

Yolo Subbasin Groundwater Agency 2022 Groundwater Sustainability Plan

Yolo County, CA

Appendix I

Well Impact Analysis

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Description of Well Impact Analysis

There are three components to the well impact analysis included in this appendix. The first is the spatial component. To better understand the significance of selected minimum thresholds (MTs) and measurable objectives (MOs), the townships and ranges in the Yolo Subbasin were mapped. The spatial data is derived from the Public Land Survey System¹.

The second component is interpolated depth to water values under measurable objective and minimum threshold scenarios. This data is calculated from the MOs and MTs for the representative wells that are identified and described in Table 3-1 of the GSP. An inverse distance weighted interpolation was done, and the average depth to water under MO and MT conditions was calculated for each quarter range in each township.

The third component is well construction information for each quarter range. The data on well construction information comes from the Online System of Well Completion Reports (OSWCR)². The data that is included in this analysis are perforation depths and total well depths.

Known Issues

The interpolation of MTs and MOs does not take aquifer properties into account, it is simply an IDW interpolation. The wells displayed in this appendix are only the wells that are preset in OSWCR with known total well depths and known perforation intervals. This is not intended to be a definitive guide, rather a tool to help display the selected MOs and MTs with the context of nearby wells.

¹ <https://gis.data.ca.gov/datasets/2b43d73d12664b73943478741dc5dbf4/explore>

² <https://data.ca.gov/dataset/well-completion-reports>

Well Impact Analysis Reference Map

-  Public Land Survey System Township and Range
-  Township_QTRs
-  Water Bodies



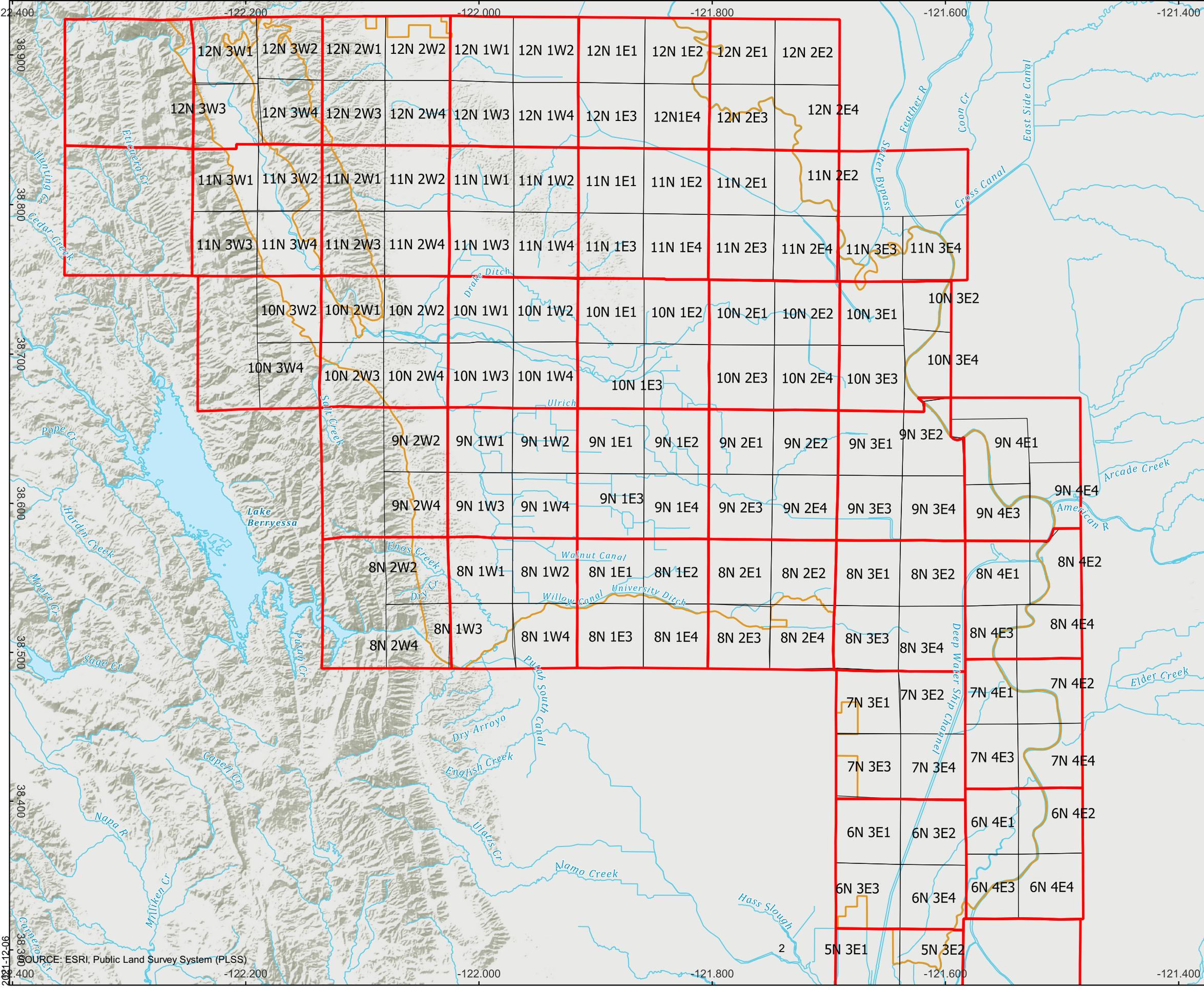
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Groundwater Agency**
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Yolo County, California



October 2021



SOURCE: ESRI, Public Land Survey System (PLSS)

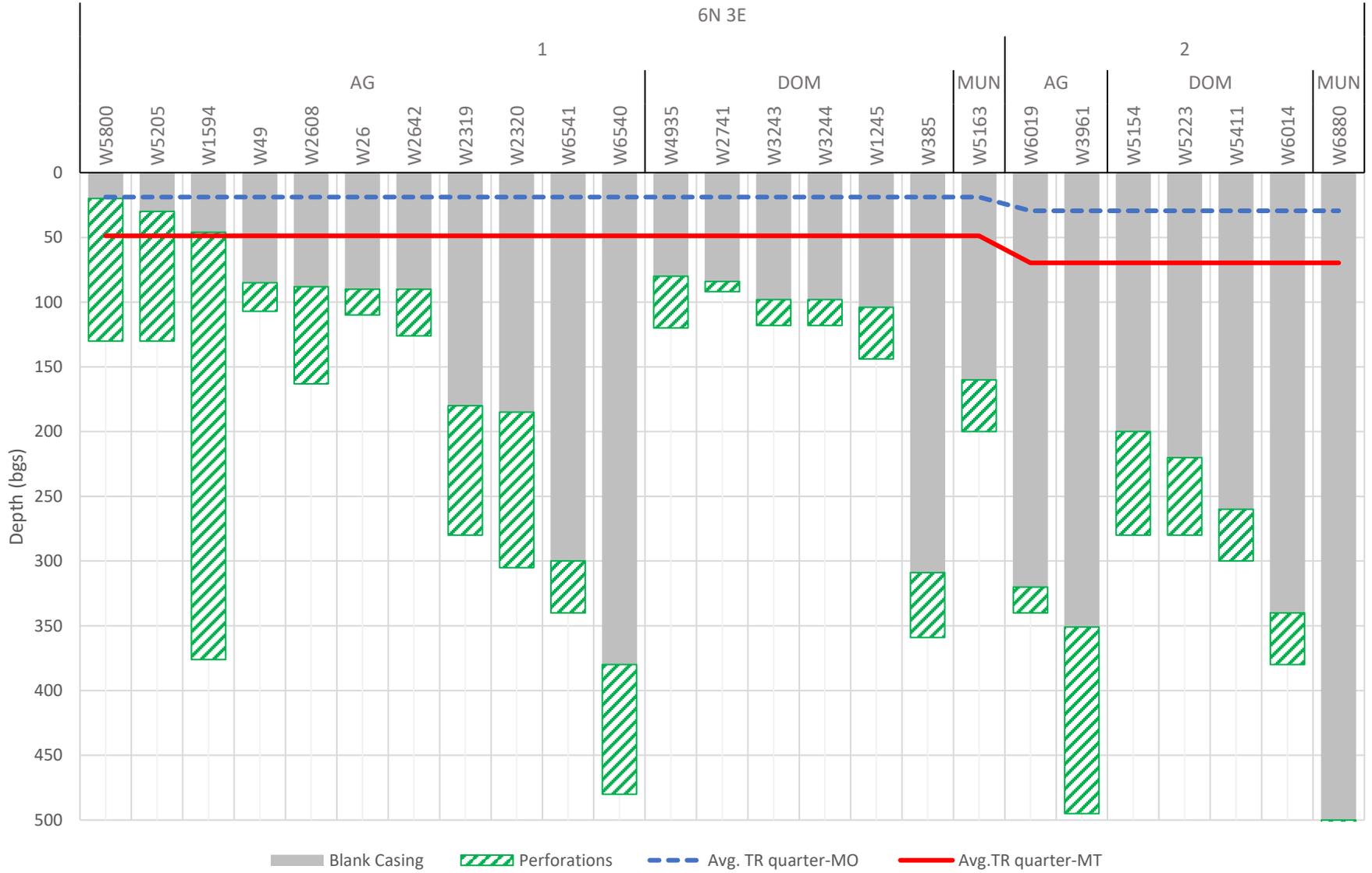
Township, Range, Quarter Range	Measurable Objective (mean DTW, ft)	Minimum Threshold (mean DTW, ft)
12N 1W1	67.6	129.2
12N 1W2	43.5	92.0
12N 1W3	46.7	94.7
12N 1W4	43.5	91.2
12N 1E1	38.0	90.0
12N 1E2	30.6	83.0
12N 1E3	43.5	97.8
12N1E4	37.1	90.9
12N 2E1	36.6	89.7
12N 2E2	37.3	90.4
12N 2E3	37.3	92.4
12N 2E4	36.9	91.6
11N 1W2	45.8	95.7
11N 1E1	56.7	123.1
11N 1E2	47.3	113.6
11N 2E1	35.6	95.5
11N 2E2	35.7	92.1
11N 2E4	34.4	90.7
11N 2E3	33.4	103.3
11N 1E4	48.0	116.6
11N 1E3	57.4	120.7
10N 1E2	50.7	119.6
10N 1E1	52.1	98.4
10N 2E1	39.6	111.1
10N 2E2	32.3	84.2
11N 3E3	33.5	86.5
10N 3E1	30.0	83.0
10N 3E3	23.6	81.0
10N 1E3	41.7	82.0
10N 1E4	54.5	117.6
10N 2E3	33.0	79.4
10N 2E4	22.4	58.7
12N 2W2	49.6	96.6
12N 2W4	42.9	84.2
12N 2W1	37.9	72.8
12N 2W3	35.6	67.0
11N 2W2	40.5	78.8
11N 1W1	43.6	89.1

Township, Range, Quarter Range	Measurable Objective (mean DTW, ft)	Minimum Threshold (mean DTW, ft)
11N 1W3	43.5	91.1
11N 1W4	48.4	97.8
10N 1W2	50.7	96.1
10N 1W4	32.6	69.8
10N 1W1	42.5	93.6
10N 1W3	33.8	69.4
11N 2W4	42.2	79.8
10N 2W2	51.3	88.2
10N 2W4	69.6	100.9
10N 2W3	41.3	66.7
10N 2W1	30.4	50.5
11N 2W3	33.9	58.9
11N 2W1	34.0	61.7
12N 3W2	30.8	55.4
12N 3W4	27.8	48.7
12N 3W1	25.4	39.2
12N 3W3	22.8	34.8
11N 3W2	26.4	45.5
11N 3W4	27.1	41.0
11N 3W3	28.3	48.5
11N 3W1	24.1	45.1
10N 3W2	31.8	51.1
10N 3W4	43.5	73.0
11N 3E4	33.1	85.1
10N 3E2	30.6	84.1
10N 3E4	26.5	86.2
9N 3E2	26.9	78.0
9N 3E1	24.4	70.4
9N 3E3	22.0	57.8
9N 3E4	25.9	70.1
9N 2E2	24.0	66.1
9N 2E4	24.3	76.0
9N 2E1	35.7	90.5
9N 2E3	31.4	80.1
8N 2E2	50.1	96.6
8N 2E1	39.8	81.0
8N 2E3	40.8	81.7
8N 2E4	44.5	89.3
8N 3E1	38.2	85.1

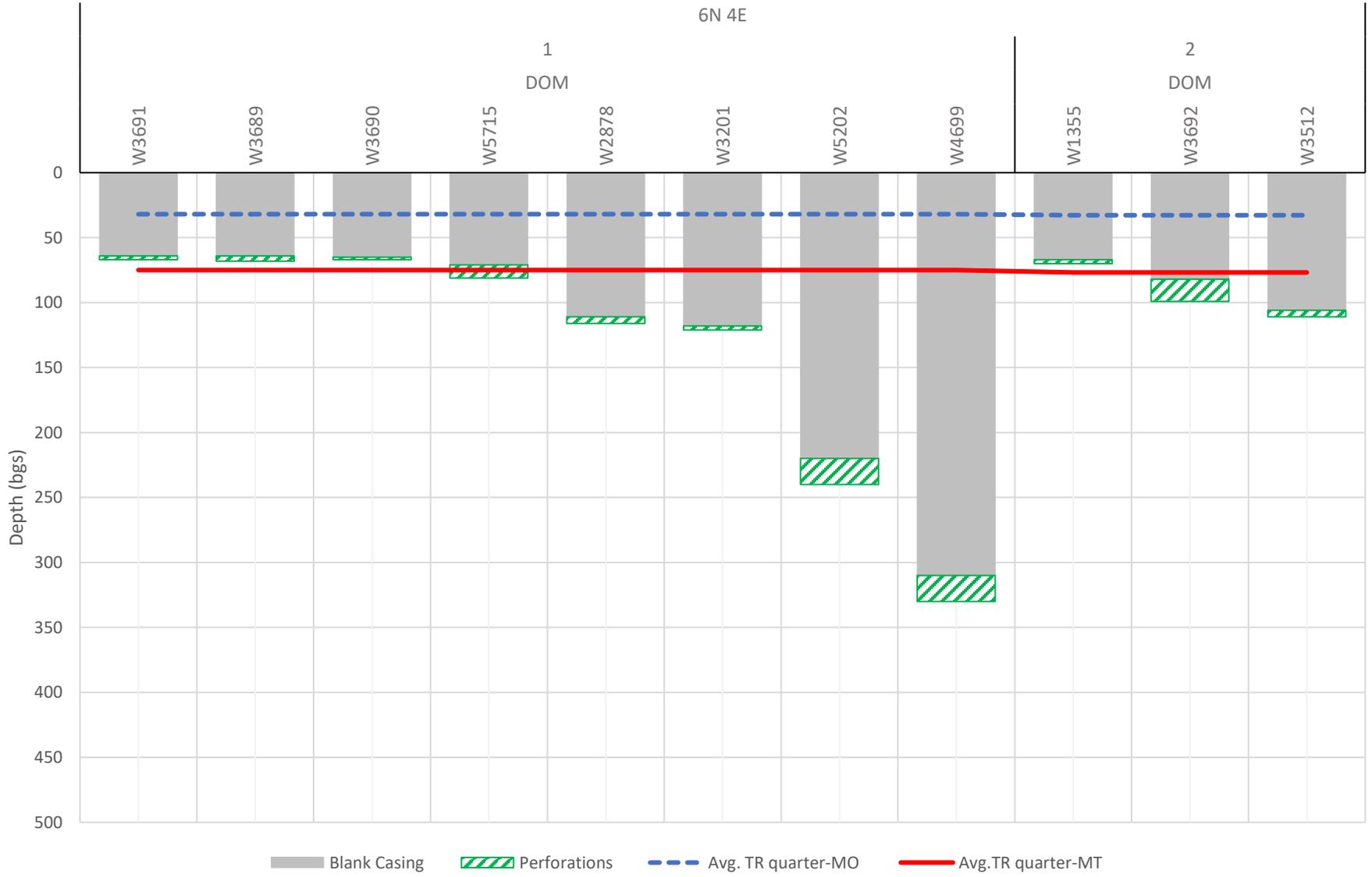
Township, Range, Quarter Range	Measurable Objective (mean DTW, ft)	Minimum Threshold (mean DTW, ft)
8N 3E3	35.4	87.4
8N 3E2	30.0	74.8
8N 3E4	31.7	75.7
9N 2W2	48.7	83.4
9N 2W4	38.4	77.2
9N 1W1	23.8	57.3
9N 1W2	21.9	62.2
9N 1W4	22.7	67.3
9N 1W3	27.9	65.1
9N 1E1	30.9	77.4
9N 1E2	40.5	95.6
9N 1E4	22.3	66.9
9N 1E3	21.0	63.2
8N 1E1	28.5	79.6
8N 1E2	33.7	75.1
8N 1W2	39.5	86.3
8N 1W1	49.7	104.3
8N 2W2	41.7	84.7
8N 1E4	37.0	78.9
8N 1E3	34.7	81.9
8N 1W4	47.0	97.6
8N 1W3	60.8	105.8
8N 2W4	45.1	89.0
9N 4E3	30.9	77.5
9N 4E1	30.4	79.0
9N 4E4	32.1	79.3
8N 4E1	31.6	77.4
8N 4E2	32.4	78.7
8N 4E3	32.2	77.2
8N 4E4	32.6	78.2
7N 4E1	32.2	76.3
7N 4E2	32.7	77.7
7N 4E3	32.1	75.6
7N 4E4	32.8	77.2
6N 4E1	31.9	74.9
6N 4E2	32.7	76.8
6N 4E3	32.0	74.8
6N 4E4	32.8	76.6
7N 3E2	30.1	70.0

Township, Range, Quarter Range	Measurable Objective (mean DTW, ft)	Minimum Threshold (mean DTW, ft)
7N 3E4	30.6	71.8
7N 3E1	31.0	73.2
7N 3E3	28.5	67.3
6N 3E1	18.9	48.8
6N 3E2	29.5	69.7
6N 3E3	23.8	58.8
6N 3E4	29.7	70.1
5N 3E2	30.8	72.2
5N 3E1	28.9	68.3

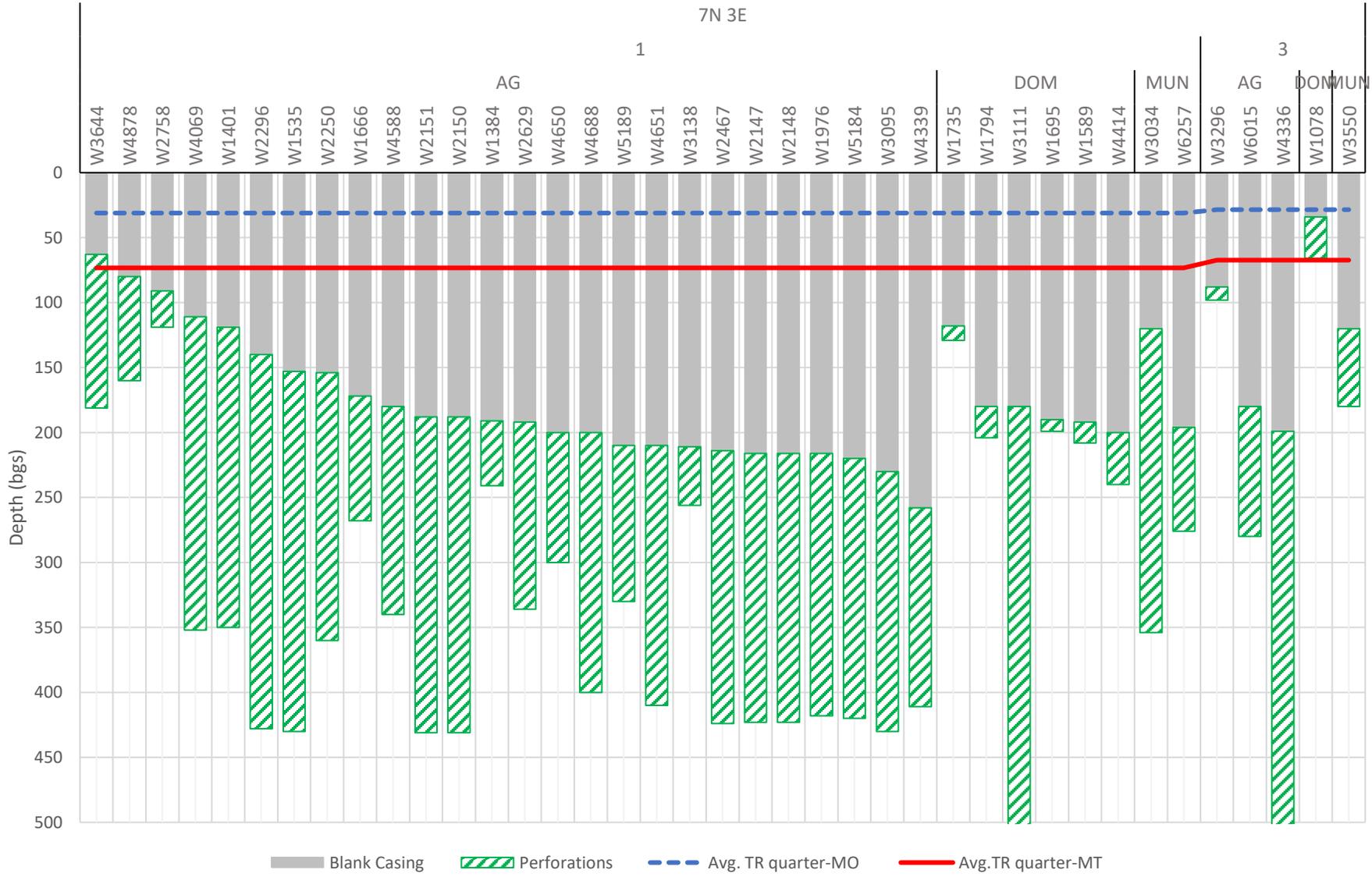
Township Range 6N 3E - Total Wells (25)
 12% Top Perforation Dewatered at MT
 0% Bottom Perforation Dewatered at MT



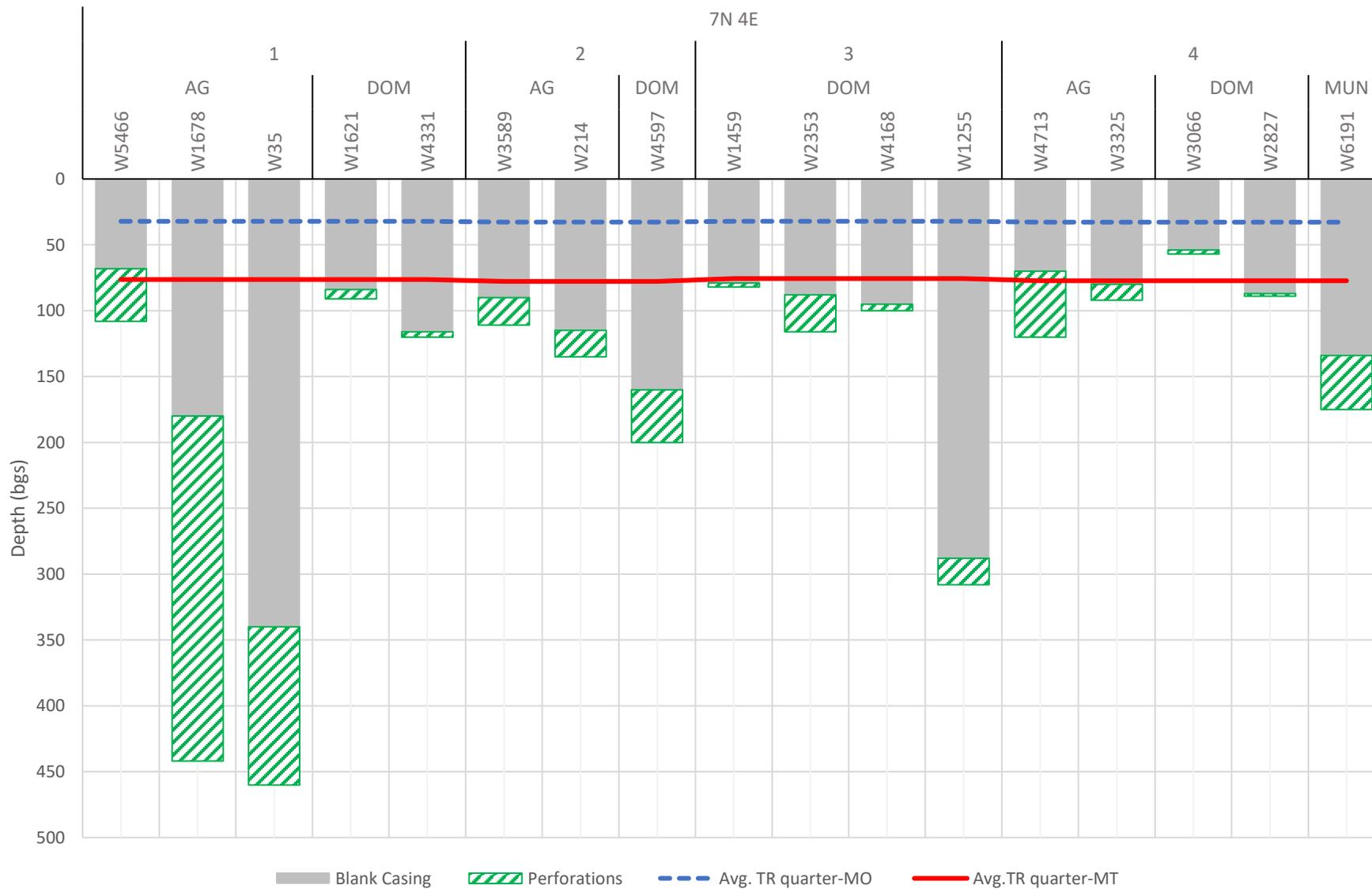
Township Range 6N 4E - Total Wells (11)
 45% Top Perforation Dewatered at MT
 36% Bottom Perforation Dewatered at MT



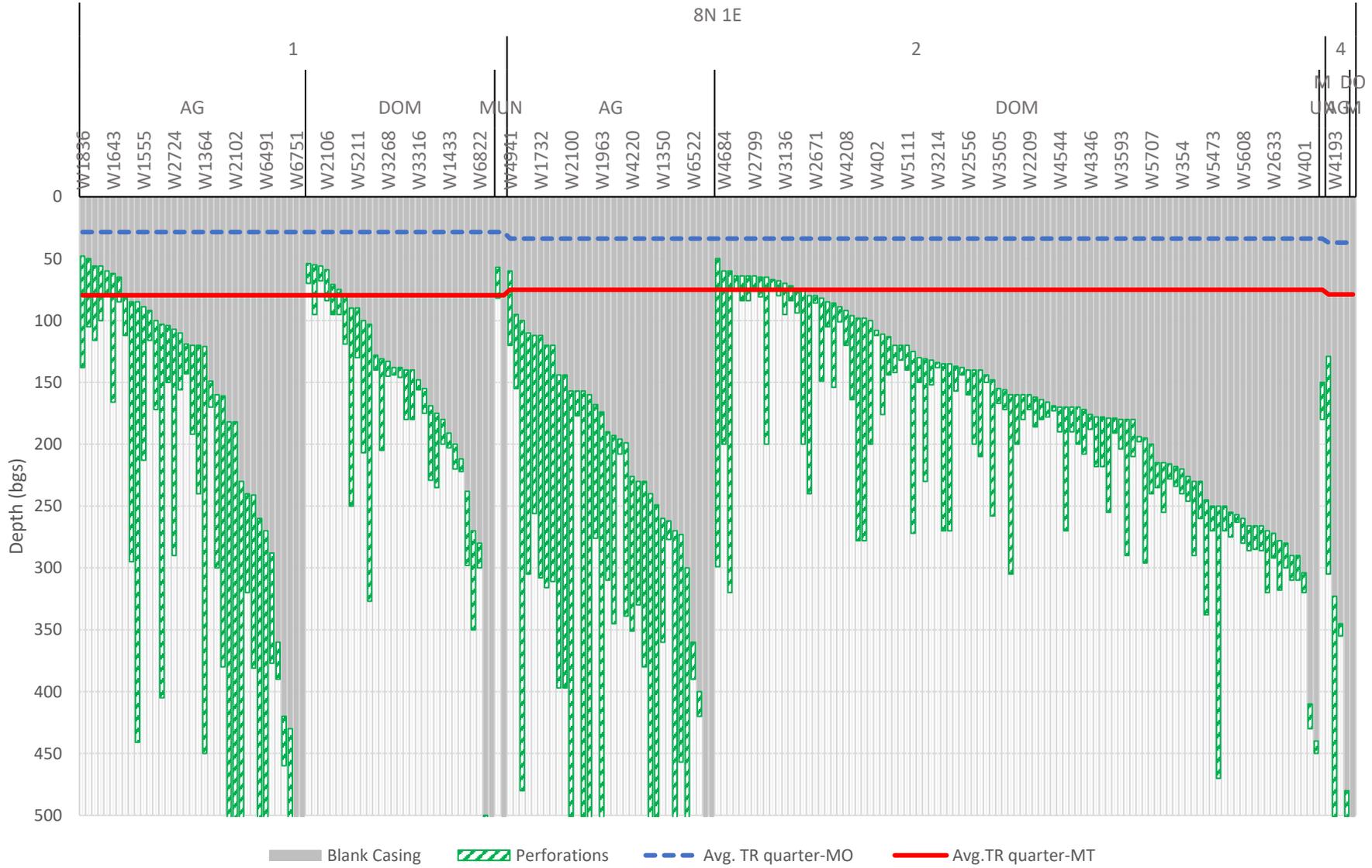
Township Range 7N 3E - Total Wells (39)
 5% Top Perforation Dewatered at MT
 3% Bottom Perforation Dewatered at MT



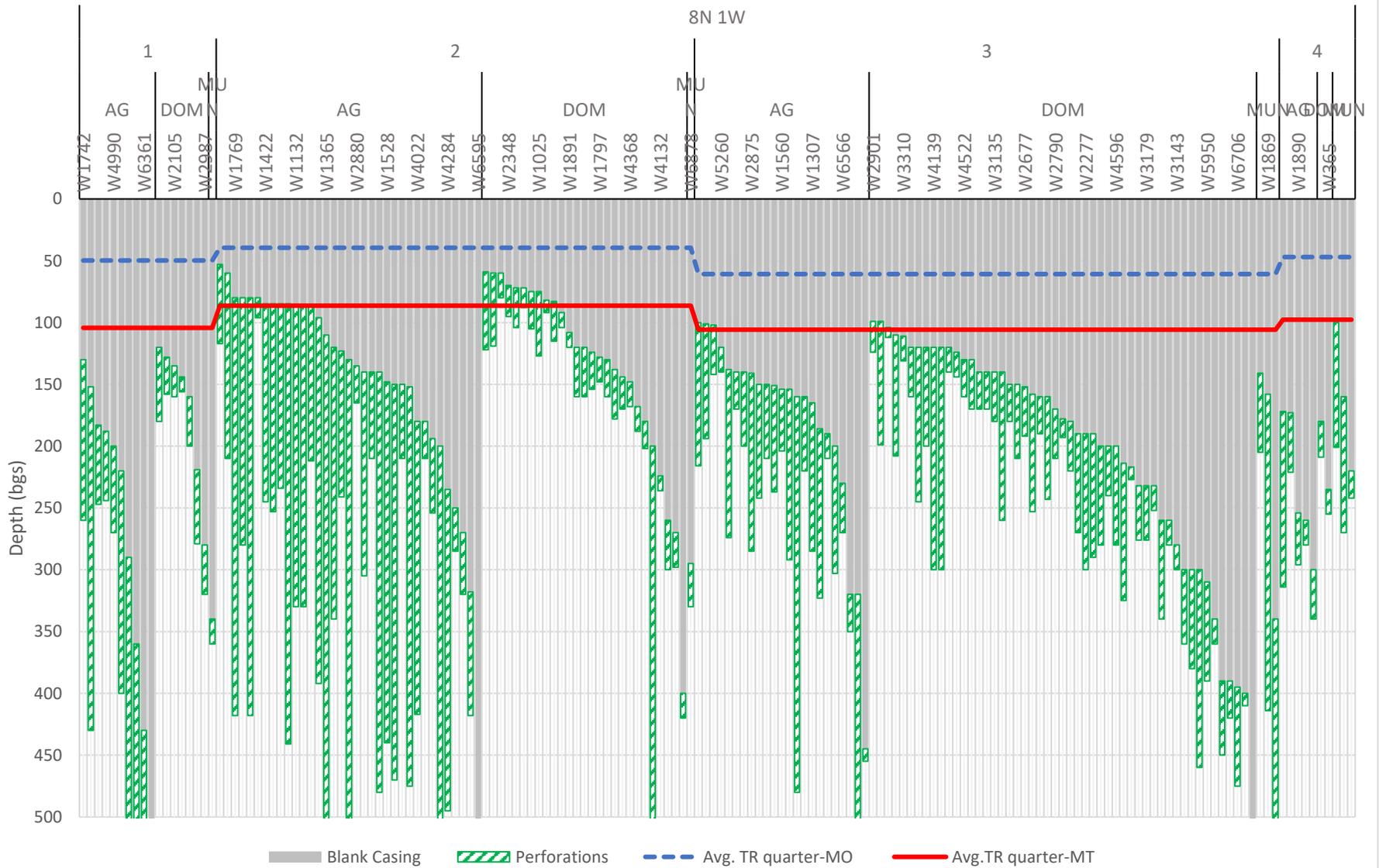
Township Range 7N 4E - Total Wells (17)
 18% Top Perforation Dewatered at MT
 6% Bottom Perforation Dewatered at MT



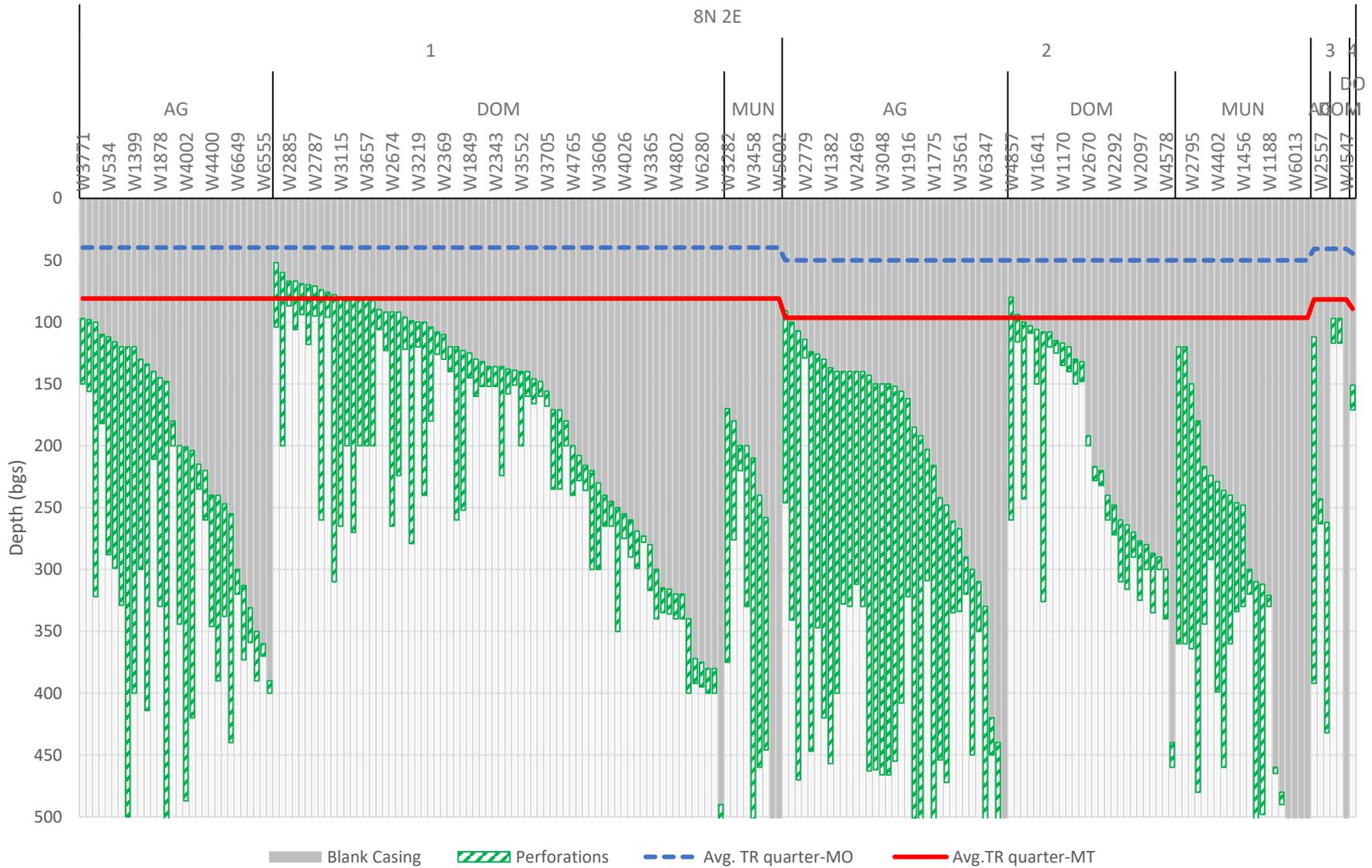
Township Range 8N 1E - Total Wells (209)
 15% Top Perforation Dewatered at MT
 1% Bottom Perforation Dewatered at MT



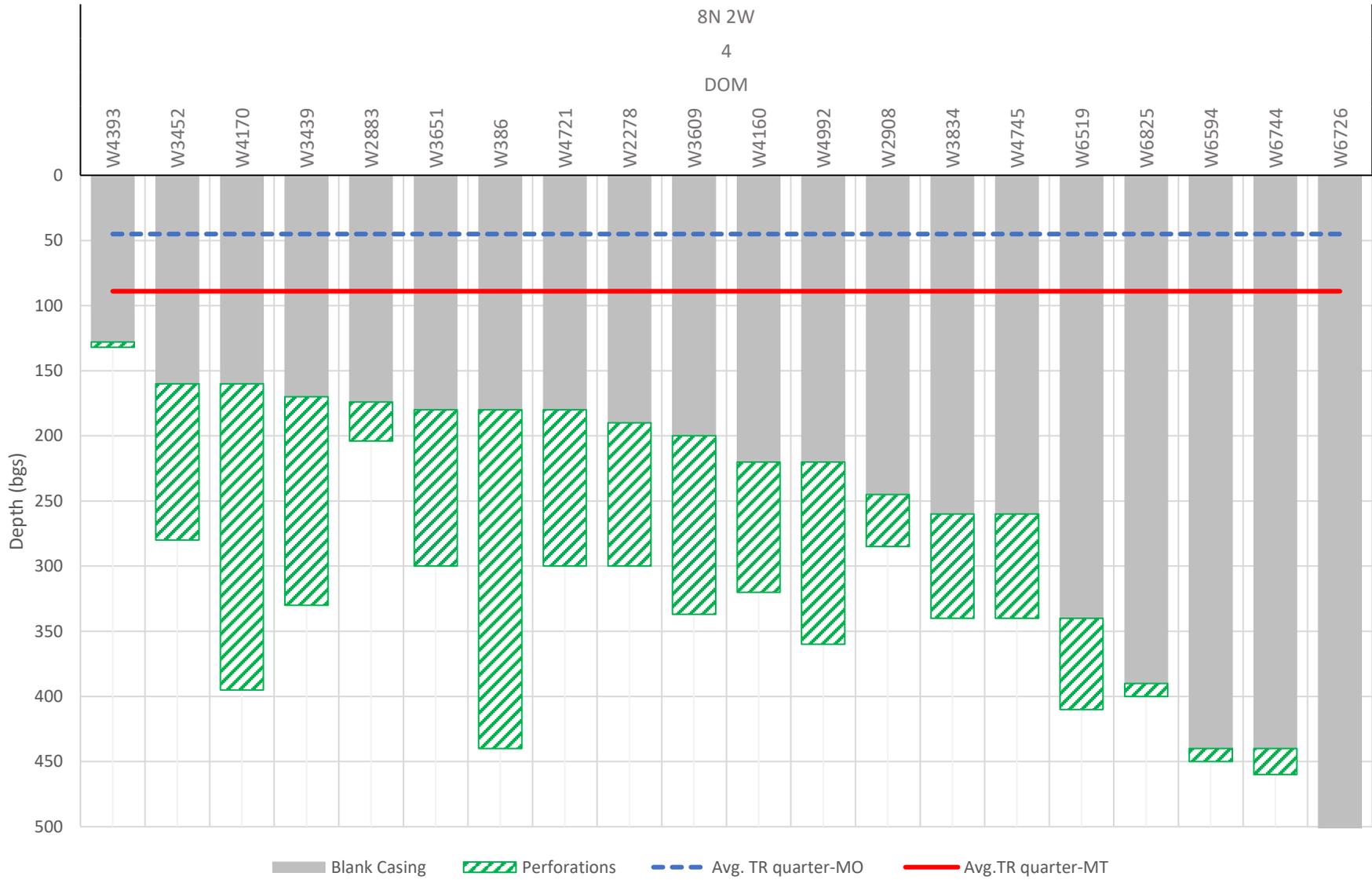
Township Range 8N 1W - Total Wells (168)
 15% Top Perforation Dewatered at MT
 1% Bottom Perforation Dewatered at MT



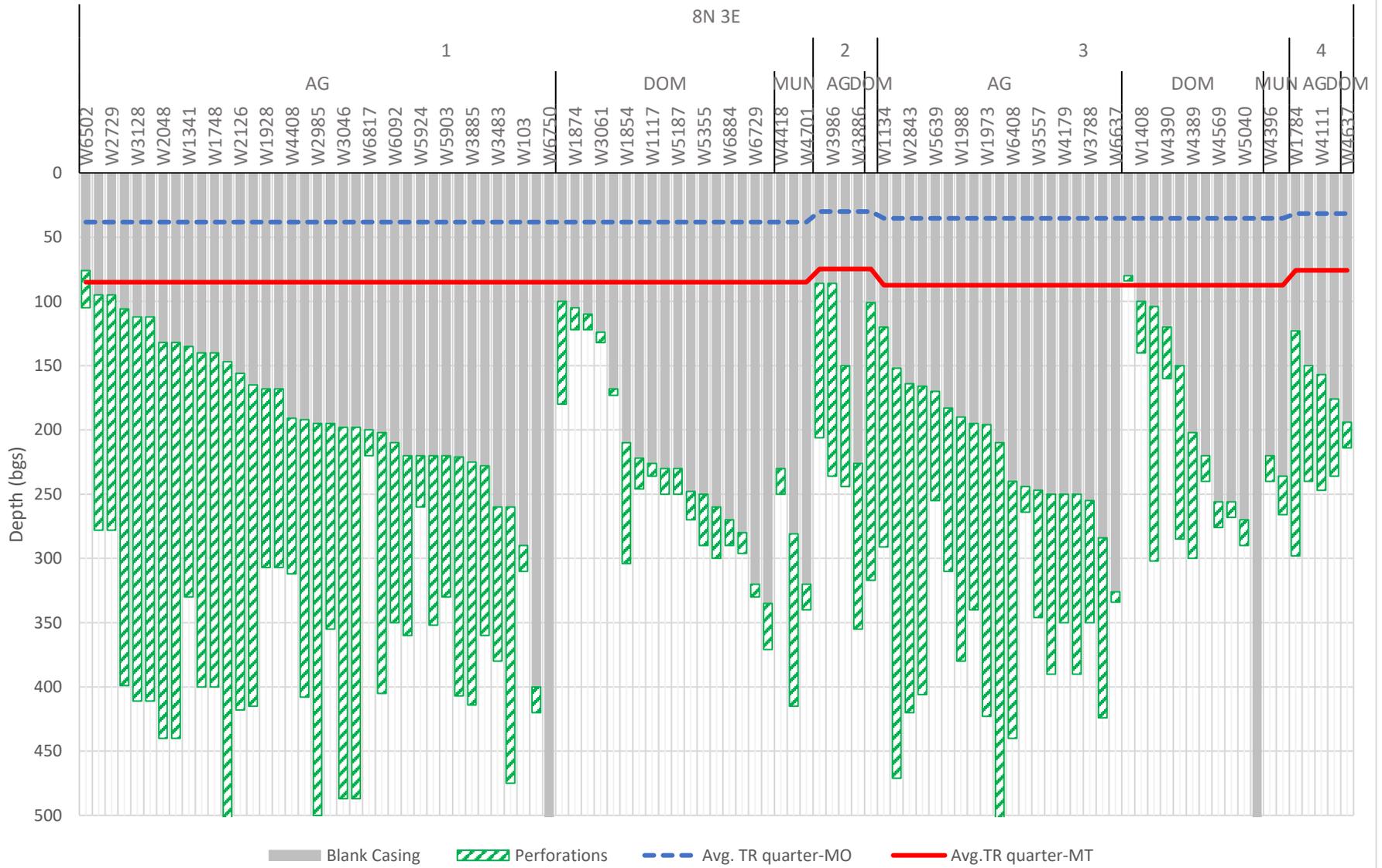
Township Range 8N 2E - Total Wells (198)
 10% Top Perforation Dewatered at MT
 0% Bottom Perforation Dewatered at MT



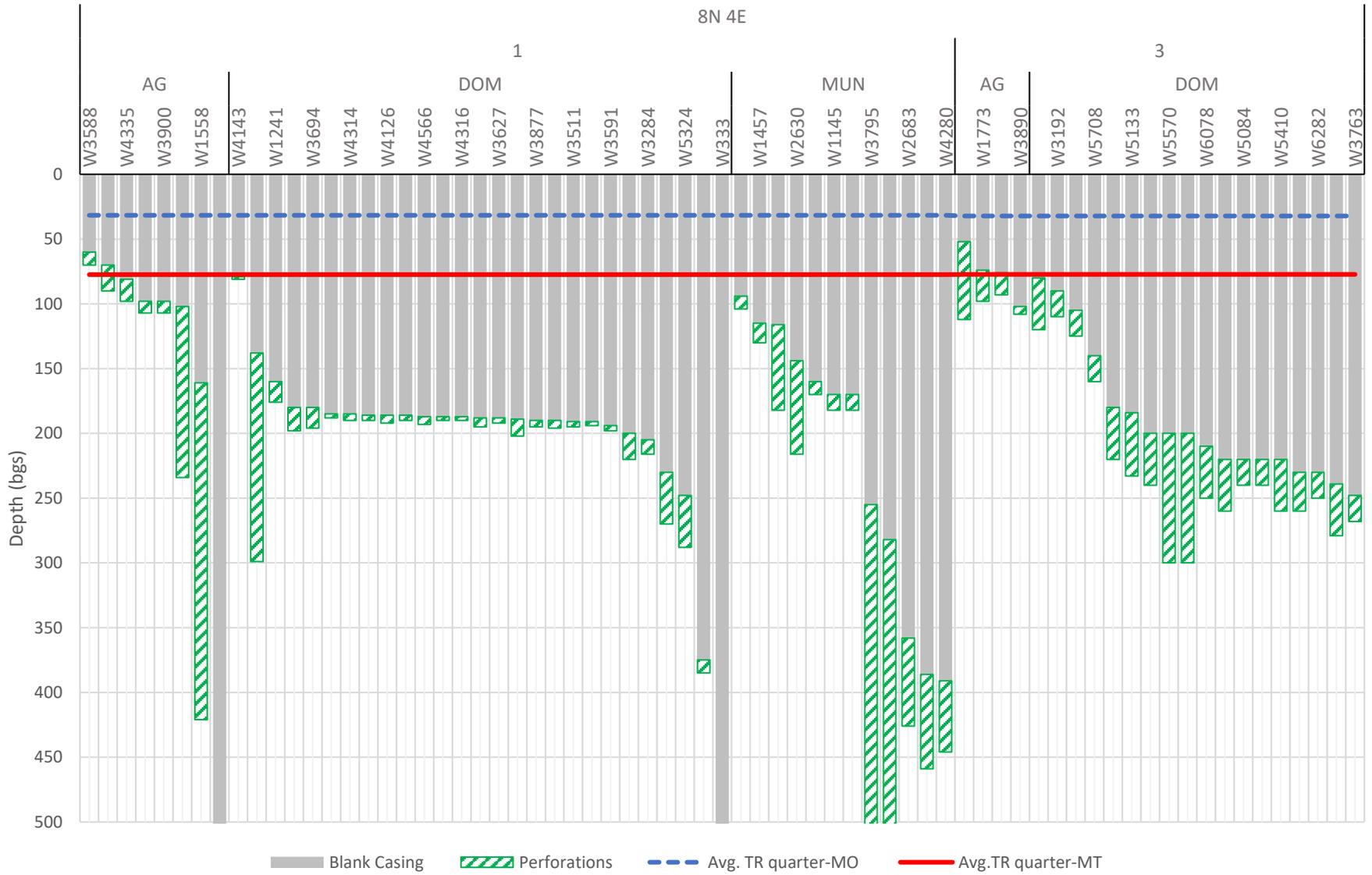
Township Range 8N 2W - Total Wells (20)
 0% Top Perforation Dewatered at MT
 0% Bottom Perforation Dewatered at MT



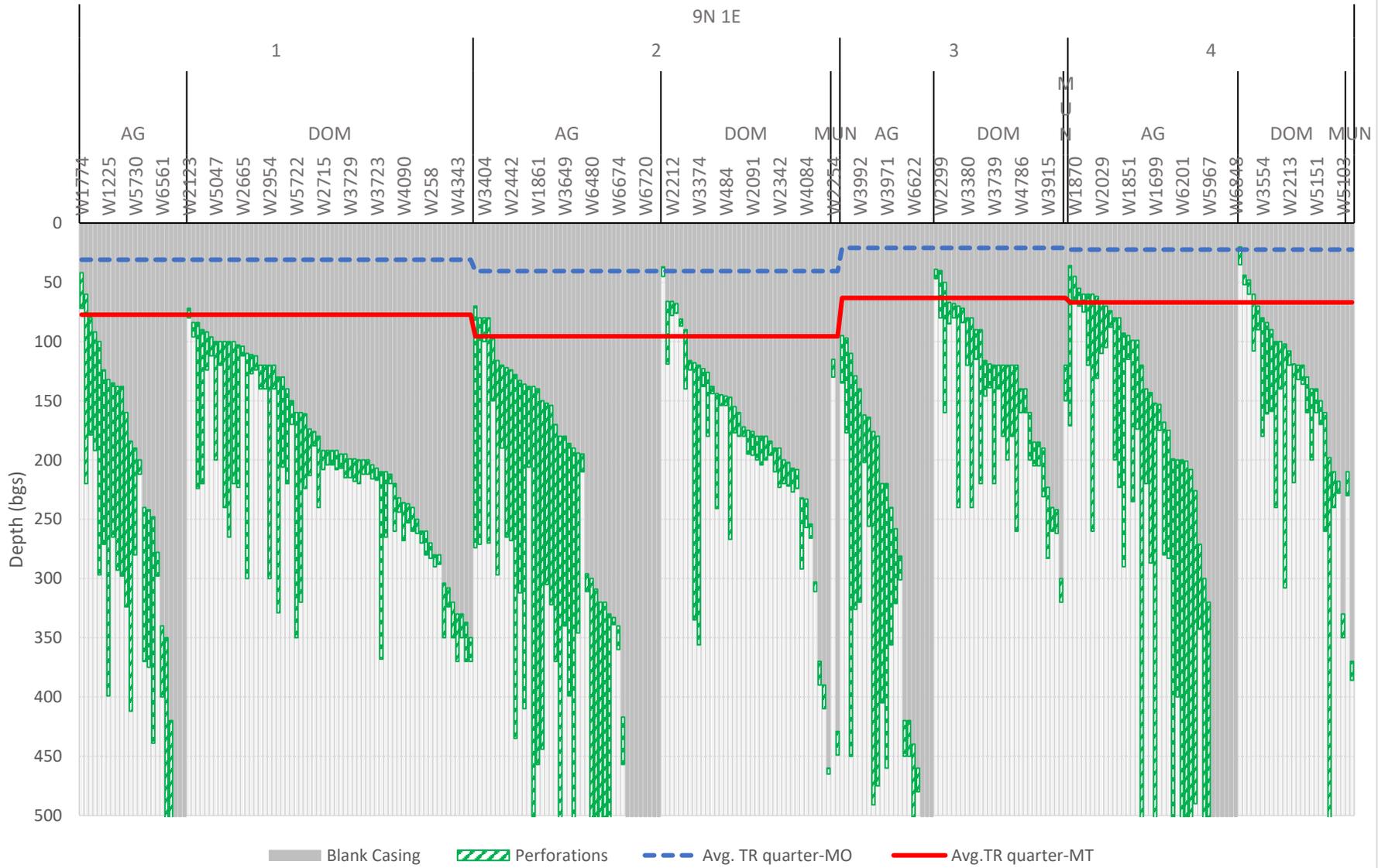
Township Range 8N 3E - Total Wells (99)
 2% Top Perforation Dewatered at MT
 1% Bottom Perforation Dewatered at MT



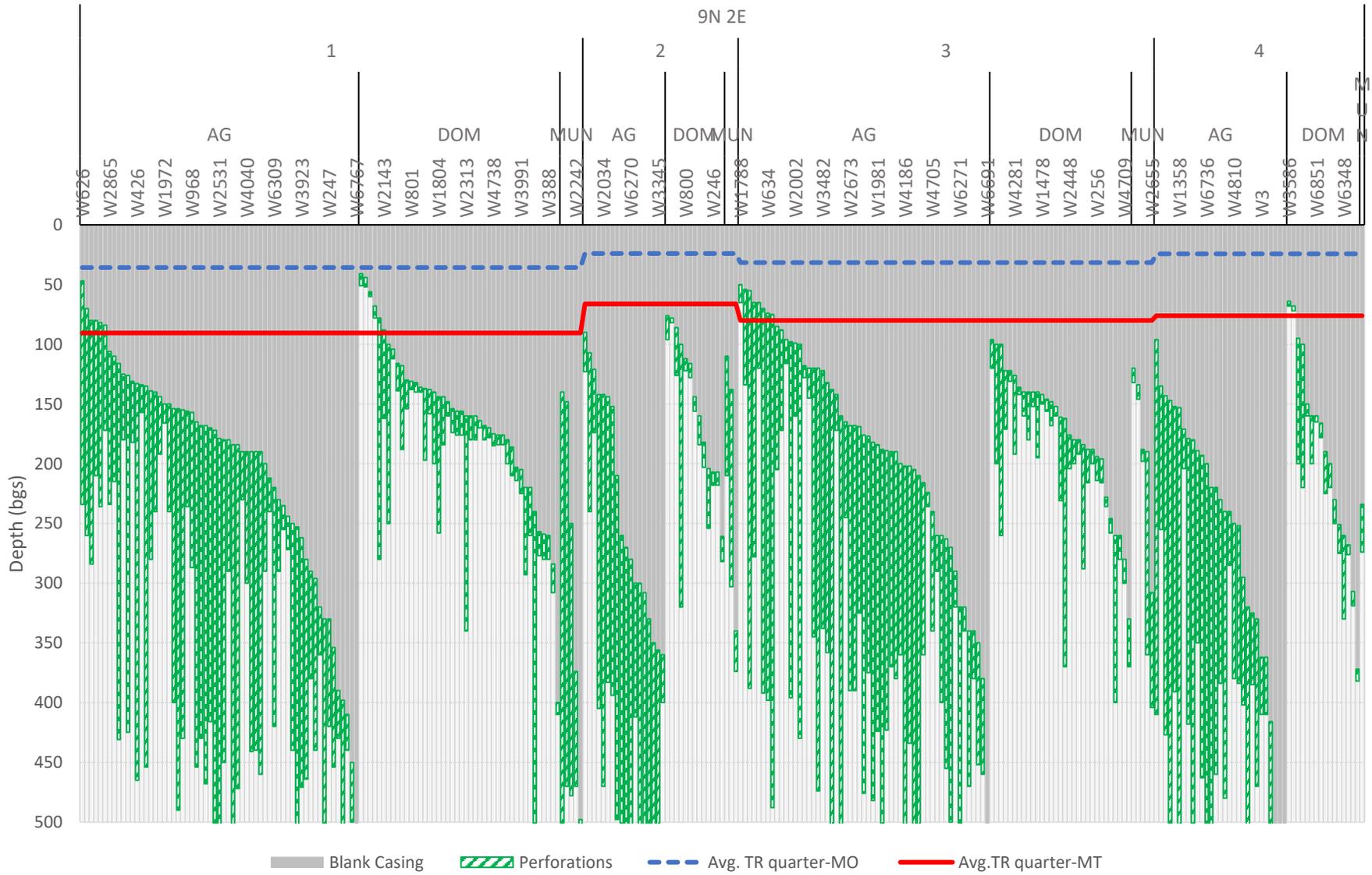
Township Range 8N 4E - Total Wells (69)
 7% Top Perforation Dewatered at MT
 1% Bottom Perforation Dewatered at MT



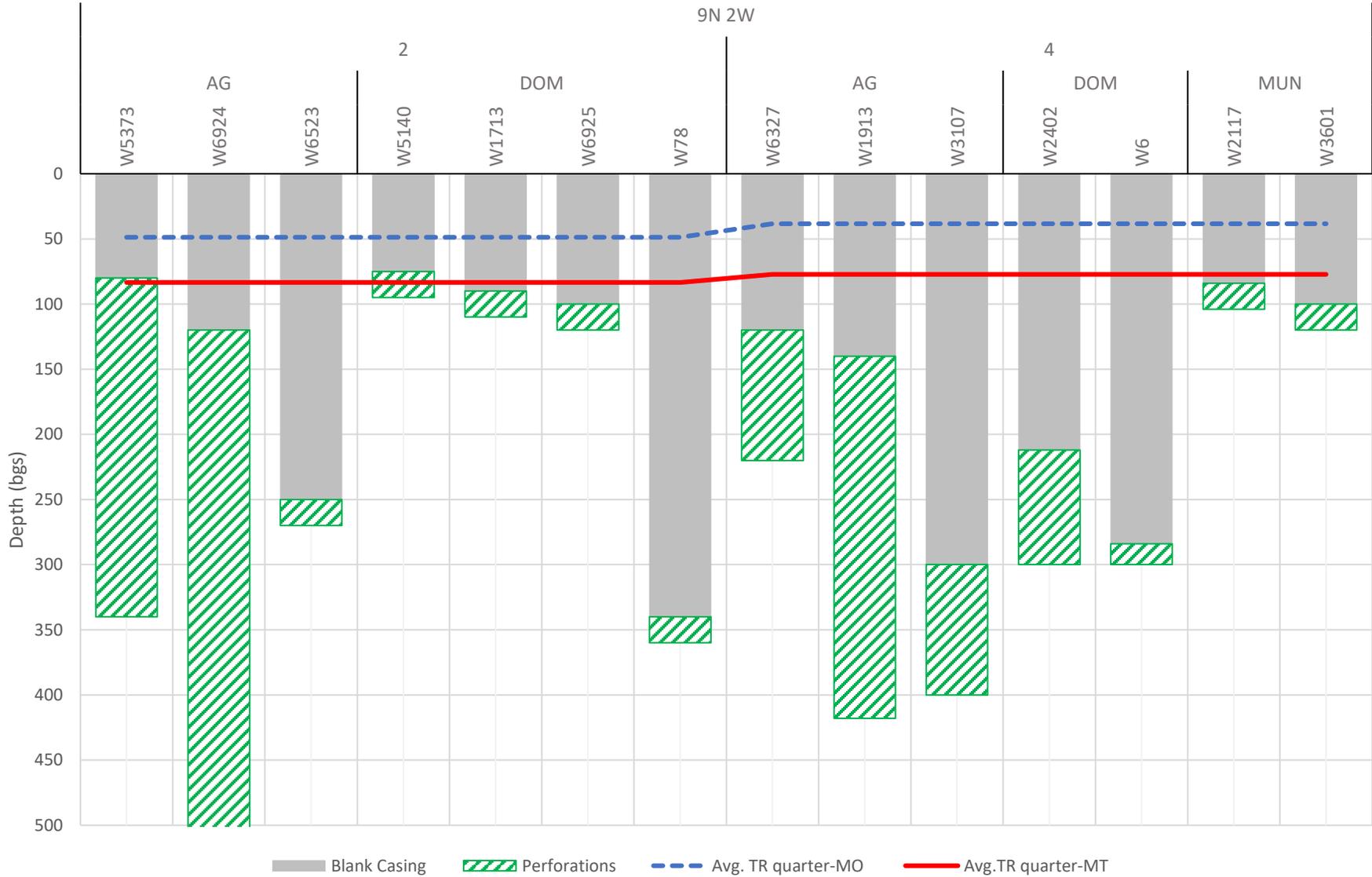
Township Range 9N 1E - Total Wells (285)
 9% Top Perforation Dewatered at MT
 4% Bottom Perforation Dewatered at MT



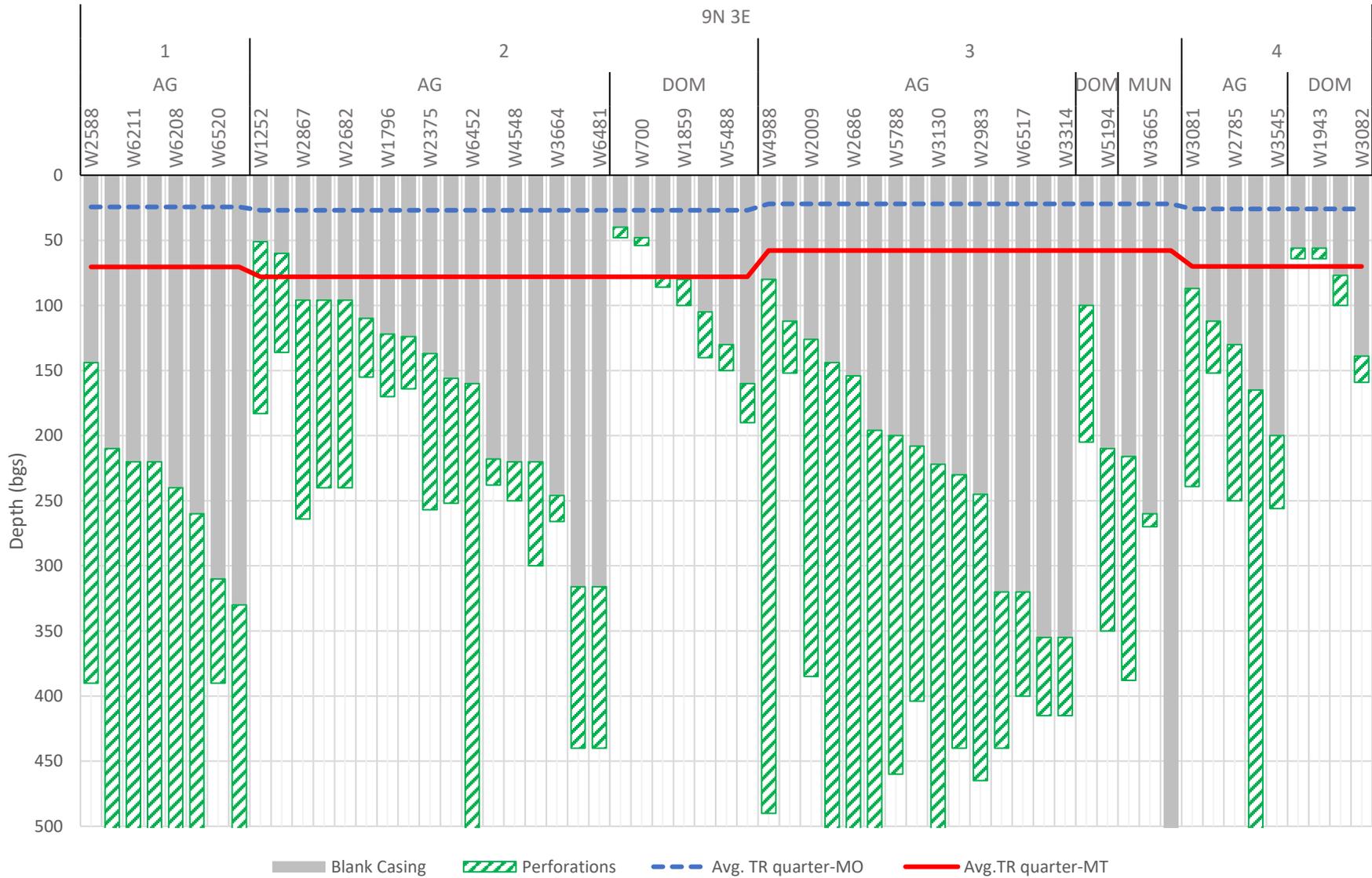
Township Range 9N 2E - Total Wells (281)
 8% Top Perforation Dewatered at MT
 2% Bottom Perforation Dewatered at MT

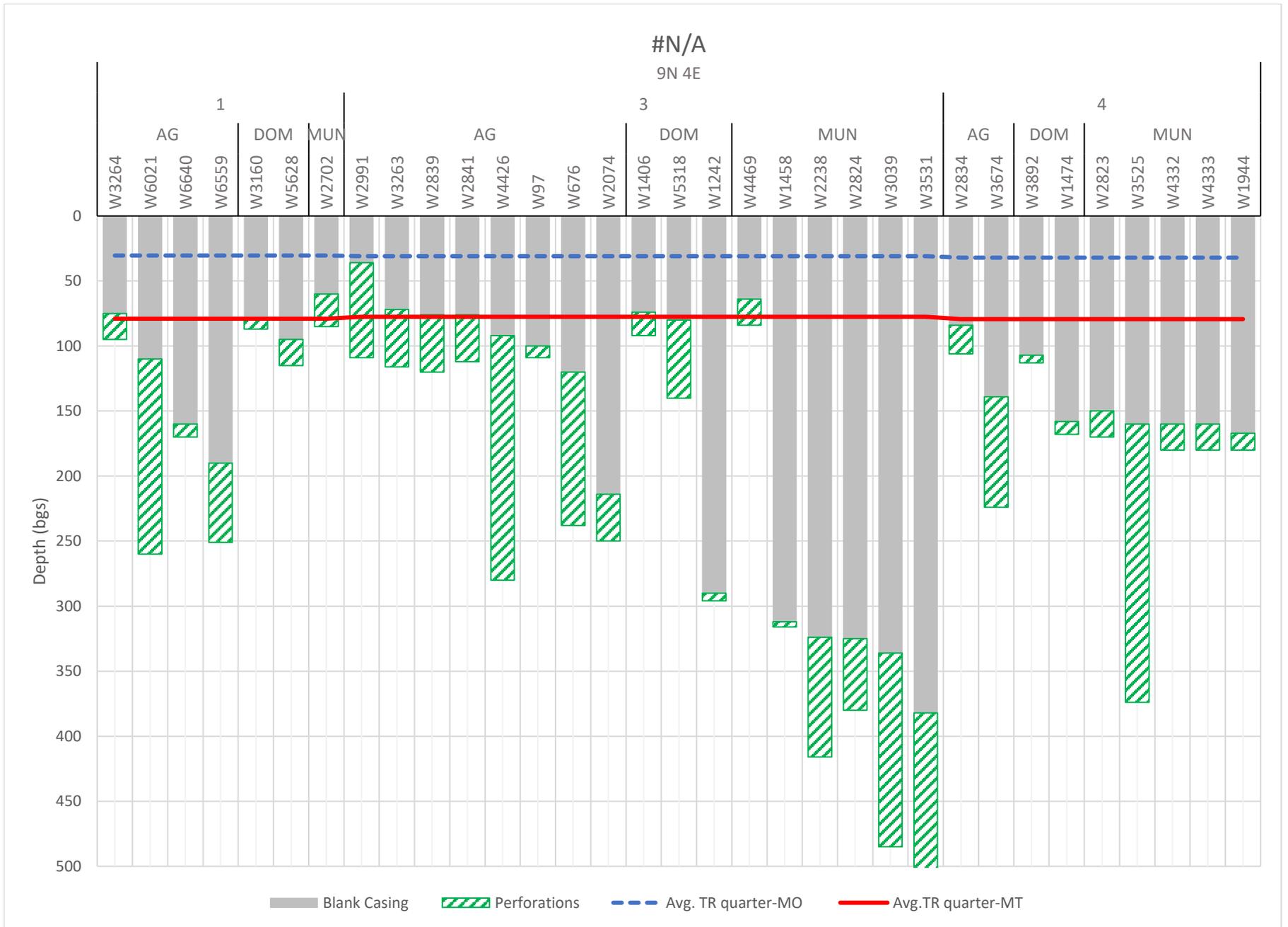


Township Range 9N 2W - Total Wells (14)
 14% Top Perforation Dewatered at MT
 0% Bottom Perforation Dewatered at MT

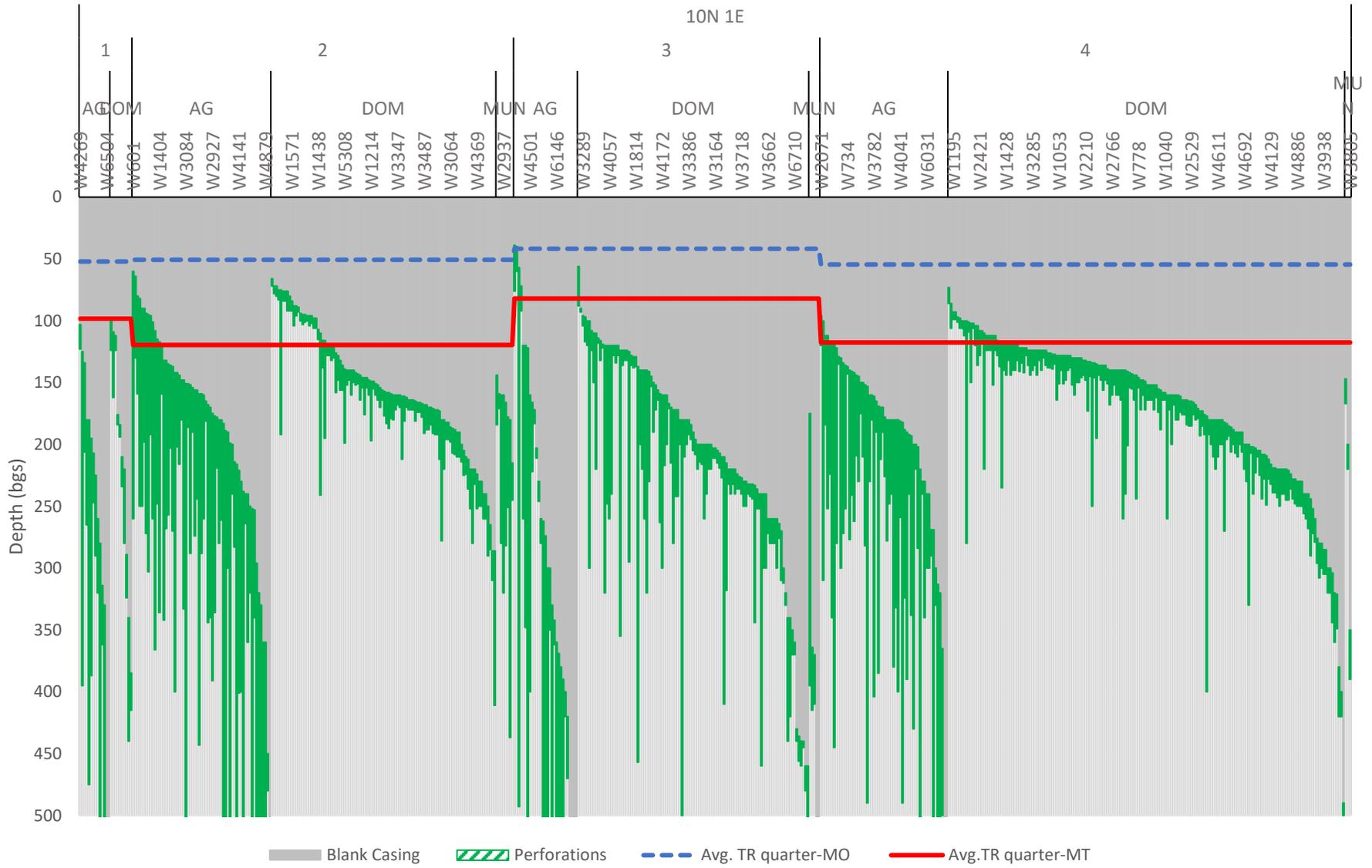


Township Range 9N 3E - Total Wells (61)
 10% Top Perforation Dewatered at MT
 7% Bottom Perforation Dewatered at MT

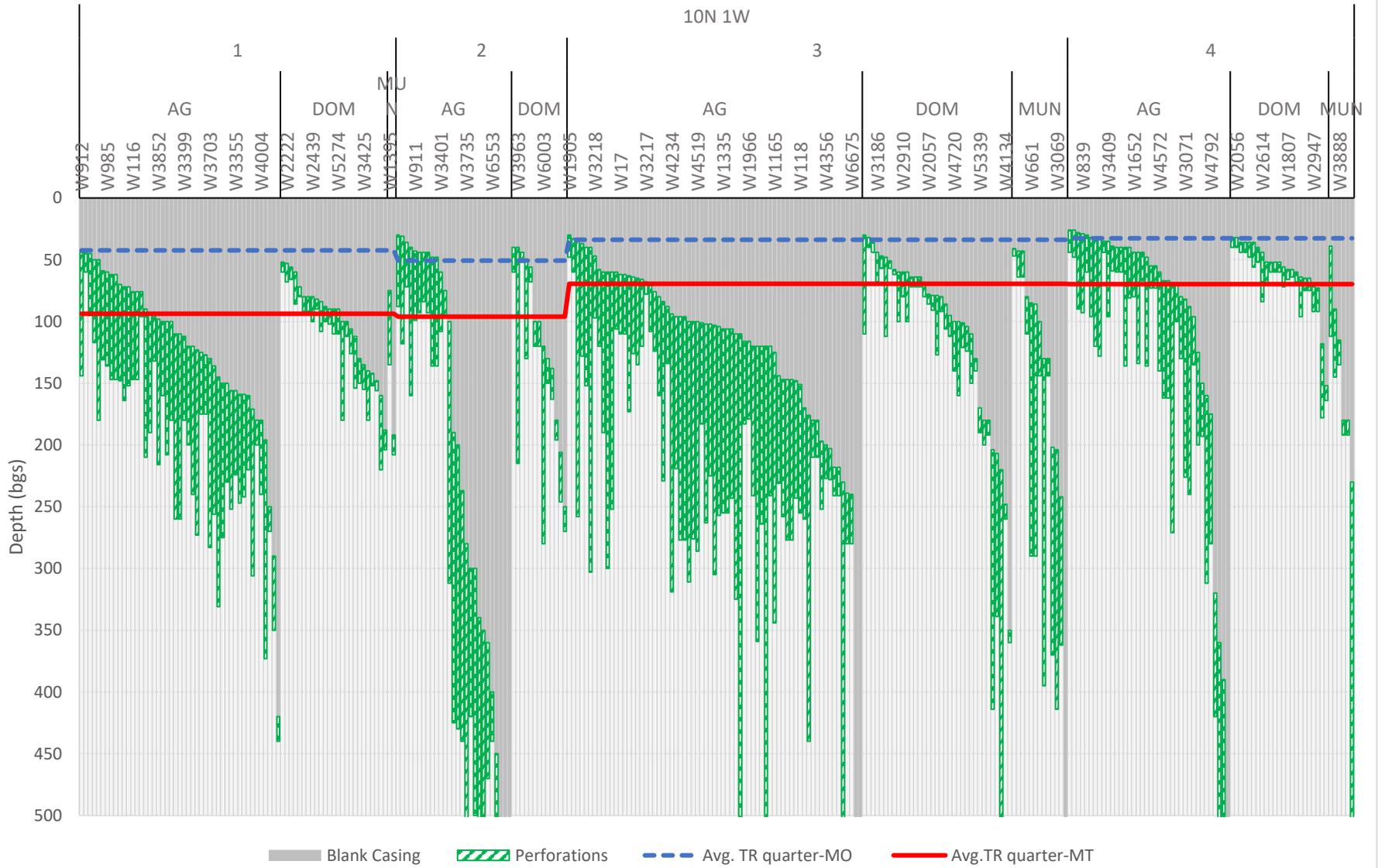




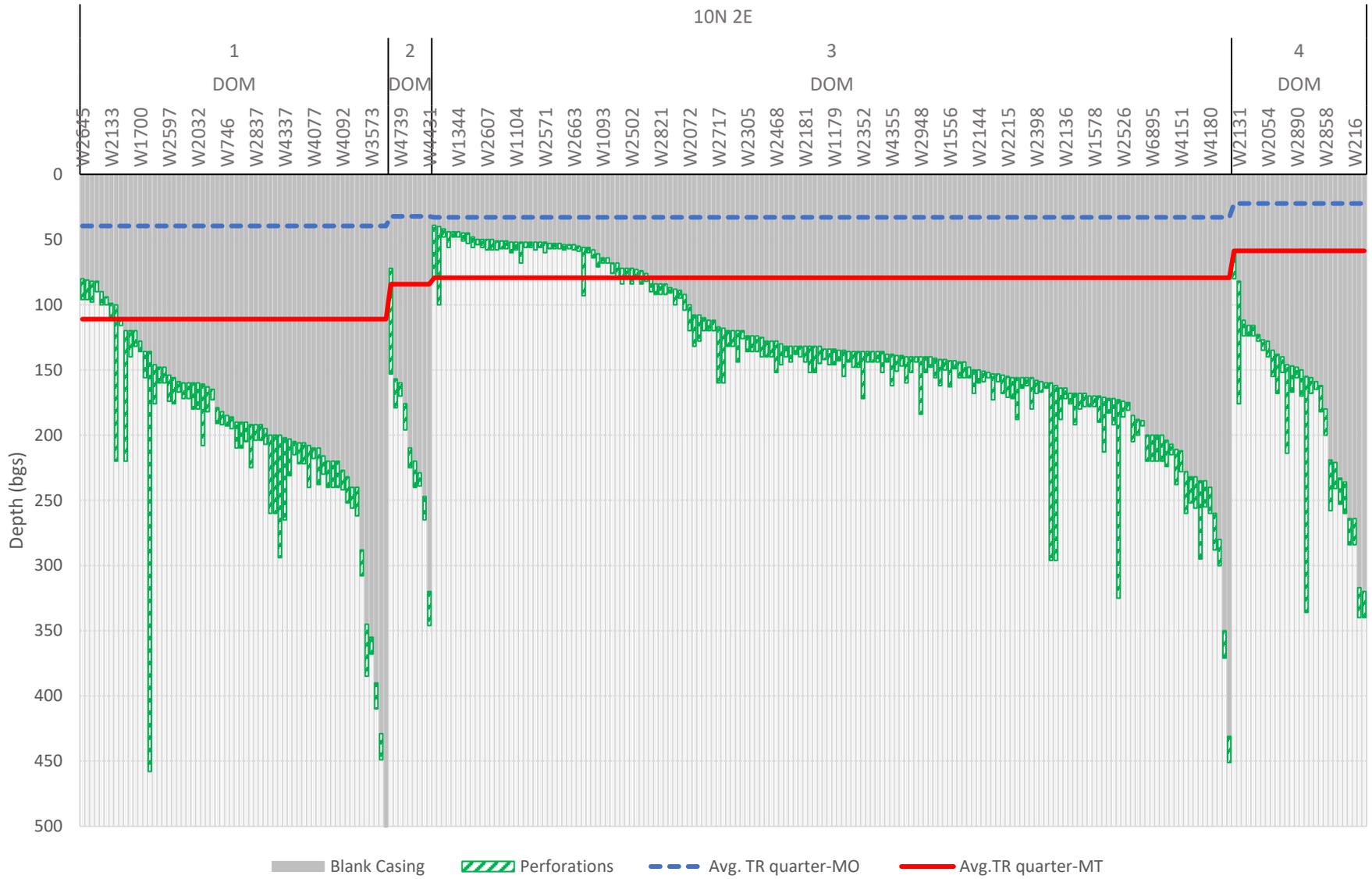
Township Range 10N 1E - Total Wells (577)
 12% Top Perforation Dewatered at MT
 6% Bottom Perforation Dewatered at MT



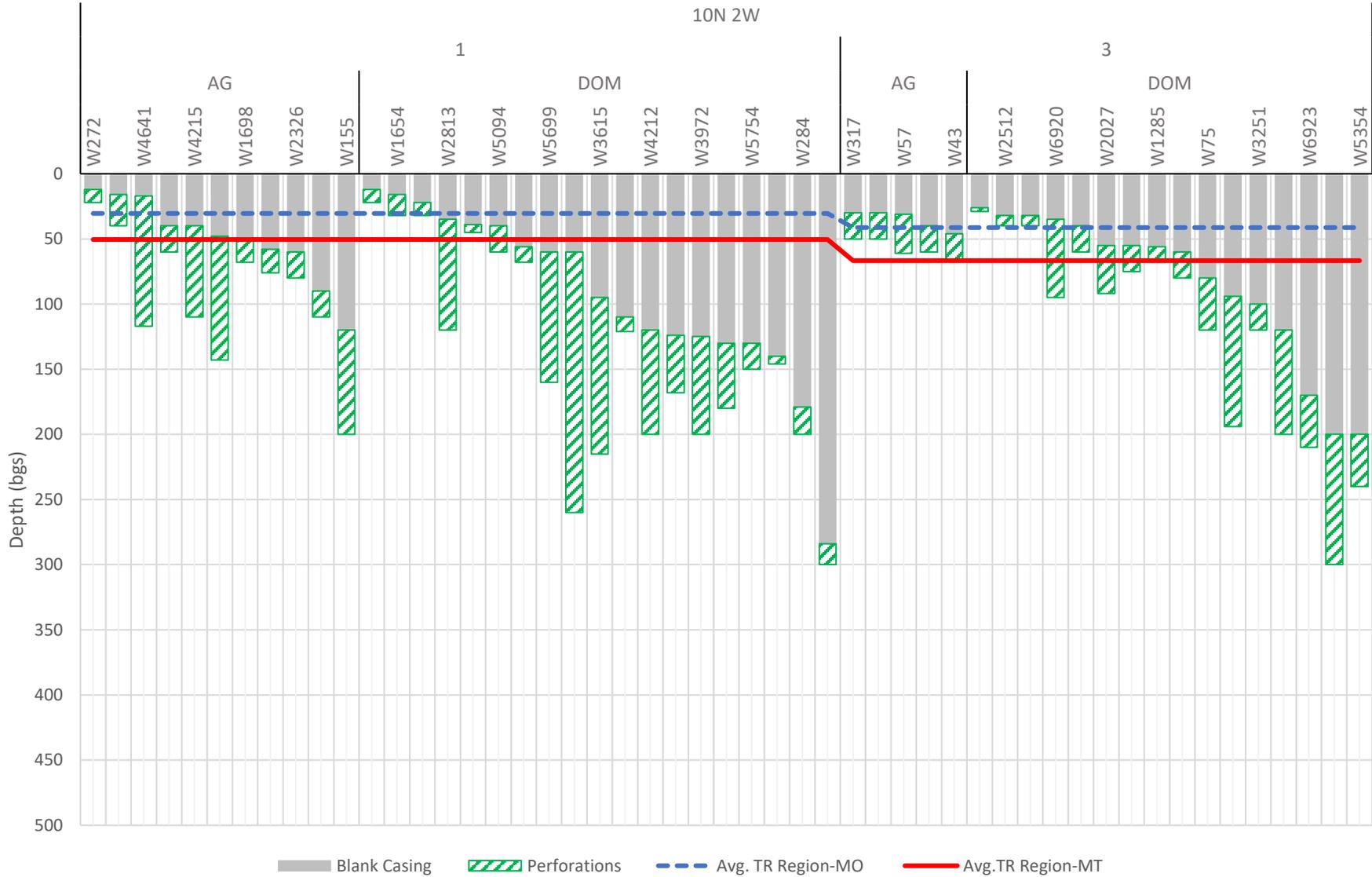
Township Range 10N 1W - Total Wells (298)
 43% Top Perforation Dewatered at MT
 17% Bottom Perforation Dewatered at MT



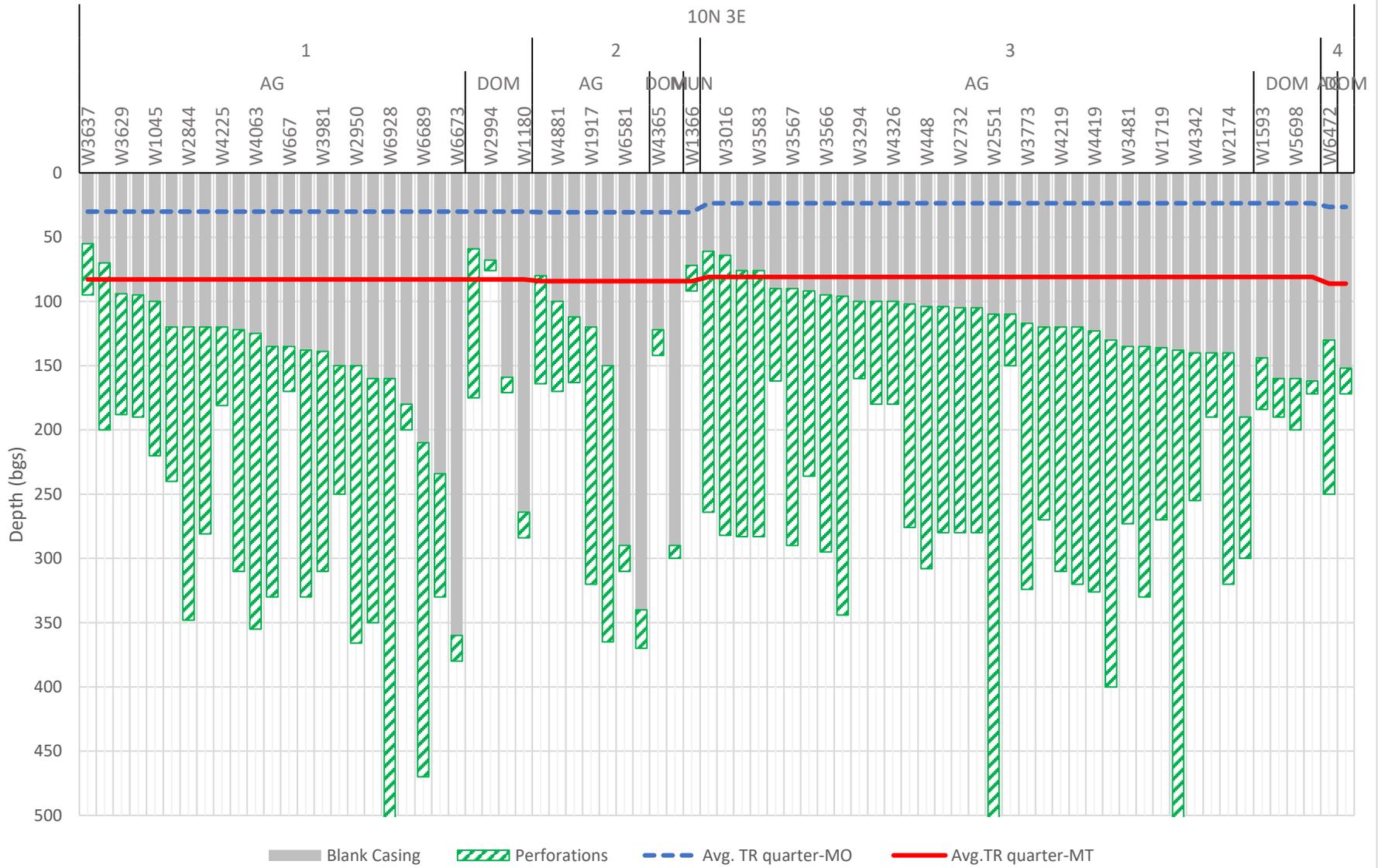
Township Range 10N 2E - Total Wells (536)
 18% Top Perforation Dewatered at MT
 10% Bottom Perforation Dewatered at MT



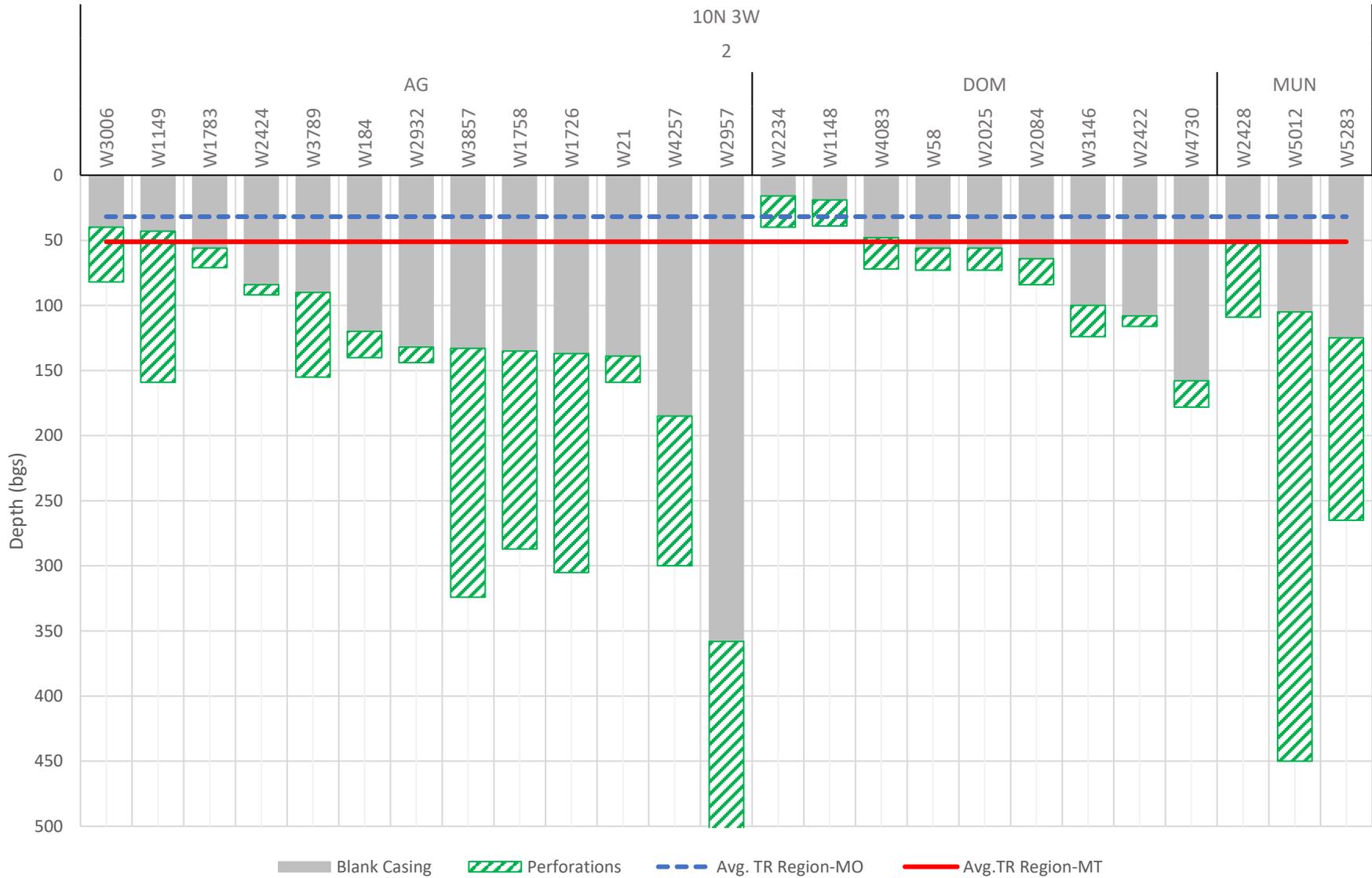
Township Range 10N 2W - Total Wells (53)
 53% Top Perforation Dewatered at MT
 29% Bottom Perforation Dewatered at MT



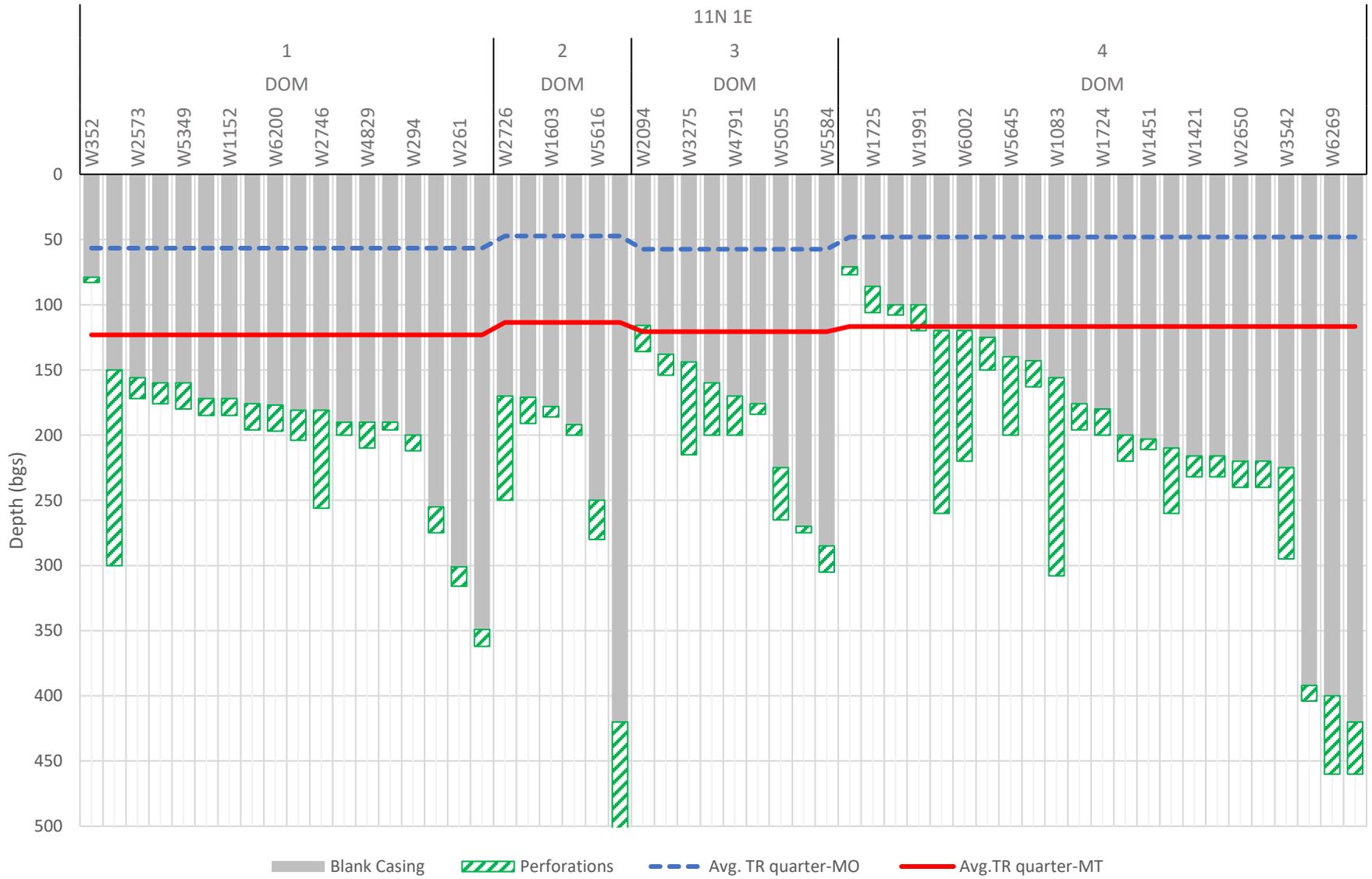
Township Range 10N 3E - Total Wells (76)
 13% Top Perforation Dewatered at MT
 1% Bottom Perforation Dewatered at MT



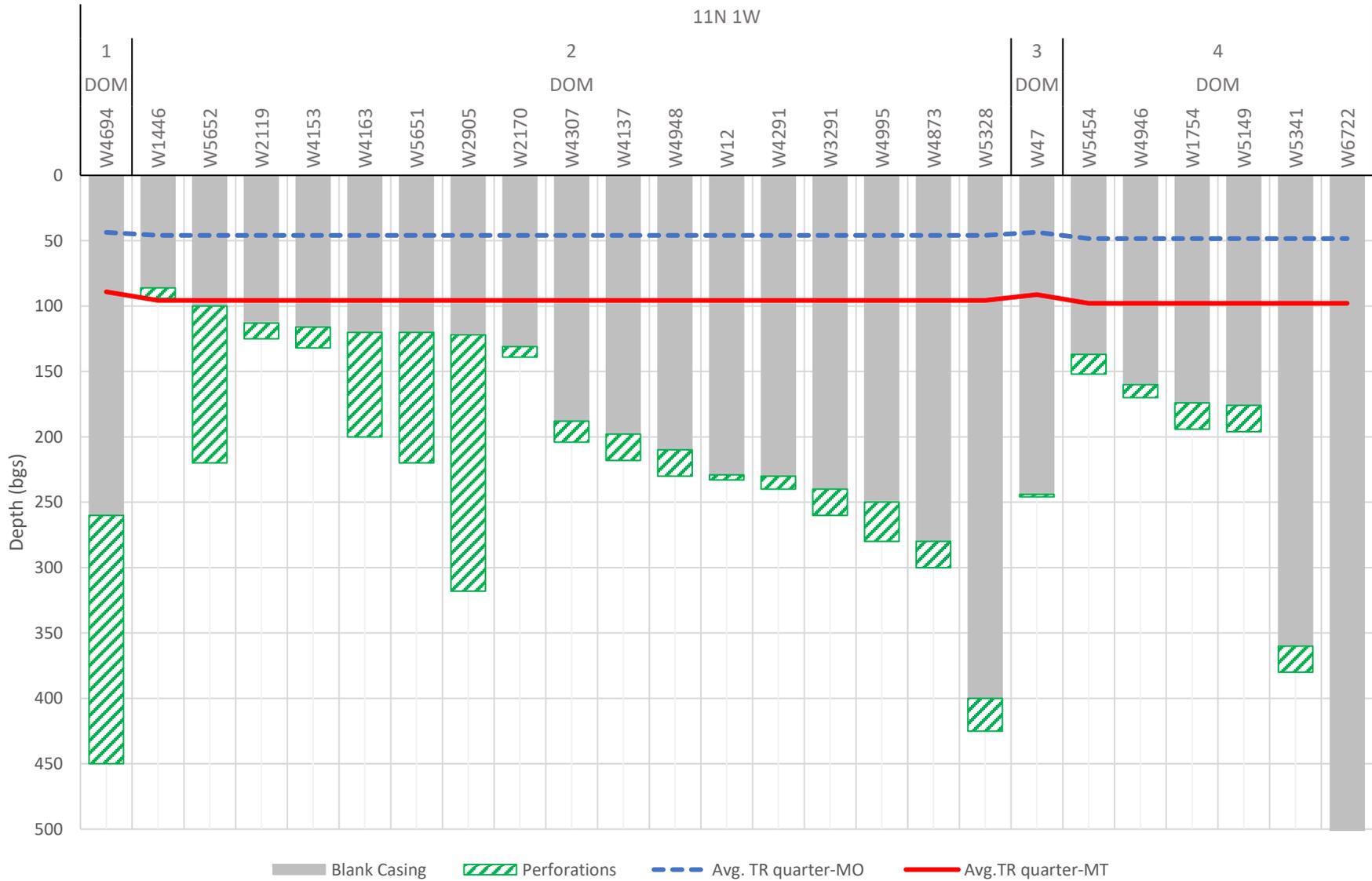
Township Range 10N 3W - Total Wells (25)
 24% Top Perforation Dewatered at MT
 8% Bottom Perforation Dewatered at MT



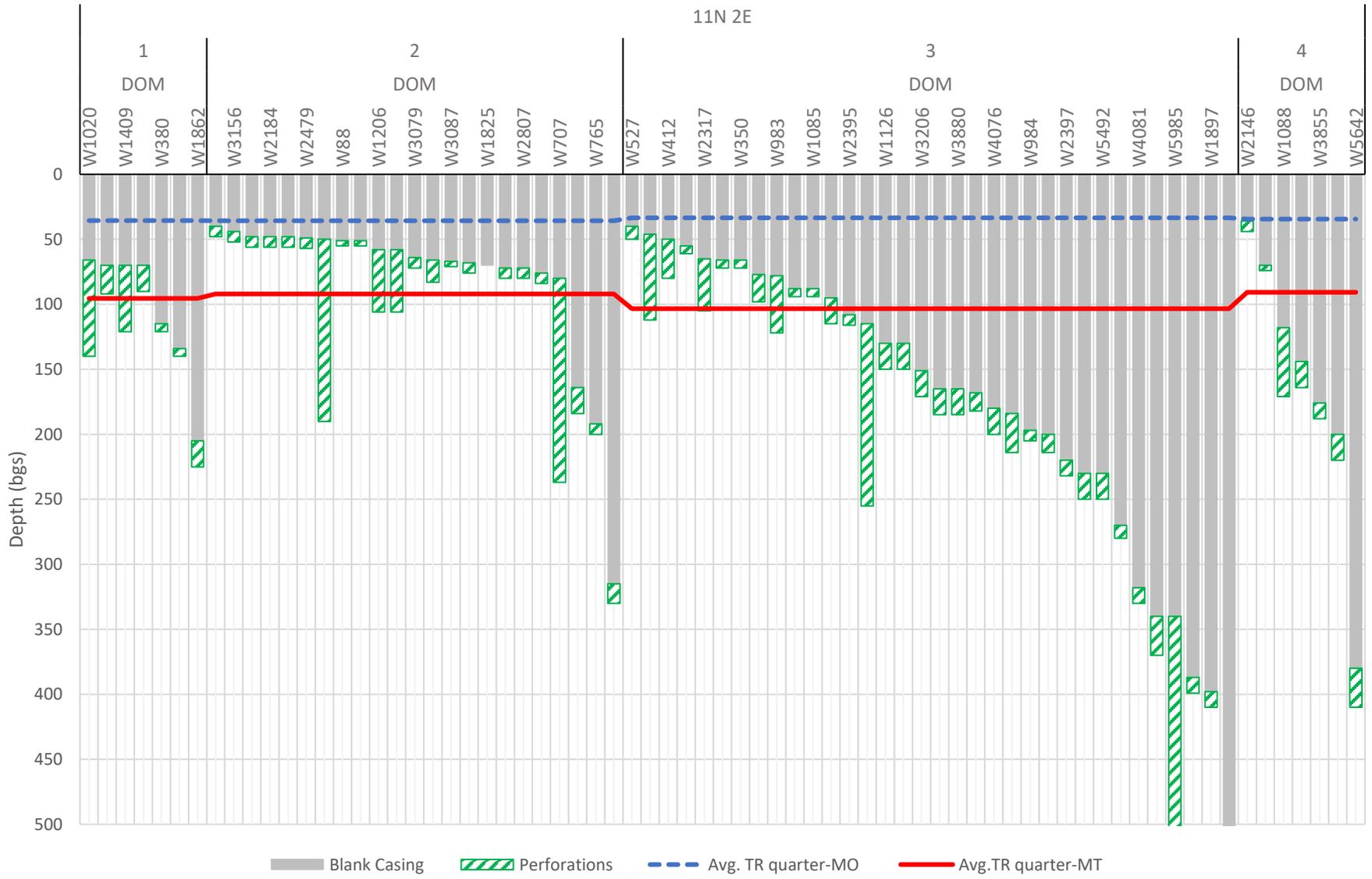
Township Range 11N 1E - Total Wells (238)
 8% Top Perforation Dewatered at MT
 2% Bottom Perforation Dewatered at MT



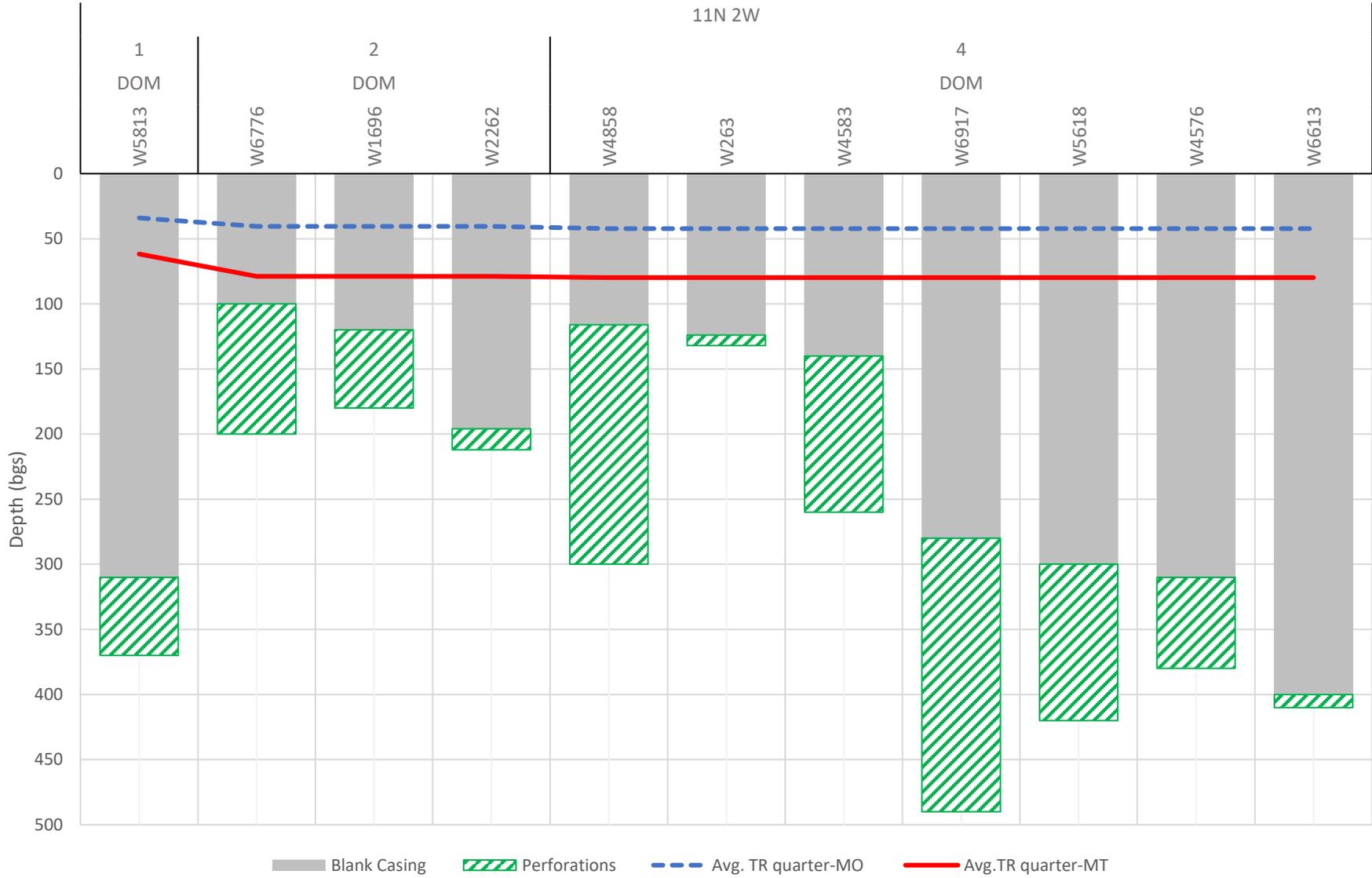
Township Range 11N 1W - Total Wells (72)
 6% Top Perforation Dewatered at MT
 1% Bottom Perforation Dewatered at MT



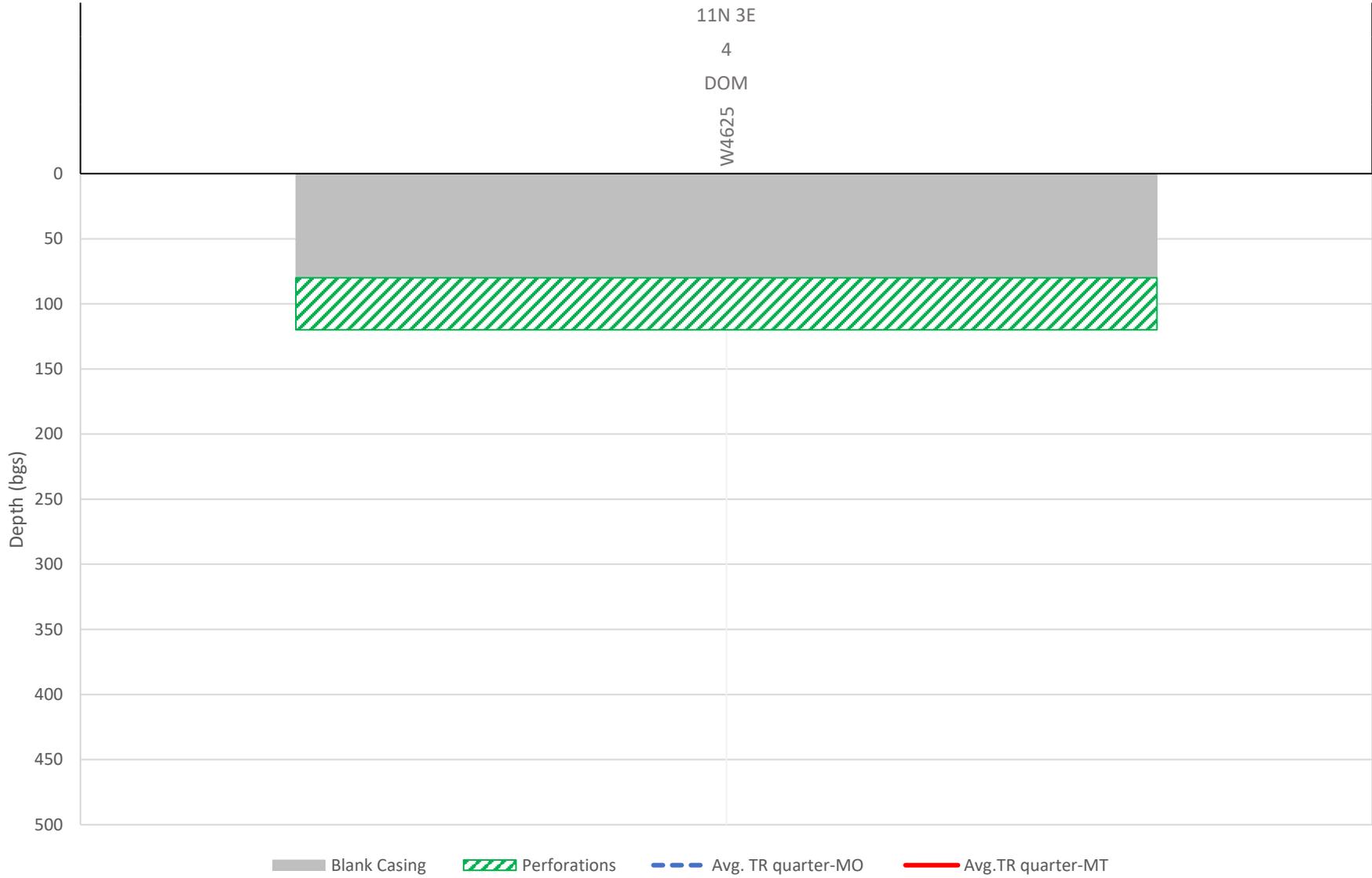
Township Range 11N 2E - Total Wells (224)
 33% Top Perforation Dewatered at MT
 14% Bottom Perforation Dewatered at MT



Township Range 11N 2W - Total Wells (44)
 0% Top Perforation Dewatered at MT
 0% Bottom Perforation Dewatered at MT

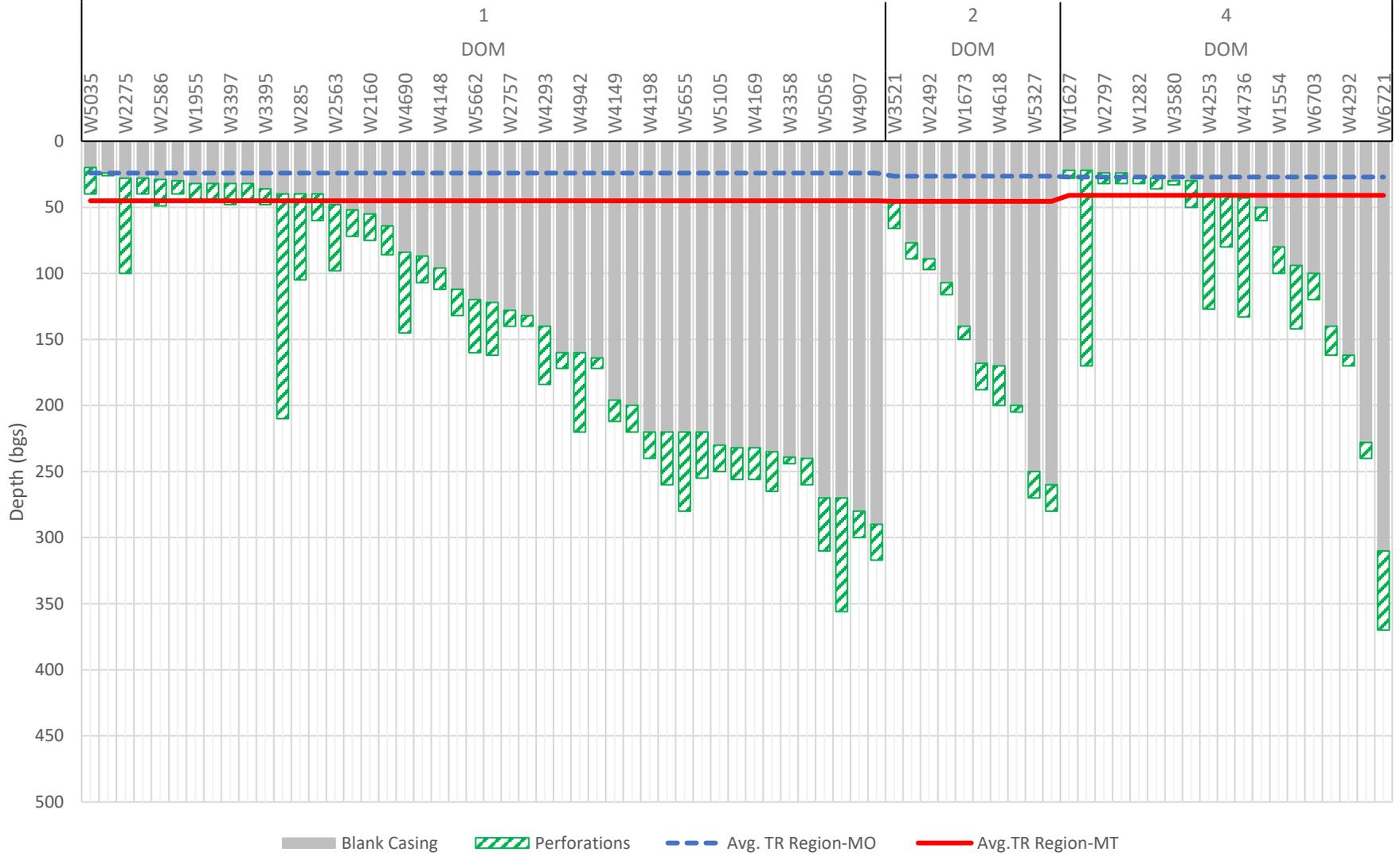


Township Range 11N 3E - Total Wells (16)
56% Top Perforation Dewatered at MT
0% Bottom Perforation Dewatered at MT



Township Range 11N 3W - Total Wells (149)
 32% Top Perforation Dewatered at MT
 10% Bottom Perforation Dewatered at MT

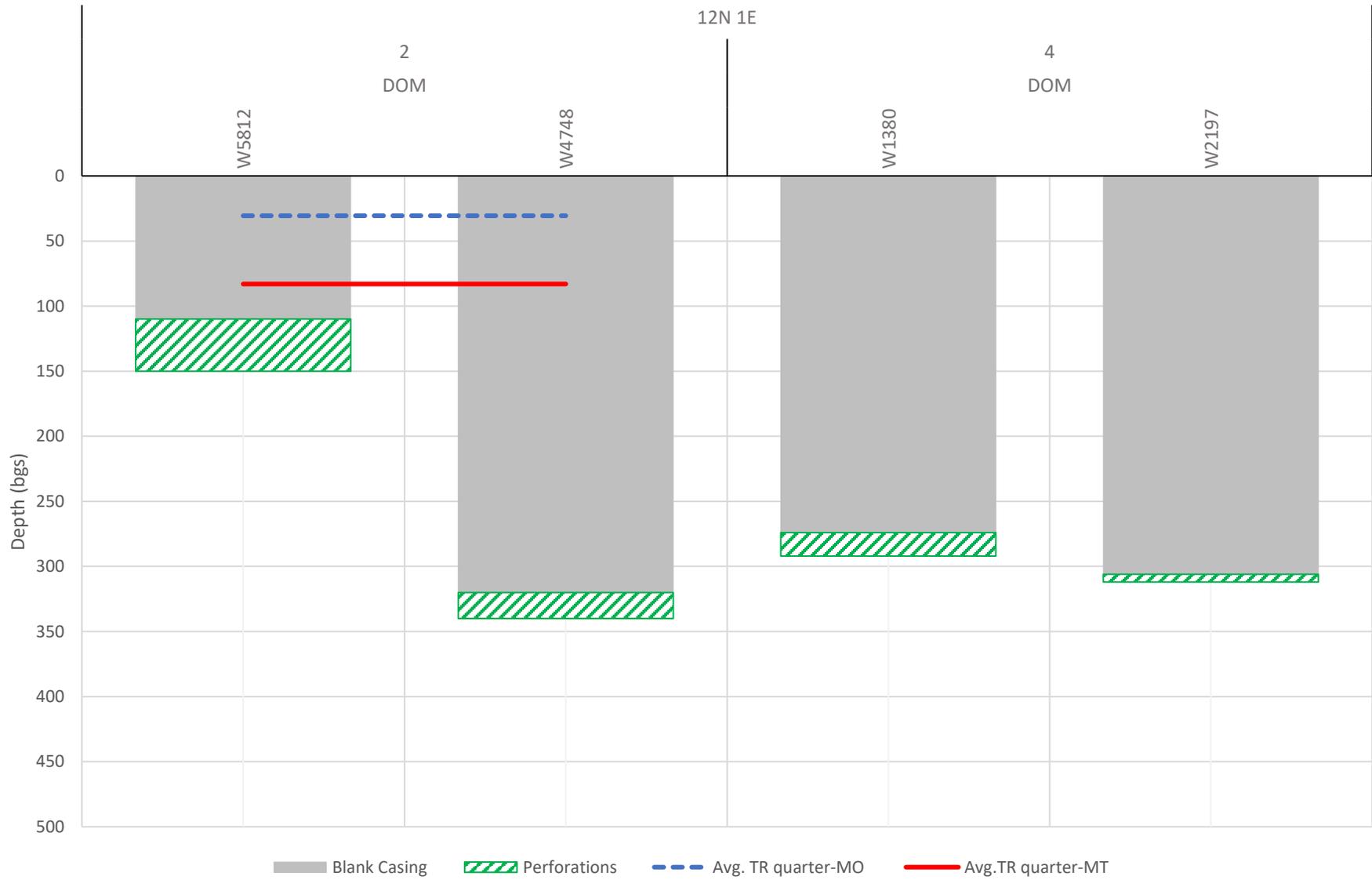
11N 3W



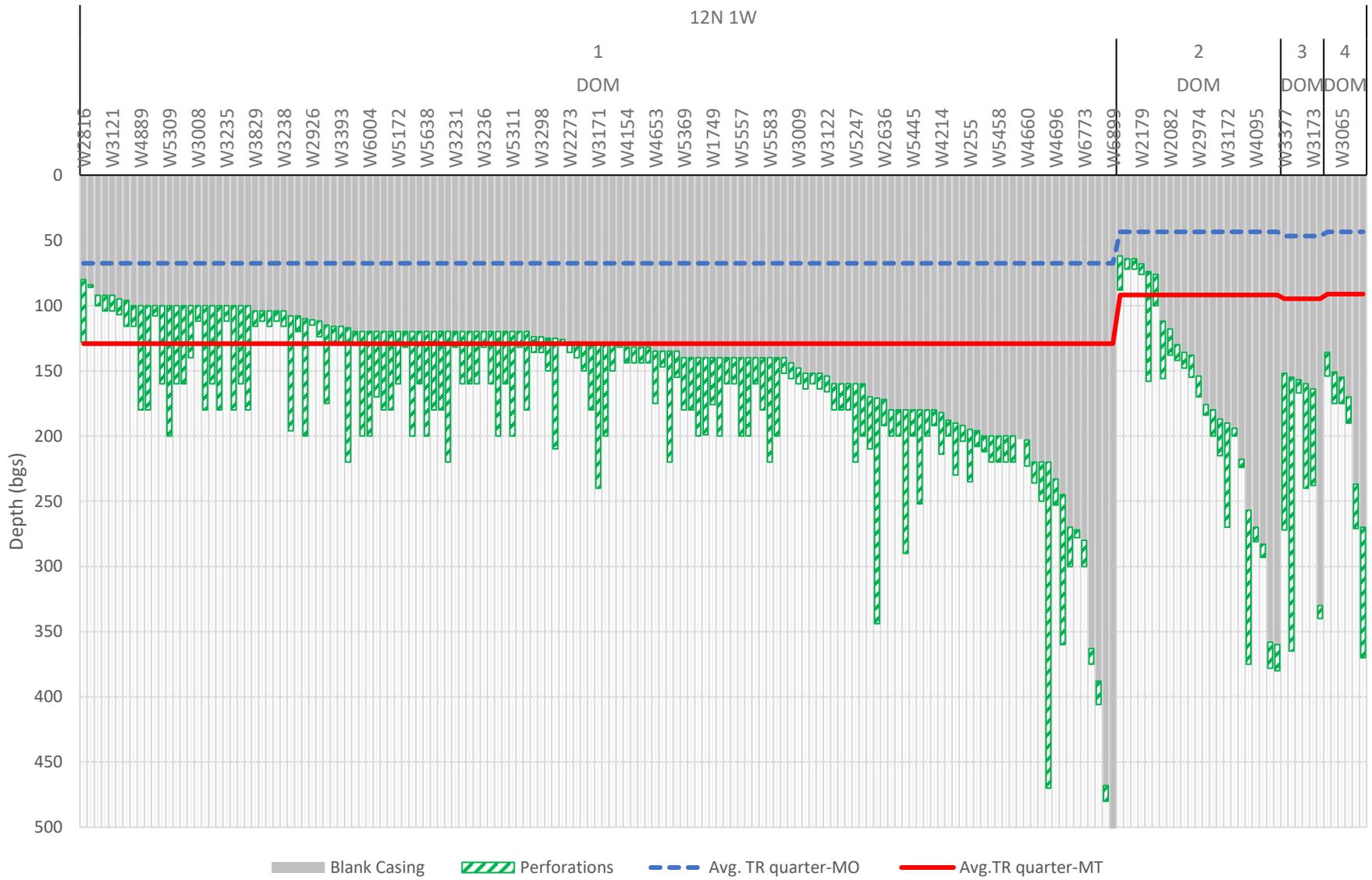
Township Range 12N 1E - Total Wells (15)

0% Top Perforation Dewatered at MT

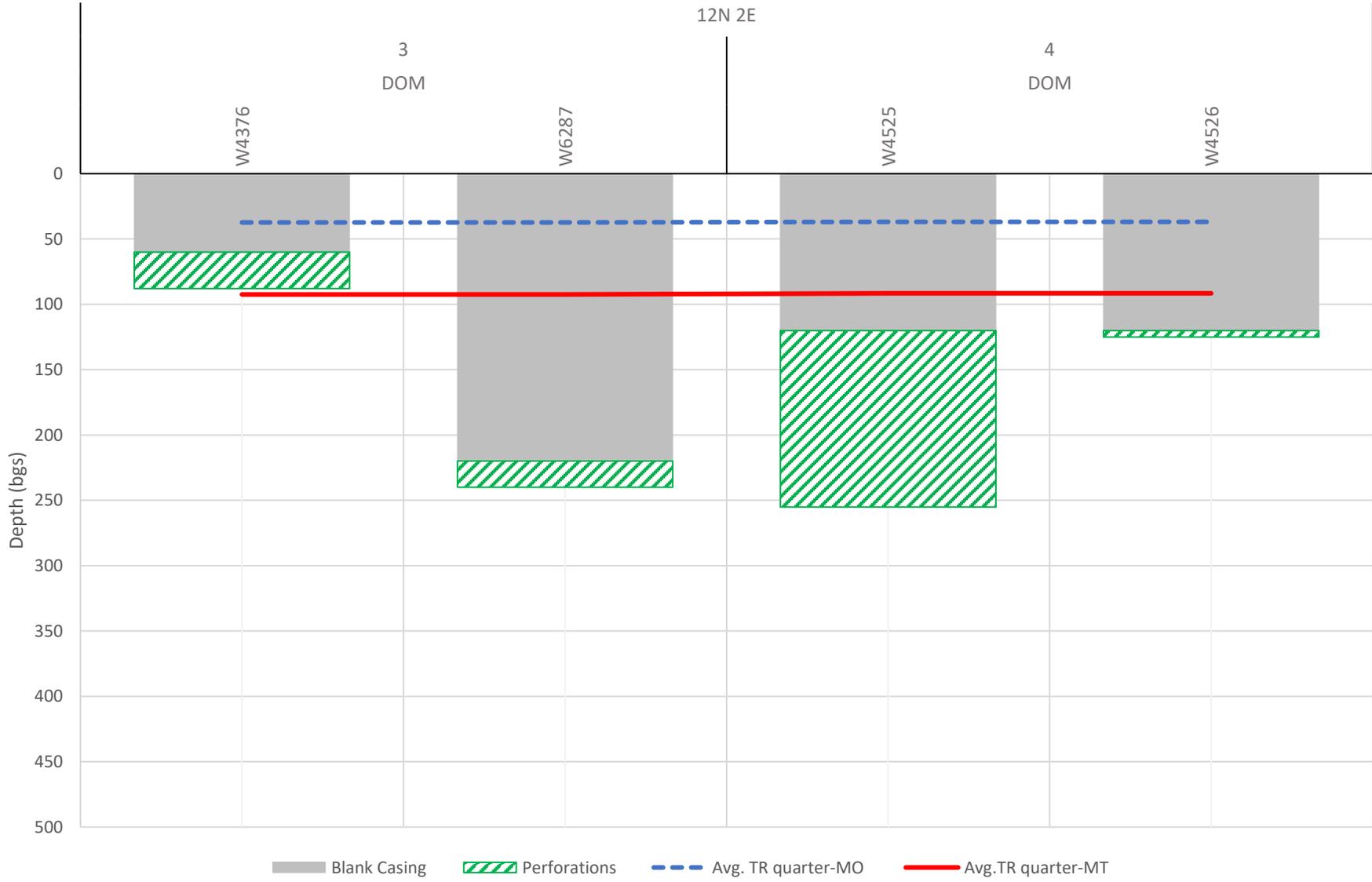
0% Bottom Perforation Dewatered at MT



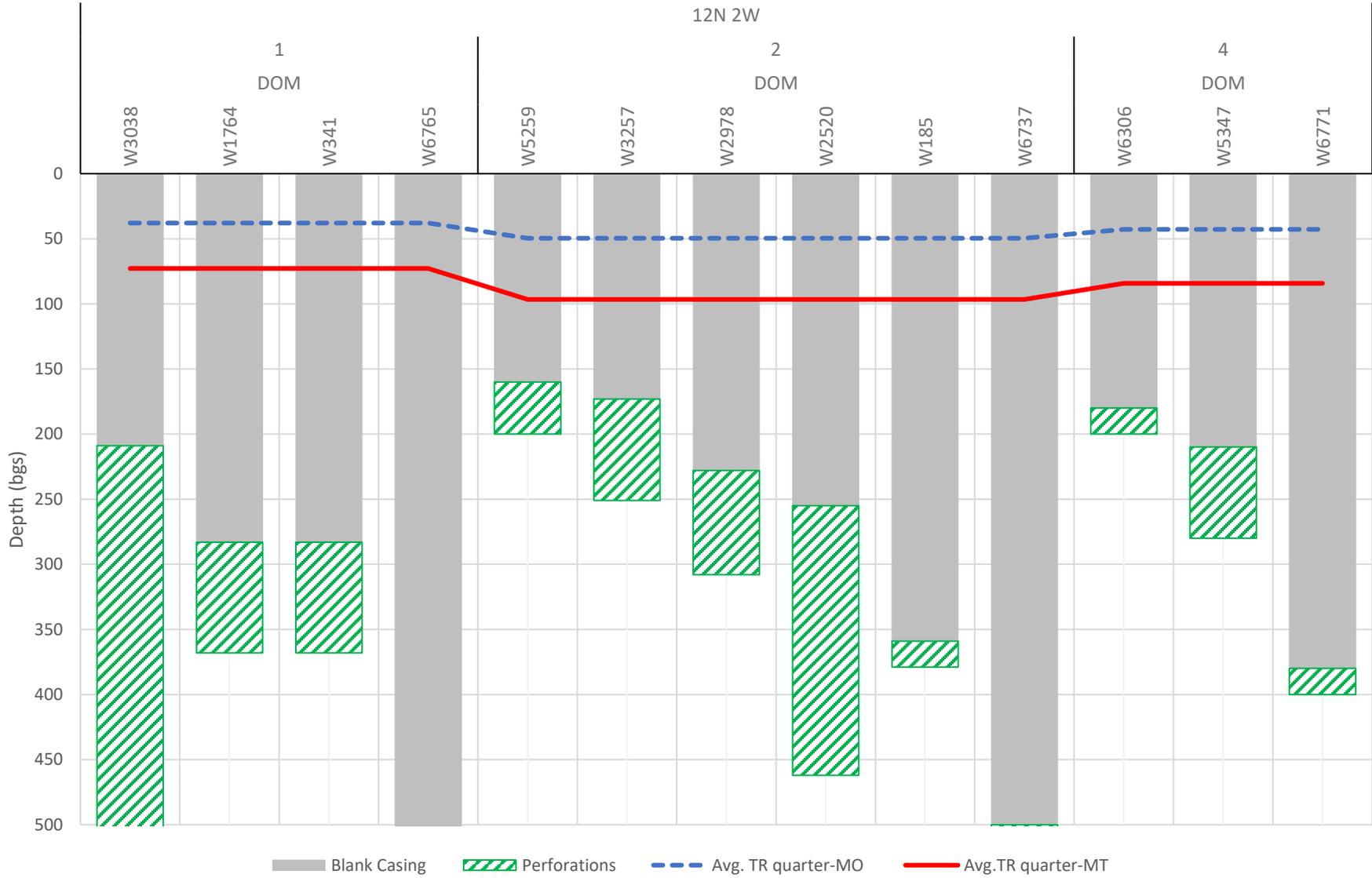
Township Range 12N 1W - Total Wells (301)
 27% Top Perforation Dewatered at MT
 9% Bottom Perforation Dewatered at MT



Township Range 12N 2E - Total Wells (10)
 20% Top Perforation Dewatered at MT
 10% Bottom Perforation Dewatered at MT



Township Range 12N 2W - Total Wells (31)
 0% Top Perforation Dewatered at MT
 0% Bottom Perforation Dewatered at MT



Township Range 12N 3W - Total Wells (76)
 4% Top Perforation Dewatered at MT
 1% Bottom Perforation Dewatered at MT

