



MONITORING WELL/BORING LOG

BORING/WELL No: **SB-15/WSW-1**

Pg. 1 of 2

Former Texaco Bulk Terminal and Retail Facility # 211441
3503 North Vine Street
Hays, Kansas

DRILLER: Thiele Geotech
POTHOLE METHOD: Water Knife/Vacuum Truck
DRILLING METHOD: CME 55 - Hollow Stem Auger
SAMPLE METHOD: 2" by 2' split spoon
DRILL BIT DIAMETER: 6 1/4" I.D.
DATE POTHOLED: 11/6/06
DATE DRILLED: 11/7/06

HOLE DIAMETER: 10 1/4"
SVE WELL CASING: 2" SCH 40 PVC
AS WELL CASING: 1" SCH 80 PVC
SVE WELL SCREEN: 2" SCH 40 PVC
AS WELL SCREEN: 1" SCH 80 PVC
Slot Size: 0.020"
SEAL TYPE: Granular bentonite & chips, Portland cement
FILTER PACK: No. 10-20 Silica Sand
WELL COVER: 12" steel vault

SAIC PROJECT #:
06-6818-00-8670-100

WELL CONSTRUCTION 11/8/06
WELL DEVELOPMENT: N/A

LOGGED BY: Brad Woffinger

GROUND ELEVATION:

CASING ELEVATION:

Depth (ft.)	Blow Counts	% Recovery	LITHOLOGY / DESCRIPTION	Field Screen PID (ppm)	UVIF Screening	Head Space PID (ppm)	Head Space FID (ppm)	Soil Type	USCS	Water Level	Depth (ft.)	Well Construction/Remarks
1	Potholed to 8'	Potholed to 8'	0'-4" Concrete	NR	NR	1.8	71.4	CL	CL	Water Level	1	Sand to 0.75'
2			4'-4" SILTY CLAY (CL), dark gray, medium plasticity, soft, moist, <=5% fine sand, slight HC odor. Trace gravel fragments.			1.9	10.3				3	Top of grout @ 3'
3			4'-6" CLAYEY SILT (ML), grayish brown, low-medium plasticity, 5-10% fine sand, moist, soft, no HC odors, wet @ 6'.			0.8	2.5				4	
4			6'-16" CLAYEY SILT (ML), yellowish brown, firm, low plasticity, <5% fine sand, no HC impacts, moist, sporadic calcite inclusions.			2.9	4.1				5	
5											6	
6											7	Portland Cement & Bentonite Powder Grout
7											8	
8											9	
9	1,3,4,5	83.33%		1.3	NR	4.7	40.8	ML	Water Level	9		
10	3,4,7,7	93.75%		0.4	NR	4.9	68.1			10		
11	2,3,5,9	100.00%		3.8	NR	4.8	67.9			11		
12	2,3,7,12	100.00%		1.2	NR	5.4	66.3			12		
13	2,3,7,12	100.00%		1.2	NR	7.5	70.1			13	Hydrated Medium Bentonite Chips	
14	3,5,9,11	100.00%	16'-24" SILTY CLAY (CL), brown, medium-high plasticity, <5% fine sand, firm to stiff, moist, sporadic calcite inclusions.	1.2	NR	7.5	70.1			14	Sand @ 14'	
15	3,5,10,11	100.00%		8.8	NR	9.3	72.6			15	SVE Screened 15'-22'	
16	2,4,8,12	100.00%		13.3	NR	63.8	519.0			16		
17								17				
18								18				
19								19				
20								20				
21			*HC odor starting at 21'					21				
22								22				

Notes:



MONITORING WELL/BORING LOG

BORING/WELL No: **SB-15/VSW-1**

Pg. 2 of 2

Former Texaco Bulk Terminal and Retail Facility # 211441 3503 North Vine Street Hays, Kansas	DRILLER: Thiele Geotech	HOLE DIAMETER: 10 1/4"
	POTHOLE METHOD: Water Knife/Vacuum Truck	SVE WELL CASING: 2" SCH 40 PVC
SAIC PROJECT #: 06-6818-00-8670-100	DRILLING METHOD: CME 55 - Hollow Stem Auger	AS WELL CASING: 1" SCH 80 PVC
	SAMPLE METHOD: 2" by 2" split spoon	SVE WELL SCREEN: 2" SCH 40 PVC
LOGGED BY: Brad Wolfinger	DRILL BIT DIAMETER: 6 1/4" I.D.	AS WELL SCREEN: 1" SCH 80 PVC
	DATE POTHOLED: 11/6/06	Slot Size: 0.020"
GROUND ELEVATION:	DATE DRILLED: 11/7/06	SEAL TYPE: Granular bentonite & chips, Portland cement
	WELL CONSTRUCTION 11/8/06	FILTER PACK: No. 10-20 Silica Sand
	WELL DEVELOPMENT: N/A	WELL COVER: 12" steel vault
		CASING ELEVATION:

Depth (ft.)	Blow Counts	% Recovery	LITHOLOGY / DESCRIPTION	Field Screen PID (ppm)	LUVF Screening	Head Space PID (ppm)	Head Space FID (ppm)	Soil Type	USCS	Water Level	Depth (ft.)	Well Construction/Remarks
22			*minor staining starting at 22'. Slightly gray.								22	
23	3,5,7,9	100.00%	*slight increase in sand content at 22', 10-20% fine sand.	97.9	CaCO ₃ Inc. Glow	269.0	4161.0				23	Coated bentonite chips
24			24'-29.5'								24	
25	1,2,4,4	100.00%	SILTY CLAY (CL), brownish gray, moist to wet, soft, high plasticity, strong HC odor, staining, 10-20% fine sand, much softer than 16'-24'.	1800.0	CaCO ₃ Inc. Glow	989.0	5000 FO		CL		25	Sample SB15-S-(24'-26')
26			*sand seam at 28'10" ~1" thick.								26	Sand @ 26'
27	2,3,3,6	100.00%	*sand seam at 27'1" ~2" thick, medium to coarse grained sand, 10-20% fine to medium grained sand in formation.	22.0	CaCO ₃ Inc. Glow	47.9	519.0				27	AS Screened 27'-29'
28			*sand seam at 28'6"-29'2", fine to coarse grained, wet.								28	
29	0,2,2,3	100.00%	29.5'-34'	23.1	CaCO ₃ Inc. Glow	37.8	312.0				29	Sample SB15-S-(28'-30')
30			CLAYEY SILT (ML), brown, soft, moist to wet, high plasticity, no visible HC impacts or odors, <=5% fine sand, thin layer of gravel at 29.5'.						ML		30	Coated bentonite chips
31	1,2,2,2	100.00%	*sand seam at 31.5', ~1" thick, fine to medium grained.	25.6	NR	29.4	197.0				31	
32											32	Sand @ 32'
33	2,2,3,2	100.00%		1.2	NR	45.5					33	AS Screened 33'-35'
34			34'-40'								34	
35	2,2,3,4	100.00%	SILTY CLAY (CL), brown, wet, firm, high plasticity, 10-20% fine to medium sand, calcite inclusions no visible HC impact or odor. Few mafic, coarse grained minerals present.	6.1	NR	81.6					35	Dead Battery on FID
36											36	Coated bentonite chips
37	2,2,4,6	100.00%		2.4	NR	43.9			CL		37	
38			*Clayey sand layer 38'-38.5'.								38	
39	0,4,5,8	100.00%	*Coarse sand layer @39.5', ~2" thick.	9.5	NR	112.0					39	
40											40	
41											41	
42											42	
43											43	

Notes: