

Evaluation of proposed move for Water Right Nos. 13815 ID 1 and 13815 ID 2

Proposed: Move water right nos. 13815 ID 1 a distance of 1,481 ft to the northwest. Move water right no. 13815 ID 2 a distance of 1,929 ft to the northwest.



Wells within 1 mile: 6243, 14440 & 36244, 3997, 30268 & 42747, 32177, 18215, 29144, a domestic well in section 23-30-29, a domestic well in section 24-30-29, a domestic well in section 19-30-28, and a domestic well in section 30-30-28.

The saturated thickness at the proposed well location is estimated to be 233 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:

$S = 0.2611, T = 33,175 \text{ ft}^2/\text{day},$

13815 ID 1: $tp_{\text{current}} = 137$ days (based upon average use and observed rate), $Q_{\text{current}} = 618$ gpm (based upon 2019 field inspection), $tp_{\text{proposed}} = 72$ days, $Q_{\text{proposed}} = 1530$ gpm

13815 ID 2: $tp_{\text{current}} = 109$ days (based upon average use and observed rate), $Q_{\text{current}} = 736$ gpm (based upon 2019 field inspection), $tp_{\text{proposed}} = 72$ days, $Q_{\text{proposed}} = 1470$ gpm

Theis drawdowns were calculated as follows:

- 6243: Drawdown from current location = 1.17 ft
 Drawdown from proposed location = 1.84 ft
 Net drawdown = **0.7 ft**

14440 & 36244: Drawdown from current location = 1.10 ft
Drawdown from proposed location = 1.81 ft
Net drawdown = **0.7 ft**

3997: Drawdown from current location = 1.51 ft
Drawdown from proposed location = 3.10 ft
Net drawdown = **1.6 ft**

30268 & 42747: Drawdown from current location = 1.10 ft
Drawdown from proposed location = 1.53 ft
Net drawdown = **0.4 ft**

32177: Drawdown from current location = 1.47 ft
Drawdown from proposed location = 2.33 ft
Net drawdown = **0.9 ft**

18215: Drawdown from current location = 1.55 ft
Drawdown from proposed location = 1.74 ft
Net drawdown = **0.2 ft**

29144: Drawdown from current location = 1.34 ft
Drawdown from proposed location = 1.55 ft
Net drawdown = **0.2 ft**

Domestic 23-30-29: Drawdown from current location = 1.27 ft
Drawdown from proposed location = 2.04 ft
Net drawdown = **0.8 ft**

Domestic 24-30-29: Drawdown from current location = 1.58 ft
Drawdown from proposed location = 3.45 ft
Net drawdown = **1.9 ft**

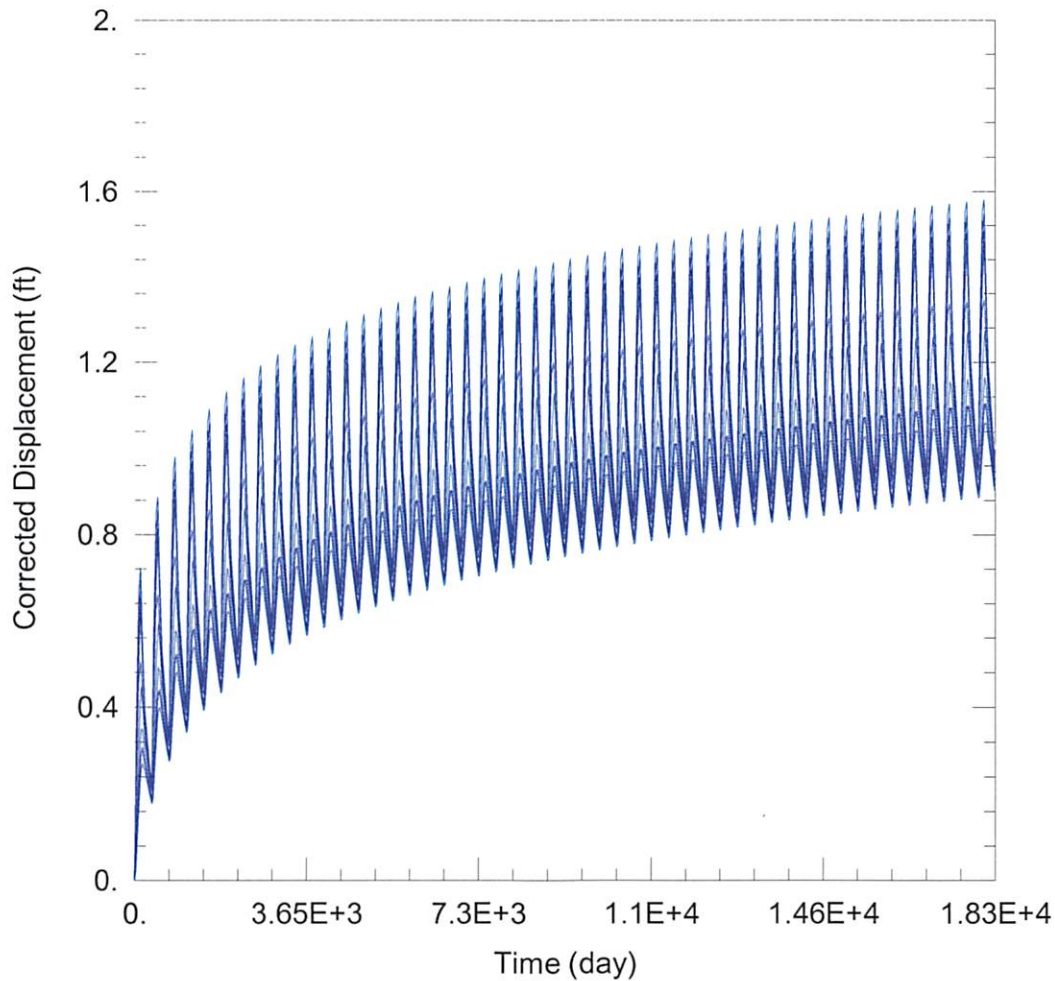
Domestic 19-30-28: Drawdown from current location = 1.06 ft
Drawdown from proposed location = 1.60 ft
Net drawdown = **0.5 ft**

Domestic 30-30-28: Drawdown from current location = 1.54 ft
 Drawdown from proposed location = 1.93 ft
 Net drawdown = **0.4 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\13815\13815 Current.aqt
 Date: 03/05/21 Time: 16:35:22

PROJECT INFORMATION

Company: GMD 3
 Project: 13815
 Location: Meade County
 Test Well: 13815

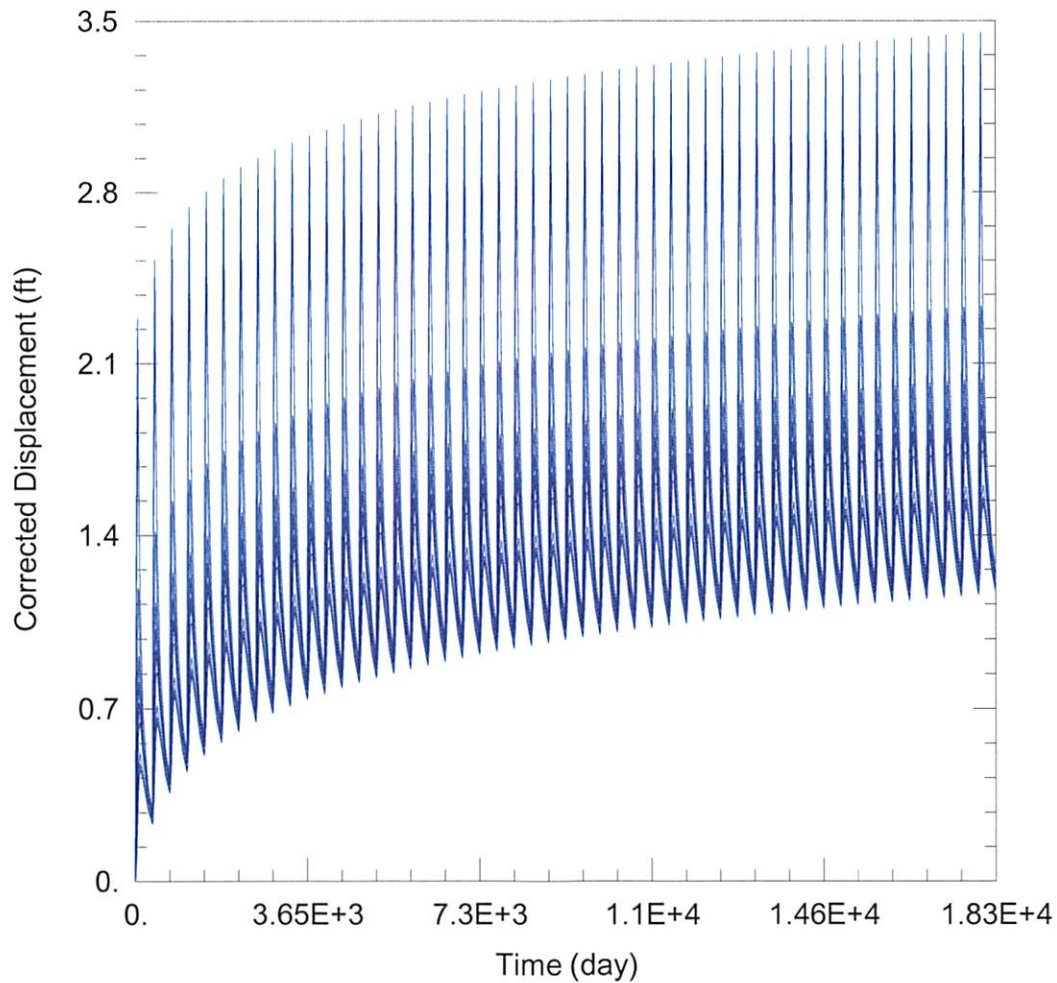
WELL DATA

Pumping Wells

| Well Name | X (ft) | Y (ft) |
|-----------|--------|--------|
| | 101178 | 194999 |
| | 103824 | 194343 |

Observation Wells

| Well Name | X (ft) | Y (ft) |
|---------------------|--------|--------|
| □ | 101178 | 194999 |
| □ | 103824 | 194343 |
| □ 6243 | 97737 | 198671 |
| □ 14440 & 36244 | 101272 | 201040 |
| □ 3997 | 102095 | 198440 |
| □ 30268 & 42747 | 108459 | 197401 |
| □ 32177 | 98356 | 196321 |
| □ 18215 | 100988 | 191492 |
| □ 29144 | 106360 | 191862 |
| □ Domestic 23-30-29 | 97867 | 197634 |
| □ Domestic 24-30-29 | 103805 | 197643 |
| □ Domestic 19-30-28 | 106454 | 200295 |
| □ Domestic 30-30-28 | 106454 | 194342 |



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021_Moves\13815\13815 Proposed.aqt
 Date: 03/05/21 Time: 16:35:16

PROJECT INFORMATION

Company: GMD 3
 Project: 13815
 Location: Meade County
 Test Well: 13815

WELL DATA

Pumping Wells

| Well Name | X (ft) | Y (ft) |
|-----------|--------|--------|
| | 100902 | 196455 |
| | 103448 | 196235 |

Observation Wells

| Well Name | X (ft) | Y (ft) |
|---------------------|--------|--------|
| □ | 100902 | 196455 |
| □ | 103448 | 196235 |
| □ 6243 | 97737 | 198671 |
| □ 14440 & 36244 | 101272 | 201040 |
| □ 3997 | 102095 | 198440 |
| □ 30268 & 42747 | 108459 | 197401 |
| □ 32177 | 98356 | 196321 |
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