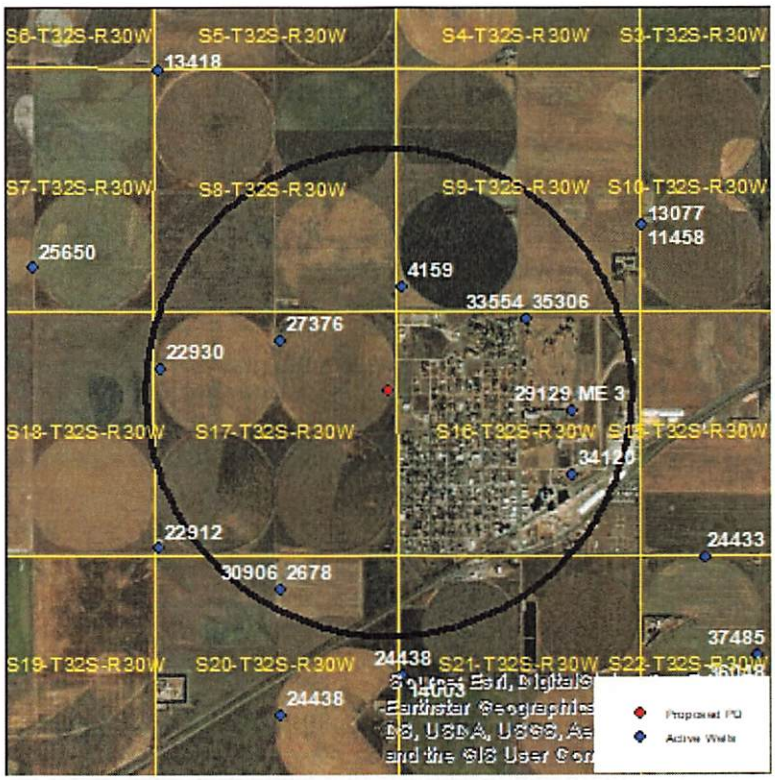
Evaluation of proposed move for Water Right No. 27376

Proposed: Move water right no. 27376 a distance of 2,595 ft to the southeast.



Wells within 1 mile: 22930, 4159, 2678 & 30906, 33554 & 35306, ME 3 & 29129, and 34120.

The saturated thickness at the proposed well location is estimated to be 234 ft, based upon the driller's log and an observation well in section 9-32-30. 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 = 0.2452, T = 6995.1 ft^2/day, $tp_{current}$ = 80 days (based upon average use and reported rate), $Q_{current}$ = 500 gpm (based upon 2017 water use report), $tp_{proposed}$ = 50 days, $Q_{proposed}$ = 1425 gpm

Theis drawdowns were calculated as follows:

22930: Drawdown from current location = 1.44 ft

Drawdown from proposed location = 1.71 ft

Net drawdown = **0.3 ft**

4159: Drawdown from current location = 1.37 ft

Drawdown from proposed location = 2.88 ft

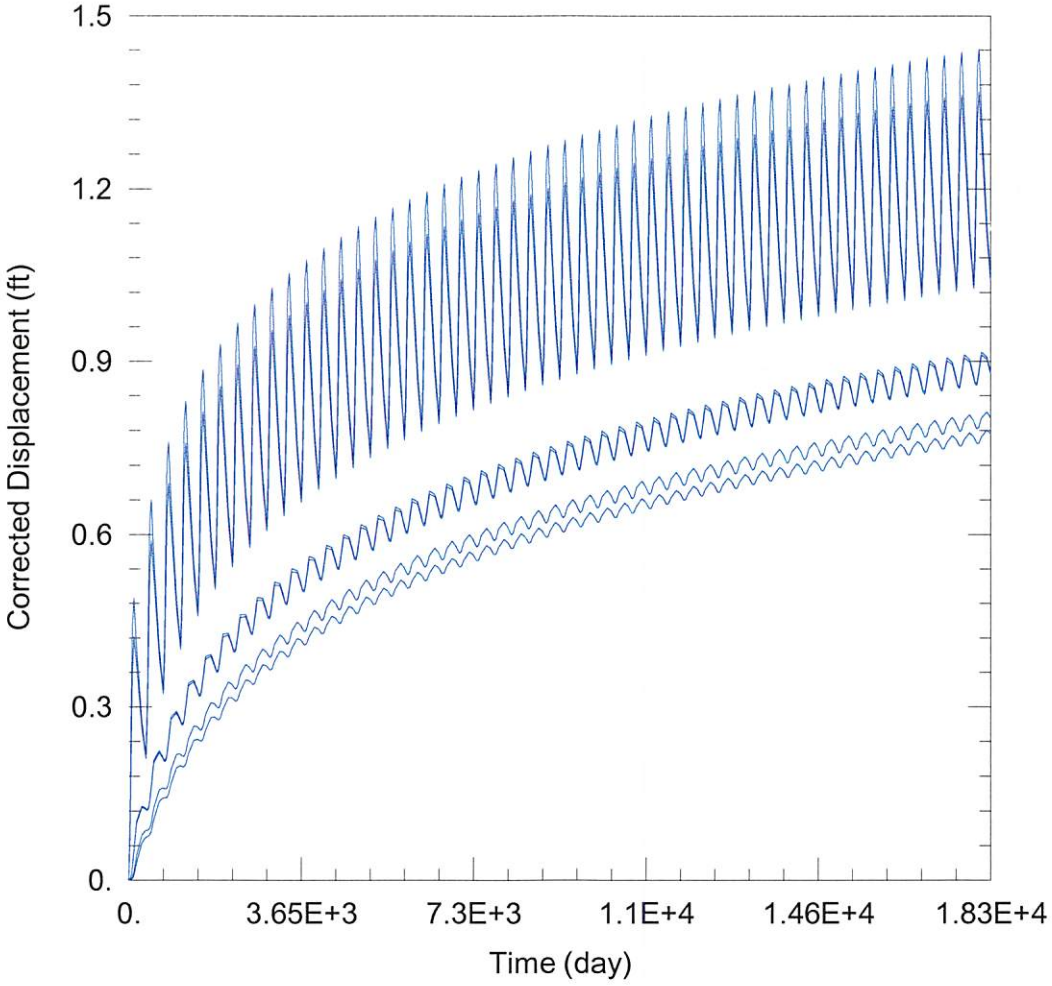
Net drawdown = **1.5 ft**

2678 & 30906:	Drawdown from current location = 0.91 ft
	Drawdown from proposed location = 1.72 ft
	Net drawdown = **0.8 ft**
33554 & 30906:	Drawdown from current location = 0.92 ft
	Drawdown from proposed location = 2.17 ft
	Net drawdown = **1.3 ft**
ME 3 & 29129:	Drawdown from current location = 0.81 ft
	Drawdown from proposed location = 1.96 ft
	Net drawdown = **1.1 ft**
34120:	Drawdown from current location = 0.78 ft
	Drawdown from proposed location = 1.86 ft
	Net drawdown = **1.1 ft**

Net drawdown does not exceed the drawdown allowance of 4.0 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\27376\27376 Current.aqt
Date: 05/20/21 Time: 14:07:17

PROJECT INFORMATION

Company: GMD 3
Project: 27376
Location: Meade County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
27376	55826	143779

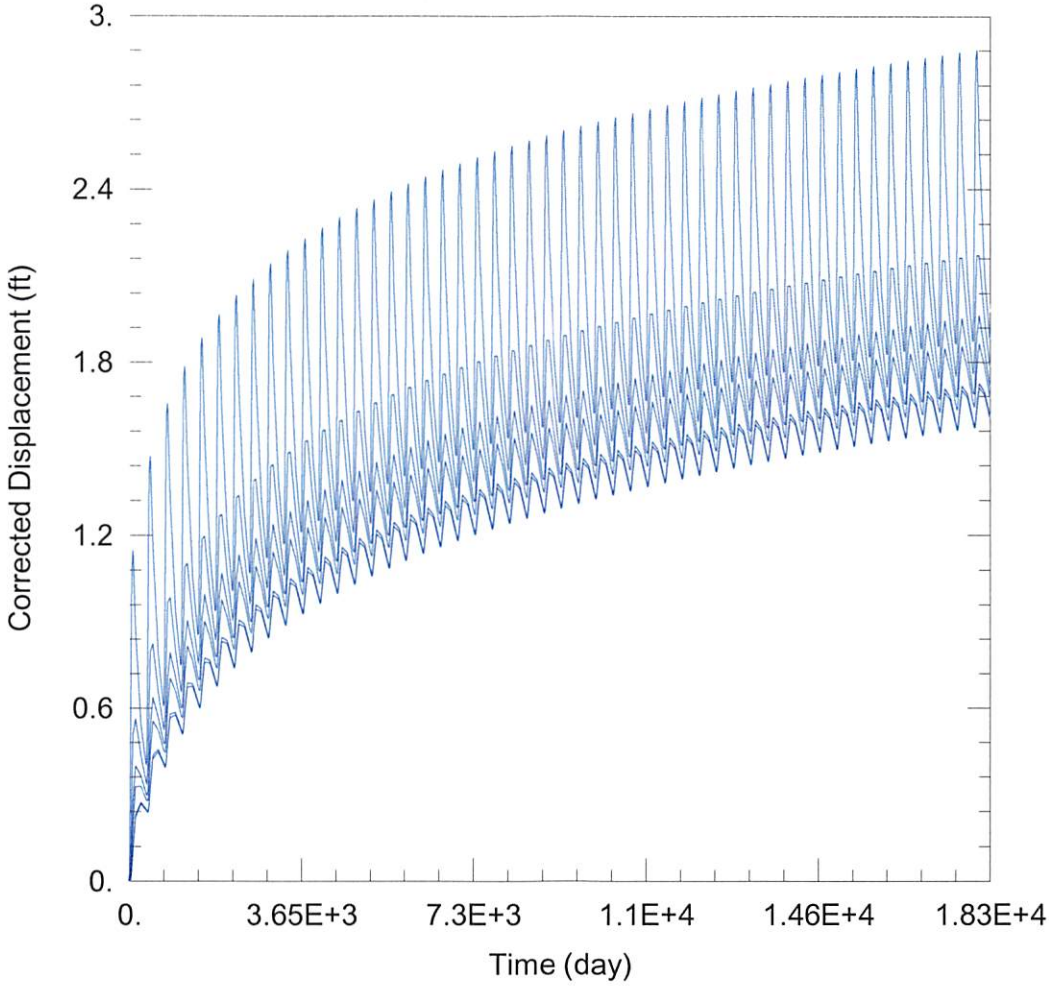
Observation Wells

Well Name	X (ft)	Y (ft)
▫	55826	143779
▫ 22930	53238	143165
▫ 4159	58457	144964
▫ 2678 & 30906	55808	138386
▫ 33554 & 35306	61151	144252
▫ ME 3 & 29129	62174	142248
▫ 34120	62148	140887

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 6995.1 ft^2/day
S = 0.2452
Kz/Kr = 1.
b = 234. ft



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\27376\27376 Proposed.aqt
Date: 05/20/21 Time: 14:07:08

PROJECT INFORMATION

Company: GMD 3
Project: 27376
Location: Meade County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
27376	58174	142672

Observation Wells

Well Name	X (ft)	Y (ft)
▫	58174	142672
▫ 22930	53238	143165
▫ 4159	58457	144964
▫ 2678 & 30906	55808	138386
▫ 33554 & 35306	61151	144252
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