



**Bill Barrett Corporation**

## **Bill Barrett Corp.**

Weld Co., CO

Sec.15-T6N-R62W

Heath 6-62-15-0857BH2

Wellbore #1

Plan: Design #1

## **Standard Planning Report**

17 April, 2015

# **Archer**



Bill Barrett Corp.  
Project: Weld Co., CO  
Site: Sec.15-T6N-R62W  
Well: Heath 6-62-15-0857BH2  
Wellbore: Wellbore #1  
Design: Design #1  
Lat: 40° 29' 37.071 N  
Long: 104° 18' 8.251 W  
Pad GL: 4732.00  
KB: Well @ 4748.00usft

# Archer

Plan: Design #1 (Heath 6-62-15-0857BH2/Wellbore #1)

Created By: Ricky Osburn Date: 14:42, April 17 2015

### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1230.16	6.60	56.30	1229.43	10.55	15.81	2.00	56.30	-10.61	Start 3899.56 hold at 1230.16 MD
5129.71	6.60	56.30	5103.11	259.37	388.85	0.00	0.00	-261.07	Start Drop -2.00
5459.87	0.00	0.00	5432.54	269.92	404.66	2.00	180.00	-271.68	Start 500.00 hold at 5459.87 MD
5959.87	0.00	0.00	5932.54	269.92	404.66	0.00	0.00	-271.68	Start Build 12.00
6712.04	90.26	180.25	6410.00	-209.71	402.56	12.00	180.25	207.95	Start 9462.73 hold at 6712.04 MD
16174.77	90.26	180.25	6367.00	-9672.25	361.15	0.00	0.00	9670.58	TD at 16174.77

### WELL DETAILS: Heath 6-62-15-0857BH2

+N/-S	+E/-W	Northing	Ground Level: Easting	4732.00 Latitude	Longitude	Slot
0.00	0.00	1424919.834	3333103.241	40° 29' 37.071 N	104° 18' 8.251 W	

### WELLBORE TARGET DETAILS (LAT/LONG)

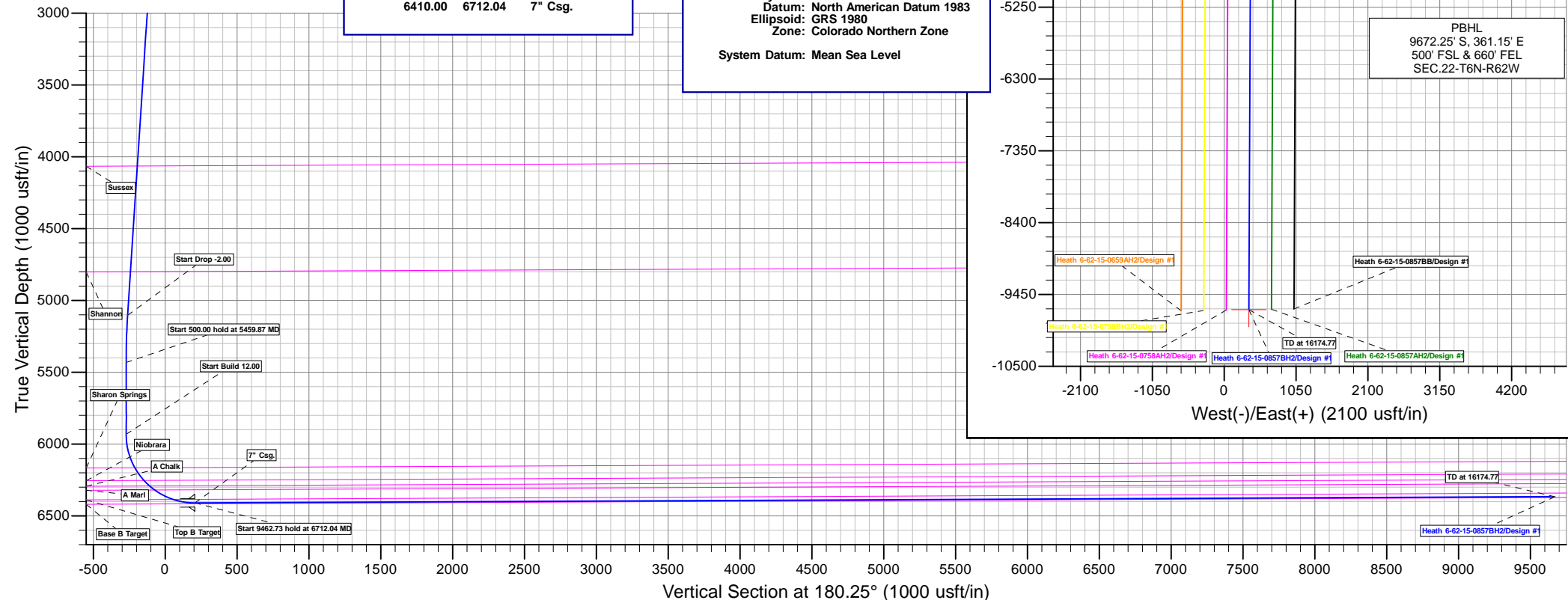
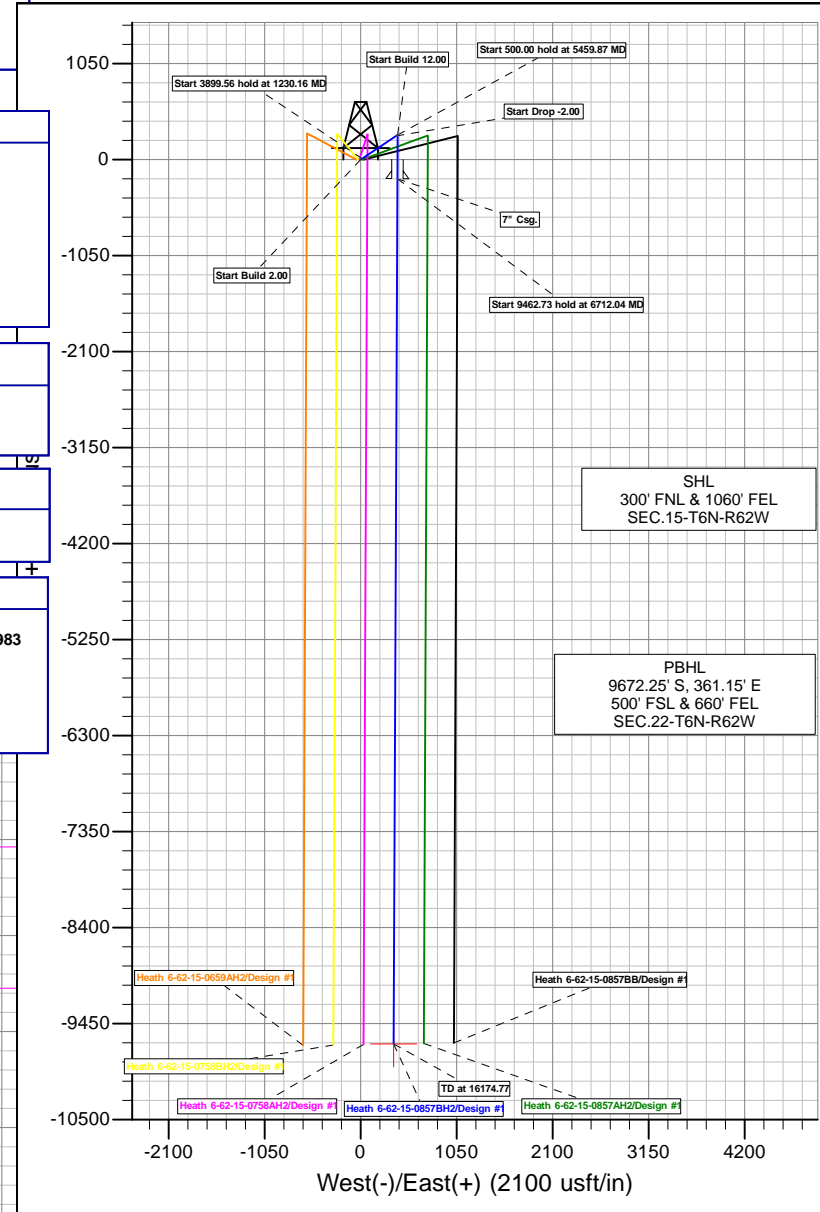
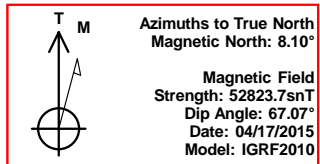
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
Heath 6-62-15-0857BH2 tgt	6367.00	-9672.25	361.15	40° 28' 1.492 N	104° 18' 3.578 W	

### CASING DETAILS

TVD	MD	Name
6410.00	6712.04	7" Csg.

### PROJECT DETAILS: Weld Co., CO

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone  
System Datum: Mean Sea Level



<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Heath 6-62-15-0857BH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	Well @ 4748.00usft
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	Well @ 4748.00usft
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Heath 6-62-15-0857BH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	Weld Co., CO		
<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		

Site		Sec.15-T6N-R62W			
Site Position:		Northing:	1,424,875.232 usft	Latitude:	40° 29' 37.061 N
From:	Lat/Long	Easting:	3,329,865.887 usft	Longitude:	104° 18' 50.159 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.77 °

Well	Heath 6-62-15-0857BH2					
Well Position	+N/-S	1.30 usft	Northing:	1,424,919.834 usft	Latitude:	40° 29' 37.071 N
	+E/-W	3,237.66 usft	Easting:	3,333,103.241 usft	Longitude:	104° 18' 8.251 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,732.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2015/04/17	8.10	67.07	52,824

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	180.25

<b>Plan Sections</b>										
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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,230.16	6.60	56.30	1,229.43	10.55	15.81	2.00	2.00	0.00	56.30	
5,129.71	6.60	56.30	5,103.11	259.37	388.85	0.00	0.00	0.00	0.00	
5,459.87	0.00	0.00	5,432.54	269.92	404.66	2.00	-2.00	0.00	180.00	
5,959.87	0.00	0.00	5,932.54	269.92	404.66	0.00	0.00	0.00	0.00	
6,712.04	90.26	180.25	6,410.00	-209.71	402.56	12.00	12.00	0.00	180.25	Heath 6-62-15-0857B
16,174.77	90.26	180.25	6,367.00	-9,672.25	361.15	0.00	0.00	0.00	0.00	Heath 6-62-15-0857B

<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Heath 6-62-15-0857BH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	Well @ 4748.00usft
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	Well @ 4748.00usft
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Heath 6-62-15-0857BH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	2.00	56.30	999.98	0.97	1.45	-0.97	2.00	2.00	0.00
1,100.00	4.00	56.30	1,099.84	3.87	5.81	-3.90	2.00	2.00	0.00
1,200.00	6.00	56.30	1,199.45	8.71	13.06	-8.77	2.00	2.00	0.00
<b>Start 3899.56 hold at 1230.16 MD</b>									
1,230.16	6.60	56.30	1,229.43	10.55	15.81	-10.61	2.00	2.00	0.00
1,300.00	6.60	56.30	1,298.81	15.00	22.49	-15.10	0.00	0.00	0.00
1,400.00	6.60	56.30	1,398.14	21.38	32.06	-21.52	0.00	0.00	0.00
1,500.00	6.60	56.30	1,497.48	27.76	41.62	-27.95	0.00	0.00	0.00
1,600.00	6.60	56.30	1,596.82	34.14	51.19	-34.37	0.00	0.00	0.00
1,700.00	6.60	56.30	1,696.15	40.53	60.76	-40.79	0.00	0.00	0.00
1,800.00	6.60	56.30	1,795.49	46.91	70.32	-47.21	0.00	0.00	0.00
1,900.00	6.60	56.30	1,894.83	53.29	79.89	-53.64	0.00	0.00	0.00
2,000.00	6.60	56.30	1,994.16	59.67	89.45	-60.06	0.00	0.00	0.00
2,100.00	6.60	56.30	2,093.50	66.05	99.02	-66.48	0.00	0.00	0.00
2,200.00	6.60	56.30	2,192.84	72.43	108.59	-72.90	0.00	0.00	0.00
2,300.00	6.60	56.30	2,292.17	78.81	118.15	-79.33	0.00	0.00	0.00
2,400.00	6.60	56.30	2,391.51	85.19	127.72	-85.75	0.00	0.00	0.00
2,500.00	6.60	56.30	2,490.85	91.57	137.29	-92.17	0.00	0.00	0.00
2,600.00	6.60	56.30	2,590.18	97.95	146.85	-98.59	0.00	0.00	0.00
2,700.00	6.60	56.30	2,689.52	104.34	156.42	-105.02	0.00	0.00	0.00
2,800.00	6.60	56.30	2,788.86	110.72	165.98	-111.44	0.00	0.00	0.00
2,900.00	6.60	56.30	2,888.19	117.10	175.55	-117.86	0.00	0.00	0.00
3,000.00	6.60	56.30	2,987.53	123.48	185.12	-124.29	0.00	0.00	0.00
3,100.00	6.60	56.30	3,086.87	129.86	194.68	-130.71	0.00	0.00	0.00
3,200.00	6.60	56.30	3,186.20	136.24	204.25	-137.13	0.00	0.00	0.00
3,300.00	6.60	56.30	3,285.54	142.62	213.82	-143.55	0.00	0.00	0.00
3,400.00	6.60	56.30	3,384.88	149.00	223.38	-149.98	0.00	0.00	0.00
3,500.00	6.60	56.30	3,484.21	155.38	232.95	-156.40	0.00	0.00	0.00
3,600.00	6.60	56.30	3,583.55	161.76	242.51	-162.82	0.00	0.00	0.00
3,700.00	6.60	56.30	3,682.89	168.15	252.08	-169.24	0.00	0.00	0.00
3,800.00	6.60	56.30	3,782.22	174.53	261.65	-175.67	0.00	0.00	0.00
3,900.00	6.60	56.30	3,881.56	180.91	271.21	-182.09	0.00	0.00	0.00
4,000.00	6.60	56.30	3,980.90	187.29	280.78	-188.51	0.00	0.00	0.00
<b>Sussex</b>									
4,084.55	6.60	56.30	4,064.88	192.68	288.87	-193.94	0.00	0.00	0.00
4,100.00	6.60	56.30	4,080.23	193.67	290.35	-194.93	0.00	0.00	0.00
4,200.00	6.60	56.30	4,179.57	200.05	299.91	-201.36	0.00	0.00	0.00
4,300.00	6.60	56.30	4,278.91	206.43	309.48	-207.78	0.00	0.00	0.00
4,400.00	6.60	56.30	4,378.24	212.81	319.04	-214.20	0.00	0.00	0.00
4,500.00	6.60	56.30	4,477.58	219.19	328.61	-220.62	0.00	0.00	0.00
4,600.00	6.60	56.30	4,576.92	225.57	338.18	-227.05	0.00	0.00	0.00
4,700.00	6.60	56.30	4,676.25	231.95	347.74	-233.47	0.00	0.00	0.00

<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Heath 6-62-15-0857BH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	Well @ 4748.00usft
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	Well @ 4748.00usft
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Heath 6-62-15-0857BH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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)
4,800.00	6.60	56.30	4,775.59	238.34	357.31	-239.89	0.00	0.00	0.00
<b>Shannon</b>									
4,825.68	6.60	56.30	4,801.10	239.97	359.77	-241.54	0.00	0.00	0.00
4,900.00	6.60	56.30	4,874.93	244.72	366.88	-246.32	0.00	0.00	0.00
5,000.00	6.60	56.30	4,974.26	251.10	376.44	-252.74	0.00	0.00	0.00
5,100.00	6.60	56.30	5,073.60	257.48	386.01	-259.16	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,129.71	6.60	56.30	5,103.11	259.37	388.85	-261.07	0.00	0.00	0.00
5,200.00	5.20	56.30	5,173.03	263.38	394.86	-265.10	2.00	-2.00	0.00
5,300.00	3.20	56.30	5,272.75	267.45	400.95	-269.19	2.00	-2.00	0.00
5,400.00	1.20	56.30	5,372.68	269.57	404.14	-271.33	2.00	-2.00	0.00
<b>Start 500.00 hold at 5459.87 MD</b>									
5,459.87	0.00	0.00	5,432.54	269.92	404.66	-271.68	2.00	-2.00	0.00
5,500.00	0.00	0.00	5,472.67	269.92	404.66	-271.68	0.00	0.00	0.00
5,600.00	0.00	0.00	5,572.67	269.92	404.66	-271.68	0.00	0.00	0.00
5,700.00	0.00	0.00	5,672.67	269.92	404.66	-271.68	0.00	0.00	0.00
5,800.00	0.00	0.00	5,772.67	269.92	404.66	-271.68	0.00	0.00	0.00
5,900.00	0.00	0.00	5,872.67	269.92	404.66	-271.68	0.00	0.00	0.00
<b>Start Build 12.00</b>									
5,959.87	0.00	0.00	5,932.54	269.92	404.66	-271.68	0.00	0.00	0.00
5,975.00	1.82	180.25	5,947.67	269.68	404.66	-271.44	12.00	12.00	0.00
6,000.00	4.82	180.25	5,972.62	268.23	404.65	-270.00	12.00	12.00	0.00
6,025.00	7.82	180.25	5,997.47	265.48	404.64	-267.25	12.00	12.00	0.00
6,050.00	10.82	180.25	6,022.14	261.44	404.62	-263.20	12.00	12.00	0.00
6,075.00	13.82	180.25	6,046.56	256.11	404.60	-257.87	12.00	12.00	0.00
6,100.00	16.82	180.25	6,070.67	249.50	404.57	-251.27	12.00	12.00	0.00
6,125.00	19.82	180.25	6,094.40	241.65	404.54	-243.41	12.00	12.00	0.00
6,150.00	22.82	180.25	6,117.69	232.56	404.50	-234.32	12.00	12.00	0.00
6,175.00	25.82	180.25	6,140.47	222.27	404.45	-224.03	12.00	12.00	0.00
6,200.00	28.82	180.25	6,162.68	210.80	404.40	-212.56	12.00	12.00	0.00
<b>Sharon Springs</b>									
6,203.75	29.27	180.25	6,165.96	208.98	404.39	-210.74	12.00	12.00	0.00
6,225.00	31.82	180.25	6,184.25	198.18	404.35	-199.94	12.00	12.00	0.00
6,250.00	34.82	180.25	6,205.14	184.45	404.29	-186.21	12.00	12.00	0.00
6,275.00	37.82	180.25	6,225.29	169.65	404.22	-171.41	12.00	12.00	0.00
6,300.00	40.82	180.25	6,244.62	153.81	404.15	-155.57	12.00	12.00	0.00
<b>Niobrara</b>									
6,312.08	42.27	180.25	6,253.67	145.80	404.12	-147.56	12.00	12.00	0.00
6,325.00	43.82	180.25	6,263.11	136.98	404.08	-138.74	12.00	12.00	0.00
6,350.00	46.82	180.25	6,280.69	119.21	404.00	-120.97	12.00	12.00	0.00
<b>A Chalk</b>									
6,366.08	48.75	180.25	6,291.49	107.30	403.95	-109.06	12.00	12.00	0.00
6,375.00	49.82	180.25	6,297.31	100.54	403.92	-102.30	12.00	12.00	0.00
6,400.00	52.82	180.25	6,312.93	81.03	403.83	-82.79	12.00	12.00	0.00
<b>A Marl</b>									
6,412.45	54.31	180.25	6,320.33	71.01	403.79	-72.77	12.00	12.00	0.00
6,425.00	55.82	180.25	6,327.52	60.72	403.74	-62.48	12.00	12.00	0.00
6,450.00	58.82	180.25	6,341.01	39.68	403.65	-41.45	12.00	12.00	0.00
6,475.00	61.82	180.25	6,353.39	17.97	403.56	-19.73	12.00	12.00	0.00
6,500.00	64.82	180.25	6,364.62	-4.37	403.46	2.61	12.00	12.00	0.00
6,525.00	67.82	180.25	6,374.66	-27.26	403.36	25.50	12.00	12.00	0.00
6,550.00	70.82	180.25	6,383.49	-50.64	403.26	48.88	12.00	12.00	0.00
<b>Top B Target</b>									

<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Heath 6-62-15-0857BH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	Well @ 4748.00usft
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	Well @ 4748.00usft
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Heath 6-62-15-0857BH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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)
6,557.02	71.66	180.25	6,385.75	-57.29	403.23	55.53	12.00	12.00	0.00
6,575.00	73.82	180.25	6,391.08	-74.46	403.15	72.70	12.00	12.00	0.00
6,600.00	76.82	180.25	6,397.42	-98.64	403.05	96.88	12.00	12.00	0.00
6,625.00	79.82	180.25	6,402.48	-123.12	402.94	121.36	12.00	12.00	0.00
6,650.00	82.82	180.25	6,406.26	-147.83	402.83	146.07	12.00	12.00	0.00
6,675.00	85.82	180.25	6,408.73	-172.70	402.72	170.94	12.00	12.00	0.00
6,700.00	88.82	180.25	6,409.90	-197.67	402.61	195.91	12.00	12.00	0.00
Start 9462.73 hold at 6712.04 MD - 7" Csg.									
6,712.04	90.26	180.25	6,410.00	-209.71	402.56	207.95	12.00	12.00	0.00
6,800.00	90.26	180.25	6,409.60	-297.67	402.18	295.91	0.00	0.00	0.00
6,900.00	90.26	180.25	6,409.15	-397.67	401.74	395.91	0.00	0.00	0.00
7,000.00	90.26	180.25	6,408.69	-497.67	401.30	495.91	0.00	0.00	0.00
7,100.00	90.26	180.25	6,408.24	-597.66	400.86	595.91	0.00	0.00	0.00
7,200.00	90.26	180.25	6,407.78	-697.66	400.43	695.91	0.00	0.00	0.00
7,300.00	90.26	180.25	6,407.33	-797.66	399.99	795.91	0.00	0.00	0.00
7,400.00	90.26	180.25	6,406.87	-897.66	399.55	895.91	0.00	0.00	0.00
7,500.00	90.26	180.25	6,406.42	-997.66	399.11	995.91	0.00	0.00	0.00
7,600.00	90.26	180.25	6,405.97	-1,097.65	398.67	1,095.90	0.00	0.00	0.00
7,700.00	90.26	180.25	6,405.51	-1,197.65	398.24	1,195.90	0.00	0.00	0.00
7,800.00	90.26	180.25	6,405.06	-1,297.65	397.80	1,295.90	0.00	0.00	0.00
7,900.00	90.26	180.25	6,404.60	-1,397.65	397.36	1,395.90	0.00	0.00	0.00
8,000.00	90.26	180.25	6,404.15	-1,497.65	396.92	1,495.90	0.00	0.00	0.00
8,100.00	90.26	180.25	6,403.69	-1,597.64	396.49	1,595.90	0.00	0.00	0.00
8,200.00	90.26	180.25	6,403.24	-1,697.64	396.05	1,695.90	0.00	0.00	0.00
8,300.00	90.26	180.25	6,402.78	-1,797.64	395.61	1,795.90	0.00	0.00	0.00
8,400.00	90.26	180.25	6,402.33	-1,897.64	395.17	1,895.90	0.00	0.00	0.00
8,500.00	90.26	180.25	6,401.88	-1,997.64	394.74	1,995.89	0.00	0.00	0.00
8,600.00	90.26	180.25	6,401.42	-2,097.63	394.30	2,095.89	0.00	0.00	0.00
8,700.00	90.26	180.25	6,400.97	-2,197.63	393.86	2,195.89	0.00	0.00	0.00
8,800.00	90.26	180.25	6,400.51	-2,297.63	393.42	2,295.89	0.00	0.00	0.00
8,900.00	90.26	180.25	6,400.06	-2,397.63	392.99	2,395.89	0.00	0.00	0.00
9,000.00	90.26	180.25	6,399.60	-2,497.63	392.55	2,495.89	0.00	0.00	0.00
9,100.00	90.26	180.25	6,399.15	-2,597.62	392.11	2,595.89	0.00	0.00	0.00
9,200.00	90.26	180.25	6,398.69	-2,697.62	391.67	2,695.89	0.00	0.00	0.00
9,300.00	90.26	180.25	6,398.24	-2,797.62	391.24	2,795.89	0.00	0.00	0.00
9,400.00	90.26	180.25	6,397.79	-2,897.62	390.80	2,895.89	0.00	0.00	0.00
9,500.00	90.26	180.25	6,397.33	-2,997.62	390.36	2,995.88	0.00	0.00	0.00
9,600.00	90.26	180.25	6,396.88	-3,097.61	389.92	3,095.88	0.00	0.00	0.00
9,700.00	90.26	180.25	6,396.42	-3,197.61	389.48	3,195.88	0.00	0.00	0.00
9,800.00	90.26	180.25	6,395.97	-3,297.61	389.05	3,295.88	0.00	0.00	0.00
9,900.00	90.26	180.25	6,395.51	-3,397.61	388.61	3,395.88	0.00	0.00	0.00
10,000.00	90.26	180.25	6,395.06	-3,497.61	388.17	3,495.88	0.00	0.00	0.00
10,100.00	90.26	180.25	6,394.61	-3,597.60	387.73	3,595.88	0.00	0.00	0.00
10,200.00	90.26	180.25	6,394.15	-3,697.60	387.30	3,695.88	0.00	0.00	0.00
10,300.00	90.26	180.25	6,393.70	-3,797.60	386.86	3,795.88	0.00	0.00	0.00
10,400.00	90.26	180.25	6,393.24	-3,897.60	386.42	3,895.88	0.00	0.00	0.00
10,500.00	90.26	180.25	6,392.79	-3,997.60	385.98	3,995.87	0.00	0.00	0.00
10,600.00	90.26	180.25	6,392.33	-4,097.59	385.55	4,095.87	0.00	0.00	0.00
10,700.00	90.26	180.25	6,391.88	-4,197.59	385.11	4,195.87	0.00	0.00	0.00
10,800.00	90.26	180.25	6,391.42	-4,297.59	384.67	4,295.87	0.00	0.00	0.00
10,900.00	90.26	180.25	6,390.97	-4,397.59	384.23	4,395.87	0.00	0.00	0.00
11,000.00	90.26	180.25	6,390.52	-4,497.59	383.80	4,495.87	0.00	0.00	0.00
11,100.00	90.26	180.25	6,390.06	-4,597.58	383.36	4,595.87	0.00	0.00	0.00

<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Heath 6-62-15-0857BH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	Well @ 4748.00usft
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	Well @ 4748.00usft
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Heath 6-62-15-0857BH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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)
11,200.00	90.26	180.25	6,389.61	-4,697.58	382.92	4,695.87	0.00	0.00	0.00
11,300.00	90.26	180.25	6,389.15	-4,797.58	382.48	4,795.87	0.00	0.00	0.00
11,400.00	90.26	180.25	6,388.70	-4,897.58	382.04	4,895.86	0.00	0.00	0.00
11,500.00	90.26	180.25	6,388.24	-4,997.58	381.61	4,995.86	0.00	0.00	0.00
11,600.00	90.26	180.25	6,387.79	-5,097.57	381.17	5,095.86	0.00	0.00	0.00
11,700.00	90.26	180.25	6,387.33	-5,197.57	380.73	5,195.86	0.00	0.00	0.00
11,800.00	90.26	180.25	6,386.88	-5,297.57	380.29	5,295.86	0.00	0.00	0.00
11,900.00	90.26	180.25	6,386.43	-5,397.57	379.86	5,395.86	0.00	0.00	0.00
12,000.00	90.26	180.25	6,385.97	-5,497.57	379.42	5,495.86	0.00	0.00	0.00
12,100.00	90.26	180.25	6,385.52	-5,597.56	378.98	5,595.86	0.00	0.00	0.00
12,200.00	90.26	180.25	6,385.06	-5,697.56	378.54	5,695.86	0.00	0.00	0.00
12,300.00	90.26	180.25	6,384.61	-5,797.56	378.11	5,795.86	0.00	0.00	0.00
12,400.00	90.26	180.25	6,384.15	-5,897.56	377.67	5,895.85	0.00	0.00	0.00
12,500.00	90.26	180.25	6,383.70	-5,997.56	377.23	5,995.85	0.00	0.00	0.00
12,600.00	90.26	180.25	6,383.25	-6,097.55	376.79	6,095.85	0.00	0.00	0.00
12,700.00	90.26	180.25	6,382.79	-6,197.55	376.36	6,195.85	0.00	0.00	0.00
12,800.00	90.26	180.25	6,382.34	-6,297.55	375.92	6,295.85	0.00	0.00	0.00
12,900.00	90.26	180.25	6,381.88	-6,397.55	375.48	6,395.85	0.00	0.00	0.00
13,000.00	90.26	180.25	6,381.43	-6,497.55	375.04	6,495.85	0.00	0.00	0.00
13,100.00	90.26	180.25	6,380.97	-6,597.54	374.60	6,595.85	0.00	0.00	0.00
13,200.00	90.26	180.25	6,380.52	-6,697.54	374.17	6,695.85	0.00	0.00	0.00
13,300.00	90.26	180.25	6,380.06	-6,797.54	373.73	6,795.85	0.00	0.00	0.00
13,400.00	90.26	180.25	6,379.61	-6,897.54	373.29	6,895.84	0.00	0.00	0.00
13,500.00	90.26	180.25	6,379.16	-6,997.54	372.85	6,995.84	0.00	0.00	0.00
13,600.00	90.26	180.25	6,378.70	-7,097.53	372.42	7,095.84	0.00	0.00	0.00
13,700.00	90.26	180.25	6,378.25	-7,197.53	371.98	7,195.84	0.00	0.00	0.00
13,800.00	90.26	180.25	6,377.79	-7,297.53	371.54	7,295.84	0.00	0.00	0.00
13,900.00	90.26	180.25	6,377.34	-7,397.53	371.10	7,395.84	0.00	0.00	0.00
14,000.00	90.26	180.25	6,376.88	-7,497.53	370.67	7,495.84	0.00	0.00	0.00
14,100.00	90.26	180.25	6,376.43	-7,597.52	370.23	7,595.84	0.00	0.00	0.00
14,200.00	90.26	180.25	6,375.97	-7,697.52	369.79	7,695.84	0.00	0.00	0.00
14,300.00	90.26	180.25	6,375.52	-7,797.52	369.35	7,795.83	0.00	0.00	0.00
14,400.00	90.26	180.25	6,375.07	-7,897.52	368.92	7,895.83	0.00	0.00	0.00
14,500.00	90.26	180.25	6,374.61	-7,997.52	368.48	7,995.83	0.00	0.00	0.00
14,600.00	90.26	180.25	6,374.16	-8,097.51	368.04	8,095.83	0.00	0.00	0.00
14,700.00	90.26	180.25	6,373.70	-8,197.51	367.60	8,195.83	0.00	0.00	0.00
14,800.00	90.26	180.25	6,373.25	-8,297.51	367.17	8,295.83	0.00	0.00	0.00
14,900.00	90.26	180.25	6,372.79	-8,397.51	366.73	8,395.83	0.00	0.00	0.00
15,000.00	90.26	180.25	6,372.34	-8,497.51	366.29	8,495.83	0.00	0.00	0.00
15,100.00	90.26	180.25	6,371.89	-8,597.50	365.85	8,595.83	0.00	0.00	0.00
15,200.00	90.26	180.25	6,371.43	-8,697.50	365.41	8,695.83	0.00	0.00	0.00
15,300.00	90.26	180.25	6,370.98	-8,797.50	364.98	8,795.82	0.00	0.00	0.00
15,400.00	90.26	180.25	6,370.52	-8,897.50	364.54	8,895.82	0.00	0.00	0.00
15,500.00	90.26	180.25	6,370.07	-8,997.50	364.10	8,995.82	0.00	0.00	0.00
15,600.00	90.26	180.25	6,369.61	-9,097.49	363.66	9,095.82	0.00	0.00	0.00
15,700.00	90.26	180.25	6,369.16	-9,197.49	363.23	9,195.82	0.00	0.00	0.00
15,800.00	90.26	180.25	6,368.70	-9,297.49	362.79	9,295.82	0.00	0.00	0.00
15,900.00	90.26	180.25	6,368.25	-9,397.49	362.35	9,395.82	0.00	0.00	0.00
16,000.00	90.26	180.25	6,367.80	-9,497.49	361.91	9,495.82	0.00	0.00	0.00
16,100.00	90.26	180.25	6,367.34	-9,597.48	361.48	9,595.82	0.00	0.00	0.00
<b>TD at 16174.77</b>									
16,174.77	90.26	180.25	6,367.00	-9,672.25	361.15	9,670.58	0.00	0.00	0.00

<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Heath 6-62-15-0857BH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	Well @ 4748.00usft
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	Well @ 4748.00usft
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Heath 6-62-15-0857BH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Heath 6-62-15-0857BH2	0.00	0.00	6,367.00	-9,672.25	361.15	1,415,253.342	3,333,594.993	40° 28' 1.492 N	104° 18' 3.578 W
- plan hits target center									
- Point									

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(usft)	(usft)		(")	(")
6,712.04	6,410.00	7" Csg.	7	8-3/4

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
4,084.55	4,064.00	Sussex		-0.26	180.25	
4,825.68	4,800.00	Shannon		-0.26	180.25	
6,203.75	6,165.00	Sharon Springs		-0.26	180.25	
6,312.08	6,253.00	Niobrara		-0.26	180.25	
6,366.08	6,291.00	A Chalk		-0.26	180.25	
6,412.45	6,320.00	A Marl		-0.26	180.25	
6,557.02	6,386.00	Top B Target		-0.26	180.25	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
900.00	900.00	0.00	0.00	Start Build 2.00
1,230.16	1,229.43	10.55	15.81	Start 3899.56 hold at 1230.16 MD
5,129.71	5,103.11	259.37	388.85	Start Drop -2.00
5,459.87	5,432.54	269.92	404.66	Start 500.00 hold at 5459.87 MD
5,959.87	5,932.54	269.92	404.66	Start Build 12.00
6,712.04	6,410.00	-209.71	402.56	Start 9462.73 hold at 6712.04 MD
16,174.77	6,367.00	-9,672.25	361.15	TD at 16174.77