

Evaluation of proposed move for Water Right No. 4730

Proposed: Move water right no. 4730 to a new well location, a distance of 977 ft to the north.



Wells within 1 mile: 13821 & 29516, 14799, 18662, 23623, 873 & 4797 & 4906, 497 & 18237, 29225, and three domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 96 ft, based upon the GMD3 model. For saturated thickness between 75 ft and 100 ft, the drawdown allowance is 2.0 ft.

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

$S = 0.0204$, $T = 18,514 \text{ ft}^2/\text{day}$, $tp_{\text{current}} = 104 \text{ days}$ (based on average use and observed rate), $Q_{\text{current}} = 291 \text{ gpm}$ (based on 2018 field inspection), $tp_{\text{proposed}} = 68 \text{ days}$, $Q_{\text{proposed}} = 1028 \text{ gpm}$

Theis drawdowns were calculated as follows:

13821 & 29516: Drawdown from current location = 0.54 ft
Drawdown from proposed location = 1.46 ft
Net drawdown = **0.9 ft**

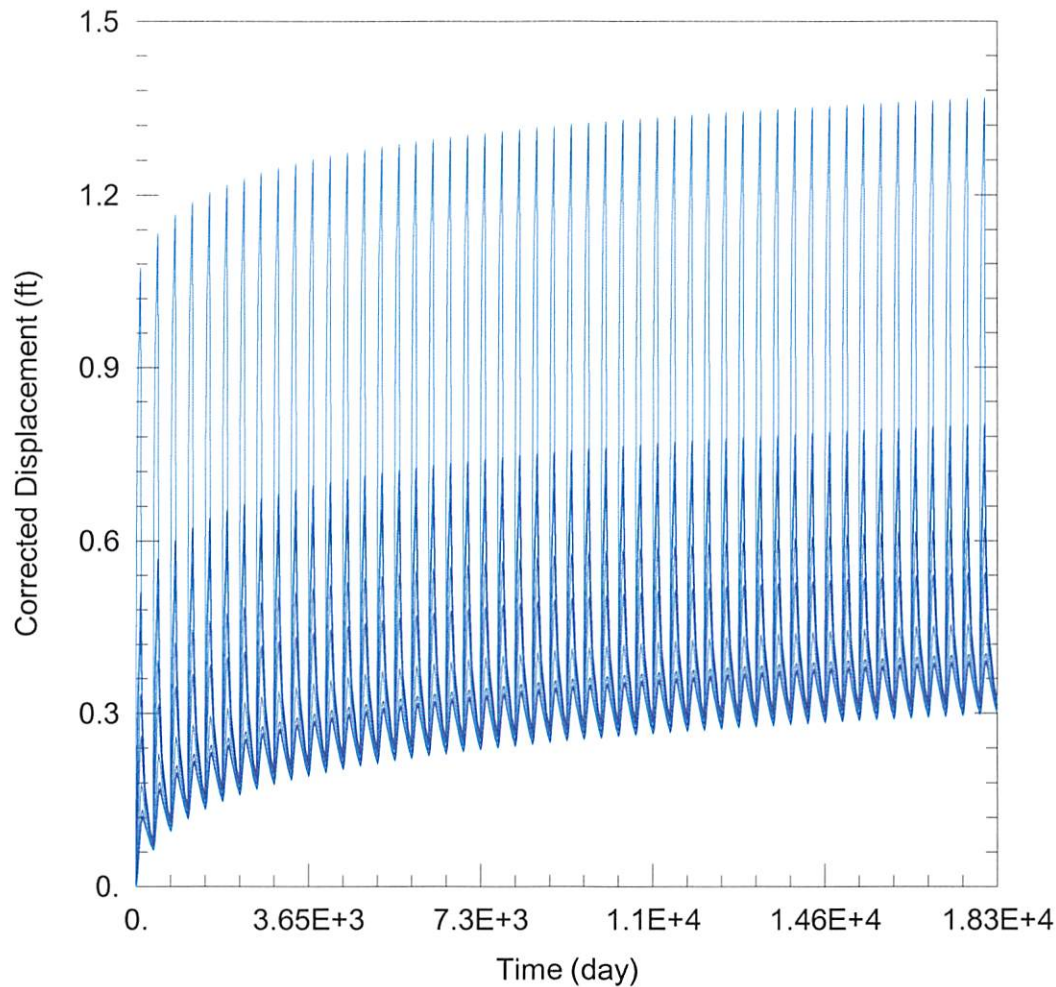
14799: Drawdown from current location = 0.40 ft
Drawdown from proposed location = 1.07 ft
Net drawdown = **0.7 ft**

18662:	Drawdown from current location = 0.40 ft Drawdown from proposed location = 0.99 ft Net drawdown = 0.6 ft
23623:	Drawdown from current location = 0.62 ft Drawdown from proposed location = 1.30 ft Net drawdown = 0.7 ft
873 & 4797 & 4906:	Drawdown from current location = 0.80 ft Drawdown from proposed location = 1.50 ft Net drawdown = 0.7 ft
497 & 18237:	Drawdown from current location = 0.74 ft Drawdown from proposed location = 1.81 ft Net drawdown = 1.1 ft
29225:	Drawdown from current location = 0.46 ft Drawdown from proposed location = 0.94 ft Net drawdown = 0.5 ft
Domestic 1:	Drawdown from current location = 0.39 ft Drawdown from proposed location = 0.92 ft Net drawdown = 0.5 ft
Domestic 2:	Drawdown from current location = 0.39 ft Drawdown from proposed location = 0.91 ft Net drawdown = 0.5 ft
Domestic 3:	Drawdown from current location = 1.37 ft Drawdown from proposed location = 2.40 ft Net drawdown = 1.0 ft

Net drawdown does not exceed the drawdown allowance of 2.0 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 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\2022_moves\4730\4730 Current.aqt

Date: 06/22/22

Time: 11:08:37

PROJECT INFORMATION

Company: GMD 3

Project: 4730

Location: Haskell County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
4730	26175	233109

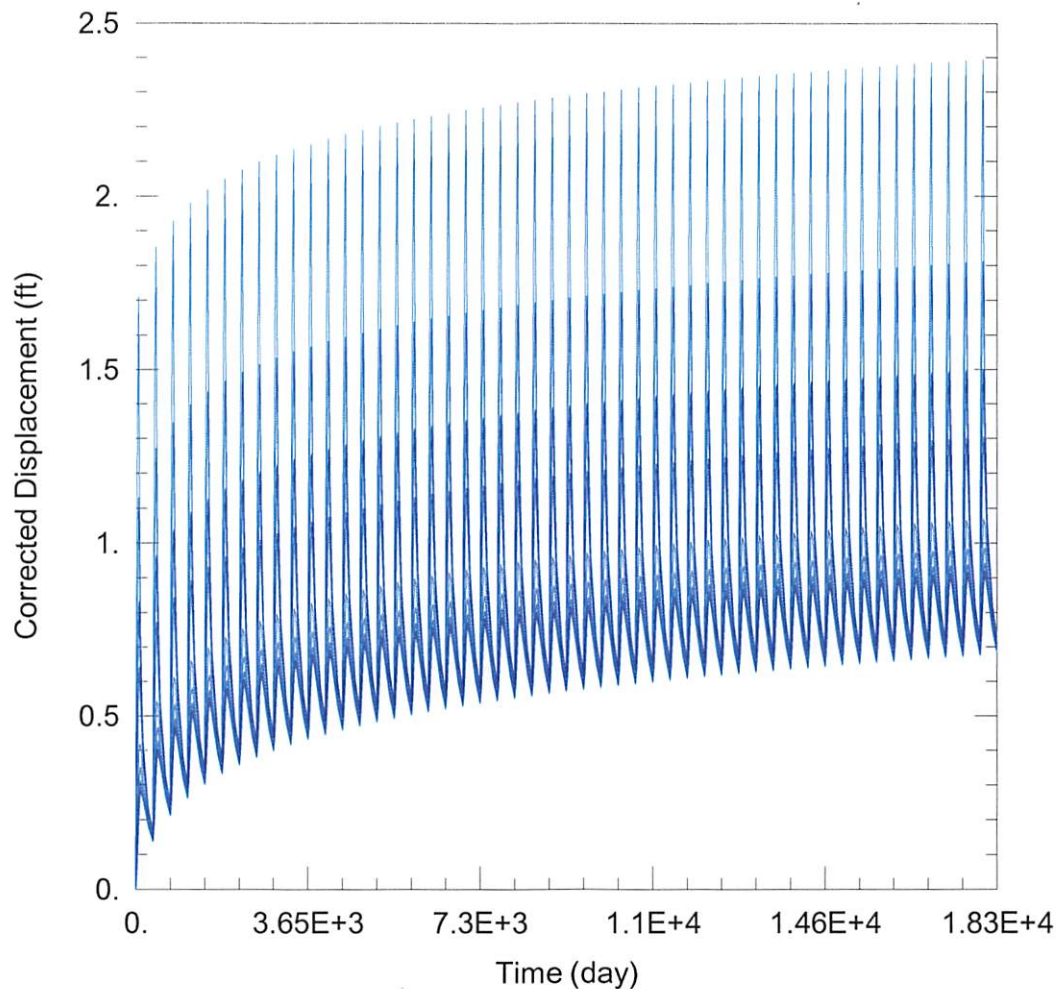
Observation Wells

Well Name	X (ft)	Y (ft)
□	26175	233109
□ 13821 & 29516	23534	234701
□ 14799	29246	236808
□ 18662	30756	234472
□ 23623	24233	231534
□ 873 & 4797 & 4906	26177	231445
□ 497 & 18237	28089	233165
□ 29225	28064	229560
□ Domestic 1	21139	234050
□ Domestic 2	21138	233204
□ Domestic 3	26428	232679

SOLUTION

Analysis Method: Unconfined

Solution Method: Theis



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2022_moves\4730\4730 Proposed.aqt

Date: 06/22/22

Time: 11:08:29

PROJECT INFORMATION

Company: GMD 3

Project: 4730

Location: Haskell County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
4730	26210	234085

Observation Wells

Well Name	X (ft)	Y (ft)
□	26210	234085
□ 13821 & 29516	23534	234701
□ 14799	29246	236808
□ 18662	30756	234472
□ 23623	24233	231534
□ 873 & 4797 & 4906	26177	231445
□ 497 & 18237	28089	233165
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SOLUTION

Analysis Model: Unconfined

Solution Method: Theis