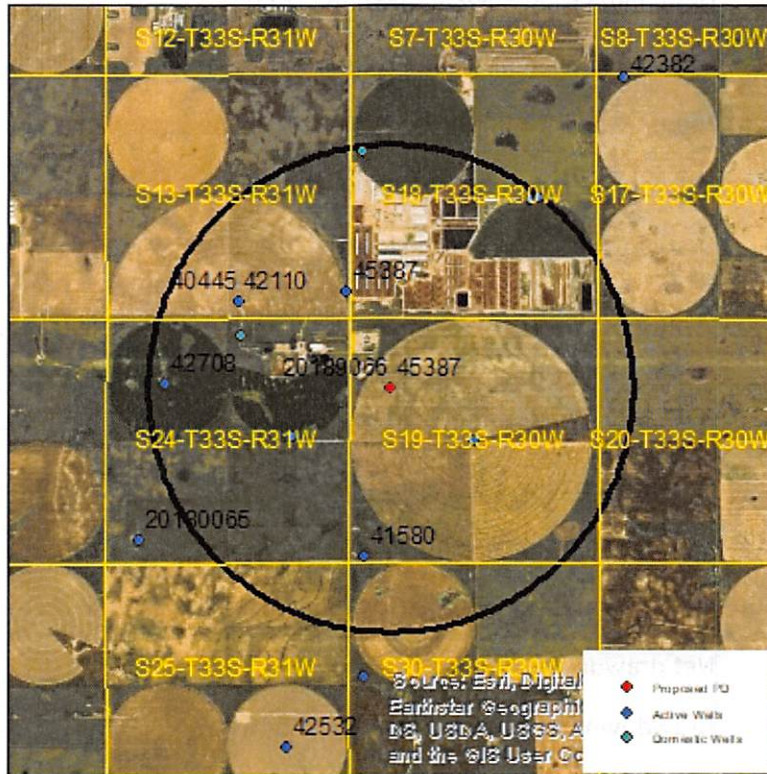


Evaluation of proposed move and change in use made of water for Water Right No 41578, and proposed change in use made of water for Water Right Nos 41579 and 41580

Proposed: Move authority under water right no. 41578 to the well currently authorized under water right no. 45387. Convert use made of water for water right nos. 41578, 41579, and 41580 from irrigation to dual use irrigation/stock. Authorized quantity for water right no. 41578 will be reduced from 141 AF to 119.568 AF. Authorized quantity for water right no. 41579 will be reduced from 498 AF to 422.304 AF. Authorized quantity for water right no. 41580 will be reduced from 805 AF to 682.64 AF.



Wells within 1 mile: 44946, 42708, 40445 & 42110, 45387, 12332, a domestic well in section 18-33-30, and a domestic well in section 24-33-31.

The saturated thickness at the proposed well location is estimated to be 271 ft, based upon the GMD3 model. For saturated thicknesses greater than 200 ft, the maximum allowable Theis drawdown to neighboring critical wells is 4.0 ft.

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

$$S = 0.1527, T = 19,238 \text{ ft}^2/\text{day}$$

41578: No use in last 10 years, so tp_{current} and Q_{current} both equal 0. Well is being relocated, so there is no proposed rate and quantity at this location.

41579: $tp_{\text{current}} = 141$ days (based upon observed rate and reported quantity), $Q_{\text{current}} = 307$ gpm (based upon 2018 field inspection), $tp_{\text{proposed}} = 311$ days, $Q_{\text{proposed}} = 307$ gpm.

41580: $tp_{current} = 182$ days (based upon observed rate and reported quantity), $Q_{current} = 710$ gpm (based upon 2018 field visit), $tp_{proposed} = 218$ days, $Q_{proposed} = 710$ gpm

45387: $tp_{current} = 219$ days (assumption made based upon stock well operating 60% of a day), $Q_{current} = 303$ gpm (based upon average reported use and assumed 219 operating days), $tp_{proposed} = 129$ days (based upon pumping at full authorized rate and quantity), $Q_{proposed} = 910$ gpm

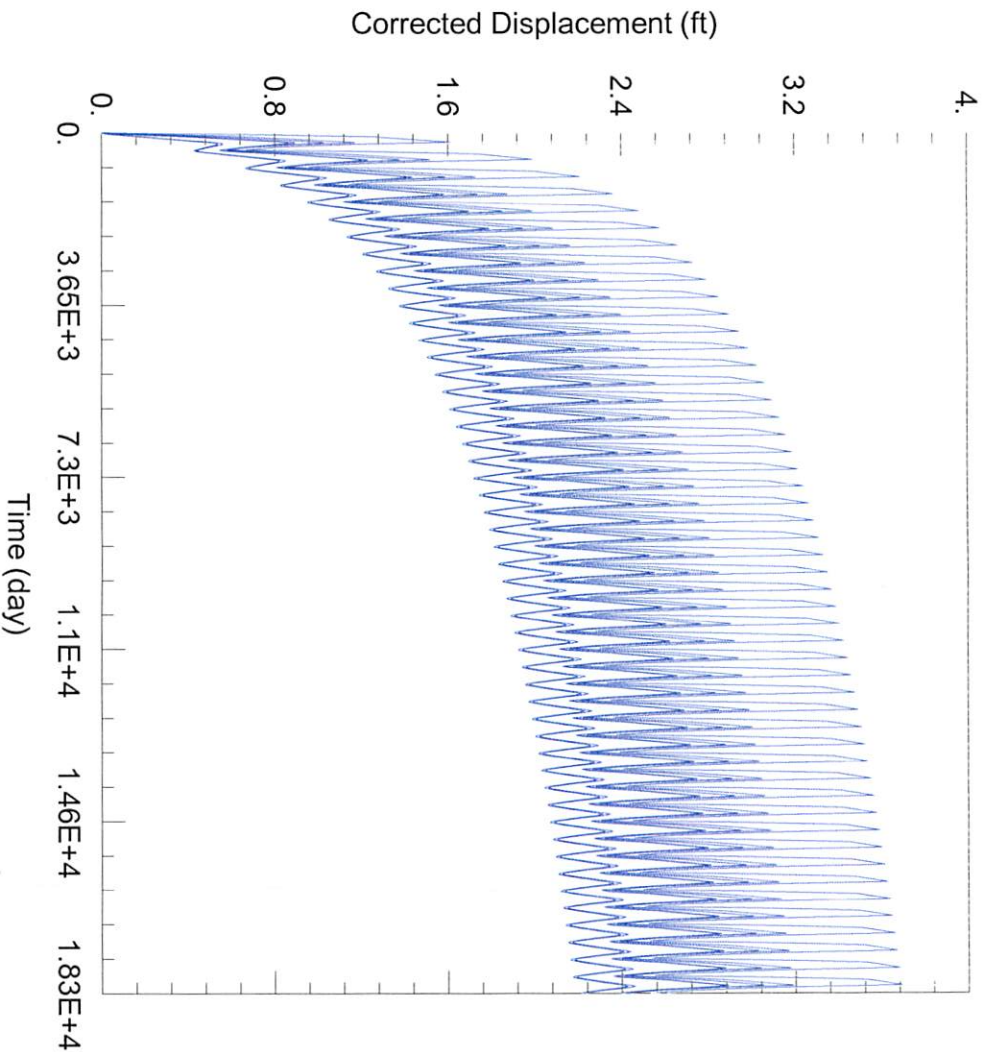
Theis drawdowns were calculated as follows:

44946:	Drawdown from current location = 3.69 ft
	Drawdown from proposed location = 5.89 ft
	Net drawdown = 2.2 ft
42708:	Drawdown from current location = 2.87 ft
	Drawdown from proposed location = 4.29 ft
	Net drawdown = 1.4 ft
40445 & 42110:	Drawdown from current location = 2.89 ft
	Drawdown from proposed location = 4.45 ft
	Net drawdown = 1.6 ft
45387:	Drawdown from current location = 3.19 ft
	Drawdown from proposed location = 5.14 ft
	Net drawdown = 1.9 ft
12332:	Drawdown from current location = 2.46 ft
	Drawdown from proposed location = 3.78 ft
	Net drawdown = 1.3 ft
Domestic 18-33-30:	Drawdown from current location = 2.43 ft
	Drawdown from proposed location = 3.73 ft
	Net drawdown = 1.3 ft
Domestic 24-33-31:	Drawdown from current location = 3.05 ft
	Drawdown from proposed location = 4.68 ft
	Net drawdown = 1.6 ft

Net drawdown does not exceed the drawdown allowance for any neighboring wells, so critical well evaluation evaluation is not necessary.

Conclusion:

Given the current saturated thickness, this proposed change is unlikely to create noticeable effects on neighboring wells.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019 moves\41578\41578 Current.aqt
 Date: 06/05/19 Time: 16:04:45

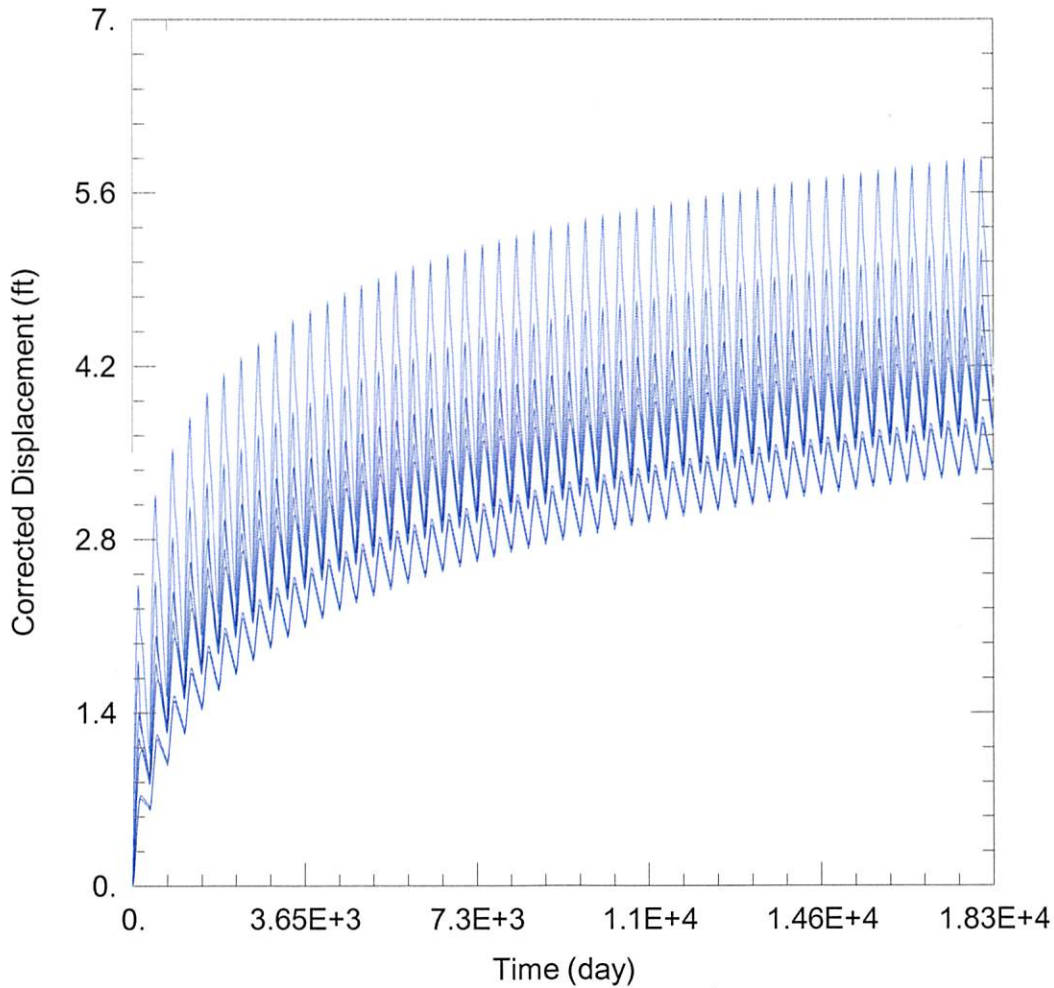
PROJECT INFORMATION

Company: GMD 3
 Project: 41578, 14579, 41580
 Location: Meade County
 Test Well: 41578, 41579, 41580

WELL DATA

Pumping Wells		Observation Wells			
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
	48688	105976	<input type="checkbox"/> 44946	46568	104948
	48104	102328	<input type="checkbox"/> 42708	43801	106079
	48125	99733	<input type="checkbox"/> 40445 & 42110	45369	107859
			<input type="checkbox"/> 45387	47717	108059
			<input type="checkbox"/> 12332	51720	110073
			<input type="checkbox"/> Domestic 18-33-30	48062	111111
			<input type="checkbox"/> Domestic 24-33-31	45423	107118

SOLUTION



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019_moves\41578\41578 Proposed.aqt
 Date: 06/05/19 Time: 16:04:39

PROJECT INFORMATION

Company: GMD 3
 Project: 41578, 14579, 41580
 Location: Meade County
 Test Well: 41578, 41579, 41580

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
	48688	105976
	48104	102328
	48125	99733

Observation Wells

Well Name	X (ft)	Y (ft)
□	48688	105976
□	48104	102328
□	48125	99733
□ 44946	46568	104948
□ 42708	43801	106079
□ 40445 & 42110	45369	107859
□ 45387	47717	108059
□ 12332	51720	110073
□ Domestic 18-33-30	48062	111111
□ Domestic 24-33-31	45423	107118

SOLUTION

Acquifer Model: Unconfined

Solution Method: Th...