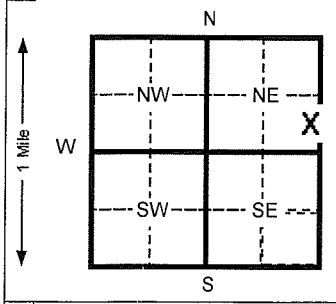
SB-18/VSW-4 WATER WELL RECORD Form WWC-5 KSA 82a-1212 ID No. _____

1 LOCATION OF WATER WELL: County: **Ellis** | Fraction: **NE** ¼ **SE** ¼ **NE** ¼ | Section Number: **28** | Township Number: T **13** S | Range Number: R **18** E/W

Distance and direction from nearest town or city street address of well if located within city?
3501 N Vine St, Hays, KS, Lat: N 38° 53.685', Long: 99° 19.115'

2 WATER WELL OWNER: **Chevron**
RR#, St. Address, Box # : **2700 NE Seward Ave**
City, State, ZIP Code : **Topeka, KS 66605**
Board of Agriculture, Division of Water Resources Application Number:

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL **35** ft. ELEVATION: **Unknown**
Depth(s) Groundwater Encountered 1 **22** ft. 2 _____ ft. 3 _____ ft.
WELL'S STATIC WATER LEVEL **Unk.** ft. below land surface measured on mo/day/yr **--**
Pump test data: Well water was **N/A** ft. after _____ hours pumping _____ gpm
Est. Yield **N/A** gpm: Well water was **N/A** ft. after _____ hours pumping _____ gpm
Bore Hole Diameter **10.25** in. to **35** ft. and _____ in. to _____ ft.
WELL WATER TO BE USED AS: 1 Domestic 2 Irrigation 3 Feed lot 4 Industrial 5 Public water supply 6 Oil field water supply 7 Lawn and garden (domestic) 8 Air conditioning 9 Dewatering 10 Monitoring well 11 Injection well (12) Other (Specify below) **Remediation**
Was a chemical/bacteriological sample submitted to Department? Yes ____ No **X** If yes, mo/day/yr sample was submitted
Water Well Disinfected? Yes ____ No **X**

5 TYPE OF BLANK CASING USED: (2) PVC | 1 Steel | 3 RMP (SR) | 4 ABS | 5 Wrought Iron | 6 Asbestos-Cement | 7 Fiberglass | 8 Concrete tile | 9 Other (specify below)
CASING JOINTS: Glued ____ Clamped ____ Welded ____ (Threaded)
Blank casing diameter **2*** in. to **15** ft., Dia **1**** in. to **25** ft., Dia **1** in. to **31&33-35** ft.
Casing height above land surface **0** in., weight **0.682*/ 0.315**** lbs./ft. Wall thickness or gauge No. **0.1875*/ 0.1575** in.**
TYPE OF SCREEN OR PERFORATION MATERIAL: (7) PVC | 1 Steel | 2 Brass | 3 Stainless steel | 4 Galvanized steel | 5 Fiberglass | 6 Concrete tile | 8 RMP (SR) | 9 ABS | 10 Asbestos-cement | 11 Other (specify) | 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE: (3) Mill slot | 1 Continuous slot | 2 Louvered shutter | 4 Key punched | 5 Gauzed wrapped | 6 Wire wrapped | 7 Torch cut | 8 Saw cut | 9 Drilled holes | 10 Other (specify) | 11 None (open hole)
SCREEN-PERFORATED INTERVALS: From **15** ft. to **21 (2")** ft. From **25** ft. to **27 (1")** ft.
From **31** ft. to **33 (1")** ft. From _____ ft. to _____ ft.
GRAVEL PACK INTERVALS: From **0.75** ft. to **3** ft. From **14** ft. to **21** ft.
From **24** ft. to **27** ft. From **30** ft. to **33** ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bentonite (4) Other **cement + bentonite grout[1]**
Grout Intervals From **3** ft. to **12[1]** ft. From **12 & 21** ft. to **14 & 24** ft. From **27 & 33** ft. to **30 & 35** ft.
What is the nearest source of possible contamination: 1 Septic tank | 2 Sewer lines | 3 Watertight sewer lines | 4 Lateral lines | 5 Cess pool | 6 Seepage pit | 7 Pit privy | 8 Sewage lagoon | 9 Feedyard | 10 Livestock pens | (11) Fuel storage | 12 Fertilizer storage | 13 Insecticide storage | 14 Abandoned water well | 15 Oil well/ Gas well | 16 Other (specify below)
Direction from well? **within plume** How many feet? **--**

FROM	TO	CODE	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	0.5 ft.	--	concrete		NOTE:	ANNULUS SEALING & SAND PACK
0.5	11	03	silty clay	0.75	3 ft.	sand
11	17	02	brown, soft, clayey silt	3	12	Portland cement + bentonite grout
17	18	04	dark brown, moist, sandy clay	12	14	hydrated medium bentonite chips
18	21	02	brown, soft, clayey silt	14	21	sand
21	22	03	brown, firm, silty clay	21	24	coated bentonite chips
22	28	02	brown, clayey silt	24	27	sand
28	30	05	silty, gravelly sand	27	30	coated bentonite chips
30	30.5	04	brown, soft, sandy clay	30	33	sand
30.5	31.5	03	brown, soft, wet, silty clay	33	35	coated bentonite chips
31.5	32	04	brown, sandy, gravelly clay			
32	33.5	04	brown, wet, fine sandy clay			
33.5	35	05	brown, clayey sand			
			*for 2" casing, **for 1" casing			[1]for cement+bentonite grout interval

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/yr) **11/9/06** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **616** This Water Well Record was completed on (mo/day/yr) **5/22/07** under the business name of **Thiele Geotech, Inc.** by (signature) _____

INSTRUCTIONS:. Please fill in blanks and circle the correct answers. Send three copies to Kansas Department of Health and Environment, Bureau of Water, 1000 S W Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 913-296-5545. Send one to WATER WELL OWNER and retain one for your records.

OFFICE USE ONLY T R SEC

SAIC — From Science to Solutions

MONITORING WELL/BORING LOG

BORING/WELL No: **SB-18/VSW-4** Pg. 1 of 2

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

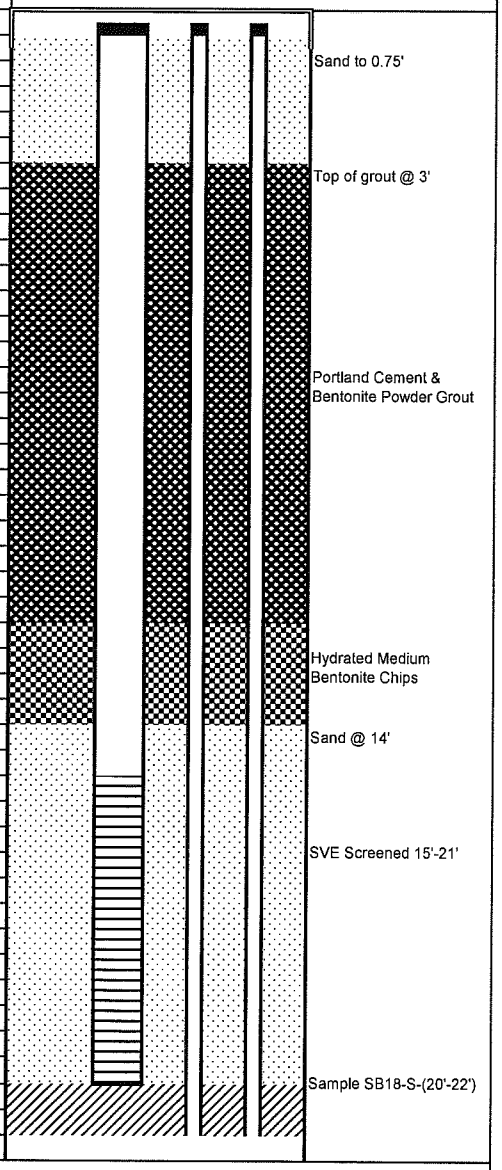
SAIC PROJECT #:
06-6818-00-8670-100

LOGGED BY: Brad Wolfinger

DRILLER:	Thiele Geotech	HOLE DIAMETER:	10 1/4"
POTHOLE METHOD:	Water Knife/Vacuum Truck	SVE WELL CASING:	2" SCH 40 PVC
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
DRILL BIT DIAMETER:	6 1/4" I.D.	AS WELL SCREEN:	1" SCH 80 PVC
DATE POTHOLED:	11/6/06	Slot Size:	0.020"
DATE DRILLED:	11/9/06	SEAL TYPE:	Granular bentonite & chips, Portland cement
WELL CONSTRUCTION	11/9/06	FILTER PACK:	No. 10-20 Silica Sand
WELL DEVELOPMENT:	N/A	WELL COVER:	12" steel vault
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
0	Potholed to 8'	Potholed to 8'	0'-6.5" Concrete 6.5"-4' SILTY CLAY (CL), brown, medium-high plasticity, soft, moist, <5% fine sand, no visible HC staining or odor.	NR	NR	1.0	2.1	CL	CL
3						1.1	2.2		
4			4'-6' SILTY CLAY (CL), brown, moist, low plasticity, soft, 5-10% fine sand, more silt than above, no HC odors.			1.0	1.8		
6			6'-8' SILTY CLAY (CL), brown, moist, wet @ 6', high plasticity, very soft, 10-20% fine sand, no HC odors.			1.0	3.0		
8	3,4,7,9	100.00%	8'-11' SILTY CLAY (CL), brown, moist, high plasticity, firm, <=5% fine sand, dirty looking, but no HC odors. Sporadic $CaCO_3$ inclusions, getting softer and less plastic at 11'.	0.2	NR	12.5	0.7		
10	3,4,8,9	100.00%	Transitioning to clayey silt. 11'-17' CLAYEY SILT (ML), brown, low plasticity, soft, moist, no HC impacts, sporadic $CaCO_3$ inclusions.	0.2	NR	19.5	5.8	ML	
12	3,4,7,8	100.00%		0.4	NR	20.6	11.9		
14	3,4,5,5	100.00%		3.1	NR	53.1	44.9		
16	2,3,3,3	100.00%	17'-18' SILTY, SANDY CLAY (SM), dark brown, high plasticity, very soft, moist, no HC impacts, ~20-30% fine sand, ~20-30% silt, ~40-60% clay.	0.6	NR	46.2	38.9	SM	
18	0,0,2,2	100.00%	18'-21' CLAYEY SILT (ML), brown, medium plasticity, soft, moist HC mottling, but no odor. *19-20, same as 11'-17', but more plastic, more clayey.	1.0	NR	23.7	16.6	ML	
20	0,2,2,4	100.00%		26.0	NR	186.0	114.0	CL	
22									

Water Level



Notes:

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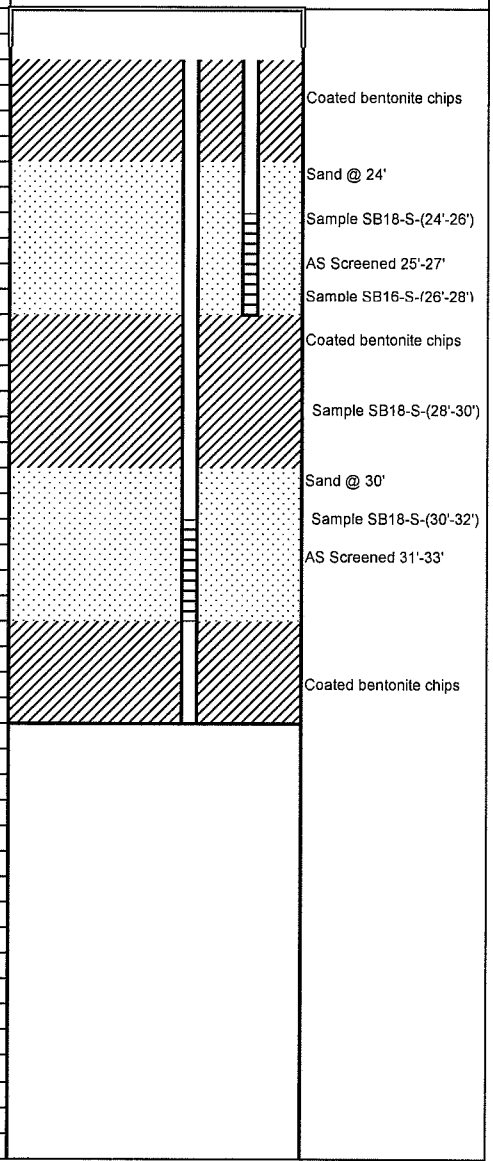
22										
23	4,7,9,11	100.00%	21'-22' SILTY CLAY (CL), brown, moist, firm, medium plasticity, no HC impacts or odor.	28.2	NR	3084.0	4153.0			
24										
25	3,3,5,5	100.00%	22'-28' CLAYEY SILT (ML), brown, moist-wet, medium plasticity, firm, sporadic $CaCO_3$ inclusions, HC odor starting at 23'.	1097.0	$CaCO_3$ Inc. Glow	4138.0	5000 FO	ML		
26										
27	2,3,5,4	100.00%	*silty, dirty sand @24', ~2" thick. *silty, dirty sand @24.5', ~3" thick. HC staining and odor widespread 24'-26'. *sand seam at 27', ~5" thick, limestone fragments at bottom of seam, coarse grained sand.	823.0	$CaCO_3$ Inc. Glow	3598.0	5000 FO			
28										
29	0,2,5,7	58.33%	*sandy, clayey, silty fine grained sand seam 27.5'-28'.	2.3	NR	13.5	1052.0	SP		
30			28'-30'							
31	1,2,1,2	100.00%	SILTY GRAVELY SAND (SP), gray, minor HC odor, poorly sorted, graded down to larger grained sand/gravel from 27.5'-28' interval. No HC staining, impacts and odors decreasing at 28', basically gone at 30'.	1.3	NR	151.0	89.8	SC CL		
32										
33	0,3,9,9	100.00%	30'-30.5' SANDY CLAY (SC), brown, soft, fine to medium grained, wet, no HC impacts.	1.3	NR	51.1	23.7	SC		
34										
35			30.5'-31.5' SILTY CLAY (CL), brown, soft, medium-high plasticity, wet, no HC impacts.							
36										
37			31.5'-32' SANDY GRAVELLY CLAY (SC), brown, poorly sorted, wet, no HC impacts.							
38										
39			32'-33.5' SANDY CLAY (SC), brown, wet, fine grained sand, no HC impacts.							
40										
41			33.5'-34' CLAYEY SAND (SC), brown, wet, fine to coarse grained, no HC impacts.							
42										
43										



Notes: