

## GMD3 Change Review

File No(s): 27805.

DWR office: GC.

App filed to change: PD

Is Landowner(s) correct in WRIS: James & Anne Cullison.

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) 03 being changed.

	ft. North	ft. West				
Authorized PD	3200	4040	Sect 2-31-35			
Proposed PD	4870	5285				
Difference	-1670 n	-1245 w				
a2 + b2 = c2	2788900	1550025	2083.009 foot move NW			

GPS for proposed PD: Lat: 37.38645 Long: -101.10411.

Is proposed PD stacking on existing WRs? No.

Is Proposed PU overlapping existing WRs? No change.

Land Owner(s) notified:    .

Name    .

Name    .

Address    .

Address    .

Zip    .

Zip    .

Neighboring certified well(s) notified: All wells within mile are the applicant's.

Name    .

Name    .

Address    .

Address    .

Zip    .

Zip    .

Domestic well(s) notified:    .

Name    .

Name    .

Address    .

Address    .

Zip    .

Zip    .

Base Acres:    .

Perfected Acres:    .

Irr. Return-Flow    %

Is a waiver needed: Move is less than half mile and minimum spacing to neighboring wells is met. Analysis shows all neighboring wells well below the allowable effect threshold. The domestic wells in section 36, to the north, are shown in WWC5, put no indication that they are still operating or completed. Each appears to be at a depth at or below static currently.

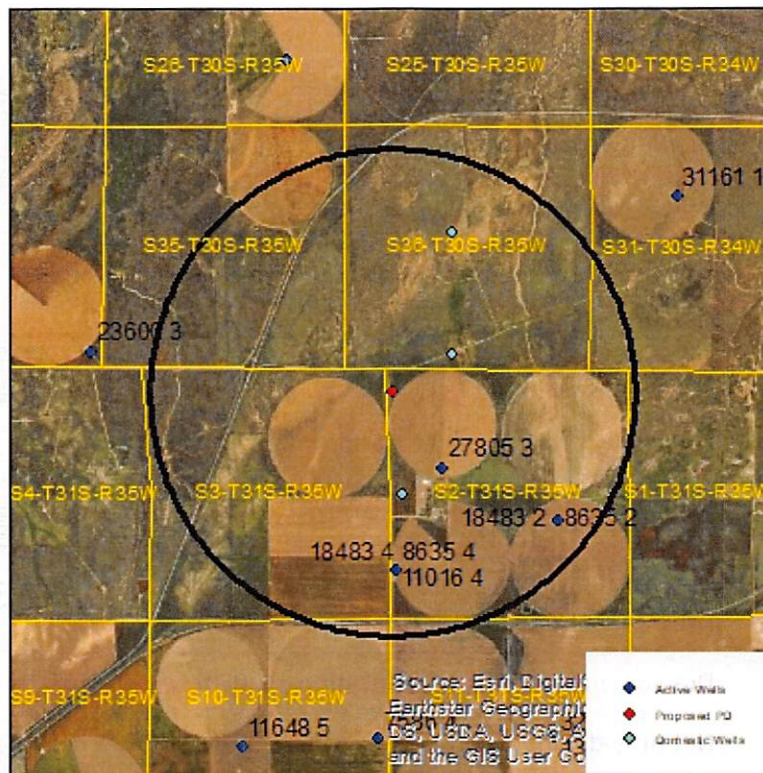
Recommendation: It appears that all current area rules are met. All located active wells in the area are the applicants and the analysis shows effects to be within limits.

Staff therefore recommends approval of the application.



## Evaluation of proposed additional well for Water Right No 27805

Proposed: Move the well authorized under water right no. 27805 a distance of 1989 ft to the northwest.



Wells within 1 mile: 8635 & 11016 & 18483 ID2, 8635 & 11016 & 18483 ID4, a domestic well in section 2-31-35, a domestic well in the south half of section 36-30-35, and a domestic well in the north half of section 36-30-35.

The saturated thickness at the proposed well location is estimated to be 268 ft, based upon a monitoring well in section 31-30-34 and the driller's log. For saturated thicknesses greater than 200 ft, the maximum allowable Theis drawdown to neighboring critical wells is 4.0 ft.

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

$S = 0.2997$ ,  $T = 30,076 \text{ ft}^2/\text{day}$ ,  $tp_{\text{current}} = 64 \text{ days}$  (based upon observed rate and reported quantity),  
 $Q_{\text{current}} = 619 \text{ gpm}$  (observed during 2012 field inspection),  $tp_{\text{proposed}} = 134 \text{ days}$ ,  $Q_{\text{proposed}} = 1590 \text{ gpm}$ .

Theis drawdowns were calculated as follows:

8635 & 11016 & 18483 ID 2:

Drawdown from current location = 0.53 ft

Drawdown from proposed location = 1.83 ft

Net drawdown = **1.3 ft**

8635 & 11016 & 18483 ID4:

Drawdown from current location = 0.58 ft

Drawdown from proposed location = 2.03 ft

Net drawdown = **1.4 ft**

Domestic 2-31-35: Drawdown from current location = 1.06 ft

Drawdown from proposed location = 2.78 ft

Net drawdown = **1.7 ft**

Domestic S 36-30-35: Drawdown from current location = 0.58 ft

Drawdown from proposed location = 3.36 ft

Net drawdown = **2.8 ft**

Domestic N 36-30-35: Drawdown from current location = 0.33 ft

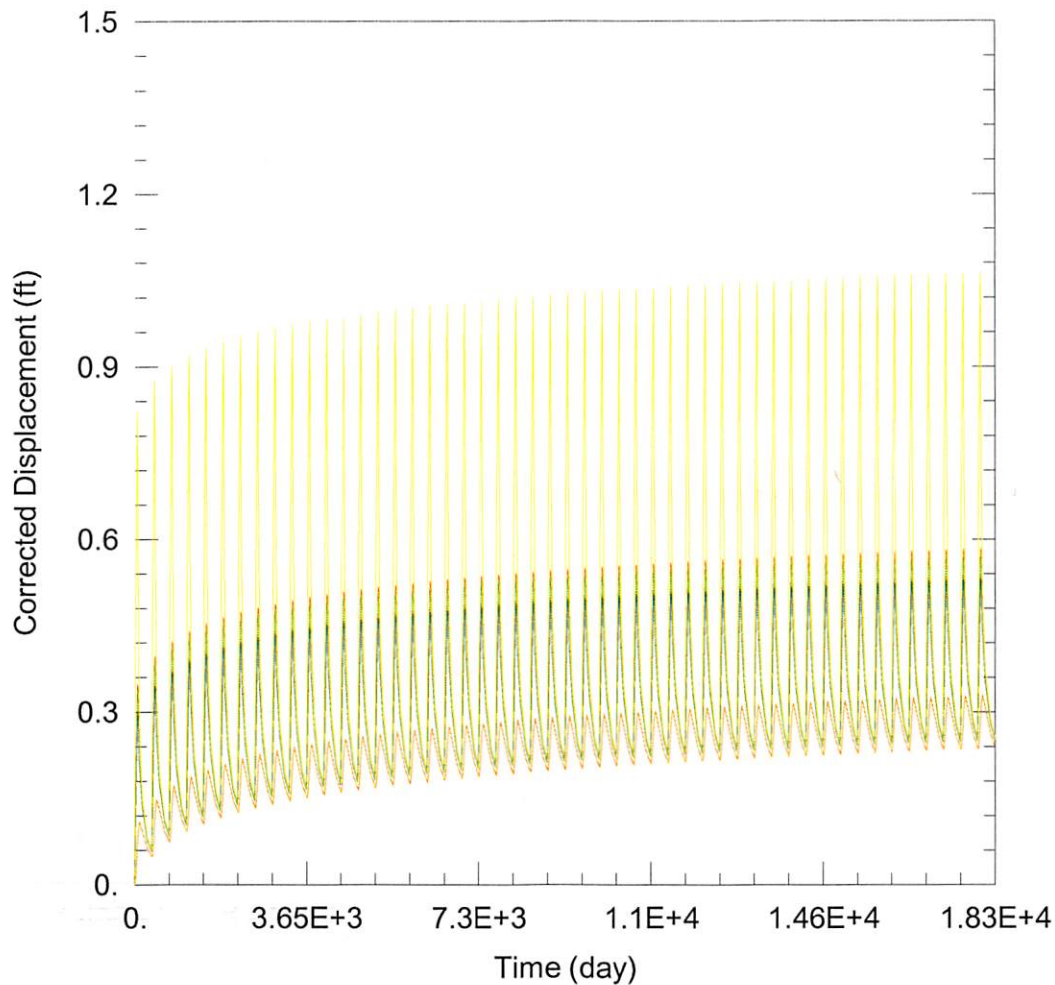
Drawdown from proposed location = 2.08 ft

Net drawdown = **1.8 ft**

Net drawdown does not exceed the drawdown allowance for any neighboring wells, so critical well evaluation evaluation is not necessary.

**Conclusion:**

Given the current saturated thickness, this proposed change is unlikely to create noticeable effects on neighboring wells.



### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019\_moves\27805\27805 Current.aqt  
 Date: 05/29/19 Time: 10:42:35

### PROJECT INFORMATION

Company: GMD 3  
 Project: 27805  
 Location: Stevens County  
 Test Well: 27805

### WELL DATA

#### Pumping Wells

Well Name	X (ft)	Y (ft)
27805	-87415	184707

#### Observation Wells

Well Name	X (ft)	Y (ft)
□	-87415	184707
□ 8635 & 11016 & 18483 ID2	-84899	183605
□ 8635 & 11016 & 18483 ID4	-88440	182491
□ Domestic 2-31-35	-88301	184145
□ Domestic S 36-30-35	-87233	187190
□ Domestic N 36-30-35	-87220	189835

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

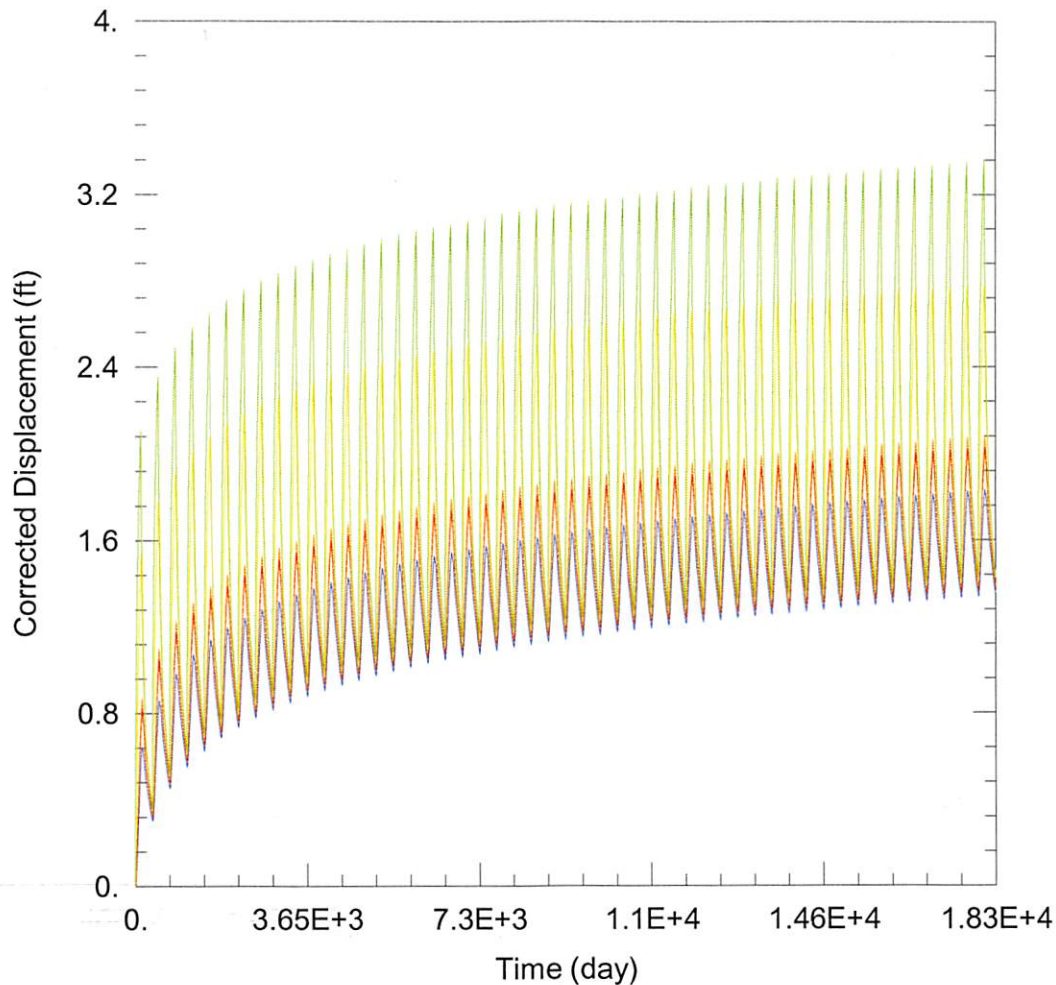
T = 3.008E+4 ft<sup>2</sup>/day

S = 0.2997

Kz/Kr = 1.

b = 268. ft





### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019\_moves\27805\27805 Proposed.aqt  
 Date: 05/29/19 Time: 10:42:27

### PROJECT INFORMATION

Company: GMD 3  
 Project: 27805  
 Location: Stevens County  
 Test Well: 27805

### WELL DATA

#### Pumping Wells

Well Name	X (ft)	Y (ft)
27805	-88519	186362

#### Observation Wells

Well Name	X (ft)	Y (ft)
□	-88519	186362
□ 8635 & 11016 & 18483 ID2	-84899	183605
□ 8635 & 11016 & 18483 ID4	-88440	182491
□ Domestic 2-31-35	-88301	184145
□ Domestic S 36-30-35	-87233	187190
□ Domestic N 36-30-35	-87220	189835

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 3.008E+4 ft<sup>2</sup>/day

S = 0.2997

Kz/Kr = 1.

b = 268. ft

Water Rights and Points of Diversion Within 1.00 miles of point defined as:

4870 ft N and 5285 ft W of the SE Corner of Section 2, T 31S, R 35W

Located at: 101.104110 West Longitude and 37.386452 North Latitude

GROUNDWATER ONLY

2300' on a //

File Number	Use	ST	SR	Dist (ft)	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Tw	Rng	ID	Batt	Auth	Quan	Add_Quan	Unit
A__ 8635	00	IRR	NK	G	4659	--	NE	NW	SE	2120	1530	2	31	35W	2		460.00	460.00	AF
Same					3886	--	NW	SW	SW	985	5090	2	31	35W	4		472.00	472.00	AF
A__ 11016	00	IRR	NK	G	4659	--	NE	NW	SE	2120	1530	2	31	35W	2		354.00	354.00	AF
Same					3886	--	NW	SW	SW	985	5090	2	31	35W	4		363.00	363.00	AF
A__ 18483	00	IRR	NK	G	4659	--	NE	NW	SE	2120	1530	2	31	35W	2		128.00	128.00	AF
Same					3886	--	NW	SW	SW	985	5090	2	31	35W	4		223.00	223.00	AF
A__ 27805	00	IRR	NK	G*	2071	--	SE	SW	NW	3200	4040	2	31	35W	3		943.00	.00	AF

Total Net Quantities Authorized:	Direct	Storage
Total Requested Amount (AF) =	.00	.00
Total Permitted Amount (AF) =	.00	.00
Total Inspected Amount (AF) =	.00	.00
Total Pro_Cert Amount (AF) =	.00	.00
Total Certified Amount (AF) =	2000.00	.00
Total Vested Amount (AF) =	.00	.00
TOTAL AMOUNT (AF) =	2000.00	.00

An \* after the source of supply indicates a pending application for change for the file number.

An \* after the ID indicates a 15 AF exemption was granted for the file number.

A "G" in the Batt column indicates the GEO CTR of a battery. A "B" indicates a well in the battery.

The number in the Batt column is the number of wells in the battery.

Water Rights and Points of Diversion Within 1.00 miles of point defined as:

101.104110 West Longitude and 37.386452 North Latitude

GROUNDWATER ONLY

WATER USE CORRESPONDENTS:

File Number	Use	ST	SR
A__ 8635	00	IRR	NK G
> JAMES W & ANNE CULLISON			
>			
> PO BOX 367			
> SATANTA KS 67870			
>-----			
A__ 11016	00	IRR	NK G
> JAMES W & ANNE CULLISON			
>			
> PO BOX 367			
> SATANTA KS 67870			
>-----			
A__ 18483	00	IRR	NK G
> JAMES W & ANNE CULLISON			
>			
> PO BOX 367			
> SATANTA KS 67870			
>-----			
A__ 27805	00	IRR	NK G

> JAMES W & ANNE CULLISON  
>  
> PO BOX 367  
> SATANTA KS 67870

>-----  
=====