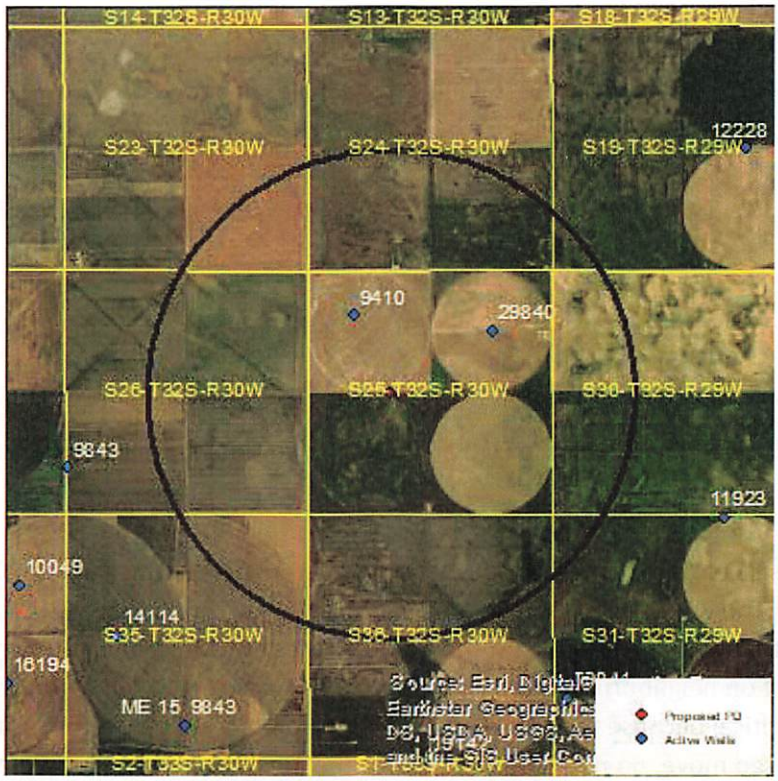
Evaluation of proposed move for Water Right No. 9410

Proposed: Move water right no. 9410 to a new well location, 1,858 ft to the southeast.



Wells within 1 mile: 29840

The saturated thickness at the proposed well location is estimated to be 214 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 = 0.2371, T = 12,584 ft^2/day, $tp_{current}$ = 244 days, $Q_{current}$ = 418 gpm, $tp_{proposed}$ = 224 days, $Q_{proposed}$ = 2000 gpm

Theis drawdowns were calculated as follows:

29840: Drawdown from current location = 1.89 ft

Drawdown from proposed location = 7.27 ft

Net drawdown = **5.4 ft**

Net drawdown exceeds the drawdown allowance for neighboring water right no. 29840. Critical well analysis is necessary on that well.

Critical Well Evaluation:

29840:

Water Column = 214 ft

DP = 5.4 ft (Net drawdown from the proposal indicated above)

DE = 39.3 ft (Water level decline from 2023 through 2048 based upon GMD3 model)

DD = 34.0 ft (S = 0.2371, T = 12,584 ft^2/day, Q = 1284 gpm, tp = 35 days, efficiency = 70%)

DT = 78.7 ft

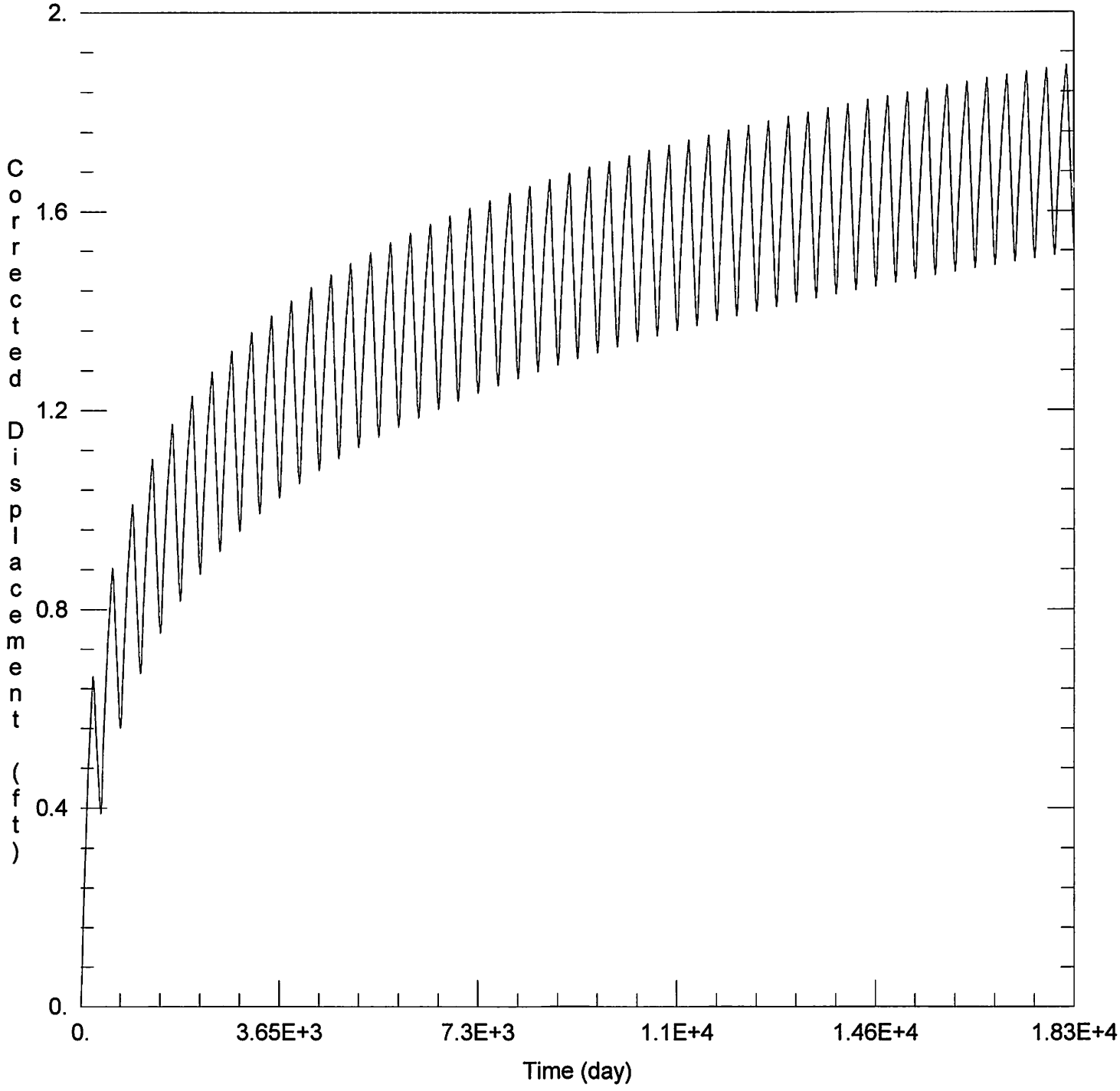
Economic Drawdown Constraint (EDC) = 0.4 * 214 ft = 85.6 ft

Physical Drawdown Constraint (PDC) = 214 ft – 60 ft = 154 ft

Total drawdown of 78.7 ft is less than the EDC and the PDC, so this well **is not critical.**

Conclusion:

The proposed move is in an area with strong aquifer characteristics and more than 200 ft of remaining saturated thickness. The water right being moved allocates 1381 AF of water at 2000 gpm, and the analysis was run at that rate and quantity. If the well operates at its fully authorized rate and quantity, the drawdown effect on neighboring water right no. 29840 will exceed 4 ft. Critical well analysis shows this well to not be critical because the rate of decline in the area, after accounting for the additional effects of the proposed move, do not exceed 40% over the next 25 years, and there appears to be sufficient saturated thickness to sustain water use. 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\2023_moves\9410\9410 Current.aqt
Date: 09/13/23 Time: 14:51:11

PROJECT INFORMATION

Company: GMD 3
Project: 9410
Location: Meade County

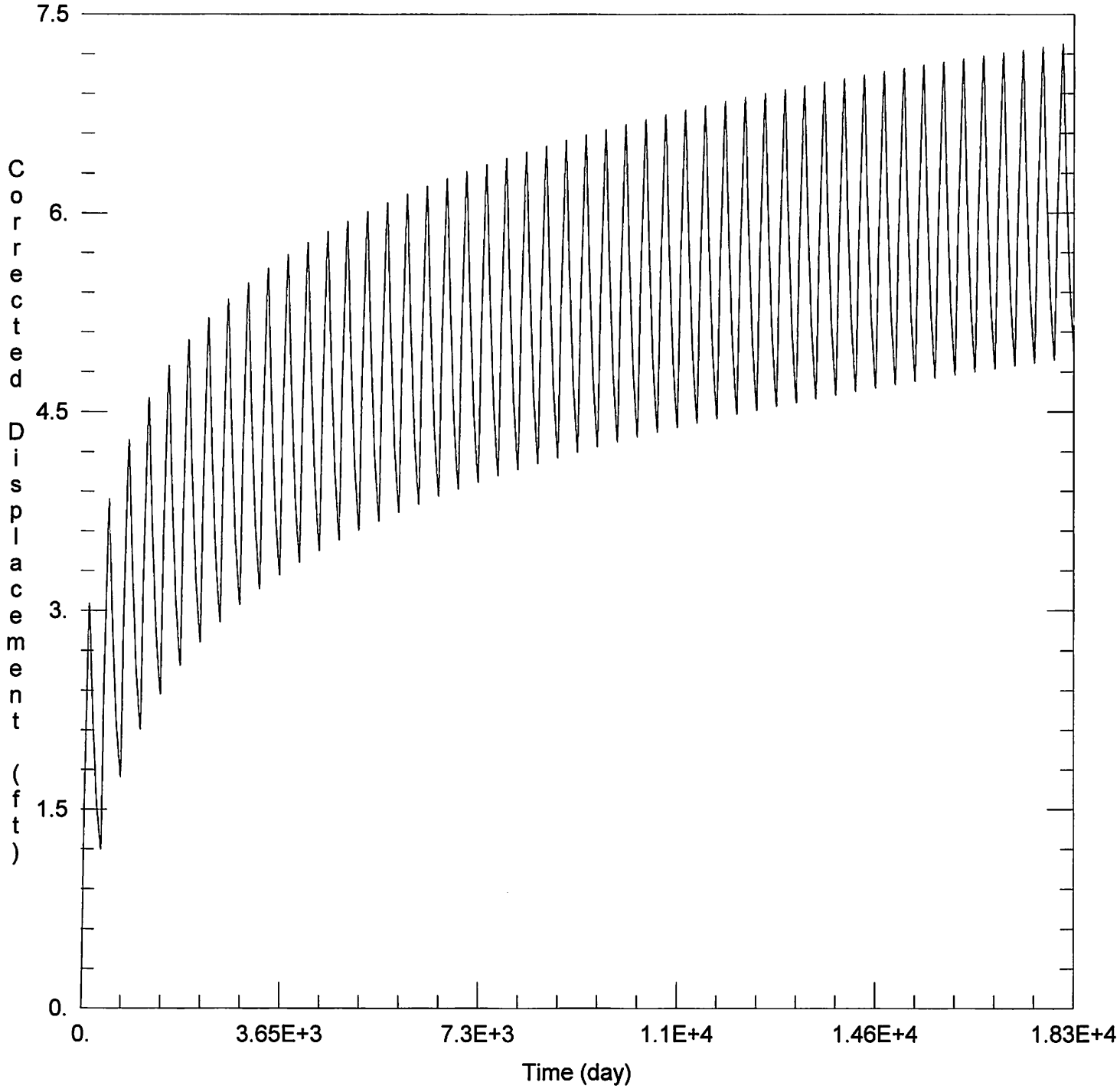
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
9410	75266	132854

Observation Wells

Well Name	X (ft)	Y (ft)
□	75266	132854
□ 29840	78237	132539



WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2023_moves\9410\9410 Proposed.aqt
Date: 09/13/23 Time: 14:51:03

PROJECT INFORMATION

Company: GMD 3
Project: 9410
Location: Meade County

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
9410	76045	131167

Observation Wells

Well Name	X (ft)	Y (ft)
□	76045	131167
□ 29840	78237	132539