



**Bill Barrett Corporation**

## **Bill Barrett Corp.**

**Weld Co., CO (NAD 83)**

**SEC 27 T6N R62W**

**Pappenheim 6-62-27-3225BH2**

**OH**

**Survey: MWD Survey**

## **Standard Survey Report**

**05 September, 2014**





Bill Barrett Corp.  
Project: Weld Co., CO (NAD 83)  
Site: SEC 27 T6N R62W  
Well: Pappenheim 6-62-27-3225BH2  
Wellbore: OH  
Design: WP02  
Lat: 40.45807  
Long: -104.31749  
Pad GL: 4733.00  
KB @ 4756.00ft



#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.000	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
1393.76	5.906	337.99	1393.06	18.80	-7.60	1.50	337.99	-6.56	Start 3858.42 hold at 1393.76 MD
5252.18	5.906	337.99	5231.00	386.90	-156.41	0.00	0.00	-134.95	Start Drop -1.50
5645.94	0.000	0.00	5624.06	405.70	-164.01	1.50	180.00	-141.50	Start 200.00 hold at 5645.94 MD
5845.94	0.000	0.00	5824.06	405.70	-164.01	0.00	0.00	-141.50	Start Build 10.02
5846.03	0.000	0.00	5824.16	405.70	-164.01	0.00	0.00	-141.50	Start Build 10.02
6748.83	90.426	89.26	6396.17	413.17	412.23	10.02	89.26	434.28	Start 9303.45 hold at 6748.83 MD
16052.28	90.426	89.26	6327.00	533.82	9714.63	0.00	0.00	9729.29	TD at 16052.28

#### WELL DETAILS: Pappenheim 6-62-27-3225BH2

+N/-S	+E/-W	Northing	Ground Level: Easting	4733.00 Latitude	Longitude	Slot
0.00	0.00	1411909.27	3329049.42	40.45807	-104.31749	

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Pappenheim 6-62-27-3225BH2 WP02 VT	5824.06	405.70	-164.01	40.45918	-104.31808	Point
Pappenheim 6-62-27-3225BH2 WP02 BHL	6327.00	533.82	9714.63	40.45953	-104.28258	Point
Pappenheim 6-62-27-3225BH2 WP02 LP	6397.00	411.69	297.76	40.45920	-104.31642	Point

#### PROJECT DETAILS: Weld Co., 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

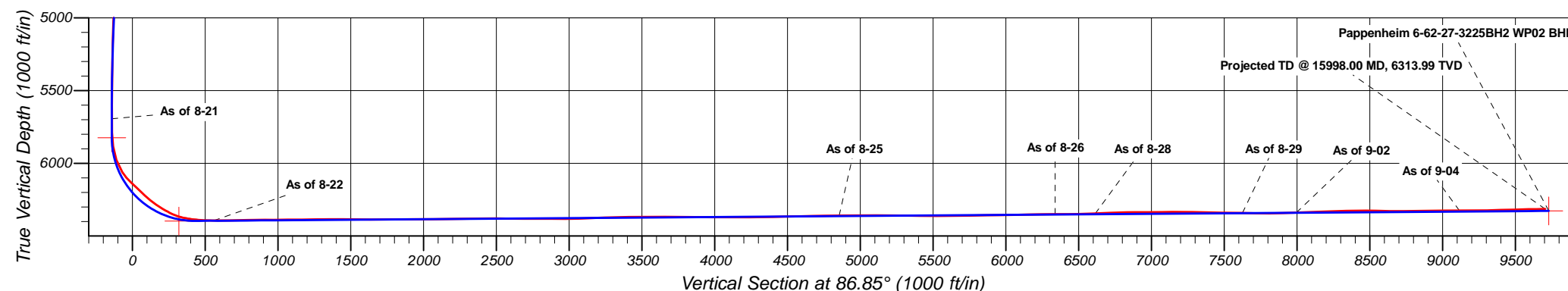
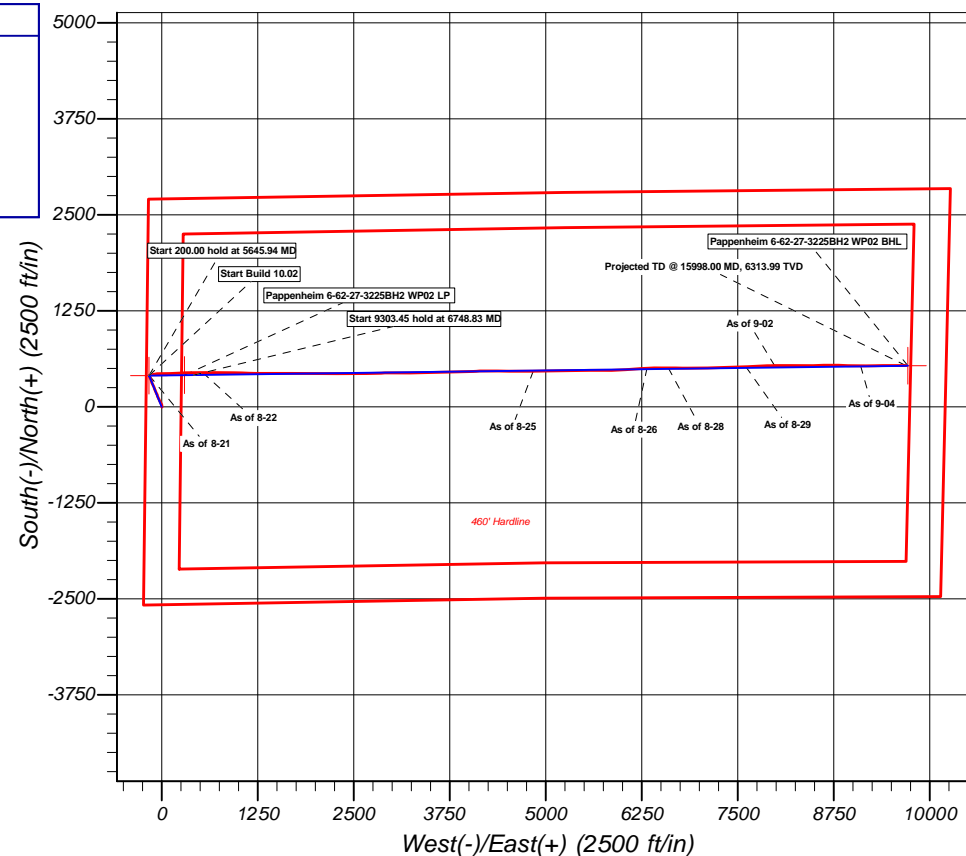
#### CASING DETAILS

No casing data is available



Azimuths to True North  
Magnetic North: 8.21°

Magnetic Field  
Strength: 52880.7snT  
Dip Angle: 67.06°  
Date: 7/25/2014  
Model: IGRF2010



<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-27-3225BH2
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	KB @ 4756.00ft
<b>Site:</b>	SEC 27 T6N R62W	<b>MD Reference:</b>	KB @ 4756.00ft
<b>Well:</b>	Pappenheim 6-62-27-3225BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Local Db

<b>Project</b>	Weld Co., CO (NAD 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	SEC 27 T6N R62W		
<b>Site Position:</b>		<b>Northing:</b>	1,410,557.62 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,329,050.75 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	1.10 ft
		<b>Latitude:</b>	40.45436
		<b>Longitude:</b>	-104.31755
		<b>Grid Convergence:</b>	0.76 °

<b>Well</b>	Pappenheim 6-62-27-3225BH2		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b> 1,411,909.27 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b> 3,329,049.43 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40.45807
		<b>Longitude:</b>	-104.31749
		<b>Ground Level:</b>	4,733.00 ft

<b>Wellbore</b>	OH		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	IGRF2010	7/25/2014	8.21
			<b>Dip Angle (°)</b>
			67.06
			<b>Field Strength (nT)</b>
			52,881

<b>Design</b>	OH		
<b>Audit Notes:</b>			
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL
		<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			<b>Direction (°)</b>
			338.76

<b>Survey Program</b>	<b>Date</b>	9/5/2014		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
891.00	15,998.00	MWD Survey (OH)	MWD	MWD - Standard

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>
0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.056	121.40	100.00	-0.03	0.04	-0.04	0.06	0.06	0.00
200.00	0.112	121.40	200.00	-0.10	0.17	-0.16	0.06	0.06	0.00
300.00	0.168	121.40	300.00	-0.23	0.38	-0.35	0.06	0.06	0.00
400.00	0.224	121.40	400.00	-0.41	0.67	-0.62	0.06	0.06	0.00
500.00	0.281	121.40	500.00	-0.64	1.04	-0.97	0.06	0.06	0.00
600.00	0.337	121.40	600.00	-0.92	1.50	-1.40	0.06	0.06	0.00
700.00	0.393	121.40	699.99	-1.25	2.05	-1.91	0.06	0.06	0.00
800.00	0.449	121.40	799.99	-1.63	2.68	-2.49	0.06	0.06	0.00
900.00	0.527	123.29	899.99	-2.07	3.39	-3.16	0.08	0.08	1.89

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-27-3225BH2
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	KB @ 4756.00ft
<b>Site:</b>	SEC 27 T6N R62W	<b>MD Reference:</b>	KB @ 4756.00ft
<b>Well:</b>	Pappenheim 6-62-27-3225BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Local Db

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)
1,000.00	0.391	105.23	999.98	-2.78	4.26	-4.14	0.20	-0.14	-18.06
1,100.00	2.842	347.30	1,099.94	-0.47	3.90	-1.85	3.05	2.45	-117.92
1,200.00	5.023	352.80	1,199.67	6.74	2.66	5.32	2.21	2.18	5.49
1,300.00	5.649	352.80	1,299.24	15.90	1.84	14.16	0.63	0.63	0.00
1,400.00	6.582	339.99	1,398.67	26.29	-0.54	24.70	1.65	0.93	-12.81
1,500.00	7.100	333.41	1,497.93	37.25	-5.74	36.79	0.94	0.52	-6.58
1,600.00	6.767	331.29	1,597.18	48.10	-11.27	48.92	0.42	-0.33	-2.12
1,700.00	6.449	328.49	1,696.53	57.98	-17.05	60.22	0.45	-0.32	-2.81
1,800.00	6.234	328.41	1,795.91	67.37	-22.87	71.08	0.22	-0.21	-0.07
1,900.00	7.007	336.18	1,895.26	77.40	-28.22	82.37	1.18	0.77	7.77
2,000.00	7.296	335.53	1,994.48	88.85	-33.26	94.86	0.30	0.29	-0.65
2,100.00	7.868	334.94	2,093.60	100.87	-38.80	108.07	0.58	0.57	-0.59
2,200.00	7.231	334.56	2,192.73	112.71	-44.48	121.17	0.64	-0.64	-0.38
2,300.00	6.820	340.02	2,291.99	123.94	-49.07	133.30	0.78	-0.41	5.45
2,400.00	6.587	339.99	2,391.28	135.10	-53.17	145.19	0.23	-0.23	-0.03
2,500.00	5.761	341.03	2,490.73	145.00	-56.65	155.68	0.83	-0.83	1.04
2,566.00	5.900	341.10	2,556.39	151.34	-58.83	162.38	0.21	0.21	0.10
As of 8-20									
2,600.00	6.007	341.58	2,590.20	154.69	-59.96	165.90	0.35	0.31	1.41
2,700.00	5.977	338.89	2,689.64	164.76	-63.33	176.51	0.28	-0.03	-2.69
2,800.00	5.700	333.31	2,789.13	173.87	-67.59	186.54	0.63	-0.28	-5.58
2,900.00	5.851	334.03	2,888.63	182.81	-72.06	196.50	0.17	0.15	0.72
3,000.00	6.000	335.18	2,988.09	192.20	-76.49	206.86	0.19	0.15	1.15
3,100.00	5.998	337.37	3,087.54	201.75	-80.75	217.30	0.23	0.00	2.19
3,200.00	5.812	339.74	3,187.00	211.40	-84.51	227.65	0.31	-0.19	2.38
3,300.00	5.144	334.13	3,286.54	220.37	-88.06	237.30	0.86	-0.67	-5.61
3,400.00	5.389	336.28	3,386.14	228.30	-92.06	246.15	0.31	0.24	2.16
3,500.00	5.905	340.25	3,485.65	237.53	-95.65	256.04	0.65	0.52	3.96
3,600.00	6.162	342.11	3,585.09	247.51	-99.03	266.58	0.32	0.26	1.86
3,700.00	6.194	336.33	3,684.51	257.63	-102.74	277.35	0.62	0.03	-5.77
3,800.00	6.827	335.30	3,783.87	267.87	-107.44	288.60	0.64	0.63	-1.03
3,900.00	6.805	337.00	3,883.16	278.78	-112.28	300.52	0.20	-0.02	1.70
4,000.00	5.897	334.30	3,982.54	288.89	-116.81	311.59	0.96	-0.91	-2.71
4,100.00	5.542	333.90	4,082.04	297.89	-121.18	321.56	0.36	-0.35	-0.40
4,200.00	4.500	333.93	4,181.66	305.67	-125.00	330.19	1.04	-1.04	0.03
4,300.00	4.659	336.21	4,281.35	312.77	-128.37	338.03	0.24	0.16	2.29
4,400.00	5.574	343.07	4,380.93	321.31	-131.49	347.12	1.10	0.91	6.86
4,500.00	5.398	348.76	4,480.47	330.63	-133.78	356.64	0.57	-0.18	5.68
4,600.00	5.186	347.03	4,580.06	339.58	-135.40	365.57	0.27	-0.21	-1.73
4,700.00	5.499	338.37	4,679.61	348.43	-138.48	374.93	0.86	0.31	-8.65
4,800.00	5.499	340.59	4,779.15	357.41	-141.83	384.52	0.21	0.00	2.22
4,900.00	5.372	335.60	4,878.70	366.38	-145.07	394.04	0.49	-0.13	-4.99
5,000.00	4.773	327.18	4,978.29	374.17	-149.66	402.97	0.95	-0.60	-8.42
5,100.00	4.180	333.31	5,078.00	380.63	-153.57	410.41	0.76	-0.59	6.13

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-27-3225BH2
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	KB @ 4756.00ft
<b>Site:</b>	SEC 27 T6N R62W	<b>MD Reference:</b>	KB @ 4756.00ft
<b>Well:</b>	Pappenheim 6-62-27-3225BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Local Db

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)	
5,200.00	4.852	341.49	5,177.71	387.71	-156.39	418.03	0.93	0.67	8.18	
5,300.00	4.311	343.39	5,277.34	395.89	-158.91	426.57	0.56	-0.54	1.90	
5,400.00	3.156	343.14	5,377.14	402.01	-160.73	432.93	1.15	-1.15	-0.25	
5,500.00	1.671	334.73	5,477.04	406.10	-162.14	437.26	1.52	-1.48	-8.41	
5,600.00	0.490	5.42	5,577.02	407.71	-162.84	439.01	1.27	-1.18	30.69	
5,700.00	0.400	37.33	5,677.02	408.30	-162.46	439.42	0.26	-0.09	31.91	
5,716.00	0.400	37.70	5,693.02	408.39	-162.39	439.48	0.02	0.00	2.29	
As of 8-21										
5,800.00	0.487	48.84	5,777.02	408.86	-161.94	439.75	0.15	0.10	13.26	
5,846.80	3.808	73.35	5,823.78	409.43	-160.30	439.69	7.20	7.09	52.38	
Pappenheim 6-62-27-3225BH2 WP02 VT										
5,900.00	7.635	75.08	5,876.74	410.69	-155.85	439.25	7.20	7.19	3.25	
6,000.00	19.034	75.00	5,973.92	416.57	-133.80	436.75	11.40	11.40	-0.08	
6,100.00	33.419	80.36	6,063.45	425.62	-90.81	429.60	14.56	14.38	5.35	
6,200.00	46.374	89.22	6,139.06	430.59	-25.96	410.74	14.12	12.96	8.86	
6,300.00	47.191	89.21	6,207.41	431.41	47.03	385.07	0.82	0.82	-0.02	
6,400.00	53.260	86.80	6,272.47	434.17	122.85	360.17	6.34	6.07	-2.41	
6,500.00	60.511	87.82	6,326.34	438.28	206.92	333.54	7.30	7.25	1.02	
6,600.00	73.465	88.60	6,367.06	441.38	297.94	303.45	12.97	12.95	0.78	
6,605.02	73.944	88.64	6,368.46	441.50	302.76	301.81	9.57	9.54	0.75	
Pappenheim 6-62-27-3225BH2 WP02 LP										
6,700.00	83.006	89.32	6,385.85	442.85	396.05	269.27	9.57	9.54	0.72	
6,800.00	88.050	89.50	6,393.15	443.84	495.75	234.08	5.05	5.04	0.18	
6,840.00	90.050	88.92	6,393.81	444.39	535.73	220.10	5.21	5.00	-1.45	
As of 8-22										
6,900.00	91.080	89.24	6,392.72	445.66	595.71	199.55	1.80	1.72	0.54	
7,000.00	90.789	90.87	6,391.69	445.12	695.70	162.82	1.66	-0.29	1.63	
7,100.00	91.181	90.92	6,389.30	443.47	795.65	125.07	0.39	0.39	0.04	
7,200.00	90.255	90.80	6,388.35	442.02	895.64	87.49	0.93	-0.93	-0.12	
7,300.00	90.200	91.00	6,387.98	440.54	995.63	49.89	0.21	-0.05	0.20	
7,400.00	90.471	91.09	6,387.51	438.58	1,095.60	11.83	0.29	0.27	0.09	
7,500.00	90.759	91.12	6,386.34	436.74	1,195.58	-26.10	0.29	0.29	0.03	
7,600.00	90.928	90.94	6,384.89	434.81	1,295.55	-64.12	0.24	0.17	-0.17	
7,700.00	89.749	90.59	6,383.89	433.49	1,395.54	-101.57	1.23	-1.18	-0.35	
7,800.00	88.976	90.87	6,385.29	432.36	1,495.52	-138.85	0.82	-0.77	0.28	
7,900.00	89.683	89.59	6,386.67	431.58	1,595.50	-175.80	1.47	0.71	-1.28	
8,000.00	90.149	89.70	6,386.71	432.56	1,695.50	-211.12	0.48	0.47	0.11	
8,100.00	90.819	89.62	6,385.92	433.05	1,795.49	-246.89	0.67	0.67	-0.08	
8,200.00	90.619	89.60	6,384.57	433.75	1,895.48	-282.46	0.20	-0.20	-0.02	
8,300.00	90.012	89.11	6,384.01	434.85	1,995.47	-317.67	0.78	-0.61	-0.49	
8,400.00	90.700	89.66	6,383.39	435.98	2,095.46	-352.84	0.88	0.69	0.55	
8,500.00	90.700	91.46	6,382.17	434.93	2,195.44	-390.04	1.80	0.00	1.80	
8,600.00	90.769	92.19	6,380.94	431.75	2,295.39	-429.21	0.74	0.07	0.73	
8,700.00	90.967	92.20	6,379.10	427.31	2,395.27	-469.54	0.20	0.20	0.01	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-27-3225BH2
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	KB @ 4756.00ft
<b>Site:</b>	SEC 27 T6N R62W	<b>MD Reference:</b>	KB @ 4756.00ft
<b>Well:</b>	Pappenheim 6-62-27-3225BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Local Db

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)
8,800.00	89.279	88.70	6,379.17	427.14	2,495.24	-505.92	3.89	-1.69	-3.50
8,900.00	89.252	88.62	6,380.50	429.42	2,595.21	-540.01	0.08	-0.03	-0.08
9,000.00	89.669	88.28	6,381.57	432.11	2,695.17	-573.72	0.54	0.42	-0.34
9,100.00	89.997	87.90	6,381.51	435.46	2,795.11	-606.81	0.50	0.33	-0.38
9,200.00	89.712	88.25	6,382.12	439.19	2,895.04	-639.54	0.45	-0.29	0.35
9,300.00	91.075	89.32	6,381.70	441.11	2,995.02	-673.97	1.74	1.36	1.07
9,400.00	92.394	89.60	6,378.31	441.94	3,094.95	-709.40	1.35	1.32	0.28
9,500.00	92.058	90.09	6,374.11	442.42	3,194.86	-745.15	0.59	-0.34	0.49
9,600.00	91.303	89.97	6,371.29	441.97	3,294.82	-781.79	0.76	-0.75	-0.12
9,700.00	91.354	89.92	6,369.17	442.37	3,394.80	-817.64	0.07	0.05	-0.05
9,800.00	90.186	88.44	6,367.34	443.20	3,494.77	-853.09	1.88	-1.17	-1.48
9,900.00	89.452	87.77	6,367.98	446.98	3,594.69	-885.77	0.99	-0.73	-0.67
10,000.00	89.322	87.72	6,369.07	450.87	3,694.61	-918.34	0.14	-0.13	-0.05
10,100.00	90.205	88.52	6,369.66	454.31	3,794.55	-951.34	1.19	0.88	0.80
10,200.00	90.225	87.91	6,369.12	457.18	3,894.51	-984.88	0.61	0.02	-0.61
10,300.00	89.375	89.08	6,369.40	460.02	3,994.46	-1,018.45	1.45	-0.85	1.17
10,400.00	88.904	88.01	6,370.93	462.38	4,094.42	-1,052.47	1.17	-0.47	-1.07
10,500.00	90.065	89.17	6,371.84	464.86	4,194.38	-1,086.38	1.64	1.16	1.15
10,600.00	91.060	90.13	6,370.79	465.38	4,294.37	-1,122.11	1.39	0.99	0.96
10,700.00	91.465	90.41	6,368.57	464.95	4,394.35	-1,158.73	0.49	0.41	0.28
10,800.00	91.489	90.65	6,365.81	463.84	4,494.30	-1,195.98	0.24	0.02	0.24
10,900.00	91.000	90.15	6,363.78	463.17	4,594.28	-1,232.83	0.70	-0.49	-0.50
11,000.00	91.509	90.08	6,361.85	463.15	4,694.26	-1,269.07	0.51	0.51	-0.06
11,100.00	91.186	89.44	6,358.84	463.09	4,794.21	-1,305.34	0.72	-0.32	-0.65
11,143.00	90.400	88.70	6,358.25	463.79	4,837.20	-1,320.26	2.51	-1.83	-1.72
As of 8-25									
11,200.00	89.787	88.82	6,358.15	465.02	4,894.19	-1,339.76	1.10	-1.08	0.22
11,300.00	90.489	90.47	6,358.47	466.09	4,994.18	-1,374.99	1.79	0.70	1.64
11,400.00	90.011	89.30	6,357.46	465.35	5,094.16	-1,411.91	1.26	-0.48	-1.17
11,500.00	89.276	88.53	6,358.21	467.62	5,194.13	-1,446.01	1.06	-0.73	-0.77
11,600.00	89.109	88.68	6,359.67	470.10	5,294.09	-1,479.92	0.23	-0.17	0.15
11,700.00	88.900	88.50	6,361.40	472.53	5,394.05	-1,513.87	0.28	-0.21	-0.18
11,800.00	90.231	89.78	6,362.10	473.93	5,494.03	-1,548.78	1.85	1.33	1.28
11,900.00	90.600	89.56	6,361.32	474.50	5,594.02	-1,584.48	0.43	0.37	-0.22
12,000.00	90.626	89.40	6,360.27	475.44	5,694.01	-1,619.83	0.17	0.03	-0.16
12,100.00	91.037	89.77	6,359.00	476.39	5,794.00	-1,655.18	0.55	0.41	0.37
12,200.00	90.995	89.34	6,356.63	476.30	5,893.97	-1,691.48	0.43	-0.04	-0.43
12,300.00	90.871	87.36	6,355.81	479.66	5,993.90	-1,724.55	1.98	-0.12	-1.98
12,400.00	91.521	86.27	6,353.19	485.07	6,093.72	-1,755.67	1.27	0.65	-1.09
12,500.00	90.919	85.70	6,351.03	492.36	6,193.43	-1,785.00	0.83	-0.60	-0.57
12,600.00	90.203	85.84	6,350.03	499.78	6,293.15	-1,814.22	0.73	-0.72	0.14
12,627.00	90.000	85.90	6,349.98	501.72	6,320.08	-1,822.16	0.78	-0.75	0.22
As of 8-26									
12,700.00	90.642	89.27	6,349.58	504.80	6,393.00	-1,845.72	4.70	0.88	4.62

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-27-3225BH2
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	KB @ 4756.00ft
<b>Site:</b>	SEC 27 T6N R62W	<b>MD Reference:</b>	KB @ 4756.00ft
<b>Well:</b>	Pappenheim 6-62-27-3225BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Local Db

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)
12,800.00	91.153	90.10	6,347.95	504.76	6,492.99	-1,881.98	0.98	0.51	0.83
12,900.00	91.966	89.24	6,345.27	505.25	6,592.95	-1,917.74	1.18	0.81	-0.86
12,904.00	92.000	89.20	6,345.13	505.30	6,596.95	-1,919.14	1.29	0.86	-0.97
<b>As of 8-28</b>									
13,000.00	92.741	90.83	6,341.07	505.22	6,692.86	-1,953.97	1.86	0.77	1.69
13,100.00	91.596	90.79	6,337.16	503.46	6,792.76	-1,991.80	1.15	-1.15	-0.04
13,200.00	89.924	88.64	6,336.18	504.49	6,892.74	-2,027.06	2.72	-1.67	-2.15
13,300.00	90.096	89.13	6,336.20	506.33	6,992.72	-2,061.57	0.52	0.17	0.49
13,400.00	90.700	89.16	6,335.66	507.78	7,092.71	-2,096.45	0.60	0.60	0.03
13,500.00	90.200	89.25	6,334.12	509.26	7,192.69	-2,131.29	0.51	-0.50	0.09
13,600.00	88.752	89.28	6,335.41	510.42	7,292.67	-2,166.43	1.45	-1.45	0.03
13,700.00	88.697	88.87	6,337.84	511.96	7,392.63	-2,201.21	0.42	-0.05	-0.41
13,800.00	89.166	87.82	6,339.75	514.70	7,492.57	-2,234.86	1.15	0.47	-1.05
13,900.00	88.641	86.59	6,341.43	519.59	7,592.43	-2,266.49	1.34	-0.52	-1.23
13,916.00	88.500	86.40	6,341.83	520.56	7,608.40	-2,271.37	1.49	-0.88	-1.21
<b>As of 8-29</b>									
14,000.00	88.865	85.94	6,343.76	526.17	7,692.19	-2,296.50	0.70	0.43	-0.54
14,100.00	89.781	87.76	6,344.97	531.83	7,792.01	-2,327.40	2.03	0.92	1.82
14,200.00	92.694	88.58	6,342.69	535.03	7,891.92	-2,360.61	3.03	2.91	0.82
14,287.00	92.600	89.80	6,338.67	536.25	7,978.82	-2,390.95	1.40	-0.11	1.40
<b>As of 9-02</b>									
14,300.00	92.467	89.81	6,338.10	536.30	7,991.81	-2,395.62	1.03	-1.02	0.11
14,400.00	91.754	89.90	6,334.62	536.53	8,091.75	-2,431.61	0.72	-0.71	0.09
14,500.00	92.008	89.90	6,331.36	536.70	8,191.69	-2,467.66	0.25	0.25	0.00
14,600.00	91.759	90.30	6,327.78	536.73	8,291.63	-2,503.84	0.47	-0.25	0.40
14,700.00	90.365	89.91	6,325.78	535.94	8,391.60	-2,540.80	1.45	-1.39	-0.38
14,800.00	89.296	88.67	6,326.33	537.40	8,491.59	-2,575.66	1.64	-1.07	-1.24
14,900.00	89.306	88.95	6,327.72	539.80	8,591.55	-2,609.64	0.28	0.01	0.28
15,000.00	89.774	90.02	6,328.56	540.75	8,691.54	-2,644.98	1.17	0.47	1.07
15,100.00	90.533	90.85	6,328.34	539.92	8,791.53	-2,681.98	1.13	0.76	0.83
15,200.00	90.947	91.41	6,326.98	537.91	8,891.50	-2,720.08	0.69	0.41	0.56
15,300.00	91.086	91.85	6,325.18	535.06	8,991.45	-2,758.95	0.46	0.14	0.43
15,400.00	90.103	90.09	6,324.02	533.12	9,091.41	-2,796.97	2.01	-0.98	-1.76
15,409.00	90.000	89.90	6,324.01	533.13	9,100.41	-2,800.23	2.38	-1.15	-2.08
<b>As of 9-04</b>									
15,500.00	89.808	88.94	6,324.16	534.04	9,191.41	-2,832.34	1.07	-0.21	-1.05
15,600.00	91.302	89.60	6,323.24	535.37	9,291.39	-2,867.33	1.63	1.49	0.65
15,700.00	91.525	89.21	6,320.78	536.44	9,391.35	-2,902.55	0.44	0.22	-0.38
15,800.00	91.773	89.50	6,317.77	537.62	9,491.30	-2,937.66	0.38	0.25	0.29
15,900.00	90.859	90.24	6,315.65	537.69	9,591.28	-2,973.81	1.17	-0.91	0.74
15,998.00	91.000	90.10	6,313.99	537.47	9,689.26	-3,009.52	0.20	0.14	-0.14
<b>Projected TD @ 15998.00 MD, 6313.99 TVD - Pappenheim 6-62-27-3225BH2 WP02 BHL</b>									

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-27-3225BH2
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	KB @ 4756.00ft
<b>Site:</b>	SEC 27 T6N R62W	<b>MD Reference:</b>	KB @ 4756.00ft
<b>Well:</b>	Pappenheim 6-62-27-3225BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Local Db

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,566.00	2,556.39	151.34	-58.83	As of 8-20
5,716.00	5,693.02	408.39	-162.39	As of 8-21
6,840.00	6,393.81	444.39	535.73	As of 8-22
11,143.00	6,358.25	463.79	4,837.20	As of 8-25
12,627.00	6,349.98	501.72	6,320.08	As of 8-26
12,904.00	6,345.13	505.30	6,596.95	As of 8-28
13,916.00	6,341.83	520.56	7,608.40	As of 8-29
14,287.00	6,338.67	536.25	7,978.82	As of 9-02
15,409.00	6,324.01	533.13	9,100.41	As of 9-04
15,998.00	6,313.99	537.47	9,689.26	Projected TD @ 15998.00 MD, 6313.99 TVD

Checked By: _____	Approved By: _____	Date: _____
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