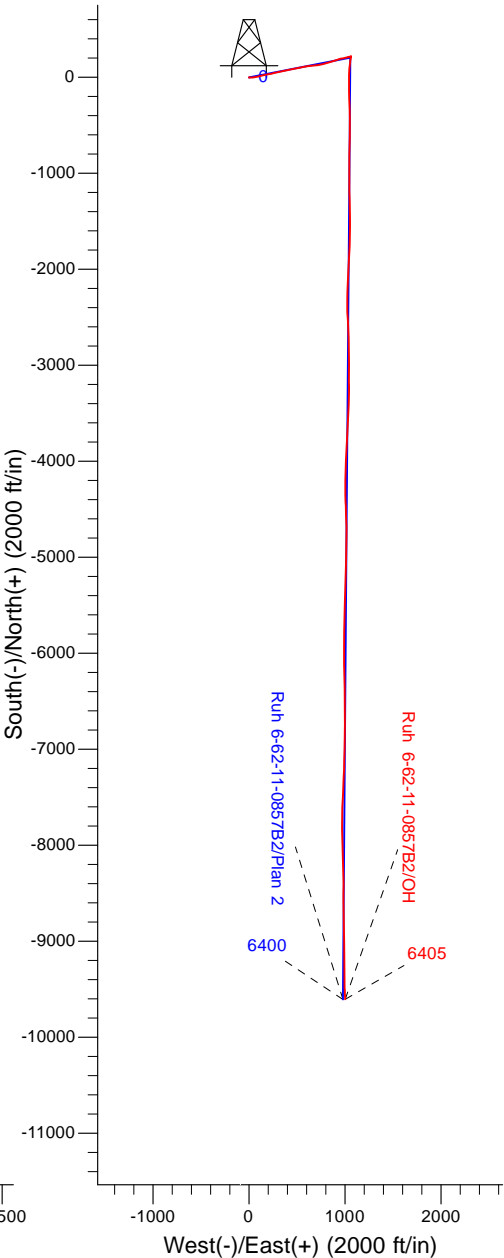
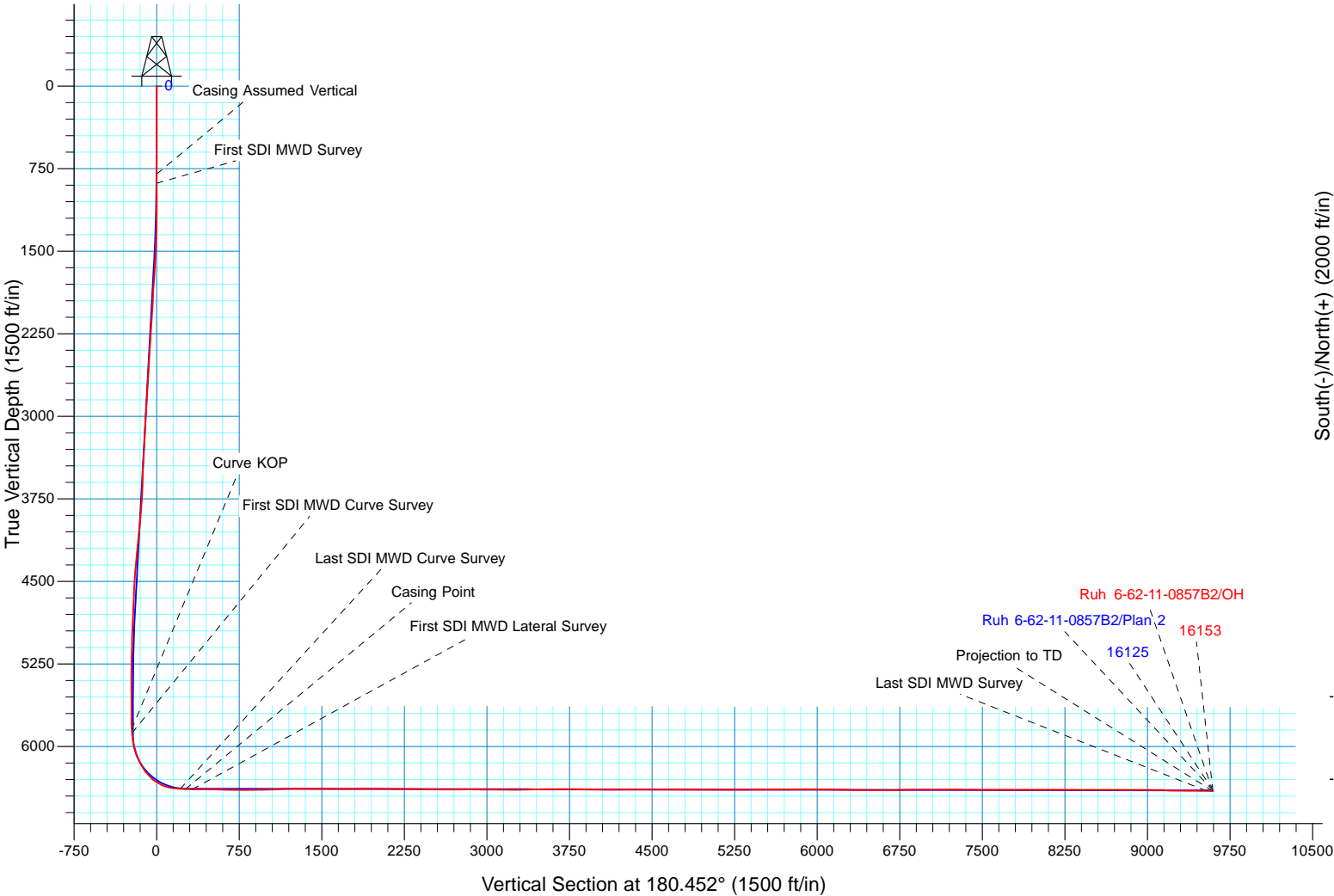


WELL DETAILS: Ruh 6-62-11-0857B2				
	GL 4749' & KB 20' @ 4769.00ft	4749.00		
Northing	Easting	Latitude	Longitude	
1430276.17	3337698.93	40° 30' 29.379 N	104° 17' 7.822 W	

Design: OH (Ruh 6-62-11-0857B2/OH)	
Created By: Seth Burstad	Date: 2-08-2017

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

ANNOTATIONS							
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Annotation
800.00	800.00	0.00	0.000	0.00	0.00	0.00	Casing Assumed Vertical
884.00	884.00	0.07	127.850	-0.03	0.04	0.03	First SDI MWD Survey
5844.20	5991.00	3.00	184.326	217.15	1061.70	-225.52	Curve KOP
5877.13	6024.00	4.54	186.060	214.99	1061.50	-223.36	First SDI MWD Curve Survey
6385.11	6769.00	87.84	178.340	-223.68	1043.74	215.44	Last SDI MWD Curve Survey
6386.67	6817.00	88.42	178.623	-271.64	1045.01	263.39	Casing Point
6388.00	6881.00	89.20	179.000	-335.61	1046.34	327.35	First SDI MWD Lateral Survey
6404.24	16095.00	88.76	177.800	-9544.84	997.95	9536.67	Last SDI MWD Survey
6405.50	16153.00	88.76	177.800	-9602.78	1000.18	9594.59	Projection to TD





Bill Barrett Corporation

Bill Barrett Corp.

Weld County, CO NAD 83
Ruh 6-62-11 14 NWNE Pad
Ruh 6-62-11-0857B2

OH

Design: OH

Standard Survey Report

08 February, 2017



Scientific Drilling

www.scientificdrilling.com



Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Ruh 6-62-11-0857B2
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4749' & KB 20' @ 4769.00ft
Site:	Ruh 6-62-11 14 NWNE Pad	MD Reference:	GL 4749' & KB 20' @ 4769.00ft
Well:	Ruh 6-62-11-0857B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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

Site	Ruh 6-62-11 14 NWNE Pad, Site Center: Ruh 6-62-11-0857B2				
Site Position:		Northing:	1,430,276.20 usft	Latitude:	40° 30' 29.380 N
From:	Lat/Long	Easting:	3,337,698.94 usft	Longitude:	104° 17' 7.822 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.78 °

Well	Ruh 6-62-11-0857B2, 250' FNL 1579' FEL Sec 11 T6N R62W					
Well Position	+N/-S	0.00 ft	Northing:	1,430,276.17 usft	Latitude:	40° 30' 29.379 N
	+E/-W	0.00 ft	Easting:	3,337,698.94 usft	Longitude:	104° 17' 7.822 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,749.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	9/12/2016	8.18	67.07	52,609

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	180.452	

Survey Program	Date	2/8/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
800.00	6,769.00	Survey #1 - Intermediate (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
6,881.00	16,153.00	Survey #2 - Lateral (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
Casing Assumed Vertical										
884.00	0.07	127.850	884.00	-0.03	0.04	0.03	0.08	0.08	0.00	
First SDI MWD Survey										
976.00	2.33	100.730	975.97	-0.41	1.92	0.40	2.47	2.46	-29.48	
1,067.00	4.24	92.680	1,066.82	-0.92	7.10	0.86	2.15	2.10	-8.85	
1,159.00	6.69	91.990	1,158.40	-1.26	15.86	1.14	2.66	2.66	-0.75	
1,251.00	9.16	84.470	1,249.51	-0.74	28.50	0.52	2.91	2.68	-8.17	

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Ruh 6-62-11-0857B2
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4749' & KB 20' @ 4769.00ft
Site:	Ruh 6-62-11 14 NWNE Pad	MD Reference:	GL 4749' & KB 20' @ 4769.00ft
Well:	Ruh 6-62-11-0857B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,342.00	11.36	82.600	1,339.05	1.11	44.60	-1.46	2.44	2.42	-2.05
1,433.00	13.71	83.550	1,427.88	3.48	64.21	-3.98	2.59	2.58	1.04
1,525.00	15.35	78.060	1,516.94	7.22	86.96	-7.91	2.33	1.78	-5.97
1,616.00	14.97	73.990	1,604.77	12.96	110.04	-13.82	1.24	-0.42	-4.47
1,708.00	14.16	74.850	1,693.81	19.17	132.32	-20.22	0.91	-0.88	0.93
1,800.00	14.77	77.490	1,782.90	24.65	154.63	-25.87	0.98	0.66	2.87
1,892.00	16.17	81.560	1,871.57	29.08	178.76	-30.48	1.92	1.52	4.42
1,983.00	15.83	82.450	1,959.04	32.57	203.59	-34.17	0.46	-0.37	0.98
2,075.00	15.76	75.320	2,047.57	37.38	228.12	-39.18	2.11	-0.08	-7.75
2,166.00	14.49	74.520	2,135.42	43.55	251.05	-45.53	1.41	-1.40	-0.88
2,258.00	15.07	76.540	2,224.38	49.41	273.77	-51.57	0.84	0.63	2.20
2,349.00	14.78	76.890	2,312.31	54.79	296.58	-57.13	0.33	-0.32	0.38
2,443.00	16.32	80.880	2,402.87	59.61	321.30	-62.14	1.99	1.64	4.24
2,538.00	16.81	78.600	2,493.92	64.44	347.95	-67.18	0.86	0.52	-2.40
2,632.00	16.32	77.720	2,584.02	69.93	374.18	-72.88	0.59	-0.52	-0.94
2,726.00	15.41	76.510	2,674.44	75.66	399.23	-78.80	1.03	-0.97	-1.29
2,821.00	16.35	77.690	2,765.81	81.45	424.57	-84.80	1.05	0.99	1.24
2,915.00	16.50	80.840	2,855.98	86.40	450.67	-89.95	0.96	0.16	3.35
3,009.00	15.46	80.310	2,946.35	90.63	476.20	-94.39	1.12	-1.11	-0.56
3,104.00	16.01	78.980	3,037.79	95.27	501.54	-99.22	0.69	0.58	-1.40
3,198.00	15.65	79.800	3,128.22	99.99	526.74	-104.14	0.45	-0.38	0.87
3,292.00	14.29	75.390	3,219.03	105.16	550.45	-109.50	1.89	-1.45	-4.69
3,387.00	15.68	77.890	3,310.80	110.81	574.35	-115.34	1.61	1.46	2.63
3,481.00	16.37	83.070	3,401.15	115.08	599.92	-119.81	1.69	0.73	5.51
3,575.00	17.37	83.980	3,491.11	118.15	627.02	-123.09	1.10	1.06	0.97
3,669.00	18.91	83.450	3,580.43	121.36	656.11	-126.53	1.65	1.64	-0.56
3,763.00	19.93	84.640	3,669.08	124.59	687.20	-130.01	1.16	1.09	1.27
3,857.00	19.96	84.260	3,757.44	127.69	719.11	-133.36	0.14	0.03	-0.40
3,952.00	21.35	75.190	3,846.36	133.74	751.97	-139.66	3.67	1.46	-9.55
4,046.00	20.23	76.060	3,934.24	142.02	784.29	-148.21	1.24	-1.19	0.93
4,141.00	19.33	72.650	4,023.63	150.67	815.24	-157.10	1.54	-0.95	-3.59
4,235.00	17.50	74.340	4,112.82	159.13	843.70	-165.78	2.03	-1.95	1.80
4,329.00	16.52	74.690	4,202.70	166.47	870.20	-173.33	1.05	-1.04	0.37
4,423.00	16.60	69.980	4,292.81	174.60	895.71	-181.66	1.43	0.09	-5.01
4,517.00	14.02	71.060	4,383.47	182.89	919.10	-190.13	2.76	-2.74	1.15
4,612.00	13.54	69.930	4,475.73	190.44	940.43	-197.85	0.58	-0.51	-1.19
4,706.00	12.23	78.900	4,567.37	196.13	960.54	-203.71	2.54	-1.39	9.54
4,799.00	11.23	82.110	4,658.43	199.27	979.17	-206.99	1.28	-1.08	3.45
4,894.00	10.98	76.350	4,751.65	202.68	997.13	-210.54	1.20	-0.26	-6.06
4,988.00	9.75	74.390	4,844.12	206.93	1,013.49	-214.92	1.36	-1.31	-2.09
5,081.00	8.47	72.810	4,935.94	211.08	1,027.62	-219.18	1.40	-1.38	-1.70
5,176.00	6.55	81.310	5,030.13	213.96	1,039.66	-222.16	2.33	-2.02	8.95
5,270.00	4.73	74.760	5,123.67	215.79	1,048.70	-224.06	2.05	-1.94	-6.97

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Ruh 6-62-11-0857B2
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4749' & KB 20' @ 4769.00ft
Site:	Ruh 6-62-11 14 NWNE Pad	MD Reference:	GL 4749' & KB 20' @ 4769.00ft
Well:	Ruh 6-62-11-0857B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,364.00	4.22	78.510	5,217.38	217.50	1,055.83	-225.82	0.63	-0.54	3.99	
5,458.00	1.71	52.360	5,311.25	219.05	1,060.33	-227.40	2.97	-2.67	-27.82	
5,553.00	0.34	121.660	5,406.24	219.76	1,061.70	-228.13	1.71	-1.44	72.95	
5,647.00	0.29	123.190	5,500.24	219.49	1,062.13	-227.86	0.05	-0.05	1.63	
5,741.00	0.21	281.290	5,594.24	219.39	1,062.16	-227.76	0.52	-0.09	168.19	
5,836.00	0.40	228.270	5,689.23	219.20	1,061.74	-227.57	0.34	0.20	-55.81	
5,930.00	0.30	126.630	5,783.23	218.84	1,061.70	-227.21	0.58	-0.11	-108.13	
5,991.00	3.00	184.326	5,844.20	217.15	1,061.70	-225.52	4.68	4.43	94.58	
Curve KOP										
6,024.00	4.54	186.060	5,877.13	214.99	1,061.50	-223.36	4.68	4.66	5.25	
First SDI MWD Curve Survey										
6,118.00	11.76	188.980	5,970.12	201.81	1,059.61	-210.17	7.69	7.68	3.11	
6,213.00	18.23	188.170	6,061.84	177.52	1,055.98	-185.84	6.81	6.81	-0.85	
6,307.00	26.45	187.260	6,148.71	142.13	1,051.24	-150.42	8.75	8.74	-0.97	
6,402.00	36.23	188.170	6,229.75	93.24	1,044.56	-101.48	10.31	10.29	0.96	
6,497.00	50.15	179.820	6,298.90	28.61	1,040.66	-36.82	15.81	14.65	-8.79	
6,591.00	65.30	179.760	6,348.95	-50.63	1,040.96	42.42	16.12	16.12	-0.06	
6,685.00	80.45	179.100	6,376.54	-140.20	1,041.87	131.98	16.13	16.12	-0.70	
6,769.00	87.84	178.340	6,385.11	-223.68	1,043.74	215.44	8.84	8.80	-0.90	
Last SDI MWD Curve Survey										
6,817.00	88.42	178.623	6,386.67	-271.64	1,045.01	263.39	1.35	1.21	0.59	
Casing Point										
6,881.00	89.20	179.000	6,388.00	-335.61	1,046.34	327.35	1.35	1.21	0.59	
First SDI MWD Lateral Survey										
6,976.00	88.66	178.480	6,389.77	-430.57	1,048.43	422.29	0.79	-0.57	-0.55	
7,070.00	88.69	180.600	6,391.95	-524.54	1,049.18	516.24	2.25	0.03	2.26	
7,164.00	88.89	180.850	6,393.93	-618.51	1,047.99	610.22	0.34	0.21	0.27	
7,259.00	90.00	180.890	6,394.85	-713.49	1,046.55	705.21	1.17	1.17	0.04	
7,354.00	89.06	179.920	6,395.63	-808.48	1,045.88	800.21	1.42	-0.99	-1.02	
7,448.00	91.24	180.420	6,395.39	-902.48	1,045.60	894.20	2.38	2.32	0.53	
7,543.00	91.48	180.240	6,393.13	-997.45	1,045.05	989.17	0.32	0.25	-0.19	
7,637.00	92.25	179.830	6,390.07	-1,091.40	1,044.99	1,083.12	0.93	0.82	-0.44	
7,731.00	93.05	179.220	6,385.73	-1,185.29	1,045.77	1,177.01	1.07	0.85	-0.65	
7,826.00	89.80	179.240	6,383.36	-1,280.24	1,047.05	1,271.94	3.42	-3.42	0.02	
7,921.00	90.03	178.450	6,383.51	-1,375.22	1,048.96	1,366.90	0.87	0.24	-0.83	
8,015.00	89.66	178.770	6,383.76	-1,469.19	1,051.24	1,460.85	0.52	-0.39	0.34	
8,109.00	89.29	181.670	6,384.62	-1,563.18	1,050.88	1,554.84	3.11	-0.39	3.09	
8,204.00	89.66	181.630	6,385.49	-1,658.13	1,048.15	1,649.81	0.39	0.39	-0.04	
8,298.00	90.20	180.730	6,385.61	-1,752.11	1,046.21	1,743.81	1.12	0.57	-0.96	
8,393.00	92.02	183.170	6,383.77	-1,847.03	1,042.98	1,838.74	3.20	1.92	2.57	
8,487.00	89.40	183.380	6,382.60	-1,940.86	1,037.61	1,932.61	2.80	-2.79	0.22	
8,582.00	89.03	182.480	6,383.90	-2,035.73	1,032.76	2,027.52	1.02	-0.39	-0.95	
8,676.00	89.26	182.340	6,385.31	-2,129.63	1,028.80	2,121.45	0.29	0.24	-0.15	
8,770.00	89.16	182.190	6,386.60	-2,223.55	1,025.09	2,215.39	0.19	-0.11	-0.16	
8,864.00	89.46	180.880	6,387.73	-2,317.51	1,022.57	2,309.37	1.43	0.32	-1.39	

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Ruh 6-62-11-0857B2
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4749' & KB 20' @ 4769.00ft
Site:	Ruh 6-62-11 14 NWNE Pad	MD Reference:	GL 4749' & KB 20' @ 4769.00ft
Well:	Ruh 6-62-11-0857B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,958.00	89.36	178.670	6,388.70	-2,411.50	1,022.94	2,403.35	2.35	-0.11	-2.35
9,052.00	88.59	176.260	6,390.38	-2,505.38	1,027.10	2,497.20	2.69	-0.82	-2.56
9,147.00	90.60	178.010	6,391.06	-2,600.25	1,031.84	2,592.03	2.81	2.12	1.84
9,241.00	90.27	176.810	6,390.34	-2,694.15	1,036.09	2,685.89	1.32	-0.35	-1.28
9,335.00	90.07	178.690	6,390.06	-2,788.07	1,039.78	2,779.78	2.01	-0.21	2.00
9,429.00	89.43	180.460	6,390.47	-2,882.07	1,040.48	2,873.77	2.00	-0.68	1.88
9,524.00	89.40	180.120	6,391.44	-2,977.06	1,040.00	2,968.76	0.36	-0.03	-0.36
9,618.00	89.53	180.140	6,392.32	-3,071.06	1,039.79	3,062.76	0.14	0.14	0.02
9,713.00	89.80	179.790	6,392.88	-3,166.05	1,039.84	3,157.75	0.47	0.28	-0.37
9,808.00	89.50	178.790	6,393.46	-3,261.04	1,041.02	3,252.73	1.10	-0.32	-1.05
9,902.00	91.44	181.590	6,392.69	-3,355.03	1,040.71	3,346.71	3.62	2.06	2.98
9,996.00	91.24	184.020	6,390.49	-3,448.88	1,036.11	3,440.60	2.59	-0.21	2.59
10,091.00	90.40	182.990	6,389.13	-3,543.69	1,030.30	3,535.45	1.40	-0.88	-1.08
10,185.00	90.44	182.520	6,388.44	-3,637.58	1,025.79	3,629.37	0.50	0.04	-0.50
10,278.00	89.83	183.000	6,388.22	-3,730.47	1,021.31	3,722.30	0.83	-0.66	0.52
10,370.00	89.09	182.910	6,389.09	-3,822.34	1,016.56	3,814.21	0.81	-0.80	-0.10
10,461.00	88.96	182.250	6,390.63	-3,913.24	1,012.47	3,905.13	0.74	-0.14	-0.73
10,553.00	89.16	182.240	6,392.14	-4,005.15	1,008.87	3,997.07	0.22	0.22	-0.01
10,645.00	89.93	181.900	6,392.87	-4,097.09	1,005.54	4,089.03	0.91	0.84	-0.37
10,736.00	90.40	180.990	6,392.61	-4,188.06	1,003.25	4,180.02	1.13	0.52	-1.00
10,828.00	89.90	179.720	6,392.37	-4,280.06	1,002.68	4,272.01	1.48	-0.54	-1.38
10,920.00	90.37	179.020	6,392.15	-4,372.05	1,003.69	4,364.00	0.92	0.51	-0.76
11,012.00	90.03	177.790	6,391.83	-4,464.01	1,006.25	4,455.93	1.39	-0.37	-1.34
11,104.00	89.93	177.630	6,391.87	-4,555.94	1,009.93	4,547.83	0.21	-0.11	-0.17
11,195.00	89.60	177.540	6,392.24	-4,646.86	1,013.76	4,638.71	0.38	-0.36	-0.10
11,287.00	90.07	180.110	6,392.50	-4,738.83	1,015.65	4,730.67	2.84	0.51	2.79
11,379.00	89.77	180.570	6,392.63	-4,830.83	1,015.10	4,822.67	0.60	-0.33	0.50
11,470.00	89.63	181.170	6,393.11	-4,921.81	1,013.72	4,913.66	0.68	-0.15	0.66
11,561.00	91.01	183.130	6,392.60	-5,012.74	1,010.31	5,004.62	2.63	1.52	2.15
11,653.00	89.63	181.800	6,392.09	-5,104.65	1,006.35	5,096.55	2.08	-1.50	-1.45
11,744.00	89.43	181.130	6,392.83	-5,195.62	1,004.02	5,187.54	0.77	-0.22	-0.74
11,836.00	89.13	180.270	6,393.99	-5,287.60	1,002.90	5,279.53	0.99	-0.33	-0.93
11,928.00	89.73	181.200	6,394.90	-5,379.59	1,001.72	5,371.52	1.20	0.65	1.01
12,020.00	91.18	182.060	6,394.17	-5,471.55	999.10	5,463.49	1.83	1.58	0.93
12,111.00	91.04	182.390	6,392.41	-5,562.46	995.57	5,554.43	0.39	-0.15	0.36
12,203.00	90.10	181.580	6,391.50	-5,654.40	992.38	5,646.39	1.35	-1.02	-0.88
12,294.00	89.76	180.570	6,391.61	-5,745.38	990.68	5,737.39	1.17	-0.37	-1.11
12,386.00	90.13	180.840	6,391.70	-5,837.37	989.54	5,829.39	0.50	0.40	0.29
12,477.00	90.47	180.340	6,391.22	-5,928.37	988.61	5,920.38	0.66	0.37	-0.55
12,569.00	90.07	179.780	6,390.79	-6,020.37	988.51	6,012.38	0.75	-0.43	-0.61
12,661.00	90.13	179.420	6,390.62	-6,112.36	989.15	6,104.37	0.40	0.07	-0.39
12,752.00	89.19	178.650	6,391.16	-6,203.35	990.69	6,195.34	1.34	-1.03	-0.85
12,843.00	87.49	178.940	6,393.80	-6,294.29	992.60	6,286.26	1.90	-1.87	0.32

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Ruh 6-62-11-0857B2
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4749' & KB 20' @ 4769.00ft
Site:	Ruh 6-62-11 14 NWNE Pad	MD Reference:	GL 4749' & KB 20' @ 4769.00ft
Well:	Ruh 6-62-11-0857B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,935.00	87.99	178.820	6,397.43	-6,386.20	994.40	6,378.15	0.56	0.54	-0.13
13,026.00	89.16	178.440	6,399.69	-6,477.14	996.57	6,469.08	1.35	1.29	-0.42
13,119.00	90.67	180.100	6,399.83	-6,570.13	997.76	6,562.05	2.41	1.62	1.78
13,210.00	91.84	180.870	6,397.84	-6,661.10	996.99	6,653.03	1.54	1.29	0.85
13,302.00	91.88	179.700	6,394.85	-6,753.05	996.53	6,744.98	1.27	0.04	-1.27
13,394.00	90.40	180.330	6,393.02	-6,845.03	996.50	6,836.95	1.75	-1.61	0.68
13,485.00	90.07	181.070	6,392.65	-6,936.02	995.39	6,927.95	0.89	-0.36	0.81
13,577.00	89.87	180.740	6,392.69	-7,028.01	993.94	7,019.95	0.42	-0.22	-0.36
13,669.00	90.10	182.070	6,392.72	-7,119.98	991.68	7,111.93	1.47	0.25	1.45
13,761.00	90.20	182.340	6,392.48	-7,211.91	988.14	7,203.89	0.31	0.11	0.29
13,852.00	89.73	181.600	6,392.53	-7,302.85	985.02	7,294.86	0.96	-0.52	-0.81
13,944.00	89.87	182.440	6,392.85	-7,394.79	981.77	7,386.82	0.93	0.15	0.91
14,036.00	89.70	183.070	6,393.20	-7,486.69	977.35	7,478.74	0.71	-0.18	0.68
14,127.00	89.66	183.400	6,393.71	-7,577.54	972.22	7,569.64	0.37	-0.04	0.36
14,219.00	89.06	180.370	6,394.74	-7,669.47	969.19	7,661.59	3.36	-0.65	-3.29
14,311.00	89.90	180.120	6,395.57	-7,761.47	968.80	7,753.58	0.95	0.91	-0.27
14,403.00	90.13	179.470	6,395.55	-7,853.47	969.13	7,845.58	0.75	0.25	-0.71
14,494.00	90.91	179.190	6,394.72	-7,944.46	970.19	7,936.56	0.91	0.86	-0.31
14,585.00	90.44	178.590	6,393.65	-8,035.43	971.95	8,027.52	0.84	-0.52	-0.66
14,676.00	89.26	177.140	6,393.89	-8,126.37	975.34	8,118.42	2.05	-1.30	-1.59
14,767.00	89.63	176.850	6,394.77	-8,217.24	980.11	8,209.25	0.52	0.41	-0.32
14,860.00	90.20	178.760	6,394.91	-8,310.16	983.67	8,302.14	2.14	0.61	2.05
14,951.00	90.30	180.230	6,394.51	-8,401.16	984.48	8,393.13	1.62	0.11	1.62
15,043.00	89.77	180.470	6,394.45	-8,493.15	983.91	8,485.13	0.63	-0.58	0.26
15,134.00	90.37	180.030	6,394.34	-8,584.15	983.52	8,576.13	0.82	0.66	-0.48
15,226.00	89.93	179.320	6,394.10	-8,676.15	984.04	8,668.12	0.91	-0.48	-0.77
15,318.00	89.46	178.490	6,394.59	-8,768.13	985.80	8,760.08	1.04	-0.51	-0.90
15,410.00	89.83	178.040	6,395.16	-8,860.09	988.58	8,852.01	0.63	0.40	-0.49
15,501.00	89.46	180.010	6,395.73	-8,951.07	990.13	8,942.98	2.20	-0.41	2.16
15,593.00	90.44	180.540	6,395.81	-9,043.06	989.69	9,034.97	1.21	1.07	0.58
15,687.00	88.22	178.630	6,396.90	-9,137.04	990.37	9,128.95	3.12	-2.36	-2.03
15,781.00	87.42	178.810	6,400.48	-9,230.95	992.47	9,222.84	0.87	-0.85	0.19
15,875.00	89.83	179.680	6,402.74	-9,324.91	993.71	9,316.78	2.73	2.56	0.93
15,970.00	90.13	179.380	6,402.77	-9,419.91	994.49	9,411.77	0.45	0.32	-0.32
16,064.00	88.86	177.830	6,403.60	-9,513.87	996.77	9,505.71	2.13	-1.35	-1.65
16,095.00	88.76	177.800	6,404.24	-9,544.84	997.95	9,536.67	0.34	-0.32	-0.10
Last SDI MWD Survey									
16,153.00	88.76	177.800	6,405.50	-9,602.78	1,000.18	9,594.59	0.00	0.00	0.00
Projection to TD									

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Ruh 6-62-11-0857B2
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4749' & KB 20' @ 4769.00ft
Site:	Ruh 6-62-11 14 NWNE Pad	MD Reference:	GL 4749' & KB 20' @ 4769.00ft
Well:	Ruh 6-62-11-0857B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
800.00	800.00	0.00	0.00	Casing Assumed Vertical
884.00	884.00	-0.03	0.04	First SDI MWD Survey
5,991.00	5,844.20	217.15	1,061.70	Curve KOP
6,024.00	5,877.13	214.99	1,061.50	First SDI MWD Curve Survey
6,769.00	6,385.11	-223.68	1,043.74	Last SDI MWD Curve Survey
6,817.00	6,386.67	-271.64	1,045.01	Casing Point
6,881.00	6,388.00	-335.61	1,046.34	First SDI MWD Lateral Survey
16,095.00	6,404.24	-9,544.84	997.95	Last SDI MWD Survey
16,153.00	6,405.50	-9,602.78	1,000.18	Projection to TD

Checked By: _____ Approved By: _____ Date: _____