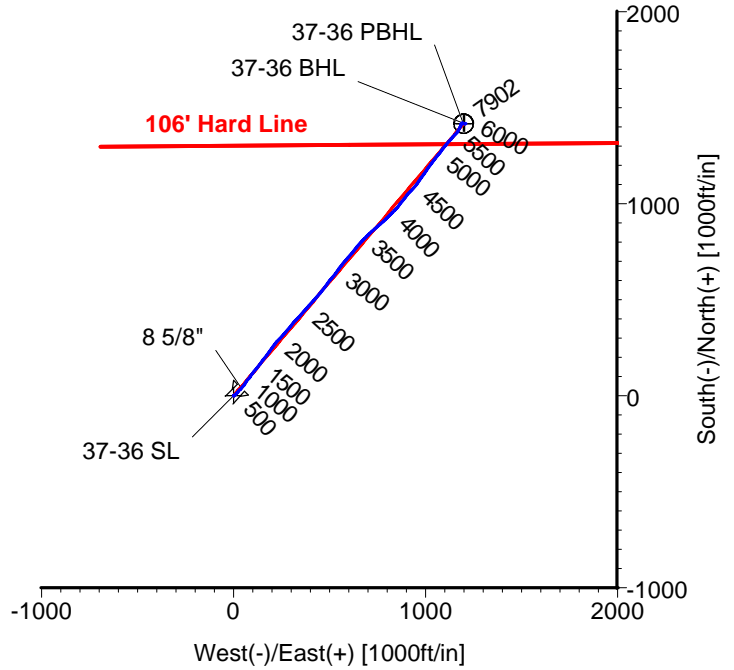
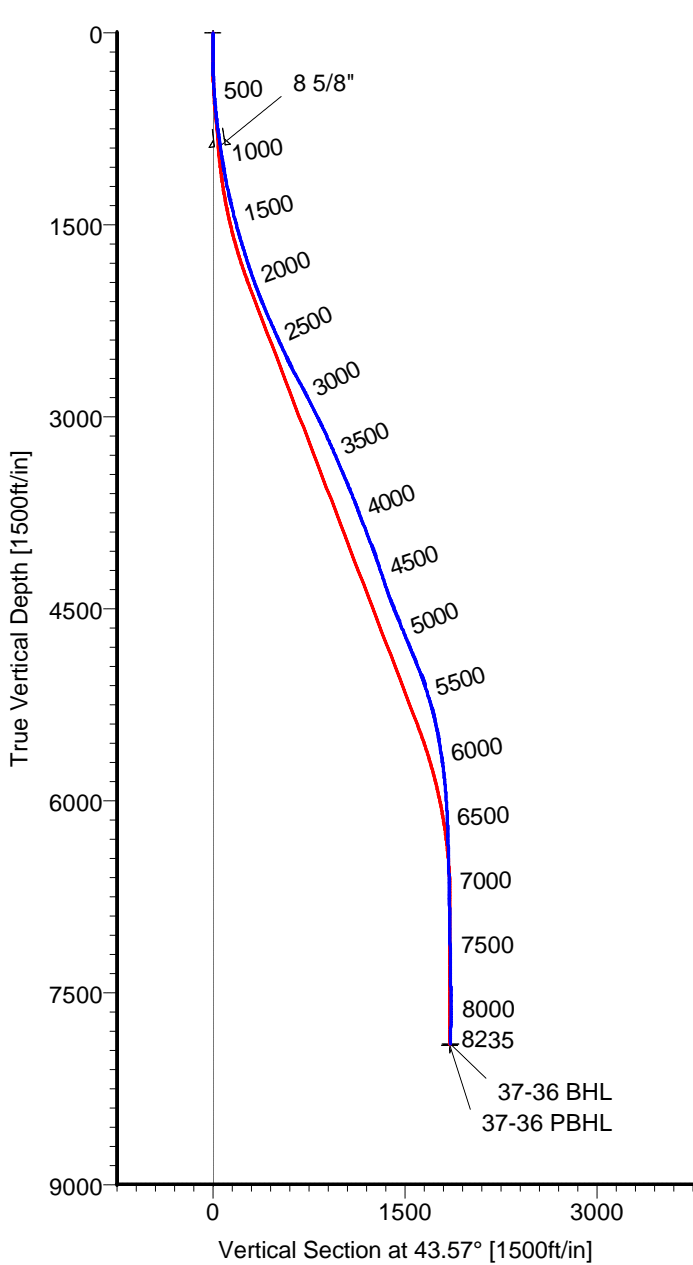


ANADARKO PETROLEUM

Field: Weld County, CO
 Site: Bernhardt 3-1 Pad
 Well: State #37-36
 Wellpath: Original Hole



Azimuths to Grid North
 True North: -0.43°
 Magnetic North: 8.62°
 Magnetic Field
 Strength: 53247nT
 Dip Angle: 67.03°
 Date: 05/19/2010
 Model: IGRF2010

CASING DETAILS

| No. | TVD | MD | Name | Size |
|-----|--------|--------|--------|-------|
| 1 | 886.97 | 890.00 | 8 5/8" | 8.625 |

LEGEND

- State #37-36,Original Hole,Plan #2a
- Original Hole

TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|------------|---------|---------|---------|---------------|----------------|---------------------|
| 37-36 SL | 0.00 | 0.00 | 0.00 | 40°20'42.851N | 104°50'28.812W | Point |
| 37-36 BHL | 7902.39 | 1416.97 | 1203.00 | 40°20'56.764N | 104°50'13.139W | Point |
| 37-36 PBHL | 7913.00 | 1416.65 | 1197.79 | 40°20'56.761N | 104°50'13.206W | Circle (Radius: 50) |



Allis-Chalmers Energy, Inc.

Survey Report

| | | | |
|------------------------------------|--|-----------------------|-------------------|
| Company: ANADARKO PETROLEUM | Date: 06/19/2010 | Time: 09:39:31 | Page: 1 |
| Field: Weld County, CO | Co-ordinate(NE) Reference: Well: State #37-36, Grid North | | |
| Site: Bernhardt 3-1 Pad | Vertical (TVD) Reference: 4826'GL+13'KB 4839.0 | | |
| Well: State #37-36 | Section (VS) Reference: Well (0.00N,0.00E,43.57Azi) | | |
| Wellpath: Original Hole | Survey Calculation Method: Minimum Curvature | | Db: Sybase |

| | |
|---|--|
| Field: Weld County, CO | |
| Map System: S State Plane Coordinate System 1983 | Map Zone: Colorado, Northern Zone |
| Geo Datum: GRS 1980 | Coordinate System: Well Centre |
| Sys Datum: Mean Sea Level | Geomagnetic Model: IGRF2010 |

| | | | |
|--------------------------------------|--------------------------------|-----------------------------------|--|
| Site: Bernhardt 3-1 Pad | | | |
| Site Position: | Northing: 1369310.76 ft | Latitude: 40 20 43.008 N | |
| From: Geographic | Easting: 3183596.38 ft | Longitude: 104 50 28.824 W | |
| Position Uncertainty: 0.00 ft | | North Reference: Grid | |
| Ground Level: 4826.00 ft | | Grid Convergence: 0.43 deg | |

| | | | |
|---------------------------------------|--------------------------------|-----------------------------------|--|
| Well: State #37-36 | | Slot Name: 37-36 | |
| Well Position: +N/-S -15.92 ft | Northing: 1369294.83 ft | Latitude: 40 20 42.851 N | |
| +E/-W 1.03 ft | Easting: 3183597.41 ft | Longitude: 104 50 28.812 W | |
| Position Uncertainty: 0.00 ft | | | |

| | | | |
|---|---------------------------|---|------------------|
| Wellpath: Original Hole | | Drilled From: Surface | |
| Current Datum: 4826'GL+13'KB | Height: 4839.00 ft | Tie-on Depth: 0.00 ft | |
| Magnetic Data: 05/19/2010 | | Above System Datum: Mean Sea Level | |
| Field Strength: 53247 nT | | Declination: 9.05 deg | |
| Vertical Section: Depth From (TVD) | +N/-S | +E/-W | Direction |
| ft | ft | ft | deg |
| 0.00 | 0.00 | 0.00 | 43.57 |

| | | | |
|---|----------------------|-----------------------------|------------------|
| Survey Program for Definitive Wellpath | | | |
| Date: 06/19/2010 | Validated: No | Version: 0 | |
| Actual From | To | Survey | Tool Name |
| ft | ft | | |
| 47.00 | 8190.00 | Survey #1 (47.00-8190.00) | MWD |
| 8235.00 | 8235.00 | Survey #2 (8235.00-8235.00) | Project |

| Survey | | | | | | | | | | |
|---------|-------|--------|---------|--------|--------|--------|-----------|-----------|-----------|--------------|
| MD | Incl | Azim | TVD | +N/-S | +E/-W | VS | DLS | Build | Turn | Tool/Comment |
| ft | deg | deg | ft | ft | ft | ft | deg/100ft | deg/100ft | deg/100ft | |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | TIE LINE |
| 47.00 | 0.40 | 263.20 | 47.00 | -0.02 | -0.16 | -0.13 | 0.85 | 0.85 | 0.00 | MWD |
| 108.00 | 0.40 | 304.40 | 108.00 | 0.08 | -0.55 | -0.32 | 0.46 | 0.00 | 67.54 | MWD |
| 169.00 | 0.40 | 87.80 | 169.00 | 0.20 | -0.51 | -0.21 | 1.25 | 0.00 | 235.08 | MWD |
| 229.00 | 0.40 | 45.30 | 229.00 | 0.36 | -0.15 | 0.15 | 0.48 | 0.00 | -70.83 | MWD |
| 289.00 | 1.20 | 62.20 | 288.99 | 0.80 | 0.55 | 0.96 | 1.38 | 1.33 | 28.17 | MWD |
| 350.00 | 2.30 | 57.20 | 349.96 | 1.76 | 2.14 | 2.75 | 1.82 | 1.80 | -8.20 | MWD |
| 428.00 | 3.50 | 52.00 | 427.86 | 4.07 | 5.34 | 6.63 | 1.57 | 1.54 | -6.67 | MWD |
| 517.00 | 4.60 | 47.40 | 516.64 | 8.16 | 10.10 | 12.88 | 1.29 | 1.24 | -5.17 | MWD |
| 607.00 | 5.60 | 45.60 | 606.28 | 13.68 | 15.90 | 20.87 | 1.13 | 1.11 | -2.00 | MWD |
| 696.00 | 7.00 | 42.10 | 694.74 | 20.74 | 22.64 | 30.63 | 1.63 | 1.57 | -3.93 | MWD |
| 786.00 | 7.60 | 41.10 | 784.01 | 29.29 | 30.23 | 42.06 | 0.68 | 0.67 | -1.11 | MWD |
| 840.00 | 8.30 | 42.80 | 837.49 | 34.85 | 35.22 | 49.52 | 1.37 | 1.30 | 3.15 | MWD |
| 890.00 | 8.30 | 44.15 | 886.97 | 40.08 | 40.19 | 56.74 | 0.39 | 0.00 | 2.69 | 8 5/8" |
| 918.00 | 8.30 | 44.90 | 914.67 | 42.96 | 43.02 | 60.78 | 0.39 | 0.00 | 2.69 | MWD |
| 1008.00 | 8.60 | 38.60 | 1003.70 | 52.82 | 51.80 | 73.98 | 1.08 | 0.33 | -7.00 | MWD |
| 1098.00 | 10.70 | 36.80 | 1092.42 | 64.78 | 61.01 | 88.98 | 2.36 | 2.33 | -2.00 | MWD |
| 1188.00 | 11.80 | 35.80 | 1180.69 | 78.93 | 71.40 | 106.40 | 1.24 | 1.22 | -1.11 | MWD |
| 1277.00 | 12.00 | 36.50 | 1267.78 | 93.75 | 82.22 | 124.59 | 0.28 | 0.22 | 0.79 | MWD |
| 1367.00 | 14.10 | 36.50 | 1355.45 | 110.08 | 94.31 | 144.76 | 2.33 | 2.33 | 0.00 | MWD |
| 1457.00 | 14.40 | 37.90 | 1442.68 | 127.73 | 107.71 | 166.78 | 0.51 | 0.33 | 1.56 | MWD |
| 1546.00 | 15.30 | 38.60 | 1528.71 | 145.64 | 121.83 | 189.49 | 1.03 | 1.01 | 0.79 | MWD |

Allis-Chalmers Energy, Inc.

Survey Report

| | | | |
|------------------------------------|--|-----------------------|-------------------|
| Company: ANADARKO PETROLEUM | Date: 06/19/2010 | Time: 09:39:31 | Page: 2 |
| Field: Weld County, CO | Co-ordinate(NE) Reference: Well: State #37-36, Grid North | | |
| Site: Bernhardt 3-1 Pad | Vertical (TVD) Reference: 4826'GL+13'KB 4839.0 | | |
| Well: State #37-36 | Section (VS) Reference: Well (0.00N,0.00E,43.57Azi) | | |
| Wellpath: Original Hole | Survey Calculation Method: Minimum Curvature | | Db: Sybase |

Survey

| MD ft | Incl deg | Azim deg | TVD ft | +N/-S ft | +E/-W ft | VS ft | DLS deg/100ft | Build deg/100ft | Turn deg/100ft | Tool/Comment |
|----------|-------------|-------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 1633.00 | 16.70 | 35.40 | 1612.33 | 164.80 | 136.23 | 213.30 | 1.90 | 1.61 | -3.68 | MWD |
| 1724.00 | 17.40 | 36.10 | 1699.33 | 186.45 | 151.82 | 239.73 | 0.80 | 0.77 | 0.77 | MWD |
| 1814.00 | 17.80 | 38.60 | 1785.12 | 208.07 | 168.34 | 266.78 | 0.95 | 0.44 | 2.78 | MWD |
| 1905.00 | 19.00 | 37.50 | 1871.47 | 230.70 | 186.03 | 295.37 | 1.37 | 1.32 | -1.21 | MWD |
| 1995.00 | 20.20 | 37.90 | 1956.25 | 254.58 | 204.50 | 325.40 | 1.34 | 1.33 | 0.44 | MWD |
| 2085.00 | 20.90 | 41.80 | 2040.53 | 278.81 | 224.74 | 356.91 | 1.71 | 0.78 | 4.33 | MWD |
| 2174.00 | 22.90 | 42.50 | 2123.10 | 303.41 | 247.02 | 390.09 | 2.27 | 2.25 | 0.79 | MWD |
| 2263.00 | 23.60 | 40.00 | 2204.88 | 329.83 | 270.18 | 425.19 | 1.36 | 0.79 | -2.81 | MWD |
| 2353.00 | 24.10 | 39.70 | 2287.19 | 357.77 | 293.49 | 461.50 | 0.57 | 0.56 | -0.33 | MWD |
| 2444.00 | 23.60 | 42.10 | 2370.42 | 385.58 | 317.57 | 498.25 | 1.20 | -0.55 | 2.64 | MWD |
| 2535.00 | 25.30 | 42.80 | 2453.26 | 413.37 | 343.00 | 535.91 | 1.90 | 1.87 | 0.77 | MWD |
| 2625.00 | 24.10 | 41.40 | 2535.02 | 441.26 | 368.22 | 573.50 | 1.48 | -1.33 | -1.56 | MWD |
| 2715.00 | 27.60 | 41.80 | 2616.01 | 470.59 | 394.27 | 612.71 | 3.89 | 3.89 | 0.44 | MWD |
| 2804.00 | 29.20 | 41.80 | 2694.29 | 502.15 | 422.49 | 655.02 | 1.80 | 1.80 | 0.00 | MWD |
| 2894.00 | 28.20 | 40.40 | 2773.23 | 534.71 | 450.90 | 698.20 | 1.34 | -1.11 | -1.56 | MWD |
| 2983.00 | 27.10 | 37.20 | 2852.07 | 566.87 | 476.79 | 739.34 | 2.08 | -1.24 | -3.60 | MWD |
| 3071.00 | 27.10 | 37.20 | 2930.41 | 598.81 | 501.03 | 779.18 | 0.00 | 0.00 | 0.00 | MWD |
| 3161.00 | 26.90 | 36.50 | 3010.60 | 631.50 | 525.53 | 819.76 | 0.42 | -0.22 | -0.78 | MWD |
| 3251.00 | 25.30 | 38.60 | 3091.42 | 662.90 | 549.64 | 859.13 | 2.05 | -1.78 | 2.33 | MWD |
| 3341.00 | 24.80 | 40.00 | 3172.96 | 692.39 | 573.77 | 897.13 | 0.86 | -0.56 | 1.56 | MWD |
| 3431.00 | 23.90 | 40.70 | 3254.95 | 720.67 | 597.80 | 934.17 | 1.05 | -1.00 | 0.78 | MWD |
| 3521.00 | 23.20 | 39.30 | 3337.46 | 748.21 | 620.91 | 970.06 | 1.00 | -0.78 | -1.56 | MWD |
| 3611.00 | 23.20 | 38.20 | 3420.18 | 775.86 | 643.11 | 1005.39 | 0.48 | 0.00 | -1.22 | MWD |
| 3702.00 | 22.70 | 41.80 | 3503.98 | 803.04 | 665.89 | 1040.79 | 1.64 | -0.55 | 3.96 | MWD |
| 3791.00 | 22.40 | 46.70 | 3586.18 | 827.47 | 689.68 | 1074.89 | 2.14 | -0.34 | 5.51 | MWD |
| 3880.00 | 21.80 | 48.10 | 3668.64 | 850.14 | 714.33 | 1108.30 | 0.90 | -0.67 | 1.57 | MWD |
| 3970.00 | 19.90 | 48.80 | 3752.75 | 871.39 | 738.29 | 1140.21 | 2.13 | -2.11 | 0.78 | MWD |
| 4060.00 | 21.50 | 47.40 | 3836.94 | 892.64 | 761.96 | 1171.92 | 1.86 | 1.78 | -1.56 | MWD |
| 4150.00 | 21.30 | 47.00 | 3920.73 | 914.96 | 786.05 | 1204.70 | 0.28 | -0.22 | -0.44 | MWD |
| 4241.00 | 21.60 | 47.00 | 4005.43 | 937.65 | 810.39 | 1237.91 | 0.33 | 0.33 | 0.00 | MWD |
| 4331.00 | 19.40 | 42.80 | 4089.73 | 959.92 | 832.67 | 1269.40 | 2.94 | -2.44 | -4.67 | MWD |
| 4421.00 | 18.00 | 40.70 | 4174.97 | 981.43 | 851.89 | 1298.24 | 1.73 | -1.56 | -2.33 | MWD |
| 4512.00 | 18.70 | 40.70 | 4261.35 | 1003.15 | 870.57 | 1326.85 | 0.77 | 0.77 | 0.00 | MWD |
| 4603.00 | 19.00 | 37.90 | 4347.47 | 1025.90 | 889.19 | 1356.16 | 1.05 | 0.33 | -3.08 | MWD |
| 4693.00 | 20.60 | 38.60 | 4432.14 | 1049.84 | 908.06 | 1386.51 | 1.80 | 1.78 | 0.78 | MWD |
| 4784.00 | 22.40 | 43.20 | 4516.82 | 1074.99 | 929.92 | 1419.81 | 2.71 | 1.98 | 5.05 | MWD |
| 4874.00 | 22.70 | 37.50 | 4599.94 | 1101.27 | 952.24 | 1454.23 | 2.45 | 0.33 | -6.33 | MWD |
| 4964.00 | 22.50 | 36.10 | 4683.03 | 1128.96 | 972.96 | 1488.57 | 0.64 | -0.22 | -1.56 | MWD |
| 5054.00 | 22.40 | 33.30 | 4766.22 | 1157.21 | 992.52 | 1522.52 | 1.19 | -0.11 | -3.11 | MWD |
| 5145.00 | 23.60 | 37.20 | 4849.98 | 1186.21 | 1013.05 | 1557.69 | 2.13 | 1.32 | 4.29 | MWD |
| 5234.00 | 21.50 | 37.90 | 4932.18 | 1213.28 | 1033.84 | 1591.63 | 2.38 | -2.36 | 0.79 | MWD |
| 5323.00 | 22.20 | 37.90 | 5014.78 | 1239.41 | 1054.19 | 1624.59 | 0.79 | 0.79 | 0.00 | MWD |
| 5414.00 | 17.60 | 37.90 | 5100.33 | 1263.85 | 1073.21 | 1655.40 | 5.05 | -5.05 | 0.00 | MWD |
| 5504.00 | 17.40 | 38.90 | 5186.16 | 1285.06 | 1090.02 | 1682.35 | 0.40 | -0.22 | 1.11 | MWD |
| 5594.00 | 16.00 | 37.50 | 5272.36 | 1305.37 | 1106.02 | 1708.10 | 1.62 | -1.56 | -1.56 | MWD |
| 5683.00 | 13.20 | 37.50 | 5358.48 | 1323.17 | 1119.68 | 1730.41 | 3.15 | -3.15 | 0.00 | MWD |
| 5773.00 | 11.60 | 41.10 | 5446.38 | 1338.14 | 1131.89 | 1749.67 | 1.97 | -1.78 | 4.00 | MWD |
| 5864.00 | 9.50 | 42.80 | 5535.84 | 1350.55 | 1143.00 | 1766.32 | 2.33 | -2.31 | 1.87 | MWD |
| 5954.00 | 9.30 | 44.60 | 5624.63 | 1361.17 | 1153.16 | 1781.02 | 0.40 | -0.22 | 2.00 | MWD |
| 6044.00 | 7.60 | 38.60 | 5713.65 | 1371.01 | 1161.98 | 1794.22 | 2.13 | -1.89 | -6.67 | MWD |
| 6135.00 | 6.30 | 36.10 | 5803.98 | 1379.74 | 1168.67 | 1805.16 | 1.47 | -1.43 | -2.75 | MWD |
| 6225.00 | 5.10 | 31.60 | 5893.53 | 1387.14 | 1173.68 | 1813.97 | 1.42 | -1.33 | -5.00 | MWD |
| 6315.00 | 4.20 | 29.10 | 5983.23 | 1393.43 | 1177.38 | 1821.08 | 1.02 | -1.00 | -2.78 | MWD |

Allis-Chalmers Energy, Inc.

Survey Report

| | | | |
|------------------------------------|--|-----------------------|-------------------|
| Company: ANADARKO PETROLEUM | Date: 06/19/2010 | Time: 09:39:31 | Page: 3 |
| Field: Weld County, CO | Co-ordinate(NE) Reference: Well: State #37-36, Grid North | | |
| Site: Bernhardt 3-1 Pad | Vertical (TVD) Reference: 4826'GL+13'KB 4839.0 | | |
| Well: State #37-36 | Section (VS) Reference: Well (0.00N,0.00E,43.57Azi) | | |
| Wellpath: Original Hole | Survey Calculation Method: Minimum Curvature | | Db: Sybase |

Survey

| MD ft | Incl deg | Azim deg | TVD ft | +N/-S ft | +E/-W ft | VS ft | DLS deg/100ft | Build deg/100ft | Turn deg/100ft | Tool/Comment |
|----------|-------------|-------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 6405.00 | 3.30 | 24.90 | 6073.04 | 1398.66 | 1180.07 | 1826.72 | 1.04 | -1.00 | -4.67 | MWD |
| 6496.00 | 2.80 | 22.10 | 6163.91 | 1403.09 | 1182.01 | 1831.27 | 0.57 | -0.55 | -3.08 | MWD |
| 6586.00 | 2.10 | 17.50 | 6253.83 | 1406.70 | 1183.33 | 1834.80 | 0.81 | -0.78 | -5.11 | MWD |
| 6675.00 | 1.80 | 13.30 | 6342.78 | 1409.62 | 1184.14 | 1837.47 | 0.37 | -0.34 | -4.72 | MWD |
| 6766.00 | 1.40 | 18.90 | 6433.74 | 1412.06 | 1184.83 | 1839.72 | 0.47 | -0.44 | 6.15 | MWD |
| 6856.00 | 1.40 | 16.80 | 6523.72 | 1414.15 | 1185.51 | 1841.70 | 0.06 | 0.00 | -2.33 | MWD |
| 6947.00 | 1.20 | 36.80 | 6614.69 | 1415.98 | 1186.40 | 1843.64 | 0.54 | -0.22 | 21.98 | MWD |
| 7037.00 | 1.10 | 48.10 | 6704.67 | 1417.31 | 1187.61 | 1845.43 | 0.27 | -0.11 | 12.56 | MWD |
| 7128.00 | 0.90 | 56.50 | 6795.66 | 1418.29 | 1188.85 | 1847.00 | 0.27 | -0.22 | 9.23 | MWD |
| 7218.00 | 1.10 | 73.00 | 6885.65 | 1418.93 | 1190.27 | 1848.44 | 0.39 | 0.22 | 18.33 | MWD |
| 7397.00 | 1.60 | 101.90 | 7064.60 | 1418.92 | 1194.36 | 1851.25 | 0.46 | 0.28 | 16.15 | MWD |
| 7577.00 | 1.90 | 100.10 | 7244.51 | 1417.88 | 1199.75 | 1854.22 | 0.17 | 0.17 | -1.00 | MWD |
| 7757.00 | 1.40 | 99.10 | 7424.44 | 1417.01 | 1204.86 | 1857.11 | 0.28 | -0.28 | -0.56 | MWD |
| 7937.00 | 0.20 | 324.10 | 7604.42 | 1416.91 | 1206.85 | 1858.41 | 0.86 | -0.67 | -75.00 | MWD |
| 8116.00 | 0.90 | 260.10 | 7783.41 | 1416.92 | 1205.28 | 1857.34 | 0.46 | 0.39 | -35.75 | MWD |
| 8190.00 | 1.20 | 274.80 | 7857.40 | 1416.89 | 1203.94 | 1856.38 | 0.54 | 0.41 | 19.86 | MWD |
| 8235.00 | 1.20 | 274.80 | 7902.39 | 1416.97 | 1203.00 | 1855.79 | 0.00 | 0.00 | 0.00 | 37-36 BHL |

Targets

| Name | Description | | TVD ft | +N/-S ft | +E/-W ft | Map Northing ft | Map Easting ft | <--- Latitude ---> | | | <--- Longitude ---> | | | | |
|----------------------|-------------|------|-----------|-------------|-------------|-----------------------|----------------------|--------------------|-----|--------|---------------------|-----|-----|--------|---|
| | Dip. | Dir. | | | | | | Deg | Min | Sec | Deg | Min | Sec | | |
| 37-36 SL | | | 0.00 | 0.00 | 0.00 | 1369294.833 | 183597.41 | 40 | 20 | 42.851 | N | 104 | 50 | 28.812 | W |
| 37-36 BHL | | | 7902.39 | 1416.97 | 1203.00 | 1370711.803 | 184800.41 | 40 | 20 | 56.764 | N | 104 | 50 | 13.139 | W |
| 37-36 PBHL | | | 7913.00 | 1416.65 | 1197.79 | 1370711.483 | 184795.20 | 40 | 20 | 56.761 | N | 104 | 50 | 13.206 | W |
| -Circle (Radius: 50) | | | | | | | | | | | | | | | |

Casing Points

| MD ft | TVD ft | Diameter in | Hole Size in | Name |
|----------|-----------|----------------|-----------------|--------|
| 890.00 | 886.97 | 8.625 | 9.875 | 8 5/8" |