

**WATER WELL RECORD Form WWC-5**

Division of Water Resources App. No.

Well ID MW4

Original Record  Correction  Change in Well Use

<b>1 LOCATION OF WATER WELL:</b> County: Gove	Fraction SE ¼ SE ¼ SE ¼ SE ¼	Section Number 3	Township Number T 11 S	Range Number R 30 <input type="checkbox"/> E <input checked="" type="checkbox"/> W
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<b>2 WELL OWNER:</b> Last Name: First: Business: Frontier Aq., Inc. Address: PO Box 248, 415 W. 2nd Address: City: Oakley State: KS ZIP: 67748	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"/> 100 Railroad Ave., Grinnell, KS
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**3 LOCATE WELL WITH "X" IN SECTION BOX:**  
N

NW	NE
SW	SE

S  
----- 1 mile -----

**4 DEPTH OF COMPLETED WELL:** ...113.5... ft.  
Depth(s) Groundwater Encountered: 1) ..... ft.  
2) ..... ft. 3) ..... ft. or 4)  Dry Well  
WELL'S STATIC WATER LEVEL: ..... 99.0 ..... ft.  
 below land surface, measured on (mo-day-yr) 9/15-16/15  
 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: ..... in. to ..... ft. and  
..... in. to ..... ft.

**5 Latitude:** ..... 39.11931 .....(decimal degrees)  
**Longitude:** ..... 100.62823 .....(decimal degrees)  
**Horizontal Datum:**  WGS 84  NAD 83  NAD 27  
**Source for Latitude/Longitude:**  
 GPS (unit make/model: .....)  
(WAAS enabled?  Yes  No)  
 Land Survey  Topographic Map  
 Online Mapper: .....

**6 Elevation:** ..... 2905.99 .....ft.  Ground Level  TOC  
**Source:**  Land Survey  GPS  Topographic Map  
 Other .....

**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 .....
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 checked="" type="checkbox"/> Monitoring: well ID MW4	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 ..... 4 ..... in. to ..... 83.5 ..... ft., Diameter ..... in. to ..... ft., Diameter ..... in. to ..... ft.  
Casing height above land surface ..... -0.23 ..... in. Weight ..... lbs./ft. Wall thickness or gauge No. ....

**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 ..... 83.5 ..... ft. to ..... 113.5 ..... ft., From ..... ft. to ..... ft., From ..... ft. to ..... ft.  
**GRAVEL PACK INTERVALS:** From ..... 80 ..... ft. to ..... 113.8 ..... ft., From ..... ft. to ..... ft., From ..... ft. to ..... ft.

**9 GROUT MATERIAL:**  Neat cement  Cement grout  Bentonite  Other Concrete: 0-1'  
Grout Intervals: From ..... 1 ..... ft. to ..... 80 ..... 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? E ..... Distance from well? ~130' .....

10 FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	0.5	Gravel			
0.5	5	Silty clay			
5	30	Silt			
30	45	Silt w/ sand, & clay			
45	70	Sand, fine to coarse			
70	80	Silty gravel			
80	90	Sand, silt, gravel			
90	100	Silty clay w/ sand			
100	113.8	Chalk w/ sand & some silt			

**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) 6/10/15 ..... and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 757 ..... This Water Well Record was completed on (mo-day-year) 10/7/15 ..... under the business name of Larsen & Associates, Inc. .... Signature .....

**WATER WELL RECORD Form WWC-5**

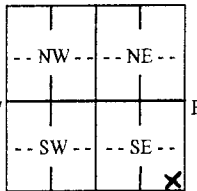
Division of Water Resources App. No.  

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<b>2 WELL OWNER:</b> Last Name: First: Business: Frontier Ad., Inc. Address: PO Box 248, 415 W. 2nd Address: City: Oakley State: KS ZIP: 67748	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"/> 100 Railroad Ave., Grinnell, KS
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<b>3 LOCATE WELL WITH "X" IN SECTION BOX:</b> N  W E S 1 mile	<b>4 DEPTH OF COMPLETED WELL:</b> 113.5 ft. Depth(s) Groundwater Encountered: 1) ..... ft. 2) ..... ft. 3) ..... ft., or 4) <input type="checkbox"/> Dry Well <b>WELL'S STATIC WATER LEVEL:</b> 99.0 ft. <input checked="" type="checkbox"/> below land surface, measured on (mo-day-yr) 9/15-16/15 <input type="checkbox"/> 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: ..... in. to ..... ft. and ..... in. to ..... ft.	<b>5 Latitude:</b> 39.11931 (decimal degrees) <b>Longitude:</b> 100.62823 (decimal degrees) Horizontal Datum: <input checked="" type="checkbox"/> WGS 84 <input type="checkbox"/> NAD 83 <input type="checkbox"/> NAD 27 Source for Latitude/Longitude: <input type="checkbox"/> GPS (unit make/model: .....) (WAAS enabled? <input type="checkbox"/> Yes <input type="checkbox"/> No) <input checked="" type="checkbox"/> Land Survey <input type="checkbox"/> Topographic Map <input type="checkbox"/> Online Mapper: .....  <b>6 Elevation:</b> 2905.9971 ft. <input type="checkbox"/> Ground Level <input checked="" type="checkbox"/> TOC Source: <input checked="" type="checkbox"/> Land Survey <input type="checkbox"/> GPS <input type="checkbox"/> Topographic Map <input type="checkbox"/> Other .....
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**7 WELL WATER TO BE USED AS:**

1. Domestic: <input type="checkbox"/> Household <input type="checkbox"/> Lawn & Garden <input type="checkbox"/> Livestock 2. <input type="checkbox"/> Irrigation 3. <input type="checkbox"/> Feedlot 4. <input type="checkbox"/> Industrial	5. <input type="checkbox"/> Public Water Supply: well ID ..... 6. <input type="checkbox"/> Dewatering: how many wells? ..... 7. <input type="checkbox"/> Aquifer Recharge: well ID ..... 8. <input checked="" type="checkbox"/> Monitoring: well ID MW4 9. Environmental Remediation: well ID ..... <input type="checkbox"/> Air Sparge <input type="checkbox"/> Soil Vapor Extraction <input type="checkbox"/> Recovery <input type="checkbox"/> Injection	10. <input type="checkbox"/> Oil Field Water Supply: lease ..... 11. Test Hole: well ID ..... <input type="checkbox"/> Cased <input type="checkbox"/> Uncased <input type="checkbox"/> Geotechnical 12. Geothermal: how many bores? ..... a) Closed Loop <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical b) Open Loop <input type="checkbox"/> Surface Discharge <input type="checkbox"/> Inj. of Water 13. <input type="checkbox"/> Other (specify): .....
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**8 TYPE OF CASING USED:**  Steel  PVC  Other ..... CASING JOINTS:  Glued  Clamped  Welded  Threaded

Casing diameter 4 in. to 83.5 ft., Diameter ..... in. to ..... ft., Diameter ..... in. to ..... ft.  
 Casing height above land surface 0.23 in. Weight ..... lbs./ft. Wall thickness or gauge No. ....

**TYPE OF SCREEN OR PERFORATION MATERIAL:**  
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 Watertight Sewer Lines  Seepage Pit  Feedyard  Fertilizer Storage  Oil Well/Gas Well  
 Other (Specify) .....

Direction from well? E Distance from well? ~130' ft.

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70	80	Silty gravel			
80	90	Sand, silt, gravel			
90	100	Silty clay w/ sand			
100	113.8	Chalk w/ sand & some silt			

**Notes:**  
KDHE ID: Frontier Ag, Inc (Grinnell); U6-032-14725

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# TRITERRA

## LAND SERVICES

P.O. Box 546  
Clearwater, Kansas 67026  
Cell (316) 648-3617 Fax (620) 584-4371  
E-mail: triterrals@yahoo.com

### SURVEYING OF MONITORING WELLS FRONTIER AG, INC. GRINNELL, KANSAS

The above site is in Section 3, Township 11 South, Range 30 West of the Sixth Principal Meridian, Gove County, Kansas. The Southeast corner of Section 3 was assigned coordinates of 00.00 North and 00.00 West.

The vertical control was an NGS benchmark located in the northwest corner of the intersection of Oak Street and Old Hwy 40 and described as a disk set in the top of the west end of a north headwall of a concrete culvert, 17' north of the Hwy centerline and 45' west of the center of Oak Street. A control point was established as a chiseled 'X' on the northwest corner of the Grinnell Community sign base at the southeast corner of the site.

The Latitude and Longitude were recorded from a GPS unit. The site is located on the 7.5' quad map titled "GRINNELL SOUTH".

ID	NORTH	WEST	LATITUDE	LONGITUDE	ELEVATION
SE Corner Sec 3-T11S-R30W	00.00	00.00			
CP	40.46	54.88	39.11895	100.62745	2905.32
MW-1 SE SE SE SE	151.94	48.39	39.11927	100.62743	RIM 2905.34 TOC 2905.05
MW-2 SE SE SE SE	60.05	156.61	39.11901	100.62779	RIM 2905.77 TOC 2905.42
MW-3 SE SE SE SE	81.92	29.13	39.11903	100.62749	RIM 2905.15 TOC 2904.66
MW-4 SE SE SE SE	169.60	272.16	39.11931	100.62823	RIM 2906.22 TOC 2905.99
MW-5 (Sec 2) SW SW SW SW	59.62	-49.39	39.11900	100.62707	RIM 2905.71 TOC 2905.13
MW-6 (Sec 2) SW SW SW SW	177.29	-50.14	39.11934	100.62708	RIM 2905.56 TOC 2905.03
MW-7 SE SE SE SE	181.52	132.74	39.11934	100.62772	RIM 2905.93 TOC 2905.55

