

# TRITERRA

## LAND SERVICES

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### SURVEY OF MONITORING WELLS TITIAN EXPRESS LANE (WEST) COLUMBUS, KANSAS

The above site is in Section 13, Township 33 South, Range 23 East of the Sixth Principal Meridian, Cherokee County, Kansas. The Southeast corner of Section 13 was assigned coordinates of 00.00 North and 00.00 West.

The vertical control was a NGS benchmark titled "North Meridian" and is described as a copper bolt set in the top of a concrete monument, at the northeast corner of the county courthouse yard, 25 feet west of the Kansas Avenue sidewalk and 6 feet south of the Maple Street sidewalk. Elevation: 913.37'. A control point was established as a chiseled 'X' on top of the curb on the radius 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 "Columbus".

ID	NORTH	WEST	LATITUDE	LONGITUDE	ELEVATION
SE CORNER 13-33S-23E	00.00	00.00			
Control Point	2703.97	3880.72	37.17096	94.84512	908.22
MW-1 SW SW SE NW	2757.84	3913.75	37.17107	94.84525	RIM 909.00 TOC 908.56
MW-2 SW SW SE NW	2724.73	3904.10	37.17097	94.84519	RIM 908.08 TOC 907.65
MW-3 SW SW SE NW	2780.62	3818.89	37.17115	94.84490	RIM 909.37 TOC 909.14
MW-4 SW SW SE NW	2847.94	3948.42	37.17137	94.84531	RIM 909.73 TOC 909.27
MW-5 NW NW NE SW	2638.11	3913.39	37.17079	94.84524	RIM 908.72 TOC 908.33
MW-6 NW NW NE SW	2630.93	3831.21	37.17075	94.84496	RIM 909.19 TOC 908.77
MW-7 SW SW SE NW	2724.10	3952.74	37.17099	94.84536	RIM 908.26 TOC 907.74
MW-8 NW NW NE SW	2524.97	3817.98	37.17047	94.84493	RIM 908.36 TOC 907.96
MW-9 NW NW NE SW	2514.01	3691.12	37.17041	98.84447	RIM 910.42 TOC 910.02



WATER WELL RECORD

Form WWC-5

Division of Water Resources App. No.

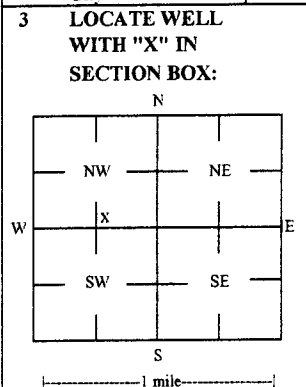
Well ID

MW1

Original Record Correction Change in Well Ust

1 LOCATION OF WATER WELL: County Cherokee Fraction SW 1/4 SE 1/4 NW 1/4 Section Number 13 Township Number T 33 S Range Number R 23 E W

2 WELL OWNER: Last Name: 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: Business: KDHE (Titian Express Lane) Address: 1000 SW Jackson City Topeka State: KS ZIP: 66612



3 LOCATE WELL WITH 'X' IN SECTION BOX: 4 DEPTH OF COMPLETED WELL: 20.02 ft Depth(s) Groundwater Encountered: 1) 2) 3) 4) Dry Well WELL'S STATIC WATER LEVEL: 1.56 ft

5 Latitude: 37.17107 (decimal degrees) Longitude: 94.84525 (decimal degrees) Horizontal Datum: X WGS 84 NAD 83 NAD 27 Source for Latitude/Longitude: GPS (unit make/model): (WAAS enabled? Yes No) X Land Survey Topographic Map Online Mapper

6 Elevation: 908.56 ft Ground Level: X TOC Source: X Land Survey GPS Topographic Map Other

7 WELL WATER TO BE USED AS: 1 Domestic: Household Lawn & Garden Livestock Irrigation Feedlot Industrial 2 Public Water Supply: well ID 3 Dewatering: how many wells? 4 Aquifer Recharge: well ID 5 Monitoring: well ID MW1 6 Environmental Remediation: well ID Air Sparge Soil Vapor Extractor Recovery Injection 7 Oil Field Water Supply: lease 8 Test Hole: well ID Cased Uncased Geotechnical 9 Geothermal: How many bores? a) Closed Loop Horizontal Vertical b) Open Loop Surface Discharge Inj. of Water Other (specify):

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

8 TYPE OF CASING USED: Steel PVC Other CASING JOINTS: Glued Clamped Welded X Threaded Casing diameter 2 in. to 3.02 ft, Diameter in. to ft, Diameter in. to ft, Casing height above land surface -0.44 in. Weight lbs./ft. Well 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 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 3.02 ft. to 20.02 ft, From ft. to ft, From ft. to ft, GRAVEL PACK INTERVALS: From 2.5 ft. to 20.5 ft, From ft. to ft, From ft. to ft,

9 GROUT MATERIAL: Neat cement Cement grout X Bentonite X Other Concrete: 0-1' Grout intervals: From 1 ft. to 2.5 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 X 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? ~5' ft

Table with 6 columns: 10 FROM, TO, LITHOLOGIC LOG, FROM, TO, LITHO. LOG (cont.) or PLUGGING INTERVALS. Rows include Asphalt & concrete, Silty clay w/ fine sand, Silty clay w/ weathered shale, Silty clay.

Notes: KDHE ID: Titian Express Lane (West): U3-011-12936

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) 10/20/15 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) 12/2/15 under the business name of Larsen & Associates, Inc. Signature