



Ursa Operating Company, LLC

Rockies Region

BMC D

BMC D 22C-18-07-95

Wellbore #1

Design: Actual

End of Well Report

13 April, 2017



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well BMC D 22C-18-07-95
Project:	Rockies Region	TVD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Site:	BMC D	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Well:	BMC D 22C-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Project		Rockies Region	
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site		BMC D			
Site Position:		Northing:		1,595,755.80 usft	
From:	Lat/Long	Easting:		2,282,541.08 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
				Latitude: 39.441572650	
				Longitude: -108.040739971	
				Grid Convergence: -1.60 °	

Well		BMC D 22C-18-07-95, SHL Lat: 39.441482141 Long: -108.040763287				
Well Position	+N/-S	0.0 usft	Northing:	1,595,723.04 usft	Latitude:	39.441482141
	+E/-W	0.0 usft	Easting:	2,282,533.58 usft	Longitude:	-108.040763287
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,285.0 usft	Ground Level:	5,268.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/13/2017	9.73	65.54	51,519

Design		Actual			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)		+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0		0.0	0.0	201.82

Survey Program		Date	4/13/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
111.0	6,400.0	Actual (Wellbore #1)	MWD	MWD - Standard	

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Well:	BMC D 22C-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
111.0	0.23	48.76	111.0	-0.2	0.1	0.2	0.21	0.21	0.00	
140.0	0.00	292.75	140.0	-0.3	0.2	0.2	0.79	-0.79	0.00	
170.0	0.18	94.14	170.0	-0.3	0.2	0.3	0.60	0.60	0.00	
200.0	0.22	45.38	200.0	-0.3	0.2	0.3	0.56	0.13	-162.53	
231.0	0.09	118.33	231.0	-0.4	0.2	0.4	0.68	-0.42	235.32	
261.0	0.66	177.66	261.0	-0.2	0.1	0.4	2.06	1.90	197.77	
292.0	0.88	170.01	292.0	0.1	-0.3	0.5	0.78	0.71	-24.68	
322.0	1.01	183.05	322.0	0.6	-0.8	0.5	0.83	0.43	43.47	
353.0	1.14	186.22	353.0	1.1	-1.4	0.5	0.46	0.42	10.23	
383.0	1.32	193.17	383.0	1.8	-2.1	0.4	0.78	0.60	23.17	
414.0	1.71	200.29	414.0	2.6	-2.8	0.1	1.39	1.26	22.97	
444.0	1.93	200.73	444.0	3.5	-3.7	-0.2	0.73	0.73	1.47	
475.0	1.98	203.45	474.9	4.6	-4.7	-0.6	0.34	0.16	8.77	
505.0	2.68	199.01	504.9	5.8	-5.8	-1.1	2.41	2.33	-14.80	
536.0	3.56	200.99	535.9	7.5	-7.4	-1.6	2.86	2.84	6.39	
566.0	4.26	205.52	565.8	9.5	-9.3	-2.4	2.55	2.33	15.10	
597.0	5.41	203.14	596.7	12.2	-11.7	-3.5	3.76	3.71	-7.68	
627.0	6.33	200.11	626.5	15.2	-14.5	-4.6	3.23	3.07	-10.10	
658.0	7.60	200.20	657.3	19.0	-18.1	-5.9	4.10	4.10	0.29	
689.0	9.12	206.72	688.0	23.5	-22.2	-7.8	5.77	4.90	21.03	
884.0	18.03	203.69	877.3	69.1	-63.7	-26.9	4.58	4.57	-1.55	
927.0	19.56	202.92	918.0	83.0	-76.4	-32.3	3.60	3.56	-1.79	
969.0	19.84	202.47	957.6	97.1	-89.5	-37.8	0.76	0.67	-1.07	
1,012.0	20.31	204.20	998.0	111.9	-103.0	-43.7	1.76	1.09	4.02	
1,055.0	20.62	203.89	1,038.3	126.9	-116.8	-49.8	0.76	0.72	-0.72	
1,098.0	21.02	202.18	1,078.4	142.2	-130.8	-55.8	1.69	0.93	-3.98	

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Site:	BMC D	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Well:	BMC D 22C-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
1,140.0	19.66	199.35	1,117.8	156.8	-144.5	-60.9	4.00	-3.24	-6.74	
1,183.0	19.03	199.06	1,158.4	171.0	-157.9	-65.6	1.48	-1.47	-0.67	
1,226.0	17.80	199.23	1,199.2	184.6	-170.8	-70.1	2.86	-2.86	0.40	
1,268.0	17.53	199.45	1,239.2	197.3	-182.8	-74.3	0.66	-0.64	0.52	
1,311.0	16.96	199.28	1,280.3	210.0	-194.8	-78.5	1.33	-1.33	-0.40	
1,354.0	17.71	197.08	1,321.3	222.8	-207.0	-82.5	2.32	1.74	-5.12	
1,397.0	18.24	196.99	1,362.2	236.1	-219.7	-86.4	1.23	1.23	-0.21	
1,439.0	19.07	198.84	1,402.0	249.5	-232.5	-90.5	2.43	1.98	4.40	
1,482.0	19.20	200.77	1,442.6	263.5	-245.7	-95.3	1.50	0.30	4.49	
1,525.0	19.81	201.28	1,483.2	277.9	-259.1	-100.5	1.47	1.42	1.19	
1,567.0	20.08	202.26	1,522.7	292.2	-272.4	-105.8	1.02	0.64	2.33	
1,610.0	20.17	202.79	1,563.0	307.0	-286.1	-111.5	0.47	0.21	1.23	
1,653.0	20.67	204.35	1,603.3	322.0	-299.8	-117.5	1.72	1.16	3.63	
1,695.0	21.23	203.89	1,642.6	337.0	-313.5	-123.6	1.39	1.33	-1.10	
1,715.0	21.09	202.48	1,661.2	344.2	-320.2	-126.4	2.64	-0.70	-7.05	
Last PZD Surface Survey										
1,785.0	21.31	203.10	1,726.5	369.5	-343.5	-136.2	0.45	0.31	0.89	
1,869.0	20.17	202.57	1,805.0	399.3	-370.9	-147.8	1.38	-1.36	-0.63	
1,953.0	18.81	199.41	1,884.2	427.3	-397.1	-157.8	2.05	-1.62	-3.76	
2,038.0	18.81	201.87	1,964.7	454.7	-422.7	-167.5	0.93	0.00	2.89	
2,122.0	20.08	203.36	2,043.9	482.7	-448.5	-178.3	1.62	1.51	1.77	
2,207.0	19.56	204.90	2,123.8	511.4	-474.8	-190.0	0.87	-0.61	1.81	
2,291.0	19.51	204.15	2,203.0	539.5	-500.4	-201.7	0.30	-0.06	-0.89	
2,375.0	18.54	203.58	2,282.4	566.9	-525.4	-212.8	1.18	-1.15	-0.68	
2,460.0	18.46	203.06	2,363.0	593.8	-550.2	-223.5	0.22	-0.09	-0.61	
2,544.0	17.58	200.51	2,442.9	619.8	-574.3	-233.1	1.41	-1.05	-3.04	
2,628.0	18.00	204.72	2,522.9	645.5	-598.0	-243.0	1.61	0.50	5.01	

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Site:	BMC D	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Well:	BMC D 22C-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
2,712.0	18.90	204.33	2,602.6	672.0	-622.2	-254.0	1.08	1.07	-0.46	
2,797.0	19.91	201.25	2,682.8	700.2	-648.2	-264.9	1.69	1.19	-3.62	
2,881.0	19.38	199.58	2,761.9	728.5	-674.7	-274.8	0.92	-0.63	-1.99	
2,965.0	20.08	198.57	2,840.9	756.8	-701.5	-284.1	0.93	0.83	-1.20	
3,050.0	20.26	203.23	2,920.7	786.1	-728.8	-294.5	1.90	0.21	5.48	
3,134.0	20.70	202.22	2,999.4	815.5	-755.9	-305.9	0.67	0.52	-1.20	
3,218.0	20.13	200.59	3,078.1	844.7	-783.2	-316.6	0.96	-0.68	-1.94	
3,303.0	18.85	199.63	3,158.3	873.1	-809.8	-326.3	1.55	-1.51	-1.13	
3,387.0	18.46	199.98	3,237.9	899.9	-835.1	-335.4	0.48	-0.46	0.42	
3,472.0	16.48	201.43	3,318.9	925.5	-859.0	-344.4	2.38	-2.33	1.71	
3,556.0	15.64	199.28	3,399.7	948.7	-880.8	-352.5	1.23	-1.00	-2.56	
3,640.0	14.37	199.54	3,480.8	970.4	-901.3	-359.7	1.51	-1.51	0.31	
3,724.0	13.36	200.86	3,562.3	990.5	-920.2	-366.7	1.26	-1.20	1.57	
3,810.0	10.94	200.99	3,646.4	1,008.6	-937.1	-373.1	2.81	-2.81	0.15	
3,894.0	9.54	200.78	3,729.1	1,023.6	-951.0	-378.5	1.67	-1.67	-0.25	
3,978.0	7.69	202.26	3,812.1	1,036.1	-962.7	-383.1	2.22	-2.20	1.76	
4,062.0	5.19	201.78	3,895.6	1,045.6	-971.5	-386.6	2.98	-2.98	-0.57	
4,147.0	2.20	195.89	3,980.4	1,051.0	-976.6	-388.5	3.54	-3.52	-6.93	
4,185.9	2.02	190.28	4,019.2	1,052.4	-978.0	-388.8	0.70	-0.45	-14.43	
22C-18-07-95 TGT										
4,231.0	1.85	182.53	4,064.3	1,053.9	-979.5	-389.0	0.70	-0.39	-17.18	
4,315.0	0.57	17.87	4,148.3	1,054.8	-980.5	-388.9	2.86	-1.52	-196.02	
4,400.0	0.79	12.73	4,233.3	1,053.8	-979.5	-388.7	0.27	0.26	-6.05	
4,484.0	0.22	347.06	4,317.3	1,053.1	-978.8	-388.6	0.71	-0.68	-30.56	
4,568.0	0.63	301.42	4,401.3	1,052.9	-978.4	-389.0	0.60	0.49	-54.33	
4,652.0	0.40	273.68	4,485.3	1,052.9	-978.1	-389.7	0.40	-0.27	-33.02	
4,737.0	0.26	271.83	4,570.3	1,053.0	-978.1	-390.2	0.17	-0.16	-2.18	

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Site:	BMC D	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Well:	BMC D 22C-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

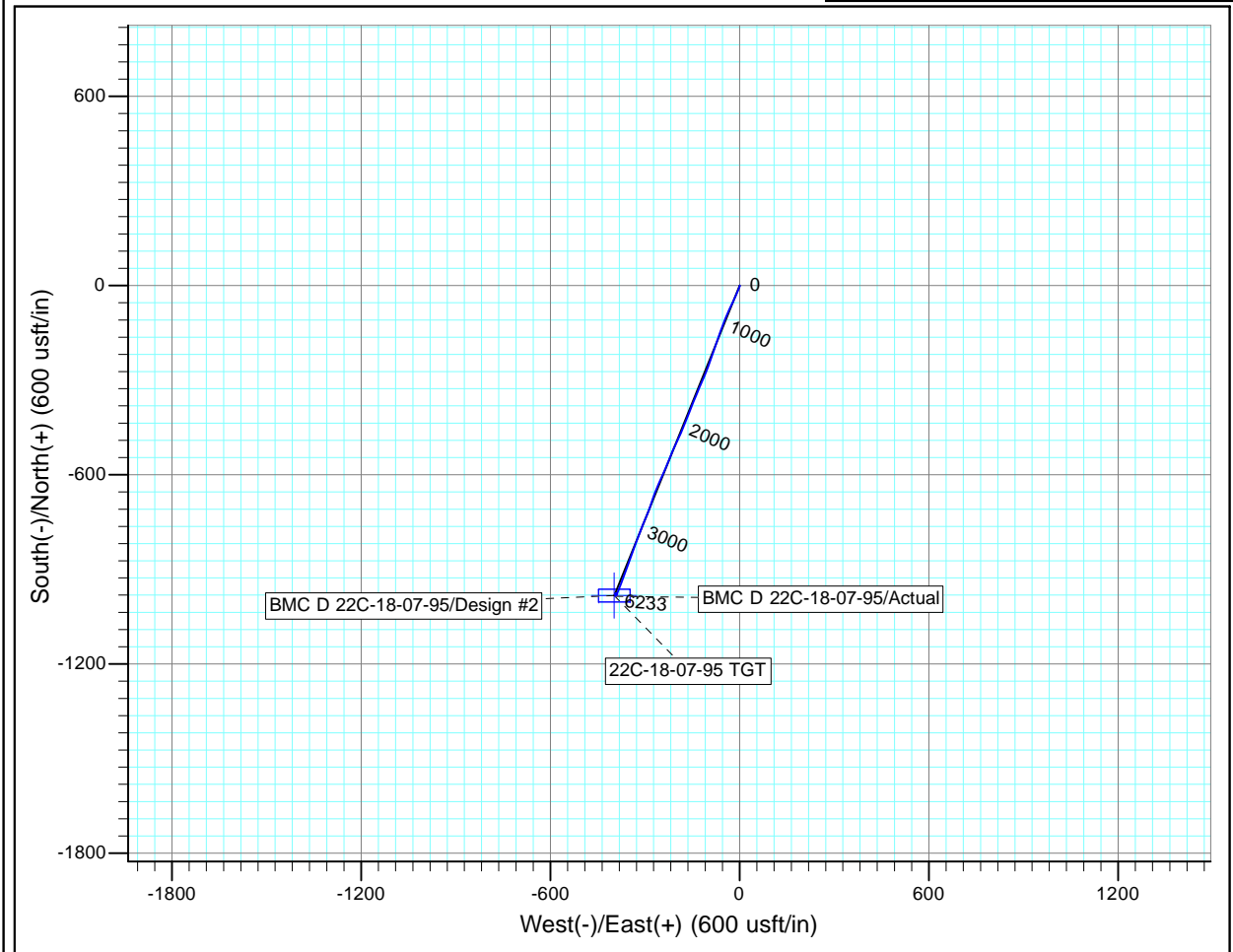
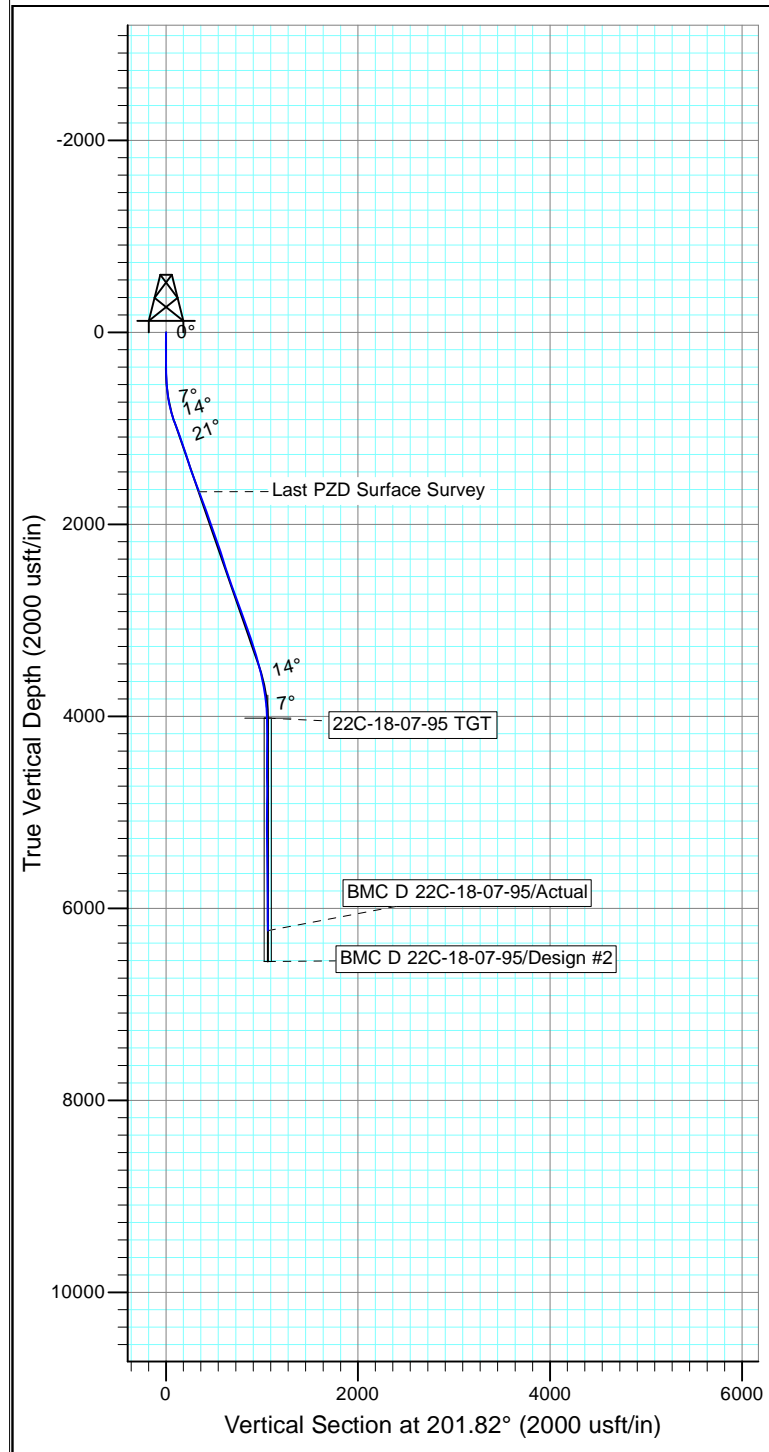
Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
4,821.0	0.79	256.62	4,654.3	1,053.4	-978.2	-390.9	0.65	0.63	-18.11	
4,905.0	1.14	243.35	4,738.3	1,054.4	-978.7	-392.2	0.49	0.42	-15.80	
4,990.0	0.92	324.92	4,823.3	1,054.7	-978.5	-393.4	1.60	-0.26	95.96	
5,074.0	1.14	44.54	4,907.3	1,053.5	-977.4	-393.2	1.58	0.26	94.79	
5,158.0	0.75	49.99	4,991.3	1,052.3	-976.4	-392.2	0.48	-0.46	6.49	
5,243.0	0.26	304.83	5,076.3	1,051.7	-976.0	-391.9	1.01	-0.58	-123.72	
5,327.0	0.26	222.17	5,160.3	1,051.9	-976.0	-392.2	0.41	0.00	-98.40	
5,411.0	0.66	257.55	5,244.3	1,052.3	-976.3	-392.8	0.56	0.48	42.12	
5,495.0	0.70	221.56	5,328.3	1,053.1	-976.7	-393.6	0.50	0.05	-42.85	
5,580.0	1.23	221.12	5,413.2	1,054.4	-977.8	-394.5	0.62	0.62	-0.52	
5,668.0	1.14	121.10	5,501.2	1,055.4	-979.0	-394.4	2.06	-0.10	-113.66	
5,756.0	0.57	111.65	5,589.2	1,055.6	-979.6	-393.3	0.67	-0.65	-10.74	
5,844.0	0.88	178.09	5,677.2	1,056.2	-980.4	-392.8	0.95	0.35	75.50	
5,933.0	1.23	213.78	5,766.2	1,057.8	-981.9	-393.3	0.82	0.39	40.10	
6,022.0	0.04	182.45	5,855.2	1,058.7	-982.7	-393.9	1.34	-1.34	-35.20	
6,111.0	0.04	126.28	5,944.2	1,058.8	-982.8	-393.9	0.04	0.00	-63.11	
6,199.0	0.31	222.52	6,032.2	1,059.0	-983.0	-394.0	0.36	0.31	109.36	
6,287.0	0.70	187.98	6,120.2	1,059.7	-983.7	-394.2	0.54	0.44	-39.25	
6,340.0	0.70	184.20	6,173.2	1,060.4	-984.3	-394.3	0.09	0.00	-7.13	
Last PZD Survey										
6,400.0	0.70	184.20	6,233.2	1,061.1	-985.1	-394.3	0.00	0.00	0.00	
Straight Line Projection to TD										

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Site:	BMC D	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Well:	BMC D 22C-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,715.0	1,661.2	-320.2	-126.4	Last PZD Surface Survey
6,340.0	6,173.2	-984.3	-394.3	Last PZD Survey
6,400.0	6,233.2	-985.1	-394.3	Straight Line Projection to TD

Checked By: _____ Approved By: _____ Date: _____





Ursa Operating Company, LLC

Rockies Region

BMC D

BMC D 22C-18-07-95

Wellbore #1

Plan: Design #2

Standard Planning Report

19 March, 2017



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BMC D 22C-18-07-95
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Well:	BMC D 22C-18-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Project	Rockies Region		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	BMC D		
Site Position:		Northing:	1,595,755.80 usft
From:	Lat/Long	Easting:	2,282,541.08 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39.441572650
		Longitude:	-108.040739971
		Grid Convergence:	-1.60 °

Well	BMC D 22C-18-07-95, SHL Lat: 39.441482141 Long: -108.040763287		
Well Position	+N/-S	-33.0 usft	Northing: 1,595,723.03 usft
	+E/-W	-6.6 usft	Easting: 2,282,533.58 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	5,285.0 usft
		Ground Level:	5,268.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/8/2017	9.74	65.54	51,530

Design	Design #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	202.02

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
405.0	0.00	0.00	405.0	0.0	0.0	0.00	0.00	0.00	0.00	
950.5	19.09	202.02	940.5	-83.5	-33.8	3.50	3.50	0.00	202.02	
3,641.6	19.09	202.02	3,483.5	-899.6	-363.8	0.00	0.00	0.00	0.00	
4,187.1	0.00	0.00	4,019.0	-983.1	-397.5	3.50	-3.50	0.00	180.00	22C-18-07-95 TGT
6,723.1	0.00	0.00	6,555.0	-983.1	-397.5	0.00	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BMC D 22C-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Project:	Rockies Region	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Site:	BMC D	North Reference:	True
Well:	BMC D 22C-18-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
0.1	0.00	0.00	0.1	0.0	0.0	0.0	0.00	0.00	0.00
SHL 39.441482141 -108.040763287									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
405.0	0.00	0.00	405.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 3.50									
500.0	3.33	202.02	499.9	-2.6	-1.0	2.8	3.50	3.50	0.00
600.0	6.83	202.02	599.5	-10.8	-4.3	11.6	3.50	3.50	0.00
700.0	10.33	202.02	698.4	-24.6	-9.9	26.5	3.50	3.50	0.00
800.0	13.83	202.02	796.2	-44.0	-17.8	47.4	3.50	3.50	0.00
900.0	17.33	202.02	892.5	-68.9	-27.8	74.3	3.50	3.50	0.00
950.5	19.09	202.02	940.5	-83.5	-33.8	90.1	3.50	3.50	0.00
Start 2691.1 hold at 950.5 MD									
1,000.0	19.09	202.02	987.2	-98.5	-39.8	106.2	0.00	0.00	0.00
1,100.0	19.09	202.02	1,081.7	-128.8	-52.1	139.0	0.00	0.00	0.00
1,200.0	19.09	202.02	1,176.2	-159.1	-64.4	171.7	0.00	0.00	0.00
1,300.0	19.09	202.02	1,270.7	-189.5	-76.6	204.4	0.00	0.00	0.00
1,400.0	19.09	202.02	1,365.2	-219.8	-88.9	237.1	0.00	0.00	0.00
1,500.0	19.09	202.02	1,459.7	-250.1	-101.1	269.8	0.00	0.00	0.00
1,600.0	19.09	202.02	1,554.2	-280.5	-113.4	302.5	0.00	0.00	0.00
1,700.0	19.09	202.02	1,648.7	-310.8	-125.7	335.2	0.00	0.00	0.00
1,754.3	19.09	202.02	1,700.0	-327.2	-132.3	353.0	0.00	0.00	0.00
Surface Casing									
1,800.0	19.09	202.02	1,743.2	-341.1	-137.9	367.9	0.00	0.00	0.00
1,900.0	19.09	202.02	1,837.7	-371.4	-150.2	400.6	0.00	0.00	0.00
2,000.0	19.09	202.02	1,932.2	-401.8	-162.5	433.4	0.00	0.00	0.00
2,100.0	19.09	202.02	2,026.7	-432.1	-174.7	466.1	0.00	0.00	0.00
2,200.0	19.09	202.02	2,121.2	-462.4	-187.0	498.8	0.00	0.00	0.00
2,300.0	19.09	202.02	2,215.7	-492.7	-199.2	531.5	0.00	0.00	0.00
2,400.0	19.09	202.02	2,310.2	-523.1	-211.5	564.2	0.00	0.00	0.00
2,500.0	19.09	202.02	2,404.7	-553.4	-223.8	596.9	0.00	0.00	0.00
2,600.0	19.09	202.02	2,499.2	-583.7	-236.0	629.6	0.00	0.00	0.00
2,700.0	19.09	202.02	2,593.7	-614.0	-248.3	662.3	0.00	0.00	0.00
2,800.0	19.09	202.02	2,688.2	-644.4	-260.6	695.1	0.00	0.00	0.00
2,900.0	19.09	202.02	2,782.7	-674.7	-272.8	727.8	0.00	0.00	0.00
3,000.0	19.09	202.02	2,877.2	-705.0	-285.1	760.5	0.00	0.00	0.00
3,100.0	19.09	202.02	2,971.7	-735.3	-297.3	793.2	0.00	0.00	0.00
3,200.0	19.09	202.02	3,066.2	-765.7	-309.6	825.9	0.00	0.00	0.00
3,300.0	19.09	202.02	3,160.7	-796.0	-321.9	858.6	0.00	0.00	0.00
3,392.4	19.09	202.02	3,248.0	-824.0	-333.2	888.8	0.00	0.00	0.00
Williams Fork									
3,400.0	19.09	202.02	3,255.2	-826.3	-334.1	891.3	0.00	0.00	0.00
3,500.0	19.09	202.02	3,349.7	-856.7	-346.4	924.0	0.00	0.00	0.00
3,600.0	19.09	202.02	3,444.2	-887.0	-358.7	956.7	0.00	0.00	0.00
3,641.6	19.09	202.02	3,483.5	-899.6	-363.8	970.4	0.00	0.00	0.00
Start Drop -3.50									
3,700.0	17.05	202.02	3,539.0	-916.4	-370.5	988.5	3.50	-3.50	0.00
3,800.0	13.55	202.02	3,635.5	-940.8	-380.4	1,014.9	3.50	-3.50	0.00
3,900.0	10.05	202.02	3,733.3	-959.8	-388.1	1,035.3	3.50	-3.50	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BMC D 22C-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Project:	Rockies Region	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Site:	BMC D	North Reference:	True
Well:	BMC D 22C-18-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned 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)
4,000.0	6.55	202.02	3,832.3	-973.2	-393.5	1,049.7	3.50	-3.50	0.00
4,100.0	3.05	202.02	3,931.9	-980.9	-396.6	1,058.1	3.50	-3.50	0.00
4,187.1	0.00	0.00	4,019.0	-983.1	-397.5	1,060.4	3.50	-3.50	181.31
Start 2536.0 hold at 4187.1 MD - Back to Vertical - Top of Gas - 22C-18-07-95 TGT									
4,200.0	0.00	0.00	4,031.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
4,300.0	0.00	0.00	4,131.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
4,400.0	0.00	0.00	4,231.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
4,500.0	0.00	0.00	4,331.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
4,600.0	0.00	0.00	4,431.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
4,700.0	0.00	0.00	4,531.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
4,800.0	0.00	0.00	4,631.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
4,900.0	0.00	0.00	4,731.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,000.0	0.00	0.00	4,831.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,100.0	0.00	0.00	4,931.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,200.0	0.00	0.00	5,031.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,300.0	0.00	0.00	5,131.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,231.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,500.0	0.00	0.00	5,331.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,431.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,700.0	0.00	0.00	5,531.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,631.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
5,805.1	0.00	0.00	5,637.0	-983.1	-397.5	1,060.4	0.00	0.00	0.00
Cameo									
5,900.0	0.00	0.00	5,731.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,831.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
6,100.0	0.00	0.00	5,931.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,031.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
6,223.1	0.00	0.00	6,055.0	-983.1	-397.5	1,060.4	0.00	0.00	0.00
Rollins									
6,300.0	0.00	0.00	6,131.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,231.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
6,500.0	0.00	0.00	6,331.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,431.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
6,700.0	0.00	0.00	6,531.9	-983.1	-397.5	1,060.4	0.00	0.00	0.00
6,723.1	0.00	0.00	6,555.0	-983.1	-397.5	1,060.4	0.00	0.00	0.00
BHL 39.4387832 -108.0421707 - TD at 6723.1									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
22C-18-07-95 TGT	0.00	0.00	4,019.0	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
- hit/miss target									
- Shape									
- plan hits target center									
- Rectangle (sides W100.0 H40.0 D2,536.0)									

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BMC D 22C-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Project:	Rockies Region	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Site:	BMC D	North Reference:	True
Well:	BMC D 22C-18-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,392.4	3,248.0	Williams Fork		0.00	
4,187.1	4,019.0	Top of Gas		0.00	
5,805.1	5,637.0	Cameo		0.00	
6,223.1	6,055.0	Rollins		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
0.1	0.1	0.0	0.0	SHL 39.441482141 -108.040763287	
405.0	405.0	0.0	0.0	Start Build 3.50	
950.5	940.5	-83.5	-33.8	Start 2691.1 hold at 950.5 MD	
1,754.3	1,700.0	-327.2	-132.3	Surface Casing	
3,641.6	3,483.5	-899.6	-363.8	Start Drop -3.50	
4,187.1	4,019.0	-983.1	-397.5	Start 2536.0 hold at 4187.1 MD	
4,187.1	4,019.0	-983.1	-397.5	Back to Vertical	
6,723.1	6,555.0	-983.1	-397.5	BHL 39.4387832 -108.0421707	
6,723.1	6,555.0	-983.1	-397.5	TD at 6723.1	



Ursa Operating Company, LLC

Rockies Region

BMC D

BMC D 22C-18-07-95

Wellbore #1

Plan: Design #2

Standard Planning Report - Geographic

19 March, 2017



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BMC D 22C-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Project:	Rockies Region	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Site:	BMC D	North Reference:	True
Well:	BMC D 22C-18-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Project	Rockies Region		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site		BMC D			
Site Position:		Northing:	1,595,755.80 usft	Latitude:	39.441572650
From:	Lat/Long	Easting:	2,282,541.08 usft	Longitude:	-108.040739971
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.60

Well	BMC D 22C-18-07-95, SHL Lat: 39.441482141 Long: -108.040763287					
Well Position	+N/-S	0.0 usft	Northing:	1,595,723.03 usft	Latitude:	39.441482141
	+E/-W	0.0 usft	Easting:	2,282,533.58 usft	Longitude:	-108.040763287
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,285.0 usft	Ground Level:	5,268.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/8/2017	9.74	65.54	51,530

Design	Design #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	202.02

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
405.0	0.00	0.00	405.0	0.0	0.0	0.00	0.00	0.00	0.00	
950.5	19.09	202.02	940.5	-83.5	-33.8	3.50	3.50	0.00	202.02	
3,641.6	19.09	202.02	3,483.5	-899.6	-363.8	0.00	0.00	0.00	0.00	
4,187.1	0.00	0.00	4,019.0	-983.1	-397.5	3.50	-3.50	0.00	180.00	22C-18-07-95 TGT
6,723.1	0.00	0.00	6,555.0	-983.1	-397.5	0.00	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BMC D 22C-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Project:	Rockies Region	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Site:	BMC D	North Reference:	True
Well:	BMC D 22C-18-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,595,723.03	2,282,533.58	39.441482141	-108.040763287	
0.1	0.00	0.00	0.1	0.0	0.0	1,595,723.03	2,282,533.58	39.441482141	-108.040763287	
SHL 39.441482141 -108.040763287										
100.0	0.00	0.00	100.0	0.0	0.0	1,595,723.03	2,282,533.58	39.441482141	-108.040763287	
200.0	0.00	0.00	200.0	0.0	0.0	1,595,723.03	2,282,533.58	39.441482141	-108.040763287	
300.0	0.00	0.00	300.0	0.0	0.0	1,595,723.03	2,282,533.58	39.441482141	-108.040763287	
405.0	0.00	0.00	405.0	0.0	0.0	1,595,723.03	2,282,533.58	39.441482141	-108.040763287	
Start Build 3.50										
500.0	3.33	202.02	499.9	-2.6	-1.0	1,595,720.51	2,282,532.48	39.441475128	-108.040766944	
600.0	6.83	202.02	599.5	-10.8	-4.3	1,595,712.40	2,282,528.93	39.441452617	-108.040778683	
700.0	10.33	202.02	698.4	-24.6	-9.9	1,595,698.74	2,282,522.96	39.441414673	-108.040798471	
800.0	13.83	202.02	796.2	-44.0	-17.8	1,595,679.58	2,282,514.58	39.441361439	-108.040826232	
900.0	17.33	202.02	892.5	-68.9	-27.8	1,595,654.99	2,282,503.83	39.441293112	-108.040861864	
950.5	19.09	202.02	940.5	-83.5	-33.8	1,595,640.52	2,282,497.50	39.441252915	-108.040882826	
Start 2691.1 hold at 950.5 MD										
1,000.0	19.09	202.02	987.2	-98.5	-39.8	1,595,625.69	2,282,491.02	39.441211738	-108.040904299	
1,100.0	19.09	202.02	1,081.7	-128.8	-52.1	1,595,595.72	2,282,477.91	39.441128481	-108.040947716	
1,200.0	19.09	202.02	1,176.2	-159.1	-64.4	1,595,565.75	2,282,464.81	39.441045224	-108.040991133	
1,300.0	19.09	202.02	1,270.7	-189.5	-76.6	1,595,535.78	2,282,451.70	39.440961968	-108.041034550	
1,400.0	19.09	202.02	1,365.2	-219.8	-88.9	1,595,505.81	2,282,438.60	39.440878711	-108.041077967	
1,500.0	19.09	202.02	1,459.7	-250.1	-101.1	1,595,475.84	2,282,425.49	39.440795454	-108.041121384	
1,600.0	19.09	202.02	1,554.2	-280.5	-113.4	1,595,445.87	2,282,412.39	39.440712197	-108.041164800	
1,700.0	19.09	202.02	1,648.7	-310.8	-125.7	1,595,415.90	2,282,399.28	39.440628940	-108.041208217	
1,754.3	19.09	202.02	1,700.0	-327.2	-132.3	1,595,399.64	2,282,392.17	39.440583766	-108.041231774	
Surface Casing										
1,800.0	19.09	202.02	1,743.2	-341.1	-137.9	1,595,385.93	2,282,386.18	39.440545684	-108.041251633	
1,900.0	19.09	202.02	1,837.7	-371.4	-150.2	1,595,355.96	2,282,373.07	39.440462427	-108.041295050	
2,000.0	19.09	202.02	1,932.2	-401.8	-162.5	1,595,325.99	2,282,359.96	39.440379170	-108.041338466	
2,100.0	19.09	202.02	2,026.7	-432.1	-174.7	1,595,296.02	2,282,346.86	39.440295913	-108.041381882	
2,200.0	19.09	202.02	2,121.2	-462.4	-187.0	1,595,266.05	2,282,333.75	39.440212656	-108.041425298	
2,300.0	19.09	202.02	2,215.7	-492.7	-199.2	1,595,236.08	2,282,320.65	39.440129399	-108.041468714	
2,400.0	19.09	202.02	2,310.2	-523.1	-211.5	1,595,206.11	2,282,307.54	39.440046142	-108.041512130	
2,500.0	19.09	202.02	2,404.7	-553.4	-223.8	1,595,176.14	2,282,294.44	39.439962885	-108.041555546	
2,600.0	19.09	202.02	2,499.2	-583.7	-236.0	1,595,146.17	2,282,281.33	39.439879628	-108.041598961	
2,700.0	19.09	202.02	2,593.7	-614.0	-248.3	1,595,116.20	2,282,268.23	39.439796371	-108.041642377	
2,800.0	19.09	202.02	2,688.2	-644.4	-260.6	1,595,086.23	2,282,255.12	39.439713114	-108.041685792	
2,900.0	19.09	202.02	2,782.7	-674.7	-272.8	1,595,056.26	2,282,242.02	39.439629857	-108.041729207	
3,000.0	19.09	202.02	2,877.2	-705.0	-285.1	1,595,026.29	2,282,228.91	39.439546600	-108.041772623	
3,100.0	19.09	202.02	2,971.7	-735.3	-297.3	1,594,996.32	2,282,215.81	39.439463343	-108.041816038	
3,200.0	19.09	202.02	3,066.2	-765.7	-309.6	1,594,966.35	2,282,202.70	39.439380086	-108.041859453	
3,300.0	19.09	202.02	3,160.7	-796.0	-321.9	1,594,936.38	2,282,189.60	39.439296829	-108.041902868	
3,392.4	19.09	202.02	3,248.0	-824.0	-333.2	1,594,908.69	2,282,177.49	39.439219914	-108.041942975	
Williams Fork										
3,400.0	19.09	202.02	3,255.2	-826.3	-334.1	1,594,906.41	2,282,176.49	39.439213572	-108.041946282	
3,500.0	19.09	202.02	3,349.7	-856.7	-346.4	1,594,876.44	2,282,163.39	39.439130314	-108.041989697	
3,600.0	19.09	202.02	3,444.2	-887.0	-358.7	1,594,846.47	2,282,150.28	39.439047057	-108.042033112	
3,641.6	19.09	202.02	3,483.5	-899.6	-363.8	1,594,834.00	2,282,144.83	39.439012428	-108.042051169	
Start Drop -3.50										
3,700.0	17.05	202.02	3,539.0	-916.4	-370.5	1,594,817.41	2,282,137.57	39.438966316	-108.042075214	
3,800.0	13.55	202.02	3,635.5	-940.8	-380.4	1,594,793.23	2,282,127.00	39.438899167	-108.042110229	
3,900.0	10.05	202.02	3,733.3	-959.8	-388.1	1,594,774.50	2,282,118.81	39.438847128	-108.042137364	
4,000.0	6.55	202.02	3,832.3	-973.2	-393.5	1,594,761.28	2,282,113.03	39.438810394	-108.042156519	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BMC D 22C-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Project:	Rockies Region	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Site:	BMC D	North Reference:	True
Well:	BMC D 22C-18-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,100.0	3.05	202.02	3,931.9	-980.9	-396.6	1,594,753.61	2,282,109.68	39.438789101	-108.042167623
4,187.1	0.00	0.00	4,019.0	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
Start 2536.0 hold at 4187.1 MD - Back to Vertical - Top of Gas - 22C-18-07-95 TGT									
4,200.0	0.00	0.00	4,031.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
4,300.0	0.00	0.00	4,131.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
4,400.0	0.00	0.00	4,231.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
4,500.0	0.00	0.00	4,331.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
4,600.0	0.00	0.00	4,431.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
4,700.0	0.00	0.00	4,531.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
4,800.0	0.00	0.00	4,631.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
4,900.0	0.00	0.00	4,731.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,000.0	0.00	0.00	4,831.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,100.0	0.00	0.00	4,931.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,200.0	0.00	0.00	5,031.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,300.0	0.00	0.00	5,131.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,400.0	0.00	0.00	5,231.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,500.0	0.00	0.00	5,331.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,600.0	0.00	0.00	5,431.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,700.0	0.00	0.00	5,531.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,800.0	0.00	0.00	5,631.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
5,805.1	0.00	0.00	5,637.0	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
Cameo									
5,900.0	0.00	0.00	5,731.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
6,000.0	0.00	0.00	5,831.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
6,100.0	0.00	0.00	5,931.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
6,200.0	0.00	0.00	6,031.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
6,223.1	0.00	0.00	6,055.0	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
Rollins									
6,300.0	0.00	0.00	6,131.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
6,400.0	0.00	0.00	6,231.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
6,500.0	0.00	0.00	6,331.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
6,600.0	0.00	0.00	6,431.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
6,700.0	0.00	0.00	6,531.9	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
6,723.1	0.00	0.00	6,555.0	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
BHL 39.4387832 -108.0421707 - TD at 6723.1									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
22C-18-07-95 TGT	0.00	0.00	4,019.0	-983.1	-397.5	1,594,751.49	2,282,108.75	39.438783200	-108.042170700
- hit/miss target									
- Shape									
- plan hits target center									
- Rectangle (sides W100.0 H40.0 D2,536.0)									

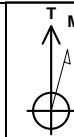
Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BMC D 22C-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Project:	Rockies Region	MD Reference:	BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)
Site:	BMC D	North Reference:	True
Well:	BMC D 22C-18-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,392.4	3,248.0	Williams Fork		0.00	
4,187.1	4,019.0	Top of Gas		0.00	
5,805.1	5,637.0	Cameo		0.00	
6,223.1	6,055.0	Rollins		0.00	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.1	0.1	0.0	0.0	SHL 39.441482141 -108.040763287
405.0	405.0	0.0	0.0	Start Build 3.50
950.5	940.5	-83.5	-33.8	Start 2691.1 hold at 950.5 MD
1,754.3	1,700.0	-327.2	-132.3	Surface Casing
3,641.6	3,483.5	-899.6	-363.8	Start Drop -3.50
4,187.1	4,019.0	-983.1	-397.5	Start 2536.0 hold at 4187.1 MD
4,187.1	4,019.0	-983.1	-397.5	Back to Vertical
6,723.1	6,555.0	-983.1	-397.5	BHL 39.4387832 -108.0421707
6,723.1	6,555.0	-983.1	-397.5	TD at 6723.1



Well Name: BMC D 22C-18-07-95
Surface Location: BMC D
North American Datum 1983, US State Plane 1983, Colorado Central Zone
Ground Elevation: 5268.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1595723.04 2282533.58 39.441482141 -108.040763287
Plan KB BMC D 22C-18-07-95 @ 5285.0usft (Plan KB)



Azimuths to True North
Magnetic North: 9.74°
Magnetic Field
Strength: 51530.2snT
Dip Angle: 65.54°
Date: 3/8/2017
Model: IGRF2015

BMC D
BMC D 22C-18-07-95
Design #2
9:17, March 19 2017

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
22C-18-07-95 TGT	4019.0	-983.1	-397.5	1594751.49	2282108.75	39.438783200	-108.042170700	Rectangle (Sides: L40.0 W100.0)

SECTION DETAILS

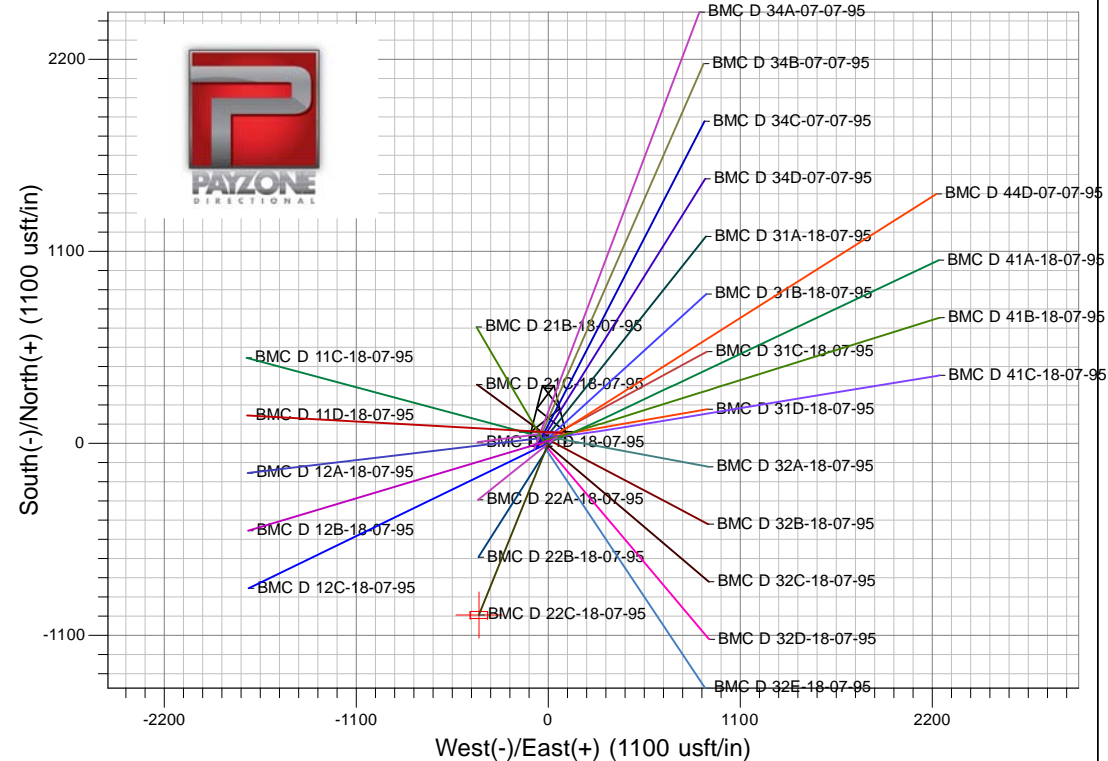
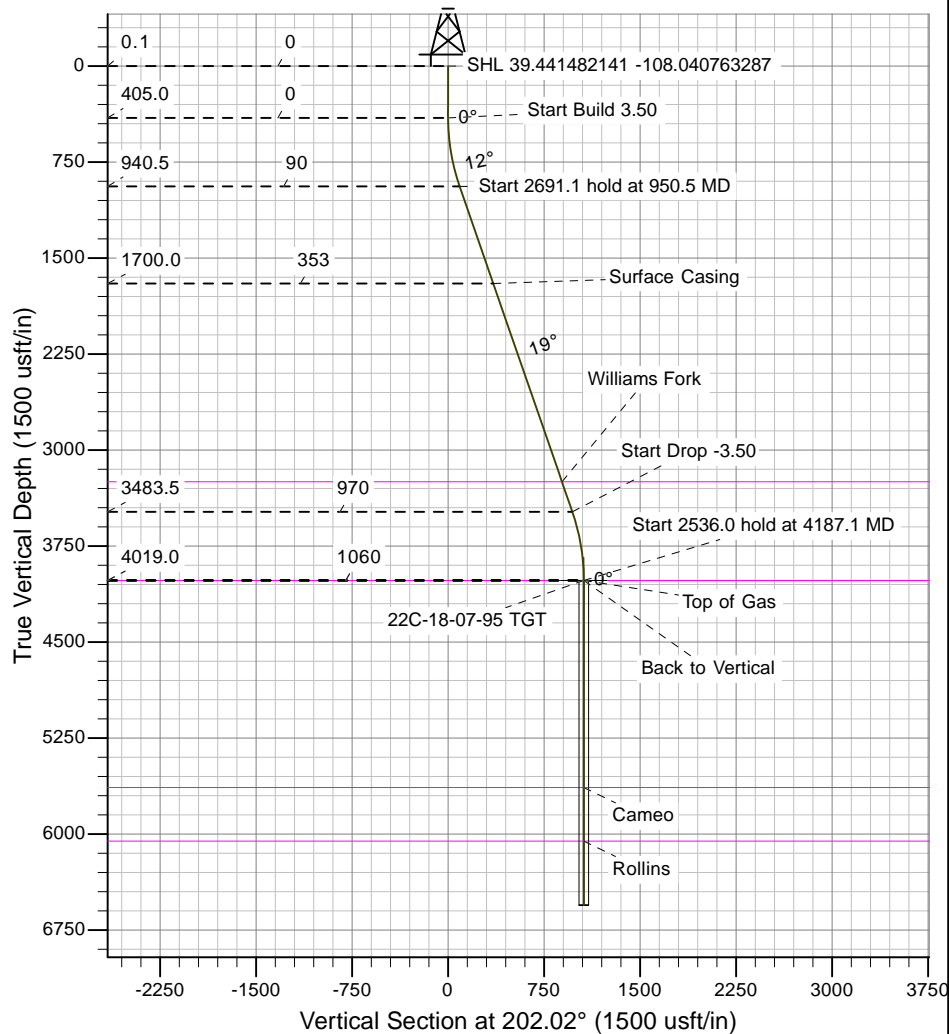
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	405.0	0.00	0.00	405.0	0.0	0.0	0.00	0.00	0.0	
3	950.5	19.09	202.02	940.5	-83.5	-33.8	3.50	202.02	90.1	
4	3641.6	19.09	202.02	3483.5	-899.6	-363.8	0.00	0.00	970.4	
5	4187.1	0.00	0.00	4019.0	-983.1	-397.5	3.50	180.00	1060.4	22C-18-07-95 TGT
6	6723.1	0.00	0.00	6555.0	-983.1	-397.5	0.00	0.00	1060.4	

ANNOTATIONS

TVD	MD	Annotation
0.1	0.1	SHL 39.441482141 -108.040763287
405.0	405.0	Start Build 3.50
940.5	950.5	Start 2691.1 hold at 950.5 MD
1700.0	1754.3	Surface Casing
3483.5	3641.6	Start Drop -3.50
4019.0	4187.1	Start 2536.0 hold at 4187.1 MD
4019.0	4187.1	Back to Vertical
6555.0	6723.1	BHL 39.4387832 -108.0421707
6555.0	6723.1	TD at 6723.1

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
3248.0	3392.4	Williams Fork	0.00	
4019.0	4187.1	Top of Gas	0.00	
5637.0	5805.1	Cameo	0.00	
6055.0	6223.1	Rollins	0.00	





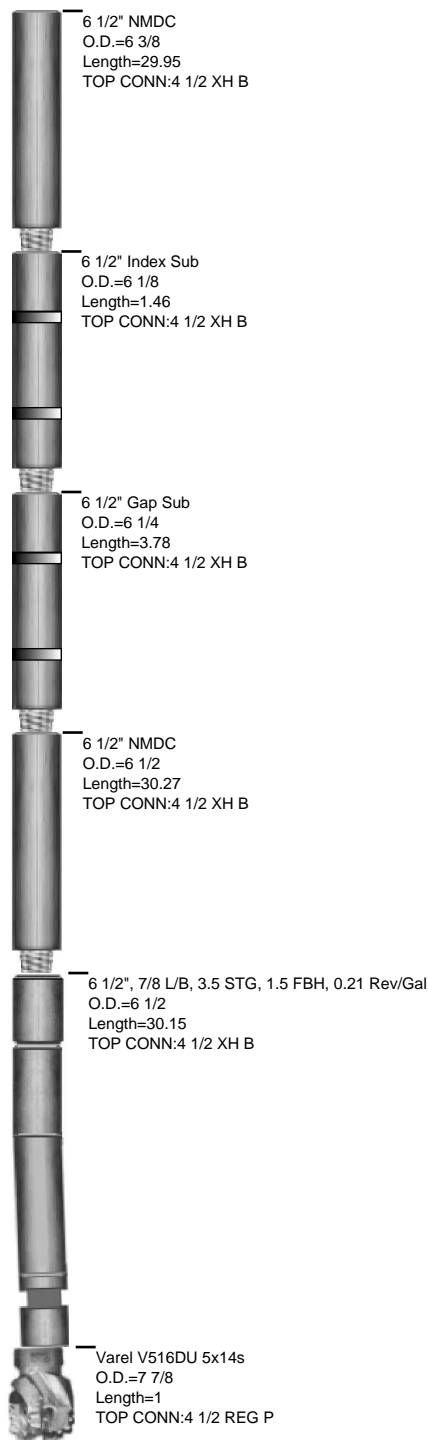
Well Information

BHA #

1

JOB NO.:	CO17544	FIELD:	Battlement Mesa
Company:	URSA Resources	Township:	7S
LOCATION:	Piceance Basin	SECTRANGE:	18
RIG NAME:	Capstar 321		95W
STATE:	Colorado		
COUNTY:	Garfield	BHA TYPE	Steerable Assembly
WELL NAME:	BMC D 22C-18-07-95		

Maintain 19.09° Inc. @ 202.02° Azi. to 3483' TVD then drop to vertical 3.5°/100' & stay in target to TD.





JOB NO.: CO17544
Company: URSA Resources
LOCATION: Piceance Basin
RIG NAME: Capstar 321
STATE: Colorado
COUNTY: Country
WELL NAME: BMC D 22C-18-07-95

FIELD: Battlement Mesa
Township: 7S
Range 95W

MOTOR INFORMATION	
Desc: 1.5° FBH,7/8 L/B,3.5 Stg.,0.21 Rev/Gal	
Bent Hsg/Sub: 1.5 / 0	Bit to Bend: 6.1
Pad OD: 6 3/4	NB Stab:

Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	11-Apr	Drilling	00:15	00:45	0.50	1770	1845	75	15	150.0	35	6000	440	1375		20.50	202.73	1.38	
1	11-Apr	Drilling	00:55	01:15	0.33	1845	1929	84	25	252.0	40	7000	440	1475		19.19	200.36	2.05	
1	11-Apr	Drilling	01:21	01:40	0.32	1929	2013	84	25	265.3	40	8000	440	1475		18.81	201.15	0.93	
1	11-Apr	Sliding	01:45	01:59	0.23	2013	2033	20	25	85.7	0	8000	440	1475	30R	18.81	201.73	0.93	
1	11-Apr	Drilling	01:59	02:17	0.30	2033	2098	65	25	216.7	40	8000	440	1475		19.72	202.95	1.62	
1	11-Apr	Sliding	02:22	02:28	0.10	2098	2118	20	25	200.0	0	8000	440	1475	0G	20.02	203.29	1.62	
1	11-Apr	Drilling	02:28	02:42	0.23	2118	2182	64	25	274.3	40	8000	440	1475		19.71	204.44	0.87	
1	11-Apr	Drilling	02:47	03:11	0.40	2182	2267	85	25	212.5	40	8000	440	1475		19.52	204.36	0.30	
1	11-Apr	Drilling	03:16	03:36	0.33	2267	2351	84	25	252.0	40	8000	440	1475		18.82	203.75	1.18	
1	11-Apr	Drilling	03:41	04:00	0.32	2351	2435	84	25	265.3	40	8000	440	1475		18.48	203.21	0.22	
1	11-Apr	Drilling	04:05	04:24	0.32	2435	2520	85	25	268.4	40	8000	440	1475		17.83	201.26	1.41	
1	11-Apr	Drilling	04:29	04:48	0.32	2520	2604	84	25	265.3	45	9500	440	1800		17.87	203.54	1.61	
1	11-Apr	Sliding	04:54	04:58	0.07	2604	2619	15	25	225.0	0	9500	440	1800	50R	17.95	204.28	1.61	
1	11-Apr	Drilling	04:58	05:18	0.33	2619	2688	69	25	207.0	45	9500	440	1800		18.64	204.44	1.08	
1	11-Apr	Sliding	05:23	05:28	0.08	2688	2699	11	25	132.0	0	9500	440	1800	30L	18.76	204.39	1.08	
1	11-Apr	Drilling	05:28	05:46	0.30	2699	2772	73	25	243.3	45	9500	440	1800		19.61	202.12	1.69	
1	11-Apr	Sliding	05:52	05:57	0.08	2772	2784	12	25	144.0	0	9500	440	1800	20L	19.75	201.70	1.69	
1	11-Apr	Drilling	05:57	06:16	0.32	2784	2857	73	25	230.5	45	9500	440	1800		19.53	200.07	0.92	
1	11-Apr	Drilling	06:21	06:42	0.35	2857	2941	84	25	240.0	45	9500	440	1800		19.88	198.85	0.93	
1	11-Apr	Sliding	06:49	06:56	0.12	2941	2956	15	25	128.6	0	10500	440	1800	15R	20.00	198.68	0.93	
1	11-Apr	Drilling	06:56	07:17	0.35	2956	3025	69	25	197.1	45	10500	440	1800		20.19	201.87	1.90	
1	11-Apr	Sliding	07:23	07:26	0.05	3025	3037	12	25	240.0	0	10500	440	1800	45R	20.22	202.52	1.90	
1	11-Apr	Drilling	07:26	07:45	0.32	3037	3110	73	25	230.5	45	10500	440	1800		20.57	202.50	0.67	
1	11-Apr	Sliding	07:51	07:55	0.07	3110	3120	10	25	150.0	0	10500	440	1800	10L	20.63	202.39	0.67	
1	11-Apr	Drilling	07:55	08:14	0.32	3120	3194	74	25	233.7	45	10500	440	1800		20.29	201.06	0.96	
1	11-Apr	Drilling	08:19	08:41	0.37	3194	3278	84	25	229.1	45	10500	440	1800		19.23	199.93	1.55	

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	11-Apr	Drilling	08:45	09:08	0.38	3278	3363	85	25	221.7	45	10500	440	1800		18.57	199.88	0.48	
1	11-Apr	Drilling	09:12	09:35	0.38	3363	3447	84	25	219.1	45	10500	440	1800		17.06	200.97	2.38	
1	11-Apr	Sliding	09:41	09:44	0.05	3447	3455	8	25	160.0	0	10500	440	1800	145R	16.88	201.11	2.38	
1	11-Apr	Drilling	09:44	10:05	0.35	3455	3531	76	25	217.1	45	10500	440	1800		15.89	199.94	1.23	
1	11-Apr	Drilling	10:09	10:35	0.43	3531	3616	85	25	196.2	45	10500	440	1800		14.73	199.46	1.51	
1	11-Apr	Drilling	10:40	11:06	0.43	3616	3700	84	25	193.8	45	10500	440	1800		13.65	200.46	1.26	
1	11-Apr	Drilling	11:11	11:36	0.42	3700	3784	84	25	201.6	45	10500	440	1800		11.67	200.95	2.81	
1	11-Apr	Sliding	11:41	11:47	0.10	3784	3796	12	25	120.0	0	10500	440	1800	170R	11.33	200.97	2.81	
1	11-Apr	Drilling	11:47	12:09	0.37	3796	3868	72	25	196.4	45	10500	440	1800		9.97	200.85	1.67	
1	11-Apr	Sliding	12:14	12:21	0.12	3868	3880	12	25	102.9	0	10500	440	1800	180	9.77	200.82	1.67	
1	11-Apr	Drilling	12:21	12:49	0.47	3880	3954	74	25	158.6	45	10500	440	1800		8.22	201.77	2.22	
1	11-Apr	Sliding	12:54	13:05	0.18	3954	3971	17	25	92.7	0	10500	440	1800	170R	7.84	202.11	2.22	
1	11-Apr	Drilling	13:05	13:27	0.37	3971	4038	67	25	182.7	45	10500	440	1800		5.90	201.96	2.98	
1	11-Apr	Sliding	13:33	13:41	0.13	4038	4059	21	25	157.5	0	10500	440	1800	170L	5.28	201.80	2.98	
1	11-Apr	Drilling	13:41	14:03	0.37	4059	4122	63	25	171.8	45	10500	440	1800		3.08	198.81	3.54	
1	11-Apr	Sliding	14:08	14:22	0.23	4122	4147	25	25	107.1	0	10500	440	1800	160L	2.20	195.89	3.54	
1	11-Apr	Drilling	14:22	14:42	0.33	4147	4207	60	25	180.0	45	10500	440	1800		1.94	186.83	0.70	
1	11-Apr	Drilling	14:46	15:14	0.47	4207	4291	84	25	180.0	45	11000	440	1900		0.17	144.13	2.86	
1	11-Apr	Sliding	15:21	15:33	0.20	4291	4316	25	25	125.0	0	11000	440	1900	360M	0.57	17.79	0.27	
1	11-Apr	Drilling	15:33	15:55	0.37	4316	4375	59	25	160.9	45	11000	440	1900		0.72	13.92	0.27	
1	11-Apr	Drilling	16:00	16:11	0.18	4375	4418	43	25	234.5	45	11000	440	1900		0.66	10.97	0.71	
1	11-Apr	Drilling	16:32	16:46	0.23	4418	4460	42	25	180.0	45	11000	440	1900		0.37	2.23	0.71	
1	11-Apr	Drilling	16:51	17:25	0.57	4460	4544	84	25	148.2	45	11000	440	1900		0.50	306.62	0.60	
1	11-Apr	Drilling	17:30	18:00	0.50	4544	4628	84	25	168.0	45	11000	440	1900		0.45	284.34	0.40	
1	11-Apr	Drilling	18:16	18:50	0.57	4628	4712	84	25	148.2	45	11000	440	1900		0.30	272.55	0.17	
1	11-Apr	Drilling	18:55	19:23	0.47	4712	4797	85	25	182.1	45	11000	440	1900		0.64	258.38	0.65	
1	11-Apr	Drilling	19:29	20:03	0.57	4797	4881	84	25	148.2	45	11000	440	1900		1.04	246.22	0.49	
1	11-Apr	Drilling	20:08	20:39	0.52	4881	4965	84	25	162.6	45	11000	440	1900		0.77	299.52	1.60	
1	11-Apr	Sliding	20:44	21:01	0.28	4965	4992	27	25	95.3	0	11000	440	1900	30M	0.90	326.61	1.58	
1	11-Apr	Drilling	21:01	21:30	0.48	4992	5050	58	25	120.0	45	11000	440	1900		0.90	27.84	1.58	
1	11-Apr	Sliding	21:35	21:48	0.22	5050	5070	20	25	92.3	0	11000	440	1900	90M	1.09	42.28	1.58	
1	11-Apr	Drilling	21:48	22:22	0.57	5070	5134	64	25	112.9	45	11000	440	1900		0.86	47.93	0.48	
1	11-Apr	Drilling	22:28	23:52	1.40	5134	5218	84	25	60.0	45	11000	440	1900		0.25	4.24	1.01	
1	12-Apr	Drilling	00:00	00:50	0.83	5218	5303	85	25	102.0	45	11000	440	1900		0.21	242.85	0.41	
1	12-Apr	Drilling	00:55	01:52	0.95	5303	5387	84	25	88.4	45	11000	440	1900		0.53	252.93	0.56	

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-Apr	Drilling	01:59	02:43	0.73	5387	5471	84	25	114.5	45	11000	440	1900		0.66	231.20	0.50	
1	12-Apr	Drilling	02:49	03:46	0.95	5471	5555	84	25	88.4	45	11000	440	1900		1.07	221.20	0.62	
1	12-Apr	Drilling	03:51	04:33	0.70	5555	5640	85	25	121.4	45	11000	440	1900		0.81	149.62	2.06	
1	12-Apr	Sliding	04:39	04:57	0.30	5640	5665	25	25	83.3	0	11000	440	1900	40M	1.09	123.26	2.06	
1	12-Apr	Drilling	04:57	05:30	0.55	5665	5728	63	25	114.5	45	11000	440	1900		0.75	116.21	0.67	
1	12-Apr	Drilling	05:35	06:13	0.63	5728	5816	88	25	138.9	45	11000	440	1900		0.69	164.20	0.95	
1	12-Apr	Drilling	06:21	07:00	0.65	5816	5904	88	25	135.4	45	11000	440	1900		1.08	204.83	0.82	
1	12-Apr	Drilling	07:05	07:45	0.67	5904	5993	89	25	133.5	45	11000	440	1900		0.42	211.89	1.34	
1	12-Apr	Sliding	07:53	08:12	0.32	5993	6018	25	25	78.9	0	11000	440	1900	40M	0.09	201.05	1.34	
1	12-Apr	Drilling	08:12	08:57	0.75	6018	6082	64	25	85.3	45	11000	440	1900		0.04	143.84	0.04	
1	12-Apr	Drilling	09:03	10:16	1.22	6082	6171	89	25	73.2	45	11000	440	1900		0.21	219.07	0.36	
1	12-Apr	Drilling	10:23	11:15	0.87	6171	6259	88	25	101.5	45	11000	440	1900		0.56	193.70	0.54	
1	12-Apr	Drilling	11:18	12:04	0.77	6259	6347	88	25	114.8	45	13000	440	2100		0.70	184.20	0.00	
1	12-Apr	Drilling	12:10	12:41	0.52	6347	6400	53	25	102.6	45	13000	440	2100		0.70	184.20	0.00	

Total Drilled: 4630 Avg. Total ROP: 146.21

DEPTH% - TIME %

Total Rotary Drilled: 4298 Avg. Rotary ROP: 149.58 Percent Rotary: 92.83 - 90.74

Total Drilled Sliding: 332 Avg. Slide ROP: 113.18 Percent Slide: 7.17 - 9.26



JOB NO.:	CO17544
Company:	URSA Resources
LOCATION:	Piceance Basin
RIG NAME:	Capstar 321
STATE:	Colorado
COUNTY:	USA
WELL NAME:	BMC D 22C-18-07-95

FIELD:	Battlement Mesa	
Township:	7S	
SECT/RANGE:	18	95W

Tool Utilization Report

Bits

4009439 - Varel V516DU 5x14s

BHA #	Rotary Hours	Slide Hours	Total Hours	Circ. Hours	Below Rotary	Amount Drilled
1	27.98	2.93	32.40	32.40	45.25	4,630.00
1	27.98	2.93	32.40	32.40	45.25	4,630.00
1	27.98	2.93	32.40	32.40	45.25	4,630.00

<< Summary for 4009439

<< Summary for Bits

DC

DD650-005 - 6 1/2" NMDC

BHA #	Rotary Hours	Slide Hours	Total Hours	Circ. Hours	Below Rotary	Amount Drilled
1	27.98	2.93	32.40	32.40	45.25	4,630.00
1	27.98	2.93	32.40	32.40	45.25	4,630.00

<< Summary for DD650-005

DD650-022 - 6 1/2" NMDC

BHA #	Rotary Hours	Slide Hours	Total Hours	Circ. Hours	Below Rotary	Amount Drilled
1	27.98	2.93	32.40	32.40	45.25	4,630.00
1	27.98	2.93	32.40	32.40	45.25	4,630.00
2	55.97	5.87	64.80	64.80	90.50	9,260.00

<< Summary for DD650-022

<< Summary for DC

Motors

6244 - 6 1/2", 7/8 L/B, 3.5 STG, 1.5 FBH, 0.21 Rev/Gal

BHA #	Rotary Hours	Slide Hours	Total Hours	Circ. Hours	Below Rotary	Amount Drilled
1	27.98	2.93	32.40	32.40	45.25	4,630.00
1	27.98	2.93	32.40	32.40	45.25	4,630.00
1	27.98	2.93	32.40	32.40	45.25	4,630.00

<< Summary for 6244

<< Summary for Motors

MWD

Tool Utilization Report

PZDGS610 - 6 1/2" Gap Sub

BHA #	Rotary Hours	Slide Hours	Total Hours	Circ. Hours	Below Rotary	Amount Drilled
1	27.98	2.93	32.40	32.40	45.25	4,630.00
1	27.98	2.93	32.40	32.40	45.25	4,630.00

<< Summary for PZDGS610

PZDIS601 - 6 1/2" Index Sub

BHA #	Rotary Hours	Slide Hours	Total Hours	Circ. Hours	Below Rotary	Amount Drilled
1	27.98	2.93	32.40	32.40	45.25	4,630.00
1	27.98	2.93	32.40	32.40	45.25	4,630.00
2	55.97	5.87	64.80	64.80	90.50	9,260.00

<< Summary for PZDIS601

<< Summary for MWD



JOB NO.: CO17544
 Company: URSA Resources
 LOCATION: Piceance Basin
 RIG NAME: Capstar 321
 STATE: Colorado
 COUNTY: Garfield
 WELL NAME: BMC D 22C-18-07-95

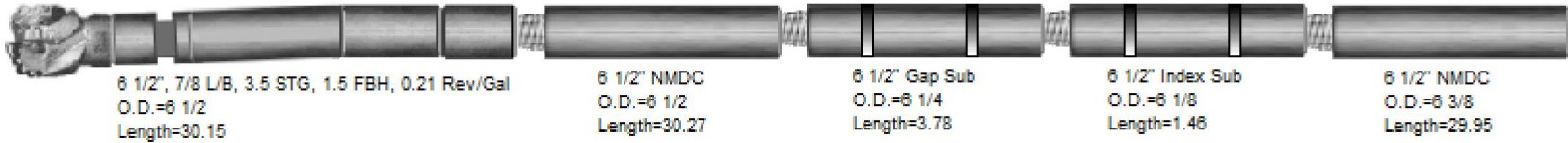
FIELD: Battlement Mesa
 Township: 7S
 SECT\ RANGE: 18 95W

COMMENT

BHA Summary Report for JOB

#	TIME IN - OUT			DEPTHS		Footage			ROP			RPM	FLOW	Incl.		Azimuth		Weight Ranges		
	Time IN	Time Out	Hrs.	IN	OUT	Rotary	Slide	Total	AVG.	Rotary	Slide			Rate	IN	OUT	IN	OUT	SO	PU
1	10-Apr-17 @ 22:00	12-Apr-17 @ 19:15	45.25	1770.0	6400.0	4298.0	332.0	4630.0	149.76	153.6	113.2	0-45	325-440	.0	.0	.0	.0	48-85	48-160	48-120
				Hours>		27.98	2.93	30.92												

Varel V516DU 5x14s
 O.D.=7 7/8
 Length=1





Well Information

BHA # 1

JOB NO.: CO17544
Company: URSA Resources
LOCATION: Piceance Basin
RIG NAME: Capstar 321
STATE: Colorado
COUNTY: Garfield

FIELD: Battlement Mesa
Township: 7S
SECT. RANGE: 18 95W
Lead DD: Lloyd Berard
Co. Man: Nate Gill
BHA TYPE: Steerable Assembly

WELL NAME: BMC D 22C-18-07-95

BHA Summary Information

TIME IN - OUT			Rotary Hours		28.73		Start Depth		1770.00		RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only		32.75 / 1.08		End Depth		6400.00				
10-Apr-17 @ 22:00	12-Apr-17 @ 19:15	Slide Hours		2.93		Percent Rotary:		92.83		0 -45	325 -440	
		Below Rotary Hrs.		45.25		Percent Slide:		7.17				
Total Drilled:			4630.00	Avg. Total ROP:		146.21		Incl.		Azimuth		
Total Rotary Drilled:			4298.00	Avg. Rotary ROP:		149.58		IN	OUT	IN	OUT	
Total Drilled Sliding:			332.00	Avg. Slide ROP:		113.18		.0	.0	.00	.00	
SPP	700 -2100	Weights	SO	48 -85	PU	48 -160	RAB	48 -120	Reason POOH		TD	

Bit Data								MOTOR DATA						Mud Data					
Varel		Varel V516DU 5x14s						1.5° FBH,7/8 L/B,3.5 Stg.,0.21 Rev/Gal						Type	Chem/Gel				
Type Bit				PDC				Model: Arrow						Pad OD		WT 9.25 GAS 0 Solids 6.1			
TFA		0.751						MFG. Hunting						6 3/4		Vis 39 SAND 0.25 T° 0			
JETS			14	14	14	14	14	Bend ° 1.5 Stator/Rotor 7/8						PV 10 PH 10 Chlor 2100					
			0	0	0	0	0	Bit to Bend 6.1 Motor Diff 375						YP 11 WL 7 Oil % 0					
Bit Coding				IADC#				Rev/GAL 0.21								BHT°		0	
IR	OR	DL	Loc	BS	G	ODL	NB Stab 0						PUMPS		PUMP1		PUMP1		
2	4	NO	A	X	1	NO	Rotor Jet 0						NAME		Gardner Denver		Gardner Denver		
Bit Drop:			292 PSI @ 440 GPM				Sensor Offsets						Model		PZ-9		PZ-9		
Comments				Sensor	60	Sonic	0							Type		Triplex		Triplex	
				Gamma	0	DNCS	0							Liner		6.50		6.50	
				Restiv	0	GYRO	0							Stroke		9.00		9.00	
										Efficiency		.95		.95					

Maintain 19.09° Inc. @ 202.02° Azi. to 3483' TVD then drop to vertical 3.5°/100' & stay in target to TD.

BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	Varel V516DU 5x14s	4009439		7 7/8	1.00	1.00	4 1/2 REGP
2	6 1/2", 7/8 L/B, 3.5 STG, 1.5 FBH, 0.21 Rev/Gal	6244	0	6 1/2	30.15	31.15	4 1/2 XHB
3	6 1/2" NMDC	DD650-022	2 3/8	6 1/2	30.27	61.42	4 1/2 XHB
4	6 1/2" Gap Sub	PZDGS610	2 7/8	6 1/4	3.78	65.20	4 1/2 XHB
5	6 1/2" Index Sub	PZDIS601	2 13/16	6 1/8	1.46	66.66	4 1/2 XHB
6	6 1/2" NMDC	DD650-005	2 3/8	6 3/8	29.95	96.61	4 1/2 XHB

6 1/2" NMDC
O.D.=6 3/8
Length=29.95

6 1/2" Index Sub
O.D.=6 1/8
Length=1.46

6 1/2" Gap Sub
O.D.=6 1/4
Length=3.78

6 1/2" NMDC
O.D.=6 1/2
Length=30.27

6 1/2", 7/8 L/B, 3.5 STG, 1.5 FBH, 0.21
O.D.=6 1/2
Length=30.15

Varel V516DU 5x14s
O.D.=7 7/8
Length=1



JOB NO.:	CO17544	Report Time:	2400	1 of 3
Company:	URSA Resources	API JOB #	05-045-23336-00	
LOCATION:	Piceance Basin	WORK ORDER#	CO17544	
RIG NAME:	Capstar 321	FIELD:	Battlement Mesa	
STATE:	Colorado	Township:	7S	
COUNTY:	Garfield	SECTRANGE:	18	95W
WELL NAME:	BMC D 22C-18-07-95			

From Monday, April 10, 2017 at 0000 to Monday, April 10, 2017 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	1770.00	Rotary Hours	0.50	WOB	10	Pick UP	48	Slack Off	48	SPM	
End Depth	1770.00	Circulating Hours	0.00	RAB	48	SPP	700	FlowRate	0 - 325	88	
Total Drilled:	0.00	Avg. Total ROP:	.00	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	.00	Type	FGel / Pac			PV	10	SOLID	5.2
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	9.15	GAS	0	YP	9	BHT°	0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	40	SAND	0.25	PH	9.4	Flow T°	0
Below Rotary Hrs.	19.00	Percent Slide:	NA	Chlorides	1600	WL	5.5			Oil %	0
PERSONNEL				CASING				BHA			
Lead Directional :	Lloyd Berard			Size	Lb/ft	Set Depth		BHA # 1:Varel V516DU 5x14s, 6 1/2", 7/8 L/B, 3.5 STG, 1.5 FBH, 0.21 Rev/Gal , 6 1/2" NMDC, 6 1/2" Gap Sub, 6 1/2" Index Sub, 6 1/2" NMDC,			
Second Directional :	Stephen Pickering			8 5/8	24	1753					
MWD Operator1	Colin Chudy										
MWD Operator2											
Directional Company:	Payzone										
Geologist:				Signature:							
Company Man:	Nate Gill										
Incl. In:	21.09	Azm. In:	202.48	Incl. Out:	21.09	Azm. Out:	202.48				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
10-Apr-17	00:00	10:30	10.50	1770	1770	Other	Run CSG, CMT on 32C
10-Apr-17	10:30	12:00	1.50	1770	1770	Other	Skid Rig onto 22C
10-Apr-17	12:00	13:00	1.00	1770	1770	N/U BOPS	N/U BOPS
10-Apr-17	13:00	17:00	4.00	1770	1770	Other	Change Out Brake Bands
10-Apr-17	17:00	21:00	4.00	1770	1770	Test BOPS	Test BOPS
10-Apr-17	21:00	22:00	1.00	1770	1770	Change BHA	Change BHA
10-Apr-17	22:00	23:30	1.50	1770	1770	TIH	TIH
10-Apr-17	23:30	24:00	0.50	1770	1770	Drilling Cement	Drill Flt, Cmt, Shoe



JOB NO.:	CO17544	Report Time:	2400	2 of 3
Company:	URSA Resources	API JOB #	05-045-23336-00	
LOCATION:	Piceance Basin	WORK ORDER#	CO17544	
RIG NAME:	Capstar 321	FIELD:	Battlement Mesa	
STATE:	Colorado	Township:	7S	
COUNTY:	Garfield	SECTRANGE:	18	95W
WELL NAME:	BMC D 22C-18-07-95			

From Tuesday, April 11, 2017 at 0000 to Tuesday, April 11, 2017 at 2400

DRILLING SUMMARY						Drilling Parameters					
Start Depth	1770.00	Rotary Hours	17.45	WOB	25	Pick UP	105	Slack Off	55	SPM	
End Depth	5218.00	Circulating Hours	0.35	RAB	80	SPP	1900	FlowRate	325 - 440	120	
Total Drilled:	3448.00	Avg. Total ROP:	174.44	Mud Data							
Total Rotary Drilled:	3166.00	Avg. Rotary ROP:	181.43	Type	Chem/Gel			PV	10	SOLID	6.1
Total Drilled Sliding:	282.00	Avg. Slide ROP:	121.73	Weight	9.25	GAS	0	YP	11	BHT°	0
Slide Hours:	2.32	Percent Rotary:	91.82	Viscosity	39	SAND	0.25	PH	10	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	8.18	Chlorides	2100	WL	7			Oil %	0
PERSONNEL				CASING					BHA		
Lead Directional :	Lloyd Berard			Size	Lb/ft	Set Depth		BHA # 1:Varel V516DU 5x14s, 6 1/2", 7/8 L/B, 3.5 STG, 1.5 FBH, 0.21 Rev/Gal , 6 1/2" NMDC, 6 1/2" Gap Sub, 6 1/2" Index Sub, 6 1/2" NMDC,			
Second Directional :	Stephen Pickering			8 5/8	24	1753					
MWD Operator1	Colin Chudy			Signature:							
MWD Operator2											
Directional Company:	Payzone										
Geologist:											
Company Man:	Nate Gill										
Incl. In:	21.09	Azm. In:	202.48	Incl. Out:	0.75	Azm. Out:	49.99				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
11-Apr-17	00:00	00:15	0.25	1770	1770	Drilling Cement	Drill FLT, CMT and Shoe
11-Apr-17	00:15	00:45	0.50	1770	1845	Drilling	Drilling - (WOB:15;GPM :440;RPM:35)
11-Apr-17	00:45	00:55	0.17	1845	1845	Survey & Conn.	Survey & Conn.@1785' Inc 21.31° Azm 203.1°
11-Apr-17	00:55	01:15	0.33	1845	1929	Drilling	Drilling - (WOB:25;GPM :440;RPM:40)
11-Apr-17	01:15	01:21	0.10	1929	1929	Survey & Conn.	Survey & Conn.@1869' Inc 20.17° Azm 202.57°
11-Apr-17	01:21	01:40	0.32	1929	2013	Drilling	Drilling - (WOB:25;GPM :440;RPM:40)
11-Apr-17	01:40	01:45	0.08	2013	2013	Survey & Conn.	Survey & Conn.@1953' Inc 18.81° Azm 199.41°
11-Apr-17	01:45	01:59	0.23	2013	2033	Sliding	Drilling - (WOB:25;GPM :440;RPM:0)
11-Apr-17	01:59	02:17	0.30	2033	2098	Drilling	Drilling - (WOB:25;GPM :440;RPM:40)
11-Apr-17	02:17	02:22	0.08	2098	2098	Survey & Conn.	Survey & Conn.@2038' Inc 18.81° Azm 201.87°
11-Apr-17	02:22	02:28	0.10	2098	2118	Sliding	Sliding - (WOB:25;GPM :440;TFO:0G))
11-Apr-17	02:28	02:42	0.23	2118	2182	Drilling	Drilling - (WOB:25;GPM :440;RPM:40)
11-Apr-17	02:42	02:47	0.08	2182	2182	Survey & Conn.	Survey & Conn.@2122' Inc 20.08° Azm 203.36°
11-Apr-17	02:47	03:11	0.40	2182	2267	Drilling	Drilling - (WOB:25;GPM :440;RPM:40)
11-Apr-17	03:11	03:16	0.08	2267	2267	Survey & Conn.	Survey & Conn.@2207' Inc 19.56° Azm 204.9°
11-Apr-17	03:16	03:36	0.33	2267	2351	Drilling	Drilling - (WOB:25;GPM :440;RPM:40)
11-Apr-17	03:36	03:41	0.08	2351	2351	Survey & Conn.	Survey & Conn.@2291' Inc 19.51° Azm 204.15°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
11-Apr-17	03:41	04:00	0.32	2351	2435	Drilling	Drilling - (WOB:25;GPM :440;RPM:40)
11-Apr-17	04:00	04:05	0.08	2435	2435	Survey & Conn.	Survey & Conn.@2375' Inc 18.54° Azm 203.58°
11-Apr-17	04:05	04:24	0.32	2435	2520	Drilling	Drilling - (WOB:25;GPM :440;RPM:40)
11-Apr-17	04:24	04:29	0.08	2520	2520	Survey & Conn.	Survey & Conn.@2460' Inc 18.46° Azm 203.06°
11-Apr-17	04:29	04:48	0.32	2520	2604	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	04:48	04:54	0.10	2604	2604	Survey & Conn.	Survey & Conn.@2544' Inc 17.58° Azm 200.51°
11-Apr-17	04:54	04:58	0.07	2604	2619	Sliding	Sliding - (WOB:25;GPM :440;TFO:50R))
11-Apr-17	04:58	05:18	0.33	2619	2688	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	05:18	05:23	0.08	2688	2688	Survey & Conn.	Survey & Conn.@2628' Inc 18° Azm 204.72°
11-Apr-17	05:23	05:28	0.08	2688	2699	Sliding	Sliding - (WOB:25;GPM :440;TFO:30L))
11-Apr-17	05:28	05:46	0.30	2699	2772	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	05:46	05:52	0.10	2772	2772	Survey & Conn.	Survey & Conn.@2712' Inc 18.9° Azm 204.33°
11-Apr-17	05:52	05:57	0.08	2772	2784	Sliding	Sliding - (WOB:25;GPM :440;TFO:20L))
11-Apr-17	05:57	06:16	0.32	2784	2857	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	06:16	06:21	0.08	2857	2857	Survey & Conn.	Survey & Conn.@2797' Inc 19.91° Azm 201.25°
11-Apr-17	06:21	06:42	0.35	2857	2941	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	06:42	06:49	0.12	2941	2941	Survey & Conn.	Survey & Conn.@2881' Inc 19.38° Azm 199.58°
11-Apr-17	06:49	06:56	0.12	2941	2956	Sliding	Sliding - (WOB:25;GPM :440;TFO:15R))
11-Apr-17	06:56	07:17	0.35	2956	3025	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	07:17	07:23	0.10	3025	3025	Survey & Conn.	Survey & Conn.@2965' Inc 20.08° Azm 198.57°
11-Apr-17	07:23	07:26	0.05	3025	3037	Sliding	Sliding - (WOB:25;GPM :440;TFO:45R))
11-Apr-17	07:26	07:45	0.32	3037	3110	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	07:45	07:51	0.10	3110	3110	Survey & Conn.	Survey & Conn.@3050' Inc 20.26° Azm 203.23°
11-Apr-17	07:51	07:55	0.07	3110	3120	Sliding	Sliding - (WOB:25;GPM :440;TFO:10L))
11-Apr-17	07:55	08:14	0.32	3120	3194	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	08:14	08:19	0.08	3194	3194	Survey & Conn.	Survey & Conn.@3134' Inc 20.7° Azm 202.22°
11-Apr-17	08:19	08:41	0.37	3194	3278	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	08:41	08:45	0.07	3278	3278	Survey & Conn.	Survey & Conn.@3218' Inc 20.13° Azm 200.59°
11-Apr-17	08:45	09:08	0.38	3278	3363	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	15:33	15:55	0.37	4316	4375	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	15:55	16:00	0.08	4375	4375	Survey & Conn.	Survey & Conn.@4315' Inc 0.57° Azm 17.87°
11-Apr-17	16:00	16:11	0.18	4375	4418	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	16:11	16:32	0.35	4418	4418	Rig Service-Inhole	Rig Service-Inhole
11-Apr-17	16:32	16:46	0.23	4418	4460	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	16:46	16:51	0.08	4460	4460	Survey & Conn.	Survey & Conn.@4400' Inc 0.79° Azm 12.73°
11-Apr-17	16:51	17:25	0.57	4460	4544	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	17:25	17:30	0.08	4544	4544	Survey & Conn.	Survey & Conn.@4484' Inc 0.22° Azm 347.06°
11-Apr-17	17:30	18:00	0.50	4544	4628	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	18:00	18:16	0.27	4628	4628	Survey & Conn.	Survey & Conn.@4568' Inc 0.63° Azm 301.42°
11-Apr-17	18:16	18:50	0.57	4628	4712	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	18:50	18:55	0.08	4712	4712	Survey & Conn.	Survey & Conn.@4652' Inc 0.4° Azm 273.68°
11-Apr-17	18:55	19:23	0.47	4712	4797	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	19:23	19:29	0.10	4797	4797	Survey & Conn.	Survey & Conn.@4737' Inc 0.26° Azm 271.83°
11-Apr-17	09:08	09:12	0.07	3363	3363	Survey & Conn.	Survey & Conn.@3303' Inc 18.85° Azm 199.63°
11-Apr-17	09:12	09:35	0.38	3363	3447	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	09:35	09:41	0.10	3447	3447	Survey & Conn.	Survey & Conn.@3387' Inc 18.46° Azm 199.98°
11-Apr-17	09:41	09:44	0.05	3447	3455	Sliding	Sliding - (WOB:25;GPM :440;TFO:145R))
11-Apr-17	09:44	10:05	0.35	3455	3531	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
11-Apr-17	10:05	10:09	0.07	3531	3531	Survey & Conn.	Survey & Conn.@3472' Inc 16.48° Azm 201.43°
11-Apr-17	10:09	10:35	0.43	3531	3616	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	10:35	10:40	0.08	3616	3616	Survey & Conn.	Survey & Conn.@3556' Inc 15.64° Azm 199.28°
11-Apr-17	10:40	11:06	0.43	3616	3700	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	11:06	11:11	0.08	3700	3700	Survey & Conn.	Survey & Conn.@3640' Inc 14.37° Azm 199.54°
11-Apr-17	11:11	11:36	0.42	3700	3784	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	11:36	11:41	0.08	3784	3784	Survey & Conn.	Survey & Conn.@3724' Inc 13.36° Azm 200.86°
11-Apr-17	11:41	11:47	0.10	3784	3796	Sliding	Sliding - (WOB:25;GPM :440;TFO:170R))
11-Apr-17	11:47	12:09	0.37	3796	3868	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	12:09	12:14	0.08	3868	3868	Survey & Conn.	Survey & Conn.@3810' Inc 10.94° Azm 200.99°
11-Apr-17	12:14	12:21	0.12	3868	3880	Sliding	Sliding - (WOB:25;GPM :440;TFO:180))
11-Apr-17	12:21	12:49	0.47	3880	3954	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	12:49	12:54	0.08	3954	3954	Survey & Conn.	Survey & Conn.@3894' Inc 9.54° Azm 200.78°
11-Apr-17	12:54	13:05	0.18	3954	3971	Sliding	Sliding - (WOB:25;GPM :440;TFO:170R))
11-Apr-17	13:05	13:27	0.37	3971	4038	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	13:27	13:33	0.10	4038	4038	Survey & Conn.	Survey & Conn.@3978' Inc 7.69° Azm 202.26°
11-Apr-17	13:33	13:41	0.13	4038	4059	Sliding	Sliding - (WOB:25;GPM :440;TFO:170L))
11-Apr-17	13:41	14:03	0.37	4059	4122	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	14:03	14:08	0.08	4122	4122	Survey & Conn.	Survey & Conn.@4062' Inc 5.19° Azm 201.78°
11-Apr-17	14:08	14:22	0.23	4122	4147	Sliding	Sliding - (WOB:25;GPM :440;TFO:160L))
11-Apr-17	14:22	14:42	0.33	4147	4207	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	14:42	14:46	0.07	4207	4207	Survey & Conn.	Survey & Conn.@4147' Inc 2.2° Azm 195.89°
11-Apr-17	14:46	15:14	0.47	4207	4291	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	15:14	15:21	0.12	4291	4291	Survey & Conn.	Survey & Conn.@4231' Inc 1.85° Azm 182.53°
11-Apr-17	15:21	15:33	0.20	4291	4316	Sliding	Sliding - (WOB:25;GPM :440;TFO:360M))
11-Apr-17	19:29	20:03	0.57	4797	4881	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	20:03	20:08	0.08	4881	4881	Survey & Conn.	Survey & Conn.@4821' Inc 0.79° Azm 256.62°
11-Apr-17	20:08	20:39	0.52	4881	4965	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	20:39	20:44	0.08	4965	4965	Survey & Conn.	Survey & Conn.@4905' Inc 1.14° Azm 243.35°
11-Apr-17	20:44	21:01	0.28	4965	4992	Sliding	Sliding - (WOB:25;GPM :440;TFO:30M))
11-Apr-17	21:01	21:30	0.48	4992	5050	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	21:30	21:35	0.08	5050	5050	Survey & Conn.	Survey & Conn.@4990' Inc 0.92° Azm 324.92°
11-Apr-17	21:35	21:48	0.22	5050	5070	Sliding	Sliding - (WOB:25;GPM :440;TFO:90M))
11-Apr-17	21:48	22:22	0.57	5070	5134	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	22:22	22:28	0.10	5134	5134	Survey & Conn.	Survey & Conn.@5074' Inc 1.14° Azm 44.54°
11-Apr-17	22:28	23:52	1.40	5134	5218	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
11-Apr-17	23:52	24:00	0.13	5218	5218	Survey & Conn.	Survey & Conn.@5158' Inc 0.75° Azm 49.99°



JOB NO.:	CO17544	Report Time:	2400	3 of 3
Company:	URSA Resources	API JOB #	05-045-23336-00	
LOCATION:	Piceance Basin	WORK ORDER#	CO17544	
RIG NAME:	Capstar 321	FIELD:	Battlement Mesa	
STATE:	Colorado	Township:	7S	
COUNTY:	Garfield	SECTRANGE:	18	95W
WELL NAME:	BMC D 22C-18-07-95			

From Wednesday, April 12, 2017 at 0000 to Wednesday, April 12, 2017 at 2400

DRILLING SUMMARY						Drilling Parameters					
Start Depth	1770.00	Rotary Hours	17.45	WOB	25	Pick UP	160	Slack Off	80	SPM	
End Depth	5218.00	Circulating Hours	0.35	RAB	120	SPP	2100	FlowRate	440 - 440	120	
Total Drilled:	3448.00	Avg. Total ROP:	174.44	Mud Data							
Total Rotary Drilled:	3166.00	Avg. Rotary ROP:	181.43	Type	Chem/Gel			PV	10	SOLID	6.1
Total Drilled Sliding:	282.00	Avg. Slide ROP:	121.73	Weight	9.25	GAS	0	YP	11	BHT°	0
Slide Hours:	2.32	Percent Rotary:	91.82	Viscosity	39	SAND	0.25	PH	10	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	8.18	Chlorides	2100	WL	7			Oil %	0
PERSONNEL				CASING					BHA		
Lead Directional :	Lloyd Berard			Size	Lb/ft	Set Depth		BHA # 1:Varel V516DU 5x14s, 6 1/2", 7/8 L/B, 3.5 STG, 1.5 FBH, 0.21 Rev/Gal , 6 1/2" NMDC, 6 1/2" Gap Sub, 6 1/2" Index Sub, 6 1/2" NMDC,			
Second Directional :	Stephen Pickering			8 5/8	24	1753					
MWD Operator1	Colin Chudy										
MWD Operator2											
Directional Company:	Payzone										
Geologist:				Signature:							
Company Man:	Nate Gill										
Incl. In:	0.75	Azm. In:	49.99	Incl. Out:	0	Azm. Out:	0				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
12-Apr-17	00:00	00:50	0.83	5218	5303	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
12-Apr-17	00:50	00:55	0.08	5303	5303	Survey & Conn.	Survey & Conn.@5243' Inc 0.26° Azm 304.83°
12-Apr-17	00:55	01:52	0.95	5303	5387	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
12-Apr-17	01:52	01:59	0.12	5387	5387	Survey & Conn.	Survey & Conn.@5327' Inc 0.26° Azm 222.17°
12-Apr-17	01:59	02:43	0.73	5387	5471	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
12-Apr-17	02:43	02:49	0.10	5471	5471	Survey & Conn.	Survey & Conn.@5411' Inc 0.66° Azm 257.55°
12-Apr-17	02:49	03:46	0.95	5471	5555	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
12-Apr-17	03:46	03:51	0.08	5555	5555	Survey & Conn.	Survey & Conn.@5495' Inc 0.7° Azm 221.56°
12-Apr-17	03:51	04:33	0.70	5555	5640	Drilling	Drilling - (WOB:25; :440;RPM:45)
12-Apr-17	04:33	04:39	0.10	5640	5640	Survey & Conn.	Survey & Conn.@5580' Inc 1.23° Azm 221.12°
12-Apr-17	04:39	04:57	0.30	5640	5665	Sliding	Sliding - (WOB:25; :440;TFO:40M))
12-Apr-17	04:57	05:30	0.55	5665	5728	Drilling	Drilling - (WOB:25; :440;RPM:45)
12-Apr-17	05:30	05:35	0.08	5728	5728	Survey & Conn.	Survey & Conn.@5668' Inc 1.14° Azm 121.1°
12-Apr-17	05:35	06:13	0.63	5728	5816	Drilling	Drilling - (WOB:25; :440;RPM:45)
12-Apr-17	06:13	06:21	0.13	5816	5816	Survey & Conn.	Survey & Conn.@5756' Inc 0.57° Azm 111.65°
12-Apr-17	06:21	07:00	0.65	5816	5904	Drilling	Drilling - (WOB:25; :440;RPM:45)
12-Apr-17	07:00	07:05	0.08	5904	5904	Survey & Conn.	Survey & Conn.@5844' Inc 0.88° Azm 178.09°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
12-Apr-17	07:05	07:45	0.67	5904	5993	Drilling	Drilling - (WOB:25; :440;RPM:45)
12-Apr-17	07:45	07:53	0.13	5993	5993	Survey & Conn.	Survey & Conn.@5933' Inc 1.23° Azm 213.78°
12-Apr-17	07:53	08:12	0.32	5993	6018	Sliding	Sliding - (WOB:25; :440;TFO:40M))
12-Apr-17	08:12	08:57	0.75	6018	6082	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
12-Apr-17	08:57	09:03	0.10	6082	6082	Survey & Conn.	Survey & Conn.@6022' Inc 0.04° Azm 182.45°
12-Apr-17	09:03	10:16	1.22	6082	6171	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
12-Apr-17	10:16	10:23	0.12	6171	6171	Survey & Conn.	Survey & Conn.@6111' Inc 0.04° Azm 126.28°
12-Apr-17	10:23	11:15	0.87	6171	6259	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
12-Apr-17	11:15	11:18	0.05	6259	6259	Survey & Conn.	Survey & Conn.@6199' Inc 0.31° Azm 222.52°
12-Apr-17	11:18	12:04	0.77	6259	6347	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
12-Apr-17	12:04	12:10	0.10	6347	6347	Survey & Conn.	Survey & Conn.@6287' Inc 0.7° Azm 187.98°
12-Apr-17	12:10	12:41	0.52	6347	6400	Drilling	Drilling - (WOB:25;GPM :440;RPM:45)
12-Apr-17	12:41	12:46	0.08	6400	6400	Survey & Conn.	Survey & Conn.@6340' Inc 0.7° Azm 184.2°
12-Apr-17	12:46	13:30	0.73	6400	6400	Circulating	Circulating
12-Apr-17	13:30	18:35	5.08	6400	6400	POOH	POOH
12-Apr-17	18:35	19:15	0.67	6400	6400	Change BHA	Lay Down Tools
12-Apr-17	19:15	24:00	4.75	6400	6400	Other	Standby

BHA # 1

Mud Motor Report



JOB NO.:	CO17544	FIELD:	Battlement Mesa
Company:	URSA Resources	Township:	7S
LOCATION:	Piceance Basin	Range	95W
RIG NAME:	Capstar 321	Lead DD:	Lloyd Berard
STATE:	Colorado	Co. Man:	Nate Gill
COUNTY:	Garfield		
WELL NAME:	BMC D 22C-18-07-95	Motor Failed?:	NO

Time and Depths (This BHA)	MOTOR DATA	Drilling Parameters
Date In: 10-Apr-17 @ 22:00	Desc: 1.5° FBH,7/8 L/B,3.5 Stg.,0.21	SO/PU: 48 - 85 / 48-160
Date Out: 12-Apr-17 @ 19:15	MFG.: Hunting	Rot Wt: 48-120
Hrs In Hole: 45.25	BHA Circ/ All BHA: 32.75 / 32.40	WOB: 10 - 25
Start Depth: 1770.00	Motor SN: 6244	TORQ: 6000 - 13000
End Depth: 6400.00	Pad OD: 6 3/4	SPP: 700 - 2100
Total Drilled: 4630.00	NB Stab: 0	Motor RPM: 92
Avg. Total ROP: 146.21	Bit to Bend: 6.1	Rotary RPM: 35 - 45
Circ Hrs:Tot/Only 32.75 / 1.08	Bent Hsg / Sub: 1.5 / 0	Flow Rate: 325 - 440
Percent Slide: 7.17	Lobe/Stage: 7/8 / 3.5	Avg Diff: 375
Percent Hrs: 9.26	Rev/GAL: 0.21	Stall Pres.:
Slide Hours: 2.93	Rotor Jet: 0	Off Bot Pres.:
Total Sliding: 332.00	Prop BUR: 3.5	Bit Record Varel / Varel V516DU 5x14s Run #: 1 Type Bit: PDC IADC#: TFA: 0.751 JETS: 5-14 Bit Drop: 292 PSI @ 440 GPM Cond.:
Avg. Slide ROP: 113.18	Act BUR:	
Percent Rotary: 92.83	Stator Clearance:	
Percent Hrs: 90.74	Lower Stab OD:	
Rot / Total Hrs: 28.73 / 31.67	Upper Stab OD:	
Rotary Drilled: 4298.00	Extended Motor? NO	
Avg. Rotary ROP: 149.58	Number of Stalls: 0	
Reason POOH: TD	Stall Duration: 0	
Mud Data		
Type Chem/Gel	WT: 9.25	Vis: 39 WL: 7 PV: 10 Flow T °: 0
SAND: 0.25 Chlor: 2100 GAS: 0 SOL: 6.1 Oil %: 0 YP: 11 PH: 10	Bottom Hole T °: 0	

Formation:

EXPANDED REASON PULLED:

TD @ 6400'md

BHA PERFORMANCE:

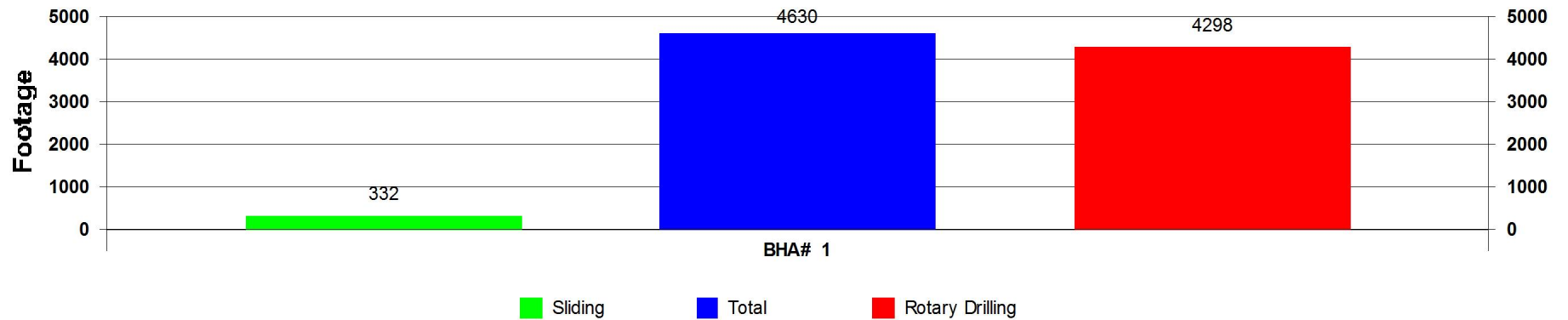
As expected

ADDITIONAL COMMENTS: (Expands to next page if necessary)

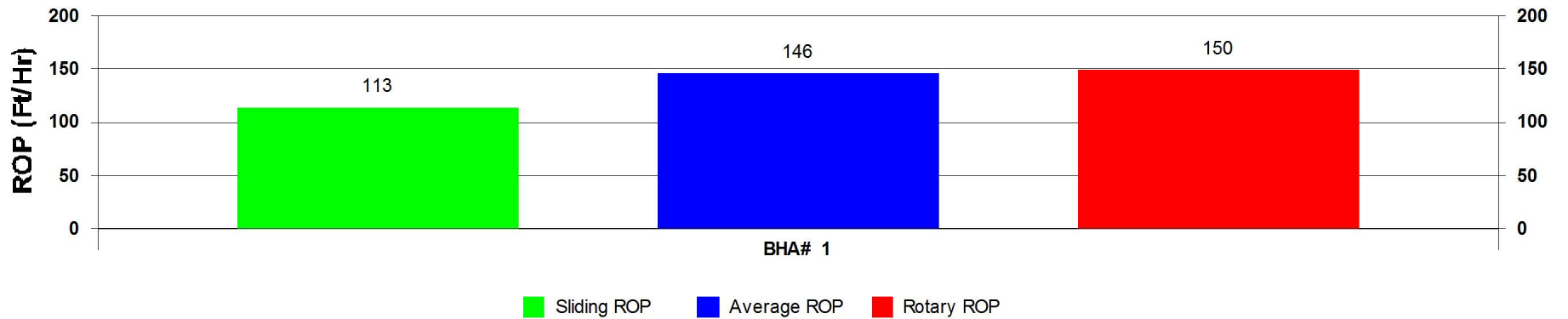


JOB NO.:	CO17544	FIELD:	Battlement Mesa	
Company:	URSA Resources	Township:	7S	
LOCATION:	Piceance Basin	SECTRANGE:	18	95W
RIG NAME:	Capstar 321	COMMENT		
STATE:	Colorado			
COUNTY:	Garfield			
WELL NAME:	BMC D 22C-18-07-95			

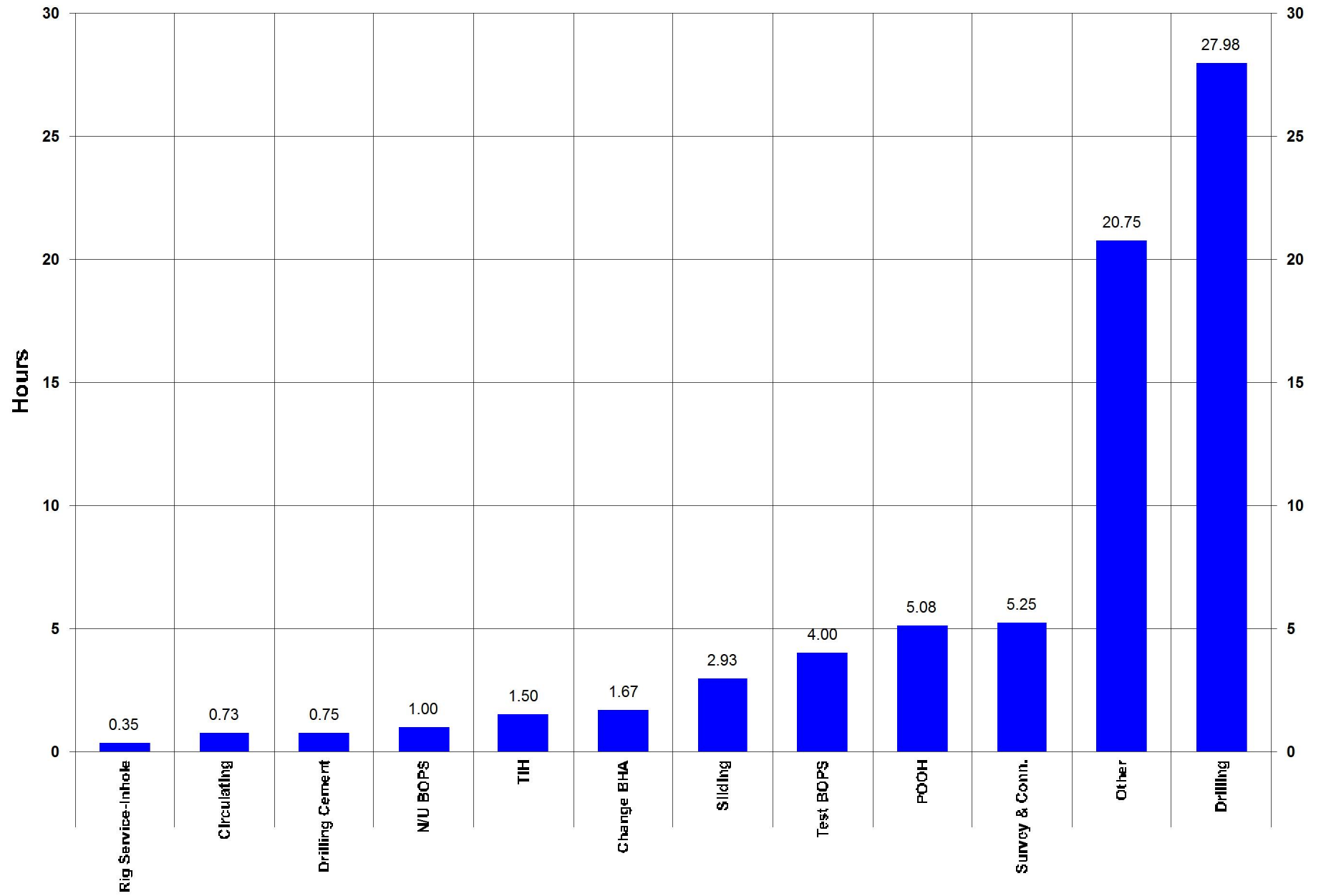
Footage Drilled with BHA



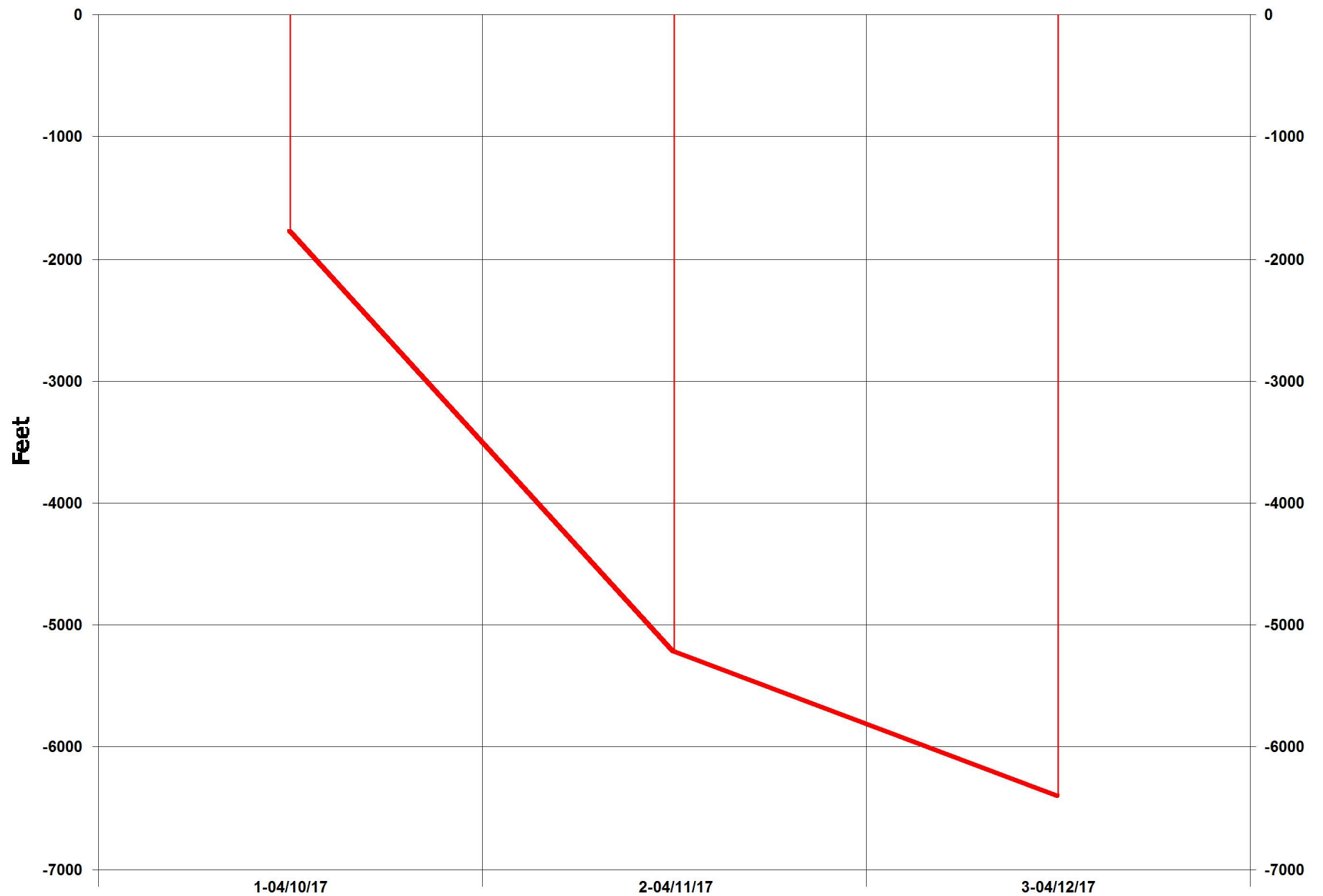
ROP vs BHA



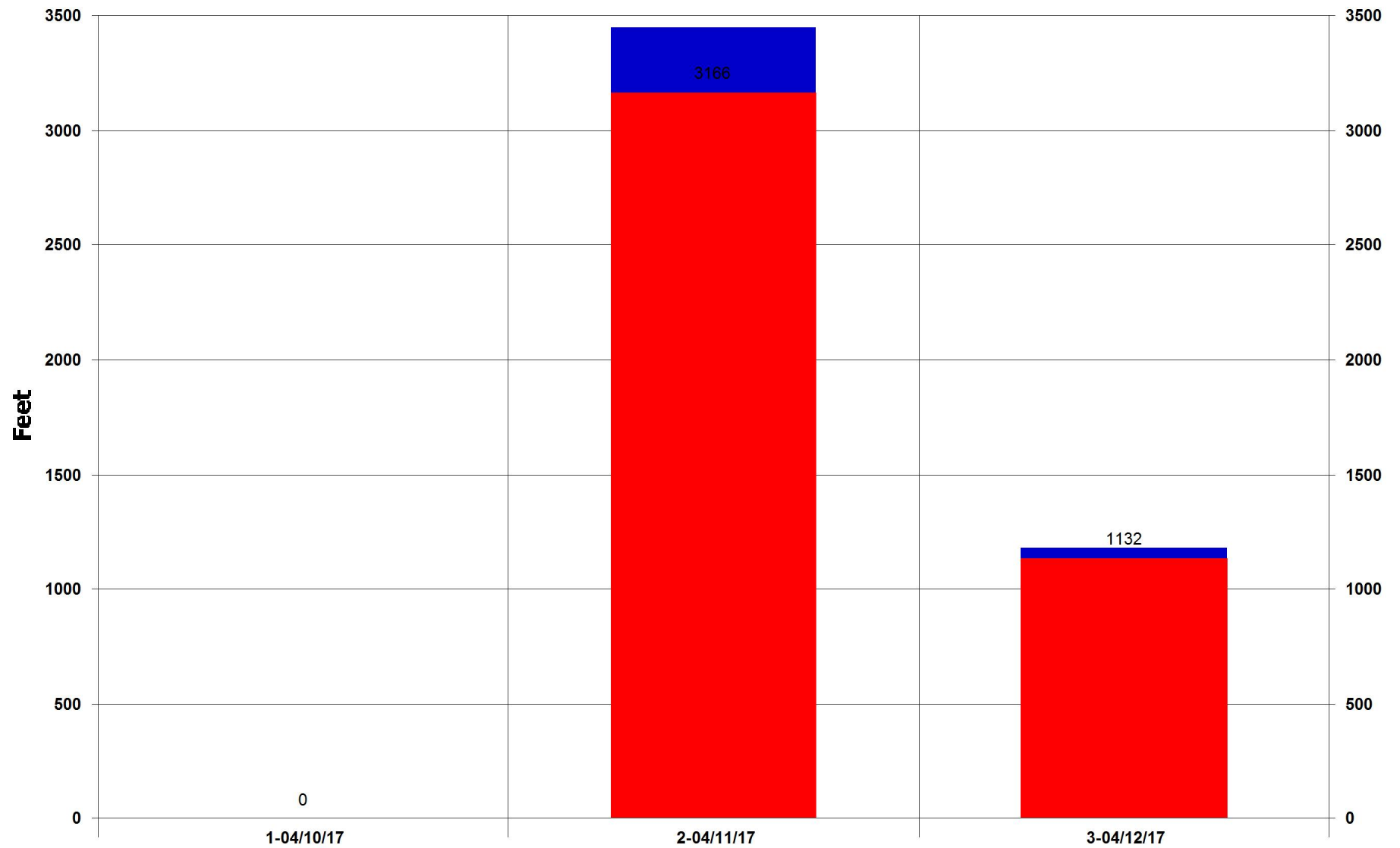
Activity Histogram



Measured Depth vs Days

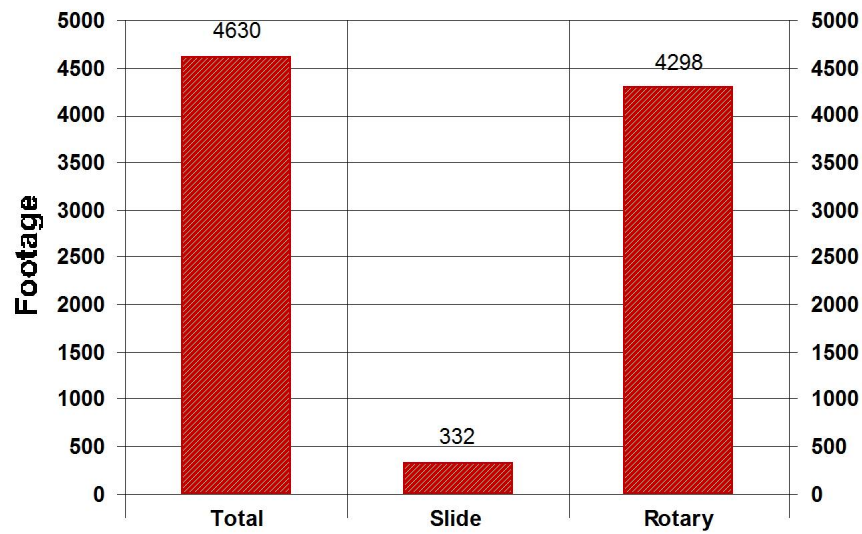


Daily Footage

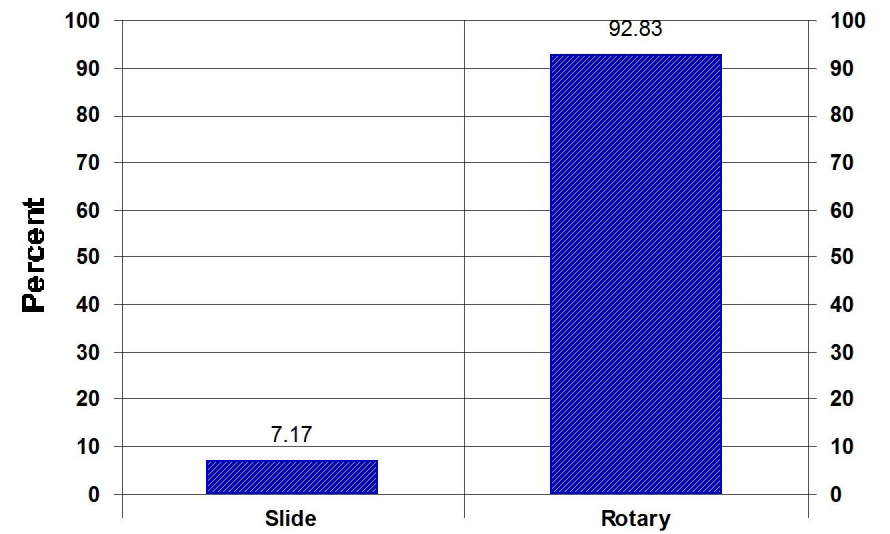


Rotary Drilling Sliding

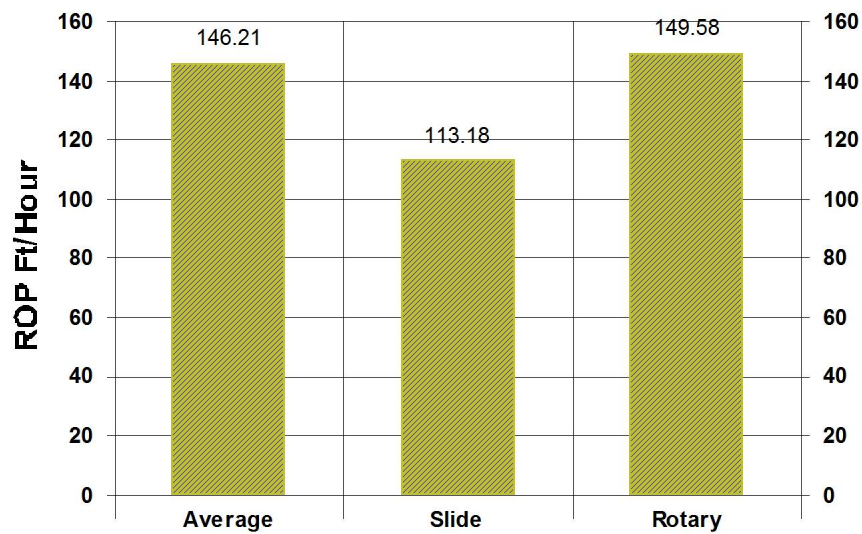
Footage Drilled Totals



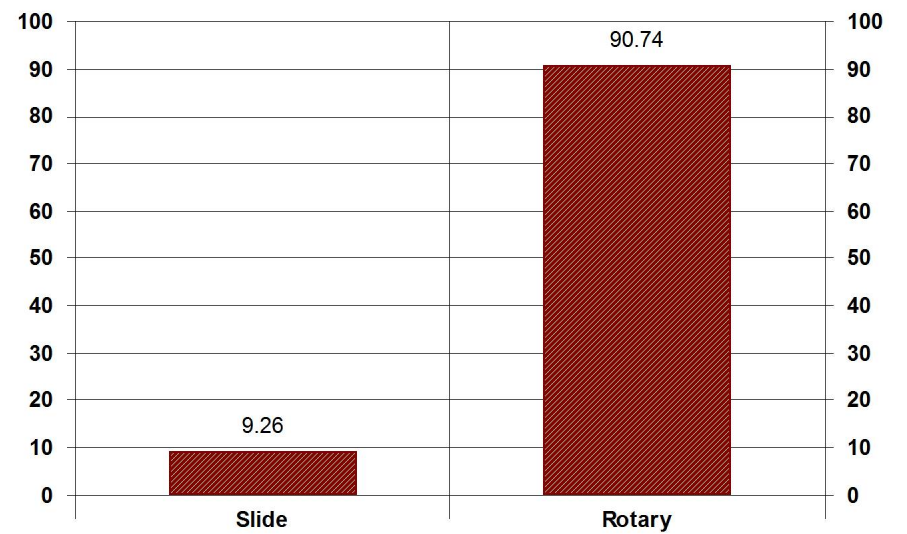
Footage Percent



Rate of Penetration Totals



Time Percent





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