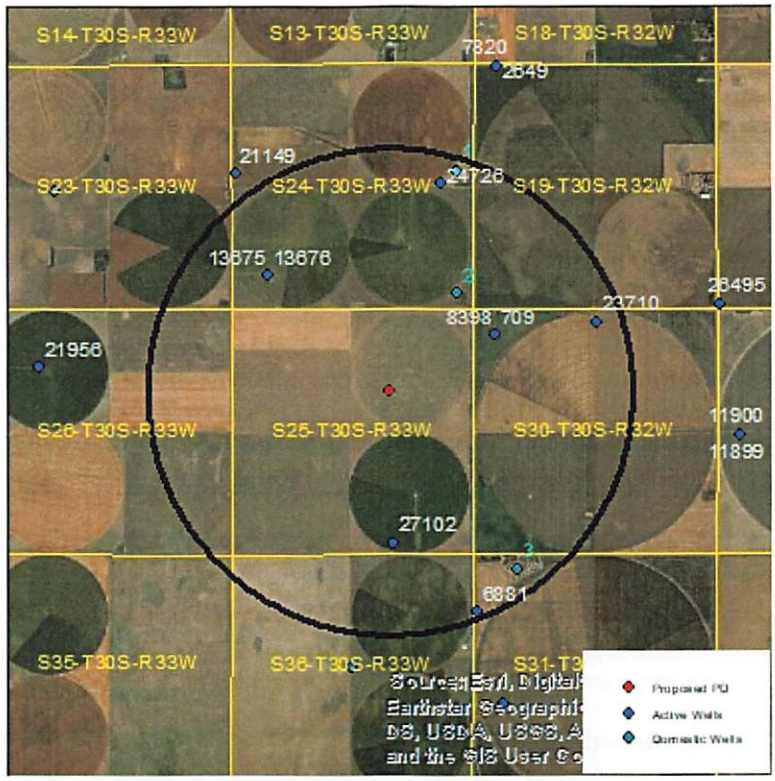
Evaluation of proposed move for Water Right Nos. 709 & 8398

Proposed: Move water right nos. 709 & 8398 a distance of 2,588 ft to the southwest.



Wells within 1 mile: 13675 & 13676, 24726, 27102, 23710, 6881, and three domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 184 ft, based upon the driller's log and an observation well in section 31-30-32. 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 = 0.1747, T = 21,041 ft^2/day, $tp_{current}$ = 122 days (based on average use and reported rate), $Q_{current}$ = 400 gpm (based on 2017 reported rate), $tp_{proposed}$ = 124 days, $Q_{proposed}$ = 1565 gpm

Theis drawdowns were calculated as follows:

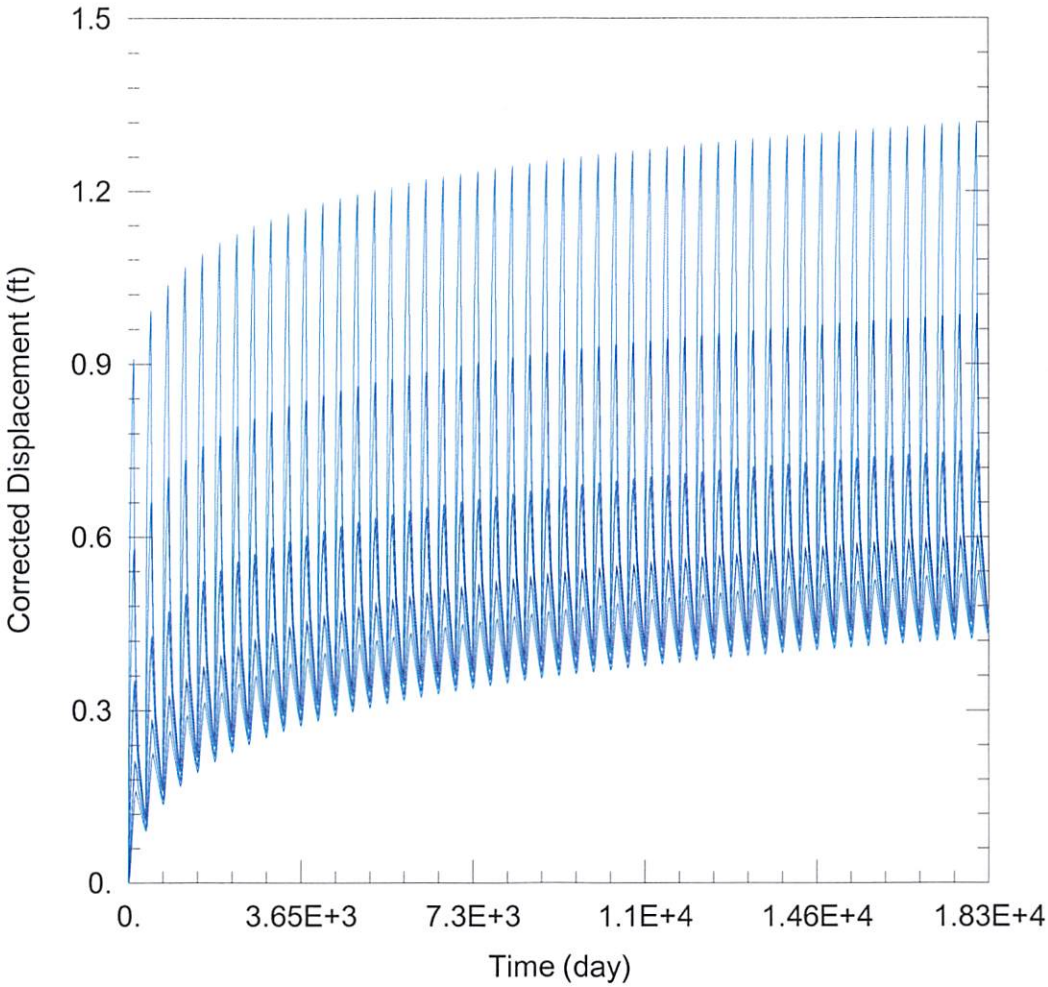
13675 & 13676:	Drawdown from current location = 0.59 ft
	Drawdown from proposed location = 2.91 ft
	Net drawdown = **2.3 ft**
24726:	Drawdown from current location = 0.75 ft
	Drawdown from proposed location = 2.51 ft
	Net drawdown = **1.8 ft**

27102:	Drawdown from current location = 0.60 ft
	Drawdown from proposed location = 3.10 ft
	Net drawdown = **2.5 ft**
23710:	Drawdown from current location = 0.99ft
	Drawdown from proposed location = 2.49 ft
	Net drawdown = **1.5 ft**
6881:	Drawdown from current location = 0.54 ft
	Drawdown from proposed location = 2.35 ft
	Net drawdown = **1.8 ft**
Domestic 1:	Drawdown from current location = 0.74 ft
	Drawdown from proposed location = 2.40 ft
	Net drawdown = **1.7 ft**
Domestic 2:	Drawdown from current location = 1.32 ft
	Drawdown from proposed location = 3.60 ft
	Net drawdown = **2.3 ft**
Domestic 3:	Drawdown from current location = 0.60 ft
	Drawdown from proposed location = 2.48 ft
	Net drawdown = **1.9 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\2022_moves\709_8398\709 & 8398 Current.aqt
Date: 02/03/22 Time: 16:10:59

PROJECT INFORMATION

Company: GMD 3
Project: 709 & 8398
Location: Haskell County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
709 & 8398	-20317	196727

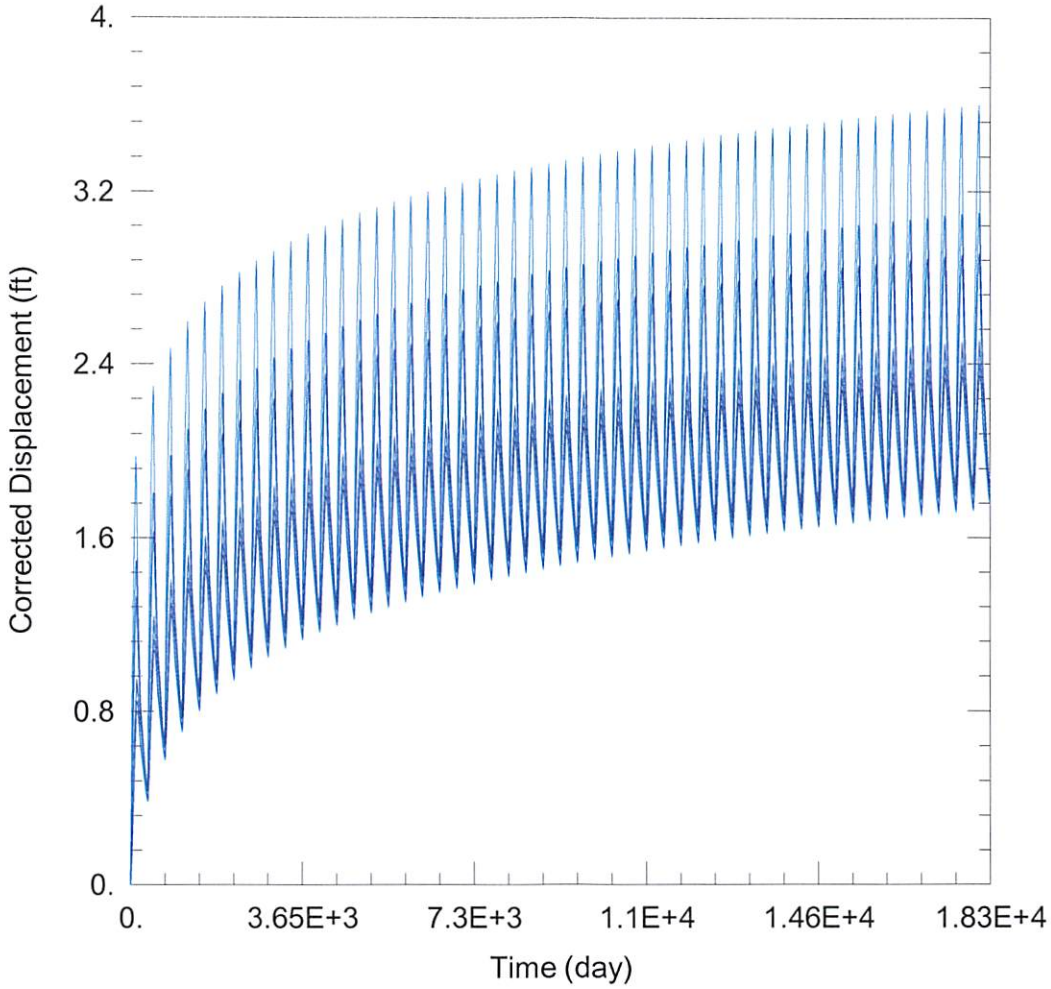
Observation Wells

Well Name	X (ft)	Y (ft)
▫	-20317	196727
▫ 13675 & 13676	-25283	198027
▫ 24726	-21477	200049
▫ 27102	-22529	192239
▫ 23710	-18110	196991
▫ 6881	-20700	190737
▫ Domestic 1	-21145	200292
▫ Domestic 2	-21142	197629
▫ Domestic 3	-19830	191659

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 2.104E+4 ft^2/day
S = 0.1747



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2022_moves\709_8398\709 & 8398 Proposed.aqt
Date: 02/03/22 Time: 16:10:52

PROJECT INFORMATION

Company: GMD 3
Project: 709 & 8398
Location: Haskell County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
709 & 8398	-22607	195520

Observation Wells

Well Name	X (ft)	Y (ft)
▫	-22607	195520
▫ 13675 & 13676	-25283	198027
▫ 24726	-21477	200049
▫ 27102	-22529	192239
▫ 23710	-18110	196991
▫ 6881	-20700	190737
▫ Domestic 1	-21145	200292
▫ Domestic 2	-21142	197629
▫ Domestic 3	-19830	191659

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 2.104E+4 ft^2/day
S = 0.1747