3 Watertight sewer lines

5 TYPE OF BLANK CASING USED:

Blank casing diameter 2\*

TYPE OF SCREEN OR PERFORATION MATERIAL:

SCREEN OR PERFORATION OPENINGS ARE:

Casing height above land surface

1 Continuous slot

2 Louvered shutter

6 GROUT MATERIAL:

2 Sewer lines

SCREEN-PERFORATED INTERVALS:

GRAVEL PACK INTERVALS:

SB-16/VSW-2

W

1 Steel

1 Steel

2 Brass

1 LOCATION OF WATER WELL:

City, State, ZIP Code

2 WATER WELL OWNER: Chevron

Ellis

RR#, St. Address, Box # : 2700 NE Seward Ave

NF ---

4 Lateral lines

7 Pit privy 8 Sewage lagoon

5 Gauzed wrapped

6 Wire wrapped

7 Torch cut

WATER WELL RECORD Form WWC-5

SE

Depth(s) Groundwater Encountered 1

Bore Hole Diameter 10.25 in. to

1 Domestic 3 Feed lot

WELL WATER TO BE USED AS: 5 Public water supply

5 Wrought Iron

in., weight 0.682\*/0.315\*\*

7 Fiberglass

5 Fiberglass

6 Concrete tile

2 Cement grout

**15** ft., Dia

NE

Fraction NE 1/4

Distance and direction from nearest town or city street address of well if located within city?

submitted

in. to

0

3 RMP (SR)

3 Stainless steel

4 Galvanized steel

(3) Mill slot

1 Neat cement

4 Key punched

From

From From

5 Cess pool

4 ABS

3501 N Vine St, Hays, KS, Lat: N 38° 53.691', Long: 99° 19.092'

y, State, ZIP Code LOCATON WITH LOCATE WELL'S LOCATON WITH LOCATE WELL'S LOCATON WITH LOCATE WELL DEPTH OF COMPLETED WELL Topeka, KS 66605

> (11) Fuel storage 12 Fertilizer storage 13 Insecticide storage

10 Livestock pens

3 Bentonite 4 Other cement + bentonite grout1

15 Oil well/ Gas well 16 Other (specify below)

ਲ

14 Abandoned water well

Direction from well? within plume

6 Seepage pit 9 Feedyard

How many feet?

 0.75
 ft. to
 3
 ft. From
 14
 ft. to

 24
 ft. to
 27
 ft. From
 33
 ft. to

KSA 82a-1212

Section Number

28

ID No.

Township Number

13

Range Number

E/W

18

Direction in o					11011	
FROM	ТО	CODE	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	0.5 ft.		concrete		NOTE:	ANNULUS SEALING & SAND PACK
0.5	4	03	dark gray, silty clay, trace sand	0.75		sand
4	18	02	clayey silt	3		Portland cement + bentonite grout
18	30	03	silty clay	12	14	hydrated medium bentonite chips
30	34	05	fine-coarse, clayey sand	14		sand
				21	24	coated bentonite chips
				24	27	sand
				27	30	coated bentonite chips
				30	33	sand
-				33	35	coated bentonite chips
			*for 2" casing, **for 1" casing			¹for cement+bentonite grout interval
7 CONTRA	CTOR'S OR	LANDOV	VNER'S CERTIFICATION: This water well was	(1) construct	ed)(2) reco	instructed, or (3) plugged under my jurisdiction and was

7 | CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed (2) reconstructed, or (3) plugged under my jurisdiction and was and this record is true to the best of my knowledge and belief. Kansas completed on (mo/day/yr) 11/9/06 616 This Water Well Record was completed on (mo/day/ym) Water Well Contractor's License No.

Thiele Geotech, Inc. by (signature) under the business name of 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.

SAIC From Science to Sciences	MONITORING W	ELL/BORING LOG	BORING/WELL No: SE	B-16/VSW-2	Pg. 1 of 2
	DRILLER:	Thiele Geotech	HOLE DIAME	ETER: 10 1/4"	
	POTHOLE METHOD:	Water Knife/Vacuum Truck	SVE WELL C	CASING: 2" SCH 40 PVC	
Former Texaco Bulk Terminal and Retail Facility # 211441	DRILLING METHOD:	CME 55 - Hollow Stem Auger	AS WELL CA	ASING: 1" SCH 80 PVC	
3503 North Vine Street	SAMPLE METHOD:	2" by 2' split spoon	SVE WELL S	SCREEN: 2" SCH 40 PVC	
	DRILL BIT DIAMETER:	6 1/4" I.D.	AS WELL SO	CREEN: 1" SCH 80 PVC	
• •	DATE POTHOLED:	11/6 & 11/7/06	;	Slot Size: 0.020"	
	DATE DRILLED:	11/8/06	SEAL TYPE:	Granular bentonite	& chips, Portland cement
SAIC PROJECT#:	WELL CONSTRUCTION	11/9/06	FILTER PAC	K: No. 10-20 Silica Sa	ind
06-6818-00-8670-100	WELL DEVELOPMENT:	N/A	WELL COVE	R: 12" steel vault	
OGGED BY: Brad Wolfinger	GROUND ELEVATION:		CASING ELE	VATION:	

.

Depth (ft.)	Blow Counts	% Recovery	LITHOLOGY / DESCRIPTION	Field Screen PID (ppm)	UVIF	Head Space PID (ppm)	Head Space FID (ppm)	Soil Type	nscs	Water Level	Depth (ft.)	Well	Construction/Remarks
1			0'-6" Concrete 6"-4'			3.7	91.4				1—		Sand to 0.75'
3	ed to 8'	Potholed to 8'	SILTY CLAY (CL), dark gray, medium plasticity, soft, moist, <=5% fine sand, slight HC odor, no visible HC staining.	NR	NR	3.2	6.6	CL			3—		Top of grout @ 3'
5—	Potholed to	Pothole	4'-6' CLAYEY SILT (ML), grayish brown, low-medium plasticity, 5-10% fine sand, moist, soft, no HC odors.		NK	0.8	4.3	3			5—		
7—			6'-8' CLAYEY SILT (ML), brown, wet @ 6', high plasticity, very soft, 10-20% fine sand, no HC impacts.			1.3	3.2				7— 7—		Portland Cement & Bentonite Powder Grout
9—	2,3,5,5	100.00%	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				9 — 10 —		
11 —	5,4,6,7	87.50%		4.5	NR	63.2	26.5	ML			11 —		
13 —	0,1,3,5	100.00%	*slight increase in clay content 12'-13'.	5.9	NR	96.0	41.3				13 —		Hydrated Medium Bentonite Chips
15	3,6,7,9	100.00%	*slight HC odor starting at 16'.	11.0	NR	109.0	56.7				15 —		Sand @ 14'
17	3,5,9,9	100.00%		7.9	NR	115.0	62.4				16 —		SVE Screened 15-21'
19	4,7,9,11	100.00%	18'-25' SILTY CLAY (CL), yellowish brown, medium plasticity, <=5% fine sand, firm to stiff, moist, sporadic calcite Inclusions. No HC staining, but slight HC odor present.	12.7	NR	79.1	40.1	CL			19 —		
21 —	6,9,12,17	100.00%	*becoming very stiff @ 20".	180.0	NR	950.0	375.0	CL		<b>T</b>	21 —		Sample SB16-S-(20'-22')
Notes													

SAIC. MONITORING WELL/BORING LOG BORING/WELL No: SB-16/VSW-2 Pg. 2 of 2 HOLE DIAMETER: 10 1/4" DRILLER: Thiele Geotech POTHOLE METHOD: Water Knife/Vacuum Truck SVE WELL CASING: 2" SCH 40 PVC Former Texaco Bulk Terminal and Retail DRILLING METHOD: CME 55 - Hollow Stem Auger SAMPLE METHOD: 2" by 2' split spoon AS WELL CASING: 1" SCH 80 PVC Facility # 211441 3503 North Vine Street SVE WELL SCREEN: 2" SCH 40 PVC DRILL BIT DIAMETER: 6 1/4" I.D. AS WELL SCREEN: 1" SCH 80 PVC Hays, Kansas Slot Size: 0.020" DATE POTHOLED: 11/6 & 11/7/06 DATE DRILLED: 11/8/06 SEAL TYPE: Granular bentonite & chips, Portland cement FILTER PACK: SAIC PROJECT #: WELL CONSTRUCTION 11/9/06 No. 10-20 Silica Sand 06-6818-00-8670-100 WELL DEVELOPMENT: N/A WELL COVER: 12" steel vault LOGGED BY: Brad Wolfinger GROUND ELEVATIÓN: 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	nscs	Water Level	Depth (ft.)	Well Construction/Remarks
22 — 23 — 24 —	4,6,8,12	400.00#	*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				22	Coated bentonite chips
25 —	1,2,3,4	100.00%	25'-30' SILTY CLAY (CL), yellowish brown, wet, soft, medium	1946.0	CaCO <sub>3</sub> Inc. Glow	4516.0	5000 FO	CL			25 —	Sand @ 24'  Sample SB16-S-(24'-26')
26 — 27 — 28 —	1,1,2,3	100.00%	plasticity, staining, 5-10% fine sand, strong HC odor and staining.  *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	CL			26 — 27 — 28 —	Sample SB16-S-(24'-26')  AS Screened 25'-27'  Sample SB16-S-(26'-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 —	0,1,2,2	100.00%	*HC impacts decreasing at 27', little to no impacts at 29' and below.  30'-34'	12.1	NR	226.0	185.0	sc			31 —	Sand @ 30'  AS Screened 31'-33'
32 — 33 — 34 —	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.  *sand becoming coarser and more clayey with depth.	13.6	NR	257.0	117.0	SC			33	
35 —			*32'-34' becoming coarse to gravelly, clayey sand.								35 —	Coated bentonite chips
36 —											36	
38 —											38 — 39 —	
40											40	
41 —											41 —	
43 —	<u> </u>									<u></u>	43 —	

Notes: