KOLAR Document ID: 1413964

WATER WELL RECORD Form WWC-5

Division of Water Resources App. No. _____ Well ID MMW-13I

☑ Original Record ☐ Correction ☐ Change in Well Use

1 LOCATION OF WATER WELL: County: Riley | Fraction: SE ¼ SE ¼ SW ¼ SW ¼ | Section Number: 18 | Township Number: T 10 S | Range Number: R 8 ☑ E ☐ W

2 WELL OWNER: Last Name: First:
Business: One Gas, Inc.
Address: 15 East Fifth Street
Address:
City: Tulsa State: Oklah ZIP: 74103

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: ☐
515 S. 11th Street
Manhattan, KS

3 LOCATE WELL WITH "X" IN SECTION BOX:

N / W / E / S; NW, NE, SW, SE; X in SW
|----------1 mile---------|

4 DEPTH OF COMPLETED WELL: 50.0 ft.
Depth(s) Groundwater Encountered: 1) 27.0 ft. 2) ……. ft. 3) ……. ft., or 4) ☐ Dry Well
WELL'S STATIC WATER LEVEL: 26.90 ft.
☑ below land surface, measured on (mo-day-yr) 05/17/2018
☐ 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: 8.5 in. to 50.0 ft. and …… in. to ……. ft.

5 Latitude: 39.174569 (decimal degrees)
Longitude: 96.571730 (decimal degrees)
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: Google Earth

6 Elevation: 1020 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
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 MMW-13I
9. Environmental Remediation: well ID …… ☐ Air Sparge ☐ Soil Vapor Extraction ☐ Recovery ☐ Injection
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 2.0 in. to 40.0 ft., Diameter …… in. to …… ft., Diameter …… in. to …… ft.
Casing height above land surface 0 in. Weight …… lbs./ft. Wall thickness or gauge No. Sch.40

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 40.0 ft. to 50.0 ft., From …… ft. to …… ft., From …… ft. to …… ft.
GRAVEL PACK INTERVALS: From 35.0 ft. to 50.0 ft., From …… ft. to …… ft., From …… ft. to …… ft.

9 GROUT MATERIAL: ☐ Neat cement ☑ Cement grout ☑ Bentonite ☑ Other Coated Pellets
Grout Intervals: From 0 ft. to 1.0 ft., From 1.0 ft. to 30.0 ft., From 30.0 ft. to 35.0 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
Attached	Attached	Attached			
			Notes:		

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) 04/06/2018 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 606 This Water Well Record was completed on (mo-day-year) 06/28/2018 under the business name of Dakota Technologies Company, L.L.C.

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

Form	WWC5
Contractor	Dakota Technologies Company, L.L.C.
Well Owner	
Doc ID	1413964

Litholgy

From	To	LithologicLog
0	2.5	Silt, Trace of Clay, Dk Grayish Brown, 10yr,4/2,Clay, Soft, Non Plastic, Roots in top .30'
2.5	7.75	Silt, with Fine Sand, Pale Brn, 10yr,6/3, Dry, Soft, Non Plastic
7.75	11.0	Silt, Some Fine Sand, Light Brownish, Gray,10yr,6/2, Damp, Soft, Non Plastic
11.0	11.75	Clay, Trace silt, Dk Gray,10yr4/1/1/,Damp, Soft To MediumStiffness, Medium Plasticity
11.75	14.0	Clay, Dk Brown, 10yr,3/3, Damp,Medium Stiffness, High Plasticity
14.0	15.0	Silt, Some Fine Sand, Trace Clay,Brown 10yr,5/3, Damp, Medium Stiffness, Non Plastic
15.0	19.5	Clay, With Silt, Dk Grayish Brown, 10yr,4/2,damp, Soft To Medium Stiffness, Trace Plasticity
19.5	20.5	Sand, Very Pale Brn, 10yr,7/4, Damp, Dense, Fine, Poorly Graded, Sub-Angular
20.5	21.5	Silt, Some Clay, Grayish Brn, 10yr, 5/2, Wet, Soft, Non Plastic

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Litholgy

From	To	LithologicLog
21.5	22.0	Sand, With silt, Dk Grayish Brn, 10yr,4/2, With Gray 10yr, 5/1,Bands, Dense, Fine, Poorly Graded, Sub Angular, Moist
22.0	25.5	Sand, Some silt, Pale Brn, 10yr,6/3, Damp, Dense,Fine, Poorly Graded, Sub Angular
25.5	30.0	Sand, Trace silt, Very pale Brn, 10yr,7/3, Damp, Dense, Fine, Medium, Poorly Graded, Sub Angular, Yellow Bands
30.0	31.0	Sand, With Silt, Grayish Brn, 10yr, 5/2, Wet, Dense, Fine, Poorly Graded, Sub Angular
31.0	32.0	Sand, Trace silt, Grayish Brn, 10yr,5/2, Wet, Dense, Fine, Trace Medium, Poorly graded, Sub angular trace to some Coarse
32.0	32.75	sand, trace Fine to Medium Gravel, Grayish brn, 10yr, 5/2, Wet, Loose, Fine to Coarse, Well Graded, Rounded
32.75	34.0	Sand, Trace Silt, Gray 10yr, 5/1, Wet, Dense, Fine,Poorly graded, Sub Angular
34.0	35.0	Clay, Dk Gray, 10yr,4/1, Moist, Medium Stiffness, High Plasticity

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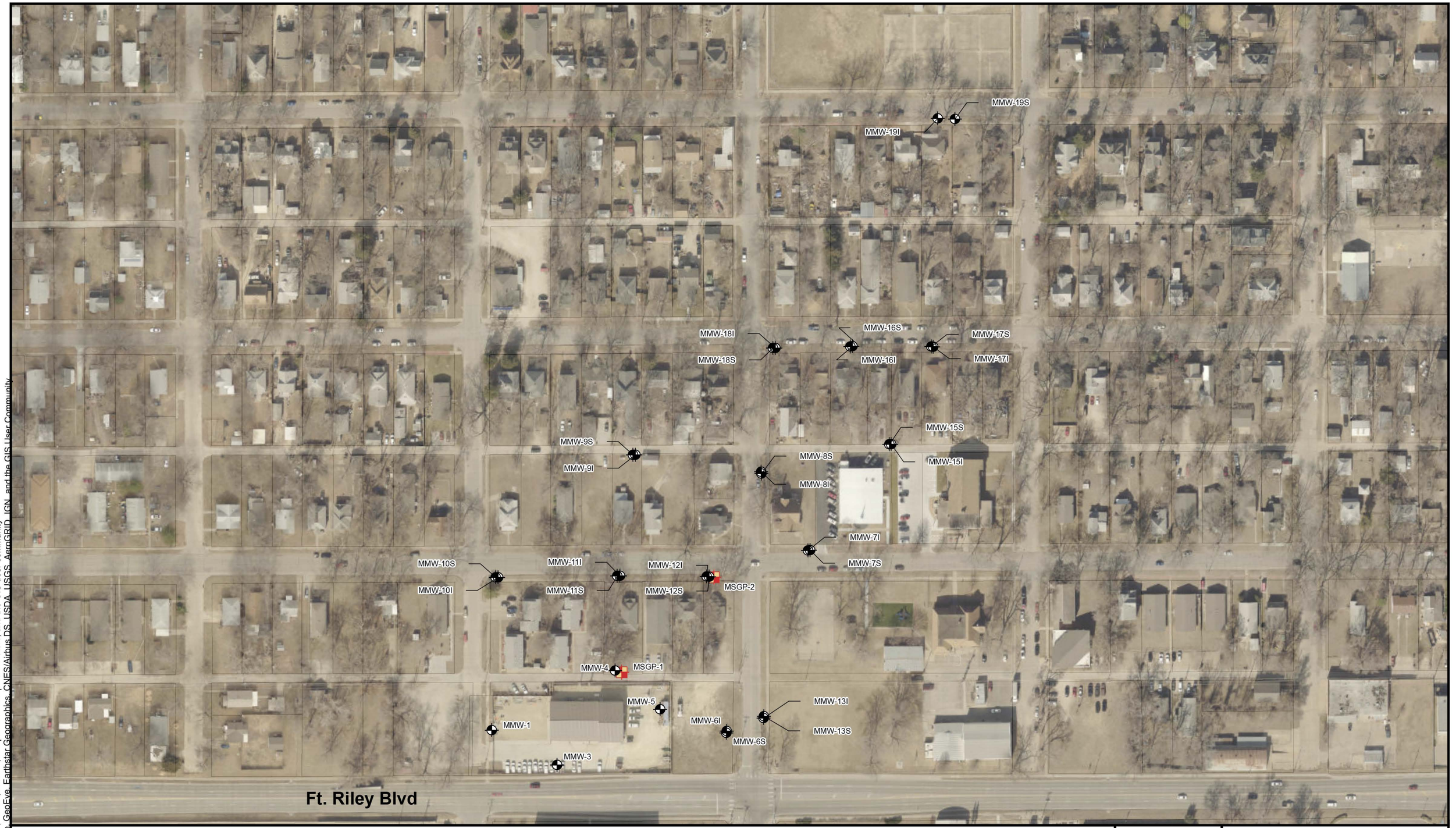
Litholgy

From	To	LithologicLog
35.0	36.0	Sand, Some silt, Gray, 10yr,5/1, Wet, Medium Density, Fine To medium., Poorly Graded, Sub Angular
36.0	37.0	Sand, with Silt, Gray, 10yr, 5/1, Wet, Medium Density, Fine to Medium, Poorly Graded, Sub Angular
37.0	38.0	Sand, with Silt, Fine Gravel, Gray, 10yr, 5/1, Wet, loose, Fine to Coarse, Well graded, Sub Rounded
38.0	40.0	Sand, with silt, Gray, 10yr, 5/1, Wet, Dense, Fine, Poorly Graded
40.0	43.0	Sand, with silt, Gray, 10yr, 5/1, Wet, Dense, Fine, Poorly Graded
43.0	46.0	Sand, with silt, Gray, 10yr, 5/1, Wet, Loose, Fine to Coarse, Well Graded, Sub Rounded
46.0	50.0	Sand, Gray, 10yr, 5/2, Wet, loose, Fine to Coarse, Well Graded, Sub Rounded



Legend

- Monitoring Well
- Soil Gas Probe
- Parcel Boundary

NORTH

0 100 200

Scale in Feet

BURNS McDONNELL

Figure 1-3
SI Monitoring Well & Soil Gas Probe Locations
ONE GAS, INC.
MANHATTAN, KANSAS

Issued: 6/29/2018

Path: Z:\Clients\ENS\OneGas\103248_Manhattan2017\Studies\Geospatial\DataFiles\ArcDocs\1-3SI_Monitoring_Well_&_SGP_Locations2018.mxd kdbaker 6/29/2018
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