Evaluation of proposed move for Water Right No 3386
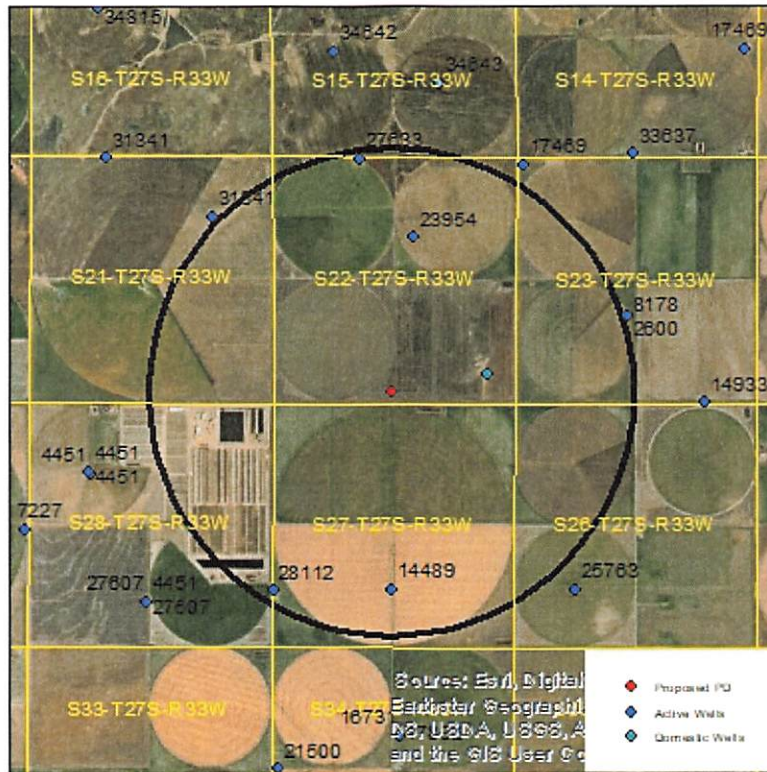
Proposed: Move 284.3 AF at 100 gpm from water right no. 3386 to a new well located 2,504 ft to the southwest. The current well location will retain more authority than is currently being used, so only the effect from pumping at the new well location was evaluated.

Wells within 1 mile: 8678, 23954, 27633, 28112, 14489, and a domestic well in section 22-27-33.

The saturated thickness at the proposed well location is estimated to be 256 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:

$S = 0.1823$, $T = 10,972$ ft^2/day, $tp_{proposed} = 339$ days, $Q_{proposed} = 100$ gpm

Theis drawdowns were calculated as follows:

|	
8678:	Net drawdown = **0.8 ft**
23954:	Net drawdown = **0.7 ft**
27633:	Net drawdown = **0.6 ft**
28112:	Net drawdown = **0.6 ft**
14489:	Net drawdown = **0.6 ft**
Domestic 22-27-33:	Net drawdown = **0.8 ft**

Net drawdown does not exceed the drawdown allowance of 4.0 ft for any wells within 1 mile of the proposed location. Therefore, critical well analysis is not necessary.

Conclusion:

Based upon information from the GMD3 model, this proposal will cause minimal effects on neighboring wells, and is unlikely to create an impairment. GMD3 staff recommends approval of the application.
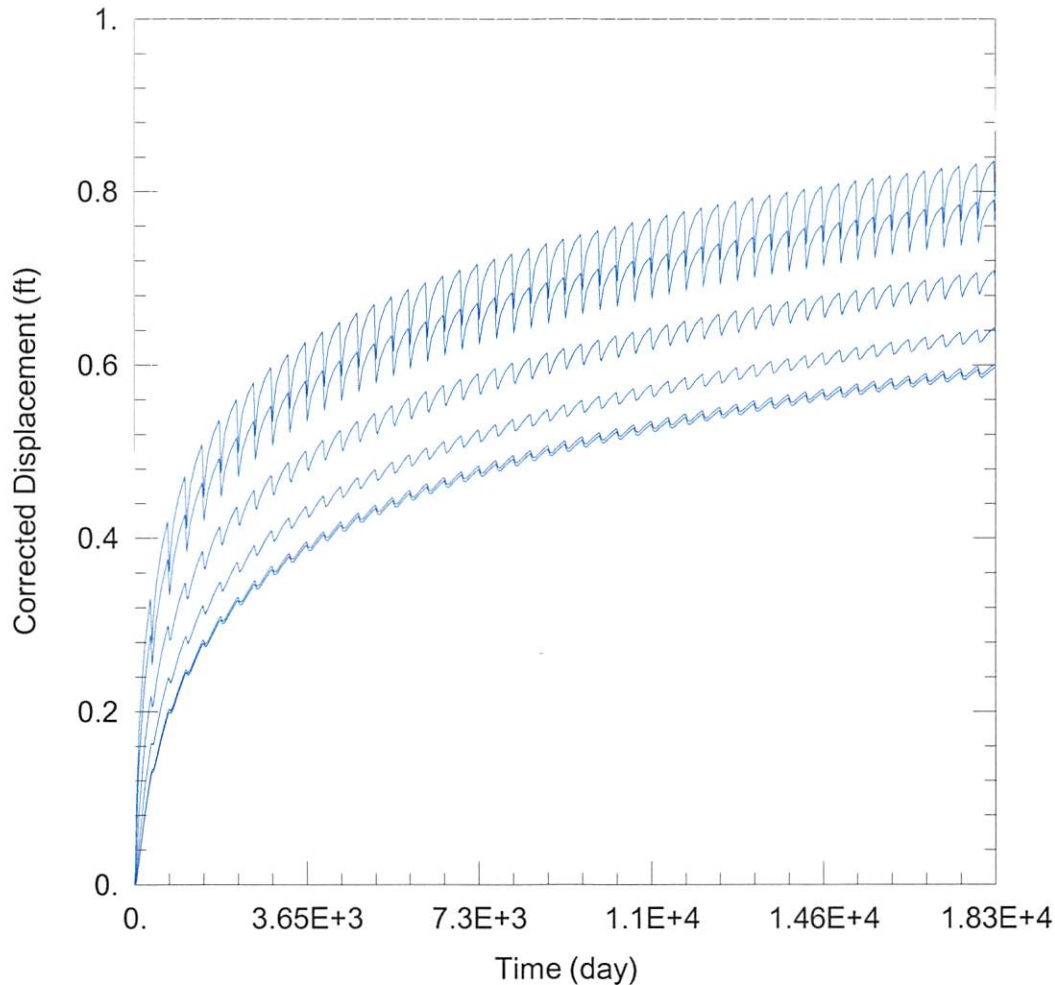
WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020_moves\3386\3386.aqt
Date: 10/15/20   Time: 15:55:44

PROJECT INFORMATION

Company: GMD 3
Project: 3386
Location: Haskell County
Test Well: 3386

WELL DATA

Pumping Wells			Observation Wells		
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
3386	-33921	292838	□	-33921	292838
			□ 8678	-31550	293644
			□ 23954	-33439	296168
			□ 27633	-34612	297870
			□ 28112	-36467	288528
			□ 14489	-33882	288554
			□ Domestic 22-27-33	-31826	293215

SOLUTION

Aquifer Model: Unconfined   Solution Method: Theis

T   = 1.097E+4 ft^2/day   S   = 0.1823
Kz/Kr = 1.   b   = 212. ft