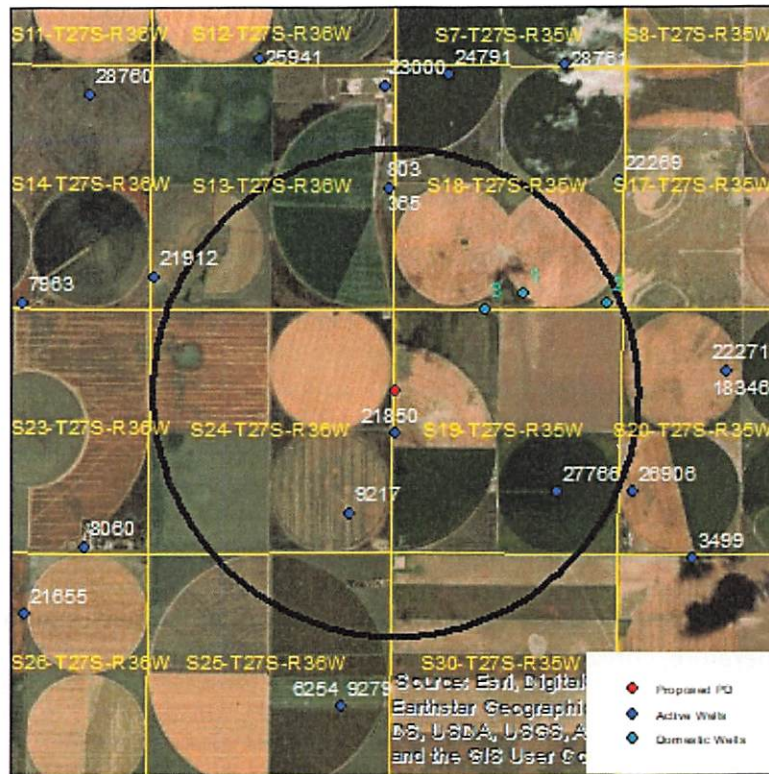


Evaluation of proposed move for Water Right No. 21850

Proposed: Move water right no. 21850 a distance of 910 ft to the north.



Wells within 1 mile: 27766, 365 & 803, 9217, and three domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 168 ft, based upon the GMD3 model. For saturated thickness between 150 ft and 200 ft, the drawdown allowance is 3.5 ft.

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

$$S = 0.2259, T = 5228 \text{ ft}^2/\text{day},$$

$$t_{p_{\text{current}}} = 120 \text{ days (assumed)}, Q_{\text{current}} = 535 \text{ gpm (based on average use and assumed time pumped)},$$

$$t_{p_{\text{proposed}}} = 100 \text{ days}, Q_{\text{proposed}} = 1260 \text{ gpm}$$

Theis drawdowns were calculated as follows:

27766: Drawdown from current location = 2.29 ft
 Drawdown from proposed location = 4.25 ft
 Net drawdown = **2.0 ft**

365 & 803: Drawdown from current location = 1.84 ft
 Drawdown from proposed location = 4.08 ft
 Net drawdown = **2.2 ft**

9217: Drawdown from current location = 3.41 ft
Drawdown from proposed location = 5.42 ft
Net drawdown = **2.0 ft**

Domestic 1: Drawdown from current location = 2.17 ft
Drawdown from proposed location = 4.68 ft
Net drawdown = **2.5 ft**

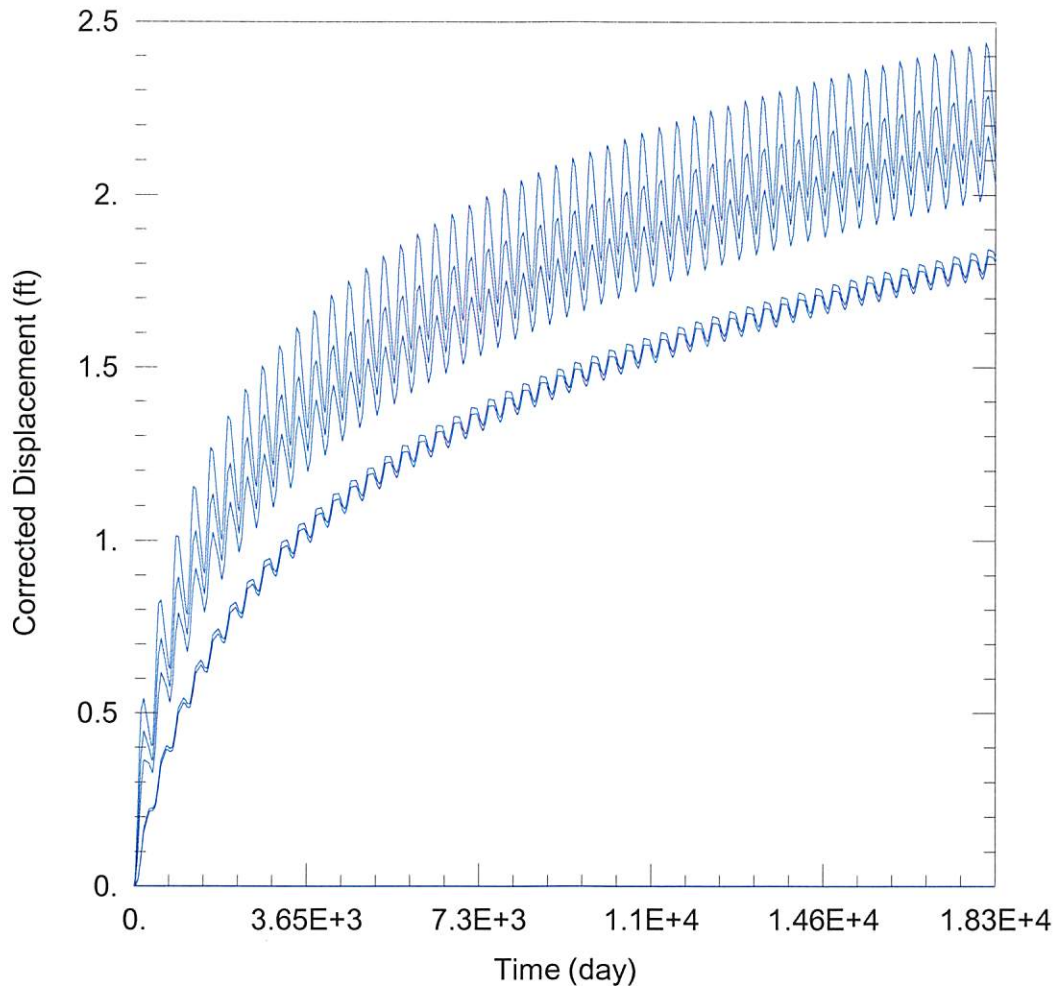
Domestic 2: Drawdown from current location = 1.82 ft
Drawdown from proposed location = 3.76 ft
Net drawdown = **1.9 ft**

Domestic 3: Drawdown from current location = 2.44 ft
Drawdown from proposed location = 5.59 ft
Net drawdown = **3.1 ft**

Net drawdown does not exceed the drawdown allowance of 3.5 ft for any well within 1 mile of the proposed location. Therefore, critical well analysis is not necessary.

Conclusion:

The proposed move is likely to create minimal effects on neighboring wells and is unlikely to cause impairment. GMD3 staff recommends approval of this proposal.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\21850\21850 Current.aqt

Date: 08/13/21

Time: 16:01:44

PROJECT INFORMATION

Company: GMD 3

Project: 21850

Location: Grant County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
21850	-115510	295217

Observation Wells

Well Name	X (ft)	Y (ft)
□	-115510	295217
□ 27766	-111985	293957
□ 365 & 803	-115661	300548
□ 9217	116530	293502
□ Domestic 1	-112737	298252
□ Domestic 2	-110889	298052
□ Domestic 3	-113538	297943

SOLUTION

Aquifer Model: Unconfined

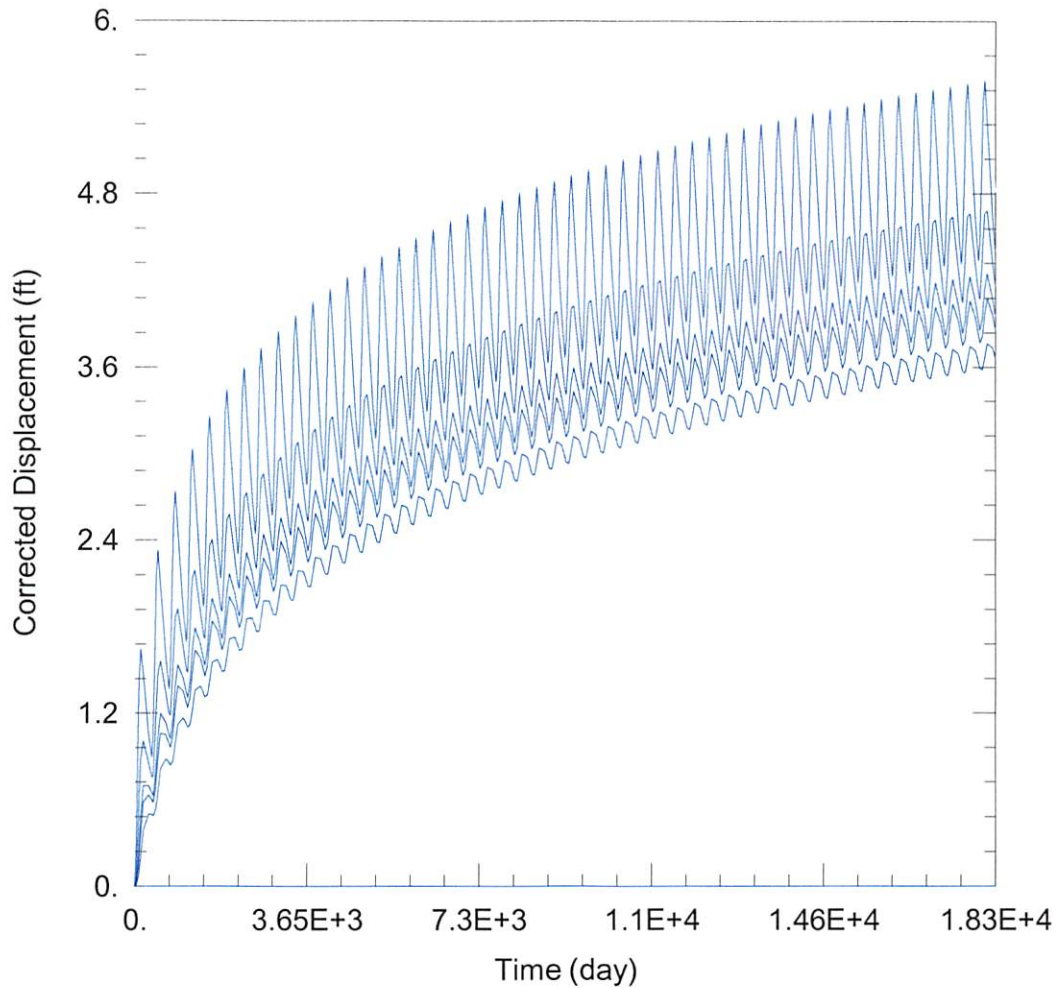
Solution Method: Theis

T = 5228 ft²/day

S = 0.2259

Kz/Kr = 1

b = 168 ft



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\21850\21850 Proposed.aqt

Date: 08/13/21

Time: 16:01:38

PROJECT INFORMATION

Company: GMD 3

Project: 21850

Location: Grant County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
21850	-115515	296127

Observation Wells

Well Name	X (ft)	Y (ft)
□	-115515	296127
□ <u>27766</u>	-111985	293957
□ <u>365 & 803</u>	-115661	300548
□ <u>9217</u>	116530	293502
□ <u>Domestic 1</u>	-112737	298252
□ <u>Domestic 2</u>	-110889	298052
□ <u>Domestic 3</u>	-113538	297943

SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 5228. ft²/day

S = 0.2259

Kz/Kr = 1.

b = 168. ft