

# **BILL BARRETT CORP**

**WELD COUNTY, COLORADO**

**Will 6-62-15\_22 NENW Pad**

**WILL 6-62-15-0461CH2**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**15 July, 2014**



**Bill Barrett Corporation**

## COMPANY DETAILS: BILL BARRETT CORP

Calculation Method: Minimum Curvature  
Error System: ISCWSA  
Scan Method: Closest Approach 3D  
Error Surface: Elliptical Conic  
Warning Method: Error Ratio

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well WILL 6-62-15-0461CH2, True North  
Vertical (TVD) Reference: KB @ 4772.0ft (Original Well Elev)  
Section (VS) Reference: Slot - (0.0N, 0.0E)  
Measured Depth Reference: KB @ 4772.0ft (Original Well Elev)  
Calculation Method: Minimum Curvature

## WELL DETAILS: WILL 6-62-15-0461CH2

+N/-S +E/-W Northing Easting Latitude Longitude  
0.0 0.0 1424896.13 3331045.24 40° 29' 37.111 N 104° 18' 34.891 W

## 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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1239.1	4.78	43.01	1238.8	7.3	6.8	2.00	43.01	-7.1	
4	5604.2	4.78	43.01	5588.7	273.4	255.0	0.00	0.00	-267.3	
5	5843.3	0.00	180.18	5827.5	280.7	261.8	2.00	180.00	-274.4	
6	6093.3	0.00	180.18	6077.5	280.7	261.8	0.00	180.18	-274.4	
7	6846.2	90.34	180.18	6555.0	-199.6	260.3	12.00	180.18	205.7	W 15-0461CH2 LP
8	16359.5	90.34	180.18	6498.0	-9712.7	230.4	0.00	0.00	9715.4	W 15-0461CH2 PBHL

## PROJECT DETAILS: WELD COUNTY, COLORADO

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

## FORMATION TOP DETAILS

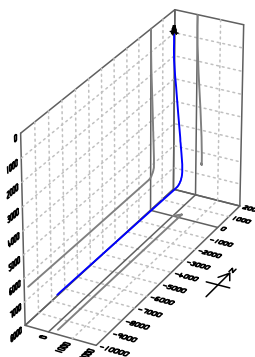
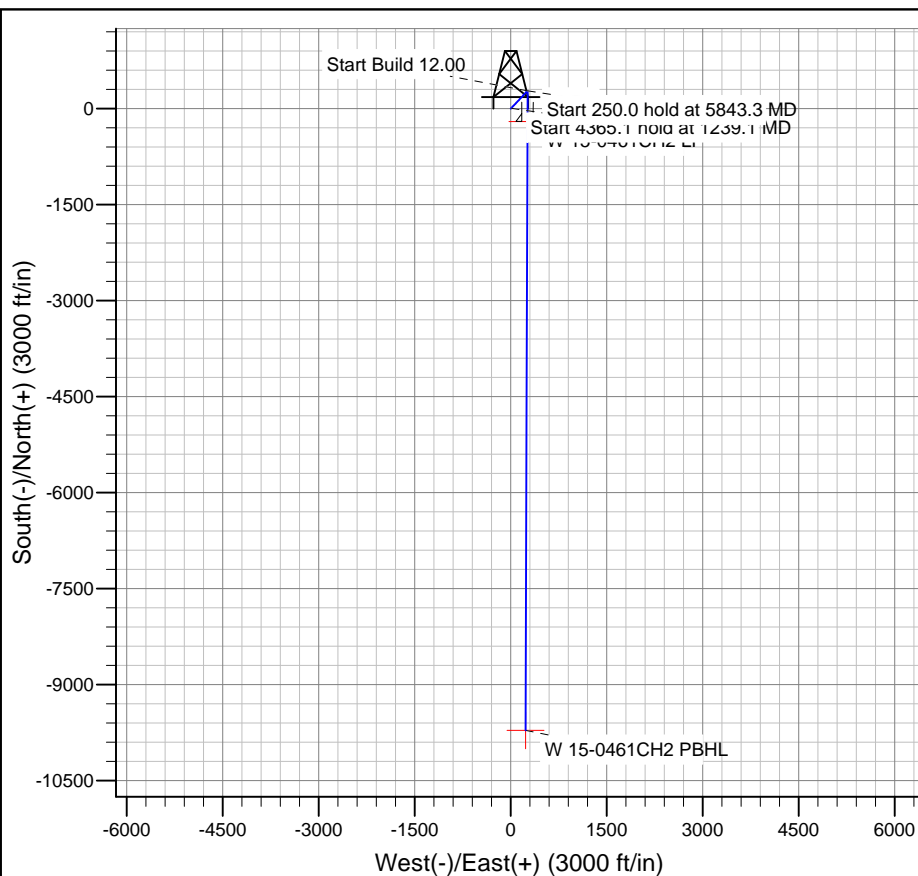
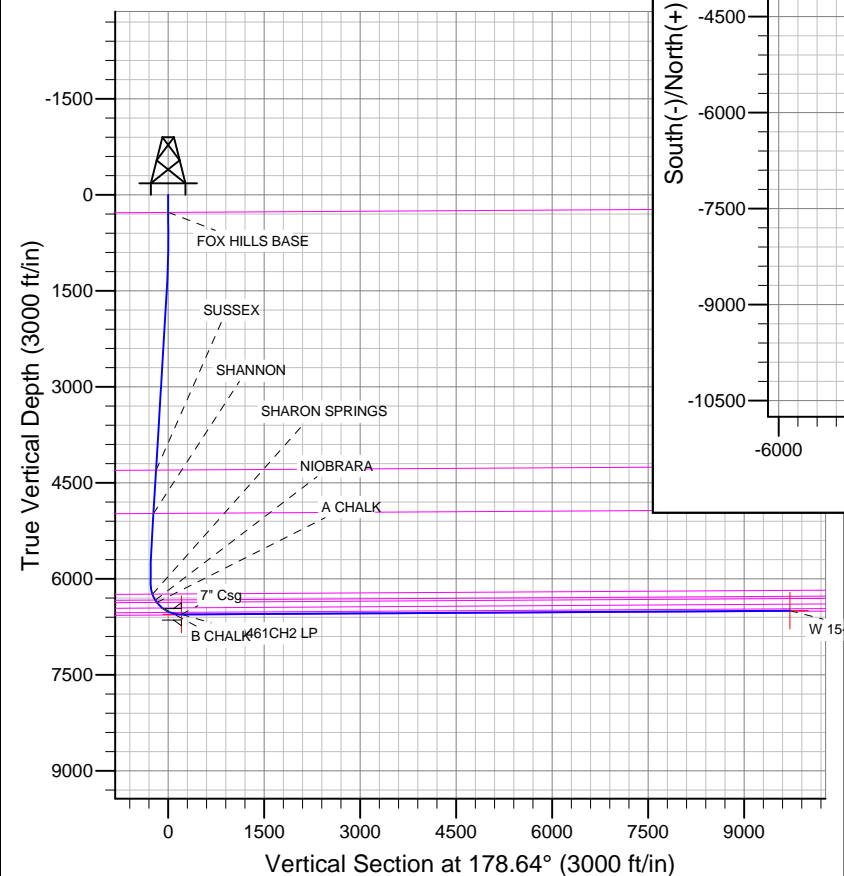
TVDPath	MDPath	Formation
272.0	272.0	BASE B TARGET
4299.2	4310.1	FOX HILLS BASE
4979.4	4992.8	SUSSEX
6239.5	6258.5	SHARON SPRINGS
6332.2	6361.9	NIOBRARA
6367.1	6404.4	A CHALK
6453.6	6526.3	B CHALK
6525.8	6675.5	TOP C TARGET

## CASING DETAILS

TVD	MD	Name	Size
6555.0	6846.2	7" Csg	7

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
W 15-0461CH2 PBHL	6498.0	-9712.7	230.4	Point
W 15-0461CH2 LP	6555.0	-199.6	260.3	Point



Azimuths to True North  
Magnetic North: 8.21°

Magnetic Field  
Strength: 52902.8snT  
Dip Angle: 67.09°  
Date: 7/15/2014  
Model: IGRF2010

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well WILL 6-62-15-0461CH2
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Site:</b>	Will 6-62-15_22 NENW Pad	<b>North Reference:</b>	True
<b>Well:</b>	WILL 6-62-15-0461CH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	WELD COUNTY, COLORADO		
<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		Will 6-62-15_22 NENW Pad				
Site Position:		Northing:	1,424,895.52 ft	Latitude:	40° 29' 37.111 N	
From:	Lat/Long	Easting:	3,330,999.60 ft	Longitude:	104° 18' 35.482 W	
Position Uncertainty:		0.0 ft	Slot Radius:	"	Grid Convergence:	0.77 °

Well	WILL 6-62-15-0461CH2					
Well Position	+N-S	0.0 ft	Northing:	1,424,896.13 ft	Latitude:	40° 29' 37.111 N
	+E-W	45.6 ft	Easting:	3,331,045.24 ft	Longitude:	104° 18' 34.891 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,750.0ft

<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	7/15/2014	8.21	67.09	52,903

<b>Design</b>	Design #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN		<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	178.64	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,239.1	4.78	43.01	1,238.8	7.3	6.8	2.00	2.00	0.00	43.01	
5,604.2	4.78	43.01	5,588.7	273.4	255.0	0.00	0.00	0.00	0.00	
5,843.3	0.00	180.18	5,827.5	280.7	261.8	2.00	-2.00	0.00	180.00	
6,093.3	0.00	180.18	6,077.5	280.7	261.8	0.00	0.00	0.00	180.18	
6,846.2	90.34	180.18	6,555.0	-199.6	260.3	12.00	12.00	0.00	180.18	W 15-0461CH2 LP
16,359.5	90.34	180.18	6,498.0	-9,712.7	230.4	0.00	0.00	0.00	0.00	W 15-0461CH2 PBI

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## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well WILL 6-62-15-0461CH2
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Site:</b>	Will 6-62-15_22 NENW Pad	<b>North Reference:</b>	True
<b>Well:</b>	WILL 6-62-15-0461CH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
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
272.0	0.00	0.00	272.0	0.0	0.0	0.0	0.00	0.00	0.00
FOX HILLS BASE									
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	2.00	43.01	1,100.0	1.3	1.2	-1.2	2.00	2.00	0.00
1,200.0	4.00	43.01	1,199.8	5.1	4.8	-5.0	2.00	2.00	0.00
1,239.1	4.78	43.01	1,238.8	7.3	6.8	-7.1	2.00	2.00	0.00
1,300.0	4.78	43.01	1,299.5	11.0	10.3	-10.8	0.00	0.00	0.00
1,400.0	4.78	43.01	1,399.2	17.1	16.0	-16.7	0.00	0.00	0.00
1,500.0	4.78	43.01	1,498.8	23.2	21.6	-22.7	0.00	0.00	0.00
1,600.0	4.78	43.01	1,598.5	29.3	27.3	-28.6	0.00	0.00	0.00
1,700.0	4.78	43.01	1,698.1	35.4	33.0	-34.6	0.00	0.00	0.00
1,800.0	4.78	43.01	1,797.8	41.5	38.7	-40.6	0.00	0.00	0.00
1,900.0	4.78	43.01	1,897.4	47.6	44.4	-46.5	0.00	0.00	0.00
2,000.0	4.78	43.01	1,997.1	53.7	50.1	-52.5	0.00	0.00	0.00
2,100.0	4.78	43.01	2,096.7	59.8	55.8	-58.4	0.00	0.00	0.00
2,200.0	4.78	43.01	2,196.4	65.9	61.4	-64.4	0.00	0.00	0.00
2,300.0	4.78	43.01	2,296.0	72.0	67.1	-70.4	0.00	0.00	0.00
2,400.0	4.78	43.01	2,395.7	78.1	72.8	-76.3	0.00	0.00	0.00
2,500.0	4.78	43.01	2,495.3	84.2	78.5	-82.3	0.00	0.00	0.00
2,600.0	4.78	43.01	2,595.0	90.3	84.2	-88.2	0.00	0.00	0.00
2,700.0	4.78	43.01	2,694.6	96.4	89.9	-94.2	0.00	0.00	0.00
2,800.0	4.78	43.01	2,794.3	102.4	95.6	-100.2	0.00	0.00	0.00
2,900.0	4.78	43.01	2,893.9	108.5	101.3	-106.1	0.00	0.00	0.00
3,000.0	4.78	43.01	2,993.6	114.6	106.9	-112.1	0.00	0.00	0.00
3,100.0	4.78	43.01	3,093.2	120.7	112.6	-118.0	0.00	0.00	0.00
3,200.0	4.78	43.01	3,192.9	126.8	118.3	-124.0	0.00	0.00	0.00
3,300.0	4.78	43.01	3,292.5	132.9	124.0	-130.0	0.00	0.00	0.00
3,400.0	4.78	43.01	3,392.2	139.0	129.7	-135.9	0.00	0.00	0.00
3,500.0	4.78	43.01	3,491.9	145.1	135.4	-141.9	0.00	0.00	0.00
3,600.0	4.78	43.01	3,591.5	151.2	141.1	-147.8	0.00	0.00	0.00
3,700.0	4.78	43.01	3,691.2	157.3	146.7	-153.8	0.00	0.00	0.00
3,800.0	4.78	43.01	3,790.8	163.4	152.4	-159.8	0.00	0.00	0.00
3,900.0	4.78	43.01	3,890.5	169.5	158.1	-165.7	0.00	0.00	0.00
4,000.0	4.78	43.01	3,990.1	175.6	163.8	-171.7	0.00	0.00	0.00
4,100.0	4.78	43.01	4,089.8	181.7	169.5	-177.6	0.00	0.00	0.00
4,200.0	4.78	43.01	4,189.4	187.8	175.2	-183.6	0.00	0.00	0.00
4,300.0	4.78	43.01	4,289.1	193.9	180.9	-189.6	0.00	0.00	0.00
4,310.1	4.78	43.01	4,299.2	194.5	181.4	-190.2	0.00	0.00	0.00
SUSSEX									
4,400.0	4.78	43.01	4,388.7	200.0	186.6	-195.5	0.00	0.00	0.00
4,500.0	4.78	43.01	4,488.4	206.1	192.2	-201.5	0.00	0.00	0.00
4,600.0	4.78	43.01	4,588.0	212.2	197.9	-207.4	0.00	0.00	0.00
4,700.0	4.78	43.01	4,687.7	218.3	203.6	-213.4	0.00	0.00	0.00
4,800.0	4.78	43.01	4,787.3	224.4	209.3	-219.3	0.00	0.00	0.00

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## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well WILL 6-62-15-0461CH2
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Site:</b>	Will 6-62-15_22 NENW Pad	<b>North Reference:</b>	True
<b>Well:</b>	WILL 6-62-15-0461CH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned 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)
4,900.0	4.78	43.01	4,887.0	230.5	215.0	-225.3	0.00	0.00	0.00
4,992.8	4.78	43.01	4,979.4	236.1	220.3	-230.8	0.00	0.00	0.00
<b>SHANNON</b>									
5,000.0	4.78	43.01	4,986.6	236.6	220.7	-231.3	0.00	0.00	0.00
5,100.0	4.78	43.01	5,086.3	242.7	226.4	-237.2	0.00	0.00	0.00
5,200.0	4.78	43.01	5,185.9	248.8	232.1	-243.2	0.00	0.00	0.00
5,300.0	4.78	43.01	5,285.6	254.9	237.7	-249.1	0.00	0.00	0.00
5,400.0	4.78	43.01	5,385.2	261.0	243.4	-255.1	0.00	0.00	0.00
5,500.0	4.78	43.01	5,484.9	267.1	249.1	-261.1	0.00	0.00	0.00
5,600.0	4.78	43.01	5,584.5	273.1	254.8	-267.0	0.00	0.00	0.00
5,604.2	4.78	43.01	5,588.7	273.4	255.0	-267.3	0.00	0.00	0.00
5,700.0	2.87	43.01	5,684.3	278.1	259.4	-271.8	2.00	-2.00	0.00
5,800.0	0.87	43.01	5,784.3	280.5	261.6	-274.2	2.00	-2.00	0.00
5,843.3	0.00	180.18	5,827.5	280.7	261.8	-274.4	2.00	-2.00	0.00
5,900.0	0.00	180.18	5,884.2	280.7	261.8	-274.4	0.00	0.00	0.00
6,000.0	0.00	180.18	5,984.2	280.7	261.8	-274.4	0.00	0.00	0.00
6,093.3	0.00	180.18	6,077.5	280.7	261.8	-274.4	0.00	0.00	0.00
6,100.0	0.80	180.18	6,084.2	280.6	261.8	-274.4	12.00	12.00	0.00
6,200.0	12.80	180.18	6,183.4	268.8	261.8	-262.5	12.00	12.00	0.00
6,258.5	19.83	180.18	6,239.5	252.4	261.8	-246.1	12.00	12.00	0.00
<b>SHARON SPRINGS</b>									
6,300.0	24.80	180.18	6,277.9	236.6	261.7	-230.4	12.00	12.00	0.00
6,361.9	32.24	180.18	6,332.2	207.1	261.6	-200.8	12.00	12.00	0.00
<b>NIOBARA</b>									
6,400.0	36.80	180.18	6,363.6	185.5	261.5	-179.3	12.00	12.00	0.00
6,404.4	37.33	180.18	6,367.1	182.9	261.5	-176.6	12.00	12.00	0.00
<b>A CHALK</b>									
6,500.0	48.80	180.18	6,436.8	117.7	261.3	-111.5	12.00	12.00	0.00
6,526.3	51.96	180.18	6,453.6	97.5	261.3	-91.2	12.00	12.00	0.00
<b>B CHALK</b>									
6,600.0	60.80	180.18	6,494.4	36.1	261.1	-29.9	12.00	12.00	0.00
6,675.5	69.86	180.18	6,525.8	-32.4	260.9	38.5	12.00	12.00	0.00
<b>TOP C TARGET</b>									
6,700.0	72.80	180.18	6,533.7	-55.6	260.8	61.8	12.00	12.00	0.00
6,800.0	84.80	180.18	6,553.0	-153.5	260.5	159.7	12.00	12.00	0.00
6,846.2	90.34	180.18	6,555.0	-199.6	260.3	205.7	11.99	11.99	0.00
<b>7" Csg - W 15-0461CH2 LP</b>									
6,900.0	90.34	180.18	6,554.7	-253.5	260.2	259.6	0.01	0.01	0.00
7,000.0	90.34	180.18	6,554.1	-353.5	259.8	359.5	0.00	0.00	0.00
7,100.0	90.34	180.18	6,553.5	-453.5	259.5	459.5	0.00	0.00	0.00
7,200.0	90.34	180.18	6,552.9	-553.5	259.2	559.5	0.00	0.00	0.00
7,300.0	90.34	180.18	6,552.3	-653.5	258.9	659.4	0.00	0.00	0.00
7,400.0	90.34	180.18	6,551.7	-753.5	258.6	759.4	0.00	0.00	0.00
7,500.0	90.34	180.18	6,551.1	-853.5	258.3	859.3	0.00	0.00	0.00
7,600.0	90.34	180.18	6,550.5	-953.5	258.0	959.3	0.00	0.00	0.00
7,700.0	90.34	180.18	6,549.9	-1,053.5	257.6	1,059.3	0.00	0.00	0.00
7,800.0	90.34	180.18	6,549.3	-1,153.5	257.3	1,159.2	0.00	0.00	0.00
7,900.0	90.34	180.18	6,548.7	-1,253.4	257.0	1,259.2	0.00	0.00	0.00
8,000.0	90.34	180.18	6,548.1	-1,353.4	256.7	1,359.2	0.00	0.00	0.00
8,100.0	90.34	180.18	6,547.5	-1,453.4	256.4	1,459.1	0.00	0.00	0.00
8,200.0	90.34	180.18	6,546.9	-1,553.4	256.1	1,559.1	0.00	0.00	0.00
8,300.0	90.34	180.18	6,546.3	-1,653.4	255.8	1,659.0	0.00	0.00	0.00
8,400.0	90.34	180.18	6,545.7	-1,753.4	255.4	1,759.0	0.00	0.00	0.00

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well WILL 6-62-15-0461CH2
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Site:</b>	Will 6-62-15_22 NENW Pad	<b>North Reference:</b>	True
<b>Well:</b>	WILL 6-62-15-0461CH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned 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)
8,500.0	90.34	180.18	6,545.1	-1,853.4	255.1	1,859.0	0.00	0.00	0.00
8,600.0	90.34	180.18	6,544.5	-1,953.4	254.8	1,958.9	0.00	0.00	0.00
8,700.0	90.34	180.18	6,543.9	-2,053.4	254.5	2,058.9	0.00	0.00	0.00
8,800.0	90.34	180.18	6,543.3	-2,153.4	254.2	2,158.9	0.00	0.00	0.00
8,900.0	90.34	180.18	6,542.7	-2,253.4	253.9	2,258.8	0.00	0.00	0.00
9,000.0	90.34	180.18	6,542.1	-2,353.4	253.5	2,358.8	0.00	0.00	0.00
9,100.0	90.34	180.18	6,541.5	-2,453.4	253.2	2,458.7	0.00	0.00	0.00
9,200.0	90.34	180.18	6,540.9	-2,553.4	252.9	2,558.7	0.00	0.00	0.00
9,300.0	90.34	180.18	6,540.3	-2,653.4	252.6	2,658.7	0.00	0.00	0.00
9,400.0	90.34	180.18	6,539.7	-2,753.4	252.3	2,758.6	0.00	0.00	0.00
9,500.0	90.34	180.18	6,539.1	-2,853.4	252.0	2,858.6	0.00	0.00	0.00
9,600.0	90.34	180.18	6,538.5	-2,953.4	251.7	2,958.5	0.00	0.00	0.00
9,700.0	90.34	180.18	6,537.9	-3,053.4	251.3	3,058.5	0.00	0.00	0.00
9,800.0	90.34	180.18	6,537.3	-3,153.4	251.0	3,158.5	0.00	0.00	0.00
9,900.0	90.34	180.18	6,536.7	-3,253.4	250.7	3,258.4	0.00	0.00	0.00
10,000.0	90.34	180.18	6,536.1	-3,353.4	250.4	3,358.4	0.00	0.00	0.00
10,100.0	90.34	180.18	6,535.5	-3,453.4	250.1	3,458.4	0.00	0.00	0.00
10,200.0	90.34	180.18	6,534.9	-3,553.4	249.8	3,558.3	0.00	0.00	0.00
10,300.0	90.34	180.18	6,534.3	-3,653.4	249.5	3,658.3	0.00	0.00	0.00
10,400.0	90.34	180.18	6,533.7	-3,753.4	249.1	3,758.2	0.00	0.00	0.00
10,500.0	90.34	180.18	6,533.1	-3,853.4	248.8	3,858.2	0.00	0.00	0.00
10,600.0	90.34	180.18	6,532.5	-3,953.4	248.5	3,958.2	0.00	0.00	0.00
10,700.0	90.34	180.18	6,531.9	-4,053.4	248.2	4,058.1	0.00	0.00	0.00
10,800.0	90.34	180.18	6,531.3	-4,153.4	247.9	4,158.1	0.00	0.00	0.00
10,900.0	90.34	180.18	6,530.7	-4,253.4	247.6	4,258.1	0.00	0.00	0.00
11,000.0	90.34	180.18	6,530.1	-4,353.4	247.3	4,358.0	0.00	0.00	0.00
11,100.0	90.34	180.18	6,529.5	-4,453.4	246.9	4,458.0	0.00	0.00	0.00
11,200.0	90.34	180.18	6,528.9	-4,553.4	246.6	4,557.9	0.00	0.00	0.00
11,300.0	90.34	180.18	6,528.3	-4,653.4	246.3	4,657.9	0.00	0.00	0.00
11,400.0	90.34	180.18	6,527.7	-4,753.4	246.0	4,757.9	0.00	0.00	0.00
11,500.0	90.34	180.18	6,527.1	-4,853.4	245.7	4,857.8	0.00	0.00	0.00
11,600.0	90.34	180.18	6,526.5	-4,953.4	245.4	4,957.8	0.00	0.00	0.00
11,700.0	90.34	180.18	6,525.9	-5,053.4	245.0	5,057.8	0.00	0.00	0.00
11,800.0	90.34	180.18	6,525.3	-5,153.4	244.7	5,157.7	0.00	0.00	0.00
11,900.0	90.34	180.18	6,524.7	-5,253.4	244.4	5,257.7	0.00	0.00	0.00
12,000.0	90.34	180.18	6,524.1	-5,353.4	244.1	5,357.6	0.00	0.00	0.00
12,100.0	90.34	180.18	6,523.5	-5,453.4	243.8	5,457.6	0.00	0.00	0.00
12,200.0	90.34	180.18	6,522.9	-5,553.4	243.5	5,557.6	0.00	0.00	0.00
12,300.0	90.34	180.18	6,522.3	-5,653.3	243.2	5,657.5	0.00	0.00	0.00
12,400.0	90.34	180.18	6,521.7	-5,753.3	242.8	5,757.5	0.00	0.00	0.00
12,500.0	90.34	180.18	6,521.1	-5,853.3	242.5	5,857.4	0.00	0.00	0.00
12,600.0	90.34	180.18	6,520.5	-5,953.3	242.2	5,957.4	0.00	0.00	0.00
12,700.0	90.34	180.18	6,519.9	-6,053.3	241.9	6,057.4	0.00	0.00	0.00
12,800.0	90.34	180.18	6,519.3	-6,153.3	241.6	6,157.3	0.00	0.00	0.00
12,900.0	90.34	180.18	6,518.7	-6,253.3	241.3	6,257.3	0.00	0.00	0.00
13,000.0	90.34	180.18	6,518.1	-6,353.3	241.0	6,357.3	0.00	0.00	0.00
13,100.0	90.34	180.18	6,517.5	-6,453.3	240.6	6,457.2	0.00	0.00	0.00
13,200.0	90.34	180.18	6,516.9	-6,553.3	240.3	6,557.2	0.00	0.00	0.00
13,300.0	90.34	180.18	6,516.3	-6,653.3	240.0	6,657.1	0.00	0.00	0.00
13,400.0	90.34	180.18	6,515.7	-6,753.3	239.7	6,757.1	0.00	0.00	0.00
13,500.0	90.34	180.18	6,515.1	-6,853.3	239.4	6,857.1	0.00	0.00	0.00
13,600.0	90.34	180.18	6,514.5	-6,953.3	239.1	6,957.0	0.00	0.00	0.00
13,700.0	90.34	180.18	6,513.9	-7,053.3	238.8	7,057.0	0.00	0.00	0.00
13,800.0	90.34	180.18	6,513.3	-7,153.3	238.4	7,157.0	0.00	0.00	0.00

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well WILL 6-62-15-0461CH2
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Site:</b>	Will 6-62-15_22 NENW Pad	<b>North Reference:</b>	True
<b>Well:</b>	WILL 6-62-15-0461CH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

### Planned 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)
13,900.0	90.34	180.18	6,512.7	-7,253.3	238.1	7,256.9	0.00	0.00	0.00
14,000.0	90.34	180.18	6,512.1	-7,353.3	237.8	7,356.9	0.00	0.00	0.00
14,100.0	90.34	180.18	6,511.5	-7,453.3	237.5	7,456.8	0.00	0.00	0.00
14,200.0	90.34	180.18	6,510.9	-7,553.3	237.2	7,556.8	0.00	0.00	0.00
14,300.0	90.34	180.18	6,510.3	-7,653.3	236.9	7,656.8	0.00	0.00	0.00
14,400.0	90.34	180.18	6,509.7	-7,753.3	236.5	7,756.7	0.00	0.00	0.00
14,500.0	90.34	180.18	6,509.1	-7,853.3	236.2	7,856.7	0.00	0.00	0.00
14,600.0	90.34	180.18	6,508.5	-7,953.3	235.9	7,956.7	0.00	0.00	0.00
14,700.0	90.34	180.18	6,507.9	-8,053.3	235.6	8,056.6	0.00	0.00	0.00
14,800.0	90.34	180.18	6,507.3	-8,153.3	235.3	8,156.6	0.00	0.00	0.00
14,900.0	90.34	180.18	6,506.7	-8,253.3	235.0	8,256.5	0.00	0.00	0.00
15,000.0	90.34	180.18	6,506.1	-8,353.3	234.7	8,356.5	0.00	0.00	0.00
15,100.0	90.34	180.18	6,505.5	-8,453.3	234.3	8,456.5	0.00	0.00	0.00
15,200.0	90.34	180.18	6,504.9	-8,553.3	234.0	8,556.4	0.00	0.00	0.00
15,300.0	90.34	180.18	6,504.3	-8,653.3	233.7	8,656.4	0.00	0.00	0.00
15,400.0	90.34	180.18	6,503.7	-8,753.3	233.4	8,756.4	0.00	0.00	0.00
15,500.0	90.34	180.18	6,503.1	-8,853.3	233.1	8,856.3	0.00	0.00	0.00
15,600.0	90.34	180.18	6,502.6	-8,953.3	232.8	8,956.3	0.00	0.00	0.00
15,700.0	90.34	180.18	6,502.0	-9,053.3	232.5	9,056.2	0.00	0.00	0.00
15,800.0	90.34	180.18	6,501.4	-9,153.3	232.1	9,156.2	0.00	0.00	0.00
15,900.0	90.34	180.18	6,500.8	-9,253.3	231.8	9,256.2	0.00	0.00	0.00
16,000.0	90.34	180.18	6,500.2	-9,353.3	231.5	9,356.1	0.00	0.00	0.00
16,100.0	90.34	180.18	6,499.6	-9,453.3	231.2	9,456.1	0.00	0.00	0.00
16,200.0	90.34	180.18	6,499.0	-9,553.3	230.9	9,556.0	0.00	0.00	0.00
16,300.0	90.34	180.18	6,498.4	-9,653.3	230.6	9,656.0	0.00	0.00	0.00
16,359.5	90.34	180.18	6,498.0	-9,712.7	230.4	9,715.4	0.00	0.00	0.00
W 15-0461CH2 PBHL									

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,846.2	6,555.0	7" Csg	7	8-3/4

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
272.0	272.0	FOX HILLS BASE		-0.34	180.18
4,310.1	4,298.0	SUSSEX		-0.34	180.18
4,992.8	4,978.0	SHANNON		-0.34	180.18
6,258.5	6,238.0	SHARON SPRINGS		-0.34	180.18
6,361.9	6,331.0	NIOBRARA		-0.34	180.18
6,404.4	6,366.0	A CHALK		-0.34	180.18
6,526.3	6,453.0	B CHALK		-0.34	180.18
6,675.5	6,526.0	TOP C TARGET		-0.34	180.18
	6,565.0	BASE B TARGET		-0.34	180.18

**Bill Barrett Corp**  
Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well WILL 6-62-15-0461CH2
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4772.0ft (Original Well Elev)
<b>Site:</b>	Will 6-62-15_22 NENW Pad	<b>North Reference:</b>	True
<b>Well:</b>	WILL 6-62-15-0461CH2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		