

Schlumberger

# **Oxy Turkey Track 8-7 State 22H Gyro+MWD 0-17,815' Survey Geodetic Report (Def Survey)**



**NM OIL CONSERVATION  
ARTESIA DISTRICT**

**DEC 22 2017**

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|                                      |                                                                 |                                             |                              |
|--------------------------------------|-----------------------------------------------------------------|---------------------------------------------|------------------------------|
| <b>Report Date:</b>                  | December 04, 2017 - 02:39 PM                                    | <b>Survey / DLS Computation:</b>            | Minimum Curvature / Lubinski |
| <b>Client:</b>                       | OXY                                                             | <b>Vertical Section Azimuth:</b>            | 286.270 ° (Grid North)       |
| <b>Field:</b>                        | NM Eddy County (NAD 83)                                         | <b>Vertical Section Origin:</b>             | 0.000 ft, 0.000 ft           |
| <b>Structure / Slot:</b>             | Oxy Turkey Track 8-7 State 22H / Oxy Turkey Track 8-7 State 22H | <b>TVD Reference Datum:</b>                 | RKB=26.5                     |
| <b>Well:</b>                         | Oxy Turkey Track 8-7 State 22H                                  | <b>TVD Reference Elevation:</b>             | 3419.100 ft above MSL        |
| <b>Borehole:</b>                     | Original Borehole                                               | <b>Seabed / Ground Elevation:</b>           | 3392.600 ft above MSL        |
| <b>UWI / API#:</b>                   | Unknown / Unknown                                               | <b>Magnetic Declination:</b>                | 7.450 °                      |
| <b>Survey Name:</b>                  | Oxy Turkey Track 8-7 State 22H Gyro+MWD 0-17,815'               | <b>Total Gravity Field Strength:</b>        | 986.5140mgm (9.80665 Based)  |
| <b>Survey Date:</b>                  | November 15, 2017                                               | <b>Gravity Model:</b>                       | GARM                         |
| <b>Tort / AHD / DOI / ERD Ratio:</b> | 205.169 ° / 10718.370 ft / 6.696 / 1.360                        | <b>Total Magnetic Field Strength:</b>       | 48153.998 nT                 |
| <b>Coordinate Reference System:</b>  | NAD83 New Mexico State Plane, Eastern Zone, US Feet             | <b>Magnetic Dip Angle:</b>                  | 60.502 °                     |
| <b>Location Lat / Long:</b>          | N 32° 40' 46.14660", W 104° 5' 17.30933"                        | <b>Declination Date:</b>                    | November 15, 2017            |
| <b>Location Grid N/E Y/X:</b>        | N 611015.000 RUS, E 616778.280 RUS                              | <b>Magnetic Declination Model:</b>          | HDGM 2017                    |
| <b>CRS Grid Convergence Angle:</b>   | 0.1324 °                                                        | <b>North Reference:</b>                     | Grid North                   |
| <b>Grid Scale Factor:</b>            | 0.99991561                                                      | <b>Grid Convergence Used:</b>               | 0.1324 °                     |
| <b>Version / Patch:</b>              | 2.10.565.0                                                      | <b>Total Corr Mag North-&gt;Grid North:</b> | 7.3177 °                     |
|                                      |                                                                 | <b>Local Coord Referenced To:</b>           | Well Head                    |

| Comments | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') |
|----------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|--------------------------|---------------------------|
| SHL      | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 611015.00          | 616778.28         | N 32 40 46.15 W 104      | 5 17 31                   |
|          | 78.30      | 0.64        | 191.02           | 78.30       | 0.11         | -0.43      | -0.08      | 0.82             | 611014.57          | 616778.20         | N 32 40 46.14 W 104      | 5 17 31                   |
|          | 141.40     | 0.74        | 192.61           | 141.39      | 0.32         | -1.17      | -0.24      | 0.16             | 611013.83          | 616778.04         | N 32 40 46.14 W 104      | 5 17 31                   |
|          | 236.00     | 0.82        | 201.76           | 235.99      | 0.78         | -2.40      | -0.62      | 0.16             | 611012.60          | 616777.66         | N 32 40 46.12 W 104      | 5 17 32                   |
|          | 330.50     | 0.98        | 203.31           | 330.47      | 1.44         | -3.77      | -1.19      | 0.17             | 611011.23          | 616777.09         | N 32 40 46.11 W 104      | 5 17 32                   |
|          | 425.00     | 1.05        | 200.30           | 424.96      | 2.16         | -5.32      | -1.81      | 0.09             | 611009.68          | 616776.47         | N 32 40 46.09 W 104      | 5 17 33                   |
|          | 519.40     | 1.01        | 191.81           | 519.34      | 2.73         | -6.95      | -2.29      | 0.17             | 611008.05          | 616775.99         | N 32 40 46.08 W 104      | 5 17 34                   |
|          | 614.00     | 0.98        | 176.98           | 613.93      | 2.97         | -8.57      | -2.41      | 0.27             | 611006.43          | 616775.87         | N 32 40 46.06 W 104      | 5 17 34                   |
|          | 708.60     | 0.29        | 190.68           | 708.52      | 3.04         | -9.61      | -2.41      | 0.74             | 611005.39          | 616775.87         | N 32 40 46.05 W 104      | 5 17 34                   |
|          | 803.30     | 0.07        | 322.64           | 803.22      | 3.13         | -9.80      | -2.49      | 0.36             | 611005.20          | 616775.79         | N 32 40 46.05 W 104      | 5 17 34                   |
|          | 897.90     | 0.11        | 26.90            | 897.82      | 3.11         | -9.68      | -2.48      | 0.11             | 611005.32          | 616775.80         | N 32 40 46.05 W 104      | 5 17 34                   |
|          | 992.60     | 0.15        | 51.53            | 992.52      | 2.96         | -9.52      | -2.34      | 0.07             | 611005.48          | 616775.94         | N 32 40 46.05 W 104      | 5 17 34                   |
|          | 1085.10    | 0.03        | 117.44           | 1085.02     | 2.84         | -9.46      | -2.23      | 0.15             | 611005.54          | 616776.05         | N 32 40 46.05 W 104      | 5 17 34                   |
|          | 1177.10    | 0.16        | 302.85           | 1177.02     | 2.92         | -9.40      | -2.31      | 0.21             | 611005.60          | 616775.97         | N 32 40 46.05 W 104      | 5 17 34                   |
|          | 1269.50    | 0.17        | 356.35           | 1269.42     | 3.02         | -9.19      | -2.43      | 0.16             | 611005.81          | 616775.85         | N 32 40 46.06 W 104      | 5 17 34                   |
|          | 1361.30    | 0.06        | 140.95           | 1361.22     | 2.99         | -8.10      | -2.41      | 0.24             | 611005.91          | 616775.67         | N 32 40 46.06 W 104      | 5 17 34                   |
|          | 1452.00    | 0.03        | 161.18           | 1451.92     | 2.96         | -8.15      | -2.37      | 0.04             | 611005.85          | 616775.91         | N 32 40 46.06 W 104      | 5 17 34                   |
|          | 1544.00    | 0.14        | 70.27            | 1543.92     | 2.85         | -8.14      | -2.26      | 0.16             | 611005.86          | 616776.02         | N 32 40 46.06 W 104      | 5 17 34                   |
|          | 1635.90    | 0.17        | 74.93            | 1635.82     | 2.60         | -8.07      | -2.02      | 0.04             | 611005.93          | 616776.26         | N 32 40 46.06 W 104      | 5 17 33                   |
|          | 1728.10    | 0.06        | 161.95           | 1728.02     | 2.46         | -8.06      | -1.87      | 0.19             | 611005.92          | 616776.41         | N 32 40 46.06 W 104      | 5 17 33                   |
|          | 1819.90    | 0.14        | 336.01           | 1819.82     | 2.49         | -9.02      | -1.90      | 0.22             | 611005.98          | 616776.38         | N 32 40 46.06 W 104      | 5 17 33                   |
|          | 1911.60    | 0.26        | 9.57             | 1911.52     | 2.48         | -8.71      | -1.91      | 0.18             | 611006.29          | 616776.37         | N 32 40 46.06 W 104      | 5 17 33                   |
|          | 2006.20    | 0.14        | 15.19            | 2006.12     | 2.39         | -8.39      | -1.85      | 0.13             | 611006.61          | 616776.43         | N 32 40 46.06 W 104      | 5 17 33                   |
|          | 2100.90    | 0.17        | 309.74           | 2100.82     | 2.45         | -8.19      | -1.93      | 0.18             | 611006.81          | 616776.35         | N 32 40 46.07 W 104      | 5 17 33                   |
|          | 2195.50    | 0.21        | 347.44           | 2195.42     | 2.58         | -7.93      | -2.07      | 0.14             | 611007.07          | 616776.21         | N 32 40 46.07 W 104      | 5 17 33                   |
|          | 2290.30    | 0.22        | 337.28           | 2290.22     | 2.67         | -7.59      | -2.18      | 0.04             | 611007.41          | 616776.10         | N 32 40 46.07 W 104      | 5 17 34                   |
|          | 2384.80    | 0.23        | 354.61           | 2384.72     | 2.73         | -7.24      | -2.27      | 0.07             | 611007.77          | 616776.01         | N 32 40 46.08 W 104      | 5 17 34                   |
|          | 2479.50    | 0.22        | 5.28             | 2479.42     | 2.71         | -6.87      | -2.27      | 0.05             | 611008.14          | 616776.01         | N 32 40 46.08 W 104      | 5 17 34                   |
|          | 2574.00    | 0.02        | 50.73            | 2573.92     | 2.67         | -6.67      | -2.24      | 0.22             | 611008.33          | 616776.04         | N 32 40 46.08 W 104      | 5 17 34                   |
|          | 2668.60    | 0.21        | 253.28           | 2668.52     | 2.82         | -6.71      | -2.39      | 0.24             | 611008.29          | 616775.89         | N 32 40 46.08 W 104      | 5 17 34                   |
|          | 2763.20    | 0.10        | 300.30           | 2763.12     | 3.06         | -6.72      | -2.63      | 0.17             | 611008.28          | 616775.65         | N 32 40 46.08 W 104      | 5 17 34                   |
|          | 2857.70    | 0.11        | 162.75           | 2857.62     | 3.11         | -6.77      | -2.67      | 0.21             | 611008.23          | 616775.61         | N 32 40 46.08 W 104      | 5 17 34                   |
|          | 2952.20    | 0.21        | 203.19           | 2952.12     | 3.17         | -7.01      | -2.72      | 0.15             | 611007.99          | 616775.57         | N 32 40 46.08 W 104      | 5 17 34                   |
|          | 3046.70    | 0.24        | 224.64           | 3046.61     | 3.39         | -7.31      | -2.92      | 0.09             | 611007.69          | 616775.36         | N 32 40 46.07 W 104      | 5 17 34                   |
|          | 3141.30    | 0.17        | 244.41           | 3141.21     | 3.67         | -7.51      | -3.19      | 0.10             | 611007.49          | 616775.09         | N 32 40 46.07 W 104      | 5 17 35                   |
|          | 3236.10    | 0.16        | 255.31           | 3236.01     | 3.93         | -7.61      | -3.44      | 0.03             | 611007.39          | 616774.84         | N 32 40 46.07 W 104      | 5 17 35                   |
|          | 3330.40    | 0.15        | 249.98           | 3330.31     | 4.18         | -7.68      | -3.69      | 0.02             | 611007.32          | 616774.59         | N 32 40 46.07 W 104      | 5 17 35                   |
|          | 3424.60    | 0.15        | 245.10           | 3424.51     | 4.41         | -7.78      | -3.91      | 0.01             | 611007.22          | 616774.37         | N 32 40 46.07 W 104      | 5 17 36                   |
|          | 3519.40    | 0.17        | 250.72           | 3519.31     | 4.66         | -7.88      | -4.16      | 0.03             | 611007.12          | 616774.12         | N 32 40 46.07 W 104      | 5 17 36                   |
|          | 3614.00    | 0.16        | 256.75           | 3613.91     | 4.93         | -7.95      | -4.42      | 0.02             | 611007.05          | 616773.86         | N 32 40 46.07 W 104      | 5 17 36                   |
|          | 3708.60    | 0.16        | 255.74           | 3708.51     | 5.19         | -8.02      | -4.68      | 0.00             | 611006.98          | 616773.60         | N 32 40 46.07 W 104      | 5 17 36                   |
|          | 3803.30    | 0.15        | 176.43           | 3803.21     | 5.32         | -8.17      | -4.80      | 0.21             | 611006.83          | 616773.48         | N 32 40 46.07 W 104      | 5 17 37                   |
|          | 3897.70    | 0.15        | 176.31           | 3897.61     | 5.32         | -8.42      | -4.79      | 0.01             | 611006.58          | 616773.49         | N 32 40 46.06 W 104      | 5 17 37                   |
|          | 3992.00    | 0.15        | 172.92           | 3991.91     | 5.32         | -8.67      | -4.77      | 0.01             | 611006.34          | 616773.51         | N 32 40 46.06 W 104      | 5 17 37                   |
|          | 4086.70    | 0.16        | 178.04           | 4086.61     | 5.32         | -8.92      | -4.75      | 0.02             | 611006.06          | 616773.53         | N 32 40 46.06 W 104      | 5 17 37                   |
|          | 4181.20    | 0.16        | 175.41           | 4181.11     | 5.32         | -9.18      | -4.73      | 0.01             | 611005.82          | 616773.55         | N 32 40 46.06 W 104      | 5 17 36                   |
|          | 4275.90    | 0.16        | 177.20           | 4275.81     | 5.32         | -9.45      | -4.72      | 0.01             | 611005.55          | 616773.57         | N 32 40 46.05 W 104      | 5 17 36                   |
|          | 4370.60    | 0.15        | 180.84           | 4370.51     | 5.33         | -9.70      | -4.71      | 0.01             | 611005.30          | 616773.57         | N 32 40 46.05 W 104      | 5 17 36                   |
|          | 4465.10    | 0.15        | 188.60           | 4465.01     | 5.37         | -9.95      | -4.73      | 0.02             | 611005.05          | 616773.55         | N 32 40 46.05 W 104      | 5 17 36                   |
|          | 4559.70    | 0.13        | 179.12           | 4559.61     | 5.40         | -10.18     | -4.75      | 0.03             | 611004.82          | 616773.53         | N 32 40 46.05 W 104      | 5 17 37                   |
|          | 4654.30    | 0.38        | 186.90           | 4654.21     | 5.46         | -10.60     | -4.78      | 0.27             | 611004.40          | 616773.50         | N 32 40 46.04 W 104      | 5 17 37                   |
|          | 4748.90    | 1.20        | 195.36           | 4748.80     | 5.85         | -11.86     | -5.08      | 0.87             | 611003.14          | 616773.20         | N 32 40 46.03 W 104      | 5 17 37                   |
|          | 4843.30    | 2.45        | 196.67           | 4843.15     | 6.87         | -14.75     | -5.92      | 1.32             | 611000.25          | 616772.36         | N 32 40 46.00 W 104      | 5 17 38                   |
|          | 4937.70    | 4.59        | 197.54           | 4937.37     | 8.95         | -20.29     | -7.64      | 2.27             | 610994.72          | 616770.64         | N 32 40 45.95 W 104      | 5 17 40                   |
|          | 5032.10    | 6.07        | 198.46           | 5031.35     | 12.20        | -26.62     | -10.36     | 1.57             | 610986.38          | 616767.92         | N 32 40 45.86 W 104      | 5 17 43                   |
|          | 5126.90    | 7.64        | 199.95           | 5125.47     | 16.63        | -39.30     | -14.10     | 1.67             | 610975.70          | 616764.18         | N 32 40 45.76 W 104      | 5 17 48                   |
|          | 5221.50    | 9.57        | 197.95           | 5219.00     | 22.06        | -52.69     | -18.67     | 2.06             | 610962.31          | 616759.61         | N 32 40 45.63 W 104      | 5 17 53                   |
|          | 5316.20    | 11.57       | 196.67           | 5312.09     | 28.28        | -69.28     | -23.82     | 2.13             | 610945.72          | 616754.46         | N 32 40 45.46 W 104      | 5 17 59                   |
|          | 5410.90    | 13.32       | 192.78           | 5404.57     | 34.69        | -89.02     | -28.96     | 2.05             | 610925.99          | 616749.33         | N 32 40 45.27 W 104      | 5 17 65                   |
|          | 5505.40    | 14.95       | 190.12           | 5406.20     | 40.70        | -111.64    | -33.51     | 1.86             | 610903.37          | 616744.78         | N 32 40 45.04 W 104      | 5 17 70                   |
|          | 5600.00    | 16.36       | 187.94           | 5587.29     | 46.32        | -136.85    | -37.49     | 1.61             | 610878.16          | 616740.79         | N 32 40 44.79 W 104      | 5 17 75                   |
|          | 5694.40    | 15.73       | 188.33           | 5678.01     | 51.68        | -162.68    | -41.18     | 0.68             | 610852.34          | 616737.10         | N 32 40 44.54 W 104      | 5 17 80                   |
|          | 5789.10    | 14.80       | 188.55           | 5769.37     | 56.93        | -187.34    | -44.84     | 0.98             | 610827.68          | 616733.44         | N 32 40 44.29 W 104      | 5 17 84                   |
|          | 5883.30    | 13.79       | 188.88           | 5860.65     | 61.94        | -210.33    | -48.36     | 1.08             | 610804.69          | 616729.92         | N 32 40 44.07 W 104      | 5 17 88                   |
|          | 5978.00    | 12.76       | 187.84           | 5952.82     | 66.47        | -231.85    | -51.49     | 1.13             | 610783.17          | 616726.79         | N 32 40 43.85 W 104      | 5 17 92                   |
|          | 6072.60    | 11.76       | 189.18           | 6045.26     | 70.68        | -251.72    | -54.42     | 1.11             | 610763.30          | 616723.66         | N 32 40 43.66 W 104      | 5 17 95                   |
|          | 6167.30    | 9.87        | 189.50           | 6138.28     | 74.70        | -269.25    | -57.30     | 2.00             | 610745.77          | 616720.98         | N 32 40 43.48 W 104      | 5 17 99                   |
|          | 6262.10    | 6.71        | 191.58           | 6232.08     | 78.02        | -282.70    | -59.75     | 3.35             | 610732.33          | 616718.53         | N 32 40 43.35 W 104      | 5 18 02                   |
|          | 6356.70    | 5.65        | 192.99           | 6326.12     | 80.82        | -292.65    | -61.91     | 1.13             | 610722.38          | 616716.37         | N 32 40 43.25 W 104      | 5 18 04                   |
|          | 6451.40    | 7.46        | 188.66           | 6420.20     | 83.48        | -303.27    | -63.88     | 2.96             | 610711.76          | 616714.40         | N 32 40 43.15 W 104      | 5 18 06                   |
|          | 6545.90    | 9.34        | 185.10           | 6513.89     | 85.97        | -316.67    | -65.49     | 2.06             | 610698.06          | 616712.80         | N 32 40 43.01 W 104      | 5 18 08                   |
|          | 6640.50    | 10.30       | 182.31           | 6606.90     | 88.04        | -333.07    | -66.51     | 2.13             | 610681.96          | 616711.77         | N 32 40 42.85 W 104      | 5 18 10                   |
|          | 6735.10    | 12.25       | 184.28           | 6699.67     | 90.33        | -351.53    | -67.60     | 1.10             | 610663.50          | 616710.68         | N 32 40 42.67 W 104      | 5 18 11                   |
|          | 6829.90    | 13.51       | 186.61           | 6792.08     | 94.10        | -372.51    | -70.01     | 1.67             | 610642.52          | 616708.27         | N 32 40 42.46 W 104      | 5 18 14                   |
|          | 6924.70    | 15.89       | 188.80           | 6883.77     | 99.28        | -396.29    | -73.66     | 2.51             | 610618.75          | 616704.63         | N 32 40 42.23 W 104      | 5 18 18                   |
|          | 7019.30    | 16.94       | 187.80           | 6974.52     | 104.85       | -422.74    | -77.51     | 1.15             | 610592.30          | 616700.78         | N 32 40 41.97 W 104      | 5 18 23                   |
|          | 7113.90    | 15.23       | 185.24           | 7065.41     | 109.54       | -448.77    | -80.51     | 1.96             | 610566.27          | 616697.77         | N 32 40 41.71 W 104      | 5 18 26                   |
|          | 7208.40    | 14.95       | 184.52           | 7156.65     | 113.22       | -473.26    | -82.61     | 0.36             | 610541.76          | 616695.68         | N 32 40 41.47 W 104      | 5 18 29                   |
|          | 7302.90    | 13.64       | 195.78           | 7248.24     | 118.70       | -496.16    | -86.60     | 3.25             |                    |                   |                          |                           |

| Comments  | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(ft/100ft) | Northings<br>(ftUS) | Easting<br>(ftUS)   | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-----------|------------|-------------|------------------|-------------|--------------|------------|------------|-------------------|---------------------|---------------------|-------------------------|--------------------------|
| Last Gyro | 7397.50    | 19.97       | 221.07           | 7336.87     | 133.84       | -519.13    | -100.28    | 10.08             | 610495.92           | 616678.01           | N 32 40 41.01 W 104     | 5 18.50                  |
|           | 7492.10    | 32.44       | 230.52           | 7423.62     | 165.95       | -547.56    | -130.61    | 13.86             | 610467.49           | 616647.69           | N 32 40 40.73 W 104     | 5 18.85                  |
|           | 7586.70    | 40.48       | 229.12           | 7499.64     | 211.10       | -583.85    | -173.48    | 8.54              | 610431.20           | 616604.82           | N 32 40 40.37 W 104     | 5 19.35                  |
|           | 7681.20    | 39.00       | 226.83           | 7572.31     | 258.51       | -624.27    | -218.36    | 2.20              | 610390.78           | 616559.94           | N 32 40 39.97 W 104     | 5 19.88                  |
|           | 7775.80    | 39.79       | 235.43           | 7645.47     | 307.53       | -661.84    | -265.03    | 5.83              | 610353.21           | 616513.27           | N 32 40 39.60 W 104     | 5 20.43                  |
|           | 7870.30    | 44.09       | 242.91           | 7715.79     | 363.74       | -694.01    | -319.26    | 6.97              | 610321.05           | 616459.05           | N 32 40 39.29 W 104     | 5 21.06                  |
|           | 7965.00    | 51.70       | 252.21           | 7779.32     | 430.21       | -720.44    | -384.15    | 10.83             | 610294.63           | 616394.17           | N 32 40 39.03 W 104     | 5 21.82                  |
|           | 8059.60    | 64.58       | 256.88           | 7829.17     | 508.72       | -741.57    | -461.45    | 14.24             | 610273.49           | 616316.87           | N 32 40 38.82 W 104     | 5 22.73                  |
|           | 8154.10    | 78.43       | 262.23           | 7859.09     | 597.49       | -757.61    | -549.37    | 15.60             | 610257.46           | 616228.96           | N 32 40 38.66 W 104     | 5 23.76                  |
|           | 8201.00    | 81.74       | 268.37           | 7867.17     | 643.66       | -761.38    | -595.38    | 14.70             | 610253.69           | 616182.95           | N 32 40 38.63 W 104     | 5 24.30                  |
|           | 8295.00    | 85.28       | 272.73           | 7877.80     | 736.76       | -760.47    | -688.74    | 5.95              | 610254.60           | 616089.80           | N 32 40 38.64 W 104     | 5 25.39                  |
|           | 8349.00    | 88.65       | 274.10           | 7890.66     | 790.25       | -757.25    | -742.56    | 6.74              | 610257.81           | 616035.79           | N 32 40 38.67 W 104     | 5 26.02                  |
|           | 8470.00    | 89.62       | 272.37           | 7882.49     | 910.34       | -750.43    | -863.34    | 1.64              | 610264.64           | 615915.01           | N 32 40 38.74 W 104     | 5 27.43                  |
|           | 8565.00    | 90.58       | 272.32           | 7882.32     | 1004.80      | -746.54    | -958.26    | 1.01              | 610268.52           | 615820.10           | N 32 40 38.78 W 104     | 5 28.54                  |
|           | 8659.00    | 90.41       | 272.00           | 7881.51     | 1098.30      | -743.00    | -1052.19   | 0.39              | 610272.07           | 615726.18           | N 32 40 38.82 W 104     | 5 29.64                  |
|           | 8848.00    | 89.76       | 272.14           | 7881.23     | 1286.34      | -736.17    | -1241.07   | 0.35              | 610278.89           | 615537.32           | N 32 40 38.89 W 104     | 5 31.85                  |
|           | 8943.00    | 90.07       | 272.20           | 7881.37     | 1380.83      | -732.57    | -1336.00   | 0.33              | 610282.49           | 615442.40           | N 32 40 38.93 W 104     | 5 32.96                  |
|           | 9038.00    | 90.96       | 273.20           | 7880.51     | 1475.23      | -728.10    | -1430.89   | 1.41              | 610286.96           | 615347.51           | N 32 40 38.97 W 104     | 5 34.07                  |
|           | 9132.00    | 91.55       | 273.05           | 7878.46     | 1568.53      | -722.98    | -1524.73   | 0.65              | 610292.09           | 615253.69           | N 32 40 39.03 W 104     | 5 35.17                  |
|           | 9227.00    | 91.55       | 272.96           | 7875.89     | 1662.84      | -718.00    | -1619.56   | 0.09              | 610297.06           | 615158.86           | N 32 40 39.08 W 104     | 5 36.28                  |
|           | 9321.00    | 91.58       | 272.79           | 7873.32     | 1756.18      | -713.29    | -1713.41   | 0.18              | 610301.78           | 615065.02           | N 32 40 39.13 W 104     | 5 37.37                  |
|           | 9416.00    | 91.44       | 272.78           | 7870.82     | 1850.54      | -708.67    | -1808.26   | 0.15              | 610306.39           | 614970.17           | N 32 40 39.18 W 104     | 5 38.48                  |
|           | 9510.00    | 91.44       | 272.87           | 7868.45     | 1943.89      | -704.04    | -1902.12   | 0.10              | 610311.02           | 614876.33           | N 32 40 39.22 W 104     | 5 39.58                  |
|           | 9605.00    | 91.41       | 272.70           | 7866.09     | 2038.25      | -699.42    | -1996.98   | 0.18              | 610315.64           | 614781.48           | N 32 40 39.27 W 104     | 5 40.69                  |
|           | 9700.00    | 91.44       | 272.65           | 7863.73     | 2132.63      | -694.99    | -2091.84   | 0.06              | 610320.07           | 614686.62           | N 32 40 39.32 W 104     | 5 41.80                  |
|           | 9795.00    | 91.55       | 272.96           | 7861.25     | 2226.96      | -690.35    | -2186.70   | 0.35              | 610324.71           | 614591.77           | N 32 40 39.37 W 104     | 5 42.91                  |
|           | 9889.00    | 91.62       | 272.15           | 7858.65     | 2320.38      | -686.16    | -2280.57   | 0.86              | 610328.90           | 614497.91           | N 32 40 39.41 W 104     | 5 44.01                  |
|           | 9984.00    | 91.41       | 268.76           | 7856.14     | 2415.08      | -685.40    | -2375.52   | 3.57              | 610329.66           | 614402.97           | N 32 40 39.42 W 104     | 5 45.12                  |
|           | 10079.00   | 91.17       | 268.44           | 7854.00     | 2509.97      | -687.72    | -2470.46   | 0.42              | 610327.34           | 614308.03           | N 32 40 39.40 W 104     | 5 46.23                  |
|           | 10173.00   | 91.38       | 268.71           | 7851.91     | 2603.88      | -690.06    | -2564.41   | 0.36              | 610325.00           | 614214.09           | N 32 40 39.38 W 104     | 5 47.33                  |
|           | 10263.00   | 91.38       | 268.46           | 7847.33     | 2793.66      | -694.75    | -2754.30   | 0.13              | 610320.31           | 614024.22           | N 32 40 39.33 W 104     | 5 48.55                  |
|           | 10357.00   | 91.41       | 268.60           | 7845.04     | 2887.56      | -697.16    | -2848.24   | 0.15              | 610317.90           | 613930.29           | N 32 40 39.31 W 104     | 5 50.65                  |
|           | 10452.00   | 91.58       | 269.26           | 7842.56     | 2982.43      | -698.93    | -2943.19   | 0.72              | 610316.13           | 613835.34           | N 32 40 39.30 W 104     | 5 51.76                  |
|           | 10547.00   | 91.48       | 269.20           | 7840.03     | 3077.27      | -700.21    | -3038.15   | 0.12              | 610314.85           | 613740.39           | N 32 40 39.29 W 104     | 5 52.87                  |
|           | 10636.00   | 91.27       | 269.50           | 7835.49     | 3265.94      | -702.35    | -3227.08   | 0.19              | 610312.71           | 613551.48           | N 32 40 39.27 W 104     | 5 55.08                  |
|           | 10731.00   | 91.79       | 269.08           | 7832.96     | 3360.77      | -703.53    | -3322.04   | 0.70              | 610311.53           | 613456.53           | N 32 40 39.26 W 104     | 5 56.19                  |
|           | 11026.00   | 91.24       | 268.54           | 7830.44     | 3455.65      | -705.50    | -3416.99   | 0.81              | 610309.56           | 613361.59           | N 32 40 39.24 W 104     | 5 57.30                  |
|           | 11118.00   | 91.17       | 269.21           | 7828.51     | 3547.53      | -707.31    | -3508.95   | 0.73              | 610307.75           | 613269.64           | N 32 40 39.23 W 104     | 5 58.38                  |
|           | 11210.00   | 91.44       | 269.50           | 7826.41     | 3639.37      | -708.34    | -3600.92   | 0.43              | 610306.72           | 613177.67           | N 32 40 39.22 W 104     | 5 59.46                  |
|           | 11303.00   | 91.51       | 269.28           | 7824.02     | 3732.20      | -709.33    | -3693.88   | 0.25              | 610305.73           | 613084.72           | N 32 40 39.21 W 104     | 6 0 0.54                 |
|           | 11394.00   | 91.48       | 268.83           | 7821.65     | 3823.07      | -710.83    | -3784.84   | 0.50              | 610304.23           | 612993.77           | N 32 40 39.20 W 104     | 6 1 1.61                 |
|           | 11485.00   | 91.48       | 268.51           | 7819.30     | 3913.96      | -712.95    | -3875.78   | 0.35              | 610302.12           | 612902.83           | N 32 40 39.18 W 104     | 6 2 6.7                  |
|           | 11577.00   | 91.86       | 268.15           | 7816.61     | 4005.82      | -714.82    | -3967.72   | 0.81              | 610300.24           | 612810.90           | N 32 40 39.16 W 104     | 6 3 7.5                  |
|           | 11669.00   | 91.38       | 268.47           | 7814.01     | 4097.66      | -715.93    | -4059.56   | 0.63              | 610299.13           | 612718.95           | N 32 40 39.15 W 104     | 6 4 8.2                  |
|           | 11761.00   | 91.62       | 269.56           | 7811.61     | 4189.48      | -716.71    | -4151.64   | 0.28              | 610298.35           | 612626.99           | N 32 40 39.15 W 104     | 6 5 9.0                  |
|           | 11853.00   | 91.07       | 268.95           | 7809.45     | 4281.33      | -717.91    | -4243.61   | 0.89              | 610297.16           | 612535.04           | N 32 40 39.14 W 104     | 6 6 9.8                  |
|           | 11945.00   | 91.58       | 271.02           | 7807.32     | 4373.10      | -717.93    | -4335.58   | 2.32              | 610297.13           | 612443.07           | N 32 40 39.14 W 104     | 6 8 0.05                 |
|           | 12036.00   | 91.65       | 270.92           | 7804.75     | 4463.76      | -716.39    | -4426.53   | 0.13              | 610296.67           | 612352.13           | N 32 40 39.16 W 104     | 6 9 1.2                  |
|           | 12128.00   | 91.17       | 271.22           | 7802.49     | 4555.41      | -714.67    | -4518.49   | 0.62              | 610300.39           | 612260.18           | N 32 40 39.18 W 104     | 6 10 1.9                 |
|           | 12218.00   | 91.82       | 271.01           | 7800.14     | 4645.06      | -712.92    | -4608.44   | 0.76              | 610302.14           | 612170.24           | N 32 40 39.19 W 104     | 6 11.24                  |
| 12307.00  | 91.38      | 271.35      | 7794.86          | 4833.29     | -709.03      | -4797.32   | 0.29       | 610306.03         | 611981.37           | N 32 40 39.24 W 104 | 6 13.45                 |                          |
| 12502.00  | 91.89      | 271.34      | 7792.15          | 4927.88     | -706.80      | -4892.26   | 0.54       | 610308.26         | 611886.44           | N 32 40 39.26 W 104 | 6 14.56                 |                          |
| 12596.00  | 91.55      | 270.95      | 7789.33          | 5021.50     | -704.92      | -4986.20   | 0.55       | 610310.14         | 611792.51           | N 32 40 39.28 W 104 | 6 15.66                 |                          |
| 12691.00  | 91.27      | 271.30      | 7787.00          | 5116.13     | -703.06      | -5081.15   | 0.47       | 610312.00         | 611697.57           | N 32 40 39.30 W 104 | 6 16.77                 |                          |
| 12786.00  | 92.00      | 270.83      | 7784.28          | 5210.76     | -701.30      | -5176.09   | 0.91       | 610313.77         | 611602.63           | N 32 40 39.32 W 104 | 6 17.88                 |                          |
| 12880.00  | 92.27      | 271.09      | 7780.78          | 5304.38     | -699.72      | -5270.02   | 0.40       | 610315.34         | 611508.72           | N 32 40 39.34 W 104 | 6 18.98                 |                          |
| 12975.00  | 91.65      | 270.43      | 7777.53          | 5399.03     | -698.46      | -5364.95   | 0.95       | 610316.60         | 611413.79           | N 32 40 39.35 W 104 | 6 20.09                 |                          |
| 13069.00  | 91.34      | 271.05      | 7775.08          | 5492.71     | -697.25      | -5458.91   | 0.74       | 610317.81         | 611319.84           | N 32 40 39.37 W 104 | 6 21.19                 |                          |
| 13164.00  | 91.44      | 271.37      | 7772.78          | 5587.33     | -695.24      | -5553.86   | 0.35       | 610319.82         | 611224.90           | N 32 40 39.39 W 104 | 6 22.30                 |                          |
| 13258.00  | 91.10      | 270.65      | 7770.69          | 5680.98     | -693.59      | -5647.82   | 0.85       | 610321.47         | 611130.95           | N 32 40 39.41 W 104 | 6 23.40                 |                          |
| 13347.00  | 91.86      | 271.28      | 7765.81          | 5869.28     | -690.40      | -5836.73   | 0.52       | 610324.65         | 610942.05           | N 32 40 39.44 W 104 | 6 25.61                 |                          |
| 13542.00  | 90.00      | 270.58      | 7764.27          | 5963.95     | -688.86      | -5931.70   | 2.09       | 610326.20         | 610847.09           | N 32 40 39.46 W 104 | 6 26.72                 |                          |
| 13637.00  | 91.41      | 271.30      | 7763.10          | 6058.63     | -687.30      | -6026.68   | 1.67       | 610327.75         | 610752.12           | N 32 40 39.48 W 104 | 6 27.83                 |                          |
| 13731.00  | 91.45      | 271.01      | 7760.76          | 6152.26     | -685.41      | -6120.63   | 0.31       | 610329.65         | 610658.18           | N 32 40 39.50 W 104 | 6 28.93                 |                          |
| 13826.00  | 91.93      | 270.47      | 7757.95          | 6246.92     | -684.18      | -6215.58   | 0.76       | 610330.87         | 610563.24           | N 32 40 39.51 W 104 | 6 30.04                 |                          |
| 14015.00  | 91.55      | 270.83      | 7752.21          | 6345.28     | -682.04      | -6404.48   | 0.28       | 610333.02         | 610374.35           | N 32 40 39.54 W 104 | 6 32.25                 |                          |
| 14110.00  | 91.65      | 270.80      | 7749.56          | 6438.95     | -680.89      | -6499.43   | 0.11       | 610334.37         | 610279.41           | N 32 40 39.55 W 104 | 6 33.37                 |                          |
| 14204.00  | 91.31      | 270.31      | 7747.13          | 6533.65     | -679.78      | -6593.40   | 0.63       | 610335.28         | 610185.45           | N 32 40 39.56 W 104 | 6 34.46                 |                          |
| 14299.00  | 91.00      |             |                  |             |              |            |            |                   |                     |                     |                         |                          |

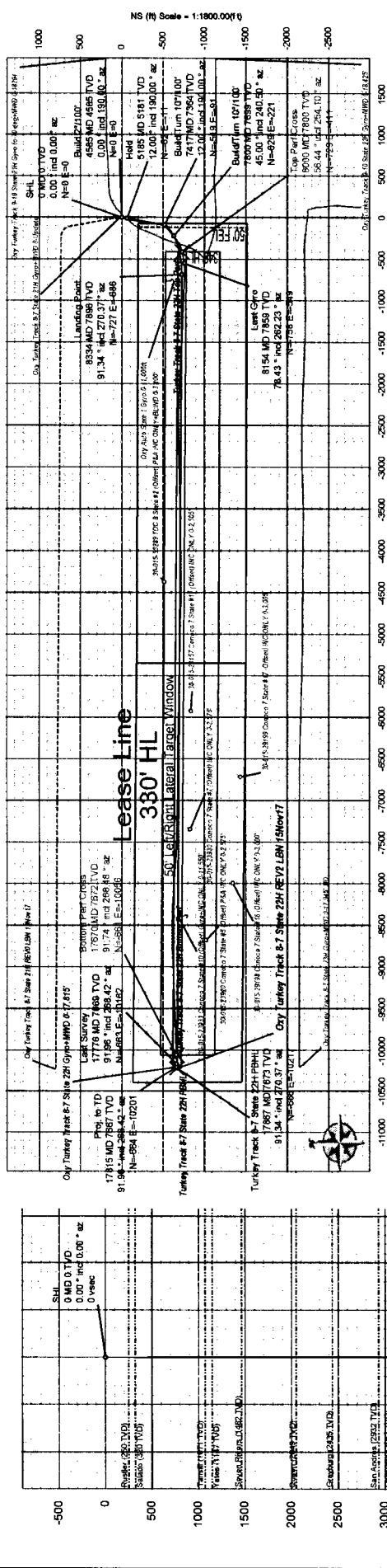
| Comments | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft)         | Northing<br>(ft) | Easting<br>(ft)                                                             | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') |
|----------|------------|-------------|------------------|-------------|--------------|------------|------------|--------------------------|------------------|-----------------------------------------------------------------------------|--------------------------|---------------------------|
|          |            | 1           | 0.000            | 26.500      | 1/96.425     | 30.000     | 30.000     | NAL_NSG+MSHOT-Depth Only |                  | Original Borehole / Oxy Turkey<br>Track 8-7 State 22H Gyro+MWD<br>0-17,815' |                          |                           |
|          |            | 1           | 26.500           | 26.500      | Act Sins     | 30.000     | 30.000     | NAL_NSG+MSHOT-Depth Only |                  | Original Borehole / Oxy Turkey<br>Track 8-7 State 22H Gyro+MWD<br>0-17,815' |                          |                           |
|          |            | 1           | 26.500           | 8154.100    | Act Sins     | 30.000     | 30.000     | NAL_NSG+MSHOT            |                  | Original Borehole / Oxy Turkey<br>Track 8-7 State 22H Gyro+MWD              |                          |                           |
|          |            | 1           | 8154.100         | 17815.000   | Act Sins     | 30.000     | 30.000     | NAL_MWD_PLUS_0.5_DEG     |                  | Original Borehole / Oxy Turkey<br>Track 8-7 State 22H Gyro+MWD              |                          |                           |



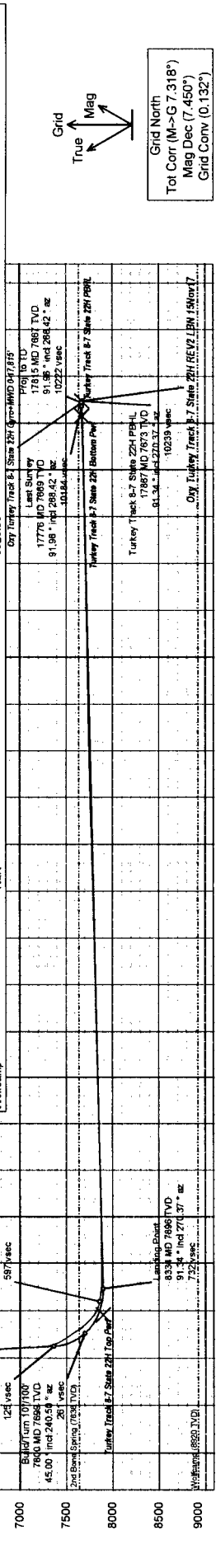
oxy



|                                                            |                                |                         |                                                 |
|------------------------------------------------------------|--------------------------------|-------------------------|-------------------------------------------------|
| <b>Borehole:</b>                                           | <b>Well:</b>                   | <b>Field:</b>           | <b>Structure:</b>                               |
| Original Borehole                                          | Oxy Turkey Track 8-7 State 22H | NM Eddy County (NAD 83) | Oxy Turkey Track 8-7 State 22H                  |
| <b>Gravity &amp; Magnetic Parameters</b>                   |                                |                         |                                                 |
| Model:                                                     | Dip:                           | Date:                   |                                                 |
| HQGM 2017                                                  | 80.90°                         | 16-Nov-2017             |                                                 |
| F5:                                                        | 48153.989mT                    | GravF5:                 |                                                 |
| MagDec:                                                    | 7.48°                          |                         |                                                 |
| <b>Surface Location</b>                                    |                                |                         |                                                 |
| Lat:                                                       | N 32.40 44.15                  | Northings:              | 6110191US                                       |
| Lon:                                                       | W 104.5 17.31                  | Easting:                | 17576239US                                      |
| <b>NAOBS New Mexico State Plane, Eastern Zone, US Feet</b> |                                |                         |                                                 |
|                                                            |                                | Grid Conv:              | 0.1324'                                         |
|                                                            |                                | Scale Fact:             | 0.99991561                                      |
| <b>Miscellaneous</b>                                       |                                |                         |                                                 |
|                                                            |                                | Slot:                   | TYO Ref:                                        |
|                                                            |                                | 7 State 22H             | RK9=26.5'(3419.1ft above MSL)                   |
|                                                            |                                | Plan:                   | Oxy Turkey Track 8-7 State 22H REV2 LBN 15Nov17 |



| TVD (ft) Scale = 1:1600.00(h)   | Critical Point      | Critical Points |        |         |          |           |           |           |       |  |  |
|---------------------------------|---------------------|-----------------|--------|---------|----------|-----------|-----------|-----------|-------|--|--|
|                                 |                     | MD              | INCL   | AZIM    | TWO      | VSEC      | N(+)/S(-) | E(+)/W(-) | DLS   |  |  |
|                                 | SHL                 | 250.00          | 0.00   | 190.00  | 250.00   | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Rustler             | 320.00          | 0.00   | 190.00  | 320.00   | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Salado              | 1071.00         | 0.00   | 190.00  | 1071.00  | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Tansill             | 1147.00         | 0.00   | 190.00  | 1147.00  | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Yates               | 1482.00         | 0.00   | 190.00  | 1482.00  | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Seven Rivers        | 2049.00         | 0.00   | 190.00  | 2049.00  | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Queen               | 2435.00         | 0.00   | 190.00  | 2435.00  | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Grayburg            | 2932.00         | 0.00   | 190.00  | 2932.00  | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | San Andres          | 3067.00         | 0.00   | 190.00  | 3067.00  | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Delaware            | 3770.00         | 0.00   | 190.00  | 3770.00  | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Bone Spring         | 4585.00         | 0.00   | 190.00  | 4585.00  | 0.00      | 0.00      | 0.00      | 0.00  |  |  |
|                                 | Build 27'100'       | 5185.00         | 12.00  | 190.00  | 5180.62  | 14.86     | -61.85    | -10.87    | 2.00  |  |  |
|                                 | Build/Turn 10°/100' | 7417.25         | 12.00  | 190.00  | 7364.09  | 125.02    | -518.71   | -91.46    | 0.00  |  |  |
|                                 | 2nd Bone Spring     | 7718.80         | 37.22  | 237.04  | 7638.00  | 214.10    | -801.11   | -175.36   | 10.00 |  |  |
|                                 | Build/Turn 10°/100' | 7759.88         | 45.00  | 240.50  | 7699.05  | 281.39    | -828.62   | -220.96   | 10.00 |  |  |
| Landing Point                   | 8332.70             | 91.34           | 270.37 | 7896.00 | 732.08   | -727.07   | -866.20   | 10.00     |       |  |  |
| Turkey Track 8-7 State 22H PBHL | 91.34               | 91.34           | 270.37 | 7873.00 | 10238.57 | -10216.87 | -866.14   | 0.00      |       |  |  |
| Wolfcamp                        | NaN                 |                 | 270.37 | 8920.00 |          |           |           |           |       |  |  |



Vertical Section (ft) Azim = 266.27° Scale = 1:1600.00(ft) Origin = 0N/-S, 0E/-W