



**Bill Barrett Corporation**

## **Bill Barrett Corp.**

**Weld Co., CO**

**Sec.35-T5N-R62W**

**Anschutz State 5-62-35-0108BH2**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

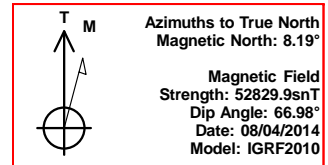
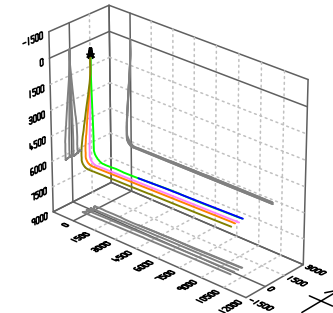
**15 January, 2015**

# **Archer**



Bill Barrett Corp.  
Project: Weld Co., CO  
Site: Sec.35-T5N-R62W  
Well: Anschutz State 5-62-35-0108BH2  
Wellbore: Wellbore #1  
Design: Design #4  
Lat: 40° 21' 39.949 N  
Long: 104° 17' 55.720 W  
Pad GL: 4640.00  
KB: Well @ 4656.00usft

# Archer



## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
9159.00	92.40	87.40	6210.23	439.35	2885.05	0.00	0.00	2894.41	Start DLS 1.50 TFO 151.66
9259.73	91.07	88.12	6207.18	443.28	2985.66	1.50	151.66	2995.08	Start 1145.18 hold at 9259.73 MD
10404.91	91.07	88.12	6185.79	480.90	4130.02	0.00	0.00	4140.00	Start DLS 1.50 TFO -180.00
10455.38	90.31	88.12	6185.19	482.56	4180.46	1.50	180.00	4190.47	Start 5709.10 hold at 10455.38 MD
16164.48	90.31	88.12	6154.00	670.11	9886.39	0.00	0.00	9899.21	TD at 16164.48

## WELL DETAILS: Anschutz State 5-62-35-0108BH2

+N/-S	+E/-W	Northing	Ground Level: Easting	4640.00 Latitude	Longitude	Slot
0.00	0.00	1376655.321	3334725.316	40° 21' 39.949 N	104° 17' 55.720 W	

## PROJECT DETAILS: Weld Co., CO

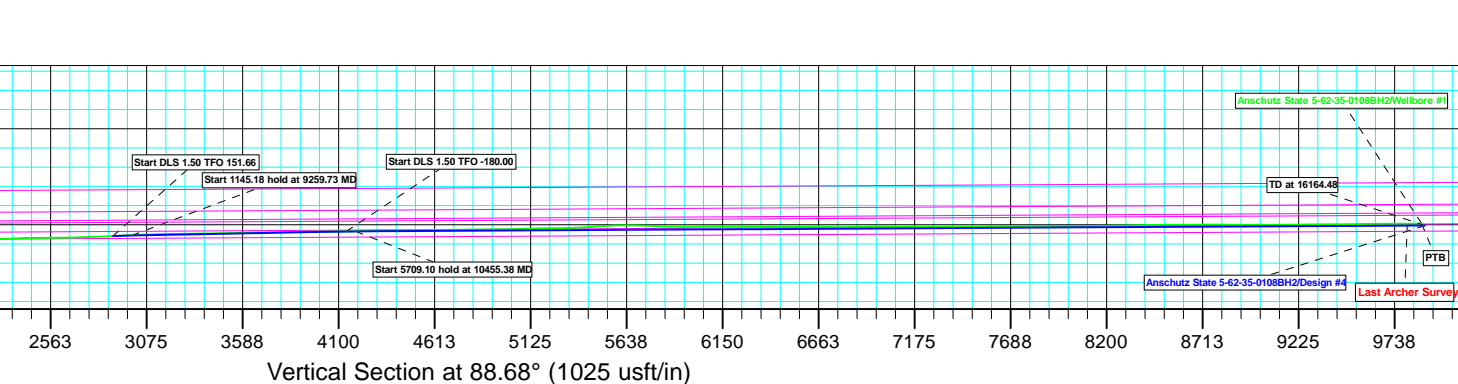
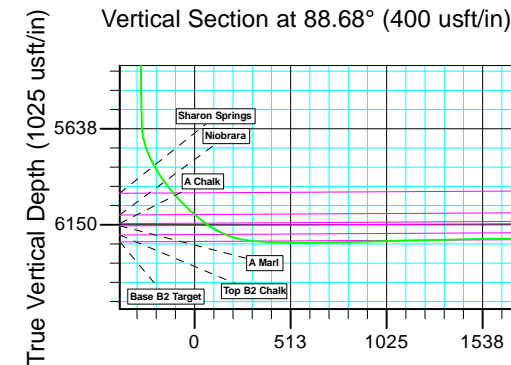
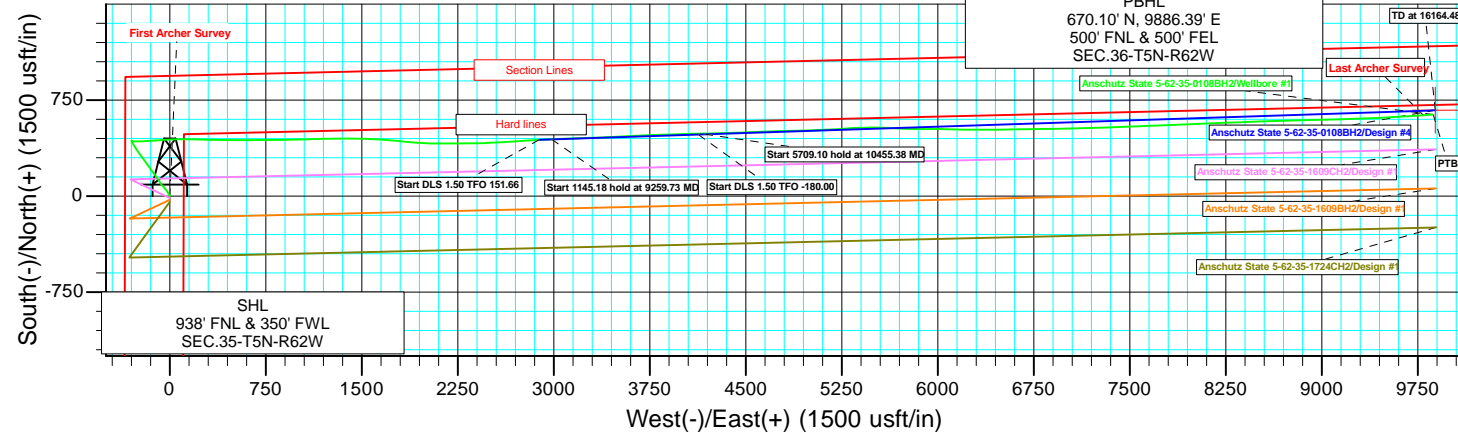
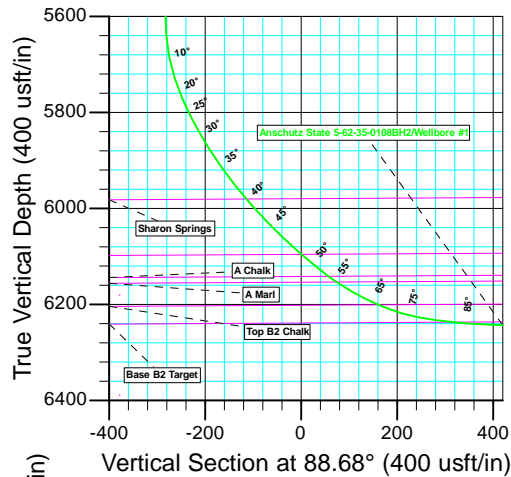
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone  
System Datum: Mean Sea Level

## CASING DETAILS

TVD	MD	Name
	6555.62	7" Csg.

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
Anschutz State 5-62-35-0108BH2 tgt	6154.00	670.11	9886.39	40° 21' 46.552 N	104° 15' 47.999 W	



Plan: Design #4 (Anschutz State 5-62-35-0108BH2/Wellbore #1)

Created By: Ricky Osburn Date: 8:22, January 15 2015

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Anschutz State 5-62-35-0108BH2
<b>Project:</b>	Weld Co., CO	<b>TVD Reference:</b>	Well @ 4656.00usft
<b>Site:</b>	Sec.35-T5N-R62W	<b>MD Reference:</b>	Well @ 4656.00usft
<b>Well:</b>	Anschutz State 5-62-35-0108BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDBBW

<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.35-T5N-R62W			
Site Position:		Northing:	1,375,286.395 usft	Latitude:	40° 21' 26.420 N
From:	Lat/Long	Easting:	3,334,739.959 usft	Longitude:	104° 17' 55.770 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.78 °

Well		Anschutz State 5-62-35-0108BH2				
Well Position	+N/-S	0.00 usft	Northing:	1,376,655.321 usft	Latitude:	40° 21' 39.949 N
	+E/-W	0.00 usft	Easting:	3,334,725.316 usft	Longitude:	104° 17' 55.720 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,640.00 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	2014/08/04	8.19	66.98	52,830

<b>Design</b>	Wellbore #1				
<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	88.68	

<b>Survey Program</b>	<b>Date</b>	2015/01/15			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
800.00	16,150.00	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>First Archer Survey</b>										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
860.00	0.30	36.40	860.00	0.13	0.09	0.10	0.50	0.50	0.00	
923.00	0.70	347.00	923.00	0.63	0.10	0.12	0.88	0.63	-78.41	
1,018.00	5.30	328.70	1,017.84	4.95	-2.31	-2.19	4.88	4.84	-19.26	
1,110.00	6.40	328.20	1,109.36	12.94	-7.22	-6.92	1.20	1.20	-0.54	
1,201.00	7.70	329.50	1,199.67	22.50	-12.98	-12.46	1.44	1.43	1.43	
1,293.00	8.00	326.60	1,290.81	33.16	-19.64	-18.87	0.54	0.33	-3.15	
1,385.00	7.80	324.20	1,381.94	43.57	-26.81	-25.80	0.42	-0.22	-2.61	
1,477.00	8.10	323.50	1,473.05	53.84	-34.32	-33.07	0.34	0.33	-0.76	
1,568.00	8.20	320.60	1,563.13	64.01	-42.25	-40.77	0.46	0.11	-3.19	
1,660.00	8.10	318.30	1,654.21	73.92	-50.73	-49.01	0.37	-0.11	-2.50	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Anschutz State 5-62-35-0108BH2
<b>Project:</b>	Weld Co., CO	<b>TVD Reference:</b>	Well @ 4656.00usft
<b>Site:</b>	Sec.35-T5N-R62W	<b>MD Reference:</b>	Well @ 4656.00usft
<b>Well:</b>	Anschutz State 5-62-35-0108BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDBBW

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)	
1,752.00	7.70	316.20	1,745.33	83.21	-59.31	-57.37	0.54	-0.43	-2.28	
1,843.00	7.80	321.90	1,835.50	92.47	-67.34	-65.19	0.85	0.11	6.26	
1,935.00	8.00	330.40	1,926.63	102.95	-74.35	-71.96	1.29	0.22	9.24	
2,027.00	7.70	329.10	2,017.77	113.80	-80.68	-78.03	0.38	-0.33	-1.41	
2,119.00	7.10	328.90	2,109.00	123.96	-86.78	-83.90	0.65	-0.65	-0.22	
2,210.00	8.20	327.00	2,199.19	134.22	-93.22	-90.10	1.24	1.21	-2.09	
2,302.00	8.00	323.40	2,290.28	144.86	-100.61	-97.25	0.59	-0.22	-3.91	
2,394.00	8.00	323.50	2,381.38	155.14	-108.23	-104.63	0.02	0.00	0.11	
2,486.00	7.50	321.80	2,472.54	165.01	-115.76	-111.92	0.60	-0.54	-1.85	
2,578.00	8.30	322.50	2,563.67	175.00	-123.51	-119.45	0.88	0.87	0.76	
2,670.00	8.50	322.40	2,654.68	185.65	-131.70	-127.39	0.22	0.22	-0.11	
2,762.00	8.40	322.00	2,745.68	196.33	-139.99	-135.43	0.13	-0.11	-0.43	
2,853.00	7.50	321.40	2,835.80	206.21	-147.79	-143.00	0.99	-0.99	-0.66	
2,945.00	7.30	324.40	2,927.04	215.66	-154.93	-149.92	0.47	-0.22	3.26	
3,036.00	7.90	326.10	3,017.24	225.55	-161.79	-156.55	0.70	0.66	1.87	
3,128.00	7.20	325.60	3,108.44	235.55	-168.57	-163.10	0.76	-0.76	-0.54	
3,219.00	7.20	327.30	3,198.72	245.06	-174.87	-169.18	0.23	0.00	1.87	
3,311.00	8.10	324.70	3,289.90	255.20	-181.73	-175.81	1.05	0.98	-2.83	
3,403.00	8.70	325.00	3,380.92	266.19	-189.47	-183.29	0.65	0.65	0.33	
3,497.00	8.80	324.40	3,473.82	277.86	-197.73	-191.28	0.14	0.11	-0.64	
3,592.00	9.20	323.50	3,567.65	289.87	-206.48	-199.75	0.45	0.42	-0.95	
3,686.00	9.00	322.20	3,660.47	301.72	-215.46	-208.45	0.31	-0.21	-1.38	
3,781.00	8.90	322.40	3,754.31	313.42	-224.49	-217.22	0.11	-0.11	0.21	
3,876.00	8.70	325.00	3,848.19	325.12	-233.10	-225.55	0.47	-0.21	2.74	
3,970.00	8.20	325.50	3,941.17	336.47	-240.97	-233.16	0.54	-0.53	0.53	
4,064.00	7.50	322.80	4,034.29	346.88	-248.48	-240.42	0.84	-0.74	-2.87	
4,159.00	7.50	329.30	4,128.48	357.15	-255.39	-247.10	0.89	0.00	6.84	
4,254.00	7.60	329.30	4,222.66	367.89	-261.77	-253.22	0.11	0.11	0.00	
4,349.00	7.30	325.00	4,316.86	378.23	-268.44	-259.65	0.67	-0.32	-4.53	
4,443.00	6.50	320.40	4,410.18	387.22	-275.25	-266.26	1.03	-0.85	-4.89	
4,538.00	7.80	330.90	4,504.44	397.00	-281.82	-272.60	1.94	1.37	11.05	
4,632.00	7.80	329.30	4,597.57	408.06	-288.18	-278.70	0.23	0.00	-1.70	
4,727.00	6.70	331.00	4,691.81	418.45	-294.15	-284.44	1.18	-1.16	1.79	
4,822.00	4.00	336.00	4,786.39	426.32	-298.19	-288.29	2.88	-2.84	5.26	
4,916.00	1.00	359.10	4,880.29	430.14	-299.54	-289.55	3.30	-3.19	24.57	
5,010.00	0.70	35.60	4,974.28	431.43	-299.21	-289.20	0.64	-0.32	38.83	
5,104.00	0.60	63.10	5,068.27	432.12	-298.44	-288.41	0.34	-0.11	29.26	
5,198.00	0.40	110.40	5,162.27	432.23	-297.69	-287.66	0.47	-0.21	50.32	
5,293.00	0.90	120.00	5,257.26	431.74	-296.74	-286.71	0.54	0.53	10.11	
5,388.00	1.10	128.70	5,352.25	430.79	-295.38	-285.38	0.26	0.21	9.16	
5,482.00	0.40	147.90	5,446.24	429.95	-294.50	-284.52	0.78	-0.74	20.43	
5,577.00	0.70	160.90	5,541.24	429.12	-294.14	-284.17	0.34	0.32	13.68	
5,672.00	3.70	98.60	5,636.16	428.12	-290.91	-280.97	3.61	3.16	-65.58	
5,719.00	10.70	91.00	5,682.76	427.81	-285.04	-275.11	15.00	14.89	-16.17	
5,766.00	18.20	89.00	5,728.24	427.86	-273.33	-263.40	15.99	15.96	-4.26	
5,813.00	22.60	89.00	5,772.28	428.15	-256.95	-247.02	9.36	9.36	0.00	
5,861.00	27.60	89.60	5,815.74	428.39	-236.60	-226.67	10.43	10.42	1.25	
5,908.00	31.20	88.30	5,856.68	428.83	-213.53	-203.60	7.78	7.66	-2.77	
5,956.00	34.30	88.10	5,897.04	429.64	-187.58	-177.64	6.46	6.46	-0.42	
6,003.00	37.10	86.50	5,935.21	430.95	-160.19	-150.22	6.28	5.96	-3.40	
6,051.00	39.60	85.00	5,972.85	433.17	-130.50	-120.48	5.56	5.21	-3.12	
6,098.00	42.50	85.80	6,008.29	435.63	-99.73	-89.67	6.27	6.17	1.70	
6,145.00	45.90	86.20	6,041.98	437.92	-67.05	-56.95	7.26	7.23	0.85	
6,192.00	47.10	86.70	6,074.33	440.03	-33.02	-22.88	2.67	2.55	1.06	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Anschutz State 5-62-35-0108BH2
<b>Project:</b>	Weld Co., CO	<b>TVD Reference:</b>	Well @ 4656.00usft
<b>Site:</b>	Sec.35-T5N-R62W	<b>MD Reference:</b>	Well @ 4656.00usft
<b>Well:</b>	Anschutz State 5-62-35-0108BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDBBW

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)
6,240.00	49.50	86.90	6,106.26	442.03	2.76	12.94	5.01	5.00	0.42
6,287.00	52.20	88.10	6,135.93	443.61	39.16	49.37	6.08	5.74	2.55
6,335.00	58.30	88.60	6,163.28	444.74	78.57	88.79	12.74	12.71	1.04
6,382.00	63.40	91.10	6,186.17	444.82	119.60	129.81	11.80	10.85	5.32
6,430.00	67.90	91.40	6,205.96	443.87	163.31	173.49	9.39	9.37	0.62
6,477.00	75.20	90.80	6,220.82	443.02	207.85	218.00	15.58	15.53	-1.28
6,525.00	81.00	91.50	6,230.71	442.07	254.79	264.91	12.17	12.08	1.46
6,557.00	83.50	92.30	6,235.03	441.02	286.48	296.56	8.20	7.81	2.50
6,640.00	86.90	90.90	6,241.97	438.71	369.14	379.15	4.43	4.10	-1.69
6,703.00	88.10	90.70	6,244.72	437.83	432.07	442.04	1.93	1.90	-0.32
6,798.00	89.60	90.50	6,246.63	436.84	527.05	536.97	1.59	1.58	-0.21
6,892.00	90.60	89.80	6,246.46	436.59	621.04	630.94	1.30	1.06	-0.74
6,987.00	91.90	89.60	6,244.39	437.09	716.02	725.90	1.38	1.37	-0.21
7,082.00	90.50	88.40	6,242.40	438.75	810.98	820.87	1.94	-1.47	-1.26
7,177.00	92.30	89.80	6,240.08	440.24	905.93	915.83	2.40	1.89	1.47
7,271.00	91.90	88.90	6,236.64	441.31	999.86	1,009.76	1.05	-0.43	-0.96
7,365.00	90.20	87.40	6,234.91	444.34	1,093.79	1,103.74	2.41	-1.81	-1.60
7,459.00	91.60	89.30	6,233.44	447.05	1,187.73	1,197.72	2.51	1.49	2.02
7,554.00	91.30	88.90	6,231.03	448.54	1,282.69	1,292.68	0.53	-0.32	-0.42
7,648.00	90.90	89.90	6,229.23	449.52	1,376.67	1,386.66	1.15	-0.43	1.06
7,741.00	91.20	90.90	6,227.52	448.87	1,469.65	1,479.60	1.12	0.32	1.08
7,836.00	91.00	92.70	6,225.70	445.89	1,564.58	1,574.44	1.91	-0.21	1.89
7,930.00	91.00	93.70	6,224.06	440.64	1,658.42	1,668.13	1.06	0.00	1.06
8,025.00	90.70	95.30	6,222.65	433.19	1,753.11	1,762.62	1.71	-0.32	1.68
8,119.00	90.80	96.30	6,221.42	423.69	1,846.62	1,855.89	1.07	0.11	1.06
8,214.00	90.10	93.80	6,220.67	415.33	1,941.24	1,950.29	2.73	-0.74	-2.63
8,309.00	88.40	90.90	6,221.92	411.44	2,036.14	2,045.08	3.54	-1.79	-3.05
8,404.00	88.20	89.80	6,224.74	410.86	2,131.09	2,139.99	1.18	-0.21	-1.16
8,498.00	89.70	89.60	6,226.46	411.35	2,225.07	2,233.96	1.61	1.60	-0.21
8,593.00	92.40	89.30	6,224.72	412.26	2,320.05	2,328.93	2.86	2.84	-0.32
8,687.00	92.10	89.00	6,221.03	413.65	2,413.96	2,422.85	0.45	-0.32	-0.32
8,781.00	89.80	86.80	6,219.47	417.10	2,507.87	2,516.82	3.39	-2.45	-2.34
8,875.00	90.50	86.90	6,219.22	422.26	2,601.73	2,610.77	0.75	0.74	0.11
8,970.00	91.60	86.50	6,217.48	427.73	2,696.56	2,705.69	1.23	1.16	-0.42
9,065.00	92.40	86.00	6,214.17	433.94	2,791.29	2,800.55	0.99	0.84	-0.53
9,159.00	92.40	87.40	6,210.23	439.35	2,885.05	2,894.41	1.49	0.00	1.49
9,255.00	92.30	87.20	6,206.29	443.86	2,980.87	2,990.30	0.23	-0.10	-0.21
9,350.00	92.40	88.00	6,202.40	447.84	3,075.70	3,085.20	0.85	0.11	0.84
9,444.00	91.20	88.10	6,199.44	451.04	3,169.60	3,179.15	1.28	-1.28	0.11
9,539.00	90.60	87.90	6,197.95	454.35	3,264.53	3,274.13	0.67	-0.63	-0.21
9,633.00	90.30	87.40	6,197.21	458.20	3,358.45	3,368.11	0.62	-0.32	-0.53
9,727.00	90.90	87.40	6,196.23	462.47	3,452.34	3,462.08	0.64	0.64	0.00
9,822.00	91.00	86.80	6,194.66	467.27	3,547.21	3,557.03	0.64	0.11	-0.63
9,914.00	91.60	87.40	6,192.57	471.93	3,639.07	3,648.97	0.92	0.65	0.65
10,005.00	91.50	88.10	6,190.11	475.50	3,729.96	3,739.93	0.78	-0.11	0.77
10,097.00	90.60	88.30	6,188.42	478.39	3,821.90	3,831.91	1.00	-0.98	0.22
10,189.00	89.80	87.90	6,188.10	481.44	3,913.85	3,923.90	0.97	-0.87	-0.43
10,281.00	90.90	88.30	6,187.54	484.49	4,005.80	4,015.89	1.27	1.20	0.43
10,373.00	91.10	88.50	6,185.93	487.06	4,097.75	4,107.88	0.31	0.22	0.22
10,465.00	91.40	88.60	6,183.92	489.38	4,189.69	4,199.86	0.34	0.33	0.11
10,557.00	91.10	88.80	6,181.92	491.47	4,281.65	4,291.83	0.39	-0.33	0.22
10,649.00	90.50	88.00	6,180.63	494.04	4,373.60	4,383.82	1.09	-0.65	-0.87
10,742.00	91.30	88.60	6,179.17	496.80	4,466.55	4,476.81	1.08	0.86	0.65
10,834.00	89.80	87.30	6,178.29	500.09	4,558.48	4,568.79	2.16	-1.63	-1.41

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Anschutz State 5-62-35-0108BH2
<b>Project:</b>	Weld Co., CO	<b>TVD Reference:</b>	Well @ 4656.00usft
<b>Site:</b>	Sec.35-T5N-R62W	<b>MD Reference:</b>	Well @ 4656.00usft
<b>Well:</b>	Anschutz State 5-62-35-0108BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDBBW

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)	
10,926.00	90.70	88.30	6,177.89	503.62	4,650.41	4,660.78	1.46	0.98	1.09	
11,019.00	90.90	88.60	6,176.59	506.14	4,743.37	4,753.77	0.39	0.22	0.32	
11,111.00	90.50	88.30	6,175.47	508.62	4,835.33	4,845.76	0.54	-0.43	-0.33	
11,203.00	90.20	87.80	6,174.90	511.75	4,927.27	4,937.75	0.63	-0.33	-0.54	
11,295.00	91.40	89.00	6,173.62	514.32	5,019.22	5,029.74	1.84	1.30	1.30	
11,387.00	91.90	87.70	6,170.97	516.97	5,111.14	5,121.70	1.51	0.54	-1.41	
11,480.00	91.20	85.90	6,168.45	522.16	5,203.96	5,214.61	2.08	-0.75	-1.94	
11,572.00	90.40	85.40	6,167.17	529.14	5,295.69	5,306.47	1.03	-0.87	-0.54	
11,665.00	92.70	88.60	6,164.65	534.00	5,388.51	5,399.38	4.24	2.47	3.44	



**Bill Barrett Corporation**

## **Bill Barrett Corp.**

**Weld Co., CO**

**Sec.35-T5N-R62W**

**Anschutz State 5-62-35-0108BH2**

**Wellbore #1**

**Survey: Survey #2**

## **Standard Survey Report**

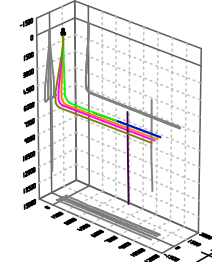
**26 January, 2015**

# **Archer**



Bill Barrett Corp.  
Project: Weld Co., CO  
Site: Sec.35-T5N-R62W  
Well: Anschutz State 5-62-35-0108BH2  
Wellbore: Wellbore #1  
Design: Side Track  
Lat: 40° 21' 39.949 N  
Long: 104° 17' 55.720 W  
Pad GL: 4640.00  
KB: Well @ 4656.00usft

# Archer



### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
11665.00	92.70	88.60	6164.65	534.00	5388.51	0.00	0.00	5399.38	Start DLS 2.50 TFO -173.78
11789.73	89.60	88.26	6162.15	537.42	5513.15	2.50	-173.78	5524.07	Start 200.00 hold at 11789.73 MD
11989.73	89.60	88.26	6163.55	543.48	5713.06	0.00	0.00	5724.06	Start Build 2.50
12016.55	90.27	88.26	6163.58	544.30	5739.86	2.50	0.00	5750.87	Start 4148.49 hold at 12016.55 MD
16165.04	90.27	88.26	6144.00	670.11	9886.39	0.00	0.00	9899.21	TD at 16165.04

### WELL DETAILS: Anschutz State 5-62-35-0108BH2

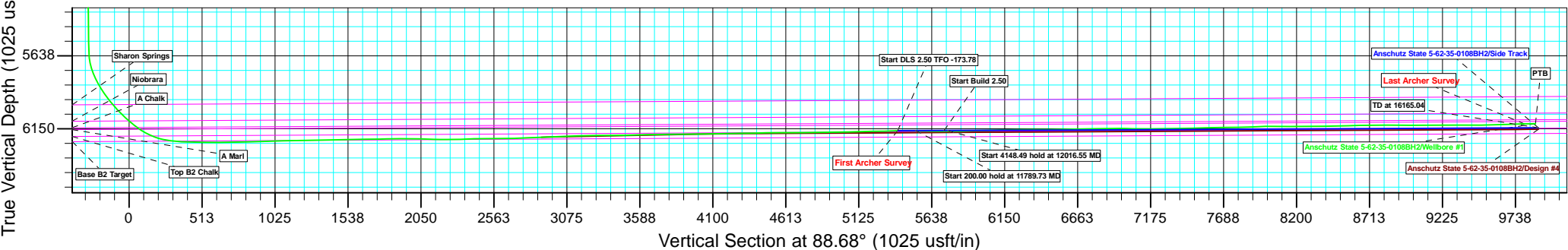
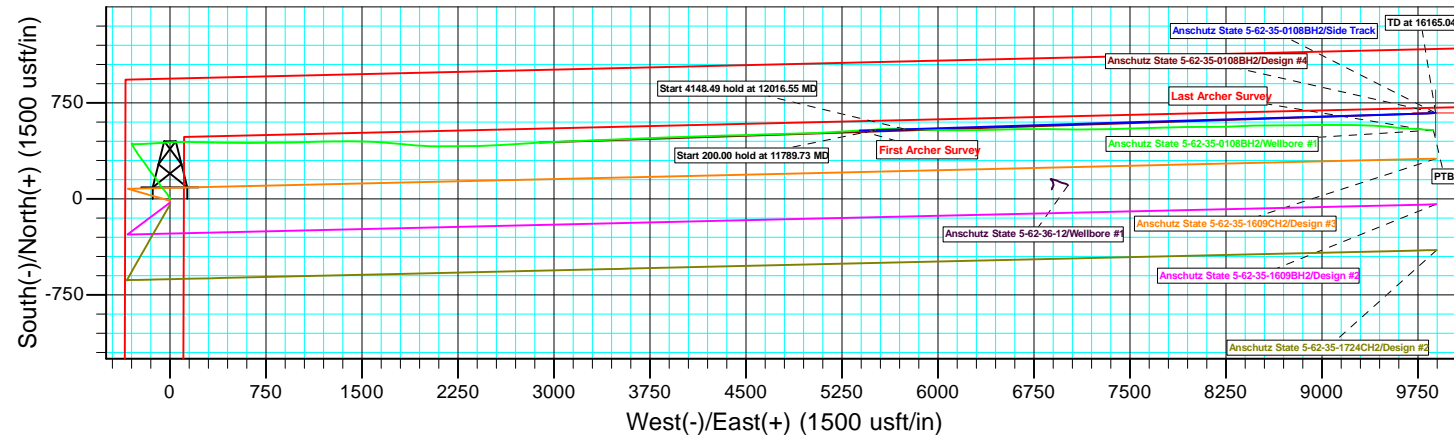
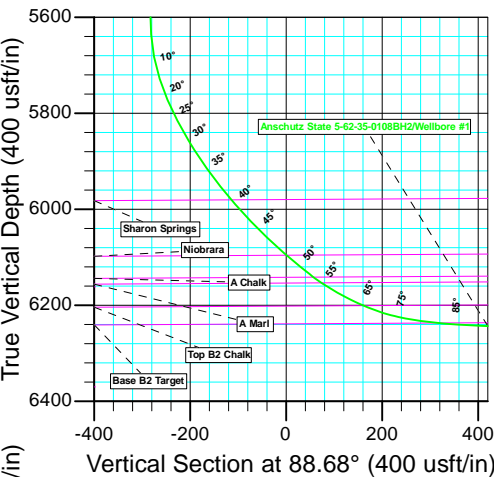
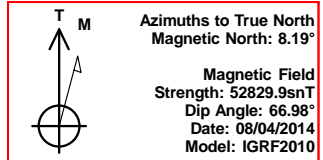
+N/-S	+E/-W	Northing	Ground Level: Easting	4640.00 Latitude	Longitude	Slot
0.00	0.00	1376655.321	3334725.316	40° 21' 39.949 N	104° 17' 55.720 W	

### 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

### CASING DETAILS

TVD	MD	Name
	6555.62	7" Csg.



Plan: Side Track (Anschutz State 5-62-35-0108BH2/Wellbore #1)

Created By: Ricky Osburn Date: 7:38, January 26 2015

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Anschutz State 5-62-35-0108BH2
<b>Project:</b>	Weld Co., CO	<b>TVD Reference:</b>	Well @ 4656.00usft
<b>Site:</b>	Sec.35-T5N-R62W	<b>MD Reference:</b>	Well @ 4656.00usft
<b>Well:</b>	Anschutz State 5-62-35-0108BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDBBW

<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.35-T5N-R62W			
Site Position:		Northing:	1,375,286.395 usft	Latitude:	40° 21' 26.420 N
From:	Lat/Long	Easting:	3,334,739.959 usft	Longitude:	104° 17' 55.770 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.78 °

Well	Anschutz State 5-62-35-0108BH2					
Well Position	+N/-S	0.00 usft	Northing:	1,376,655.321 usft	Latitude:	40° 21' 39.949 N
	+E/-W	0.00 usft	Easting:	3,334,725.316 usft	Longitude:	104° 17' 55.720 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,640.00 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	2014/08/04	8.19	66.98	52,830

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)		+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00		0.00	0.00	88.68

<b>Survey Program</b>	<b>Date</b>	2015/01/26			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
800.00	11,665.00	Survey #1 (Wellbore #1)	MWD	MWD - Standard	
11,757.00	16,150.00	Survey #2 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
<b>First Archer Survey</b>										
11,665.00	84.10	84.00	6,171.63	537.71	5,388.13	5,399.09	0.00	0.00	0.00	
11,757.00	87.60	84.70	6,178.29	546.74	5,479.43	5,490.57	3.88	3.80	0.76	
11,850.00	89.40	87.30	6,180.72	553.22	5,572.16	5,583.42	3.40	1.94	2.80	
11,942.00	89.70	89.10	6,181.44	556.11	5,664.11	5,675.41	1.98	0.33	1.96	
12,034.00	89.70	93.30	6,181.93	554.19	5,756.06	5,767.30	4.57	0.00	4.57	
12,125.00	92.00	92.10	6,180.58	549.90	5,846.95	5,858.06	2.85	2.53	-1.32	
12,217.00	91.80	91.20	6,177.53	547.25	5,938.86	5,949.89	1.00	-0.22	-0.98	
12,309.00	91.00	91.70	6,175.28	544.93	6,030.80	6,041.75	1.03	-0.87	0.54	
12,400.00	91.30	90.30	6,173.45	543.34	6,121.76	6,132.66	1.57	0.33	-1.54	
12,492.00	90.80	89.60	6,171.77	543.42	6,213.75	6,224.62	0.93	-0.54	-0.76	
12,584.00	90.60	88.90	6,170.64	544.62	6,305.73	6,316.60	0.79	-0.22	-0.76	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Anschutz State 5-62-35-0108BH2
<b>Project:</b>	Weld Co., CO	<b>TVD Reference:</b>	Well @ 4656.00usft
<b>Site:</b>	Sec.35-T5N-R62W	<b>MD Reference:</b>	Well @ 4656.00usft
<b>Well:</b>	Anschutz State 5-62-35-0108BH2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDBBW

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)
12,675.00	90.20	88.30	6,170.01	546.85	6,396.70	6,407.60	0.79	-0.44	-0.66
12,766.00	90.50	89.30	6,169.45	548.75	6,487.68	6,498.60	1.15	0.33	1.10
12,859.00	91.60	88.40	6,167.75	550.62	6,580.64	6,591.58	1.53	1.18	-0.97
12,951.00	90.60	89.70	6,165.98	552.14	6,672.61	6,683.56	1.78	-1.09	1.41
13,042.00	90.60	90.20	6,165.03	552.22	6,763.60	6,774.53	0.55	0.00	0.55
13,134.00	91.60	90.50	6,163.26	551.66	6,855.58	6,866.47	1.13	1.09	0.33
13,226.00	89.40	90.70	6,162.46	550.70	6,947.57	6,958.41	2.40	-2.39	0.22
13,317.00	88.30	90.00	6,164.28	550.14	7,038.55	7,049.35	1.43	-1.21	-0.77
13,409.00	90.20	89.80	6,165.49	550.30	7,130.54	7,141.32	2.08	2.07	-0.22
13,501.00	91.00	90.30	6,164.53	550.22	7,222.53	7,233.29	1.03	0.87	0.54
13,592.00	90.90	89.10	6,163.02	550.70	7,313.51	7,324.26	1.32	-0.11	-1.32
13,684.00	90.50	87.70	6,161.89	553.27	7,405.47	7,416.25	1.58	-0.43	-1.52
13,777.00	91.50	88.80	6,160.27	556.11	7,498.41	7,509.23	1.60	1.08	1.18
13,871.00	92.10	88.30	6,157.32	558.48	7,592.33	7,603.18	0.83	0.64	-0.53
13,966.00	90.70	88.30	6,155.00	561.30	7,687.26	7,698.15	1.47	-1.47	0.00
14,060.00	90.50	87.80	6,154.01	564.50	7,781.20	7,792.14	0.57	-0.21	-0.53
14,156.00	92.60	87.60	6,151.41	568.35	7,877.08	7,888.08	2.20	2.19	-0.21
14,251.00	91.30	89.80	6,148.18	570.50	7,971.99	7,983.02	2.69	-1.37	2.32
14,346.00	89.70	90.60	6,147.35	570.17	8,066.99	8,077.98	1.88	-1.68	0.84
14,441.00	89.30	89.30	6,148.18	570.26	8,161.98	8,172.95	1.43	-0.42	-1.37
14,535.00	90.60	88.60	6,148.26	571.98	8,255.96	8,266.95	1.57	1.38	-0.74
14,631.00	90.50	88.20	6,147.34	574.66	8,351.92	8,362.94	0.43	-0.10	-0.42
14,725.00	91.00	87.60	6,146.11	578.10	8,445.85	8,456.92	0.83	0.53	-0.64
14,820.00	92.70	88.60	6,143.05	581.25	8,540.74	8,551.86	2.08	1.79	1.05
14,915.00	90.60	90.90	6,140.31	581.66	8,635.69	8,646.80	3.28	-2.21	2.42
15,008.00	90.70	90.10	6,139.25	580.85	8,728.68	8,739.74	0.87	0.11	-0.86
15,103.00	89.90	88.20	6,138.76	582.26	8,823.66	8,834.73	2.17	-0.84	-2.00
15,198.00	89.80	89.40	6,139.01	584.25	8,918.64	8,929.73	1.27	-0.11	1.26
15,293.00	89.80	89.70	6,139.34	585.00	9,013.64	9,024.72	0.32	0.00	0.32
15,388.00	90.50	90.40	6,139.09	584.91	9,108.63	9,119.69	1.04	0.74	0.74
15,482.00	89.90	89.80	6,138.76	584.75	9,202.63	9,213.66	0.90	-0.64	-0.64
15,577.00	90.10	91.90	6,138.76	583.34	9,297.62	9,308.59	2.22	0.21	2.21
15,672.00	90.00	92.90	6,138.68	579.36	9,392.53	9,403.39	1.06	-0.11	1.05
15,766.00	90.40	94.70	6,138.35	573.13	9,486.32	9,497.01	1.96	0.43	1.91
15,860.00	91.80	95.50	6,136.55	564.78	9,579.93	9,590.40	1.72	1.49	0.85
15,955.00	91.80	94.60	6,133.56	556.42	9,674.51	9,684.76	0.95	0.00	-0.95
16,049.00	91.60	93.00	6,130.77	550.19	9,768.26	9,778.34	1.71	-0.21	-1.70
Last Archer Survey									
16,072.00	91.40	93.50	6,130.17	548.89	9,791.22	9,801.26	2.34	-0.87	2.17
PTB - Anschutz State 5-62-35-0108BH2 tgt									
16,150.00	91.40	93.50	6,128.26	544.13	9,869.05	9,878.96	0.00	0.00	0.00

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,665.00	6,171.63	537.71	5,388.13	First Archer Survey
16,072.00	6,130.17	548.89	9,791.22	Last Archer Survey
16,150.00	6,128.26	544.13	9,869.05	PTB

Checked By: _____	Approved By: _____	Date: _____
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