Evaluation of proposed move for Water Right No 25460 ID 3

Proposed: Move water right no. 25460 ID 3 a distance of 1,078 ft to the north. Move a quantity of 120 AF from the well authorized under water right no. 25460 ID 5 to the new well location. Total authorized quantity under 25460 ID 3 will be increased from 260 AF to 380 AF. Total authorized quantity under 25460 ID 5 will be reduced from 520 AF to 400 AF.



Wells within 1 mile: 25460 ID 4, 25460 ID 5, 22576, 20890, 22578 ID 2, 22578 ID 5, 22578 ID 7, 22578 ID 8, 30820, 30819 ID 1, 30819 ID 2, a domestic well in section 31-26-33, and a domestic well in section 2-27-34

The saturated thickness at the proposed well location is estimated to be 209 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:

$$S = 0.2647$$
, $T = 30,250$ ft²/day,

 $tp_{current} = 109$ days (based upon average use and observed rate), $Q_{current} = 790$ gpm (based upon 2019 field inspection), $tp_{proposed} = 109$ days, $Q_{proposed} = 790$ gpm

Theis drawdowns were calculated as follows:

25460 ID 4:

Drawdown from current location = 0.25 ft

Drawdown from proposed location = 1.05 ft

Net drawdown = 0.8 ft

25460 ID 5: Drawdown from current location = 0.23 ft

Drawdown from proposed location = 1.35 ft

Net drawdown = 1.1 ft

22576: Drawdown from current location = 0.15 ft

Drawdown from proposed location = 0.71 ft

Net drawdown = 0.6 ft

20890: Drawdown from current location = 0.15 ft

Drawdown from proposed location = 0.72 ft

Net drawdown = 0.6 ft

22578 ID 2: Drawdown from current location = 0.17 ft

Drawdown from proposed location = 0.83 ft

Net drawdown = 0.7 ft

22578 ID 5: Drawdown from current location = 0.24 ft

Drawdown from proposed location = 1.05 ft

Net drawdown = 0.8 ft

22578 ID 7: Drawdown from current location = 0.19 ft

Drawdown from proposed location = 0.80 ft

Net drawdown = **0.6 ft**

22578 ID 8: Drawdown from current location = 0.21 ft

Drawdown from proposed location = 1.04 ft

Net drawdown = **0.8 ft**

30820: Drawdown from current location = 0.20 ft

Drawdown from proposed location = 0.78 ft

Net drawdown = **0.6 ft**

30819 ID 1: Drawdown from current location = 0.20 ft

Drawdown from proposed location = 0.77 ft

Net drawdown = **0.6 ft**

30819 ID 2: Drawdown from current location = 0.24 ft

Drawdown from proposed location = 0.87 ft

Net drawdown = **0.6** ft

Domestic 31-26-33: Drawdown from current location = 0.19 ft

Drawdown from proposed location = 0.82 ft

Net drawdown = 0.6 ft

Domestic 2-27-34: Drawdown from current location = 0.27 ft

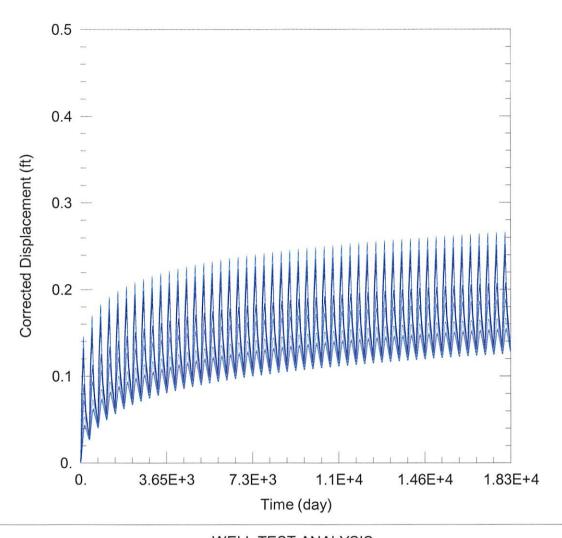
Drawdown from proposed location = 0.99 ft

Net drawdown = 0.7 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 is unlikely to cause impairment. GMD3 staff recommends approval of this proposal.



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\25460\25460 Current.aqt

Date: 03/16/21 Time: 15:29:50

PROJECT INFORMATION

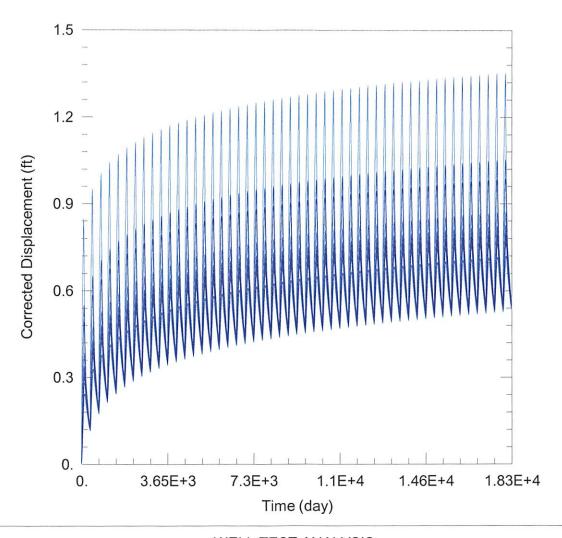
Company: GMD 3
Project: 25460 ID 3
Location: Finney County
Test Well: 25460 ID 3

WELL DATA

r diriping vvolio			
Well Name	X (ft)	Y (ft)	
25460 ID3	-56173	315174	

Pumping Wells

Observation Wells				
Well Name	X (ft)	Y (ft)		
	-56173	315174		
□ 25460 ID4	-53571	315158		
□ 25460 ID5	-56309	318149		
22576	-58909	320693		
20890	-53300	320463		
□ 22578 ID2	-56162	320487		
□ 22578 ID5	-58920	315198		
□ 22578 ID7	-60569	315205		
□ 22578 ID8	-58741	317794		
□ 30820	-58897	312536		
□ 30819 ID1	-53605	312339		
□ 30819 ID2	-56208	312352		
 Domestic 31-26-33 	-51939	316186		



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\25460\25460 Proposed.aqt

Date: 03/16/21 Time: 15:29:40

PROJECT INFORMATION

Company: GMD 3
Project: 25460 ID 3
Location: Finney County
Test Well: 25460 ID 3

WELL DATA

Pumping Wells			
Well Name	X (ft)	Y (ft)	
25460 ID3	-56235	316250	

Observation Wells				
Well Name	X (ft)	Y (ft)		
	-56235	316250		
□ 25460 ID4	-53571	315158		
□ 25460 ID5	-56309	318149		
22576	-58909	320693		
20890	-53300	320463		
□ 22578 ID2	-56162	320487		
□ 22578 ID5	-58920	315198		
□ 22578 ID7	-60569	315205		
□ 22578 ID8	-58741	317794		
30820	-58897	312536		
□ 30819 ID1	-53605	312339		
□ 30819 ID2	-56208	312352		
 Domestic 31-26-33 	-51939	316186		