



END OF WELL REPORT

Prepared For:

**Extraction Oil & Gas
Winder South 4
Patterson 346
Weld County, CO**

Prepared By:

***Seth Burstad
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Project: Weld County, CO NAD 83
Site: Winder South Pad
Well: Winder South 4
Wellbore: OH
Design: OH



WELL DETAILS: Winder South 4

GL 4855' & KB 25' @ 4880.00ft (Patterson 346)	4855.00
Northing	Longitude
1426547.03	3169478.34
Easting	Latitude
40° 30' 9.626 N	104° 53' 25.998 W

Design: OH (Winder South 4/OH)

Created By: Seth Burstad Date: 9-07-2016

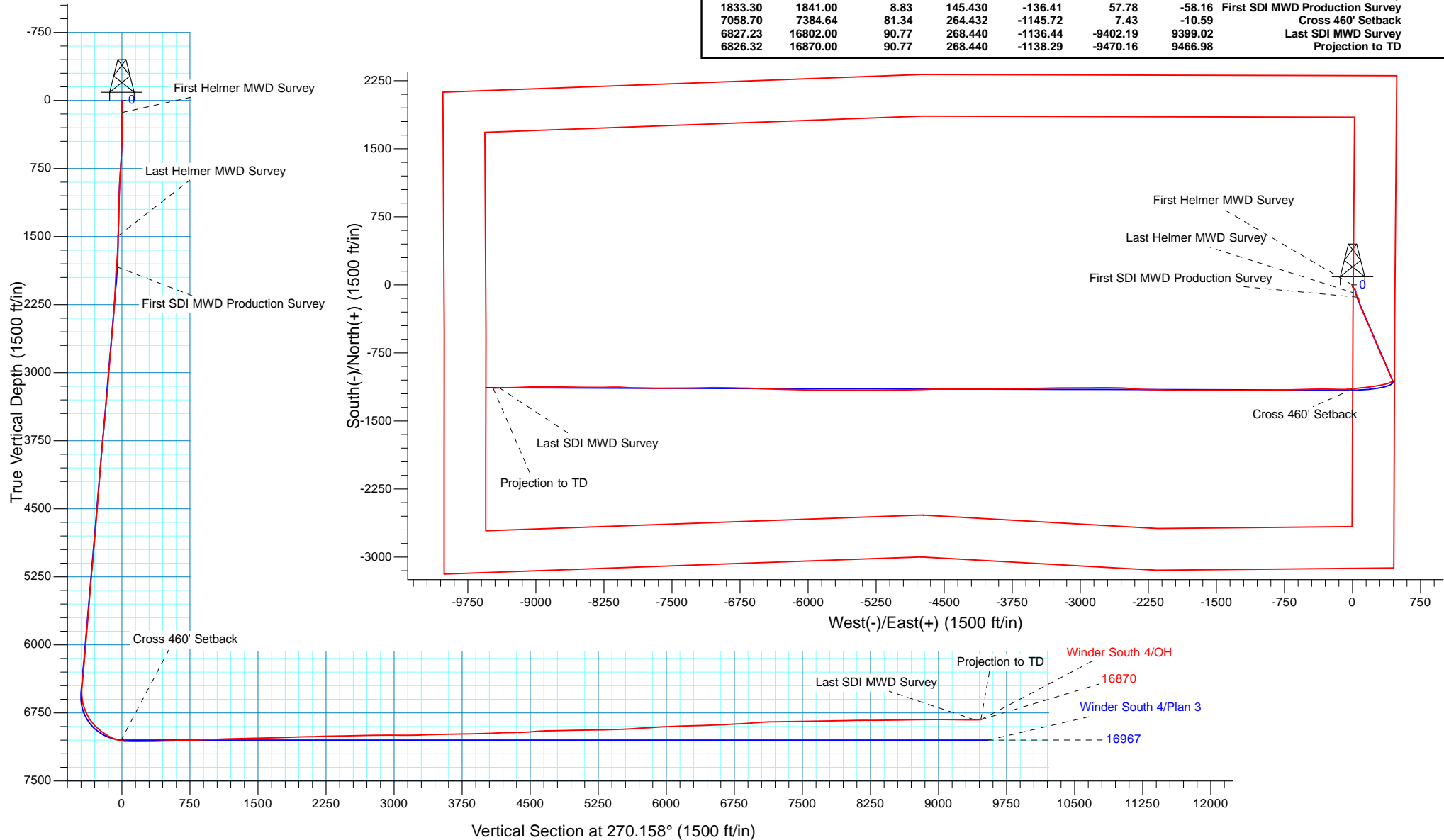
PROJECT DETAILS: Weld County, CO NAD 83

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

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Annotation
134.00	134.00	0.80	254.400	-0.25	-0.90	0.90	First Helmer MWD Survey
1493.24	1498.00	6.30	168.300	-96.28	39.02	-39.28	Last Helmer MWD Survey
1833.30	1841.00	8.83	145.430	-136.41	57.78	-58.16	First SDI MWD Production Survey
7058.70	7384.64	81.34	264.432	-1145.72	7.43	-10.59	Cross 460' Setback
6827.23	16802.00	90.77	268.440	-1136.44	-9402.19	9399.02	Last SDI MWD Survey
6826.32	16870.00	90.77	268.440	-1138.29	-9470.16	9466.98	Projection to TD





Extraction Oil & Gas

Weld County, CO NAD 83

Winder South Pad

Winder South 4

OH

Design: OH

Standard Survey Report

07 September, 2016



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Winder South 4
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4855' & KB 25' @ 4880.00ft (Patterson 346)
Site:	Winder South Pad	MD Reference:	GL 4855' & KB 25' @ 4880.00ft (Patterson 346)
Well:	Winder South 4	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						Winder South Pad, Site Center: Winder South 2											
Site Position:			Northing:			1,426,547.14 usft			Latitude:			40° 30' 9.630 N					
From:			Lat/Long			Easting:			3,169,438.29 usft			Longitude:			104° 53' 26.516 W		
Position Uncertainty:			0.00 ft			Slot Radius:			13.200 in			Grid Convergence:			0.39 °		

Well	Winder South 4, 2306' FNL 468' FEL Sec 9 T6N R67W					
Well Position	+N/-S	0.00 ft	Northing:	1,426,547.03 usft	Latitude:	40° 30' 9.626 N
	+E/-W	0.00 ft	Easting:	3,169,478.34 usft	Longitude:	104° 53' 25.998 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,855.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	8/22/2016	8.52	66.99	52,521

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	270.158	

Survey Program	Date	9/7/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
134.00	1,498.00	Survey #1 - Surface (OH)	MWD	MWD - Standard	
1,841.00	16,870.00	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	
134.00	0.80	254.400	134.00	-0.25	-0.90	0.90	0.60	0.60	0.00	
First Helmer MWD Survey										
224.00	1.30	188.400	223.98	-1.43	-1.66	1.65	1.35	0.56	-73.33	
314.00	2.70	190.900	313.93	-4.52	-2.21	2.19	1.56	1.56	2.78	
404.00	3.70	180.500	403.79	-9.51	-2.63	2.61	1.28	1.11	-11.56	
494.00	5.50	151.300	493.50	-16.20	-0.59	0.54	3.22	2.00	-32.44	
584.00	5.70	155.000	583.07	-24.03	3.37	-3.44	0.46	0.22	4.11	
674.00	5.50	145.000	672.65	-31.61	7.74	-7.82	1.11	-0.22	-11.11	
764.00	4.30	109.100	762.34	-36.25	13.40	-13.50	3.58	-1.33	-39.89	

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Project:	Weld County, CO NAD 83	TVD Reference:	GL 4855' & KB 25' @ 4880.00ft (Patterson 346)
Site:	Winder South Pad	MD Reference:	GL 4855' & KB 25' @ 4880.00ft (Patterson 346)
Well:	Winder South 4	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)
854.00	5.50	139.100	852.02	-40.62	19.41	-19.53	3.10	1.33	33.33
944.00	5.20	154.700	941.63	-47.56	23.98	-24.11	1.64	-0.33	17.33
1,034.00	4.80	154.700	1,031.29	-54.66	27.33	-27.48	0.44	-0.44	0.00
1,124.00	4.90	158.700	1,120.97	-61.64	30.34	-30.51	0.39	0.11	4.44
1,214.00	5.50	166.700	1,210.60	-69.42	32.73	-32.92	1.04	0.67	8.89
1,304.00	4.60	166.000	1,300.25	-77.12	34.59	-34.81	1.00	-1.00	-0.78
1,394.00	6.00	166.400	1,389.86	-85.19	36.57	-36.81	1.56	1.56	0.44
1,484.00	6.50	168.400	1,479.33	-94.76	38.70	-38.96	0.61	0.56	2.22
1,498.00	6.30	168.300	1,493.24	-96.28	39.02	-39.28	1.43	-1.43	-0.71
Last Helmer MWD Survey									
1,841.00	8.83	145.430	1,833.30	-136.41	57.78	-58.16	1.13	0.74	-6.67
First SDI MWD Production Survey									
1,935.00	9.36	157.370	1,926.13	-149.40	64.81	-65.23	2.08	0.56	12.70
2,030.00	10.95	167.980	2,019.64	-165.36	69.67	-70.12	2.58	1.67	11.17
2,124.00	12.44	166.400	2,111.69	-183.94	73.91	-74.41	1.62	1.59	-1.68
2,219.00	11.74	168.010	2,204.58	-203.33	78.32	-78.88	0.82	-0.74	1.69
2,313.00	12.57	165.490	2,296.48	-222.59	82.87	-83.48	1.05	0.88	-2.68
2,408.00	13.22	158.160	2,389.09	-242.68	89.50	-90.17	1.85	0.68	-7.72
2,502.00	13.11	157.380	2,480.62	-262.50	97.60	-98.32	0.22	-0.12	-0.83
2,597.00	12.57	159.210	2,573.24	-282.11	105.41	-106.19	0.71	-0.57	1.93
2,692.00	12.46	154.030	2,665.99	-300.99	113.57	-114.40	1.19	-0.12	-5.45
2,786.00	12.00	154.820	2,757.85	-318.95	122.17	-123.05	0.52	-0.49	0.84
2,881.00	11.29	154.540	2,850.90	-336.28	130.37	-131.30	0.75	-0.75	-0.29
2,975.00	11.80	159.910	2,943.00	-353.62	137.63	-138.60	1.26	0.54	5.71
3,069.00	10.43	158.090	3,035.23	-370.54	144.10	-145.12	1.50	-1.46	-1.94
3,164.00	11.25	156.790	3,128.54	-387.04	150.96	-152.03	0.90	0.86	-1.37
3,258.00	12.86	153.120	3,220.46	-404.80	159.31	-160.42	1.90	1.71	-3.90
3,352.00	12.10	152.160	3,312.24	-422.84	168.64	-169.80	0.84	-0.81	-1.02
3,447.00	12.13	152.940	3,405.12	-440.53	177.83	-179.04	0.18	0.03	0.82
3,542.00	12.22	157.560	3,497.99	-458.71	186.21	-187.47	1.03	0.09	4.86
3,637.00	13.01	159.550	3,590.70	-478.03	193.78	-195.10	0.95	0.83	2.09
3,731.00	14.09	159.740	3,682.08	-498.67	201.44	-202.82	1.15	1.15	0.20
3,826.00	14.51	159.650	3,774.13	-520.68	209.58	-211.02	0.44	0.44	-0.09
3,921.00	13.33	152.790	3,866.35	-541.58	218.73	-220.22	2.13	-1.24	-7.22
4,016.00	12.66	157.140	3,958.92	-560.91	227.78	-229.33	1.25	-0.71	4.58
4,111.00	10.73	158.450	4,051.94	-578.73	235.08	-236.67	2.05	-2.03	1.38
4,205.00	10.56	156.930	4,144.32	-594.80	241.67	-243.31	0.35	-0.18	-1.62
4,299.00	11.56	153.760	4,236.58	-611.17	249.21	-250.89	1.24	1.06	-3.37
4,394.00	12.40	158.910	4,329.51	-629.23	257.09	-258.82	1.43	0.88	5.42
4,488.00	11.96	160.270	4,421.39	-647.81	264.01	-265.79	0.56	-0.47	1.45
4,582.00	10.57	160.180	4,513.58	-665.09	270.22	-272.05	1.48	-1.48	-0.10
4,677.00	11.30	158.630	4,606.86	-681.95	276.56	-278.44	0.83	0.77	-1.63
4,772.00	12.75	155.940	4,699.77	-700.20	284.23	-286.16	1.64	1.53	-2.83

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Site:	Winder South Pad	MD Reference:	GL 4855' & KB 25' @ 4880.00ft (Patterson 346)
Well:	Winder South 4	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)
4,866.00	12.75	155.140	4,791.45	-719.08	292.82	-294.80	0.19	0.00	-0.85
4,961.00	11.82	153.560	4,884.28	-737.30	301.56	-303.59	1.04	-0.98	-1.66
5,056.00	11.63	158.750	4,977.30	-754.94	309.36	-311.44	1.13	-0.20	5.46
5,151.00	11.79	156.530	5,070.32	-772.77	316.70	-318.83	0.50	0.17	-2.34
5,245.00	12.18	150.880	5,162.27	-790.24	325.35	-327.53	1.31	0.41	-6.01
5,340.00	10.66	150.210	5,255.39	-806.62	334.59	-336.81	1.61	-1.60	-0.71
5,435.00	10.70	153.060	5,348.74	-822.11	342.95	-345.22	0.56	0.04	3.00
5,530.00	11.77	156.770	5,441.92	-838.88	350.77	-353.08	1.36	1.13	3.91
5,625.00	11.99	162.060	5,534.89	-857.17	357.63	-359.99	1.17	0.23	5.57
5,719.00	12.10	158.410	5,626.82	-875.62	364.26	-366.68	0.82	0.12	-3.88
5,814.00	11.53	158.300	5,719.81	-893.70	371.44	-373.90	0.60	-0.60	-0.12
5,909.00	11.36	155.290	5,812.92	-911.02	378.86	-381.37	0.65	-0.18	-3.17
6,003.00	12.49	160.900	5,904.90	-929.04	386.06	-388.62	1.72	1.20	5.97
6,098.00	13.81	155.990	5,997.41	-949.10	394.03	-396.65	1.82	1.39	-5.17
6,192.00	11.94	152.440	6,089.04	-967.97	403.10	-405.76	2.16	-1.99	-3.78
6,287.00	11.16	156.210	6,182.12	-985.10	411.35	-414.07	1.14	-0.82	3.97
6,381.00	11.59	156.370	6,274.27	-1,002.07	418.81	-421.57	0.46	0.46	0.17
6,476.00	12.95	154.780	6,367.10	-1,020.45	427.17	-429.98	1.47	1.43	-1.67
6,570.00	12.26	155.570	6,458.83	-1,039.06	435.78	-438.65	0.76	-0.73	0.84
6,665.00	9.85	185.430	6,552.14	-1,056.35	439.19	-442.10	6.45	-2.54	31.43
6,759.00	17.54	238.040	6,643.71	-1,071.93	426.35	-429.30	14.78	8.18	55.97
6,854.00	22.66	252.380	6,732.95	-1,085.06	396.72	-399.71	7.44	5.39	15.09
6,949.00	32.72	256.860	6,816.97	-1,096.47	354.17	-357.19	10.81	10.59	4.72
7,043.00	45.80	258.300	6,889.59	-1,109.13	296.18	-299.24	13.95	13.91	1.53
7,138.00	53.03	262.550	6,951.37	-1,120.98	225.09	-228.18	8.33	7.61	4.47
7,232.00	57.97	264.400	7,004.60	-1,129.74	148.15	-151.26	5.50	5.26	1.97
7,327.00	71.40	262.670	7,045.13	-1,139.46	63.02	-66.17	14.23	14.14	-1.82
7,384.64	81.34	264.432	7,058.70	-1,145.72	7.43	-10.59	17.49	17.24	3.06
Cross 460' Setback									
7,421.00	87.61	265.490	7,062.20	-1,148.90	-28.60	25.43	17.49	17.25	2.91
7,516.00	90.40	270.750	7,063.85	-1,152.01	-123.49	120.31	6.27	2.94	5.54
7,636.00	89.73	270.730	7,063.72	-1,150.46	-243.48	240.31	0.56	-0.56	-0.02
7,730.00	89.63	269.890	7,064.24	-1,149.95	-337.48	334.30	0.90	-0.11	-0.89
7,825.00	91.48	269.100	7,063.32	-1,150.79	-432.46	429.29	2.12	1.95	-0.83
7,920.00	92.42	268.580	7,060.09	-1,152.71	-527.39	524.21	1.13	0.99	-0.55
8,014.00	92.39	268.410	7,056.14	-1,155.18	-621.27	618.09	0.18	-0.03	-0.18
8,109.00	91.24	268.960	7,053.13	-1,157.36	-716.20	713.00	1.34	-1.21	0.58
8,203.00	91.91	268.870	7,050.55	-1,159.14	-810.15	806.95	0.72	0.71	-0.10
8,298.00	92.82	268.900	7,046.63	-1,160.99	-905.05	901.84	0.96	0.96	0.03
8,393.00	91.48	269.990	7,043.07	-1,161.90	-999.97	996.76	1.82	-1.41	1.15
8,487.00	91.61	269.870	7,040.53	-1,162.02	-1,093.94	1,090.73	0.19	0.14	-0.13
8,581.00	91.85	269.710	7,037.69	-1,162.36	-1,187.89	1,184.68	0.31	0.26	-0.17
8,676.00	92.42	269.540	7,034.16	-1,162.98	-1,282.82	1,279.61	0.63	0.60	-0.18
8,770.00	91.04	270.770	7,031.32	-1,162.73	-1,376.78	1,373.57	1.97	-1.47	1.31

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Well:	Winder South 4	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)
8,865.00	91.28	270.960	7,029.39	-1,161.30	-1,471.75	1,468.54	0.32	0.25	0.20
8,959.00	90.74	269.920	7,027.74	-1,160.57	-1,565.73	1,562.52	1.25	-0.57	-1.11
9,054.00	91.41	269.320	7,025.96	-1,161.20	-1,660.71	1,657.50	0.95	0.71	-0.63
9,148.00	92.42	268.930	7,022.81	-1,162.64	-1,754.64	1,751.43	1.15	1.07	-0.41
9,243.00	92.08	269.990	7,019.08	-1,163.53	-1,849.56	1,846.35	1.17	-0.36	1.12
9,337.00	91.41	271.690	7,016.22	-1,162.16	-1,943.51	1,940.29	1.94	-0.71	1.81
9,432.00	91.68	271.900	7,013.66	-1,159.18	-2,038.43	2,035.22	0.36	0.28	0.22
9,526.00	91.38	271.390	7,011.15	-1,156.48	-2,132.35	2,129.16	0.63	-0.32	-0.54
9,621.00	90.97	270.040	7,009.20	-1,155.30	-2,227.32	2,224.13	1.48	-0.43	-1.42
9,715.00	91.04	273.810	7,007.55	-1,152.14	-2,321.24	2,318.05	4.01	0.07	4.01
9,810.00	91.38	275.890	7,005.55	-1,144.11	-2,415.87	2,412.71	2.22	0.36	2.19
9,904.00	91.58	272.300	7,003.12	-1,137.40	-2,509.59	2,506.44	3.82	0.21	-3.82
9,999.00	91.61	270.420	7,000.47	-1,135.15	-2,604.52	2,601.38	1.98	0.03	-1.98
10,093.00	90.77	270.060	6,998.52	-1,134.76	-2,698.50	2,695.36	0.97	-0.89	-0.38
10,188.00	90.47	269.700	6,997.49	-1,134.95	-2,793.49	2,790.35	0.49	-0.32	-0.38
10,282.00	89.76	269.790	6,997.30	-1,135.37	-2,887.49	2,884.35	0.76	-0.76	0.10
10,377.00	90.60	270.480	6,997.01	-1,135.15	-2,982.49	2,979.34	1.14	0.88	0.73
10,471.00	89.50	269.860	6,996.92	-1,134.87	-3,076.48	3,073.34	1.34	-1.17	-0.66
10,566.00	90.67	269.310	6,996.78	-1,135.56	-3,171.48	3,168.33	1.36	1.23	-0.58
10,660.00	91.71	269.050	6,994.83	-1,136.90	-3,265.45	3,262.30	1.14	1.11	-0.28
10,755.00	91.98	269.260	6,991.77	-1,138.30	-3,360.39	3,357.24	0.36	0.28	0.22
10,849.00	91.68	268.590	6,988.77	-1,140.07	-3,454.32	3,451.17	0.78	-0.32	-0.71
10,944.00	90.81	268.300	6,986.71	-1,142.64	-3,549.26	3,546.10	0.97	-0.92	-0.31
11,038.00	90.97	269.460	6,985.25	-1,144.48	-3,643.23	3,640.06	1.25	0.17	1.23
11,133.00	91.24	269.420	6,983.41	-1,145.41	-3,738.21	3,735.04	0.29	0.28	-0.04
11,227.00	90.91	269.170	6,981.65	-1,146.57	-3,832.19	3,829.01	0.44	-0.35	-0.27
11,321.00	90.64	269.220	6,980.38	-1,147.89	-3,926.17	3,922.99	0.29	-0.29	0.05
11,416.00	92.25	269.990	6,977.98	-1,148.54	-4,021.13	4,017.95	1.88	1.69	0.81
11,511.00	93.73	271.860	6,973.03	-1,147.01	-4,115.98	4,112.81	2.51	1.56	1.97
11,605.00	91.24	270.450	6,968.95	-1,145.12	-4,209.87	4,206.69	3.04	-2.65	-1.50
11,699.00	90.57	270.070	6,967.47	-1,144.69	-4,303.85	4,300.68	0.82	-0.71	-0.40
11,793.00	91.91	269.480	6,965.43	-1,145.06	-4,397.83	4,394.65	1.56	1.43	-0.63
11,888.00	94.54	269.480	6,960.09	-1,145.92	-4,492.67	4,489.49	2.77	2.77	0.00
11,983.00	93.56	268.300	6,953.38	-1,147.76	-4,587.41	4,584.23	1.61	-1.03	-1.24
12,077.00	91.68	267.780	6,949.08	-1,150.97	-4,681.25	4,678.06	2.07	-2.00	-0.55
12,172.00	91.01	267.520	6,946.85	-1,154.86	-4,776.14	4,772.94	0.76	-0.71	-0.27
12,266.00	91.34	268.800	6,944.93	-1,157.88	-4,870.07	4,866.86	1.41	0.35	1.36
12,360.00	91.38	269.090	6,942.69	-1,159.61	-4,964.03	4,960.81	0.31	0.04	0.31
12,455.00	90.94	269.240	6,940.77	-1,161.00	-5,059.00	5,055.78	0.49	-0.46	0.16
12,549.00	90.70	269.650	6,939.43	-1,161.91	-5,152.99	5,149.76	0.51	-0.26	0.44
12,644.00	90.97	270.080	6,938.04	-1,162.13	-5,247.98	5,244.75	0.53	0.28	0.45
12,738.00	90.91	269.740	6,936.50	-1,162.28	-5,341.96	5,338.74	0.37	-0.06	-0.36
12,833.00	91.71	270.380	6,934.33	-1,162.18	-5,436.94	5,433.71	1.08	0.84	0.67

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Winder South 4
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4855' & KB 25' @ 4880.00ft (Patterson 346)
Site:	Winder South Pad	MD Reference:	GL 4855' & KB 25' @ 4880.00ft (Patterson 346)
Well:	Winder South 4	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)
12,927.00	92.86	270.650	6,930.58	-1,161.33	-5,530.86	5,527.63	1.26	1.22	0.29
13,021.00	93.26	270.350	6,925.56	-1,160.52	-5,624.72	5,621.50	0.53	0.43	-0.32
13,116.00	94.13	270.340	6,919.44	-1,159.94	-5,719.52	5,716.30	0.92	0.92	-0.01
13,210.00	92.69	269.820	6,913.85	-1,159.81	-5,813.35	5,810.13	1.63	-1.53	-0.55
13,305.00	93.26	270.020	6,908.92	-1,159.95	-5,908.22	5,905.00	0.64	0.60	0.21
13,399.00	94.67	270.920	6,902.42	-1,159.18	-6,001.99	5,998.77	1.78	1.50	0.96
13,493.00	91.65	271.430	6,897.24	-1,157.25	-6,095.82	6,092.60	3.26	-3.21	0.54
13,588.00	91.04	271.300	6,895.01	-1,154.99	-6,190.76	6,187.55	0.66	-0.64	-0.14
13,682.00	91.81	271.960	6,892.67	-1,152.32	-6,284.69	6,281.49	1.08	0.82	0.70
13,776.00	91.95	271.940	6,889.59	-1,149.12	-6,378.59	6,375.40	0.15	0.15	-0.02
13,871.00	92.39	273.200	6,885.99	-1,144.86	-6,473.42	6,470.24	1.40	0.46	1.33
13,965.00	92.28	271.470	6,882.16	-1,141.04	-6,567.26	6,564.09	1.84	-0.12	-1.84
14,059.00	92.62	271.590	6,878.14	-1,138.53	-6,661.14	6,657.98	0.38	0.36	0.13
14,154.00	92.42	270.590	6,873.96	-1,136.73	-6,756.03	6,752.87	1.07	-0.21	-1.05
14,248.00	93.39	270.840	6,869.20	-1,135.55	-6,849.90	6,846.75	1.07	1.03	0.27
14,343.00	95.18	270.980	6,862.10	-1,134.05	-6,944.62	6,941.47	1.89	1.88	0.15
14,437.00	94.37	269.820	6,854.28	-1,133.40	-7,038.29	7,035.14	1.50	-0.86	-1.23
14,532.00	91.28	269.220	6,849.60	-1,134.19	-7,133.16	7,130.01	3.31	-3.25	-0.63
14,626.00	90.44	268.910	6,848.18	-1,135.73	-7,227.14	7,223.98	0.95	-0.89	-0.33
14,721.00	91.14	268.490	6,846.87	-1,137.88	-7,322.10	7,318.94	0.86	0.74	-0.44
14,815.00	90.57	269.160	6,845.47	-1,139.81	-7,416.07	7,412.90	0.94	-0.61	0.71
14,910.00	91.01	268.810	6,844.16	-1,141.49	-7,511.05	7,507.87	0.59	0.46	-0.37
15,004.00	90.74	270.420	6,842.73	-1,142.12	-7,605.03	7,601.85	1.74	-0.29	1.71
15,099.00	91.48	271.530	6,840.89	-1,140.51	-7,700.00	7,696.82	1.40	0.78	1.17
15,194.00	89.97	270.960	6,839.68	-1,138.44	-7,794.96	7,791.79	1.70	-1.59	-0.60
15,288.00	91.18	272.050	6,838.74	-1,135.97	-7,888.92	7,885.76	1.73	1.29	1.16
15,383.00	92.28	272.690	6,835.87	-1,132.05	-7,983.80	7,980.64	1.34	1.16	0.67
15,477.00	91.38	271.140	6,832.87	-1,128.91	-8,077.69	8,074.55	1.91	-0.96	-1.65
15,572.00	89.87	268.840	6,831.83	-1,128.92	-8,172.68	8,169.53	2.90	-1.59	-2.42
15,666.00	89.80	269.430	6,832.11	-1,130.34	-8,266.67	8,263.52	0.63	-0.07	0.63
15,761.00	90.07	269.990	6,832.21	-1,130.82	-8,361.66	8,358.51	0.65	0.28	0.59
15,856.00	91.17	271.620	6,831.18	-1,129.49	-8,456.65	8,453.50	2.07	1.16	1.72
15,950.00	91.98	272.370	6,828.60	-1,126.22	-8,550.55	8,547.41	1.17	0.86	0.80
16,044.00	90.34	269.690	6,826.70	-1,124.53	-8,644.50	8,641.37	3.34	-1.74	-2.85
16,139.00	89.97	269.130	6,826.44	-1,125.51	-8,739.50	8,736.36	0.71	-0.39	-0.59
16,234.00	91.34	270.860	6,825.35	-1,125.52	-8,834.49	8,831.35	2.32	1.44	1.82
16,328.00	91.28	271.290	6,823.21	-1,123.75	-8,928.45	8,925.31	0.46	-0.06	0.46
16,423.00	89.56	268.050	6,822.51	-1,124.30	-9,023.43	9,020.29	3.86	-1.81	-3.41
16,517.00	89.23	268.000	6,823.50	-1,127.54	-9,117.36	9,114.22	0.36	-0.35	-0.05
16,612.00	88.96	267.940	6,825.00	-1,130.91	-9,212.29	9,209.14	0.29	-0.28	-0.06
16,707.00	88.79	268.470	6,826.87	-1,133.88	-9,307.23	9,304.06	0.59	-0.18	0.56
16,802.00	90.77	268.440	6,827.23	-1,136.44	-9,402.19	9,399.02	2.08	2.08	-0.03
Last SDI MWD Survey									
16,870.00	90.77	268.440	6,826.32	-1,138.29	-9,470.16	9,466.98	0.00	0.00	0.00

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Winder South 4
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4855' & KB 25' @ 4880.00ft (Patterson 346)
Site:	Winder South Pad	MD Reference:	GL 4855' & KB 25' @ 4880.00ft (Patterson 346)
Well:	Winder South 4	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)	
134.00	134.00	-0.25	-0.90	First Helmer MWD Survey
1,498.00	1,493.24	-96.28	39.02	Last Helmer MWD Survey
1,841.00	1,833.30	-136.41	57.78	First SDI MWD Production Survey
7,384.64	7,058.70	-1,145.72	7.43	Cross 460' Setback
16,802.00	6,827.23	-1,136.44	-9,402.19	Last SDI MWD Survey
16,870.00	6,826.32	-1,138.29	-9,470.16	Projection to TD

Checked By: _____ Approved By: _____ Date: _____



JOB NO.: 382234
Company: Extraction Oil & Gas
LOCATION: Winder South
RIG NAME: Patterson 346
STATE: Colorado
COUNTY: Weld
WELL NAME: Winder South 4
Lead Directional : Chris Apodaca

Report Time: 2400 **1 of 5**
API JOB # 05-123-43400
WORK ORDER#
FIELD: Wattenberg
Township: 6N
Range/Section 67W 9
Company Man Todd
2nd Dir Hand : Colby Hansen

From Saturday, September 03, 2016 at 0000 to Saturday, September 03, 2016 at 2400

DAILY TOTALS		ASSEMBLY TOTALS									
Start Depth	0.00	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	0.00										
Below Rot Hrs.	0.00										
Total Drilled:	0.00	Drilling Parameters		Mud Record		Bit Record			Current BHA # 0		
Avg. Total ROP:	NA										
Slide Footage:	0.00										
Slide Hours	0.00										
Avg. Slide ROP:	NA										
Rotate Footage:	0.00										
Rotary Hours	0.00										
Avg. Rot ROP:	NA										
Circ Hours	0.00										
Ream Hours	0.00										
Rotary Hrs%:	NA										
Slide Hrs%:	NA										
Rotary Ftg%:	NA										
Slide Ftg%:	NA										
CASING											
Size	Lb/Ft	MD									
			COST BREAKDOWN								



JOB NO.: 382234
Company: Extraction Oil & Gas
LOCATION: Winder South
RIG NAME: Patterson 346
STATE: Colorado
COUNTY: Weld
WELL NAME: Winder South 4
Lead Directional : Chris Apodaca

Report Time: 2400 **2 of 5**
API JOB # 05-123-43400
WORK ORDER#
FIELD: Wattenberg
Township: 6N
Range/Section 67W 9
Company Man Todd
2nd Dir Hand : Colby Hansen

From Sunday, September 04, 2016 at 0000 to Sunday, September 04, 2016 at 2400

DAILY TOTALS		ASSEMBLY TOTALS									
Start Depth	1557.00	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	6819.00	1	G961	2,866.00	18.57	12,447.00	34.73	5.70	59.00	15,313.00	265.77
Below Rot Hrs.	23.25										
Total Drilled:	5262.00										
Avg. Total ROP:	357.55										
Slide Footage:	1864.00	Drilling Parameters WOB: 32 Rot Wt: 0 Pick UP: 0 Slack Off: 0 SPP: 3650 Flow: 0 - 640 SPM: 220 Rot. RPM 20 - 65 Mot RPM: 20 - 65 Incl. In: 0 Azm. In: 0 Incl. Out: 0 Azm. Out: 0		Mud Record Weight: 0 Visc: 0 Chlorides: 0 YP: 0 PV: 0 PH: 0 GAS: 0 SAND: 0 WL: 0 SOLID: 0 BHT°: 0 Flow T°: 0 Oil %: 0		Bit Record Bit No: SK516M Model SK516M SN.: A229405 MFG. A229405 Type PDC IADC JETS 7-12 TFA: 0.773 Hole ID: 7 7/8 Bit Hrs: 53.30 Bit Ftg: 15313.00		Current BHA # 1 SK516M 7/8 5.0 STG.,29Rev NMDC NMPDC Hang Off Sub NMPDC NMDC Filter Sub 3 Stands HWDP			
Slide Hours	5.57										
Avg. Slide ROP:	334.85										
Rotate Footage:	3398.00										
Rotary Hours	9.15										
Avg. Rot ROP:	371.37										
Circ Hours	1.23										
Ream Hours	0.00										
Rotary Hrs%:	62.17										
Slide Hrs%:	37.83										
Rotary Ftg%:	64.58										
Slide Ftg%:	35.42										
Casing											
Size	Lb/Ft	MD									
			COST BREAKDOWN								
						</					

GENERAL COMMENT

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
00:00	00:45	0.75	0	0	0	.00	Standby	Standby
00:45	01:15	0.50	1557	1557	0	.00	Other	P/U Dir. Tools
01:15	02:43	1.47	1557	1557	0	.00	TIH	
02:43	03:18	0.58	1557	1557	0	.00	Drilling Cement	
03:18	03:35	0.28	1557	1617	60	211.76	Drilling	
03:35	05:14	1.65	1617	1617	0	.00	Other	Go Through Pumps
05:14	05:30	0.27	1617	1712	95	356.25	Drilling	Drilling - (WOB:4;GPM :501;RPM:20)
05:30	05:38	0.13	1712	1712	0	.00	Survey & Conn.	Survey & Conn.@1498' Inc 6.3° Azm 168.3°
05:38	05:40	0.03	1712	1720	8	240.00	Sliding	Drilling - (WOB:4;GPM :501;RPM:20)
05:40	05:48	0.13	1720	1806	86	645.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:65)
05:48	06:07	0.32	1806	1806	0	.00	Survey & Conn.	Survey & Conn.@1841' Inc 8.83° Azm 145.43°
06:07	06:25	0.30	1806	1806	0	.00	Circulating	Circulating
06:25	06:27	0.03	1806	1821	15	450.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:45L))
06:27	06:30	0.05	1821	1855	34	680.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:65)

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
06:30	06:40	0.17	1855	1855	0	.00	MWD Survey	MWD Survey@1841' Inc 8.83° Azm 145.43°
06:40	06:44	0.07	1855	1901	46	690.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:65)
06:44	06:50	0.10	1901	1901	0	.00	Survey & Conn.	Survey & Conn.@1841' Inc 8.83° Azm 145.43°
06:50	07:26	0.60	1901	1901	0	.00	Circulating	Circulating - Trouble Shoot # 1 Mud Pump
07:26	07:29	0.05	1901	1916	15	300.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:65)
07:29	07:36	0.12	1916	1930	14	120.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:60R)
07:36	07:40	0.07	1930	1995	65	975.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
07:40	07:44	0.07	1995	1995	0	.00	Survey & Conn.	Survey & Conn.@1935' Inc 9.36° Azm 157.37°
07:44	07:47	0.05	1995	2018	23	460.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
07:47	07:54	0.12	2018	2033	15	128.57	Sliding	Sliding - (WOB:10;GPM :640;TFO:35R)
07:54	07:57	0.05	2033	2090	57	1140.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
07:57	08:00	0.05	2090	2090	0	.00	Survey & Conn.	Survey & Conn.@2030' Inc 10.95° Azm 167.98°
08:00	08:03	0.05	2090	2112	22	440.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
08:03	08:10	0.12	2112	2122	10	85.71	Sliding	Sliding - (WOB:10;GPM :640;TFO:20L)
08:10	08:13	0.05	2122	2184	62	1240.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
08:13	08:16	0.05	2184	2184	0	.00	Survey & Conn.	Survey & Conn.@2124' Inc 12.44° Azm 166.4°
08:16	08:24	0.13	2184	2279	95	712.50	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
08:24	08:28	0.07	2279	2279	0	.00	Survey & Conn.	Survey & Conn.@2219' Inc 11.74° Azm 168.01°
08:28	08:38	0.17	2279	2279	0	.00	Circulating	Circulating - Trouble Shoot Pressure
08:38	08:40	0.03	2279	2291	12	360.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
08:40	08:48	0.13	2291	2306	15	112.50	Sliding	Sliding - (WOB:10;GPM :640;TFO:50L)
08:48	08:56	0.13	2306	2373	67	502.50	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
08:56	08:59	0.05	2373	2373	0	.00	Survey & Conn.	Survey & Conn.@2313' Inc 12.57° Azm 165.49°
08:59	09:03	0.07	2373	2400	27	405.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
09:03	09:08	0.08	2400	2412	12	144.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:60L)
09:08	09:13	0.08	2412	2468	56	672.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
09:13	09:16	0.05	2468	2468	0	.00	Survey & Conn.	Survey & Conn.@2408' Inc 13.22° Azm 158.16°
09:16	09:25	0.15	2468	2562	94	626.67	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
09:25	09:29	0.07	2562	2562	0	.00	Survey & Conn.	Survey & Conn.@2502' Inc 13.11° Azm 157.38°
09:29	09:36	0.12	2562	2657	95	814.29	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
09:36	09:40	0.07	2657	2657	0	.00	Survey & Conn.	Survey & Conn.@2597' Inc 12.57° Azm 159.21°
09:40	09:43	0.05	2657	2679	22	440.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
09:43	09:49	0.10	2679	2689	10	100.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:70L)
09:49	09:55	0.10	2689	2752	63	630.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
09:55	09:58	0.05	2752	2752	0	.00	Survey & Conn.	Survey & Conn.@2692' Inc 12.46° Azm 154.03°
09:58	10:07	0.15	2752	2846	94	626.67	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
10:07	10:10	0.05	2846	2846	0	.00	Survey & Conn.	Survey & Conn.@2786' Inc 12° Azm 154.82°
10:10	10:18	0.13	2846	2941	95	712.50	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
10:18	10:21	0.05	2941	2941	0	.00	Survey & Conn.	Survey & Conn.@2881' Inc 11.29° Azm 154.54°
10:21	10:25	0.07	2941	2963	22	330.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
10:25	10:29	0.07	2963	2973	10	150.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:20R)
10:29	10:34	0.08	2973	3035	62	744.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
10:34	10:37	0.05	3035	3035	0	.00	Survey & Conn.	Survey & Conn.@2975' Inc 11.8° Azm 159.91°
10:37	10:45	0.13	3035	3129	94	705.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
10:45	10:48	0.05	3129	3129	0	.00	Survey & Conn.	Survey & Conn.@3069' Inc 10.43° Azm 158.09°
10:48	10:52	0.07	3129	3155	26	390.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
10:52	10:58	0.10	3155	3172	17	170.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:30L)
10:58	11:02	0.07	3172	3224	52	780.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
11:02	11:05	0.05	3224	3224	0	.00	Survey & Conn.	Survey & Conn.@3164' Inc 11.25° Azm 156.79°
11:05	11:09	0.07	3224	3250	26	390.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
11:09	11:15	0.10	3250	3266	16	160.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:20L)
11:15	11:19	0.07	3266	3318	52	780.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
11:19	11:22	0.05	3318	3318	0	.00	Survey & Conn.	Survey & Conn.@3258' Inc 12.86° Azm 153.12°
11:22	11:31	0.15	3318	3412	94	626.67	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
11:31	11:34	0.05	3412	3412	0	.00	Survey & Conn.	Survey & Conn.@3352' Inc 12.1° Azm 152.16°
11:34	11:38	0.07	3412	3439	27	405.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
11:38	11:43	0.08	3439	3453	14	168.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:20R)
11:43	11:48	0.08	3453	3507	54	648.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
11:48	11:51	0.05	3507	3507	0	.00	Survey & Conn.	Survey & Conn.@3447' Inc 12.13° Azm 152.94°
11:51	11:55	0.07	3507	3520	13	195.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
11:55	12:03	0.13	3520	3537	17	127.50	Sliding	Sliding - (WOB:10;GPM :640;TFO:30R)
12:03	12:09	0.10	3537	3602	65	650.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
12:09	12:12	0.05	3602	3602	0	.00	Survey & Conn.	Survey & Conn.@3542' Inc 12.22° Azm 157.56°
12:12	12:16	0.07	3602	3632	30	450.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
12:16	12:22	0.10	3632	3649	17	170.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:0)
12:22	12:27	0.08	3649	3697	48	576.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
12:27	12:31	0.07	3697	3697	0	.00	Survey & Conn.	Survey & Conn.@3637' Inc 13.01° Azm 159.55°
12:31	12:41	0.17	3697	3791	94	564.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
12:41	12:45	0.07	3791	3791	0	.00	Survey & Conn.	Survey & Conn.@3731' Inc 14.09° Azm 159.74°
12:45	12:53	0.13	3791	3886	95	712.50	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
12:53	12:57	0.07	3886	3886	0	.00	Survey & Conn.	Survey & Conn.@3826' Inc 14.51° Azm 159.65°
12:57	13:01	0.07	3886	3900	14	210.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
13:01	13:07	0.10	3900	3910	10	100.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:140L)
13:07	13:13	0.10	3910	3981	71	710.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
13:13	13:16	0.05	3981	3981	0	.00	Survey & Conn.	Survey & Conn.@3921' Inc 13.33° Azm 152.79°
13:16	13:20	0.07	3981	4007	26	390.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:55)
13:20	13:26	0.10	4007	4014	7	70.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:150R)
13:26	13:31	0.08	4014	4076	62	744.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
13:31	13:35	0.07	4076	4076	0	.00	Survey & Conn.	Survey & Conn.@4016' Inc 12.66° Azm 157.14°
13:35	13:43	0.13	4076	4171	95	712.50	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
13:43	13:46	0.05	4171	4171	0	.00	Survey & Conn.	Survey & Conn.@4111' Inc 10.73° Azm 158.45°
13:46	13:50	0.07	4171	4196	25	375.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
13:50	13:55	0.08	4196	4208	12	144.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:30L)
13:55	14:00	0.08	4208	4265	57	684.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
14:00	14:03	0.05	4265	4265	0	.00	Survey & Conn.	Survey & Conn.@4205' Inc 10.56° Azm 156.93°
14:03	14:07	0.07	4265	4290	25	375.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
14:07	14:14	0.12	4290	4307	17	145.71	Sliding	Sliding - (WOB:10;GPM :640;TFO:30L)
14:14	14:18	0.07	4307	4359	52	780.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
14:18	14:22	0.07	4359	4359	0	.00	Survey & Conn.	Survey & Conn.@4299' Inc 11.56° Azm 153.76°
14:22	14:25	0.05	4359	4382	23	460.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
14:25	14:30	0.08	4382	4394	12	144.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:20R)
14:30	14:35	0.08	4394	4454	60	720.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
14:35	14:38	0.05	4454	4454	0	.00	Survey & Conn.	Survey & Conn.@4394' Inc 12.4° Azm 158.91°
14:38	14:47	0.15	4454	4548	94	626.67	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
14:47	14:51	0.07	4548	4548	0	.00	Survey & Conn.	Survey & Conn.@4488' Inc 11.96° Azm 160.27°
14:51	14:59	0.13	4548	4642	94	705.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
14:59	15:02	0.05	4642	4642	0	.00	Survey & Conn.	Survey & Conn.@4582' Inc 10.57° Azm 160.18°
15:02	15:06	0.07	4642	4663	21	315.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
15:06	15:13	0.12	4663	4680	17	145.71	Sliding	Sliding - (WOB:10;GPM :640;TFO:35L)
15:13	15:19	0.10	4680	4737	57	570.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
15:19	15:22	0.05	4737	4737	0	.00	Survey & Conn.	Survey & Conn.@4677' Inc 11.3° Azm 158.63°
15:22	15:26	0.07	4737	4761	24	360.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
15:26	15:32	0.10	4761	4776	15	150.00	Sliding	Sliding - (WOB:10;GPM :640;TFO:35L)
15:32	15:38	0.10	4776	4832	56	560.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
15:38	15:41	0.05	4832	4832	0	.00	Survey & Conn.	Survey & Conn.@4772' Inc 12.75° Azm 155.94°
15:41	15:51	0.17	4832	4926	94	564.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
15:51	15:54	0.05	4926	4926	0	.00	Survey & Conn.	Survey & Conn.@4866' Inc 12.75° Azm 155.14°
15:54	16:03	0.15	4926	5021	95	633.33	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
16:03	16:07	0.07	5021	5021	0	.00	Survey & Conn.	Survey & Conn.@4961' Inc 11.82° Azm 153.56°
16:07	16:11	0.07	5021	5046	25	375.00	Drilling	Drilling - (WOB:30;GPM :640;RPM:60)
16:11	16:17	0.10	5046	5060	14	140.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:0)
16:17	16:23	0.10	5060	5116	56	560.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
16:23	16:28	0.08	5116	5116	0	.00	Survey & Conn.	Survey & Conn.@5056' Inc 11.63° Azm 158.75°
16:28	16:32	0.07	5116	5143	27	405.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
16:32	16:38	0.10	5143	5158	15	150.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:35L)
16:38	16:43	0.08	5158	5211	53	636.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
16:43	16:47	0.07	5211	5211	0	.00	Survey & Conn.	Survey & Conn.@5151' Inc 11.79° Azm 156.53°
16:47	16:51	0.07	5211	5239	28	420.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
16:51	16:58	0.12	5239	5254	15	128.57	Sliding	Sliding - (WOB:15;GPM :640;TFO:30L)
16:58	17:03	0.08	5254	5305	51	612.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
17:03	17:06	0.05	5305	5305	0	.00	Survey & Conn.	Survey & Conn.@5245' Inc 12.18° Azm 150.88°
17:06	17:15	0.15	5305	5400	95	633.33	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
17:15	17:18	0.05	5400	5400	0	.00	Survey & Conn.	Survey & Conn.@5340' Inc 10.66° Azm 150.21°
17:18	17:22	0.07	5400	5427	27	405.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
17:22	17:29	0.12	5427	5444	17	145.71	Sliding	Sliding - (WOB:15;GPM :640;TFO:30R)
17:29	17:33	0.07	5444	5495	51	765.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
17:33	17:37	0.07	5495	5495	0	.00	Survey & Conn.	Survey & Conn.@5435' Inc 10.7° Azm 153.06°
17:37	17:41	0.07	5495	5516	21	315.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
17:41	17:47	0.10	5516	5533	17	170.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
17:47	17:52	0.08	5533	5590	57	684.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
17:52	17:55	0.05	5590	5590	0	.00	Survey & Conn.	Survey & Conn.@5530' Inc 11.77° Azm 156.77°
17:55	18:02	0.12	5590	5614	24	205.71	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
18:02	18:07	0.08	5614	5630	16	192.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
18:07	18:12	0.08	5630	5689	59	708.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
18:12	18:16	0.07	5689	5689	0	.00	Survey & Conn.	Survey & Conn.@5625' Inc 11.99° Azm 162.06°
18:16	18:21	0.08	5689	5702	13	156.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
18:21	18:28	0.12	5702	5720	18	154.29	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
18:28	18:36	0.13	5720	5779	59	442.50	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
18:36	18:39	0.05	5779	5779	0	.00	Survey & Conn.	Survey & Conn.@5719' Inc 12.1° Azm 158.41°
18:39	18:44	0.08	5779	5798	19	228.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
18:44	18:49	0.08	5798	5812	14	168.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
18:49	18:52	0.05	5812	5874	62	1240.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
18:52	18:58	0.10	5874	5874	0	.00	Survey & Conn.	Survey & Conn.@5814' Inc 11.53° Azm 158.3°
18:58	19:02	0.07	5874	5888	14	210.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
19:02	19:09	0.12	5888	5909	21	180.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
19:09	19:18	0.15	5909	5909	0	.00	Survey & Conn.	Survey & Conn.@5814' Inc 11.53° Azm 158.3°
19:18	19:21	0.05	5909	5984	75	1500.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
19:21	19:32	0.18	5984	6014	30	163.64	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
19:32	19:37	0.08	6014	6063	49	588.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
19:37	19:40	0.05	6063	6063	0	.00	Survey & Conn.	Survey & Conn.@6003' Inc 12.49° Azm 160.9°
19:40	19:45	0.08	6063	6073	10	120.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
19:45	19:51	0.10	6073	6086	13	130.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
19:51	19:58	0.12	6086	6158	72	617.14	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
19:58	20:01	0.05	6158	6158	0	.00	Survey & Conn.	Survey & Conn.@6098' Inc 13.81° Azm 155.99°
20:01	20:05	0.07	6158	6168	10	150.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
20:05	20:11	0.10	6168	6182	14	140.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
20:11	20:18	0.12	6182	6252	70	600.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
20:18	20:21	0.05	6252	6252	0	.00	Survey & Conn.	Survey & Conn.@6192' Inc 11.94° Azm 152.44°
20:21	20:25	0.07	6252	6262	10	150.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
20:25	20:40	0.25	6262	6282	20	80.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
20:40	20:50	0.17	6282	6347	65	390.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
20:50	20:53	0.05	6347	6347	0	.00	Survey & Conn.	Survey & Conn.@6287' Inc 11.16° Azm 156.21°
20:53	21:00	0.12	6347	6357	10	85.71	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
21:00	21:30	0.50	6357	6393	36	72.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
21:30	21:37	0.12	6393	6441	48	411.43	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
21:37	21:41	0.07	6441	6441	0	.00	Survey & Conn.	Survey & Conn.@6381' Inc 11.59° Azm 156.37°
21:41	21:50	0.15	6441	6451	10	66.67	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
21:50	21:55	0.08	6451	6464	13	156.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
21:55	22:01	0.10	6464	6536	72	720.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
22:01	22:10	0.15	6536	5446	-1090	-7266.67	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
22:10	22:15	0.08	5446	6568	1122	13464.00	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
22:15	22:23	0.13	6568	6630	62	465.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
22:23	22:30	0.12	6630	6630	0	.00	Survey & Conn.	Survey & Conn.@6570' Inc 12.26° Azm 155.57°
22:30	23:10	0.67	6630	6725	95	142.50	Sliding	Sliding - (WOB:15;GPM :640;TFO:10R)
23:10	23:21	0.18	6725	6725	0	.00	Survey & Conn.	Survey & Conn.@6665' Inc 9.85° Azm 185.43°
23:21	24:00	0.65	6725	6819	94	144.62	Sliding	Sliding - (WOB:32;GPM :640;TFO:0)



JOB NO.: 382234
Company: Extraction Oil & Gas
LOCATION: Winder South
RIG NAME: Patterson 346
STATE: Colorado
COUNTY: Weld
WELL NAME: Winder South 4
Lead Directional : Chris Apodaca

Report Time: 2400 **3 of 5**
API JOB # 05-123-43400
WORK ORDER#
FIELD: Wattenberg
Township: 6N
Range/Section 67W 9
Company Man Todd
2nd Dir Hand : Colby Hansen

From Monday, September 05, 2016 at 0000 to Monday, September 05, 2016 at 2400

DAILY TOTALS		ASSEMBLY TOTALS										
Start Depth	6819.00	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	11660.00	1	G961	2,866.00	18.57	12,447.00	34.73	5.70	59.00	15,313.00	265.77	
Below Rot Hrs.	24.00											
Total Drilled:	4841.00	Drilling Parameters		Mud Record		Bit Record		Current BHA # 1				
Avg. Total ROP:	305.43	WOB: 40		Weight: 0		Bit No:		SK516M				
Slide Footage:	725.00	Rot Wt: 0		Visc: 0		Model SK516M		7/8 5.0 STG.,29Rev				
Slide Hours	5.35	Pick UP: 0		Chlorides: 0		SN.: A229405		NMDC				
Avg. Slide ROP:	135.51	Slack Off: 0		YP: 0		MFG.		NMPDC				
Rotate Footage:	4116.00	SPP: 5550		PV: 0		Type PDC		Hang Off Sub				
Rotary Hours	10.50	Flow: 640 - 640		PH: 0		IADC		NMPDC				
Avg. Rot ROP:	392.00	SPM: 220		GAS: 0		JETS 7-12		NMDC				
Circ Hours	0.45	Rot. RPM 60 - 60		SAND: 0		TFA: 0.773		Filter Sub				
Ream Hours	0.00	Mot RPM: 60 - 60		WL: 0		Hole ID: 7 7/8		3 Stands HWDP				
Rotary Hrs%:	66.25	Incl. In: 0		SOLID: 0		Bit Hrs: 53.30						
Slide Hrs%:	33.75	Azm. In: 0		BHT°: 0		Bit Ftg: 15313.00						
Rotary Ftg%:	85.02	Incl. Out: 0		Flow T°: 0		PUMPS						
Slide Ftg%:	14.98	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					

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
03:04	03:14	0.17	7292	7292	0	.00	Survey & Conn.	Survey & Conn.@7232' Inc 57.97° Azm 264.4°
03:14	04:00	0.77	7292	7387	95	123.91	Sliding	Sliding - (WOB:32;GPM :640;TFO:0))
04:00	04:10	0.17	7387	7387	0	.00	Survey & Conn.	Survey & Conn.@7327' Inc 71.4° Azm 262.67°
04:10	04:33	0.38	7387	7446	59	153.91	Sliding	Sliding - (WOB:32;GPM :640;TFO:0))
04:33	04:38	0.08	7446	7481	35	420.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
04:38	04:54	0.27	7481	7481	0	.00	Survey & Conn.	Survey & Conn.@7421' Inc 87.61° Azm 265.49°
04:54	05:05	0.18	7481	7502	21	114.55	Sliding	Sliding - (WOB:32;GPM :640;TFO:0)
05:05	05:12	0.12	7502	7545	43	368.57	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
05:12	05:18	0.10	7545	7545	0	.00	Circulating	Check shot
05:18	05:24	0.10	7545	7575	30	300.00	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
05:24	05:40	0.27	7575	7575	0	.00	Circulating	Circulating
05:40	07:15	1.58	7575	7575	0	.00	POOH	POOH
07:15	07:20	0.08	7575	7575	0	.00	Other	Other - Pick Up Shock Tool & Agitator
07:20	08:45	1.42	7575	7575	0	.00	TIH	TIH
08:45	08:50	0.08	7575	7575	0	.00	MWD Survey	MWD Survey@7516' Inc 90.4° Azm 270.75°
08:50	09:01	0.18	7575	7601	26	141.82	Drilling	Drilling - (WOB:32;GPM :640;RPM:60)
09:01	09:04	0.05	7601	7601	0	.00	Survey & Conn.	Survey & Conn.@7516' Inc 90.4° Azm 270.75°
09:04	09:16	0.20	7601	7696	95	475.00	Drilling	Drilling - (WOB:35;GPM :640;RPM:60)
09:16	09:19	0.05	7696	7696	0	.00	Survey & Conn.	Survey & Conn.@7636' Inc 89.73° Azm 270.73°
09:19	09:23	0.07	7696	7718	22	330.00	Drilling	Drilling - (WOB:35;GPM :640;RPM:60)
09:23	09:33	0.17	7718	7730	12	72.00	Sliding	Sliding - (WOB:32;GPM :640;TFO:60L)
09:33	09:42	0.15	7730	7790	60	400.00	Drilling	Drilling - (WOB:35;GPM :640;RPM:60)
09:42	09:45	0.05	7790	7790	0	.00	Survey & Conn.	Survey & Conn.@7730' Inc 89.63° Azm 269.89°
09:45	09:49	0.07	7790	7813	23	345.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
09:49	09:55	0.10	7813	7823	10	100.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:40L)
09:55	10:03	0.13	7823	7885	62	465.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
10:03	10:06	0.05	7885	7885	0	.00	Survey & Conn.	Survey & Conn.@7825' Inc 91.48° Azm 269.1°
10:06	10:18	0.20	7885	7980	95	475.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
10:18	10:21	0.05	7980	7980	0	.00	Survey & Conn.	Survey & Conn.@7920' Inc 92.42° Azm 268.58°
10:21	10:25	0.07	7980	8004	24	360.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
10:25	10:32	0.12	8004	8012	8	68.57	Sliding	Sliding - (WOB:40;GPM :640;TFO:160R)
10:32	10:41	0.15	8012	8074	62	413.33	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
10:41	10:44	0.05	8074	8074	0	.00	Survey & Conn.	Survey & Conn.@8014' Inc 92.39° Azm 268.41°
10:44	10:48	0.07	8074	8098	24	360.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
10:48	10:57	0.15	8098	8098	0	.00	Other	Other - Tighten Mud Line
10:57	11:03	0.10	8098	8106	8	80.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:160R)
11:03	11:11	0.13	8106	8169	63	472.50	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
11:11	11:26	0.25	8169	8169	0	.00	Other	Other - Fix Mud Line, Replace Seal
11:26	11:29	0.05	8169	8169	0	.00	Survey & Conn.	Survey & Conn.@8109' Inc 91.24° Azm 268.96°
11:29	11:33	0.07	8169	8194	25	375.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
11:33	11:40	0.12	8194	8194	0	.00	Other	Recycle Pumps For MWD
11:40	11:48	0.13	8194	8263	69	517.50	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
11:48	11:51	0.05	8263	8263	0	.00	Survey & Conn.	Survey & Conn.@8203' Inc 91.91° Azm 268.87°
11:51	12:03	0.20	8263	8358	95	475.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
12:03	12:18	0.25	8358	8358	0	.00	Other	Other - Replace Seal On Mud Line
12:18	12:21	0.05	8358	8358	0	.00	Survey & Conn.	Survey & Conn.@8298' Inc 92.82° Azm 268.9°
12:21	12:25	0.07	8358	8385	27	405.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
12:25	12:34	0.15	8385	8400	15	100.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:150R)

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
12:34	12:41	0.12	8400	8453	53	454.29	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
12:41	12:44	0.05	8453	8453	0	.00	Survey & Conn.	Survey & Conn.@8393' Inc 91.48° Azm 269.99°
12:44	12:58	0.23	8453	8547	94	402.86	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
12:58	13:01	0.05	8547	8547	0	.00	Survey & Conn.	Survey & Conn.@8487' Inc 91.61° Azm 269.87°
13:01	13:14	0.22	8547	8641	94	433.85	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
13:14	13:17	0.05	8641	8641	0	.00	Survey & Conn.	Survey & Conn.@8581' Inc 91.85° Azm 269.71°
13:17	13:29	0.20	8641	8737	96	480.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
13:29	13:32	0.05	8737	8737	0	.00	Survey & Conn.	Survey & Conn.@8676' Inc 92.42° Azm 269.54°
13:32	13:36	0.07	8737	8759	22	330.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
13:36	13:44	0.13	8759	8774	15	112.50	Sliding	Sliding - (WOB:40;GPM :640;TFO:130R)
13:44	13:51	0.12	8774	8830	56	480.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
13:51	13:54	0.05	8830	8830	0	.00	Survey & Conn.	Survey & Conn.@8770' Inc 91.04° Azm 270.77°
13:54	14:06	0.20	8830	8925	95	475.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
14:06	14:09	0.05	8925	8925	0	.00	Survey & Conn.	Survey & Conn.@8865' Inc 91.28° Azm 270.96°
14:09	14:21	0.20	8925	9019	94	470.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
14:21	14:24	0.05	9019	9019	0	.00	Survey & Conn.	Survey & Conn.@8959' Inc 90.74° Azm 269.92°
14:24	14:36	0.20	9019	9114	95	475.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
14:36	14:39	0.05	9114	9114	0	.00	Survey & Conn.	Survey & Conn.@9054' Inc 91.41° Azm 269.32°
14:39	14:51	0.20	9114	9208	94	470.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
14:51	14:54	0.05	9208	9208	0	.00	Survey & Conn.	Survey & Conn.@9148' Inc 92.42° Azm 268.93°
14:54	14:58	0.07	9208	9232	24	360.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
14:58	15:07	0.15	9232	9247	15	100.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:135R)
15:07	15:14	0.12	9247	9303	56	480.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
15:14	15:18	0.07	9303	9303	0	.00	Survey & Conn.	Survey & Conn.@9243' Inc 92.08° Azm 269.99°
15:18	15:22	0.07	9303	9331	28	420.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
15:22	15:32	0.17	9331	9341	10	60.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:120R)
15:32	15:39	0.12	9341	9397	56	480.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
15:39	15:42	0.05	9397	9397	0	.00	Survey & Conn.	Survey & Conn.@9337' Inc 91.41° Azm 271.69°
15:42	15:53	0.18	9397	9492	95	518.18	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
15:53	15:56	0.05	9492	9492	0	.00	Survey & Conn.	Survey & Conn.@9432' Inc 91.68° Azm 271.9°
15:56	16:08	0.20	9492	9586	94	470.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
16:08	16:11	0.05	9586	9586	0	.00	Survey & Conn.	Survey & Conn.@9526' Inc 91.38° Azm 271.39°
16:11	16:29	0.30	9586	9681	95	316.67	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
16:29	16:32	0.05	9681	9681	0	.00	Survey & Conn.	Survey & Conn.@9621' Inc 90.97° Azm 270.04°
16:32	16:44	0.20	9681	9775	94	470.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
16:44	16:51	0.12	9775	9775	0	.00	Survey & Conn.	Survey & Conn.@9715' Inc 91.04° Azm 273.81°
16:51	16:56	0.08	9775	9808	33	396.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
16:56	17:05	0.15	9808	9823	15	100.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:90L)
17:05	17:12	0.12	9823	9870	47	402.86	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
17:12	17:16	0.07	9870	9870	0	.00	Survey & Conn.	Survey & Conn.@9810' Inc 91.38° Azm 275.89°
17:16	17:20	0.07	9870	9897	27	405.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
17:20	17:36	0.27	9897	9913	16	60.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:90L)
17:36	17:44	0.13	9913	9964	51	382.50	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
17:44	17:47	0.05	9964	9964	0	.00	Survey & Conn.	Survey & Conn.@9904' Inc 91.58° Azm 272.3°
17:47	17:51	0.07	9964	9989	25	375.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
17:51	18:00	0.15	9989	10002	13	86.67	Sliding	Sliding - (WOB:40;GPM :640;TFO:90L))
18:00	18:19	0.32	10002	10077	75	236.84	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
18:19	18:23	0.07	10077	10077	0	.00	Connection	Connection

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
18:23	18:27	0.07	10077	10092	15	225.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:135L)
18:27	18:35	0.13	10092	10153	61	457.50	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
18:35	18:38	0.05	10153	10153	0	.00	Connection	Connection
18:38	18:52	0.23	10153	10248	95	407.14	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
18:52	18:56	0.07	10248	10248	0	.00	Connection	Connection
18:56	19:08	0.20	10248	10342	94	470.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
19:08	19:16	0.13	10342	10354	12	90.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
19:16	19:26	0.17	10354	10367	13	78.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
19:26	19:37	0.18	10367	10437	70	381.82	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
19:37	19:40	0.05	10437	10437	0	.00	Connection	Connection
19:40	19:53	0.22	10437	10537	100	461.54	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
19:53	20:00	0.12	10537	10548	11	94.29	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
20:00	20:11	0.18	10548	10564	16	87.27	Sliding	Sliding - (WOB:40;GPM :640;TFO:135L)
20:11	20:19	0.13	10564	10626	62	465.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
20:19	20:23	0.07	10626	10626	0	.00	Connection	Connection
20:23	20:51	0.47	10626	10815	189	405.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
20:51	20:54	0.05	10815	10815	0	.00	Connection	Connection
20:54	21:22	0.47	10815	11032	217	465.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
21:22	21:28	0.10	11032	11032	0	.00	Connection	Connection
21:28	21:40	0.20	11032	11049	17	85.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:135L)
21:40	22:25	0.75	11049	11381	332	442.67	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
22:25	22:35	0.17	11381	11381	0	.00	Connection	Connection
22:35	22:40	0.08	11381	11398	17	204.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
22:40	22:50	0.17	11398	11412	14	84.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:135L)
22:50	22:58	0.13	11412	11476	64	480.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
22:58	23:20	0.37	11476	11476	0	.00	Connection	Connection
23:20	23:27	0.12	11476	11581	105	900.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
23:27	23:40	0.22	11581	11596	15	69.23	Sliding	Sliding - (WOB:40;GPM :640;TFO:135L)
23:40	24:00	0.33	11596	11660	64	192.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)



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Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
01:43	01:46	0.05	12137	12137	0	.00	Survey & Conn.	Survey & Conn.@12077' Inc 91.68° Azm 267.78°
01:46	01:58	0.20	12137	12232	95	475.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
01:58	02:05	0.12	12232	12251	19	162.86	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
02:05	02:24	0.32	12251	12266	15	47.37	Sliding	Sliding - (WOB:40;GPM :640;TFO:0)
02:24	02:33	0.15	12266	12326	60	400.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
02:33	02:37	0.07	12326	12326	0	.00	Survey & Conn.	Survey & Conn.@12266' Inc 91.34° Azm 268.8°
02:37	02:49	0.20	12326	12420	94	470.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
02:49	02:52	0.05	12420	12420	0	.00	Survey & Conn.	Survey & Conn.@12360' Inc 91.38° Azm 269.09°
02:52	02:56	0.07	12420	12440	20	300.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
02:56	03:08	0.20	12440	12450	10	50.00	Sliding	Sliding - (WOB:40;GPM :640;TFO:0)
03:08	03:18	0.17	12450	12609	159	954.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
03:18	03:21	0.05	12609	12609	0	.00	Survey & Conn.	Survey & Conn.@12549' Inc 90.7° Azm 269.65°
03:21	03:49	0.47	12609	12628	19	40.71	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
03:49	03:59	0.17	12628	12636	8	48.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
03:59	04:09	0.17	12636	12704	68	408.00	Drilling	Drilling - (WOB:40;GPM :640;RPM:60)
04:09	04:12	0.05	12704	12704	0	.00	Survey & Conn.	Survey & Conn.@12644' Inc 90.97° Azm 270.08°
04:12	04:24	0.20	12704	12798	94	470.00	Drilling	Drilling - (WOB:42;GPM :615;RPM:65)
04:24	04:32	0.13	12798	12798	0	.00	Survey & Conn.	Survey & Conn.@12738' Inc 90.91° Azm 269.74°
04:32	04:39	0.12	12798	12810	12	102.86	Drilling	Drilling - (WOB:42;GPM :615;RPM:65)
04:39	05:00	0.35	12810	12821	11	31.43	Sliding	Sliding - (WOB:40;GPM :640;TFO:0)
05:00	05:10	0.17	12821	12893	72	432.00	Drilling	Drilling - (WOB:42;GPM :615;RPM:65)
05:10	05:14	0.07	12893	12893	0	.00	Survey & Conn.	Survey & Conn.@12833' Inc 91.71° Azm 270.38°
05:14	05:18	0.07	12893	12912	19	285.00	Drilling	Drilling - (WOB:42;GPM :615;RPM:65)
05:18	05:29	0.18	12912	12920	8	43.64	Sliding	Sliding - (WOB:40;GPM :640;TFO:0)
05:29	05:36	0.12	12920	12987	67	574.29	Drilling	Drilling - (WOB:42;GPM :615;RPM:65)
05:36	05:44	0.13	12987	12987	0	.00	Survey & Conn.	Survey & Conn.@12927' Inc 92.86° Azm 270.65°
05:44	05:57	0.22	12987	13081	94	433.85	Drilling	Drilling - (WOB:42;GPM :615;RPM:65)
05:57	06:00	0.05	13081	13081	0	.00	Survey & Conn.	Survey & Conn.@13021' Inc 93.26° Azm 270.35°
06:00	06:15	0.25	13081	13176	95	380.00	Drilling	Drilling - (WOB:42;GPM :615;RPM:65)
06:15	06:18	0.05	13176	13176	0	.00	Survey & Conn.	Survey & Conn.@13116' Inc 94.13° Azm 270.34°
06:18	06:23	0.08	13176	13199	23	276.00	Drilling	Drilling - (WOB:42;GPM :615;RPM:65)
06:23	06:38	0.25	13199	13212	13	52.00	Sliding	Sliding - (WOB:40;GPM :610;TFO:160R))
06:38	06:49	0.18	13212	13270	58	316.36	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
06:49	06:53	0.07	13270	13270	0	.00	Survey & Conn.	Survey & Conn.@13210' Inc 92.69° Azm 269.82°
06:53	07:07	0.23	13270	13365	95	407.14	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
07:07	07:10	0.05	13365	13365	0	.00	Survey & Conn.	Survey & Conn.@13305' Inc 93.26° Azm 270.02°
07:10	07:25	0.25	13365	13459	94	376.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
07:25	07:28	0.05	13459	13459	0	.00	Survey & Conn.	Survey & Conn.@13399' Inc 94.67° Azm 270.92°
07:28	07:32	0.07	13459	13475	16	240.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
07:32	07:53	0.35	13475	13492	17	48.57	Sliding	Sliding - (WOB:40;GPM :610;TFO:180)
07:53	08:03	0.17	13492	13553	61	366.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
08:03	08:07	0.07	13553	13553	0	.00	Survey & Conn.	Survey & Conn.@13493' Inc 91.65° Azm 271.43°
08:07	08:21	0.23	13553	13658	105	450.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
08:21	08:25	0.07	13658	13658	0	.00	Survey & Conn.	Survey & Conn.@13588' Inc 91.04° Azm 271.3°
08:25	08:40	0.25	13658	13742	84	336.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
08:40	08:43	0.05	13742	13742	0	.00	Survey & Conn.	Survey & Conn.@13682' Inc 91.81° Azm 271.96°
08:43	08:58	0.25	13742	13836	94	376.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
08:58	09:02	0.07	13836	13836	0	.00	Survey & Conn.	Survey & Conn.@13776' Inc 91.95° Azm 271.94°

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
09:02	09:20	0.30	13836	13931	95	316.67	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
09:20	09:23	0.05	13931	13931	0	.00	Survey & Conn.	Survey & Conn.@13871' Inc 92.39° Azm 273.2°
09:23	09:27	0.07	13931	13951	20	300.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
09:27	09:57	0.50	13951	13966	15	30.00	Sliding	Sliding - (WOB:40;GPM :610;TFO:90L)
09:57	10:07	0.17	13966	14025	59	354.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
10:07	10:11	0.07	14025	14025	0	.00	Reaming	
10:11	10:15	0.07	14025	14025	0	.00	Survey & Conn.	Survey & Conn.@13965' Inc 92.28° Azm 271.47°
10:15	10:28	0.22	14025	14119	94	433.85	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
10:28	10:32	0.07	14119	14119	0	.00	Reaming	
10:32	10:35	0.05	14119	14119	0	.00	Survey & Conn.	Survey & Conn.@14059' Inc 92.62° Azm 271.59°
10:35	10:51	0.27	14119	14214	95	356.25	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
10:51	10:56	0.08	14214	14214	0	.00	Reaming	
10:56	10:59	0.05	14214	14214	0	.00	Survey & Conn.	Survey & Conn.@14154' Inc 92.42° Azm 270.59°
10:59	11:14	0.25	14214	14308	94	376.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
11:14	11:18	0.07	14308	14308	0	.00	Reaming	
11:18	11:21	0.05	14308	14308	0	.00	Survey & Conn.	Survey & Conn.@14248' Inc 93.39° Azm 270.84°
11:21	11:35	0.23	14308	14403	95	407.14	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
11:35	11:39	0.07	14403	14403	0	.00	Reaming	
11:39	11:42	0.05	14403	14403	0	.00	Survey & Conn.	Survey & Conn.@14343' Inc 95.18° Azm 270.98°
11:42	11:46	0.07	14403	14425	22	330.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
11:46	12:07	0.35	14425	14442	17	48.57	Sliding	Sliding - (WOB:40;GPM :610;TFO:170L))
12:07	12:15	0.13	14442	14497	55	412.50	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
12:15	12:19	0.07	14497	14497	0	.00	Reaming	
12:19	12:23	0.07	14497	14497	0	.00	Survey & Conn.	Survey & Conn.@14437' Inc 94.37° Azm 269.82°
12:23	12:26	0.05	14497	14510	13	260.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
12:26	12:44	0.30	14510	14527	17	56.67	Sliding	Sliding - (WOB:40;GPM :610;TFO:170L)
12:44	12:52	0.13	14527	14592	65	487.50	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
12:52	12:57	0.08	14592	14592	0	.00	Reaming	
12:57	13:01	0.07	14592	14592	0	.00	Survey & Conn.	Survey & Conn.@14532' Inc 91.28° Azm 269.22°
13:01	13:03	0.03	14592	14603	11	330.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
13:03	13:41	0.63	14603	14603	0	.00	Circulating	Circulating Bottoms Up
13:41	13:43	0.03	14603	14610	7	210.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
13:43	13:57	0.23	14610	14616	6	25.71	Sliding	Sliding - (WOB:40;GPM :610;TFO:170L)
13:57	14:06	0.15	14616	14686	70	466.67	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
14:06	14:10	0.07	14686	14686	0	.00	Reaming	
14:10	14:14	0.07	14686	14686	0	.00	Survey & Conn.	Survey & Conn.@14626' Inc 90.44° Azm 268.91°
14:14	14:25	0.18	14686	14781	95	518.18	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
14:25	14:30	0.08	14781	14781	0	.00	Reaming	
14:30	14:33	0.05	14781	14781	0	.00	Survey & Conn.	Survey & Conn.@14721' Inc 91.14° Azm 268.49°
14:33	14:37	0.07	14781	14800	19	285.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
14:37	14:46	0.15	14800	14809	9	60.00	Sliding	Sliding - (WOB:40;GPM :610;TFO:135R)
14:46	14:58	0.20	14809	14875	66	330.00	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
14:58	15:03	0.08	14875	14875	0	.00	Reaming	
15:03	15:06	0.05	14875	14875	0	.00	Survey & Conn.	Survey & Conn.@14815' Inc 90.57° Azm 269.16°
15:06	15:22	0.27	14875	14970	95	356.25	Drilling	Drilling - (WOB:42;GPM :610;RPM:65)
15:22	15:27	0.08	14970	14970	0	.00	Reaming	
15:27	15:30	0.05	14970	14970	0	.00	Survey & Conn.	Survey & Conn.@14910' Inc 91.01° Azm 268.81°
15:30	15:34	0.07	14970	14989	19	285.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)

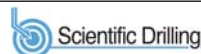
Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
15:34	15:55	0.35	14989	15001	12	34.29	Sliding	Sliding - (WOB:40;GPM :610;TFO:140R)
15:55	16:06	0.18	15001	15064	63	343.64	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
16:06	16:11	0.08	15064	15064	0	.00	Reaming	
16:11	16:16	0.08	15064	15064	0	.00	Survey & Conn.	Survey & Conn.@15004' Inc 90.74° Azm 270.42°
16:16	16:31	0.25	15064	15159	95	380.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
16:31	16:36	0.08	15159	15159	0	.00	Reaming	
16:36	16:40	0.07	15159	15159	0	.00	Survey & Conn.	Survey & Conn.@15099' Inc 91.48° Azm 271.53°
16:40	16:43	0.05	15159	15176	17	340.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
16:43	17:01	0.30	15176	15186	10	33.33	Sliding	Sliding - (WOB:40;GPM :610;TFO:170L)
17:01	17:13	0.20	15186	15254	68	340.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
17:13	17:17	0.07	15254	15254	0	.00	Reaming	
17:17	17:21	0.07	15254	15254	0	.00	Survey & Conn.	Survey & Conn.@15194' Inc 89.97° Azm 270.96°
17:21	17:39	0.30	15254	15348	94	313.33	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
17:39	17:44	0.08	15348	15348	0	.00	Reaming	Drilling - (WOB:42;GPM :598;RPM:65)
17:44	17:48	0.07	15348	15348	0	.00	Survey & Conn.	Survey & Conn.@15288' Inc 91.18° Azm 272.05°
17:48	18:07	0.32	15348	15443	95	300.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
18:07	18:12	0.08	15443	15443	0	.00	Survey & Conn.	Survey & Conn.@15383' Inc 92.28° Azm 272.69°
18:12	18:15	0.05	15443	15457	14	280.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
18:15	18:44	0.48	15457	15469	12	24.83	Sliding	Sliding - (WOB:40;GPM :610;TFO:170L)
18:44	19:01	0.28	15469	15537	68	240.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
19:01	19:11	0.17	15537	15537	0	.00	Survey & Conn.	Survey & Conn.@15477' Inc 91.38° Azm 271.14°
19:11	19:13	0.03	15537	15551	14	420.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
19:13	19:38	0.42	15551	15563	12	28.80	Sliding	Sliding - (WOB:40;GPM :610;TFO:170L)
19:38	19:55	0.28	15563	15632	69	243.53	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
19:55	19:59	0.07	15632	15632	0	.00	Survey & Conn.	Survey & Conn.@15572' Inc 89.87° Azm 268.84°
19:59	20:16	0.28	15632	15726	94	331.76	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
20:16	20:20	0.07	15726	15726	0	.00	Survey & Conn.	Survey & Conn.@15666' Inc 89.8° Azm 269.43°
20:20	20:40	0.33	15726	15821	95	285.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
20:40	20:44	0.07	15821	15821	0	.00	Survey & Conn.	Survey & Conn.@15761' Inc 90.07° Azm 269.99°
20:44	21:16	0.53	15821	15931	110	206.25	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
21:16	22:15	0.98	15931	16010	79	80.34	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
22:15	22:21	0.10	16010	16010	0	.00	Survey & Conn.	Survey & Conn.@15950' Inc 91.98° Azm 272.37°
22:21	22:29	0.13	16010	16028	18	135.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
22:29	22:56	0.45	16028	16042	14	31.11	Sliding	Sliding - (WOB:40;GPM :610;TFO:170L)
22:56	23:42	0.77	16042	16104	62	80.87	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
23:42	23:47	0.08	16104	16104	0	.00	Survey & Conn.	Survey & Conn.@16044' Inc 90.34° Azm 269.69°
23:47	24:00	0.22	16104	16294	190	876.92	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)



Daily Report for JOB#: 382234 - Page 1 of 2

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
04:49	04:53	0.07	16862	16862	0	.00	Survey & Conn.	Survey & Conn. @16802' Inc 90.77° Azm 268.44°
04:53	04:55	0.03	16862	16870	8	240.00	Drilling	Drilling - (WOB:42;GPM :598;RPM:65)
04:55	05:05	0.17	16870	16870	0	.00	Circulating	Circulating
05:05	08:30	3.42	16870	16870	0	.00	Short Trip	Short Trip
08:30	10:00	1.50	16870	16870	0	.00	Circulating	Circulating
10:00	17:00	7.00	16870	16870	0	.00	POOH	POOH
17:00	17:30	0.50	16870	16870	0	.00	Change BHA	Lay Down Tools
17:30	24:00	6.50	16870	16870	0	.00	Standby	Standby

BHA # 1



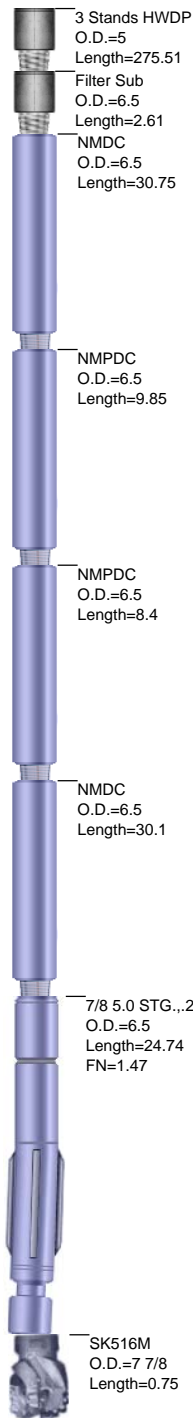
JOB NO.: 382234 Work Order: FIELD: Wattenberg
 Company: Extraction Oil & Gas Township: 6N
 LOCATION: Winder South SECT. RANGE: 9 67W
 RIG NAME: Patterson 346 Lead DD: Chris Apodaca
 STATE: Colorado Co. Man: Todd Stephens
 COUNTY: Weld BHA TYPE: Steerable Assembly
 WELL NAME: Winder South 4 BHA WT: 17594 Wt @ Jars: N/A

Time and Depths	MOTOR DATA	Drilling Parameters
Date In: 04-Sep-16 @ 00:45	6.5, 7/8, 5.0stg, .29Rev	SO/PU: 0 - 0 / 0-0
Date Out: 07-Sep-16 @ 17:30	MFG.: Bico	Rot Strg Wt: 0-0
Hrs In Hole: 88.75	Pad OD: 6 3/4	WOB: 4 - 42
Start Depth: 1557.00	NB Stab: 0	TORQ: 1132 - 25000
End Depth: 16870.00	Bit to Bend: 4.2	SPP: 1301 - 6050
Total Drilled: 15313.00	Bent Hsg/Sub°: 2.12 /	Motor RPM: 145 - 186
Avg. Total ROP: 284.19	Lobe/Stage: 7/8 / 5	Rotary RPM: 20 - 65
Circ Hrs: Tot/Only 59.00 / 5.12	Rev/GAL: 0.29	Flow Rate: 501 - 640
Percent Slide: 18.72	Rotor Jet: 0	Avg Diff:
Percent Hrs: 34.46	Prop BUR:	Stall Pres.:
Slide Hours: 18.57	Act BUR:	Off Bot Pres.:
Total Sliding: 2866.00		
Avg. Slide ROP: 154.36		
Percent Rotary: 81.28		
Percent Hrs: 65.54		
Rotary Hours: 35.32		
Total Rotary: 12447.00		
Avg. Rotary ROP: 352.44		
Reason POOH:		

MWD Spacing	Gamma: 45.89	Restiv: 0	Sensor: 58.48	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.
SK516M	A229405		7 7/8	0.75	0.75	4 1/2 REGP	REED
7/8 5.0 STG.,.29Rev	G961		6.5	24.74	25.49	4 1/2 IFB	BICO
NMDC	122-978	3.25	6.5	30.10	55.59	4 1/2 IFB	SDI
NMPDC	125-218	3.25	6.5	8.40	63.99	4 1/2 IFB	SDI
Hang Off Sub	129-284	3.25	6.5	5.77	69.76	4 1/2 IFB	SDI
NMPDC	125-297	3.25	6.5	9.85	79.61	4 1/2 IFB	SDI
NMDC	189-012	3.25	6.5	30.75	110.36	4 1/2 IFB	SDI
Filter Sub	DR16287	3.25	6.5	2.61	112.97	4 1/2 IFB	Other
3 Stands HWDP	N/A	3.76	5	275.51	388.48	4 1/2 IF	Other





JOB NO.: 382234
Company: Extraction Oil & Gas
LOCATION: Winder South
RIG NAME: Patterson 346
STATE: Colorado
COUNTY: Country
WELL NAME: Winder South 4

FIELD: Wattenberg
Township: 6N
Range 67W

MOTOR INFORMATION

Desc: 6.5, 7/8, 5.0stg, .29Rev
 Bent Hsg/Sub: 2.1 / 0 Bit to Bend: 4.2
 Pad OD: 6 3/4 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-Sep	Drilling	03:18	03:35	0.28	1557	1617	60	4	211.8	20	1132	501	1301		6.30	168.30	0.00	
1	4-Sep	Drilling	05:14	05:30	0.27	1617	1712	95	4	356.3	20	1132	501	1301		6.30	168.30	0.00	
1	4-Sep	Sliding	05:38	05:40	0.03	1712	1720	8	4	240.0	20	1132	501	1301		6.30	168.30	0.00	
1	4-Sep	Drilling	05:40	05:48	0.13	1720	1806	86	30	645.0	65	6813	640	2630		6.30	168.30	0.00	
1	4-Sep	Sliding	06:25	06:27	0.03	1806	1821	15	10	450.0	65	6813	640	2630	45L	6.30	168.30	0.00	
1	4-Sep	Drilling	06:27	06:30	0.05	1821	1855	34	30	680.0	65	6813	640	2630		8.83	145.43	0.00	
1	4-Sep	Drilling	06:40	06:44	0.07	1855	1901	46	30	690.0	65	6813	640	2630		8.83	145.43	0.00	
1	4-Sep	Drilling	07:26	07:29	0.05	1901	1916	15	30	300.0	65	6813	640	2630		8.83	145.43	0.00	
1	4-Sep	Sliding	07:29	07:36	0.12	1916	1930	14	10	120.0	65	6813	640	2630	60R	8.83	145.43	0.00	
1	4-Sep	Drilling	07:36	07:40	0.07	1930	1995	65	30	975.0	60	7722	640	2750		9.36	157.37	0.00	
1	4-Sep	Drilling	07:44	07:47	0.05	1995	2018	23	30	460.0	60	7722	640	2750		9.36	157.37	0.00	
1	4-Sep	Sliding	07:47	07:54	0.12	2018	2033	15	10	128.6	60	7722	640	2750	35R	10.95	167.98	0.00	
1	4-Sep	Drilling	07:54	07:57	0.05	2033	2090	57	30	1140.0	60	7722	640	2750		10.95	167.98	0.00	
1	4-Sep	Drilling	08:00	08:03	0.05	2090	2112	22	30	440.0	60	7722	640	2750		10.95	167.98	0.00	
1	4-Sep	Sliding	08:03	08:10	0.12	2112	2122	10	10	85.7	60	7722	640	2750	20L	10.95	167.98	0.00	
1	4-Sep	Drilling	08:10	08:13	0.05	2122	2184	62	30	1240.0	60	7722	640	2750		12.44	166.40	0.00	
1	4-Sep	Drilling	08:16	08:24	0.13	2184	2279	95	30	712.5	60	7722	640	2750		11.74	168.01	0.00	
1	4-Sep	Drilling	08:38	08:40	0.03	2279	2291	12	30	360.0	60	7722	640	2750		11.74	168.01	0.00	
1	4-Sep	Sliding	08:40	08:48	0.13	2291	2306	15	10	112.5	60	7722	640	2750	50L	11.74	168.01	0.00	
1	4-Sep	Drilling	08:48	08:56	0.13	2306	2373	67	30	502.5	60	7722	640	2750		12.57	165.49	0.00	
1	4-Sep	Drilling	08:59	09:03	0.07	2373	2400	27	30	405.0	60	7722	640	2750		12.57	165.49	0.00	
1	4-Sep	Sliding	09:03	09:08	0.08	2400	2412	12	10	144.0	60	7722	640	2750	60L	13.22	158.16	0.00	
1	4-Sep	Drilling	09:08	09:13	0.08	2412	2468	56	30	672.0	60	7722	640	2750		13.22	158.16	0.00	
1	4-Sep	Drilling	09:16	09:25	0.15	2468	2562	94	30	626.7	60	7722	640	2750		13.11	157.38	0.00	
1	4-Sep	Drilling	09:29	09:36	0.12	2562	2657	95	30	814.3	60	7722	640	2750		12.57	159.21	0.00	
1	4-Sep	Drilling	09:40	09:43	0.05	2657	2679	22	30	440.0	60	7722	640	2750		12.57	159.21	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-Sep	Sliding	09:43	09:49	0.10	2679	2689	10	10	100.0	60	7722	640	2750	70L	12.57	159.21	0.00	
1	4-Sep	Drilling	09:49	09:55	0.10	2689	2752	63	30	630.0	60	7722	640	2750		12.46	154.03	0.00	
1	4-Sep	Drilling	09:58	10:07	0.15	2752	2846	94	30	626.7	60	7722	640	2750		12.00	154.82	0.00	
1	4-Sep	Drilling	10:10	10:18	0.13	2846	2941	95	30	712.5	60	7722	640	2750		11.29	154.54	0.00	
1	4-Sep	Drilling	10:21	10:25	0.07	2941	2963	22	30	330.0	60	7722	640	2750		11.29	154.54	0.00	
1	4-Sep	Sliding	10:25	10:29	0.07	2963	2973	10	10	150.0	60	7722	640	2750	20R	11.29	154.54	0.00	
1	4-Sep	Drilling	10:29	10:34	0.08	2973	3035	62	30	744.0	60	7722	640	2750		11.80	159.91	0.00	
1	4-Sep	Drilling	10:37	10:45	0.13	3035	3129	94	30	705.0	60	7722	640	2750		10.43	158.09	0.00	
1	4-Sep	Drilling	10:48	10:52	0.07	3129	3155	26	30	390.0	60	7722	640	2750		10.43	158.09	0.00	
1	4-Sep	Sliding	10:52	10:58	0.10	3155	3172	17	10	170.0	60	7722	640	2750	30L	11.25	156.79	0.00	
1	4-Sep	Drilling	10:58	11:02	0.07	3172	3224	52	30	780.0	60	7722	640	2750		11.25	156.79	0.00	
1	4-Sep	Drilling	11:05	11:09	0.07	3224	3250	26	30	390.0	55	10500	640	3175		11.25	156.79	0.00	
1	4-Sep	Sliding	11:09	11:15	0.10	3250	3266	16	10	160.0	60	10500	640	3175	20L	12.86	153.12	0.00	
1	4-Sep	Drilling	11:15	11:19	0.07	3266	3318	52	30	780.0	55	10500	640	3175		12.86	153.12	0.00	
1	4-Sep	Drilling	11:22	11:31	0.15	3318	3412	94	30	626.7	55	10500	640	3175		12.10	152.16	0.00	
1	4-Sep	Drilling	11:34	11:38	0.07	3412	3439	27	30	405.0	55	10500	640	3175		12.10	152.16	0.00	
1	4-Sep	Sliding	11:38	11:43	0.08	3439	3453	14	10	168.0	55	10500	640	3175	20R	12.13	152.94	0.00	
1	4-Sep	Drilling	11:43	11:48	0.08	3453	3507	54	30	648.0	55	10500	640	3175		12.13	152.94	0.00	
1	4-Sep	Drilling	11:51	11:55	0.07	3507	3520	13	30	195.0	55	10500	640	3175		12.13	152.94	0.00	
1	4-Sep	Sliding	11:55	12:03	0.13	3520	3537	17	10	127.5	55	10500	640	3175	30R	12.13	152.94	0.00	
1	4-Sep	Drilling	12:03	12:09	0.10	3537	3602	65	30	650.0	55	10500	640	3175		12.22	157.56	0.00	
1	4-Sep	Drilling	12:12	12:16	0.07	3602	3632	30	30	450.0	55	10500	640	3175		12.22	157.56	0.00	
1	4-Sep	Sliding	12:16	12:22	0.10	3632	3649	17	10	170.0	55	10500	640	3175		13.01	159.55	0.00	
1	4-Sep	Drilling	12:22	12:27	0.08	3649	3697	48	30	576.0	55	10500	640	3175		13.01	159.55	0.00	
1	4-Sep	Drilling	12:31	12:41	0.17	3697	3791	94	30	564.0	55	10500	640	3175		14.09	159.74	0.00	
1	4-Sep	Drilling	12:45	12:53	0.13	3791	3886	95	30	712.5	55	10500	640	3175		14.51	159.65	0.00	
1	4-Sep	Drilling	12:57	13:01	0.07	3886	3900	14	30	210.0	55	10500	640	3175		14.51	159.65	0.00	
1	4-Sep	Sliding	13:01	13:07	0.10	3900	3910	10	10	100.0	55	10500	640	3175	140L	14.51	159.65	0.00	
1	4-Sep	Drilling	13:07	13:13	0.10	3910	3981	71	30	710.0	55	10500	640	3175		13.33	152.79	0.00	
1	4-Sep	Drilling	13:16	13:20	0.07	3981	4007	26	30	390.0	55	10500	640	3175		13.33	152.79	0.00	
1	4-Sep	Sliding	13:20	13:26	0.10	4007	4014	7	10	70.0	60	11500	640	3350	150R	13.33	152.79	0.00	
1	4-Sep	Drilling	13:26	13:31	0.08	4014	4076	62	30	744.0	60	11500	640	3350		12.66	157.14	0.00	
1	4-Sep	Drilling	13:35	13:43	0.13	4076	4171	95	30	712.5	60	11500	640	3350		10.73	158.45	0.00	
1	4-Sep	Drilling	13:46	13:50	0.07	4171	4196	25	30	375.0	60	11500	640	3350		10.73	158.45	0.00	
1	4-Sep	Sliding	13:50	13:55	0.08	4196	4208	12	10	144.0	60	11500	640	3350	30L	10.56	156.93	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-Sep	Drilling	13:55	14:00	0.08	4208	4265	57	30	684.0	60	11500	640	3350		10.56	156.93	0.00	
1	4-Sep	Drilling	14:03	14:07	0.07	4265	4290	25	30	375.0	60	11500	640	3350		10.56	156.93	0.00	
1	4-Sep	Sliding	14:07	14:14	0.12	4290	4307	17	10	145.7	60	11500	640	3350	30L	11.56	153.76	0.00	
1	4-Sep	Drilling	14:14	14:18	0.07	4307	4359	52	30	780.0	60	11500	640	3350		11.56	153.76	0.00	
1	4-Sep	Drilling	14:22	14:25	0.05	4359	4382	23	30	460.0	60	11500	640	3350		11.56	153.76	0.00	
1	4-Sep	Sliding	14:25	14:30	0.08	4382	4394	12	10	144.0	60	11500	640	3350	20R	11.56	153.76	0.00	
1	4-Sep	Drilling	14:30	14:35	0.08	4394	4454	60	30	720.0	60	11500	640	3350		12.40	158.91	0.00	
1	4-Sep	Drilling	14:38	14:47	0.15	4454	4548	94	30	626.7	60	11500	640	3350		11.96	160.27	0.00	
1	4-Sep	Drilling	14:51	14:59	0.13	4548	4642	94	30	705.0	60	11500	640	3350		10.57	160.18	0.00	
1	4-Sep	Drilling	15:02	15:06	0.07	4642	4663	21	30	315.0	60	11500	640	3350		10.57	160.18	0.00	
1	4-Sep	Sliding	15:06	15:13	0.12	4663	4680	17	10	145.7	60	11500	640	3350	35L	11.30	158.63	0.00	
1	4-Sep	Drilling	15:13	15:19	0.10	4680	4737	57	30	570.0	60	11500	640	3350		11.30	158.63	0.00	
1	4-Sep	Drilling	15:22	15:26	0.07	4737	4761	24	30	360.0	60	11500	640	3350		11.30	158.63	0.00	
1	4-Sep	Sliding	15:26	15:32	0.10	4761	4776	15	10	150.0	60	11500	640	3350	35L	12.75	155.94	0.00	
1	4-Sep	Drilling	15:32	15:38	0.10	4776	4832	56	30	560.0	60	11500	640	3350		12.75	155.94	0.00	
1	4-Sep	Drilling	15:41	15:51	0.17	4832	4926	94	30	564.0	60	11500	640	3350		12.75	155.14	0.00	
1	4-Sep	Drilling	15:54	16:03	0.15	4926	5021	95	30	633.3	60	11500	640	3350		11.82	153.56	0.00	
1	4-Sep	Drilling	16:07	16:11	0.07	5021	5046	25	30	375.0	60	11500	640	3350		11.82	153.56	0.00	
1	4-Sep	Sliding	16:11	16:17	0.10	5046	5060	14	15	140.0	60	11500	640	3350		11.63	158.75	0.00	
1	4-Sep	Drilling	16:17	16:23	0.10	5060	5116	56	32	560.0	60	14500	640	3650		11.63	158.75	0.00	
1	4-Sep	Drilling	16:28	16:32	0.07	5116	5143	27	32	405.0	60	14500	640	3650		11.63	158.75	0.00	
1	4-Sep	Sliding	16:32	16:38	0.10	5143	5158	15	15	150.0	60	14500	640	3650	35L	11.79	156.53	0.00	
1	4-Sep	Drilling	16:38	16:43	0.08	5158	5211	53	32	636.0	60	14500	640	3650		11.79	156.53	0.00	
1	4-Sep	Drilling	16:47	16:51	0.07	5211	5239	28	32	420.0	60	14500	640	3650		11.79	156.53	0.00	
1	4-Sep	Sliding	16:51	16:58	0.12	5239	5254	15	15	128.6	60	14500	640	3650	30L	12.18	150.88	0.00	
1	4-Sep	Drilling	16:58	17:03	0.08	5254	5305	51	32	612.0	60	14500	640	3650		12.18	150.88	0.00	
1	4-Sep	Drilling	17:06	17:15	0.15	5305	5400	95	32	633.3	60	14500	640	3650		10.66	150.21	0.00	
1	4-Sep	Drilling	17:18	17:22	0.07	5400	5427	27	32	405.0	60	14500	640	3650		10.66	150.21	0.00	
1	4-Sep	Sliding	17:22	17:29	0.12	5427	5444	17	15	145.7	60	14500	640	3650	30R	10.70	153.06	0.00	
1	4-Sep	Drilling	17:29	17:33	0.07	5444	5495	51	32	765.0	60	14500	640	3650		10.70	153.06	0.00	
1	4-Sep	Drilling	17:37	17:41	0.07	5495	5516	21	32	315.0	60	14500	640	3650		10.70	153.06	0.00	
1	4-Sep	Sliding	17:41	17:47	0.10	5516	5533	17	15	170.0	60	14500	640	3650	10R	11.77	156.77	0.00	
1	4-Sep	Drilling	17:47	17:52	0.08	5533	5590	57	32	684.0	60	14500	640	3650		11.77	156.77	0.00	
1	4-Sep	Drilling	17:55	18:02	0.12	5590	5614	24	32	205.7	60	14500	640	3650		11.77	156.77	0.00	
1	4-Sep	Sliding	18:02	18:07	0.08	5614	5630	16	15	192.0	60	14500	640	3650	10R	11.99	162.06	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-Sep	Drilling	18:07	18:12	0.08	5630	5689	59	32	708.0	60	14500	640	3650		11.99	162.06	0.00	
1	4-Sep	Drilling	18:16	18:21	0.08	5689	5702	13	32	156.0	60	14500	640	3650		11.99	162.06	0.00	
1	4-Sep	Sliding	18:21	18:28	0.12	5702	5720	18	15	154.3	60	14500	640	3650	10R	12.10	158.41	0.00	
1	4-Sep	Drilling	18:28	18:36	0.13	5720	5779	59	32	442.5	60	14500	640	3650		12.10	158.41	0.00	
1	4-Sep	Drilling	18:39	18:44	0.08	5779	5798	19	32	228.0	60	14500	640	3650		12.10	158.41	0.00	
1	4-Sep	Sliding	18:44	18:49	0.08	5798	5812	14	15	168.0	60	14500	640	3650	10R	12.10	158.41	0.00	
1	4-Sep	Drilling	18:49	18:52	0.05	5812	5874	62	32	1240.0	60	14500	640	3650		11.53	158.30	0.00	
1	4-Sep	Drilling	18:58	19:02	0.07	5874	5888	14	32	210.0	60	14500	640	3650		11.53	158.30	0.00	
1	4-Sep	Sliding	19:02	19:09	0.12	5888	5909	21	15	180.0	60	14500	640	3650	10R	11.53	158.30	0.00	
1	4-Sep	Drilling	19:18	19:21	0.05	5909	5984	75	32	1500.0	60	14500	640	3650		11.36	155.29	0.00	
1	4-Sep	Sliding	19:21	19:32	0.18	5984	6014	30	15	163.6	60	14500	640	3650	10R	12.49	160.90	0.00	
1	4-Sep	Drilling	19:32	19:37	0.08	6014	6063	49	32	588.0	60	14500	640	3650		12.49	160.90	0.00	
1	4-Sep	Drilling	19:40	19:45	0.08	6063	6073	10	32	120.0	60	14500	640	3650		12.49	160.90	0.00	
1	4-Sep	Sliding	19:45	19:51	0.10	6073	6086	13	15	130.0	60	14500	640	3650	10R	12.49	160.90	0.00	
1	4-Sep	Drilling	19:51	19:58	0.12	6086	6158	72	32	617.1	60	14500	640	3650		13.81	155.99	0.00	
1	4-Sep	Drilling	20:01	20:05	0.07	6158	6168	10	32	150.0	60	14500	640	3650		13.81	155.99	0.00	
1	4-Sep	Sliding	20:05	20:11	0.10	6168	6182	14	15	140.0	60	14500	640	3650	10R	13.81	155.99	0.00	
1	4-Sep	Drilling	20:11	20:18	0.12	6182	6252	70	32	600.0	60	14500	640	3650		11.94	152.44	0.00	
1	4-Sep	Drilling	20:21	20:25	0.07	6252	6262	10	32	150.0	60	14500	640	3650		11.94	152.44	0.00	
1	4-Sep	Sliding	20:25	20:40	0.25	6262	6282	20	15	80.0	60	14500	640	3650	10R	11.94	152.44	0.00	
1	4-Sep	Drilling	20:40	20:50	0.17	6282	6347	65	32	390.0	60	14500	640	3650		11.16	156.21	0.00	
1	4-Sep	Drilling	20:53	21:00	0.12	6347	6357	10	32	85.7	60	14500	640	3650		11.16	156.21	0.00	
1	4-Sep	Sliding	21:00	21:30	0.50	6357	6393	36	15	72.0	60	14500	640	3650	10R	11.59	156.37	0.00	
1	4-Sep	Drilling	21:30	21:37	0.12	6393	6441	48	32	411.4	60	14500	640	3650		11.59	156.37	0.00	
1	4-Sep	Drilling	21:41	21:50	0.15	6441	6451	10	32	66.7	60	14500	640	3650		11.59	156.37	0.00	
1	4-Sep	Sliding	21:50	21:55	0.08	6451	6464	13	15	156.0	60	14500	640	3650	10R	11.59	156.37	0.00	
1	4-Sep	Drilling	21:55	22:01	0.10	6464	6536	72	32	720.0	60	14500	640	3650		12.95	154.78	0.00	
1	4-Sep	Drilling	22:01	22:10	0.15	6536	5446	-1090	32	-7266.7	60	14500	640	3650		10.70	153.06	0.00	
1	4-Sep	Sliding	22:10	22:15	0.08	5446	6568	1122	15	13464.0	60	14500	640	3650	10R	12.95	154.78	0.00	
1	4-Sep	Drilling	22:15	22:23	0.13	6568	6630	62	32	465.0	60	14500	640	3650		12.26	155.57	0.00	
1	4-Sep	Sliding	22:30	23:10	0.67	6630	6725	95	32	142.5	60	14500	640	3650		9.85	185.43	0.00	
1	4-Sep	Sliding	23:21	24:00	0.65	6725	6819	94	32	144.6	60	14500	640	3650		17.54	238.04	0.00	
1	5-Sep	Drilling	00:10	00:25	0.25	6819	6866	47	32	188.0	60	14500	640	3650		22.66	252.38	0.00	
1	5-Sep	Sliding	00:34	00:48	0.23	6866	6914	48	32	205.7	60	14500	640	3650	10R	22.66	252.38	0.00	

Slide Report for BHA # 1

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#	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-Sep	Sliding	00:55	01:16	0.35	6914	7009	95	32	271.4	60	14500	640	3650	10R	32.72	256.86	0.00	
1	5-Sep	Sliding	01:25	01:43	0.30	7009	7103	94	32	313.3	60	14500	640	3650	10R	45.80	258.30	0.00	
1	5-Sep	Drilling	01:50	02:04	0.23	7103	7153	50	32	214.3	60	14500	640	3650		53.03	262.55	0.00	
1	5-Sep	Sliding	02:04	02:20	0.27	7153	7198	45	32	168.8	60	14500	640	3650	10R	53.03	262.55	0.00	
1	5-Sep	Drilling	02:30	02:41	0.18	7198	7238	40	32	218.2	60	14500	640	3650		57.97	264.40	0.00	
1	5-Sep	Sliding	02:41	03:04	0.38	7238	7292	54	32	140.9	60	14500	640	3650	10R	57.97	264.40	0.00	
1	5-Sep	Sliding	03:14	04:00	0.77	7292	7387	95	32	123.9	60	14500	640	3650	10R	71.40	262.67	0.00	
1	5-Sep	Sliding	04:10	04:33	0.38	7387	7446	59	32	153.9	60	14500	640	3650	0G	87.61	265.49	0.00	
1	5-Sep	Drilling	04:33	04:38	0.08	7446	7481	35	32	420.0	60	14500	640	3650		87.61	265.49	0.00	
1	5-Sep	Sliding	04:54	05:05	0.18	7481	7502	21	32	114.5	60	14500	640	3650	90R	87.61	265.49	0.00	
1	5-Sep	Drilling	05:05	05:12	0.12	7502	7545	43	32	368.6	60	14500	640	3650		90.40	270.75	0.00	
1	5-Sep	Drilling	05:18	05:24	0.10	7545	7575	30	32	300.0	60	14500	640	3650		90.40	270.75	0.00	
1	5-Sep	Drilling	08:50	09:01	0.18	7575	7601	26	32	141.8	60	14500	640	3650		90.40	270.75	0.00	
1	5-Sep	Drilling	09:04	09:16	0.20	7601	7696	95	35	475.0	60	19000	640	5150		89.73	270.73	0.00	
1	5-Sep	Drilling	09:19	09:23	0.07	7696	7718	22	35	330.0	60	19000	640	5150		89.73	270.73	0.00	
1	5-Sep	Sliding	09:23	09:33	0.17	7718	7730	12	32	72.0	60	19000	640	5150	60L	89.73	270.73	0.00	
1	5-Sep	Drilling	09:33	09:42	0.15	7730	7790	60	35	400.0	60	19000	640	5150		89.63	269.89	0.00	
1	5-Sep	Drilling	09:45	09:49	0.07	7790	7813	23	40	345.0	60	19000	640	5150		89.63	269.89	0.00	
1	5-Sep	Sliding	09:49	09:55	0.10	7813	7823	10	40	100.0	60	19000	640	5150	40L	89.63	269.89	0.00	
1	5-Sep	Drilling	09:55	10:03	0.13	7823	7885	62	40	465.0	60	19000	640	5150		91.48	269.10	0.00	
1	5-Sep	Drilling	10:06	10:18	0.20	7885	7980	95	40	475.0	60	19000	640	5150		92.42	268.58	0.00	
1	5-Sep	Drilling	10:21	10:25	0.07	7980	8004	24	40	360.0	60	14500	640	5150		92.42	268.58	0.00	
1	5-Sep	Sliding	10:25	10:32	0.12	8004	8012	8	40	68.6	60	14500	640	5150	160R	92.42	268.58	0.00	
1	5-Sep	Drilling	10:32	10:41	0.15	8012	8074	62	40	413.3	60	14500	640	5150		92.39	268.41	0.00	
1	5-Sep	Drilling	10:44	10:48	0.07	8074	8098	24	40	360.0	60	14500	640	5150		92.39	268.41	0.00	
1	5-Sep	Sliding	10:57	11:03	0.10	8098	8106	8	40	80.0	60	14500	640	5150	160R	92.39	268.41	0.00	
1	5-Sep	Drilling	11:03	11:11	0.13	8106	8169	63	40	472.5	60	14500	640	5150		91.24	268.96	0.00	
1	5-Sep	Drilling	11:29	11:33	0.07	8169	8194	25	40	375.0	60	14500	640	5150		91.24	268.96	0.00	
1	5-Sep	Drilling	11:40	11:48	0.13	8194	8263	69	40	517.5	60	14500	640	5150		91.91	268.87	0.00	
1	5-Sep	Drilling	11:51	12:03	0.20	8263	8358	95	40	475.0	60	14500	640	5150		92.82	268.90	0.00	
1	5-Sep	Drilling	12:21	12:25	0.07	8358	8385	27	40	405.0	60	14500	640	5150		92.82	268.90	0.00	
1	5-Sep	Sliding	12:25	12:34	0.15	8385	8400	15	40	100.0	60	14500	640	5150	150R	91.48	269.99	0.00	
1	5-Sep	Drilling	12:34	12:41	0.12	8400	8453	53	40	454.3	60	14500	640	5150		91.48	269.99	0.00	
1	5-Sep	Drilling	12:44	12:58	0.23	8453	8547	94	40	402.9	60	14500	640	5150		91.61	269.87	0.00	
1	5-Sep	Drilling	13:01	13:14	0.22	8547	8641	94	40	433.8	60	15000	640	5200		91.85	269.71	0.00	

Slide Report for BHA # 1

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#	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-Sep	Drilling	13:17	13:29	0.20	8641	8737	96	40	480.0	60	15000	640	5200		92.42	269.54	0.00	
1	5-Sep	Drilling	13:32	13:36	0.07	8737	8759	22	40	330.0	60	15000	640	5200		92.42	269.54	0.00	
1	5-Sep	Sliding	13:36	13:44	0.13	8759	8774	15	40	112.5	60	15000	640	5200	130R	91.04	270.77	0.00	
1	5-Sep	Drilling	13:44	13:51	0.12	8774	8830	56	40	480.0	60	15000	640	5200		91.04	270.77	0.00	
1	5-Sep	Drilling	13:54	14:06	0.20	8830	8925	95	40	475.0	60	15000	640	5200		91.28	270.96	0.00	
1	5-Sep	Drilling	14:09	14:21	0.20	8925	9019	94	40	470.0	60	15000	640	5200		90.74	269.92	0.00	
1	5-Sep	Drilling	14:24	14:36	0.20	9019	9114	95	40	475.0	60	15000	640	5200		91.41	269.32	0.00	
1	5-Sep	Drilling	14:39	14:51	0.20	9114	9208	94	40	470.0	60	15000	640	5200		92.42	268.93	0.00	
1	5-Sep	Drilling	14:54	14:58	0.07	9208	9232	24	40	360.0	60	15000	640	5200		92.42	268.93	0.00	
1	5-Sep	Sliding	14:58	15:07	0.15	9232	9247	15	40	100.0	60	15000	640	5200	135R	92.08	269.99	0.00	
1	5-Sep	Drilling	15:07	15:14	0.12	9247	9303	56	40	480.0	60	15000	640	5200		92.08	269.99	0.00	
1	5-Sep	Drilling	15:18	15:22	0.07	9303	9331	28	40	420.0	60	15000	640	5200		92.08	269.99	0.00	
1	5-Sep	Sliding	15:22	15:32	0.17	9331	9341	10	40	60.0	60	15000	640	5200	120R	91.41	271.69	0.00	
1	5-Sep	Drilling	15:32	15:39	0.12	9341	9397	56	40	480.0	60	15000	640	5200		91.41	271.69	0.00	
1	5-Sep	Drilling	15:42	15:53	0.18	9397	9492	95	40	518.2	60	15000	640	5200		91.68	271.90	0.00	
1	5-Sep	Drilling	15:56	16:08	0.20	9492	9586	94	40	470.0	60	15000	640	5200		91.38	271.39	0.00	
1	5-Sep	Drilling	16:11	16:29	0.30	9586	9681	95	40	316.7	60	15000	640	5200		90.97	270.04	0.00	
1	5-Sep	Drilling	16:32	16:44	0.20	9681	9775	94	40	470.0	60	15000	640	5200		91.04	273.81	0.00	
1	5-Sep	Drilling	16:51	16:56	0.08	9775	9808	33	40	396.0	60	17000	640	5550		91.04	273.81	0.00	
1	5-Sep	Sliding	16:56	17:05	0.15	9808	9823	15	40	100.0	60	17000	640	5550	90L	91.38	275.89	0.00	
1	5-Sep	Drilling	17:05	17:12	0.12	9823	9870	47	40	402.9	60	17000	640	5550		91.38	275.89	0.00	
1	5-Sep	Drilling	17:16	17:20	0.07	9870	9897	27	40	405.0	60	17000	640	5550		91.38	275.89	0.00	
1	5-Sep	Sliding	17:20	17:36	0.27	9897	9913	16	40	60.0	60	17000	640	5550	90L	91.58	272.30	0.00	
1	5-Sep	Drilling	17:36	17:44	0.13	9913	9964	51	40	382.5	60	17000	640	5550		91.58	272.30	0.00	
1	5-Sep	Drilling	17:47	17:51	0.07	9964	9989	25	40	375.0	60	17000	640	5550		91.58	272.30	0.00	
1	5-Sep	Sliding	17:51	18:00	0.15	9989	10002	13	40	86.7	60	17000	640	5550	135L	91.61	270.42	0.00	
1	5-Sep	Drilling	18:00	18:19	0.32	10002	10077	75	40	236.8	60	17000	640	5550		91.61	270.42	0.00	
1	5-Sep	Sliding	18:23	18:27	0.07	10077	10092	15	40	225.0	60	17000	640	5550	135L	91.61	270.42	0.00	
1	5-Sep	Drilling	18:27	18:35	0.13	10092	10153	61	40	457.5	60	17000	640	5550		90.77	270.06	0.00	
1	5-Sep	Drilling	18:38	18:52	0.23	10153	10248	95	40	407.1	60	17000	640	5550		90.47	269.70	0.00	
1	5-Sep	Drilling	18:56	19:08	0.20	10248	10342	94	40	470.0	60	17000	640	5550		89.76	269.79	0.00	
1	5-Sep	Drilling	19:08	19:16	0.13	10342	10354	12	40	90.0	60	17000	640	5550		89.76	269.79	0.00	
1	5-Sep	Drilling	19:16	19:26	0.17	10354	10367	13	40	78.0	60	17000	640	5550		89.76	269.79	0.00	
1	5-Sep	Drilling	19:26	19:37	0.18	10367	10437	70	40	381.8	60	17000	640	5550		90.60	270.48	0.00	
1	5-Sep	Drilling	19:40	19:53	0.22	10437	10537	100	40	461.5	60	17000	640	5550		89.50	269.86	0.00	

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#	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-Sep	Drilling	19:53	20:00	0.12	10537	10548	11	40	94.3	60	17000	640	5550		89.50	269.86	0.00	
1	5-Sep	Sliding	20:00	20:11	0.18	10548	10564	16	40	87.3	60	17000	640	5550	135L	89.50	269.86	0.00	
1	5-Sep	Drilling	20:11	20:19	0.13	10564	10626	62	40	465.0	60	17000	640	5550		90.67	269.31	0.00	
1	5-Sep	Drilling	20:23	20:51	0.47	10626	10815	189	40	405.0	60	17000	640	5550		91.98	269.26	0.00	
1	5-Sep	Drilling	20:54	21:22	0.47	10815	11032	217	40	465.0	60	17000	640	5550		90.81	268.30	0.00	
1	5-Sep	Sliding	21:28	21:40	0.20	11032	11049	17	40	85.0	60	17000	640	5550	135L	90.97	269.46	0.00	
1	5-Sep	Drilling	21:40	22:25	0.75	11049	11381	332	40	442.7	60	17000	640	5550		90.64	269.22	0.00	
1	5-Sep	Drilling	22:35	22:40	0.08	11381	11398	17	40	204.0	60	17000	640	5550		90.64	269.22	0.00	
1	5-Sep	Sliding	22:40	22:50	0.17	11398	11412	14	40	84.0	60	17000	640	5550	135L	90.64	269.22	0.00	
1	5-Sep	Drilling	22:50	22:58	0.13	11412	11476	64	40	480.0	60	17000	640	5550		92.25	269.99	0.00	
1	5-Sep	Drilling	23:20	23:27	0.12	11476	11581	105	40	900.0	60	17000	640	5550		93.73	271.86	0.00	
1	5-Sep	Sliding	23:27	23:40	0.22	11581	11596	15	40	69.2	60	17000	640	5550	135L	93.73	271.86	0.00	
1	5-Sep	Drilling	23:40	24:00	0.33	11596	11660	64	40	192.0	60	17000	640	5550		91.24	270.45	0.00	
1	6-Sep	Drilling	00:00	00:06	0.10	11660	11665	5	40	50.0	60	17000	640	5550		91.24	270.45	0.00	
1	6-Sep	Drilling	00:12	00:16	0.07	11665	11777	112	40	1680.0	60	17000	640	5550		90.57	270.07	0.00	
1	6-Sep	Sliding	00:16	00:26	0.17	11777	11789	12	40	72.0	60	17000	640	5550	135L	90.57	270.07	0.00	
1	6-Sep	Drilling	00:26	00:34	0.13	11789	11853	64	40	480.0	60	17000	640	5550		91.91	269.48	0.00	
1	6-Sep	Drilling	00:37	00:49	0.20	11853	11948	95	40	475.0	60	17000	640	5550		94.54	269.48	0.00	
1	6-Sep	Drilling	00:52	00:56	0.07	11948	11966	18	40	270.0	60	17000	640	5550		94.54	269.48	0.00	
1	6-Sep	Sliding	00:56	01:05	0.15	11966	11981	15	40	100.0	60	17000	640	5550	135L	94.54	269.48	0.00	
1	6-Sep	Drilling	01:05	01:14	0.15	11981	12043	62	40	413.3	60	17000	640	5550		93.56	268.30	0.00	
1	6-Sep	Sliding	01:22	01:32	0.17	12043	12053	10	40	60.0	60	17000	640	5550		93.56	268.30	0.00	
1	6-Sep	Drilling	01:32	01:43	0.18	12053	12137	84	40	458.2	60	17000	640	5550		91.68	267.78	0.00	
1	6-Sep	Drilling	01:46	01:58	0.20	12137	12232	95	40	475.0	60	17000	640	5550		91.01	267.52	0.00	
1	6-Sep	Drilling	01:58	02:05	0.12	12232	12251	19	40	162.9	60	17000	640	5550		91.01	267.52	0.00	
1	6-Sep	Sliding	02:05	02:24	0.32	12251	12266	15	40	47.4	60	17000	640	5550		91.01	267.52	0.00	
1	6-Sep	Drilling	02:24	02:33	0.15	12266	12326	60	40	400.0	60	17000	640	5550		91.34	268.80	0.00	
1	6-Sep	Drilling	02:37	02:49	0.20	12326	12420	94	40	470.0	60	17000	640	5550		91.38	269.09	0.00	
1	6-Sep	Drilling	02:52	02:56	0.07	12420	12440	20	40	300.0	60	17000	640	5550		91.38	269.09	0.00	
1	6-Sep	Sliding	02:56	03:08	0.20	12440	12450	10	40	50.0	60	17000	640	5550		91.38	269.09	0.00	
1	6-Sep	Drilling	03:08	03:18	0.17	12450	12609	159	40	954.0	60	17000	640	5550		90.70	269.65	0.00	
1	6-Sep	Drilling	03:21	03:49	0.47	12609	12628	19	40	40.7	60	17000	640	5550		90.70	269.65	0.00	
1	6-Sep	Drilling	03:49	03:59	0.17	12628	12636	8	40	48.0	60	17000	640	5550		90.70	269.65	0.00	
1	6-Sep	Drilling	03:59	04:09	0.17	12636	12704	68	40	408.0	60	17000	640	5550		90.97	270.08	0.00	
1	6-Sep	Drilling	04:12	04:24	0.20	12704	12798	94	42	470.0	65	23000	615	5998		90.91	269.74	0.00	

Slide Report for BHA # 1

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#	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-Sep	Drilling	04:32	04:39	0.12	12798	12810	12	42	102.9	65	23000	615	5998		90.91	269.74	0.00	
1	6-Sep	Sliding	04:39	05:00	0.35	12810	12821	11	40	31.4	65	23000	640	5998		90.91	269.74	0.00	
1	6-Sep	Drilling	05:00	05:10	0.17	12821	12893	72	42	432.0	65	23000	615	5998		91.71	270.38	0.00	
1	6-Sep	Drilling	05:14	05:18	0.07	12893	12912	19	42	285.0	65	23000	615	5998		91.71	270.38	0.00	
1	6-Sep	Sliding	05:18	05:29	0.18	12912	12920	8	40	43.6	65	23000	640	5998		91.71	270.38	0.00	
1	6-Sep	Drilling	05:29	05:36	0.12	12920	12987	67	42	574.3	65	23000	615	5998		92.86	270.65	0.00	
1	6-Sep	Drilling	05:44	05:57	0.22	12987	13081	94	42	433.8	65	23000	615	5998		93.26	270.35	0.00	
1	6-Sep	Drilling	06:00	06:15	0.25	13081	13176	95	42	380.0	65	23000	615	5998		94.13	270.34	0.00	
1	6-Sep	Drilling	06:18	06:23	0.08	13176	13199	23	42	276.0	65	23000	610	5998		94.13	270.34	0.00	
1	6-Sep	Sliding	06:23	06:38	0.25	13199	13212	13	40	52.0	60	23000	610	5998	160R	92.69	269.82	0.00	
1	6-Sep	Drilling	06:38	06:49	0.18	13212	13270	58	42	316.4	65	23000	610	5998		92.69	269.82	0.00	
1	6-Sep	Drilling	06:53	07:07	0.23	13270	13365	95	42	407.1	65	23000	610	5998		93.26	270.02	0.00	
1	6-Sep	Drilling	07:10	07:25	0.25	13365	13459	94	42	376.0	65	23000	610	5998		94.67	270.92	0.00	
1	6-Sep	Drilling	07:28	07:32	0.07	13459	13475	16	42	240.0	65	23000	610	5998		94.67	270.92	0.00	
1	6-Sep	Sliding	07:32	07:53	0.35	13475	13492	17	40	48.6	65	23000	610	5998	180	94.67	270.92	0.00	
1	6-Sep	Drilling	07:53	08:03	0.17	13492	13553	61	42	366.0	65	23000	610	5998		91.65	271.43	0.00	
1	6-Sep	Drilling	08:07	08:21	0.23	13553	13658	105	42	450.0	65	23000	610	5998		91.04	271.30	0.00	
1	6-Sep	Drilling	08:25	08:40	0.25	13658	13742	84	42	336.0	65	23000	610	5998		91.81	271.96	0.00	
1	6-Sep	Drilling	08:43	08:58	0.25	13742	13836	94	42	376.0	65	23000	610	5998		91.95	271.94	0.00	
1	6-Sep	Drilling	09:02	09:20	0.30	13836	13931	95	42	316.7	65	23000	610	5998		92.39	273.20	0.00	
1	6-Sep	Drilling	09:23	09:27	0.07	13931	13951	20	42	300.0	65	23000	610	5998		92.39	273.20	0.00	
1	6-Sep	Sliding	09:27	09:57	0.50	13951	13966	15	40	30.0	65	23000	610	5998	90L	92.28	271.47	0.00	
1	6-Sep	Drilling	09:57	10:07	0.17	13966	14025	59	42	354.0	65	24000	610	6050		92.28	271.47	0.00	
1	6-Sep	Drilling	10:15	10:28	0.22	14025	14119	94	42	433.8	65	24000	610	6050		92.62	271.59	0.00	
1	6-Sep	Drilling	10:35	10:51	0.27	14119	14214	95	42	356.3	65	24000	610	6050		92.42	270.59	0.00	
1	6-Sep	Drilling	10:59	11:14	0.25	14214	14308	94	42	376.0	65	24000	610	6050		93.39	270.84	0.00	
1	6-Sep	Drilling	11:21	11:35	0.23	14308	14403	95	42	407.1	65	24000	610	6050		95.18	270.98	0.00	
1	6-Sep	Drilling	11:42	11:46	0.07	14403	14425	22	42	330.0	65	24000	610	6050		95.18	270.98	0.00	
1	6-Sep	Sliding	11:46	12:07	0.35	14425	14442	17	40	48.6	65	24000	610	6050	170L	94.37	269.82	0.00	
1	6-Sep	Drilling	12:07	12:15	0.13	14442	14497	55	42	412.5	65	24000	610	6050		94.37	269.82	0.00	
1	6-Sep	Drilling	12:23	12:26	0.05	14497	14510	13	42	260.0	65	24000	610	6050		94.37	269.82	0.00	
1	6-Sep	Sliding	12:26	12:44	0.30	14510	14527	17	40	56.7	65	24000	610	6050	170L	94.37	269.82	0.00	
1	6-Sep	Drilling	12:44	12:52	0.13	14527	14592	65	42	487.5	65	24000	610	6050		91.28	269.22	0.00	
1	6-Sep	Drilling	13:01	13:03	0.03	14592	14603	11	42	330.0	65	24000	610	6050		91.28	269.22	0.00	
1	6-Sep	Drilling	13:41	13:43	0.03	14603	14610	7	42	210.0	65	24000	610	6050		91.28	269.22	0.00	

Slide Report for BHA # 1

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#	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-Sep	Sliding	13:43	13:57	0.23	14610	14616	6	40	25.7	65	24000	610	6050	170L	91.28	269.22	0.00	
1	6-Sep	Drilling	13:57	14:06	0.15	14616	14686	70	42	466.7	65	24000	610	6050		90.44	268.91	0.00	
1	6-Sep	Drilling	14:14	14:25	0.18	14686	14781	95	42	518.2	65	24000	610	6050		91.14	268.49	0.00	
1	6-Sep	Drilling	14:33	14:37	0.07	14781	14800	19	42	285.0	65	24000	610	6050		91.14	268.49	0.00	
1	6-Sep	Sliding	14:37	14:46	0.15	14800	14809	9	40	60.0	65	24000	610	6050	135R	91.14	268.49	0.00	
1	6-Sep	Drilling	14:46	14:58	0.20	14809	14875	66	42	330.0	65	24000	610	6050		90.57	269.16	0.00	
1	6-Sep	Drilling	15:06	15:22	0.27	14875	14970	95	42	356.3	65	24000	610	6050		91.01	268.81	0.00	
1	6-Sep	Drilling	15:30	15:34	0.07	14970	14989	19	42	285.0	65	25000	598	6025		91.01	268.81	0.00	
1	6-Sep	Sliding	15:34	15:55	0.35	14989	15001	12	40	34.3	65	25000	610	6025	140R	91.01	268.81	0.00	
1	6-Sep	Drilling	15:55	16:06	0.18	15001	15064	63	42	343.6	65	25000	598	6025		90.74	270.42	0.00	
1	6-Sep	Drilling	16:16	16:31	0.25	15064	15159	95	42	380.0	65	25000	598	6025		91.48	271.53	0.00	
1	6-Sep	Drilling	16:40	16:43	0.05	15159	15176	17	42	340.0	65	25000	598	6025		91.48	271.53	0.00	
1	6-Sep	Sliding	16:43	17:01	0.30	15176	15186	10	40	33.3	65	25000	610	6025	170L	91.48	271.53	0.00	
1	6-Sep	Drilling	17:01	17:13	0.20	15186	15254	68	42	340.0	65	25000	598	6025		89.97	270.96	0.00	
1	6-Sep	Drilling	17:21	17:39	0.30	15254	15348	94	42	313.3	65	25000	598	6025		91.18	272.05	0.00	
1	6-Sep	Drilling	17:48	18:07	0.32	15348	15443	95	42	300.0	65	25000	598	6025		92.28	272.69	0.00	
1	6-Sep	Drilling	18:12	18:15	0.05	15443	15457	14	42	280.0	65	25000	598	6025		92.28	272.69	0.00	
1	6-Sep	Sliding	18:15	18:44	0.48	15457	15469	12	40	24.8	65	25000	610	6025	170L	92.28	272.69	0.00	
1	6-Sep	Drilling	18:44	19:01	0.28	15469	15537	68	42	240.0	65	25000	598	6025		91.38	271.14	0.00	
1	6-Sep	Drilling	19:11	19:13	0.03	15537	15551	14	42	420.0	65	25000	598	6025		91.38	271.14	0.00	
1	6-Sep	Sliding	19:13	19:38	0.42	15551	15563	12	40	28.8	65	25000	610	6025	170L	91.38	271.14	0.00	
1	6-Sep	Drilling	19:38	19:55	0.28	15563	15632	69	42	243.5	65	25000	598	6025		89.87	268.84	0.00	
1	6-Sep	Drilling	19:59	20:16	0.28	15632	15726	94	42	331.8	65	25000	598	6025		89.80	269.43	0.00	
1	6-Sep	Drilling	20:20	20:40	0.33	15726	15821	95	42	285.0	65	25000	598	6025		90.07	269.99	0.00	
1	6-Sep	Drilling	20:44	21:16	0.53	15821	15931	110	42	206.3	65	25000	598	6025		91.17	271.62	0.00	
1	6-Sep	Drilling	21:16	22:15	0.98	15931	16010	79	42	80.3	65	25000	598	6025		91.98	272.37	0.00	
1	6-Sep	Drilling	22:21	22:29	0.13	16010	16028	18	42	135.0	65	25000	598	6025		91.98	272.37	0.00	
1	6-Sep	Sliding	22:29	22:56	0.45	16028	16042	14	40	31.1	65	25000	610	6025	170L	91.98	272.37	0.00	
1	6-Sep	Drilling	22:56	23:42	0.77	16042	16104	62	42	80.9	65	25000	598	6025		90.34	269.69	0.00	
1	6-Sep	Drilling	23:47	24:00	0.22	16104	16294	190	42	876.9	65	25000	598	6025		91.34	270.86	0.00	
1	7-Sep	Drilling	00:08	00:20	0.20	16294	16311	17	42	85.0	65	25000	598	6025		91.34	270.86	0.00	
1	7-Sep	Sliding	00:20	00:45	0.42	16311	16321	10	40	24.0	65	25000	610	6025	135L	91.34	270.86	0.00	
1	7-Sep	Drilling	00:45	01:05	0.33	16321	16388	67	42	201.0	65	25000	598	6025		91.28	271.29	0.00	
1	7-Sep	Drilling	01:12	01:14	0.03	16388	16406	18	42	540.0	65	25000	598	6025		91.28	271.29	0.00	
1	7-Sep	Sliding	01:14	02:00	0.77	16406	16423	17	40	22.2	65	25000	610	6025	135L	91.28	271.29	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	7-Sep	Drilling	02:00	02:35	0.58	16423	16577	154	42	264.0	65	25000	598	6025		89.23	268.00	0.00	
1	7-Sep	Drilling	02:50	03:19	0.48	16577	16672	95	42	196.6	65	25000	598	6025		88.96	267.94	0.00	
1	7-Sep	Drilling	03:33	03:44	0.18	16672	16767	95	42	518.2	65	25000	598	6025		88.79	268.47	0.00	
1	7-Sep	Sliding	03:44	04:32	0.80	16767	16782	15	40	18.8	65	25000	610	6025	135L	88.79	268.47	0.00	
1	7-Sep	Drilling	04:32	04:49	0.28	16782	16862	80	42	282.4	65	25000	598	6025		90.77	268.44	0.00	
1	7-Sep	Drilling	04:53	04:55	0.03	16862	16870	8	42	240.0	65	25000	598	6025		90.77	268.44	0.00	

Total Drilled: 15313 **Avg. Total ROP:** 284.19 **DEPTH% - TIME %**

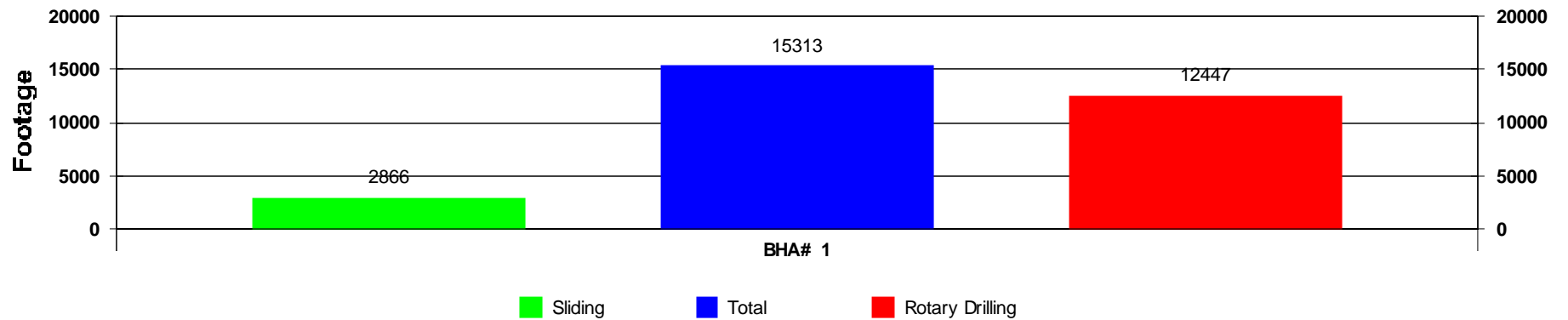
Total Rotary Drilled: 12447 **Avg. Rotary ROP:** 352.44 **Percent Rotary:** 81.28 - 65.54

Total Drilled Sliding: 2866 **Avg. Slide ROP:** 154.36 **Percent Slide:** 18.72 - 34.46

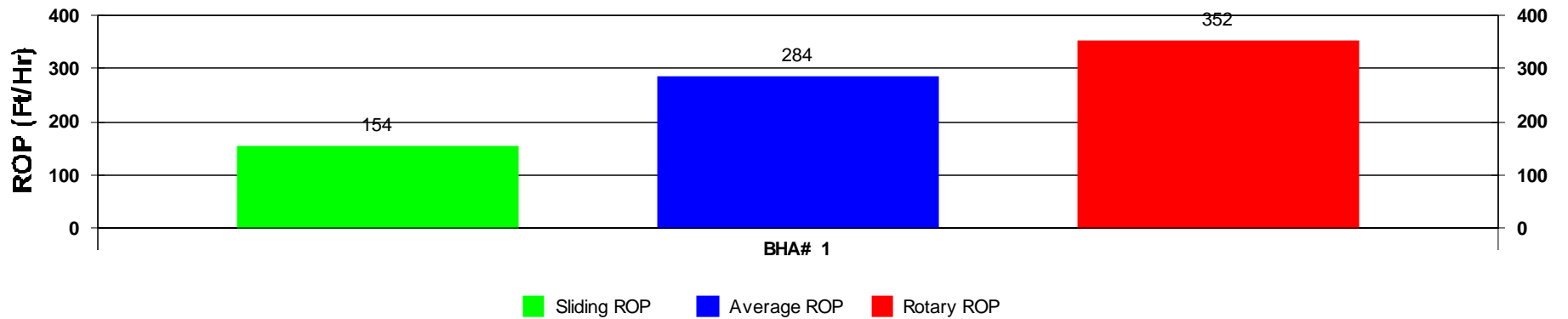


JOB NO.:	382234	FIELD:	Wattenberg	
Company:	Extraction Oil & Gas	Township:	6N	
LOCATION:	Winder South	SECTRANGE:	9	67W
RIG NAME:	Patterson 346	COMMENT		
STATE:	Colorado			
COUNTY:	Weld			
WELL NAME:	Winder South 4			

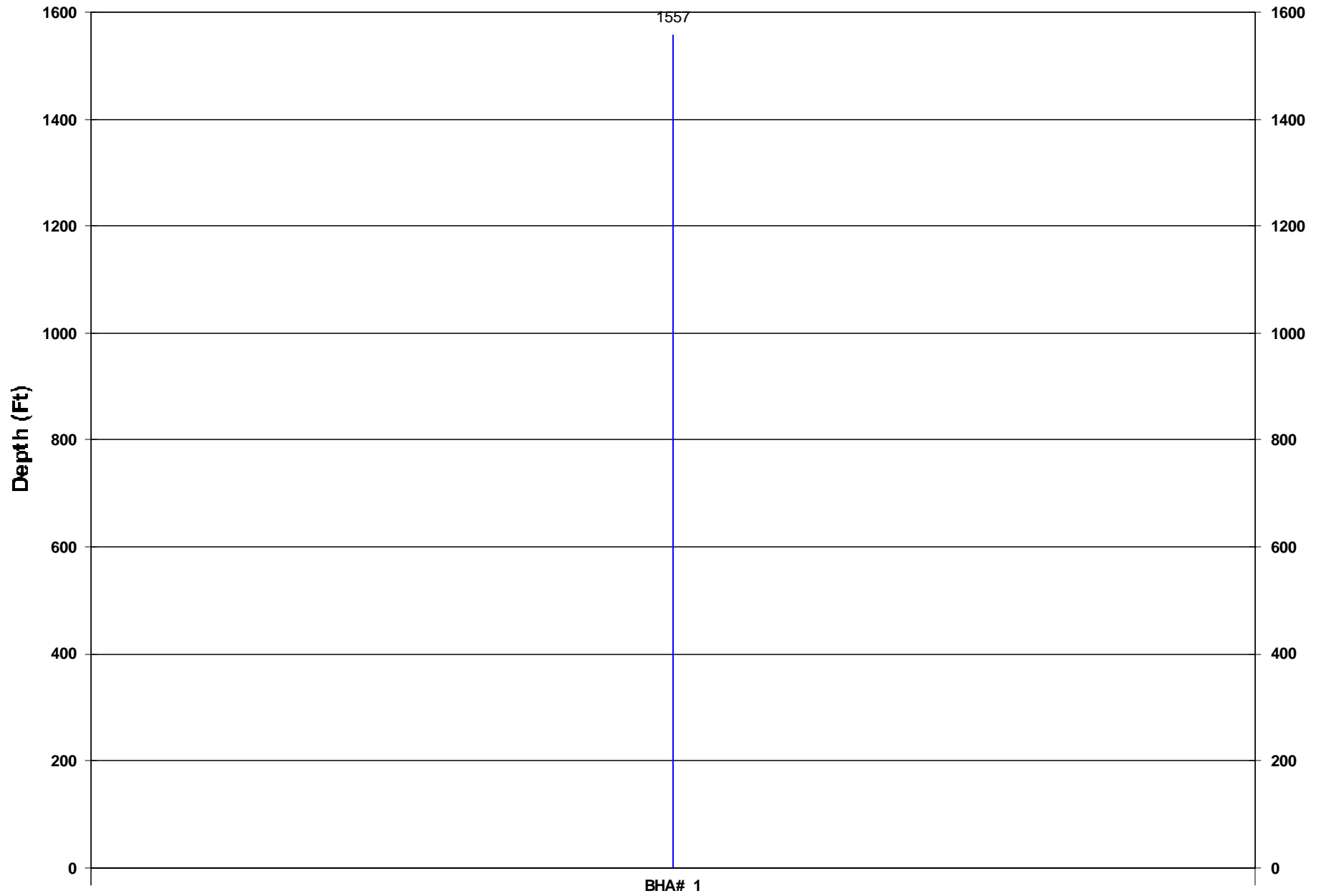
Footage Drilled with BHA



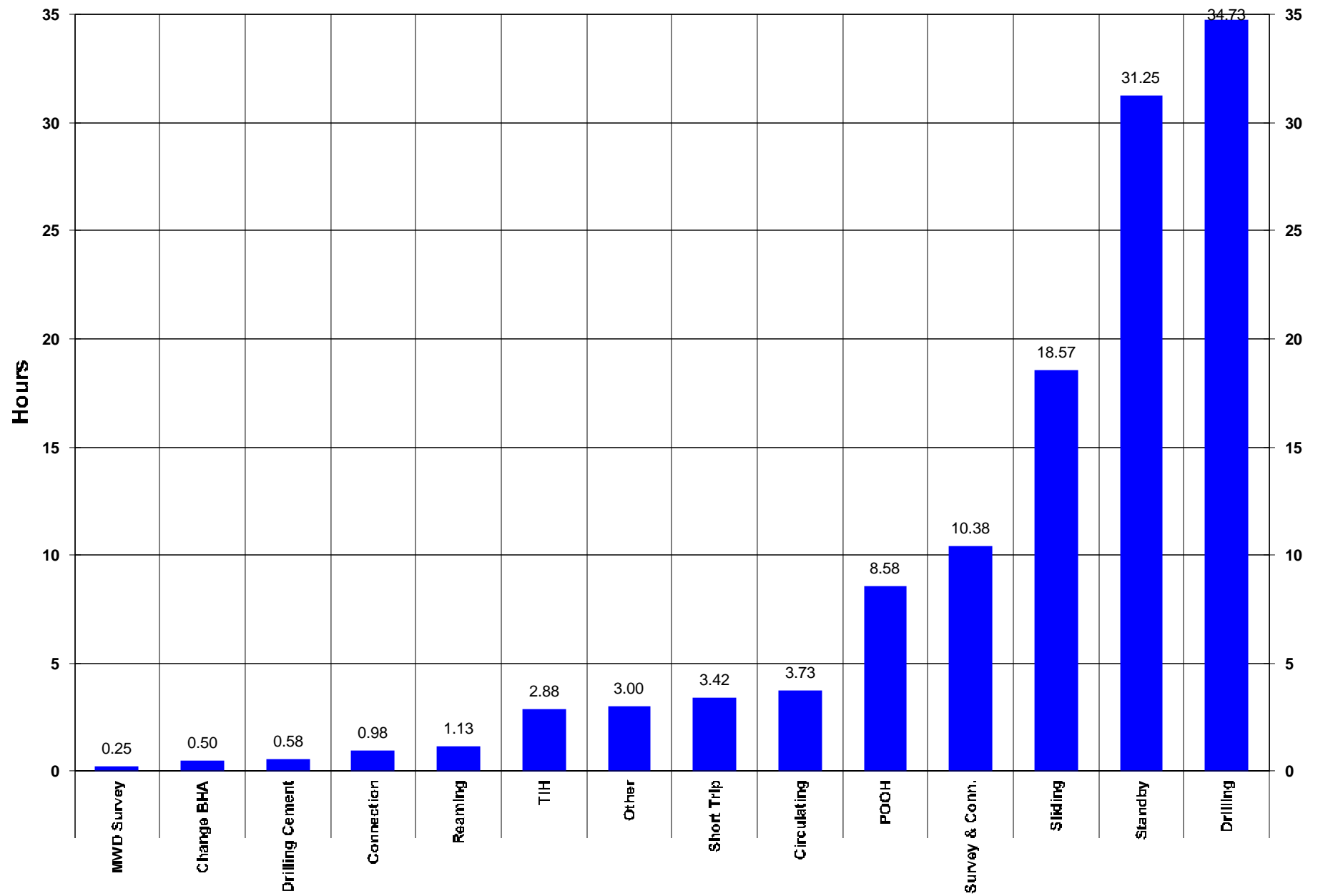
ROP vs BHA



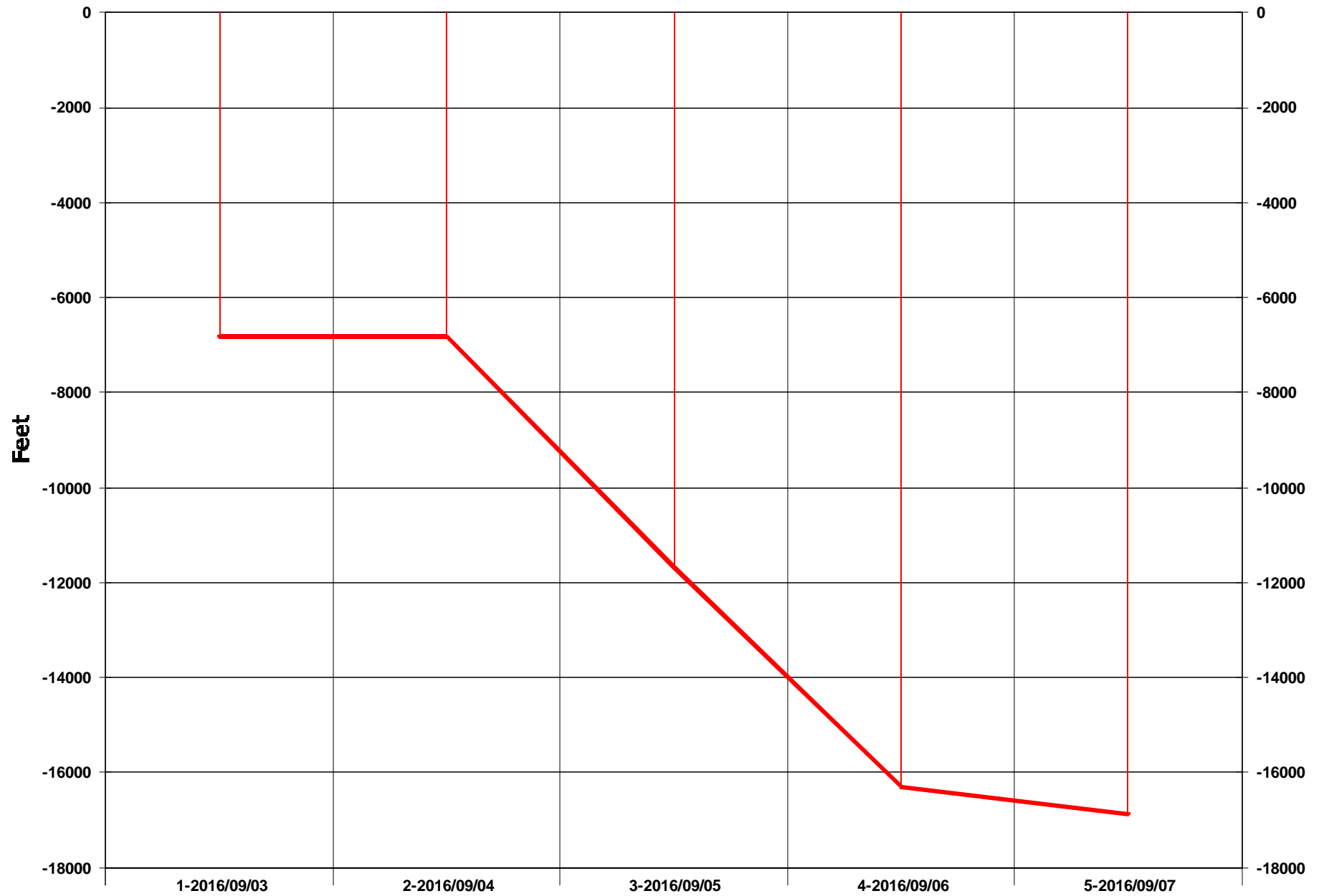
Depth vs BHA



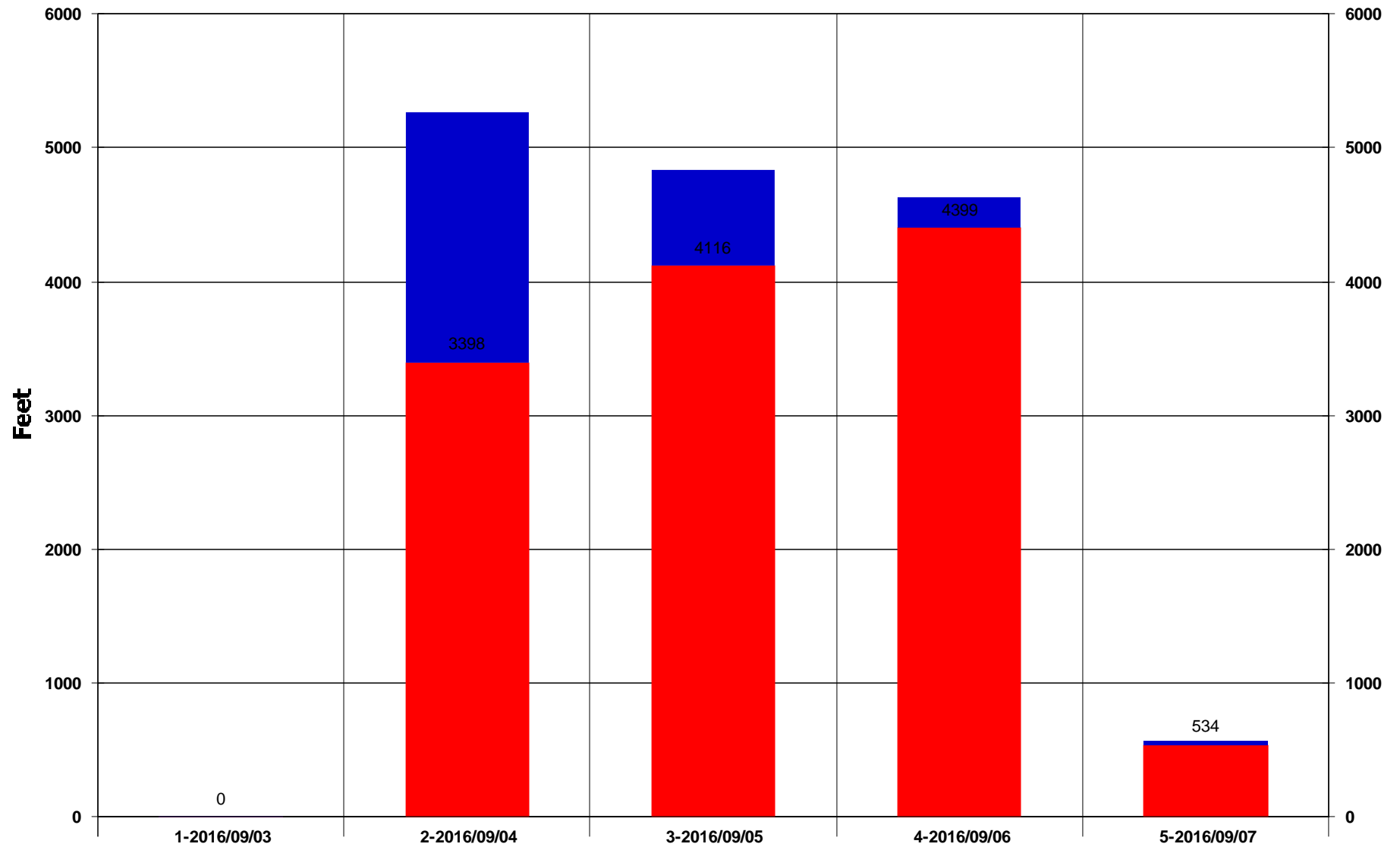
Activity Histogram



Measured Depth vs Days

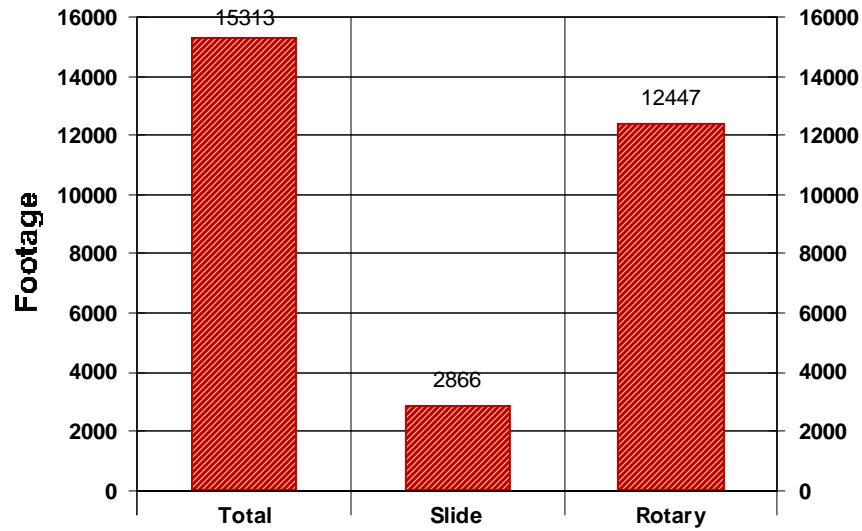


Daily Footage

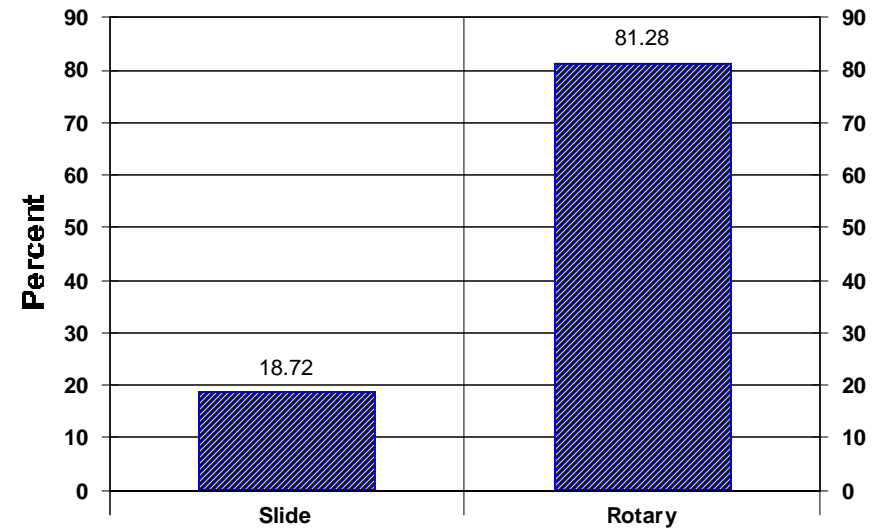


Rotary Drilling Sliding

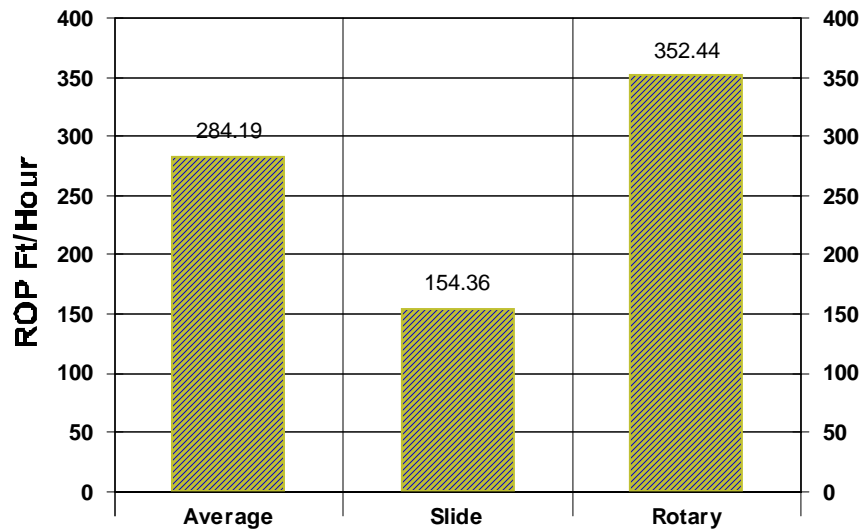
Footage Drilled Totals



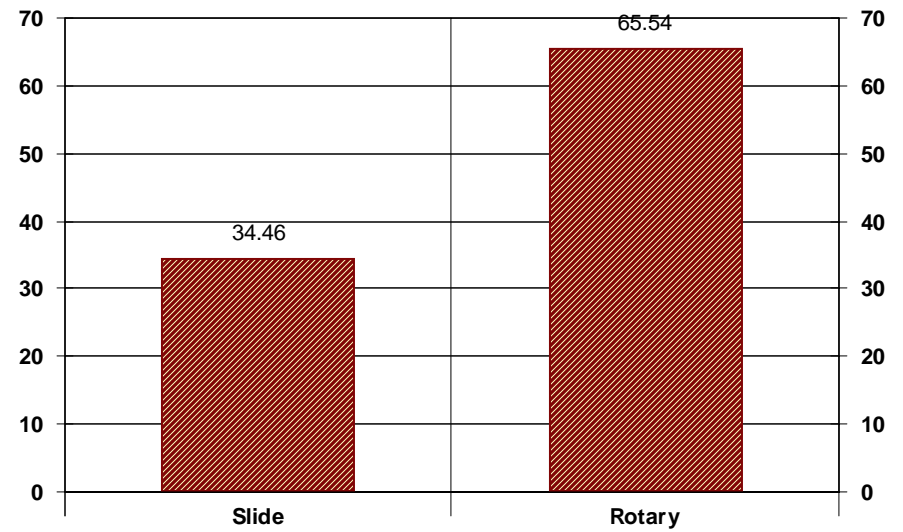
Footage Percent



Rate of Penetration Totals



Time Percent





SUPPORT STAFF

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