



END OF WELL REPORT

Prepared For:

**EnCana Oil & Gas (USA) Inc
Ruhl 1E-32H-B264
H&P 278
Weld County, CO**

Prepared By:

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Rockies Region Well Planner
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Project: DJ Wattenberg
Site: S32-T2N-R64W (Newnam/Ruhl)
Well: Ruhl 1E-32H-B264
Wellbore: Hz
Design: Plan 3



Plan: Plan 3 (Ruhl 1E-32H-B264/Hz)

Created By: Seth Burstad Date: 1-2-15

WELL DETAILS: Ruhl 1E-32H-B264

Northing	Easting	KB @ 4955.00ft	4955.00 Latitude	Longitude
1281151.87	3259144.10		40.101438	-104.573598

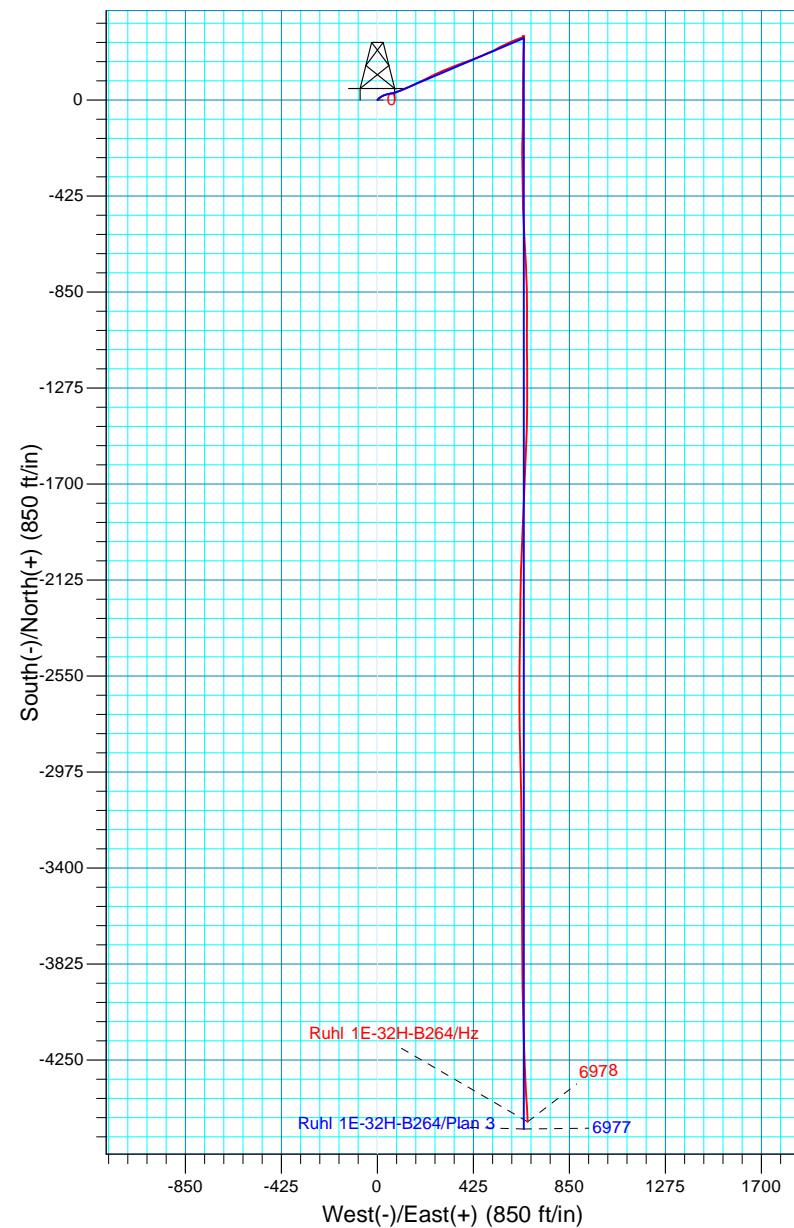
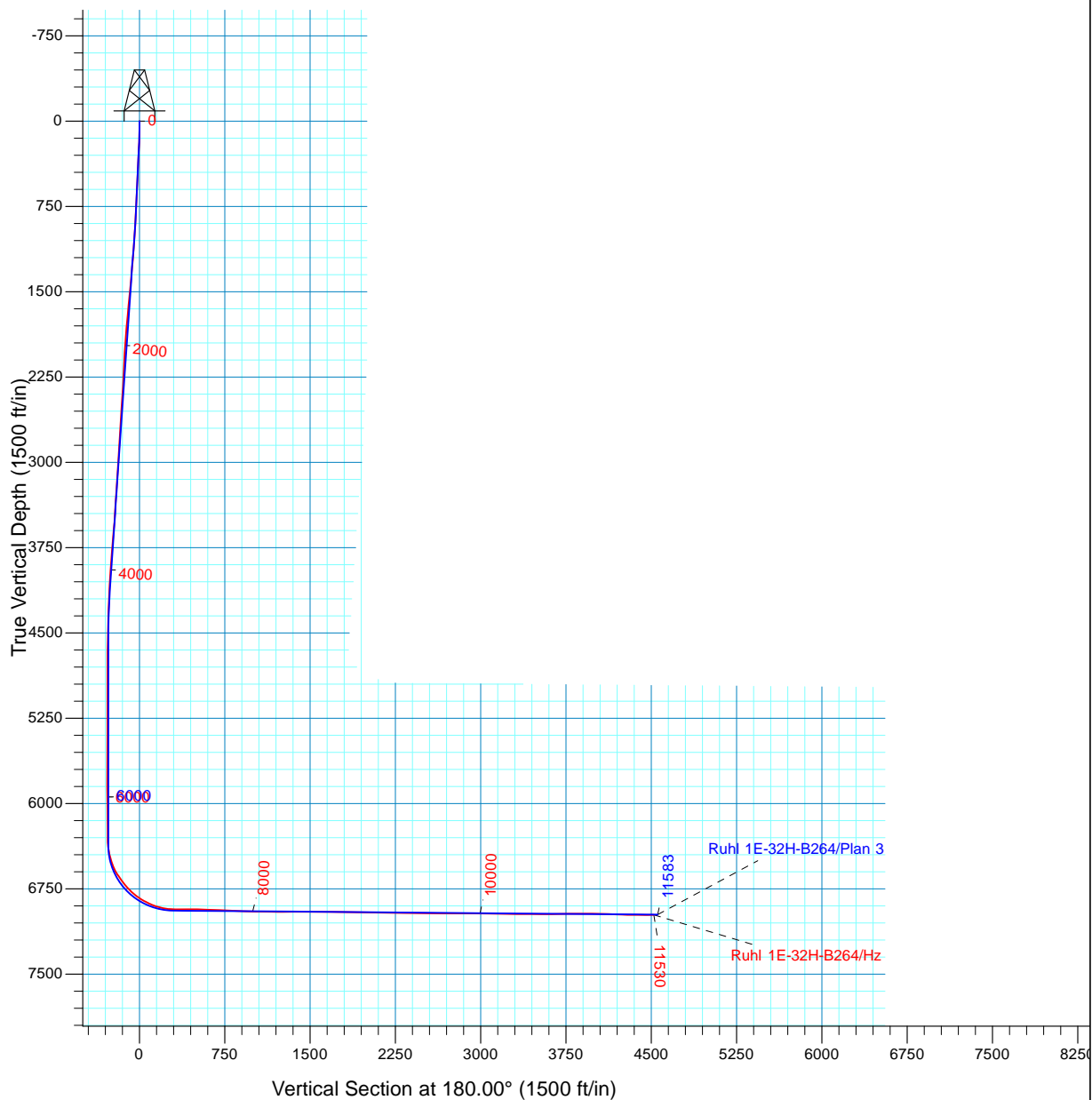
PROJECT DETAILS: DJ Wattenberg

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



Azimuths to True North
Magnetic North: 8.37°

Magnetic Field
Strength: 52514.9snT
Dip Angle: 66.71°
Date: 12/3/2014
Model: BGGM2014





EnCana Oil & Gas (USA)

DJ Wattenberg

S32-T2N-R64W (Newnam/Ruhl)

Ruhl 1E-32H-B264

Hz

Design: Hz

Standard Survey Report

02 January, 2015





Company:	EnCana Oil & Gas (USA)	Local Co-ordinate Reference:	Well Ruhl 1E-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.00ft
Site:	S32-T2N-R64W (Newnam/Ruhl)	MD Reference:	KB @ 4955.00ft
Well:	Ruhl 1E-32H-B264	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	Hz	Database:	Casper District

Project	DJ Wattenberg, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	S32-T2N-R64W (Newnam/Ruhl)			
Site Position:		Northing:	1,281,148.07 usft	Latitude: 40.101468
From:	Lat/Long	Easting:	3,257,728.03 usft	Longitude: -104.578660
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.60 °

Well	Ruhl 1E-32H-B264			
Well Position	+N/-S	0.00 ft	Northing:	1,281,151.87 usft
	+E/-W	0.00 ft	Easting:	3,259,144.10 usft
Position Uncertainty	0.00 ft		Wellhead Elevation:	0.00 ft
			Ground Level:	4,955.00 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	12/3/2014	8.37	66.71	52,515

Design	Hz			
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	180.00

Survey Program	Date	1/2/2015		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
245.00	1,152.00	Survey #1 - Surface (Hz)	SDI MWD	SDI MWD - Standard ver 1.0.1
1,277.00	7,281.00	Survey #2 - Intermediate (Hz)	SDI MWD	SDI MWD - Standard ver 1.0.1
7,424.00	11,530.00	Survey #3 - Lateral (Hz)	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
245.00	3.39	44.52	244.86	5.17	5.08	-5.17	1.38	1.38	0.00
First SDI MWD Survey									
336.00	4.71	48.80	335.63	9.55	9.78	-9.55	1.49	1.45	4.70
427.00	5.96	58.30	426.23	14.49	16.61	-14.49	1.68	1.37	10.44
519.00	7.27	65.92	517.62	19.37	25.99	-19.37	1.71	1.42	8.28
608.00	7.80	73.68	605.85	23.37	36.93	-23.37	1.29	0.60	8.72
698.00	9.22	77.55	694.86	26.64	49.83	-26.64	1.70	1.58	4.30
789.00	10.92	78.70	784.46	29.90	65.40	-29.90	1.88	1.87	1.26

Company:	EnCana Oil & Gas (USA)	Local Co-ordinate Reference:	Well Ruhl 1E-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.00ft
Site:	S32-T2N-R64W (Newnam/Ruhl)	MD Reference:	KB @ 4955.00ft
Well:	Ruhl 1E-32H-B264	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	Hz	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)
879.00	11.48	74.01	872.74	34.04	82.37	-34.04	1.19	0.62	-5.21
970.00	11.30	68.16	961.96	39.85	99.35	-39.85	1.28	-0.20	-6.43
1,060.00	11.37	64.41	1,050.20	46.96	115.54	-46.96	0.82	0.08	-4.17
1,152.00	10.93	66.12	1,140.46	54.41	131.69	-54.41	0.60	-0.48	1.86
Last SDI MWD Surface Survey									
1,277.00	10.19	63.44	1,263.35	64.15	152.42	-64.15	0.71	-0.59	-2.14
First SDI MWD Inter. Survey									
1,459.00	11.85	66.74	1,441.99	78.73	183.99	-78.73	0.98	0.91	1.81
1,641.00	12.70	62.82	1,619.83	95.25	218.96	-95.25	0.65	0.47	-2.15
1,822.00	10.90	64.05	1,797.00	111.83	252.05	-111.83	1.00	-0.99	0.68
2,003.00	9.85	65.01	1,975.03	125.86	281.47	-125.86	0.59	-0.58	0.53
2,183.00	8.05	72.10	2,152.84	136.24	307.42	-136.24	1.17	-1.00	3.94
2,366.00	9.04	67.15	2,333.81	145.76	332.86	-145.76	0.67	0.54	-2.70
2,549.00	9.43	68.45	2,514.44	156.85	360.05	-156.85	0.24	0.21	0.71
2,731.00	10.13	69.63	2,693.79	167.90	388.93	-167.90	0.40	0.38	0.65
2,912.00	10.45	70.75	2,871.88	178.85	419.34	-178.85	0.21	0.18	0.62
3,092.00	9.96	66.97	3,049.03	190.32	449.08	-190.32	0.46	-0.27	-2.10
3,275.00	8.65	63.99	3,229.62	202.55	476.02	-202.55	0.76	-0.72	-1.63
3,457.00	9.29	72.03	3,409.40	213.08	502.29	-213.08	0.77	0.35	4.42
3,637.00	10.37	58.78	3,586.78	225.96	529.97	-225.96	1.39	0.60	-7.36
3,824.00	8.82	60.94	3,771.16	241.65	556.90	-241.65	0.85	-0.83	1.16
4,013.00	9.22	67.31	3,957.83	254.53	583.53	-254.53	0.57	0.21	3.37
4,203.00	7.12	71.25	4,145.89	264.19	608.73	-264.19	1.14	-1.11	2.07
4,392.00	6.80	66.79	4,333.50	272.36	630.10	-272.36	0.33	-0.17	-2.36
4,581.00	3.24	66.45	4,521.74	278.91	645.29	-278.91	1.88	-1.88	-0.18
4,771.00	0.72	2.94	4,711.63	282.25	650.27	-282.25	1.57	-1.33	-33.43
4,961.00	0.12	296.77	4,901.62	283.53	650.16	-283.53	0.36	-0.32	-34.83
5,151.00	0.89	265.82	5,091.61	283.51	648.51	-283.51	0.42	0.41	-16.29
5,341.00	1.13	192.28	5,281.59	281.57	646.64	-281.57	0.64	0.13	-38.71
5,530.00	0.27	273.95	5,470.58	279.78	645.80	-279.78	0.59	-0.46	43.21
5,720.00	1.02	12.97	5,660.57	281.46	645.73	-281.46	0.58	0.39	52.12
5,910.00	0.45	244.86	5,850.56	282.79	645.43	-282.79	0.71	-0.30	-67.43
6,099.00	1.04	134.76	6,039.55	281.27	645.98	-281.27	0.67	0.31	-58.25
6,289.00	0.51	110.14	6,229.53	279.76	648.00	-279.76	0.32	-0.28	-12.96
6,384.00	0.67	52.27	6,324.52	279.96	648.83	-279.96	0.62	0.17	-60.92
6,431.00	5.70	180.75	6,371.45	277.79	649.02	-277.79	13.06	10.70	273.36
6,478.00	12.73	182.09	6,417.82	270.27	648.80	-270.27	14.96	14.96	2.85
6,525.00	13.75	183.17	6,463.57	259.52	648.30	-259.52	2.23	2.17	2.30
6,573.00	17.89	183.07	6,509.74	246.46	647.59	-246.46	8.63	8.63	-0.21
6,620.00	22.64	180.55	6,553.82	230.19	647.12	-230.19	10.27	10.11	-5.36
6,668.00	28.77	180.07	6,597.05	209.38	647.02	-209.38	12.78	12.77	-1.00
6,715.00	34.02	181.50	6,637.15	184.91	646.66	-184.91	11.28	11.17	3.04
6,763.00	35.64	181.28	6,676.55	157.51	645.99	-157.51	3.39	3.38	-0.46
6,810.00	39.97	181.97	6,713.68	128.71	645.17	-128.71	9.26	9.21	1.47

Company:	EnCana Oil & Gas (USA)	Local Co-ordinate Reference:	Well Ruhl 1E-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.00ft
Site:	S32-T2N-R64W (Newnam/Ruhl)	MD Reference:	KB @ 4955.00ft
Well:	Ruhl 1E-32H-B264	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	Hz	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)
6,858.00	44.74	180.87	6,749.14	96.40	644.38	-96.40	10.06	9.94	-2.29
6,905.00	46.47	179.16	6,782.02	62.82	644.38	-62.82	4.51	3.68	-3.64
6,952.00	53.20	178.81	6,812.32	26.93	645.02	-26.93	14.33	14.32	-0.74
6,999.00	58.53	179.68	6,838.68	-11.96	645.52	11.96	11.44	11.34	1.85
7,047.00	61.94	181.73	6,862.51	-53.61	645.00	53.61	8.01	7.10	4.27
7,094.00	66.03	182.10	6,883.12	-95.82	643.59	95.82	8.73	8.70	0.79
7,142.00	70.84	181.10	6,900.76	-140.43	642.35	140.43	10.21	10.02	-2.08
7,189.00	75.75	180.44	6,914.26	-185.43	641.74	185.43	10.53	10.45	-1.40
7,237.00	81.71	179.89	6,923.64	-232.48	641.61	232.48	12.47	12.42	-1.15
7,281.00	87.98	179.61	6,927.59	-276.28	641.80	276.28	14.26	14.25	-0.64
Last SDI MWD Inter. Survey									
7,424.00	90.74	178.98	6,929.19	-419.24	643.56	419.24	1.98	1.93	-0.44
First SDI MWD Lateral Survey									
7,514.00	88.89	177.47	6,929.48	-509.19	646.35	509.19	2.65	-2.06	-1.68
7,605.00	88.06	177.15	6,931.90	-600.06	650.62	600.06	0.98	-0.91	-0.35
7,696.00	87.11	176.46	6,935.74	-690.84	655.69	690.84	1.29	-1.04	-0.76
7,791.00	87.38	177.86	6,940.30	-785.61	660.39	785.61	1.50	0.28	1.47
7,886.00	88.49	180.02	6,943.73	-880.52	662.14	880.52	2.55	1.17	2.27
7,980.00	87.75	180.02	6,946.81	-974.47	662.11	974.47	0.79	-0.79	0.00
8,075.00	89.40	179.42	6,949.17	-1,069.44	662.57	1,069.44	1.85	1.74	-0.63
8,170.00	88.66	179.73	6,950.78	-1,164.42	663.28	1,164.42	0.84	-0.78	0.33
8,264.00	90.34	180.01	6,951.60	-1,258.41	663.49	1,258.41	1.81	1.79	0.30
8,360.00	90.27	180.36	6,951.09	-1,354.41	663.18	1,354.41	0.37	-0.07	0.36
8,454.00	89.66	181.57	6,951.15	-1,448.40	661.60	1,448.40	1.44	-0.65	1.29
8,549.00	91.11	182.87	6,950.51	-1,543.32	657.92	1,543.32	2.05	1.53	1.37
8,643.00	89.46	182.16	6,950.04	-1,637.22	653.79	1,637.22	1.91	-1.76	-0.76
8,737.00	88.89	182.02	6,951.39	-1,731.15	650.37	1,731.15	0.62	-0.61	-0.15
8,832.00	87.92	182.22	6,954.04	-1,826.05	646.85	1,826.05	1.04	-1.02	0.21
8,927.00	89.09	183.64	6,956.52	-1,920.89	642.00	1,920.89	1.94	1.23	1.49
9,021.00	89.77	181.11	6,957.45	-2,014.79	638.11	2,014.79	2.79	0.72	-2.69
9,116.00	88.86	181.63	6,958.59	-2,109.76	635.83	2,109.76	1.10	-0.96	0.55
9,211.00	89.19	180.79	6,960.20	-2,204.72	633.83	2,204.72	0.95	0.35	-0.88
9,305.00	89.53	180.80	6,961.25	-2,298.71	632.52	2,298.71	0.36	0.36	0.01
9,400.00	90.03	180.60	6,961.62	-2,393.70	631.36	2,393.70	0.57	0.53	-0.21
9,495.00	88.86	181.10	6,962.54	-2,488.68	629.95	2,488.68	1.34	-1.23	0.53
9,590.00	88.79	179.73	6,964.49	-2,583.66	629.27	2,583.66	1.44	-0.07	-1.44
9,685.00	90.03	179.85	6,965.47	-2,678.65	629.61	2,678.65	1.31	1.31	0.13
9,779.00	90.13	179.54	6,965.33	-2,772.65	630.12	2,772.65	0.35	0.11	-0.33
9,874.00	90.57	178.54	6,964.75	-2,867.63	631.71	2,867.63	1.15	0.46	-1.05
9,969.00	89.46	178.52	6,964.73	-2,962.60	634.14	2,962.60	1.17	-1.17	-0.02
10,064.00	88.22	178.55	6,966.65	-3,057.55	636.57	3,057.55	1.31	-1.31	0.03
10,158.00	89.16	179.31	6,968.80	-3,151.50	638.33	3,151.50	1.29	1.00	0.81
10,253.00	89.90	179.98	6,969.58	-3,246.50	638.92	3,246.50	1.05	0.78	0.71

Company:	EnCana Oil & Gas (USA)	Local Co-ordinate Reference:	Well Ruhl 1E-32H-B264
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Site:	S32-T2N-R64W (Newnam/Ruhl)	MD Reference:	KB @ 4955.00ft
Well:	Ruhl 1E-32H-B264	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	Hz	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)	
10,348.00	90.27	179.89	6,969.44	-3,341.50	639.02	3,341.50	0.40	0.39	-0.09	
10,442.00	89.03	179.49	6,970.01	-3,435.49	639.53	3,435.49	1.39	-1.32	-0.43	
10,537.00	89.63	180.21	6,971.13	-3,530.48	639.78	3,530.48	0.99	0.63	0.76	
10,632.00	90.91	179.78	6,970.68	-3,625.48	639.79	3,625.48	1.42	1.35	-0.45	
10,727.00	90.64	179.58	6,969.39	-3,720.47	640.32	3,720.47	0.35	-0.28	-0.21	
10,822.00	91.21	179.16	6,967.86	-3,815.45	641.36	3,815.45	0.75	0.60	-0.44	
10,917.00	89.70	179.10	6,967.10	-3,910.43	642.81	3,910.43	1.59	-1.59	-0.06	
11,012.00	88.59	178.64	6,968.52	-4,005.40	644.68	4,005.40	1.26	-1.17	-0.48	
11,106.00	87.72	178.11	6,971.55	-4,099.32	647.34	4,099.32	1.08	-0.93	-0.56	
11,201.00	88.26	178.75	6,974.88	-4,194.22	649.94	4,194.22	0.88	0.57	0.67	
11,295.00	89.36	178.18	6,976.83	-4,288.16	652.46	4,288.16	1.32	1.17	-0.61	
11,390.00	89.16	175.65	6,978.06	-4,383.01	657.57	4,383.01	2.67	-0.21	-2.66	
11,466.00	90.44	177.15	6,978.33	-4,458.86	662.35	4,458.86	2.59	1.68	1.97	
Last SDI MWD Survey										
11,530.00	90.44	177.15	6,977.83	-4,522.78	665.53	4,522.78	0.00	0.00	0.00	
Projection to TD										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
245.00	244.86	5.17	5.08	First SDI MWD Survey	
1,152.00	1,140.46	54.41	131.69	Last SDI MWD Surface Survey	
1,277.00	1,263.35	64.15	152.42	First SDI MWD Inter. Survey	
7,281.00	6,927.59	-276.28	641.80	Last SDI MWD Inter. Survey	
7,424.00	6,929.19	-419.24	643.56	First SDI MWD Lateral Survey	
11,466.00	6,978.33	-4,458.86	662.35	Last SDI MWD Survey	
11,530.00	6,977.83	-4,522.78	665.53	Projection to TD	

Checked By: _____ Approved By: _____ Date: _____

JOB NO.:	232827	Report Time:	2400	1 of 2
Company:	EnCana Oil & Gas (USA) Inc.	API JOB #	05-123-40277	
LOCATION:	Ruhl Pad	WORK ORDER#	232827	
RIG NAME:	H&P 278	FIELD:	Wattenburg	
STATE:	Colorado	Township:	2N	
COUNTY:	Weld	Range/Section	64W	32
WELL NAME:	Ruhl 1E-32H-B264	Company Man	Randy / Joe	
Lead Directional :	Paul Turner (10972)	2nd Dir Hand :	Ben Ezeaku (10012)	

From Friday, December 12, 2014 at 0000 to Friday, December 12, 2014 at 2400

DAILY TOTALS		ASSEMBLY TOTALS									
Start Depth	149.00	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	1226.00	1	836	308.00	1.25	769.00	2.33	1.58	5.17	1,077.00	208.45
Below Rot Hrs.	7.50										
Total Drilled:	1077.00	Drilling Parameters		Mud Record		Bit Record		Current BHA # 1			
Avg. Total ROP:	300.56										
Slide Footage:	308.00	WOB:	26	Weight:	0	Bit No:	1	DP 606S SDI 8" Drill Motor 6 1/2" Steel X-Over NM Pony Collar MWD NMDC 6 1/2" Orient Sub 6 1/2" Gap Sub NM Pony Collar NMDC 6 1/2" Steel X-Over			
Slide Hours	1.25	Rot Wt:	0	Visc:	0	Model	DP 606S				
Avg. Slide ROP:	246.40	Pick UP:	0	Chlorides:	0	SN.:	7032254				
Rotate Footage:	769.00	Slack Off:	0	YP:	0	MFG.	BAKER				
Rotary Hours	2.33	SPP:	1460	PV:	0	Type	PDC				
Avg. Rot ROP:	329.57	Flow:	0 - 652	PH:	0	IADC					
Circ Hours	1.58	SPM:	170	GAS:	0	JETS	9-12				
Ream Hours	0.00	Rot. RPM	0 - 50	SAND:	0	TFA:	0.994				
Rotary Hrs%:	65.12	Mot RPM:	0 - 50	WL:	0	Hole ID:	12.25				
Slide Hrs%:	34.88	Incl. In:	0	SOLID:	0	Bit Hrs:	3.58				
Rotary Ftg%:	71.40	Azm. In:	0	BHT°:	0	Bit Ftg:	1077.00				
Slide Ftg%:	28.60	Incl. Out:	10.93	Flow T°:	0	PUMPS					
		Azm. Out:	66.12	Oil %:	0						
COST BREAKDOWN											

GENERAL COMMENT

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
00:00	16:30	16.50	0	0	0	.00	Standby	
16:30	16:45	0.25	0	0	0	.00	Other	JSA with Rig Crew
16:45	17:15	0.50	0	125	125	250.00	Change BHA	Change BHA
17:15	17:45	0.50	125	149	24	48.00	TIH	TIH
17:45	17:50	0.08	149	159	10	120.00	Drilling	TIH
17:50	18:00	0.17	159	182	23	138.00	Sliding	TIH
18:00	18:15	0.25	182	217	35	140.00	Drilling	Drilling - (WOB:10;GPM :422;RPM:50)
18:15	18:20	0.08	217	217	0	.00	Connection	Connection / Checkshot @154
18:20	18:30	0.17	217	247	30	180.00	Sliding	Sliding - (WOB:12;GPM :422;TFO:55M))
18:30	18:45	0.25	247	308	61	244.00	Drilling	Drilling - (WOB:10;GPM :422;RPM:50)
18:45	18:55	0.17	308	308	0	.00	Survey & Conn.	Survey & Conn. @245' Inc 3.39° Azm 44.52°
18:55	19:00	0.08	308	328	20	240.00	Sliding	Sliding - (WOB:12;GPM :422;TFO:60M))
19:00	19:15	0.25	328	399	71	284.00	Drilling	Drilling - (WOB:10;GPM :422;RPM:50)
19:15	19:20	0.08	399	399	0	.00	Survey & Conn.	Survey & Conn. @336' Inc 4.71° Azm 48.8°

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
19:20	19:25	0.08	399	439	40	480.00	Sliding	Sliding - (WOB:12;GPM :422;TFO:80M))
19:25	19:35	0.17	439	490	51	306.00	Drilling	Drilling - (WOB:14;GPM :422;RPM:50)
19:35	19:40	0.08	490	490	0	.00	Survey & Conn.	Survey & Conn.@427' Inc 5.96° Azm 58.3°
19:40	19:45	0.08	490	520	30	360.00	Sliding	Sliding - (WOB:12;GPM :422;TFO:15R))
19:45	19:55	0.17	520	582	62	372.00	Drilling	Drilling - (WOB:14;GPM :560;RPM:50)
19:55	20:00	0.08	582	582	0	.00	Survey & Conn.	Survey & Conn.@519' Inc 7.27° Azm 65.92°
20:00	20:05	0.08	582	617	35	420.00	Sliding	Sliding - (WOB:12;GPM :422;TFO:30R))
20:05	20:15	0.17	617	671	54	324.00	Drilling	Drilling - (WOB:19;GPM :560;RPM:50)
20:15	20:20	0.08	671	671	0	.00	Survey & Conn.	Survey & Conn.@608' Inc 7.8° Azm 73.68°
20:20	20:30	0.17	671	716	45	270.00	Sliding	Sliding - (WOB:12;GPM :422;TFO:5L))
20:30	20:35	0.08	716	761	45	540.00	Drilling	Drilling - (WOB:22;GPM :560;RPM:50)
20:35	20:40	0.08	761	761	0	.00	Survey & Conn.	Survey & Conn.@698' Inc 9.22° Azm 77.55°
20:40	20:45	0.08	761	781	20	240.00	Sliding	Sliding - (WOB:12;GPM :422;TFO:15L))
20:45	20:50	0.08	781	852	71	852.00	Drilling	Drilling - (WOB:22;GPM :560;RPM:50)
20:50	20:55	0.08	852	852	0	.00	Survey & Conn.	Survey & Conn.@789' Inc 10.92° Azm 78.7°
20:55	21:00	0.08	852	872	20	240.00	Sliding	Sliding - (WOB:16;GPM :422;TFO:45L))
21:00	21:15	0.25	872	942	70	280.00	Drilling	Drilling - (WOB:24;GPM :652;RPM:50)
21:15	21:20	0.08	942	942	0	.00	Survey & Conn.	Survey & Conn.@879' Inc 11.48° Azm 74.01°
21:20	21:25	0.08	942	957	15	180.00	Sliding	Sliding - (WOB:16;GPM :422;TFO:75L))
21:25	21:35	0.17	957	1033	76	456.00	Drilling	Drilling - (WOB:26;GPM :652;RPM:50)
21:35	21:40	0.08	1033	1033	0	.00	Survey & Conn.	Survey & Conn.@970' Inc 11.3° Azm 68.16°
21:40	21:45	0.08	1033	1048	15	180.00	Sliding	Sliding - (WOB:16;GPM :422;TFO:0))
21:45	21:55	0.17	1048	1123	75	450.00	Drilling	Drilling - (WOB:26;GPM :652;RPM:50)
21:55	22:00	0.08	1123	1123	0	.00	Survey & Conn.	Survey & Conn.@1060' Inc 11.37° Azm 64.41°
22:00	22:05	0.08	1123	1138	15	180.00	Sliding	Sliding - (WOB:18;GPM :422;TFO:45R))
22:05	22:15	0.17	1138	1215	77	462.00	Drilling	Drilling - (WOB:26;GPM :652;RPM:50)
22:15	22:20	0.08	1215	1215	0	.00	Survey & Conn.	Survey & Conn.@1152' Inc 10.93° Azm 66.12°
22:20	22:25	0.08	1215	1226	11	132.00	Drilling	Drilling - (WOB:26;GPM :652;RPM:50)
22:25	24:00	1.58	1226	1226	0	.00	Circulating	Circulating / Wiper Trip

JOB NO.: 232827
Company: EnCana Oil & Gas (USA) Inc.
LOCATION: Ruhl Pad
RIG NAME: H&P 278
STATE: Colorado
COUNTY: Weld
WELL NAME: Ruhl 1E-32H-B264
Lead Directional : Paul Turner (10972)

Report Time: 2400 **2 of 2**
API JOB # 05-123-40277
WORK ORDER# 232827
FIELD: Wattenburg
Township: 2N
Range/Section 64W 32
Company Man Randy / Joe
2nd Dir Hand : Ben Ezeaku (10012)

From Saturday, December 13, 2014 at 0000 to Saturday, December 13, 2014 at 2400

DAILY TOTALS		ASSEMBLY TOTALS											
Start Depth	149.00	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	1226.00	1	836	308.00	1.25	769.00	2.33	1.58	5.17	1,077.00	208.45		
Below Rot Hrs.	7.50												
Total Drilled:	1077.00	Drilling Parameters		Mud Record		Bit Record		Current BHA # 1					
Avg. Total ROP:	300.56	WOB: 26		Weight: 0		Bit No: 1		DP 606S SDI 8" Drill Motor 6 1/2" Steel X-Over NM Pony Collar MWD NMDC 6 1/2" Orient Sub 6 1/2" Gap Sub NM Pony Collar NMDC 6 1/2" Steel X-Over					
Slide Footage:	308.00	Rot Wt: 0		Visc: 0		Model DP 606S							
Slide Hours	1.25	Pick UP: 0		Chlorides: 0		SN.: 7032254							
Avg. Slide ROP:	246.40	Slack Off: 0		YP: 0		MFG. BAKER							
Rotate Footage:	769.00	SPP: 1460		PV: 0		Type PDC							
Rotary Hours	2.33	Flow: 652 - 652		PH: 0		IADC							
Avg. Rot ROP:	329.57	SPM: 170		GAS: 0		JETS 9-12							
Circ Hours	1.58	Rot. RPM -		SAND: 0		TFA: 0.994							
Ream Hours	0.00	Mot RPM: -		WL: 0		Hole ID: 12.25							
Rotary Hrs%:	65.12	Incl. In: 10.93		SOLID: 0		Bit Hrs: 3.58							
Slide Hrs%:	34.88	Azm. In: 66.12		BHT°: 0		Bit Ftg: 1077.00							
Rotary Ftg%:	71.40	Incl. Out: 0		Flow T°: 0		PUMPS							
Slide Ftg%:	28.60	Azm. Out: 0		Oil %: 0									
Casing		COST BREAKDOWN					Liner		0	0			
Size	Lb/Ft	MD						Stroke		0	0		
							Effic.		95.00%	95.00%			
							Gal/Stk		0.00	0.00			
							BBL/Stk		0.000	0.000			



JOB NO.: 238972
COMPANY: EnCana Oil & Gas USA
LOCATION: Ruhl
RIG NAME: HP 278
STATE: Colorado
COUNTY: Weld
WELL NAME: Ruhl 1E-32H-B264
Lead Directional : Paul Turner (10972)

Report Time: 2400 1 of 9
API JOB # 05-123-40277-00
WORK ORDER# 238972
FIELD: Wattenburg
Township: 2N
Range/Section 64W 32
Company Man Joe / Quiz
2nd Dir Hand : Ben Ezeaku (10012)

From Friday, December 26, 2014 at 0000 to Friday, December 26, 2014 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		WOB:	0	Weight:	0	Bit No:					
Slide Hours	0.00		Rot Wt:	0	Visc:	0	Model					
Avg. Slide ROP:	NA		Pick UP:	0	Chlorides:	0	SN.:					
Rotate Footage:	0.00		Slack Off:	0	YP:	0	MFG.					
Rotary Hours	0.00		SPP:	0	PV:	0	Type					
Avg. Rot ROP:	NA		Flow:	0 - 0	PH:	0	IADC					
Circ Hours	0.00		SPM:	0	GAS:	0	JETS					
Ream Hours	0.00		Rot. RPM	-	SAND:	0	TFA:					
Rotary Hrs%:	NA		Mot RPM:	-	WL:	0	Hole ID:N/A					
Slide Hrs%:	NA		Incl. In:	0	SOLID:	0	Bit Hrs:					
Rotary Ftg%:	NA		Azm. In:	0	BHT°:	0	Bit Ftg:					
Slide Ftg%:	NA		Incl. Out:	0	Flow T°:	0	PUMPS					
cASING			Azm. Out:	0	Oil %:	0	Liner	0	0			
Size	Lb/Ft	MD	COST BREAKDOWN				Stroke			0	0	
							Effic.	95.00%	95.00%			
							Gal/Stk	0.00	0.00			
							BBL/Stk	0.000	0.000			

GENERAL COMMENT

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
00:00	24:00	24.00	0	0	0	.00	Standby	Standby



JOB NO.: 238972
COMPANY: EnCana Oil & Gas USA
LOCATION: Ruhl
RIG NAME: HP 278
STATE: Colorado
COUNTY: Weld
WELL NAME: Ruhl 1E-32H-B264
Lead Directional : Paul Turner (10972)

Report Time: 2400 2 of 9
API JOB # 05-123-40277-00
WORK ORDER# 238972
FIELD: Wattenburg
Township: 2N
Range/Section 64W 32
Company Man Joe / Quiz
2nd Dir Hand : Ben Ezeaku (10012)

From Saturday, December 27, 2014 at 0000 to Saturday, December 27, 2014 at 2400

DAILY TOTALS			ASSEMBLY TOTALS									
Start Depth	1226.00		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	4416.00		1	65097	837.00	11.08	5,196.00	19.42	6.50	37.00	6,033.00	164.54
Below Rot Hrs.	18.50											
Total Drilled:	3190.00											
Avg. Total ROP:	260.41											
Slide Footage:	152.00											
Slide Hours	1.67											
Avg. Slide ROP:	91.20											
Rotate Footage:	3038.00											
Rotary Hours	10.58											
Avg. Rot ROP:	287.06											
Circ Hours	0.42											
Ream Hours	0.00											
Rotary Hrs%:	86.39											
Slide Hrs%:	13.61											
Rotary Ftg%:	95.24											
Slide Ftg%:	4.76											
cASING												
Size	Lb/Ft	MD										

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
12:55	13:20	0.42	1709	1885	176	422.40	Drilling	Drilling - (WOB:20;GPM :580;RPM:60)
13:20	13:25	0.08	1885	1885	0	.00	Survey & Conn.	Survey & Conn.@1822' Inc 10.9° Azm 64.05°
13:25	13:30	0.08	1885	1889	4	48.00	Sliding	Sliding - (WOB:0;GPM :0;TFO:160R)
13:30	13:55	0.42	1889	2066	177	424.80	Drilling	Drilling - (WOB:20;GPM :580;RPM:60)
13:55	14:00	0.08	2066	2066	0	.00	Survey & Conn.	Survey & Conn.@2003' Inc 9.85° Azm 65.01°
14:00	14:05	0.08	2066	2071	5	60.00	Sliding	Sliding - (WOB:0;GPM :0;TFO:90R))
14:05	14:40	0.58	2071	2246	175	300.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
14:40	14:45	0.08	2246	2246	0	.00	Survey & Conn.	Survey & Conn.@2183' Inc 8.05° Azm 72.1°
14:45	14:50	0.08	2246	2254	8	96.00	Sliding	Sliding - (WOB:0;GPM :0;TFO:15L))
14:50	15:15	0.42	2254	2429	175	420.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
15:15	15:20	0.08	2429	2429	0	.00	Survey & Conn.	Survey & Conn.@2366' Inc 9.04° Azm 67.15°
15:20	15:25	0.08	2429	2437	8	96.00	Sliding	Sliding - (WOB:0;GPM :0;TFO:0))
15:25	15:55	0.50	2437	2612	175	350.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
15:55	16:00	0.08	2612	2612	0	.00	Survey & Conn.	Survey & Conn.@2549' Inc 9.43° Azm 68.45°
16:00	16:20	0.33	2612	2711	99	297.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
16:20	16:25	0.08	2711	2719	8	96.00	Sliding	Sliding - (WOB:0;GPM :0;TFO:0))
16:25	16:30	0.08	2719	2794	75	900.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
16:30	16:35	0.08	2794	2794	0	.00	Survey & Conn.	Survey & Conn.@2731' Inc 10.13° Azm 69.63°
16:35	16:40	0.08	2794	2800	6	72.00	Sliding	Sliding - (WOB:0;GPM :0;TFO:15L))
16:40	16:50	0.17	2800	2885	85	510.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
16:50	17:10	0.33	2885	2885	0	.00	Service-Inhol	Rig Service-Inhole
17:10	17:15	0.08	2885	2885	0	.00	Other	Connection
17:15	17:20	0.08	2885	2890	5	60.00	Sliding	Sliding - (WOB:0;GPM :0;TFO:50L))
17:20	17:30	0.17	2890	2975	85	510.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
17:30	17:35	0.08	2975	2975	0	.00	Survey & Conn.	Survey & Conn.@2912' Inc 10.45° Azm 70.75°
17:35	17:55	0.33	2975	3077	102	306.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
17:55	18:00	0.08	3077	3083	6	72.00	Sliding	Sliding - (WOB:0;GPM :0;TFO:50L))
18:00	18:10	0.17	3083	3155	72	432.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
18:10	18:20	0.17	3155	3155	0	.00	Survey & Conn.	Survey & Conn.@3092' Inc 9.96° Azm 66.97°
18:20	18:45	0.42	3155	3248	93	223.20	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
18:45	18:50	0.08	3248	3256	8	96.00	Sliding	Sliding - (WOB:0;GPM :580;TFO:30L))
18:50	19:00	0.17	3256	3338	82	492.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
19:00	19:05	0.08	3338	3338	0	.00	Survey & Conn.	Survey & Conn.@3275' Inc 8.65° Azm 63.99°
19:05	19:10	0.08	3338	3346	8	96.00	Sliding	Sliding - (WOB:0;GPM :580;TFO:30L))
19:10	19:35	0.42	3346	3429	83	199.20	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
19:35	19:40	0.08	3429	3439	10	120.00	Sliding	Sliding - (WOB:0;GPM :580;TFO:30L))
19:40	20:00	0.33	3439	3520	81	243.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
20:00	20:10	0.17	3520	3520	0	.00	Survey & Conn.	Survey & Conn.@3457' Inc 9.29° Azm 72.03°
20:10	20:15	0.08	3520	3530	10	120.00	Sliding	Sliding - (WOB:0;GPM :580;TFO:45L))
20:15	20:35	0.33	3530	3610	80	240.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
20:35	20:40	0.08	3610	3618	8	96.00	Sliding	Sliding - (WOB:0;GPM :580;TFO:45L)
20:40	21:05	0.42	3618	3700	82	196.80	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
21:05	21:15	0.17	3700	3700	0	.00	Survey & Conn.	Survey & Conn.@3637' Inc 10.37° Azm 58.78°
21:15	21:30	0.25	3700	3792	92	368.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
21:30	21:35	0.08	3792	3800	8	96.00	Sliding	Sliding - (WOB:0;GPM :580;TFO:45L)
21:35	21:45	0.17	3800	3887	87	522.00	Drilling	Drilling - (WOB:30;GPM :580;RPM:60)
21:45	21:50	0.08	3887	3887	0	.00	Survey & Conn.	Survey & Conn.@3824' Inc 8.82° Azm 60.94°
21:50	21:55	0.08	3887	3897	10	120.00	Sliding	Sliding - (WOB:0;GPM :595;TFO:15R))

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
21:55	22:15	0.33	3897	3982	85	255.00	Drilling	Drilling - (WOB:30;GPM :595;RPM:60)
22:15	22:20	0.08	3982	3982	0	.00	MWD Survey	MWD Survey@4013' Inc 9.22° Azm 67.31°
22:20	22:25	0.08	3982	3990	8	96.00	Sliding	Sliding - (WOB:0;GPM :595;TFO:60R))
22:25	22:35	0.17	3990	4076	86	516.00	Drilling	Drilling - (WOB:30;GPM :595;RPM:60)
22:35	22:45	0.17	4076	4076	0	.00	Survey & Conn.	Survey & Conn.@4013' Inc 9.22° Azm 67.31°
22:45	23:00	0.25	4076	4171	95	380.00	Drilling	Drilling - (WOB:30;GPM :595;RPM:60)
23:00	23:05	0.08	4171	4179	8	96.00	Sliding	Sliding - (WOB:0;GPM :595;TFO:75R))
23:05	23:20	0.25	4179	4266	87	348.00	Drilling	Drilling - (WOB:30;GPM :595;RPM:60)
23:20	23:30	0.17	4266	4266	0	.00	Survey & Conn.	Survey & Conn.@4203' Inc 7.12° Azm 71.25°
23:30	23:50	0.33	4266	4360	94	282.00	Drilling	Drilling - (WOB:30;GPM :595;RPM:60)
23:50	23:55	0.08	4360	4367	7	84.00	Sliding	Sliding - (WOB:0;GPM :595;TFO:160R))
23:55	24:00	0.08	4367	4416	49	588.00	Drilling	Drilling - (WOB:30;GPM :595;RPM:60)



JOB NO.: 238972
COMPANY: EnCana Oil & Gas USA
LOCATION: Ruhl
RIG NAME: HP 278
STATE: Colorado
COUNTY: Weld
WELL NAME: Ruhl 1E-32H-B264
Lead Directional : Paul Turner (10972)

Report Time: 2400 **3 of 9**
API JOB # 05-123-40277-00
WORK ORDER# 238972
FIELD: Wattenburg
Township: 2N
Range/Section 64W 32
Company Man Joe / Quiz
2nd Dir Hand : Ben Ezeaku (10012)

From Sunday, December 28, 2014 at 0000 to Sunday, December 28, 2014 at 2400

DAILY TOTALS			ASSEMBLY TOTALS									
Start Depth	4416.00		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	7252.00		1	65097	837.00	11.08	5,196.00	19.42	6.50	37.00	6,033.00	164.54
Below Rot Hrs.	24.00											
Total Drilled:	2751.00		Drilling Parameters		Mud Record		Bit Record		Current BHA # 1			
Avg. Total ROP:	148.70											
Slide Footage:	647.00		WOB:	35	Weight:	0	Bit No:	2	Smith SDi611 6.75 SDI Motor 6 1/4" NMPC 6 1/2" NMDC Flex 6 1/2" Pulser Sub 6 1/2" NMDC Flex 6 1/2" NMPC 6 1/2" Steel X-Over 10 Stnds. DP (30 Jnts.) 30 Stnds. (90 Jnts.) HWDP			
Slide Hours	8.58		Rot Wt:	120	Visc:	0	Model	Smith SDi611				
Avg. Slide ROP:	75.38		Pick UP:	145	Chlorides:	0	SN.:	JK1910				
Rotate Footage:	2104.00		Slack Off:	115	YP:	0	MFG.	REED				
Rotary Hours	9.92		SPP:	3800	PV:	0	Type	PDC				
Avg. Rot ROP:	212.17		Flow:	490 - 595	PH:	0	IADC					
Circ Hours	0.92		SPM:	153	GAS:	0	JETS	3-13,4-14				
Ream Hours	0.00		Rot. RPM	30 - 60	SAND:	0	TFA:	0.99				
Rotary Hrs%:	53.60		Mot RPM:	30 - 60	WL:	0	Hole ID:	8.75				
Slide Hrs%:	46.40		Incl. In:	6.8	SOLID:	0	Bit Hrs:	30.50				
Rotary Ftg%:	76.48		Azm. In:	66.79	BHT°:	0	Bit Ftg:	6033.00				
Slide Ftg%:	23.52		Incl. Out:	80.84	Flow T°:	0	PUMPS					
cASING			Azm. Out:	181.1	Oil %:	0						
Size	Lb/Ft	MD	COST BREAKDOWN				Liner		0	0	Effic. 95.00% 95.00% Gal/Stk 0.00 0.00 BBL/Stk 0.000 0.000	
							Stroke		0	0		

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
03:00	03:05	0.08	5024	5024	0	.00	Survey & Conn.	Survey & Conn.@4961' Inc 0.12° Azm 296.77°
03:05	03:25	0.33	5024	5119	95	285.00	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
03:25	03:30	0.08	5119	5129	10	120.00	Sliding	Sliding - (WOB:0;GPM :595;TFO:180M))
03:30	04:15	0.75	5129	5214	85	113.33	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
04:15	04:25	0.17	5214	5214	0	.00	Survey & Conn.	Survey & Conn.@5151' Inc 0.89° Azm 265.82°
04:25	04:35	0.17	5214	5214	0	.00	Rig repair	Rig repair
04:35	04:45	0.17	5214	5224	10	60.00	Sliding	Sliding - (WOB:0;GPM :595;TFO:145M))
04:45	05:00	0.25	5224	5309	85	340.00	MWD Survey	MWD Survey@5341' Inc 1.13° Azm 192.28°
05:00	05:30	0.50	5309	5404	95	190.00	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
05:30	05:35	0.08	5404	5404	0	.00	Survey & Conn.	Survey & Conn.@5341' Inc 1.13° Azm 192.28°
05:35	06:15	0.67	5404	5593	189	283.50	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
06:15	06:20	0.08	5593	5593	0	.00	Survey & Conn.	Survey & Conn.@5530' Inc 0.27° Azm 273.95°
06:20	07:00	0.67	5593	5783	190	285.00	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
07:00	07:05	0.08	5783	5783	0	.00	Survey & Conn.	Survey & Conn.@5720' Inc 1.02° Azm 12.97°
07:05	07:15	0.17	5783	5793	10	60.00	Sliding	Sliding - (WOB:0;GPM :595;TFO:170M))
07:15	07:50	0.58	5793	5973	180	308.57	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
07:50	07:55	0.08	5973	5973	0	.00	Survey & Conn.	Survey & Conn.@5910' Inc 0.45° Azm 244.86°
07:55	08:05	0.17	5973	5985	12	72.00	Sliding	Sliding - (WOB:0;GPM :595;TFO:150M))
08:05	08:50	0.75	5985	6162	177	236.00	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
08:50	08:55	0.08	6162	6162	0	.00	Survey & Conn.	Survey & Conn.@6099' Inc 1.04° Azm 134.76°
08:55	09:35	0.67	6162	6352	190	285.00	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
09:35	09:40	0.08	6352	6352	0	.00	Survey & Conn.	Survey & Conn.@6289' Inc 0.51° Azm 110.14°
09:40	09:50	0.17	6352	6396	44	264.00	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
09:50	10:35	0.75	6396	6396	0	.00	Work Pipe	Work Pipe
10:35	11:10	0.58	6396	6447	51	87.43	Sliding	Sliding - (WOB:0;GPM :490;TFO:150M))
11:10	11:20	0.17	6447	6447	0	.00	Survey & Conn.	Survey & Conn.@6384' Inc 0.67° Azm 52.27°
11:20	12:05	0.75	6447	6487	40	53.33	Sliding	Sliding - (WOB:0;GPM :490;TFO:180M))
12:05	12:10	0.08	6487	6494	7	84.00	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
12:10	12:20	0.17	6494	6494	0	.00	Survey & Conn.	Survey & Conn.@6431' Inc 5.7° Azm 180.75°
12:20	12:40	0.33	6494	6541	47	141.00	Sliding	Sliding - (WOB:0;GPM :490;TFO:180M))
12:40	12:45	0.08	6541	6541	0	.00	Survey & Conn.	Survey & Conn.@6478' Inc 12.73° Azm 182.09°
12:45	13:05	0.33	6541	6571	30	90.00	Sliding	Sliding - (WOB:0;GPM :490;TFO:0))
13:05	13:15	0.17	6571	6588	17	102.00	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
13:15	13:20	0.08	6588	6588	0	.00	Survey & Conn.	Survey & Conn.@6525' Inc 13.75° Azm 183.17°
13:20	14:00	0.67	6588	6588	0	.00	Circulating	Circulating
14:00	14:30	0.50	6588	6618	30	60.00	Sliding	Sliding - (WOB:0;GPM :490;TFO:0))
14:30	14:40	0.17	6618	6618	0	.00	Survey & Conn.	Survey & Conn.@6573' Inc 17.89° Azm 183.07°
14:40	15:15	0.58	6618	6680	62	106.29	Sliding	Sliding - (WOB:0;GPM :490;TFO:15L))
15:15	15:20	0.08	6680	6683	3	36.00	Drilling	Drilling - (WOB:32;GPM :595;RPM:60)
15:20	15:25	0.08	6683	6683	0	.00	Survey & Conn.	Survey & Conn.@6620' Inc 22.64° Azm 180.55°
15:25	15:30	0.08	6683	6711	28	336.00	Sliding	Sliding - (WOB:35;GPM :490;TFO:0))
15:30	15:40	0.17	6711	6731	20	120.00	Drilling	Drilling - (WOB:32;GPM :490;RPM:60)
15:40	15:50	0.17	6731	6731	0	.00	Survey & Conn.	Survey & Conn.@6668' Inc 28.77° Azm 180.07°
15:50	16:00	0.17	6731	6746	15	90.00	Sliding	Sliding - (WOB:35;GPM :490;TFO:15L))
16:00	16:20	0.33	6746	6778	32	96.00	Drilling	Drilling - (WOB:32;GPM :490;RPM:60)
16:20	16:40	0.33	6778	6802	24	72.00	Sliding	Sliding - (WOB:35;GPM :490;TFO:15L))
16:40	16:50	0.17	6802	6826	24	144.00	Drilling	Drilling - (WOB:35;GPM :490;RPM:30)
16:50	17:00	0.17	6826	6826	0	.00	Survey & Conn.	Survey & Conn.@6763' Inc 35.64° Azm 181.28°

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
17:00	17:15	0.25	6826	6854	28	112.00	Sliding	Sliding - (WOB:35;GPM :490;TFO:30L))
17:15	17:30	0.25	6854	6873	19	76.00	Drilling	Drilling - (WOB:35;GPM :490;RPM:30)
17:30	17:40	0.17	6873	6873	0	.00	Survey & Conn.	Survey & Conn.@6810' Inc 39.97° Azm 181.97°
17:40	17:45	0.08	6873	6885	12	144.00	Sliding	Sliding - (WOB:35;GPM :490;TFO:30L))
17:45	17:55	0.17	6885	6921	36	216.00	Drilling	Drilling - (WOB:35;GPM :490;RPM:30)
17:55	18:05	0.17	6921	6921	0	.00	Survey & Conn.	Survey & Conn.@6858' Inc 44.74° Azm 180.87°
18:05	18:35	0.50	6921	6956	35	70.00	Sliding	Sliding - (WOB:40;GPM :490;TFO:30L))
18:35	18:50	0.25	6956	6956	0	.00	Survey & Conn.	Survey & Conn.@6905' Inc 46.47° Azm 179.16°
18:50	19:05	0.25	6956	6993	37	148.00	Sliding	Sliding - (WOB:40;GPM :490;TFO:30L)
19:05	19:30	0.42	6993	7062	69	165.60	Drilling	Drilling - (WOB:35;GPM :490;RPM:30)
19:30	19:45	0.25	7062	7062	0	.00	Survey & Conn.	Survey & Conn.@6999' Inc 58.53° Azm 179.68°
19:45	20:25	0.67	7062	7086	24	36.00	Sliding	Sliding - (WOB:40;GPM :490;TFO:30L))
20:25	20:30	0.08	7086	7110	24	288.00	Drilling	Drilling - (WOB:35;GPM :490;RPM:30)
20:30	20:45	0.25	7110	7110	0	.00	Survey & Conn.	Survey & Conn.@7047' Inc 61.94° Azm 181.73°
20:45	21:20	0.58	7110	7133	23	39.43	Sliding	Sliding - (WOB:40;GPM :490;TFO:30L))
21:20	21:40	0.33	7133	7157	24	72.00	Drilling	Drilling - (WOB:35;GPM :490;RPM:30)
21:40	21:50	0.17	7157	7157	0	.00	Survey & Conn.	Survey & Conn.@7094' Inc 66.03° Azm 182.1°
21:50	22:30	0.67	7157	7187	30	45.00	Sliding	Sliding - (WOB:45;GPM :490;TFO:30L))
22:30	22:40	0.17	7187	7205	18	108.00	Drilling	Drilling - (WOB:35;GPM :490;RPM:30)
22:40	22:50	0.17	7205	7205	0	.00	Survey & Conn.	Survey & Conn.@7142' Inc 70.84° Azm 181.1°
22:50	23:45	0.92	7205	7237	32	34.91	Sliding	Sliding - (WOB:45;GPM :490;TFO:30L))
23:45	24:00	0.25	7237	7252	15	60.00	Drilling	Drilling - (WOB:35;GPM :490;RPM:30)



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JOB NO.: 238972
COMPANY: EnCana Oil & Gas USA
LOCATION: Ruhl
RIG NAME: HP 278
STATE: Colorado
COUNTY: Weld
WELL NAME: Ruhl 1E-32H-B264
Lead Directional : Steven Schlamp (10800)

Report Time: 2400 5 of 9
API JOB # 05-123-40277-00
WORK ORDER# 238972
FIELD: Wattenburg
Township: 2N
Range/Section 64W 32
Company Man Joe / Quiz
2nd Dir Hand : Ben Ezeaku (10012)

From Tuesday, December 30, 2014 at 0000 to Tuesday, December 30, 2014 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	WOB:	35	Weight:	0	Bit No:					
Slide Hours	0.00	Rot Wt:	120	Visc:	0	Model					
Avg. Slide ROP:	NA	Pick UP:	145	Chlorides:	0	SN.:					
Rotate Footage:	0.00	Slack Off:	115	YP:	0	MFG.					
Rotary Hours	0.00	SPP:	3800	PV:	0	Type					
Avg. Rot ROP:	NA	Flow:	490 - 490	PH:	0	IADC					
Circ Hours	0.00	SPM:	153	GAS:	0	JETS					
Ream Hours	0.00	Rot. RPM	-	SAND:	0	TFA:					
Rotary Hrs%:	NA	Mot RPM:	-	WL:	0	Hole ID: N/A					
Slide Hrs%:	NA	Incl. In:	87.98	SOLID:	0	Bit Hrs:					
Rotary Ftg%:	NA	Azm. In:	179.61	BHT°:	0	Bit Ftg:					
Slide Ftg%:	NA	Incl. Out:	87.98	Flow T°:	0	PUMPS					
cASING			Azm. Out:	179.61	Oil %:	0	Liner	0	0		
Size Lb/Ft MD	COST BREAKDOWN					Effic.	95.00%	95.00%			
						Gal/Stk	0.00	0.00			
						BBL/Stk	0.000	0.000			

GENERAL COMMENT

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
00:00	24:00	24.00	7344	7344	0	.00	Standby	Standby



JOB NO.: 238972
COMPANY: EnCana Oil & Gas USA
LOCATION: Ruhl
RIG NAME: HP 278
STATE: Colorado
COUNTY: Weld
WELL NAME: Ruhl 1E-32H-B264
Lead Directional : Steven Schlamp (10800)

Report Time: 2400 **6 of 9**
API JOB # 05-123-40277-00
WORK ORDER# 238972
FIELD: Wattenburg
Township: 2N
Range/Section 64W 32
Company Man Joe / Quiz
2nd Dir Hand : Ben Ezeaku (10012)

From Wednesday, December 31, 2014 at 0000 to Wednesday, December 31, 2014 at 2400

DAILY TOTALS			ASSEMBLY TOTALS									
Start Depth	7344.00		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	8116.00		2	200	310.00	5.92	3,876.00	18.50	6.83	31.25	4,186.00	133.95
Below Rot Hrs.	23.50											
Total Drilled:	772.00											
Avg. Total ROP:	149.42											
Slide Footage:	59.00		Drilling Parameters		Mud Record		Bit Record		Current BHA # 2			
Slide Hours	0.67											
Avg. Slide ROP:	88.50		WOB:	32	Weight:	0	Bit No:	2	Ulterra U516S Hunting 4.75" Drill Motor 4.75 NM Pony 4 3/4" NMDC 4 3/4" Pulser Sub 4 3/4" NMDC 4.75 NM Pony 5" Steel XO 1 Std. HWDP (3 Jnts.) 18 Stnds. DP (54 Jnts.) NOV SS Agitator 4 Stnds. (12 Jnts.) 4" DP 1 Jnt 4" HWDP 14 Stnds. (42 Jnts.) 4" DP 1 Jnt. 4" HWDP 14 Stnds. DP (42 Jnts.) 30 Stnds. (90 Jnts.) HWDP			
Rotate Footage:	713.00		Rot Wt:	145	Visc:	0	Model	Ulterra U516S				
Rotary Hours	4.50		Pick UP:	176	Chlorides:	0	SN.:	27821				
Avg. Rot ROP:	158.44		Slack Off:	123	YP:	0	MFG.	Ulterra				
Circ Hours	1.67		SPP:	3925	PV:	0	Type	PDC				
Ream Hours	0.00		Flow:	0 - 490	PH:	0	IADC					
Rotary Hrs%:	87.10		SPM:	78	GAS:	0	JETS	5-16				
Slide Hrs%:	12.90		Rot. RPM	30 - 90	SAND:	0	TFA:	0.981				
Rotary Ftg%:	92.36		Mot RPM:	60 - 90	WL:	0	Hole ID:	6.125				
Slide Ftg%:	7.64		Incl. In:	87.98	SOLID:	0	Bit Hrs:	24.42				
cASING			Azm. In:	179.61	BHT°:	0	Bit Ftg:	4186.00				
Size	Lb/Ft	MD	Incl. Out:	89.4	Flow T°:	0	PUMPS					
			Azm. Out:	179.42	Oil %:	0	Liner	0	0			
			COST BREAKDOWN				Stroke	0	0			
							Effic.	95.00%	95.00%			
							Gal/Stk	0.00	0.00			
							BBL/Stk	0.000	0.000			

GENERAL COMMENT

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
00:00	00:30	0.50	7344	7344	0	.00	Standby	Standby
00:30	00:45	0.25	7344	7344	0	.00	Other	JSA with Rig Crew
00:45	03:05	2.33	7344	7344	0	.00	Change BHA	Change BHA
03:05	03:30	0.42	7344	7344	0	.00	TIH	TIH to 357'
03:30	04:20	0.83	7344	7344	0	.00	Other	Installed Rotating Head & Surface Test MWD - Successful
04:20	05:00	0.67	7344	7344	0	.00	Other	Blow down TD
05:00	07:00	2.00	7344	7344	0	.00	TIH	TIH 15 Stands
07:00	10:00	3.00	7344	7344	0	.00	Rig repair	Rig repair (drilling line)
10:00	10:20	0.33	7344	7344	0	.00	Other	Install agitator & test MWD (Good)
10:20	10:35	0.25	7344	7344	0	.00	Other	Blow down TD
10:35	12:00	1.42	7344	7344	0	.00	TIH	TIH
12:00	12:20	0.33	7344	7344	0	.00	Other	Fill pipe & blow down TD
12:20	13:30	1.17	7344	7344	0	.00	TIH	TIH to tage cement / Float @7292 / Shoe @7338
13:30	14:45	1.25	7344	7344	0	.00	Circulating	Drill cement & float equipment

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
14:45	14:50	0.08	7344	7354	10	120.00	Drilling	Drilling - (WOB:22;GPM :490;RPM:30)
14:50	15:15	0.42	7354	7354	0	.00	Circulating	Circulate BU
15:15	17:30	2.25	7354	7354	0	.00	Other	FIT Test
17:30	18:00	0.50	7354	7398	44	88.00	Drilling	Drilling - (WOB:20;GPM :276;RPM:60)
18:00	18:10	0.17	7398	7398	0	.00	Survey & Conn.	Survey & Conn.@7281' Inc 87.98° Azm 179.61°
18:10	19:10	1.00	7398	7488	90	90.00	Drilling	Drilling - (WOB:20;GPM :276;RPM:60)
19:10	19:25	0.25	7488	7488	0	.00	Survey & Conn.	Survey & Conn.@7424' Inc 90.74° Azm 178.98°
19:25	19:35	0.17	7488	7503	15	90.00	Sliding	Sliding - (WOB:30;GPM :276;TFO:180))
19:35	20:00	0.42	7503	7578	75	180.00	Drilling	Drilling - (WOB:27;GPM :299.4;RPM:90)
20:00	20:10	0.17	7578	7578	0	.00	Survey & Conn.	Survey & Conn.@7514' Inc 88.89° Azm 177.47°
20:10	20:40	0.50	7578	7669	91	182.00	Drilling	Drilling - (WOB:27;GPM :299.4;RPM:90)
20:40	20:50	0.17	7669	7669	0	.00	Survey & Conn.	Survey & Conn.@7605' Inc 88.06° Azm 177.15°
20:50	21:15	0.42	7669	7760	91	218.40	Drilling	Drilling - (WOB:27;GPM :299.4;RPM:90)
21:15	21:25	0.17	7760	7760	0	.00	Survey & Conn.	Survey & Conn.@7696' Inc 87.11° Azm 176.46°
21:25	21:35	0.17	7760	7775	15	90.00	Sliding	Sliding - (WOB:30;GPM :299.4;TFO:45R))
21:35	22:10	0.58	7775	7855	80	137.14	Drilling	Drilling - (WOB:30;GPM :299.4;RPM:90)
22:10	22:20	0.17	7855	7855	0	.00	Survey & Conn.	Survey & Conn.@7791' Inc 87.38° Azm 177.86°
22:20	22:30	0.17	7855	7870	15	90.00	Sliding	Sliding - (WOB:35;GPM :299.4;TFO:45R))
22:30	22:55	0.42	7870	7950	80	192.00	Drilling	Drilling - (WOB:27;GPM :299.4;RPM:90)
22:55	23:05	0.17	7950	7950	0	.00	Survey & Conn.	Survey & Conn.@7886' Inc 88.49° Azm 180.02°
23:05	23:30	0.42	7950	8044	94	225.60	Drilling	Drilling - (WOB:32;GPM :299.4;RPM:90)
23:30	23:40	0.17	8044	8044	0	.00	Survey & Conn.	Survey & Conn.@7980' Inc 87.75° Azm 180.02°
23:40	23:50	0.17	8044	8058	14	84.00	Sliding	Sliding - (WOB:35;GPM :299.4;TFO:5R))
23:50	24:00	0.17	8058	8116	58	348.00	Drilling	Drilling - (WOB:32;GPM :300;RPM:90)



DAILY TOTALS			ASSEMBLY TOTALS								
Start Depth	8116.00		BHA Motor SN / R.S. #	Slide Ftg	Slide Hrs	Rotate Ftg	Rotate Hrs	Circ Hrs	D & C Hrs	BHA Ftg	Avg ROP
End Depth	11451.00		2	200	310.00	5.92	3,876.00	18.50	6.83	31.25	4,186.00 133.95
Below Rot Hrs.	24.00										
Total Drilled:	3335.00		Drilling Parameters		Mud Record		Bit Record		Current BHA # 2		
Avg. Total ROP:	176.30		WOB: 30		Weight: 0		Bit No: 2		Ulterra U516S Hunting 4.75" Drill Motor 4.75 NM Pony 4 3/4" NMDC 4 3/4" Pulser Sub 4 3/4" NMDC 4.75 NM Pony 5" Steel XO 1 Std. HWDP (3 Jnts.) 18 Stnds. DP (54 Jnts.) NOV SS Agitator 4 Stnds. (12 Jnts.) 4" DP 1 Jnt 4" HWDP 14 Stnds. (42 Jnts.) 4" DP 1 Jnt. 4" HWDP 14 Stnds. DP (42 Jnts.) 30 Stnds. (90 Jnts.) HWDP		
Slide Footage:	251.00		Rot Wt: 139		Visc: 0		Model Ulterra U516S				
Slide Hours	5.25		Pick UP: 219		Chlorides: 0		SN.: 27821				
Avg. Slide ROP:	47.81		Slack Off: 52		YP: 0		MFG. Ulterra				
Rotate Footage:	3084.00		SPP: 4575		PV: 0		Type PDC				
Rotary Hours	13.67		Flow: 300 - 300		PH: 0		IADC				
Avg. Rot ROP:	225.66		SPM: 78		GAS: 0		JETS 5-16				
Circ Hours	0.42		Rot. RPM 90 - 90		SAND: 0		TFA: 0.981				
Ream Hours	0.00		Mot RPM: 90 - 90		WL: 0		Hole ID: 6.125				
Rotary Hrs%:	72.25		Incl. In: 89.4		SOLID: 0		Bit Hrs: 24.42				
Slide Hrs%:	27.75		Azm. In: 179.42		BHT°: 0		Bit Ftg: 4186.00				
Rotary Ftg%:	92.47		Incl. Out: 89.26		Flow T°: 0		PUMPS				
Slide Ftg%:	7.53		Azm. Out: 178.18		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
00:00	00:15	0.25	8116	8139	23	92.00	Drilling	Drilling - (WOB:32;GPM :300;RPM:90)
00:15	00:25	0.17	8139	8139	0	.00	Survey & Conn.	Survey & Conn.@8075' Inc 89.4° Azm 179.42°
00:25	00:50	0.42	8139	8234	95	228.00	Drilling	Drilling - (WOB:32;GPM :300;RPM:90)
00:50	01:05	0.25	8234	8234	0	.00	Survey & Conn.	Survey & Conn.@8170' Inc 88.66° Azm 179.73°
01:05	01:15	0.17	8234	8237	3	18.00	Sliding	Sliding - (WOB:35;GPM :300;TFO:5R)
01:15	01:40	0.42	8237	8328	91	218.40	Drilling	Drilling - (WOB:32;GPM :300;RPM:90)
01:40	01:50	0.17	8328	8328	0	.00	Survey & Conn.	Survey & Conn.@8264' Inc 90.34° Azm 180.01°
01:50	01:55	0.08	8328	8334	6	72.00	Sliding	Sliding - (WOB:35;GPM :300;TFO:160R))
01:55	02:25	0.50	8334	8424	90	180.00	Drilling	Drilling - (WOB:32; :300;RPM:90)
02:25	02:40	0.25	8424	8424	0	.00	Survey & Conn.	Survey & Conn.@8360' Inc 90.27° Azm 180.36°
02:40	02:45	0.08	8424	8432	8	96.00	Sliding	Sliding - (WOB:35; :300;TFO:160R))
02:45	03:05	0.33	8432	8516	84	252.00	Drilling	Drilling - (WOB:32; :300;RPM:90)
03:05	03:15	0.17	8516	8516	0	.00	Survey & Conn.	Survey & Conn.@8454' Inc 89.66° Azm 181.57°
03:15	03:40	0.42	8516	8613	97	232.80	Drilling	Drilling - (WOB:32; :300;RPM:90)

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
03:40	03:50	0.17	8613	8613	0	.00	Survey & Conn.	Survey & Conn.@8549' Inc 91.11° Azm 182.87°
03:50	04:00	0.17	8613	8625	12	72.00	Sliding	Sliding - (WOB:37; :300;TFO:180))
04:00	04:25	0.42	8625	8707	82	196.80	Drilling	Drilling - (WOB:32; :300;RPM:90)
04:25	04:35	0.17	8707	8707	0	.00	Survey & Conn.	Survey & Conn.@8643' Inc 89.46° Azm 182.16°
04:35	04:55	0.33	8707	8801	94	282.00	Drilling	Drilling - (WOB:32; :300;RPM:90)
04:55	05:05	0.17	8801	8801	0	.00	Survey & Conn.	Survey & Conn.@8737' Inc 88.89° Azm 182.02°
05:05	05:30	0.42	8801	8896	95	228.00	Drilling	Drilling - (WOB:32; :300;RPM:90)
05:30	05:40	0.17	8896	8896	0	.00	Survey & Conn.	Survey & Conn.@8832' Inc 87.92° Azm 182.22°
05:40	05:50	0.17	8896	8906	10	60.00	Sliding	Sliding - (WOB:37; :300;TFO:180))
05:50	06:15	0.42	8906	8991	85	204.00	Drilling	Drilling - (WOB:32; :300;RPM:90)
06:15	06:20	0.08	8991	8991	0	.00	Survey & Conn.	Survey & Conn.@8927' Inc 89.09° Azm 183.64°
06:20	06:30	0.17	8991	9001	10	60.00	Sliding	Sliding - (WOB:37; :300;TFO:180))
06:30	06:50	0.33	9001	9085	84	252.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
06:50	06:55	0.08	9085	9085	0	.00	Survey & Conn.	Survey & Conn.@9021' Inc 89.77° Azm 181.11°
06:55	07:15	0.33	9085	9180	95	285.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
07:15	07:20	0.08	9180	9180	0	.00	Survey & Conn.	Survey & Conn.@9116' Inc 88.86° Azm 181.63°
07:20	07:30	0.17	9180	9190	10	60.00	Sliding	Sliding - (WOB:45; :300;TFO:75L))
07:30	07:55	0.42	9190	9275	85	204.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
07:55	08:00	0.08	9275	9275	0	.00	Survey & Conn.	Survey & Conn.@9211' Inc 89.19° Azm 180.79°
08:00	08:10	0.17	9275	9287	12	72.00	Sliding	Sliding - (WOB:45; :300;TFO:45L))
08:10	08:35	0.42	9287	9369	82	196.80	Drilling	Drilling - (WOB:35; :300;RPM:90)
08:35	08:40	0.08	9369	9369	0	.00	Survey & Conn.	Survey & Conn.@9305' Inc 89.53° Azm 180.8°
08:40	08:50	0.17	9369	9381	12	72.00	Sliding	Sliding - (WOB:45; :300;TFO:30L))
08:50	09:15	0.42	9381	9464	83	199.20	Drilling	Drilling - (WOB:35; :300;RPM:90)
09:15	09:20	0.08	9464	9464	0	.00	Survey & Conn.	Survey & Conn.@9400' Inc 90.03° Azm 180.6°
09:20	09:40	0.33	9464	9559	95	285.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
09:40	09:45	0.08	9559	9559	0	.00	Survey & Conn.	Survey & Conn.@9495' Inc 88.86° Azm 181.1°
09:45	09:55	0.17	9559	9571	12	72.00	Sliding	Sliding - (WOB:45; :300;TFO:45L))
09:55	10:15	0.33	9571	9654	83	249.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
10:15	10:20	0.08	9654	9654	0	.00	Survey & Conn.	Survey & Conn.@9590' Inc 88.79° Azm 179.73°
10:20	10:35	0.25	9654	9669	15	60.00	Sliding	Sliding - (WOB:45; :300;TFO:30L))
10:35	11:00	0.42	9669	9749	80	192.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
11:00	11:05	0.08	9749	9749	0	.00	Survey & Conn.	Survey & Conn.@9685' Inc 90.03° Azm 179.85°
11:05	11:15	0.17	9749	9759	10	60.00	Sliding	Sliding - (WOB:45; :300;TFO:30L))
11:15	11:35	0.33	9759	9843	84	252.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
11:35	11:40	0.08	9843	9843	0	.00	Survey & Conn.	Survey & Conn.@9779' Inc 90.13° Azm 179.54°
11:40	11:50	0.17	9843	9850	7	42.00	Sliding	Sliding - (WOB:45; :300;TFO:30L))
11:50	12:05	0.25	9850	9938	88	352.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
12:05	12:10	0.08	9938	9938	0	.00	Survey & Conn.	Survey & Conn.@9874' Inc 90.57° Azm 178.54°
12:10	12:30	0.33	9938	10033	95	285.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
12:30	12:35	0.08	10033	10033	0	.00	Survey & Conn.	Survey & Conn.@9969' Inc 89.46° Azm 178.52°
12:35	13:00	0.42	10033	10128	95	228.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
13:00	13:05	0.08	10128	10128	0	.00	Survey & Conn.	Survey & Conn.@10064' Inc 88.22° Azm 178.55°
13:05	13:20	0.25	10128	10143	15	60.00	Sliding	Sliding - (WOB:45; :300;TFO:30L))
13:20	13:40	0.33	10143	10222	79	237.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
13:40	13:45	0.08	10222	10222	0	.00	Survey & Conn.	Survey & Conn.@10158' Inc 89.16° Azm 179.31°
13:45	14:00	0.25	10222	10234	12	48.00	Sliding	Sliding - (WOB:45; :300;TFO:0L))
14:00	14:25	0.42	10234	10317	83	199.20	Drilling	Drilling - (WOB:35; :300;RPM:90)

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
14:25	14:30	0.08	10317	10317	0	.00	Survey & Conn.	Survey & Conn.@10253' Inc 89.9° Azm 179.98°
14:30	14:50	0.33	10317	10329	12	36.00	Sliding	Sliding - (WOB:45; :300;TFO:0L))
14:50	15:15	0.42	10329	10412	83	199.20	Drilling	Drilling - (WOB:35; :300;RPM:90)
15:15	15:20	0.08	10412	10412	0	.00	Survey & Conn.	Survey & Conn.@10348' Inc 90.27° Azm 179.89°
15:20	15:45	0.42	10412	10506	94	225.60	Drilling	Drilling - (WOB:35; :300;RPM:90)
15:45	15:50	0.08	10506	10506	0	.00	Survey & Conn.	Survey & Conn.@10442' Inc 89.03° Azm 179.49°
15:50	16:10	0.33	10506	10521	15	45.00	Sliding	Sliding - (WOB:45; :300;TFO:30L))
16:10	16:35	0.42	10521	10601	80	192.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
16:35	17:00	0.42	10601	10601	0	.00	Circulating	Rig Service
17:00	17:05	0.08	10601	10601	0	.00	Survey & Conn.	Survey & Conn.@10537' Inc 89.63° Azm 180.21°
17:05	17:25	0.33	10601	10616	15	45.00	Sliding	Sliding - (WOB:45; :300;TFO:15R)
17:25	17:45	0.33	10616	10696	80	240.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
17:45	17:55	0.17	10696	10696	0	.00	Survey & Conn.	Survey & Conn.@10632' Inc 90.91° Azm 179.78°
17:55	18:20	0.42	10696	10791	95	228.00	Drilling	Drilling - (WOB:35; :300;RPM:90)
18:20	18:30	0.17	10791	10791	0	.00	Survey & Conn.	Survey & Conn.@10727' Inc 90.64° Azm 179.58°
18:30	18:55	0.42	10791	10886	95	228.00	Drilling	Drilling - (WOB:33; :300;RPM:90)
18:55	19:00	0.08	10886	10886	0	.00	Survey & Conn.	Survey & Conn.@10822' Inc 91.21° Azm 179.16°
19:00	19:20	0.33	10886	10896	10	30.00	Sliding	Sliding - (WOB:45; :300;TFO:165L))
19:20	19:45	0.42	10896	10981	85	204.00	Drilling	Drilling - (WOB:33; :300;RPM:90)
19:45	19:55	0.17	10981	10981	0	.00	Survey & Conn.	Survey & Conn.@10917' Inc 89.7° Azm 179.1°
19:55	20:20	0.42	10981	11076	95	228.00	Drilling	Drilling - (WOB:33; :300;RPM:90)
20:20	20:35	0.25	11076	11076	0	.00	Survey & Conn.	Survey & Conn.@11012' Inc 88.59° Azm 178.64°
20:35	21:00	0.42	11076	11170	94	225.60	Drilling	Drilling - (WOB:33; :300;RPM:90)
21:00	21:15	0.25	11170	11170	0	.00	Survey & Conn.	Survey & Conn.@11106' Inc 87.72° Azm 178.11°
21:15	21:40	0.42	11170	11185	15	36.00	Sliding	Sliding - (WOB:48; :300;TFO:15L))
21:40	22:05	0.42	11185	11265	80	192.00	Drilling	Drilling - (WOB:33; :300;RPM:90)
22:05	22:15	0.17	11265	11265	0	.00	Survey & Conn.	Survey & Conn.@11201' Inc 88.26° Azm 178.75°
22:15	22:40	0.42	11265	11280	15	36.00	Sliding	Sliding - (WOB:48; :300;TFO:15L))
22:40	23:00	0.33	11280	11359	79	237.00	Drilling	Drilling - (WOB:30; :300;RPM:90)
23:00	23:15	0.25	11359	11359	0	.00	Survey & Conn.	Survey & Conn.@11295' Inc 89.36° Azm 178.18°
23:15	23:45	0.50	11359	11374	15	30.00	Sliding	Sliding - (WOB:48; :300;TFO:15L)
23:45	24:00	0.25	11374	11451	77	308.00	Drilling	Drilling - (WOB:30; :300;RPM:90)



JOB NO.: 238972
COMPANY: EnCana Oil & Gas USA
LOCATION: Ruhl
RIG NAME: HP 278
STATE: Colorado
COUNTY: Weld
WELL NAME: Ruhl 1E-32H-B264
Lead Directional : Steven Schlamp (10800)

Report Time: 2400 **8 of 9**
API JOB # 05-123-40277-00
WORK ORDER# 238972
FIELD: Wattenburg
Township: 2N
Range/Section 64W 32
Company Man Randy / Quiz
2nd Dir Hand : Ben Ezeaku (10012)

From Friday, January 02, 2015 at 0000 to Friday, January 02, 2015 at 2400

DAILY TOTALS			ASSEMBLY TOTALS									
Start Depth	11451.00		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	11530.00		2	200	310.00	5.92	3,876.00	18.50	6.83	31.25	4,186.00	133.95
Below Rot Hrs.	12.50											
Total Drilled:	79.00		Drilling Parameters		Mud Record		Bit Record		Current BHA # 2			
Avg. Total ROP:	237.00											
Slide Footage:	0.00		WOB:	30	Weight:	0	Bit No:	2	Ulterra U516S Hunting 4.75" Drill Motor 4.75 NM Pony 4 3/4" NMDC 4 3/4" Pulser Sub 4 3/4" NMDC 4.75 NM Pony 5" Steel XO 1 Std. HWDP (3 Jnts.) 18 Stnds. DP (54 Jnts.) NOV SS Agitator 4 Stnds. (12 Jnts.) 4" DP 1 Jnt 4" HWDP 14 Stnds. (42 Jnts.) 4" DP 1 Jnt. 4" HWDP 14 Stnds. DP (42 Jnts.) 30 Stnds. (90 Jnts.) HWDP			
Slide Hours	0.00		Rot Wt:	139	Visc:	0	Model	Ulterra U516S				
Avg. Slide ROP:	NA		Pick UP:	219	Chlorides:	0	SN.:	27821				
Rotate Footage:	79.00		Slack Off:	52	YP:	0	MFG.	Ulterra				
Rotary Hours	0.33		SPP:	4575	PV:	0	Type	PDC				
Avg. Rot ROP:	237.00		Flow:	300 - 300	PH:	0	IADC					
Circ Hours	4.75		SPM:	78	GAS:	0	JETS	5-16				
Ream Hours	0.00		Rot. RPM	90 - 90	SAND:	0	TFA:	0.981				
Rotary Hrs%:	100.00		Mot RPM:	-	WL:	0	Hole ID:	6.125				
Slide Hrs%:	.00		Incl. In:	89.26	SOLID:	0	Bit Hrs:	24.42				
Rotary Ftg%:	100.00		Azm. In:	178.18	BHT°:	0	Bit Ftg:	4186.00				
Slide Ftg%:	.00		Incl. Out:	90.44	Flow T°:	0	PUMPS					
cASING			Azm. Out:	177.15	Oil %:	0						
Size	Lb/Ft	MD	COST BREAKDOWN				Liner	0	0	Effic. 95.00% 95.00% Gal/Stk 0.00 0.00 BBL/Stk 0.000 0.000		
							Stroke	0	0			

GENERAL COMMENT

Start Time	End Time	Hours	Start Depth	End Depth	Delta Depth	ROP	Activity Code	COMMENT
00:00	00:05	0.08	11451	11454	3	36.00	Drilling	Drilling - (WOB:30; :300;RPM:90)
00:05	00:20	0.25	11454	11454	0	.00	Survey & Conn.	Survey & Conn.@11390' Inc 89.16° Azm 175.65°
00:20	00:35	0.25	11454	11530	76	304.00	Drilling	Drilling - (WOB:30; :300;RPM:90)
00:35	00:45	0.17	11530	11530	0	.00	Survey & Conn.	Survey & Conn.@11466' Inc 90.44° Azm 177.15°
00:45	05:30	4.75	11530	11530	0	.00	Circulating	Circulating
05:30	11:30	6.00	11530	11530	0	.00	POOH	POOH
11:30	11:40	0.17	11530	11530	0	.00	Other	Safety meeting w. rig crew
11:40	12:30	0.83	11530	11530	0	.00	Change BHA	Rack NMDC in Derrick / LO Motor & Bit
12:30	24:00	11.50	11530	11530	0	.00	Standby	Standby / Casing & Cement Ops



JOB NO.: 238972
COMPANY: EnCana Oil & Gas USA
LOCATION: Ruhl
RIG NAME: HP 278
STATE: Colorado
COUNTY: Weld
WELL NAME: Ruhl 1E-32H-B264
Lead Directional : Steven Schlamp (10800)

Report Time: 2400 9 of 9
API JOB # 05-123-40277-00
WORK ORDER# 238972
FIELD: Wattenburg
Township: 2N
Range/Section 64W 32
Company Man Randy / Quiz
2nd Dir Hand : Ben Ezeaku (10012)

From Saturday, January 03, 2015 at 0000 to Saturday, January 03, 2015 at 2400

DAILY TOTALS			ASSEMBLY TOTALS									
Start Depth	11451.00		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	11530.00											
Below Rot Hrs.	12.50											
Total Drilled:	79.00											
Avg. Total ROP:	237.00											
Slide Footage:	0.00											
Slide Hours	0.00											
Avg. Slide ROP:	NA											
Rotate Footage:	79.00											
Rotary Hours	0.33											
Avg. Rot ROP:	237.00											
Circ Hours	4.75											
Ream Hours	0.00											
Rotary Hrs%:	100.00											
Slide Hrs%:	.00											
Rotary Ftg%:	100.00											
Slide Ftg%:	.00											
cASING												
Size	Lb/Ft	MD										

BHA # 1

JOB NO.:	232827	Work Order:	232827	FIELD:	Wattenburg
Company:	EnCana Oil & Gas (USA) Inc.	Township:	2N	SECT. RANGE:	32 64W
LOCATION:	Ruhl Pad	Lead DD:	Paul Turner (10972)	Co. Man:	Randy / Joe
RIG NAME:	H&P 278	BHA TYPE:	Steerable Assembly	BHA WT:	12443
STATE:	Colorado	Wt @ Jars:	N/A		
COUNTY:	Weld				
WELL NAME:	Ruhl 1E-32H-B264				

Time and Depths	MOTOR DATA	Drilling Parameters
Date In: 12-Dec-14 @ 16:45	SDI Drill Motor	SO/PU: 0 - 0 / 0-0
Date Out: 13-Dec-14 @ 01:20	MFG.: SDI	Rot Strg Wt: 0-0
Hrs In Hole: 8.58	Pad OD: 8.27	WOB: 0 - 26
Start Depth: 149.00	NB Stab: 0	TORQ: 0 - 9
End Depth: 1226.00	Bit to Bend: 6.9	SPP: 0 - 1460
Total Drilled: 1077.00	Bent Hsg/Sub°: 2.25 / 2.25	Motor RPM: 68
Avg. Total ROP: 300.56	Lobe/Stage: 7/8 / 4	Rotary RPM: 0 - 50
Circ Hrs: Tot/Only 5.17 / 1.58	Rev/GAL: 0.16	Flow Rate: 0 - 652
Percent Slide: 28.60	Rotor Jet: 0	Avg Diff:
Percent Hrs: 34.88	Prop BUR:	Stall Pres.:
Slide Hours: 1.25	Act BUR:	Off Bot Pres.:
Total Sliding: 308.00		
Avg. Slide ROP: 246.40		
Percent Rotary: 71.40		
Percent Hrs: 65.12		
Rotary Hours: 2.33		
Total Rotary: 769.00		
Avg. Rotary ROP: 329.57		
Reason POOH: TD		

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

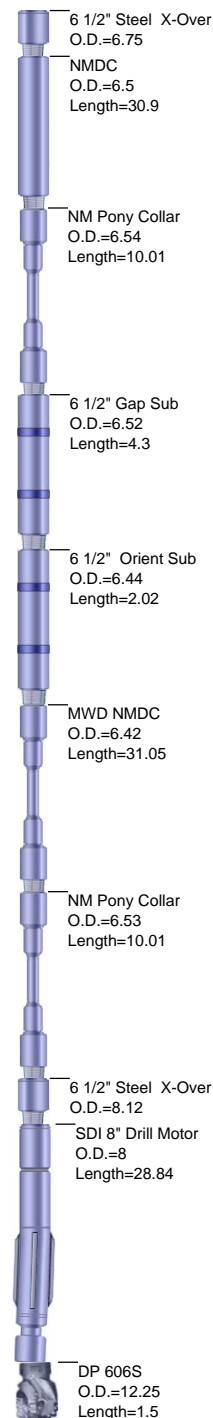
INC IN: .0 INC OUT: .0 AZM IN: .00 AZM OUT: .00

- SDI 8" Drill Motor 7/8 4.0stg 2.25FBH
- Speed Ratio: 0.16RPG
- Max Flow: 900 GPM
- Max Diff: 900
- EM TFO: 342.5
- Gyro TFO: N/A

- Bit to Sensor: 60.90'
- Bit to Survey: 63'
- Bit to Gyro: N/A

BHA Detail

Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
DP 606S	7032254		12.25	1.50	1.50	6 5/8 REGP	BAKER
SDI 8" Drill Motor	836		8	28.84	30.34	6 5/8 REGB	SDI
6 1/2" Steel X-Over	1-858	3.25	8.12	4.04	34.38	4 1/2 XHB	SDI
NM Pony Collar	125-074	3.37	6.53	10.01	44.39	4 1/2 XHB	SDI
MWD NMDC	122-969	3.25	6.42	31.05	75.44	4 1/2 XHB	SDI
6 1/2" Orient Sub	8-741	3.31	6.44	2.02	77.46	4 1/2 XHB	SDI
6 1/2" Gap Sub	69-911	3	6.52	4.30	81.76	4 1/2 XHB	SDI
NM Pony Collar	125-412	3.25	6.54	10.01	91.77	4 1/2 XHB	SDI
NMDC	DR 9338	3.25	6.5	30.90	122.67	4 1/2 XHB	OTHER
6 1/2" Steel X-Over	SD11583	3.25	6.75	3.04	125.71	XT39B	SDI



JOB NO.: 232827
Company: EnCana Oil & Gas (USA) Inc.
LOCATION: Ruhl Pad
RIG NAME: H&P 278
STATE: Colorado
COUNTY: Country
WELL NAME: Ruhl 1E-32H-B264

FIELD: Wattenburg
Township: 2N
Range 64W

MOTOR INFORMATION

Desc: SDI Drill Motor
 Bent Hsg/Sub: 2.2 / 2.2 5 5 Bit to Bend: 6.9
 Pad OD: 8.27 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	12-Dec	Drilling	17:45	17:50	0.08	149	159	10		120.0	0	0				0.00	0.00	0.00	
1	12-Dec	Sliding	17:50	18:00	0.17	159	182	23	11	138.0	0	2	422	890	50M	0.00	0.00	0.00	
1	12-Dec	Drilling	18:00	18:15	0.25	182	217	35	10	140.0	50	2	422	890		0.00	0.00	0.00	
1	12-Dec	Sliding	18:20	18:30	0.17	217	247	30	12	180.0	50	2	422	890	55M	3.39	44.52	0.00	
1	12-Dec	Drilling	18:30	18:45	0.25	247	308	61	10	244.0	50	2	422	890		3.39	44.52	0.00	
1	12-Dec	Sliding	18:55	19:00	0.08	308	328	20	12	240.0	50	2	422	890	60M	3.39	44.52	0.00	
1	12-Dec	Drilling	19:00	19:15	0.25	328	399	71	10	284.0	50	2	422	890		4.71	48.80	0.00	
1	12-Dec	Sliding	19:20	19:25	0.08	399	439	40	12	480.0	50	2	422	890	80M	5.96	58.30	0.00	
1	12-Dec	Drilling	19:25	19:35	0.17	439	490	51	14	306.0	50	2	422	1240		5.96	58.30	0.00	
1	12-Dec	Sliding	19:40	19:45	0.08	490	520	30	12	360.0	50	2	422	1240	15R	7.27	65.92	0.00	
1	12-Dec	Drilling	19:45	19:55	0.17	520	582	62	14	372.0	50	2	560	1240		7.27	65.92	0.00	
1	12-Dec	Sliding	20:00	20:05	0.08	582	617	35	12	420.0	50	2	422	1240	30R	7.80	73.68	0.00	
1	12-Dec	Drilling	20:05	20:15	0.17	617	671	54	19	324.0	50	2	560	1420		7.80	73.68	0.00	
1	12-Dec	Sliding	20:20	20:30	0.17	671	716	45	12	270.0	50	2	422	1420	5L	9.22	77.55	0.00	
1	12-Dec	Drilling	20:30	20:35	0.08	716	761	45	22	540.0	50	4	560	1420		9.22	77.55	0.00	
1	12-Dec	Sliding	20:40	20:45	0.08	761	781	20	12	240.0	50	4	422	1420	15L	9.22	77.55	0.00	
1	12-Dec	Drilling	20:45	20:50	0.08	781	852	71	22	852.0	50	4	560	1420		10.92	78.70	0.00	
1	12-Dec	Sliding	20:55	21:00	0.08	852	872	20	16	240.0	50	4	422	1420	45L	10.92	78.70	0.00	
1	12-Dec	Drilling	21:00	21:15	0.25	872	942	70	24	280.0	50	8	652	1420		11.48	74.01	0.00	
1	12-Dec	Sliding	21:20	21:25	0.08	942	957	15	16	180.0	50	8	422	1420	75L	11.48	74.01	0.00	
1	12-Dec	Drilling	21:25	21:35	0.17	957	1033	76	26	456.0	50	9	652	1460		11.30	68.16	0.00	
1	12-Dec	Sliding	21:40	21:45	0.08	1033	1048	15	16	180.0	50	9	422	1460		11.30	68.16	0.00	
1	12-Dec	Drilling	21:45	21:55	0.17	1048	1123	75	26	450.0	50	9	652	1460		11.37	64.41	0.00	
1	12-Dec	Sliding	22:00	22:05	0.08	1123	1138	15	18	180.0	50	9	422	1460	45R	11.37	64.41	0.00	
1	12-Dec	Drilling	22:05	22:15	0.17	1138	1215	77	26	462.0	50	9	652	1460		0.00	0.00	0.00	
1	12-Dec	Drilling	22:20	22:25	0.08	1215	1226	11	26	132.0	50	9	652	1460		0.00	0.00	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
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Total Drilled: 1077 **Avg. Total ROP:** 300.56 **DEPTH% - TIME %**

Total Rotary Drilled: 769 **Avg. Rotary ROP:** 329.57 **Percent Rotary:** 71.40 - 65.12

Total Drilled Sliding: 308 **Avg. Slide ROP:** 246.40 **Percent Slide:** 28.60 - 34.88

BHA # 1

PDT

JOB NO.: 238972 Work Order: 238972 FIELD: Wattenburg
 COMPANY: EnCana Oil & Gas USA Township: 2N
 LOCATION: Ruhl SECT. RANGE: 32 64W
 RIG NAME: HP 278 Lead DD: Paul Turner (10972)
 STATE: Colorado Co. Man: Joe / Quiz
 COUNTY: Weld BHA TYPE: Steerable Assembly
 WELL NAME: Ruhl 1E-32H-B264 BHA WT: 110485 Wt @ Jars: N/A

Time and Depths	MOTOR DATA	Drilling Parameters
Date In: 27-Dec-14 @ 05:50	6.75 Drill Motor	SO/PU: 0 - 115 / 0-145
Date Out: 29-Dec-14 @ 10:45	MFG.: SDI	Rot Strg Wt: 0-120
Hrs In Hole: 52.92	Pad OD: 7.46	WOB: 0 - 45
Start Depth: 1226.00	NB Stab: 0	TORQ: 0 - 10.5
End Depth: 7344.00	Bit to Bend: 3.17	SPP: 0 - 4325
Total Drilled: 6033.00	Bent Hsg/Sub: 1.95 /	Motor RPM: - 173
Avg. Total ROP: 189.02	Lobe/Stage: 7/8 / 6.4	Rotary RPM: 0 - 60
Circ Hrs: Tot/Only 37.33 / 5.42	Rev/GAL: 0.29	Flow Rate: 0 - 595
Percent Slide: 13.87	Rotor Jet: 0	Avg Diff:
Percent Hrs: 34.73	Prop BUR:	Stall Pres.:
Slide Hours: 11.08	Act BUR:	Off Bot Pres.:
Total Sliding: 837.00		
Avg. Slide ROP: 75.52		
Percent Rotary: 86.13		
Percent Hrs: 65.27		
Rotary Hours: 20.83		
Total Rotary: 5196.00		
Avg. Rotary ROP: 249.41		
Reason POOH: TD		

MWD Spacing	Gamma: 53.47	Restiv: 0	Sensor: 62.14	Last Casing
	GYRO: 0	DNSC: 1225	Sonic: 0	Shoe @: Hanger @:

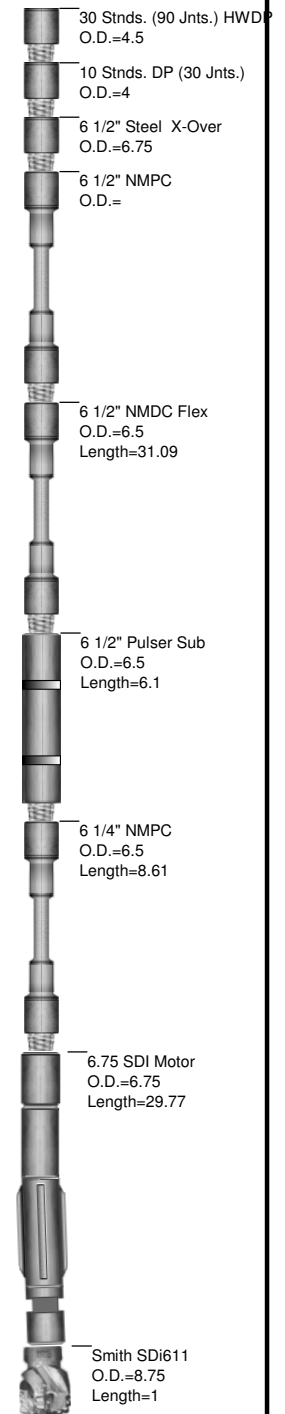
INC IN: .0 INC OUT: .0 AZM IN: .00 AZM OUT: .00

- 6 3/4" SDI Titan TD Drill Motor 7/8 6.4stg 1.95FBH
 - Speed Ratio: 0.29RPG
 - TFO: 76.18

- Bit to Sensor - 61.22'
 - Bit to Survey - 63'
 - Bit to Gamma - 52.57'

BHA Detail

Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
Smith SDi611	JK1910		8.75	1.00	1.00	4 1/2 REGP	SMITH
6.75 SDI Motor	65097		6.75	29.77	30.77	4 1/2 XHB	SDI
6 1/4" NMPC	40386	3.25	6.5	8.61	39.38	4 1/2 XHB	SDI
6 1/2" NMDC Flex	122-329F	3.25	6.5	31.02	70.40	4 1/2 XHB	SDI
6 1/2" Pulser Sub	129-070		6.5	6.10	76.50	4 1/2 XHB	SDI
6 1/2" NMDC Flex	122-466F	3.25	6.5	31.09	107.59	4 1/2 XHB	SDI
6 1/2" NMPC	35686	3.25		0.00	107.59	4 1/2 XHB	SDI
6 1/2" Steel X-Over	11583	3.25	6.75	3.04	110.63	XT39B	SDI
10 Stnds. DP (30 Jnts.)	RIG456	3.25	4	948.93	1059.56	XT39B	Other
30 Stnds. (90 Jnts.) HWD	RIG123	2.88	4.5	2,723.90	3783.46	XT39	Other





JOB NO.: 238972
COMPANY: EnCana Oil & Gas USA
LOCATION: Ruhl
RIG NAME: HP 278
STATE: Colorado
COUNTY: Country
WELL NAME: Ruhl 1E-32H-B264

FIELD: Wattenburg
Township: 2N
Range 64W

MOTOR INFORMATION

Desc: 6.75 Drill Motor
Bent Hsg/Sub: 1.95/ 0 **Bit to Bend:** 3.17
Pad OD: 7.46 **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	27-Dec	Drilling	10:50	11:25	0.58	1226	1340	114		195.4	0	0				10.19	63.44	0.00	
1	27-Dec	Sliding	11:30	11:35	0.08	1340	1352	12		144.0	0	0			40R	10.19	63.44	0.00	
1	27-Dec	Drilling	11:35	12:10	0.58	1352	1522	170	20	291.4	60	4	580	2040		11.85	66.74	0.00	
1	27-Dec	Drilling	12:15	12:45	0.50	1522	1704	182	20	364.0	60	4	580	2040		12.70	62.82	0.00	
1	27-Dec	Sliding	12:50	12:55	0.08	1704	1709	5		60.0	60	4		2040	160R	12.70	62.82	0.00	
1	27-Dec	Drilling	12:55	13:20	0.42	1709	1885	176	20	422.4	60	4	580	2040		10.90	64.05	0.00	
1	27-Dec	Sliding	13:25	13:30	0.08	1885	1889	4		48.0	60	4		2040	160R	10.90	64.05	0.00	
1	27-Dec	Drilling	13:30	13:55	0.42	1889	2066	177	20	424.8	60	4	580	2040		9.85	65.01	0.00	
1	27-Dec	Sliding	14:00	14:05	0.08	2066	2071	5		60.0	60	4		2040	90R	9.85	65.01	0.00	
1	27-Dec	Drilling	14:05	14:40	0.58	2071	2246	175	30	300.0	60	6	580	2700		8.05	72.10	0.00	
1	27-Dec	Sliding	14:45	14:50	0.08	2246	2254	8		96.0	60	6		2700	15L	8.05	72.10	0.00	
1	27-Dec	Drilling	14:50	15:15	0.42	2254	2429	175	30	420.0	60	6	580	2700		9.04	67.15	0.00	
1	27-Dec	Sliding	15:20	15:25	0.08	2429	2437	8		96.0	60	6		2700		9.04	67.15	0.00	
1	27-Dec	Drilling	15:25	15:55	0.50	2437	2612	175	30	350.0	60	6	580	2700		9.43	68.45	0.00	
1	27-Dec	Drilling	16:00	16:20	0.33	2612	2711	99	30	297.0	60	6	580	2700		9.43	68.45	0.00	
1	27-Dec	Sliding	16:20	16:25	0.08	2711	2719	8		96.0	60	6		2700		9.43	68.45	0.00	
1	27-Dec	Drilling	16:25	16:30	0.08	2719	2794	75	30	900.0	60	6	580	2700		10.13	69.63	0.00	
1	27-Dec	Sliding	16:35	16:40	0.08	2794	2800	6		72.0	60	6		2700	15L	10.13	69.63	0.00	
1	27-Dec	Drilling	16:40	16:50	0.17	2800	2885	85	30	510.0	60	6	580	2700		10.13	69.63	0.00	
1	27-Dec	Sliding	17:15	17:20	0.08	2885	2890	5		60.0	60	6		2700	50L	10.13	69.63	0.00	
1	27-Dec	Drilling	17:20	17:30	0.17	2890	2975	85	30	510.0	60	6	580	2700		10.45	70.75	0.00	
1	27-Dec	Drilling	17:35	17:55	0.33	2975	3077	102	30	306.0	60	6	580	2700		10.45	70.75	0.00	
1	27-Dec	Sliding	17:55	18:00	0.08	3077	3083	6		72.0	60	6		2700	50L	10.45	70.75	0.00	
1	27-Dec	Drilling	18:00	18:10	0.17	3083	3155	72	30	432.0	60	6	580	2700		9.96	66.97	0.00	
1	27-Dec	Drilling	18:20	18:45	0.42	3155	3248	93	30	223.2	60	7.5	580	3450		9.96	66.97	0.00	
1	27-Dec	Sliding	18:45	18:50	0.08	3248	3256	8		96.0	60	7.5	580	3450	30L	9.96	66.97	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	27-Dec	Drilling	18:50	19:00	0.17	3256	3338	82	30	492.0	60	7.5	580	3450		8.65	63.99	0.00	
1	27-Dec	Sliding	19:05	19:10	0.08	3338	3346	8		96.0	60	7.5	580	3450	30L	8.65	63.99	0.00	
1	27-Dec	Drilling	19:10	19:35	0.42	3346	3429	83	30	199.2	60	7.5	580	3450		8.65	63.99	0.00	
1	27-Dec	Sliding	19:35	19:40	0.08	3429	3439	10		120.0	60	7.5	580	3450	30L	8.65	63.99	0.00	
1	27-Dec	Drilling	19:40	20:00	0.33	3439	3520	81	30	243.0	60	7.5	580	3450		9.29	72.03	0.00	
1	27-Dec	Sliding	20:10	20:15	0.08	3520	3530	10		120.0	60	9	580	3575	45L	9.29	72.03	0.00	
1	27-Dec	Drilling	20:15	20:35	0.33	3530	3610	80	30	240.0	60	9	580	3575		9.29	72.03	0.00	
1	27-Dec	Sliding	20:35	20:40	0.08	3610	3618	8		96.0	60	9	580	3575	45L	9.29	72.03	0.00	
1	27-Dec	Drilling	20:40	21:05	0.42	3618	3700	82	30	196.8	60	9	580	3575		10.37	58.78	0.00	
1	27-Dec	Drilling	21:15	21:30	0.25	3700	3792	92	30	368.0	60	9	580	3575		10.37	58.78	0.00	
1	27-Dec	Sliding	21:30	21:35	0.08	3792	3800	8		96.0	60	9	580	3575	45L	10.37	58.78	0.00	
1	27-Dec	Drilling	21:35	21:45	0.17	3800	3887	87	30	522.0	60	9	580	3575		8.82	60.94	0.00	
1	27-Dec	Sliding	21:50	21:55	0.08	3887	3897	10		120.0	60	9.5	595	3575	15R	8.82	60.94	0.00	
1	27-Dec	Drilling	21:55	22:15	0.33	3897	3982	85	30	255.0	60	9.5	595	4250		8.82	60.94	0.00	
1	27-Dec	Sliding	22:20	22:25	0.08	3982	3990	8		96.0	60	9.5	595	4250	60R	8.82	60.94	0.00	
1	27-Dec	Drilling	22:25	22:35	0.17	3990	4076	86	30	516.0	60	9.5	595	4250		9.22	67.31	0.00	
1	27-Dec	Drilling	22:45	23:00	0.25	4076	4171	95	30	380.0	60	9.5	595	4250		9.22	67.31	0.00	
1	27-Dec	Sliding	23:00	23:05	0.08	4171	4179	8		96.0	60	9.5	595	4250	75R	9.22	67.31	0.00	
1	27-Dec	Drilling	23:05	23:20	0.25	4179	4266	87	30	348.0	60	9.5	595	4250		7.12	71.25	0.00	
1	27-Dec	Drilling	23:30	23:50	0.33	4266	4360	94	30	282.0	60	9.5	595	4250		7.12	71.25	0.00	
1	27-Dec	Sliding	23:50	23:55	0.08	4360	4367	7		84.0	60	9.5	595	4250	160R	7.12	71.25	0.00	
1	27-Dec	Drilling	23:55	24:00	0.08	4367	4416	49	30	588.0	60	9.5	595	4250		6.80	66.79	0.00	
1	28-Dec	Drilling	00:00	00:10	0.17	4416	4455	39	32	234.0	60	8.9	595	4155		6.80	66.79	0.00	
1	28-Dec	Sliding	00:20	00:25	0.08	4455	4466	11		132.0	60	8.9	595	4155	170R	6.80	66.79	0.00	
1	28-Dec	Drilling	00:25	00:40	0.25	4466	4549	83	32	332.0	60	8.9	595	4155		6.80	66.79	0.00	
1	28-Dec	Sliding	00:40	00:45	0.08	4549	4559	10		120.0	60	8.9	595	4155	170R	6.80	66.79	0.00	
1	28-Dec	Drilling	00:45	01:10	0.42	4559	4644	85	32	204.0	60	8.9	595	4155		3.24	66.45	0.00	
1	28-Dec	Sliding	01:15	01:20	0.08	4644	4658	14		168.0	60	8.9	595	4155	170R	3.24	66.45	0.00	
1	28-Dec	Drilling	01:20	01:55	0.58	4658	4834	176	32	301.7	60	8.9	595	4155		0.72	2.94	0.00	
1	28-Dec	Sliding	02:05	02:10	0.08	4834	4844	10		120.0	60	8.9	595	4155	95M	0.72	2.94	0.00	
1	28-Dec	Drilling	02:10	02:35	0.42	4844	4929	85	32	204.0	60	8.9	595	4155		0.72	2.94	0.00	
1	28-Dec	Sliding	02:35	02:40	0.08	4929	4941	12		144.0	60	8.9	595	4155	180M	0.72	2.94	0.00	
1	28-Dec	Drilling	02:40	03:00	0.33	4941	5024	83	32	249.0	60	8.9	595	4325		0.12	296.77	0.00	
1	28-Dec	Drilling	03:05	03:25	0.33	5024	5119	95	32	285.0	60	9.5	595	4325		0.12	296.77	0.00	
1	28-Dec	Sliding	03:25	03:30	0.08	5119	5129	10		120.0	60	9.5	595	4325	180M	0.12	296.77	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	28-Dec	Drilling	03:30	04:15	0.75	5129	5214	85	32	113.3	60	9.5	595	4325		0.89	265.82	0.00	
1	28-Dec	Sliding	04:35	04:45	0.17	5214	5224	10		60.0	60	9.5	595	4325	145M	0.89	265.82	0.00	
1	28-Dec	Drilling	05:00	05:30	0.50	5309	5404	95	32	190.0	60	9.5	595	4325		1.13	192.28	0.00	
1	28-Dec	Drilling	05:35	06:15	0.67	5404	5593	189	32	283.5	60	9.5	595	4325		0.27	273.95	0.00	
1	28-Dec	Drilling	06:20	07:00	0.67	5593	5783	190	32	285.0	60	9.5	595	4325		1.02	12.97	0.00	
1	28-Dec	Sliding	07:05	07:15	0.17	5783	5793	10		60.0	60	9.5	595	4325	170M	1.02	12.97	0.00	
1	28-Dec	Drilling	07:15	07:50	0.58	5793	5973	180	32	308.6	60	9.5	595	4325		0.45	244.86	0.00	
1	28-Dec	Sliding	07:55	08:05	0.17	5973	5985	12		72.0	60	9.5	595	4325	150M	0.45	244.86	0.00	
1	28-Dec	Drilling	08:05	08:50	0.75	5985	6162	177	32	236.0	60	9.5	595	4325		1.04	134.76	0.00	
1	28-Dec	Drilling	08:55	09:35	0.67	6162	6352	190	32	285.0	60	9.5	595	4325		0.51	110.14	0.00	
1	28-Dec	Drilling	09:40	09:50	0.17	6352	6396	44	32	264.0	60	9.5	595	4325		0.67	52.27	0.00	
1	28-Dec	Sliding	10:35	11:10	0.58	6396	6447	51		87.4	30	10.5	490	3800	150M	5.70	180.75	0.00	
1	28-Dec	Sliding	11:20	12:05	0.75	6447	6487	40		53.3	30	10.5	490	3800	180M	12.73	182.09	0.00	
1	28-Dec	Drilling	12:05	12:10	0.08	6487	6494	7	32	84.0	60	10.5	595	3800		12.73	182.09	0.00	
1	28-Dec	Sliding	12:20	12:40	0.33	6494	6541	47		141.0	30	10.5	490	3800	180M	13.75	183.17	0.00	
1	28-Dec	Sliding	12:45	13:05	0.33	6541	6571	30		90.0	30	10.5	490	3800		13.75	183.17	0.00	
1	28-Dec	Drilling	13:05	13:15	0.17	6571	6588	17	32	102.0	30	10.5	595	3800		17.89	183.07	0.00	
1	28-Dec	Sliding	14:00	14:30	0.50	6588	6618	30		60.0	30	10.5	490	3800		17.89	183.07	0.00	
1	28-Dec	Sliding	14:40	15:15	0.58	6618	6680	62		106.3	30	10.5	490	3800	15L	28.77	180.07	0.00	
1	28-Dec	Drilling	15:15	15:20	0.08	6680	6683	3	32	36.0	30	10.5	595	3800		28.77	180.07	0.00	
1	28-Dec	Sliding	15:25	15:30	0.08	6683	6711	28	35	336.0	30	10.5	490	3800		28.77	180.07	0.00	
1	28-Dec	Drilling	15:30	15:40	0.17	6711	6731	20	32	120.0	30	10.5	490	3800		34.02	181.50	0.00	
1	28-Dec	Sliding	15:50	16:00	0.17	6731	6746	15	35	90.0	60	10.5	490	3800	15L	34.02	181.50	0.00	
1	28-Dec	Drilling	16:00	16:20	0.33	6746	6778	32	32	96.0	30	10.5	490	3800		35.64	181.28	0.00	
1	28-Dec	Sliding	16:20	16:40	0.33	6778	6802	24	35	72.0	30	10.5	490	3800	15L	35.64	181.28	0.00	
1	28-Dec	Drilling	16:40	16:50	0.17	6802	6826	24	35	144.0	30	10.5	490	3800		39.97	181.97	0.00	
1	28-Dec	Sliding	17:00	17:15	0.25	6826	6854	28	35	112.0	30	10.5	490	3800	30L	39.97	181.97	0.00	
1	28-Dec	Drilling	17:15	17:30	0.25	6854	6873	19	35	76.0	30	10.5	490	3800		44.74	180.87	0.00	
1	28-Dec	Sliding	17:40	17:45	0.08	6873	6885	12	35	144.0	30	10.5	490	3800	30L	44.74	180.87	0.00	
1	28-Dec	Drilling	17:45	17:55	0.17	6885	6921	36	35	216.0	30	10.5	490	3800		46.47	179.16	0.00	
1	28-Dec	Sliding	18:05	18:35	0.50	6921	6956	35	40	70.0	30	10.5	490	3800	30L	53.20	178.81	0.00	
1	28-Dec	Sliding	18:50	19:05	0.25	6956	6993	37	40	148.0	30	10.5	490	3800	30L	53.20	178.81	0.00	
1	28-Dec	Drilling	19:05	19:30	0.42	6993	7062	69	35	165.6	30	10.5	490	3800		61.94	181.73	0.00	
1	28-Dec	Sliding	19:45	20:25	0.67	7062	7086	24	40	36.0	30	10.5	490	3800	30L	61.94	181.73	0.00	
1	28-Dec	Drilling	20:25	20:30	0.08	7086	7110	24	35	288.0	30	10.5	490	3800		66.03	182.10	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	28-Dec	Sliding	20:45	21:20	0.58	7110	7133	23	40	39.4	30	10.5	490	3800	30L	66.03	182.10	0.00	
1	28-Dec	Drilling	21:20	21:40	0.33	7133	7157	24	35	72.0	30	10.5	490	3800		70.84	181.10	0.00	
1	28-Dec	Sliding	21:50	22:30	0.67	7157	7187	30	45	45.0	30	10.5	490	3800	30L	70.84	181.10	0.00	
1	28-Dec	Drilling	22:30	22:40	0.17	7187	7205	18	35	108.0	30	10.5	490	3800		75.75	180.44	0.00	
1	28-Dec	Sliding	22:50	23:45	0.92	7205	7237	32	45	34.9	30	10.5	490	3800	30L	75.75	180.44	0.00	
1	28-Dec	Drilling	23:45	24:00	0.25	7237	7252	15	35	60.0	30	10.5	490	3800		81.71	179.89	0.00	
1	29-Dec	Sliding	00:10	01:00	0.83	7252	7290	38	45	45.6	30	10.5	490	3800		87.98	179.61	0.00	
1	29-Dec	Drilling	01:25	01:45	0.33	7290	7344	54	35	162.0	30	10.5	490	3800		87.98	179.61	0.00	

Total Drilled: 6033 **Avg. Total ROP:** 189.02

DEPTH% - TIME %

Total Rotary Drilled: 5196 **Avg. Rotary ROP:** 249.41 **Percent Rotary:** 86.13 - 65.27

Total Drilled Sliding: 837 **Avg. Slide ROP:** 75.52 **Percent Slide:** 13.87 - 34.73

BHA # 2

PDT

JOB NO.: 238972 Work Order: 238972 FIELD: Wattenburg
 COMPANY: EnCana Oil & Gas USA Township: 2N
 LOCATION: Ruhl SECT. RANGE: 32 64W
 RIG NAME: HP 278 Lead DD: Steven Schlamp (10800)
 STATE: Colorado Co. Man: Randy / Quiz
 COUNTY: Weld BHA TYPE: Steerable Assembly
 WELL NAME: Ruhl 1E-32H-B264 BHA WT: -1960759 Wt @ Jars: N/A

Time and Depths		MOTOR DATA		Drilling Parameters	
Date In:	31-Dec-14 @ 00:45	4.75 Drill Motor		SO/PU:	52 - 123 / 115-219
Date Out:	02-Jan-15 @ 12:30	MFG.: Hunting		Rot Strg Wt:	105-145
Hrs In Hole:	59.75	Pad OD: 5.125		WOB:	20 - 48
Start Depth:	7344.00	NB Stab: 0		TORQ:	7.5 - 16
End Depth:	11530.00	Bit to Bend: 5		SPP:	3400 - 4600
Total Drilled:	4186.00	Bent Hsg/Sub°: 1.5 / 1.5		Motor RPM:	No Rev/Gal Input
Avg. Total ROP:	171.44	Lobe/Stage: 5.6 / 8.3		Rotary RPM:	30 - 90
Circ Hrs: Tot/Only	31.25 / 6.83	Rev/GAL: 0		Flow Rate:	276 - 300
Percent Slide:	7.41	Rotor Jet: 0		Avg Diff:	
Percent Hrs:	24.23	Prop BUR:		Stall Pres.:	
Slide Hours:	5.92	Act BUR:		Off Bot Pres.:	
Total Sliding:	310.00	Mud Data		Bit Record	
Avg. Slide ROP:	52.39	Type		Ulterra / Ulterra U516S	
Percent Rotary:	92.59	WT:	0	GAS:	0
Percent Hrs:	75.77	Vis:	0	PV:	0
Rotary Hours:	18.50	WL:	0	PH:	0
Total Rotary:	3876.00	SOL:	0	SAND:	0
Avg. Rotary ROP:	209.51	Oil %:	0	T °:	0
Reason POOH:	TD	Chlor:	0	YP:	0
MWD Spacing	Gamma: 0	Restiv: 0	Sensor: 0	Last Casing	
	GYRO: 0	DNSC: 7344	Sonic: 0	Shoe @: Hanger @:	

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

- 4.75" Hunting 5/6 8.3stg Drill Motor 1.50FBH
 - Speed Ratio: 1.04RPG
 - TFO: 268.8

- Bit to Sensor - 62.18'
 - Bit to Survey - 64'
 - Bit to Gamma - 53.53'

BHA Detail

Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
Ulterra U516S	27821		6.125	1.00	1.00	3 1/2 REGP	Ulterra
Hunting 4.75" Drill Motor	200		4.75	29.71	30.71	3 1/2 IFB	HUNTING
4.75 NM Pony	51707	2.75	4.75	9.94	40.65	3 1/2 IFB	OTHER
4 3/4" NMDC	DR28956	2.75	4.75	31.14	71.79	3 1/2 IFB	SDI
4 3/4" Pulser Sub	65-105	2.75	4.75	5.52	77.31	3 1/2 IFB	SDI
4 3/4" NMDC	DR28964	2.75	4.75	31.15	108.46	3 1/2 IFB	SDI
4.75 NM Pony	52833	2.75	4.75	10.52	118.98	3 1/2 IFB	OTHER
5" Steel XO	107235	2.75	4.75	1.54	120.52	XT39B	SDI
1 Stnd. HWDP (3 Jnts.)	RIG222	2.88	4	91.61	212.13	XT39B	Other
18 Stnds. DP (54 Jnts.)	RIG789	3.25	4	1,706.34	1918.47	XT39B	Other
NOV SS Agitator	1068949-1		5.0	22.40	1940.87	XT39B	NOV
4 Stnds. (12 Jnts.) 4" DP	789	3.25	4	379.91	2320.78	XT39B	Other
1 Jnt 4" HWDP	456	3.25	4	30.40	2351.18	XT39B	Other
14 Stnds. (42 Jnts.) 4" DP	ABC	3.25	4	1,327.69	3678.87	XT39B	Other

WinSURV II BHA Report - License: NP2553



JOB NO.: 238972
COMPANY: EnCana Oil & Gas USA
LOCATION: Ruhl
RIG NAME: HP 278
STATE: Colorado
COUNTY: Country
WELL NAME: Ruhl 1E-32H-B264

FIELD: Wattenburg
Township: 2N
Range 64W

MOTOR INFORMATION

Desc: 4.75 Drill Motor
Bent Hsg/Sub: 1.5 / 1.5 **Bit to Bend:** 5
Pad OD: 5.125 **NB Stab:**

Slide Report for BHA # 2

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
2	31-Dec	Drilling	14:45	14:50	0.08	7344	7354	10	22	120.0	30	10.5	276	3400		87.98	179.61	0.00	
2	31-Dec	Drilling	17:30	18:00	0.50	7354	7398	44	20	88.0	60	7.5	276	3400		87.98	179.61	0.00	
2	31-Dec	Drilling	18:10	19:10	1.00	7398	7488	90	20	90.0	60	7.5	276	3400		90.74	178.98	0.00	
2	31-Dec	Sliding	19:25	19:35	0.17	7488	7503	15	30	90.0	60	7.5	276	3400	180	90.74	178.98	0.00	
2	31-Dec	Drilling	19:35	20:00	0.42	7503	7578	75	27	180.0	90	9	299	3850		88.89	177.47	0.00	
2	31-Dec	Drilling	20:10	20:40	0.50	7578	7669	91	27	182.0	90	9	299	3850		88.06	177.15	0.00	
2	31-Dec	Drilling	20:50	21:15	0.42	7669	7760	91	27	218.4	90	9	299	3850		87.11	176.46	0.00	
2	31-Dec	Sliding	21:25	21:35	0.17	7760	7775	15	30	90.0	90	9	299	3850	45R	87.11	176.46	0.00	
2	31-Dec	Drilling	21:35	22:10	0.58	7775	7855	80	30	137.1	90	9	299	3850		87.38	177.86	0.00	
2	31-Dec	Sliding	22:20	22:30	0.17	7855	7870	15	35	90.0	90	9.5	299	3850	45R	87.38	177.86	0.00	
2	31-Dec	Drilling	22:30	22:55	0.42	7870	7950	80	30	192.0	90	9.5	299	3925		88.49	180.02	0.00	
2	31-Dec	Drilling	23:05	23:30	0.42	7950	8044	94	32	225.6	90	10.5	300	3925		87.75	180.02	0.00	
2	31-Dec	Sliding	23:40	23:50	0.17	8044	8058	14	35	84.0	90	10.5	300	3925	5R	87.75	180.02	0.00	
2	31-Dec	Drilling	23:50	24:00	0.17	8058	8116	58	32	348.0	90	10.5	300	3925		89.40	179.42	0.00	
2	1-Jan	Drilling	00:00	00:15	0.25	8116	8139	23	32	92.0	90	10.5	300	3925		89.40	179.42	0.00	
2	1-Jan	Drilling	00:25	00:50	0.42	8139	8234	95	32	228.0	90	10.5	300	3925		88.66	179.73	0.00	
2	1-Jan	Sliding	01:05	01:15	0.17	8234	8237	3	35	18.0	90	10.5	300	3925	5R	88.66	179.73	0.00	
2	1-Jan	Drilling	01:15	01:40	0.42	8237	8328	91	32	218.4	90	10.5	300	3925		90.34	180.01	0.00	
2	1-Jan	Sliding	01:50	01:55	0.08	8328	8334	6	35	72.0	90	10.5	300	3925	160R	90.34	180.01	0.00	
2	1-Jan	Drilling	01:55	02:25	0.50	8334	8424	90	32	180.0	90	10.5	300	3925		90.27	180.36	0.00	
2	1-Jan	Sliding	02:40	02:45	0.08	8424	8432	8	35	96.0	90	11.5	300	3925	160R	90.27	180.36	0.00	
2	1-Jan	Drilling	02:45	03:05	0.33	8432	8516	84	32	252.0	90	11.5	300	4175		89.66	181.57	0.00	
2	1-Jan	Drilling	03:15	03:40	0.42	8516	8613	97	32	232.8	90	11.5	300	4175		91.11	182.87	0.00	
2	1-Jan	Sliding	03:50	04:00	0.17	8613	8625	12	37	72.0	90	11.5	300	4175	180	91.11	182.87	0.00	
2	1-Jan	Drilling	04:00	04:25	0.42	8625	8707	82	32	196.8	90	11.5	300	4175		89.46	182.16	0.00	
2	1-Jan	Drilling	04:35	04:55	0.33	8707	8801	94	32	282.0	90	11.5	300	4175		88.89	182.02	0.00	

Slide Report for BHA # 2

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
2	1-Jan	Drilling	05:05	05:30	0.42	8801	8896	95	32	228.0	90	11.5	300	4175		87.92	182.22	0.00	
2	1-Jan	Sliding	05:40	05:50	0.17	8896	8906	10	37	60.0	90	11.5	300	4175	180	87.92	182.22	0.00	
2	1-Jan	Drilling	05:50	06:15	0.42	8906	8991	85	32	204.0	90	11.5	300	4175		89.09	183.64	0.00	
2	1-Jan	Sliding	06:20	06:30	0.17	8991	9001	10	37	60.0	90	11.5	300	4175	75L	89.09	183.64	0.00	
2	1-Jan	Drilling	06:30	06:50	0.33	9001	9085	84	35	252.0	90	13	300	4300		89.77	181.11	0.00	
2	1-Jan	Drilling	06:55	07:15	0.33	9085	9180	95	35	285.0	90	13	300	4300		88.86	181.63	0.00	
2	1-Jan	Sliding	07:20	07:30	0.17	9180	9190	10	45	60.0	90	13	300	4300	45L	88.86	181.63	0.00	
2	1-Jan	Drilling	07:30	07:55	0.42	9190	9275	85	35	204.0	90	13	300	4300		89.19	180.79	0.00	
2	1-Jan	Sliding	08:00	08:10	0.17	9275	9287	12	45	72.0	90	13	300	4300	30L	89.19	180.79	0.00	
2	1-Jan	Drilling	08:10	08:35	0.42	9287	9369	82	35	196.8	90	13	300	4300		89.53	180.80	0.00	
2	1-Jan	Sliding	08:40	08:50	0.17	9369	9381	12	45	72.0	90	13	300	4300	45L	89.53	180.80	0.00	
2	1-Jan	Drilling	08:50	09:15	0.42	9381	9464	83	35	199.2	90	13	300	4300		90.03	180.60	0.00	
2	1-Jan	Drilling	09:20	09:40	0.33	9464	9559	95	35	285.0	90	13	300	4300		88.86	181.10	0.00	
2	1-Jan	Sliding	09:45	09:55	0.17	9559	9571	12	45	72.0	90	13	300	4300	60L	88.86	181.10	0.00	
2	1-Jan	Drilling	09:55	10:15	0.33	9571	9654	83	35	249.0	90	14.5	300	4400		88.79	179.73	0.00	
2	1-Jan	Sliding	10:20	10:35	0.25	9654	9669	15	45	60.0	90	14.5	300	4400	30L	88.79	179.73	0.00	
2	1-Jan	Drilling	10:35	11:00	0.42	9669	9749	80	35	192.0	90	14.5	300	4400		90.03	179.85	0.00	
2	1-Jan	Sliding	11:05	11:15	0.17	9749	9759	10	45	60.0	90	14.5	300	4400	30L	90.03	179.85	0.00	
2	1-Jan	Drilling	11:15	11:35	0.33	9759	9843	84	35	252.0	90	14.5	300	4400		90.13	179.54	0.00	
2	1-Jan	Sliding	11:40	11:50	0.17	9843	9850	7	45	42.0	90	14.5	300	4400	30L	90.13	179.54	0.00	
2	1-Jan	Drilling	11:50	12:05	0.25	9850	9938	88	35	352.0	90	14.5	300	4400		90.57	178.54	0.00	
2	1-Jan	Drilling	12:10	12:30	0.33	9938	10033	95	35	285.0	90	14.5	300	4400		89.46	178.52	0.00	
2	1-Jan	Drilling	12:35	13:00	0.42	10033	10128	95	35	228.0	90	14.5	300	4400		88.22	178.55	0.00	
2	1-Jan	Sliding	13:05	13:20	0.25	10128	10143	15	45	60.0	90	14.5	300	4400	15L	88.22	178.55	0.00	
2	1-Jan	Drilling	13:20	13:40	0.33	10143	10222	79	35	237.0	90	14.8	300	4600		89.16	179.31	0.00	
2	1-Jan	Sliding	13:45	14:00	0.25	10222	10234	12	45	48.0	90	14.8	300	4600	0L	89.16	179.31	0.00	
2	1-Jan	Drilling	14:00	14:25	0.42	10234	10317	83	35	199.2	90	14.8	300	4600		89.90	179.98	0.00	
2	1-Jan	Sliding	14:30	14:50	0.33	10317	10329	12	45	36.0	90	14.8	300	4600	30L	89.90	179.98	0.00	
2	1-Jan	Drilling	14:50	15:15	0.42	10329	10412	83	35	199.2	90	14.8	300	4600		90.27	179.89	0.00	
2	1-Jan	Drilling	15:20	15:45	0.42	10412	10506	94	35	225.6	90	14.8	300	4600		89.03	179.49	0.00	
2	1-Jan	Sliding	15:50	16:10	0.33	10506	10521	15	45	45.0	90	14.8	300	4600	15R	89.03	179.49	0.00	
2	1-Jan	Drilling	16:10	16:35	0.42	10521	10601	80	35	192.0	90	14.8	300	4600		89.63	180.21	0.00	
2	1-Jan	Sliding	17:05	17:25	0.33	10601	10616	15	45	45.0	90	14.8	300	4600	15R	89.63	180.21	0.00	
2	1-Jan	Drilling	17:25	17:45	0.33	10616	10696	80	35	240.0	90	14.8	300	4600		90.91	179.78	0.00	
2	1-Jan	Drilling	17:55	18:20	0.42	10696	10791	95	33	228.0	90	16	300	4566		90.64	179.58	0.00	

Slide Report for BHA # 2

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
2	1-Jan	Drilling	18:30	18:55	0.42	10791	10886	95	33	228.0	90	16	300	4566		91.21	179.16	0.00	
2	1-Jan	Sliding	19:00	19:20	0.33	10886	10896	10	45	30.0	90	16	300	4566	165L	91.21	179.16	0.00	
2	1-Jan	Drilling	19:20	19:45	0.42	10896	10981	85	33	204.0	90	16	300	4566		89.70	179.10	0.00	
2	1-Jan	Drilling	19:55	20:20	0.42	10981	11076	95	33	228.0	90	16	300	4566		88.59	178.64	0.00	
2	1-Jan	Drilling	20:35	21:00	0.42	11076	11170	94	33	225.6	90	16	300	4566		87.72	178.11	0.00	
2	1-Jan	Sliding	21:15	21:40	0.42	11170	11185	15	48	36.0	90	16	300	4566	15L	87.72	178.11	0.00	
2	1-Jan	Drilling	21:40	22:05	0.42	11185	11265	80	33	192.0	90	16	300	4566		88.26	178.75	0.00	
2	1-Jan	Sliding	22:15	22:40	0.42	11265	11280	15	48	36.0	90	16	300	4566	15L	88.26	178.75	0.00	
2	1-Jan	Drilling	22:40	23:00	0.33	11280	11359	79	30	237.0	90	10.5	300	4575		89.36	178.18	0.00	
2	1-Jan	Sliding	23:15	23:45	0.50	11359	11374	15	48	30.0	90	10.5	300	4575	15L	89.36	178.18	0.00	
2	1-Jan	Drilling	23:45	24:00	0.25	11374	11451	77	30	308.0	90	10.5	300	4575		89.16	175.65	0.00	
2	2-Jan	Drilling	00:00	00:05	0.08	11451	11454	3	30	36.0	90	10.5	300	4575		89.16	175.65	0.00	
2	2-Jan	Drilling	00:20	00:35	0.25	11454	11530	76	30	304.0	90	10.5	300	4575		90.44	177.15	0.00	

Total Drilled: 4186 **Avg. Total ROP:** 171.44

DEPTH% - TIME %

Total Rotary Drilled: 3876 **Avg. Rotary ROP:** 209.51

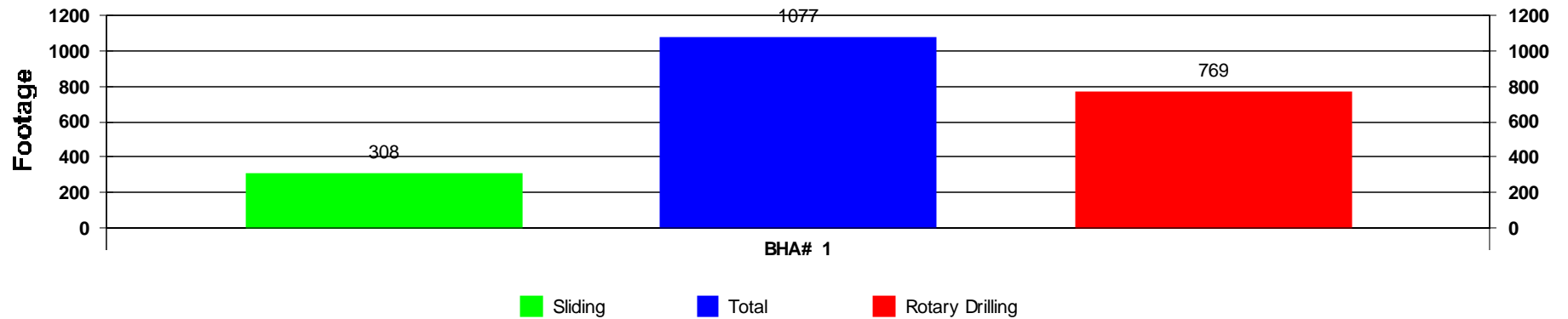
Percent Rotary: 92.59 - 75.77

Total Drilled Sliding: 310 **Avg. Slide ROP:** 52.39

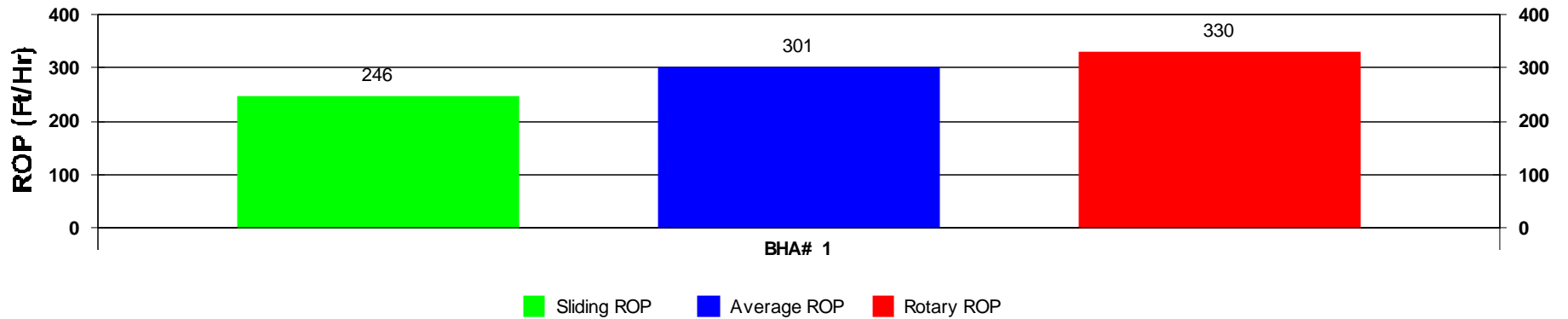
Percent Slide: 7.41 - 24.23

JOB NO.:	232827	FIELD:	Wattenburg	
Company:	EnCana Oil & Gas (USA) Inc.	Township:	2N	
LOCATION:	Ruhl Pad	SECTRANGE:	32	64W
RIG NAME:	H&P 278	COMMENT		
STATE:	Colorado			
COUNTY:	Weld			
WELL NAME:	Ruhl 1E-32H-B264			

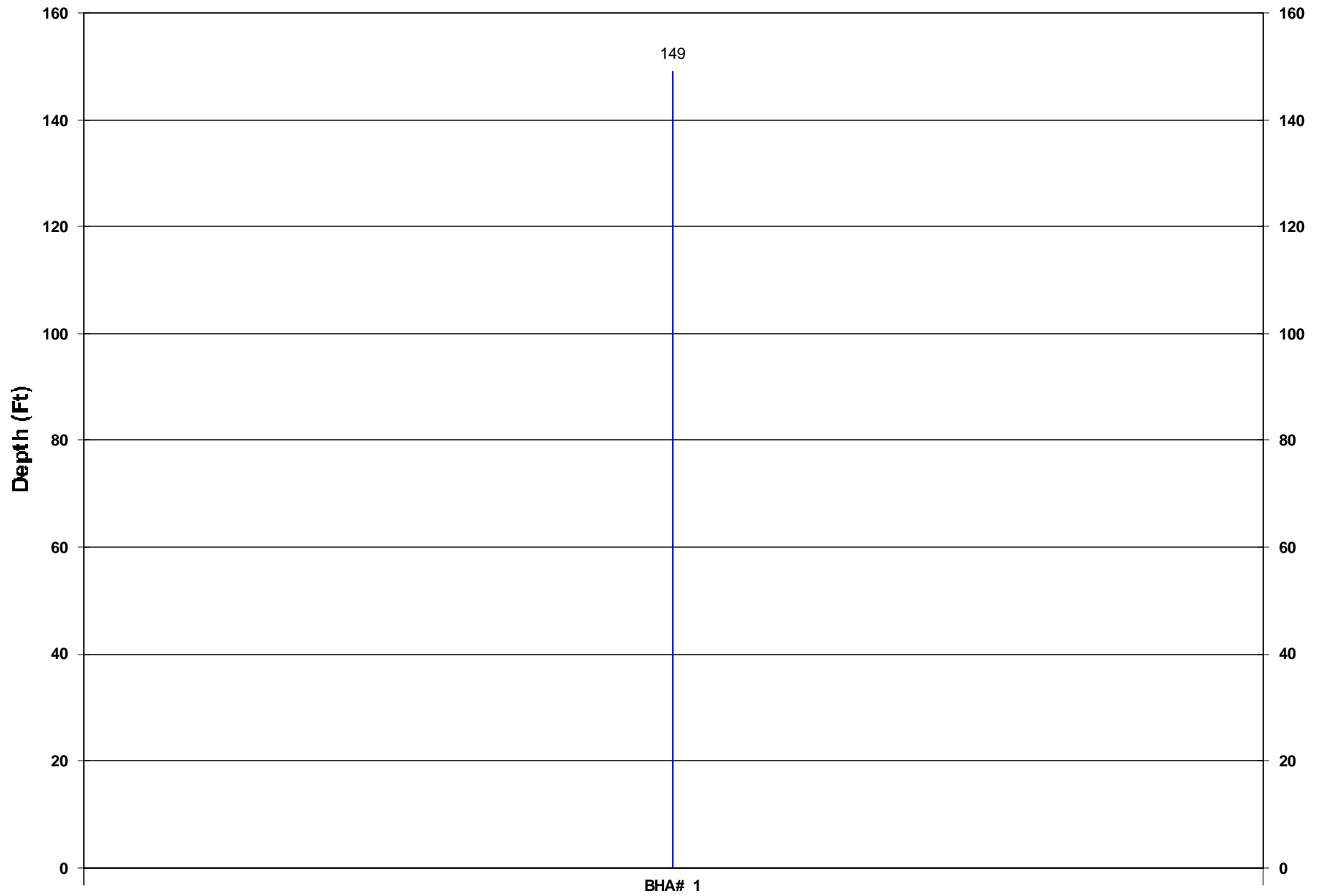
Footage Drilled with BHA



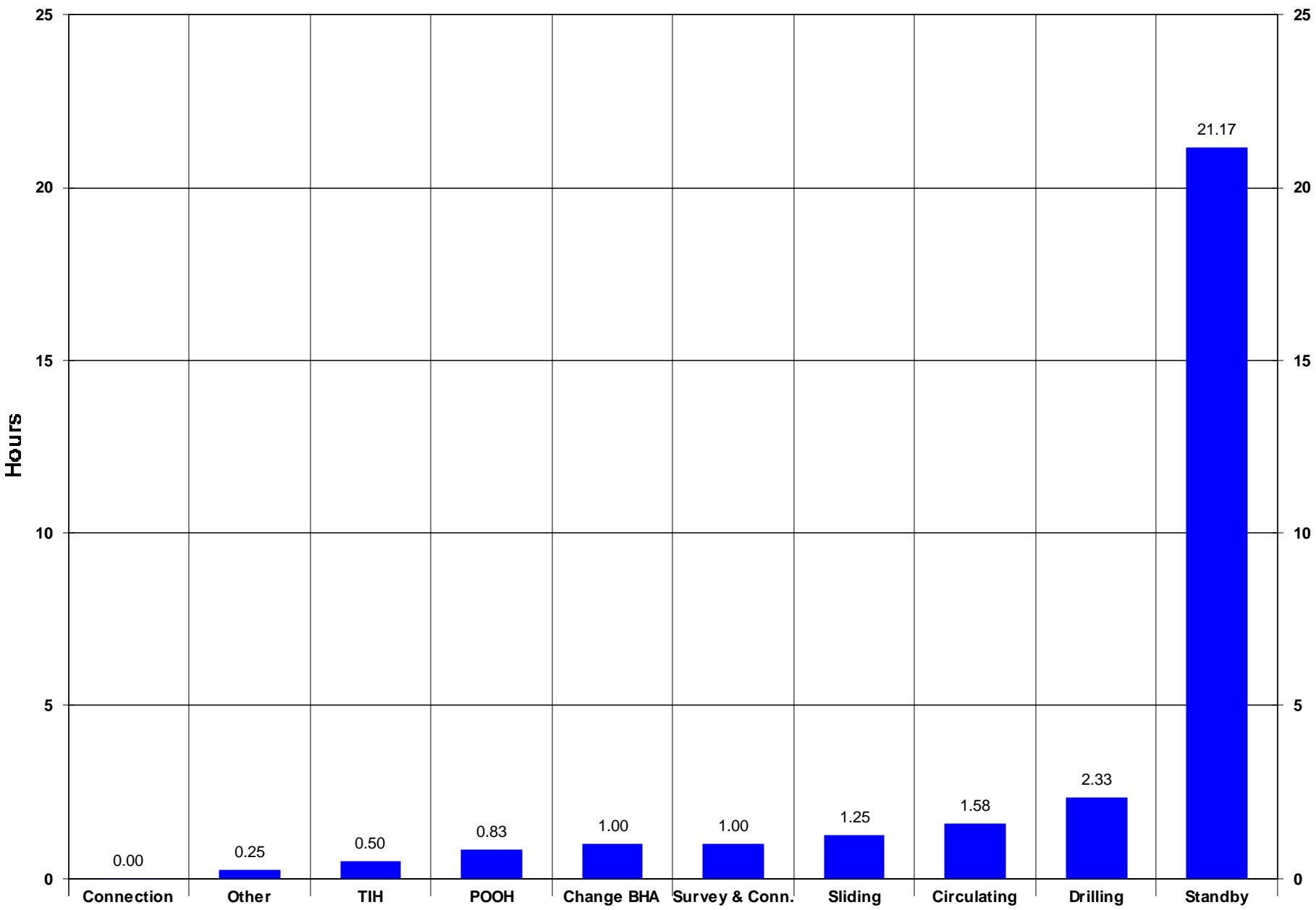
ROP vs BHA



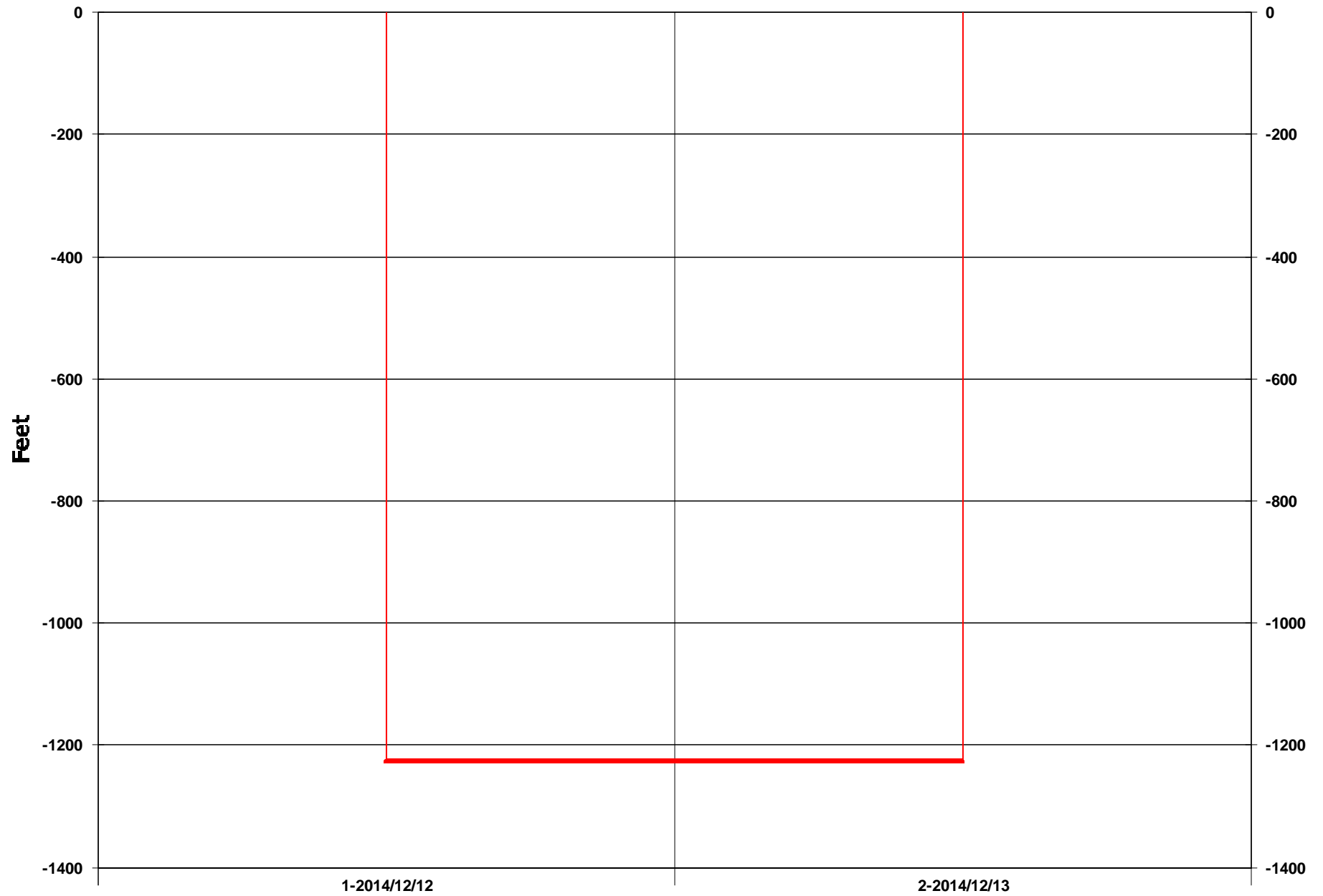
Depth vs BHA



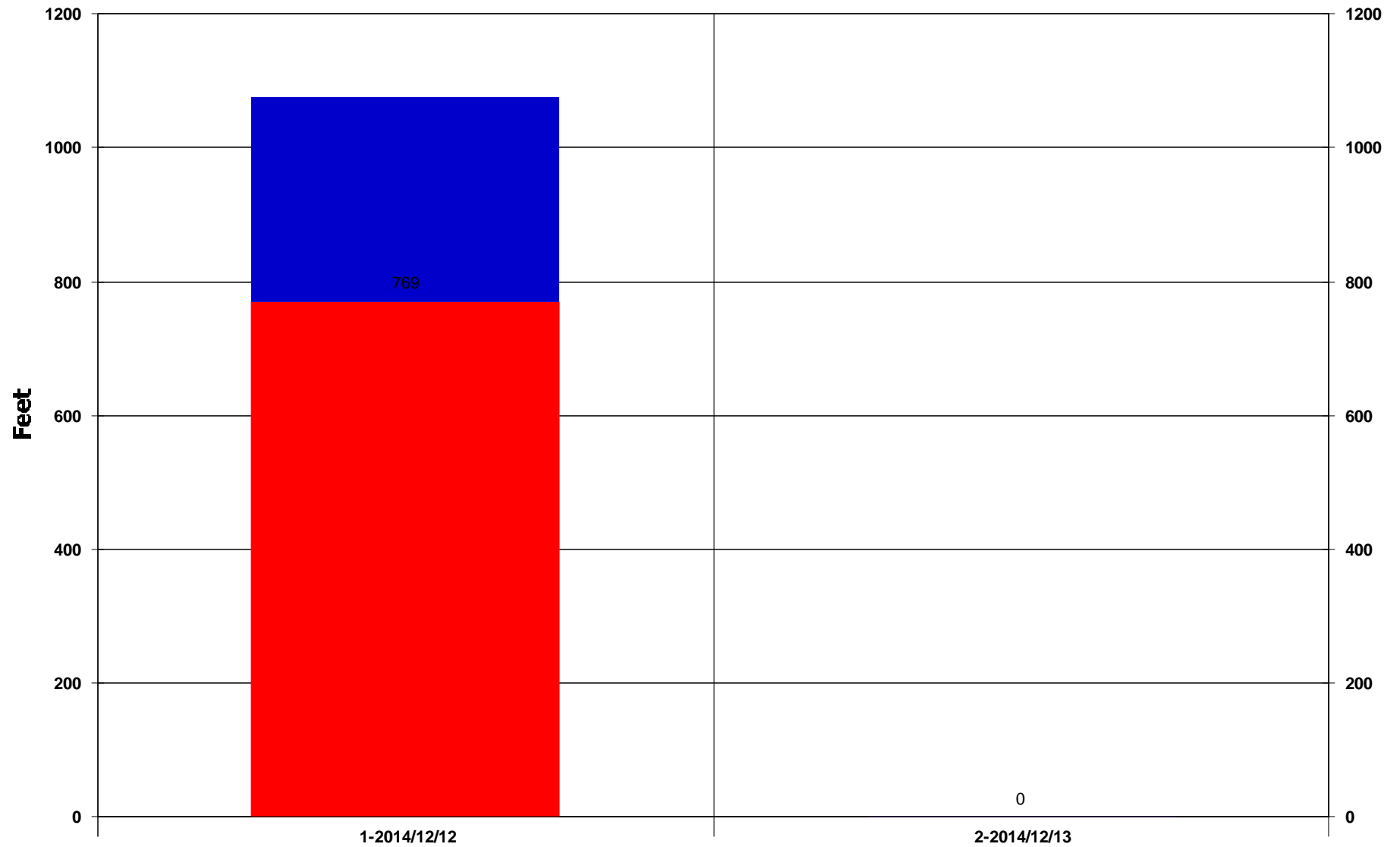
Activity Histogram



Measured Depth vs Days

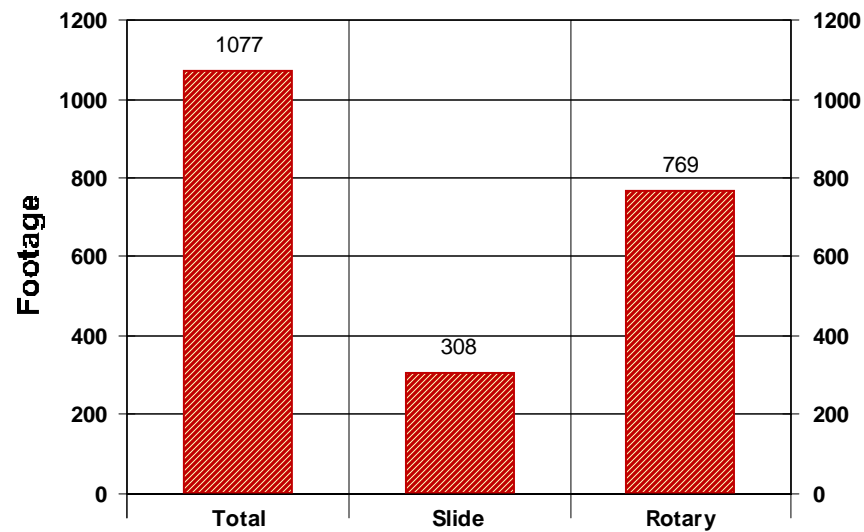


Daily Footage

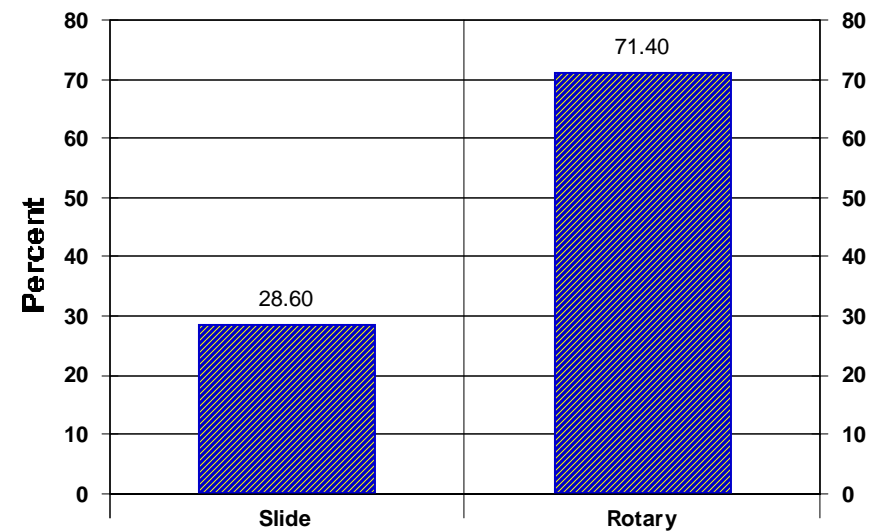


Rotary Drilling Sliding

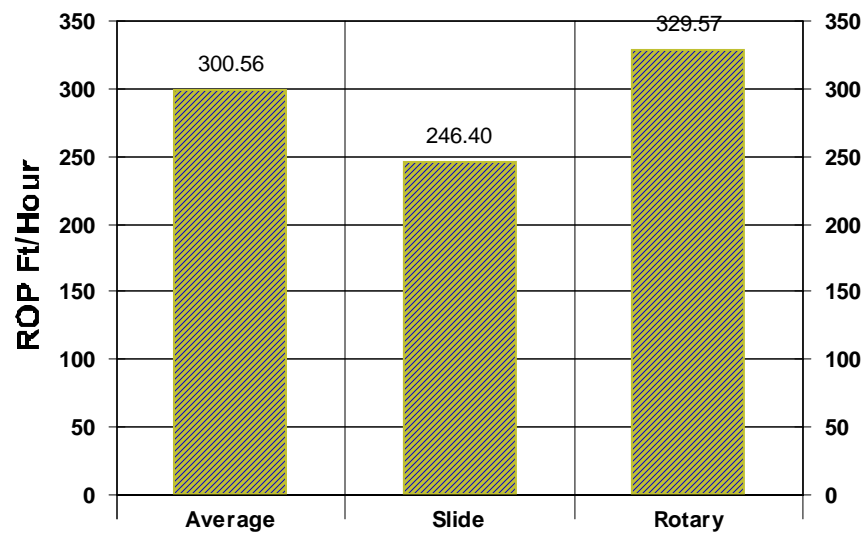
Footage Drilled Totals



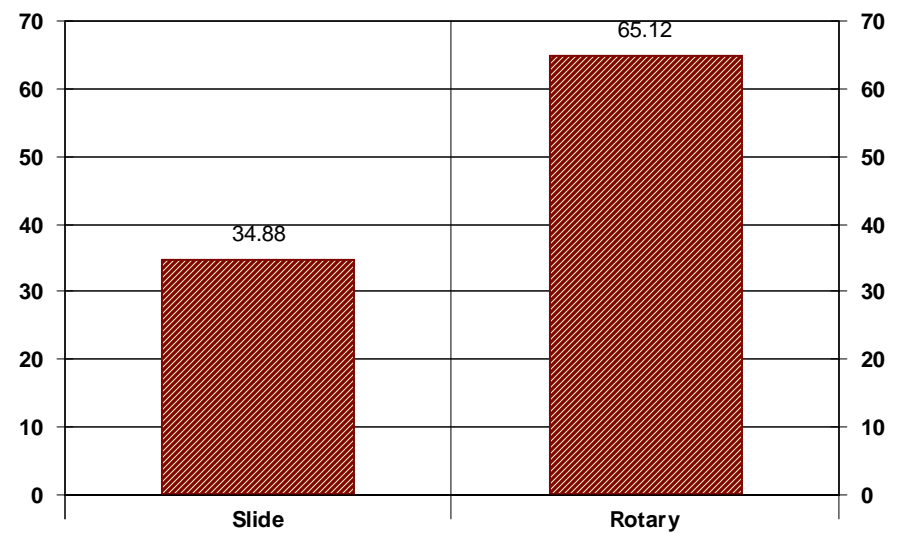
Footage Percent



Rate of Penetration Totals



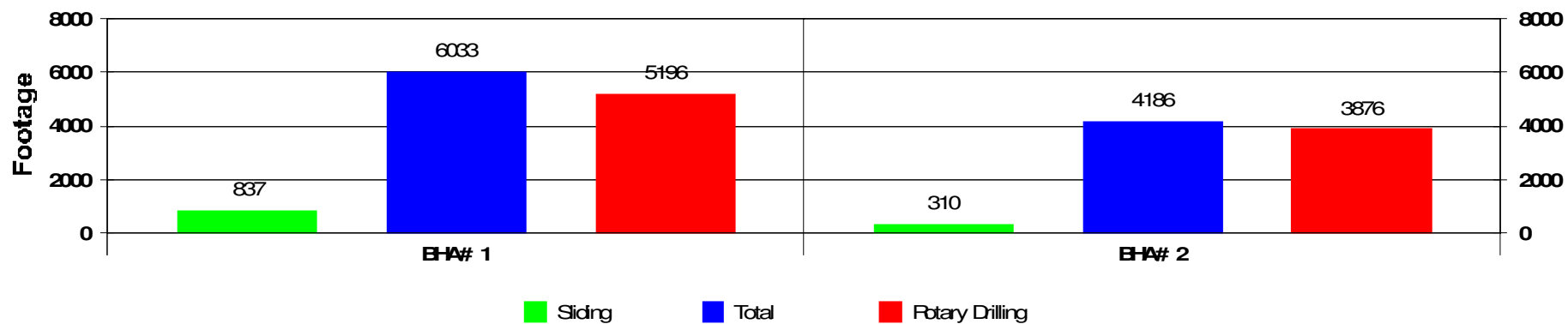
Time Percent



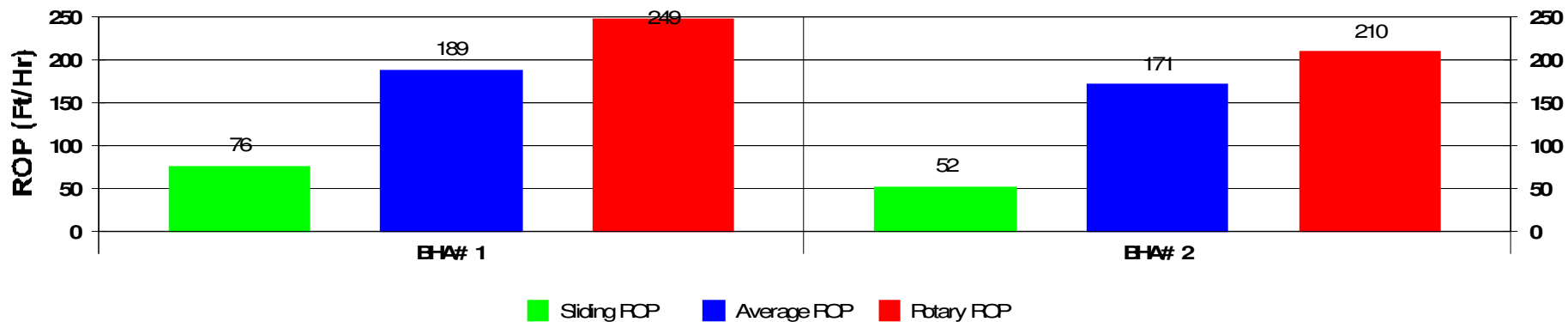


JOB NO.:	238972	FIELD:	Wattenburg	
COMPANY:	EnCana Oil & Gas USA	Township:	2N	
LOCATION:	Ruhl	SECT\	RANGE:	32 64W
RIG NAME:	HP 278	COMMENT		
STATE:	Colorado			
COUNTY:	Weld			
WELL NAME:	Ruhl 1E-32H-B264			

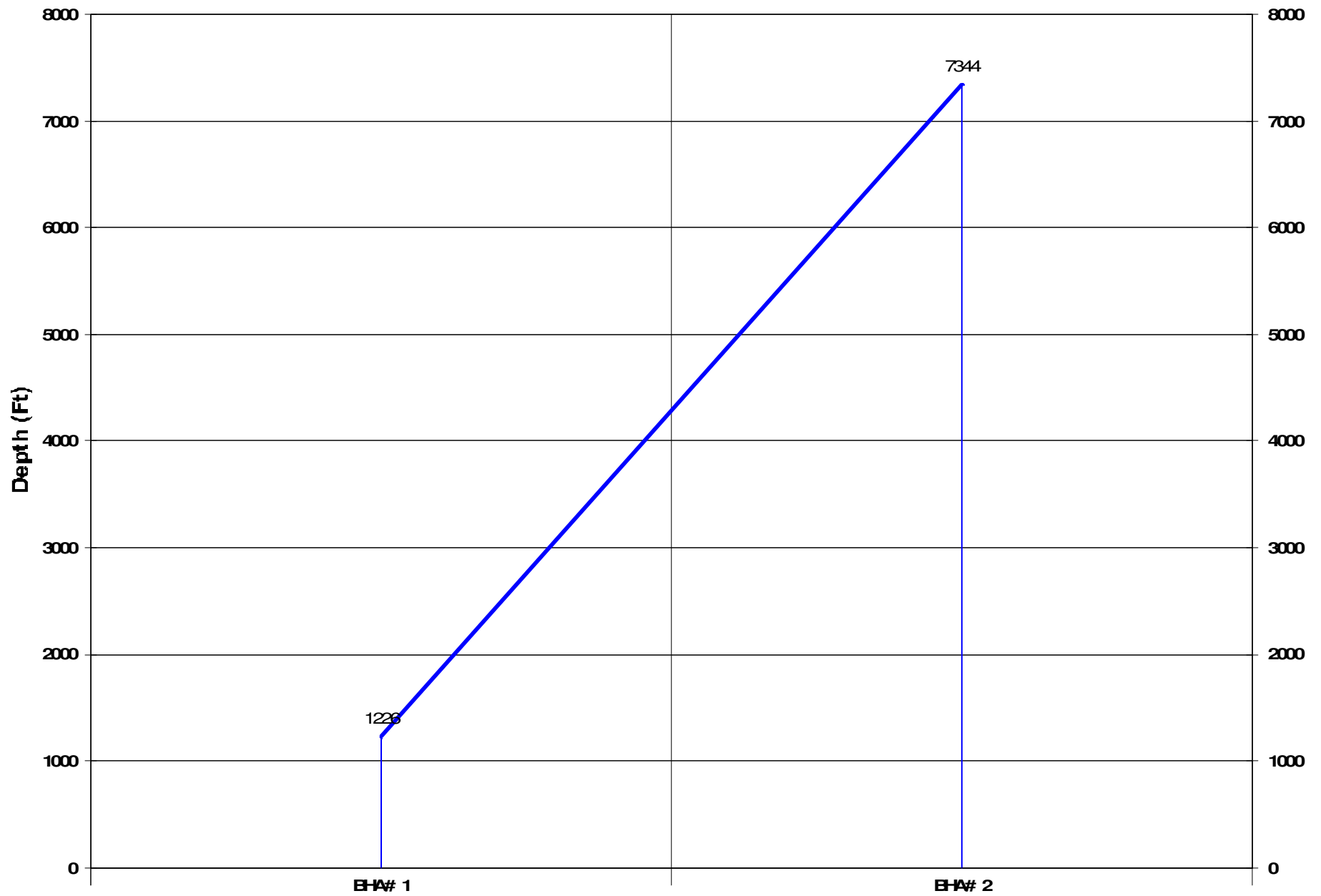
Footage Drilled with BHA



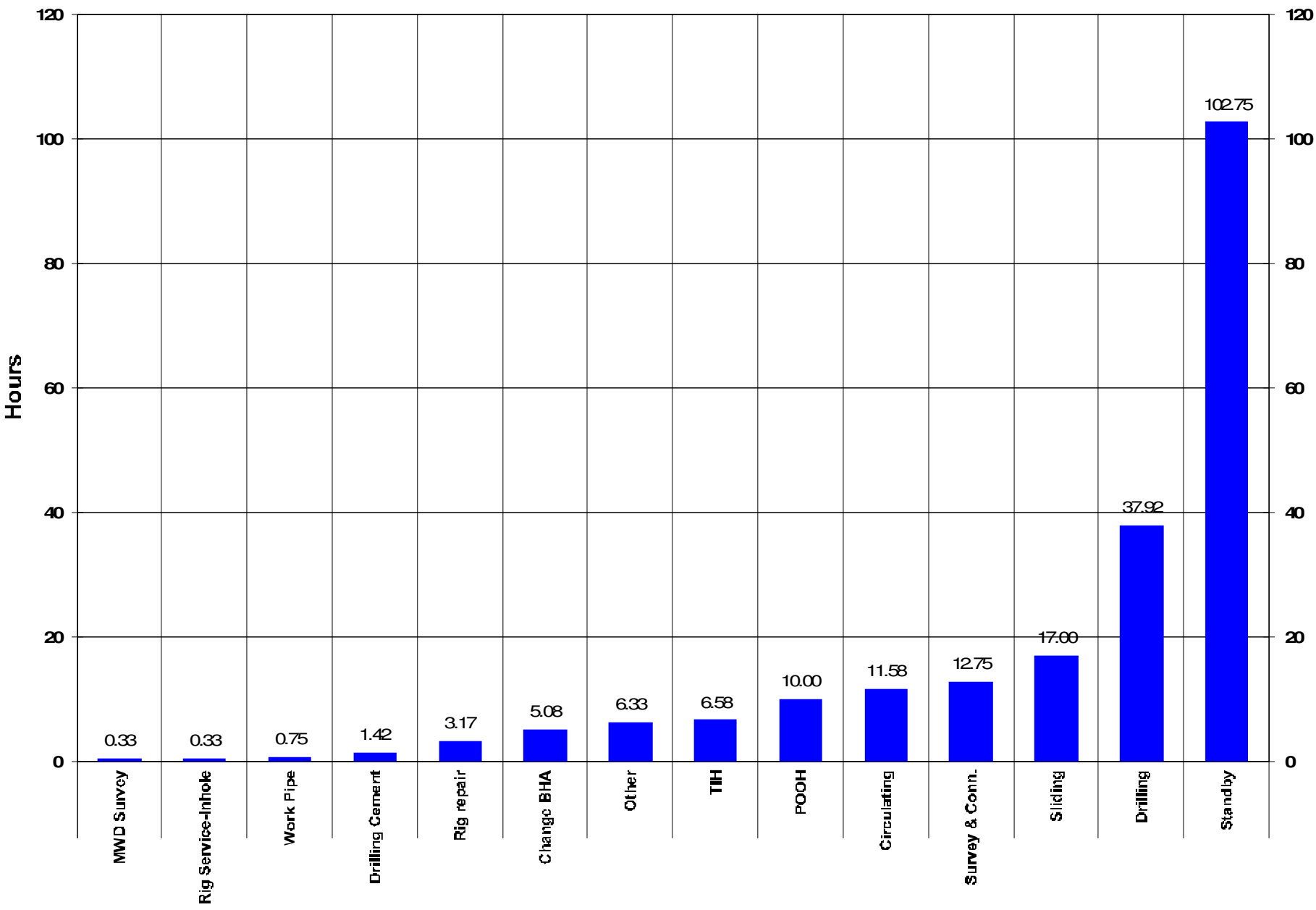
ROP vs BHA



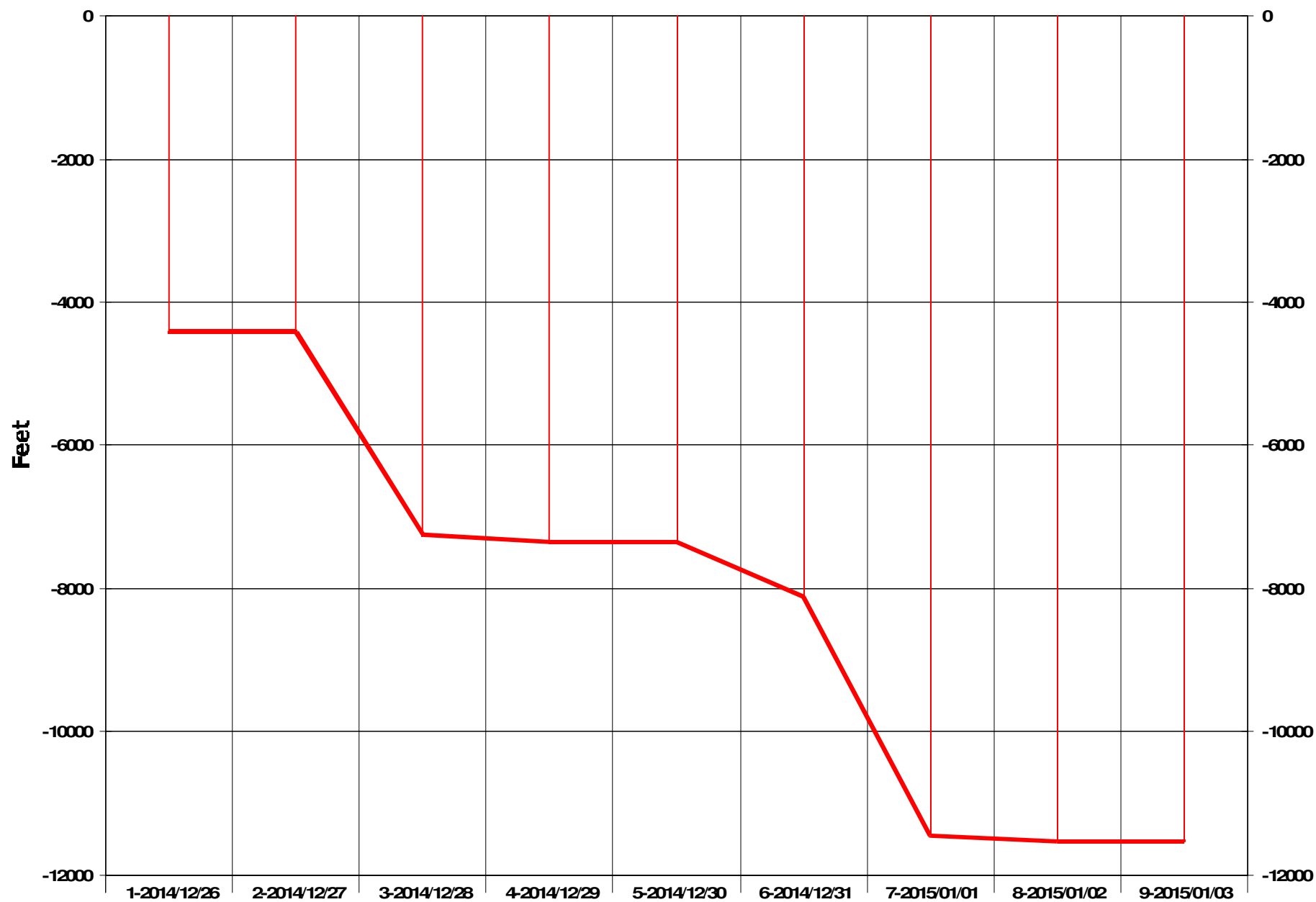
Depth vs BHA



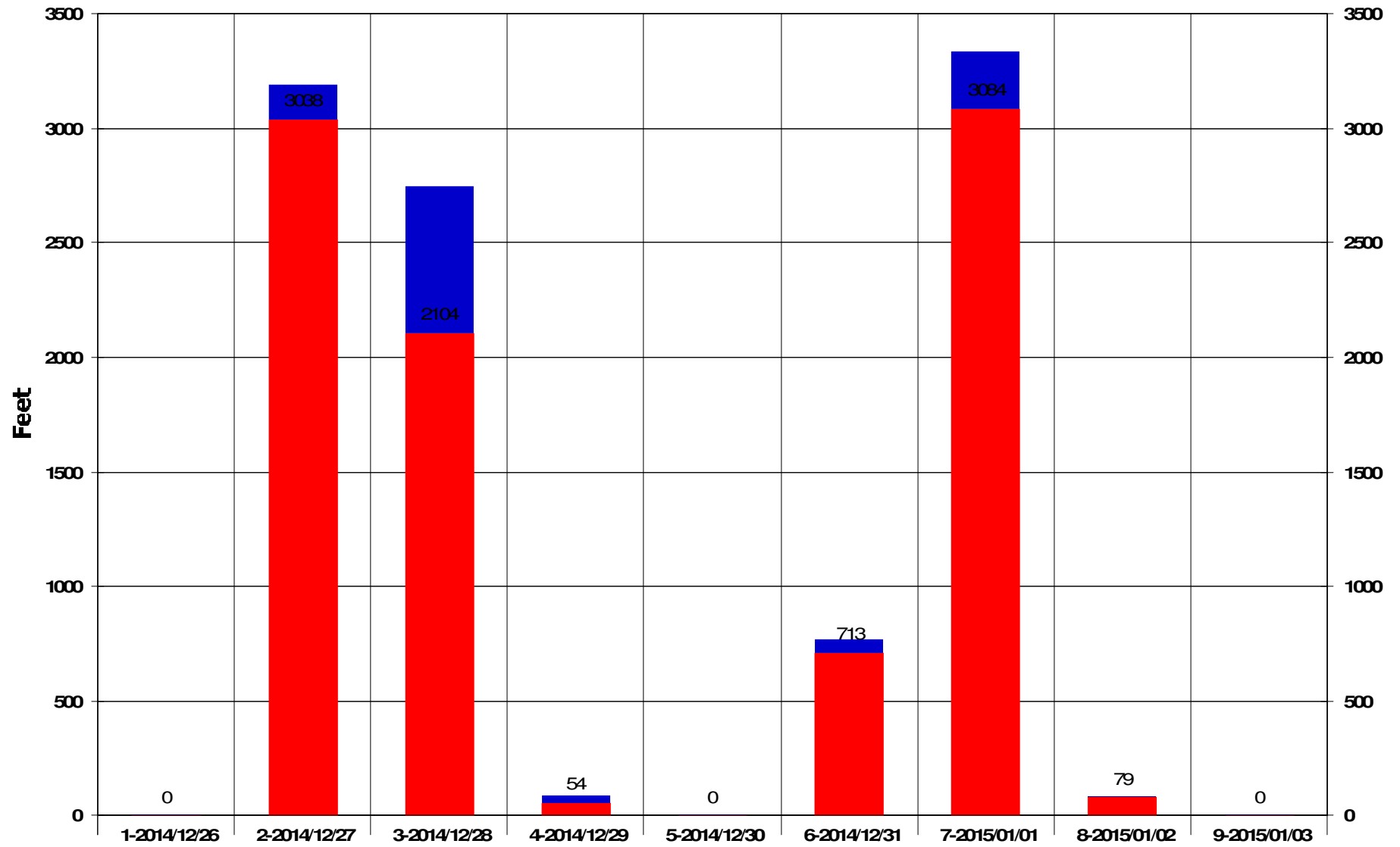
Activity Histogram



Measured Depth vs Days

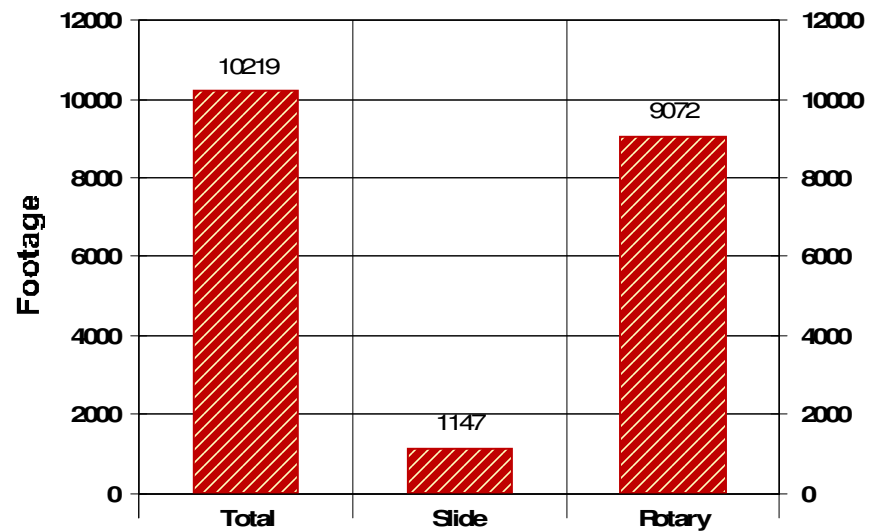


Daily Footage

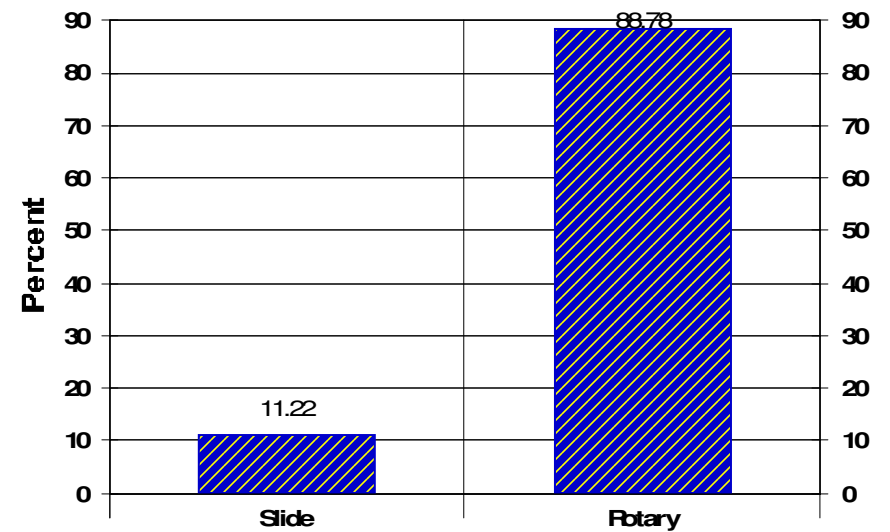


Rotary Drilling Siding

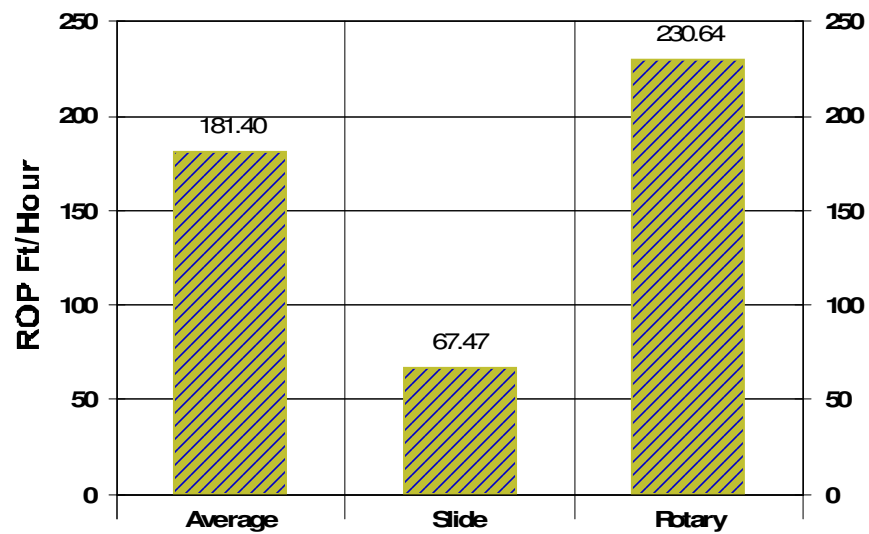
Footage Drilled Totals



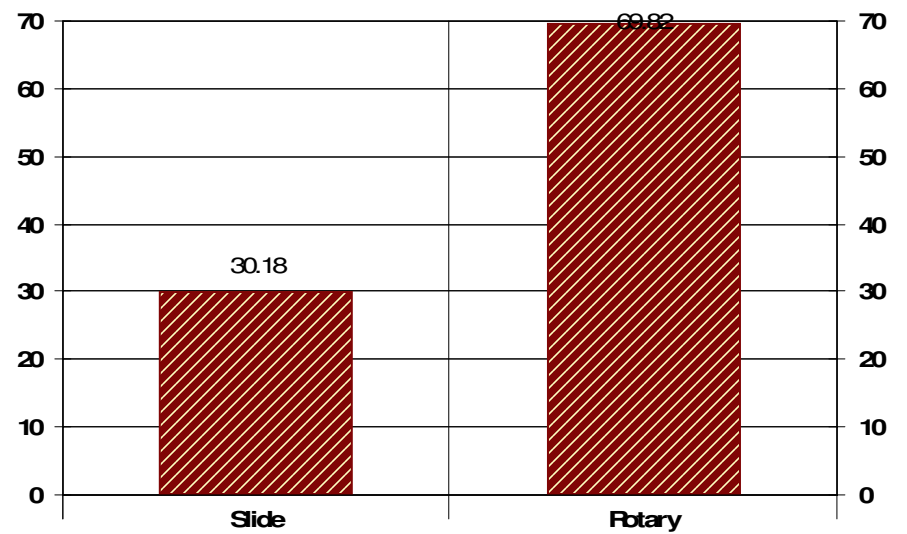
Footage Percent



Rate of Penetration Totals



Time Percent





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