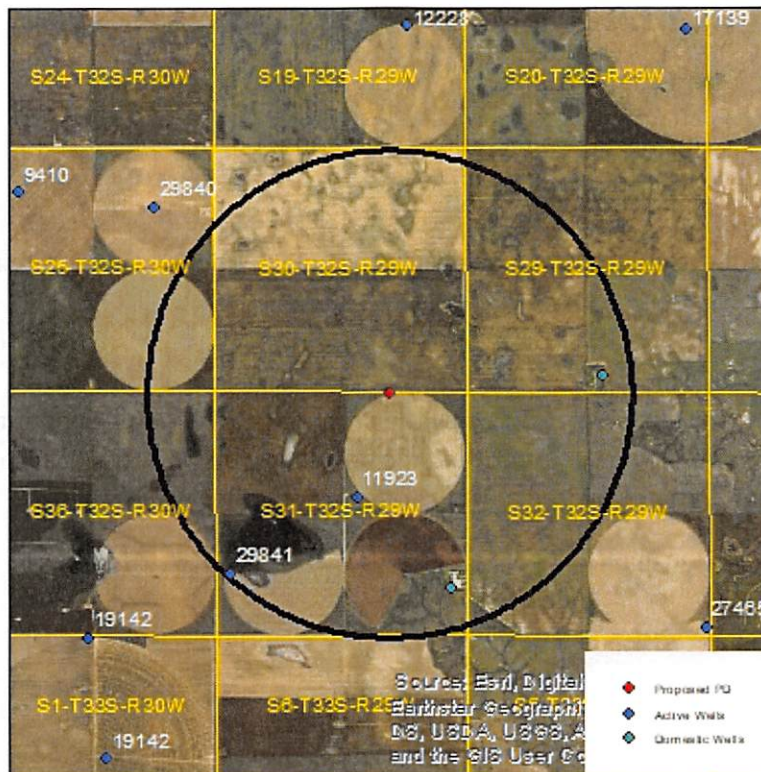


## Evaluation of proposed move for Water Right No 11923

Proposed: Move water right no. 11923 to a new location 2344 ft to the northeast.



Wells within 1 mile: 29841, a domestic well located in section 31-32-29, and a domestic well located in section 29-32-29.

The saturated thickness at the proposed well location is estimated to be 259 ft, based upon the driller's log and an observation well located in section 35-32-30. 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:

$S = 0.1764$ ,  $T = 17,756 \text{ ft}^2/\text{day}$ ,  $tp_{\text{current}} = 250 \text{ days}$  (based upon observed rate and average reported quantity),  $Q_{\text{current}} = 471.5 \text{ gpm}$  (observed during 2017 field inspection),  $tp_{\text{proposed}} = 73 \text{ days}$ ,  $Q_{\text{proposed}} = 1670 \text{ gpm}$

Theis drawdowns were calculated as follows:

29841: Drawdown from current location = 1.83 ft  
Drawdown from proposed location = 1.69 ft  
Net drawdown = **-0.1 ft**

Domestic 31-32-29: Drawdown from current location = 1.93 ft  
Drawdown from proposed location = 1.88 ft  
Net drawdown = **-0.1 ft**

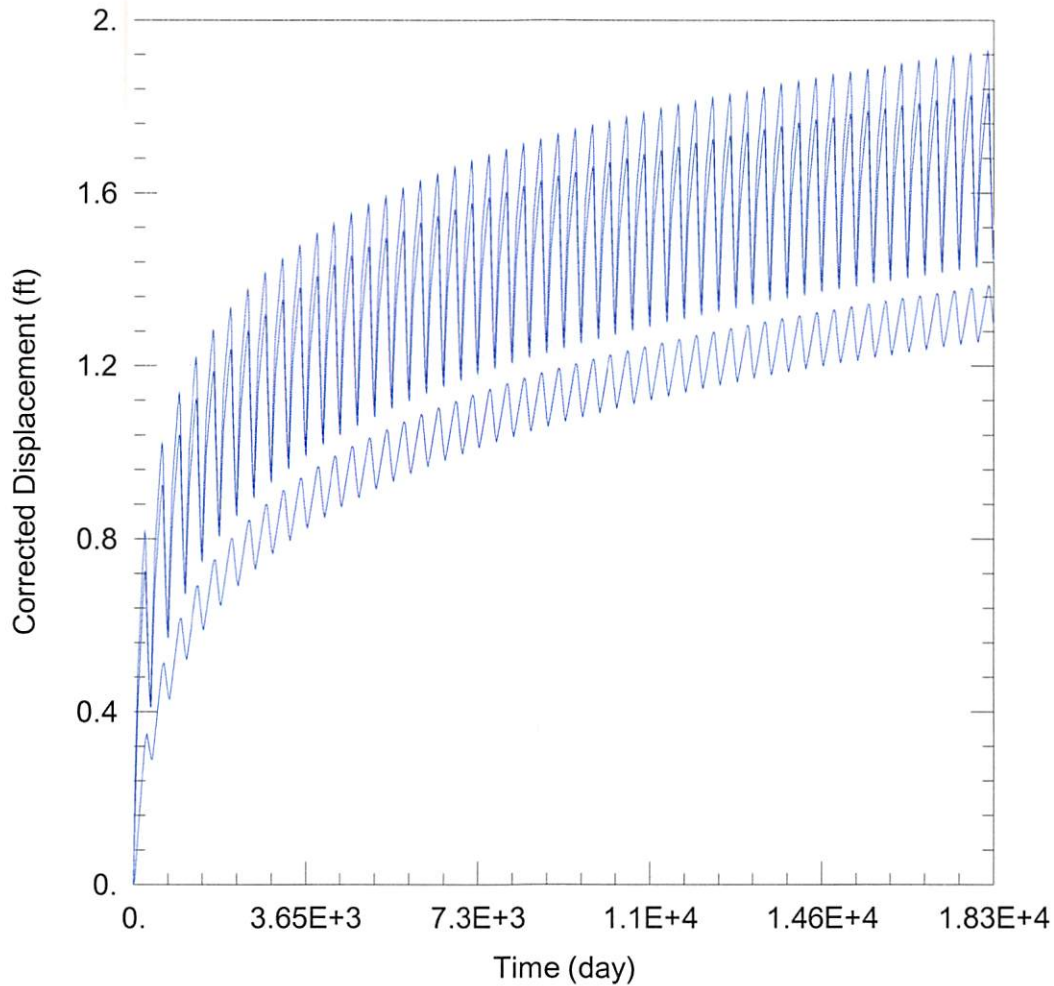
Domestic 29-32-29: Drawdown from current location = 1.39 ft  
Drawdown from proposed location = 1.81 ft  
Net drawdown = **0.4 ft**

Net drawdown does not exceed the drawdown allowance of 4.0 ft for any wells within one mile, so critical well evaluation is not necessary.

**Conclusion:**

No neighboring wells are likely to be impaired by the proposed move. Two neighboring wells should see less drawdown effect from the new location, and the domestic well in 29-32-29 will only see a minimal effect even if the water right is exercised at its full rate and quantity every year.

GMD3 staff recommends the application be approved.



### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019\_moves\11923\11923 Current.aqt

Date: 06/25/19

Time: 13:54:56

### PROJECT INFORMATION

Company: GMD 3

Project: 11923

Location: Meade County

Test Well: 11923

### WELL DATA

#### Pumping Wells

Well Name	X (ft)	Y (ft)
11923	82662	126253

#### Observation Wells

Well Name	X (ft)	Y (ft)
□	82662	126253
□ 29841	79878	124581
□ Domestic 31-32-29	84718	124267
□ Domestic 29-32-29	88010	128883

### SOLUTION

Aquifer Model: Unconfined

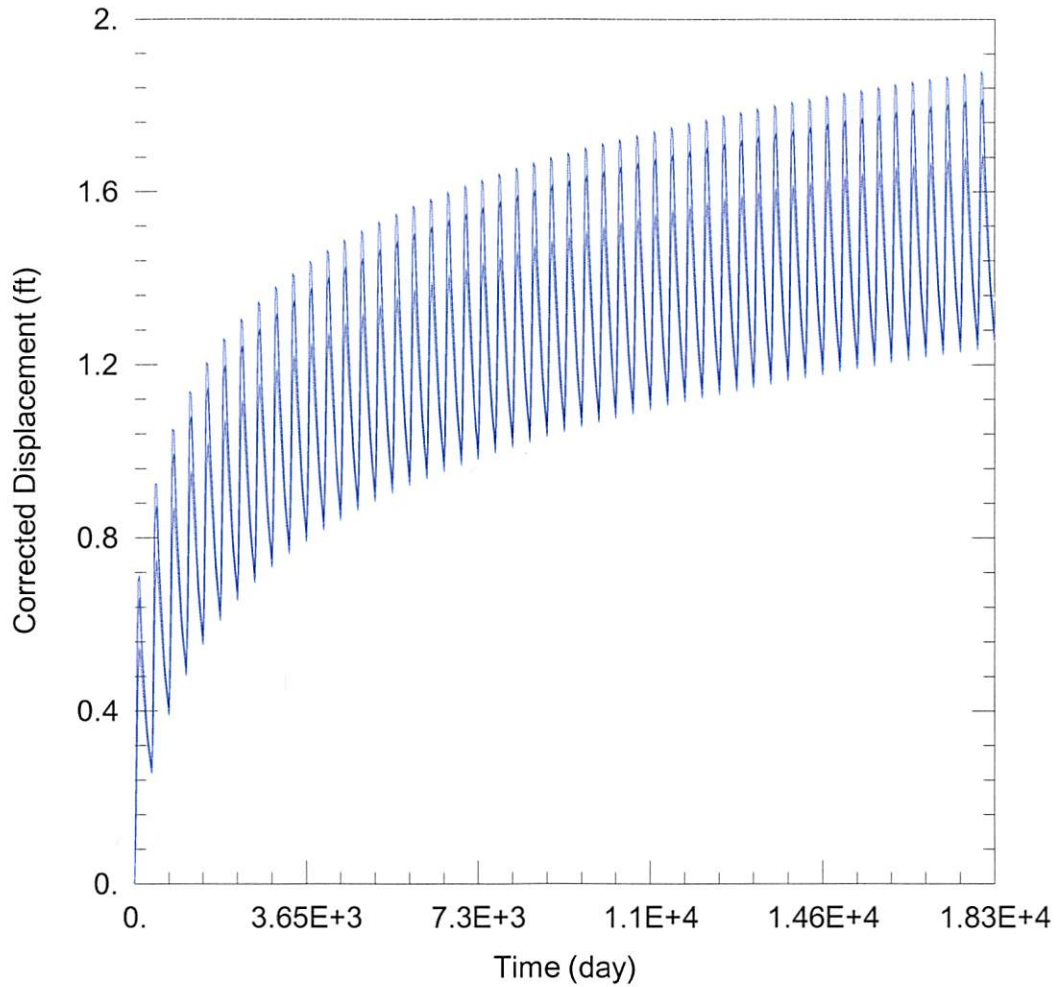
Solution Method: Theis

T = 1.776E+4 ft<sup>2</sup>/day

S = 0.1764

Kz/Kr = 1.

b = 259. ft



### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019\_moves\11923\11923 Proposed.aqt

Date: 06/25/19

Time: 13:55:02

### PROJECT INFORMATION

Company: GMD 3

Project: 11923

Location: Meade County

Test Well: 11923

### WELL DATA

#### Pumping Wells

Well Name	X (ft)	Y (ft)
11923	83358	128490

#### Observation Wells

Well Name	X (ft)	Y (ft)
□	83358	128490
□ 29841	79878	124581
□ Domestic 31-32-29	84718	124267
□ Domestic 29-32-29	88010	128883

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 1.776E+4 ft<sup>2</sup>/day

S = 0.1764

Kz/Kr = 1.

b = 259. ft