



END OF WELL REPORT

Prepared For:

**Extraction Oil & Gas
Breniman 11
Patterson 346
Weld County, CO**

Prepared By:

***Seth Burstad
Rockies Region Well Planner
Scientific Drilling***

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Project: Weld County, CO NAD 83
 Site: Breniman
 Well: Breniman 11
 Wellbore: OH
 Design: OH

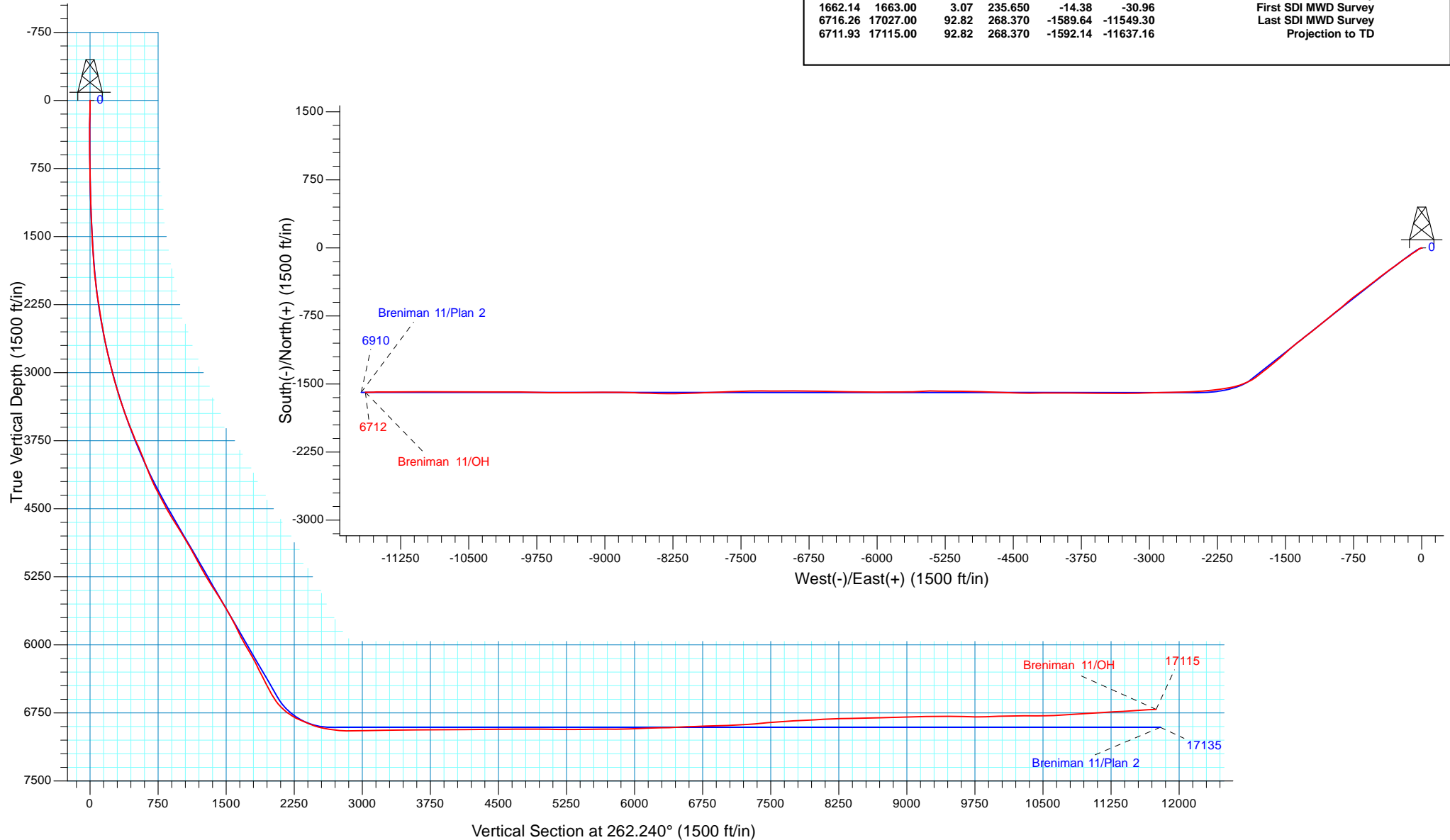


| WELL DETAILS: Breniman 11 | | | |
|---|------------|------------------|------------------|
| GL 4796' & KB 25' @ 4821.00ft (Patterson 346) | 4796.00 | | |
| Northing | Easting | Latitude | Longitude |
| 1422708.55 | 3166747.83 | 40° 29' 31.880 N | 104° 54' 1.681 W |

| |
|--|
| Design: OH (Breniman 11/OH) |
| Created By: Seth Burstad Date: 7-27-2016 |

| PROJECT DETAILS: Weld County, CO NAD 83 | |
|---|---------------------------|
| Geodetic System: | US State Plane 1983 |
| Datum: | North American Datum 1983 |
| Ellipsoid: | GRS 1980 |
| Zone: | Colorado Northern Zone |
| System Datum: | Mean Sea Level |
| Local North: | True |

| ANNOTATIONS | | | | | | | Annotation |
|-------------|----------|-------|---------|----------|-----------|--|-------------------------|
| TVD | MD | Inc | Azi | +N/-S | +E/-W | | |
| 75.99 | 76.00 | 1.20 | 114.300 | -0.33 | 0.73 | | First Helmer MWD Survey |
| 1478.45 | 1479.00 | 3.60 | 244.100 | -9.08 | -21.70 | | Last Helmer MWD Survey |
| 1662.14 | 1663.00 | 3.07 | 235.650 | -14.38 | -30.96 | | First SDI MWD Survey |
| 6716.26 | 17027.00 | 92.82 | 268.370 | -1589.64 | -11549.30 | | Last SDI MWD Survey |
| 6711.93 | 17115.00 | 92.82 | 268.370 | -1592.14 | -11637.16 | | Projection to TD |





Extraction Oil & Gas

Weld County, CO NAD 83

Breniman

Breniman 11

OH

Design: OH

Standard Survey Report

08 August, 2016



| | | | |
|------------------|------------------------|-------------------------------------|---|
| Company: | Extraction Oil & Gas | Local Co-ordinate Reference: | Well Breniman 11 |
| Project: | Weld County, CO NAD 83 | TVD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Site: | Breniman | MD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Well: | Breniman 11 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Casper District |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| Project | Weld County, CO NAD 83 | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Northern Zone | | |

| | | | | | |
|-----------------------|----------|------------------------------------|-------------------|-------------------|------------------|
| Site | | Breniman, Site Center : Breniman 2 | | | |
| Site Position: | | Northing: | 1,422,925.49 usft | Latitude: | 40° 29' 34.015 N |
| From: | Lat/Long | Easting: | 3,166,875.93 usft | Longitude: | 104° 54' 0.004 W |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13.200 in | Grid Convergence: | 0.39 ° |

| | | | | | | |
|----------------------|---|---------|---------------------|-------------------|---------------|------------------|
| Well | Breniman 11, 706' FNL 1997' FWL Sec 16 T6N R67W | | | | | |
| Well Position | +N/-S | 0.00 ft | Northing: | 1,422,708.55 usft | Latitude: | 40° 29' 31.880 N |
| | +E/-W | 0.00 ft | Easting: | 3,166,747.83 usft | Longitude: | 104° 54' 1.681 W |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | 0.00 ft | Ground Level: | 4,796.00 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | BGGM2016 | 7/30/2016 | 8.53 | 66.95 | 52,522 |

| | | | | | |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|------|
| Design | OH | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) | |
| | 0.00 | 0.00 | 0.00 | 262.240 | |

| | | | | | |
|-----------------------|----------------|-----------------------------|------------------|------------------------------|--|
| Survey Program | Date | 8/8/2016 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 76.00 | 1,479.00 | Survey #1 - Surface (OH) | MWD | MWD - Standard | |
| 1,663.00 | 17,115.00 | Survey #2 - Production (OH) | SDI MWD | SDI MWD - Standard ver 1.0.1 | |

| | | | | | | | | | | |
|--------------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|------------------------------|-----------------------------|----------------------------|--|
| Survey | | | | | | | | | | |
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | |
| 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 76.00 | 1.20 | 114.300 | 75.99 | -0.33 | 0.73 | -0.67 | 1.58 | 1.58 | 0.00 | |
| First Helmer MWD Survey | | | | | | | | | | |
| 171.00 | 0.90 | 120.200 | 170.98 | -1.11 | 2.28 | -2.11 | 0.34 | -0.32 | 6.21 | |
| 266.00 | 0.70 | 125.400 | 265.97 | -1.82 | 3.39 | -3.12 | 0.22 | -0.21 | 5.47 | |
| 361.00 | 0.40 | 148.100 | 360.96 | -2.44 | 4.04 | -3.68 | 0.38 | -0.32 | 23.89 | |
| 456.00 | 0.40 | 162.600 | 455.96 | -3.04 | 4.32 | -3.87 | 0.11 | 0.00 | 15.26 | |
| 551.00 | 0.30 | 284.300 | 550.96 | -3.29 | 4.18 | -3.69 | 0.65 | -0.11 | 128.11 | |
| 646.00 | 0.90 | 273.900 | 645.96 | -3.18 | 3.19 | -2.73 | 0.64 | 0.63 | -10.95 | |
| 741.00 | 1.30 | 276.700 | 740.94 | -3.01 | 1.38 | -0.96 | 0.42 | 0.42 | 2.95 | |

| | | | |
|------------------|------------------------|-------------------------------------|---|
| Company: | Extraction Oil & Gas | Local Co-ordinate Reference: | Well Breniman 11 |
| Project: | Weld County, CO NAD 83 | TVD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Site: | Breniman | MD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Well: | Breniman 11 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Casper District |

| Survey | | | | | | | | | |
|-------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 836.00 | 1.20 | 282.300 | 835.92 | -2.67 | -0.67 | 1.02 | 0.17 | -0.11 | 5.89 |
| 931.00 | 1.20 | 279.900 | 930.89 | -2.29 | -2.62 | 2.90 | 0.05 | 0.00 | -2.53 |
| 1,026.00 | 1.20 | 277.000 | 1,025.87 | -1.99 | -4.59 | 4.81 | 0.06 | 0.00 | -3.05 |
| 1,122.00 | 1.60 | 253.500 | 1,121.85 | -2.25 | -6.87 | 7.11 | 0.72 | 0.42 | -24.48 |
| 1,217.00 | 2.00 | 247.500 | 1,216.80 | -3.26 | -9.67 | 10.02 | 0.46 | 0.42 | -6.32 |
| 1,312.00 | 2.80 | 241.600 | 1,311.71 | -5.00 | -13.24 | 13.80 | 0.88 | 0.84 | -6.21 |
| 1,407.00 | 3.30 | 245.600 | 1,406.58 | -7.23 | -17.78 | 18.59 | 0.57 | 0.53 | 4.21 |
| 1,479.00 | 3.60 | 244.100 | 1,478.45 | -9.08 | -21.70 | 22.72 | 0.44 | 0.42 | -2.08 |
| Last Helmer MWD Survey | | | | | | | | | |
| 1,663.00 | 3.07 | 235.650 | 1,662.14 | -14.38 | -30.96 | 32.62 | 0.39 | -0.29 | -4.59 |
| First SDI MWD Survey | | | | | | | | | |
| 1,759.00 | 4.28 | 234.630 | 1,757.94 | -17.90 | -36.00 | 38.09 | 1.26 | 1.26 | -1.06 |
| 1,854.00 | 7.01 | 233.420 | 1,852.47 | -23.41 | -43.55 | 46.31 | 2.88 | 2.87 | -1.27 |
| 1,949.00 | 6.89 | 233.450 | 1,946.77 | -30.26 | -52.78 | 56.39 | 0.13 | -0.13 | 0.03 |
| 2,044.00 | 6.42 | 229.670 | 2,041.13 | -37.09 | -61.41 | 65.86 | 0.68 | -0.49 | -3.98 |
| 2,140.00 | 8.35 | 239.440 | 2,136.33 | -44.11 | -71.51 | 76.81 | 2.39 | 2.01 | 10.18 |
| 2,235.00 | 10.37 | 241.610 | 2,230.07 | -51.68 | -84.97 | 91.17 | 2.16 | 2.13 | 2.28 |
| 2,331.00 | 10.14 | 238.770 | 2,324.53 | -60.17 | -99.80 | 107.01 | 0.58 | -0.24 | -2.96 |
| 2,426.00 | 11.33 | 230.400 | 2,417.87 | -70.46 | -114.14 | 122.61 | 2.06 | 1.25 | -8.81 |
| 2,521.00 | 11.53 | 232.860 | 2,510.99 | -82.14 | -128.90 | 138.81 | 0.55 | 0.21 | 2.59 |
| 2,616.00 | 11.80 | 231.790 | 2,604.03 | -93.88 | -144.10 | 155.46 | 0.36 | 0.28 | -1.13 |
| 2,711.00 | 13.16 | 238.870 | 2,696.79 | -105.48 | -160.99 | 173.76 | 2.15 | 1.43 | 7.45 |
| 2,806.00 | 14.25 | 236.990 | 2,789.08 | -117.44 | -180.05 | 194.26 | 1.24 | 1.15 | -1.98 |
| 2,901.00 | 15.53 | 235.800 | 2,880.89 | -130.96 | -200.38 | 216.23 | 1.39 | 1.35 | -1.25 |
| 2,997.00 | 16.47 | 230.890 | 2,973.17 | -146.77 | -221.57 | 239.36 | 1.72 | 0.98 | -5.11 |
| 3,092.00 | 17.61 | 232.590 | 3,064.00 | -163.99 | -243.43 | 263.35 | 1.31 | 1.20 | 1.79 |
| 3,188.00 | 18.01 | 231.660 | 3,155.40 | -182.02 | -266.61 | 288.74 | 0.51 | 0.42 | -0.97 |
| 3,283.00 | 19.71 | 236.900 | 3,245.30 | -199.88 | -291.55 | 315.87 | 2.52 | 1.79 | 5.52 |
| 3,378.00 | 20.97 | 234.640 | 3,334.38 | -218.47 | -318.84 | 345.41 | 1.56 | 1.33 | -2.38 |
| 3,473.00 | 21.18 | 235.040 | 3,423.03 | -238.14 | -346.76 | 375.74 | 0.27 | 0.22 | 0.42 |
| 3,568.00 | 22.72 | 233.690 | 3,511.14 | -258.84 | -375.61 | 407.12 | 1.71 | 1.62 | -1.42 |
| 3,663.00 | 25.06 | 233.020 | 3,597.99 | -281.81 | -406.47 | 440.80 | 2.48 | 2.46 | -0.71 |
| 3,759.00 | 24.99 | 232.030 | 3,684.98 | -306.52 | -438.70 | 476.07 | 0.44 | -0.07 | -1.03 |
| 3,854.00 | 27.30 | 232.500 | 3,770.25 | -332.13 | -471.81 | 512.33 | 2.44 | 2.43 | 0.49 |
| 3,949.00 | 26.66 | 231.360 | 3,854.92 | -358.70 | -505.74 | 549.54 | 0.87 | -0.67 | -1.20 |
| 4,044.00 | 23.66 | 232.770 | 3,940.89 | -383.55 | -537.57 | 584.44 | 3.22 | -3.16 | 1.48 |
| 4,140.00 | 23.92 | 232.750 | 4,028.74 | -406.98 | -568.40 | 618.15 | 0.27 | 0.27 | -0.02 |
| 4,235.00 | 24.90 | 231.790 | 4,115.24 | -431.01 | -599.45 | 652.16 | 1.11 | 1.03 | -1.01 |
| 4,330.00 | 26.85 | 234.080 | 4,200.72 | -455.97 | -632.54 | 688.32 | 2.31 | 2.05 | 2.41 |
| 4,425.00 | 30.86 | 233.680 | 4,283.91 | -483.00 | -669.56 | 728.65 | 4.23 | 4.22 | -0.42 |
| 4,521.00 | 31.40 | 233.150 | 4,366.08 | -512.58 | -709.41 | 772.13 | 0.63 | 0.56 | -0.55 |
| 4,616.00 | 31.47 | 232.120 | 4,447.14 | -542.65 | -748.79 | 815.20 | 0.57 | 0.07 | -1.08 |
| 4,711.00 | 33.60 | 230.190 | 4,527.23 | -574.71 | -788.56 | 858.94 | 2.49 | 2.24 | -2.03 |

| | | | |
|------------------|------------------------|-------------------------------------|---|
| Company: | Extraction Oil & Gas | Local Co-ordinate Reference: | Well Breniman 11 |
| Project: | Weld County, CO NAD 83 | TVD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Site: | Breniman | MD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Well: | Breniman 11 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Casper District |

| Survey | | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | |
| 4,807.00 | 37.57 | 229.120 | 4,605.28 | -610.88 | -831.11 | 905.98 | 4.19 | 4.14 | -1.11 | |
| 4,902.00 | 36.02 | 229.720 | 4,681.36 | -647.90 | -874.32 | 953.80 | 1.67 | -1.63 | 0.63 | |
| 4,997.00 | 34.58 | 231.720 | 4,758.89 | -682.66 | -916.80 | 1,000.58 | 1.94 | -1.52 | 2.11 | |
| 5,092.00 | 36.10 | 230.750 | 4,836.38 | -717.08 | -959.63 | 1,047.67 | 1.71 | 1.60 | -1.02 | |
| 5,188.00 | 33.09 | 230.950 | 4,915.40 | -751.49 | -1,001.90 | 1,094.19 | 3.14 | -3.14 | 0.21 | |
| 5,283.00 | 33.53 | 230.660 | 4,994.79 | -784.46 | -1,042.33 | 1,138.70 | 0.49 | 0.46 | -0.31 | |
| 5,379.00 | 32.81 | 228.870 | 5,075.15 | -818.37 | -1,082.43 | 1,183.01 | 1.27 | -0.75 | -1.86 | |
| 5,474.00 | 33.53 | 229.440 | 5,154.67 | -852.37 | -1,121.75 | 1,226.56 | 0.83 | 0.76 | 0.60 | |
| 5,570.00 | 33.91 | 232.970 | 5,234.53 | -885.74 | -1,163.27 | 1,272.22 | 2.08 | 0.40 | 3.68 | |
| 5,665.00 | 34.85 | 231.720 | 5,312.93 | -918.51 | -1,205.74 | 1,318.72 | 1.24 | 0.99 | -1.32 | |
| 5,761.00 | 37.38 | 233.400 | 5,390.48 | -952.89 | -1,250.67 | 1,367.88 | 2.83 | 2.64 | 1.75 | |
| 5,856.00 | 35.59 | 230.160 | 5,466.87 | -987.79 | -1,295.06 | 1,416.57 | 2.77 | -1.88 | -3.41 | |
| 5,952.00 | 36.08 | 232.180 | 5,544.70 | -1,023.03 | -1,338.84 | 1,464.71 | 1.33 | 0.51 | 2.10 | |
| 6,047.00 | 34.56 | 231.690 | 5,622.21 | -1,056.88 | -1,382.08 | 1,512.13 | 1.63 | -1.60 | -0.52 | |
| 6,142.00 | 32.45 | 228.590 | 5,701.42 | -1,090.45 | -1,422.35 | 1,556.56 | 2.86 | -2.22 | -3.26 | |
| 6,238.00 | 30.47 | 230.190 | 5,783.31 | -1,123.08 | -1,460.36 | 1,598.63 | 2.24 | -2.06 | 1.67 | |
| 6,333.00 | 30.72 | 227.660 | 5,865.09 | -1,154.84 | -1,496.80 | 1,639.03 | 1.38 | 0.26 | -2.66 | |
| 6,428.00 | 32.33 | 229.280 | 5,946.07 | -1,187.76 | -1,534.00 | 1,680.32 | 1.91 | 1.69 | 1.71 | |
| 6,523.00 | 35.45 | 229.110 | 6,024.92 | -1,222.37 | -1,574.08 | 1,724.72 | 3.29 | 3.28 | -0.18 | |
| 6,618.00 | 33.50 | 230.820 | 6,103.23 | -1,256.98 | -1,615.24 | 1,770.17 | 2.29 | -2.05 | 1.80 | |
| 6,714.00 | 31.64 | 230.210 | 6,184.13 | -1,289.83 | -1,655.13 | 1,814.13 | 1.97 | -1.94 | -0.64 | |
| 6,809.00 | 30.33 | 230.260 | 6,265.57 | -1,321.11 | -1,692.72 | 1,855.60 | 1.38 | -1.38 | 0.05 | |
| 6,904.00 | 30.83 | 233.230 | 6,347.36 | -1,351.02 | -1,730.67 | 1,897.24 | 1.68 | 0.53 | 3.13 | |
| 7,000.00 | 30.56 | 230.830 | 6,429.92 | -1,381.16 | -1,769.29 | 1,939.58 | 1.31 | -0.28 | -2.50 | |
| 7,095.00 | 32.52 | 230.780 | 6,510.88 | -1,412.57 | -1,807.81 | 1,981.98 | 2.06 | 2.06 | -0.05 | |
| 7,191.00 | 34.40 | 237.060 | 6,590.99 | -1,443.64 | -1,850.57 | 2,028.55 | 4.10 | 1.96 | 6.54 | |
| 7,286.00 | 43.38 | 245.300 | 6,664.91 | -1,471.94 | -1,902.88 | 2,084.20 | 10.89 | 9.45 | 8.67 | |
| 7,381.00 | 50.57 | 247.980 | 6,729.69 | -1,499.37 | -1,966.62 | 2,151.06 | 7.84 | 7.57 | 2.82 | |
| 7,476.00 | 58.95 | 254.610 | 6,784.50 | -1,523.99 | -2,040.05 | 2,227.14 | 10.49 | 8.82 | 6.98 | |
| 7,571.00 | 67.07 | 260.880 | 6,827.61 | -1,541.77 | -2,122.68 | 2,311.42 | 10.37 | 8.55 | 6.60 | |
| 7,667.00 | 66.75 | 260.500 | 6,865.26 | -1,556.05 | -2,209.83 | 2,399.70 | 0.49 | -0.33 | -0.40 | |
| 7,762.00 | 72.66 | 263.260 | 6,898.20 | -1,568.59 | -2,297.99 | 2,488.75 | 6.79 | 6.22 | 2.91 | |
| 7,858.00 | 79.47 | 266.070 | 6,921.31 | -1,577.21 | -2,390.70 | 2,581.77 | 7.64 | 7.09 | 2.93 | |
| 7,953.00 | 81.85 | 266.220 | 6,936.73 | -1,583.51 | -2,484.23 | 2,675.29 | 2.51 | 2.51 | 0.16 | |
| 8,048.00 | 86.34 | 268.450 | 6,946.50 | -1,587.90 | -2,578.59 | 2,769.38 | 5.27 | 4.73 | 2.35 | |
| 8,144.00 | 90.87 | 268.630 | 6,948.84 | -1,590.34 | -2,674.50 | 2,864.75 | 4.72 | 4.72 | 0.19 | |
| 8,239.00 | 90.84 | 268.910 | 6,947.42 | -1,592.38 | -2,769.47 | 2,959.12 | 0.30 | -0.03 | 0.29 | |
| 8,334.00 | 91.34 | 268.880 | 6,945.61 | -1,594.21 | -2,864.44 | 3,053.46 | 0.53 | 0.53 | -0.03 | |
| 8,455.00 | 90.91 | 267.890 | 6,943.24 | -1,597.62 | -2,985.36 | 3,173.74 | 0.89 | -0.36 | -0.82 | |
| 8,551.00 | 91.14 | 267.670 | 6,941.52 | -1,601.34 | -3,081.28 | 3,269.28 | 0.33 | 0.24 | -0.23 | |
| 8,646.00 | 91.01 | 270.130 | 6,939.74 | -1,603.17 | -3,176.23 | 3,363.61 | 2.59 | -0.14 | 2.59 | |
| 8,741.00 | 90.73 | 269.900 | 6,938.29 | -1,603.14 | -3,271.22 | 3,457.73 | 0.38 | -0.29 | -0.24 | |
| 8,837.00 | 89.80 | 269.490 | 6,937.85 | -1,603.65 | -3,367.22 | 3,552.92 | 1.06 | -0.97 | -0.43 | |
| 8,932.00 | 89.97 | 269.620 | 6,938.04 | -1,604.39 | -3,462.22 | 3,647.14 | 0.23 | 0.18 | 0.14 | |

| | | | |
|------------------|------------------------|-------------------------------------|---|
| Company: | Extraction Oil & Gas | Local Co-ordinate Reference: | Well Breniman 11 |
| Project: | Weld County, CO NAD 83 | TVD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Site: | Breniman | MD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Well: | Breniman 11 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Casper District |

| Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 9,027.00 | 90.10 | 270.640 | 6,937.98 | -1,604.17 | -3,557.22 | 3,741.24 | 1.08 | 0.14 | 1.07 |
| 9,123.00 | 90.60 | 271.490 | 6,937.40 | -1,602.39 | -3,653.20 | 3,836.10 | 1.03 | 0.52 | 0.89 |
| 9,218.00 | 90.60 | 270.660 | 6,936.40 | -1,600.61 | -3,748.17 | 3,929.97 | 0.87 | 0.00 | -0.87 |
| 9,313.00 | 91.78 | 270.820 | 6,934.43 | -1,599.38 | -3,843.14 | 4,023.90 | 1.25 | 1.24 | 0.17 |
| 9,409.00 | 89.87 | 269.650 | 6,933.05 | -1,598.99 | -3,939.13 | 4,118.95 | 2.33 | -1.99 | -1.22 |
| 9,504.00 | 89.70 | 269.350 | 6,933.40 | -1,599.82 | -4,034.12 | 4,213.19 | 0.36 | -0.18 | -0.32 |
| 9,600.00 | 90.24 | 269.000 | 6,933.45 | -1,601.20 | -4,130.11 | 4,308.49 | 0.67 | 0.56 | -0.36 |
| 9,695.00 | 91.44 | 269.270 | 6,932.06 | -1,602.63 | -4,225.09 | 4,402.79 | 1.29 | 1.26 | 0.28 |
| 9,791.00 | 90.54 | 271.520 | 6,930.40 | -1,601.97 | -4,321.06 | 4,497.80 | 2.52 | -0.94 | 2.34 |
| 9,886.00 | 89.87 | 270.730 | 6,930.06 | -1,600.11 | -4,416.04 | 4,591.66 | 1.09 | -0.71 | -0.83 |
| 9,981.00 | 90.30 | 271.590 | 6,929.92 | -1,598.18 | -4,511.02 | 4,685.51 | 1.01 | 0.45 | 0.91 |
| 10,077.00 | 90.84 | 271.880 | 6,928.96 | -1,595.28 | -4,606.97 | 4,780.19 | 0.64 | 0.56 | 0.30 |
| 10,173.00 | 89.46 | 271.920 | 6,928.71 | -1,592.09 | -4,702.92 | 4,874.82 | 1.44 | -1.44 | 0.04 |
| 10,268.00 | 88.99 | 273.260 | 6,930.00 | -1,587.80 | -4,797.81 | 4,968.27 | 1.49 | -0.49 | 1.41 |
| 10,363.00 | 89.26 | 270.570 | 6,931.45 | -1,584.63 | -4,892.74 | 5,061.89 | 2.85 | 0.28 | -2.83 |
| 10,459.00 | 88.83 | 271.960 | 6,933.05 | -1,582.51 | -4,988.70 | 5,156.69 | 1.52 | -0.45 | 1.45 |
| 10,554.00 | 90.30 | 270.130 | 6,933.77 | -1,580.78 | -5,083.67 | 5,250.56 | 2.47 | 1.55 | -1.93 |
| 10,649.00 | 90.37 | 270.090 | 6,933.22 | -1,580.59 | -5,178.67 | 5,344.66 | 0.08 | 0.07 | -0.04 |
| 10,744.00 | 90.91 | 270.990 | 6,932.15 | -1,579.70 | -5,273.66 | 5,438.66 | 1.10 | 0.57 | 0.95 |
| 10,840.00 | 91.24 | 271.240 | 6,930.35 | -1,577.83 | -5,369.62 | 5,533.50 | 0.43 | 0.34 | 0.26 |
| 10,935.00 | 89.83 | 267.000 | 6,929.47 | -1,579.29 | -5,464.59 | 5,627.78 | 4.70 | -1.48 | -4.46 |
| 11,030.00 | 89.53 | 266.390 | 6,930.00 | -1,584.77 | -5,559.43 | 5,722.50 | 0.72 | -0.32 | -0.64 |
| 11,126.00 | 90.90 | 269.910 | 6,929.64 | -1,587.86 | -5,655.36 | 5,817.97 | 3.93 | 1.43 | 3.67 |
| 11,221.00 | 91.45 | 269.150 | 6,927.69 | -1,588.64 | -5,750.33 | 5,912.18 | 0.99 | 0.58 | -0.80 |
| 11,316.00 | 92.92 | 269.870 | 6,924.07 | -1,589.46 | -5,845.26 | 6,006.34 | 1.72 | 1.55 | 0.76 |
| 11,411.00 | 91.98 | 270.020 | 6,920.00 | -1,589.55 | -5,940.17 | 6,100.40 | 1.00 | -0.99 | 0.16 |
| 11,507.00 | 91.75 | 269.820 | 6,916.88 | -1,589.68 | -6,036.12 | 6,195.49 | 0.32 | -0.24 | -0.21 |
| 11,602.00 | 91.31 | 270.350 | 6,914.34 | -1,589.54 | -6,131.08 | 6,289.56 | 0.72 | -0.46 | 0.56 |
| 11,697.00 | 91.04 | 270.320 | 6,912.40 | -1,588.98 | -6,226.06 | 6,383.60 | 0.29 | -0.28 | -0.03 |
| 11,793.00 | 93.03 | 270.930 | 6,908.99 | -1,587.94 | -6,321.99 | 6,478.51 | 2.17 | 2.07 | 0.64 |
| 11,888.00 | 92.51 | 271.990 | 6,904.40 | -1,585.52 | -6,416.85 | 6,572.17 | 1.24 | -0.55 | 1.12 |
| 11,984.00 | 92.72 | 272.390 | 6,900.02 | -1,581.86 | -6,512.68 | 6,666.62 | 0.47 | 0.22 | 0.42 |
| 12,079.00 | 91.24 | 270.550 | 6,896.73 | -1,579.42 | -6,607.58 | 6,760.33 | 2.48 | -1.56 | -1.94 |
| 12,174.00 | 91.60 | 271.390 | 6,894.38 | -1,577.81 | -6,702.54 | 6,854.20 | 0.96 | 0.38 | 0.88 |
| 12,270.00 | 91.68 | 268.770 | 6,891.63 | -1,577.68 | -6,798.49 | 6,949.26 | 2.73 | 0.08 | -2.73 |
| 12,365.00 | 93.28 | 269.790 | 6,887.52 | -1,578.87 | -6,893.39 | 7,043.45 | 2.00 | 1.68 | 1.07 |
| 12,460.00 | 92.72 | 269.560 | 6,882.55 | -1,579.41 | -6,988.26 | 7,137.52 | 0.64 | -0.59 | -0.24 |
| 12,555.00 | 92.98 | 271.170 | 6,877.82 | -1,578.81 | -7,083.13 | 7,231.45 | 1.71 | 0.27 | 1.69 |
| 12,650.00 | 94.36 | 270.260 | 6,871.74 | -1,577.62 | -7,177.93 | 7,325.21 | 1.74 | 1.45 | -0.96 |
| 12,746.00 | 95.34 | 269.870 | 6,863.63 | -1,577.51 | -7,273.58 | 7,419.98 | 1.10 | 1.02 | -0.41 |
| 12,841.00 | 95.18 | 269.560 | 6,854.92 | -1,577.98 | -7,368.18 | 7,513.77 | 0.37 | -0.17 | -0.33 |
| 12,936.00 | 93.86 | 267.450 | 6,847.43 | -1,580.46 | -7,462.85 | 7,607.90 | 2.61 | -1.39 | -2.22 |
| 13,031.00 | 92.95 | 268.250 | 6,841.79 | -1,584.01 | -7,557.61 | 7,702.28 | 1.27 | -0.96 | 0.84 |

| | | | |
|------------------|------------------------|-------------------------------------|---|
| Company: | Extraction Oil & Gas | Local Co-ordinate Reference: | Well Breniman 11 |
| Project: | Weld County, CO NAD 83 | TVD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Site: | Breniman | MD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Well: | Breniman 11 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Casper District |

| Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 13,127.00 | 92.95 | 268.350 | 6,836.85 | -1,586.86 | -7,653.44 | 7,797.62 | 0.10 | 0.00 | 0.10 |
| 13,222.00 | 92.78 | 268.270 | 6,832.10 | -1,589.66 | -7,748.28 | 7,891.97 | 0.20 | -0.18 | -0.08 |
| 13,317.00 | 93.09 | 267.280 | 6,827.24 | -1,593.34 | -7,843.08 | 7,986.40 | 1.09 | 0.33 | -1.04 |
| 13,412.00 | 93.80 | 268.050 | 6,821.53 | -1,597.20 | -7,937.83 | 8,080.80 | 1.10 | 0.75 | 0.81 |
| 13,507.00 | 92.31 | 267.770 | 6,816.46 | -1,600.66 | -8,032.63 | 8,175.20 | 1.60 | -1.57 | -0.29 |
| 13,603.00 | 90.67 | 267.100 | 6,813.97 | -1,604.96 | -8,128.50 | 8,270.77 | 1.85 | -1.71 | -0.70 |
| 13,698.00 | 91.24 | 270.230 | 6,812.38 | -1,607.17 | -8,223.45 | 8,365.15 | 3.35 | 0.60 | 3.29 |
| 13,793.00 | 91.07 | 270.290 | 6,810.47 | -1,606.74 | -8,318.43 | 8,459.20 | 0.19 | -0.18 | 0.06 |
| 13,888.00 | 91.74 | 271.660 | 6,808.14 | -1,605.12 | -8,413.38 | 8,553.07 | 1.60 | 0.71 | 1.44 |
| 13,983.00 | 91.51 | 271.070 | 6,805.45 | -1,602.86 | -8,508.32 | 8,646.83 | 0.67 | -0.24 | -0.62 |
| 14,078.00 | 91.58 | 271.800 | 6,802.88 | -1,600.48 | -8,603.25 | 8,740.57 | 0.77 | 0.07 | 0.77 |
| 14,173.00 | 92.18 | 272.400 | 6,799.77 | -1,597.00 | -8,698.14 | 8,834.12 | 0.89 | 0.63 | 0.63 |
| 14,268.00 | 91.68 | 272.150 | 6,796.57 | -1,593.24 | -8,793.01 | 8,927.61 | 0.59 | -0.53 | -0.26 |
| 14,363.00 | 91.71 | 271.670 | 6,793.76 | -1,590.07 | -8,887.91 | 9,021.22 | 0.51 | 0.03 | -0.51 |
| 14,458.00 | 90.07 | 268.290 | 6,792.28 | -1,590.10 | -8,982.88 | 9,115.32 | 3.95 | -1.73 | -3.56 |
| 14,553.00 | 90.94 | 268.970 | 6,791.44 | -1,592.38 | -9,077.85 | 9,209.73 | 1.16 | 0.92 | 0.72 |
| 14,648.00 | 91.14 | 267.380 | 6,789.72 | -1,595.40 | -9,172.78 | 9,304.20 | 1.69 | 0.21 | -1.67 |
| 14,744.00 | 91.31 | 270.650 | 6,787.67 | -1,597.05 | -9,268.74 | 9,399.50 | 3.41 | 0.18 | 3.41 |
| 14,839.00 | 88.72 | 269.890 | 6,787.64 | -1,596.60 | -9,363.73 | 9,493.56 | 2.84 | -2.73 | -0.80 |
| 14,934.00 | 88.59 | 270.250 | 6,789.87 | -1,596.49 | -9,458.70 | 9,587.64 | 0.40 | -0.14 | 0.38 |
| 15,029.00 | 88.19 | 269.910 | 6,792.54 | -1,596.35 | -9,553.66 | 9,681.72 | 0.55 | -0.42 | -0.36 |
| 15,124.00 | 89.60 | 271.330 | 6,794.37 | -1,595.33 | -9,648.63 | 9,775.68 | 2.11 | 1.48 | 1.49 |
| 15,219.00 | 91.78 | 271.750 | 6,793.23 | -1,592.77 | -9,743.59 | 9,869.42 | 2.34 | 2.29 | 0.44 |
| 15,314.00 | 92.88 | 271.210 | 6,789.37 | -1,590.32 | -9,838.47 | 9,963.11 | 1.29 | 1.16 | -0.57 |
| 15,409.00 | 90.94 | 269.820 | 6,786.20 | -1,589.47 | -9,933.41 | 10,057.06 | 2.51 | -2.04 | -1.46 |
| 15,504.00 | 91.17 | 270.140 | 6,784.45 | -1,589.50 | -10,028.39 | 10,151.18 | 0.41 | 0.24 | 0.34 |
| 15,599.00 | 90.27 | 270.700 | 6,783.26 | -1,588.81 | -10,123.38 | 10,245.20 | 1.12 | -0.95 | 0.59 |
| 15,695.00 | 89.63 | 270.680 | 6,783.34 | -1,587.65 | -10,219.38 | 10,340.16 | 0.67 | -0.67 | -0.02 |
| 15,790.00 | 90.50 | 269.570 | 6,783.23 | -1,587.44 | -10,314.37 | 10,434.26 | 1.48 | 0.92 | -1.17 |
| 15,885.00 | 90.60 | 269.050 | 6,782.32 | -1,588.59 | -10,409.36 | 10,528.53 | 0.56 | 0.11 | -0.55 |
| 15,981.00 | 92.59 | 269.930 | 6,779.65 | -1,589.44 | -10,505.31 | 10,623.72 | 2.27 | 2.07 | 0.92 |
| 16,076.00 | 93.95 | 271.190 | 6,774.23 | -1,588.51 | -10,600.15 | 10,717.57 | 1.95 | 1.43 | 1.33 |
| 16,171.00 | 93.45 | 270.810 | 6,768.10 | -1,586.86 | -10,694.94 | 10,811.26 | 0.66 | -0.53 | -0.40 |
| 16,267.00 | 94.27 | 270.010 | 6,761.64 | -1,586.17 | -10,790.72 | 10,906.07 | 1.19 | 0.85 | -0.83 |
| 16,362.00 | 92.85 | 269.880 | 6,755.74 | -1,586.27 | -10,885.53 | 11,000.03 | 1.50 | -1.49 | -0.14 |
| 16,457.00 | 93.26 | 269.160 | 6,750.68 | -1,587.06 | -10,980.39 | 11,094.13 | 0.87 | 0.43 | -0.76 |
| 16,552.00 | 94.46 | 270.380 | 6,744.28 | -1,587.44 | -11,075.17 | 11,188.09 | 1.80 | 1.26 | 1.28 |
| 16,647.00 | 92.38 | 269.810 | 6,738.61 | -1,587.28 | -11,170.00 | 11,282.03 | 2.27 | -2.19 | -0.60 |
| 16,742.00 | 92.89 | 269.330 | 6,734.25 | -1,588.00 | -11,264.89 | 11,376.15 | 0.74 | 0.54 | -0.51 |
| 16,837.00 | 93.75 | 270.270 | 6,728.74 | -1,588.33 | -11,359.73 | 11,470.16 | 1.34 | 0.91 | 0.99 |
| 16,932.00 | 94.25 | 269.890 | 6,722.12 | -1,588.20 | -11,454.50 | 11,564.05 | 0.66 | 0.53 | -0.40 |
| 17,027.00 | 92.82 | 268.370 | 6,716.26 | -1,589.64 | -11,549.30 | 11,658.18 | 2.19 | -1.51 | -1.60 |
| Last SDI MWD Survey | | | | | | | | | |
| 17,115.00 | 92.82 | 268.370 | 6,711.93 | -1,592.14 | -11,637.16 | 11,745.57 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|------------------------|-------------------------------------|---|
| Company: | Extraction Oil & Gas | Local Co-ordinate Reference: | Well Breniman 11 |
| Project: | Weld County, CO NAD 83 | TVD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Site: | Breniman | MD Reference: | GL 4796' & KB 25' @ 4821.00ft (Patterson 346) |
| Well: | Breniman 11 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Casper District |

| Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| Projection to TD | | | | | | | | | |

| Design Annotations | | | | |
|---------------------|---------------------|-------------------|------------|-------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 76.00 | 75.99 | -0.33 | 0.73 | First Helmer MWD Survey |
| 1,479.00 | 1,478.45 | -9.08 | -21.70 | Last Helmer MWD Survey |
| 1,663.00 | 1,662.14 | -14.38 | -30.96 | First SDI MWD Survey |
| 17,027.00 | 6,716.26 | -1,589.64 | -11,549.30 | Last SDI MWD Survey |
| 17,115.00 | 6,711.93 | -1,592.14 | -11,637.16 | Projection to TD |

| | | |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|



Daily Report for JOB#: 376640 - Page 1 of 3

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|---------|----------------|---|
| 18:38 | 18:43 | 0.08 | 1757 | 1821 | 64 | 768.00 | Drilling | Drilling - (WOB:25;GPM :700;RPM:65) |
| 18:43 | 18:48 | 0.08 | 1821 | 1821 | 0 | .00 | Survey & Conn. | Survey & Conn.@1759' Inc 4.28° Azm 234.63° |
| 18:48 | 18:53 | 0.08 | 1821 | 1829 | 8 | 96.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:235M) |
| 18:53 | 18:58 | 0.08 | 1829 | 1916 | 87 | 1044.00 | Drilling | Drilling - (WOB:25;GPM :700;RPM:65) |
| 18:58 | 19:03 | 0.08 | 1916 | 1916 | 0 | .00 | Survey & Conn. | Survey & Conn.@1854' Inc 7.01° Azm 233.42° |
| 19:03 | 19:09 | 0.10 | 1916 | 2011 | 95 | 950.00 | Drilling | Drilling - (WOB:25;GPM :700;RPM:65) |
| 19:09 | 19:13 | 0.07 | 2011 | 2011 | 0 | .00 | Survey & Conn. | Survey & Conn.@1949' Inc 6.89° Azm 233.45° |
| 19:13 | 19:17 | 0.07 | 2011 | 2019 | 8 | 120.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 19:17 | 19:23 | 0.10 | 2019 | 2106 | 87 | 870.00 | Drilling | Drilling - (WOB:25;GPM :700;RPM:65) |
| 19:23 | 19:28 | 0.08 | 2106 | 2106 | 0 | .00 | Survey & Conn. | Survey & Conn.@2044' Inc 6.42° Azm 229.67° |
| 19:28 | 19:31 | 0.05 | 2106 | 2118 | 12 | 240.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:30R) |
| 19:31 | 19:38 | 0.12 | 2118 | 2202 | 84 | 720.00 | Drilling | Drilling - (WOB:28;GPM :700;RPM:65) |
| 19:38 | 19:44 | 0.10 | 2202 | 2202 | 0 | .00 | Survey & Conn. | Survey & Conn.@2140' Inc 8.35° Azm 239.44° |
| 19:44 | 19:48 | 0.07 | 2202 | 2212 | 10 | 150.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 19:48 | 19:53 | 0.08 | 2212 | 2297 | 85 | 1020.00 | Drilling | Drilling - (WOB:28;GPM :700;RPM:65) |
| 19:53 | 19:57 | 0.07 | 2297 | 2297 | 0 | .00 | Survey & Conn. | Survey & Conn.@2235' Inc 10.37° Azm 241.61° |
| 19:57 | 20:02 | 0.08 | 2297 | 2393 | 96 | 1152.00 | Drilling | Drilling - (WOB:28;GPM :700;RPM:65) |
| 20:02 | 20:10 | 0.13 | 2393 | 2393 | 0 | .00 | Survey & Conn. | Survey & Conn.@2331' Inc 10.14° Azm 238.77° |
| 20:10 | 20:12 | 0.03 | 2393 | 2399 | 6 | 180.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:30L) |
| 20:12 | 20:20 | 0.13 | 2399 | 2488 | 89 | 667.50 | Drilling | Drilling - (WOB:28;GPM :700;RPM:65) |
| 20:20 | 20:24 | 0.07 | 2488 | 2488 | 0 | .00 | Survey & Conn. | Survey & Conn.@2426' Inc 11.33° Azm 230.4° |
| 20:24 | 20:30 | 0.10 | 2488 | 2583 | 95 | 950.00 | Drilling | Drilling - (WOB:28;GPM :700;RPM:65) |
| 20:30 | 20:34 | 0.07 | 2583 | 2583 | 0 | .00 | Survey & Conn. | Survey & Conn.@2521' Inc 11.53° Azm 232.86° |
| 20:34 | 20:36 | 0.03 | 2583 | 2589 | 6 | 180.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:30L) |
| 20:36 | 20:41 | 0.08 | 2589 | 2678 | 89 | 1068.00 | Drilling | Drilling - (WOB:28;GPM :700;RPM:65) |
| 20:41 | 20:46 | 0.08 | 2678 | 2678 | 0 | .00 | Survey & Conn. | Survey & Conn.@2616' Inc 11.8° Azm 231.79° |
| 20:46 | 20:48 | 0.03 | 2678 | 2688 | 10 | 300.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:30R) |
| 20:48 | 20:54 | 0.10 | 2688 | 2773 | 85 | 850.00 | Drilling | Drilling - (WOB:28;GPM :700;RPM:65) |
| 20:54 | 20:58 | 0.07 | 2773 | 2773 | 0 | .00 | Survey & Conn. | Survey & Conn.@2711' Inc 13.16° Azm 238.87° |
| 20:58 | 21:00 | 0.03 | 2773 | 2781 | 8 | 240.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:30L) |
| 21:00 | 21:05 | 0.08 | 2781 | 2868 | 87 | 1044.00 | Drilling | Drilling - (WOB:28;GPM :700;RPM:65) |
| 21:05 | 21:11 | 0.10 | 2868 | 2868 | 0 | .00 | Survey & Conn. | Survey & Conn.@2806' Inc 14.25° Azm 236.99° |
| 21:11 | 21:15 | 0.07 | 2868 | 2880 | 12 | 180.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 21:15 | 21:20 | 0.08 | 2880 | 2963 | 83 | 996.00 | Drilling | Drilling - (WOB:28;GPM :700;RPM:65) |
| 21:20 | 21:24 | 0.07 | 2963 | 2963 | 0 | .00 | Survey & Conn. | Survey & Conn.@2901' Inc 15.53° Azm 235.8° |
| 21:24 | 21:27 | 0.05 | 2963 | 2976 | 13 | 260.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 21:27 | 21:33 | 0.10 | 2976 | 3059 | 83 | 830.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:65) |
| 21:33 | 21:37 | 0.07 | 3059 | 3059 | 0 | .00 | Survey & Conn. | Survey & Conn.@2997' Inc 16.47° Azm 230.89° |
| 21:37 | 21:41 | 0.07 | 3059 | 3074 | 15 | 225.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20R) |
| 21:41 | 21:46 | 0.08 | 3074 | 3154 | 80 | 960.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:65) |
| 21:46 | 21:51 | 0.08 | 3154 | 3154 | 0 | .00 | Survey & Conn. | Survey & Conn.@3092' Inc 17.61° Azm 232.59° |
| 21:51 | 21:54 | 0.05 | 3154 | 3169 | 15 | 300.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20R) |
| 21:54 | 22:00 | 0.10 | 3169 | 3250 | 81 | 810.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 22:00 | 22:03 | 0.05 | 3250 | 3250 | 0 | .00 | Survey & Conn. | Survey & Conn.@3188' Inc 18.01° Azm 231.66° |
| 22:03 | 22:06 | 0.05 | 3250 | 3270 | 20 | 400.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20R) |
| 22:06 | 22:11 | 0.08 | 3270 | 3345 | 75 | 900.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 22:11 | 22:16 | 0.08 | 3345 | 3345 | 0 | .00 | Survey & Conn. | Survey & Conn.@3283' Inc 19.71° Azm 236.9° |
| 22:16 | 22:19 | 0.05 | 3345 | 3363 | 18 | 360.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:10L) |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|---|
| 22:19 | 22:24 | 0.08 | 3363 | 3440 | 77 | 924.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 22:24 | 22:29 | 0.08 | 3440 | 3440 | 0 | .00 | Survey & Conn. | Survey & Conn.@3378' Inc 20.97° Azm 234.64° |
| 22:29 | 22:32 | 0.05 | 3440 | 3453 | 13 | 260.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:10L) |
| 22:32 | 22:38 | 0.10 | 3453 | 3535 | 82 | 820.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 22:38 | 22:43 | 0.08 | 3535 | 3535 | 0 | .00 | Survey & Conn. | Survey & Conn.@3473' Inc 21.18° Azm 235.04° |
| 22:43 | 22:46 | 0.05 | 3535 | 3552 | 17 | 340.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 22:46 | 22:52 | 0.10 | 3552 | 3630 | 78 | 780.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 22:52 | 22:56 | 0.07 | 3630 | 3630 | 0 | .00 | Survey & Conn. | Survey & Conn.@3568' Inc 22.72° Azm 233.69° |
| 22:56 | 22:59 | 0.05 | 3630 | 3645 | 15 | 300.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 22:59 | 23:05 | 0.10 | 3645 | 3725 | 80 | 800.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 23:05 | 23:11 | 0.10 | 3725 | 3725 | 0 | .00 | Survey & Conn. | Survey & Conn.@3663' Inc 25.06° Azm 233.02° |
| 23:11 | 23:18 | 0.12 | 3725 | 3821 | 96 | 822.86 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 23:18 | 23:22 | 0.07 | 3821 | 3821 | 0 | .00 | Survey & Conn. | Survey & Conn.@3759' Inc 24.99° Azm 232.03° |
| 23:22 | 23:25 | 0.05 | 3821 | 3833 | 12 | 240.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 23:25 | 23:32 | 0.12 | 3833 | 3916 | 83 | 711.43 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 23:32 | 23:36 | 0.07 | 3916 | 3916 | 0 | .00 | Survey & Conn. | Survey & Conn.@3854' Inc 27.3° Azm 232.5° |
| 23:36 | 23:42 | 0.10 | 3916 | 4011 | 95 | 950.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 23:42 | 23:46 | 0.07 | 4011 | 4011 | 0 | .00 | Survey & Conn. | Survey & Conn.@3949' Inc 26.66° Azm 231.36° |
| 23:46 | 23:52 | 0.10 | 4011 | 4106 | 95 | 950.00 | Drilling | Drilling - (WOB:30;GPM :700;RPM:50) |
| 23:52 | 23:56 | 0.07 | 4106 | 4106 | 0 | .00 | Survey & Conn. | Survey & Conn.@4044' Inc 23.66° Azm 232.77° |
| 23:56 | 24:00 | 0.07 | 4106 | 4123 | 17 | 255.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:10L) |



JOB NO.: 376640
Company: Extraction Oil & Gas
LOCATION: Breniman Pad
RIG NAME: Patterson 346
STATE: Colorado
COUNTY: Weld
WELL NAME: Breniman 11
Lead Directional : Scott Sandford

Report Time: 2400 **2 of 5**
API JOB # 05-123-40425
WORK ORDER#
FIELD: Wattenburg
Township: 6N
Range/Section 67W 16
Company Man Jose Torres
2nd Dir Hand : Chris Apodaca

From Friday, August 05, 2016 at 0000 to Friday, August 05, 2016 at 2400

| DAILY TOTALS | | ASSEMBLY TOTALS | | | | | | | | | | | |
|-----------------|----------|---------------------|--------------------|--------------|-----------|-------------------|------------|---|-----------|-----------|---------|--|--|
| Start Depth | 4123.00 | BHA # | Motor SN / R.S. SN | Slide Ftg | Slide Hrs | Rotate Ftg | Rotate Hrs | Circ Hrs | D & C Hrs | BHA Ftg | Avg ROP | | |
| End Depth | 10153.00 | 1 | G1239 | 1,946.00 | 11.32 | 13,637.00 | 25.73 | 2.98 | 40.03 | 15,583.00 | 394.17 | | |
| Below Rot Hrs. | 24.00 | | | | | | | | | | | | |
| Total Drilled: | 6030.00 | Drilling Parameters | | Mud Record | | Bit Record | | Current BHA # 1 | | | | | |
| Avg. Total ROP: | 413.49 | WOB: 35 | | Weight: 0 | | Bit No: | | PDC 2.0 FBH Pony Non Mag DC Pony Non Mag DC Non Mag DC Hang Off Sub Antena Sub Non Mag DC Filter Sub 3 Stands H.W.D.P. | | | | | |
| Slide Footage: | 1316.00 | Rot Wt: 0 | | Visc: 0 | | Model PDC | | | | | | | |
| Slide Hours | 5.28 | Pick UP: 0 | | Chlorides: 0 | | SN.: XXXXX | | | | | | | |
| Avg. Slide ROP: | 249.09 | Slack Off: 0 | | YP: 0 | | MFG. | | | | | | | |
| Rotate Footage: | 4714.00 | SPP: 4850 | | PV: 0 | | Type | | | | | | | |
| Rotary Hours | 9.30 | Flow: 700 - 700 | | PH: 0 | | IADC | | | | | | | |
| Avg. Rot ROP: | 506.88 | SPM: 240 | | GAS: 0 | | JETS N/A | | | | | | | |
| Circ Hours | 0.27 | Rot. RPM 20 - 65 | | SAND: 0 | | TFA: 0 | | | | | | | |
| Ream Hours | 0.00 | Mot RPM: 0 - 65 | | WL: 0 | | Hole ID: | | | | | | | |
| Rotary Hrs%: | 63.77 | Incl. In: 0 | | SOLID: 0 | | Bit Hrs: 37.05 | | | | | | | |
| Slide Hrs%: | 36.23 | Azm. In: 0 | | BHT°: 0 | | Bit Ftg: 15583.00 | | | | | | | |
| Rotary Ftg%: | 78.18 | Incl. Out: 0 | | Flow T°: 0 | | PUMPS | | | | | | | |
| Slide Ftg%: | 21.82 | Azm. Out: 0 | | Oil %: 0 | | Liner 0 0 | | | | | | | |
| CASING | | COST BREAKDOWN | | | | | Stroke 0 0 | | | | | | |
| Size | Lb/Ft | MD | | | | | | Effic. 95.00% 95.00% | | | | | |
| | | | | | | | | Gal/Stk 0.00 0.00 | | | | | |
| | | | | | | | | BBL/Stk 0.000 0.000 | | | | | |

GENERAL COMMENT

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|--|
| 00:00 | 00:06 | 0.10 | 4123 | 4202 | 79 | 790.00 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |
| 00:06 | 00:11 | 0.08 | 4202 | 4202 | 0 | .00 | Survey & Conn. | Survey & Conn. @4140' Inc 23.92° Azm 232.75° |
| 00:11 | 00:15 | 0.07 | 4202 | 4219 | 17 | 255.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 00:15 | 00:21 | 0.10 | 4219 | 4297 | 78 | 780.00 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |
| 00:21 | 00:26 | 0.08 | 4297 | 4297 | 0 | .00 | Survey & Conn. | Survey & Conn. @4235' Inc 24.9° Azm 231.79° |
| 00:26 | 00:30 | 0.07 | 4297 | 4317 | 20 | 300.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 00:30 | 00:34 | 0.07 | 4317 | 4363 | 46 | 690.00 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |
| 00:34 | 00:39 | 0.08 | 4363 | 4373 | 10 | 120.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 00:39 | 00:41 | 0.03 | 4373 | 4392 | 19 | 570.00 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |
| 00:41 | 00:46 | 0.08 | 4392 | 4392 | 0 | .00 | Survey & Conn. | Survey & Conn. @4330' Inc 26.85° Azm 234.08° |
| 00:46 | 00:50 | 0.07 | 4392 | 4411 | 19 | 285.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 00:50 | 00:54 | 0.07 | 4411 | 4459 | 48 | 720.00 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |
| 00:54 | 01:01 | 0.12 | 4459 | 4469 | 10 | 85.71 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 01:01 | 01:03 | 0.03 | 4469 | 4487 | 18 | 540.00 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|---|
| 01:03 | 01:08 | 0.08 | 4487 | 4487 | 0 | .00 | Survey & Conn. | Survey & Conn.@4425' Inc 30.86° Azm 233.68° |
| 01:08 | 01:11 | 0.05 | 4487 | 4501 | 14 | 280.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 01:11 | 01:18 | 0.12 | 4501 | 4583 | 82 | 702.86 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |
| 01:18 | 01:22 | 0.07 | 4583 | 4583 | 0 | .00 | Survey & Conn. | Survey & Conn.@4521' Inc 31.4° Azm 233.15° |
| 01:22 | 01:27 | 0.08 | 4583 | 4603 | 20 | 240.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 01:27 | 01:33 | 0.10 | 4603 | 4678 | 75 | 750.00 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |
| 01:33 | 01:37 | 0.07 | 4678 | 4678 | 0 | .00 | Survey & Conn. | Survey & Conn.@4616' Inc 31.47° Azm 232.12° |
| 01:37 | 01:43 | 0.10 | 4678 | 4705 | 27 | 270.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 01:43 | 01:47 | 0.07 | 4705 | 4747 | 42 | 630.00 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |
| 01:47 | 01:52 | 0.08 | 4747 | 4762 | 15 | 180.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 01:52 | 01:54 | 0.03 | 4762 | 4773 | 11 | 330.00 | Drilling | Drilling - (WOB:32;GPM :700;RPM:50) |
| 01:54 | 01:59 | 0.08 | 4773 | 4773 | 0 | .00 | Survey & Conn. | Survey & Conn.@4711' Inc 33.6° Azm 230.19° |
| 01:59 | 02:02 | 0.05 | 4773 | 4785 | 12 | 240.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 02:02 | 02:10 | 0.13 | 4785 | 4869 | 84 | 630.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 02:10 | 02:14 | 0.07 | 4869 | 4869 | 0 | .00 | Survey & Conn. | Survey & Conn.@4807' Inc 37.57° Azm 229.12° |
| 02:14 | 02:22 | 0.13 | 4869 | 4964 | 95 | 712.50 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 02:22 | 02:26 | 0.07 | 4964 | 4964 | 0 | .00 | Survey & Conn. | Survey & Conn.@4902' Inc 36.02° Azm 229.72° |
| 02:26 | 02:36 | 0.17 | 4964 | 4980 | 16 | 96.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 02:36 | 02:42 | 0.10 | 4980 | 5059 | 79 | 790.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 02:42 | 02:46 | 0.07 | 5059 | 5059 | 0 | .00 | Survey & Conn. | Survey & Conn.@4997' Inc 34.58° Azm 231.72° |
| 02:46 | 02:50 | 0.07 | 5059 | 5076 | 17 | 255.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:10L) |
| 02:50 | 02:57 | 0.12 | 5076 | 5154 | 78 | 668.57 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 02:57 | 03:02 | 0.08 | 5154 | 5154 | 0 | .00 | Survey & Conn. | Survey & Conn.@5092' Inc 36.1° Azm 230.75° |
| 03:02 | 03:04 | 0.03 | 5154 | 5162 | 8 | 240.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 03:04 | 03:12 | 0.13 | 5162 | 5250 | 88 | 660.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 03:12 | 03:17 | 0.08 | 5250 | 5250 | 0 | .00 | Survey & Conn. | Survey & Conn.@5188' Inc 33.09° Azm 230.95° |
| 03:17 | 03:23 | 0.10 | 5250 | 5275 | 25 | 250.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 03:23 | 03:30 | 0.12 | 5275 | 5345 | 70 | 600.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 03:30 | 03:34 | 0.07 | 5345 | 5345 | 0 | .00 | Survey & Conn. | Survey & Conn.@5283' Inc 33.53° Azm 230.66° |
| 03:34 | 03:39 | 0.08 | 5345 | 5370 | 25 | 300.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 03:39 | 03:46 | 0.12 | 5370 | 5441 | 71 | 608.57 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 03:46 | 03:50 | 0.07 | 5441 | 5441 | 0 | .00 | Survey & Conn. | Survey & Conn.@5379' Inc 32.81° Azm 228.87° |
| 03:50 | 03:56 | 0.10 | 5441 | 5471 | 30 | 300.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20R) |
| 03:56 | 04:00 | 0.07 | 5471 | 5507 | 36 | 540.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 04:00 | 04:06 | 0.10 | 5507 | 5521 | 14 | 140.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20R) |
| 04:06 | 04:08 | 0.03 | 5521 | 5536 | 15 | 450.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 04:08 | 04:12 | 0.07 | 5536 | 5536 | 0 | .00 | Survey & Conn. | Survey & Conn.@5474' Inc 33.53° Azm 229.44° |
| 04:12 | 04:18 | 0.10 | 5536 | 5556 | 20 | 200.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20R) |
| 04:18 | 04:25 | 0.12 | 5556 | 5632 | 76 | 651.43 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 04:25 | 04:30 | 0.08 | 5632 | 5632 | 0 | .00 | Survey & Conn. | Survey & Conn.@5570' Inc 33.91° Azm 232.97° |
| 04:30 | 04:34 | 0.07 | 5632 | 5662 | 30 | 450.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20R) |
| 04:34 | 04:38 | 0.07 | 5662 | 5700 | 38 | 570.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 04:38 | 04:44 | 0.10 | 5700 | 5715 | 15 | 150.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 04:44 | 04:46 | 0.03 | 5715 | 5727 | 12 | 360.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 04:46 | 04:50 | 0.07 | 5727 | 5727 | 0 | .00 | Survey & Conn. | Survey & Conn.@5665' Inc 34.85° Azm 231.72° |
| 04:50 | 04:55 | 0.08 | 5727 | 5747 | 20 | 240.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 04:55 | 05:01 | 0.10 | 5747 | 5823 | 76 | 760.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:45) |
| 05:01 | 05:06 | 0.08 | 5823 | 5823 | 0 | .00 | Survey & Conn. | Survey & Conn.@5761' Inc 37.38° Azm 233.4° |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|--|
| 05:06 | 05:10 | 0.07 | 5823 | 5840 | 17 | 255.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20L) |
| 05:10 | 05:17 | 0.12 | 5840 | 5918 | 78 | 668.57 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 05:17 | 05:21 | 0.07 | 5918 | 5918 | 0 | .00 | Survey & Conn. | Survey & Conn.@5856' Inc 35.59° Azm 230.16° |
| 05:21 | 05:26 | 0.08 | 5918 | 5938 | 20 | 240.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:20R) |
| 05:26 | 05:32 | 0.10 | 5938 | 6014 | 76 | 760.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:60) |
| 05:32 | 05:36 | 0.07 | 6014 | 6014 | 0 | .00 | Survey & Conn. | Survey & Conn.@5952' Inc 36.08° Azm 232.18° |
| 05:36 | 05:41 | 0.08 | 6014 | 6029 | 15 | 180.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 05:41 | 05:47 | 0.10 | 6029 | 6109 | 80 | 800.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:45) |
| 05:47 | 05:52 | 0.08 | 6109 | 6109 | 0 | .00 | Survey & Conn. | Survey & Conn.@6047' Inc 34.56° Azm 231.69° |
| 05:52 | 05:57 | 0.08 | 6109 | 6129 | 20 | 240.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 05:57 | 06:04 | 0.12 | 6129 | 6204 | 75 | 642.86 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 06:04 | 06:14 | 0.17 | 6204 | 6204 | 0 | .00 | Survey & Conn. | Survey & Conn.@6142' Inc 32.45° Azm 228.59° |
| 06:14 | 06:20 | 0.10 | 6204 | 6229 | 25 | 250.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 06:20 | 06:26 | 0.10 | 6229 | 6300 | 71 | 710.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 06:26 | 06:30 | 0.07 | 6300 | 6300 | 0 | .00 | Survey & Conn. | Survey & Conn.@6238' Inc 30.47° Azm 230.19° |
| 06:30 | 06:36 | 0.10 | 6300 | 6335 | 35 | 350.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 06:36 | 06:41 | 0.08 | 6335 | 6395 | 60 | 720.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 06:41 | 06:45 | 0.07 | 6395 | 6395 | 0 | .00 | Survey & Conn. | Survey & Conn.@6333' Inc 30.72° Azm 227.66° |
| 06:45 | 06:53 | 0.13 | 6395 | 6435 | 40 | 300.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G)) |
| 06:53 | 06:59 | 0.10 | 6435 | 6490 | 55 | 550.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 06:59 | 07:03 | 0.07 | 6490 | 6490 | 0 | .00 | Survey & Conn. | Survey & Conn.@6428' Inc 32.33° Azm 229.28° |
| 07:03 | 07:10 | 0.12 | 6490 | 6525 | 35 | 300.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:30R) |
| 07:10 | 07:15 | 0.08 | 6525 | 6585 | 60 | 720.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 07:15 | 07:19 | 0.07 | 6585 | 6585 | 0 | .00 | Survey & Conn. | Survey & Conn.@6523' Inc 35.45° Azm 229.11° |
| 07:19 | 07:23 | 0.07 | 6585 | 6600 | 15 | 225.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:30R)) |
| 07:23 | 07:30 | 0.12 | 6600 | 6680 | 80 | 685.71 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 07:30 | 07:34 | 0.07 | 6680 | 6680 | 0 | .00 | Survey & Conn. | Survey & Conn.@6618' Inc 33.5° Azm 230.82° |
| 07:34 | 07:39 | 0.08 | 6680 | 6705 | 25 | 300.00 | Sliding | Sliding - (WOB:25;GPM :700;TFO:0G) |
| 07:39 | 07:45 | 0.10 | 6705 | 6776 | 71 | 710.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 07:45 | 07:49 | 0.07 | 6776 | 6776 | 0 | .00 | Survey & Conn. | Survey & Conn.@6714' Inc 31.64° Azm 230.21° |
| 07:49 | 07:56 | 0.12 | 6776 | 6811 | 35 | 300.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:0)) |
| 23:40 | 23:52 | 0.20 | 10043 | 10139 | 96 | 480.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 23:52 | 23:57 | 0.08 | 10139 | 10139 | 0 | .00 | Survey & Conn. | Survey & Conn.@10077' Inc 90.84° Azm 271.88° |
| 23:57 | 24:00 | 0.05 | 10139 | 10153 | 14 | 280.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 07:56 | 08:01 | 0.08 | 6811 | 6871 | 60 | 720.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 08:01 | 08:05 | 0.07 | 6871 | 6871 | 0 | .00 | Survey & Conn. | Survey & Conn.@6809' Inc 30.33° Azm 230.26° |
| 08:05 | 08:13 | 0.13 | 6871 | 6911 | 40 | 300.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:10R) |
| 08:13 | 08:18 | 0.08 | 6911 | 6966 | 55 | 660.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 08:18 | 08:22 | 0.07 | 6966 | 6966 | 0 | .00 | Survey & Conn. | Survey & Conn.@6904' Inc 30.83° Azm 233.23° |
| 08:22 | 08:30 | 0.13 | 6966 | 7006 | 40 | 300.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:10R)) |
| 08:30 | 08:35 | 0.08 | 7006 | 7062 | 56 | 672.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 08:35 | 08:39 | 0.07 | 7062 | 7062 | 0 | .00 | Survey & Conn. | Survey & Conn.@7000' Inc 30.56° Azm 230.83° |
| 08:39 | 08:49 | 0.17 | 7062 | 7112 | 50 | 300.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:20L)) |
| 08:49 | 08:54 | 0.08 | 7112 | 7157 | 45 | 540.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:50) |
| 08:54 | 08:58 | 0.07 | 7157 | 7157 | 0 | .00 | Survey & Conn. | Survey & Conn.@7095' Inc 32.52° Azm 230.78° |
| 08:58 | 09:11 | 0.22 | 7157 | 7253 | 96 | 443.08 | Sliding | Sliding - (WOB:35;GPM :700;TFO:10R)) |
| 09:11 | 09:15 | 0.07 | 7253 | 7253 | 0 | .00 | Survey & Conn. | Survey & Conn.@7191' Inc 34.4° Azm 237.06° |
| 09:15 | 09:30 | 0.25 | 7253 | 7348 | 95 | 380.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:40R) |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|---|
| 09:30 | 09:34 | 0.07 | 7348 | 7348 | 0 | .00 | Survey & Conn. | Survey & Conn.@7286' Inc 43.38° Azm 245.3° |
| 09:34 | 09:39 | 0.08 | 7348 | 7373 | 25 | 300.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 09:39 | 09:51 | 0.20 | 7373 | 7443 | 70 | 350.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:40R) |
| 09:51 | 10:03 | 0.20 | 7443 | 7443 | 0 | .00 | Survey & Conn. | Survey & Conn.@7381' Inc 50.57° Azm 247.98° |
| 10:03 | 10:07 | 0.07 | 7443 | 7473 | 30 | 450.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 10:07 | 10:19 | 0.20 | 7473 | 7538 | 65 | 325.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:40R) |
| 10:19 | 10:24 | 0.08 | 7538 | 7538 | 0 | .00 | Survey & Conn. | Survey & Conn.@7476' Inc 58.95° Azm 254.61° |
| 10:24 | 10:35 | 0.18 | 7538 | 7633 | 95 | 518.18 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 10:35 | 10:39 | 0.07 | 7633 | 7633 | 0 | .00 | Survey & Conn. | Survey & Conn.@7571' Inc 67.07° Azm 260.88° |
| 10:39 | 10:47 | 0.13 | 7633 | 7697 | 64 | 480.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 10:47 | 11:03 | 0.27 | 7697 | 7729 | 32 | 120.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:40R)) |
| 11:03 | 11:07 | 0.07 | 7729 | 7729 | 0 | .00 | Survey & Conn. | Survey & Conn.@7667' Inc 66.75° Azm 260.5° |
| 11:07 | 11:14 | 0.12 | 7729 | 7762 | 33 | 282.86 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 11:14 | 11:25 | 0.18 | 7762 | 7807 | 45 | 245.45 | Sliding | Sliding - (WOB:35;GPM :700;TFO:20R) |
| 11:25 | 11:29 | 0.07 | 7807 | 7824 | 17 | 255.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 11:29 | 11:33 | 0.07 | 7824 | 7824 | 0 | .00 | Survey & Conn. | Survey & Conn.@7762' Inc 72.66° Azm 263.26° |
| 11:33 | 11:42 | 0.15 | 7824 | 7874 | 50 | 333.33 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 11:42 | 11:47 | 0.08 | 7874 | 7882 | 8 | 96.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:20R)) |
| 11:47 | 11:55 | 0.13 | 7882 | 7920 | 38 | 285.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 11:55 | 11:59 | 0.07 | 7920 | 7920 | 0 | .00 | Survey & Conn. | Survey & Conn.@7858' Inc 79.47° Azm 266.07° |
| 11:59 | 12:04 | 0.08 | 7920 | 7955 | 35 | 420.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 12:04 | 12:13 | 0.15 | 7955 | 7985 | 30 | 200.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:10L)) |
| 12:13 | 12:18 | 0.08 | 7985 | 8015 | 30 | 360.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 12:18 | 12:22 | 0.07 | 8015 | 8015 | 0 | .00 | Survey & Conn. | Survey & Conn.@7953' Inc 81.85° Azm 266.22° |
| 12:22 | 12:28 | 0.10 | 8015 | 8050 | 35 | 350.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 12:28 | 12:38 | 0.17 | 8050 | 8082 | 32 | 192.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:0G)) |
| 12:38 | 12:45 | 0.12 | 8082 | 8110 | 28 | 240.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:20) |
| 12:45 | 12:49 | 0.07 | 8110 | 8110 | 0 | .00 | Survey & Conn. | Survey & Conn.@8048' Inc 86.34° Azm 268.45° |
| 12:49 | 13:02 | 0.22 | 8110 | 8206 | 96 | 443.08 | Drilling | Drilling - (WOB:36;GPM :700;RPM:65) |
| 13:02 | 13:06 | 0.07 | 8206 | 8206 | 0 | .00 | Survey & Conn. | Survey & Conn.@8144' Inc 90.87° Azm 268.63° |
| 13:06 | 13:20 | 0.23 | 8206 | 8301 | 95 | 407.14 | Drilling | Drilling - (WOB:36;GPM :700;RPM:65) |
| 13:20 | 13:24 | 0.07 | 8301 | 8301 | 0 | .00 | Survey & Conn. | Survey & Conn.@8239' Inc 90.84° Azm 268.91° |
| 13:24 | 13:36 | 0.20 | 8301 | 8396 | 95 | 475.00 | Drilling | Drilling - (WOB:36;GPM :700;RPM:65) |
| 13:36 | 13:52 | 0.27 | 8396 | 8396 | 0 | .00 | Circulating | Circulating |
| 13:52 | 18:00 | 4.13 | 8396 | 8396 | 0 | .00 | Short Trip | Short Trip - Pick Up Agitator |
| 18:00 | 18:04 | 0.07 | 8396 | 8422 | 26 | 390.00 | Drilling | Drilling - (WOB:20;GPM :700;RPM:65) |
| 18:04 | 18:08 | 0.07 | 8422 | 8422 | 0 | .00 | Survey & Conn. | Survey & Conn.@8334' Inc 91.34° Azm 268.88° |
| 18:08 | 18:18 | 0.17 | 8422 | 8517 | 95 | 570.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 18:18 | 18:22 | 0.07 | 8517 | 8517 | 0 | .00 | Survey & Conn. | Survey & Conn.@8455' Inc 90.91° Azm 267.89° |
| 18:22 | 18:33 | 0.18 | 8517 | 8613 | 96 | 523.64 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 18:33 | 18:40 | 0.12 | 8613 | 8613 | 0 | .00 | Other | Tighten Up Mud Line |
| 18:40 | 18:46 | 0.10 | 8613 | 8613 | 0 | .00 | Survey & Conn. | Survey & Conn.@8551' Inc 91.14° Azm 267.67° |
| 18:46 | 18:50 | 0.07 | 8613 | 8626 | 13 | 195.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:120R) |
| 18:50 | 19:00 | 0.17 | 8626 | 8708 | 82 | 492.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 19:00 | 19:04 | 0.07 | 8708 | 8708 | 0 | .00 | Survey & Conn. | Survey & Conn.@8646' Inc 91.01° Azm 270.13° |
| 19:04 | 19:18 | 0.23 | 8708 | 8803 | 95 | 407.14 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 19:18 | 19:23 | 0.08 | 8803 | 8803 | 0 | .00 | Survey & Conn. | Survey & Conn.@8741' Inc 90.73° Azm 269.9° |
| 19:23 | 19:34 | 0.18 | 8803 | 8899 | 96 | 523.64 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|---|
| 19:34 | 19:39 | 0.08 | 8899 | 8899 | 0 | .00 | Survey & Conn. | Survey & Conn.@8837' Inc 89.8° Azm 269.49° |
| 19:39 | 19:54 | 0.25 | 8899 | 8994 | 95 | 380.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 19:54 | 19:59 | 0.08 | 8994 | 8994 | 0 | .00 | Survey & Conn. | Survey & Conn.@8932' Inc 89.97° Azm 269.62° |
| 19:59 | 20:12 | 0.22 | 8994 | 9089 | 95 | 438.46 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 20:12 | 20:17 | 0.08 | 9089 | 9089 | 0 | .00 | Survey & Conn. | Survey & Conn.@9027' Inc 90.1° Azm 270.64° |
| 20:17 | 20:31 | 0.23 | 9089 | 9185 | 96 | 411.43 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 20:31 | 20:36 | 0.08 | 9185 | 9185 | 0 | .00 | Survey & Conn. | Survey & Conn.@9123' Inc 90.6° Azm 271.49° |
| 20:36 | 20:49 | 0.22 | 9185 | 9280 | 95 | 438.46 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 20:49 | 20:54 | 0.08 | 9280 | 9280 | 0 | .00 | Survey & Conn. | Survey & Conn.@9218' Inc 90.6° Azm 270.66° |
| 20:54 | 21:08 | 0.23 | 9280 | 9375 | 95 | 407.14 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 21:08 | 21:13 | 0.08 | 9375 | 9375 | 0 | .00 | Survey & Conn. | Survey & Conn.@9313' Inc 91.78° Azm 270.82° |
| 21:13 | 21:18 | 0.08 | 9375 | 9388 | 13 | 156.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:170L) |
| 21:18 | 21:31 | 0.22 | 9388 | 9471 | 83 | 383.08 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 21:31 | 21:36 | 0.08 | 9471 | 9471 | 0 | .00 | Survey & Conn. | Survey & Conn.@9409' Inc 89.87° Azm 269.65° |
| 21:36 | 21:50 | 0.23 | 9471 | 9566 | 95 | 407.14 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 21:50 | 21:55 | 0.08 | 9566 | 9566 | 0 | .00 | Survey & Conn. | Survey & Conn.@9504' Inc 89.7° Azm 269.35° |
| 21:55 | 22:12 | 0.28 | 9566 | 9662 | 96 | 338.82 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 22:12 | 22:17 | 0.08 | 9662 | 9662 | 0 | .00 | Survey & Conn. | Survey & Conn.@9600' Inc 90.24° Azm 269° |
| 22:17 | 22:31 | 0.23 | 9662 | 9757 | 95 | 407.14 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 22:31 | 22:36 | 0.08 | 9757 | 9757 | 0 | .00 | Survey & Conn. | Survey & Conn.@9695' Inc 91.44° Azm 269.27° |
| 22:36 | 22:44 | 0.13 | 9757 | 9772 | 15 | 112.50 | Sliding | Sliding - (WOB:35;GPM :700;TFO:135R) |
| 22:44 | 22:56 | 0.20 | 9772 | 9853 | 81 | 405.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 22:56 | 23:01 | 0.08 | 9853 | 9853 | 0 | .00 | Survey & Conn. | Survey & Conn.@9791' Inc 90.54° Azm 271.52° |
| 23:01 | 23:04 | 0.05 | 9853 | 9859 | 6 | 120.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:180) |
| 23:04 | 23:18 | 0.23 | 9859 | 9948 | 89 | 381.43 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 23:18 | 23:23 | 0.08 | 9948 | 9948 | 0 | .00 | Survey & Conn. | Survey & Conn.@9886' Inc 89.87° Azm 270.73° |
| 23:23 | 23:35 | 0.20 | 9948 | 10043 | 95 | 475.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 23:35 | 23:40 | 0.08 | 10043 | 10043 | 0 | .00 | Survey & Conn. | Survey & Conn.@9981' Inc 90.3° Azm 271.59° |



JOB NO.: 376640
Company: Extraction Oil & Gas
LOCATION: Breniman Pad
RIG NAME: Patterson 346
STATE: Colorado
COUNTY: Weld
WELL NAME: Breniman 11
Lead Directional : Scott Sandford

Report Time: 2400 **3 of 5**
API JOB # 05-123-40425
WORK ORDER#
FIELD: Wattenburg
Township: 6N
Range/Section 67W 16
Company Man Jose Torres
2nd Dir Hand : Chris Apodaca

From Saturday, August 06, 2016 at 0000 to Saturday, August 06, 2016 at 2400

| DAILY TOTALS | | ASSEMBLY TOTALS | | | | | | | | | |
|-----------------|----------|---------------------|--------------------|--------------|-----------|-------------------|------------|---|-----------|-----------|---------|
| Start Depth | 10153.00 | BHA # | Motor SN / R.S. SN | Slide Ftg | Slide Hrs | Rotate Ftg | Rotate Hrs | Circ Hrs | D & C Hrs | BHA Ftg | Avg ROP |
| End Depth | 16534.00 | 1 | G1239 | 1,946.00 | 11.32 | 13,637.00 | 25.73 | 2.98 | 40.03 | 15,583.00 | 394.17 |
| Below Rot Hrs. | 24.00 | | | | | | | | | | |
| Total Drilled: | 6381.00 | Drilling Parameters | | Mud Record | | Bit Record | | Current BHA # 1 | | | |
| Avg. Total ROP: | 379.82 | WOB: 42 | | Weight: 0 | | Bit No: | | PDC 2.0 FBH Pony Non Mag DC Pony Non Mag DC Non Mag DC Hang Off Sub Antena Sub Non Mag DC Filter Sub 3 Stands H.W.D.P. | | | |
| Slide Footage: | 363.00 | Rot Wt: 0 | | Visc: 0 | | Model PDC | | | | | |
| Slide Hours | 4.43 | Pick UP: 0 | | Chlorides: 0 | | SN.: XXXXX | | | | | |
| Avg. Slide ROP: | 81.88 | Slack Off: 0 | | YP: 0 | | MFG. | | | | | |
| Rotate Footage: | 6018.00 | SPP: 5575 | | PV: 0 | | Type | | | | | |
| Rotary Hours | 12.37 | Flow: 700 - 700 | | PH: 0 | | IADC | | | | | |
| Avg. Rot ROP: | 486.63 | SPM: 240 | | GAS: 0 | | JETS N/A | | | | | |
| Circ Hours | 0.42 | Rot. RPM 65 - 65 | | SAND: 0 | | TFA: 0 | | | | | |
| Ream Hours | 0.00 | Mot RPM: 65 - 65 | | WL: 0 | | Hole ID: | | | | | |
| Rotary Hrs%: | 73.61 | Incl. In: 0 | | SOLID: 0 | | Bit Hrs: 37.05 | | | | | |
| Slide Hrs%: | 26.39 | Incl. Out: 0 | | BHT°: 0 | | Bit Ftg: 15583.00 | | | | | |
| Rotary Ftg%: | 94.31 | Azm. In: 0 | | Flow T°: 0 | | PUMPS | | | | | |
| Slide Ftg%: | 5.69 | Azm. Out: 0 | | Oil %: 0 | | Liner 0 0 | | | | | |
| COST BREAKDOWN | | | | | | | | | | | |
| Size Lb/Ft MD | | | | | | | | | | | |
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GENERAL COMMENT

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|---|
| 00:00 | 00:04 | 0.07 | 10153 | 10163 | 10 | 150.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:180) |
| 00:04 | 00:16 | 0.20 | 10163 | 10235 | 72 | 360.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 00:16 | 00:21 | 0.08 | 10235 | 10235 | 0 | .00 | Survey & Conn. | Survey & Conn. @10173' Inc 89.46° Azm 271.92° |
| 00:21 | 00:33 | 0.20 | 10235 | 10330 | 95 | 475.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 00:33 | 00:38 | 0.08 | 10330 | 10330 | 0 | .00 | Survey & Conn. | Survey & Conn. @10268' Inc 88.99° Azm 273.26° |
| 00:38 | 00:44 | 0.10 | 10330 | 10345 | 15 | 150.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:80L) |
| 00:44 | 00:55 | 0.18 | 10345 | 10425 | 80 | 436.36 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 00:55 | 00:59 | 0.07 | 10425 | 10425 | 0 | .00 | Survey & Conn. | Survey & Conn. @10363' Inc 89.26° Azm 270.57° |
| 00:59 | 01:12 | 0.22 | 10425 | 10521 | 96 | 443.08 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 01:12 | 01:17 | 0.08 | 10521 | 10521 | 0 | .00 | Survey & Conn. | Survey & Conn. @10459' Inc 88.83° Azm 271.96° |
| 01:17 | 01:25 | 0.13 | 10521 | 10539 | 18 | 135.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:60L) |
| 01:25 | 01:36 | 0.18 | 10539 | 10616 | 77 | 420.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 01:36 | 01:41 | 0.08 | 10616 | 10616 | 0 | .00 | Survey & Conn. | Survey & Conn. @10554' Inc 90.3° Azm 270.13° |
| 01:41 | 01:54 | 0.22 | 10616 | 10711 | 95 | 438.46 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|--|
| 01:54 | 01:59 | 0.08 | 10711 | 10711 | 0 | .00 | Survey & Conn. | Survey & Conn.@10649' Inc 90.37° Azm 270.09° |
| 01:59 | 02:12 | 0.22 | 10711 | 10806 | 95 | 438.46 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 02:12 | 02:20 | 0.13 | 10806 | 10806 | 0 | .00 | Survey & Conn. | Survey & Conn.@10744' Inc 90.91° Azm 270.99° |
| 02:20 | 02:32 | 0.20 | 10806 | 10902 | 96 | 480.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 02:32 | 02:36 | 0.07 | 10902 | 10902 | 0 | .00 | Survey & Conn. | Survey & Conn.@10840' Inc 91.24° Azm 271.24° |
| 02:36 | 02:45 | 0.15 | 10902 | 10922 | 20 | 133.33 | Sliding | Sliding - (WOB:35;GPM :700;TFO:120L) |
| 02:45 | 02:54 | 0.15 | 10922 | 10997 | 75 | 500.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 02:54 | 02:58 | 0.07 | 10997 | 10997 | 0 | .00 | Survey & Conn. | Survey & Conn.@10935' Inc 89.83° Azm 267° |
| 02:58 | 03:11 | 0.22 | 10997 | 11092 | 95 | 438.46 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 03:11 | 03:16 | 0.08 | 11092 | 11092 | 0 | .00 | Survey & Conn. | Survey & Conn.@11030' Inc 89.53° Azm 266.39° |
| 03:16 | 03:22 | 0.10 | 11092 | 11107 | 15 | 150.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:60R) |
| 03:22 | 03:33 | 0.18 | 11107 | 11188 | 81 | 441.82 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 03:33 | 03:37 | 0.07 | 11188 | 11188 | 0 | .00 | Survey & Conn. | Survey & Conn.@11126' Inc 90.9° Azm 269.91° |
| 03:37 | 03:47 | 0.17 | 11188 | 11283 | 95 | 570.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 03:47 | 03:51 | 0.07 | 11283 | 11283 | 0 | .00 | Survey & Conn. | Survey & Conn.@11221' Inc 91.45° Azm 269.15° |
| 03:51 | 04:01 | 0.17 | 11283 | 11378 | 95 | 570.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 04:01 | 04:05 | 0.07 | 11378 | 11378 | 0 | .00 | Survey & Conn. | Survey & Conn.@11316' Inc 92.92° Azm 269.87° |
| 04:05 | 04:10 | 0.08 | 11378 | 11388 | 10 | 120.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:170L) |
| 04:10 | 04:21 | 0.18 | 11388 | 11473 | 85 | 463.64 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 04:21 | 04:26 | 0.08 | 11473 | 11473 | 0 | .00 | Survey & Conn. | Survey & Conn.@11411' Inc 91.98° Azm 270.02° |
| 04:26 | 04:29 | 0.05 | 11473 | 11480 | 7 | 140.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:170L) |
| 04:29 | 04:40 | 0.18 | 11480 | 11569 | 89 | 485.45 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 04:40 | 04:44 | 0.07 | 11569 | 11569 | 0 | .00 | Survey & Conn. | Survey & Conn.@11507' Inc 91.75° Azm 269.82° |
| 04:44 | 04:54 | 0.17 | 11569 | 11664 | 95 | 570.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 04:54 | 04:58 | 0.07 | 11664 | 11664 | 0 | .00 | Survey & Conn. | Survey & Conn.@11602' Inc 91.31° Azm 270.35° |
| 04:58 | 05:09 | 0.18 | 11664 | 11759 | 95 | 518.18 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 05:09 | 05:13 | 0.07 | 11759 | 11759 | 0 | .00 | Survey & Conn. | Survey & Conn.@11697' Inc 91.04° Azm 270.32° |
| 05:13 | 05:17 | 0.07 | 11759 | 11761 | 2 | 30.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:40L) |
| 05:17 | 05:28 | 0.18 | 11761 | 11855 | 94 | 512.73 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 05:28 | 05:32 | 0.07 | 11855 | 11855 | 0 | .00 | Survey & Conn. | Survey & Conn.@11793' Inc 93.03° Azm 270.93° |
| 05:32 | 05:42 | 0.17 | 11855 | 11867 | 12 | 72.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:40L) |
| 05:42 | 05:52 | 0.17 | 11867 | 11950 | 83 | 498.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 05:52 | 05:56 | 0.07 | 11950 | 11950 | 0 | .00 | Survey & Conn. | Survey & Conn.@11888' Inc 92.51° Azm 271.99° |
| 05:56 | 06:05 | 0.15 | 11950 | 12046 | 96 | 640.00 | Drilling | Drilling - (WOB:35;GPM :700;RPM:65) |
| 06:05 | 06:11 | 0.10 | 12046 | 12046 | 0 | .00 | Survey & Conn. | Survey & Conn.@11984' Inc 92.72° Azm 272.39° |
| 06:11 | 06:20 | 0.15 | 12046 | 12058 | 12 | 80.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:40L)) |
| 06:20 | 06:30 | 0.17 | 12058 | 12141 | 83 | 498.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 06:30 | 06:34 | 0.07 | 12141 | 12141 | 0 | .00 | Survey & Conn. | Survey & Conn.@12079' Inc 91.24° Azm 270.55° |
| 06:34 | 06:43 | 0.15 | 12141 | 12236 | 95 | 633.33 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 06:43 | 06:47 | 0.07 | 12236 | 12236 | 0 | .00 | Survey & Conn. | Survey & Conn.@12174' Inc 91.6° Azm 271.39° |
| 06:47 | 06:54 | 0.12 | 12236 | 12246 | 10 | 85.71 | Sliding | Sliding - (WOB:35;GPM :700;TFO:120L)) |
| 06:54 | 07:04 | 0.17 | 12246 | 12332 | 86 | 516.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 07:04 | 07:08 | 0.07 | 12332 | 12332 | 0 | .00 | Survey & Conn. | Survey & Conn.@12270' Inc 91.68° Azm 268.77° |
| 07:08 | 07:12 | 0.07 | 12332 | 12339 | 7 | 105.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:0G)) |
| 07:12 | 07:22 | 0.17 | 12339 | 12427 | 88 | 528.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 07:22 | 07:26 | 0.07 | 12427 | 12427 | 0 | .00 | Survey & Conn. | Survey & Conn.@12365' Inc 93.28° Azm 269.79° |
| 07:26 | 07:37 | 0.18 | 12427 | 12522 | 95 | 518.18 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 07:37 | 07:41 | 0.07 | 12522 | 12522 | 0 | .00 | Survey & Conn. | Survey & Conn.@12460' Inc 92.72° Azm 269.56° |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|--|
| 07:41 | 07:52 | 0.18 | 12522 | 12617 | 95 | 518.18 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 07:52 | 07:56 | 0.07 | 12617 | 12617 | 0 | .00 | Survey & Conn. | Survey & Conn.@12555' Inc 92.98° Azm 271.17° |
| 07:56 | 08:02 | 0.10 | 12617 | 12626 | 9 | 90.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:0G)) |
| 08:02 | 08:12 | 0.17 | 12626 | 12712 | 86 | 516.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 08:12 | 08:16 | 0.07 | 12712 | 12712 | 0 | .00 | Survey & Conn. | Survey & Conn.@12650' Inc 94.36° Azm 270.26° |
| 08:16 | 08:27 | 0.18 | 12712 | 12808 | 96 | 523.64 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 08:27 | 08:31 | 0.07 | 12808 | 12808 | 0 | .00 | Survey & Conn. | Survey & Conn.@12746' Inc 95.34° Azm 269.87° |
| 08:31 | 08:35 | 0.07 | 12808 | 12815 | 7 | 105.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:70L)) |
| 08:35 | 08:46 | 0.18 | 12815 | 12903 | 88 | 480.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 08:46 | 08:50 | 0.07 | 12903 | 12903 | 0 | .00 | Survey & Conn. | Survey & Conn.@12841' Inc 95.18° Azm 269.56° |
| 08:50 | 08:59 | 0.15 | 12903 | 12918 | 15 | 100.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:160L)) |
| 08:59 | 09:09 | 0.17 | 12918 | 12998 | 80 | 480.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 09:09 | 09:17 | 0.13 | 12998 | 12998 | 0 | .00 | Survey & Conn. | Survey & Conn.@12936' Inc 93.86° Azm 267.45° |
| 09:17 | 09:24 | 0.12 | 12998 | 13010 | 12 | 102.86 | Sliding | Sliding - (WOB:35;GPM :700;TFO:150L)) |
| 09:24 | 09:34 | 0.17 | 13010 | 13093 | 83 | 498.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 09:34 | 09:42 | 0.13 | 13093 | 13093 | 0 | .00 | Survey & Conn. | Survey & Conn.@13031' Inc 92.95° Azm 268.25° |
| 09:42 | 09:52 | 0.17 | 13093 | 13189 | 96 | 576.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 09:52 | 10:00 | 0.13 | 13189 | 13189 | 0 | .00 | Survey & Conn. | Survey & Conn.@13127' Inc 92.95° Azm 268.35° |
| 10:00 | 10:10 | 0.17 | 13189 | 13284 | 95 | 570.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 10:10 | 10:17 | 0.12 | 13284 | 13284 | 0 | .00 | Survey & Conn. | Survey & Conn.@13222' Inc 92.78° Azm 268.27° |
| 10:17 | 10:26 | 0.15 | 13284 | 13379 | 95 | 633.33 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 10:26 | 10:33 | 0.12 | 13379 | 13379 | 0 | .00 | Survey & Conn. | Survey & Conn.@13317' Inc 93.09° Azm 267.28° |
| 10:33 | 10:43 | 0.17 | 13379 | 13474 | 95 | 570.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 10:43 | 10:50 | 0.12 | 13474 | 13474 | 0 | .00 | Survey & Conn. | Survey & Conn.@13412' Inc 93.8° Azm 268.05° |
| 10:50 | 10:59 | 0.15 | 13474 | 13488 | 14 | 93.33 | Sliding | Sliding - (WOB:35;GPM :700;TFO:180)) |
| 10:59 | 11:09 | 0.17 | 13488 | 13569 | 81 | 486.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 11:09 | 11:16 | 0.12 | 13569 | 13569 | 0 | .00 | Survey & Conn. | Survey & Conn.@13507' Inc 92.31° Azm 267.77° |
| 11:16 | 11:21 | 0.08 | 13569 | 13577 | 8 | 96.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:160R)) |
| 11:21 | 11:32 | 0.18 | 13577 | 13665 | 88 | 480.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 11:32 | 11:39 | 0.12 | 13665 | 13665 | 0 | .00 | Survey & Conn. | Survey & Conn.@13603' Inc 90.67° Azm 267.1° |
| 11:39 | 11:46 | 0.12 | 13665 | 13675 | 10 | 85.71 | Sliding | Sliding - (WOB:35;GPM :700;TFO:140R)) |
| 11:46 | 11:56 | 0.17 | 13675 | 13760 | 85 | 510.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 11:56 | 12:03 | 0.12 | 13760 | 13760 | 0 | .00 | Survey & Conn. | Survey & Conn.@13698' Inc 91.24° Azm 270.23° |
| 12:03 | 12:13 | 0.17 | 13760 | 13855 | 95 | 570.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 12:13 | 12:20 | 0.12 | 13855 | 13855 | 0 | .00 | Survey & Conn. | Survey & Conn.@13793' Inc 91.07° Azm 270.29° |
| 12:20 | 12:31 | 0.18 | 13855 | 13950 | 95 | 518.18 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 12:31 | 12:37 | 0.10 | 13950 | 13950 | 0 | .00 | Survey & Conn. | Survey & Conn.@13888' Inc 91.74° Azm 271.66° |
| 12:37 | 12:49 | 0.20 | 13950 | 14045 | 95 | 475.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 12:49 | 12:55 | 0.10 | 14045 | 14045 | 0 | .00 | Survey & Conn. | Survey & Conn.@13983' Inc 91.51° Azm 271.07° |
| 12:55 | 13:06 | 0.18 | 14045 | 14140 | 95 | 518.18 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 13:06 | 13:13 | 0.12 | 14140 | 14140 | 0 | .00 | Survey & Conn. | Survey & Conn.@14078' Inc 91.58° Azm 271.8° |
| 13:13 | 13:23 | 0.17 | 14140 | 14235 | 95 | 570.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 13:23 | 13:30 | 0.12 | 14235 | 14235 | 0 | .00 | Survey & Conn. | Survey & Conn.@14173' Inc 92.18° Azm 272.4° |
| 13:30 | 13:42 | 0.20 | 14235 | 14249 | 14 | 70.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:90R)) |
| 13:42 | 13:54 | 0.20 | 14249 | 14330 | 81 | 405.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 13:54 | 14:00 | 0.10 | 14330 | 14330 | 0 | .00 | Survey & Conn. | Survey & Conn.@14268' Inc 91.68° Azm 272.15° |
| 14:00 | 14:13 | 0.22 | 14330 | 14345 | 15 | 69.23 | Sliding | Sliding - (WOB:35;GPM :700;TFO:130L) |
| 14:13 | 14:24 | 0.18 | 14345 | 14425 | 80 | 436.36 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|--------------------|--|
| 14:24 | 14:30 | 0.10 | 14425 | 14425 | 0 | .00 | Survey & Conn. | Survey & Conn.@14363' Inc 91.71° Azm 271.67° |
| 14:30 | 14:41 | 0.18 | 14425 | 14442 | 17 | 92.73 | Sliding | Sliding - (WOB:35;GPM :700;TFO:130L)) |
| 14:41 | 14:51 | 0.17 | 14442 | 14520 | 78 | 468.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 14:51 | 14:58 | 0.12 | 14520 | 14520 | 0 | .00 | Survey & Conn. | Survey & Conn.@14458' Inc 90.07° Azm 268.29° |
| 14:58 | 15:09 | 0.18 | 14520 | 14615 | 95 | 518.18 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 15:09 | 15:15 | 0.10 | 14615 | 14615 | 0 | .00 | Survey & Conn. | Survey & Conn.@14553' Inc 90.94° Azm 268.97° |
| 15:15 | 15:27 | 0.20 | 14615 | 14710 | 95 | 475.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 15:27 | 15:34 | 0.12 | 14710 | 14710 | 0 | .00 | Survey & Conn. | Survey & Conn.@14648' Inc 91.14° Azm 267.38° |
| 15:34 | 15:42 | 0.13 | 14710 | 14720 | 10 | 75.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:135L)) |
| 15:42 | 15:52 | 0.17 | 14720 | 14806 | 86 | 516.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 15:52 | 16:17 | 0.42 | 14806 | 14806 | 0 | .00 | Rig Service-Inhole | Rig Service-Inhole |
| 16:17 | 16:21 | 0.07 | 14806 | 14806 | 0 | .00 | Survey & Conn. | Survey & Conn.@14744' Inc 91.31° Azm 270.65° |
| 16:21 | 16:30 | 0.15 | 14806 | 14818 | 12 | 80.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:170L) |
| 16:30 | 16:40 | 0.17 | 14818 | 14901 | 83 | 498.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 16:40 | 16:46 | 0.10 | 14901 | 14901 | 0 | .00 | Survey & Conn. | Survey & Conn.@14839' Inc 88.72° Azm 269.89° |
| 16:46 | 16:57 | 0.18 | 14901 | 14996 | 95 | 518.18 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 16:57 | 17:03 | 0.10 | 14996 | 14996 | 0 | .00 | Survey & Conn. | Survey & Conn.@14934' Inc 88.59° Azm 270.25° |
| 17:03 | 17:15 | 0.20 | 14996 | 15091 | 95 | 475.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 17:15 | 17:22 | 0.12 | 15091 | 15091 | 0 | .00 | Survey & Conn. | Survey & Conn.@15029' Inc 88.19° Azm 269.91° |
| 17:22 | 17:30 | 0.13 | 15091 | 15099 | 8 | 60.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:0G) |
| 17:30 | 17:41 | 0.18 | 15099 | 15186 | 87 | 474.55 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 17:41 | 17:47 | 0.10 | 15186 | 15186 | 0 | .00 | Survey & Conn. | Survey & Conn.@15124' Inc 89.6° Azm 271.33° |
| 17:47 | 17:54 | 0.12 | 15186 | 15194 | 8 | 68.57 | Sliding | Sliding - (WOB:35;GPM :700;TFO:0G) |
| 17:54 | 18:05 | 0.18 | 15194 | 15281 | 87 | 474.55 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 18:05 | 18:14 | 0.15 | 15281 | 15281 | 0 | .00 | Survey & Conn. | Survey & Conn.@15219' Inc 91.78° Azm 271.75° |
| 18:14 | 18:25 | 0.18 | 15281 | 15376 | 95 | 518.18 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 18:25 | 18:36 | 0.18 | 15376 | 15376 | 0 | .00 | Survey & Conn. | Survey & Conn.@15314' Inc 92.88° Azm 271.21° |
| 18:36 | 18:45 | 0.15 | 15376 | 15388 | 12 | 80.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:160L) |
| 18:45 | 18:58 | 0.22 | 15388 | 15471 | 83 | 383.08 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 18:58 | 19:07 | 0.15 | 15471 | 15471 | 0 | .00 | Survey & Conn. | Survey & Conn.@15409' Inc 90.94° Azm 269.82° |
| 19:07 | 19:12 | 0.08 | 15471 | 15475 | 4 | 48.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:180) |
| 19:12 | 19:25 | 0.22 | 15475 | 15566 | 91 | 420.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 19:25 | 19:33 | 0.13 | 15566 | 15566 | 0 | .00 | Survey & Conn. | Survey & Conn.@15504' Inc 91.17° Azm 270.14° |
| 19:33 | 19:36 | 0.05 | 15566 | 15596 | 30 | 600.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 19:36 | 19:45 | 0.15 | 15596 | 15604 | 8 | 53.33 | Sliding | Sliding - (WOB:35;GPM :700;TFO:160L) |
| 19:45 | 19:54 | 0.15 | 15604 | 15661 | 57 | 380.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 19:54 | 20:02 | 0.13 | 15661 | 15661 | 0 | .00 | Survey & Conn. | Survey & Conn.@15599' Inc 90.27° Azm 270.7° |
| 20:02 | 20:14 | 0.20 | 15661 | 15757 | 96 | 480.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 20:14 | 20:22 | 0.13 | 15757 | 15757 | 0 | .00 | Survey & Conn. | Survey & Conn.@15695' Inc 89.63° Azm 270.68° |
| 20:22 | 20:35 | 0.22 | 15757 | 15765 | 8 | 36.92 | Sliding | Sliding - (WOB:35;GPM :700;TFO:50L) |
| 20:35 | 20:47 | 0.20 | 15765 | 15852 | 87 | 435.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 20:47 | 20:56 | 0.15 | 15852 | 15852 | 0 | .00 | Survey & Conn. | Survey & Conn.@15790' Inc 90.5° Azm 269.57° |
| 20:56 | 21:05 | 0.15 | 15852 | 15857 | 5 | 33.33 | Sliding | Sliding - (WOB:35;GPM :700;TFO:50L) |
| 21:05 | 21:17 | 0.20 | 15857 | 15947 | 90 | 450.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 21:17 | 21:25 | 0.13 | 15947 | 15947 | 0 | .00 | Survey & Conn. | Survey & Conn.@15885' Inc 90.6° Azm 269.05° |
| 21:25 | 21:33 | 0.13 | 15947 | 15957 | 10 | 75.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:0G) |
| 21:33 | 21:44 | 0.18 | 15957 | 16043 | 86 | 469.09 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 21:44 | 21:52 | 0.13 | 16043 | 16043 | 0 | .00 | Survey & Conn. | Survey & Conn.@15981' Inc 92.59° Azm 269.93° |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|--|
| 21:52 | 22:05 | 0.22 | 16043 | 16138 | 95 | 438.46 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 22:05 | 22:13 | 0.13 | 16138 | 16138 | 0 | .00 | Survey & Conn. | Survey & Conn.@16076' Inc 93.95° Azm 271.19° |
| 22:13 | 22:24 | 0.18 | 16138 | 16145 | 7 | 38.18 | Sliding | Sliding - (WOB:35;GPM :700;TFO:170L) |
| 22:24 | 22:37 | 0.22 | 16145 | 16233 | 88 | 406.15 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 22:37 | 22:45 | 0.13 | 16233 | 16233 | 0 | .00 | Survey & Conn. | Survey & Conn.@16171' Inc 93.45° Azm 270.81° |
| 22:45 | 22:58 | 0.22 | 16233 | 16329 | 96 | 443.08 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 22:58 | 23:06 | 0.13 | 16329 | 16329 | 0 | .00 | Survey & Conn. | Survey & Conn.@16267' Inc 94.27° Azm 270.01° |
| 23:06 | 23:18 | 0.20 | 16329 | 16341 | 12 | 60.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:170L) |
| 23:18 | 23:30 | 0.20 | 16341 | 16424 | 83 | 415.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 23:30 | 23:38 | 0.13 | 16424 | 16424 | 0 | .00 | Survey & Conn. | Survey & Conn.@16362' Inc 92.85° Azm 269.88° |
| 23:38 | 23:50 | 0.20 | 16424 | 16519 | 95 | 475.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 23:50 | 23:58 | 0.13 | 16519 | 16519 | 0 | .00 | Survey & Conn. | Survey & Conn.@16457' Inc 93.26° Azm 269.16° |
| 23:58 | 24:00 | 0.03 | 16519 | 16534 | 15 | 450.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |



JOB NO.: 376640
Company: Extraction Oil & Gas
LOCATION: Breniman Pad
RIG NAME: Patterson 346
STATE: Colorado
COUNTY: Weld
WELL NAME: Breniman 11
Lead Directional : Scott Sandford

Report Time: 2400 **4 of 5**
API JOB # 05-123-40425
WORK ORDER#
FIELD: Wattenburg
Township: 6N
Range/Section 67W 16
Company Man Jose Torres
2nd Dir Hand : Chris Apodaca

From Sunday, August 07, 2016 at 0000 to Sunday, August 07, 2016 at 2400

| DAILY TOTALS | | ASSEMBLY TOTALS | | | | | | | | | |
|-----------------|----------|---------------------|--------------------|------------|-----------|------------|------------|---|-----------|-----------|---------|
| Start Depth | 16534.00 | BHA # | Motor SN / R.S. SN | Slide Ftg | Slide Hrs | Rotate Ftg | Rotate Hrs | Circ Hrs | D & C Hrs | BHA Ftg | Avg ROP |
| End Depth | 17115.00 | 1 | G1239 | 1,946.00 | 11.32 | 13,637.00 | 25.73 | 2.98 | 40.03 | 15,583.00 | 394.17 |
| Below Rot Hrs. | 19.50 | | | | | | | | | | |
| Total Drilled: | 581.00 | | | | | | | | | | |
| Avg. Total ROP: | 311.25 | | | | | | | | | | |
| Slide Footage: | 22.00 | Drilling Parameters | | Mud Record | | Bit Record | | Current BHA # 1 | | | |
| Slide Hours | 0.55 | WOB: | 42 | Weight: | 0 | Bit No: | | PDC 2.0 FBH Pony Non Mag DC Pony Non Mag DC Non Mag DC Hang Off Sub Antena Sub Non Mag DC Filter Sub 3 Stands H.W.D.P. | | | |
| Avg. Slide ROP: | 40.00 | Rot Wt: | 0 | Visc: | 0 | Model | PDC | | | | |
| Rotate Footage: | 559.00 | Pick UP: | 0 | Chlorides: | 0 | SN.: | XXXXX | | | | |
| Rotary Hours | 1.32 | Slack Off: | 0 | YP: | 0 | MFG. | | | | | |
| Avg. Rot ROP: | 424.56 | SPP: | 5575 | PV: | 0 | Type | | | | | |
| Circ Hours | 1.20 | Flow: | 700 - 700 | PH: | 0 | IADC | | | | | |
| Ream Hours | 0.00 | SPM: | 240 | GAS: | 0 | JETS | N/A | | | | |
| Rotary Hrs%: | 70.54 | Rot. RPM | 65 - 65 | SAND: | 0 | TFA: | 0 | | | | |
| Slide Hrs%: | 29.46 | Mot RPM: | 65 - 65 | WL: | 0 | Hole ID: | | | | | |
| Rotary Ftg%: | 96.21 | Incl. In: | 0 | SOLID: | 0 | Bit Hrs: | 37.05 | | | | |
| Slide Ftg%: | 3.79 | Incl. Out: | 0 | BHT°: | 0 | Bit Ftg: | 15583.00 | | | | |
| Casing | | Azm. In: | 0 | Flow T°: | 0 | PUMPS | | | | | |
| Size | Lb/Ft | MD | Azm. Out: | 0 | Oil %: | 0 | Liner | 0 | 0 | | |
| | | COST BREAKDOWN | | | | | Stroke | 0 | 0 | | |
| | | | | | | | Effic. | 95.00% | 95.00% | | |
| | | | | | | | Gal/Stk | 0.00 | 0.00 | | |
| | | | | | | | BBL/Stk | 0.000 | 0.000 | | |

GENERAL COMMENT

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|----------------|---|
| 00:00 | 00:11 | 0.18 | 16534 | 16614 | 80 | 436.36 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 00:11 | 00:19 | 0.13 | 16614 | 16614 | 0 | .00 | Survey & Conn. | Survey & Conn. @16552' Inc 94.46° Azm 270.38° |
| 00:19 | 00:42 | 0.38 | 16614 | 16628 | 14 | 36.52 | Sliding | Sliding - (WOB:35;GPM :700;TFO:170L) |
| 00:42 | 00:54 | 0.20 | 16628 | 16709 | 81 | 405.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 00:54 | 01:02 | 0.13 | 16709 | 16709 | 0 | .00 | Survey & Conn. | Survey & Conn. @16647' Inc 92.38° Azm 269.81° |
| 01:02 | 01:13 | 0.18 | 16709 | 16804 | 95 | 518.18 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 01:13 | 01:21 | 0.13 | 16804 | 16804 | 0 | .00 | Survey & Conn. | Survey & Conn. @16742' Inc 92.89° Azm 269.33° |
| 01:21 | 01:35 | 0.23 | 16804 | 16899 | 95 | 407.14 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 01:35 | 01:44 | 0.15 | 16899 | 16899 | 0 | .00 | Survey & Conn. | Survey & Conn. @16837' Inc 93.75° Azm 270.27° |
| 01:44 | 01:58 | 0.23 | 16899 | 16994 | 95 | 407.14 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 01:58 | 02:07 | 0.15 | 16994 | 16994 | 0 | .00 | Survey & Conn. | Survey & Conn. @16932' Inc 94.25° Azm 269.89° |
| 02:07 | 02:17 | 0.17 | 16994 | 17002 | 8 | 48.00 | Sliding | Sliding - (WOB:35;GPM :700;TFO:180) |
| 02:17 | 02:30 | 0.22 | 17002 | 17089 | 87 | 401.54 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 02:30 | 02:39 | 0.15 | 17089 | 17089 | 0 | .00 | Survey & Conn. | Survey & Conn. @17027' Inc 92.82° Azm 268.37° |

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|--------|---------------|-------------------------------------|
| 02:39 | 02:43 | 0.07 | 17089 | 17115 | 26 | 390.00 | Drilling | Drilling - (WOB:42;GPM :700;RPM:65) |
| 02:43 | 02:55 | 0.20 | 17115 | 17115 | 0 | .00 | Circulating | Circulating |
| 02:55 | 04:00 | 1.08 | 17115 | 17115 | 0 | .00 | Short Trip | Short Trip |
| 04:00 | 05:00 | 1.00 | 17115 | 17115 | 0 | .00 | Circulating | Circulating |
| 05:00 | 18:00 | 13.00 | 17115 | 17115 | 0 | .00 | POOH | POOH - Laying Down Drill Pipe |
| 18:00 | 19:30 | 1.50 | 17115 | 17115 | 0 | .00 | Other | L/D directional tools |
| 19:30 | 24:00 | 0.00 | 17115 | 17115 | 0 | .00 | Standby | Standby |



JOB NO.: 376640
Company: Extraction Oil & Gas
LOCATION: Breniman Pad
RIG NAME: Patterson 346
STATE: Colorado
COUNTY: Weld
WELL NAME: Breniman 11
Lead Directional : Scott Sandford

Report Time: 2400 **5 of 5**
API JOB # 05-123-40425
WORK ORDER#
FIELD: Wattenburg
Township: 6N
Range/Section 67W 16
Company Man Jose Torres
2nd Dir Hand : Chris Apodaca

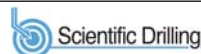
From Monday, August 08, 2016 at 0000 to Monday, August 08, 2016 at 2400

| DAILY TOTALS | | ASSEMBLY TOTALS | | | | | | | | | |
|-----------------|----------|---------------------|--------------------|------------|-----------|--------------|------------|-----------------|-----------|---------|---------|
| Start Depth | 16534.00 | BHA # | Motor SN / R.S. SN | Slide Ftg | Slide Hrs | Rotate Ftg | Rotate Hrs | Circ Hrs | D & C Hrs | BHA Ftg | Avg ROP |
| End Depth | 17115.00 | | | | | | | | | | |
| Below Rot Hrs. | 19.50 | | | | | | | | | | |
| Total Drilled: | 581.00 | Drilling Parameters | | Mud Record | | Bit Record | | Current BHA # 0 | | | |
| Avg. Total ROP: | 311.25 | | | | | | | | | | |
| Slide Footage: | 22.00 | WOB: | 42 | Weight: | 0 | Bit No: | | | | | |
| Slide Hours | 0.55 | Rot Wt: | 0 | Visc: | 0 | Model | | | | | |
| Avg. Slide ROP: | 40.00 | Pick UP: | 0 | Chlorides: | 0 | SN.: | | | | | |
| Rotate Footage: | 559.00 | Slack Off: | 0 | YP: | 0 | MFG. | | | | | |
| Rotary Hours | 1.32 | SPP: | 5575 | PV: | 0 | Type | | | | | |
| Avg. Rot ROP: | 424.56 | Flow: | 700 - 700 | PH: | 0 | IADC | | | | | |
| Circ Hours | 1.20 | SPM: | 240 | GAS: | 0 | JETS | | | | | |
| Ream Hours | 0.00 | Rot. RPM | - | SAND: | 0 | TFA: | | | | | |
| Rotary Hrs%: | 70.54 | Mot RPM: | - | WL: | 0 | Hole ID: N/A | | | | | |
| Slide Hrs%: | 29.46 | Incl. In: | 0 | SOLID: | 0 | Bit Hrs: | | | | | |
| Rotary Ftg%: | 96.21 | Azm. In: | 0 | BHT°: | 0 | Bit Ftg: | | | | | |
| Slide Ftg%: | 3.79 | Incl. Out: | 0 | Flow T°: | 0 | PUMPS | | | | | |
| CASING | | Azm. Out: | 0 | Oil %: | 0 | Liner | 0 | 0 | | | |
| Size | Lb/Ft | MD | COST BREAKDOWN | | | Effic. | 95.00% | 95.00% | | | |
| | | | | | | Gal/Stk | 0.00 | 0.00 | | | |
| | | | | | | BBL/Stk | 0.000 | 0.000 | | | |

GENERAL COMMENT

| Start Time | End Time | Hours | Start Depth | End Depth | Delta Depth | ROP | Activity Code | COMMENT |
|------------|----------|-------|-------------|-----------|-------------|-----|---------------|---------|
| 00:00 | 24:00 | 0.00 | 17115 | 17115 | 0 | .00 | Standby | Standby |

BHA # 1



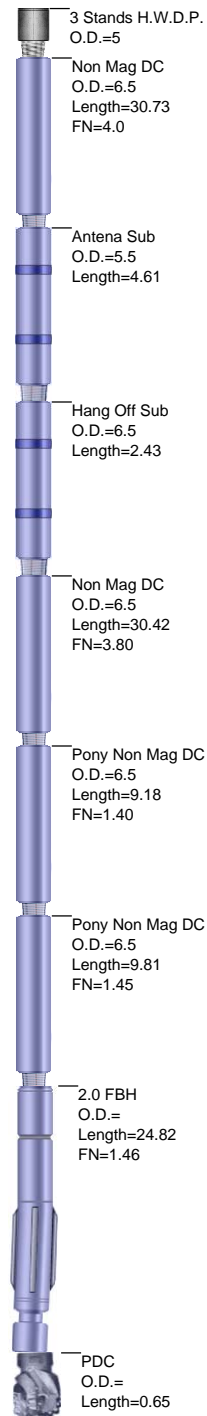
JOB NO.: 376640 **Work Order:** **FIELD:** Wattenburg
Company: Extraction Oil & Gas **Township:** 6N
LOCATION: Breniman Pad **SECT. RANGE:** 16 67W
RIG NAME: Patterson 346 **Lead DD:** Scott Sandford
STATE: Colorado **Co. Man:** Jose Torres
COUNTY: Weld **BHA TYPE:**
WELL NAME: Breniman 11 **BHA WT:** 15477 **Wt @ Jars:** N/A

| Time and Depths | MOTOR DATA | Drilling Parameters |
|--|---------------------------|------------------------------------|
| Date In: 04-Aug-16 @ 15:00 | 2.0 FBH | SO/PU: 0 - 0 / 0-0 |
| Date Out: 07-Aug-16 @ 19:30 | MFG.: | Rot Strg Wt: 0-0 |
| Hrs In Hole: 76.50 | Pad OD: | WOB: 0 - 42 |
| Start Depth: 1532.00 | NB Stab: 0 | TORQ: 0 - 24500 |
| End Depth: 17115.00 | Bit to Bend: 0 | SPP: 0 - 5575 |
| Total Drilled: 15583.00 | Bent Hsg/Sub°: 2 / | Motor RPM: No Rev/Gal Input |
| Avg. Total ROP: 420.59 | Lobe/Stage: / | Rotary RPM: 0 - 65 |
| Circ Hrs: Tot/Only 40.45 / 3.40 | Rev/GAL: 0 | Flow Rate: 0 - 700 |
| Percent Slide: 12.49 | Rotor Jet: 0 | Avg Diff: |
| Percent Hrs: 30.54 | Prop BUR: | Stall Pres.: |
| Slide Hours: 11.32 | Act BUR: | Off Bot Pres.: |
| Total Sliding: 1946.00 | | |
| Avg. Slide ROP: 171.96 | | |
| Percent Rotary: 87.51 | | |
| Percent Hrs: 69.46 | | |
| Rotary Hours: 25.73 | | |
| Total Rotary: 13637.00 | | |
| Avg. Rotary ROP: 529.94 | | |
| Reason POOH: | | |

| MWD Spacing | Gamma: 0 | Restiv: 0 | Sensor: 0 | Last Casing | O.D. |
|-------------|----------|-----------|-----------|-------------|-----------|
| | GYRO: 0 | DNSC: 0 | Sonic: 0 | Shoe @: | Hanger @: |

INC IN: .0 INC OUT: .0 AZM IN: .00 AZM OUT: .00

| BHA Detail | | | | | | | |
|-------------------|----------|------|------|--------|--------|------------|-------|
| Description | Serial # | I.D. | O.D. | Length | Sum | Top Conn | MFG. |
| PDC | XXXXX | | | 0.65 | 0.65 | 4 1/2 REGP | OTHER |
| 2.0 FBH | G1239 | | | 24.82 | 25.47 | 4 1/2 IFB | OTHER |
| Pony Non Mag DC | 197-001 | 3.25 | 6.5 | 9.81 | 35.28 | 4 1/2 IFB | SDI |
| Pony Non Mag DC | 125-438 | 3.25 | 6.5 | 9.18 | 44.46 | 4 1/2 IFB | SDI |
| Non Mag DC | 189-009 | 3.25 | 6.5 | 30.42 | 74.88 | 4 1/2 IFB | SDI |
| Hang Off Sub | 8-1057 | 3.25 | 6.5 | 2.43 | 77.31 | 4 1/2 IFB | SDI |
| Antena Sub | 69-1169 | 2.75 | 5.5 | 4.61 | 81.92 | 4 1/2 IFB | SDI |
| Non Mag DC | 189-012 | 3.25 | 6.5 | 30.73 | 112.65 | 4 1/2 IFB | SDI |
| Filter Sub | DR16287 | 3.25 | 6.5 | 2.47 | 115.12 | 4 1/2 IFB | SDI |
| 3 Stands H.W.D.P. | N/A | 3.76 | 5 | 275.51 | 390.63 | 4 1/2 IF | Other |





JOB NO.: 376640
Company: Extraction Oil & Gas
LOCATION: Breniman Pad
RIG NAME: Patterson 346
STATE: Colorado
COUNTY: Country
WELL NAME: Breniman 11

FIELD: Wattenburg
Township: 6N
Range 67W

MOTOR INFORMATION

Desc: 2.0 FBH
Bent Hsg/Sub: 2 / 0 **Bit to Bend:** 0
Pad OD: **NB Stab:**

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

| # | Date | Drill Mode | Start Time | End Time | Hours | Start MD | End MD | Depth Drilled | WOB | ROP | RPM | Surf. Torque | Flow Rate | SPP | TFO | INC | AZM | DLS | Note |
|---|-------|------------|------------|----------|-------|----------|--------|---------------|-----|--------|-----|--------------|-----------|------|------|-------|--------|------|------|
| 1 | 4-Aug | Drilling | 17:30 | 17:41 | 0.18 | 1532 | 1630 | 98 | | 534.5 | 0 | 0 | | | | 3.60 | 244.10 | 0.00 | |
| 1 | 4-Aug | Drilling | 17:45 | 17:51 | 0.10 | 1630 | 1725 | 95 | 25 | 950.0 | 65 | 6000 | 700 | 2400 | | 3.07 | 235.65 | 0.00 | |
| 1 | 4-Aug | Drilling | 17:56 | 17:59 | 0.05 | 1725 | 1747 | 22 | 25 | 440.0 | 65 | 6000 | 700 | 2400 | | 3.07 | 235.65 | 0.00 | |
| 1 | 4-Aug | Sliding | 18:35 | 18:38 | 0.05 | 1747 | 1757 | 10 | 25 | 200.0 | 65 | 6000 | 700 | 2400 | 235M | 3.07 | 235.65 | 0.00 | |
| 1 | 4-Aug | Drilling | 18:38 | 18:43 | 0.08 | 1757 | 1821 | 64 | 25 | 768.0 | 65 | 6000 | 700 | 2400 | | 4.28 | 234.63 | 0.00 | |
| 1 | 4-Aug | Sliding | 18:48 | 18:53 | 0.08 | 1821 | 1829 | 8 | 25 | 96.0 | 65 | 6000 | 700 | 2400 | 235M | 4.28 | 234.63 | 0.00 | |
| 1 | 4-Aug | Drilling | 18:53 | 18:58 | 0.08 | 1829 | 1916 | 87 | 25 | 1044.0 | 65 | 6000 | 700 | 2400 | | 7.01 | 233.42 | 0.00 | |
| 1 | 4-Aug | Drilling | 19:03 | 19:09 | 0.10 | 1916 | 2011 | 95 | 25 | 950.0 | 65 | 6000 | 700 | 2400 | | 6.89 | 233.45 | 0.00 | |
| 1 | 4-Aug | Sliding | 19:13 | 19:17 | 0.07 | 2011 | 2019 | 8 | 25 | 120.0 | 65 | 6000 | 700 | 2400 | 0G | 6.89 | 233.45 | 0.00 | |
| 1 | 4-Aug | Drilling | 19:17 | 19:23 | 0.10 | 2019 | 2106 | 87 | 25 | 870.0 | 65 | 6000 | 700 | 2400 | | 6.42 | 229.67 | 0.00 | |
| 1 | 4-Aug | Sliding | 19:28 | 19:31 | 0.05 | 2106 | 2118 | 12 | 25 | 240.0 | 65 | 6000 | 700 | 2400 | 30R | 6.42 | 229.67 | 0.00 | |
| 1 | 4-Aug | Drilling | 19:31 | 19:38 | 0.12 | 2118 | 2202 | 84 | 28 | 720.0 | 65 | 6000 | 700 | 2400 | | 8.35 | 239.44 | 0.00 | |
| 1 | 4-Aug | Sliding | 19:44 | 19:48 | 0.07 | 2202 | 2212 | 10 | 25 | 150.0 | 65 | 6000 | 700 | 2400 | 20L | 8.35 | 239.44 | 0.00 | |
| 1 | 4-Aug | Drilling | 19:48 | 19:53 | 0.08 | 2212 | 2297 | 85 | 28 | 1020.0 | 65 | 6000 | 700 | 2400 | | 10.37 | 241.61 | 0.00 | |
| 1 | 4-Aug | Drilling | 19:57 | 20:02 | 0.08 | 2297 | 2393 | 96 | 28 | 1152.0 | 65 | 6000 | 700 | 2400 | | 10.14 | 238.77 | 0.00 | |
| 1 | 4-Aug | Sliding | 20:10 | 20:12 | 0.03 | 2393 | 2399 | 6 | 25 | 180.0 | 65 | 6000 | 700 | 2400 | 30L | 10.14 | 238.77 | 0.00 | |
| 1 | 4-Aug | Drilling | 20:12 | 20:20 | 0.13 | 2399 | 2488 | 89 | 28 | 667.5 | 65 | 6000 | 700 | 2400 | | 11.33 | 230.40 | 0.00 | |
| 1 | 4-Aug | Drilling | 20:24 | 20:30 | 0.10 | 2488 | 2583 | 95 | 28 | 950.0 | 65 | 6000 | 700 | 2400 | | 11.53 | 232.86 | 0.00 | |
| 1 | 4-Aug | Sliding | 20:34 | 20:36 | 0.03 | 2583 | 2589 | 6 | 25 | 180.0 | 65 | 6000 | 700 | 2400 | | 11.53 | 232.86 | 0.00 | |
| 1 | 4-Aug | Drilling | 20:36 | 20:41 | 0.08 | 2589 | 2678 | 89 | 28 | 1068.0 | 65 | 6000 | 700 | 2400 | | 11.80 | 231.79 | 0.00 | |
| 1 | 4-Aug | Sliding | 20:46 | 20:48 | 0.03 | 2678 | 2688 | 10 | 25 | 300.0 | 65 | 6000 | 700 | 2400 | 30R | 11.80 | 231.79 | 0.00 | |
| 1 | 4-Aug | Drilling | 20:48 | 20:54 | 0.10 | 2688 | 2773 | 85 | 28 | 850.0 | 65 | 6000 | 700 | 2400 | | 13.16 | 238.87 | 0.00 | |
| 1 | 4-Aug | Sliding | 20:58 | 21:00 | 0.03 | 2773 | 2781 | 8 | 25 | 240.0 | 65 | 6000 | 700 | 2400 | 30L | 13.16 | 238.87 | 0.00 | |
| 1 | 4-Aug | Drilling | 21:00 | 21:05 | 0.08 | 2781 | 2868 | 87 | 28 | 1044.0 | 65 | 6000 | 700 | 2400 | | 14.25 | 236.99 | 0.00 | |
| 1 | 4-Aug | Sliding | 21:11 | 21:15 | 0.07 | 2868 | 2880 | 12 | 25 | 180.0 | 65 | 6000 | 700 | 2400 | 20L | 14.25 | 236.99 | 0.00 | |
| 1 | 4-Aug | Drilling | 21:15 | 21:20 | 0.08 | 2880 | 2963 | 83 | 28 | 996.0 | 65 | 6000 | 700 | 2400 | | 15.53 | 235.80 | 0.00 | |

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

| # | Date | Drill Mode | Start Time | End Time | Hours | Start MD | End MD | Depth Drilled | WOB | ROP | RPM | Surf. Torque | Flow Rate | SPP | TFO | INC | AZM | DLS | Note |
|---|-------|------------|------------|----------|-------|----------|--------|---------------|-----|-------|-----|--------------|-----------|------|-----|-------|--------|------|------|
| 1 | 4-Aug | Sliding | 21:24 | 21:27 | 0.05 | 2963 | 2976 | 13 | 25 | 260.0 | 65 | 6000 | 700 | 2400 | 20L | 15.53 | 235.80 | 0.00 | |
| 1 | 4-Aug | Drilling | 21:27 | 21:33 | 0.10 | 2976 | 3059 | 83 | 30 | 830.0 | 65 | 8000 | 700 | 2800 | | 16.47 | 230.89 | 0.00 | |
| 1 | 4-Aug | Sliding | 21:37 | 21:41 | 0.07 | 3059 | 3074 | 15 | 25 | 225.0 | 65 | 8000 | 700 | 2800 | 20R | 16.47 | 230.89 | 0.00 | |
| 1 | 4-Aug | Drilling | 21:41 | 21:46 | 0.08 | 3074 | 3154 | 80 | 30 | 960.0 | 65 | 8000 | 700 | 2800 | | 17.61 | 232.59 | 0.00 | |
| 1 | 4-Aug | Sliding | 21:51 | 21:54 | 0.05 | 3154 | 3169 | 15 | 25 | 300.0 | 65 | 8000 | 700 | 2800 | 20R | 17.61 | 232.59 | 0.00 | |
| 1 | 4-Aug | Drilling | 21:54 | 22:00 | 0.10 | 3169 | 3250 | 81 | 30 | 810.0 | 50 | 8400 | 700 | 2850 | | 18.01 | 231.66 | 0.00 | |
| 1 | 4-Aug | Sliding | 22:03 | 22:06 | 0.05 | 3250 | 3270 | 20 | 25 | 400.0 | 50 | 8400 | 700 | 2850 | 20R | 18.01 | 231.66 | 0.00 | |
| 1 | 4-Aug | Drilling | 22:06 | 22:11 | 0.08 | 3270 | 3345 | 75 | 30 | 900.0 | 50 | 8400 | 700 | 2850 | | 19.71 | 236.90 | 0.00 | |
| 1 | 4-Aug | Sliding | 22:16 | 22:19 | 0.05 | 3345 | 3363 | 18 | 25 | 360.0 | 50 | 8400 | 700 | 2850 | 10L | 19.71 | 236.90 | 0.00 | |
| 1 | 4-Aug | Drilling | 22:19 | 22:24 | 0.08 | 3363 | 3440 | 77 | 30 | 924.0 | 50 | 8400 | 700 | 2850 | | 20.97 | 234.64 | 0.00 | |
| 1 | 4-Aug | Sliding | 22:29 | 22:32 | 0.05 | 3440 | 3453 | 13 | 25 | 260.0 | 50 | 8400 | 700 | 2850 | 0G | 20.97 | 234.64 | 0.00 | |
| 1 | 4-Aug | Drilling | 22:32 | 22:38 | 0.10 | 3453 | 3535 | 82 | 30 | 820.0 | 50 | 8400 | 700 | 2850 | | 21.18 | 235.04 | 0.00 | |
| 1 | 4-Aug | Sliding | 22:43 | 22:46 | 0.05 | 3535 | 3552 | 17 | 25 | 340.0 | 50 | 8400 | 700 | 2850 | 20L | 21.18 | 235.04 | 0.00 | |
| 1 | 4-Aug | Drilling | 22:46 | 22:52 | 0.10 | 3552 | 3630 | 78 | 30 | 780.0 | 50 | 8400 | 700 | 2850 | | 22.72 | 233.69 | 0.00 | |
| 1 | 4-Aug | Sliding | 22:56 | 22:59 | 0.05 | 3630 | 3645 | 15 | 25 | 300.0 | 50 | 8400 | 700 | 2850 | 20L | 22.72 | 233.69 | 0.00 | |
| 1 | 4-Aug | Drilling | 22:59 | 23:05 | 0.10 | 3645 | 3725 | 80 | 30 | 800.0 | 50 | 8400 | 700 | 2850 | | 25.06 | 233.02 | 0.00 | |
| 1 | 4-Aug | Drilling | 23:11 | 23:18 | 0.12 | 3725 | 3821 | 96 | 30 | 822.9 | 50 | 8400 | 700 | 2850 | | 24.99 | 232.03 | 0.00 | |
| 1 | 4-Aug | Sliding | 23:22 | 23:25 | 0.05 | 3821 | 3833 | 12 | 25 | 240.0 | 50 | 8400 | 700 | 2850 | 0G | 24.99 | 232.03 | 0.00 | |
| 1 | 4-Aug | Drilling | 23:25 | 23:32 | 0.12 | 3833 | 3916 | 83 | 30 | 711.4 | 50 | 8400 | 700 | 2850 | | 27.30 | 232.50 | 0.00 | |
| 1 | 4-Aug | Drilling | 23:36 | 23:42 | 0.10 | 3916 | 4011 | 95 | 30 | 950.0 | 50 | 8400 | 700 | 2850 | | 26.66 | 231.36 | 0.00 | |
| 1 | 4-Aug | Drilling | 23:46 | 23:52 | 0.10 | 4011 | 4106 | 95 | 30 | 950.0 | 50 | 8400 | 700 | 2850 | | 23.66 | 232.77 | 0.00 | |
| 1 | 4-Aug | Sliding | 23:56 | 24:00 | 0.07 | 4106 | 4123 | 17 | 25 | 255.0 | 50 | 8400 | 700 | 2850 | 10L | 23.66 | 232.77 | 0.00 | |
| 1 | 5-Aug | Drilling | 00:00 | 00:06 | 0.10 | 4123 | 4202 | 79 | 32 | 790.0 | 50 | 9500 | 700 | 3125 | | 23.92 | 232.75 | 0.00 | |
| 1 | 5-Aug | Sliding | 00:11 | 00:15 | 0.07 | 4202 | 4219 | 17 | 25 | 255.0 | 50 | 9500 | 700 | 3125 | 20L | 23.92 | 232.75 | 0.00 | |
| 1 | 5-Aug | Drilling | 00:15 | 00:21 | 0.10 | 4219 | 4297 | 78 | 32 | 780.0 | 50 | 9500 | 700 | 3125 | | 24.90 | 231.79 | 0.00 | |
| 1 | 5-Aug | Sliding | 00:26 | 00:30 | 0.07 | 4297 | 4317 | 20 | 25 | 300.0 | 50 | 9500 | 700 | 3125 | 20L | 24.90 | 231.79 | 0.00 | |
| 1 | 5-Aug | Drilling | 00:30 | 00:34 | 0.07 | 4317 | 4363 | 46 | 32 | 690.0 | 50 | 9500 | 700 | 3125 | | 26.85 | 234.08 | 0.00 | |
| 1 | 5-Aug | Sliding | 00:34 | 00:39 | 0.08 | 4363 | 4373 | 10 | 25 | 120.0 | 50 | 9500 | 700 | 3125 | 20L | 26.85 | 234.08 | 0.00 | |
| 1 | 5-Aug | Drilling | 00:39 | 00:41 | 0.03 | 4373 | 4392 | 19 | 32 | 570.0 | 50 | 9500 | 700 | 3125 | | 26.85 | 234.08 | 0.00 | |
| 1 | 5-Aug | Sliding | 00:46 | 00:50 | 0.07 | 4392 | 4411 | 19 | 25 | 285.0 | 50 | 9500 | 700 | 3125 | 20L | 26.85 | 234.08 | 0.00 | |
| 1 | 5-Aug | Drilling | 00:50 | 00:54 | 0.07 | 4411 | 4459 | 48 | 32 | 720.0 | 50 | 9500 | 700 | 3125 | | 30.86 | 233.68 | 0.00 | |
| 1 | 5-Aug | Sliding | 00:54 | 01:01 | 0.12 | 4459 | 4469 | 10 | 25 | 85.7 | 50 | 9500 | 700 | 3125 | 20L | 30.86 | 233.68 | 0.00 | |
| 1 | 5-Aug | Drilling | 01:01 | 01:03 | 0.03 | 4469 | 4487 | 18 | 32 | 540.0 | 50 | 9500 | 700 | 3125 | | 30.86 | 233.68 | 0.00 | |
| 1 | 5-Aug | Sliding | 01:08 | 01:11 | 0.05 | 4487 | 4501 | 14 | 25 | 280.0 | 50 | 9500 | 700 | 3125 | 20L | 30.86 | 233.68 | 0.00 | |
| 1 | 5-Aug | Drilling | 01:11 | 01:18 | 0.12 | 4501 | 4583 | 82 | 32 | 702.9 | 50 | 9500 | 700 | 3125 | | 31.40 | 233.15 | 0.00 | |

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

| # | Date | Drill Mode | Start Time | End Time | Hours | Start MD | End MD | Depth Drilled | WOB | ROP | RPM | Surf. Torque | Flow Rate | SPP | TFO | INC | AZM | DLS | Note |
|---|-------|------------|------------|----------|-------|----------|--------|---------------|-----|-------|-----|--------------|-----------|------|-----|-------|--------|------|------|
| 1 | 5-Aug | Sliding | 01:22 | 01:27 | 0.08 | 4583 | 4603 | 20 | 25 | 240.0 | 50 | 9500 | 700 | 3125 | 20L | 31.40 | 233.15 | 0.00 | |
| 1 | 5-Aug | Drilling | 01:27 | 01:33 | 0.10 | 4603 | 4678 | 75 | 32 | 750.0 | 50 | 9500 | 700 | 3125 | | 31.47 | 232.12 | 0.00 | |
| 1 | 5-Aug | Sliding | 01:37 | 01:43 | 0.10 | 4678 | 4705 | 27 | 25 | 270.0 | 50 | 9500 | 700 | 3125 | 20L | 31.47 | 232.12 | 0.00 | |
| 1 | 5-Aug | Drilling | 01:43 | 01:47 | 0.07 | 4705 | 4747 | 42 | 32 | 630.0 | 50 | 9500 | 700 | 3125 | | 33.60 | 230.19 | 0.00 | |
| 1 | 5-Aug | Sliding | 01:47 | 01:52 | 0.08 | 4747 | 4762 | 15 | 25 | 180.0 | 50 | 9500 | 700 | 3125 | 20L | 33.60 | 230.19 | 0.00 | |
| 1 | 5-Aug | Drilling | 01:52 | 01:54 | 0.03 | 4762 | 4773 | 11 | 32 | 330.0 | 50 | 9500 | 700 | 3125 | | 33.60 | 230.19 | 0.00 | |
| 1 | 5-Aug | Sliding | 01:59 | 02:02 | 0.05 | 4773 | 4785 | 12 | 25 | 240.0 | 50 | 9500 | 700 | 3125 | 0G | 33.60 | 230.19 | 0.00 | |
| 1 | 5-Aug | Drilling | 02:02 | 02:10 | 0.13 | 4785 | 4869 | 84 | 35 | 630.0 | 50 | 12000 | 700 | 3200 | | 37.57 | 229.12 | 0.00 | |
| 1 | 5-Aug | Drilling | 02:14 | 02:22 | 0.13 | 4869 | 4964 | 95 | 35 | 712.5 | 60 | 12000 | 700 | 3200 | | 36.02 | 229.72 | 0.00 | |
| 1 | 5-Aug | Sliding | 02:26 | 02:36 | 0.17 | 4964 | 4980 | 16 | 25 | 96.0 | 60 | 12000 | 700 | 3200 | 0G | 36.02 | 229.72 | 0.00 | |
| 1 | 5-Aug | Drilling | 02:36 | 02:42 | 0.10 | 4980 | 5059 | 79 | 35 | 790.0 | 60 | 12000 | 700 | 3200 | | 34.58 | 231.72 | 0.00 | |
| 1 | 5-Aug | Sliding | 02:46 | 02:50 | 0.07 | 5059 | 5076 | 17 | 25 | 255.0 | 60 | 12000 | 700 | 3200 | 10L | 34.58 | 231.72 | 0.00 | |
| 1 | 5-Aug | Drilling | 02:50 | 02:57 | 0.12 | 5076 | 5154 | 78 | 35 | 668.6 | 60 | 12000 | 700 | 3200 | | 36.10 | 230.75 | 0.00 | |
| 1 | 5-Aug | Sliding | 03:02 | 03:04 | 0.03 | 5154 | 5162 | 8 | 25 | 240.0 | 60 | 12000 | 700 | 3200 | 0G | 36.10 | 230.75 | 0.00 | |
| 1 | 5-Aug | Drilling | 03:04 | 03:12 | 0.13 | 5162 | 5250 | 88 | 35 | 660.0 | 60 | 12000 | 700 | 3200 | | 33.09 | 230.95 | 0.00 | |
| 1 | 5-Aug | Sliding | 03:17 | 03:23 | 0.10 | 5250 | 5275 | 25 | 25 | 250.0 | 60 | 12000 | 700 | 3200 | 0G | 33.09 | 230.95 | 0.00 | |
| 1 | 5-Aug | Drilling | 03:23 | 03:30 | 0.12 | 5275 | 5345 | 70 | 35 | 600.0 | 60 | 12000 | 700 | 3200 | | 33.53 | 230.66 | 0.00 | |
| 1 | 5-Aug | Sliding | 03:34 | 03:39 | 0.08 | 5345 | 5370 | 25 | 25 | 300.0 | 60 | 12000 | 700 | 3200 | 0G | 33.53 | 230.66 | 0.00 | |
| 1 | 5-Aug | Drilling | 03:39 | 03:46 | 0.12 | 5370 | 5441 | 71 | 35 | 608.6 | 60 | 12000 | 700 | 3200 | | 32.81 | 228.87 | 0.00 | |
| 1 | 5-Aug | Sliding | 03:50 | 03:56 | 0.10 | 5441 | 5471 | 30 | 25 | 300.0 | 60 | 12000 | 700 | 3200 | 20R | 32.81 | 228.87 | 0.00 | |
| 1 | 5-Aug | Drilling | 03:56 | 04:00 | 0.07 | 5471 | 5507 | 36 | 35 | 540.0 | 45 | 12000 | 700 | 3200 | | 33.53 | 229.44 | 0.00 | |
| 1 | 5-Aug | Sliding | 04:00 | 04:06 | 0.10 | 5507 | 5521 | 14 | 25 | 140.0 | 45 | 12000 | 700 | 3200 | 20R | 33.53 | 229.44 | 0.00 | |
| 1 | 5-Aug | Drilling | 04:06 | 04:08 | 0.03 | 5521 | 5536 | 15 | 35 | 450.0 | 45 | 12000 | 700 | 3200 | | 33.53 | 229.44 | 0.00 | |
| 1 | 5-Aug | Sliding | 04:12 | 04:18 | 0.10 | 5536 | 5556 | 20 | 25 | 200.0 | 45 | 12000 | 700 | 3200 | 20R | 33.53 | 229.44 | 0.00 | |
| 1 | 5-Aug | Drilling | 04:18 | 04:25 | 0.12 | 5556 | 5632 | 76 | 35 | 651.4 | 45 | 12000 | 700 | 3200 | | 33.91 | 232.97 | 0.00 | |
| 1 | 5-Aug | Sliding | 04:30 | 04:34 | 0.07 | 5632 | 5662 | 30 | 25 | 450.0 | 45 | 12000 | 700 | 3200 | 20R | 33.91 | 232.97 | 0.00 | |
| 1 | 5-Aug | Drilling | 04:34 | 04:38 | 0.07 | 5662 | 5700 | 38 | 35 | 570.0 | 45 | 12000 | 700 | 3200 | | 34.85 | 231.72 | 0.00 | |
| 1 | 5-Aug | Sliding | 04:38 | 04:44 | 0.10 | 5700 | 5715 | 15 | 25 | 150.0 | 45 | 12000 | 700 | 3200 | 0G | 34.85 | 231.72 | 0.00 | |
| 1 | 5-Aug | Drilling | 04:44 | 04:46 | 0.03 | 5715 | 5727 | 12 | 35 | 360.0 | 45 | 12000 | 700 | 3200 | | 34.85 | 231.72 | 0.00 | |
| 1 | 5-Aug | Sliding | 04:50 | 04:55 | 0.08 | 5727 | 5747 | 20 | 25 | 240.0 | 45 | 12000 | 700 | 3200 | 0G | 34.85 | 231.72 | 0.00 | |
| 1 | 5-Aug | Drilling | 04:55 | 05:01 | 0.10 | 5747 | 5823 | 76 | 35 | 760.0 | 45 | 12000 | 700 | 3200 | | 37.38 | 233.40 | 0.00 | |
| 1 | 5-Aug | Sliding | 05:06 | 05:10 | 0.07 | 5823 | 5840 | 17 | 25 | 255.0 | 45 | 12000 | 700 | 3200 | 20L | 37.38 | 233.40 | 0.00 | |
| 1 | 5-Aug | Drilling | 05:10 | 05:17 | 0.12 | 5840 | 5918 | 78 | 35 | 668.6 | 45 | 12000 | 700 | 3200 | | 35.59 | 230.16 | 0.00 | |
| 1 | 5-Aug | Sliding | 05:21 | 05:26 | 0.08 | 5918 | 5938 | 20 | 25 | 240.0 | 45 | 12000 | 700 | 3200 | 20R | 35.59 | 230.16 | 0.00 | |
| 1 | 5-Aug | Drilling | 05:26 | 05:32 | 0.10 | 5938 | 6014 | 76 | 35 | 760.0 | 45 | 12000 | 700 | 3200 | | 36.08 | 232.18 | 0.00 | |

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

| # | Date | Drill Mode | Start Time | End Time | Hours | Start MD | End MD | Depth Drilled | WOB | ROP | RPM | Surf. Torque | Flow Rate | SPP | TFO | INC | AZM | DLS | Note |
|---|-------|------------|------------|----------|-------|----------|--------|---------------|-----|-------|-----|--------------|-----------|------|-----|-------|--------|------|------|
| 1 | 5-Aug | Sliding | 05:36 | 05:41 | 0.08 | 6014 | 6029 | 15 | 25 | 180.0 | 45 | 12000 | 700 | 3200 | 0G | 36.08 | 232.18 | 0.00 | |
| 1 | 5-Aug | Drilling | 05:41 | 05:47 | 0.10 | 6029 | 6109 | 80 | 35 | 800.0 | 45 | 12000 | 700 | 3200 | | 34.56 | 231.69 | 0.00 | |
| 1 | 5-Aug | Sliding | 05:52 | 05:57 | 0.08 | 6109 | 6129 | 20 | 25 | 240.0 | 45 | 12000 | 700 | 3200 | 0G | 34.56 | 231.69 | 0.00 | |
| 1 | 5-Aug | Drilling | 05:57 | 06:04 | 0.12 | 6129 | 6204 | 75 | 35 | 642.9 | 50 | 13000 | 700 | 3450 | | 32.45 | 228.59 | 0.00 | |
| 1 | 5-Aug | Sliding | 06:14 | 06:20 | 0.10 | 6204 | 6229 | 25 | 25 | 250.0 | 50 | 13000 | 700 | 3450 | 0G | 32.45 | 228.59 | 0.00 | |
| 1 | 5-Aug | Drilling | 06:20 | 06:26 | 0.10 | 6229 | 6300 | 71 | 35 | 710.0 | 50 | 13000 | 700 | 3450 | | 30.47 | 230.19 | 0.00 | |
| 1 | 5-Aug | Sliding | 06:30 | 06:36 | 0.10 | 6300 | 6335 | 35 | 25 | 350.0 | 50 | 13000 | 700 | 3450 | 0G | 30.72 | 227.66 | 0.00 | |
| 1 | 5-Aug | Drilling | 06:36 | 06:41 | 0.08 | 6335 | 6395 | 60 | 35 | 720.0 | 50 | 13000 | 700 | 3450 | | 30.72 | 227.66 | 0.00 | |
| 1 | 5-Aug | Sliding | 06:45 | 06:53 | 0.13 | 6395 | 6435 | 40 | 25 | 300.0 | 50 | 13000 | 700 | 3450 | 30R | 32.33 | 229.28 | 0.00 | |
| 1 | 5-Aug | Drilling | 06:53 | 06:59 | 0.10 | 6435 | 6490 | 55 | 35 | 550.0 | 50 | 13000 | 700 | 3450 | | 32.33 | 229.28 | 0.00 | |
| 1 | 5-Aug | Sliding | 07:03 | 07:10 | 0.12 | 6490 | 6525 | 35 | 25 | 300.0 | 50 | 13000 | 700 | 3450 | 30R | 35.45 | 229.11 | 0.00 | |
| 1 | 5-Aug | Drilling | 07:10 | 07:15 | 0.08 | 6525 | 6585 | 60 | 35 | 720.0 | 50 | 13000 | 700 | 3450 | | 35.45 | 229.11 | 0.00 | |
| 1 | 5-Aug | Sliding | 07:19 | 07:23 | 0.07 | 6585 | 6600 | 15 | 25 | 225.0 | 50 | 13000 | 700 | 3450 | 0G | 35.45 | 229.11 | 0.00 | |
| 1 | 5-Aug | Drilling | 07:23 | 07:30 | 0.12 | 6600 | 6680 | 80 | 35 | 685.7 | 50 | 13000 | 700 | 3450 | | 33.50 | 230.82 | 0.00 | |
| 1 | 5-Aug | Sliding | 07:34 | 07:39 | 0.08 | 6680 | 6705 | 25 | 25 | 300.0 | 50 | 13000 | 700 | 3450 | 0G | 33.50 | 230.82 | 0.00 | |
| 1 | 5-Aug | Drilling | 07:39 | 07:45 | 0.10 | 6705 | 6776 | 71 | 35 | 710.0 | 50 | 13000 | 700 | 3450 | | 31.64 | 230.21 | 0.00 | |
| 1 | 5-Aug | Sliding | 07:49 | 07:56 | 0.12 | 6776 | 6811 | 35 | 35 | 300.0 | 50 | 13000 | 700 | 3450 | 10R | 30.33 | 230.26 | 0.00 | |
| 1 | 5-Aug | Drilling | 07:56 | 08:01 | 0.08 | 6811 | 6871 | 60 | 35 | 720.0 | 50 | 13000 | 700 | 3450 | | 30.33 | 230.26 | 0.00 | |
| 1 | 5-Aug | Sliding | 08:05 | 08:13 | 0.13 | 6871 | 6911 | 40 | 35 | 300.0 | 50 | 13000 | 700 | 3450 | 10R | 30.83 | 233.23 | 0.00 | |
| 1 | 5-Aug | Drilling | 08:13 | 08:18 | 0.08 | 6911 | 6966 | 55 | 35 | 660.0 | 50 | 13000 | 700 | 3450 | | 30.83 | 233.23 | 0.00 | |
| 1 | 5-Aug | Sliding | 08:22 | 08:30 | 0.13 | 6966 | 7006 | 40 | 35 | 300.0 | 50 | 13000 | 700 | 3450 | 20L | 30.56 | 230.83 | 0.00 | |
| 1 | 5-Aug | Drilling | 08:30 | 08:35 | 0.08 | 7006 | 7062 | 56 | 35 | 672.0 | 50 | 13000 | 700 | 3450 | | 30.56 | 230.83 | 0.00 | |
| 1 | 5-Aug | Sliding | 08:39 | 08:49 | 0.17 | 7062 | 7112 | 50 | 35 | 300.0 | 50 | 13000 | 700 | 3450 | 10R | 32.52 | 230.78 | 0.00 | |
| 1 | 5-Aug | Drilling | 08:49 | 08:54 | 0.08 | 7112 | 7157 | 45 | 35 | 540.0 | 50 | 13000 | 700 | 3450 | | 32.52 | 230.78 | 0.00 | |
| 1 | 5-Aug | Sliding | 08:58 | 09:11 | 0.22 | 7157 | 7253 | 96 | 35 | 443.1 | 50 | 13000 | 700 | 3450 | 40R | 34.40 | 237.06 | 0.00 | |
| 1 | 5-Aug | Sliding | 09:15 | 09:30 | 0.25 | 7253 | 7348 | 95 | 35 | 380.0 | 50 | 13000 | 700 | 3450 | 40R | 43.38 | 245.30 | 0.00 | |
| 1 | 5-Aug | Drilling | 09:34 | 09:39 | 0.08 | 7348 | 7373 | 25 | 35 | 300.0 | 20 | 13000 | 700 | 3450 | | 43.38 | 245.30 | 0.00 | |
| 1 | 5-Aug | Sliding | 09:39 | 09:51 | 0.20 | 7373 | 7443 | 70 | 35 | 350.0 | 20 | 13000 | 700 | 3450 | 40R | 50.57 | 247.98 | 0.00 | |
| 1 | 5-Aug | Drilling | 10:03 | 10:07 | 0.07 | 7443 | 7473 | 30 | 35 | 450.0 | 20 | 13000 | 700 | 3450 | | 50.57 | 247.98 | 0.00 | |
| 1 | 5-Aug | Sliding | 10:07 | 10:19 | 0.20 | 7473 | 7538 | 65 | 35 | 325.0 | 20 | 13000 | 700 | 3450 | 40R | 58.95 | 254.61 | 0.00 | |
| 1 | 5-Aug | Drilling | 10:24 | 10:35 | 0.18 | 7538 | 7633 | 95 | 35 | 518.2 | 20 | 13000 | 700 | 3450 | | 67.07 | 260.88 | 0.00 | |
| 1 | 5-Aug | Drilling | 10:39 | 10:47 | 0.13 | 7633 | 7697 | 64 | 35 | 480.0 | 20 | 13000 | 700 | 3450 | | 66.75 | 260.50 | 0.00 | |
| 1 | 5-Aug | Sliding | 10:47 | 11:03 | 0.27 | 7697 | 7729 | 32 | 35 | 120.0 | 20 | 13000 | 700 | 3450 | 20R | 66.75 | 260.50 | 0.00 | |
| 1 | 5-Aug | Drilling | 11:07 | 11:14 | 0.12 | 7729 | 7762 | 33 | 35 | 282.9 | 20 | 13000 | 700 | 3450 | | 66.75 | 260.50 | 0.00 | |
| 1 | 5-Aug | Sliding | 11:14 | 11:25 | 0.18 | 7762 | 7807 | 45 | 35 | 245.5 | 20 | 13000 | 700 | 3450 | 20R | 72.66 | 263.26 | 0.00 | |

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

| # | Date | Drill Mode | Start Time | End Time | Hours | Start MD | End MD | Depth Drilled | WOB | ROP | RPM | Surf. Torque | Flow Rate | SPP | TFO | INC | AZM | DLS | Note |
|---|-------|------------|------------|----------|-------|----------|--------|---------------|-----|-------|-----|--------------|-----------|------|------|-------|--------|------|------|
| 1 | 5-Aug | Drilling | 11:25 | 11:29 | 0.07 | 7807 | 7824 | 17 | 35 | 255.0 | 20 | 13000 | 700 | 3450 | | 72.66 | 263.26 | 0.00 | |
| 1 | 5-Aug | Drilling | 11:33 | 11:42 | 0.15 | 7824 | 7874 | 50 | 35 | 333.3 | 20 | 13000 | 700 | 3450 | | 79.47 | 266.07 | 0.00 | |
| 1 | 5-Aug | Sliding | 11:42 | 11:47 | 0.08 | 7874 | 7882 | 8 | 35 | 96.0 | | 13000 | 700 | 3450 | 10L | 79.47 | 266.07 | 0.00 | |
| 1 | 5-Aug | Drilling | 11:47 | 11:55 | 0.13 | 7882 | 7920 | 38 | 35 | 285.0 | 20 | 13000 | 700 | 3450 | | 79.47 | 266.07 | 0.00 | |
| 1 | 5-Aug | Drilling | 11:59 | 12:04 | 0.08 | 7920 | 7955 | 35 | 35 | 420.0 | 20 | 13000 | 700 | 3450 | | 81.85 | 266.22 | 0.00 | |
| 1 | 5-Aug | Sliding | 12:04 | 12:13 | 0.15 | 7955 | 7985 | 30 | 35 | 200.0 | 20 | 13000 | 700 | 3450 | 20R | 81.85 | 266.22 | 0.00 | |
| 1 | 5-Aug | Drilling | 12:13 | 12:18 | 0.08 | 7985 | 8015 | 30 | 35 | 360.0 | 20 | 13000 | 700 | 3450 | | 81.85 | 266.22 | 0.00 | |
| 1 | 5-Aug | Drilling | 12:22 | 12:28 | 0.10 | 8015 | 8050 | 35 | 35 | 350.0 | 20 | 13000 | 700 | 3450 | | 86.34 | 268.45 | 0.00 | |
| 1 | 5-Aug | Sliding | 12:28 | 12:38 | 0.17 | 8050 | 8082 | 32 | 35 | 192.0 | 20 | 13000 | 700 | 3450 | 0G | 86.34 | 268.45 | 0.00 | |
| 1 | 5-Aug | Drilling | 12:38 | 12:45 | 0.12 | 8082 | 8110 | 28 | 35 | 240.0 | 20 | 13000 | 700 | 3450 | | 86.34 | 268.45 | 0.00 | |
| 1 | 5-Aug | Drilling | 12:49 | 13:02 | 0.22 | 8110 | 8206 | 96 | 36 | 443.1 | 65 | 14500 | 700 | 3450 | | 90.87 | 268.63 | 0.00 | |
| 1 | 5-Aug | Drilling | 13:06 | 13:20 | 0.23 | 8206 | 8301 | 95 | 36 | 407.1 | 65 | 14500 | 700 | 3450 | | 90.84 | 268.91 | 0.00 | |
| 1 | 5-Aug | Drilling | 13:24 | 13:36 | 0.20 | 8301 | 8396 | 95 | 36 | 475.0 | 65 | 14500 | 700 | 3450 | | 91.34 | 268.88 | 0.00 | |
| 1 | 5-Aug | Drilling | 18:00 | 18:04 | 0.07 | 8396 | 8422 | 26 | 20 | 390.0 | 65 | 14500 | 700 | 4650 | | 91.34 | 268.88 | 0.00 | |
| 1 | 5-Aug | Drilling | 18:08 | 18:18 | 0.17 | 8422 | 8517 | 95 | 35 | 570.0 | 65 | 15000 | 700 | 4775 | | 90.91 | 267.89 | 0.00 | |
| 1 | 5-Aug | Drilling | 18:22 | 18:33 | 0.18 | 8517 | 8613 | 96 | 35 | 523.6 | 65 | 15000 | 700 | 4775 | | 91.14 | 267.67 | 0.00 | |
| 1 | 5-Aug | Sliding | 18:46 | 18:50 | 0.07 | 8613 | 8626 | 13 | 35 | 195.0 | 0 | 0 | 700 | 4575 | 120R | 91.14 | 267.67 | 0.00 | |
| 1 | 5-Aug | Drilling | 18:50 | 19:00 | 0.17 | 8626 | 8708 | 82 | 35 | 492.0 | 65 | 15000 | 700 | 4775 | | 91.01 | 270.13 | 0.00 | |
| 1 | 5-Aug | Drilling | 19:04 | 19:18 | 0.23 | 8708 | 8803 | 95 | 35 | 407.1 | 65 | 15000 | 700 | 4775 | | 90.73 | 269.90 | 0.00 | |
| 1 | 5-Aug | Drilling | 19:23 | 19:34 | 0.18 | 8803 | 8899 | 96 | 35 | 523.6 | 65 | 15000 | 700 | 4775 | | 89.80 | 269.49 | 0.00 | |
| 1 | 5-Aug | Drilling | 19:39 | 19:54 | 0.25 | 8899 | 8994 | 95 | 35 | 380.0 | 65 | 15000 | 700 | 4775 | | 89.97 | 269.62 | 0.00 | |
| 1 | 5-Aug | Drilling | 19:59 | 20:12 | 0.22 | 8994 | 9089 | 95 | 35 | 438.5 | 65 | 15000 | 700 | 4775 | | 90.10 | 270.64 | 0.00 | |
| 1 | 5-Aug | Drilling | 20:17 | 20:31 | 0.23 | 9089 | 9185 | 96 | 35 | 411.4 | 65 | 15000 | 700 | 4775 | | 90.60 | 271.49 | 0.00 | |
| 1 | 5-Aug | Drilling | 20:36 | 20:49 | 0.22 | 9185 | 9280 | 95 | 35 | 438.5 | 65 | 15000 | 700 | 4775 | | 90.60 | 270.66 | 0.00 | |
| 1 | 5-Aug | Drilling | 20:54 | 21:08 | 0.23 | 9280 | 9375 | 95 | 35 | 407.1 | 65 | 15000 | 700 | 4775 | | 91.78 | 270.82 | 0.00 | |
| 1 | 5-Aug | Sliding | 21:13 | 21:18 | 0.08 | 9375 | 9388 | 13 | 35 | 156.0 | 65 | 15000 | 700 | 4775 | 170L | 91.78 | 270.82 | 0.00 | |
| 1 | 5-Aug | Drilling | 21:18 | 21:31 | 0.22 | 9388 | 9471 | 83 | 35 | 383.1 | 65 | 15000 | 700 | 4775 | | 89.87 | 269.65 | 0.00 | |
| 1 | 5-Aug | Drilling | 21:36 | 21:50 | 0.23 | 9471 | 9566 | 95 | 35 | 407.1 | 65 | 15000 | 700 | 4775 | | 89.70 | 269.35 | 0.00 | |
| 1 | 5-Aug | Drilling | 21:55 | 22:12 | 0.28 | 9566 | 9662 | 96 | 35 | 338.8 | 65 | 15000 | 700 | 4775 | | 90.24 | 269.00 | 0.00 | |
| 1 | 5-Aug | Drilling | 22:17 | 22:31 | 0.23 | 9662 | 9757 | 95 | 35 | 407.1 | 65 | 15000 | 700 | 4775 | | 91.44 | 269.27 | 0.00 | |
| 1 | 5-Aug | Sliding | 22:36 | 22:44 | 0.13 | 9757 | 9772 | 15 | 35 | 112.5 | 65 | 15000 | 700 | 4775 | 135R | 91.44 | 269.27 | 0.00 | |
| 1 | 5-Aug | Drilling | 22:44 | 22:56 | 0.20 | 9772 | 9853 | 81 | 35 | 405.0 | 65 | 15000 | 700 | 4775 | | 90.54 | 271.52 | 0.00 | |
| 1 | 5-Aug | Sliding | 23:01 | 23:04 | 0.05 | 9853 | 9859 | 6 | 35 | 120.0 | 65 | 15000 | 700 | 4775 | 180 | 90.54 | 271.52 | 0.00 | |
| 1 | 5-Aug | Drilling | 23:04 | 23:18 | 0.23 | 9859 | 9948 | 89 | 35 | 381.4 | 65 | 15000 | 700 | 4775 | | 89.87 | 270.73 | 0.00 | |
| 1 | 5-Aug | Drilling | 23:23 | 23:35 | 0.20 | 9948 | 10043 | 95 | 35 | 475.0 | 65 | 15000 | 700 | 4775 | | 90.30 | 271.59 | 0.00 | |

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

| # | Date | Drill Mode | Start Time | End Time | Hours | Start MD | End MD | Depth Drilled | WOB | ROP | RPM | Surf. Torque | Flow Rate | SPP | TFO | INC | AZM | DLS | Note |
|---|-------|------------|------------|----------|-------|----------|--------|---------------|-----|-------|-----|--------------|-----------|------|------|-------|--------|------|------|
| 1 | 5-Aug | Drilling | 23:40 | 23:52 | 0.20 | 10043 | 10139 | 96 | 35 | 480.0 | 65 | 15500 | 700 | 4850 | | 90.84 | 271.88 | 0.00 | |
| 1 | 5-Aug | Drilling | 23:57 | 24:00 | 0.05 | 10139 | 10153 | 14 | 35 | 280.0 | 65 | 15500 | 700 | 4850 | | 90.84 | 271.88 | 0.00 | |
| 1 | 6-Aug | Sliding | 00:00 | 00:04 | 0.07 | 10153 | 10163 | 10 | 35 | 150.0 | 65 | 15500 | 700 | 4850 | 180 | 90.84 | 271.88 | 0.00 | |
| 1 | 6-Aug | Drilling | 00:04 | 00:16 | 0.20 | 10163 | 10235 | 72 | 35 | 360.0 | 65 | 15500 | 700 | 4850 | | 89.46 | 271.92 | 0.00 | |
| 1 | 6-Aug | Drilling | 00:21 | 00:33 | 0.20 | 10235 | 10330 | 95 | 35 | 475.0 | 65 | 15500 | 700 | 4850 | | 88.99 | 273.26 | 0.00 | |
| 1 | 6-Aug | Sliding | 00:38 | 00:44 | 0.10 | 10330 | 10345 | 15 | 35 | 150.0 | 65 | 15500 | 700 | 4850 | 80L | 88.99 | 273.26 | 0.00 | |
| 1 | 6-Aug | Drilling | 00:44 | 00:55 | 0.18 | 10345 | 10425 | 80 | 35 | 436.4 | 65 | 15500 | 700 | 4850 | | 89.26 | 270.57 | 0.00 | |
| 1 | 6-Aug | Drilling | 00:59 | 01:12 | 0.22 | 10425 | 10521 | 96 | 35 | 443.1 | 65 | 15500 | 700 | 4850 | | 88.83 | 271.96 | 0.00 | |
| 1 | 6-Aug | Sliding | 01:17 | 01:25 | 0.13 | 10521 | 10539 | 18 | 35 | 135.0 | 65 | 15500 | 700 | 4850 | 60L | 88.83 | 271.96 | 0.00 | |
| 1 | 6-Aug | Drilling | 01:25 | 01:36 | 0.18 | 10539 | 10616 | 77 | 35 | 420.0 | 65 | 15500 | 700 | 4850 | | 90.30 | 270.13 | 0.00 | |
| 1 | 6-Aug | Drilling | 01:41 | 01:54 | 0.22 | 10616 | 10711 | 95 | 35 | 438.5 | 65 | 15500 | 700 | 4850 | | 90.37 | 270.09 | 0.00 | |
| 1 | 6-Aug | Drilling | 01:59 | 02:12 | 0.22 | 10711 | 10806 | 95 | 35 | 438.5 | 65 | 15500 | 700 | 4850 | | 90.91 | 270.99 | 0.00 | |
| 1 | 6-Aug | Drilling | 02:20 | 02:32 | 0.20 | 10806 | 10902 | 96 | 35 | 480.0 | 65 | 15500 | 700 | 4850 | | 91.24 | 271.24 | 0.00 | |
| 1 | 6-Aug | Sliding | 02:36 | 02:45 | 0.15 | 10902 | 10922 | 20 | 35 | 133.3 | 65 | 15500 | 700 | 4850 | 120L | 91.24 | 271.24 | 0.00 | |
| 1 | 6-Aug | Drilling | 02:45 | 02:54 | 0.15 | 10922 | 10997 | 75 | 35 | 500.0 | 65 | 15500 | 700 | 4850 | | 89.83 | 267.00 | 0.00 | |
| 1 | 6-Aug | Drilling | 02:58 | 03:11 | 0.22 | 10997 | 11092 | 95 | 35 | 438.5 | 65 | 15500 | 700 | 4850 | | 89.53 | 266.39 | 0.00 | |
| 1 | 6-Aug | Sliding | 03:16 | 03:22 | 0.10 | 11092 | 11107 | 15 | 35 | 150.0 | 65 | 15500 | 700 | 4850 | 60R | 89.53 | 266.39 | 0.00 | |
| 1 | 6-Aug | Drilling | 03:22 | 03:33 | 0.18 | 11107 | 11188 | 81 | 35 | 441.8 | 65 | 15500 | 700 | 4850 | | 90.90 | 269.91 | 0.00 | |
| 1 | 6-Aug | Drilling | 03:37 | 03:47 | 0.17 | 11188 | 11283 | 95 | 35 | 570.0 | 65 | 15500 | 700 | 4850 | | 91.45 | 269.15 | 0.00 | |
| 1 | 6-Aug | Drilling | 03:51 | 04:01 | 0.17 | 11283 | 11378 | 95 | 35 | 570.0 | 65 | 17000 | 700 | 5150 | | 92.92 | 269.87 | 0.00 | |
| 1 | 6-Aug | Sliding | 04:05 | 04:10 | 0.08 | 11378 | 11388 | 10 | 35 | 120.0 | 65 | 17000 | 700 | 5150 | 170L | 92.92 | 269.87 | 0.00 | |
| 1 | 6-Aug | Drilling | 04:10 | 04:21 | 0.18 | 11388 | 11473 | 85 | 35 | 463.6 | 65 | 17000 | 700 | 5150 | | 91.98 | 270.02 | 0.00 | |
| 1 | 6-Aug | Sliding | 04:26 | 04:29 | 0.05 | 11473 | 11480 | 7 | 35 | 140.0 | 65 | 17000 | 700 | 5150 | 170L | 91.98 | 270.02 | 0.00 | |
| 1 | 6-Aug | Drilling | 04:29 | 04:40 | 0.18 | 11480 | 11569 | 89 | 35 | 485.5 | 65 | 17000 | 700 | 5150 | | 91.75 | 269.82 | 0.00 | |
| 1 | 6-Aug | Drilling | 04:44 | 04:54 | 0.17 | 11569 | 11664 | 95 | 35 | 570.0 | 65 | 17000 | 700 | 5150 | | 91.31 | 270.35 | 0.00 | |
| 1 | 6-Aug | Drilling | 04:58 | 05:09 | 0.18 | 11664 | 11759 | 95 | 35 | 518.2 | 65 | 17000 | 700 | 5150 | | 91.04 | 270.32 | 0.00 | |
| 1 | 6-Aug | Sliding | 05:13 | 05:17 | 0.07 | 11759 | 11761 | 2 | 35 | 30.0 | 65 | 17000 | 700 | 5150 | 40L | 91.04 | 270.32 | 0.00 | |
| 1 | 6-Aug | Drilling | 05:17 | 05:28 | 0.18 | 11761 | 11855 | 94 | 35 | 512.7 | 65 | 17000 | 700 | 5150 | | 93.03 | 270.93 | 0.00 | |
| 1 | 6-Aug | Sliding | 05:32 | 05:42 | 0.17 | 11855 | 11867 | 12 | 35 | 72.0 | 65 | 17000 | 700 | 5150 | 40L | 93.03 | 270.93 | 0.00 | |
| 1 | 6-Aug | Drilling | 05:42 | 05:52 | 0.17 | 11867 | 11950 | 83 | 35 | 498.0 | 65 | 17000 | 700 | 5150 | | 92.51 | 271.99 | 0.00 | |
| 1 | 6-Aug | Drilling | 05:56 | 06:05 | 0.15 | 11950 | 12046 | 96 | 35 | 640.0 | 65 | 17000 | 700 | 5150 | | 92.72 | 272.39 | 0.00 | |
| 1 | 6-Aug | Sliding | 06:11 | 06:20 | 0.15 | 12046 | 12058 | 12 | 35 | 80.0 | 65 | 17000 | 700 | 5150 | 120L | 92.72 | 272.39 | 0.00 | |
| 1 | 6-Aug | Drilling | 06:20 | 06:30 | 0.17 | 12058 | 12141 | 83 | 42 | 498.0 | 65 | 19500 | 700 | 5350 | | 91.24 | 270.55 | 0.00 | |
| 1 | 6-Aug | Drilling | 06:34 | 06:43 | 0.15 | 12141 | 12236 | 95 | 42 | 633.3 | 65 | 19500 | 700 | 5350 | | 91.60 | 271.39 | 0.00 | |
| 1 | 6-Aug | Sliding | 06:47 | 06:54 | 0.12 | 12236 | 12246 | 10 | 35 | 85.7 | 65 | 19500 | 700 | 5350 | 80L | 91.60 | 271.39 | 0.00 | |

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

| # | Date | Drill Mode | Start Time | End Time | Hours | Start MD | End MD | Depth Drilled | WOB | ROP | RPM | Surf. Torque | Flow Rate | SPP | TFO | INC | AZM | DLS | Note |
|---|-------|------------|------------|----------|-------|----------|--------|---------------|-----|-------|-----|--------------|-----------|------|------|-------|--------|------|------|
| 1 | 6-Aug | Drilling | 06:54 | 07:04 | 0.17 | 12246 | 12332 | 86 | 42 | 516.0 | 65 | 19500 | 700 | 5350 | | 91.68 | 268.77 | 0.00 | |
| 1 | 6-Aug | Sliding | 07:08 | 07:12 | 0.07 | 12332 | 12339 | 7 | 35 | 105.0 | 65 | 19500 | 700 | 5350 | 0G | 91.68 | 268.77 | 0.00 | |
| 1 | 6-Aug | Drilling | 07:12 | 07:22 | 0.17 | 12339 | 12427 | 88 | 42 | 528.0 | 65 | 19500 | 700 | 5350 | | 93.28 | 269.79 | 0.00 | |
| 1 | 6-Aug | Drilling | 07:26 | 07:37 | 0.18 | 12427 | 12522 | 95 | 42 | 518.2 | 65 | 19500 | 700 | 5350 | | 92.72 | 269.56 | 0.00 | |
| 1 | 6-Aug | Drilling | 07:41 | 07:52 | 0.18 | 12522 | 12617 | 95 | 42 | 518.2 | 65 | 19500 | 700 | 5350 | | 92.98 | 271.17 | 0.00 | |
| 1 | 6-Aug | Sliding | 07:56 | 08:02 | 0.10 | 12617 | 12626 | 9 | 35 | 90.0 | 65 | 19500 | 700 | 5350 | 70L | 92.98 | 271.17 | 0.00 | |
| 1 | 6-Aug | Drilling | 08:02 | 08:12 | 0.17 | 12626 | 12712 | 86 | 42 | 516.0 | 65 | 19500 | 700 | 5350 | | 94.36 | 270.26 | 0.00 | |
| 1 | 6-Aug | Drilling | 08:16 | 08:27 | 0.18 | 12712 | 12808 | 96 | 42 | 523.6 | 65 | 19500 | 700 | 5350 | | 95.34 | 269.87 | 0.00 | |
| 1 | 6-Aug | Sliding | 08:31 | 08:35 | 0.07 | 12808 | 12815 | 7 | 35 | 105.0 | 65 | 19500 | 700 | 5350 | 160L | 95.34 | 269.87 | 0.00 | |
| 1 | 6-Aug | Drilling | 08:35 | 08:46 | 0.18 | 12815 | 12903 | 88 | 42 | 480.0 | 65 | 19500 | 700 | 5350 | | 95.18 | 269.56 | 0.00 | |
| 1 | 6-Aug | Sliding | 08:50 | 08:59 | 0.15 | 12903 | 12918 | 15 | 35 | 100.0 | 65 | 19500 | 700 | 5350 | 150L | 95.18 | 269.56 | 0.00 | |
| 1 | 6-Aug | Drilling | 08:59 | 09:09 | 0.17 | 12918 | 12998 | 80 | 42 | 480.0 | 65 | 19500 | 700 | 5350 | | 93.86 | 267.45 | 0.00 | |
| 1 | 6-Aug | Sliding | 09:17 | 09:24 | 0.12 | 12998 | 13010 | 12 | 35 | 102.9 | 65 | 19500 | 700 | 5350 | 180 | 93.86 | 267.45 | 0.00 | |
| 1 | 6-Aug | Drilling | 09:24 | 09:34 | 0.17 | 13010 | 13093 | 83 | 42 | 498.0 | 65 | 19500 | 700 | 5350 | | 92.95 | 268.25 | 0.00 | |
| 1 | 6-Aug | Drilling | 09:42 | 09:52 | 0.17 | 13093 | 13189 | 96 | 42 | 576.0 | 65 | 19500 | 700 | 5350 | | 92.95 | 268.35 | 0.00 | |
| 1 | 6-Aug | Drilling | 10:00 | 10:10 | 0.17 | 13189 | 13284 | 95 | 42 | 570.0 | 65 | 19500 | 700 | 5350 | | 92.78 | 268.27 | 0.00 | |
| 1 | 6-Aug | Drilling | 10:17 | 10:26 | 0.15 | 13284 | 13379 | 95 | 42 | 633.3 | 65 | 19500 | 700 | 5350 | | 93.09 | 267.28 | 0.00 | |
| 1 | 6-Aug | Drilling | 10:33 | 10:43 | 0.17 | 13379 | 13474 | 95 | 42 | 570.0 | 65 | 19500 | 700 | 5350 | | 93.80 | 268.05 | 0.00 | |
| 1 | 6-Aug | Sliding | 10:50 | 10:59 | 0.15 | 13474 | 13488 | 14 | 35 | 93.3 | 65 | 19500 | 700 | 5350 | 160R | 93.80 | 268.05 | 0.00 | |
| 1 | 6-Aug | Drilling | 10:59 | 11:09 | 0.17 | 13488 | 13569 | 81 | 42 | 486.0 | 65 | 19500 | 700 | 5350 | | 92.31 | 267.77 | 0.00 | |
| 1 | 6-Aug | Sliding | 11:16 | 11:21 | 0.08 | 13569 | 13577 | 8 | 35 | 96.0 | 65 | 19500 | 700 | 5350 | 140R | 92.31 | 267.77 | 0.00 | |
| 1 | 6-Aug | Drilling | 11:21 | 11:32 | 0.18 | 13577 | 13665 | 88 | 42 | 480.0 | 65 | 19500 | 700 | 5350 | | 90.67 | 267.10 | 0.00 | |
| 1 | 6-Aug | Sliding | 11:39 | 11:46 | 0.12 | 13665 | 13675 | 10 | 35 | 85.7 | 65 | 19500 | 700 | 5350 | 90R | 90.67 | 267.10 | 0.00 | |
| 1 | 6-Aug | Drilling | 11:46 | 11:56 | 0.17 | 13675 | 13760 | 85 | 42 | 510.0 | 65 | 19500 | 700 | 5350 | | 91.24 | 270.23 | 0.00 | |
| 1 | 6-Aug | Drilling | 12:03 | 12:13 | 0.17 | 13760 | 13855 | 95 | 42 | 570.0 | 65 | 19500 | 700 | 5350 | | 91.07 | 270.29 | 0.00 | |
| 1 | 6-Aug | Drilling | 12:20 | 12:31 | 0.18 | 13855 | 13950 | 95 | 42 | 518.2 | 65 | 19500 | 700 | 5350 | | 91.74 | 271.66 | 0.00 | |
| 1 | 6-Aug | Drilling | 12:37 | 12:49 | 0.20 | 13950 | 14045 | 95 | 42 | 475.0 | 65 | 23000 | 700 | 5500 | | 91.51 | 271.07 | 0.00 | |
| 1 | 6-Aug | Drilling | 12:55 | 13:06 | 0.18 | 14045 | 14140 | 95 | 42 | 518.2 | 65 | 23000 | 700 | 5500 | | 91.58 | 271.80 | 0.00 | |
| 1 | 6-Aug | Drilling | 13:13 | 13:23 | 0.17 | 14140 | 14235 | 95 | 42 | 570.0 | 65 | 23000 | 700 | 5500 | | 92.18 | 272.40 | 0.00 | |
| 1 | 6-Aug | Sliding | 13:30 | 13:42 | 0.20 | 14235 | 14249 | 14 | 35 | 70.0 | 65 | 23000 | 700 | 5500 | 130L | 92.18 | 272.40 | 0.00 | |
| 1 | 6-Aug | Drilling | 13:42 | 13:54 | 0.20 | 14249 | 14330 | 81 | 42 | 405.0 | 65 | 23000 | 700 | 5500 | | 91.68 | 272.15 | 0.00 | |
| 1 | 6-Aug | Sliding | 14:00 | 14:13 | 0.22 | 14330 | 14345 | 15 | 35 | 69.2 | 65 | 23000 | 700 | 5500 | 130L | 91.68 | 272.15 | 0.00 | |
| 1 | 6-Aug | Drilling | 14:13 | 14:24 | 0.18 | 14345 | 14425 | 80 | 42 | 436.4 | 65 | 23000 | 700 | 5500 | | 91.71 | 271.67 | 0.00 | |
| 1 | 6-Aug | Sliding | 14:30 | 14:41 | 0.18 | 14425 | 14442 | 17 | 35 | 92.7 | 65 | 23000 | 700 | 5500 | 135L | 91.71 | 271.67 | 0.00 | |
| 1 | 6-Aug | Drilling | 14:41 | 14:51 | 0.17 | 14442 | 14520 | 78 | 42 | 468.0 | 65 | 23000 | 700 | 5500 | | 90.07 | 268.29 | 0.00 | |

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

| # | Date | Drill Mode | Start Time | End Time | Hours | Start MD | End MD | Depth Drilled | WOB | ROP | RPM | Surf. Torque | Flow Rate | SPP | TFO | INC | AZM | DLS | Note |
|---|-------|------------|------------|----------|-------|----------|--------|---------------|-----|-------|-----|--------------|-----------|------|------|-------|--------|------|------|
| 1 | 6-Aug | Drilling | 14:58 | 15:09 | 0.18 | 14520 | 14615 | 95 | 42 | 518.2 | 65 | 23000 | 700 | 5500 | | 90.94 | 268.97 | 0.00 | |
| 1 | 6-Aug | Drilling | 15:15 | 15:27 | 0.20 | 14615 | 14710 | 95 | 42 | 475.0 | 65 | 23000 | 700 | 5500 | | 91.14 | 267.38 | 0.00 | |
| 1 | 6-Aug | Sliding | 15:34 | 15:42 | 0.13 | 14710 | 14720 | 10 | 35 | 75.0 | 65 | 23000 | 700 | 5500 | 120R | 91.14 | 267.38 | 0.00 | |
| 1 | 6-Aug | Drilling | 15:42 | 15:52 | 0.17 | 14720 | 14806 | 86 | 42 | 516.0 | 65 | 23000 | 700 | 5500 | | 91.31 | 270.65 | 0.00 | |
| 1 | 6-Aug | Sliding | 16:21 | 16:30 | 0.15 | 14806 | 14818 | 12 | 35 | 80.0 | 65 | 23000 | 700 | 5500 | 170L | 91.31 | 270.65 | 0.00 | |
| 1 | 6-Aug | Drilling | 16:30 | 16:40 | 0.17 | 14818 | 14901 | 83 | 42 | 498.0 | 65 | 23000 | 700 | 5500 | | 88.72 | 269.89 | 0.00 | |
| 1 | 6-Aug | Drilling | 16:46 | 16:57 | 0.18 | 14901 | 14996 | 95 | 42 | 518.2 | 65 | 23000 | 700 | 5500 | | 88.59 | 270.25 | 0.00 | |
| 1 | 6-Aug | Drilling | 17:03 | 17:15 | 0.20 | 14996 | 15091 | 95 | 42 | 475.0 | 65 | 23000 | 700 | 5500 | | 88.19 | 269.91 | 0.00 | |
| 1 | 6-Aug | Sliding | 17:22 | 17:30 | 0.13 | 15091 | 15099 | 8 | 35 | 60.0 | 65 | 23000 | 700 | 5500 | 0G | 88.19 | 269.91 | 0.00 | |
| 1 | 6-Aug | Drilling | 17:30 | 17:41 | 0.18 | 15099 | 15186 | 87 | 42 | 474.5 | 65 | 23000 | 700 | 5500 | | 89.60 | 271.33 | 0.00 | |
| 1 | 6-Aug | Sliding | 17:47 | 17:54 | 0.12 | 15186 | 15194 | 8 | 35 | 68.6 | 65 | 23000 | 700 | 5500 | 0G | 89.60 | 271.33 | 0.00 | |
| 1 | 6-Aug | Drilling | 17:54 | 18:05 | 0.18 | 15194 | 15281 | 87 | 42 | 474.5 | 65 | 23000 | 700 | 5500 | | 91.78 | 271.75 | 0.00 | |
| 1 | 6-Aug | Drilling | 18:14 | 18:25 | 0.18 | 15281 | 15376 | 95 | 42 | 518.2 | 65 | 23000 | 700 | 5500 | | 92.88 | 271.21 | 0.00 | |
| 1 | 6-Aug | Sliding | 18:36 | 18:45 | 0.15 | 15376 | 15388 | 12 | 35 | 80.0 | 65 | 23000 | 700 | 5500 | 160L | 92.88 | 271.21 | 0.00 | |
| 1 | 6-Aug | Drilling | 18:45 | 18:58 | 0.22 | 15388 | 15471 | 83 | 42 | 383.1 | 65 | 23000 | 700 | 5500 | | 90.94 | 269.82 | 0.00 | |
| 1 | 6-Aug | Sliding | 19:07 | 19:12 | 0.08 | 15471 | 15475 | 4 | 35 | 48.0 | 65 | 23000 | 700 | 5500 | 180 | 90.94 | 269.82 | 0.00 | |
| 1 | 6-Aug | Drilling | 19:12 | 19:25 | 0.22 | 15475 | 15566 | 91 | 42 | 420.0 | 65 | 23000 | 700 | 5500 | | 91.17 | 270.14 | 0.00 | |
| 1 | 6-Aug | Drilling | 19:33 | 19:36 | 0.05 | 15566 | 15596 | 30 | 42 | 600.0 | 65 | 23000 | 700 | 5500 | | 91.17 | 270.14 | 0.00 | |
| 1 | 6-Aug | Sliding | 19:36 | 19:45 | 0.15 | 15596 | 15604 | 8 | 35 | 53.3 | 65 | 23000 | 700 | 5500 | 160L | 90.27 | 270.70 | 0.00 | |
| 1 | 6-Aug | Drilling | 19:45 | 19:54 | 0.15 | 15604 | 15661 | 57 | 42 | 380.0 | 65 | 23000 | 700 | 5500 | | 90.27 | 270.70 | 0.00 | |
| 1 | 6-Aug | Drilling | 20:02 | 20:14 | 0.20 | 15661 | 15757 | 96 | 42 | 480.0 | 65 | 23000 | 700 | 5500 | | 89.63 | 270.68 | 0.00 | |
| 1 | 6-Aug | Sliding | 20:22 | 20:35 | 0.22 | 15757 | 15765 | 8 | 35 | 36.9 | 65 | 23000 | 700 | 5500 | 50L | 89.63 | 270.68 | 0.00 | |
| 1 | 6-Aug | Drilling | 20:35 | 20:47 | 0.20 | 15765 | 15852 | 87 | 42 | 435.0 | 65 | 24500 | 700 | 5575 | | 90.50 | 269.57 | 0.00 | |
| 1 | 6-Aug | Sliding | 20:56 | 21:05 | 0.15 | 15852 | 15857 | 5 | 35 | 33.3 | 65 | 24500 | 700 | 5575 | 50L | 90.50 | 269.57 | 0.00 | |
| 1 | 6-Aug | Drilling | 21:05 | 21:17 | 0.20 | 15857 | 15947 | 90 | 42 | 450.0 | 65 | 24500 | 700 | 5575 | | 90.60 | 269.05 | 0.00 | |
| 1 | 6-Aug | Sliding | 21:25 | 21:33 | 0.13 | 15947 | 15957 | 10 | 35 | 75.0 | 65 | 24500 | 700 | 5575 | 0G | 90.60 | 269.05 | 0.00 | |
| 1 | 6-Aug | Drilling | 21:33 | 21:44 | 0.18 | 15957 | 16043 | 86 | 42 | 469.1 | 65 | 24500 | 700 | 5575 | | 92.59 | 269.93 | 0.00 | |
| 1 | 6-Aug | Drilling | 21:52 | 22:05 | 0.22 | 16043 | 16138 | 95 | 42 | 438.5 | 65 | 24500 | 700 | 5575 | | 93.95 | 271.19 | 0.00 | |
| 1 | 6-Aug | Sliding | 22:13 | 22:24 | 0.18 | 16138 | 16145 | 7 | 35 | 38.2 | 65 | 24500 | 700 | 5575 | 170L | 93.95 | 271.19 | 0.00 | |
| 1 | 6-Aug | Drilling | 22:24 | 22:37 | 0.22 | 16145 | 16233 | 88 | 42 | 406.2 | 65 | 24500 | 700 | 5575 | | 93.45 | 270.81 | 0.00 | |
| 1 | 6-Aug | Drilling | 22:45 | 22:58 | 0.22 | 16233 | 16329 | 96 | 42 | 443.1 | 65 | 24500 | 700 | 5575 | | 94.27 | 270.01 | 0.00 | |
| 1 | 6-Aug | Sliding | 23:06 | 23:18 | 0.20 | 16329 | 16341 | 12 | 35 | 60.0 | 65 | 24500 | 700 | 5575 | 170L | 94.27 | 270.01 | 0.00 | |
| 1 | 6-Aug | Drilling | 23:18 | 23:30 | 0.20 | 16341 | 16424 | 83 | 42 | 415.0 | 65 | 24500 | 700 | 5575 | | 92.85 | 269.88 | 0.00 | |
| 1 | 6-Aug | Drilling | 23:38 | 23:50 | 0.20 | 16424 | 16519 | 95 | 42 | 475.0 | 65 | 24500 | 700 | 5575 | | 93.26 | 269.16 | 0.00 | |
| 1 | 6-Aug | Drilling | 23:58 | 24:00 | 0.03 | 16519 | 16534 | 15 | 42 | 450.0 | 65 | 24500 | 700 | 5575 | | 93.26 | 269.16 | 0.00 | |

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

| # | Date | Drill Mode | Start Time | End Time | Hours | Start MD | End MD | Depth Drilled | WOB | ROP | RPM | Surf. Torque | Flow Rate | SPP | TFO | INC | AZM | DLS | Note |
|---|-------|------------|------------|----------|-------|----------|--------|---------------|-----|-------|-----|--------------|-----------|------|------|-------|--------|------|------|
| 1 | 7-Aug | Drilling | 00:00 | 00:11 | 0.18 | 16534 | 16614 | 80 | 42 | 436.4 | 65 | 24500 | 700 | 5575 | | 94.46 | 270.38 | 0.00 | |
| 1 | 7-Aug | Sliding | 00:19 | 00:42 | 0.38 | 16614 | 16628 | 14 | 35 | 36.5 | 65 | 24500 | 700 | 5575 | 170L | 94.46 | 270.38 | 0.00 | |
| 1 | 7-Aug | Drilling | 00:42 | 00:54 | 0.20 | 16628 | 16709 | 81 | 42 | 405.0 | 65 | 24500 | 700 | 5575 | | 92.38 | 269.81 | 0.00 | |
| 1 | 7-Aug | Drilling | 01:02 | 01:13 | 0.18 | 16709 | 16804 | 95 | 42 | 518.2 | 65 | 24500 | 700 | 5575 | | 92.89 | 269.33 | 0.00 | |
| 1 | 7-Aug | Drilling | 01:21 | 01:35 | 0.23 | 16804 | 16899 | 95 | 42 | 407.1 | 65 | 24500 | 700 | 5575 | | 93.75 | 270.27 | 0.00 | |
| 1 | 7-Aug | Drilling | 01:44 | 01:58 | 0.23 | 16899 | 16994 | 95 | 42 | 407.1 | 65 | 24500 | 700 | 5575 | | 94.25 | 269.89 | 0.00 | |
| 1 | 7-Aug | Sliding | 02:07 | 02:17 | 0.17 | 16994 | 17002 | 8 | 35 | 48.0 | 65 | 24500 | 700 | 5575 | 180 | 94.25 | 269.89 | 0.00 | |
| 1 | 7-Aug | Drilling | 02:17 | 02:30 | 0.22 | 17002 | 17089 | 87 | 42 | 401.5 | 65 | 24500 | 700 | 5575 | | 92.82 | 268.37 | 0.00 | |
| 1 | 7-Aug | Drilling | 02:39 | 02:43 | 0.07 | 17089 | 17115 | 26 | 42 | 390.0 | 65 | 24500 | 700 | 5575 | | 92.82 | 268.37 | 0.00 | |

Total Drilled: 15583 **Avg. Total ROP:** 420.59 **DEPTH% - TIME %**

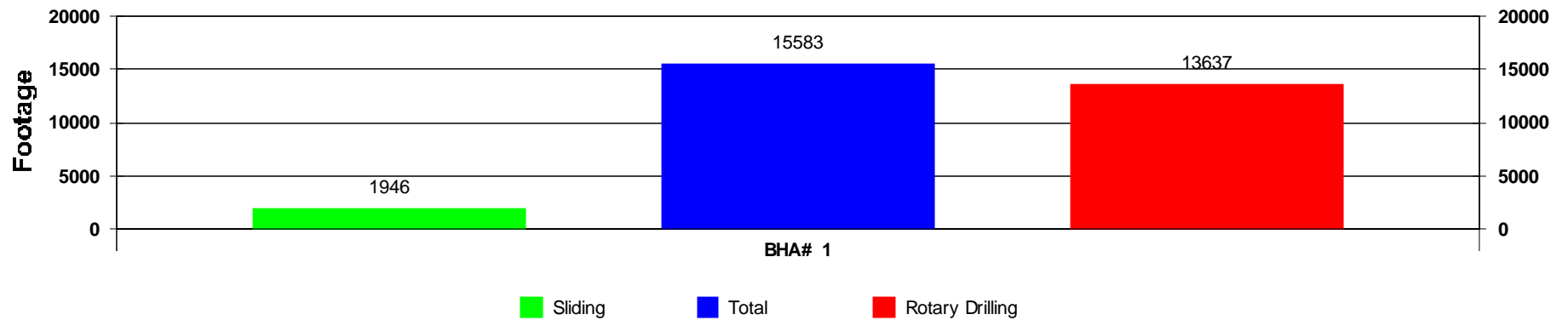
Total Rotary Drilled: 13637 **Avg. Rotary ROP:** 529.94 **Percent Rotary:** 87.51 - 69.46

Total Drilled Sliding: 1946 **Avg. Slide ROP:** 171.96 **Percent Slide:** 12.49 - 30.54

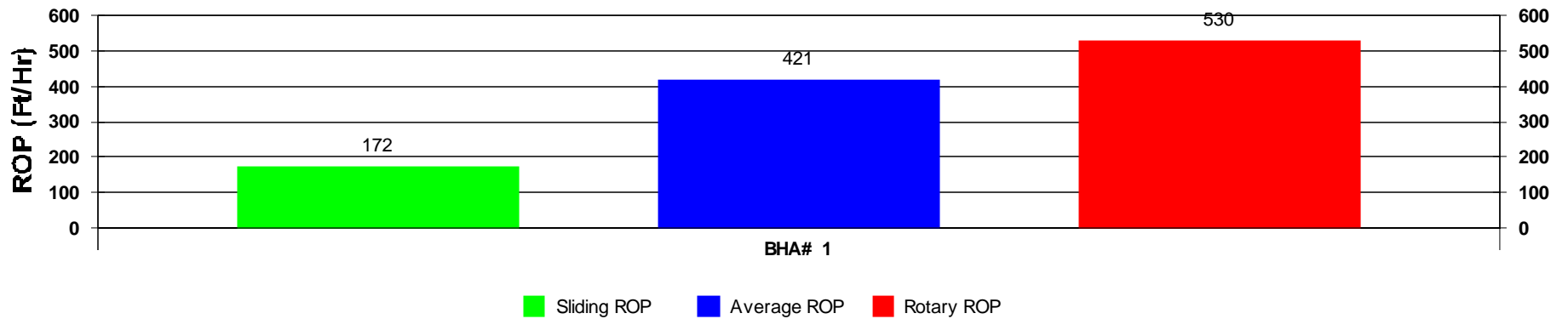


| | | | | |
|------------|----------------------|------------|------------|-----|
| JOB NO.: | 376640 | FIELD: | Wattenburg | |
| Company: | Extraction Oil & Gas | Township: | 6N | |
| LOCATION: | Breniman Pad | SECTRANGE: | 16 | 67W |
| RIG NAME: | Patterson 346 | COMMENT | | |
| STATE: | Colorado | | | |
| COUNTY: | Weld | | | |
| WELL NAME: | Breniman 11 | | | |

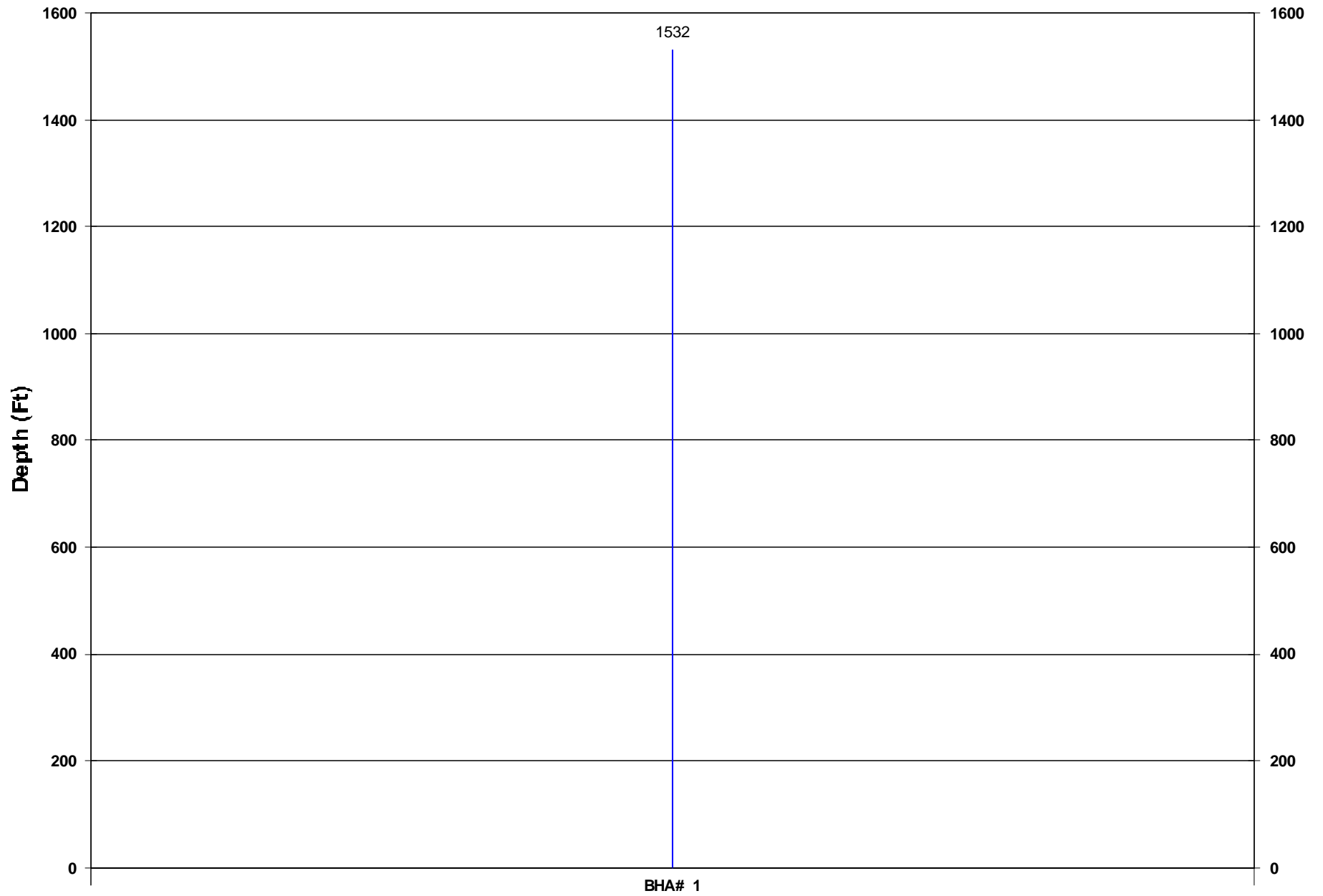
Footage Drilled with BHA



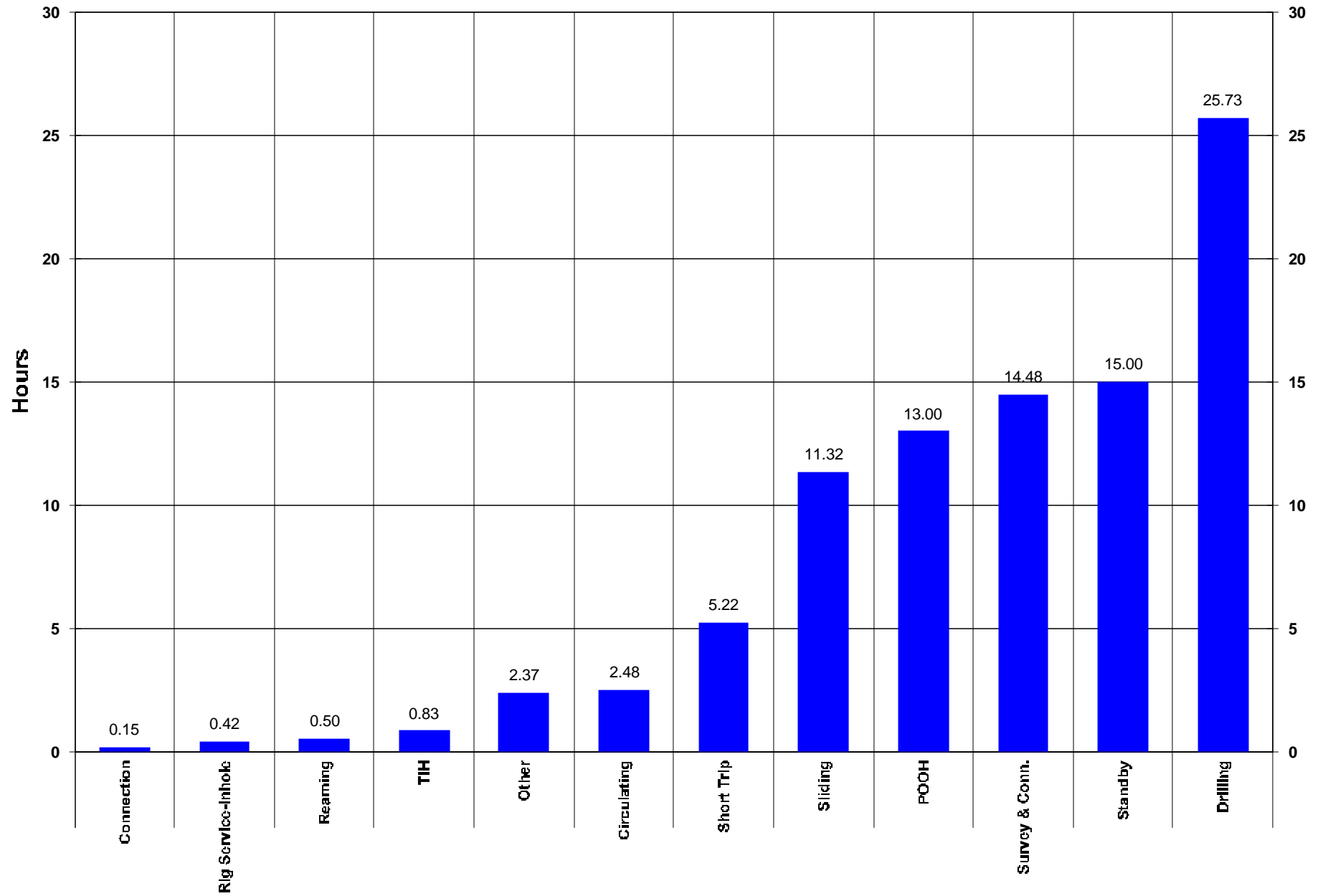
ROP vs BHA



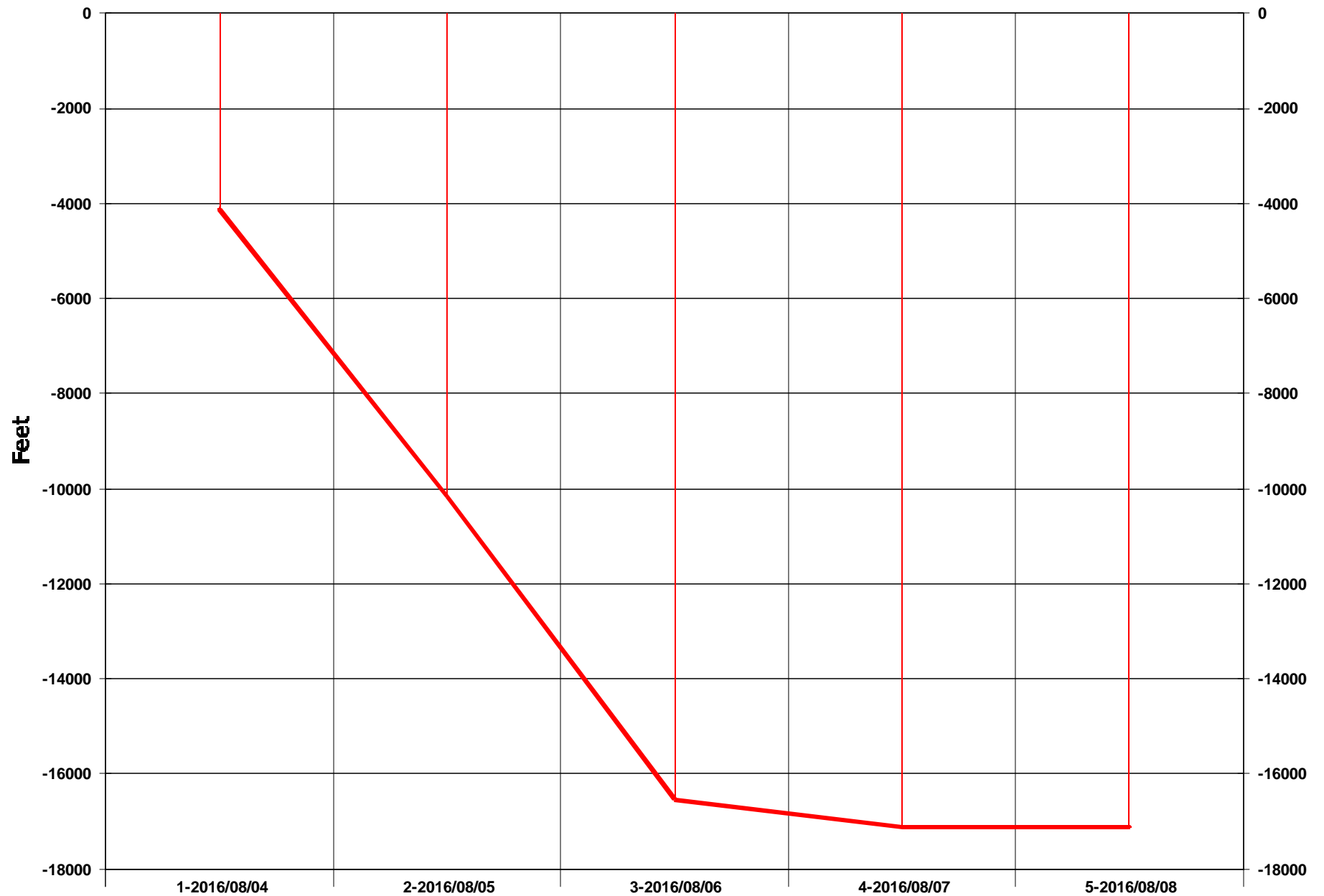
Depth vs BHA



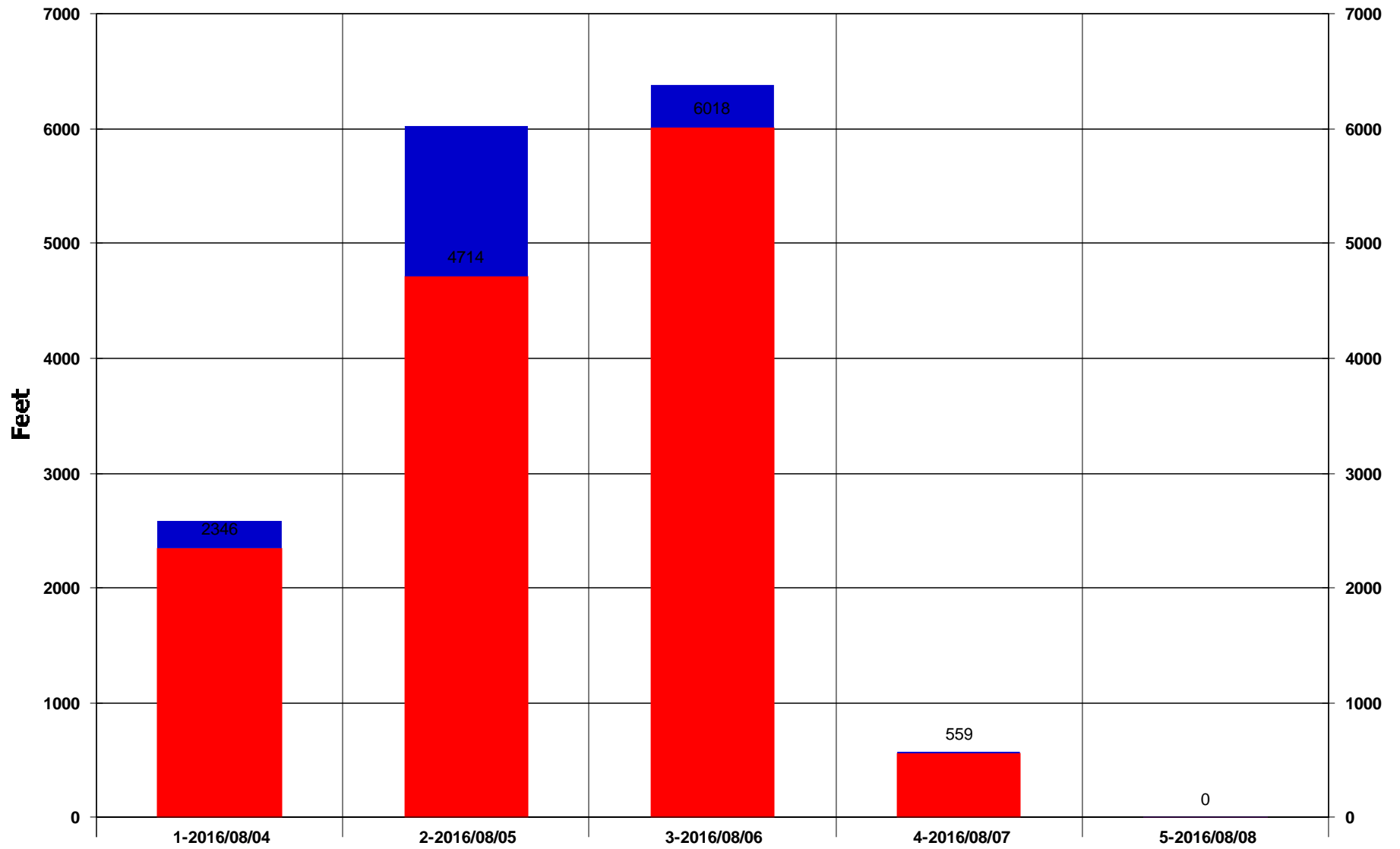
Activity Histogram



Measured Depth vs Days

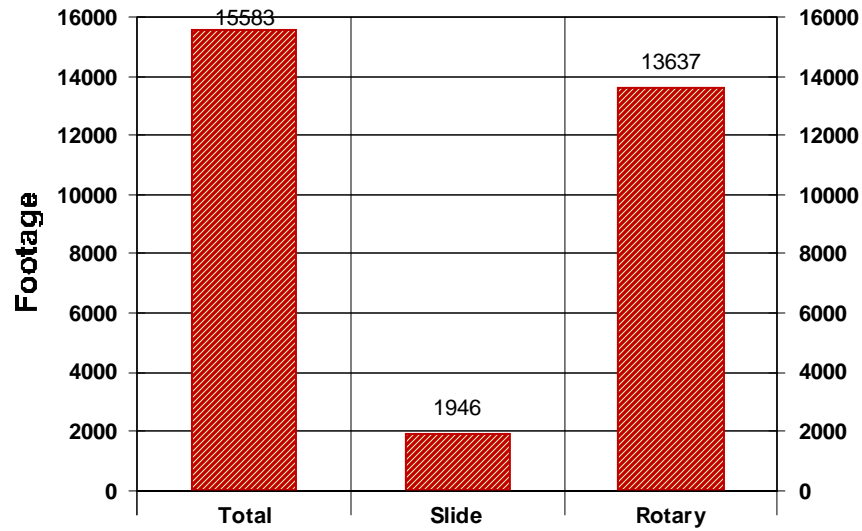


Daily Footage

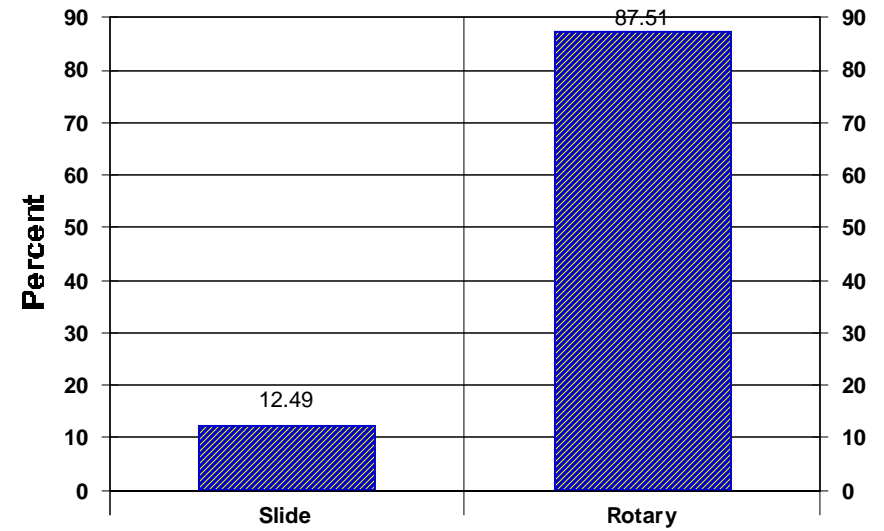


Rotary Drilling Sliding

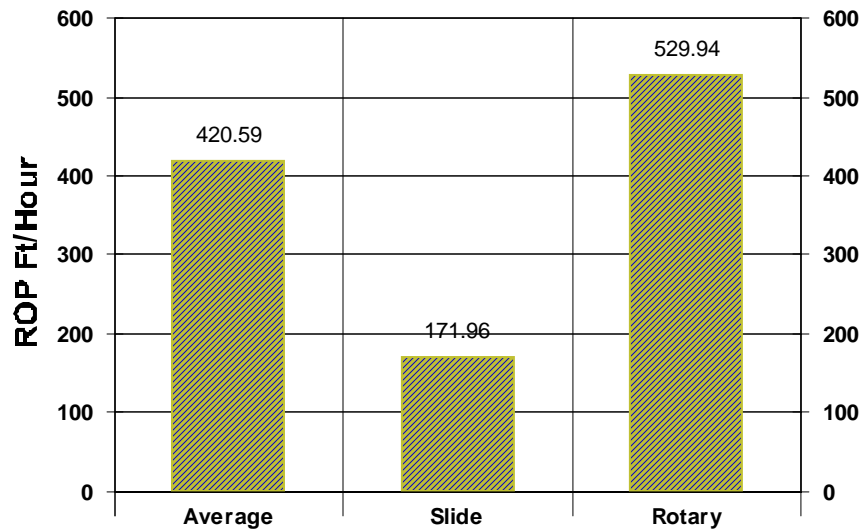
Footage Drilled Totals



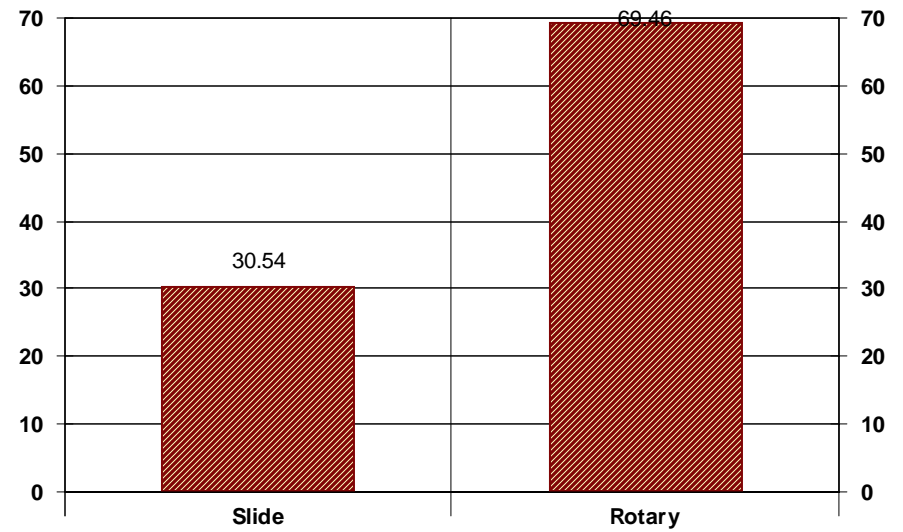
Footage Percent



Rate of Penetration Totals



Time Percent





SUPPORT STAFF

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