

CORRECTION(S) TO WATER WELL RECORD (Form WWC-5)

(to rectify lacking or incorrect information)

LOCATION OF WATER WELL: County: <u>Johnson</u>	Fraction <u>1/4 NE 1/4 SE 1/4</u>	Section <u>8</u>	Township T <u>13</u> S	Range R <u>22</u> ☒ E ☐ W
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Owner: USACE c/o Burns & McDonnell

Location was listed as:

Sec. _____ T _____ S R _____ ☐ E ☐ W

Fraction: _____

Location changed to:

Sec. _____ T _____ S R _____ ☐ E ☐ W

Fraction: _____

Other changes: Initial statements: HTW Drill Log Location: N 232603.6172 E 2857596.1399

Changed to: 38.932800969 -94.985044493

Comments: Converted State Plane 1501-Kansas North NAD 27 to Geographic Decimal Degrees NAD 83.

Verification method: Corpscon 6.0.1

initials: df date: 04/14/2014

Submitted by: Kansas Geological Survey, Data Resources Library, 1930 Constant Ave., Lawrence, KS 66047-3726
to: Kansas Dept of Health & Environment, Bureau of Water, 1000 SW Jackson, Suite 420, Topeka, KS 66612-1367.

1 LOCATION OF WATER WELL: County: <u>Johnson</u>		FRACTION <u>1/2</u> <u>NE</u> <u>1/4</u> <u>SE</u> <u>1/4</u>		SECTION NUMBER <u>8</u>		TOWNSHIP NUMBER T <u>13</u> S		RANGE NUMBER R <u>22</u> <u>EX</u>													
Distance and direction from nearest town or city street address of well if located within city? <u>Well #96-4D at Sunflower AAP near DeSoto KS</u>																					
2 WATER WELL OWNER: <u>USACE 70 Burns & McDonnell</u> RR#, St. Address, Box #: <u>9400 Ward Parkway</u> City, State, ZIP Code: <u>Kansas City MO 64114</u>						Board of Agriculture, Division of Water Resources Application Number:															
3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX: 			4 DEPTH OF COMPLETED WELL: <u>19.3</u> ft. ELEVATION: Depth(s) Groundwater Encountered 1. _____ ft. 2. _____ ft. 3. _____ ft. WELL'S STATIC WATER LEVEL _____ ft. below land surface measured on mo/day/yr Pump test data: Well water was _____ ft. after _____ hours pumping _____ gpm Est. Yield _____ gpm: Well water was _____ ft. after _____ hours pumping _____ gpm Bore Hole Diameter <u>10</u> in. to <u>4.5</u> ft. and <u>6</u> in. to <u>19.3</u> ft. WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well 1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (Specify below) 2 Irrigation 4 Industrial 7 Lawn and garden only <u>10</u> Monitoring well Was a chemical/bacteriological sample submitted to Department? Yes _____ No <u>X</u> If yes, mo/day/yr sample was submitted _____ Water Well Disinfected? Yes _____ No <u>X</u>																		
5 TYPE OF BLANK CASING USED: 1 Steel 3 RMP (SR) 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued _____ Clamped _____ <u>2</u> PVC 4 ABS 7 Fiberglass 9 Other (specify below) Welded _____ Blank casing diameter <u>6</u> in. to <u>4.5</u> ft. Dia <u>2</u> in. to <u>30</u> in. Dia _____ in. to _____ ft. Casing height above land surface <u>30</u> in. weight _____ lbs./ft. Wall thickness or gauge No. <u>3440</u> TYPE OF SCREEN OR PERFORATION MATERIAL: <u>7</u> PVC 10 Asbestos-cement 1 Steel 3 Stainless steel 5 Fiberglass 8 RMP (SR) 11 Other (specify) _____ 2 Brass 4 Galvanized steel 6 Concrete tile 9 ABS 12 None used (open hole) SCREEN OR PERFORATION OPENINGS ARE: 5 Gauzed wrapped 8 Saw cut 11 None (open hole) 1 Continuous slot <u>3</u> Mill slot 6 Wire wrapped 9 Drilled holes 2 Louvered shutter 4 Key punched 7 Torch cut 10 Other (specify) _____ SCREEN-PERFORATED INTERVALS: From <u>9.1</u> ft. to <u>19.1</u> ft. From _____ ft. to _____ ft. From _____ ft. to _____ ft. From _____ ft. to _____ ft. GRAVEL PACK INTERVALS: From <u>4.5</u> ft. to <u>19.3</u> ft. From _____ ft. to _____ ft. From _____ ft. to _____ ft. From _____ ft. to _____ ft.																					
6 GROUT MATERIAL: 1 Neat cement <u>2</u> Cement grout <u>3</u> Bentonite 4 Other _____ Grout Intervals: From <u>0</u> ft. to <u>4.5</u> ft. From <u>0</u> ft. to <u>4.5</u> ft. From _____ ft. to _____ ft. What is the nearest source of possible contamination: 1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well 2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/Gas well 3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage <u>16</u> Other (specify below) <u>Ammunition plant</u> 13 Insecticide storage Direction from well? _____ How many feet? _____																					
<table border="1"><thead><tr><th>FROM</th><th>TO</th><th>LITHOLOGIC LOG</th><th>FROM</th><th>TO</th><th>PLUGGING INTERVALS</th></tr></thead><tbody><tr><td colspan="6" style="height: 100px; vertical-align: bottom;">* Surface casing waiver approved by Don Taylor of KDHE on 9/6/96 at 1300 hr.</td></tr></tbody></table>										FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS	* Surface casing waiver approved by Don Taylor of KDHE on 9/6/96 at 1300 hr.					
FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS																
* Surface casing waiver approved by Don Taylor of KDHE on 9/6/96 at 1300 hr.																					
7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was <u>(1)</u> constructed, <u>(2)</u> reconstructed, or <u>(3)</u> plugged under my jurisdiction and was completed on (mo/day/year) <u>9/7/96</u> and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. <u>570</u> This Water Well Record was completed on (mo/day/yr) <u>11/27/96</u> under the business name of <u>AQUADRILL, INC.</u> by (signature) <u>Jeff Johnson</u>																					
INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send two copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0001. Telephone: 913-296-5545. Send one to WATER WELL OWNER and retain one for your records.																					

HTW DRILLING LOG

HOLE NO.

96-4D

1. COMPANY NAME
BURNS & McDONNELL

2. DRILLING SUBCONTRACTOR
AQUADRILL

SHEET 1
OF 4 SHEETS

3. PROJECT
94-800-4-020-01 USSFRFI

4. LOCATION
SUNFLOWER ARMY AMMUNITION PLANT

5. NAME OF DRILLER
Jeff Zosky

6. MANUFACTURER'S DESIGNATION OF DRILL
Gus Peck - Brat 22R

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT
8 1/4" Hollow Stem Augers (HSA)
Chisel & Blade B.T.
Kelly Bit
Coring: Mobile B-57 NG2 wire-line Core barrel
Remains: Brat 22R, 6 5/8 2-cone bit

8. HOLE LOCATION
N-232603.0172 E-2857590.1329

9. SURFACE ELEVATION
857.5

10. DATE STARTED

8-27-96

11. DATE COMPLETED

9-7-96

12. OVERBURDEN THICKNESS
4.4 ft.

15. DEPTH GROUNDWATER ENCOUNTERED
12.0 ft.

13. DEPTH DRILLED INTO ROCK
12.0 ft.

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED
35 minutes, 4.5 ft TOC, 51 min, 12.2 ft TOC, 55 min 9.8' TOC

14. TOTAL DEPTH OF HOLE
16.5 ft.

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)
9-12-96 8.58 ft. TOC @ 1335

18. GEOTECHNICAL SAMPLES
See log of 45

DISTURBED
N/A

UNDISTURBED
N/A

19. TOTAL NUMBER OF CORE BOXES
2

20. SAMPLES FOR CHEMICAL ANALYSIS

VOC

METALS

OTHER (SPECIFY)

OTHER (SPECIFY)

OTHER (SPECIFY)

21. TOTAL CORE RECOVERY
96% %

See log of 45

N/A

N/A

N/A

N/A

N/A

22. DISPOSITION OF HOLE

BACKFILLED

MONITORING WELL

OTHER (SPECIFY)

23. SIGNATURE OF INSPECTOR

Monitoring Well

NA

96-09

NA

J. Melson Jr.

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	0	See log of 96-45	N/A	N/A	N/A	N/A	1134 Begin drilling with the 8 1/4" HSAs, using Chisel & Blade bit & Kelly bit.
	1						1141 Rock coming up in cuttings. (fragments)
	2						1144 Pulling bit out of hole.
	3	GROUT					1152 Monoflex PVC Schedule 40, 6" ID, 7.25' stick up = 2.0 ft. TO = 4.5'
	4						1157 pulling augers. Casing is in place.
	5	LIMESTONE GRAYISH ORANGE (104R7/4) MODERATELY WEATHERED GRADING INTO MEDIUM BLuish GRAY (585/1) SLIGHTLY WEATHERED MODERATELY STRONG, SOME SOLUTION CAVITIES & VUGS ESPECIALLY IN UPPER					1310 Mixing grout

PROJECT

94-800-4-020-01 USSFRFI

HOLE NO. =

96-4D

HTW DRILLING LOG

HOLE NO.
96-4D

PROJECT
94-800-4-020-01 USSRFI

INSPECTOR
J. Melvin Jace

SHEET 2
OF 4 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	2.0 FEET OF UNIT, SOME VEGS PARTIALLY FILLED W/ SPARRY CALCITE, ABUNDANT FOSSILS, RECRYSTALLIZED ALGAE, FENESTRAL BRYOZOA, RECRYSTALLIZED BELECYPODS, THICKLY BEDDED TO LAMINATED - WHICH IS DEFINED BY ALGAL REMAINS. MICROCRYSTALLINE MATRIX TRACE (1%) CLAY INCREASING TO ~5% W/ DEPTH.	BH=0.0 BZ=0.0 S=0.0 LEL=0% O ₂ =20.9			HIGHLY FRACTURED & SOLUTION VOID 4.5'-6.6'	Used 2 1/2 bags (285 lb) LOWSKT Portland cement, 14.5 lb bentonite (Benseal), 18 gallons water.
	6	TRACE TO SOME CALCITE & IRON OXIDE ALONG FRACTURES - BOTH VERTICAL & HORIZONTAL FRACTURES PRESENT				FRACTURE/SOLUTION VOID	1338
	7	[FARLEY LIMESTONE] (SH) [MYERLIAM LIMESTONE]		NA	NA	SOLUTION VOID	pumping grout 1345
	8					RUN 1 6.2 7.1	Finished pumping grout FRACTURE/SOLUTION VOID + VERTICAL & HORIZONTAL
	9		BH=0.0 BZ=0.0 S=0.0 LEL=0% O ₂ =20.9				FRACTURE/SOLUTION VOID
	10	HIGHLY TO EXTREMELY WEATHERED SHALE, DARK YELLOWISH ORANGE (10YR 6/6) WET, SOME TB WITH IRON OXIDE STAINING SOME (30%) PLANT FOSSILS & RECENT? PLANT ROOTS, VERY WEAK					1147 1420 RESUME CORING
	11	LOCATED CREEK? [PONNER SPRINGS SHALE] SHALE, MEDIUM BLUISH GRAY (5B 5/1) SLIGHTLY WEATHERED TO FRESH, VERY WEAK THINLY LAMINATED, TRACE TO SOME ORGANIC MATTER/PLANT FOSSILS OXIDIZATION ALONG HORIZONTAL FRACTURES.	BH=0.0 BZ=0.0 S=0.0 LEL=0% O ₂ =20.9				
	12	[PONNER SPRINGS SHALE]		NA	NA	RUN 2 6.5 6.5	FRACTURE (WET) FRACTURE (WET)
	13						FRACTURE (WET)

HTW DRILLING LOG

HOLE NO.

96-4D

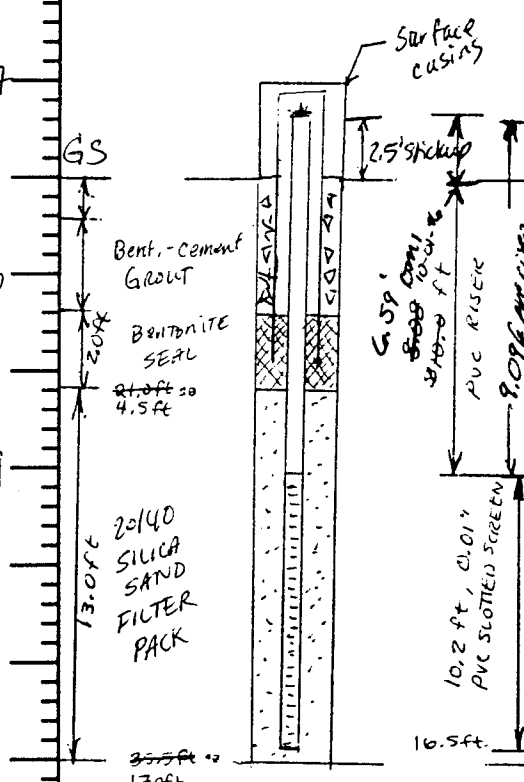
PROJECT
94-800-4-020-01 USSFRFI

INSPECTOR

SUZANNE BAILEY

SHEET 3
OF 4 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	SHALE, MEDIUM BLuish GRAY (50%), SLIGHTLY WEATHERED TO FRESH VERY WEAK, THINLY LAMINATED, TRACE TO SCANT (10-15%) ORGANIC MATTER/PLANT FOSSILS, OXIDIZATION ALONG HORIZONTAL FRACTURES. [PONNER SPRINGS SHALE]	BH=0.0 BZ=0.0 S=0.0 LEL=0% O ₂ =20.9	NA	NA		
	15						
	16						
	17						Bottom of HOLE 16.5' @ 1440
	18						9-6-96 1858 Began reaming with 6 5/8" 2-cone, button bit on GUS PECH BRAT 22-R.
	19						1727 Pulled bit out of borehole, meas- ured 14.5 ft.
							1730 Resume reaming.
							1750 Ceased reaming.
							9-7-96 0740 measured depth of borehole at 16 ft.
							0742 Resumed reaming.
							0748 Reamed to 17.0 ft due to cont- inued borehole collapse. Driller indicated that void space was at bottom of the hole due to collapse.



BOTTOM OF HOLE = 17.0 ft
BOTTOM OF WELL = 16.5 ft

PROJECT

94-800-4-020-01

USSFRFI

HOLE NO.

96-4D

HTW DRILLING LOG

HOLE NO.
96-4D

PROJECT
94-800-4-020-01 USSFRFI

INSPECTOR
Suzanne Bailey

SHEET
OF 4 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
							0750 Installed 10.0ft of 2" diam Sch. 40 PVC 0.01" Slot screen with 0.2" end cap (threaded), and 10.0ft of PVC riser. Bottom of well at 16.5ft 0752 Tremied 13.0ft of 20/40 Silica sand filter pack (NORTHERN GRAVEL CO.) to 4.3ft bgs. 4.5 ft, surged. 0805 Driller said a void space exists at the bottom of the casing and he is using more sand than usual to fill it up 0808 Installed 2.5 ft Benseal bentonite grout to 2.0ft bgs (Hydrated)

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