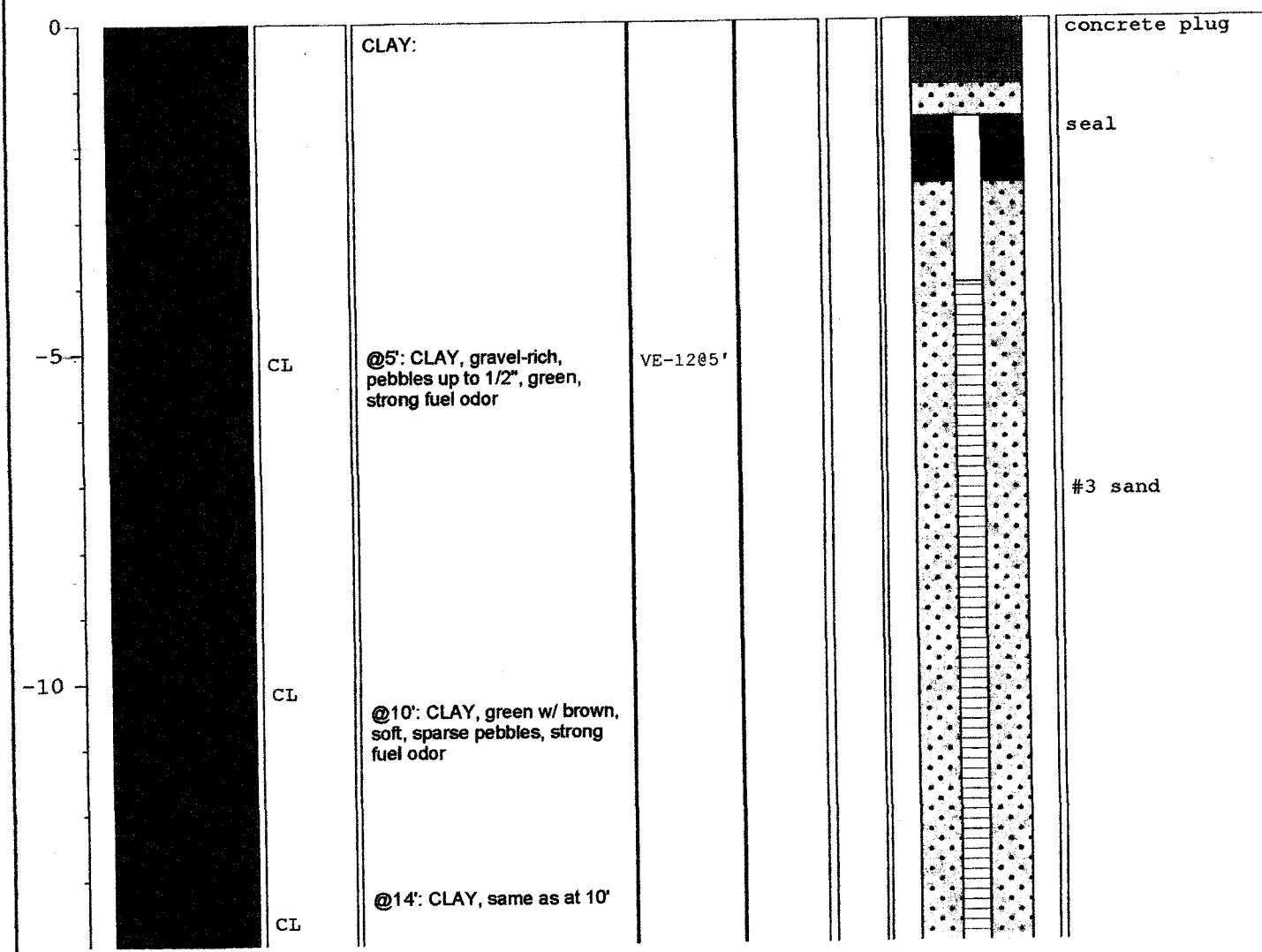
**PROJECT INFORMATION**

**DRILLING INFORMATION**

PROJECT: **Alaska Gasoline Company**  
 SITE LOCATION: **Oakland**  
 JOB NO.: **A51-01.03**  
 LOGGED BY: **J. Teves**  
 PROJECT MANAGER: **J. Teves**  
 DATES DRILLED: **1/14/04**

DRILLING CO.: **Consolidated Testing**  
 SLOT SIZE: **0.020"**  
 CASING TYPE: **2" Sch. 40 PVC**  
 METHOD OF DRILLING: **8" Hollow Stem Auger**  
 SAMPLING METHOD: **California split spoon**  
 GRAVEL PACK: **#3 Sand**

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
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NOTES: Vapor Extraction Well



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 Bass Lake, CA 93604-0229  
 (559) 641-7320

**BOREHOLE NO.: VE-13**

**TOTAL DEPTH: 14'**

**PROJECT INFORMATION**

**DRILLING INFORMATION**

**PROJECT:** Alaska Gasoline Company  
**SITE LOCATION:** Oakland  
**JOB NO.:** A51-01.03  
**LOGGED BY:** J. Teves  
**PROJECT MANAGER:** J. Teves  
**DATES DRILLED:** 1/14/04

**DRILLING CO.:** Consolidated Testing  
**SLOT SIZE:** 0.020"  
**CASING TYPE:** 2" Sch. 40 PVC  
**METHOD OF DRILLING:** 8" Hollow Stem Auger  
**SAMPLING METHOD:** California split spoon  
**GRAVEL PACK:** #3 Sand

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			CLAY:					concrete plug
								seal
-5		CL	@5': CLAY, green w/ orange, high strength, sparse pebbles up to 1/2", strong fuel odor	VE-1305'				
-10		CL	@10': CLAY, green, soft, strong fuel odor					#3 sand
		CL	@14': CLAY, gravel-rich, pebbles up to 1/2", strong fuel odor					

NOTES: Vapor Extraction Well

**APPENDIX B**

**CERTIFIED LABORATORY ANALYTICAL REPORTS**

**WITH CHAIN OF CUSTODY**

# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate # 2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930  
Fax: (209) 384-1507

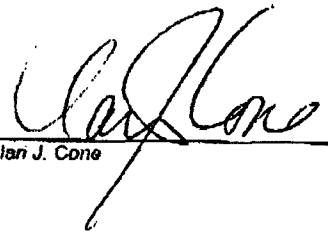
HerSchy Environmental P.O. Box 229 Bass Lake, CA 93604 Attn: Joshua Teves	Client Project ID: Alaska Gasoline - Oakland Reference Number: 6538 Sample Description: Soil Sample Prep/Analysis Method: EPA 5030/8015M, 8020 Lab Numbers: 6538-1S, 2S, 3S, 4S, 5S	Sampled: See Below Received: 01-16-04 Extracted: 01-20-04 Analyzed: 01-21-04 Reported: 01-30-04
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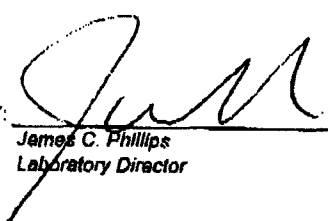
## TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (mg/kg)	SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID
		AS-1 @ 5' (mg/kg)	AS-2 @ 5' (mg/kg)	AS-3 @ 5' (mg/kg)	AS-4 @ 5' (mg/kg)	AS-5 @ 5' (mg/kg)
MTBE	0.010	46	26	ND	85	11
BENZENE	0.0050	5.9	3.5	0.031	2.7	16
TOLUENE	0.0050	48	34	0.033	24	160
ETHYLBENZENE	0.0050	13	13	0.062	7.2	90
TOTAL XYLENES	0.0050	74	69	0.28	44	510
GASOLINE RANGE HYDROCARBONS	1.0	630	650	6.4	370	3400
Report Limit Multiplication Factor:		100	50	1	100	500
Date Sampled:		01-15-04	01-15-04	01-14-04	01-14-04	01-14-04

Surrogate % Recovery:	NA	NA	PID: 103% / PID: 95.2%	NA	NA
Instrument ID:	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit  
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

ANALYST:   
Cian J. Cone

APPROVED BY:   
James C. Phillips  
Laboratory Director

# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate # 2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930  
Fax: (209) 384-1507

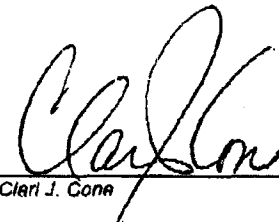
HerSchy Environmental P.O. Box 229 Bass Lake, CA 93604 Attn: Joshua Teves	Client Project ID: Alaska Gasoline - Oakland Reference Number: 6538 Sample Description: Soil Sample Prep/Analysis Method: EPA 5030/8015M, 8020 Lab Numbers: 6538-6S, 7S, 8S, 9S, 10S	Sampled: See Below Received: 01-16-04 Extracted: 01-20-04 Analyzed: 01-21-04 Reported: 01-30-04
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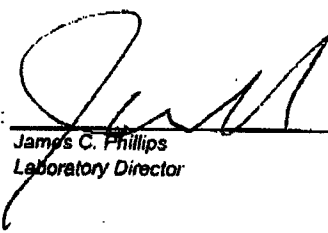
## TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (mg/kg)	SAMPLE ID EX-1 @ 3' (mg/kg)	SAMPLE ID MW-1R @ 5' (mg/kg)	SAMPLE ID VE-1 @ 4' (mg/kg)	SAMPLE ID VE-2 @ 5' (mg/kg)	SAMPLE ID VE-3 @ 5' (mg/kg)
MTBE	0.010	4.6	ND	ND	1.3	18
BENZENE	0.0050	2.2	0.060	2.2	4.6	0.84
TOLUENE	0.0050	13	0.20	15	29	1.1
ETHYLBENZENE	0.0050	5.5	0.14	8.9	14	0.82
TOTAL XYLENES	0.0050	27	0.88	46	73	4.4
GASOLINE RANGE HYDROCARBONS	1.0	230	4.3	390	590	32
Report Limit Multiplication Factor:		20	1	50	50	20
Report Limit Multiplication Factor for MTBE only:					20	
Date Sampled:		01-12-04	01-12-04	01-13-04	01-13-04	01-13-04

Surrogate % Recovery:	NA	100% / PID: 1117%	NA	NA	NA
Instrument ID:	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit  
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

ANALYST:   
Clari J. Cone

APPROVED BY:   
James C. Phillips  
Laboratory Director

# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate # 2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930  
Fax: (209) 384-1507

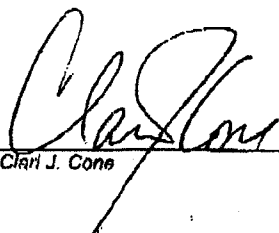
HerSchy Environmental P.O. Box 229 Bass Lake, CA 93604 Attn: Joshua Teves	Client Project ID: Alaska Gasoline - Oakland Reference Number: 6538 Sample Description: Soil Sample Prep/Analysis Method: EPA 5030/8015M, 8020 Lab Numbers: 6538-11S, 12S, 13S, 14S, 15S	Sampled: 01-13-04 Received: 01-16-04 Extracted: 01-20-04 Analyzed: 01-21-04 Reported: 01-30-04
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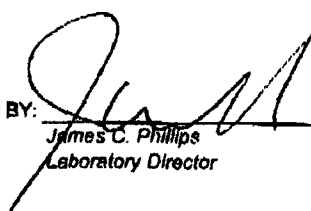
## TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (mg/kg)	SAMPLE ID VE-4 @ 5' (mg/kg)	SAMPLE ID VE-5 @ 6' (mg/kg)	SAMPLE ID VE-6 @ 6' (mg/kg)	SAMPLE ID VE-7 @ 5' (mg/kg)	SAMPLE ID VE-8 @ 5' (mg/kg)
MTBE	0.010	0.99	59	5.3	43	6.2
BENZENE	0.0050	0.28	2.2	1.6	1.5	0.39
TOLUENE	0.0050	1.6	9.5	14	20	2.4
ETHYLBENZENE	0.0050	1.2	1.7	9.8	9.9	3.0
TOTAL XYLENES	0.0050	6.3	10	58	57	18
GASOLINE RANGE HYDROCARBONS	1.0	52	83	390	500	170
Report Limit Multiplication Factor:		10	10	50	100	20

Surrogate % Recovery:	NA	NA	NA	NA	NA
Instrument ID:	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit  
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

ANALYST:   
Clair J. Cone

APPROVED BY:   
James C. Phillips  
Laboratory Director

# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate # 2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930  
Fax: (209) 384-1507

HerSchy Environmental  
P.O. Box 229  
Bass Lake, CA 93604  
Attn: Joshua Teves

Client Project ID: Alaska Gasoline - Oakland  
Reference Number: 6538  
Sample Description: Soil  
Sample Prep/Analysis Method: EPA 5030/8015M, 8020  
Lab Numbers: 6538-16S, 17S, 18S, 19S, 20S

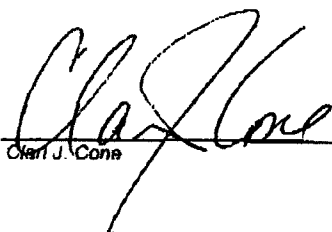
Sampled: See Below  
Received: 01-16-04  
Extracted: 01-20-04  
Analyzed: 01-21-04  
Reported: 01-30-04

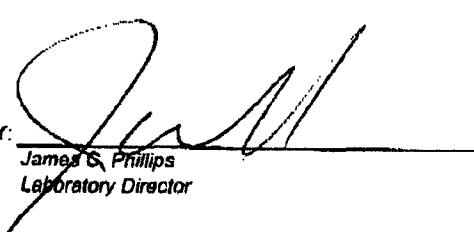
## TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (mg/kg)	SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID
		VE-9 @ 5' (mg/kg)	VE-10 @ 5' (mg/kg)	VE-11 @ 5' (mg/kg)	VE-12 @ 5' (mg/kg)	VE-13 @ 5' (mg/kg)
MTBE	0.010	5.5	8.7	20	33	47
BENZENE	0.0050	0.43	0.13	1.3	2.1	2.7
TOLUENE	0.0050	2.4	0.11	0.67	16	22
ETHYLBENZENE	0.0050	4.5	0.42	6.9	6.1	9.2
TOTAL XYLENES	0.0050	22	2.0	35	36	53
GASOLINE RANGE HYDROCARBONS	1.0	200	26	270	270	410
Report Limit Multiplication Factor:		20	20	20	50	50
Date Sampled:		01-13-04	01-13-04	01-14-04	01-14-04	01-14-04

Surrogate % Recovery:	NA	NA	NA	NA	NA
Instrument ID:	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit  
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

ANALYST:   
Cliff J. Cone

APPROVED BY:   
James S. Phillips  
Laboratory Director

**CASTLE ANALYTICAL LABORATORY - PORTERVILLE**Environmental Testing Services  
Certificate No. 25512780 Yowlumne Ave., Suite C  
Porterville, CA 93258Phone: (559) 781-6099  
Fax: (559) 781-6091Her Schy Environmental  
P.O. Box 229  
Bass Lake, CA 93604  
Attn: Joshua TevesClient Project ID: Alaska Gasoline - Oakland  
Reference Number: P238 / 6538  
Sample Description: SOIL  
Lab Numbers: P238-1S, 2SSampled: See Below  
Received: 01-23-04  
Prepared: 01-23-04  
Analyzed: 01-23-04  
Reported: 01-30-04**ICP Metals - EPA SW6010C**

ANALYTE	REPORTING LIMIT (mg/kg)	SAMPLE ID AS-2@5 (mg/kg)	SAMPLE ID AS-5@5 (mg/kg)
LEAD (Pb)	5.0	ND	ND

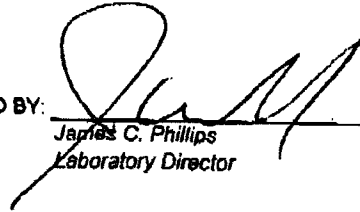
Report Limit Multiplication Factor:

1

1

Analytes reported as ND were not detected at or above the Practical Quantitation Limit  
 Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

APPROVED BY:


  
James C. Phillips  
Laboratory Director