GMD3 Change Review

File No(s).: 101, 135, 183, 5099, 10716, 17722 & 18167. DWR office: HQ/GC.
App filed to change: PU, Reductions, and WR 183 PD, PU & UMW.
Is Landowner(s) correct in WRIS: Rome Farms.
If NO, is documentation included?
Is Water Use Correspondent correct in WRIS? Yes.
If NO, is documentation included?
Regulation(s) Reviewed: KAR 5-23-3
Point of diversion ID No(s) 04 being changed.

	ft. North		ft. West					
Authorized PD	2779		132		Sect 18-31-37			
Proposed PD	75		4995		Sect 8-31-37			
Difference	2576	n	416	e				
a2 + b2 = c2	6635776		173056		2609.374	foot move NE		

GPS for proposed PD: Lat: __ Long:__.
Is proposed PD stacking on existing WRs? No, but it was the old location, so existing hole.
Is Proposed PU overlapping existing WRs? Bring in the STK and keep IRR overlap with reductions.
Land Owner(s) notified: __.

Name __.	Name __.
Address __.	Address __.
Zip __.	Zip __.

Neighboring certified well(s) notified: __.

Name __.	Name __.
Address __.	Address __.
Zip __.	Zip __.

Domestic well(s) notified: __.

Name __.	Name __.
Address __.	Address __.
Zip __.	Zip __.

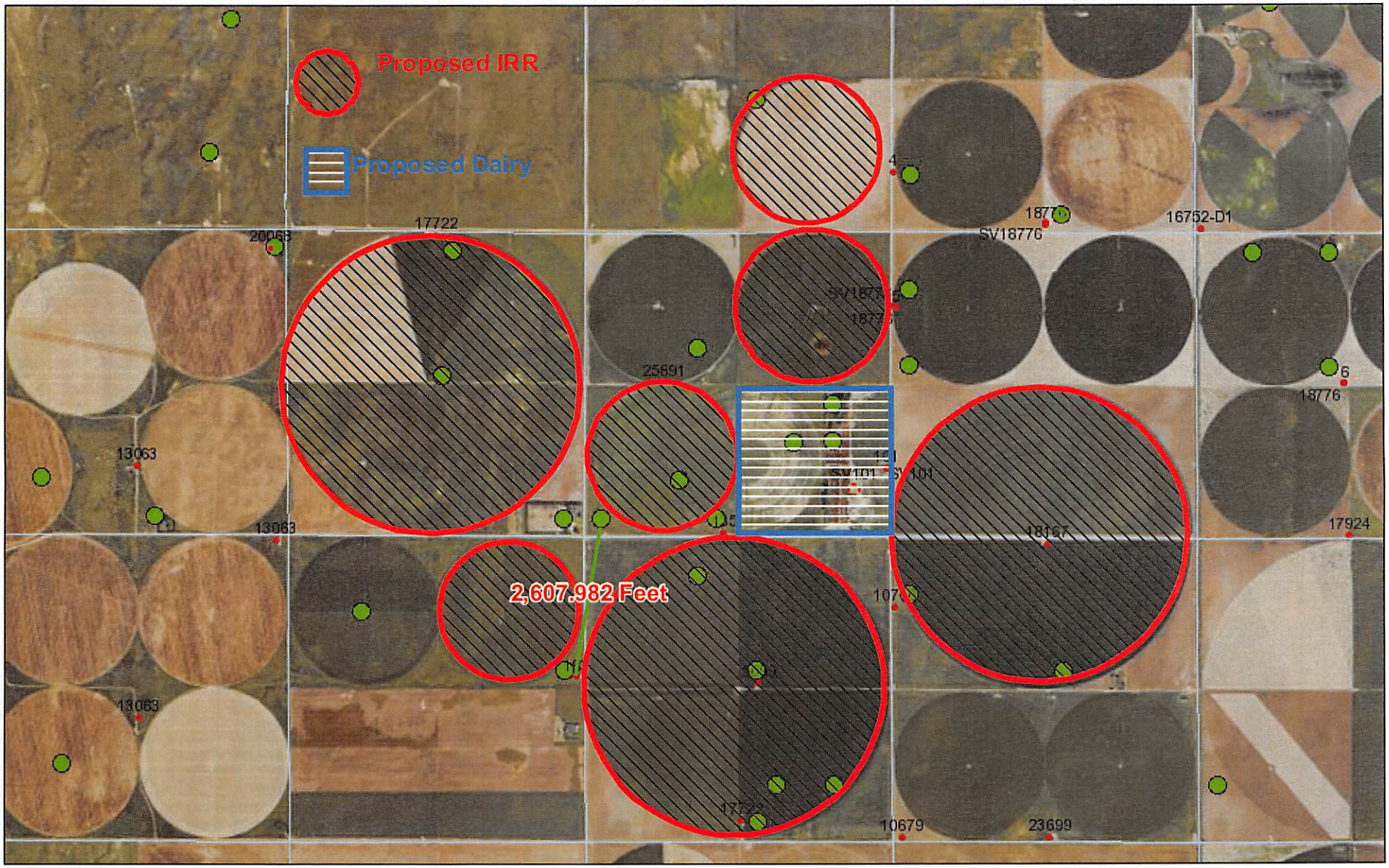
Base Acres: __.
Perfected Acres: __.
Irr. Return-Flow ___%

Applications to adjust the IRR acres and will expand the STK area.
WR183 converting to STK: 480AF X 89.1% = 427.7AF. Reduction of 52.3AF from conversion. Also will be reducing maximum authorized rate down to 500gpm.
WR 101 had the STK acreage expanded to cover the new area and take it off the IRR portion of the water right.
Reduction requests for PU on WRs 135, 5099, 10716, 17722 & 18167 to take off the IRR land that will be part of the new dairy facility.

Well to well evaluation showed effects to domestic well and well 183 to be within the criteria of minimal effect and once again, both belong to applicant.
Saturated thicknesses of 125-150' allow a deminimus effect not to exceed 3'.
Evaluations show that none of the neighboring wells exceed that limit
Is a waiver needed: Spacing to WR 135 (2300' minimum) not met for the PD change under WR 183. The change/reduction in PU meets current area rules.
Recommendation: Review of all available information shows that all spacing is NOT met to a domestic well and anther water right. Will be taken to Board for waiver request .

gWorks

Rome Farms



March 25, 2019
11:14 AM

DISCLAIMER: This map is not intended for conveyances, nor is it a legal survey. The information is presented on a best-efforts basis, and should not be relied upon for making financial, survey, legal or other commitments.

1:36,112

0 1,650 3,300 6,600 ft
0 500 1,000 2,000 m

Wells

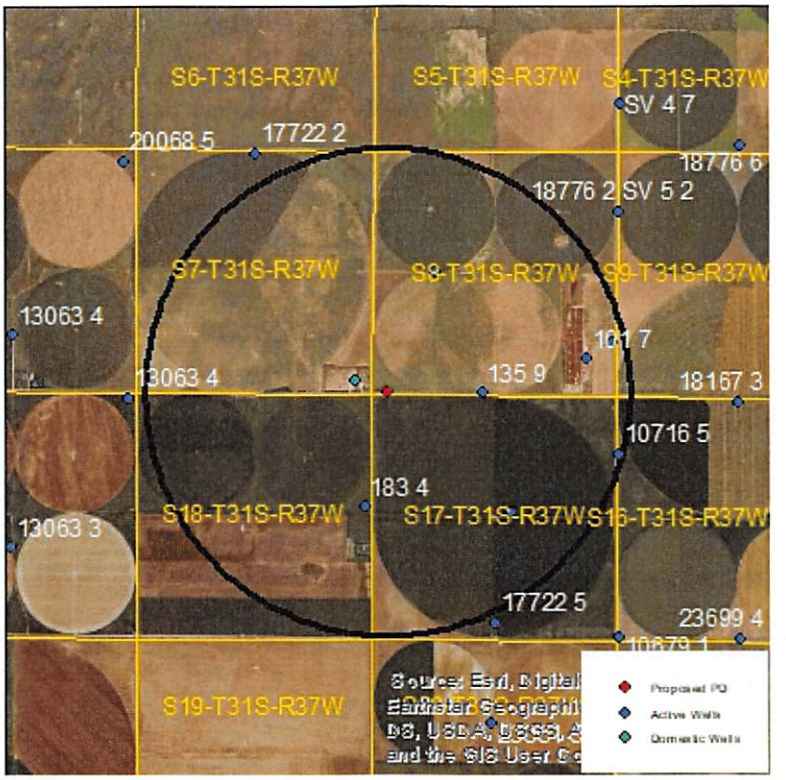
? Other	+ CON	DEW	FPR	HYD	MUN	REC	THX ? Empty
• IRR	DOM	★ IND	STK				WWC5 WELLS GMD3

Sections

jason
gWorks.

Evaluation of proposed move for Water Right No 183

Proposed: Move the well authorized under water right no. 183 2,552 ft to the northeast, at an existing well location in section 8-31-37.



Wells within 1 mile: 5099, 135, 101 ID 7, 101 ID 1, 25891, and a domestic well in section 7-31-37.

The saturated thickness at the proposed well location is estimated to be 150 ft, based upon measurement at the observation well in section 9-31-37 and local drillers logs. For saturated thicknesses between 125 ft and 150 ft, the maximum allowable Theis drawdown to neighboring critical wells is 3.0 ft.

50 year Theis Analysis: The following values were used to run the analysis:

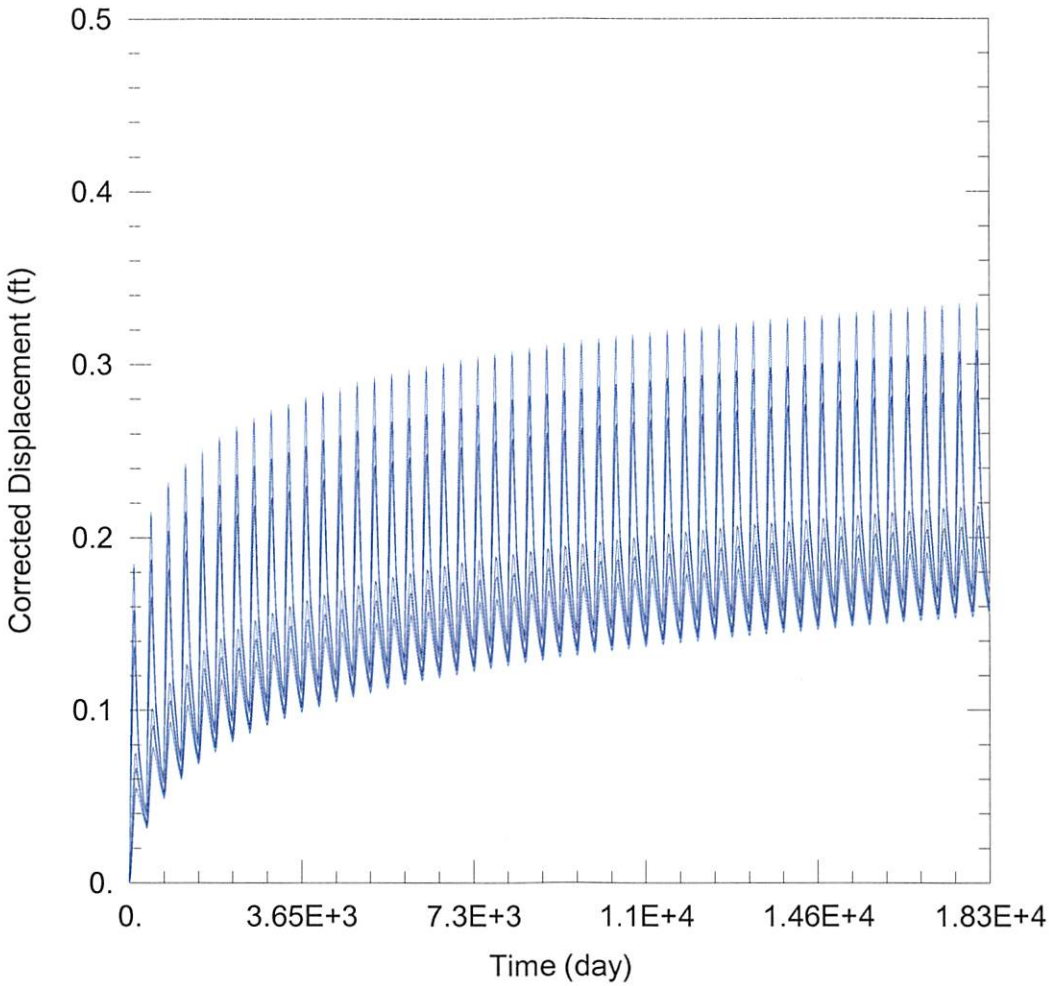
S = 0.2681, T = 34,081 ft^2/day, $tp_{current}$ = 109 days (based upon observed rate and reported quantity), $Q_{current}$ = 267 gpm (based upon observation during 2012 field visit), $tp_{proposed}$ = 194 days, $Q_{proposed}$ = 500 gpm.

Theis drawdown calculations are as follows:

5099:	Drawdown from current location = 0.31 ft
	Drawdown from proposed location = 0.81 ft
	Net drawdown = **0.5 ft**
135:	Drawdown from current location = 0.29 ft
	Drawdown from proposed location = 1.07 ft

	Net drawdown = **0.8 ft**
101 ID 7:	Drawdown from current location = 0.21 ft
	Drawdown from proposed location = 0.76 ft
	Net drawdown = **0.6 ft**
101 ID 1:	Drawdown from current location = 0.19 ft
	Drawdown from proposed location = 0.71 ft
	Net drawdown = **0.5 ft**
25891:	Drawdown from current location = 0.22 ft
	Drawdown from proposed location = 0.94 ft
	Net drawdown = **0.7 ft**
Domestic 7-31-37:	Drawdown from current location = 0.33 ft
	Drawdown from proposed location = 1.54 ft
	Net drawdown = **1.2 ft**

Net drawdown effects do not exceed the maximum drawdown allowance of 3.0 ft on any well, so no further evaluation is necessary.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019_moves\183\183 Current Theis.aqt
Date: 03/29/19 Time: 13:35:24

PROJECT INFORMATION

Company: GMD 3
Project: 183
Location: Stevens County
Test Well: 183

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
183	-167707	174292

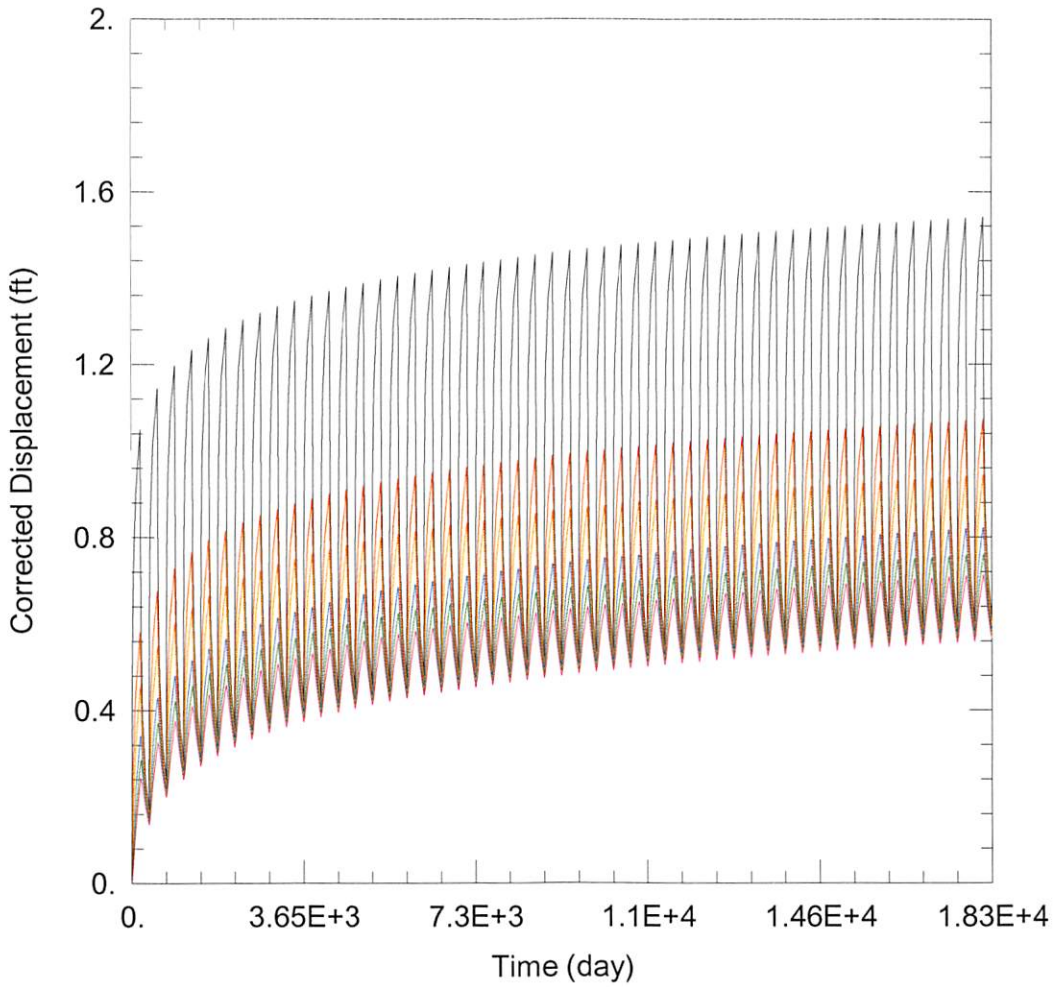
Observation Wells

Well Name	X (ft)	Y (ft)
▫	-167707	174292
▫ 5099	-164555	174155
▫ 135	-165140	176771
▫ 101 ID7	-162875	177499
▫ 101 ID1	-162328	177868
▫ 25891	-166169	179399
▫ Domestic 7-31-37	-167907	177044

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 3.408E+4 ft^2/day
S = 0.2681
Kz/Kr = 1.
b = 150. ft



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019_moves\183\183 Proposed Theis.aqt
Date: 03/29/19 Time: 13:35:15

PROJECT INFORMATION

Company: GMD 3
Project: 183
Location: Stevens County
Test Well: 183

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
183	-167227	176798

Observation Wells

Well Name	X (ft)	Y (ft)
▫	-167227	176798
▫ 5099	-164555	174155
▫ 135	-165140	176771
▫ 101 ID7	-162875	177499
▫ 101 ID1	-162328	177868
▫ 25891	-166169	179399
▫ Domestic 7-31-37	-167907	177044

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 3.408E+4 ft^2/day
S = 0.2681
Kz/Kr = 1.
b = 150. ft

KGS Hydrology | Water Well Database Query

Specific Water Well Detail

Believe this is well moving too or close

Well T31S, R37W, Sec. 8, SW SW SW, Action: Constructed

Location Info			
	Owner: Spikes, Warren		**Status**: Constructed
	Location: T31S, R37W, Sec. 8, SW SW SW		**County:** Stevens
	Directions: From Moscow, 2.5 miles North and 9 miles West		
	Longitude: -101.3744599	**Latitude**: 37.3598065	Datum NAD 27
	Longitude: -101.3748996	**Latitude**: 37.3598296	Datum NAD 83
	Longitude and latitude calculated by Survey from township-range-section-quarter calls. Only good to within the quarter call accuracy.		
	View well on interactive map This link will create a new window and display an interactive map of this well and its neighbors.		

General Info		
	Well Depth: 493 ft.	**Elevation:** ft.
	Static Water Level: 254 ft.	**Est. Yield:** 1500 gpm.
	Comp. Date: 24-Jul-1991	**Well Use:** Irrigation
	DWR Applic. #: 183	**Other ID:**

Links
View info from Wizard Water Level Data base...
View info from WIMAS Water Right Data base...

Driller Info		
	Driller: Hydro Resources Mid Continent, Inc.	**License #:** 145

Scanned Form
View scan of this form in PDF format.
You will need the Acrobat PDF Reader, available free from Adobe, to read this file.

	Chemical Sample Submitted?: No **Water Well disinfected?:**
	Ground water encountered: 254 ft. , 0 ft. , 0 ft.
	Pump test data: Well water was 282 ft after 4 hours pumping 1523 gpm

Casing Info		
	Casing Type: Steel **Casing Joints:**	**Diam:** 16 in. to 493 ft **Diam:** 0 in. to 0 ft **Diam:** 0 in. to 0 ft
	Casing height above land surface: in **Casing Weight:** lbs/ft **Wall thickness or gauge no.:**	

Screen and Perforation Info

	Screen Type: Steel	**Screen Openings:** Mill slot
	Screen-perforated intervals	**From:** 28 ft to 32 ft **From:** 430 ft to 490 ft **From:** 321 ft to 381 ft
	Gravel pack intervals	**From:** ft to ft

Grout Info

	Grout used: Bentonite	**From:** 0 to 20 ft **From:** 0 to 0 ft **From:** 0 to 0 ft

Source of Possible Contamination

	Source: Abandoned water well	
	Direction from well:	**Distance:** 0 ft

Lithologic Log
(Log data entered by KGS.)

	From: 0 ft. **to** 2 ft.	clay
	From: 2 ft. **to** 55 ft.	clay sandy clay
	From: 55 ft. **to** 105 ft.	sandy clay limestone
	From: 105 ft. **to** 131 ft.	fine sand medium sand sandstone
	From: 131 ft. **to** 198 ft.	fine sand medium sand clay
	From: 198 ft. **to** 205 ft.	sandstone clay
	From: 205 ft. **to** 218 ft.	fine sand medium sand fine gravel
	From: 218 ft. **to** 233 ft.	sandstone clay
	From: 233 ft. **to** 259 ft.	medium sand fine gravel clay
	From: 259 ft. **to** 301 ft.	fine sand medium sand fine gravel
	From: 301 ft. **to** 305 ft.	clay
	From: 305 ft. **to** 321 ft.	fine sand medium sand
	From: 321 ft. **to** 330 ft.	clay
	From: 330 ft. **to** 349 ft.	fine sand medium sand fine gravel
	From: 349 ft. **to** 365 ft.	sandy clay fine sand
	From: 365 ft. **to** 382 ft.	fine sand coarse sand sandy clay
	From: 382 ft. **to** 390 ft.	clay
	From: 390 ft. **to** 420 ft.	clay shale
	From: 420 ft. **to** 490 ft.	sandstone shale
	From: 490 ft. **to** 505 ft.	shale limestone

Kansas Geological Survey
Comments to webadmin@kgs.ku.edu
URL=http://www.kgs.ku.edu/Magellan/WaterWell/index.html
Display Programs Updated July 2, 2014
Data added continuously.