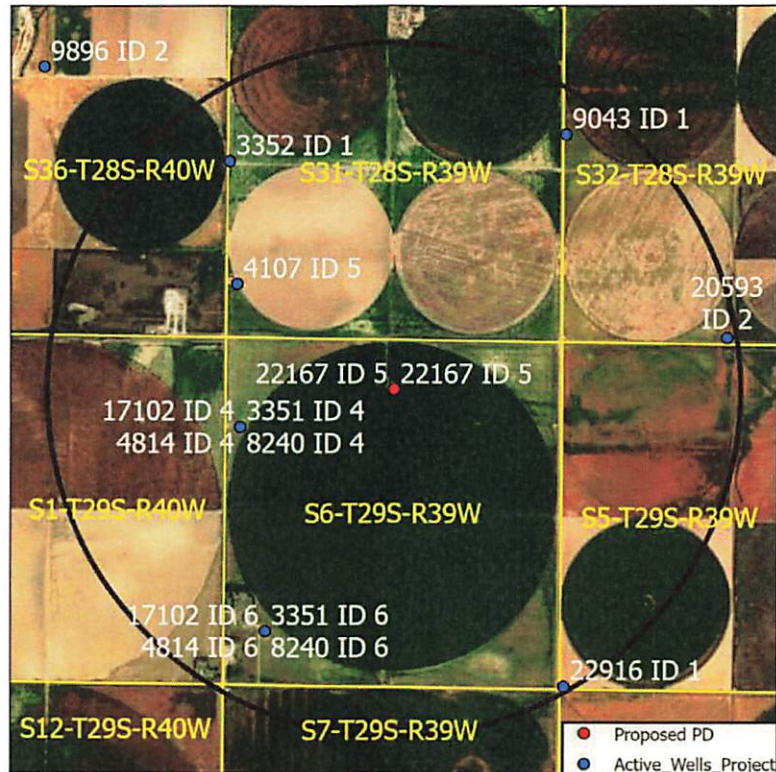


## Evaluation of proposed move for Water Right Nos. 3351, 4814, 8240, 17102 and 22167

Proposed: Move the portion of water right nos. 3351 & 4814 & 8240 & 17102 currently authorized under well ID 4 in section 6-29-39 to the well currently authorized under water right no. 22167. Move water right no. 22167 to the well ID 4 location in section 6-29-39.



Wells within 1 mile: 3551 & 4814 & 8240 & 17102 ID6, 3552, 4107, 9043, 20593, and 22916.

The saturated thickness at the proposed well location is estimated to be 112 ft, based upon the GMD3 model. For saturated thickness between 100 ft and 125 ft, the drawdown allowance is 2.5 ft.

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

$S = 0.064$ ,  $T = 33,098 \text{ ft}^2/\text{day}$ ,

Well ID 4:  $t_{\text{current}} = 272 \text{ days}$ ,  $Q_{\text{current}} = 398 \text{ gpm}$ ,  $t_{\text{proposed}} = 181 \text{ days}$ ,  $Q_{\text{proposed}} = 398 \text{ gpm}$

Well ID 5:  $t_{\text{current}} = 84 \text{ days}$ ,  $Q_{\text{current}} = 550 \text{ gpm}$ ,  $t_{\text{proposed}} = 365 \text{ days}$ ,  $Q_{\text{proposed}} = 550 \text{ gpm}$

Note that since no new wells are being constructed, current pumping rates were used for this evaluation, rather than the authorized rate on the water right. This did not allow the full quantity of water rights to be pumped from the ID 5 location, since it is only physically possible to pump 887 AF in a year at 550 gpm.

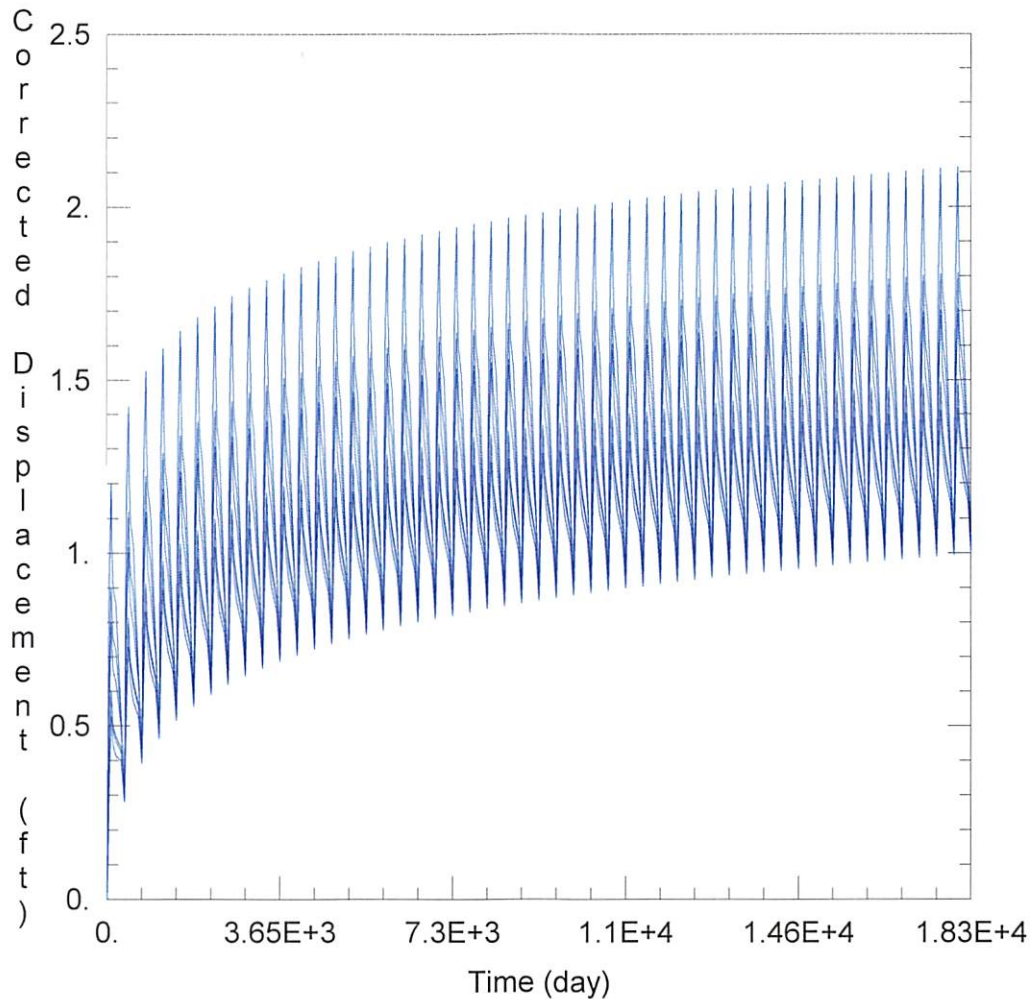
Theis drawdowns were calculated as follows:

3551 & 4814 & 8240 & 17102 ID6:	Drawdown from current location = 1.81 ft
	Drawdown from proposed location = 2.51 ft
	Net drawdown = <b>0.7 ft</b>
3352:	Drawdown from current location = 1.71 ft
	Drawdown from proposed location = 2.48 ft
	Net drawdown = <b>0.8 ft</b>
4107:	Drawdown from current location = 2.11 ft
	Drawdown from proposed location = 2.81 ft
	Net drawdown = <b>0.7 ft</b>
9043:	Drawdown from current location = 1.50 ft
	Drawdown from proposed location = 2.38 ft
	Net drawdown = <b>0.9 ft</b>
20593:	Drawdown from current location = 1.42 ft
	Drawdown from proposed location = 2.31 ft
	Net drawdown = <b>0.9 ft</b>
22916:	Drawdown from current location = 1.47 ft
	Drawdown from proposed location = 2.33 ft
	Net drawdown = <b>0.9 ft</b>

Net drawdown does not exceed the drawdown allowance of 2.5 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 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\2024\_moves\3351+\3351+ Current.aqt  
 Date: 07/31/24 Time: 16:16:42

PROJECT INFORMATION

Company: GMD 3  
 Project: 3351\_4814\_8240\_22167  
 Location: Stanton County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>22167</u>	-239639	250621
<u>3351 &amp; 4814 &amp; 8240 &amp; 1710</u>	-241973	250052

Observation Wells

Well Name	X (ft)	Y (ft)
□	-239639	250621
□	-241973	250052
□ <u>3351 &amp; 4814 &amp; 8240 &amp; 171</u>	-241596	246950
□ <u>3352</u>	-242140	254092
□ <u>4107</u>	-242024	252234
□ <u>9043</u>	-237024	254495
□ <u>20593</u>	-234570	251419
□ <u>22916</u>	-237051	246116

SOLUTION

Aquifer Model: Unconfined

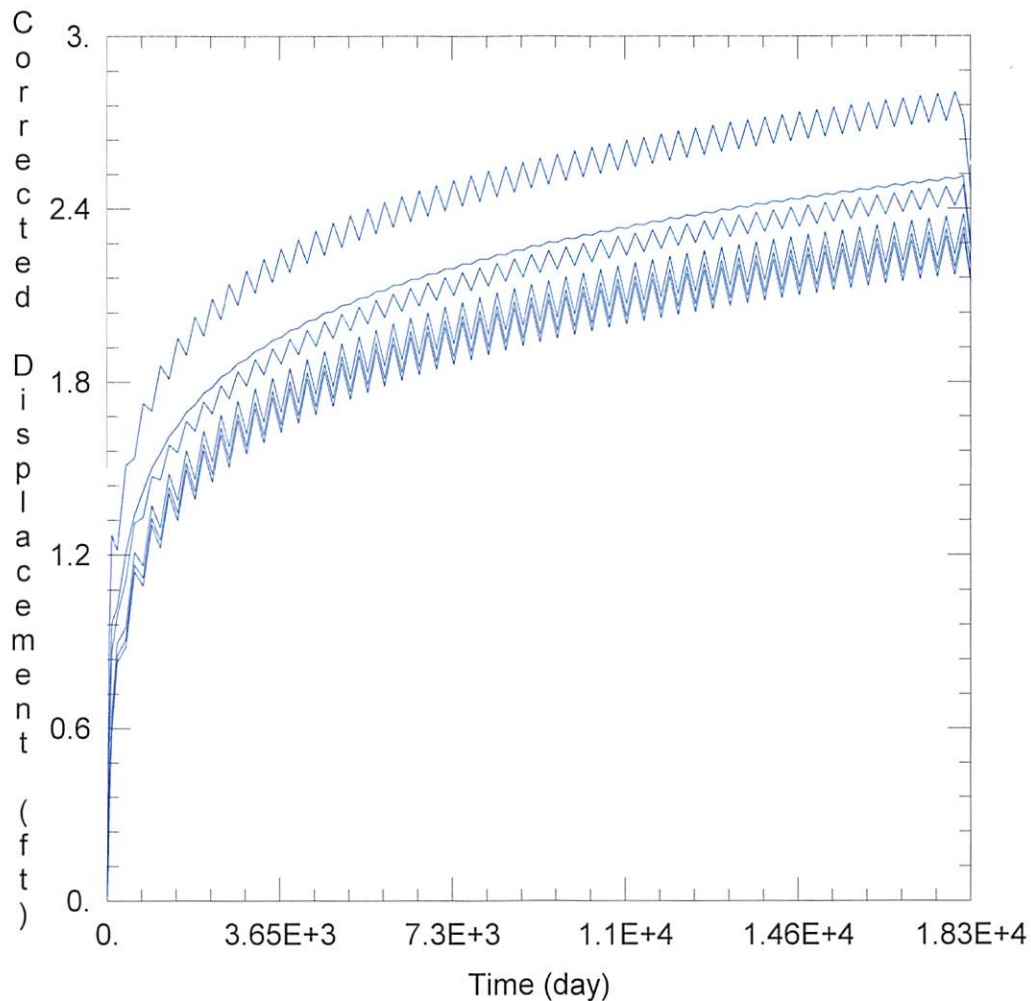
Solution Method: Theis

T = 3.31E+4 ft<sup>2</sup>/day

S = 0.064

Kz/Kr = 1.

b = 112. ft



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2024\_moves\3351+\3351+ Proposed.aqt  
 Date: 07/31/24 Time: 16:17:44

PROJECT INFORMATION

Company: GMD 3  
 Project: 3351\_4814\_8240\_22167  
 Location: Stanton County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>22167</u>	<u>-239639</u>	<u>250621</u>
<u>3351 &amp; 4814 &amp; 8240 &amp; 1710</u>	<u>-241973</u>	<u>250052</u>

Observation Wells

Well Name	X (ft)	Y (ft)
□	<u>-239639</u>	<u>250621</u>
□	<u>-241973</u>	<u>250052</u>
□ <u>3351 &amp; 4814 &amp; 8240 &amp; 1710</u>	<u>-241596</u>	<u>246950</u>
□ <u>3352</u>	<u>-242140</u>	<u>254092</u>
□ <u>4107</u>	<u>-242024</u>	<u>252234</u>
□ <u>9043</u>	<u>-237024</u>	<u>254495</u>
□ <u>20593</u>	<u>-234570</u>	<u>251419</u>
□ <u>22916</u>	<u>-237051</u>	<u>246116</u>

SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 3.31E+4 ft<sup>2</sup>/day

S = 0.064

Kz/Kr = 1.

b = 112. ft