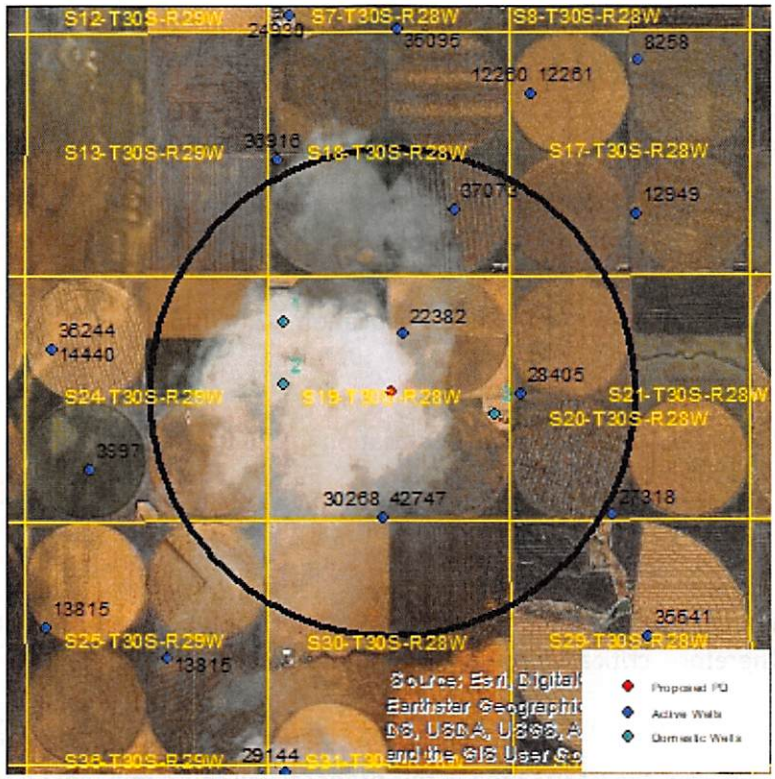
Evaluation of proposed move for Water Right No 22382

Proposed: Move water right no. 22382 a distance of 1,260 ft to the southwest.



Wells within 1 mile:30268 & 42747, 28405, 37073, and three domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 271 ft, based upon an observation well in section 17-30-28 and the driller's log at the proposed well location. For saturated thickness greater than 200 ft, the drawdown allowance is 4.0 ft.

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

S = 0.08785, T = 9,397.1 ft^2/day, $tp_{current}$ = 74 days (based upon average use and observed rate), $Q_{current}$ = 385 gpm (based upon 2019 field inspection), $tp_{proposed}$ = 56 days, $Q_{proposed}$ = 700 gpm

Theis drawdowns were calculated as follows:

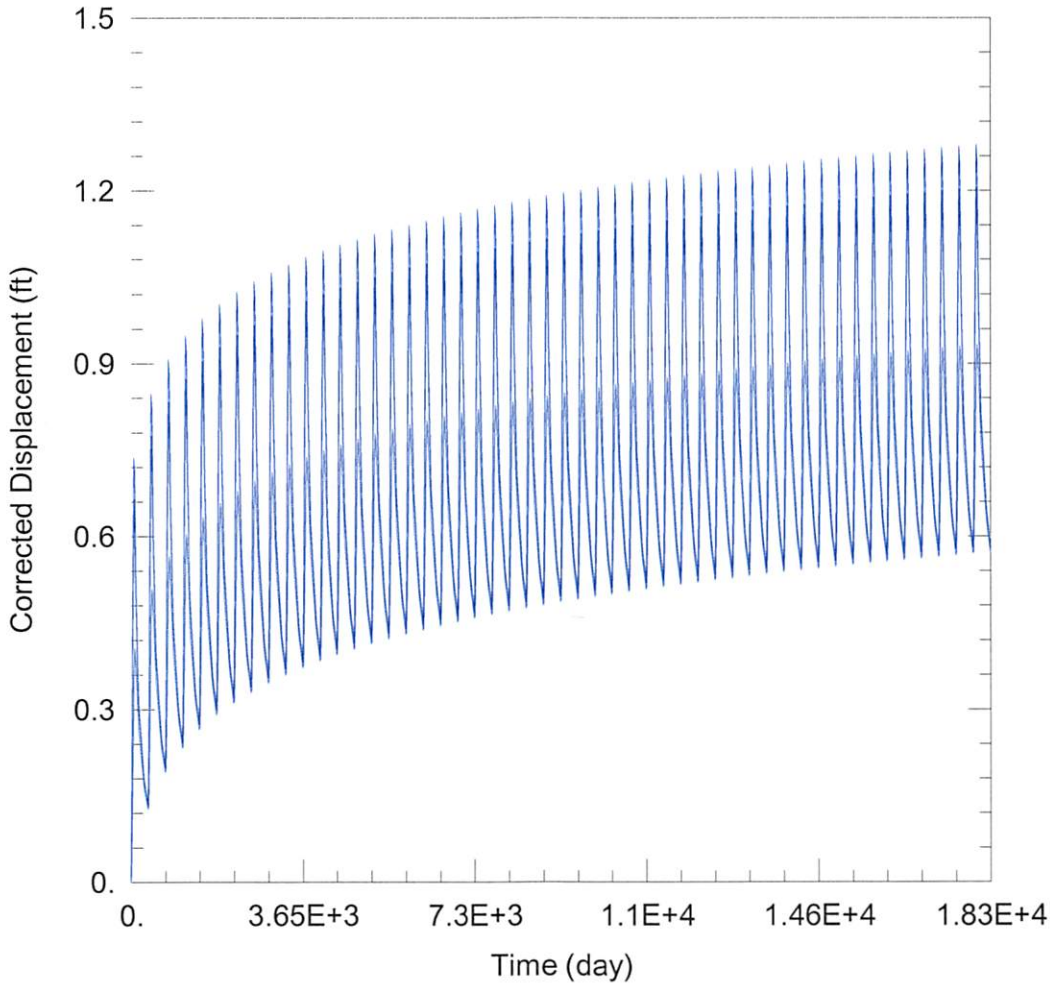
30268 & 42747:	Drawdown from current location = 0.93 ft
	Drawdown from proposed location = 1.77 ft
	Net drawdown = **0.8 ft**
28405:	Drawdown from current location = 1.18 ft
	Drawdown from proposed location = 1.74 ft
	Net drawdown = **0.6 ft**

37073:	Drawdown from current location = 1.16 ft
	Drawdown from proposed location = 1.25 ft
	Net drawdown = **0.1 ft**
Domestic 1:	Drawdown from current location = 1.28 ft
	Drawdown from proposed location = 1.75 ft
	Net drawdown = **0.5 ft**
Domestic 2:	Drawdown from current location = 1.21 ft
	Drawdown from proposed location = 2.01 ft
	Net drawdown = **0.8 ft**
Domestic 3:	Drawdown from current location = 1.26 ft
	Drawdown from proposed location = 2.07 ft
	Net drawdown = **0.8 ft**

Net drawdown does not exceed the drawdown allowance of 4.0 ft for any wells within 1 mile of the proposed location. Therefore, critical well analysis is not necessary.

Conclusion:

Based upon information from the GMD3 model, this proposal will cause minimal effects on neighboring wells, and is unlikely to create an impairment. GMD3 staff recommends approval of the application.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020_moves\22382\22382 Current.aqt
Date: 05/18/20 Time: 13:55:36

PROJECT INFORMATION

Company: GMD 3
Project: 22382
Location: Meade County
Test Well: 22382

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
22382	109035	201357

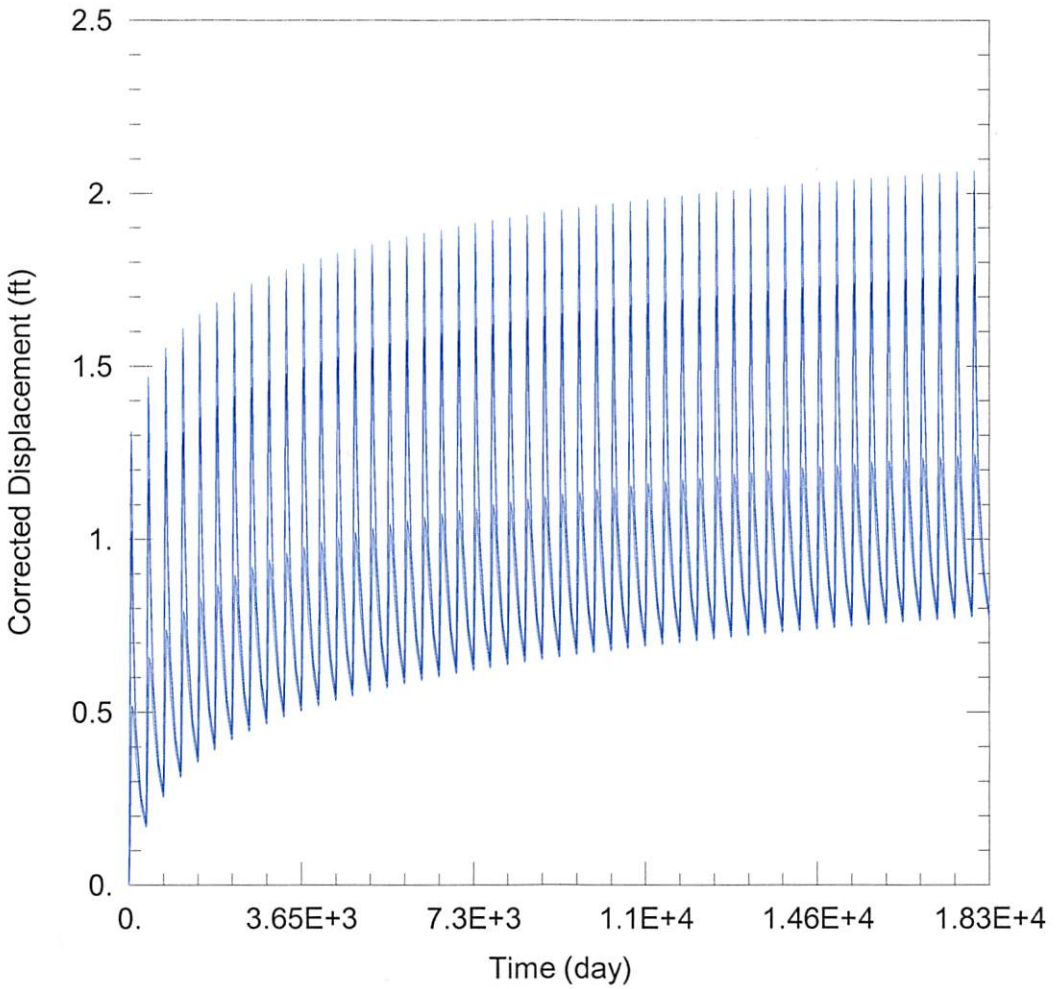
Observation Wells

Well Name	X (ft)	Y (ft)
▫	109035	201357
▫ 30268 & 42747	108592	197394
▫ 28405	111599	200067
▫ 37073	110154	204083
▫ Domestic 1	106455	201619
▫ Domestic 2	106454	200295
▫ Domestic 3	111044	199642

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 9397.1 ft^2/day
S = 0.08785
Kz/Kr = 1.
b = 271. ft



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020_moves\22382\22382 Proposed.aqt
Date: 05/18/20 Time: 13:55:31

PROJECT INFORMATION

Company: GMD 3
Project: 22382
Location: Meade County
Test Well: 22382

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
22382	108804	200119

Observation Wells

Well Name	X (ft)	Y (ft)
▫	108804	200119
▫ 30268 & 42747	108592	197394
▫ 28405	111599	200067
▫ 37073	110154	204083
▫ Domestic 1	106455	201619
▫ Domestic 2	106454	200295
▫ Domestic 3	111044	199642

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 9397.1 ft^2/day
S = 0.08785
Kz/Kr = 1.
b = 271. ft