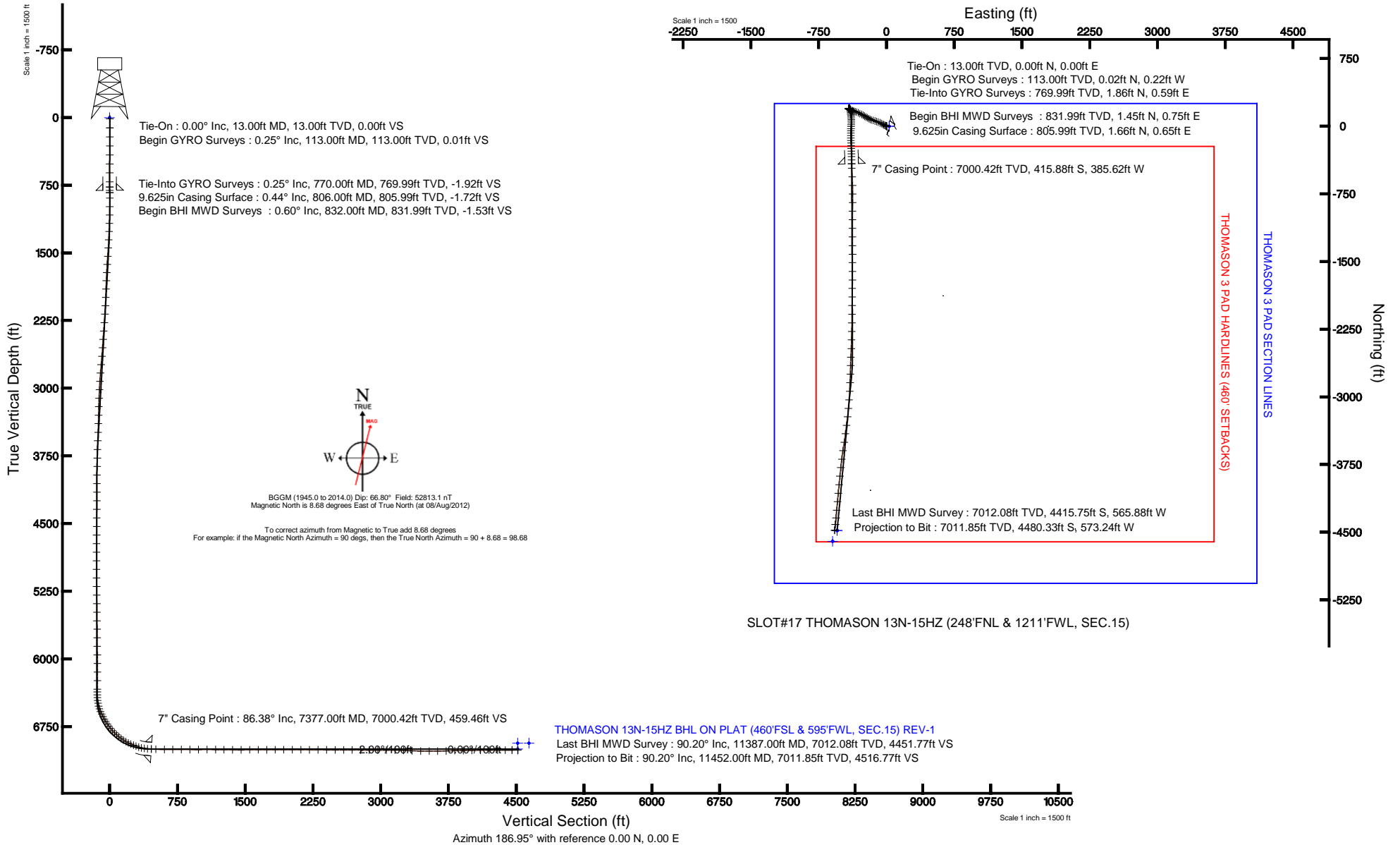


KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15)
 Field: WELD COUNTY (KERR MCGEE) Well: THOMASON 13N-15HZ
 Facility: SEC.15-T2N-R65W Wellbore: THOMASON 13N-15HZ PWB

Plot reference wellpath is THOMASON 13N-15HZ (REV-B.0) PWP

| | |
|--|--|
| True vertical depths are referenced to ENSIGN 138 (RKB) | Grid System: NAD83 / Lambert Colorado SP, Northern Zone (601), US feet |
| Measured depths are referenced to ENSIGN 138 (RKB) | North Reference: True north |
| ENSGIN 138 (RKB) to Mean Sea Level: 4876 feet | Scale: True distance |
| Mean Sea Level to Mud line (At Slot: SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15)): 0 feet | Depths are in feet |
| Coordinates are in feet referenced to Slot | Created by: augunora on 25/Sep/2012 |





Actual Wellpath Report

THOMASON 13N-15HZ AWP

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|--|----------|---|
| Operator | KERR-MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15) |
| Area | COLORADO | Well | THOMASON 13N-15HZ |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | THOMASON 13N-15HZ AWB |
| Facility | SEC.15-T2N-R65W | | |

REPORT SETUP INFORMATION

| | | | |
|---------------------|--|----------------------|--|
| Projection System | NAD83 / Lambert Colorado SP, Northern Zone (501), US feet | Software System | WellArchitect® 3.0.0 |
| North Reference | True | User | Augunora |
| Scale | 0.999959 | Report Generated | 27/Sep/2012 at 12:58 |
| Convergence at slot | 0.55° East | Database/Source file | WA_ANADARKO/THOMASON_13N-15HZ_AWB.xml |

WELLPATH LOCATION

| | Local coordinates | | Grid coordinates | | Geographic coordinates | |
|-----------------------|-------------------|----------|-------------------|-------------------|------------------------|------------------------|
| | North[ft] | East[ft] | Easting[US ft] | Northing[US ft] | Latitude | Longitude |
| Slot Location | 1010.16 | -2742.10 | 3236132.87 | 1296898.18 | 40°08'43.053"N | 104°39'19.146"W |
| Facility Reference Pt | | | 3238884.46 | 1295914.54 | 40°08'33.072"N | 104°38'43.836"W |
| Field Reference Pt | | | 3197771.84 | 1268891.29 | 40°04'09.600"N | 104°47'36.000"W |

WELLPATH DATUM

| | | | |
|--------------------------|--------------------------|---|--------------------------|
| Calculation method | Minimum curvature | ENSIGN 138 (RKB) to Facility Vertical Datum | 4876.00ft |
| Horizontal Reference Pt | Slot | ENSIGN 138 (RKB) to Mean Sea Level | 4876.00ft |
| Vertical Reference Pt | ENSIGN 138 (RKB) | ENSIGN 138 (RKB) to Mud Line at Slot (SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15)) | 4876.00ft |
| MD Reference Pt | ENSIGN 138 (RKB) | Section Origin | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level | Section Azimuth | 187.29° |



Actual Wellpath Report

THOMASON 13N-15HZ AWP

Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | KERR-MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15) |
| Area | COLORADO | Well | THOMASON 13N-15HZ |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | THOMASON 13N-15HZ AWB |
| Facility | SEC.15-T2N-R65W | | |

WELLPATH DATA (145 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
|---------|-----------------|-------------|----------|----------------|------------|-----------|----------------|-----------------|---------------|-----------------------|
| 0.00† | 0.000 | 274.540 | 0.00 | 0.00 | 0.00 | 0.00 | 40°08'43.053"N | 104°39'19.146"W | 0.00 | |
| 13.00 | 0.000 | 274.540 | 13.00 | 0.00 | 0.00 | 0.00 | 40°08'43.053"N | 104°39'19.146"W | 0.00 | Tie-On |
| 113.00 | 0.250 | 274.540 | 113.00 | 0.01 | 0.02 | -0.22 | 40°08'43.053"N | 104°39'19.149"W | 0.25 | Begin GYRO Surveys |
| 213.00 | 0.260 | 357.370 | 213.00 | -0.20 | 0.26 | -0.45 | 40°08'43.056"N | 104°39'19.152"W | 0.34 | |
| 313.00 | 0.600 | 57.940 | 313.00 | -0.76 | 0.77 | -0.01 | 40°08'43.061"N | 104°39'19.146"W | 0.52 | |
| 413.00 | 0.360 | 42.110 | 412.99 | -1.35 | 1.28 | 0.64 | 40°08'43.066"N | 104°39'19.138"W | 0.27 | |
| 513.00 | 0.280 | 355.320 | 512.99 | -1.84 | 1.75 | 0.83 | 40°08'43.070"N | 104°39'19.135"W | 0.26 | |
| 613.00 | 0.120 | 199.270 | 612.99 | -1.98 | 1.90 | 0.78 | 40°08'43.072"N | 104°39'19.136"W | 0.39 | |
| 713.00 | 0.180 | 319.390 | 712.99 | -1.98 | 1.92 | 0.64 | 40°08'43.072"N | 104°39'19.138"W | 0.26 | |
| 770.00 | 0.250 | 177.980 | 769.99 | -1.92 | 1.86 | 0.59 | 40°08'43.071"N | 104°39'19.138"W | 0.71 | Tie-Into GYRO Surveys |
| 832.00 | 0.600 | 150.100 | 831.99 | -1.53 | 1.45 | 0.75 | 40°08'43.067"N | 104°39'19.136"W | 0.64 | Begin BHI MWD Surveys |
| 893.00 | 0.600 | 251.200 | 892.99 | -1.13 | 1.07 | 0.61 | 40°08'43.064"N | 104°39'19.138"W | 1.52 | |
| 986.00 | 1.900 | 296.500 | 985.96 | -1.43 | 1.60 | -1.23 | 40°08'43.069"N | 104°39'19.162"W | 1.65 | |
| 1079.00 | 3.500 | 296.000 | 1078.86 | -2.85 | 3.53 | -5.16 | 40°08'43.088"N | 104°39'19.212"W | 1.72 | |
| 1172.00 | 4.600 | 294.600 | 1171.62 | -4.87 | 6.33 | -11.10 | 40°08'43.116"N | 104°39'19.289"W | 1.19 | |
| 1263.00 | 6.300 | 300.100 | 1262.21 | -7.89 | 10.35 | -18.74 | 40°08'43.155"N | 104°39'19.387"W | 1.95 | |
| 1357.00 | 8.000 | 297.900 | 1355.48 | -12.19 | 16.00 | -28.99 | 40°08'43.211"N | 104°39'19.519"W | 1.83 | |
| 1448.00 | 9.700 | 299.700 | 1445.39 | -17.34 | 22.76 | -41.24 | 40°08'43.278"N | 104°39'19.677"W | 1.89 | |
| 1541.00 | 11.200 | 296.800 | 1536.85 | -23.34 | 30.71 | -56.11 | 40°08'43.357"N | 104°39'19.869"W | 1.71 | |
| 1633.00 | 12.100 | 292.000 | 1626.95 | -28.78 | 38.35 | -73.03 | 40°08'43.432"N | 104°39'20.086"W | 1.44 | |
| 1726.00 | 12.200 | 292.200 | 1717.87 | -33.78 | 45.72 | -91.16 | 40°08'43.505"N | 104°39'20.320"W | 0.12 | |
| 1819.00 | 11.900 | 288.600 | 1808.82 | -38.19 | 52.49 | -109.35 | 40°08'43.572"N | 104°39'20.554"W | 0.87 | |
| 1912.00 | 12.200 | 286.600 | 1899.77 | -41.66 | 58.36 | -127.85 | 40°08'43.630"N | 104°39'20.792"W | 0.55 | |
| 2007.00 | 12.400 | 285.800 | 1992.59 | -44.79 | 64.00 | -147.29 | 40°08'43.685"N | 104°39'21.043"W | 0.28 | |
| 2102.00 | 11.600 | 289.800 | 2085.52 | -48.37 | 70.01 | -166.09 | 40°08'43.745"N | 104°39'21.285"W | 1.21 | |
| 2197.00 | 10.300 | 296.700 | 2178.79 | -53.26 | 77.07 | -182.66 | 40°08'43.815"N | 104°39'21.498"W | 1.94 | |
| 2292.00 | 10.200 | 300.500 | 2272.27 | -59.40 | 85.15 | -197.50 | 40°08'43.894"N | 104°39'21.689"W | 0.72 | |
| 2387.00 | 10.200 | 301.100 | 2365.77 | -66.11 | 93.77 | -211.95 | 40°08'43.980"N | 104°39'21.875"W | 0.11 | |
| 2482.00 | 10.400 | 299.600 | 2459.24 | -72.76 | 102.35 | -226.61 | 40°08'44.064"N | 104°39'22.064"W | 0.35 | |
| 2576.00 | 10.900 | 300.000 | 2551.62 | -79.41 | 110.98 | -241.68 | 40°08'44.150"N | 104°39'22.258"W | 0.54 | |
| 2672.00 | 12.000 | 302.000 | 2645.71 | -87.09 | 120.81 | -258.01 | 40°08'44.247"N | 104°39'22.468"W | 1.22 | |
| 2767.00 | 12.300 | 298.100 | 2738.58 | -94.81 | 130.81 | -275.31 | 40°08'44.346"N | 104°39'22.691"W | 0.92 | |
| 2862.00 | 13.100 | 297.200 | 2831.26 | -102.07 | 140.49 | -293.81 | 40°08'44.441"N | 104°39'22.929"W | 0.87 | |
| 2957.00 | 12.300 | 292.300 | 2923.94 | -108.36 | 149.26 | -312.75 | 40°08'44.528"N | 104°39'23.173"W | 1.41 | |
| 3053.00 | 11.400 | 290.400 | 3017.89 | -113.16 | 156.44 | -331.10 | 40°08'44.599"N | 104°39'23.410"W | 1.02 | |
| 3148.00 | 10.200 | 288.700 | 3111.21 | -116.95 | 162.41 | -347.87 | 40°08'44.658"N | 104°39'23.626"W | 1.31 | |
| 3243.00 | 8.700 | 287.200 | 3204.91 | -119.85 | 167.23 | -362.70 | 40°08'44.706"N | 104°39'23.817"W | 1.60 | |
| 3338.00 | 7.600 | 286.400 | 3298.95 | -122.08 | 171.13 | -375.59 | 40°08'44.744"N | 104°39'23.983"W | 1.16 | |
| 3433.00 | 6.700 | 292.000 | 3393.21 | -124.48 | 174.98 | -386.76 | 40°08'44.782"N | 104°39'24.126"W | 1.20 | |
| 3529.00 | 5.700 | 302.300 | 3488.65 | -127.92 | 179.63 | -395.98 | 40°08'44.828"N | 104°39'24.245"W | 1.55 | |
| 3624.00 | 4.700 | 302.700 | 3583.26 | -131.59 | 184.25 | -403.24 | 40°08'44.874"N | 104°39'24.339"W | 1.05 | |
| 3720.00 | 3.700 | 301.400 | 3679.00 | -134.54 | 187.99 | -409.20 | 40°08'44.911"N | 104°39'24.415"W | 1.05 | |
| 3815.00 | 3.300 | 291.900 | 3773.83 | -136.48 | 190.61 | -414.35 | 40°08'44.937"N | 104°39'24.482"W | 0.74 | |
| 3910.00 | 2.000 | 316.800 | 3868.73 | -138.23 | 192.84 | -418.02 | 40°08'44.959"N | 104°39'24.529"W | 1.80 | |
| 4005.00 | 1.800 | 304.000 | 3963.67 | -139.95 | 194.88 | -420.39 | 40°08'44.979"N | 104°39'24.559"W | 0.49 | |



Actual Wellpath Report

THOMASON 13N-15HZ AWP

Page 3 of 7



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | KERR-MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15) |
| Area | COLORADO | Well | THOMASON 13N-15HZ |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | THOMASON 13N-15HZ AWB |
| Facility | SEC.15-T2N-R65W | | |

WELLPATH DATA (145 stations)

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
|---------|-----------------|-------------|----------|----------------|------------|-----------|----------------|-----------------|---------------|----------|
| 4100.00 | 0.700 | 262.900 | 4058.65 | -140.48 | 195.64 | -422.21 | 40°08'44.986"N | 104°39'24.583"W | 1.42 | |
| 4195.00 | 1.200 | 96.800 | 4153.65 | -140.34 | 195.45 | -421.79 | 40°08'44.984"N | 104°39'24.577"W | 1.99 | |
| 4290.00 | 1.400 | 86.600 | 4248.62 | -140.56 | 195.40 | -419.65 | 40°08'44.984"N | 104°39'24.550"W | 0.32 | |
| 4385.00 | 1.500 | 77.700 | 4343.59 | -141.20 | 195.74 | -417.28 | 40°08'44.987"N | 104°39'24.519"W | 0.26 | |
| 4480.00 | 1.300 | 72.800 | 4438.56 | -142.06 | 196.32 | -415.03 | 40°08'44.993"N | 104°39'24.490"W | 0.25 | |
| 4575.00 | 1.200 | 63.900 | 4533.54 | -143.06 | 197.08 | -413.11 | 40°08'45.000"N | 104°39'24.466"W | 0.23 | |
| 4670.00 | 1.000 | 72.800 | 4628.52 | -143.95 | 197.76 | -411.42 | 40°08'45.007"N | 104°39'24.450"W | 0.28 | |
| 4765.00 | 0.900 | 64.700 | 4723.51 | -144.69 | 198.32 | -409.96 | 40°08'45.013"N | 104°39'24.425"W | 0.18 | |
| 4860.00 | 0.400 | 94.200 | 4818.50 | -145.11 | 198.62 | -408.95 | 40°08'45.016"N | 104°39'24.412"W | 0.62 | |
| 4955.00 | 0.200 | 88.600 | 4913.50 | -145.15 | 198.60 | -408.45 | 40°08'45.016"N | 104°39'24.406"W | 0.21 | |
| 5050.00 | 0.400 | 263.800 | 5008.50 | -145.10 | 198.57 | -408.62 | 40°08'45.015"N | 104°39'24.408"W | 0.63 | |
| 5145.00 | 0.400 | 196.900 | 5103.50 | -144.70 | 198.21 | -409.04 | 40°08'45.012"N | 104°39'24.413"W | 0.46 | |
| 5240.00 | 0.700 | 198.600 | 5198.50 | -143.80 | 197.35 | -409.33 | 40°08'45.003"N | 104°39'24.417"W | 0.32 | |
| 5335.00 | 0.800 | 184.800 | 5293.49 | -142.57 | 196.13 | -409.57 | 40°08'44.991"N | 104°39'24.420"W | 0.22 | |
| 5430.00 | 0.700 | 186.800 | 5388.48 | -141.33 | 194.90 | -409.69 | 40°08'44.979"N | 104°39'24.422"W | 0.11 | |
| 5525.00 | 0.600 | 179.900 | 5483.47 | -140.25 | 193.82 | -409.76 | 40°08'44.968"N | 104°39'24.422"W | 0.13 | |
| 5620.00 | 0.600 | 167.200 | 5578.47 | -139.29 | 192.84 | -409.65 | 40°08'44.959"N | 104°39'24.421"W | 0.14 | |
| 5714.00 | 0.500 | 183.000 | 5672.46 | -138.42 | 191.95 | -409.56 | 40°08'44.950"N | 104°39'24.420"W | 0.19 | |
| 5809.00 | 0.300 | 194.200 | 5767.46 | -137.76 | 191.30 | -409.64 | 40°08'44.943"N | 104°39'24.421"W | 0.23 | |
| 5904.00 | 0.600 | 198.200 | 5862.46 | -137.03 | 190.58 | -409.86 | 40°08'44.936"N | 104°39'24.424"W | 0.32 | |
| 5999.00 | 0.400 | 165.300 | 5957.45 | -136.23 | 189.79 | -409.93 | 40°08'44.928"N | 104°39'24.425"W | 0.36 | |
| 6094.00 | 0.600 | 137.900 | 6052.45 | -135.60 | 189.10 | -409.51 | 40°08'44.922"N | 104°39'24.419"W | 0.32 | |
| 6189.00 | 0.700 | 71.000 | 6147.45 | -135.53 | 188.92 | -408.63 | 40°08'44.920"N | 104°39'24.408"W | 0.76 | |
| 6284.00 | 0.900 | 74.900 | 6242.44 | -136.07 | 189.30 | -407.36 | 40°08'44.924"N | 104°39'24.392"W | 0.22 | |
| 6379.00 | 1.000 | 90.100 | 6337.42 | -136.46 | 189.50 | -405.81 | 40°08'44.926"N | 104°39'24.372"W | 0.28 | |
| 6410.00 | 1.200 | 79.800 | 6368.42 | -136.59 | 189.55 | -405.22 | 40°08'44.926"N | 104°39'24.364"W | 0.90 | |
| 6442.00 | 1.400 | 114.200 | 6400.41 | -136.58 | 189.45 | -404.54 | 40°08'44.925"N | 104°39'24.355"W | 2.48 | |
| 6473.00 | 4.700 | 155.600 | 6431.37 | -135.39 | 188.14 | -403.67 | 40°08'44.912"N | 104°39'24.344"W | 12.15 | |
| 6505.00 | 7.700 | 162.400 | 6463.17 | -132.33 | 184.90 | -402.48 | 40°08'44.880"N | 104°39'24.329"W | 9.64 | |
| 6536.00 | 10.500 | 165.000 | 6493.78 | -127.83 | 180.19 | -401.12 | 40°08'44.834"N | 104°39'24.311"W | 9.13 | |
| 6568.00 | 14.100 | 172.600 | 6525.04 | -121.36 | 173.51 | -399.86 | 40°08'44.768"N | 104°39'24.295"W | 12.31 | |
| 6600.00 | 18.600 | 173.900 | 6555.74 | -112.62 | 164.56 | -398.81 | 40°08'44.679"N | 104°39'24.282"W | 14.11 | |
| 6631.00 | 23.200 | 173.200 | 6584.69 | -101.88 | 153.58 | -397.57 | 40°08'44.571"N | 104°39'24.265"W | 14.86 | |
| 6663.00 | 27.900 | 174.400 | 6613.56 | -88.46 | 139.86 | -396.09 | 40°08'44.435"N | 104°39'24.246"W | 14.78 | |
| 6695.00 | 30.200 | 174.300 | 6641.53 | -73.32 | 124.40 | -394.56 | 40°08'44.282"N | 104°39'24.227"W | 7.19 | |
| 6727.00 | 29.500 | 173.800 | 6669.28 | -57.82 | 108.56 | -392.91 | 40°08'44.126"N | 104°39'24.205"W | 2.32 | |
| 6758.00 | 31.300 | 175.000 | 6696.02 | -42.52 | 92.95 | -391.38 | 40°08'43.971"N | 104°39'24.186"W | 6.13 | |
| 6790.00 | 34.000 | 177.400 | 6722.96 | -25.59 | 75.72 | -390.25 | 40°08'43.801"N | 104°39'24.171"W | 9.36 | |
| 6822.00 | 36.300 | 179.200 | 6749.13 | -7.39 | 57.31 | -389.71 | 40°08'43.619"N | 104°39'24.164"W | 7.88 | |
| 6854.00 | 40.200 | 182.500 | 6774.26 | 12.29 | 37.51 | -390.03 | 40°08'43.424"N | 104°39'24.168"W | 13.75 | |
| 6885.00 | 41.300 | 183.000 | 6797.74 | 32.46 | 17.30 | -391.00 | 40°08'43.224"N | 104°39'24.181"W | 3.70 | |
| 6917.00 | 43.600 | 183.000 | 6821.35 | 54.00 | -4.27 | -392.13 | 40°08'43.011"N | 104°39'24.195"W | 7.19 | |
| 6949.00 | 48.100 | 182.400 | 6843.63 | 76.88 | -27.19 | -393.21 | 40°08'42.784"N | 104°39'24.209"W | 14.13 | |
| 6981.00 | 50.900 | 181.900 | 6864.41 | 101.11 | -51.51 | -394.12 | 40°08'42.544"N | 104°39'24.221"W | 8.83 | |
| 7013.00 | 53.000 | 180.100 | 6884.14 | 126.15 | -76.70 | -394.55 | 40°08'42.295"N | 104°39'24.227"W | 7.92 | |



Actual Wellpath Report

THOMASON 13N-15HZ AWP

Page 4 of 7



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | KERR-MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15) |
| Area | COLORADO | Well | THOMASON 13N-15HZ |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | THOMASON 13N-15HZ AWB |
| Facility | SEC.15-T2N-R65W | | |

WELLPATH DATA (145 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
|----------|-----------------|-------------|----------|----------------|------------|-----------|----------------|-----------------|---------------|-----------------|
| 7044.00 | 57.800 | 179.700 | 6901.73 | 151.45 | -102.21 | -394.51 | 40°08'42.043"N | 104°39'24.226"W | 15.52 | |
| 7076.00 | 60.800 | 179.400 | 6918.07 | 178.71 | -129.72 | -394.29 | 40°08'41.771"N | 104°39'24.223"W | 9.41 | |
| 7108.00 | 63.200 | 178.800 | 6933.09 | 206.68 | -157.97 | -393.84 | 40°08'41.492"N | 104°39'24.217"W | 7.68 | |
| 7139.00 | 67.900 | 177.700 | 6945.92 | 234.54 | -186.17 | -392.98 | 40°08'41.213"N | 104°39'24.206"W | 15.50 | |
| 7171.00 | 68.900 | 177.900 | 6957.70 | 263.88 | -215.90 | -391.84 | 40°08'40.919"N | 104°39'24.192"W | 3.18 | |
| 7202.00 | 69.000 | 177.800 | 6968.83 | 292.42 | -244.81 | -390.75 | 40°08'40.634"N | 104°39'24.178"W | 0.44 | |
| 7234.00 | 71.800 | 177.700 | 6979.57 | 322.15 | -274.93 | -389.57 | 40°08'40.336"N | 104°39'24.162"W | 8.75 | |
| 7266.00 | 77.100 | 177.700 | 6988.14 | 352.53 | -305.72 | -388.33 | 40°08'40.032"N | 104°39'24.146"W | 16.56 | |
| 7297.00 | 82.600 | 178.600 | 6993.60 | 382.65 | -336.21 | -387.35 | 40°08'39.731"N | 104°39'24.134"W | 17.97 | |
| 7334.00 | 85.600 | 179.000 | 6997.41 | 419.04 | -373.00 | -386.58 | 40°08'39.367"N | 104°39'24.124"W | 8.18 | |
| 7377.00† | 86.377 | 178.451 | 7000.42 | 461.46 | -415.88 | -385.62 | 40°08'38.943"N | 104°39'24.112"W | 2.21 | 7" Casing Point |
| 7428.00 | 87.300 | 177.800 | 7003.23 | 511.73 | -466.78 | -383.96 | 40°08'38.440"N | 104°39'24.090"W | 2.21 | |
| 7523.00 | 90.100 | 177.800 | 7005.38 | 605.40 | -561.67 | -380.31 | 40°08'37.502"N | 104°39'24.043"W | 2.95 | |
| 7618.00 | 90.400 | 177.100 | 7004.97 | 699.00 | -656.58 | -376.08 | 40°08'36.565"N | 104°39'23.989"W | 0.80 | |
| 7713.00 | 89.000 | 180.300 | 7005.47 | 792.92 | -751.54 | -373.93 | 40°08'35.626"N | 104°39'23.961"W | 3.68 | |
| 7808.00 | 89.200 | 180.700 | 7006.96 | 887.24 | -846.52 | -374.76 | 40°08'34.688"N | 104°39'23.972"W | 0.47 | |
| 7903.00 | 90.500 | 181.200 | 7007.21 | 981.65 | -941.51 | -376.33 | 40°08'33.749"N | 104°39'23.992"W | 1.47 | |
| 7999.00 | 90.300 | 180.100 | 7006.54 | 1077.01 | -1037.50 | -377.42 | 40°08'32.800"N | 104°39'24.006"W | 1.16 | |
| 8094.00 | 88.900 | 179.700 | 7007.20 | 1171.21 | -1132.49 | -377.26 | 40°08'31.862"N | 104°39'24.004"W | 1.53 | |
| 8189.00 | 89.300 | 179.700 | 7008.69 | 1265.37 | -1227.48 | -376.76 | 40°08'30.923"N | 104°39'23.997"W | 0.42 | |
| 8285.00 | 89.700 | 179.700 | 7009.53 | 1360.52 | -1323.47 | -376.26 | 40°08'29.974"N | 104°39'23.991"W | 0.42 | |
| 8380.00 | 90.100 | 180.200 | 7009.70 | 1454.74 | -1418.47 | -376.17 | 40°08'29.036"N | 104°39'23.990"W | 0.67 | |
| 8475.00 | 90.600 | 180.100 | 7009.11 | 1549.00 | -1513.47 | -376.42 | 40°08'28.097"N | 104°39'23.993"W | 0.54 | |
| 8571.00 | 89.500 | 180.500 | 7009.03 | 1644.29 | -1609.47 | -376.92 | 40°08'27.148"N | 104°39'23.999"W | 1.22 | |
| 8666.00 | 90.000 | 180.600 | 7009.45 | 1738.63 | -1704.46 | -377.84 | 40°08'26.209"N | 104°39'24.011"W | 0.54 | |
| 8760.00 | 91.000 | 180.800 | 7008.63 | 1832.00 | -1798.45 | -378.99 | 40°08'25.281"N | 104°39'24.026"W | 1.08 | |
| 8855.00 | 89.900 | 180.100 | 7007.88 | 1926.32 | -1893.44 | -379.73 | 40°08'24.342"N | 104°39'24.035"W | 1.37 | |
| 8950.00 | 90.000 | 181.300 | 7007.96 | 2020.69 | -1988.43 | -380.89 | 40°08'23.403"N | 104°39'24.050"W | 1.27 | |
| 9046.00 | 89.400 | 180.800 | 7008.46 | 2116.12 | -2084.41 | -382.65 | 40°08'22.455"N | 104°39'24.073"W | 0.81 | |
| 9142.00 | 89.500 | 179.900 | 7009.39 | 2211.41 | -2180.41 | -383.24 | 40°08'21.506"N | 104°39'24.081"W | 0.94 | |
| 9237.00 | 90.400 | 182.000 | 7009.47 | 2305.83 | -2275.39 | -384.81 | 40°08'20.567"N | 104°39'24.101"W | 2.40 | |
| 9331.00 | 89.400 | 180.900 | 7009.63 | 2399.34 | -2369.36 | -387.19 | 40°08'19.639"N | 104°39'24.111"W | 1.58 | |
| 9427.00 | 89.800 | 182.700 | 7010.30 | 2494.89 | -2465.30 | -390.21 | 40°08'18.691"N | 104°39'24.170"W | 1.92 | |
| 9522.00 | 90.600 | 182.200 | 7009.97 | 2589.55 | -2560.21 | -394.27 | 40°08'17.753"N | 104°39'24.222"W | 0.99 | |
| 9616.00 | 89.000 | 182.000 | 7010.30 | 2683.16 | -2654.15 | -397.71 | 40°08'16.824"N | 104°39'24.267"W | 1.72 | |
| 9711.00 | 89.200 | 180.900 | 7011.79 | 2777.65 | -2749.10 | -400.11 | 40°08'15.886"N | 104°39'24.298"W | 1.18 | |
| 9806.00 | 89.800 | 183.400 | 7012.62 | 2872.26 | -2844.02 | -403.68 | 40°08'14.948"N | 104°39'24.344"W | 2.71 | |
| 9901.00 | 90.300 | 181.800 | 7012.54 | 2966.94 | -2938.92 | -407.99 | 40°08'14.010"N | 104°39'24.399"W | 1.76 | |
| 9996.00 | 89.800 | 185.200 | 7012.46 | 3061.71 | -3033.73 | -413.79 | 40°08'13.073"N | 104°39'24.474"W | 3.62 | |
| 10091.00 | 89.600 | 184.600 | 7012.95 | 3156.63 | -3128.38 | -421.90 | 40°08'12.138"N | 104°39'24.578"W | 0.67 | |
| 10185.00 | 87.300 | 186.300 | 7015.50 | 3250.54 | -3221.91 | -430.82 | 40°08'11.214"N | 104°39'24.693"W | 3.04 | |
| 10280.00 | 87.600 | 187.100 | 7019.72 | 3345.44 | -3316.17 | -441.90 | 40°08'10.282"N | 104°39'24.836"W | 0.90 | |
| 10375.00 | 89.000 | 187.900 | 7022.54 | 3440.39 | -3410.31 | -454.29 | 40°08'09.352"N | 104°39'24.995"W | 1.70 | |
| 10470.00 | 90.000 | 188.300 | 7023.37 | 3535.38 | -3504.36 | -467.68 | 40°08'08.423"N | 104°39'25.167"W | 1.13 | |
| 10564.00 | 89.700 | 189.100 | 7023.62 | 3629.35 | -3597.28 | -481.89 | 40°08'07.504"N | 104°39'25.350"W | 0.91 | |



Actual Wellpath Report

THOMASON 13N-15HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | KERR-MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15) |
| Area | COLORADO | Well | THOMASON 13N-15HZ |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | THOMASON 13N-15HZ AWB |
| Facility | SEC.15-T2N-R65W | | |

WELLPATH DATA (145 stations)

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
|----------|-----------------|-------------|----------|----------------|------------|-----------|----------------|-----------------|---------------|---------------------|
| 10659.00 | 92.300 | 186.700 | 7021.96 | 3724.31 | -3691.35 | -494.95 | 40°08'06.575"N | 104°39'25.518"W | 3.72 | |
| 10754.00 | 91.600 | 186.200 | 7018.73 | 3819.25 | -3785.69 | -505.61 | 40°08'05.642"N | 104°39'25.656"W | 0.91 | |
| 10849.00 | 90.400 | 185.700 | 7017.07 | 3914.20 | -3880.16 | -515.46 | 40°08'04.709"N | 104°39'25.783"W | 1.37 | |
| 10944.00 | 91.300 | 185.400 | 7015.66 | 4009.15 | -3974.70 | -524.65 | 40°08'03.775"N | 104°39'25.901"W | 1.00 | |
| 11039.00 | 90.400 | 185.400 | 7014.25 | 4104.09 | -4069.27 | -533.59 | 40°08'02.840"N | 104°39'26.016"W | 0.95 | |
| 11133.00 | 91.200 | 185.400 | 7012.94 | 4198.02 | -4162.84 | -542.43 | 40°08'01.915"N | 104°39'26.130"W | 0.85 | |
| 11228.00 | 89.300 | 185.100 | 7012.52 | 4292.96 | -4257.44 | -551.12 | 40°08'00.981"N | 104°39'26.242"W | 2.02 | |
| 11313.00 | 90.600 | 184.900 | 7012.60 | 4377.89 | -4342.12 | -558.53 | 40°08'00.144"N | 104°39'26.337"W | 1.55 | |
| 11387.00 | 90.200 | 186.500 | 7012.08 | 4451.86 | -4415.75 | -565.88 | 40°07'59.416"N | 104°39'26.432"W | 2.23 | Last BHI MWD Survey |
| 11452.00 | 90.200 | 186.500 | 7011.85 | 4516.85 | -4480.33 | -573.24 | 40°07'58.778"N | 104°39'26.526"W | 0.00 | Projection to Bit |

HOLE & CASING SECTIONS - Ref Wellbore: THOMASON 13N-15HZ AWB Ref Wellpath: THOMASON 13N-15HZ AWP

| String/Diameter | Start MD [ft] | End MD [ft] | Interval [ft] | Start TVD [ft] | End TVD [ft] | Start N/S [ft] | Start E/W [ft] | End N/S [ft] | End E/W [ft] |
|-------------------------|---------------|-------------|---------------|----------------|--------------|----------------|----------------|--------------|--------------|
| 13.5in Open Hole | 13.00 | 806.00 | 793.00 | 13.00 | 805.99 | 0.00 | 0.00 | 1.66 | 0.65 |
| 9.625in Casing Surface | 13.00 | 806.00 | 793.00 | 13.00 | 805.99 | 0.00 | 0.00 | 1.66 | 0.65 |
| 8.75in Open Hole | 806.00 | 7388.00 | 6582.00 | 805.99 | 7001.09 | 1.66 | 0.65 | -426.86 | -385.31 |
| 7in Casing Intermediate | 13.00 | 7377.00 | 7364.00 | 13.00 | 7000.42 | 0.00 | 0.00 | -415.88 | -385.62 |
| 6.125in Open Hole | 7377.00 | 11452.00 | 4075.00 | 7000.42 | 7011.85 | -415.88 | -385.62 | -4480.33 | -573.24 |



Actual Wellpath Report

THOMASON 13N-15HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | KERR-MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15) |
| Area | COLORADO | Well | THOMASON 13N-15HZ |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | THOMASON 13N-15HZ AWB |
| Facility | SEC.15-T2N-R65W | | |

TARGETS

| Name | MD [ft] | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
|---|---------|----------|------------|-----------|-------------------|--------------------|----------------|-----------------|---------|
| THOMASON 3 PAD SECTION LINES | | 0.00 | 0.00 | 30.05 | 3236162.92 | 1296898.47 | 40°08'43.053"N | 104°39'18.759"W | polygon |
| THOMASON 13N-15HZ BHL (580'FSL & 645'FWL, SEC.15) REV-2 | | 6936.00 | -4482.36 | -546.06 | 3235629.56 | 1292411.02 | 40°07'58.758"N | 104°39'26.176"W | point |
| THOMASON 13N-15HZ BHL ON PLAT (460'FSL & 595'FWL, SEC.15) REV-1 | | 6936.00 | -4602.36 | -596.06 | 3235580.70 | 1292290.55 | 40°07'57.572"N | 104°39'26.820"W | point |
| THOMASON 13N-15HZ BHL (580'FSL & 645'FWL, SEC.15) REV-3 | | 7001.00 | -4482.36 | -546.06 | 3235629.56 | 1292411.02 | 40°07'58.758"N | 104°39'26.176"W | point |
| THOMASON 3 PAD HARDLINES (460' SETBACKS) | | 7180.00 | 0.00 | 30.05 | 3236162.92 | 1296898.47 | 40°08'43.053"N | 104°39'18.759"W | polygon |

WELLPATH COMPOSITION - Ref Wellbore: THOMASON 13N-15HZ AWB Ref Wellpath: THOMASON 13N-15HZ AWP

| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore |
|---------------|-------------|--------------------------------------|--|-----------------------|
| 13.00 | 770.00 | Generic gyro - continuous (Standard) | GYRO SURVEYS <113-770> | THOMASON 13N-15HZ AWB |
| 770.00 | 7334.00 | NaviTrak (Standard) | BHI MWD SURVEYS 8 3/4" HOLE <832-7334> | THOMASON 13N-15HZ AWB |
| 7334.00 | 11387.00 | OnTrak (Standard) | BHI MWD SURVEYS 6 1/8" HOLE <7428-11387> | THOMASON 13N-15HZ AWB |
| 11387.00 | 11452.00 | Blind Drilling (std) | Projection to bit | THOMASON 13N-15HZ AWB |



Actual Wellpath Report

THOMASON 13N-15HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | KERR-MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#17 THOMASON 13N-15HZ (248'FNL & 1211'FWL, SEC.15) |
| Area | COLORADO | Well | THOMASON 13N-15HZ |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | THOMASON 13N-15HZ AWP |
| Facility | SEC.15-T2N-R65W | | |

WELLPATH COMMENTS

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Comment |
|----------|-----------------|-------------|----------|-----------------------|
| 13.00 | 0.000 | 274.540 | 13.00 | Tie-On |
| 113.00 | 0.250 | 274.540 | 113.00 | Begin GYRO Surveys |
| 770.00 | 0.250 | 177.980 | 769.99 | Tie-Into GYRO Surveys |
| 832.00 | 0.600 | 150.100 | 831.99 | Begin BHI MWD Surveys |
| 7377.00 | 86.377 | 178.451 | 7000.42 | 7" Casing Point |
| 11387.00 | 90.200 | 186.500 | 7012.08 | Last BHI MWD Survey |
| 11452.00 | 90.200 | 186.500 | 7011.85 | Projection to Bit |