





**MONITORING WELL/BORING LOG**

BORING/WELL No: **SB-16/VSW-2**

Pg. 1 of 2

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

DRILLER: Thiele Geotech  
POT HOLE 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 POT HOLED: 11/6 & 11/7/06  
DATE DRILLED: 11/8/06

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 11/9/06  
WELL DEVELOPMENT: N/A

LOGGED BY: Brad Wolfinger

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'-6" Concrete	NR	NR	3.7	91.4	CL	CL	Water Level	1	Sand to 0.75'			
2			6"-4' SILTY CLAY (CL), dark gray, medium plasticity, soft, moist, <=5% fine sand, slight HC odor, no visible HC staining.			3.2	6.6				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.			0.8	4.3				4	Portland Cement & Bentonite Powder Grout			
4			6'-8' CLAYEY SILT (ML), brown, wet @ 6', high plasticity, very soft, 10-20% fine sand, no HC impacts.			1.3	3.2				5				
5			8'-18' CLAYEY SILT (ML), brown, moist, soft, low plasticity, <=5% fine sand, no HC impacts. Sporadic calcite incl.			1.5	NR				60.1		21.3	6	
6			5.4, 6.7			87.50%	4.5				NR		63.2	26.5	ML
7			0.1, 3.5			100.00%	5.9				NR	96.0	41.3	12	Hydrated Medium Bentonite Chips
8			3.6, 7.9			100.00%	11.0				NR	109.0	56.7	14	Sand @ 14'
9	3.5, 9.9	100.00%	7.9	NR	115.0	62.4	15	SVE Screened 15'-21'							
10	4.7, 9.11	100.00%	12.7	NR	79.1	40.1	CL	18	Sample SB16-S-(20'-22')						
11	6.9, 12.17	100.00%	180.0	NR	950.0	375.0	CL	20							
12			*slight increase in clay content 12'-13'.												
13			*slight HC odor starting at 16'.												

Notes:



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22											22	
23	4,6,8,12	100.00%	*HC impacts increasing @ ~23'. *sand seam @23'8". Medium to coarse grained sand, ~4" thick, stained black, saturated.	1083.0	NR	3300.0	4400.0				23	Coated bentonite chips
24											24	
25	1,2,3,4	100.00%	25'-30'	1946.0	CaCO <sub>3</sub> Inc. Glow	4516.0	5000 FO	CL			25	Sand @ 24' Sample SB16-S-(24'-26')
26			SILTY CLAY (CL), yellowish brown, wet, soft, medium plasticity, staining, 5-10% fine sand, strong HC odor and staining.								26	AS Screened 25'-27'
27	1,1,2,3	100.00%	*sand seam (SC) at 27' ~6" thick, clayey sand, fine to medium grained.	175.0	CaCO <sub>3</sub> Inc. Glow	903.0	676.0				27	Sample SB16-S-(26'-28')
28											28	
29	0,1,2,2	100.00%	*sand seam at 28.5 ~6" thick, silty sand, wet, no visible HC impacts.	30.0	CaCO <sub>3</sub> Inc. Glow	299.0	149.0				29	Coated bentonite chips
30											30	
31	0,1,2,2	100.00%	*HC impacts decreasing at 27', little to no impacts at 29' and below.	12.1	NR	226.0	185.0	SC			31	Sand @ 30' AS Screened 31'-33'
32			30'-34'								32	
33	1,1,2,2	100.00%	CLAYEY SAND (SC), brown-tan, poorly sorted, fine to coarse grained sands, saturated, soft, no visible HC impacts or odors.	13.6	NR	257.0	117.0				33	
34			*sand becoming coarser and more clayey with depth. *32'-34' becoming coarse to gravelly, clayey sand.								34	Coated bentonite chips
35											35	
36											36	
37											37	
38											38	
39											39	
40											40	
41											41	
42											42	
43											43	

Notes: