



**Bill Barrett Corporation**

## **Bill Barrett Corp.**

Weld Co., CO

Sec.15-T6N-R62W

Will 6-62-15-0148CH2

Wellbore #1

Plan: Design #1

## **Standard Planning Report**

25 June, 2014

# **Archer**



Bill Barrett Corp.  
Project: Weld Co., CO  
Site: Sec.15-T6N-R62W  
Well: Will 6-62-15-0148CH2  
Wellbore: Wellbore #1  
Design: Design #1  
Lat: 40° 29' 37.061 N  
Long: 104° 18' 49.972 W  
Pad GL: 4761.00  
KB: WELL @ 4783.00usft (Original Well Elev)

# Archer

### 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
1185.93	5.72	309.56	1185.45	9.08	-10.99	2.00	309.56	-9.08	Start 4136.22 hold at 1185.93 MD
5322.14	5.72	309.56	5301.09	271.59	-328.72	0.00	0.00	-271.59	Start Drop -2.00
5608.07	0.00	0.00	5586.54	280.67	-339.71	2.00	180.00	-280.67	Start 500.00 hold at 5608.07 MD
6108.07	0.00	0.00	6086.54	280.67	-339.71	0.00	0.00	-280.67	Start Build 12.00
6859.53	90.17	180.00	6564.00	-198.25	-339.73	12.00	180.00	198.25	Start 7218.64 hold at 6859.53 MD
14078.17	90.17	180.00	6542.00	-7416.85	-339.97	0.00	0.00	7416.85	TD at 14078.17

### WELL DETAILS: Will 6-62-15-0148CH2

+N/-S	+E/-W	Northing	Ground Level: Easting	Latitude	Longitude	Slot
0.00	0.00	1424875.418	3329880.348	40° 29' 37.061 N	104° 18' 49.972 W	

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
Will 6-62-15-0148CH2 tgt	6542.00	-7416.85	-339.97	40° 28' 23.768 N	104° 18' 54.371 W	

### CASING DETAILS

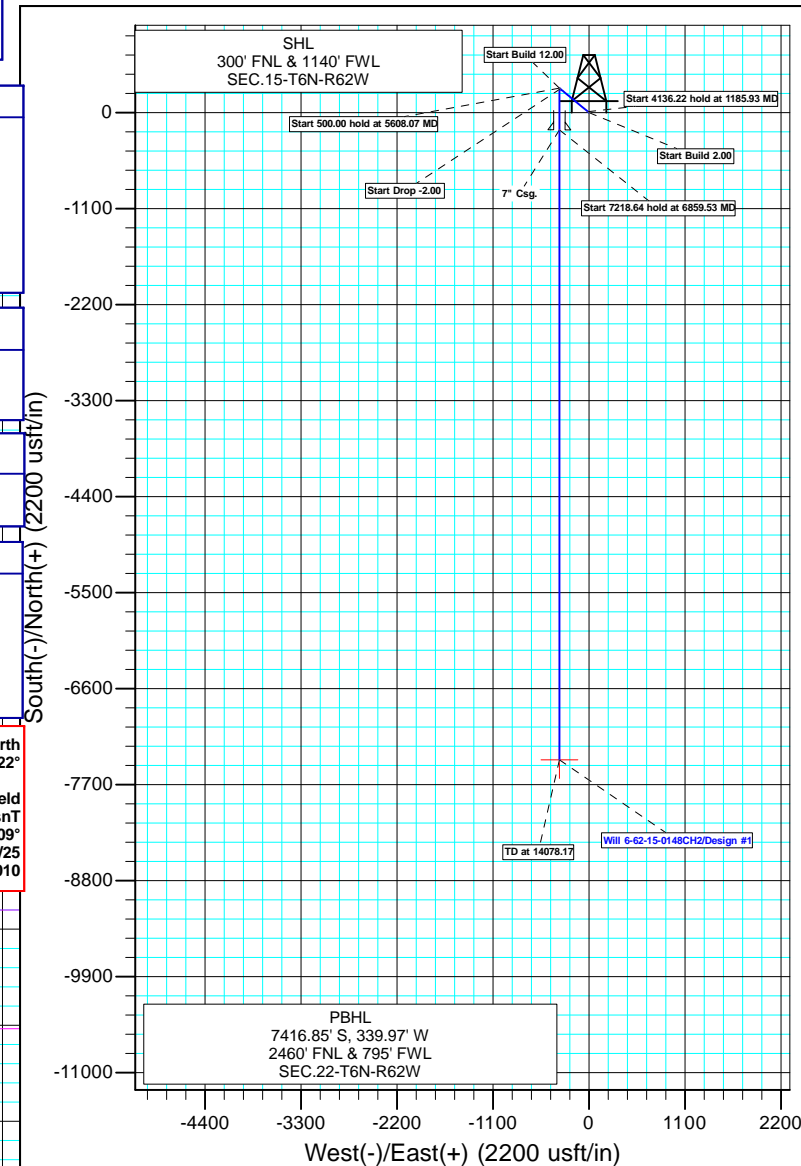
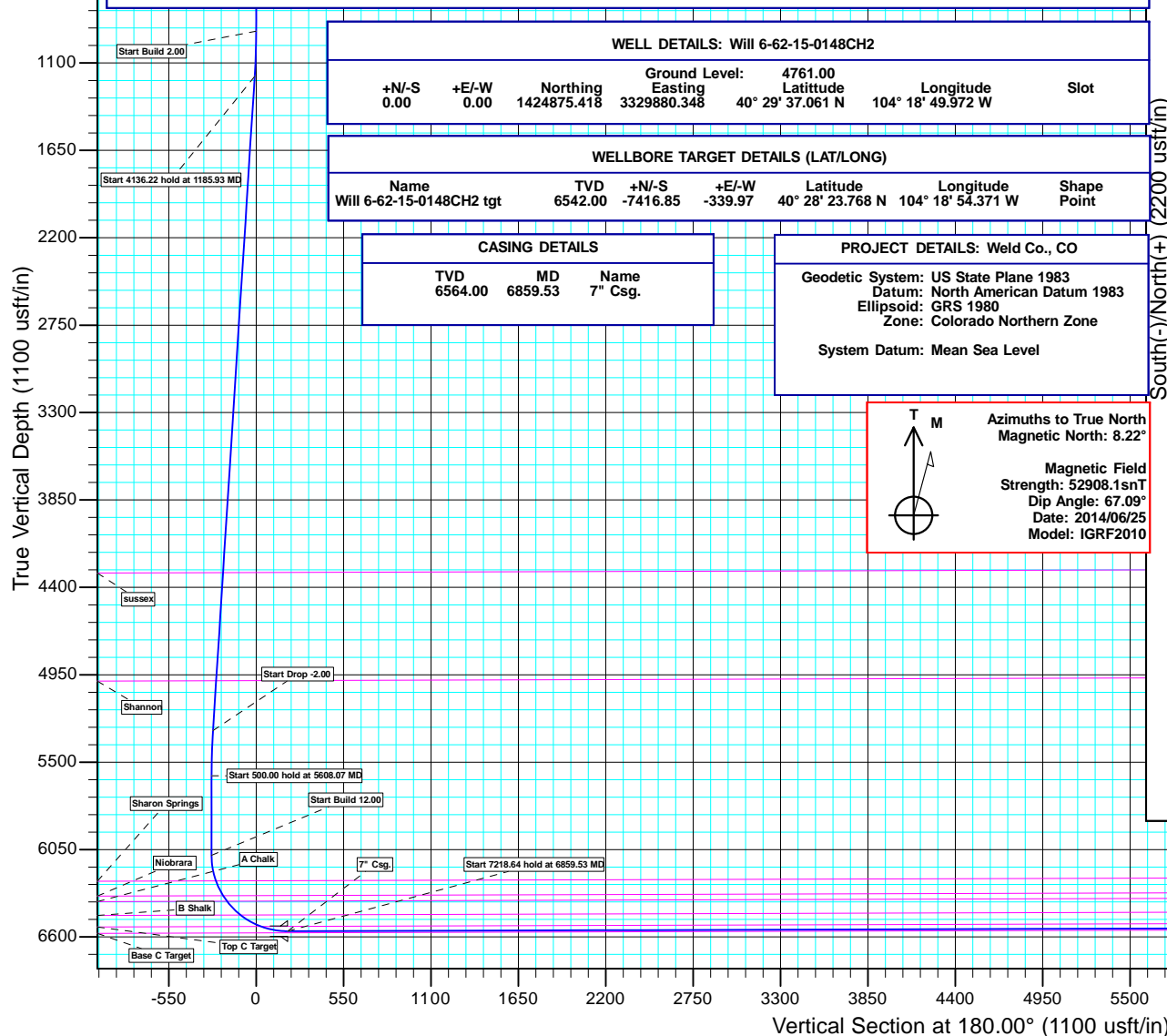
TVD	MD	Name
6564.00	6859.53	7" Csg.

### 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



Azimuths to True North  
Magnetic North: 8.22°  
Magnetic Field  
Strength: 52908.1snT  
Dip Angle: 67.09°  
Date: 2014/06/25  
Model: IGRF2010



<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Will 6-62-15-0148CH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Will 6-62-15-0148CH2	<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	Will 6-62-15-0148CH2					
Well Position	+N/-S	-0.01 usft	Northing:	1,424,875.418 usft	Latitude:	40° 29' 37.061 N
	+E/-W	14.46 usft	Easting:	3,329,880.348 usft	Longitude:	104° 18' 49.972 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,761.00 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	2014/06/25	8.22	67.09	52,908

<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	180.00

<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	
1,185.93	5.72	309.56	1,185.45	9.08	-10.99	2.00	2.00	0.00	309.56	
5,322.14	5.72	309.56	5,301.09	271.59	-328.72	0.00	0.00	0.00	0.00	
5,608.07	0.00	0.00	5,586.54	280.67	-339.71	2.00	-2.00	0.00	180.00	
6,108.07	0.00	0.00	6,086.54	280.67	-339.71	0.00	0.00	0.00	0.00	
6,859.53	90.17	180.00	6,564.00	-198.25	-339.73	12.00	12.00	0.00	180.00	Will 6-62-15-0148CH2
14,078.17	90.17	180.00	6,542.00	-7,416.85	-339.97	0.00	0.00	0.00	0.00	Will 6-62-15-0148CH2

<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Will 6-62-15-0148CH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Will 6-62-15-0148CH2	<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	309.56	999.98	1.11	-1.35	-1.11	2.00	2.00	0.00
1,100.00	4.00	309.56	1,099.84	4.44	-5.38	-4.44	2.00	2.00	0.00
<b>Start 4136.22 hold at 1185.93 MD</b>									
1,185.93	5.72	309.56	1,185.45	9.08	-10.99	-9.08	2.00	2.00	0.00
1,200.00	5.72	309.56	1,199.46	9.97	-12.07	-9.97	0.00	0.00	0.00
1,300.00	5.72	309.56	1,298.96	16.32	-19.75	-16.32	0.00	0.00	0.00
1,400.00	5.72	309.56	1,398.46	22.67	-27.44	-22.67	0.00	0.00	0.00
1,500.00	5.72	309.56	1,497.96	29.01	-35.12	-29.01	0.00	0.00	0.00
1,600.00	5.72	309.56	1,597.46	35.36	-42.80	-35.36	0.00	0.00	0.00
1,700.00	5.72	309.56	1,696.97	41.71	-50.48	-41.71	0.00	0.00	0.00
1,800.00	5.72	309.56	1,796.47	48.05	-58.16	-48.05	0.00	0.00	0.00
1,900.00	5.72	309.56	1,895.97	54.40	-65.84	-54.40	0.00	0.00	0.00
2,000.00	5.72	309.56	1,995.47	60.75	-73.52	-60.75	0.00	0.00	0.00
2,100.00	5.72	309.56	2,094.98	67.09	-81.21	-67.09	0.00	0.00	0.00
2,200.00	5.72	309.56	2,194.48	73.44	-88.89	-73.44	0.00	0.00	0.00
2,300.00	5.72	309.56	2,293.98	79.79	-96.57	-79.79	0.00	0.00	0.00
2,400.00	5.72	309.56	2,393.48	86.13	-104.25	-86.13	0.00	0.00	0.00
2,500.00	5.72	309.56	2,492.99	92.48	-111.93	-92.48	0.00	0.00	0.00
2,600.00	5.72	309.56	2,592.49	98.83	-119.61	-98.83	0.00	0.00	0.00
2,700.00	5.72	309.56	2,691.99	105.17	-127.30	-105.17	0.00	0.00	0.00
2,800.00	5.72	309.56	2,791.49	111.52	-134.98	-111.52	0.00	0.00	0.00
2,900.00	5.72	309.56	2,891.00	117.87	-142.66	-117.87	0.00	0.00	0.00
3,000.00	5.72	309.56	2,990.50	124.21	-150.34	-124.21	0.00	0.00	0.00
3,100.00	5.72	309.56	3,090.00	130.56	-158.02	-130.56	0.00	0.00	0.00
3,200.00	5.72	309.56	3,189.50	136.91	-165.70	-136.91	0.00	0.00	0.00
3,300.00	5.72	309.56	3,289.00	143.25	-173.39	-143.25	0.00	0.00	0.00
3,400.00	5.72	309.56	3,388.51	149.60	-181.07	-149.60	0.00	0.00	0.00
3,500.00	5.72	309.56	3,488.01	155.95	-188.75	-155.95	0.00	0.00	0.00
3,600.00	5.72	309.56	3,587.51	162.29	-196.43	-162.29	0.00	0.00	0.00
3,700.00	5.72	309.56	3,687.01	168.64	-204.11	-168.64	0.00	0.00	0.00
3,800.00	5.72	309.56	3,786.52	174.98	-211.79	-174.98	0.00	0.00	0.00
3,900.00	5.72	309.56	3,886.02	181.33	-219.48	-181.33	0.00	0.00	0.00
4,000.00	5.72	309.56	3,985.52	187.68	-227.16	-187.68	0.00	0.00	0.00
4,100.00	5.72	309.56	4,085.02	194.02	-234.84	-194.02	0.00	0.00	0.00
4,200.00	5.72	309.56	4,184.53	200.37	-242.52	-200.37	0.00	0.00	0.00
4,300.00	5.72	309.56	4,284.03	206.72	-250.20	-206.72	0.00	0.00	0.00
<b>sussex</b>									
4,323.71	5.72	309.56	4,307.62	208.22	-252.02	-208.22	0.00	0.00	0.00
4,400.00	5.72	309.56	4,383.53	213.06	-257.88	-213.06	0.00	0.00	0.00
4,500.00	5.72	309.56	4,483.03	219.41	-265.56	-219.41	0.00	0.00	0.00
4,600.00	5.72	309.56	4,582.53	225.76	-273.25	-225.76	0.00	0.00	0.00
4,700.00	5.72	309.56	4,682.04	232.10	-280.93	-232.10	0.00	0.00	0.00

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<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Will 6-62-15-0148CH2	<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	5.72	309.56	4,781.54	238.45	-288.61	-238.45	0.00	0.00	0.00	
4,900.00	5.72	309.56	4,881.04	244.80	-296.29	-244.80	0.00	0.00	0.00	
5,000.00	5.72	309.56	4,980.54	251.14	-303.97	-251.14	0.00	0.00	0.00	
<b>Shannon</b>										
5,007.24	5.72	309.56	4,987.75	251.60	-304.53	-251.60	0.00	0.00	0.00	
5,100.00	5.72	309.56	5,080.05	257.49	-311.65	-257.49	0.00	0.00	0.00	
5,200.00	5.72	309.56	5,179.55	263.84	-319.34	-263.84	0.00	0.00	0.00	
5,300.00	5.72	309.56	5,279.05	270.18	-327.02	-270.18	0.00	0.00	0.00	
<b>Start Drop -2.00</b>										
5,322.14	5.72	309.56	5,301.09	271.59	-328.72	-271.59	0.00	0.00	0.00	
5,400.00	4.16	309.56	5,378.65	275.86	-333.89	-275.86	2.00	-2.00	0.00	
5,500.00	2.16	309.56	5,478.49	279.37	-338.14	-279.37	2.00	-2.00	0.00	
<b>Start 500.00 hold at 5608.07 MD</b>										
5,608.07	0.00	0.00	5,586.54	280.67	-339.71	-280.67	2.00	-2.00	0.00	
5,700.00	0.00	0.00	5,678.47	280.67	-339.71	-280.67	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,778.47	280.67	-339.71	-280.67	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,878.47	280.67	-339.71	-280.67	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,978.47	280.67	-339.71	-280.67	0.00	0.00	0.00	
<b>Start Build 12.00</b>										
6,108.07	0.00	0.00	6,086.54	280.67	-339.71	-280.67	0.00	0.00	0.00	
6,125.00	2.03	180.00	6,103.46	280.37	-339.71	-280.37	12.00	12.00	0.00	
6,150.00	5.03	180.00	6,128.41	278.83	-339.71	-278.83	12.00	12.00	0.00	
6,175.00	8.03	180.00	6,153.25	275.99	-339.71	-275.99	12.00	12.00	0.00	
6,200.00	11.03	180.00	6,177.90	271.85	-339.71	-271.85	12.00	12.00	0.00	
6,225.00	14.03	180.00	6,202.30	266.42	-339.71	-266.42	12.00	12.00	0.00	
6,250.00	17.03	180.00	6,226.39	259.73	-339.71	-259.73	12.00	12.00	0.00	
<b>Sharon Springs</b>										
6,272.51	19.73	180.00	6,247.75	252.63	-339.71	-252.63	12.00	12.00	0.00	
6,275.00	20.03	180.00	6,250.09	251.79	-339.71	-251.79	12.00	12.00	0.00	
6,300.00	23.03	180.00	6,273.34	242.61	-339.71	-242.61	12.00	12.00	0.00	
6,325.00	26.03	180.00	6,296.08	232.23	-339.71	-232.23	12.00	12.00	0.00	
6,350.00	29.03	180.00	6,318.25	220.68	-339.71	-220.68	12.00	12.00	0.00	
6,375.00	32.03	180.00	6,339.78	207.98	-339.71	-207.98	12.00	12.00	0.00	
<b>Niobrara</b>										
6,375.99	32.15	180.00	6,340.62	207.46	-339.71	-207.46	12.00	12.00	0.00	
6,400.00	35.03	180.00	6,360.62	194.17	-339.71	-194.17	12.00	12.00	0.00	
<b>A Chalk</b>										
6,418.49	37.25	180.00	6,375.54	183.27	-339.71	-183.27	12.00	12.00	0.00	
6,425.00	38.03	180.00	6,380.70	179.29	-339.71	-179.29	12.00	12.00	0.00	
6,450.00	41.03	180.00	6,399.98	163.38	-339.71	-163.38	12.00	12.00	0.00	
6,475.00	44.03	180.00	6,418.40	146.48	-339.71	-146.48	12.00	12.00	0.00	
6,500.00	47.03	180.00	6,435.91	128.65	-339.72	-128.65	12.00	12.00	0.00	
6,525.00	50.03	180.00	6,452.47	109.91	-339.72	-109.91	12.00	12.00	0.00	
<b>B Shalk</b>										
6,540.60	51.90	180.00	6,462.29	97.80	-339.72	-97.80	12.00	12.00	0.00	
6,550.00	53.03	180.00	6,468.02	90.34	-339.72	-90.34	12.00	12.00	0.00	
6,575.00	56.03	180.00	6,482.52	69.98	-339.72	-69.98	12.00	12.00	0.00	
6,600.00	59.03	180.00	6,495.94	48.90	-339.72	-48.90	12.00	12.00	0.00	
6,625.00	62.03	180.00	6,508.24	27.13	-339.72	-27.13	12.00	12.00	0.00	
6,650.00	65.03	180.00	6,519.38	4.76	-339.72	-4.76	12.00	12.00	0.00	
6,675.00	68.03	180.00	6,529.33	-18.17	-339.72	18.17	12.00	12.00	0.00	
<b>Top C Target</b>										
6,690.51	69.89	180.00	6,534.90	-32.65	-339.72	32.65	12.00	12.00	0.00	

<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Will 6-62-15-0148CH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Will 6-62-15-0148CH2	<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)	
6,700.00	71.03	180.00	6,538.08	-41.59	-339.72	41.59	12.00	12.00	0.00	
6,725.00	74.03	180.00	6,545.58	-65.44	-339.72	65.44	12.00	12.00	0.00	
6,750.00	77.03	180.00	6,551.83	-89.64	-339.72	89.64	12.00	12.00	0.00	
6,775.00	80.03	180.00	6,556.80	-114.14	-339.72	114.14	12.00	12.00	0.00	
6,800.00	83.03	180.00	6,560.48	-138.86	-339.72	138.86	12.00	12.00	0.00	
6,825.00	86.03	180.00	6,562.86	-163.75	-339.73	163.75	12.00	12.00	0.00	
6,850.00	89.03	180.00	6,563.94	-188.72	-339.73	188.72	12.00	12.00	0.00	
<b>Start 7218.64 hold at 6859.53 MD - 7" Csg.</b>										
6,859.53	90.17	180.00	6,564.00	-198.25	-339.73	198.25	12.00	12.00	0.00	
6,900.00	90.17	180.00	6,563.88	-238.72	-339.73	238.72	0.00	0.00	0.00	
7,000.00	90.17	180.00	6,563.57	-338.72	-339.73	338.72	0.00	0.00	0.00	
7,100.00	90.17	180.00	6,563.27	-438.72	-339.73	438.72	0.00	0.00	0.00	
7,200.00	90.17	180.00	6,562.97	-538.72	-339.74	538.72	0.00	0.00	0.00	
7,300.00	90.17	180.00	6,562.66	-638.72	-339.74	638.72	0.00	0.00	0.00	
7,400.00	90.17	180.00	6,562.36	-738.72	-339.74	738.72	0.00	0.00	0.00	
7,500.00	90.17	180.00	6,562.05	-838.72	-339.75	838.72	0.00	0.00	0.00	
7,600.00	90.17	180.00	6,561.75	-938.72	-339.75	938.72	0.00	0.00	0.00	
7,700.00	90.17	180.00	6,561.44	-1,038.72	-339.75	1,038.72	0.00	0.00	0.00	
7,800.00	90.17	180.00	6,561.14	-1,138.72	-339.76	1,138.72	0.00	0.00	0.00	
7,900.00	90.17	180.00	6,560.83	-1,238.72	-339.76	1,238.72	0.00	0.00	0.00	
8,000.00	90.17	180.00	6,560.53	-1,338.72	-339.77	1,338.72	0.00	0.00	0.00	
8,100.00	90.17	180.00	6,560.22	-1,438.72	-339.77	1,438.72	0.00	0.00	0.00	
8,200.00	90.17	180.00	6,559.92	-1,538.71	-339.77	1,538.71	0.00	0.00	0.00	
8,300.00	90.17	180.00	6,559.61	-1,638.71	-339.78	1,638.71	0.00	0.00	0.00	
8,400.00	90.17	180.00	6,559.31	-1,738.71	-339.78	1,738.71	0.00	0.00	0.00	
8,500.00	90.17	180.00	6,559.00	-1,838.71	-339.78	1,838.71	0.00	0.00	0.00	
8,600.00	90.17	180.00	6,558.70	-1,938.71	-339.79	1,938.71	0.00	0.00	0.00	
8,700.00	90.17	180.00	6,558.39	-2,038.71	-339.79	2,038.71	0.00	0.00	0.00	
8,800.00	90.17	180.00	6,558.09	-2,138.71	-339.79	2,138.71	0.00	0.00	0.00	
8,900.00	90.17	180.00	6,557.78	-2,238.71	-339.80	2,238.71	0.00	0.00	0.00	
9,000.00	90.17	180.00	6,557.48	-2,338.71	-339.80	2,338.71	0.00	0.00	0.00	
9,100.00	90.17	180.00	6,557.17	-2,438.71	-339.80	2,438.71	0.00	0.00	0.00	
9,200.00	90.17	180.00	6,556.87	-2,538.71	-339.81	2,538.71	0.00	0.00	0.00	
9,300.00	90.17	180.00	6,556.57	-2,638.71	-339.81	2,638.71	0.00	0.00	0.00	
9,400.00	90.17	180.00	6,556.26	-2,738.71	-339.81	2,738.71	0.00	0.00	0.00	
9,500.00	90.17	180.00	6,555.96	-2,838.71	-339.82	2,838.71	0.00	0.00	0.00	
9,600.00	90.17	180.00	6,555.65	-2,938.71	-339.82	2,938.71	0.00	0.00	0.00	
9,700.00	90.17	180.00	6,555.35	-3,038.71	-339.82	3,038.71	0.00	0.00	0.00	
9,800.00	90.17	180.00	6,555.04	-3,138.71	-339.83	3,138.71	0.00	0.00	0.00	
9,900.00	90.17	180.00	6,554.74	-3,238.71	-339.83	3,238.71	0.00	0.00	0.00	
10,000.00	90.17	180.00	6,554.43	-3,338.71	-339.83	3,338.71	0.00	0.00	0.00	
10,100.00	90.17	180.00	6,554.13	-3,438.71	-339.84	3,438.71	0.00	0.00	0.00	
10,200.00	90.17	180.00	6,553.82	-3,538.71	-339.84	3,538.71	0.00	0.00	0.00	
10,300.00	90.17	180.00	6,553.52	-3,638.71	-339.84	3,638.71	0.00	0.00	0.00	
10,400.00	90.17	180.00	6,553.21	-3,738.70	-339.85	3,738.70	0.00	0.00	0.00	
10,500.00	90.17	180.00	6,552.91	-3,838.70	-339.85	3,838.70	0.00	0.00	0.00	
10,600.00	90.17	180.00	6,552.60	-3,938.70	-339.85	3,938.70	0.00	0.00	0.00	
10,700.00	90.17	180.00	6,552.30	-4,038.70	-339.86	4,038.70	0.00	0.00	0.00	
10,800.00	90.17	180.00	6,551.99	-4,138.70	-339.86	4,138.70	0.00	0.00	0.00	
10,900.00	90.17	180.00	6,551.69	-4,238.70	-339.86	4,238.70	0.00	0.00	0.00	
11,000.00	90.17	180.00	6,551.38	-4,338.70	-339.87	4,338.70	0.00	0.00	0.00	
11,100.00	90.17	180.00	6,551.08	-4,438.70	-339.87	4,438.70	0.00	0.00	0.00	
11,200.00	90.17	180.00	6,550.77	-4,538.70	-339.87	4,538.70	0.00	0.00	0.00	

<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Will 6-62-15-0148CH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Will 6-62-15-0148CH2	<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)	
11,300.00	90.17	180.00	6,550.47	-4,638.70	-339.88	4,638.70	0.00	0.00	0.00	
11,400.00	90.17	180.00	6,550.17	-4,738.70	-339.88	4,738.70	0.00	0.00	0.00	
11,500.00	90.17	180.00	6,549.86	-4,838.70	-339.88	4,838.70	0.00	0.00	0.00	
11,600.00	90.17	180.00	6,549.56	-4,938.70	-339.89	4,938.70	0.00	0.00	0.00	
11,700.00	90.17	180.00	6,549.25	-5,038.70	-339.89	5,038.70	0.00	0.00	0.00	
11,800.00	90.17	180.00	6,548.95	-5,138.70	-339.89	5,138.70	0.00	0.00	0.00	
11,900.00	90.17	180.00	6,548.64	-5,238.70	-339.90	5,238.70	0.00	0.00	0.00	
12,000.00	90.17	180.00	6,548.34	-5,338.70	-339.90	5,338.70	0.00	0.00	0.00	
12,100.00	90.17	180.00	6,548.03	-5,438.70	-339.90	5,438.70	0.00	0.00	0.00	
12,200.00	90.17	180.00	6,547.73	-5,538.70	-339.91	5,538.70	0.00	0.00	0.00	
12,300.00	90.17	180.00	6,547.42	-5,638.70	-339.91	5,638.70	0.00	0.00	0.00	
12,400.00	90.17	180.00	6,547.12	-5,738.70	-339.91	5,738.70	0.00	0.00	0.00	
12,500.00	90.17	180.00	6,546.81	-5,838.69	-339.92	5,838.69	0.00	0.00	0.00	
12,600.00	90.17	180.00	6,546.51	-5,938.69	-339.92	5,938.69	0.00	0.00	0.00	
12,700.00	90.17	180.00	6,546.20	-6,038.69	-339.92	6,038.69	0.00	0.00	0.00	
12,800.00	90.17	180.00	6,545.90	-6,138.69	-339.93	6,138.69	0.00	0.00	0.00	
12,900.00	90.17	180.00	6,545.59	-6,238.69	-339.93	6,238.69	0.00	0.00	0.00	
13,000.00	90.17	180.00	6,545.29	-6,338.69	-339.94	6,338.69	0.00	0.00	0.00	
13,100.00	90.17	180.00	6,544.98	-6,438.69	-339.94	6,438.69	0.00	0.00	0.00	
13,200.00	90.17	180.00	6,544.68	-6,538.69	-339.94	6,538.69	0.00	0.00	0.00	
13,300.00	90.17	180.00	6,544.38	-6,638.69	-339.95	6,638.69	0.00	0.00	0.00	
13,400.00	90.17	180.00	6,544.07	-6,738.69	-339.95	6,738.69	0.00	0.00	0.00	
13,500.00	90.17	180.00	6,543.77	-6,838.69	-339.95	6,838.69	0.00	0.00	0.00	
13,600.00	90.17	180.00	6,543.46	-6,938.69	-339.96	6,938.69	0.00	0.00	0.00	
13,700.00	90.17	180.00	6,543.16	-7,038.69	-339.96	7,038.69	0.00	0.00	0.00	
13,800.00	90.17	180.00	6,542.85	-7,138.69	-339.96	7,138.69	0.00	0.00	0.00	
13,900.00	90.17	180.00	6,542.55	-7,238.69	-339.97	7,238.69	0.00	0.00	0.00	
14,000.00	90.17	180.00	6,542.24	-7,338.69	-339.97	7,338.69	0.00	0.00	0.00	
TD at 14078.17										
14,078.17	90.17	180.00	6,542.00	-7,416.85	-339.97	7,416.85	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		Longitude
- hit/miss target										
- Shape										
Will 6-62-15-0148CH2 tç	0.00	0.00	6,542.00	-7,416.85	-339.97	1,417,454.681	3,329,639.612	40° 28' 23.768 N		104° 18' 54.371 W
- plan hits target center										
- Point										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
6,859.53	6,564.00	7" Csg.		7	8-3/4

<b>Database:</b>	EDMDBBW	<b>Local Co-ordinate Reference:</b>	Well Will 6-62-15-0148CH2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Project:</b>	Weld Co., CO	<b>MD Reference:</b>	WELL @ 4783.00usft (Original Well Elev)
<b>Site:</b>	Sec.15-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Will 6-62-15-0148CH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,323.71	4,307.00	sussex		-0.17	180.00	
5,007.24	4,987.00	Shannon		-0.17	180.00	
6,272.51	6,247.00	Sharon Springs		-0.17	180.00	
6,375.99	6,340.00	Niobrara		-0.17	180.00	
6,418.49	6,375.00	A Chalk		-0.17	180.00	
6,540.60	6,462.00	B Shalk		-0.17	180.00	
6,690.51	6,535.00	Top C Target		-0.17	180.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
900.00	900.00	0.00	0.00	Start Build 2.00	
1,185.93	1,185.45	9.08	-10.99	Start 4136.22 hold at 1185.93 MD	
5,322.14	5,301.09	271.59	-328.72	Start Drop -2.00	
5,608.07	5,586.54	280.67	-339.71	Start 500.00 hold at 5608.07 MD	
6,108.07	6,086.54	280.67	-339.71	Start Build 12.00	
6,859.53	6,564.00	-198.25	-339.73	Start 7218.64 hold at 6859.53 MD	
14,078.17	6,542.00	-7,416.85	-339.97	TD at 14078.17	