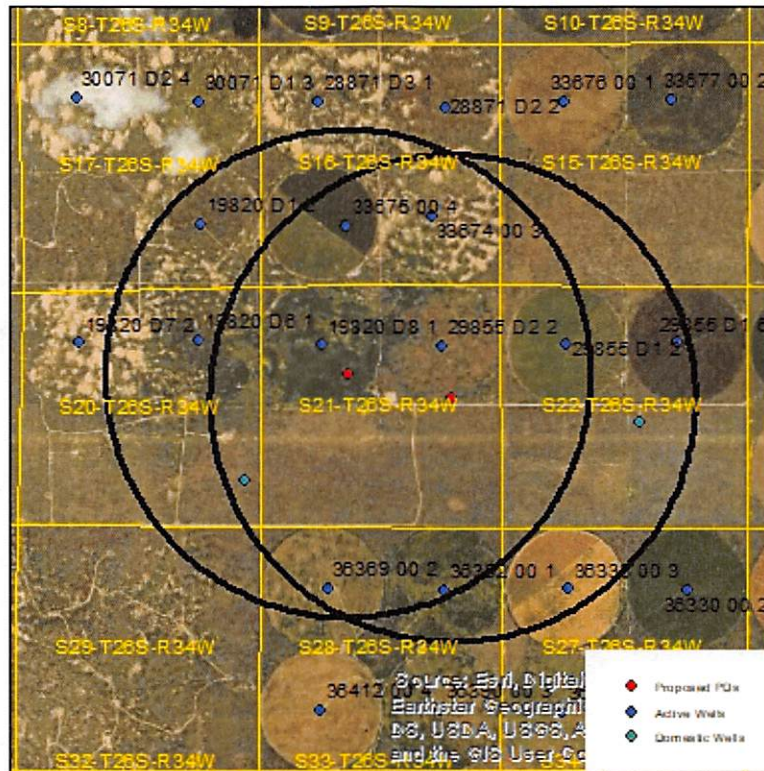


Evaluation of proposed additional well for Water Right Nos 19820 D8 ID1 and 29855 D2 ID2

Proposed: Move water right nos. 19820 D8 ID1 and 29855 D2 ID2 to new locations to the southeast of their currently authorized points of diversion. Neither of the currently authorized wells have been operated over the past 10 years, so there were no current effects calculated to offset the effects of the proposal.



Wells within 1 mile: 33674 ID3, 33675 ID4, 19820 D1 ID2, 19820 D6 ID1, 36369 ID2, 36352 ID1, 36333 ID3, 29855 D1 ID2, 29855 D1 ID6, a domestic well in section 20-26-34, and a domestic well in section 22-26-34.

The saturated thickness at the proposed well location is estimated to be 237 ft, based upon the water level and depth to shale identified in driller's logs at the proposed well locations. For saturated thicknesses greater than 200 ft, the maximum allowable drawdown is 4.0 ft.

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

$$S = 0.2699, T = 15,027 \text{ ft}^2/\text{day},$$

$$19820 \text{ D8 ID1: } t_{p\text{proposed}} = 57 \text{ days, } Q_{p\text{proposed}} = 1025 \text{ gpm}$$

$$29855 \text{ D2 ID2: } t_{p\text{proposed}} = 67 \text{ days, } Q_{p\text{proposed}} = 800 \text{ gpm}$$

Theis drawdowns were calculated as follows:

$$33674 \text{ ID3: } \text{Drawdown from proposed location} = 1.8 \text{ ft}$$

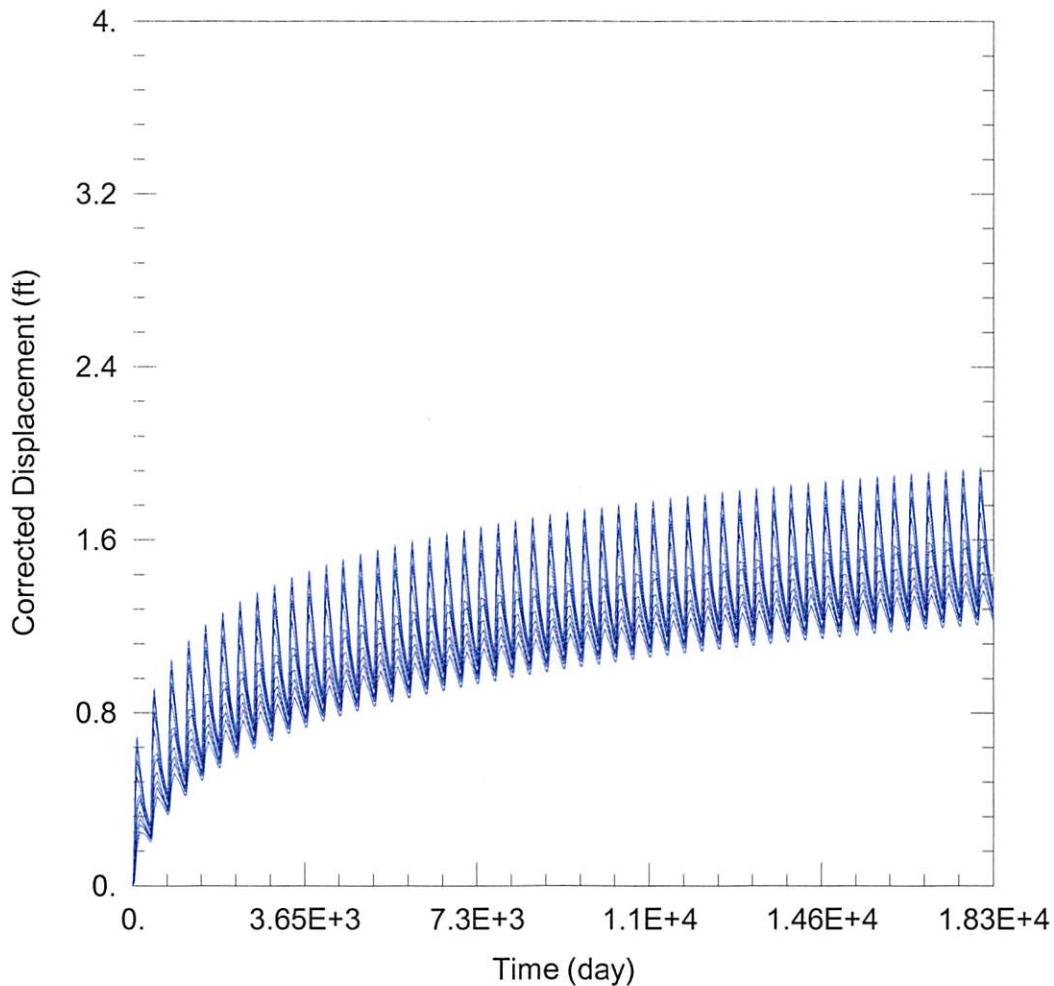
$$33675 \text{ ID4: } \text{Drawdown from proposed location} = 1.9 \text{ ft}$$

19820 D1 ID2: Drawdown from proposed location = **1.5 ft**
19820 D6 ID1: Drawdown from proposed location = **1.7 ft**
36369 ID2: Drawdown from proposed location = **1.6 ft**
36352 ID1: Drawdown from proposed location = **1.6 ft**
36333 ID3: Drawdown from proposed location = **1.4 ft**
29855 D1 ID2: Drawdown from proposed location = **1.9 ft**
29855 D1 ID6: Drawdown from proposed location = **1.4 ft**
Domestic 20-26-34: Drawdown from proposed location = **1.8 ft**
Domestic 22-26-34: Drawdown from proposed location = **1.5 ft**

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

Conclusion:

This proposal will likely have a negligible effect on neighboring water rights. GMD3 staff recommends approval of the application.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2019_moves\19820_29855\19820_29855.aqt

Date: 08/19/19

Time: 10:02:57

PROJECT INFORMATION

Company: GMD 3

Project: 19820_29855

Location: Finney County

Test Well: 19820_29855

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
	-71527	327801
	-69251	327271

Observation Wells

Well Name	X (ft)	Y (ft)
□	-71527	327801
□	-69251	327271
□ 33674 ID3	-69711	331226
□ 33675 ID4	-71560	331004
□ 19820 D1 ID2	-74727	331061
□ 19820 D6 ID1	-74749	328536
□ 36369 ID2	-71965	323149
□ 36352 ID1	-69440	323104
□ 36333 ID3	-66751	323126
□ 29855 D1 ID2	-66776	328426
□ 29855 D1 ID6	-64346	328462
□ Domestic 20-26-34	-73778	325477
□ Domestic 22-26-34	-65161	326743