#### Evaluation of proposed move for Water Right No. 20893 ID2

Proposed: Move water right nos. 20893 ID2 a distance of 1,838 ft to the north.



Wells within 1 mile: 20893 ID5, 21388, 21386 ID1, 21386 ID6, 20894 ID6, 20894 ID8, 22566 ID7, 22566 ID9, and 20898.

The saturated thickness at the proposed well location is estimated to be 215 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 = 0.1159, T = 13,795.5 ft<sup>2</sup>/day,  $tp_{current} = 174$  days (based upon average use and observed rate),  $Q_{current} = 217$  gpm (based upon 2018 field inspection),  $tp_{proposed} = 63$  days,  $Q_{proposed} = 980$  gpm

Theis drawdowns were calculated as follows:

20893 ID5: Drawdown from current location = 0.79 ft

Drawdown from proposed location = 1.50 ft

Net drawdown = 0.7 ft

21388: Drawdown from current location = 0.90 ft

Drawdown from proposed location = 1.61 ft

Net drawdown = 0.7 ft

21386 ID1: Drawdown from current location = 0.62 ft

Drawdown from proposed location = 1.36 ft

Net drawdown = 0.7 ft

21386 ID6: Drawdown from current location = 0.78 ft

Drawdown from proposed location = 1.59 ft

Net drawdown = **0.8 ft** 

20894 ID6: Drawdown from current location = 0.60 ft

Drawdown from proposed location = 1.31 ft

Net drawdown = **0.7** ft

20894 ID8: Drawdown from current location = 0.67 ft

Drawdown from proposed location = 1.68 ft

Net drawdown = 1.0 ft

22566 ID7: Drawdown from current location = 0.73 ft

Drawdown from proposed location = 1.74 ft

Net drawdown = 1.0 ft

22566 ID9: Drawdown from current location = 0.82 ft

Drawdown from proposed location = 2.80 ft

Net drawdown = 2.0 ft

20898: Drawdown from current location = 0.63 ft

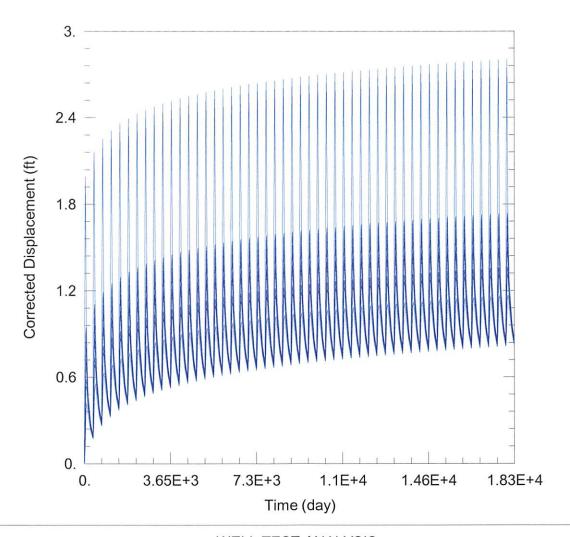
Drawdown from proposed location = 1.17 ft

Net drawdown = **0.5** 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\20893\20893 Proposed.aqt

Date: 03/31/21 Time: 16:33:30

# PROJECT INFORMATION

Company: GMD 3 Project: 20893

Location: Finney County

Test Well: 20893

Well Name

20893 ID2

# WELL DATA

Pumping Wells

X (ft) Y (ft)

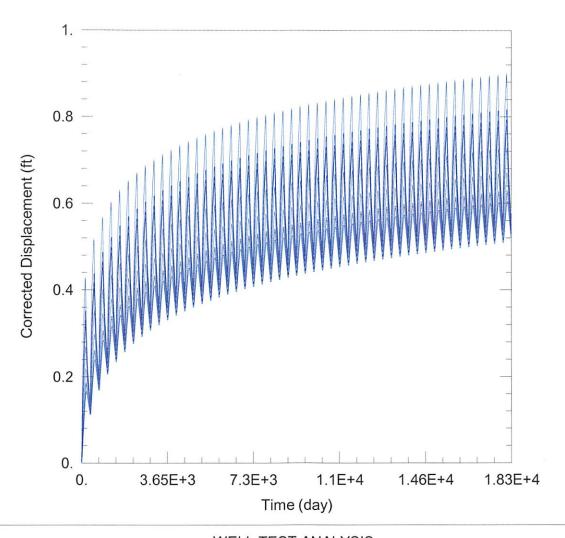
-75622 374527

| Well Name    | X (ft) | Y (ft) |
|--------------|--------|--------|
|              | -75622 | 374527 |
| □ 20893 ID5  | -71915 | 373425 |
| <b>21388</b> | -78562 | 372562 |
| □ 21386 ID1  | -78316 | 377885 |
| □ 21386 ID6  | -79192 | 374290 |
| □ 20894 ID6  | -73695 | 378579 |
| □ 20894 ID8  | -75674 | 377856 |
| □ 22566 ID7  | -72966 | 376290 |
| □ 22566 ID9  | -75557 | 376251 |
| <b>20898</b> | -70418 | 375165 |

**Observation Wells** 

SOLUTION

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# WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2021\_Moves\20893\20893 Current.aqt

Date: 03/31/21

Time: 16:33:58

## PROJECT INFORMATION

Company: GMD 3 Project: 20893

Location: Finney County
Test Well: 20893

## **WELL DATA**

| Pumping Wells |        |        |  |
|---------------|--------|--------|--|
| Well Name     | X (ft) | Y (ft) |  |
| 20893 ID2     | -75616 | 372688 |  |

| Well Name    | X (ft) | Y (ft) |
|--------------|--------|--------|
| 0            | -75616 | 372688 |
| □ 20893 ID5  | -71915 | 373425 |
| <b>21388</b> | -78562 | 372562 |
| □ 21386 ID1  | -78316 | 377885 |
| □ 21386 ID6  | -79192 | 374290 |
| □ 20894 ID6  | -73695 | 378579 |
| □ 20894 ID8  | -75674 | 377856 |
| □ 22566 ID7  | -72966 | 376290 |
| □ 22566 ID9  | -75557 | 376251 |
| <b>20898</b> | -70418 | 375165 |

**Observation Wells** 

## SOLUTION