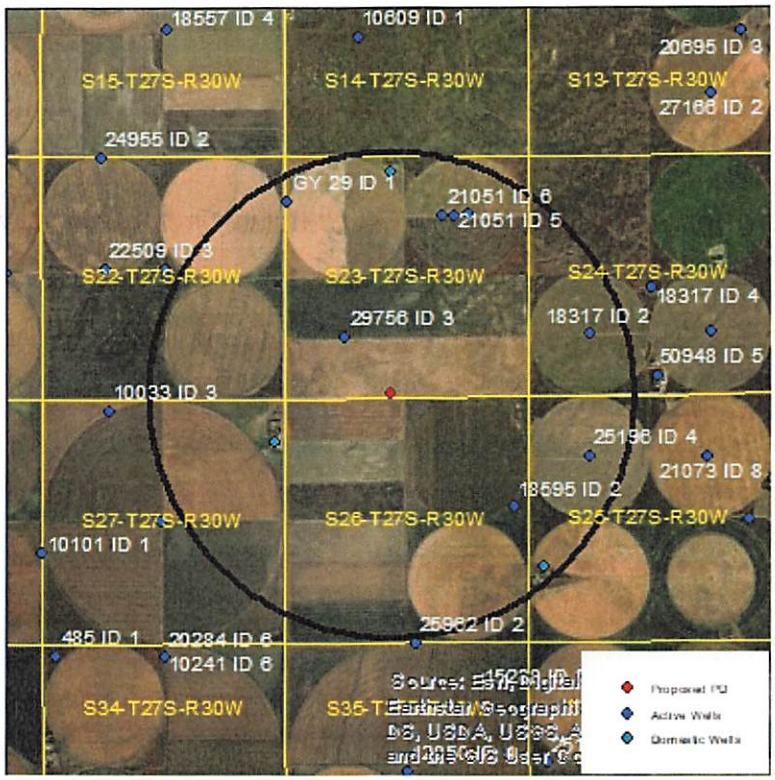
Evaluation of proposed move for Water Right No. 29756

Proposed: Move water right no. 29756 to a new well location, a distance of 1,582 ft to the southeast.



Wells within 1 mile: GY 29, 21051, 18317, 18595, 25196, a domestic well in section 23-27-30, a domestic well in section 25-27-30, and a domestic well in section 27-27-30.

The saturated thickness at the proposed well location is estimated to be 76 ft, based upon the driller's log and an observation well in section 23-27-30. For saturated thickness between 75 ft and 100 ft, the drawdown allowance is 2.0ft.

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

S = 0.1297, T = 44,150 ft^2/day, $tp_{current}$ = 0 days (no use in last 10 years), $Q_{current}$ = 0 gpm, $tp_{proposed}$ = 56 days, $Q_{proposed}$ = 1000 gpm

Theis drawdowns were calculated as follows:

GY 29: Net drawdown = **0.5 ft**

21051: Net drawdown = **0.6 ft**

18317: Net drawdown = **0.6 ft**

18595: Net drawdown = **0.7 ft**

25196: Net drawdown = **0.6 ft**

Domestic 23-27-30: Net drawdown = **0.5 ft**

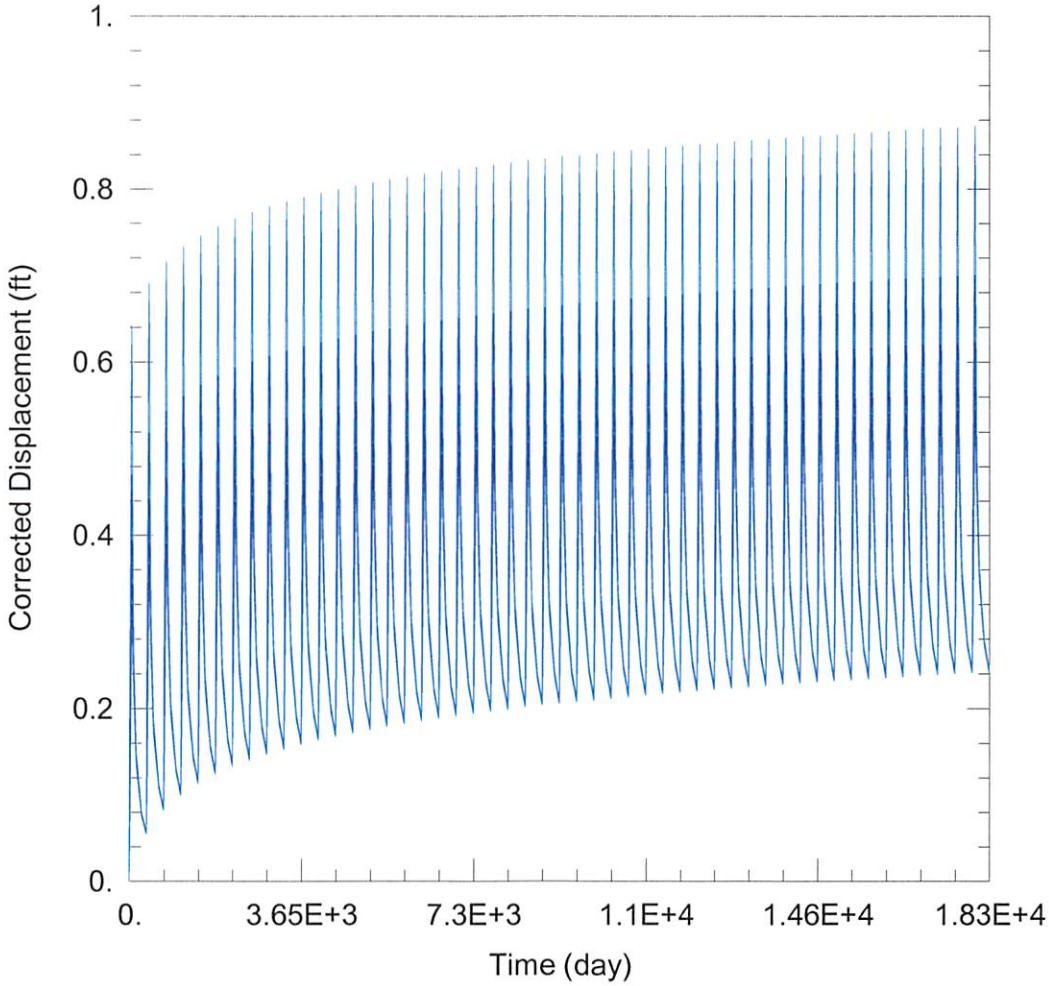
Domestic 25-27-30: Net drawdown = **0.5 ft**

Domestic 27-27-30: Net drawdown = **0.9 ft**

Net drawdown does not exceed the drawdown allowance of 2.0 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 appears unlikely to cause impairment. Any concerned neighbors should contact GMD3 at (620) 275-7147 or the Division of Water Resources at (620) 276-2901.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2023_moves\29756\29756 proposed.aqt
Date: 07/27/23 Time: 10:14:54

PROJECT INFORMATION

Company: GMD3
Project: 29756
Location: Gray County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
29756	65920	292792

Observation Wells

Well Name	X (ft)	Y (ft)
▫	65920	292792
▫ GY 29	63673	296987
▫ 21051	67291	296682
▫ 18317	70247	294082
▫ 18595	68580	290356
▫ 25196	70236	291457
▫ Domestic 23-27-30	65921	297613
▫ Domestic 25-27-30	69261	289079
▫ Domestic 27-27-30	63399	291770

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis
T = 4.415E+4 ft^2/day
S = 0.1297