

KANSAS DEPARTMENT OF AGRICULTURE
Division of Water Resources

M E M O R A N D U M

TO: Files

DATE: November 10, 2022

FROM: Lloyd Hemphill

RE: Application, File No. 50,686

Precision Farms LLC has filed the referenced application to appropriate 157 acre-feet of groundwater at a rate of diversion of 800 gallons per minute for irrigation use. The proposed point of diversion is a battery of two wells with a geographic center located in the Northeast Quarter of the Northwest Quarter of the Southeast Quarter (NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$) of Section 2, in Township 2 South, Range 17 East, Brown County, within the South Fork Big Nemaha River drainage basin. This point of diversion overlaps File No. 50,509 (Industrial Use), filed by Glacial Hills Agri Services, LLC. The application has been signed by a representative of the applicant, stating they have access to the point of diversion. The place of use is 157 acres in the Southeast Quarter of the same section, owned by Precision Farms LLC and G & O, INC, as described on the irrigation supplemental sheet. No other files will overlap this place of use. There will be no limitation of quantity with File No. 50,509 but the rate will be limited to 800 gallons per minute to meet the requirements for a battery of wells.

The requested quantity of water (157 acre-feet), is reasonable to irrigate the proposed 157 acres, based on the reasonable quantity for irrigation in Brown County (157 acres x 1 AF/acre = 157 AF), per K.A.R. 5-3-23. The requested rate is the maximum allowed for a battery of wells and is reasonable for this project.

The applicant identified one domestic well owner within one-half ($\frac{1}{2}$) mile of the proposed point of diversion, per K.A.R. 5-3-4. Shortly after the overlapping senior application was filed, an additional party (either a representative or customer of Public Wholesale Water Supply District #27) contacted DWR and requested that they be added to the notice list. PWWSD #27 owns wells (File No. 47,392) approximately $\frac{3}{4}$ mile west of the proposed point of diversion. Two notification letters were sent, one to the domestic well owner and the other to PWWSD #27 on September 23, 2022. On September 30, 2022 and October 7, 2022 an unknown party posted a public notice regarding the project in the Hiawatha World newspaper. Numerous calls, letters, and e-mails were received with concerns about the project. All of these correspondences and subsequent responses have been documented in the file. Most of these concerned citizens noted the proximity of the proposed wells to the existing public water supply wells. The various concerns generally included over-appropriation of the water supply or changes to the water table; deterioration of water quality by introduction of nitrates or other contaminants; increased nitrate content due to increased usage of water; and unreasonable impacts to public interest. Response letters were sent to all the concerned parties advising them that the proposed appropriation would be reviewed to make sure that it meets all applicable laws under the Kansas Water Appropriation Act. Safe yield and well spacing will be discussed later in this memo. Where appropriate, the concerned parties were advised that agricultural practices associated with this irrigation project may be subject to additional requirements (the application of agricultural chemicals is regulated by the Kansas Department of Agriculture Pesticide and Fertilizer Program and the KWAA requires that equipment is installed at the point of diversion to prevent backflow of chemicals into the water supply if any chemicals are injected into the irrigation system (K.A.R. 5-3-5c)). Additionally, KDA-DWR is not aware of a current nitrate problem that will be exacerbated by the proposed appropriation of water but, per KSA 82a-711, all applications shall be approved by the Chief Engineer unless the proposed use of water will impair existing water rights or prejudicially and unreasonably affect the public interest, including the unreasonable deterioration of the water quality at the water user's point of diversion beyond a reasonable economic limit.

Per K.A.R 5-4-4, the required well spacing for this aquifer (glacial deposits) is 1,320 feet from other non-domestic wells and 660 feet from domestic wells to prevent direct impairment. The nearest non-domestic point of diversion (File No. 50,151-IRR) is located approximately 3,439 away and the nearest domestic well is located at least 2,000 feet away (Paternoster). Therefore, the proposed wells meet well spacing criteria. The nearest PWWSD #27 well is located 3,646 feet away. The proposed spacing from existing wells is significantly greater than several other recent approvals in the same area. There are four existing well batteries used for irrigation in the section to the north (in the same aquifer source). The geographic centers are located 1,320 to 1,500 ft apart. The proposed well spacing meets K.A.R. 5-4-4 and no information has been provided to indicate that this application would result in impairment of any senior water rights.

Test hole logs were submitted with this application, which show a mixture of clay, sand, and gravel sporadically distributed throughout the subsurface, which is typical of glacial drift deposits. Depths to groundwater and saturated thicknesses are also highly variable over short lateral distances, contributing to a complex, heterogeneous aquifer. The log for this location shows 25 feet of silty clay at the surface, underlain by 53 feet of sand. Within the sand are layers of varying coarseness and a few clay layers, especially in the upper portion. Some gravel is shown along with the sand in deeper depths. This coarser layer is likely the primary producing zone of the aquifer. Underlying the sand is 27 feet of silty clay. Bedrock consisting of sandstone, shale, and limestone was reached at a depth of 105 feet. The test hole log reported a static water level of 14 feet depth, with a question mark noted. If this static water level is accurate the water level is above the top of the sand unit suggesting the aquifer may be under confining conditions, however many nearby well logs show some unsaturated sand which would suggest unconfined conditions. The safe yield of this aquifer will be analyzed with the best information available using the method described by K.A.R. 5-3-11 (unconfined aquifers).

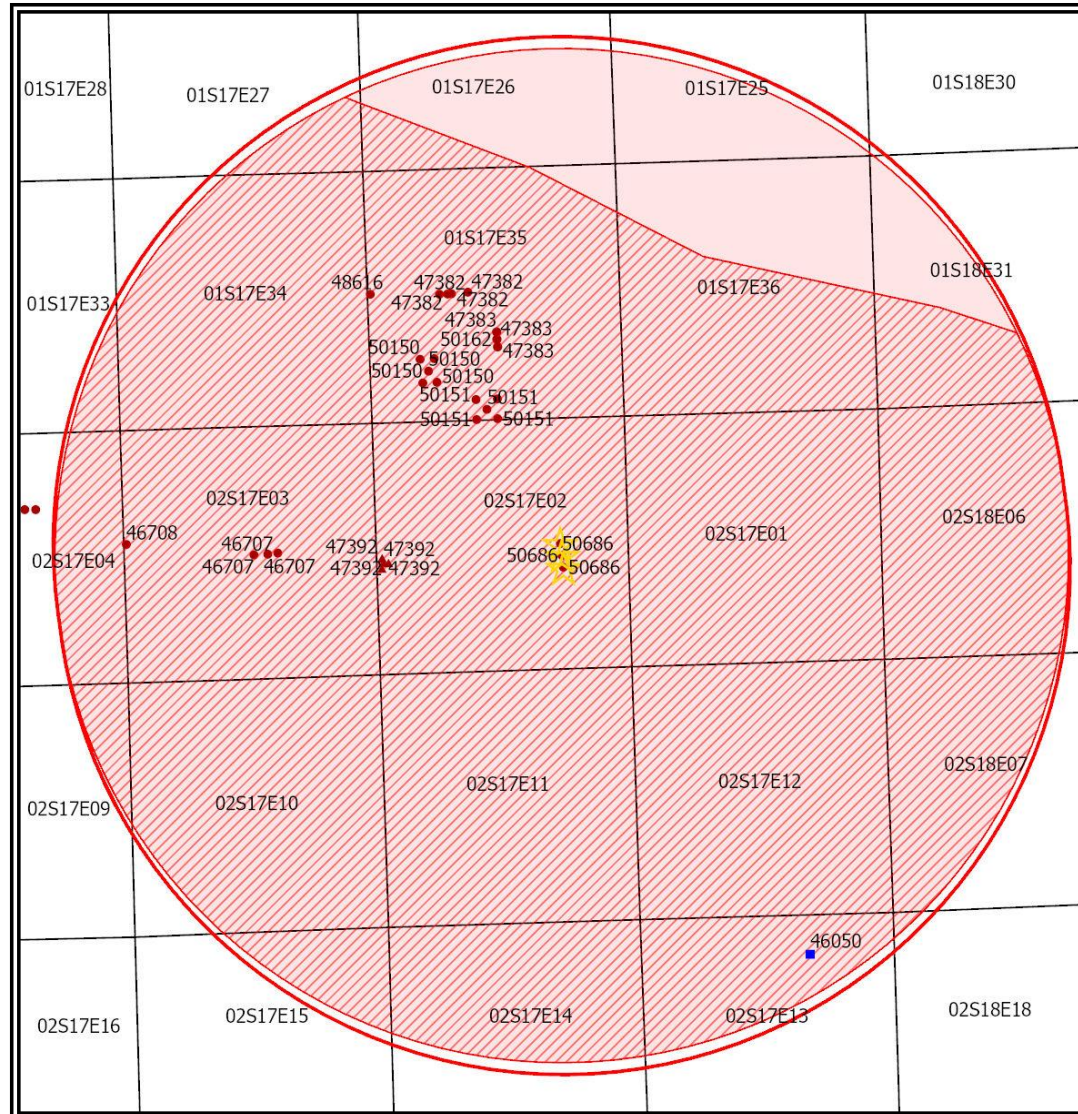
Safe yield is determined by the extent of the unconfined aquifer (glacial deposits) within a two-mile circle radius of the point of diversion, which establishes the area of consideration. The aquifer extent was determined based on a review of hydrologic data consistent with the methods used for senior water rights in the area. Well logs for numerous wells and test holes in the area were used to draw cross-sections and determine the aquifer saturated thickness. The well logs show that the sand and gravel deposits do not extend to the northern margin of the project area or are relatively thin. Therefore, for this application, the area of consideration was determined by excluding the northern portion of the two-mile circle where saturated sand and gravel deposits were less than 12 feet in thickness. A test hole log provided with the application shows a saturated sand thickness of 63 feet near the proposed point of diversion. The saturated sand thickness reaches 75 to 93 feet in the western portion of the two-mile circle (in the vicinity of the PWWSD #27 wells and a few irrigation wells). The safe yield area of consideration was 7,247 acres, potential recharge is 5.2 inches, 100% of recharge is available for appropriation, and safe yield was determined to be 3,140 acre-feet. Existing water rights have appropriated 1,838 acre-feet, providing a difference of 1,302 acre-feet available for appropriation. The application requesting 157 acre-feet complies with safe yield.

In accordance with K.S.A. 82a-706c, the Chief Engineer retains full authority to require any water user to install meters, gages, or other measuring devices, which devices he or she or his or her agents may read at any time. Water flowmeter requirements are further described in K.A.R. 5-1-4 through K.A.R. 5-1-12. If any chemical or foreign substance is injected into the water pumped under this permit, a check valve will also need to be installed.

Based on the above discussion, reduced well spacing and safe yield criteria are met, approval will provide a reasonable quantity of water for irrigation, and approval of the application will not impair senior water rights nor prejudicially or unreasonably affect the public interest, it is recommended that the referenced application be approved.

Lloyd Hemphill
Environmental Scientist
Topeka Field Office

Safe Yield Report Sheet
Water Right- A5068600
Point of Diversion in 02-02S-17E
Footages from SE corner- 2,374 feet North 1,396 feet West



Analysis Results

The selected PD is in an area OPEN to new appropriations.

The safe yield based on the variables listed below is 3,140.46 AF.

Total prior appropriations in the circle is 1,921.00 AF – 157 AF = 1,764 AF [before File Nos. 50,509 & 50,686]

Total quantity of water available for appropriation is 1,219.46 AF + 157 AF = 1,376.46 AF [before File Nos. 50,509 & 50,686]

There is sufficient water available for appropriation to cover Application, File Nos. 50,509 & 50,686 which propose 73.93 AF and 157 AF, respectively.

Safe Yield Variables

The area used for the analysis is set at 7,247 acres.

The potential annual recharge at the circle center is estimated to be 5.2 inches.

The percent of recharge available for appropriation is 100%.

Authorized Quantity values are as of 24-OCT-2022 and are based on Appropriated and Vested ground water right and possible stream nodes for GMD #2. Domestic, Term and Temporary water rights have been excluded.

There are 10 water rights and 29 points of diversion within the circle.

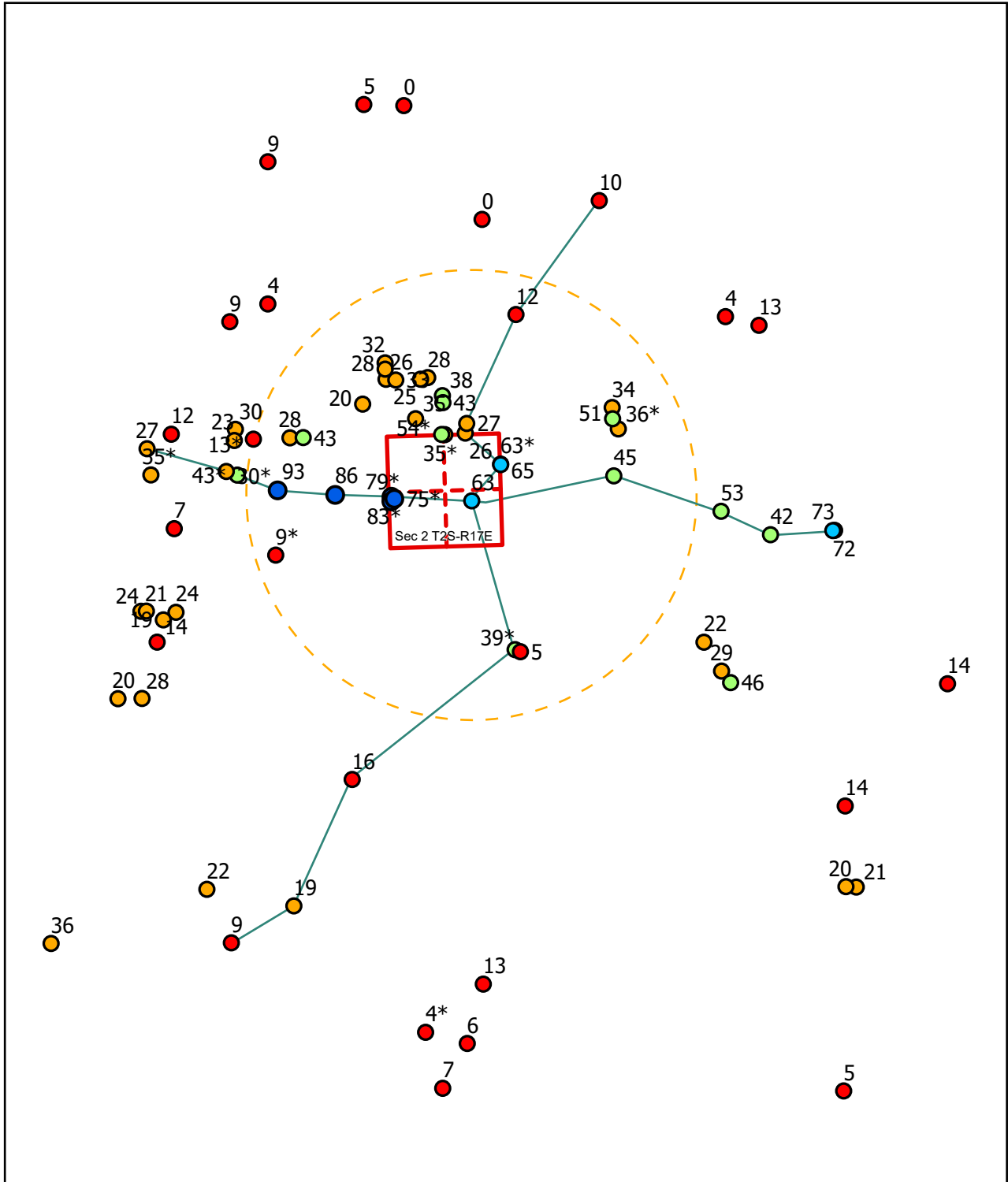
File Number	Use	ST	SR	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Twp	Rng	ID	Qind	Auth Quant	Add Quant	Tot Acres	Net Acres
A 46708 00	IRR	NK	G		SW	SW	NW	2890	5247	03	02	17E	12	WR	197.00	197.00	270.00	270.00
A 46707 00	IRR	NK	G		NW	NW	SE	2598	2585	03	02	17E	3	WR	101.00	101.00	134.00	134.00
Same	IRR	NK	G		NE	NW	SE	2599	1993	03	02	17E	4	WR				
Same	IRR	NK	G		NW	NW	SE	2599	2289	03	02	17E	7	WR				
A 47382 00	IRR	LR	G		SE	SE	NW	2700	3208	35	01	17E	13	WR	160.00	160.00	400.00	400.00
Same	IRR	LR	G		SW	SE	NW	2671	3802	35	01	17E	14	WR				
Same	IRR	LR	G		SW	SE	NW	2682	3548	35	01	17E	16	WR				
Same	IRR	LR	G		SW	SE	NW	2674	3634	35	01	17E	17	WR				
A 47383 00	IRR	NK	G		SW	NW	SE	1697	2627	35	01	17E	9	WR	76.00	76.00	320.00	320.00
Same	IRR	NK	G		SW	NW	SE	1851	2633	35	01	17E	10	WR				
Same	IRR	NK	G		SW	NW	SE	1542	2621	35	01	17E	11	WR				
A 47392 00	MUN	LO	G		NW	NW	SW	2344	5135	02	02	17E	3	WR	620.00	620.00		
Same	MUN	LO	G		NW	NW	SW	2441	5189	02	02	17E	4	WR				
Same	MUN	LO	G		NW	NW	SW	2217	5191	02	02	17E	5	WR				
Same	MUN	LO	G		NW	NW	SW	2328	5043	02	02	17E	6	WR				
A 48616 00	IRR	LR	G		SW	SW	NW	2718	5253	35	01	17E	1	WR	400.00	240.00	400.00	0.00
A 50150 00	IRR	HK	G		NE	SW	SW	1080	4081	35	01	17E	18	WR	50.00	50.00	400.00	400.00
Same	IRR	HK	G		NW	SE	SW	830	3912	35	01	17E	19	WR				
Same	IRR	HK	G		SW	NE	SW	1330	3950	35	01	17E	20	WR				
Same	IRR	HK	G		SE	NW	SW	1330	4250	35	01	17E	24	WR				
Same	IRR	HK	G		NE	SW	SW	830	4212	35	01	17E	25	WR				
A 50151 00	IRR	HK	G		SE	SE	SW	243	2880	35	01	17E	21	WR	160.00	160.00	400.00	0.00
Same	IRR	HK	G		SE	SE	SW	35	2660	35	01	17E	22	WR				
Same	IRR	HK	G		SE	SE	SW	450	2660	35	01	17E	23	WR				

File Number	Use	ST	SR	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Twp	Rng	ID	Qind	Auth Quant	Add Quant	Tot Acres	Net Acres
Same	IRR	HK	G		SE	SE	SW	450	3100	35	01	17E	26	WR				
Same	IRR	HK	G		SE	SE	SW	35	3100	35	01	17E	27	WR				
A 50162 00	IRR	LO	G		SW	NW	SE	1697	2627	35	01	17E	9	WR	160.00	160.00	320.00	0.00
Same	IRR	LO	G		SW	NW	SE	1851	2633	35	01	17E	10	WR				
Same	IRR	LO	G		SW	NW	SE	1542	2621	35	01	17E	11	WR				
A 50509 00	IND	AY	G		NE	NW	SE	2374	1396	02	02	17E	7	WR	100.00	100.00		
Same	IND	AY	G		NE	NW	SE	2124	1370	02	02	17E	8	WR				
Same	IND	AY	G		NE	NW	SE	2623	1422	02	02	17E	9	WR				
A 50686 00	IRR	AY	G		NE	NW	SE	2374	1396	02	02	17E	7	WR	157.00	157.00	157.00	157.00
Same	IRR	AY	G		NE	NW	SE	2124	1370	02	02	17E	8	WR				
Same	IRR	AY	G		NE	NW	SE	2623	1422	02	02	17E	9	WR				

Limitations

File Number	Seq Num	Limitations
A 48616 00	1	400 AF COM/W #47382 * 400 AF – 160 AF = 240 AF - OK
A 50162 00	1	800 GPM COM/W #47382 *rate limitation

SATURATED SAND THICKNESS IN FEET

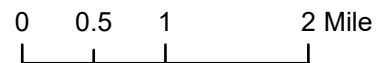


Data from test hole logs and water well completion reports.

● * Bedrock not noted on well log

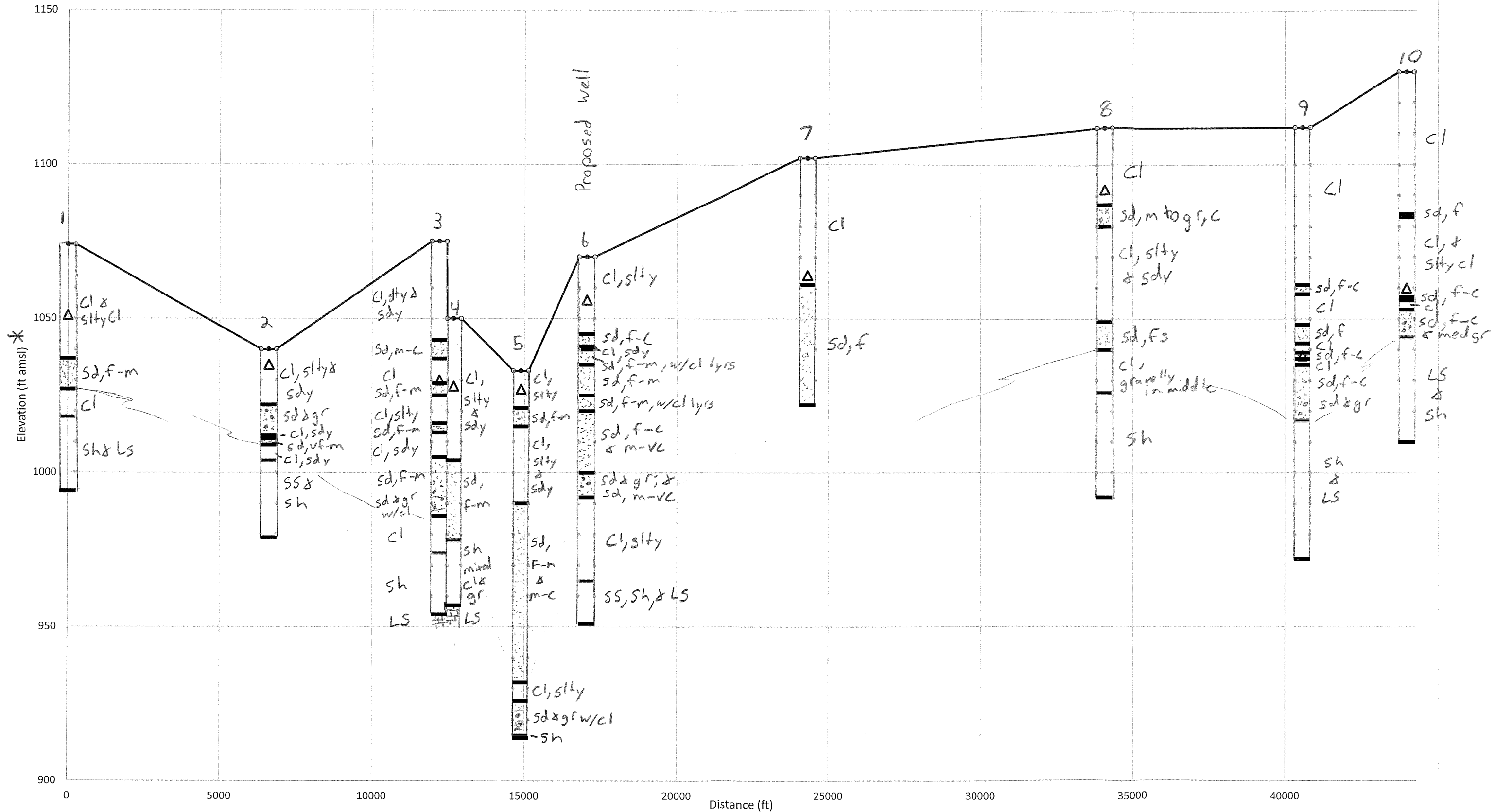


Scale: 1:85,000



Map prepared by: LHH/TFO 11/4/2022

North to South Cross Section



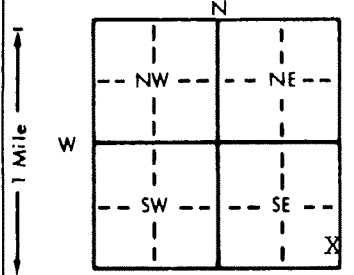
* Elevations are subject to error.

NS-1

WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL: Fraction SE 1/4 SE 1/4 SE 1/4 Section Number 24 Township Number T 1 S Range Number R 17E EW
 County: BROWN
 Distance and direction from nearest town or city street address of well if located within city?

2 WATER WELL OWNER: Daryl Schooler
 RR#, St. Address, Box # : Rt. 2 Board of Agriculture, Division of Water Resources
 City, State, ZIP Code : Hiawatha, KS 66434 Application Number:

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:  4 DEPTH OF COMPLETED WELL... 80' ft. ELEVATION: ft.
 Depth(s) Groundwater Encountered 1. ft. 2. ft. 3. ft.
 WELL'S STATIC WATER LEVEL . 23' ft. below land surface measured on mo/day/yr ... 10-14-93
 Pump test data: Well water was ft. after hours pumping gpm
 Est. Yield . 50 gpm: Well water was ft. after hours pumping gpm
 Bore Hole Diameter . 12" .in. to . 0-52' ft., and . 8 3/4 in. to . 52-80 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 10 Monitoring well
 Was a chemical/bacteriological sample submitted to Department? Yes.....No...X.....; If yes, mo/day/yr sample was submitted
 Water Well Disinfected? Yes X No

5 TYPE OF BLANK CASING USED: 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued . X . Clamped
 1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded
 2 PVC 4 ABS 7 Fiberglass Threaded
 Blank casing diameter 5" .in. to . 0-37 ft., Dia . 5" .in. to . 49-81 ft., Dia in. to ft.
 Casing height above land surface . 24" .in., weight . 2.82 lbs./ft. Wall thickness or gauge No. . 258
 TYPE OF SCREEN OR PERFORATION MATERIAL: 7 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 3 Mill slot 6 Wire wrapped 9 Drilled holes
 2 Louvered shutter 4 Key punched 7 Torch cut 10 Other (specify)
 SCREEN-PERFORATED INTERVALS: From . 37 ft. to . 49 ft., From ft. to ft.
 From ft. to ft., From ft. to ft.
 GRAVEL PACK INTERVALS: From . 20 ft. to . 80 ft., From ft. to ft.
 From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout 3 Bentonite 4 Other
 Grout Intervals: From . 0 ft. to . 20 ft., From ft. to 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 16 Other (specify below)
 13 Insecticide storage
 Direction from well? west How many feet? 250'

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	3	Top Soil			
3	12	Brown Clay			
12	16	Grey Clay			
16	22	Brown Clay			
22	30	Yellow Clay, Silty			
30	37	Grey Clay			
37	47	Sand, Medium & Fine-Brown			
47	56	Grey Clay			
56	66	Grey Shale			
66	67	Grey Limestone			
67	79	Grey Shale			
79	80	Grey Limestone			

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/year) ... 10-14-93 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. . 182 This Water Well Record was completed on (mo/day/yr) 11-16-93 under the business name of STRADER DRILLING CO., INC. by (signature) Daryl Schooler

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three 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.

OFFICE USE ONLY

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WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
County: <u>Brown</u>	<u>SE 1/4 SW 1/4 SW 1/4</u>	<u>25</u>	<u>T 1 S</u>	<u>R 17</u> EM

Distance and direction from nearest town or city street address of well if located within city?
5 miles East and 1 mile north of Padonia, KS

2 WATER WELL OWNER: Randy Fee
 RR#, St. Address, Box # Oklahoma City Area Indian Health Service Board of Agriculture, Division of Water Resources
 City, State, ZIP Code 3625 N.W. 56th St., Oklahoma, OK 73112 Application Number:

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

4 DEPTH OF COMPLETED WELL: 61 ft. ELEVATION: _____ ft.
 Depth(s) Groundwater Encountered 1. 18 ft. 2. _____ ft. 3. _____ ft.
 WELL'S STATIC WATER LEVEL 5 ft. below land surface measured on mo/day/yr 6-30-95
 Pump test data: Well water was 20 ft. after 3 hours pumping 15 gpm
 Est. Yield 25 gpm; Well water was _____ ft. after _____ hours pumping _____ gpm
 Bore Hole Diameter 9 in. to 61 ft., and _____ in. to _____ 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 10 Monitoring well _____
 Was a chemical/bacteriological sample submitted to Department? Yes _____ No X; If yes, mo/day/yr sample was submitted
 Water Well Disinfected? Yes X No

5 TYPE OF BLANK CASING USED:

1 Steel	3 RMP (SR)	6 Asbestos-Cement	9 Other (specify below)	CASING JOINTS: Glued <u>X</u> Clamped _____
2 PVC	4 ABS	7 Fiberglass		Welded _____

Blank casing diameter 5 in. to 21 ft., Dia. _____ in. to _____ ft., Dia. _____ in. to _____ ft.
 Casing height above land surface 18 in., weight 2.843 lbs./ft. Wall thickness or gauge No. SDR 21
 TYPE OF SCREEN OR PERFORATION MATERIAL:

1 Steel	3 Stainless steel	5 Fiberglass	<u>7 PVC</u>	10 Asbestos-cement
2 Brass	4 Galvanized steel	6 Concrete tile	<u>8 RMP (SR)</u>	11 Other (specify) _____
			9 ABS	12 None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:

1 Continuous slot	3 Mill slot	5 Gauzed wrapped	<u>8 Saw cut</u>	11 None (open hole)
2 Louvered shutter	4 Key punched	6 Wire wrapped	9 Drilled holes	
		7 Torch cut	10 Other (specify) _____	

SCREEN-PERFORATED INTERVALS: From 21 ft. to 41 ft., From _____ ft. to _____ ft.
 From _____ ft. to _____ ft., From _____ ft. to _____ ft.
 GRAVEL PACK INTERVALS: From 15 ft. to 61 ft., From _____ ft. to _____ ft.
 From _____ ft. to _____ ft., From _____ ft. to _____ ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout 3 Bentonite 4 Other _____
 Grout Intervals: From 0 ft. to 15 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	16 Other (specify below)
			13 Insecticide storage	<u>None Known</u>

Direction from well? _____ How many feet? _____

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	5	No Sample			
5	13	silt & clay			
13	18	sandy clay			
18	28	sand & gravel - brn			
28	29	sandy clay - yellowish brn			
29	31	sand - brn VF-Med.			
31	36	sandy clay - gray			
36	41	sandstone - gray			
41	61	shale - gray			

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/year) 6-31-95 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 308 This Water Well Record was completed on (mo/day/yr) 7-20-95 under the business name of Rieschick Drilling Company by (signature) Randy Fee

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three 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.

WATER WELL RECORD

Form WWC-5

Division of Water Resources App. No.

1 LOCATION OF WATER WELL: County: Brown	Fraction NE ¼ SE ¼ SW ¼ SE ¼	Section Number 35	Township No. T 1 S	Range Number R 17 <input checked="" type="checkbox"/> E <input type="checkbox"/> W
Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here <input checked="" type="checkbox"/> About 1/4 mile West & 1/8 North of 280th and NightHawk Rd.		Global Positioning System (GPS) information: Latitude: .39,9154330 (in decimal degrees) Longitude: :-95.4761160 (in decimal degrees) Elevation: Datum: <input type="checkbox"/> WGS 84, <input checked="" type="checkbox"/> NAD 83, <input type="checkbox"/> NAD 27 Collection Method: <input checked="" type="checkbox"/> GPS unit (Make/Model: Garmin 12xl) <input type="checkbox"/> Digital Map/Photo, <input type="checkbox"/> Topographic Map, <input type="checkbox"/> Land Survey Est. Accuracy: <input type="checkbox"/> <3 m, <input checked="" type="checkbox"/> 3-5 m, <input type="checkbox"/> 5-15 m, <input type="checkbox"/> >15 m		
2 WATER WELL OWNER: Howard Farms Inc. RR#, Street Address, Box #: 1606 280th St. City, State, ZIP Code : Hiawatha, KS 66434				

3 LOCATE WELL WITH AN "X" IN SECTION BOX: N <table style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 5%;"></td> <td style="width: 15%; border: 1px solid black;">--NW--</td> <td style="width: 15%; border: 1px solid black;">--NE--</td> <td style="width: 5%;"></td> </tr> <tr> <td style="width: 5%; text-align: right;">W</td> <td style="border: 1px solid black;"> </td> <td style="border: 1px solid black;"> </td> <td style="width: 5%; text-align: left;">E</td> </tr> <tr> <td></td> <td style="border: 1px solid black;">--SW--</td> <td style="border: 1px solid black;">--SE--</td> <td></td> </tr> <tr> <td></td> <td style="border: 1px solid black;"> </td> <td style="border: 1px solid black; text-align: center;">X</td> <td></td> </tr> </table> <p style="text-align: center;">S -----1 mile-----</p>		--NW--	--NE--		W			E		--SW--	--SE--				X		4 DEPTH OF COMPLETED WELL 95 ft. Depth(s) Groundwater Encountered (1) 46 ft. (2) 70 ft. (3)..... ft. WELL'S STATIC WATER LEVEL 45ft. below land surface measured on mo/day/yr. 09/30/2009 ... 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 14in. to 95ft., andin. toft. WELL WATER TO BE USED AS: <input type="checkbox"/> Public water supply <input type="checkbox"/> Geothermal <input type="checkbox"/> Injection well <input type="checkbox"/> Domestic <input type="checkbox"/> Feedlot <input type="checkbox"/> Oil field water supply <input type="checkbox"/> Dewatering <input type="checkbox"/> Other (Specify below) <input checked="" type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Domestic-lawn & garden <input type="checkbox"/> Monitoring well Was a chemical/bacteriological sample submitted to Department? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, mo/day/yr sample was submitted..... Water well disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	--NW--	--NE--															
W			E														
	--SW--	--SE--															
		X															

5 TYPE OF CASING USED: Steel PVC Other

CASING JOINTS: Glued Clamped Welded Threaded
 Casing diameter **.8**..... in. to **.95**..... ft., Diameter in. to ft., Diameter in. to ft.
 Casing height above land surface **.24**..... in., Weight **5.39**.....lbs./ft., Wall thickness or gauge No. **0.322**.....

TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel PVC Other (Specify)
 Brass Galvanized Steel None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:
 Continuous slot Mill slot Gauze wrapped Torch cut Drilled holes None (open hole)
 Louvered shutter Key punched Wire wrapped Saw cut Other (specify)

SCREEN-PERFORATED INTERVALS: From **.65**..... ft. to **.95**..... ft., From ft. to ft.
 From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From **.25**..... ft. to **.95**..... ft., From ft. to ft.
 From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: Neat cement Cement grout Bentonite Other

Grout intervals: From **.5**..... ft. to **.25**..... ft., From ft. to ft., From ft. to ft.

What is the nearest source of possible contamination:
 Septic tank Lateral lines Pit privy Livestock pens Insecticide storage Other (specify below)
 Sewer lines Cesspool Sewage lagoon Fuel storage Abandoned water well
 Watertight sewer lines Seepage pit Feedyard Fertilizer storage Oil well/gas well **None - Open Field**

Direction from well Distance from well

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	4	no sample	70	75	sand F-M
4	11	clay silty brown	75	89	sand to gravel w/intermittent clay
11	18	clay sandy brown	89	101	clay gray
18	32	clay sandy light brown	101	112	shale olive
32	38	sand M-C	112	121	shale gray
38	46	clay light brown	121		limestone
46	50	sand F-M brown			
50	59	clay silty gray			
59	62	sand F-M brown			
62	70	clay sandy brown			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo/day/year) **.11/06/2009**.... and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **.779**..... This Water Well Record was completed on (mo/day/year) **.12/1/2009**..... under the business name of **Drill-Well, LLC**..... by (signature) *[Signature]*

INSTRUCTIONS: Use typewriter or ball point pen. **PLEASE PRESS FIRMLY** and **PRINT** clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of \$5.00 for each constructed well. Visit us at <http://www.kdheks.gov/waterwell/index.html>.

NS-4

47,383

WATER WELL RECORD

Form WWC-5

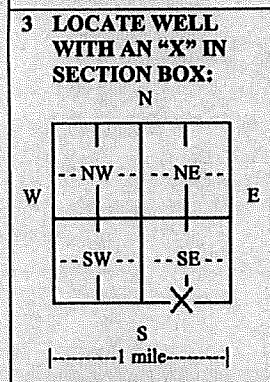
Division of Water Resources App. No.

1 LOCATION OF WATER WELL: County: Brown	Fraction SE ¼ SE ¼ SW ¼ SE ¼	Section Number 35	Township No. T 1 S	Range Number R 17 <input checked="" type="checkbox"/> E <input type="checkbox"/> W
---	---------------------------------	----------------------	-----------------------	---

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here .
1/4 mile West of 280th and Nighthawk Rd.

Global Positioning System (GPS) information:
Latitude: .39,914183 (in decimal degrees)
Longitude: -95.47640 (in decimal degrees)
Elevation: 1050'
Datum: WGS 84, NAD 83, NAD 27
Collection Method:
 GPS unit (Make/Model: Garmin 12xl)
 Digital Map/Photo, Topographic Map, Land Survey
Est. Accuracy: <3 m, 3-5 m, 5-15 m, >15 m

2 WATER WELL OWNER: Howard Farms Inc.
RR#, Street Address, Box #: 1606 280th St.
City, State, ZIP Code : Hiawatha, KS 66434



4 DEPTH OF COMPLETED WELL 80 ft.
Depth(s) Groundwater Encountered (1).46 ft. (2).77 ft. (3)..... ft.
WELL'S STATIC WATER LEVEL 22 ft. below land surface measured on mo/day/yr. 07/18/2009...
Pump test data: Well water was.....ft. after..... hours pumping..... gpm
EST. YIELD 75 gpm. Well water was.....ft. after..... hours pumping..... gpm
Bore Hole Diameter 14 in. to 80 ft., andin. toft.
WELL WATER TO BE USED AS: Public water supply Geothermal Injection well
 Domestic Feedlot Oil field water supply Dewatering Other (Specify below)
 Irrigation Industrial Domestic-lawn & garden Monitoring well
Was a chemical/bacteriological sample submitted to Department? Yes No
If yes, mo/day/yr sample was submitted.....
Water well disinfected? Yes No

5 TYPE OF CASING USED: Steel PVC Other
CASING JOINTS: Glued Clamped Welded Threaded
Casing diameter 8 in. to 80 ft., Diameter in. to ft., Diameter in. to ft.
Casing height above land surface 30 in., Weight 5.39 lbs./ft., Wall thickness or gauge No. 0.322
TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel PVC Other (Specify)
 Brass Galvanized Steel None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
 Continuous slot Mill slot Gauze wrapped Torch cut Drilled holes None (open hole)
 Louvered shutter Key punched Wire wrapped Saw cut Other (specify)
SCREEN-PERFORATED INTERVALS: From 50 ft. to 80 ft., From ft. to ft.
GRAVEL PACK INTERVALS: From 25 ft. to 80 ft., From ft. to ft.
From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: Neat cement Cement grout Bentonite Other
Grout Intervals: From 5 ft. to 25 ft., From ft. to ft., From ft. to ft.
What is the nearest source of possible contamination:
 Septic tank Lateral lines Pit privy Livestock pens Insecticide storage Other (specify below)
 Sewer lines Cesspool Sewage lagoon Fuel storage Abandoned water well
 Watertight sewer lines Seepage pit Feedyard Fertilizer storage Oil well/gas well Road
Direction from well South Distance from well 60

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	6	no sample			
6	22	clay silty brown			
22	26	clay sandy brown			
26	38	clay silty gray			
38	46	clay sandy brown			
46	59	sand F-M brown			
59	72	sand M brown			
72	76	shale brown			
76	93	mixed clay and gravel gray			
93		limestone			

RECEIVED
AUG 26 2009

TOPEKA FIELD OFFICE
DIVISION OF WATER RESOURCES

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo/day/year) 07/17/2009.... and this record is true to the best of my knowledge and belief.
Kansas Water Well Contractor's License No. 779..... This Water Well Record was completed on (mo/day/year) 07/28/2009.....
under the business name of Drill-Well, LLC..... by (signature).....

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of \$3.00 for each constructed well. Visit us at <http://www.kdheks.gov/waterwell/index.html>.

East well

NS-5

Hiawatha 11-05

WATER WELL RECORD

Form WWC-5

Division of Water Resources App. No.

[Empty box for application number]

1 LOCATION OF WATER WELL: Fraction NW 1/4 NW 1/4 SW 1/4 NW 1/4
 County: Brown
 Section Number 1 Township No. T 2 S Range Number R 17 E W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here
 1463' South of 280th & Nighthawk Rd. East sid of road.

2 WATER WELL OWNER: City of Hiawatha
 RR#, Street Address, Box #: 701 Oregon St.
 City, State, ZIP Code : Hiawatha, KS 66434

Global Positioning System (GPS) information:
 Latitude: .39.909972..... (in decimal degrees)
 Longitude: -95.470666..... (in decimal degrees)
 Elevation: 1033.....
 Datum: WGS 84, NAD 83, NAD 27
 Collection Method:
 GPS unit (Make/Model: Garmin 12xl.....)
 Digital Map/Photo, Topographic Map, Land Survey
 Est. Accuracy: <3 m, 3-5 m, 5-15 m, >15 m

3 LOCATE WELL WITH AN "X" IN SECTION BOX:
 N
 W X NW NE E
 SW SE S
 |-----1 mile-----|

4 DEPTH OF COMPLETED WELL 99..... ft.
 Depth(s) Groundwater Encountered (1).43..... ft. (2)..... ft. (3)..... ft.
 WELL'S STATIC WATER LEVEL: 8.2.....ft. below land surface measured on mo/day/yr. 05/03/2011....
 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 6.....in. to .119.....ft., andin. toft.
 WELL WATER TO BE USED AS: Public water supply Geothermal Injection well
 Domestic Feedlot Oil field water supply Dewatering Other (Specify below)
 Irrigation Industrial Domestic-lawn & garden Monitoring well
 Was a chemical/bacteriological sample submitted to Department? Yes No
 If yes, mo/day/yr sample was submitted.....
 Water well disinfected? Yes No

5 TYPE OF CASING USED: Steel PVC Other

CASING JOINTS: Glued Clamped Welded Threaded
 Casing diameter .2..... in. to .99..... ft., Diameter in. to ft., Diameter in. to ft.
 Casing height above land surface..20..... in., Weightlbs./ft., Wall thickness or gauge No. SDR21.....
TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel PVC Other (Specify)
 Brass Galvanized Steel None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
 Continuous slot Mill slot Gauze wrapped Torch cut Drilled holes None (open hole)
 Louvered shutter Key punched Wire wrapped Saw cut Other (specify)
SCREEN-PERFORATED INTERVALS: From..79..... ft. to ..99..... ft., From ft. to ft.
 From..... ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From..40..... ft. to ..99..... ft., From ft. to ft.
 From..... ft. to ft., From ft. to ft.

6 GROUT MATERIAL: Neat cement Cement grout Bentonite Other

Grout Intervals: From .5..... ft. to .40..... ft., From ft. to ft., From ft. to ft.

What is the nearest source of possible contamination:
 Septic tank Lateral lines Pit privy Livestock pens Insecticide storage Other (specify below)
 Sewer lines Cesspool Sewage lagoon Fuel storage Abandoned water well
 Watertight sewer lines Seepage pit Feedyard Fertilizer storage Oil well/gas well Road.....
 Direction from well West..... Distance from well ..5'.....

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	4	no sample	101	107	silty clay gray
4	12	clay silty dark brown	107	118	dirty sand & gravel, w/clay gray
12	18	sand F-M brown	118	119	shale dark gray
18	30	clay silty gray			
30	43	clay silty sandy gray			
43	60	sand F-M			
60	65	sand M-C			
65	80	sand F-M			
80	90	sand M-C			
90	101	sand F-M			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo/day/year) 05/02/2011.... and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 779..... This Water Well Record was completed on (mo/day/year) 06/21/2011..... under the business name of Drill Well LLC..... by (signature) [Signature]

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of \$5.00 for each constructed well. Visit us at <http://www.kdheks.gov/waterwell/index.html>.

1070

Precision Farms

2021-10-22

21-1 "best spot"

N 39 54' 19.5"

W95 28' 32.5"

5-25 silty clay brown

25-29 sand F-C brown

29-30 sandy clay brown

30-35 sand F-M brown with clay layers

35-45 sand F-M brown

45-50 sand F-M brown with clay layers

50-55 sand F-C brown

55-60 sand M-vc brown

60-70 sand F-C brown

70-75 sand and gravel brown

75-78 sand M-VC brown

78-97 silty clay gray

97-105 silty clay grayish brown

105-110 sand stone gray

110-119 shale gray

119 limestone

lost water from 50-78

SWL 14'?

EW 7 / NS - 6

1071

21-2 650' east of 21-1

N 39 54' 18.6"

w 95 28' 24.2"

5-14 sandy clay brown

14-19 silty clay brown

19-41 silty clay gray

41 limestone

EW 8

21-3 along North fence 500' north of 21-1

N 39 54' 24.4"

W95 28' 32.5"

5-23 silty clay brown

23-34 sandy clay brown

34-38 sand F-M cemented

38-46 hard clay brown

46-50 sand VF-M brown

50-55 sand F-M brown with clay layers

55-65 sand F-M brown

65-90 sand VF-M brown with clay layers

90-101 sand F-M brown with clay layers

101-103 shale black

103-115 shale gray

stopped

KGS
Hydrology

Water Well Database Query

Scan of WWC5 Form

WATER WELL RECORD Form WWC-5 KSA 02A-1212 ID No.

1] LOCATION OF WATER WELL: Fraction Section Number Township Number Range Number
 County: **BROWN** SW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 27 T 2 S R 17 EW
 Distance and direction from nearest town or city street address of well if located within city?
 1/2 mi. E Hiawatha

2] WATER WELL OWNER: STAN BOOS Board of Agriculture, Division of Water Resources
 RR#, St. Address, Box # : 111 South 5 th Application Number:
 City, State, ZIP Code : 66434

3] LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX: **3] DEPTH OF COMPLETED WELL:** 140 ft. **IL ELEVATION:** ft.
 Depth(s) Groundwater Encountered 1. ft. 2. ft. 3. ft.
 WELL'S STATIC WATER LEVEL: 74 ft. below land surface measured on mo/day/yr 1-21-2002
 Pump test data: Well water was ft. after hours pumping gpm
 East. Yield gpm; Well water was ft. after hours pumping gpm
 Bore Hole Diameter: 1.2 in. to 1.00 in. and 7 7/8 in. to 1.40 in.
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
 1 Domestic 3 Feedlot 8 Oil field water supply 9 Dewatering 12 Other (Specify below)
 2 Irrigation 4 Industrial 7 Domestic (lawn & garden) 10 Monitoring well
 Was a chemical/bacteriological sample submitted to Department? Yes. No. X; If yes, mo/day/yr sample was submitted
 Water Well Disinfected? Yes X No

5] TYPE OF BLANK CASING USED: 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued, X Clamped
 1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded
 2 PVC 4 ABS 7 Fiberglass Threaded
 Blank casing diameter: 5 in. to 140 in. Dia. in. to in. Dia. in. to in. Dia. in. to in. Dia.
 Casing height above land surface: 24 in. weight 2.82 lbs./ft. Wall thickness or gauge No. 258

TYPE OF SCREEN OR PERFORATION MATERIAL: 7 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 3 Mill slot 6 Wire wrapped 9 Unfiled holes
 2 Louvered shutter 4 Key punched 7 Torch cut 10 Other (specify) ft.

SCREEN-PERFORATED INTERVALS: From 80 ft. to 95 ft. From 139 ft. to 140 ft.
 From ft. to ft. From ft. to ft.
GRAVEL PACK INTERVALS: From 24 ft. to 100 ft. From ft. to ft.
 From ft. to ft. From ft. to ft.

6] GROUT MATERIAL: 1 Neat cement 2 Cement grout 3 Bentonite 4 Other
 Grout intervals: From A ft. to 24 ft. From ft. to 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 12 Fertilizer storage 15 Oil well/Gas well
 3 Watertight sewer lines 6 Seepage pit 9 Feedyard 13 Insecticide storage 16 Other (specify below)
 Direction from well? EAST How many feet? 400

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2	top soil	95	103	grey shale
2	4	brown clay	103	104	grey limestone
4	16	tan clay	104	106	black shale
16	19	brown clay	106	119	grey shale
19	24	lt. brown clay	119	121	grey limestone
24	51	yellow brown clay	121	132	grey shale
51	54	brown fine-coarse sand	132	133	grey limestone
54	64	tan clay	133	140	grey shale
64	70	brown fine sand			
70	73	tan-grey clay			
73	75	brown fine-coarse sand			
75	77	tan-grey clay			
77	93	brown fine-coarse sand			
93	95	coarse-sd- 1/4 sand & gravel			

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/year) January 21, 2002 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's Licence No. 182 This Water Well Record was completed on (mo/day/yr) 2-5-2002 under the business name of STRADER DRILLING CO., INC by (signature) Dale Anderson

INSTRUCTIONS: Use typewriter or ballpoint pen. PLEASE PRESS HARD and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0001, Telephone 785-296-5224. Send one to WATER WELL OWNER and retain one for your records. Fee of \$5.00 for each constructed well.

WATER WELL RECORD Form WWC-5 KSA 82a-1212

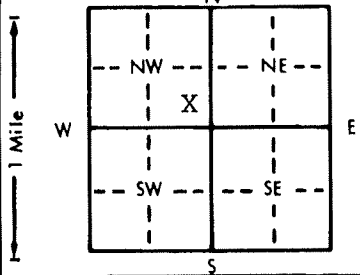
1 LOCATION OF WATER WELL: County: BROWN	Fraction SE 1/4 SE 1/4 NW 1/4	Section Number 28	Township Number T 2 S	Range Number R 17 EW
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Distance and direction from nearest town or city street address of well if located within city?

1/8 mile E. of Hiawatha

2 WATER WELL OWNER: **Ruth & Wendell Sparks**
 RR#, St. Address, Box # : **402 S. 6th** Board of Agriculture, Division of Water Resources
 City, State, ZIP Code : **Hiawatha, KS 66434** Application Number:

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



4 DEPTH OF COMPLETED WELL: **120'** ft. ELEVATION:

Depth(s) Groundwater Encountered 1. **85'** ft. 2. ft. 3. ft.

WELL'S STATIC WATER LEVEL **70'** ft. below land surface measured on **mo/day/yr 4/28/97**

Pump test data: Well water was ft. after hours pumping gpm

Est. Yield **5** gpm: Well water was ft. after hours pumping gpm

Bore Hole Diameter **1.2"** in. to ft., and in. to 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
2 Irrigation	4 Industrial	7 Lawn and garden only
		9 Dewatering
		10 Monitoring well
		12 Other (Specify below)

Was a chemical/bacteriological sample submitted to Department? Yes.....No.....**X**.....; If yes, mo/day/yr sample was submitted

Water Well Disinfected? Yes **X** No

5 TYPE OF BLANK CASING USED:

1 Steel	3 RMP (SR)	5 Wrought iron	8 Concrete tile	CASING JOINTS: Glued X Clamped
2 PVC	4 ABS	6 Asbestos-Cement	9 Other (specify below)	Welded
		7 Fiberglass		Threaded

Blank casing diameter **5"** in. to **0-77** ft., Dia **5"** in. to **90-119** ft., Dia in. to ft.

Casing height above land surface **24"** in., weight **2.82** lbs./ft. Wall thickness or gauge No. **258**

TYPE OF SCREEN OR PERFORATION MATERIAL:

1 Steel	3 Stainless steel	5 Fiberglass	7 PVC	10 Asbestos-cement
2 Brass	4 Galvanized steel	6 Concrete tile	8 RMP (SR)	11 Other (specify)
			9 ABS	12 None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:

1 Continuous slot	3 Mill slot	5 Gauzed wrapped	8 Saw cut	11 None (open hole)
2 Louvered shutter	4 Key punched	6 Wire wrapped	9 Drilled holes	
		7 Torch cut	10 Other (specify)	

SCREEN-PERFORATED INTERVALS: From **77** ft. to **90** ft., From ft. to ft.

From **119** ft. to **120** ft., From ft. to ft.

GRAVEL PACK INTERVALS: From **24** ft. to **120** ft., From ft. to ft.

From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout 3 ~~Bentonite~~ 4 Other

Grout intervals: From **24** ft. to **120'** ft., From ft. to 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	16 Other (specify below)
			13 Insecticide storage	

Direction from well? **NE** How many feet? **250'**

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2	Top Soil			
2	46	Clay-Brown			
46	47	Fine Sand-Brown			
47	63	Clay-Brown			
63	69	Clay-Brown-Silty			
69	70	Boulder			
70	73	Clay-Brown			
73	74	Fine Sand-Coarse Sand-Brown			
74	77	Clay-Brown			
77	81	Fine Sand-Coarse Sand-Brown			
81	86	FS-CS-Med Gravel-Brown			
86	89	LS-Tan			
89	120	Shale-Grey			

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/year) **4/28/97** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **182** This Water Well Record was completed on (mo/day/yr) **5-21-97** under the business name of **STRADER DRILLING CO., INC.** by (signature) *Dale Strader*

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three 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.

OFFICE USE ONLY T R EW SEC. 1/4 1/4 1/4



WATER WELL RECORD Form WWC-5 1358712

Division of Water Resources App. No. Well ID

Original Record Correction Change in Well Use

1 LOCATION OF WATER WELL: County: Brown	Fraction NE ¼ NW ¼ NE ¼ NE ¼	Section Number 5	Township Number T 2 S	Range Number R 17 <input checked="" type="checkbox"/> E <input type="checkbox"/> W
---	---------------------------------	---------------------	--------------------------	---

2 WELL OWNER: Last Name: First: Business: Howard Farms, Inc Address: 1606 280th St. Address: City: Hiawatha State: KS ZIP: 66434	Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): If at owner's address, check here: <input type="checkbox"/> 630 ft west and 215 ft south of the intersection of HY73 & 280th St.
---	---

3 LOCATE WELL WITH "X" IN SECTION BOX:
N

---NW---	---NE---		
---SW---	---SE---		
	S		

W E

-----1 mile-----

4 DEPTH OF COMPLETED WELL: 65 ft.

Depth(s) Groundwater Encountered: 1) 51 ft.
2) ft. 3) ft., or 4) Dry Well

WELL'S STATIC WATER LEVEL: 28 ft.
 below land surface, measured on (mo-day-yr) 09/06/2016
 above land surface, measured on (mo-day-yr).....

Pump test data: Well water was ft.
after..... hours pumping gpm
Well water was ft.
after..... hours pumping gpm

Estimated Yield: ... 30 gpm
Bore Hole Diameter: ... 10 in. to ... 65 ft. and
..... in. to ft.

5 Latitude: 39.9134167 (decimal degrees)
Longitude: 95.5299028 (decimal degrees)
Datum: WGS 84 NAD 83 NAD 27
Source for Latitude/Longitude:
 GPS (unit make/model: Garmin
(WAAS enabled? Yes No)
 Land Survey Topographic Map
 Online Mapper:

6 Elevation: 1042 ft. Ground Level TOC
Source: Land Survey GPS Topographic Map
 Other KOLAR.....

7 WELL WATER TO BE USED AS:

1. Domestic: <input checked="" type="checkbox"/> Household <input type="checkbox"/> Lawn & Garden <input type="checkbox"/> Livestock	5. <input type="checkbox"/> Public Water Supply: well ID	10. <input type="checkbox"/> Oil Field Water Supply: lease
2. <input type="checkbox"/> Irrigation	6. <input type="checkbox"/> Dewatering: how many wells?	11. Test Hole: well ID
3. <input type="checkbox"/> Feedlot	7. <input type="checkbox"/> Aquifer Recharge: well ID	<input type="checkbox"/> Cased <input type="checkbox"/> Uncased <input type="checkbox"/> Geotechnical
4. <input type="checkbox"/> Industrial	8. <input type="checkbox"/> Monitoring: well ID	12. Geothermal: how many bores?
	9. Environmental Remediation: well ID	a) Closed Loop <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical
	<input type="checkbox"/> Air Sparge <input type="checkbox"/> Soil Vapor Extraction	b) Open Loop <input type="checkbox"/> Surface Discharge <input type="checkbox"/> Inj. of Water
	<input type="checkbox"/> Recovery <input type="checkbox"/> Injection	13. <input type="checkbox"/> Other (specify):

Was a chemical/bacteriological sample submitted to KDHE? Yes No If yes, date sample was submitted:

Water well disinfected? Yes No

8 TYPE OF CASING USED: Steel PVC Other CASING JOINTS: Glued Clamped Welded Threaded

Casing diameter 5 in. to 65 ft., Diameter in. to ft., Diameter in. to ft.
Casing height above land surface 24 in. Weight lbs./ft. Wall thickness or gauge No. SDR21.....

TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel Fiberglass PVC Other (Specify)

Brass Galvanized Steel Concrete tile None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:
 Continuous Slot Mill Slot Gauze Wrapped Torch Cut Drilled Holes Other (Specify)

Louvered Shutter Key Punched Wire Wrapped Saw Cut None (Open Hole)

SCREEN-PERFORATED INTERVALS: From 55 ft. to 65 ft., From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From 25 ft. to 65 ft., From ft. to ft., From ft. to ft.

9 GROUT MATERIAL: Neat cement Cement grout Bentonite Other

Grout Intervals: From 2 ft. to 25 ft., From ft. to ft., From ft. to ft.

Nearest source of possible contamination:
 Septic Tank Lateral Lines Pit Privy Livestock Pens Insecticide Storage
 Sewer Lines Cess Pool Sewage Lagoon Fuel Storage Abandoned Water Well
 Watertight Sewer Lines Seepage Pit Feedyard Fertilizer Storage Oil Well/Gas Well
 Other (Specify)

Direction from well? Distance from well? ft.

10 FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	5	no sample	64	65	shale gray
5	14	silty clay brown			
14	28	sand and gravel brown			
28	36	sand and gravel with cobble brown			
36	47	sandy clay gray			
47	51	silty clay gray			
51	59	sand F-M gray	Notes:		
59	63	shale gray			
63	64	limestone			

11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo-day-year) 09/06/2016..... and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 779..... This Water Well Record was completed on (mo-day-year) 06/28/2017..... under the business name of Drill-Well, LLC.....

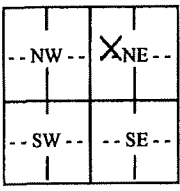
Send one copy to WATER WELL OWNER and retain one for your records. Fee of \$5.00 for each constructed well.
KS Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-3565.
Visit us at <http://www.kdheks.gov/waterwell/index.html> KSA 82a-1212

WATER WELL RECORD

Form WWC-5

Division of Water Resources App. No.

1 LOCATION OF WATER WELL: Fraction NW 1/4 NW 1/4 SW 1/4 NE 1/4 Section Number 4 Township No. T 2 S Range Number R 17 E W
 County: Brown
 Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here . From HY73 & 280th St, about 6/10 East & 1/4 South
2 WATER WELL OWNER: Jerry & Jane Reschke RR#, Street Address, Box #: 1515 320th St. City, State, ZIP Code : Hiawatha, KS 66434
Global Positioning System (GPS) information: Latitude: .39.91019..... (in decimal degrees) Longitude: .95.51670..... (in decimal degrees) Elevation: Datum: WGS 84, NAD 83, NAD 27
Collection Method: GPS unit (Make/Model: Garmin 12xl.....) Digital Map/Photo, Topographic Map, Land Survey Est. Accuracy: <3 m, 3-5 m, 5-15 m, >15 m

3 LOCATE WELL WITH AN "X" IN SECTION BOX: N

 W E
 S
 |-----1 mile-----|

4 DEPTH OF COMPLETED WELL .84..... ft.
 Depth(s) Groundwater Encountered (1).50..... ft. (2).72..... ft. (3)..... ft.
 WELL'S STATIC WATER LEVEL.26.4.....ft. below land surface measured on mo/day/yr.05/02/2010...
 Pump test data: Well water was.50.0.....ft. after.1.5..... hours pumping.400..... gpm
 EST. YIELD.450.....gpm. Well water was.....ft. after..... hours pumping..... gpm
 Bore Hole Diameter 32.....in. to .84.....ft., andin. toft.
 WELL WATER TO BE USED AS: Public water supply Geothermal Injection well
 Domestic Feedlot Oil field water supply Dewatering Other (Specify below)
 Irrigation Industrial Domestic-lawn & garden Monitoring well
 Was a chemical/bacteriological sample submitted to Department? Yes No
 If yes, mo/day/yr sample was submitted.....
 Water well disinfected? Yes No

5 TYPE OF CASING USED: Steel PVC Other
 CASING JOINTS: Glued Clamped Welded Threaded
 Casing diameter .16..... in. to .84..... ft., Diameter in. to ft.
 Casing height above land surface.20..... in., Weight .19.9.....lbs./ft., Wall thickness or gauge No. .0.615.....
TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel PVC Other (Specify)
 Brass Galvanized Steel None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
 Continuous slot Mill slot Gauze wrapped Torch cut Drilled holes None (open hole)
 Louvered shutter Key punched Wire wrapped Saw cut Other (specify)
SCREEN-PERFORATED INTERVALS: From .49..... ft. to .84..... ft., From ft. to ft.
 0.040 From..... ft. to ft., From ft. to ft.
8/16 GRAVEL PACK INTERVALS: From .25..... ft. to .84..... ft., From ft. to ft.
 From..... ft. to ft., From ft. to ft.

6 GROUT MATERIAL: Neat cement Cement grout Bentonite Other
 Grout Intervals: From .5..... ft. to .25..... ft., From ft. to ft., From ft. to ft.
 What is the nearest source of possible contamination:
 Septic tank Lateral lines Pit privy Livestock pens Insecticide storage Other (specify below)
 Sewer lines Cesspool Sewage lagoon Fuel storage Abandoned water well
 Watertight sewer lines Seepage pit Feedyard Fertilizer storage Oil well/gas well Ditch.....
 Direction from well .North..... Distance from well .40'.....

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	4	no sample			
4	25	clay silty brown			
25	50	clay sandy tan			
50	59	sand & gravel			
59	60	clay gray			
60	69	sand C			
69	72	clay gray			
72	84	sand M gray			
84		clay gray			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo/day/year) .03/30/2010.... and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. .779..... This Water Well Record was completed on (mo/day/year) .05/04/2010..... under the business name of .Drill-Well, LLC..... by (signature)

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of \$5.00 for each constructed well. Visit us at <http://www.kdheks.gov/waterwell/index.html>.

Reschke East 1

WATER WELL RECORD

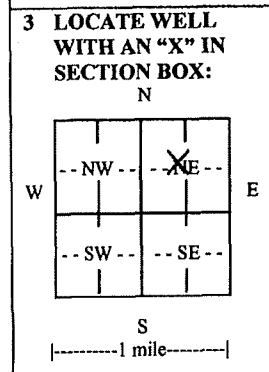
Form WWC-5

Division of Water Resources App. No.

1 LOCATION OF WATER WELL: County: Brown Fraction NW 1/4 NE 1/4 SW 1/4 NE 1/4 Section Number 4 Township No. T 2 S Range Number R 817 [X]E []W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here []. From HY73 & 280th St, about 3/4 East & 1/4 South Global Positioning System (GPS) information: Latitude: .39,90971 (in decimal degrees) Longitude: -95.51482 (in decimal degrees) Elevation: Datum: [] WGS 84, [X] NAD 83, [] NAD 27 Collection Method: [X] GPS unit (Make/Model: Garmin 12xl) [] Digital Map/Photo, [] Topographic Map, [] Land Survey Est. Accuracy: [] <3 m, [X] 3-5 m, [] 5-15 m, [] >15 m

2 WATER WELL OWNER: Jerry & Jane Reschke RR#, Street Address, Box #: 1515 320th St. City, State, ZIP Code : Hiawatha, KS 66434



4 DEPTH OF COMPLETED WELL 78 ft. Depth(s) Groundwater Encountered (1) 30 ft. (2) ft. (3) ft. WELL'S STATIC WATER LEVEL 31.1 ft. below land surface measured on mo/day/yr. 05/02/2010. Pump test data: Well water was 52.9 ft. after 1.5 hours pumping 400 gpm EST. YIELD 450 gpm. Well water was ft. after hours pumping gpm Bore Hole Diameter 30 in. to 78 ft., and in. to ft. WELL WATER TO BE USED AS: [] Public water supply [] Geothermal [] Injection well [] Domestic [] Feedlot [] Oil field water supply [] Dewatering [] Other (Specify below) [X] Irrigation [] Industrial [] Domestic-lawn & garden [] Monitoring well Was a chemical/bacteriological sample submitted to Department? [] Yes [X] No If yes, mo/day/yr sample was submitted. Water well disinfected? [X] Yes [] No

5 TYPE OF CASING USED: [] Steel [X] PVC [] Other CASING JOINTS: [X] Glued [] Clamped [] Welded [] Threaded Casing diameter .16 in. to .78 ft., Diameter in. to ft., Diameter in. to ft. Casing height above land surface .20 in., Weight 19.9 lbs./ft., Wall thickness or gauge No. 0.615 TYPE OF SCREEN OR PERFORATION MATERIAL: [] Steel [] Stainless Steel [X] PVC [] Other (Specify) [] Brass [] Galvanized Steel [] None used (open hole) SCREEN OR PERFORATION OPENINGS ARE: [] Continuous slot [X] Mill slot [] Gauze wrapped [] Torch cut [] Drilled holes [] None (open hole) [] Louvered shutter [] Key punched [] Wire wrapped [] Saw cut [] Other (specify) SCREEN-PERFORATED INTERVALS: From .58 ft. to .78 ft., From ft. to ft. 0.040 From ft. to ft., From ft. to ft. 8/16 GRAVEL PACK INTERVALS: From .25 ft. to .78 ft., From ft. to ft. From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: [] Neat cement [] Cement grout [X] Bentonite [] Other Grout Intervals: From 5 ft. to 25 ft., From ft. to ft., From ft. to ft. What is the nearest source of possible contamination: [] Septic tank [] Lateral lines [] Pit privy [] Livestock pens [] Insecticide storage [X] Other (specify below) [] Sewer lines [] Cesspool [] Sewage lagoon [] Fuel storage [] Abandoned water well [] Watertight sewer lines [] Seepage pit [] Feedyard [] Fertilizer storage [] Oil well/gas well Ditch Direction from well NE Distance from well 70'

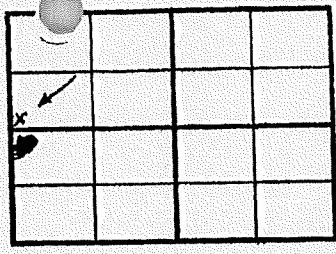
Table with columns: FROM, TO, LITHOLOGIC LOG, FROM, TO, LITHO. LOG (cont.) or PLUGGING INTERVALS. Rows: 0-4 no sample, 4-17 clay silty brown, 17-24 sand F, 24-30 clay sandy tan, 30-50 sand F-M, 50-72 sand F-C, 72-76 clay gray, 76-77 sand F-M, 77-78 clay gray

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was [X] constructed, [] reconstructed, or [] plugged under my jurisdiction and was completed on (mo/day/year) 02/03/2010 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 779 This Water Well Record was completed on (mo/day/year) 05/04/2010 under the business name of Drill-Well, LLC by signature

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of \$5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell/index.html.

5-12-2001 EW4

BRANCH NORTH BEND
 DATE 5/14/2007
 PHONE 785-742-7277
 NAME Jerry Reschke
 (Clarence Wilson)
 ADDRESS 1515 - 320th Street
Hiawatha KS 66434



File # 46708
Log 6

SEC 3 TWN 2 RGE 17
 (LOCATE TEST WITH X)

Elev. $\frac{1090}{163} = \frac{1090}{927}$ SWL $\frac{1090}{1070}$

_____ FEET FROM _____ LINE
 _____ FEET FROM _____ LINE

FOOTAGE		Description
0	6	Top Soil
6	18	Brown Clay
18	22	Tan Clay
22	22.25	Rock Layer
22.25	45	Fine/Medium Brown Sand
45	62	Fine Tight Brown Sand
62	63	Hard Layer
63	77	Medium Sand / Fine Gravel
77	77.25	Hard Layer
77.25	101	Fine/Medium Brown Sand
101	113	Medium Sand / Fine Gravel
113	119	Medium Brown Gravel
119	163	Fine Gravel w/ Some Medium Sand - Gray, Nice
163	165	Blue Clay or Blue Shale
165		
		All sands & Gravel took water
		Some Rocks at 97 - 100 & 115-119
		Should make nice well
DRILLER	Tracy McConnell Kosie Nel	

SWL - 70'

2,890 Feet North
 and
 5,210 Feet West
 of
 southeast corner of 3-2-17

SCANNED

RECEIVED
 NOV 09 2007
 TOPEKA FIELD OFFICE
 DIVISION OF WATER RESOURCES

WATER RESOURCES
 RECEIVED
 OCT 05 2007
 KS DEPT OF AGRICULTURE

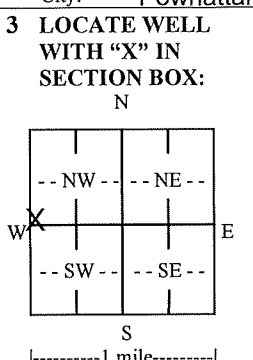
Ewb



WATER WELL RECORD Form WWC-5 1350114 Division of Water Resources App. No. 47,392 Well ID #1 - North

1 LOCATION OF WATER WELL: County: Brown Fraction SW 1/4 SW 1/4 NW 1/4 Section Number 2 Township Number T 2 S Range Number R 17 E W

2 WELL OWNER: Last Name: Business: Public Wholesale Water Supply District No. 27 Address: 110 N. Commercial St. City: Powhattan State: KS ZIP: 66527 Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): 4 miles East and 1 1/4 miles South of Padonia. 2,385' South and 256' East of the intersection at 280th St. and Mulberry Rd.



3 LOCATE WELL WITH 'X' IN SECTION BOX: N W E S | 4 DEPTH OF COMPLETED WELL: 149 ft. Depth(s) Groundwater Encountered: 1) 70 ft. 2) ... ft. 3) ... ft. or 4) Dry Well WELL'S STATIC WATER LEVEL: 70 ft. below land surface, measured on (mo-day-yr) 1/26/2017. Pump test data: Well water was 75 ft. after 24 hours pumping 325 gpm. Well water was ... ft. after ... hours pumping ... gpm. Estimated Yield: 325 gpm. Bore Hole Diameter: 36 in. to 149 ft. and ... in. to ... ft.

5 Latitude: 39.907388 (decimal degrees) Longitude: 95.488691 (decimal degrees) Datum: WGS 84 NAD 83 NAD 27 Source for Latitude/Longitude: GPS (unit make/model: Garmin/Dakota 10) (WAAS enabled? Yes No) Land Survey Topographic Map Online Mapper | 6 Elevation: 1090 ft. Ground Level TOC Source: Land Survey GPS Topographic Map Other KOLAR

7 WELL WATER TO BE USED AS: 1. Domestic: Household Lawn & Garden Livestock Irrigation Feedlot Industrial | 5. Public Water Supply: well ID #1 - North | 10. Oil Field Water Supply: lease | 11. Test Hole: well ID Cased Uncased Geotechnical | 12. Geothermal: how many bores? a) Closed Loop Horizontal Vertical b) Open Loop Surface Discharge Inj. of Water | 13. Other (specify):

Was a chemical/bacteriological sample submitted to KDHE? Yes No If yes, date sample was submitted: Water well disinfected? Yes No

8 TYPE OF CASING USED: Steel PVC Other CASING JOINTS: Glued Clamped Welded Threaded Casing diameter 12 in. to 84 ft., Diameter 12 in. to 119 ft., Diameter ... in. to ... ft. Casing height above land surface 24 in. Weight ... lbs./ft. Wall thickness or gauge No. 0.375

TYPE OF SCREEN OR PERFORATION MATERIAL: Steel Stainless Steel Fiberglass PVC Other (Specify) Stainless V-Wire Brass Galvanized Steel Concrete tile None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE: Continuous Slot Mill Slot Gauze Wrapped Torch Cut Drilled Holes Other (Specify) Louvered Shutter Key Punched Wire Wrapped Saw Cut None (Open Hole) SCREEN-PERFORATED INTERVALS: From 84 ft. to 104 ft., From 119 ft. to 149 ft., From ... ft. to ... ft. GRAVEL PACK INTERVALS: From 60 ft. to 108 ft., From 108 ft. to 149 ft., From ... ft. to ... ft.

9 GROUT MATERIAL: Neat cement Cement grout Bentonite Other Grout Intervals: From 5 ft. to 25 ft., From 25 ft. to 60 ft., From ... ft. to ... ft.

Nearest source of possible contamination: Septic Tank Lateral Lines Pit Privy Livestock Pens Insecticide Storage Sewer Lines Cess Pool Sewage Lagoon Fuel Storage Abandoned Water Well Watertight Sewer Lines Seepage Pit Feedyard Fertilizer Storage Oil Well/Gas Well Other (Specify) Direction from well? Distance from well? ft.

Table with columns: 10 FROM TO LITHOLOGIC LOG FROM TO LITHO. LOG (cont.) or PLUGGING INTERVALS. Includes a Notes section.

11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo-day-year) 11/16/2016 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 755 This Water Well Record was completed on (mo-day-year) 05/17/2017 under the business name of Sargent Drilling

1098

Form	WWC5
Contractor	Sargent Drilling
Well Owner	
Doc ID	1350114

Litholgy

0	2	Top Soil
2	12	Brown, Gray Clay
12	20	Yellow, Gray Clay
20	23	Brown Sand
23	28	Yellow, Gray Clay & Limy Layers
28	36	Fine Brown Sand
36	37	Yellow, Gray Clay, Boulders, Limy
37	38	Fine to Coarse Brown Sand
38	57	Fine Tan Hard Sand
57	62	Fine to Coarse Brown Sand & Some Loose Cemented Layers
62	80	Fine Brown Sand & Some Firm Clay
80	92	Fine to Medium Brown Sand
92	93	Boulder
93	96	Fine to Medium Brown Sand
96	101	Fine to Medium Brown Sand & Cemented Sand
101	107	Fine to Medium Rusty, Brown Sand
107	110	Fine to Medium Brown Sand
110	120	Fine to Coarse Brown Sand & Fine Gravel

sd
w/
cl/yf

3

Form	WWC5
Contractor	Sargent Drilling
Well Owner	
Doc ID	1350114

Litholgy

120	153	Very Fine Gray Sand & Some Gray Clay

1070

Precision Farms

2021-10-22

21-1 "best spot"

N 39 54' 19.5"

W95 28' 32.5"

5-25 silty clay brown

25-29 sand F-C brown

29-30 sandy clay brown

30-35 sand F-M brown with clay layers

35-45 sand F-M brown

45-50 sand F-M brown with clay layers

50-55 sand F-C brown

55-60 sand M-vc brown

60-70 sand F-C brown

70-75 sand and gravel brown

75-78 sand M-VC brown

78-97 silty clay gray

97-105 silty clay grayish brown

105-110 sand stone gray

110-119 shale gray

119 limestone

lost water from 50-78

SWL 14'?

EW 7

1071

21-2 650' east of 21-1

N 39 54' 18.6"

w 95 28' 24.2"

5-14 sandy clay brown

14-19 silty clay brown

19-41 silty clay gray

41 limestone

EW 8

21-3 along North fence 500' north of 21-1

N 39 54' 24.4"

W95 28' 32.5"

5-23 silty clay brown

23-34 sandy clay brown

34-38 sand F-M cemented

38-46 hard clay brown

46-50 sand VF-M brown

50-55 sand F-M brown with clay layers

55-65 sand F-M brown

65-90 sand VF-M brown with clay layers

90-101 sand F-M brown with clay layers

101-103 shale black

103-115 shale gray

stopped

WATER WELL RECORD

Form WWC-5

Division of Water Resources App. No.

1 LOCATION OF WATER WELL: Fraction NW 1/4 SW 1/4 SW 1/4 NW 1/4 Section Number 6 Township No. T 2 S Range Number R 18 E W
 County: Brown
 Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here 1/3 mile south of 280th St & plumtree Rd
Global Positioning System (GPS) information:
 Latitude: .39.9080830..... (in decimal degrees)
 Longitude: .95.4517500..... (in decimal degrees)
 Elevation:
 Datum: WGS 84, NAD 83, NAD 27
 Collection Method:
 GPS unit (Make/Model: Garmin 12xl.....)
 Digital Map/Photo, Topographic Map, Land Survey
 Est. Accuracy: <3 m, 3-5 m, 5-15 m, >15 m

2 WATER WELL OWNER: Ryan Patton
 RR#, Street Address, Box #: 1974 260th St
 City, State, ZIP Code : Hiawatha, KS 66434

3 LOCATE WELL WITH AN "X" IN SECTION BOX:
 N
 --NW-- --NE--
 W X | | E
 --SW-- --SE--
 S
 |-----| mile-----|

4 DEPTH OF COMPLETED WELL 89..... ft.
 Depth(s) Groundwater Encountered (1).43..... ft. (2)..... ft. (3)..... ft.
 WELL'S STATIC WATER LEVEL.43..... ft. below land surface measured on mo/day/yr.....
 Pump test data: Well water was.....ft. after..... hours pumping..... gpm
 EST. YIELD.75.....gpm. Well water was.....ft. after..... hours pumping..... gpm
 Bore Hole Diameter 14.....in. to .89.....ft., andin. toft.
 WELL WATER TO BE USED AS: Public water supply Geothermal Injection well
 Domestic Feedlot Oil field water supply Dewatering Other (Specify below)
 Irrigation Industrial Domestic-lawn & garden Monitoring well
 Was a chemical/bacteriological sample submitted to Department? Yes No
 If yes, mo/day/yr sample was submitted.....
 Water well disinfected? Yes No

5 TYPE OF CASING USED: Steel PVC Other
 CASING JOINTS: Glued Clamped Welded Threaded
 Casing diameter .8..... in. to .89..... ft., Diameter in. to ft.
 Casing height above land surface.24..... in., Weight 7.07.....lbs./ft., Wall thickness or gauge No. .0.41".....
 TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel PVC Other (Specify)
 Brass Galvanized Steel None used (open hole)
 SCREEN OR PERFORATION OPENINGS ARE:
 Continuous slot Mill slot Gauze wrapped Torch cut Drilled holes None (open hole)
 Louvered shutter Key punched Wire wrapped Saw cut Other (specify)
 SCREEN-PERFORATED INTERVALS: From .69..... ft. to .89..... ft., From ft. to ft.
 From ft. to ft., From ft. to ft.
 GRAVEL PACK INTERVALS: From .25..... ft. to .89..... ft., From ft. to ft.
 From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: Neat cement Cement grout Bentonite Other
 Grout Intervals: From .5..... ft. to .25..... ft., From ft. to ft., From ft. to ft.
 What is the nearest source of possible contamination:
 Septic tank Lateral lines Pit privy Livestock pens Insecticide storage Other (specify below)
 Sewer lines Cesspool Sewage lagoon Fuel storage Abandoned water well
 Watertight sewer lines Seepage pit Feedyard Fertilizer storage Oil well/gas well Road.....
 Direction from well West..... Distance from well .40'.....

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	4	no sample			
4	11	clay silty brown			
11	21	clay sandy brown			
21	30	clay gray			
30	43	clay sandy brown			
43	83	sand VF brown			
83	88	gravel			
88	89	shale olive			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo/day/year) .05/06/2011.... and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. .779..... This Water Well Record was completed on (mo/day/year) .05/23/2011..... under the business name of .Drill-Well, LLC..... by (signature).....

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St, Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of \$5.00 for each constructed well. Visit us at <http://www.kdheks.gov/waterwell/index.html>.



WATER WELL RECORD Form WWC-5 1201684

Division of Water Resources App. No.

[]

Hiawatha 5"

[x] Original Record [] Correction [] Change in Well Use

Well ID

1 LOCATION OF WATER WELL: County: Brown Fraction 1/4 1/4 1/4 Section Number 5 Township Number T 2 S Range Number R 18 [x] E [] W

2 WELL OWNER: Last Name: City of Hiawatha First: Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): If at owner's address, check here: [] from intersection of 270th and Prairie Rd, travel 1/4 mi north. Well is on east side of road.

3 LOCATE WELL WITH "X" IN SECTION BOX: N W E S [] 1 mile [] 4 DEPTH OF COMPLETED WELL: 104 ft. Depth(s) Groundwater Encountered: 1) 51 ft. 2) 29.8 ft. or 4) [] Dry Well WELL'S STATIC WATER LEVEL: 29.8 ft. [x] below land surface, measured on (mo-day-yr) 04/04/2014 [] above land surface, measured on (mo-day-yr) Pump test data: Well water was ... ft. after ... hours pumping ... gpm Well water was ... ft. after ... hours pumping ... gpm Estimated Yield: ... gpm Bore Hole Diameter: 9.5 in. to 104 ft. and ... in. to ... ft. 5 Latitude: 39.9030800 (decimal degrees) Longitude: 95.4339330 (decimal degrees) Datum: [] WGS 84 [x] NAD 83 [] NAD 27 Source for Latitude/Longitude: [x] GPS (unit make/model: Garmin (WAAS enabled? [] Yes [x] No) [] Land Survey [] Topographic Map [] Online Mapper: 6 Elevation: 1011 ft. [x] Ground Level [] TOC Source: [] Land Survey [] GPS [] Topographic Map [x] Other KOLAR

7 WELL WATER TO BE USED AS: 1. Domestic: [] Household [] Lawn & Garden [] Livestock 2. [] Irrigation 3. [] Feedlot 4. [] Industrial 5. [] Public Water Supply: well ID 6. [] Dewatering: how many wells? 7. [] Aquifer Recharge: well ID 8. [] Monitoring: well ID 9. Environmental Remediation: well ID [] Air Sparge [] Soil Vapor Extraction [] Recovery [] Injection 10. [] Oil Field Water Supply: lease 11. Test Hole: well ID Hiawatha 5" Well 14-02 [x] Cased [] Uncased [] Geotechnical 12. Geothermal: how many bores? a) Closed Loop [] Horizontal [] Vertical b) Open Loop [] Surface Discharge [] Inj. of Water 13. [] Other (specify):

Was a chemical/bacteriological sample submitted to KDHE? [] Yes [x] No If yes, date sample was submitted: Water well disinfected? [x] Yes [] No

8 TYPE OF CASING USED: [] Steel [x] PVC [] Other CASING JOINTS: [x] Glued [] Clamped [] Welded [] Threaded Casing diameter 5 in. to 104 ft., Diameter in. to ft., Diameter in. to ft. Casing height above land surface 30 in. Weight lbs./ft. Wall thickness or gauge No. SDR21 TYPE OF SCREEN OR PERFORATION MATERIAL: [] Steel [] Stainless Steel [] Fiberglass [x] PVC [] Other (Specify) [] Brass [] Galvanized Steel [] Concrete tile [] None used (open hole) SCREEN OR PERFORATION OPENINGS ARE: [] Continuous Slot [x] Mill Slot [] Gauze Wrapped [] Torch Cut [] Drilled Holes [] Other (Specify) [] Louvered Shutter [] Key Punched [] Wire Wrapped [] Saw Cut [] None (Open Hole) SCREEN-PERFORATED INTERVALS: From 94 ft. to 104 ft., From ft. to ft., From ft. to ft. GRAVEL PACK INTERVALS: From 51 ft. to 104 ft., From ft. to ft., From ft. to ft.

9 GROUT MATERIAL: [] Neat cement [] Cement grout [x] Bentonite [] Other Grout Intervals: From 5 ft. to 51 ft., From ft. to ft., From ft. to ft. Nearest source of possible contamination: [] Septic Tank [] Lateral Lines [] Pit Privy [] Livestock Pens [] Insecticide Storage [] Sewer Lines [] Cess Pool [] Sewage Lagoon [] Fuel Storage [] Abandoned Water Well [] Watertight Sewer Lines [] Seepage Pit [] Feedyard [] Fertilizer Storage [] Oil Well/Gas Well [] Other (Specify) Direction from well? Distance from well? ft.

Table with 6 columns: 10 FROM, TO, LITHOLOGIC LOG, FROM, TO, LITHO. LOG (cont.) or PLUGGING INTERVALS. Rows include: 0-5 no sample, 5-10 silty clay brown, 10-15 silty clay yellowish brown, 15-27 silty clay grayish brown, 27-51 silty clay gray, 51-60 sand F-M brown, 60-89 sand F brown, 89-104 sand F-M brown, 104 limestone. Notes: []

11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was [x] constructed, [] reconstructed, or [] plugged under my jurisdiction and was completed on (mo-day-year) 03/14/2014 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 779 This Water Well Record was completed on (mo-day-year) 04/25/2014 under the business name of Drill-Well, LLC



EW-11

WATER WELL RECORD Form WWC-5 1201687

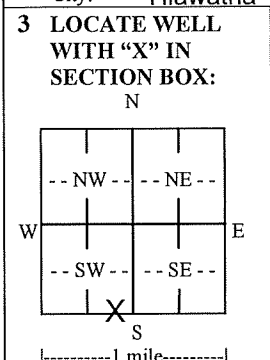
Division of Water Resources App. No.

Well ID Hiawatha 5" \

Original Record Correction Change in Well Use

1 LOCATION OF WATER WELL: County: Brown	Fraction SW 1/4 SE 1/4 SE 1/4 SW 1/4	Section Number 5	Township Number T 2 S	Range Number R 18 <input checked="" type="checkbox"/> E <input type="checkbox"/> W
---	---	---------------------	--------------------------	---

2 WELL OWNER: Last Name: City of Hiawatha Business: City of Hiawatha Address: 701 Oregon St Address: City: Hiawatha State: KS ZIP: 66434	Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): If at owner's address, check here: <input type="checkbox"/> Starting at the intersection of 270th and Prairie Rd, travel 1/2 mi east. Well is on north side of road.
---	---



4 DEPTH OF COMPLETED WELL: 101 ft.
 Depth(s) Groundwater Encountered: 1) 26 ft.
 2) ft. 3) ft., or 4) Dry Well
WELL'S STATIC WATER LEVEL: 14.25 ft.
 below land surface, measured on (mo-day-yr) 03/14/2014
 above land surface, measured on (mo-day-yr)
 Pump test data: Well water was ft.
 after hours pumping gpm
 Well water was ft.
 after hours pumping gpm
 Estimated Yield: gpm
 Bore Hole Diameter: 9.5 in. to 101 ft. and
 in. to ft.

5 Latitude: 39.8998630 (decimal degrees)
Longitude: 95.4257750 (decimal degrees)
 Datum: WGS 84 NAD 83 NAD 27
Source for Latitude/Longitude:
 GPS (unit make/model: Garmin (WAAS enabled? Yes No)
 Land Survey Topographic Map
 Online Mapper:

6 Elevation: 989 ft. Ground Level TOC
Source: Land Survey GPS Topographic Map
 Other KOLAR

7 WELL WATER TO BE USED AS:

1. Domestic: <input type="checkbox"/> Household <input type="checkbox"/> Lawn & Garden <input type="checkbox"/> Livestock	5. <input type="checkbox"/> Public Water Supply: well ID	10. <input type="checkbox"/> Oil Field Water Supply: lease
2. <input type="checkbox"/> Irrigation	6. <input type="checkbox"/> Dewatering: how many wells?	11. Test Hole: well ID Hiawatha 5" Well 14-0-1 <input checked="" type="checkbox"/> Cased <input type="checkbox"/> Uncased <input type="checkbox"/> Geotechnical
3. <input type="checkbox"/> Feedlot	7. <input type="checkbox"/> Aquifer Recharge: well ID	12. Geothermal: how many bores?
4. <input type="checkbox"/> Industrial	8. <input type="checkbox"/> Monitoring: well ID	a) Closed Loop <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical
	9. Environmental Remediation: well ID	b) Open Loop <input type="checkbox"/> Surface Discharge <input type="checkbox"/> Inj. of Water
	<input type="checkbox"/> Air Sparge <input type="checkbox"/> Soil Vapor Extraction	13. <input type="checkbox"/> Other (specify):
	<input type="checkbox"/> Recovery <input type="checkbox"/> Injection	

Was a chemical/bacteriological sample submitted to KDHE? Yes No If yes, date sample was submitted:

Water well disinfected? Yes No

8 TYPE OF CASING USED: Steel PVC Other **CASING JOINTS:** Glued Clamped Welded Threaded
 Casing diameter 5 in. to 101 ft., Diameter in. to ft., Diameter in. to ft.
 Casing height above land surface 30 in. Weight lbs./ft. Wall thickness or gauge No. SDR21

TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel Fiberglass PVC Other (Specify)

SCREEN OR PERFORATION OPENINGS ARE:
 Continuous Slot Mill Slot Gauze Wrapped Torch Cut Drilled Holes Other (Specify)

SCREEN-PERFORATED INTERVALS: From 91 ft. to 101 ft., From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From 54 ft. to 101 ft., From ft. to ft., From ft. to ft.

9 GROUT MATERIAL: Neat cement Cement grout Bentonite Other
 Grout Intervals: From 5 ft. to 54 ft., From ft. to ft., From ft. to ft.

Nearest source of possible contamination:
 Septic Tank Lateral Lines Pit Privy Livestock Pens Insecticide Storage
 Sewer Lines Cess Pool Sewage Lagoon Fuel Storage Abandoned Water Well
 Watertight Sewer Lines Seepage Pit Feedyard Fertilizer Storage Oil Well/Gas Well
 Other (Specify)

Direction from well? Distance from well? ft.

10 FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	5	no sample	61	65	sandy clay gray
5	10	silty clay dark brown	65	75	sand F brown
10	22	silty clay brown	75	80	sand F-M brown with some clay
22	26	sandy clay light gray	80	82	sandy clay gray
26	28	sand sand C-VC	82	100	sand VF-F brown
28	42	sandy clay brown	100	101	shale
42	46	silty clay brown & gray	Notes:		
46	54	sandy clay light gray			
54	61	sand VF-F brown			

11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo-day-year) 03/13/2014 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 779 This Water Well Record was completed on (mo-day-year) 04/25/2014 under the business name of Drill-Well, LLC

WATER WELL RECORD

Form WWC-5

Division of Water Resources App. No.

1 LOCATION OF WATER WELL: County: Brown	Fraction SW ¼ SW ¼ SW ¼ SW ¼	Section Number 4	Township No. T 2 S	Range Number R 18 <input checked="" type="checkbox"/> E <input type="checkbox"/> W
Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here <input type="checkbox"/> NE corner of 270th & Raccoon Rd.		Global Positioning System (GPS) information: Latitude: .39.90014..... (in decimal degrees) Longitude: -95.41510..... (in decimal degrees) Elevation: 995..... Datum: <input type="checkbox"/> WGS 84, <input checked="" type="checkbox"/> NAD 83, <input type="checkbox"/> NAD 27 Collection Method: <input checked="" type="checkbox"/> GPS unit (Make/Model: <u>Garmin 12xl</u>) <input type="checkbox"/> Digital Map/Photo, <input type="checkbox"/> Topographic Map, <input type="checkbox"/> Land Survey Est. Accuracy: <input type="checkbox"/> <3 m, <input checked="" type="checkbox"/> 3-5 m, <input type="checkbox"/> 5-15 m, <input type="checkbox"/> >15 m		
2 WATER WELL OWNER: City of Hiawatha RR#, Street Address, Box #: 701 Oregon St. City, State, ZIP Code : Hiawatha, KS 66434				

3 LOCATE WELL WITH AN "X" IN SECTION BOX: N <table style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;">NW</td> <td style="border: 1px solid black; width: 25px; height: 25px;">NE</td> </tr> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;">SW</td> <td style="border: 1px solid black; width: 25px; height: 25px;">SE</td> </tr> </table> S -----1 mile-----	NW	NE	SW	SE	4 DEPTH OF COMPLETED WELL 103..... ft. Depth(s) Groundwater Encountered (1) 27..... ft. (2)..... ft. (3)..... ft. WELL'S STATIC WATER LEVEL 28.8.....ft. below land surface measured on mo/day/yr. 03/16/2011.... 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 6.....in. to 105.....ft., and.....in. to.....ft. WELL WATER TO BE USED AS: <input type="checkbox"/> Public water supply <input type="checkbox"/> Geothermal <input type="checkbox"/> Injection well <input type="checkbox"/> Domestic <input type="checkbox"/> Feedlot <input type="checkbox"/> Oil field water supply <input type="checkbox"/> Dewatering <input type="checkbox"/> Other (Specify below) <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Domestic-lawn & garden <input checked="" type="checkbox"/> Monitoring well Was a chemical/bacteriological sample submitted to Department? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, mo/day/yr sample was submitted..... Water well disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
NW	NE				
SW	SE				

5 TYPE OF CASING USED: Steel PVC Other

CASING JOINTS: Glued Clamped Welded Threaded

Casing diameter 2..... in. to 103..... ft., Diameter in. to ft., Diameter in. to ft.
 Casing height above land surface 24..... in., Weightlbs./ft., Wall thickness or gauge No. SDR21.....

TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel PVC Other (Specify)
 Brass Galvanized Steel None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:
 Continuous slot Mill slot Gauze wrapped Torch cut Drilled holes None (open hole)
 Louvered shutter Key punched Wire wrapped Saw cut Other (specify)

SCREEN-PERFORATED INTERVALS: From 93..... ft. to 103..... ft., From ft. to ft.
 From ft. to ft., From ft. to ft.

GRAVEL PACK INTERVALS: From 50..... ft. to 103..... ft., From ft. to ft.
 From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: Neat cement Cement grout Bentonite Other

Grout Intervals: From 5..... ft. to 50..... ft., From ft. to ft., From ft. to ft.

What is the nearest source of possible contamination:
 Septic tank Lateral lines Pit privy Livestock pens Insecticide storage Other (specify below)
 Sewer lines Cesspool Sewage lagoon Fuel storage Abandoned water well Road
 Watertight sewer lines Seepage pit Feedyard Fertilizer storage Oil well/gas well

Direction from well West..... Distance from well 5'

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	4	no sample			
4	27	clay sandy brown			
27	86	sand F-M brown with some intermittent clay			
86	90	gravel with some clay			
90	102	sand & gravel brown			
102	105	shale light gray			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo/day/year) 03/11/2011.... and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 779..... This Water Well Record was completed on (mo/day/year) 06/21/2011..... under the business name of Drill-Well, LLC..... by (signature) *[Signature]*

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of \$5.00 for each constructed well. Visit us at <http://www.kdheks.gov/waterwell/index.html>.

File Nos. 50,509 & 50,686

Report Date: Tuesday, November 1 2022

The proposed point of diversion (geocenter) is approximately 3,000 feet from the nearest domestic well. The proposed appropriation meets well spacing criteria, per K.A.R. 5-4-4.

2374 Feet N and 1396 Feet W of the Southeast Corner of Section 2 Twp 2S Rng 17E
Located at: 95.475725 West Longitude and 39.906117 North Latitude

Both SURFACE WATER and GROUNDWATER

File Number	Use	ST	SR	Dist (ft)	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Twp	Rng	ID	Batt	Auth	Quan	Add	Quan
A 46050	00	SED	NK	S	9832	--	SE	NW	NE	4461	1729	13	2	17E	1		.00		.00
***** Authorized storage = 10.33 AF Additional storage = 0.00 AF AF																			
A 46707	00	IRR	NK	G	5858	--	NE	NW	SE	2599	1993	3	2	17E	4	B2	101.00		101.00
Same	Same	Same	Same	Same	6154	--	NW	NW	SE	2599	2289	3	2	17E	7	G2			
Same	Same	Same	Same	Same	6449	--	NW	NW	SE	2598	2585	3	2	17E	3	B2			
A 46708	00	IRR	NK	G	9122	--	SW	SW	NW	2890	5247	3	2	17E	12		197.00		197.00
A 47382	00	IRR	LR	G	5851	--	SE	SE	NW	2700	3208	35	1	17E	13	B3	160.00		160.00
Same	Same	Same	Same	Same	5947	--	SW	SE	NW	2682	3548	35	1	17E	16	G3			
Same	Same	Same	Same	Same	5972	--	SW	SE	NW	2674	3634	35	1	17E	17	B3			
Same	Same	Same	Same	Same	6033	--	SW	SE	NW	2671	3802	35	1	17E	14	B3			
A 47383	00	IRR	NK	G	4573	--	SW	NW	SE	1542	2621	35	1	17E	11	B2	76.00		76.00
A 47392	00	MUN	LO	G	4725	--	SW	NW	SE	1697	2627	35	1	17E	9	G2			
Same	Same	Same	Same	Same	4875	--	SW	NW	SE	1851	2633	35	1	17E	10	B2			
A 47392	00	MUN	LO	G	3646	--	NW	NW	SW	2328	5043	2	2	17E	6	B3	620.00		620.00
A 48616	00	IRR	LR	G	3739	--	NW	NW	SW	2344	5135	2	2	17E	3	G3			
Same	Same	Same	Same	Same	3792	--	NW	NW	SW	2441	5189	2	2	17E	4	B3			
Same	Same	Same	Same	Same	3798	--	NW	NW	SW	2217	5191	2	2	17E	5	B3			
A 50150	00	IRR	LR	G	6781	--	SW	SW	NW	2718	5253	35	1	17E	1		400.00		240.00
A 50150	00	IRR	HK	G	4466	--	NW	SE	SW	830	3912	35	1	17E	19	B4	50.00		50.00

PWWS D # 27



 THE STATE OF KANSAS

KANSAS DEPARTMENT OF AGRICULTURE
 Mike Beam, Secretary of Agriculture

DIVISION OF WATER RESOURCES
 Earl D. Lewis Jr., Chief Engineer

APPROVAL OF APPLICATION
and
PERMIT TO PROCEED
 (This Is Not a Certificate of Appropriation)

This is to certify that I have examined Application, **File No. 50,686** of the applicant

PRECISION FARMS
2595 GOLDFINCH RD
HIAWATHA KS 66434

for a permit to appropriate water for beneficial use, together with the maps, plans and other submitted data, and that the application is hereby approved and the applicant is hereby authorized, subject to vested rights and prior appropriations, to proceed with the construction of the proposed diversion works (except those dams and stream obstructions regulated by K.S.A. 82a-301 through 305a, as amended), and to proceed with all steps necessary for the application of the water to the approved and proposed beneficial use and otherwise perfect the proposed appropriation subject to the following terms, conditions and limitations:

1. That the priority date assigned to such application is **December 8, 2021**.
2. That the water sought to be appropriated shall be used for irrigation use on land described in the application, as follows:

Sec. Twp. Range	NE¼				NW¼				SW¼				SE¼				TOTAL
	NE¼	NW¼	W¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
2 - 2S - 17E													40	40	37	40	157

3. That the authorized source from which the appropriation shall be made is groundwater, to be withdrawn by means of a battery of two (2) wells with a geographic center located in the Northeast Quarter of the Northwest Quarter of the Southeast Quarter (NE¼ NW¼ SE¼) of Section 2, more particularly described as being near a point 2,374 feet North and 1,396 feet West of the Southeast corner of said section, in Township 2 South, Range 17 East, Brown County, Kansas, located substantially as shown on the map accompanying the application.

4. That the appropriation sought shall be limited to a maximum diversion rate not in excess of **800 gallons per minute (1.78 c.f.s.)** and to a quantity **not to exceed 157 acre-feet** of water for any calendar year.

5. That installation of works for diversion of water shall be completed on or before **December 31, 2024**, or within any authorized extension thereof. The applicant shall notify the Chief Engineer and pay the statutorily required field inspection fee of \$400.00 when construction of the works has been completed. Failure to timely submit the notice and the fee will result in revocation of the permit. Any request for an extension of time shall be submitted prior to the expiration of the deadline and shall be accompanied by the required statutory fee of \$100.00.

6. That the proposed appropriation shall be perfected by the actual application of water to the proposed beneficial use on or before **December 31, 2028**, or any authorized extension thereof. Any request for an extension of time shall be submitted prior to the expiration of the deadline and shall be accompanied by the required statutory fee of \$100.00.

7. That the applicant shall not be deemed to have acquired a water appropriation for a quantity in excess of the amount approved herein nor in excess of the amount found by the Chief Engineer to have been actually used for the approved purpose during one calendar year subsequent to approval of the application and within the time specified for perfection or any authorized extension thereof.

8. That the use of water herein authorized shall not be made so as to impair any use under existing water rights nor prejudicially and unreasonably affect the public interest.

9. That the right of the appropriator shall relate to a specific quantity of water and such right must allow for a reasonable raising or lowering of the static water level and for the reasonable increase or decrease of the streamflow at the appropriator's point of diversion.

10. That this permit does not constitute authority under K.S.A. 82a-301 through 305a to construct any dam or other obstruction; nor does it grant any right-of-way, or authorize entry upon or injury to, public or private property.

11. That all diversion works constructed under the authority of this permit into which any type of chemical or other foreign substance will be injected into the water pumped from the diversion works shall be equipped with an in-line, automatic quick-closing, check valve capable of preventing pollution of the source of the water supply. The type of valve installed shall meet specifications adopted by the Chief Engineer and shall be maintained in an operating condition satisfactory to the Chief Engineer.

12. That all wells with a diversion rate of 100 gallons per minute or more drilled under the authority of this permit shall have a tube or other device installed in a manner acceptable to, and in accordance with specifications adopted by, the Chief Engineer. This tube or device shall be suitable for making water level measurements and shall be maintained in a condition satisfactory to the Chief Engineer.

13. That an acceptable water flow meter shall be installed and maintained on the diversion works authorized by this permit in accordance with Kansas Administrative Regulations 5-1-4 through 5-1-12 adopted by the Chief Engineer. This water flow meter shall be used to provide an accurate quantity of water diverted as required for the annual water use report (including the meter reading at the beginning and end of the report year).

14. That the applicant shall maintain accurate and complete records from which the quantity of water diverted during each calendar year may be readily determined and the applicant shall file an annual water use report with the Chief Engineer by March 1 following the end of each calendar year. Failure to file the annual water use report by the due date shall cause the applicant to be subject to a civil penalty.

15. That no water user shall engage in nor allow the waste of any water diverted under the authority of this permit.

16. That the right to appropriate water under authority of this permit is subject to any minimum desirable streamflow requirements identified and established pursuant to K.S.A. 82a-703c for the source of supply to which this water right applies.

17. That the rate of diversion approved under this permit is further limited to the rate, which combined with Appropriation of Water, File No. 50,509, will provide a **total not in excess of 800 gallons per minute** (1.78 c.f.s) from the point of diversion described herein.

18. That failure without cause to comply with provisions of the permit and its terms, conditions and limitations will result in the forfeiture of the priority date, revocation of the permit and dismissal of the application.

Ordered this 27 day of December, 2022, in Manhattan, Riley County, Kansas.

Lane P. Letourneau

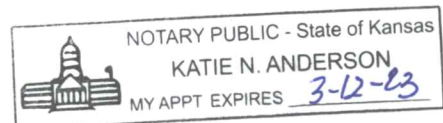
Lane P. Letourneau, P.G.
Water Appropriation Program Manager
Division of Water Resources
Kansas Department of Agriculture

State of Kansas)
) SS
County of Riley)

The foregoing instrument was acknowledged before me this 27 day of December, 2022, by Lane P. Letourneau, P.G., Water Appropriation Program Manager, Division of Water Resources, Kansas Department of Agriculture.

Katie N Anderson

Notary Public



1320 Research Park Drive
Manhattan, KS 66502
785-564-6700
www.agriculture.ks.gov



900 SW Jackson, Room 456
Topeka, KS 66612
785-296-3556

Mike Beam, Secretary

Laura Kelly, Governor

January 9, 2023

PRECISION FARMS
2595 GOLDFINCH RD
HIAWATHA KS 66434

RE: Appropriation of Water
File No. 50,686

Dear Sir or Madam:

Enclosed is a permit authorizing you to proceed with construction of the proposed diversion works and to appropriate water for beneficial use as set forth in the permit. Your attention is directed to the enclosures and to the terms, conditions, limitations, and requirements specified in this permit.

Notice must be filed on the enclosed form once the diversion works have been completed. Failure to complete the diversion works within the time allowed, or within any authorized extension of time thereof, will result in dismissal of this permit. If you need an extension of time, you must request it before the deadline for completion set forth in the permit. Any request for an extension of time must be accompanied by the statutorily required fee, which is currently \$100.00.

An acceptable water flowmeter must be installed on the diversion works authorized by this permit prior to using water. An annual water use report must be filed with the Chief Engineer by March 1, following the end of each calendar year. If a complete annual water use report is not received by the deadline, then a fine may be assessed and all water use under such permit or right may be suspended. Reports submitted in paper form will be assessed a \$20 per file number paper filing fee. In order to avoid this filing fee, you may submit your report online at www.kswaterusereport.org.

The approval of your application constitutes a permit to appropriate water. It does not give authority to construct any dam or other stream obstruction regulated by K.S.A. 82a-301 through 305a. It does not give authority to access any right-of-way or authorize trespassing upon or injury to public or private property. It may also be necessary for you to comply with other local, state or federal requirements.

Enclosed is an informational sheet that sets forth the procedure to obtain a Certificate of Appropriation which will establish the extent of your perfected water right. Additional information and applicable forms may be found on our website at agriculture.ks.gov/dwr. If you have any questions or need assistance with any of these requirements, please contact our office at 785-564-6640 or your local Topeka Field Office at 785-296-5733. If you call, please reference the file number so we can help you more efficiently.

Sincerely,

Kristen A. Baum
New Application Unit Supervisor
Division of Water Resources

KAB:lh
Enclosure(s)

pc: G & O INC
Topeka Field Office

RIGHT TO A HEARING AND TO ADMINISTRATIVE REVIEW

If you are aggrieved by this Order, then pursuant to K.S.A. 82a-1901, you may request an evidentiary hearing before the Chief Engineer, or request administrative review by the Secretary of Agriculture. Failure to request an evidentiary hearing before the Chief Engineer does not preclude your right to administrative review by the Secretary.

To obtain an evidentiary hearing before the Chief Engineer, a written request for hearing must be filed within 15 days after service of this Order as provided in K.S.A. 77-531 (**i.e., within a total of 18 days after this Order was mailed to you**), with: Kansas Department of Agriculture, Attn: Legal Division, 1320 Research Park Drive, Manhattan, Kansas 66502, FAX (785) 564-6777.

If you do not file a request for an evidentiary hearing before the Chief Engineer, you may petition for administrative review of the Order by the Secretary of Agriculture. A petition for review shall be in writing and state the basis for requesting administrative review. The request for review may be denied if the request fails to clearly establish factual or legal issues for review. See K.S.A. 77-527. The petition must be filed within 30 days after service of this Order as provided in K.S.A. 77-531 (**i.e., within a total of 33 days after this Order was mailed to you**), and be filed with: Secretary of Agriculture, Attn: Legal Division, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502, FAX (785) 564-6777.

If neither a request for an evidentiary hearing nor a petition for administrative review is filed as set forth above, then this Order shall be effective and become a final agency action as defined in K.S.A. 77-607(b). Failure to timely request either an evidentiary hearing or administrative review may preclude further judicial review under the Kansas Judicial Review Act.

CERTIFICATE OF SERVICE

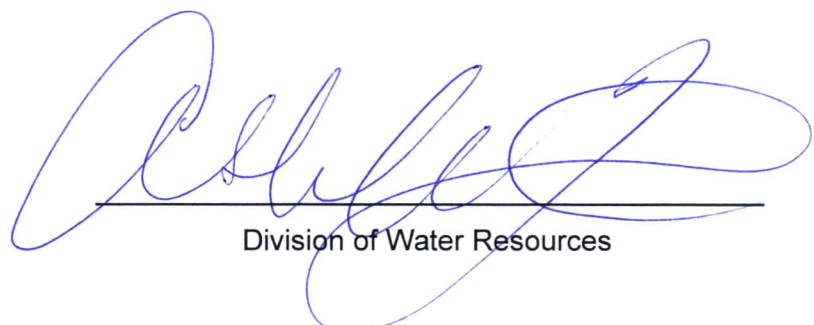
On this 9 day of January, 2022, I hereby certify that the foregoing Approval of Application and Permit to Proceed, File No. 50,686, dated 27 December 2022 was mailed postage prepaid, first class, US mail to the following:

PRECISION FARMS
2595 GOLDFINCH RD
HIAWATHA KS 66434

With photocopies to:

G & O INC
112 S 7TH ST
HIAWATHA KS 66434

Topeka Field Office



Division of Water Resources