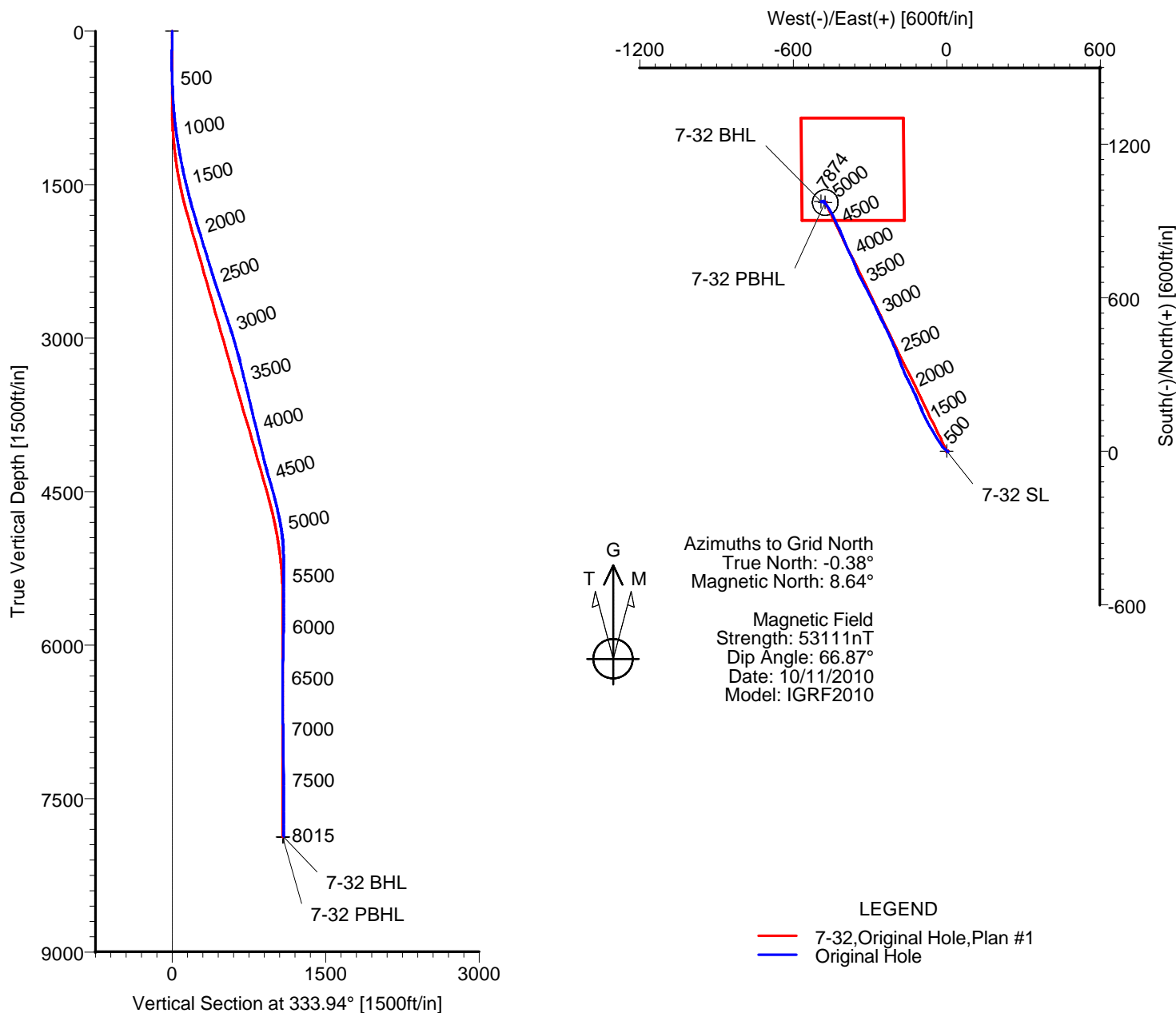


# ANADARKO PETROLEUM

Field: Weld County, CO  
Site: Everist 10-32 Pad  
Well: 7-32  
Wellpath: Original Hole



## TARGET DETAILS

| Name      | TVD     | +N/-S  | +E/-W   | Latitude      | Longitude      | Shape               |
|-----------|---------|--------|---------|---------------|----------------|---------------------|
| 7-32 SL   | 0.00    | 0.00   | 0.00    | 40°10'52.293N | 104°54'36.567W | Point               |
| 7-32 PBHL | 7873.00 | 972.09 | -475.38 | 40°11'01.930N | 104°54'42.609W | Circle (Radius: 50) |
| 7-32 BHL  | 7873.89 | 975.38 | -491.19 | 40°11'01.964N | 104°54'42.813W | Point               |

Wellpath: (7-32/Original Hole)

Created By: Ivonne Gonzalez

Date: 11/01/2010

ALLIS-CHALMERS DIRECTIONAL DRILLING SERVICES  
911 Regional Park Drive Houston, Texas 77060  
Phone: 713-934-9600 Fax: 713-934-9067



**DIRECTIONAL  
DRILLING SERVICES**

# Allis-Chalmers Energy, Inc.

## Survey Report

|  |   |  |                                     |
|--|---|--|-------------------------------------|
| <b>Company:</b> ANADARKO PETROLEUM<br><b>Field:</b> Weld County, CO<br><b>Site:</b> Everist 10-32 Pad<br><b>Well:</b> 7-32<br><b>Wellpath:</b> Original Hole | <b>Date:</b> 11/01/2010<br><b>Co-ordinate(NE) Reference:</b><br><b>Vertical (TVD) Reference:</b><br><b>Section (VS) Reference:</b><br><b>Survey Calculation Method:</b> | <b>Time:</b> 08:30:26<br>Well: 7-32, Grid North<br>4803'GL+13'KB 4816.0<br>Well (0.00N,0.00E,333.94Azi)<br>Minimum Curvature | <b>Page:</b> 1<br><b>Db:</b> Adapti |
|--|---|--|-------------------------------------|

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

|  |  |
|--|--|
| <b>Site:</b> Everist 10-32 Pad<br><br>Centered on 25-32<br><b>Site Position:</b><br><b>From:</b> Geographic<br><b>Position Uncertainty:</b> 0.00 ft<br><b>Ground Level:</b> 4803.00 ft | <b>Northing:</b> 1309402.05 ft<br><b>Easting:</b> 3164796.50 ft<br><br><b>Latitude:</b> 40 10 52.295 N<br><b>Longitude:</b> 104 54 36.774 W<br><b>North Reference:</b> Grid<br><b>Grid Convergence:</b> 0.38 deg |
|--|--|

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|---|--|
| <b>Well:</b> 7-32<br><br><b>Well Position:</b> +N/-S -0.12 ft<br>+E/-W 16.03 ft<br><b>Position Uncertainty:</b> 0.00 ft | <b>Slot Name:</b> 7-32<br><br><b>Well Position:</b> +N/-S -0.12 ft<br>+E/-W 16.03 ft<br><b>Position Uncertainty:</b> 0.00 ft |
|---|--|

|  |  |
|--|--|
| <b>Wellpath:</b> Original Hole<br><br><b>Current Datum:</b> 4803'GL+13'KB<br><b>Magnetic Data:</b> 10/11/2010<br><b>Field Strength:</b> 53111 nT<br><b>Vertical Section:</b> Depth From (TVD) ft | <b>Drilled From:</b> Surface<br><b>Tie-on Depth:</b> 0.00 ft<br><b>Above System Datum:</b> Mean Sea Level<br><b>Declination:</b> 9.02 deg<br><b>Mag Dip Angle:</b> 66.87 deg<br><b>+N/-S</b> ft<br><b>+E/-W</b> ft<br><b>Direction</b> deg |
| 0.00   | 0.00   |

|   |                      |                             |                 |                  |
|---|----------------------|-----------------------------|-----------------|------------------|
| <b>Survey Program for Definitive Wellpath</b> |                      |                             |                 |                  |
| <b>Date:</b> 11/01/2010                       | <b>Validated:</b> No | <b>Version:</b> 0           |                 |                  |
| <b>Actual From</b> ft                         | <b>To</b> ft         | <b>Survey</b>               | <b>Toolcode</b> | <b>Tool Name</b> |
| 79.00   | 7955.00              | Survey #1 (79.00-7955.00)   | MWD             | Std MWD          |
| 8015.00                                       | 8015.00              | Survey #2 (8015.00-8015.00) | Project         | Projection       |

| Survey   |             |             |           |             |             |          |                  |                    |                   |              |
|----------|-------------|-------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | +N/-S<br>ft | +E/-W<br>ft | VS<br>ft | DLS<br>deg/100ft | Build<br>deg/100ft | Turn<br>deg/100ft | Tool/Comment |
| 0.00     | 0.00        | 0.00        | 0.00      | 0.00        | 0.00        | 0.00     | 0.00             | 0.00               | 0.00              | TIE LINE     |
| 79.00    | 1.20        | 113.40      | 78.99     | -0.33       | 0.76        | -0.63    | 1.52             | 1.52               | 0.00              | MWD          |
| 171.00   | 1.40        | 118.40      | 170.97    | -1.25       | 2.63        | -2.28    | 0.25             | 0.22               | 5.43              | MWD          |
| 262.00   | 0.40        | 100.80      | 261.96    | -1.83       | 3.92        | -3.37    | 1.13             | -1.10              | -19.34            | MWD          |
| 352.00   | 0.70        | 305.70      | 351.96    | -1.57       | 3.78        | -3.07    | 1.20             | 0.33               | -172.33           | MWD          |
| 430.00   | 1.90        | 314.20      | 429.94    | -0.39       | 2.47        | -1.44    | 1.55             | 1.54               | 10.90             | MWD          |
| 521.00   | 2.60        | 311.00      | 520.86    | 2.01        | -0.17       | 1.88     | 0.78             | 0.77               | -3.52             | MWD          |
| 611.00   | 3.50        | 311.70      | 610.74    | 5.18        | -3.76       | 6.31     | 1.00             | 1.00               | 0.78              | MWD          |
| 691.00   | 3.50        | 306.40      | 690.59    | 8.25        | -7.55       | 10.73    | 0.40             | 0.00               | -6.62             | MWD          |
| 782.00   | 4.80        | 311.40      | 781.35    | 12.42       | -12.64      | 16.71    | 1.48             | 1.43               | 5.49              | MWD          |
| 872.00   | 6.00        | 325.10      | 870.95    | 18.77       | -18.16      | 24.84    | 1.95             | 1.33               | 15.22             | MWD          |
| 963.00   | 7.60        | 329.30      | 961.31    | 27.84       | -23.95      | 35.54    | 1.84             | 1.76               | 4.62              | MWD          |
| 1054.00  | 9.20        | 325.80      | 1051.33   | 39.04       | -31.11      | 48.74    | 1.85             | 1.76               | -3.85             | MWD          |
| 1145.00  | 10.20       | 324.40      | 1141.03   | 51.60       | -39.89      | 63.88    | 1.13             | 1.10               | -1.54             | MWD          |
| 1236.00  | 10.60       | 333.50      | 1230.54   | 65.65       | -48.32      | 80.20    | 1.86             | 0.44               | 10.00             | MWD          |
| 1326.00  | 10.90       | 331.40      | 1318.96   | 80.53       | -56.09      | 96.98    | 0.55             | 0.33               | -2.33             | MWD          |
| 1417.00  | 12.70       | 330.30      | 1408.03   | 96.77       | -65.16      | 115.56   | 1.99             | 1.98               | -1.21             | MWD          |
| 1508.00  | 13.60       | 330.00      | 1496.64   | 114.73      | -75.47      | 136.22   | 0.99             | 0.99               | -0.33             | MWD          |
| 1599.00  | 14.30       | 331.70      | 1584.96   | 133.89      | -86.14      | 158.12   | 0.89             | 0.77               | 1.87              | MWD          |
| 1689.00  | 15.10       | 338.80      | 1672.02   | 154.60      | -95.65      | 180.91   | 2.19             | 0.89               | 7.89              | MWD          |
| 1780.00  | 16.50       | 335.60      | 1759.58   | 177.43      | -105.28     | 205.64   | 1.81             | 1.54               | -3.52             | MWD          |
| 1871.00  | 16.40       | 337.70      | 1846.86   | 201.08      | -115.49     | 231.37   | 0.66             | -0.11              | 2.31              | MWD          |

# Allis-Chalmers Energy, Inc.

## Survey Report

|  |  |  |
|--|--|--|
| <b>Company:</b> ANADARKO PETROLEUM<br><b>Field:</b> Weld County, CO<br><b>Site:</b> Everist 10-32 Pad<br><b>Well:</b> 7-32<br><b>Wellpath:</b> Original Hole | <b>Date:</b> 11/01/2010<br><b>Co-ordinate(NE) Reference:</b> Well: 7-32, Grid North<br><b>Vertical (TVD) Reference:</b> 4803'GL+13'KB 4816.0<br><b>Section (VS) Reference:</b> Well (0.00N,0.00E,333.94Azi)<br><b>Survey Calculation Method:</b> Minimum Curvature | <b>Time:</b> 08:30:26<br><b>Page:</b> 2<br><b>Db:</b> Adapti |
|--|--|--|

### Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | +N/-S<br>ft | +E/-W<br>ft | VS<br>ft | DLS<br>deg/100ft | Build<br>deg/100ft | Turn<br>deg/100ft | Tool/Comment |
|----------|-------------|-------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 1962.00  | 17.80       | 334.90      | 1933.83   | 225.56      | -126.27     | 258.10   | 1.78             | 1.54               | -3.08             | MWD          |
| 2053.00  | 17.20       | 334.60      | 2020.62   | 250.31      | -137.94     | 285.46   | 0.67             | -0.66              | -0.33             | MWD          |
| 2144.00  | 17.20       | 331.70      | 2107.55   | 274.31      | -150.09     | 312.36   | 0.94             | 0.00               | -3.19             | MWD          |
| 2234.00  | 16.70       | 336.00      | 2193.65   | 297.84      | -161.66     | 338.58   | 1.50             | -0.56              | 4.78              | MWD          |
| 2325.00  | 16.50       | 336.70      | 2280.86   | 321.66      | -172.09     | 364.56   | 0.31             | -0.22              | 0.77              | MWD          |
| 2416.00  | 17.10       | 340.20      | 2367.97   | 346.12      | -181.73     | 390.77   | 1.29             | 0.66               | 3.85              | MWD          |
| 2507.00  | 18.80       | 340.90      | 2454.54   | 372.56      | -191.06     | 418.62   | 1.88             | 1.87               | 0.77              | MWD          |
| 2597.00  | 18.00       | 336.30      | 2539.94   | 399.00      | -201.40     | 446.91   | 1.84             | -0.89              | -5.11             | MWD          |
| 2688.00  | 18.30       | 337.00      | 2626.42   | 425.03      | -212.63     | 475.23   | 0.41             | 0.33               | 0.77              | MWD          |
| 2779.00  | 18.50       | 333.90      | 2712.77   | 451.14      | -224.57     | 503.93   | 1.10             | 0.22               | -3.41             | MWD          |
| 2870.00  | 18.30       | 334.90      | 2799.11   | 477.05      | -236.98     | 532.65   | 0.41             | -0.22              | 1.10              | MWD          |
| 2961.00  | 18.80       | 333.20      | 2885.39   | 503.07      | -249.65     | 561.60   | 0.81             | 0.55               | -1.87             | MWD          |
| 3051.00  | 17.10       | 334.20      | 2971.00   | 527.93      | -261.95     | 589.33   | 1.92             | -1.89              | 1.11              | MWD          |
| 3142.00  | 15.70       | 334.60      | 3058.30   | 551.10      | -273.05     | 615.03   | 1.54             | -1.54              | 0.44              | MWD          |
| 3233.00  | 15.70       | 337.70      | 3145.90   | 573.61      | -283.01     | 639.62   | 0.92             | 0.00               | 3.41              | MWD          |
| 3324.00  | 14.30       | 329.30      | 3233.81   | 594.67      | -293.42     | 663.12   | 2.84             | -1.54              | -9.23             | MWD          |
| 3415.00  | 13.70       | 331.40      | 3322.11   | 613.80      | -304.31     | 685.08   | 0.86             | -0.66              | 2.31              | MWD          |
| 3506.00  | 13.90       | 333.90      | 3410.48   | 633.07      | -314.28     | 706.78   | 0.69             | 0.22               | 2.75              | MWD          |
| 3596.00  | 14.30       | 332.50      | 3497.77   | 652.64      | -324.17     | 728.70   | 0.58             | 0.44               | -1.56             | MWD          |
| 3687.00  | 13.20       | 331.70      | 3586.16   | 671.76      | -334.29     | 750.32   | 1.23             | -1.21              | -0.88             | MWD          |
| 3778.00  | 12.80       | 335.60      | 3674.83   | 690.09      | -343.38     | 770.78   | 1.06             | -0.44              | 4.29              | MWD          |
| 3869.00  | 13.70       | 338.40      | 3763.41   | 709.29      | -351.51     | 791.60   | 1.21             | 0.99               | 3.08              | MWD          |
| 3960.00  | 13.90       | 334.90      | 3851.78   | 729.20      | -360.11     | 813.27   | 0.94             | 0.22               | -3.85             | MWD          |
| 4050.00  | 14.10       | 338.40      | 3939.11   | 749.19      | -368.73     | 835.01   | 0.97             | 0.22               | 3.89              | MWD          |
| 4141.00  | 14.40       | 334.20      | 4027.31   | 769.68      | -377.74     | 857.38   | 1.18             | 0.33               | -4.62             | MWD          |
| 4232.00  | 13.70       | 334.60      | 4115.59   | 789.60      | -387.28     | 879.47   | 0.78             | -0.77              | 0.44              | MWD          |
| 4323.00  | 13.70       | 338.80      | 4204.00   | 809.39      | -395.80     | 900.98   | 1.09             | 0.00               | 4.62              | MWD          |
| 4414.00  | 15.70       | 337.00      | 4292.02   | 830.77      | -404.51     | 924.01   | 2.25             | 2.20               | -1.98             | MWD          |
| 4504.00  | 17.10       | 336.30      | 4378.36   | 854.09      | -414.59     | 949.40   | 1.57             | 1.56               | -0.78             | MWD          |
| 4595.00  | 15.80       | 334.90      | 4465.63   | 877.56      | -425.22     | 975.15   | 1.49             | -1.43              | -1.54             | MWD          |
| 4686.00  | 14.60       | 334.90      | 4553.45   | 899.17      | -435.34     | 999.01   | 1.32             | -1.32              | 0.00              | MWD          |
| 4776.00  | 13.00       | 334.60      | 4640.85   | 918.59      | -444.50     | 1020.47  | 1.78             | -1.78              | -0.33             | MWD          |
| 4867.00  | 12.00       | 328.60      | 4729.69   | 935.91      | -453.82     | 1040.13  | 1.80             | -1.10              | -6.59             | MWD          |
| 4958.00  | 9.90        | 329.60      | 4819.03   | 950.73      | -462.71     | 1057.35  | 2.32             | -2.31              | 1.10              | MWD          |
| 5048.00  | 7.60        | 329.30      | 4907.98   | 962.53      | -469.66     | 1071.00  | 2.56             | -2.56              | -0.33             | MWD          |
| 5139.00  | 4.80        | 323.30      | 4998.44   | 970.75      | -475.01     | 1080.74  | 3.15             | -3.08              | -6.59             | MWD          |
| 5230.00  | 2.60        | 329.60      | 5089.24   | 975.59      | -478.33     | 1086.54  | 2.45             | -2.42              | 6.92              | MWD          |
| 5320.00  | 1.40        | 311.00      | 5179.19   | 978.07      | -480.19     | 1089.59  | 1.50             | -1.33              | -20.67            | MWD          |
| 5411.00  | 0.50        | 254.10      | 5270.17   | 978.69      | -481.41     | 1090.68  | 1.32             | -0.99              | -62.53            | MWD          |
| 5593.00  | 0.40        | 275.50      | 5452.17   | 978.53      | -482.81     | 1091.15  | 0.11             | -0.05              | 11.76             | MWD          |
| 5774.00  | 0.20        | 134.90      | 5633.17   | 978.37      | -483.21     | 1091.19  | 0.31             | -0.11              | -77.68            | MWD          |
| 5956.00  | 1.20        | 130.30      | 5815.15   | 976.91      | -481.54     | 1089.14  | 0.55             | 0.55               | -2.53             | MWD          |
| 6138.00  | 1.10        | 156.70      | 5997.12   | 974.08      | -479.39     | 1085.65  | 0.29             | -0.05              | 14.51             | MWD          |
| 6320.00  | 1.20        | 143.70      | 6179.08   | 970.94      | -477.57     | 1082.03  | 0.15             | 0.05               | -7.14             | MWD          |
| 6502.00  | 0.70        | 150.50      | 6361.05   | 968.43      | -475.90     | 1079.04  | 0.28             | -0.27              | 3.74              | MWD          |
| 6684.00  | 0.30        | 295.50      | 6543.05   | 967.67      | -475.78     | 1078.31  | 0.53             | -0.22              | 79.67             | MWD          |
| 6865.00  | 1.80        | 313.80      | 6724.01   | 969.84      | -478.26     | 1081.35  | 0.84             | 0.83               | 10.11             | MWD          |
| 7047.00  | 0.70        | 350.70      | 6905.97   | 972.92      | -480.50     | 1085.10  | 0.72             | -0.60              | 20.27             | MWD          |
| 7228.00  | 1.10        | 276.90      | 7086.95   | 974.22      | -482.41     | 1087.10  | 0.62             | 0.22               | -40.77            | MWD          |
| 7410.00  | 1.10        | 263.50      | 7268.92   | 974.23      | -485.88     | 1088.64  | 0.14             | 0.00               | -7.36             | MWD          |
| 7592.00  | 0.50        | 272.70      | 7450.90   | 974.07      | -488.40     | 1089.60  | 0.34             | -0.33              | 5.05              | MWD          |
| 7773.00  | 0.50        | 301.50      | 7631.89   | 974.52      | -489.87     | 1090.65  | 0.14             | 0.00               | 15.91             | MWD          |
| 7955.00  | 0.30        | 304.70      | 7813.89   | 975.21      | -490.94     | 1091.73  | 0.11             | -0.11              | 1.76              | MWD          |

# Allis-Chalmers Energy, Inc.

## Survey Report

|  |   |                |
|--|---|----------------|
| <b>Company:</b> ANADARKO PETROLEUM<br><b>Field:</b> Weld County, CO<br><b>Site:</b> Everist 10-32 Pad<br><b>Well:</b> 7-32<br><b>Wellpath:</b> Original Hole | <b>Date:</b> 11/01/2010<br><b>Co-ordinate(NE) Reference:</b> Well: 7-32, Grid North<br><b>Vertical (TVD) Reference:</b> 4803'GL+13'KB 4816.0<br><b>Section (VS) Reference:</b> Well (0.00N,0.00E,333.94Azi)<br><b>Survey Calculation Method:</b> Minimum Curvature<br><b>Db:</b> Adapti | <b>Page:</b> 3 |
|--|---|----------------|

### Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | +N/-S<br>ft | +E/-W<br>ft | VS<br>ft | DLS<br>deg/100ft | Build<br>deg/100ft | Turn<br>deg/100ft | Tool/Comment |
|----------|-------------|-------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 8014.11  | 0.30        | 304.70      | 7873.00   | 975.38      | -491.19     | 1092.00  | 0.00             | 0.00               | 0.00              | 7-32 PBHL    |
| 8015.00  | 0.30        | 304.70      | 7873.89   | 975.38      | -491.19     | 1092.01  | 0.00             | 0.00               | 0.00              | 7-32 BHL     |

### Targets

| Name                 | Description<br>Dip. | Dir. | TVD<br>ft | +N/-S<br>ft | +E/-W<br>ft | Map<br>Northing<br>ft | Map<br>Easting<br>ft | <---- Latitude ----> |    |          | <--- Longitude ---> |    |          |
|----------------------|---------------------|------|-----------|-------------|-------------|-----------------------|----------------------|----------------------|----|----------|---------------------|----|----------|
| 7-32 SL              |                     |      | 0.00      | 0.00        | 0.00        | 1309401.93            | 3164812.53           | 40                   | 10 | 52.293 N | 104                 | 54 | 36.567 W |
| 7-32 PBHL            |                     |      | 7873.00   | 972.09      | -475.38     | 1310374.02            | 3164337.15           | 40                   | 11 | 1.930 N  | 104                 | 54 | 42.609 W |
| -Circle (Radius: 50) |                     |      |           |             |             |                       |                      |                      |    |          |                     |    |          |
| 7-32 BHL             |                     |      | 7873.89   | 975.38      | -491.19     | 1310377.31            | 3164321.34           | 40                   | 11 | 1.964 N  | 104                 | 54 | 42.813 W |