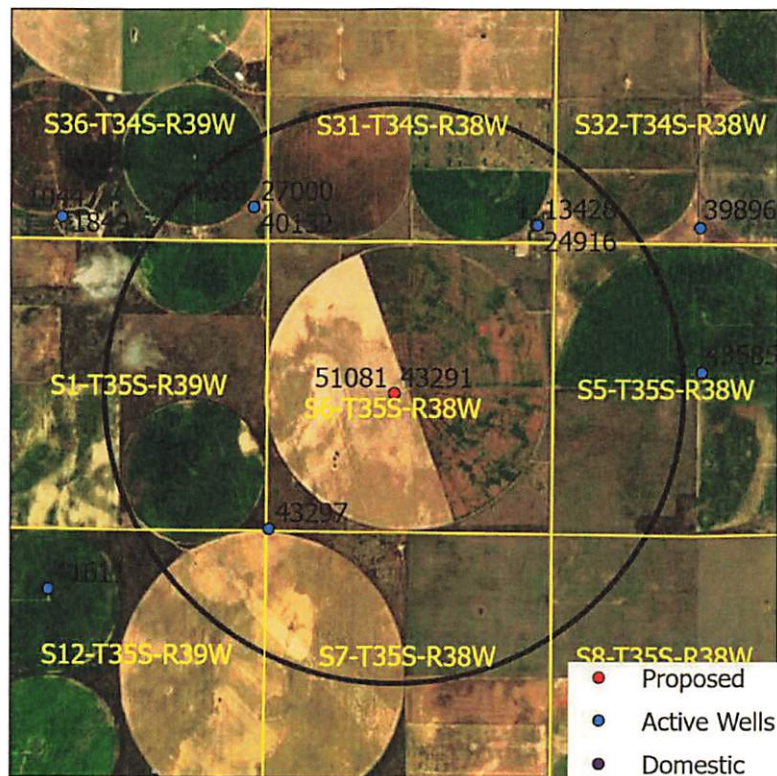


Evaluation of proposed move for Water Right No. 51081

Proposed: Increase rate on water right no. 43291 & 51081 from 1830 gpm to 2105 gpm.



Wells within 1 mile: 27000, 13428, 43297, and one domestic well in section 31-34-38.

The saturated thickness at the proposed well location is estimated to be 282.5 ft, based upon the GMD3 model. 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:

$S = 0.028$, $T = 31,842.3 \text{ ft}^2/\text{day}$, $tp_{\text{current}} = 87 \text{ days}$ (based on average use and observed rate),

$Q_{\text{current}} = 1830 \text{ gpm}$ (based on authorized rate), $tp_{\text{proposed}} = 75 \text{ days}$, $Q_{\text{proposed}} = 2105 \text{ gpm}$

Theis drawdowns were calculated as follows:

27000: Drawdown from current location = 3.15 ft
Drawdown from proposed location = 3.34 ft
Net drawdown = **0.2 ft**

13428: Drawdown from current location = 3.24 ft
Drawdown from proposed location = 3.45 ft
Net drawdown = **0.2 ft**

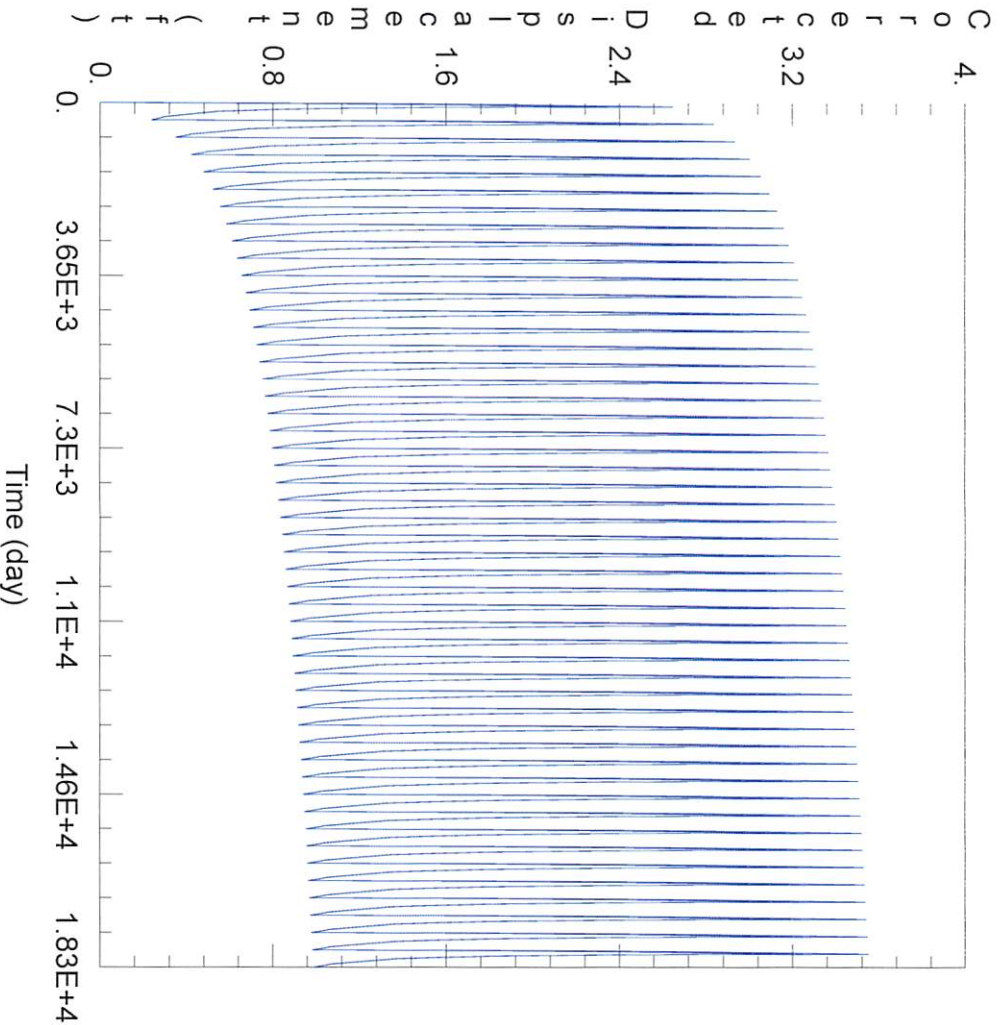
43297: Drawdown from current location = 3.55 ft
Drawdown from proposed location = 3.80 ft
Net drawdown = **0.3 ft**

Domestic 31-34-38: Drawdown from current location = 3.24 ft
Drawdown from proposed location = 3.45 ft
Net drawdown = **0.2 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 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\scanstation\Documents\move requests\51081\51081 current.aqt
 Date: 08/01/24 Time: 11:24:27

PROJECT INFORMATION

Test Well: 51081

WELL DATA

Pumping Wells		Observation Wells			
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
51081	-202509	57788	<input type="checkbox"/> 27000	-202509	57788
			<input type="checkbox"/> 13428	-205065	61183
			<input type="checkbox"/> 43297	-199900.5	60857
			<input type="checkbox"/> Domestic	-204787	55319
				-199927	60868

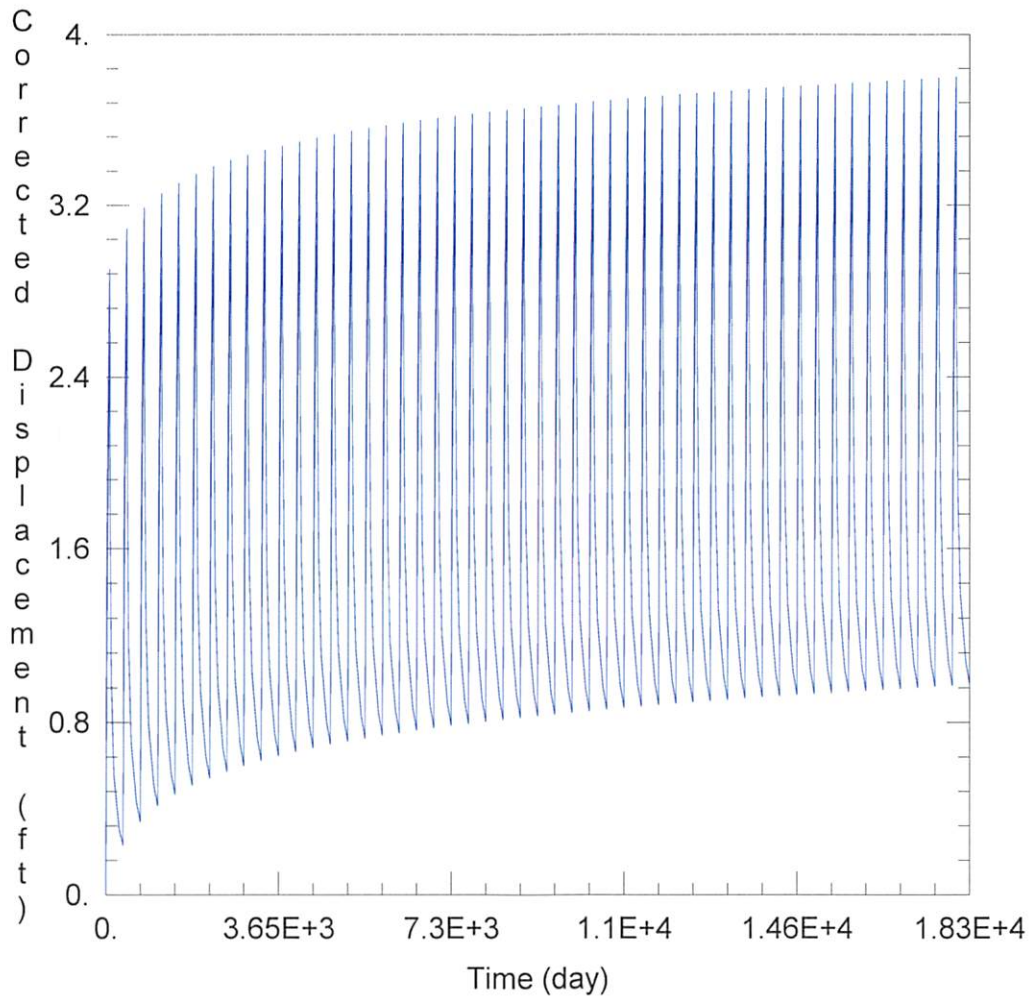
SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

$T = 3.184E+4 \text{ ft}^2/\text{day}$
 $Kz/Kr = 1.$

$S = 0.028$
 $b = 283. \text{ ft}$



WELL TEST ANALYSIS

Data Set: C:\Users\scanstation\Documents\move requests\51081\51081 proposed.aqt
 Date: 08/01/24 Time: 11:24:32

PROJECT INFORMATION

Test Well: 51081

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
51081	-202509	57788

Observation Wells

Well Name	X (ft)	Y (ft)
□	-202509	57788
□ 27000	-205065	61183
□ 13428	-199900.5	60857
□ 43297	-204787	55319
□ Domestic	-199927	60868

SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 3.184E+4 ft²/day

S = 0.028

Kz/Kr = 1.

b = 283. ft