



B.P.

La Plata County, CO NAD83

Taichert Pad

Taichert 31-01 #4

OH

Design: OH

Standard Survey Report

29 September, 2015



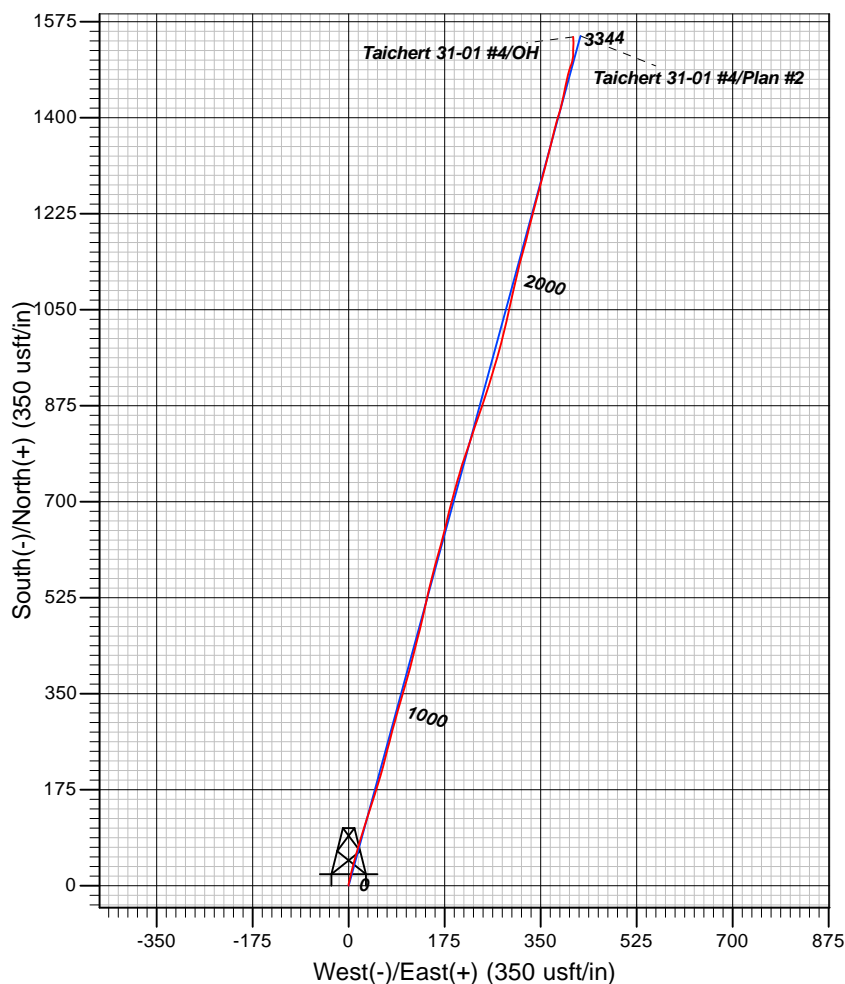
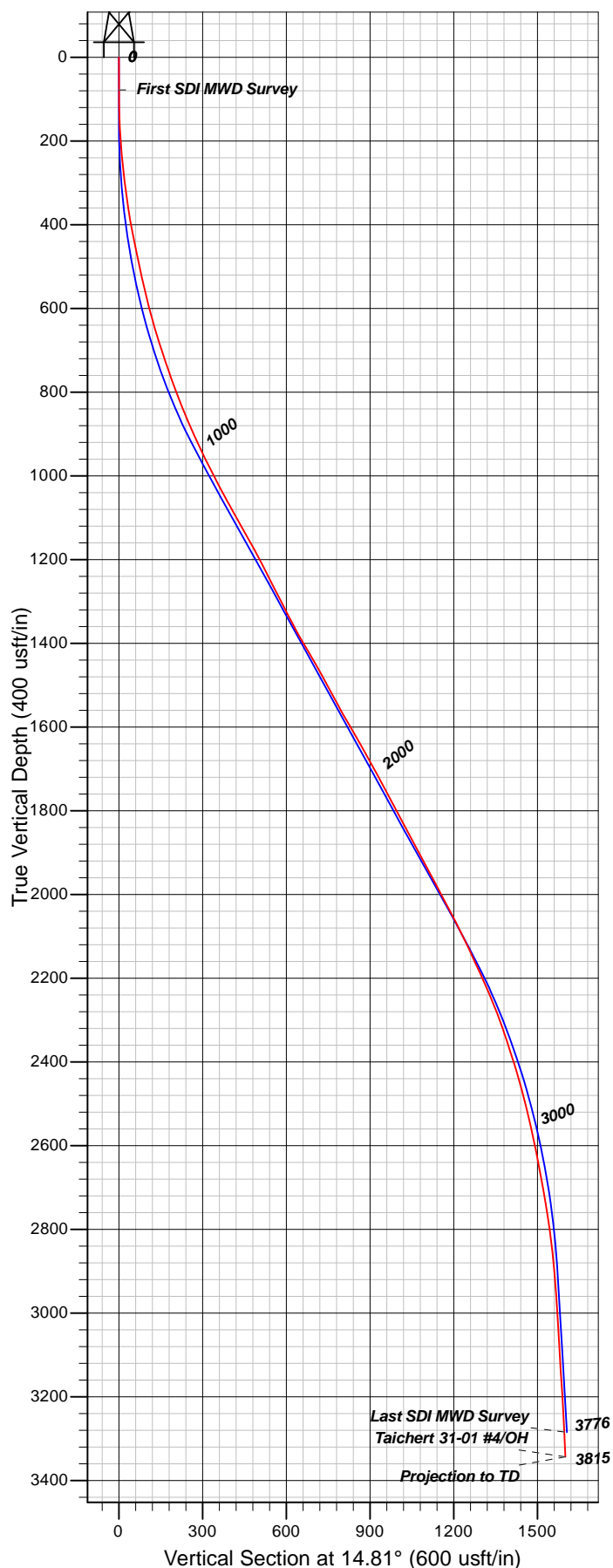
TABLE OF CONTENTS

- 1. Directional Plot and Surveys**
- 2. Daily Drilling Reports**
- 3. BHA Summary Reports and Slide Sheets**
- 4. Graphical Job History**
- 5. Support Staff**





Company: B.P.
Project: La Plata County, CO NAD83
Site: Taichert Pad
Well: Taichert 31-01 #4
Wellbore: OH
Design: OH



Well Details: Taichert 31-01 #4

+N/-S	+E/-W	North	East	Latitude	Longitude	Slot
0.00	0.00	1149712.51	2402645.20	37.0598475	-107.5472039	

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Taichert 31-01 #4, Grid North
Vertical (TVD) Reference: GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Calculation Method: Minimum Curvature

PROJECT DETAILS: La Plata County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone

System Datum: Mean Sea Level

Plan: OH

16:39, September 29 2015
Created By: Janie Collins



Company:	B.P.	Local Co-ordinate Reference:	Well Taichert 31-01 #4
Project:	La Plata County, CO NAD83	TVD Reference:	GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Site:	Taichert Pad	MD Reference:	GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Well:	Taichert 31-01 #4	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Project	La Plata County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		

Site		Taichert Pad					
Site Position:		Northing:	1,149,682.54	usft	Latitude:	37.0597651	
From:	Lat/Long	Easting:	2,402,643.85	usft	Longitude:	-107.5472063	
Position Uncertainty:	0.00	usft	Slot Radius:	13.20	in	Grid Convergence:	-1.26 °

Well	Taichert 31-01 #4					
Well Position	+N/-S	0.00 usft	Northing:	1,149,712.51 usft	Latitude:	37.0598475
	+E/-W	0.00 usft	Easting:	2,402,645.20 usft	Longitude:	-107.5472040
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,600.99 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	3/13/2015	9.48	63.70	50,464

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	14.81	

Survey Program	Date	9/29/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
78.00	3,815.00	Survey #1 - MWD Survey (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
78.00	0.76	331.41	78.00	0.45	-0.25	0.38	0.97	0.97	0.00	
First SDI MWD Survey										
107.00	1.37	347.81	106.99	0.96	-0.41	0.82	2.33	2.10	56.55	
137.00	2.66	1.38	136.97	2.01	-0.47	1.82	4.56	4.30	45.23	
166.00	3.81	13.59	165.93	3.62	-0.23	3.44	4.60	3.97	42.10	
197.00	5.63	12.05	196.82	6.11	0.33	5.99	5.88	5.87	-4.97	
227.00	7.51	16.35	226.62	9.43	1.19	9.42	6.47	6.27	14.33	
255.00	8.60	12.89	254.35	13.22	2.17	13.34	4.26	3.89	-12.36	
285.00	10.13	15.05	283.95	17.96	3.36	18.22	5.23	5.10	7.20	
315.00	11.09	14.54	313.43	23.30	4.77	23.74	3.22	3.20	-1.70	



Company:	B.P.	Local Co-ordinate Reference:	Well Taichert 31-01 #4
Project:	La Plata County, CO NAD83	TVD Reference:	GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Site:	Taichert Pad	MD Reference:	GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Well:	Taichert 31-01 #4	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
346.00	12.22	13.61	343.79	29.37	6.29	30.00	3.70	3.65	-3.00
377.00	13.49	13.77	374.02	36.07	7.92	36.90	4.10	4.10	0.52
407.00	14.99	14.62	403.09	43.23	9.73	44.28	5.05	5.00	2.83
438.00	16.45	15.19	432.93	51.34	11.89	52.68	4.74	4.71	1.84
467.00	17.66	15.71	460.66	59.54	14.16	61.18	4.21	4.17	1.79
541.00	18.82	15.90	530.94	81.83	20.47	84.34	1.57	1.57	0.26
572.00	19.27	17.12	560.24	91.52	23.35	94.45	1.94	1.45	3.94
602.00	20.29	18.37	588.47	101.19	26.44	104.59	3.68	3.40	4.17
633.00	22.36	18.54	617.35	111.88	30.01	115.84	6.68	6.68	0.55
663.00	23.70	18.28	644.95	123.02	33.72	127.55	4.48	4.47	-0.87
694.00	25.18	17.45	673.18	135.23	37.65	140.36	4.90	4.77	-2.68
724.00	26.27	17.43	700.20	147.65	41.55	153.37	3.63	3.63	-0.07
754.00	26.96	17.90	727.02	160.46	45.63	166.79	2.40	2.30	1.57
785.00	27.64	17.12	754.57	174.02	49.91	180.99	2.48	2.19	-2.52
815.00	28.72	16.74	781.01	187.57	54.03	195.15	3.65	3.60	-1.27
846.00	30.18	15.70	808.01	202.20	58.29	210.39	4.99	4.71	-3.35
876.00	31.05	15.30	833.83	216.93	62.37	225.66	2.98	2.90	-1.33
906.00	32.19	14.88	859.37	232.11	66.46	241.39	3.87	3.80	-1.40
937.00	33.10	14.57	885.47	248.29	70.71	258.11	2.98	2.94	-1.00
967.00	34.07	14.25	910.47	264.36	74.84	274.71	3.29	3.23	-1.07
999.00	35.50	14.78	936.75	282.03	79.42	292.96	4.57	4.47	1.66
1,030.00	36.71	15.00	961.79	299.68	84.11	311.23	3.93	3.90	0.71
1,061.00	38.15	15.91	986.41	317.84	89.14	330.07	4.98	4.65	2.94
1,093.00	38.34	16.93	1,011.54	336.84	94.74	349.87	2.06	0.59	3.19
1,125.00	37.96	16.14	1,036.71	355.79	100.36	369.63	1.93	-1.19	-2.47
1,156.00	38.65	15.75	1,061.03	374.27	105.64	388.84	2.36	2.23	-1.26
1,188.00	40.34	14.80	1,085.73	393.90	111.00	409.19	5.61	5.28	-2.97
1,282.00	39.81	13.68	1,157.65	452.55	125.89	469.70	0.95	-0.56	-1.19
1,376.00	37.72	12.83	1,230.95	509.84	139.39	528.53	2.29	-2.22	-0.90
1,407.00	36.95	12.85	1,255.59	528.17	143.57	547.32	2.48	-2.48	0.06
1,438.00	37.19	13.32	1,280.33	546.37	147.80	566.00	1.20	0.77	1.52
1,469.00	37.91	14.76	1,304.91	564.69	152.38	584.89	3.66	2.32	4.65
1,501.00	37.85	15.36	1,330.16	583.67	157.49	604.53	1.17	-0.19	1.88
1,533.00	38.10	15.41	1,355.39	602.65	162.71	624.22	0.79	0.78	0.16
1,564.00	39.61	14.79	1,379.53	621.43	167.78	643.67	5.03	4.87	-2.00
1,596.00	41.59	14.20	1,403.82	641.59	172.99	664.49	6.30	6.19	-1.84
1,627.00	41.72	13.94	1,426.99	661.58	178.00	685.10	0.70	0.42	-0.84
1,658.00	40.40	14.79	1,450.36	681.30	183.05	705.46	4.62	-4.26	2.74
1,690.00	39.58	14.96	1,474.88	701.18	188.33	726.02	2.59	-2.56	0.53
1,722.00	38.72	15.04	1,499.69	720.69	193.55	746.22	2.69	-2.69	0.25
1,753.00	38.76	15.43	1,523.87	739.41	198.65	765.62	0.80	0.13	1.26
1,785.00	39.48	16.80	1,548.70	758.80	204.26	785.81	3.52	2.25	4.28
1,816.00	40.77	18.48	1,572.40	777.84	210.32	805.76	5.43	4.16	5.42



Company:	B.P.	Local Co-ordinate Reference:	Well Taichert 31-01 #4
Project:	La Plata County, CO NAD83	TVD Reference:	GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Site:	Taichert Pad	MD Reference:	GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Well:	Taichert 31-01 #4	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,847.00	40.87	18.73	1,595.86	797.05	216.78	825.98	0.62	0.32	0.81	
1,879.00	40.85	18.42	1,620.07	816.89	223.45	846.87	0.64	-0.06	-0.97	
1,910.00	40.63	18.73	1,643.55	836.07	229.89	867.06	0.96	-0.71	1.00	
1,941.00	40.13	18.85	1,667.17	855.08	236.36	887.09	1.63	-1.61	0.39	
1,973.00	40.01	18.63	1,691.66	874.59	242.98	907.64	0.58	-0.38	-0.69	
2,004.00	39.49	18.40	1,715.49	893.38	249.28	927.42	1.74	-1.68	-0.74	
2,036.00	39.19	17.64	1,740.24	912.67	255.55	947.68	1.77	-0.94	-2.38	
2,067.00	38.92	16.68	1,764.31	931.34	261.31	967.19	2.14	-0.87	-3.10	
2,098.00	38.19	16.87	1,788.55	949.83	266.89	986.50	2.39	-2.35	0.61	
2,129.00	38.07	16.42	1,812.94	968.17	272.37	1,005.63	0.98	-0.39	-1.45	
2,161.00	38.34	13.80	1,838.09	987.28	277.53	1,025.42	5.13	0.84	-8.19	
2,193.00	38.49	13.01	1,863.16	1,006.62	282.14	1,045.30	1.60	0.47	-2.47	
2,225.00	38.77	13.57	1,888.16	1,026.06	286.73	1,065.27	1.40	0.88	1.75	
2,256.00	39.13	13.19	1,912.27	1,045.02	291.24	1,084.75	1.39	1.16	-1.23	
2,287.00	38.75	12.27	1,936.38	1,064.02	295.53	1,104.22	2.23	-1.23	-2.97	
2,319.00	38.83	11.98	1,961.32	1,083.62	299.75	1,124.24	0.62	0.25	-0.91	
2,350.00	38.37	13.91	1,985.55	1,102.47	304.08	1,143.57	4.16	-1.48	6.23	
2,382.00	38.09	14.56	2,010.69	1,121.66	308.94	1,163.37	1.53	-0.88	2.03	
2,413.00	38.60	14.17	2,035.00	1,140.29	313.72	1,182.60	1.82	1.65	-1.26	
2,445.00	38.36	14.65	2,060.05	1,159.58	318.67	1,202.51	1.20	-0.75	1.50	
2,476.00	36.62	14.99	2,084.65	1,177.82	323.50	1,221.38	5.65	-5.61	1.10	
2,508.00	35.77	14.62	2,110.47	1,196.09	328.32	1,240.28	2.74	-2.66	-1.16	
2,539.00	35.17	14.12	2,135.72	1,213.51	332.79	1,258.27	2.15	-1.94	-1.61	
2,571.00	34.35	14.27	2,162.01	1,231.20	337.26	1,276.51	2.58	-2.56	0.47	
2,602.00	34.24	14.51	2,187.62	1,248.12	341.60	1,293.98	0.56	-0.35	0.77	
2,633.00	33.66	15.24	2,213.33	1,264.85	346.05	1,311.29	2.29	-1.87	2.35	
2,664.00	32.55	14.96	2,239.30	1,281.20	350.46	1,328.22	3.61	-3.58	-0.90	
2,696.00	31.06	14.81	2,266.49	1,297.50	354.79	1,345.08	4.66	-4.66	-0.47	
2,727.00	29.43	14.53	2,293.27	1,312.60	358.75	1,360.70	5.28	-5.26	-0.90	
2,758.00	27.86	14.54	2,320.48	1,326.99	362.48	1,375.56	5.06	-5.06	0.03	
2,789.00	26.45	14.25	2,348.06	1,340.69	365.99	1,389.71	4.57	-4.55	-0.94	
2,821.00	25.52	13.69	2,376.83	1,354.30	369.38	1,403.72	3.01	-2.91	-1.75	
2,851.00	25.02	13.40	2,403.95	1,366.75	372.38	1,416.53	1.72	-1.67	-0.97	
2,882.00	23.68	14.50	2,432.20	1,379.15	375.46	1,429.31	4.56	-4.32	3.55	
2,913.00	22.22	15.82	2,460.74	1,390.82	378.61	1,441.39	4.99	-4.71	4.26	
2,945.00	21.15	16.20	2,490.48	1,402.18	381.87	1,453.21	3.37	-3.34	1.19	
2,976.00	19.78	15.19	2,519.52	1,412.62	384.81	1,464.05	4.56	-4.42	-3.26	
3,007.00	18.80	13.87	2,548.78	1,422.53	387.38	1,474.29	3.46	-3.16	-4.26	
3,038.00	17.84	13.01	2,578.21	1,432.00	389.65	1,484.03	3.22	-3.10	-2.77	
3,069.00	17.08	12.33	2,607.78	1,441.08	391.69	1,493.33	2.54	-2.45	-2.19	
3,100.00	16.02	12.33	2,637.49	1,449.71	393.57	1,502.15	3.42	-3.42	0.00	
3,132.00	15.54	12.28	2,668.29	1,458.21	395.43	1,510.84	1.50	-1.50	-0.16	
3,163.00	15.33	10.82	2,698.17	1,466.29	397.08	1,519.08	1.42	-0.68	-4.71	



Company:	B.P.	Local Co-ordinate Reference:	Well Taichert 31-01 #4
Project:	La Plata County, CO NAD83	TVD Reference:	GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Site:	Taichert Pad	MD Reference:	GL 6601' & RKB 11' @ 6611.99usft (Aztec 703)
Well:	Taichert 31-01 #4	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,194.00	14.64	11.89	2,728.12	1,474.15	398.66	1,527.08	2.40	-2.23	3.45	
3,225.00	12.99	14.90	2,758.22	1,481.35	400.36	1,534.48	5.80	-5.32	9.71	
3,256.00	11.92	18.07	2,788.49	1,487.76	402.25	1,541.16	4.09	-3.45	10.23	
3,288.00	11.19	19.95	2,819.84	1,493.82	404.34	1,547.55	2.57	-2.28	5.88	
3,320.00	9.73	18.76	2,851.31	1,499.30	406.26	1,553.34	4.61	-4.56	-3.72	
3,351.00	8.26	14.80	2,881.93	1,503.93	407.68	1,558.18	5.14	-4.74	-12.77	
3,382.00	7.01	8.08	2,912.65	1,507.96	408.51	1,562.29	4.95	-4.03	-21.68	
3,414.00	6.42	5.39	2,944.43	1,511.67	408.95	1,565.99	2.09	-1.84	-8.41	
3,445.00	5.85	3.07	2,975.25	1,514.98	409.20	1,569.25	2.00	-1.84	-7.48	
3,477.00	4.99	358.69	3,007.11	1,518.00	409.26	1,572.18	2.98	-2.69	-13.69	
3,508.00	4.86	353.05	3,038.00	1,520.65	409.07	1,574.69	1.62	-0.42	-18.19	
3,539.00	5.30	358.84	3,068.87	1,523.38	408.88	1,577.29	2.18	1.42	18.68	
3,571.00	5.55	4.91	3,100.73	1,526.40	408.98	1,580.24	1.95	0.78	18.97	
3,603.00	5.94	3.97	3,132.57	1,529.60	409.23	1,583.39	1.25	1.22	-2.94	
3,634.00	5.48	3.72	3,163.42	1,532.67	409.43	1,586.41	1.49	-1.48	-0.81	
3,665.00	5.13	1.43	3,194.28	1,535.54	409.57	1,589.22	1.32	-1.13	-7.39	
3,697.00	4.75	358.71	3,226.17	1,538.29	409.57	1,591.88	1.39	-1.19	-8.50	
3,728.00	4.32	357.07	3,257.07	1,540.74	409.48	1,594.23	1.45	-1.39	-5.29	
3,755.00	4.33	357.30	3,283.99	1,542.77	409.38	1,596.17	0.07	0.04	0.85	
Last SDI MWD Survey										
3,815.00	4.33	357.30	3,343.82	1,547.30	409.17	1,600.49	0.00	0.00	0.00	
Projection to TD										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
78.00	78.00	0.45	-0.25	First SDI MWD Survey	
3,755.00	3,283.99	1,542.77	409.38	Last SDI MWD Survey	
3,815.00	3,343.82	1,547.30	409.17	Projection to TD	

Checked By: _____ Approved By: _____ Date: _____



JOB NO.:	330915DEF311787	Report Time:	2400	1 of 6
COMPANY:	B.P.	API JOB #	05 067 09938	
LOCATION:	La Plata	WORK ORDER#	311787	
RIG NAME:	Aztec 507	FIELD:	La Plata	
STATE:	Co.	Township:	SEC 31 T33N 606W	
COUNTY:	La Plata	SECT\	RANGE:	X3-01664 33
WELL NAME:	Taichert 31-01 #4			

From Monday, September 14, 2015 at 0000 to Monday, September 14, 2015 at 2400

DRILLING SUMMARY				Drilling Parameters								
Start Depth	0.00	Rotary Hours	0.00	WOB	0	Pick UP	0	Slack Off	0	SPM		
End Depth	0.00	Circulating Hours	0.00	RAB	0	SPP	0	FlowRate	0 - 0	0		
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data								
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type				PV	0	SOLID	0	
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	0	GAS	0	YP	0	BHT°	0	
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	0	SAND	0	PH	0	Flow T°	0	
Below Rotary Hrs.	11.00	Percent Slide:	NA	Chlorides	0	WL	0			Oil %	0	
PERSONNEL				cASING					BHA			
Lead Directional :	Mark Houston			Size	Lb/ft	Set Depth		N/A				
Second Directional :	David Hensley			Signature:								
MWD Operator1	Robert Cuevas											
MWD Operator2	Luke Kristy											
Directional Company:	SDI											
Geologist:												
Company Man:	Carey Carr											
Incl. In:	0	Azm. In:	0	Incl. Out:	0	Azm. Out:	0					

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
14-Sep-15	13:00	24:00	11.00	0	0	Other	Moved rig



JOB NO.:	330915DEF311787	Report Time:	2400	2 of 6
COMPANY:	B.P.	API JOB #	05 067 09938	
LOCATION:	La Plata	WORK ORDER#	311787	
RIG NAME:	Aztec 507	FIELD:	La Plata	
STATE:	Co.	Township:	SEC 31 T33N 606W	
COUNTY:	La Plata	SECT\	RANGE: X3-01664	33
WELL NAME:	Taichert 31-01 #4			

From Tuesday, September 15, 2015 at 0000 to Tuesday, September 15, 2015 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	106.00	Rotary Hours	4.37	WOB	0	Pick UP	50	Slack Off	40	SPM	
End Depth	522.00	Circulating Hours	1.03	RAB	45	SPP	700	FlowRate	0 - 500	97	
Total Drilled:	416.00	Avg. Total ROP:	64.00	Mud Data							
Total Rotary Drilled:	237.00	Avg. Rotary ROP:	54.27	Type				PV	0	SOLID	0
Total Drilled Sliding:	179.00	Avg. Slide ROP:	83.91	Weight	0	GAS	0	YP	0	BHT°	0
Slide Hours:	2.13	Percent Rotary:	56.97	Viscosity	0	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	43.03	Chlorides	0	WL	0			Oil %	0
PERSONNEL				cASING					BHA		
Lead Directional :	Mark Houston			Size	Lb/ft	Set Depth		BHA # 1: 12 1/4 PDC MI 616 , Bit Sub, 6 1/2 1.75 3.0 7:8 W/Stab , 12" Stab, 10' NMPC, Support sub, NMDC, Gap sub, NMDC,			
Second Directional :	David Hensley			Signature:							
MWD Operator1	Robert Cuevas										
MWD Operator2	Luke Kristy										
Directional Company:	SDI										
Geologist:											
Company Man:	Carey Carr										
Incl. In:	0.76	Azm. In:	331.41	Incl. Out:	17.66	Azm. Out:	15.71				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
15-Sep-15	00:00	02:00	2.00	0	0	Other	Slip cut drilling line
15-Sep-15	02:00	05:50	3.83	0	0	Other	Finish rigging up strap collars
15-Sep-15	05:50	07:40	1.83	106	106	Drilling	Other drilled 12 1/4' hole to 106'
15-Sep-15	07:40	08:15	0.58	106	106	POOH	POOH
15-Sep-15	08:15	09:50	1.58	106	106	Change BHA	Change BHA P/U BHA #1
15-Sep-15	09:50	10:10	0.33	106	106	Other	Other work on pason
15-Sep-15	10:10	10:19	0.15	106	121	Sliding	Slide F/106' T/121'
15-Sep-15	10:19	10:27	0.13	121	133	Drilling	Drilling - (WOB:0;GPM :0;RPM:0)
15-Sep-15	10:27	10:31	0.07	133	133	Survey & Conn.	Survey & Conn.@107' Inc 1.37° Azm 347.81°
15-Sep-15	10:31	10:39	0.13	133	148	Sliding	Sliding - (WOB:0; :500;TFO:15m))
15-Sep-15	10:39	10:48	0.15	148	162	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	10:48	10:53	0.08	162	162	Survey & Conn.	Survey & Conn.@137' Inc 2.66° Azm 1.38°
15-Sep-15	10:53	11:01	0.13	162	177	Sliding	Sliding - (WOB:0; :500;TFO:15m))
15-Sep-15	11:01	11:11	0.17	177	192	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	11:11	11:27	0.27	192	192	Survey & Conn.	Survey & Conn.@166' Inc 3.81° Azm 13.59°
15-Sep-15	11:27	11:38	0.18	192	207	Sliding	Sliding - (WOB:0; :500;TFO:15m))
15-Sep-15	11:38	11:47	0.15	207	221	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	11:47	11:55	0.13	221	221	Survey & Conn.	Survey & Conn.@197' Inc 5.63° Azm 12.05°
15-Sep-15	11:55	12:07	0.20	221	236	Sliding	Sliding - (WOB:0; :500;TFO:15m))
15-Sep-15	12:07	12:17	0.17	236	252	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	12:17	12:22	0.08	252	252	Survey & Conn.	Survey & Conn.@227' Inc 7.51° Azm 16.35°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
15-Sep-15	12:22	12:30	0.13	252	262	Sliding	Sliding - (WOB:0; :500;TFO:360))
15-Sep-15	13:49	13:54	0.08	370	370	Survey & Conn.	Survey & Conn.@346' Inc 12.22° Azm 13.61°
15-Sep-15	13:54	14:02	0.13	370	384	Sliding	Sliding - (WOB:0; :500;TFO:360)
15-Sep-15	14:02	14:12	0.17	384	401	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	14:12	14:18	0.10	401	401	Survey & Conn.	Survey & Conn.@377' Inc 13.49° Azm 13.77°
15-Sep-15	14:18	14:29	0.18	401	414	Sliding	Sliding - (WOB:0;GPM :500;TFO:360)
15-Sep-15	14:29	14:40	0.18	414	432	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	14:40	14:45	0.08	432	432	Survey & Conn.	Survey & Conn.@425' Inc 16.37° Azm 14.74°
15-Sep-15	14:45	14:58	0.22	432	445	Sliding	Sliding - (WOB:0;GPM :500;TFO:360)
15-Sep-15	14:58	15:09	0.18	445	462	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	15:09	15:14	0.08	462	462	Survey & Conn.	Survey & Conn.@425' Inc 16.37° Azm 14.74°
15-Sep-15	15:14	15:21	0.12	462	472	Sliding	Sliding - (WOB:0;GPM :500;TFO:360)
15-Sep-15	15:21	15:28	0.12	472	480	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	15:28	16:00	0.53	480	480	Circulating	Circulating (TVD not depth enough)
15-Sep-15	16:00	16:09	0.15	480	493	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	16:09	16:13	0.07	493	493	Survey & Conn.	Survey & Conn.@480' Inc 18.24° Azm 15.26°
15-Sep-15	16:13	16:24	0.18	493	504	Sliding	Sliding - (WOB:0;GPM :500;TFO:360)
15-Sep-15	16:24	16:40	0.27	504	522	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	16:40	17:10	0.50	522	522	Circulating	Circulating
15-Sep-15	17:10	19:00	1.83	522	522	POOH	POOH down directional tools
15-Sep-15	19:00	24:00	5.00	522	522	Other	Perform CSG Operations
15-Sep-15	12:30	12:42	0.20	262	282	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
15-Sep-15	12:42	12:47	0.08	282	282	Survey & Conn.	Survey & Conn.@255' Inc 8.6° Azm 12.89°
15-Sep-15	12:47	12:54	0.12	282	292	Sliding	Sliding - (WOB:0;GPM :500;TFO:360)
15-Sep-15	12:54	13:05	0.18	292	310	Drilling	Drilling - (WOB:0; :500;RPM:60)
15-Sep-15	13:05	13:10	0.08	310	310	Survey & Conn.	Survey & Conn.@285' Inc 10.13° Azm 15.05°
15-Sep-15	13:10	13:17	0.12	310	322	Sliding	Sliding - (WOB:0; :500;TFO:360)
15-Sep-15	13:17	13:26	0.15	322	340	Drilling	Drilling - (WOB:0; :500;RPM:60)
15-Sep-15	13:26	13:31	0.08	340	340	Survey & Conn.	Survey & Conn.@315' Inc 11.09° Azm 14.54°
15-Sep-15	13:31	13:39	0.13	340	351	Sliding	Sliding - (WOB:0; :500;TFO:360)
15-Sep-15	13:39	13:49	0.17	351	370	Drilling	Drilling - (WOB:0; :500;RPM:60)



JOB NO.:	330915DEF311787	Report Time:	2400	3 of 6
COMPANY:	B.P.	API JOB #	05 067 09938	
LOCATION:	La Plata	WORK ORDER#	311787	
RIG NAME:	Aztec 507	FIELD:	La Plata	
STATE:	Co.	Township:	SEC 31 T33N 606W	
COUNTY:	La Plata	SECT\	RANGE:	X3-01664 33
WELL NAME:	Taichert 31-01 #4			

From Wednesday, September 16, 2015 at 0000 to Wednesday, September 16, 2015 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	10	Pick UP	50	Slack Off	40	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	45	SPP	700	FlowRate	500 - 500	97	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	Water base			PV	10	SOLID	0
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	8.8	GAS	0	YP	7	BHT°	100
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	39	SAND	0.05	PH	9.3	Flow T°	95
Below Rotary Hrs.	2.00	Percent Slide:	NA	Chlorides	300	WL	8			Oil %	0
PERSONNEL				cASING				BHA			
Lead Directional :	Mark Houston			Size	Lb/ft	Set Depth		N/A			
Second Directional :	David Hensley			Signature:							
MWD Operator1	Robert Cuevas										
MWD Operator2	Luke Kristy										
Directional Company:	SDI										
Geologist:											
Company Man:	Carey Carr										
Incl. In:	0	Azm. In:	0	Incl. Out:	0	Azm. Out:	0				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
16-Sep-15	00:00	22:00	22.00	522	522	N/U BOPS	N/U BOPS & Test
16-Sep-15	22:00	24:00	2.00	522	522	Other	M/U Rig BHA TIH C/O CMT F/ 332' T/ 470'



JOB NO.:	330915DEF311787	Report Time:	2400	4 of 6
COMPANY:	B.P.	API JOB #	05 067 09938	
LOCATION:	La Plata	WORK ORDER#	311787	
RIG NAME:	Aztec 507	FIELD:	La Plata	
STATE:	Co.	Township:	SEC 31 T33N 606W	
COUNTY:	La Plata	SECT\	RANGE: X3-01664	33
WELL NAME:	Taichert 31-01 #4			

From Thursday, September 17, 2015 at 0000 to Thursday, September 17, 2015 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	522.00	Rotary Hours	8.98	WOB	25	Pick UP	92	Slack Off	54	SPM	
End Depth	2942.00	Circulating Hours	0.00	RAB	64	SPP	1600	FlowRate	500 - 500	97	
Total Drilled:	2420.00	Avg. Total ROP:	192.06	Mud Data							
Total Rotary Drilled:	1964.00	Avg. Rotary ROP:	218.63	Type	Water base			PV	14	SOLID	0
Total Drilled Sliding:	456.00	Avg. Slide ROP:	126.08	Weight	8.85	GAS	0	YP	24	BHT°	103
Slide Hours:	3.62	Percent Rotary:	81.16	Viscosity	46	SAND	0.05	PH	8	Flow T°	100
Below Rotary Hrs.	24.00	Percent Slide:	18.84	Chlorides	700	WL	8			Oil %	0
PERSONNEL				cASING				BHA			
Lead Directional :	Mark Houston			Size	Lb/ft	Set Depth		BHA # 2:MM55 5x12 jets, 6 1/2 1.5 3.3 7:8, NMXO, PRT SUB, NMDC, Support sub, Gap sub, NMDC,			
Second Directional :	David Hensley			Signature:							
MWD Operator1	Robert Cuevas										
MWD Operator2	Luke Kristy										
Directional Company:	SDI										
Geologist:											
Company Man:	Carey Carr										
Incl. In:	0	Azm. In:	0	Incl. Out:	0	Azm. Out:	0				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Sep-15	00:00	00:30	0.50	522	522	Other	C/O CMT,FC Thru Shoe T/ 522' With rig BHA
17-Sep-15	00:30	01:00	0.50	522	522	Other	Circulate
17-Sep-15	01:00	02:00	1.00	522	522	POOH	POOH
17-Sep-15	02:00	04:30	2.50	522	522	Change BHA	P/U M/U Directional tools PRT Tool
17-Sep-15	04:30	05:27	0.95	522	522	TIH	TIH
17-Sep-15	05:27	05:33	0.10	522	540	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	05:33	07:00	1.45	540	540	Rig repair	Rig repair (work on shakers)
17-Sep-15	07:00	07:09	0.15	540	571	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	07:09	07:12	0.05	571	571	Survey & Conn.	Survey & Conn.@541' Inc 18.82° Azm 15.9°
17-Sep-15	07:12	07:18	0.10	571	583	Sliding	Sliding - (WOB:0;GPM :500;TFO:360)
17-Sep-15	07:18	07:21	0.05	583	601	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	07:21	07:24	0.05	601	601	Survey & Conn.	Survey & Conn.@572' Inc 19.27° Azm 17.12°
17-Sep-15	07:24	07:29	0.08	601	614	Sliding	Sliding - (WOB:0;GPM :500;TFO:360)
17-Sep-15	07:29	07:33	0.07	614	632	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	07:33	07:37	0.07	632	632	Survey & Conn.	Survey & Conn.@602' Inc 20.29° Azm 18.37°
17-Sep-15	07:37	07:41	0.07	632	645	Sliding	Sliding - (WOB:0;GPM :500;TFO:360)
17-Sep-15	07:41	07:48	0.12	645	662	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	07:48	07:51	0.05	662	662	Survey & Conn.	Survey & Conn.@633' Inc 22.36° Azm 18.54°
17-Sep-15	07:51	07:57	0.10	662	676	Sliding	Sliding - (WOB:0;GPM :500;TFO:360))
17-Sep-15	07:57	08:02	0.08	676	693	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	08:02	08:05	0.05	693	693	Survey & Conn.	Survey & Conn.@663' Inc 23.7° Azm 18.28°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Sep-15	08:05	08:09	0.07	693	700	Sliding	Sliding - (WOB:0;GPM :500;TFO:10L)
17-Sep-15	08:09	08:15	0.10	700	723	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	08:15	08:18	0.05	723	723	Survey & Conn.	Survey & Conn.@694' Inc 25.18° Azm 17.45°
17-Sep-15	08:18	08:22	0.07	723	733	Sliding	Sliding - (WOB:0;GPM :500;TFO:10L)
17-Sep-15	08:22	08:27	0.08	733	754	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	08:27	08:30	0.05	754	754	Survey & Conn.	Survey & Conn.@724' Inc 26.27° Azm 17.43°
17-Sep-15	08:30	08:34	0.07	754	762	Sliding	Sliding - (WOB:0;GPM :500;TFO:10L)
17-Sep-15	08:48	08:51	0.05	814	814	Survey & Conn.	Survey & Conn.@785' Inc 27.64° Azm 17.12°
17-Sep-15	08:51	08:56	0.08	814	826	Sliding	Sliding - (WOB:0;GPM :500;TFO:15L)
17-Sep-15	08:56	09:01	0.08	826	845	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	09:01	09:06	0.08	845	845	Survey & Conn.	Survey & Conn.@815' Inc 28.72° Azm 16.74°
17-Sep-15	09:06	09:11	0.08	845	857	Sliding	Sliding - (WOB:0;GPM :500;TFO:15L))
17-Sep-15	09:11	09:16	0.08	857	875	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	09:16	09:19	0.05	875	875	Survey & Conn.	Survey & Conn.@846' Inc 30.18° Azm 15.7°
17-Sep-15	09:19	09:22	0.05	875	886	Sliding	Sliding - (WOB:0;GPM :500;TFO:15L)
17-Sep-15	09:22	09:25	0.05	886	906	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	09:25	09:28	0.05	906	906	Survey & Conn.	Survey & Conn.@876' Inc 31.05° Azm 15.3°
17-Sep-15	09:28	09:32	0.07	906	917	Sliding	Sliding - (WOB:0;GPM :500;TFO:30L)
17-Sep-15	09:32	09:35	0.05	917	936	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	09:35	09:38	0.05	936	936	Survey & Conn.	Survey & Conn.@906' Inc 32.19° Azm 14.88°
17-Sep-15	09:38	09:43	0.08	936	949	Sliding	Sliding - (WOB:0;GPM :500;TFO:15L)
17-Sep-15	09:43	09:46	0.05	949	966	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	09:46	09:49	0.05	966	966	Survey & Conn.	Survey & Conn.@937' Inc 33.1° Azm 14.57°
17-Sep-15	09:49	09:55	0.10	966	978	Sliding	Sliding - (WOB:0;GPM :500;TFO:15L)
17-Sep-15	09:55	09:59	0.07	978	997	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	09:59	10:03	0.07	997	997	Survey & Conn.	Survey & Conn.@967' Inc 34.07° Azm 14.25°
17-Sep-15	10:03	10:07	0.07	997	1010	Sliding	Sliding - (WOB:0;GPM :500;TFO:15L)
17-Sep-15	10:07	10:10	0.05	1010	1027	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	10:10	10:13	0.05	1027	1027	Survey & Conn.	Survey & Conn.@999' Inc 35.5° Azm 14.78°
17-Sep-15	10:53	10:58	0.08	1153	1167	Sliding	Sliding - (WOB:0;GPM :500;TFO:10R))
17-Sep-15	10:58	11:03	0.08	1167	1185	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	11:03	11:06	0.05	1185	1185	Survey & Conn.	Survey & Conn.@1156' Inc 38.65° Azm 15.75°
17-Sep-15	11:06	11:11	0.08	1185	1199	Sliding	Sliding - (WOB:0;GPM :500;TFO:10R))
17-Sep-15	11:11	11:16	0.08	1199	1216	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	11:16	11:19	0.05	1216	1216	Survey & Conn.	Survey & Conn.@1188' Inc 40.34° Azm 14.8°
17-Sep-15	11:19	11:23	0.07	1216	1248	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	11:23	11:26	0.05	1248	1248	Survey & Conn.	Survey & Conn.@1188' Inc 40.34° Azm 14.8°
17-Sep-15	11:26	11:50	0.40	1248	1342	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	11:50	11:53	0.05	1342	1342	Survey & Conn.	Survey & Conn.@1282' Inc 39.81° Azm 13.68°
17-Sep-15	11:53	12:15	0.37	1342	1436	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	12:15	12:18	0.05	1436	1436	Survey & Conn.	Survey & Conn.@1407' Inc 36.95° Azm 12.85°
17-Sep-15	12:18	12:24	0.10	1436	1449	Sliding	Sliding - (WOB:0;GPM :500;TFO:10L))
17-Sep-15	12:24	12:28	0.07	1449	1467	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	12:28	12:31	0.05	1467	1467	Survey & Conn.	Survey & Conn.@1438' Inc 37.19° Azm 13.32°
17-Sep-15	12:31	12:36	0.08	1467	1479	Sliding	Sliding - (WOB:0;GPM :500;TFO:30R)
17-Sep-15	12:36	12:41	0.08	1479	1498	Drilling	Drilling - (WOB:0; :500;RPM:60)
17-Sep-15	12:41	12:44	0.05	1498	1498	Survey & Conn.	Survey & Conn.@1469' Inc 37.91° Azm 14.76°
17-Sep-15	12:44	12:48	0.07	1498	1529	Drilling	Drilling - (WOB:0; :500;RPM:60)
17-Sep-15	12:48	12:55	0.12	1529	1529	Survey & Conn.	Survey & Conn.@1501' Inc 37.85° Azm 15.36°
17-Sep-15	12:55	13:02	0.12	1529	1542	Sliding	Sliding - (WOB:0; :500;TFO:30R)
17-Sep-15	13:02	13:05	0.05	1542	1561	Drilling	Drilling - (WOB:0; :500;RPM:60)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Sep-15	13:45	13:49	0.07	1664	1687	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	13:49	13:51	0.03	1687	1687	Survey & Conn.	Survey & Conn.@ 1658' Inc 40.4° Azm 14.79°
17-Sep-15	13:51	13:57	0.10	1687	1718	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	13:57	14:00	0.05	1718	1718	Survey & Conn.	Survey & Conn.@ 1690' Inc 39.58° Azm 14.96°
17-Sep-15	14:00	14:06	0.10	1718	1750	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	14:06	14:09	0.05	1750	1750	Survey & Conn.	Survey & Conn.@ 1722' Inc 38.72° Azm 15.04°
17-Sep-15	14:09	14:13	0.07	1750	1762	Sliding	Sliding - (WOB:0 ;500;TFO:90R)
17-Sep-15	14:13	14:18	0.08	1762	1782	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	14:18	14:22	0.07	1782	1782	Survey & Conn.	Survey & Conn.@ 1753' Inc 38.76° Azm 15.43°
17-Sep-15	14:22	14:26	0.07	1782	1794	Sliding	Sliding - (WOB:0 ;500;TFO:360)
17-Sep-15	14:26	14:31	0.08	1794	1813	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	14:31	14:34	0.05	1813	1813	Survey & Conn.	Survey & Conn.@ 1785' Inc 39.48° Azm 16.8°
17-Sep-15	14:34	14:40	0.10	1813	1825	Sliding	Sliding - (WOB:0 ;500;TFO:360)
17-Sep-15	14:40	14:43	0.05	1825	1845	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	14:43	14:45	0.03	1845	1845	Survey & Conn.	Survey & Conn.@ 1816' Inc 40.77° Azm 18.48°
17-Sep-15	14:45	14:53	0.13	1845	1876	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	14:53	14:56	0.05	1876	1876	Survey & Conn.	Survey & Conn.@ 1847' Inc 40.87° Azm 18.73°
17-Sep-15	14:56	15:07	0.18	1876	1907	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	15:07	15:10	0.05	1907	1907	Survey & Conn.	Survey & Conn.@ 1879' Inc 40.85° Azm 18.42°
17-Sep-15	15:10	15:16	0.10	1907	1939	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	15:16	15:19	0.05	1939	1939	Survey & Conn.	Survey & Conn.@ 1910' Inc 40.63° Azm 18.73°
17-Sep-15	15:19	15:26	0.12	1939	1970	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	15:26	15:29	0.05	1970	1970	Survey & Conn.	Survey & Conn.@ 1941' Inc 40.13° Azm 18.85°
17-Sep-15	15:29	15:35	0.10	1970	1978	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	15:35	15:41	0.10	1978	1978	Other	Other (wire to BOP for e-field got cut repaired)
17-Sep-15	15:41	15:57	0.27	1978	2001	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	15:57	16:00	0.05	2001	2001	Survey & Conn.	Survey & Conn.@ 1973' Inc 40.01° Azm 18.63°
17-Sep-15	16:00	16:06	0.10	2001	2033	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	16:14	16:18	0.07	2042	2064	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	16:18	16:21	0.05	2064	2064	Survey & Conn.	Survey & Conn.@ 2036' Inc 39.19° Azm 17.64°
17-Sep-15	16:21	16:37	0.27	2064	2096	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	16:37	16:40	0.05	2096	2096	Survey & Conn.	Survey & Conn.@ 2067' Inc 38.92° Azm 16.68°
17-Sep-15	16:40	16:50	0.17	2096	2127	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	16:50	16:55	0.08	2127	2139	Sliding	Sliding - (WOB:0 ;500;TFO:45L))
17-Sep-15	16:55	17:00	0.08	2139	2158	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	17:00	17:05	0.08	2158	2158	Survey & Conn.	Survey & Conn.@ 2129' Inc 38.07° Azm 16.42°
17-Sep-15	17:05	17:10	0.08	2158	2164	Sliding	Sliding - (WOB:0 ;500;TFO:45L))
17-Sep-15	17:10	17:20	0.17	2164	2189	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	17:20	17:25	0.08	2189	2189	Survey & Conn.	Survey & Conn.@ 2161' Inc 38.34° Azm 13.8°
17-Sep-15	17:25	17:40	0.25	2189	2221	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	17:40	17:45	0.08	2221	2231	Sliding	Sliding - (WOB:0 ;500;TFO:70L))
17-Sep-15	17:45	17:55	0.17	2231	2253	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	17:55	18:00	0.08	2253	2253	Survey & Conn.	Survey & Conn.@ 2225' Inc 38.77° Azm 13.57°
17-Sep-15	18:00	18:05	0.08	2253	2285	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	18:05	18:10	0.08	2285	2285	Survey & Conn.	Survey & Conn.@ 2256' Inc 39.13° Azm 13.19°
17-Sep-15	18:10	18:25	0.25	2285	2316	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	18:25	18:30	0.08	2316	2316	Survey & Conn.	Survey & Conn.@ 2287' Inc 38.75° Azm 12.27°
17-Sep-15	18:30	18:35	0.08	2316	2347	Drilling	Drilling - (WOB:0 ;500;RPM:60)
17-Sep-15	18:35	18:40	0.08	2347	2347	Survey & Conn.	Survey & Conn.@ 2319' Inc 38.83° Azm 11.98°
17-Sep-15	18:40	18:45	0.08	2347	2355	Sliding	Sliding - (WOB:0 ;500;TFO:60))
17-Sep-15	18:45	18:55	0.17	2355	2379	Drilling	Drilling - (WOB:25 ;500;RPM:60)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Sep-15	18:55	19:00	0.08	2379	2379	Survey & Conn.	Survey & Conn.@2350' Inc 38.37° Azm 13.91°
17-Sep-15	19:00	19:10	0.17	2379	2410	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	19:10	19:15	0.08	2410	2410	Survey & Conn.	Survey & Conn.@2382' Inc 38.09° Azm 14.56°
17-Sep-15	19:15	19:20	0.08	2410	2420	Sliding	Sliding - (WOB:0; :500;TFO:60)
17-Sep-15	19:20	19:25	0.08	2420	2442	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	20:00	20:10	0.17	2505	2536	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	20:10	20:15	0.08	2536	2536	Survey & Conn.	Survey & Conn.@2508' Inc 35.77° Azm 14.62°
17-Sep-15	20:15	20:20	0.08	2536	2568	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	20:20	20:25	0.08	2568	2568	Survey & Conn.	Survey & Conn.@2539' Inc 35.17° Azm 14.12°
17-Sep-15	20:25	20:30	0.08	2568	2573	Sliding	Sliding - (WOB:30; :500;TFO:180)
17-Sep-15	20:30	20:45	0.25	2573	2599	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	20:45	20:50	0.08	2599	2599	Survey & Conn.	Survey & Conn.@2571' Inc 34.35° Azm 14.27°
17-Sep-15	20:50	21:00	0.17	2599	2631	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	21:00	21:05	0.08	2631	2631	Survey & Conn.	Survey & Conn.@2602' Inc 34.24° Azm 14.51°
17-Sep-15	21:05	21:10	0.08	2631	2637	Sliding	Sliding - (WOB:30; :500;TFO:180))
17-Sep-15	21:10	21:30	0.33	2637	2662	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	21:30	21:35	0.08	2662	2662	Survey & Conn.	Survey & Conn.@2633' Inc 33.66° Azm 15.24°
17-Sep-15	21:35	21:40	0.08	2662	2669	Sliding	Sliding - (WOB:30; :500;TFO:150))
17-Sep-15	21:40	21:55	0.25	2669	2693	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	21:55	22:00	0.08	2693	2693	Survey & Conn.	Survey & Conn.@2664' Inc 32.55° Azm 14.96°
17-Sep-15	22:00	22:05	0.08	2693	2701	Sliding	Sliding - (WOB:30; :500;TFO:150))
17-Sep-15	22:05	22:10	0.08	2701	2724	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	22:10	22:15	0.08	2724	2724	Survey & Conn.	Survey & Conn.@2696' Inc 31.06° Azm 14.81°
17-Sep-15	22:15	22:20	0.08	2724	2732	Sliding	Sliding - (WOB:30; :500;TFO:180)
17-Sep-15	22:20	22:30	0.17	2732	2756	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	22:30	22:35	0.08	2756	2756	Survey & Conn.	Survey & Conn.@2727' Inc 29.43° Azm 14.53°
17-Sep-15	22:35	22:40	0.08	2756	2763	Sliding	Sliding - (WOB:30; :500;TFO:180))
17-Sep-15	22:40	22:45	0.08	2763	2787	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	22:45	22:50	0.08	2787	2787	Survey & Conn.	Survey & Conn.@2758' Inc 27.86° Azm 14.54°
17-Sep-15	22:50	22:55	0.08	2787	2793	Sliding	Sliding - (WOB:30; :500;TFO:180)
17-Sep-15	22:55	23:00	0.08	2793	2818	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	23:00	23:05	0.08	2818	2818	Survey & Conn.	Survey & Conn.@2789' Inc 26.45° Azm 14.25°
17-Sep-15	23:05	23:10	0.08	2818	2849	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	23:10	23:15	0.08	2849	2849	Survey & Conn.	Survey & Conn.@2821' Inc 25.52° Azm 13.69°
17-Sep-15	23:15	23:20	0.08	2849	2855	Sliding	Sliding - (WOB:30;GPM :500;TFO:180))
17-Sep-15	23:20	23:30	0.17	2855	2881	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
17-Sep-15	23:30	23:35	0.08	2881	2881	Survey & Conn.	Survey & Conn.@2851' Inc 25.02° Azm 13.4°
17-Sep-15	23:35	23:40	0.08	2881	2887	Sliding	Sliding - (WOB:30;GPM :500;TFO:150)
17-Sep-15	23:40	23:45	0.08	2887	2911	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
17-Sep-15	23:45	23:50	0.08	2911	2911	Survey & Conn.	Survey & Conn.@2882' Inc 23.68° Azm 14.5°
17-Sep-15	23:50	23:55	0.08	2911	2919	Sliding	Sliding - (WOB:30;GPM :500;TFO:150)
17-Sep-15	23:55	24:00	0.08	2919	2942	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
17-Sep-15	08:34	08:38	0.07	762	784	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	08:38	08:41	0.05	784	784	Survey & Conn.	Survey & Conn.@754' Inc 26.96° Azm 17.9°
17-Sep-15	08:41	08:43	0.03	784	792	Sliding	Sliding - (WOB:0;GPM :500;TFO:10L)
17-Sep-15	08:43	08:48	0.08	792	814	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	10:13	10:17	0.07	1027	1040	Sliding	Sliding - (WOB:0;GPM :500;TFO:15L))
17-Sep-15	10:17	10:21	0.07	1040	1059	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	10:21	10:24	0.05	1059	1059	Survey & Conn.	Survey & Conn.@1030' Inc 36.71° Azm 15°
17-Sep-15	10:24	10:29	0.08	1059	1069	Sliding	Sliding - (WOB:0;GPM :500;TFO:15L))
17-Sep-15	10:29	10:34	0.08	1069	1090	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Sep-15	10:34	10:37	0.05	1090	1090	Survey & Conn.	Survey & Conn.@1061' Inc 38.15° Azm 15.91°
17-Sep-15	10:37	10:43	0.10	1090	1121	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	10:43	10:45	0.03	1121	1121	Survey & Conn.	Survey & Conn.@1093' Inc 38.34° Azm 16.93°
17-Sep-15	10:45	10:50	0.08	1121	1153	Drilling	Drilling - (WOB:0;GPM :500;RPM:60)
17-Sep-15	10:50	10:53	0.05	1153	1153	Survey & Conn.	Survey & Conn.@1125' Inc 37.96° Azm 16.14°
17-Sep-15	13:05	13:08	0.05	1561	1561	Survey & Conn.	Survey & Conn.@1533' Inc 38.1° Azm 15.41°
17-Sep-15	13:08	13:14	0.10	1561	1574	Sliding	Sliding - (WOB:0; :500;TFO:360)
17-Sep-15	13:14	13:20	0.10	1574	1593	Drilling	Drilling - (WOB:0; :500;RPM:60)
17-Sep-15	13:20	13:23	0.05	1593	1593	Survey & Conn.	Survey & Conn.@1564' Inc 39.61° Azm 14.79°
17-Sep-15	13:23	13:28	0.08	1593	1606	Sliding	Sliding - (WOB:0; :500;TFO:360)
17-Sep-15	13:28	13:30	0.03	1606	1624	Drilling	Drilling - (WOB:0; :500;RPM:60)
17-Sep-15	13:30	13:33	0.05	1624	1624	Survey & Conn.	Survey & Conn.@1596' Inc 41.59° Azm 14.2°
17-Sep-15	13:33	13:39	0.10	1624	1656	Drilling	Drilling - (WOB:0; :500;RPM:60)
17-Sep-15	13:39	13:42	0.05	1656	1656	Survey & Conn.	Survey & Conn.@1627' Inc 41.72° Azm 13.94°
17-Sep-15	13:42	13:45	0.05	1656	1664	Sliding	Sliding - (WOB:0; :500;TFO:360)
17-Sep-15	16:06	16:09	0.05	2033	2033	Survey & Conn.	Survey & Conn.@2004' Inc 39.49° Azm 18.4°
17-Sep-15	16:09	16:14	0.08	2033	2042	Sliding	Sliding - (WOB:0; :500;TFO:360))
17-Sep-15	19:25	19:30	0.08	2442	2442	Survey & Conn.	Survey & Conn.@2413' Inc 38.6° Azm 14.17°
17-Sep-15	19:30	19:40	0.17	2442	2473	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	19:40	19:45	0.08	2473	2473	Survey & Conn.	Survey & Conn.@2445' Inc 38.36° Azm 14.65°
17-Sep-15	19:45	19:50	0.08	2473	2479	Sliding	Sliding - (WOB:30; :500;TFO:180))
17-Sep-15	19:50	19:55	0.08	2479	2505	Drilling	Drilling - (WOB:25; :500;RPM:60)
17-Sep-15	19:55	20:00	0.08	2505	2505	Survey & Conn.	Survey & Conn.@2476' Inc 36.62° Azm 14.99°



JOB NO.:	330915DEF311787	Report Time:	2400	5 of 6
COMPANY:	B.P.	API JOB #	05 067 09938	
LOCATION:	La Plata	WORK ORDER#	311787	
RIG NAME:	Aztec 507	FIELD:	La Plata	
STATE:	Co.	Township:	SEC 31 T33N 606W	
COUNTY:	La Plata	SECT\	RANGE: X3-01664	33
WELL NAME:	Taichert 31-01 #4			

From Friday, September 18, 2015 at 0000 to Friday, September 18, 2015 at 2400

DRILLING SUMMARY				Drilling Parameters									
Start Depth	2942.00	Rotary Hours	4.53	WOB	25	Pick UP	92	Slack Off	54	SPM			
End Depth	3815.00	Circulating Hours	3.17	RAB	64	SPP	1700	FlowRate	500 - 500	97			
Total Drilled:	873.00	Avg. Total ROP:	159.70	Mud Data									
Total Rotary Drilled:	799.00	Avg. Rotary ROP:	176.25	Type	Water base			PV	14	SOLID	0		
Total Drilled Sliding:	74.00	Avg. Slide ROP:	79.29	Weight	8.85	GAS	0	YP	24	BHT°	103		
Slide Hours:	0.93	Percent Rotary:	91.52	Viscosity	46	SAND	0.05	PH	8	Flow T°	100		
Below Rotary Hrs.	24.00	Percent Slide:	8.48	Chlorides	700	WL	8			Oil %	0		
PERSONNEL				cASING					BHA				
Lead Directional :	Mark Houston			Size	Lb/ft	Set Depth		BHA # 2:MM55 5x12 jets, 6 1/2 1.5 3.3 7:8, NMXXO, PRT SUB, NMDC, Support sub, Gap sub, NMDC,					
Second Directional :	David Hensley			Signature:									
MWD Operator1	Robert Cuevas												
MWD Operator2	Luke Kristy												
Directional Company:	SDI												
Geologist:													
Company Man:	Carey Carr												
Incl. In:	0	Azm. In:	0	Incl. Out:	0	Azm. Out:	0						

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
18-Sep-15	00:00	00:05	0.08	2942	2942	Survey & Conn.	Survey & Conn.@2913' Inc 22.22° Azm 15.82°
18-Sep-15	00:05	00:15	0.17	2942	2973	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	00:15	00:20	0.08	2973	2973	Survey & Conn.	Survey & Conn.@2945' Inc 21.15° Azm 16.2°
18-Sep-15	00:20	00:25	0.08	2973	2980	Sliding	Sliding - (WOB:30;GPM :500;TFO:150))
18-Sep-15	00:25	00:30	0.08	2980	3005	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	00:30	00:35	0.08	3005	3005	Survey & Conn.	Survey & Conn.@2976' Inc 19.78° Azm 15.19°
18-Sep-15	00:35	00:40	0.08	3005	3012	Sliding	Sliding - (WOB:30;GPM :500;TFO:180)
18-Sep-15	00:40	00:50	0.17	3012	3036	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	00:50	00:55	0.08	3036	3036	Survey & Conn.	Survey & Conn.@3007' Inc 18.8° Azm 13.87°
18-Sep-15	00:55	01:05	0.17	3036	3067	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	01:05	01:10	0.08	3067	3067	Survey & Conn.	Survey & Conn.@3038' Inc 17.84° Azm 13.01°
18-Sep-15	01:10	01:15	0.08	3067	3074	Sliding	Sliding - (WOB:30;GPM :500;TFO:180)
18-Sep-15	01:15	01:20	0.08	3074	3098	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	01:20	01:25	0.08	3098	3098	Survey & Conn.	Survey & Conn.@3069' Inc 17.08° Azm 12.33°
18-Sep-15	01:25	01:45	0.33	3098	3129	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	01:45	01:50	0.08	3129	3129	Survey & Conn.	Survey & Conn.@3100' Inc 16.02° Azm 12.33°
18-Sep-15	01:50	01:55	0.08	3129	3135	Sliding	Sliding - (WOB:30;GPM :500;TFO:180))
18-Sep-15	01:55	02:05	0.17	3135	3160	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	02:05	02:10	0.08	3160	3160	Survey & Conn.	Survey & Conn.@3132' Inc 15.54° Azm 12.28°
18-Sep-15	02:10	02:25	0.25	3160	3192	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	02:25	02:30	0.08	3192	3192	Survey & Conn.	Survey & Conn.@3163' Inc 15.33° Azm 10.82°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
18-Sep-15	02:30	02:35	0.08	3192	3198	Sliding	Sliding - (WOB:30;GPM :500;TFO:150R))
18-Sep-15	02:35	02:50	0.25	3198	3223	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	02:50	02:55	0.08	3223	3223	Survey & Conn.	Survey & Conn.@3194' Inc 14.64° Azm 11.89°
18-Sep-15	02:55	03:00	0.08	3223	3231	Sliding	Sliding - (WOB:30;GPM :500;TFO:150R)
18-Sep-15	03:00	03:10	0.17	3231	3254	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	03:10	03:15	0.08	3254	3254	Survey & Conn.	Survey & Conn.@3225' Inc 12.99° Azm 14.9°
18-Sep-15	03:15	03:20	0.08	3254	3262	Sliding	Sliding - (WOB:40;GPM :500;TFO:150R))
18-Sep-15	03:20	03:40	0.33	3262	3285	Drilling	Drilling - (WOB:25;GPM :500;RPM:60)
18-Sep-15	03:40	03:45	0.08	3285	3285	Survey & Conn.	Survey & Conn.@3256' Inc 11.92° Azm 18.07°
18-Sep-15	03:45	05:20	1.58	3285	3285	Circulating	Work on pump
18-Sep-15	05:20	05:31	0.18	3285	3316	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	05:31	05:34	0.05	3316	3316	Survey & Conn.	Survey & Conn.@3288' Inc 11.19° Azm 19.95°
18-Sep-15	05:34	05:40	0.10	3316	3322	Sliding	Sliding - (WOB:40; :500;TFO:150R)
18-Sep-15	05:40	05:49	0.15	3322	3348	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	05:49	05:52	0.05	3348	3348	Survey & Conn.	Survey & Conn.@3320' Inc 9.73° Azm 18.76°
18-Sep-15	05:52	06:00	0.13	3348	3356	Sliding	Sliding - (WOB:40; :500;TFO:170L)
18-Sep-15	06:00	06:09	0.15	3356	3380	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	06:09	06:12	0.05	3380	3380	Survey & Conn.	Survey & Conn.@3351' Inc 8.26° Azm 14.8°
18-Sep-15	06:12	06:19	0.12	3380	3411	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	06:19	06:22	0.05	3411	3411	Survey & Conn.	Survey & Conn.@3382' Inc 7.01° Azm 8.08°
18-Sep-15	06:22	06:29	0.12	3411	3442	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	06:29	06:32	0.05	3442	3442	Survey & Conn.	Survey & Conn.@3414' Inc 6.42° Azm 5.39°
18-Sep-15	06:32	06:38	0.10	3442	3474	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	06:38	06:41	0.05	3474	3474	Survey & Conn.	Survey & Conn.@3445' Inc 5.85° Azm 3.07°
18-Sep-15	06:41	06:49	0.13	3474	3505	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	06:59	07:02	0.05	3537	3537	Survey & Conn.	Survey & Conn.@3508' Inc 4.86° Azm 353.05°
18-Sep-15	07:02	07:09	0.12	3537	3548	Sliding	Sliding - (WOB:40; :500;TFO:170L)
18-Sep-15	08:08	08:15	0.12	3694	3724	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	08:15	08:18	0.05	3724	3724	Survey & Conn.	Survey & Conn.@3697' Inc 4.75° Azm 358.71°
18-Sep-15	08:18	08:26	0.13	3724	3757	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	08:26	08:29	0.05	3757	3757	Survey & Conn.	Survey & Conn.@3755' Inc 4.33° Azm 357.3°
18-Sep-15	08:29	08:40	0.18	3757	3788	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	08:40	08:43	0.05	3788	3788	Survey & Conn.	Survey & Conn.@3755' Inc 4.33° Azm 357.3°
18-Sep-15	08:43	08:57	0.23	3788	3788	Circulating	Circulating
18-Sep-15	08:57	09:07	0.17	3788	3815	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	09:07	09:09	0.03	3815	3815	Survey & Conn.	Survey & Conn.@3755' Inc 4.33° Azm 357.3°
18-Sep-15	09:09	10:30	1.35	3815	3815	Circulating	Circulating
18-Sep-15	06:49	06:52	0.05	3505	3505	Survey & Conn.	Survey & Conn.@3477' Inc 4.99° Azm 358.69°
18-Sep-15	06:52	06:59	0.12	3505	3537	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	07:09	07:15	0.10	3548	3568	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	07:15	07:20	0.08	3568	3568	Survey & Conn.	Survey & Conn.@3539' Inc 5.3° Azm 358.84°
18-Sep-15	07:20	07:30	0.17	3568	3599	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	07:30	07:33	0.05	3599	3599	Survey & Conn.	Survey & Conn.@3571' Inc 5.55° Azm 4.91°
18-Sep-15	07:33	07:40	0.12	3599	3631	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	07:40	07:43	0.05	3631	3631	Survey & Conn.	Survey & Conn.@3603' Inc 5.94° Azm 3.97°
18-Sep-15	07:43	07:53	0.17	3631	3663	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	07:53	07:56	0.05	3663	3663	Survey & Conn.	Survey & Conn.@3634' Inc 5.48° Azm 3.72°
18-Sep-15	07:56	08:05	0.15	3663	3694	Drilling	Drilling - (WOB:25; :500;RPM:60)
18-Sep-15	08:05	08:08	0.05	3694	3694	Survey & Conn.	Survey & Conn.@3665' Inc 5.13° Azm 1.43°
18-Sep-15	10:30	18:00	7.50	3815	3815	POOH	POOH L/D BHA #2
18-Sep-15	18:00	24:00	6.00	3815	3815	Other	Perform CSG Operations



JOB NO.:	330915DEF311787	Report Time:	2400	6 of 6
COMPANY:	B.P.	API JOB #	05 067 09938	
LOCATION:	La Plata	WORK ORDER#	311787	
RIG NAME:	Aztec 507	FIELD:	La Plata	
STATE:	Co.	Township:	SEC 31 T33N 606W	
COUNTY:	La Plata	SECT\	RANGE: X3-01664	33
WELL NAME:	Taichert 31-01 #4			

From Saturday, September 19, 2015 at 0000 to Saturday, September 19, 2015 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	25	Pick UP	92	Slack Off	54	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	64	SPP	1700	FlowRate	500 - 500	97	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	Water base			PV	14	SOLID	0
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	8.85	GAS	0	YP	24	BHT°	103
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	46	SAND	0.05	PH	8	Flow T°	100
Below Rotary Hrs.	24.00	Percent Slide:	NA	Chlorides	700	WL	8			Oil %	0
PERSONNEL				cASING				BHA			
Lead Directional :	Mark Houston			Size	Lb/ft	Set Depth		N/A			
Second Directional :	David Hensley			Signature:							
MWD Operator1	Robert Cuevas										
MWD Operator2	Luke Kristy										
Directional Company:	SDI										
Geologist:											
Company Man:	Carey Carr										
Incl. In:	0	Azm. In:	0	Incl. Out:	0	Azm. Out:	0				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
19-Sep-15	00:00	24:00	24.00	3815	3815	Other	Move rig

BHA # 1

SDI



JOB NO.: 330915DEF311787 Work Order: 311787
 COMPANY: B.P.
 LOCATION: La Plata
 RIG NAME: Aztec 507
 STATE: Co.
 COUNTY: La Plata
 WELL NAME: Taichert 31-01 #4

FIELD: La Plata
 Township: SEC 31 T33N 606W
 SECT. RANGE: X3-01664 33
 Lead DD: Mark Houston
 Co. Man: Carey Carr
 BHA TYPE: Steerable Assembly
 BHA WT: 8903 Wt @ Jars: N/A

Time and Depths	MOTOR DATA	Drilling Parameters
Date In: 15-Sep-15 @ 08:15	6 1/2 3.0 7:8 1.75 W/ 12 stab	SO/PU: 0 - 0 / 0-0
Date Out: 15-Sep-15 @ 19:00	MFG.: SDI	Rot Strg Wt: 0-0
Hrs In Hole: 10.75	Pad OD: .50	WOB: 0 - 0
Start Depth: 106.00	NB Stab: 12	TORQ: 0 - 0
End Depth: 522.00	Bit to Bend: 5.2	SPP: 700 - 700
Total Drilled: 416.00	Bent Hsg/Sub°: 1.75 /	Motor RPM: 140
Avg. Total ROP: 89.14	Lobe/Stage: 7:8 / 3	Rotary RPM: 60 - 60
Circ Hrs: Tot/Only 5.70 / 1.03	Rev/GAL: 0.28	Flow Rate: 500 - 500
Percent Slide: 43.03	Rotor Jet: 0	Avg Diff:
Percent Hrs: 45.71	Prop BUR: 4.4	Stall Pres.:
Slide Hours: 2.13	Act BUR:	Off Bot Pres.:
Total Sliding: 179.00		
Avg. Slide ROP: 83.91		
Percent Rotary: 56.97		
Percent Hrs: 54.29		
Rotary Hours: 2.53		
Total Rotary: 237.00		
Avg. Rotary ROP: 93.55		
Reason POOH:		
MWD Spacing	Gamma: 0 Restiv: 0 Sensor: 0	Last Casing
	GYRO: 0 DNSC: 0 Sonic: 0	Shoe @: Hanger @:

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

Motor # 6306 Going in W/ 0.0 HRS
 Ending HRS =5.70 HRS
 0.28 rev/gal

BHA Detail

Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
12 1/4 PDC MI 616	JH 5432	3	12 1/4	0.75	0.75	6 5/8 REGP	
Bit Sub	12400	2 1/2	7 11/16	1.05	1.80	4 1/2 REGP	SDI
6 1/2 1.75 3.0 7:8 W/Stab	6306	2	6 1/2	19.23	21.03	4 1/2 XHB	SDI
12" Stab	29712	2 5/8	6 1/2	7.80	28.83	4 1/2 XHB	Other
10' NMPC	125-476	3 1/4	6 1/2	10.00	38.83	4 1/2 XHB	SDI
Support sub	8-725	3 1/4	6 3/8	1.77	40.60	4 1/2 XHB	SDI
NMDC	122-311	3 1/4	6 1/8	29.22	69.82	4 1/2 XHB	SDI
Gap sub	69-925	2 3/4	6 1/2	4.99	74.81	4 1/2 XHB	SDI
NMDC	122-433	3 1/4	6 1/8	30.71	105.52	4 1/2 XHB	SDI

NMDC
 O.D.=6 1/8
 Length=30.71
 FN=1.99

Gap sub
 O.D.=6 1/2
 Length=4.99

NMDC
 O.D.=6 1/8
 Length=29.22
 FN=1.98

Support sub
 O.D.=6 3/8
 Length=1.77
 10' NMPC
 O.D.=6 1/2
 Length=10
 FN=2.00

12" Stab
 O.D.=6 1/2

6 1/2 1.75 3.0 7:8 W/Stab
 O.D.=6 1/2
 Length=19.23

Bit Sub
 O.D.=7 11/16

12 1/4 PDC MI 616
 O.D.=12 1/4
 Length=0.75



JOB NO.: 330915DEF311787
COMPANY: B.P.
LOCATION: La Plata
RIG NAME: Aztec 507
STATE: Co.
COUNTY: Country
WELL NAME: Taichert 31-01 #4

FIELD: La Plata
Township: SEC 31 T33N 606W
Range 33

MOTOR INFORMATION			
Desc: 6 1/2 3.0 7:8 1.75 W/ 12 stab			
Bent Hsg/Sub: 1.75/ 0	Bit to Bend: 5.2		
Pad OD: .50	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	15-Sep	Sliding	10:10	10:19	0.15	106	121	15		100.0	60	0	500	700	15	1.96	356.00	4.56	
1	15-Sep	Drilling	10:19	10:27	0.13	121	133	12		90.0	60	0	500	700		2.48	0.00	4.56	
1	15-Sep	Sliding	10:31	10:39	0.13	133	148	15		112.5	60	0	500	700	15	3.08	7.00	4.60	
1	15-Sep	Drilling	10:39	10:48	0.15	148	162	14		93.3	60	0	500	700		3.64	12.00	4.60	
1	15-Sep	Sliding	10:53	11:01	0.13	162	177	15		112.5	60	0	500	700	15	4.46	14.00	5.88	
1	15-Sep	Drilling	11:01	11:11	0.17	177	192	15		90.0	60	0	500	700		5.34	15.00	5.88	
1	15-Sep	Sliding	11:27	11:38	0.18	192	207	15		81.8	60	0	500	700	15	6.25	14.00	6.47	
1	15-Sep	Drilling	11:38	11:47	0.15	207	221	14		93.3	60	0	500	700		7.13	16.00	6.47	
1	15-Sep	Sliding	11:55	12:07	0.20	221	236	15		75.0	60	0	500	700	15	7.86	18.00	4.26	
1	15-Sep	Drilling	12:07	12:17	0.17	236	252	16		96.0	60	0	500	700		8.48	19.00	4.26	
1	15-Sep	Sliding	12:22	12:30	0.13	252	262	10		75.0	60	0	500	700	360	8.96	13.00	5.23	
1	15-Sep	Drilling	12:30	12:42	0.20	262	282	20		100.0	60	0	500	700		9.98	15.00	5.23	
1	15-Sep	Sliding	12:47	12:54	0.12	282	292	10		85.7	60	0	500	700	360	10.35	15.00	3.22	
1	15-Sep	Drilling	12:54	13:05	0.18	292	310	18		98.2	60	0	500	700		10.93	15.00	3.22	
1	15-Sep	Sliding	13:10	13:17	0.12	310	322	12		102.9	60	0	500	700	360	11.34	15.00	3.70	
1	15-Sep	Drilling	13:17	13:26	0.15	322	340	18		120.0	60	0	500	700		12.00	15.00	3.70	
1	15-Sep	Sliding	13:31	13:39	0.13	340	351	11		82.5	60	0	500	700	360	12.42	14.00	4.10	
1	15-Sep	Drilling	13:39	13:49	0.17	351	370	19		114.0	60	0	500	700		13.20	14.00	4.10	
1	15-Sep	Sliding	13:54	14:02	0.13	370	384	14		105.0	60	0	500	700	360	13.84	14.00	5.05	
1	15-Sep	Drilling	14:02	14:12	0.17	384	401	17		102.0	60	0	500	700		14.69	14.00	5.05	
1	15-Sep	Sliding	14:18	14:29	0.18	401	414	13		70.9	60	0	500	700	360	15.32	15.00	4.74	
1	15-Sep	Drilling	14:29	14:40	0.18	414	432	18		98.2	60	0	500	700		16.17	15.00	4.74	
1	15-Sep	Sliding	14:45	14:58	0.22	432	445	13		60.0	60	0	500	700	360	16.74	15.00	4.21	
1	15-Sep	Drilling	14:58	15:09	0.18	445	462	17		92.7	60	0	500	700		17.45	16.00	4.21	
1	15-Sep	Sliding	15:14	15:21	0.12	462	472	10		85.7	60	0	500	700	360	17.74	16.00	1.57	

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	15-Sep	Drilling	15:21	15:28	0.12	472	480	8		68.6	60	0	500	700		17.86	16.00	1.57	
1	15-Sep	Drilling	16:00	16:09	0.15	480	493	13		86.7	60	0	500	700		18.07	16.00	1.57	
1	15-Sep	Sliding	16:13	16:24	0.18	493	504	11		60.0	60	0	500	700	360	18.24	16.00	1.57	
1	15-Sep	Drilling	16:24	16:40	0.27	504	522	18		67.5	60	0	500	700		18.52	16.00	1.57	

Total Drilled: 416 **Avg. Total ROP:** 89.14 **DEPTH% - TIME %**

Total Rotary Drilled: 237 **Avg. Rotary ROP:** 93.55 **Percent Rotary:** 56.97 - 54.29

Total Drilled Sliding: 179 **Avg. Slide ROP:** 83.91 **Percent Slide:** 43.03 - 45.71

BHA # 2

SDI



JOB NO.: 330915DEF311787 Work Order: 311787
 COMPANY: B.P.
 LOCATION: La Plata
 RIG NAME: Aztec 507
 STATE: Co.
 COUNTY: La Plata
 WELL NAME: Taichert 31-01 #4

FIELD: La Plata
 Township: SEC 31 T33N 606W
 SECT. RANGE: X3-01664 33
 Lead DD: Mark Houston
 Co. Man: Carey Carr
 BHA TYPE: Steerable Assembly
 BHA WT: 8136 Wt @ Jars: N/A

Time and Depths		MOTOR DATA		Drilling Parameters	
Date In:	17-Sep-15 @ 04:30	6 1/2 1.50 3.3 7:8 FBH		SO/PU:	40 - 54 / 50-92
Date Out:	18-Sep-15 @ 18:00	MFG.: SDI		Rot Strg Wt:	45-64
Hrs In Hole:	37.50	Pad OD: 6 7/8		WOB:	0 - 40
Start Depth:	522.00	NB Stab: 0		TORQ:	0 - 95
End Depth:	3815.00	Bit to Bend: 4.2		SPP:	700 - 1700
Total Drilled:	3293.00	Bent Hsg/Sub°: 1.5 /		Motor RPM:	70
Avg. Total ROP:	182.27	Lobe/Stage: 7:8 / 3.3		Rotary RPM:	60 - 60
Circ Hrs: Tot/Only	21.23 / 3.17	Rev/GAL: 0.14		Flow Rate:	500 - 500
Percent Slide:	16.09	Rotor Jet: 0		Avg Diff:	250-300
Percent Hrs:	25.18	Prop BUR: 12		Stall Pres.:	
Slide Hours:	4.55	Act BUR: 14		Off Bot Pres.:	
Total Sliding:	530.00	Mud Data		Bit Record	
Avg. Slide ROP:	116.48	Type Water base		Security / MM55 5x12 jets	
Percent Rotary:	83.91	WT:	8.85	GAS:	0
Percent Hrs:	74.82	Vis:	46	PV:	14
Rotary Hours:	13.52	WL:	8	PH:	8
Total Rotary:	2763.00	SOL:	0	SAND:	0.05
Avg. Rotary ROP:	204.41	Oil %:	0	T °:	103
Reason POOH:		Chlor:	700	YP:	24
MWD Spacing	Gamma: 0	Restiv: 0	Sensor: 0	Last Casing	8 5/8
	GYRO: 0	DNSSC: 0	Sonic: 0	Shoe @:	Hanger @:

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

Motor # 6264 going in W/ 0.0 HRS
 0.14 rev/Gal
 6 1/2 3.3 7:8 FBH
 Ending HRS =

BHA Detail

Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
MM55 5x12 jets	12659456	2	7 7/8	0.85	0.85	4 1/2 REGP	
6 1/2 1.5 3.3 7:8	6264	2	6 1/2	28.21	29.06	4 1/2 XHB	SDI
NMXO	66-439	3 1/4	6 9/16	3.95	33.01	4 1/2 XHP	SDI
PRT SUB	100-009	3 11/16	6 1/2	14.72	47.73	4 1/2 XHB	SDI
NMDC	122-311	3 1/4	6 1/8	29.22	76.95	4 1/2 XHB	SDI
Support sub	8-725	3 1/4	6 3/8	1.77	78.72	4 1/2 XHB	SDI
Gap sub	69-925	2 3/4	6 1/2	4.99	83.71	4 1/2 XHB	SDI
NMDC	122-433	3 1/4	6 1/8	30.71	114.42	4 1/2 XHB	SDI

NMDC
 O.D.=6 1/8
 Length=30.71
 FN=1.99

Gap sub
 O.D.=6 1/2
 Length=4.99

Support sub
 O.D.=6 3/8
 Length=1.77

NMDC
 O.D.=6 1/8
 Length=29.22
 FN=1.98

PRT SUB
 O.D.=6 1/2
 Length=14.72

NMXO
 O.D.=6 9/16
 Length=3.95

6 1/2 1.5 3.3 7:8
 O.D.=6 1/2
 Length=28.21

MM55 5x12 jets
 O.D.=7 7/8
 Length=0.85



JOB NO.: 330915DEF311787
COMPANY: B.P.
LOCATION: La Plata
RIG NAME: Aztec 507
STATE: Co.
COUNTY: Country
WELL NAME: Taichert 31-01 #4

FIELD: La Plata
Township: SEC 31 T33N 606W
Range 33

MOTOR INFORMATION	
Desc: 6 1/2 1.50 3.3 7:8 FBH	
Bent Hsg/Sub: 1.5 / 0	Bit to Bend: 4.2
Pad OD: 6 7/8	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	17-Sep	Drilling	05:27	05:33	0.10	522	540	18		180.0	60	0	500	700		18.80	16.00	1.57	
2	17-Sep	Drilling	07:00	07:09	0.15	540	571	31		206.7	60	0	500	700		19.26	17.00	1.94	
2	17-Sep	Sliding	07:12	07:18	0.10	571	583	12		120.0	60	0	500	700	360	19.64	18.00	3.68	
2	17-Sep	Drilling	07:18	07:21	0.05	583	601	18		360.0	60	0	500	700		20.26	18.00	3.68	
2	17-Sep	Sliding	07:24	07:29	0.08	601	614	13		156.0	60	0	500	700	360	21.09	18.00	6.68	
2	17-Sep	Drilling	07:29	07:33	0.07	614	632	18		270.0	60	0	500	700		22.29	19.00	6.68	
2	17-Sep	Sliding	07:37	07:41	0.07	632	645	13		195.0	60	0	500	700	360	22.90	19.00	4.48	
2	17-Sep	Drilling	07:41	07:48	0.12	645	662	17		145.7	60	0	500	700		23.66	19.00	4.48	
2	17-Sep	Sliding	07:51	07:57	0.10	662	676	14		140.0	60	0	500	700	10L	24.32	19.00	4.90	
2	17-Sep	Drilling	07:57	08:02	0.08	676	693	17		204.0	60	0	500	700		25.13	19.00	4.90	
2	17-Sep	Sliding	08:05	08:09	0.07	693	700	7		105.0	60	0	500	700	10L	25.40	17.00	3.63	
2	17-Sep	Drilling	08:09	08:15	0.10	700	723	23		230.0	60	0	500	700		26.23	17.00	3.63	
2	17-Sep	Sliding	08:18	08:22	0.07	723	733	10		150.0	60	0	500	700	10L	26.48	18.00	2.40	
2	17-Sep	Drilling	08:22	08:27	0.08	733	754	21		252.0	60	0	500	700		26.96	18.00	2.40	
2	17-Sep	Sliding	08:30	08:34	0.07	754	762	8		120.0	60	0	500	700	10L	27.14	18.00	2.48	
2	17-Sep	Drilling	08:34	08:38	0.07	762	784	22		330.0	60	0	500	700		27.62	19.00	2.48	
2	17-Sep	Sliding	08:41	08:43	0.03	784	792	8		240.0	60	0	500	700	15L	27.89	17.00	3.65	
2	17-Sep	Drilling	08:43	08:48	0.08	792	814	22		264.0	60	0	500	700		28.68	17.00	3.65	
2	17-Sep	Sliding	08:51	08:56	0.08	814	826	12		144.0	60	0	500	700	15L	29.24	17.00	4.99	
2	17-Sep	Drilling	08:56	09:01	0.08	826	845	19		228.0	60	0	500	700		30.13	18.00	4.99	
2	17-Sep	Sliding	09:06	09:11	0.08	845	857	12		144.0	60	0	500	700	30L	30.50	16.00	2.98	
2	17-Sep	Drilling	09:11	09:16	0.08	857	875	18		216.0	60	0	500	700		31.02	16.00	2.98	
2	17-Sep	Sliding	09:19	09:22	0.05	875	886	11		220.0	60	0	500	700	30L	31.43	15.00	3.87	
2	17-Sep	Drilling	09:22	09:25	0.05	886	906	20		400.0	60	0	500	700		32.19	16.00	3.87	
2	17-Sep	Sliding	09:28	09:32	0.07	906	917	11		165.0	60	0	500	700	15L	32.51	15.00	2.98	

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	17-Sep	Drilling	09:32	09:35	0.05	917	936	19		380.0	60	0	500	700		33.07	15.00	2.98	
2	17-Sep	Sliding	09:38	09:43	0.08	936	949	13		156.0	60	0	500	700	15L	33.49	15.00	3.29	
2	17-Sep	Drilling	09:43	09:46	0.05	949	966	17		340.0	60	0	500	700		34.04	15.00	3.29	
2	17-Sep	Sliding	09:49	09:55	0.10	966	978	12		120.0	60	0	500	700	15L	34.56	14.00	4.57	
2	17-Sep	Drilling	09:55	09:59	0.07	978	997	19		285.0	60	0	500	700		35.41	15.00	4.57	
2	17-Sep	Sliding	10:03	10:07	0.07	997	1010	13		195.0	60	0	500	700	15L	35.93	15.00	3.93	
2	17-Sep	Drilling	10:07	10:10	0.05	1010	1027	17		340.0	60	0	500	700		36.59	15.00	3.93	
2	17-Sep	Sliding	10:13	10:17	0.07	1027	1040	13		195.0	60	0	500	700	10R	37.17	15.00	4.98	
2	17-Sep	Drilling	10:17	10:21	0.07	1040	1059	19		285.0	60	0	500	700		38.06	16.00	4.98	
2	17-Sep	Sliding	10:24	10:29	0.08	1059	1069	10		120.0	60	0	500	700	10R	38.20	16.00	2.06	
2	17-Sep	Drilling	10:29	10:34	0.08	1069	1090	21		252.0	60	0	500	700		38.32	17.00	2.06	
2	17-Sep	Drilling	10:37	10:43	0.10	1090	1121	31		310.0	60	0	500	700		38.01	18.00	1.93	
2	17-Sep	Drilling	10:45	10:50	0.08	1121	1153	32		384.0	60	0	500	700		38.58	16.00	2.36	
2	17-Sep	Sliding	10:53	10:58	0.08	1153	1167	14		168.0	60	0	500	700	10L	39.23	16.00	5.61	
2	17-Sep	Drilling	10:58	11:03	0.08	1167	1185	18		216.0	60	0	500	700		40.18	17.00	5.61	
2	17-Sep	Sliding	11:06	11:11	0.08	1185	1199	14		168.0	60	0	500	1255	10L	40.28	15.00	0.95	
2	17-Sep	Drilling	11:11	11:16	0.08	1199	1216	17		204.0	60	0	500	1255		40.18	15.00	0.95	
2	17-Sep	Drilling	11:19	11:23	0.07	1216	1248	32		480.0	60	0	500	1255		40.00	16.00	0.95	
2	17-Sep	Drilling	11:26	11:50	0.40	1248	1342	94		235.0	60	0	500	1255		38.48	14.00	2.29	
2	17-Sep	Drilling	11:53	12:15	0.37	1342	1436	94		256.4	60	0	500	1255		37.17	13.00	1.20	
2	17-Sep	Sliding	12:18	12:24	0.10	1436	1449	13		130.0	60	0	500	1255	30R	37.44	14.00	3.66	
2	17-Sep	Drilling	12:24	12:28	0.07	1449	1467	18		270.0	60	0	500	1255		37.86	15.00	3.66	
2	17-Sep	Sliding	12:31	12:36	0.08	1467	1479	12		144.0	60	0	500	1255	30R	37.89	15.00	1.17	
2	17-Sep	Drilling	12:36	12:41	0.08	1479	1498	19		228.0	60	0	500	1255		37.86	15.00	1.17	
2	17-Sep	Drilling	12:44	12:48	0.07	1498	1529	31		465.0	60	0	500	1255		38.07	15.00	0.79	
2	17-Sep	Sliding	12:55	13:02	0.12	1529	1542	13		111.4	60	0	500	1255	360	38.54	16.00	5.03	
2	17-Sep	Drilling	13:02	13:05	0.05	1542	1561	19		380.0	60	0	500	1255		39.46	16.00	5.03	
2	17-Sep	Sliding	13:08	13:14	0.10	1561	1574	13		130.0	60	0	500	1255	360	40.23	15.00	6.30	
2	17-Sep	Drilling	13:14	13:20	0.10	1574	1593	19		190.0	60	0	500	1255		41.40	15.00	6.30	
2	17-Sep	Sliding	13:23	13:28	0.08	1593	1606	13		156.0	60	0	500	1255	360	41.63	14.00	0.70	
2	17-Sep	Drilling	13:28	13:30	0.03	1606	1624	18		540.0	60	0	500	1255		41.71	14.00	0.70	
2	17-Sep	Drilling	13:33	13:39	0.10	1624	1656	32		320.0	60	0	500	1255		40.48	15.00	4.62	
2	17-Sep	Sliding	13:42	13:45	0.05	1656	1664	8		160.0	60	0	500	1255	90R	40.25	15.00	2.59	

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	17-Sep	Drilling	13:45	13:49	0.07	1664	1687	23		345.0	60	0	500	1255		39.66	15.00	2.59	
2	17-Sep	Drilling	13:51	13:57	0.10	1687	1718	31		310.0	60	0	500	1255		38.83	15.00	2.69	
2	17-Sep	Drilling	14:00	14:06	0.10	1718	1750	32		320.0	60	0	500	1255		38.76	15.00	0.80	
2	17-Sep	Sliding	14:09	14:13	0.07	1750	1762	12		180.0	60	0	500	1255	360	38.96	16.00	3.52	
2	17-Sep	Drilling	14:13	14:18	0.08	1762	1782	20		240.0	60	0	500	1255		39.41	17.00	3.52	
2	17-Sep	Sliding	14:22	14:26	0.07	1782	1794	12		180.0	60	0	500	1255	360	39.85	17.00	5.43	
2	17-Sep	Drilling	14:26	14:31	0.08	1794	1813	19		228.0	60	0	500	1255		40.64	18.00	5.43	
2	17-Sep	Sliding	14:34	14:40	0.10	1813	1825	12		120.0	60	0	500	1255	360	40.80	19.00	0.62	
2	17-Sep	Drilling	14:40	14:43	0.05	1825	1845	20		400.0	60	0	500	1255		40.86	19.00	0.62	
2	17-Sep	Drilling	14:45	14:53	0.13	1845	1876	31		232.5	60	0	500	1255		40.85	19.00	0.64	
2	17-Sep	Drilling	14:56	15:07	0.18	1876	1907	31		169.1	60	0	500	1255		40.65	19.00	0.96	
2	17-Sep	Drilling	15:10	15:16	0.10	1907	1939	32		320.0	60	0	500	1255		40.16	19.00	1.63	
2	17-Sep	Drilling	15:19	15:26	0.12	1939	1970	31		265.7	60	0	500	1255		40.02	19.00	0.58	
2	17-Sep	Drilling	15:29	15:35	0.10	1970	1978	8		80.0	60	0	500	1255		39.93	19.00	1.74	
2	17-Sep	Drilling	15:41	15:57	0.27	1978	2001	23		86.2	60	0	500	1255		39.54	19.00	1.74	
2	17-Sep	Drilling	16:00	16:06	0.10	2001	2033	32		320.0	60	0	500	1255		39.22	19.00	1.77	
2	17-Sep	Sliding	16:09	16:14	0.08	2033	2042	9		108.0	60	0	500	1255	90L	39.14	18.00	2.14	
2	17-Sep	Drilling	16:14	16:18	0.07	2042	2064	22		330.0	60	0	500	1255		38.95	19.00	2.14	
2	17-Sep	Drilling	16:21	16:37	0.27	2064	2096	32		120.0	60	0	500	1255		38.24	17.00	2.39	
2	17-Sep	Drilling	16:40	16:50	0.17	2096	2127	31		186.0	60	85	500	1255		38.08	17.00	0.98	
2	17-Sep	Sliding	16:50	16:55	0.08	2127	2139	12		144.0	0	85	500	1255	45L	38.15	17.00	5.13	
2	17-Sep	Drilling	16:55	17:00	0.08	2139	2158	19		228.0	60	85	500	1255		38.31	19.00	5.13	
2	17-Sep	Sliding	17:05	17:10	0.08	2158	2164	6		72.0	60	85	500	1255	70L	38.35	14.00	1.60	
2	17-Sep	Drilling	17:10	17:20	0.17	2164	2189	25		150.0	60	85	500	1255		38.47	14.00	1.60	
2	17-Sep	Drilling	17:25	17:40	0.25	2189	2221	32		128.0	60	85	500	1255		38.73	14.00	1.40	
2	17-Sep	Sliding	17:40	17:45	0.08	2221	2231	10		120.0	60	85	500	1255	360	38.84	14.00	1.39	
2	17-Sep	Drilling	17:45	17:55	0.17	2231	2253	22		132.0	60	85	500	1600		39.10	14.00	1.39	
2	17-Sep	Drilling	18:00	18:05	0.08	2253	2285	32		384.0	60	85	500	1600		38.77	14.00	2.23	
2	17-Sep	Drilling	18:10	18:25	0.25	2285	2316	31		124.0	60	85	500	1600		38.82	13.00	0.62	
2	17-Sep	Drilling	18:30	18:35	0.08	2316	2347	31		372.0	60	85	500	1600		38.41	14.00	4.16	
2	17-Sep	Sliding	18:40	18:45	0.08	2347	2355	8	30	96.0	60	85	500	1600	60	38.33	14.00	1.53	
2	17-Sep	Drilling	18:45	18:55	0.17	2355	2379	24	25	144.0	60	85	500	1600		38.12	14.00	1.53	
2	17-Sep	Drilling	19:00	19:10	0.17	2379	2410	31	25	186.0	60	85	500	1600		38.55	15.00	1.82	

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	17-Sep	Sliding	19:15	19:20	0.08	2410	2420	10	30	120.0	60	85	500	1600	60	38.55	14.00	1.20	
2	17-Sep	Drilling	19:20	19:25	0.08	2420	2442	22	25	264.0	60	85	500	1600		38.38	15.00	1.20	
2	17-Sep	Drilling	19:30	19:40	0.17	2442	2473	31	25	186.0	60	85	500	1600		36.79	15.00	5.65	
2	17-Sep	Sliding	19:45	19:50	0.08	2473	2479	6	30	72.0	60	85	500	1600	180	36.54	15.00	2.74	
2	17-Sep	Drilling	19:50	19:55	0.08	2479	2505	26	25	312.0	60	85	500	1600		35.85	15.00	2.74	
2	17-Sep	Drilling	20:00	20:10	0.17	2505	2536	31	25	186.0	60	85	500	1600		35.23	15.00	2.15	
2	17-Sep	Drilling	20:15	20:20	0.08	2536	2568	32	25	384.0	60	85	500	1600		34.43	14.00	2.58	
2	17-Sep	Sliding	20:25	20:30	0.08	2568	2573	5	30	60.0	60	85	500	1600	180	34.34	14.00	0.56	
2	17-Sep	Drilling	20:30	20:45	0.25	2573	2599	26	25	104.0	60	85	500	1600		34.25	14.00	0.56	
2	17-Sep	Drilling	20:50	21:00	0.17	2599	2631	32	25	192.0	60	85	500	1600		33.70	15.00	2.29	
2	17-Sep	Sliding	21:05	21:10	0.08	2631	2637	6	30	72.0	60	85	500	1600	150	33.52	15.00	3.61	
2	17-Sep	Drilling	21:10	21:30	0.33	2637	2662	25	25	75.0	60	85	500	1600		32.62	16.00	3.61	
2	17-Sep	Sliding	21:35	21:40	0.08	2662	2669	7	30	84.0	60	85	500	1600	180	32.32	15.00	4.66	
2	17-Sep	Drilling	21:40	21:55	0.25	2669	2693	24	25	96.0	60	85	500	1600		31.20	15.00	4.66	
2	17-Sep	Sliding	22:00	22:05	0.08	2693	2701	8	30	96.0	60	85	500	1600	180	30.80	15.00	5.28	
2	17-Sep	Drilling	22:05	22:10	0.08	2701	2724	23	25	276.0	60	85	500	1600		29.59	15.00	5.28	
2	17-Sep	Sliding	22:15	22:20	0.08	2724	2732	8	30	96.0	60	85	500	1600	180	29.18	15.00	5.06	
2	17-Sep	Drilling	22:20	22:30	0.17	2732	2756	24	25	144.0	60	85	500	1600		27.96	15.00	5.06	
2	17-Sep	Sliding	22:35	22:40	0.08	2756	2763	7	30	84.0	60	90	500	1600	180	27.63	15.00	4.57	
2	17-Sep	Drilling	22:40	22:45	0.08	2763	2787	24	25	288.0	60	90	500	1600		26.54	15.00	4.57	
2	17-Sep	Sliding	22:50	22:55	0.08	2787	2793	6	30	72.0	60	90	500	1600	180	26.33	14.00	3.01	
2	17-Sep	Drilling	22:55	23:00	0.08	2793	2818	25	25	300.0	60	90	500	1600		25.61	15.00	3.01	
2	17-Sep	Drilling	23:05	23:10	0.08	2818	2849	31	25	372.0	60	90	500	1600		25.05	14.00	1.72	
2	17-Sep	Sliding	23:15	23:20	0.08	2849	2855	6	30	72.0	60	90	500	1600	150	24.85	14.00	4.56	
2	17-Sep	Drilling	23:20	23:30	0.17	2855	2881	26	25	156.0	60	90	500	1600		23.72	14.00	4.56	
2	17-Sep	Sliding	23:35	23:40	0.08	2881	2887	6	30	72.0	60	90	500	1600	150	23.44	15.00	4.99	
2	17-Sep	Drilling	23:40	23:45	0.08	2887	2911	24	25	288.0	60	90	500	1600		22.31	16.00	4.99	
2	17-Sep	Sliding	23:50	23:55	0.08	2911	2919	8	30	96.0	60	90	500	1600	150	22.02	16.00	3.37	
2	17-Sep	Drilling	23:55	24:00	0.08	2919	2942	23	25	276.0	60	90	500	1600		21.25	16.00	3.37	
2	18-Sep	Drilling	00:05	00:15	0.17	2942	2973	31	25	186.0	60	95	500	1600		19.91	17.00	4.56	
2	18-Sep	Sliding	00:20	00:25	0.08	2973	2980	7	30	84.0	60	95	500	1600	180	19.65	15.00	3.46	
2	18-Sep	Drilling	00:25	00:30	0.08	2980	3005	25	25	300.0	60	95	500	1600		18.86	16.00	3.46	
2	18-Sep	Sliding	00:35	00:40	0.08	3005	3012	7	30	84.0	60	95	500	1600	180	18.64	14.00	3.22	

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	18-Sep	Drilling	00:40	00:50	0.17	3012	3036	24	25	144.0	60	95	500	1600		17.90	15.00	3.22	
2	18-Sep	Drilling	00:55	01:05	0.17	3036	3067	31	25	186.0	60	95	500	1600		17.13	14.00	2.54	
2	18-Sep	Sliding	01:10	01:15	0.08	3067	3074	7	30	84.0	60	95	500	1600	180	16.91	12.00	3.42	
2	18-Sep	Drilling	01:15	01:20	0.08	3074	3098	24	25	288.0	60	95	500	1600		16.09	12.00	3.42	
2	18-Sep	Drilling	01:25	01:45	0.33	3098	3129	31	25	93.0	60	95	500	1600		15.59	12.00	1.50	
2	18-Sep	Sliding	01:50	01:55	0.08	3129	3135	6	30	72.0	60	95	500	1600	120R	15.52	12.00	1.42	
2	18-Sep	Drilling	01:55	02:05	0.17	3135	3160	25	25	150.0	60	95	500	1600		15.35	14.00	1.42	
2	18-Sep	Drilling	02:10	02:25	0.25	3160	3192	32	25	128.0	60	95	500	1600		14.68	12.00	2.40	
2	18-Sep	Sliding	02:30	02:35	0.08	3192	3198	6	30	72.0	60	95	500	1600	150R	14.43	12.00	5.80	
2	18-Sep	Drilling	02:35	02:50	0.25	3198	3223	25	25	100.0	60	95	500	1600		13.10	15.00	5.80	
2	18-Sep	Sliding	02:55	03:00	0.08	3223	3231	8	30	96.0	60	95	500	1600	150R	12.78	15.00	4.09	
2	18-Sep	Drilling	03:00	03:10	0.17	3231	3254	23	25	138.0	60	95	500	1600		11.99	18.00	4.09	
2	18-Sep	Sliding	03:15	03:20	0.08	3254	3262	8	40	96.0	60	95	500	1700	150R	11.78	18.00	2.57	
2	18-Sep	Drilling	03:20	03:40	0.33	3262	3285	23	25	69.0	60	95	500	1700		11.26	20.00	2.57	
2	18-Sep	Drilling	05:20	05:31	0.18	3285	3316	31	25	169.1	60	95	500	1700		9.91	21.00	4.61	
2	18-Sep	Sliding	05:34	05:40	0.10	3316	3322	6	40	60.0	60	95	500	1700	170L	9.63	19.00	5.14	
2	18-Sep	Drilling	05:40	05:49	0.15	3322	3348	26	25	173.3	60	95	500	1700		8.40	22.00	5.14	
2	18-Sep	Sliding	05:52	06:00	0.13	3348	3356	8	40	60.0	60	95	500	1700	170L	8.05	16.00	4.95	
2	18-Sep	Drilling	06:00	06:09	0.15	3356	3380	24	25	160.0	60	95	500	1700		7.09	21.00	4.95	
2	18-Sep	Drilling	06:12	06:19	0.12	3380	3411	31	25	265.7	60	95	500	1700		6.47	10.00	2.09	
2	18-Sep	Drilling	06:22	06:29	0.12	3411	3442	31	25	265.7	60	95	500	1700		5.90	7.00	2.00	
2	18-Sep	Drilling	06:32	06:38	0.10	3442	3474	32	25	320.0	60	95	500	1700		5.07	7.00	2.98	
2	18-Sep	Drilling	06:41	06:49	0.13	3474	3505	31	25	232.5	60	95	500	1700		4.87	4.00	1.62	
2	18-Sep	Drilling	06:52	06:59	0.12	3505	3537	32	25	274.3	60	95	500	1700		5.27	358.00	2.18	
2	18-Sep	Sliding	07:02	07:09	0.12	3537	3548	11	40	94.3	60	95	500	1700	30R	5.36	1.00	1.95	
2	18-Sep	Drilling	07:09	07:15	0.10	3548	3568	20	25	200.0	60	95	500	1700		5.52	4.00	1.95	
2	18-Sep	Drilling	07:20	07:30	0.17	3568	3599	31	25	186.0	60	95	500	1700		5.89	6.00	1.25	
2	18-Sep	Drilling	07:33	07:40	0.12	3599	3631	32	25	274.3	60	95	500	1700		5.52	4.00	1.49	
2	18-Sep	Drilling	07:43	07:53	0.17	3631	3663	32	25	192.0	60	95	500	1700		5.15	6.00	1.32	
2	18-Sep	Drilling	07:56	08:05	0.15	3663	3694	31	25	206.7	60	95	500	1700		4.79	4.00	1.39	
2	18-Sep	Drilling	08:08	08:15	0.12	3694	3724	30	25	257.1	60	95	500	1700		4.38	0.00	1.45	
2	18-Sep	Drilling	08:18	08:26	0.13	3724	3757	33	25	247.5	60	95	500	1700		4.33	357.00	0.00	
2	18-Sep	Drilling	08:29	08:40	0.18	3757	3788	31	25	169.1	60	95	500	1700		4.33	357.00	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	18-Sep	Drilling	08:57	09:07	0.17	3788	3815	27	25	162.0	60	95	500	1700		4.33	357.00	0.00	

Total Drilled: 3293 Avg. Total ROP: 182.27 DEPTH% - TIME %

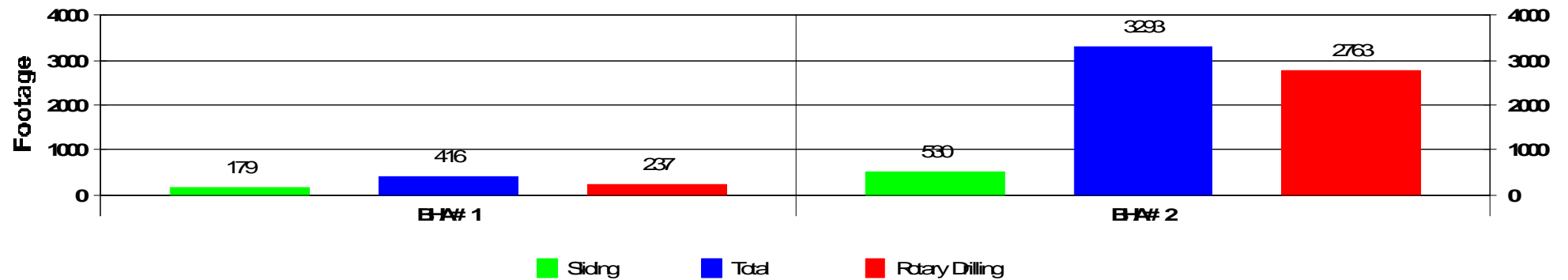
Total Rotary Drilled: 2763 Avg. Rotary ROP: 204.41 Percent Rotary: 83.91 - 74.82

Total Drilled Sliding: 530 Avg. Slide ROP: 116.48 Percent Slide: 16.09 - 25.18

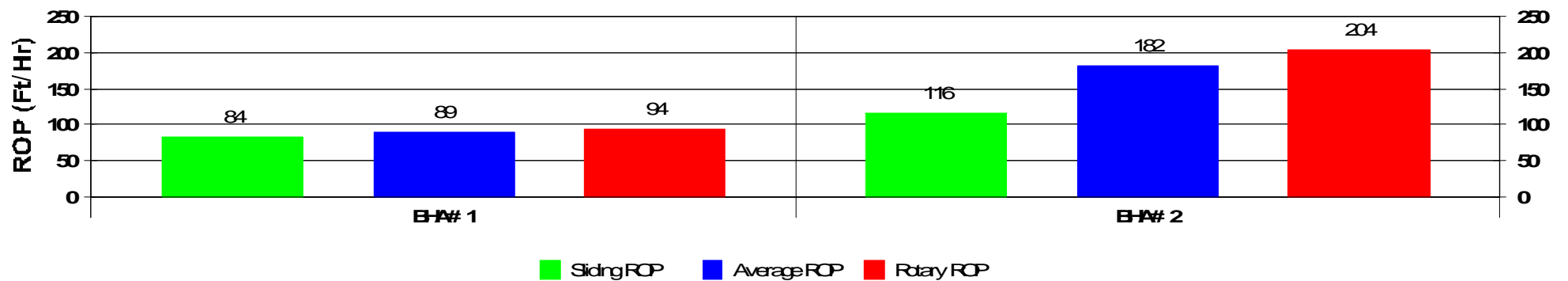


JOB NO.:	330915DEF311787	FIELD:	La Plata	
COMPANY:	B.P.	Township:	SEC 31 T33N 606W	
LOCATION:	La Plata	SECT/RANGE:	X3-01664	33
RIG NAME:	Aztec 507	COMMENT		
STATE:	Co.			
COUNTY:	La Plata			
WELL NAME:	Taichert 31-01 #4			

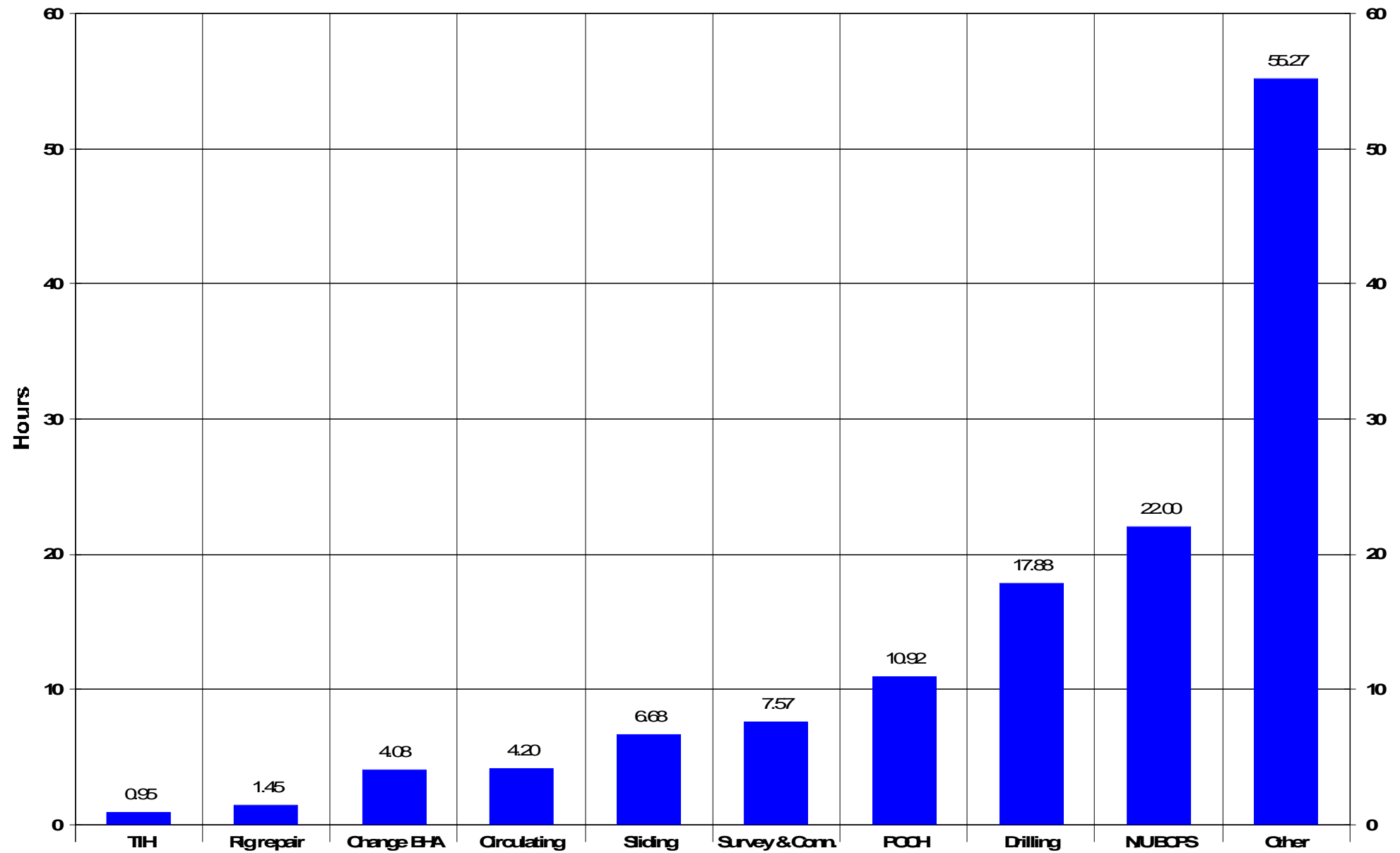
Footage Drilled with BHA



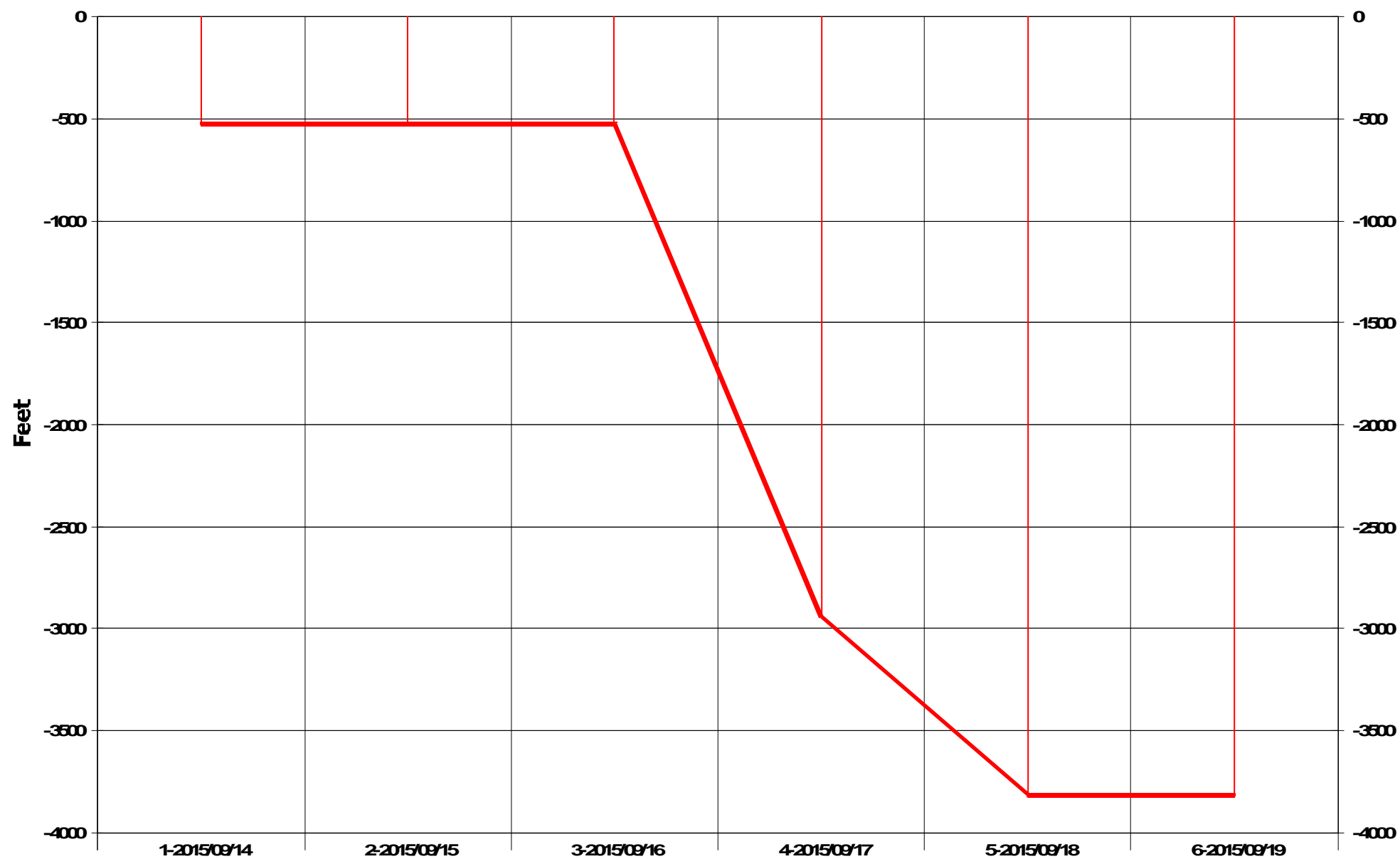
ROP vs BHA



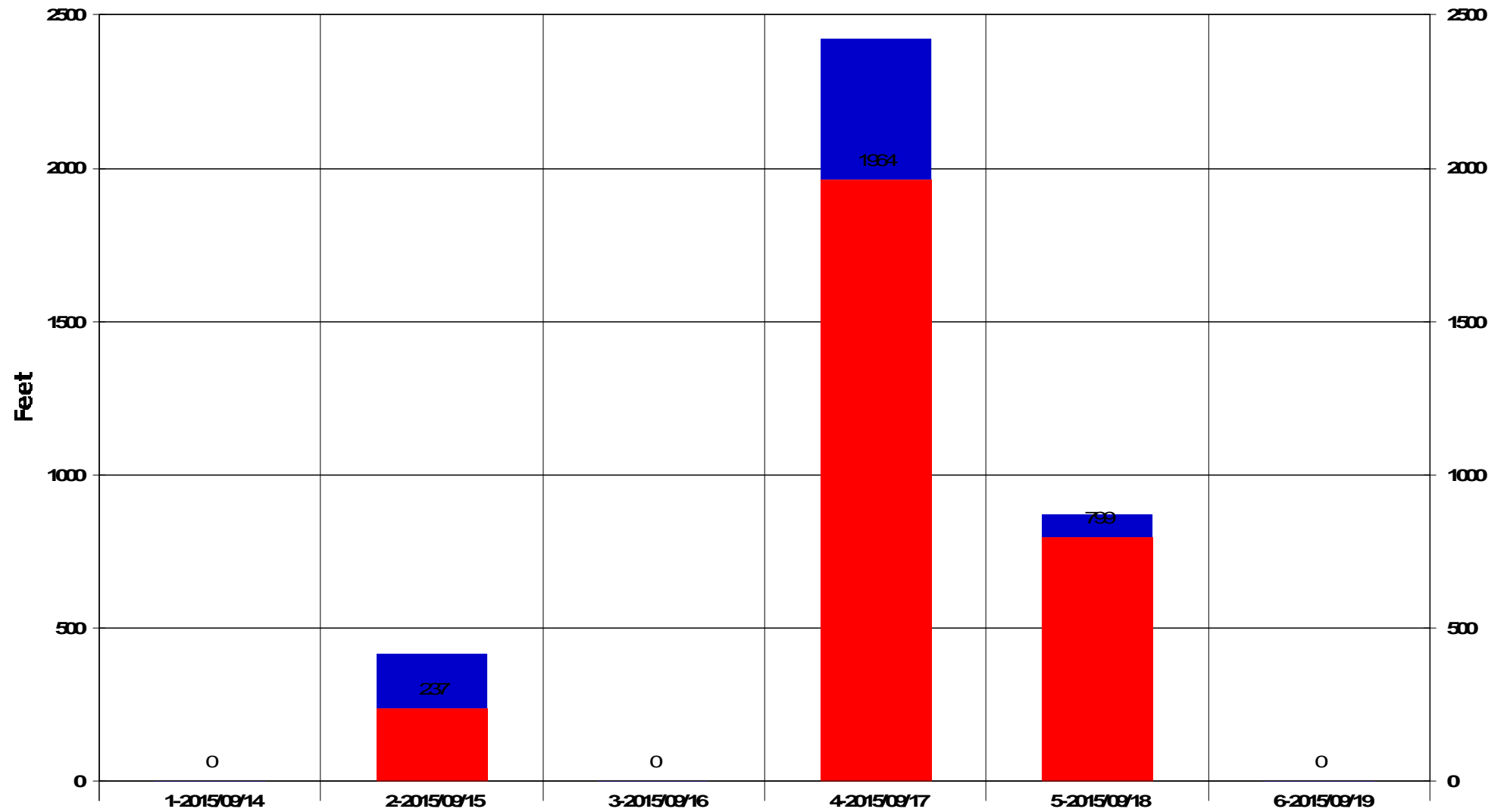
Activity Histogram



Measured Depth vs Days



Daily Footage



Rotary Drilling Siding

SUPPORT STAFF

**D'Arcy Quinn – Northern USA Region Director
(307) 472-6621**

darcy.quinn@scientificdrilling.com

**Jack Potter – Grand Junction, CO & Farmington, NM
District Base Manager
(970) 245-9447**

jack.potter@scientificdrilling.com

**Colorado District Well Planner:
Janie Collins**

**Directional Drillers:
D. Hensley, M. Houston**

**MWD Operators:
R. Cuevas, L. Kristy**

2948 I-70 Bus. Loop
Grand Junction, CO 81504
(970) 245-9447

