

# **BILL BARRETT CORPORATION**

**ADAMS COUNTY, COLORADO (NAD 83)  
SW NW SEC. 36 T1S R66W 6th P.M.  
STATE OF COLORADO 1S-66-36-0108BH  
JOB # 2009266**

**26 February, 2014**

**Survey: FINAL SURVEYS**





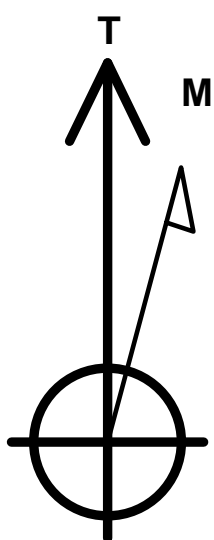
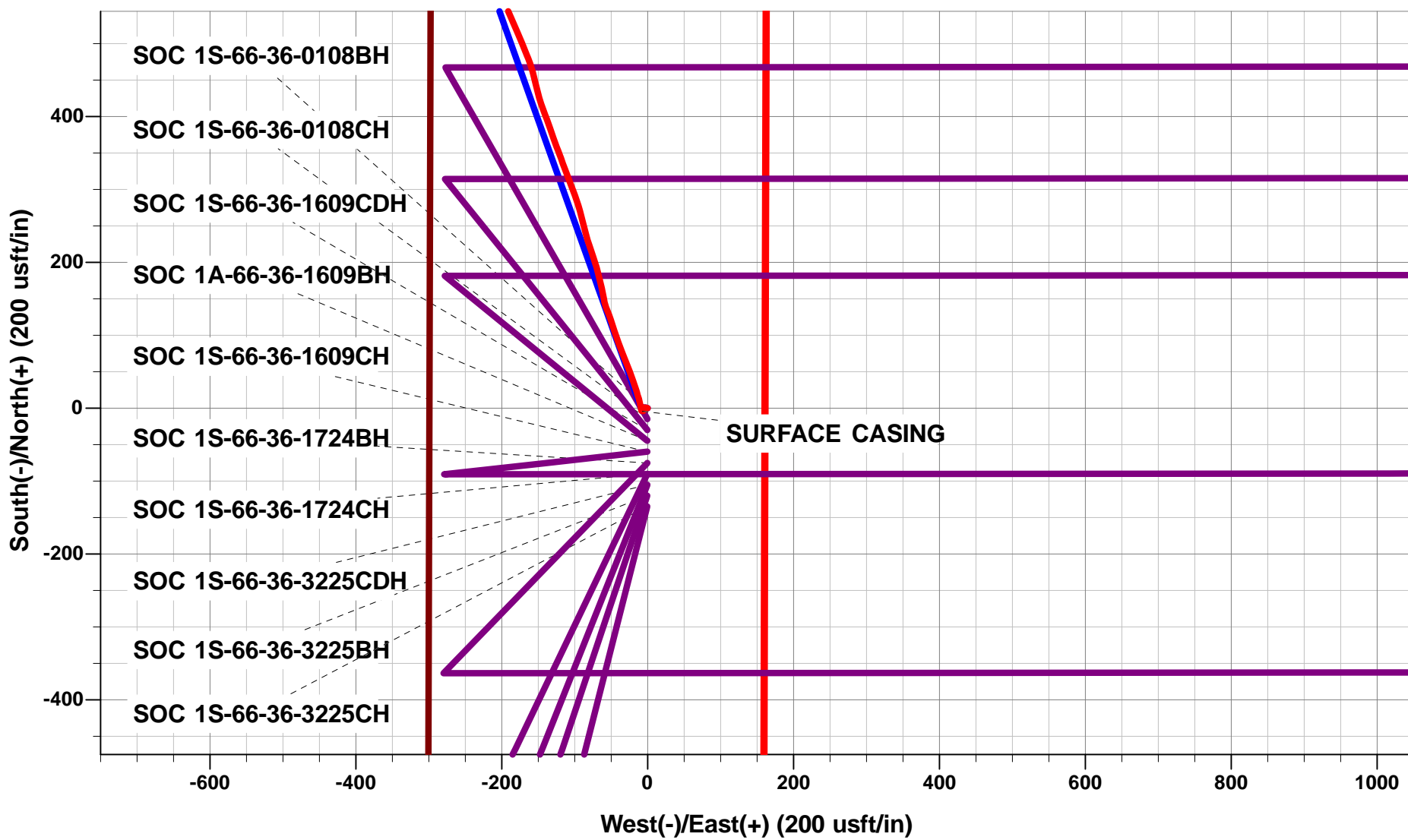
Project: ADAMS COUNTY, COLORADO (NAD 83)  
Site: SW NW SEC. 36 T1S R66W 6th P.M.  
Well: STATE OF COLORADO 1S-66-36-0108BH  
Wellbore: JOB # 2009266  
Design: FINAL SURVEYS

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation
1420.9	1421.0	0.73	286.05	-4.0	-7.4	-8.0	11.8	SURFACE CASING
7551.4	7935.0	88.64	89.00	714.2	278.3	392.9	1363.5	ICP
7523.8	12085.0	89.30	90.30	739.4	4424.9	4486.2	5511.9	LAST SURVEY - FEB 26, 2014
7524.7	12158.0	89.30	90.30	739.0	4497.9	4558.1	5584.9	EXTRAPOLATION TO TD

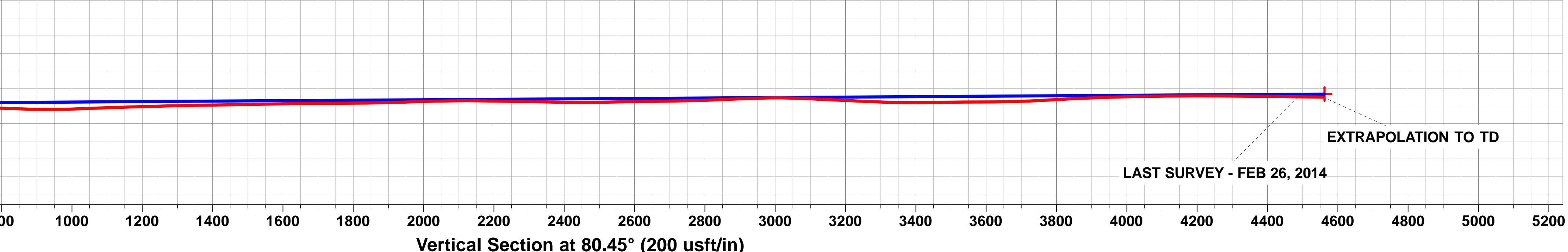
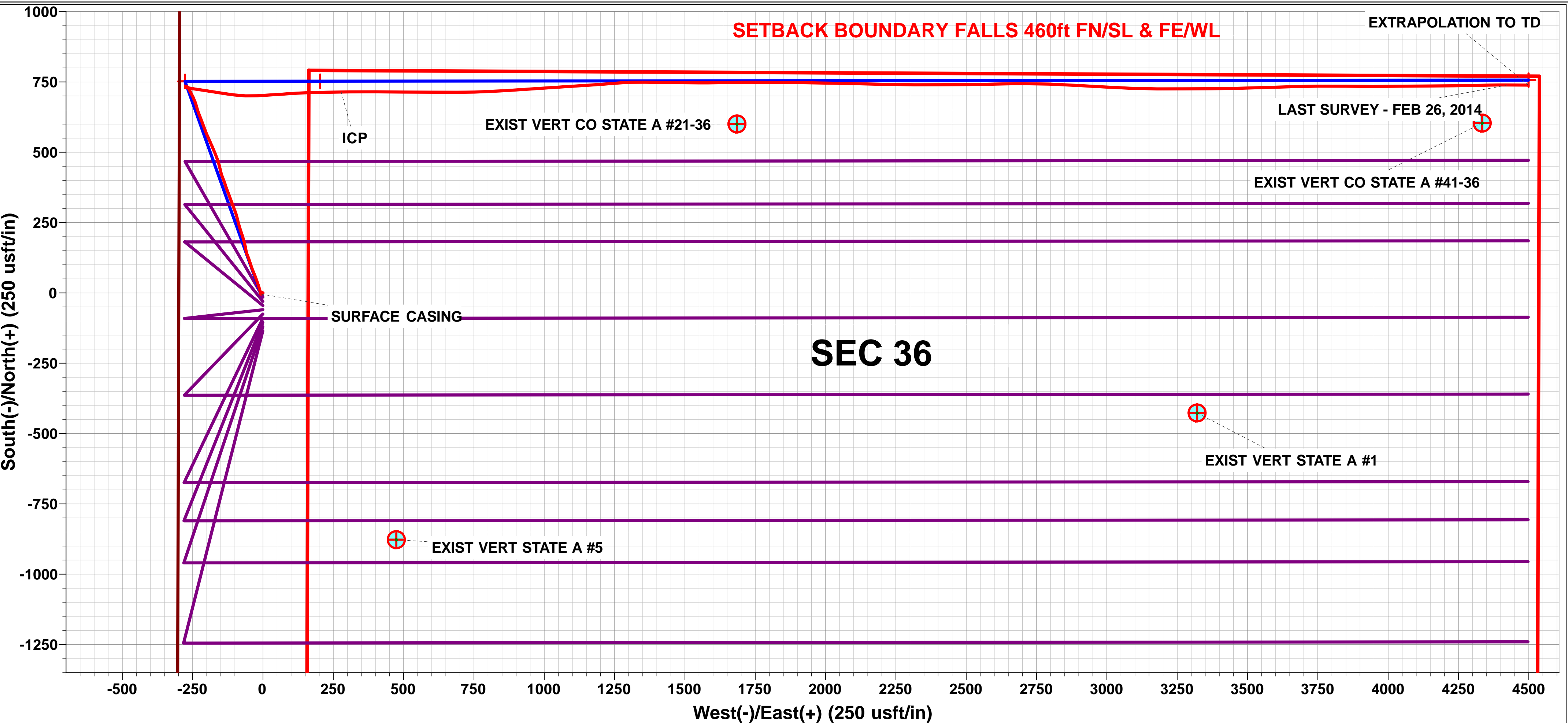
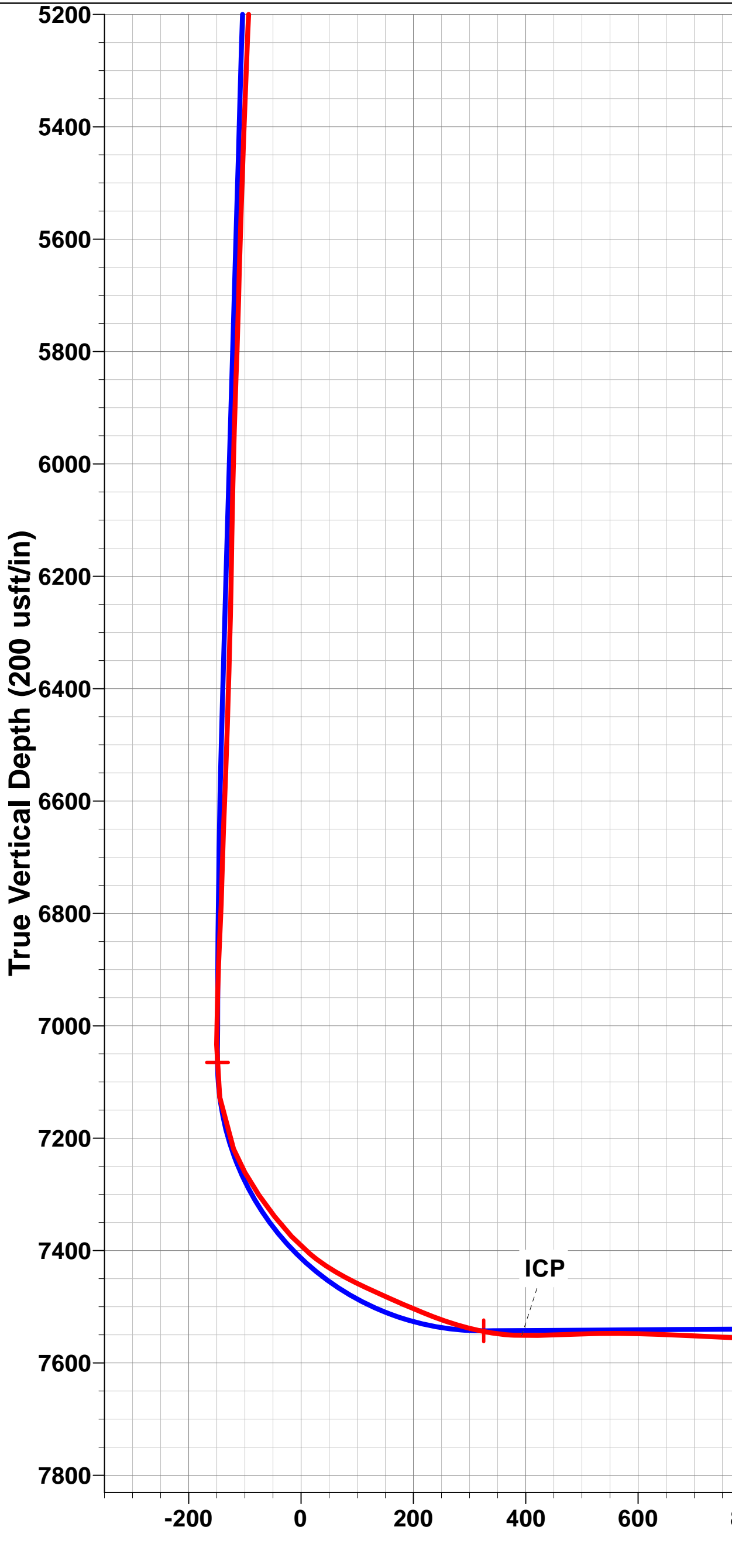
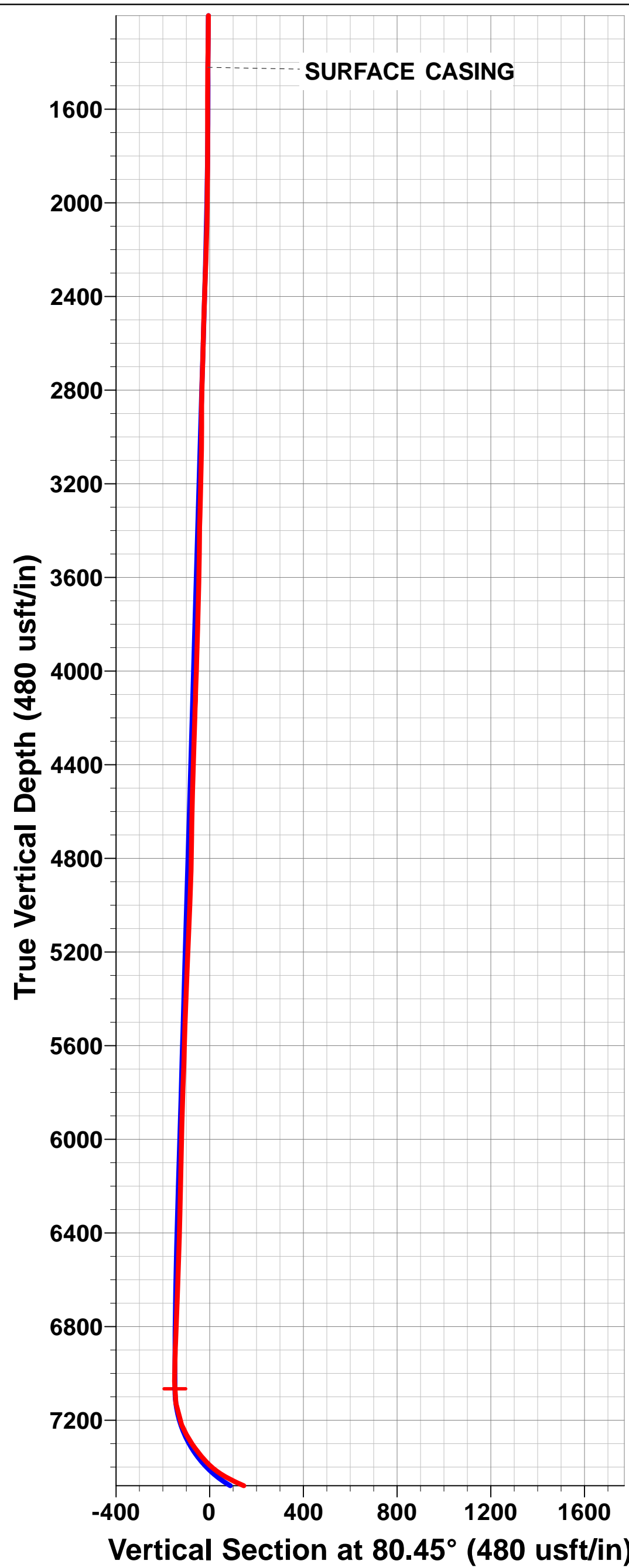
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
BHL - SOC 1S-66-36-0108BH (P3)	7516.0	756.7	4499.1	39° 55' 38.917 N	104° 42' 58.932 W	Point
BTV - SOC 1S-66-36-0108BH (P3)	7065.5	752.1	-277.2	39° 55' 38.876 N	104° 44' 0.241 W	Point
ENTRY PNT - SOC 1S-66-36-0108BH (P3)	7543.0	752.6	203.3	39° 55' 38.881 N	104° 43' 54.073 W	Point



Azimuths to True North  
Magnetic North: 8.45°

Magnetic Field  
Strength: 52606.9snT  
Dip Angle: 66.58°  
Date: 24/01/2014  
Model: IGRF2010



## Survey Report



<b>Company:</b>	BILL BARRETT CORPORATION	<b>Local Co-ordinate Reference:</b>	Well STATE OF COLORADO 1S-66-36-0108BH
<b>Project:</b>	ADAMS COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 5203.0usft (NABORS M37)
<b>Site:</b>	SW NW SEC. 36 T1S R66W 6th P.M.	<b>MD Reference:</b>	KB @ 5203.0usft (NABORS M37)
<b>Well:</b>	STATE OF COLORADO 1S-66-36-0108BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2009266	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

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

Site	SW NW SEC. 36 T1S R66W 6th P.M.				
Site Position:		Northing:	1,216,544.45 usft	Latitude:	39° 55' 30.853 N
From:	Lat/Long	Easting:	3,215,275.31 usft	Longitude:	104° 43' 56.687 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.50 °

Well	STATE OF COLORADO 1S-66-36-0108BH					
Well Position	+N/-S	0.0 usft	Northing:	1,216,604.17 usft	Latitude:	39° 55' 31.443 N
	+E/-W	0.0 usft	Easting:	3,215,275.07 usft	Longitude:	104° 43' 56.683 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	5,180.0 usft

<b>Wellbore</b>	JOB # 2009266				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	24/01/2014	8.46	66.58	52,607

Design	FINAL SURVEYS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	80.45	

<b>Survey Program</b>	<b>Date</b>	26/02/2014			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
103.0	12,158.0	FINAL SURVEYS (JOB # 2009266)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>Subsea 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>
0.0	0.00	0.00	0.0	5,203.0	0.0	0.0	0.0	0.00	0.00	0.00
103.0	0.69	286.51	103.0	5,100.0	0.2	-0.6	-0.6	0.67	0.67	0.00
203.0	0.61	289.56	203.0	5,000.0	0.5	-1.7	-1.6	0.09	-0.08	3.05
303.0	0.39	294.22	303.0	4,900.0	0.8	-2.5	-2.3	0.22	-0.22	4.66
403.0	0.25	263.99	403.0	4,800.0	1.0	-3.0	-2.8	0.21	-0.14	-30.23
503.0	0.41	263.10	503.0	4,700.0	0.9	-3.6	-3.4	0.16	0.16	-0.89
603.0	0.27	284.84	603.0	4,600.0	0.9	-4.2	-4.0	0.19	-0.14	21.74
703.0	0.19	207.14	703.0	4,500.0	0.8	-4.5	-4.3	0.30	-0.08	-77.70
803.0	0.44	181.12	803.0	4,400.0	0.3	-4.6	-4.4	0.28	0.25	-26.02
903.0	0.53	181.61	903.0	4,300.0	-0.6	-4.6	-4.6	0.09	0.09	0.49
1,003.0	0.73	175.57	1,003.0	4,200.0	-1.7	-4.5	-4.7	0.21	0.20	-6.04
1,103.0	0.62	205.54	1,103.0	4,100.0	-2.8	-4.7	-5.1	0.36	-0.11	29.97
1,203.0	0.56	222.95	1,203.0	4,000.0	-3.6	-5.3	-5.8	0.19	-0.06	17.41

## Survey Report



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<b>Project:</b>	ADAMS COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 5203.0usft (NABORS M37)
<b>Site:</b>	SW NW SEC. 36 T1S R66W 6th P.M.	<b>MD Reference:</b>	KB @ 5203.0usft (NABORS M37)
<b>Well:</b>	STATE OF COLORADO 1S-66-36-0108BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2009266	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,303.0	0.55	256.12	1,303.0	3,900.0	-4.1	-6.1	-6.7	0.32	-0.01	33.17
1,403.0	0.73	283.43	1,402.9	3,800.1	-4.1	-7.2	-7.7	0.35	0.18	27.31
1,418.0	0.74	285.51	1,417.9	3,785.1	-4.0	-7.4	-7.9	0.19	0.07	13.87
<b>SURFACE CASING</b>										
<b>1,421.0</b>	<b>0.73</b>	<b>286.05</b>	<b>1,420.9</b>	<b>3,782.1</b>	<b>-4.0</b>	<b>-7.4</b>	<b>-8.0</b>	<b>0.44</b>	<b>-0.37</b>	<b>17.92</b>
1,539.0	0.40	329.10	1,538.9	3,664.1	-3.4	-8.3	-8.8	0.44	-0.28	36.49
1,635.0	2.50	349.10	1,634.9	3,568.1	-1.1	-8.9	-9.0	2.22	2.19	20.83
1,729.0	2.50	347.20	1,728.8	3,474.2	2.9	-9.7	-9.1	0.09	0.00	-2.02
1,825.0	3.70	350.80	1,824.7	3,378.3	8.0	-10.7	-9.2	1.27	1.25	3.75
1,920.0	4.20	339.30	1,919.4	3,283.6	14.3	-12.4	-9.9	0.98	0.53	-12.11
2,016.0	6.00	345.10	2,015.1	3,187.9	22.4	-15.0	-11.0	1.95	1.87	6.04
2,112.0	7.20	339.70	2,110.4	3,092.6	32.9	-18.3	-12.6	1.41	1.25	-5.62
2,207.0	9.50	340.70	2,204.4	2,998.6	45.9	-23.0	-15.1	2.43	2.42	1.05
2,303.0	9.40	338.80	2,299.1	2,903.9	60.7	-28.4	-18.0	0.34	-0.10	-1.98
2,399.0	9.30	337.40	2,393.8	2,809.2	75.2	-34.3	-21.3	0.26	-0.10	-1.46
2,495.0	9.90	339.40	2,488.5	2,714.5	90.1	-40.1	-24.6	0.71	0.62	2.08
2,591.0	10.10	343.10	2,583.0	2,620.0	105.8	-45.5	-27.3	0.70	0.21	3.85
2,687.0	9.30	340.80	2,677.7	2,525.3	121.2	-50.5	-29.7	0.93	-0.83	-2.40
2,782.0	8.40	337.40	2,771.5	2,431.5	134.9	-55.7	-32.5	1.10	-0.95	-3.58
2,878.0	9.40	349.60	2,866.4	2,336.6	149.1	-59.8	-34.2	2.22	1.04	12.71
2,974.0	9.70	347.90	2,961.1	2,241.9	164.7	-62.9	-34.7	0.43	0.31	-1.77
3,069.0	9.10	345.90	3,054.8	2,148.2	179.8	-66.4	-35.7	0.72	-0.63	-2.11
3,165.0	8.00	343.20	3,149.7	2,053.3	193.5	-70.2	-37.1	1.22	-1.15	-2.81
3,260.0	10.30	341.80	3,243.5	1,959.5	207.9	-74.8	-39.2	2.43	2.42	-1.47
3,356.0	9.20	341.00	3,338.1	1,864.9	223.4	-79.9	-41.8	1.15	-1.15	-0.83
3,451.0	10.30	345.50	3,431.7	1,771.3	238.8	-84.5	-43.8	1.41	1.16	4.74
3,547.0	9.60	345.00	3,526.3	1,676.7	254.8	-88.8	-45.3	0.73	-0.73	-0.52
3,643.0	9.70	346.00	3,620.9	1,582.1	270.4	-92.8	-46.7	0.20	0.10	1.04
3,738.0	9.80	340.10	3,714.6	1,488.4	285.7	-97.5	-48.7	1.06	0.11	-6.21
3,834.0	7.70	340.00	3,809.4	1,393.6	299.5	-102.5	-51.4	2.19	-2.19	-0.10
3,931.0	9.30	339.40	3,905.4	1,297.6	312.9	-107.4	-54.0	1.65	1.65	-0.62
4,027.0	10.30	338.80	4,000.0	1,203.0	328.2	-113.3	-57.3	1.05	1.04	-0.62
4,124.0	8.40	340.60	4,095.7	1,107.3	342.9	-118.8	-60.2	1.98	-1.96	1.86
4,220.0	10.60	338.30	4,190.4	1,012.6	357.8	-124.3	-63.3	2.33	2.29	-2.40
4,315.0	8.90	340.40	4,284.0	919.0	372.8	-130.0	-66.4	1.83	-1.79	2.21
4,411.0	9.50	341.90	4,378.7	824.3	387.3	-135.0	-68.9	0.67	0.62	1.56
4,507.0	9.60	338.30	4,473.4	729.6	402.3	-140.4	-71.7	0.63	0.10	-3.75
4,603.0	9.80	341.00	4,568.0	635.0	417.5	-146.0	-74.8	0.52	0.21	2.81
4,699.0	11.10	346.30	4,662.4	540.6	434.2	-150.9	-76.8	1.68	1.35	5.52
4,796.0	9.90	347.20	4,757.8	445.2	451.4	-154.9	-77.9	1.25	-1.24	0.93
4,892.0	9.80	342.20	4,852.4	350.6	467.2	-159.3	-79.6	0.90	-0.10	-5.21
4,988.0	11.30	338.00	4,946.8	256.2	483.7	-165.3	-82.8	1.75	1.56	-4.37
5,084.0	10.20	337.90	5,041.1	161.9	500.3	-172.0	-86.7	1.15	-1.15	-0.10
5,181.0	10.10	335.90	5,136.6	66.4	516.0	-178.7	-90.7	0.38	-0.10	-2.06
5,277.0	9.90	337.00	5,231.1	-28.1	531.3	-185.4	-94.7	0.29	-0.21	1.15
5,371.0	9.10	335.90	5,323.8	-120.8	545.5	-191.6	-98.4	0.87	-0.85	-1.17
5,467.0	7.90	335.80	5,418.8	-215.8	558.5	-197.4	-102.0	1.25	-1.25	-0.10
5,564.0	8.80	337.00	5,514.7	-311.7	571.4	-203.0	-105.4	0.95	0.93	1.24
5,660.0	9.50	340.70	5,609.5	-406.5	585.6	-208.5	-108.5	0.95	0.73	3.85
5,757.0	8.50	340.20	5,705.3	-502.3	599.9	-213.6	-111.1	1.03	-1.03	-0.52
5,852.0	9.40	338.80	5,799.2	-596.2	613.8	-218.8	-113.9	0.97	0.95	-1.47
5,949.0	9.20	336.90	5,894.9	-691.9	628.3	-224.7	-117.3	0.38	-0.21	-1.96
6,044.0	8.70	341.60	5,988.7	-785.7	642.1	-229.9	-120.2	0.93	-0.53	4.95

# Survey Report



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Survey										
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6,141.0	8.70	343.40	6,084.6	-881.6	656.1	-234.3	-122.3	0.28	0.00	1.86
6,236.0	6.80	343.70	6,178.8	-975.8	668.4	-238.0	-123.8	2.00	-2.00	0.32
6,332.0	7.90	339.40	6,274.0	-1,071.0	680.0	-241.9	-125.7	1.28	1.15	-4.48
6,428.0	6.10	335.40	6,369.2	-1,166.2	690.8	-246.3	-128.3	1.94	-1.87	-4.17
6,524.0	7.20	336.10	6,464.6	-1,261.6	700.9	-250.9	-131.1	1.15	1.15	0.73
6,619.0	6.90	330.80	6,558.9	-1,355.9	711.4	-256.1	-134.5	0.75	-0.32	-5.58
6,714.0	5.70	330.40	6,653.3	-1,450.3	720.4	-261.2	-138.1	1.26	-1.26	-0.42
6,810.0	5.20	331.90	6,748.9	-1,545.9	728.4	-265.6	-141.1	0.54	-0.52	1.56
6,905.0	3.50	302.20	6,843.6	-1,640.6	733.8	-270.1	-144.6	2.91	-1.79	-31.26
6,999.0	1.90	240.00	6,937.5	-1,734.5	734.5	-273.9	-148.2	3.31	-1.70	-66.17
7,095.0	1.20	212.00	7,033.5	-1,830.5	732.9	-275.8	-150.4	1.05	-0.73	-29.17
7,189.0	8.90	108.60	7,127.1	-1,924.1	729.7	-269.4	-144.6	9.84	8.19	-110.00
7,285.0	22.90	96.60	7,219.2	-2,016.2	725.2	-243.7	-120.0	14.90	14.58	-12.50
7,332.0	30.60	99.60	7,261.2	-2,058.2	722.1	-222.7	-99.9	16.63	16.38	6.38
7,380.0	35.70	99.30	7,301.3	-2,098.3	717.8	-196.9	-75.1	10.63	10.62	-0.62
7,428.0	39.70	98.10	7,339.3	-2,136.3	713.4	-167.8	-47.2	8.47	8.33	-2.50
7,476.0	44.00	99.10	7,375.1	-2,172.1	708.6	-136.2	-16.8	9.07	8.96	2.08
7,522.0	51.60	96.70	7,405.9	-2,202.9	704.0	-102.5	15.7	16.97	16.52	-5.22
7,572.0	59.00	92.60	7,434.4	-2,231.4	700.7	-61.5	55.5	16.26	14.80	-8.20
7,619.0	64.30	86.90	7,456.7	-2,253.7	700.9	-20.2	96.3	15.52	11.28	-12.13
7,667.0	65.50	86.20	7,477.1	-2,274.1	703.5	23.2	139.5	2.83	2.50	-1.46
7,715.0	66.80	86.20	7,496.5	-2,293.5	706.5	67.0	183.2	2.71	2.71	0.00
7,764.0	68.30	86.20	7,515.2	-2,312.2	709.5	112.2	228.3	3.06	3.06	0.00
7,811.0	73.00	88.00	7,530.8	-2,327.8	711.7	156.4	272.3	10.63	10.00	3.83
7,859.0	77.80	89.10	7,542.9	-2,339.9	712.9	202.9	318.3	10.24	10.00	2.29
7,886.0	82.30	89.00	7,547.5	-2,344.5	713.3	229.5	344.6	16.67	16.67	-0.37
ICP										
7,935.0	88.64	89.00	7,551.4	-2,348.4	714.2	278.3	392.9	12.95	12.95	0.00
7,964.0	92.40	89.00	7,551.1	-2,348.1	714.7	307.3	421.5	12.95	12.95	0.00
8,058.0	91.30	90.60	7,548.1	-2,345.1	715.0	401.2	514.2	2.06	-1.17	1.70
8,154.0	88.10	90.30	7,548.6	-2,345.6	714.2	497.2	608.8	3.35	-3.33	-0.31
8,250.0	87.70	90.30	7,552.1	-2,349.1	713.7	593.1	703.3	0.42	-0.42	0.00
8,346.0	87.60	90.10	7,556.1	-2,353.1	713.4	689.0	797.8	0.23	-0.10	-0.21
8,442.0	88.20	87.60	7,559.6	-2,356.6	715.3	784.9	892.7	2.68	0.62	-2.60
8,538.0	92.30	86.30	7,559.1	-2,356.1	720.4	880.8	988.1	4.48	4.27	-1.35
8,633.0	92.20	86.30	7,555.4	-2,352.4	726.6	975.5	1,082.5	0.11	-0.11	0.00
8,728.0	91.60	86.20	7,552.3	-2,349.3	732.8	1,070.3	1,177.0	0.64	-0.63	-0.11
8,825.0	91.50	86.30	7,549.6	-2,346.6	739.1	1,167.0	1,273.4	0.15	-0.10	0.10
8,920.0	90.80	85.30	7,547.7	-2,344.7	746.1	1,261.7	1,368.0	1.28	-0.74	-1.05
9,017.0	90.90	91.20	7,546.3	-2,343.3	749.0	1,358.6	1,464.1	6.08	0.10	6.08
9,113.0	91.30	90.60	7,544.5	-2,341.5	747.5	1,454.6	1,558.4	0.75	0.42	-0.62
9,209.0	91.00	90.20	7,542.5	-2,339.5	746.8	1,550.6	1,653.0	0.52	-0.31	-0.42
9,304.0	89.40	88.60	7,542.2	-2,339.2	747.8	1,645.6	1,746.8	2.38	-1.68	-1.68
9,399.0	91.40	90.10	7,541.5	-2,338.5	748.9	1,740.6	1,840.7	2.63	2.11	1.58
9,494.0	91.60	90.80	7,539.0	-2,336.0	748.2	1,835.5	1,934.2	0.77	0.21	0.74
9,589.0	91.90	90.60	7,536.1	-2,333.1	747.0	1,930.5	2,027.6	0.38	0.32	-0.21
9,685.0	89.50	91.20	7,535.0	-2,332.0	745.5	2,026.4	2,122.0	2.58	-2.50	0.62
9,782.0	89.20	91.40	7,536.1	-2,333.1	743.3	2,123.4	2,217.3	0.37	-0.31	0.21
9,878.0	88.80	91.30	7,537.8	-2,334.8	741.0	2,219.4	2,311.5	0.43	-0.42	-0.10
9,974.0	89.10	90.00	7,539.5	-2,336.5	740.0	2,315.3	2,406.0	1.39	0.31	-1.35
10,070.0	91.10	89.80	7,539.3	-2,336.3	740.1	2,411.3	2,500.7	2.09	2.08	-0.21
10,166.0	91.20	89.60	7,537.4	-2,334.4	740.6	2,507.3	2,595.4	0.23	0.10	-0.21
10,262.0	90.30	88.30	7,536.2	-2,333.2	742.4	2,603.3	2,690.4	1.65	-0.94	-1.35

## Survey Report



<b>Company:</b>	BILL BARRETT CORPORATION	<b>Local Co-ordinate Reference:</b>	Well STATE OF COLORADO 1S-66-36-0108BH
<b>Project:</b>	ADAMS COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 5203.0usft (NABORS M37)
<b>Site:</b>	SW NW SEC. 36 T1S R66W 6th P.M.	<b>MD Reference:</b>	KB @ 5203.0usft (NABORS M37)
<b>Well:</b>	STATE OF COLORADO 1S-66-36-0108BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2009266	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,358.0	92.00	89.80	7,534.2	-2,331.2	744.0	2,699.3	2,785.3	2.36	1.77	1.56
10,454.0	92.60	92.00	7,530.4	-2,327.4	742.5	2,795.2	2,879.6	2.37	0.62	2.29
10,550.0	91.20	93.40	7,527.2	-2,324.2	737.9	2,891.0	2,973.3	2.06	-1.46	1.46
10,646.0	87.80	93.30	7,528.0	-2,325.0	732.3	2,986.8	3,066.9	3.54	-3.54	-0.10
10,742.0	87.00	92.40	7,532.4	-2,329.4	727.6	3,082.6	3,160.6	1.25	-0.83	-0.94
10,838.0	87.60	90.10	7,536.9	-2,333.9	725.5	3,178.5	3,254.8	2.47	0.62	-2.40
10,933.0	88.90	89.60	7,539.8	-2,336.8	725.7	3,273.4	3,348.4	1.47	1.37	-0.53
11,029.0	91.00	90.10	7,539.9	-2,336.9	726.0	3,369.4	3,443.1	2.25	2.19	0.52
11,124.0	90.50	88.30	7,538.7	-2,335.7	727.3	3,464.4	3,537.0	1.97	-0.53	-1.89
11,219.0	89.90	88.30	7,538.3	-2,335.3	730.1	3,559.3	3,631.1	0.63	-0.63	0.00
11,316.0	93.30	88.20	7,535.6	-2,332.6	733.1	3,656.2	3,727.2	3.51	3.51	-0.10
11,412.0	92.90	89.40	7,530.4	-2,327.4	735.1	3,752.1	3,822.0	1.32	-0.42	1.25
11,509.0	92.10	91.00	7,526.2	-2,323.2	734.8	3,849.0	3,917.5	1.84	-0.82	1.65
11,605.0	91.30	89.80	7,523.3	-2,320.3	734.1	3,944.9	4,012.1	1.50	-0.83	-1.25
11,701.0	90.50	89.40	7,521.8	-2,318.8	734.8	4,040.9	4,106.8	0.93	-0.83	-0.42
11,797.0	90.00	89.50	7,521.4	-2,318.4	735.7	4,136.9	4,201.6	0.53	-0.52	0.10
11,893.0	89.90	89.60	7,521.5	-2,318.5	736.4	4,232.9	4,296.4	0.15	-0.10	0.10
11,989.0	89.00	88.30	7,522.4	-2,319.4	738.2	4,328.9	4,391.4	1.65	-0.94	-1.35
LAST SURVEY - FEB 26, 2014										
12,085.0	89.30	90.30	7,523.8	-2,320.8	739.4	4,424.9	4,486.2	2.11	0.31	2.08
EXTRAPOLATION TO TD										
12,158.0	89.30	90.30	7,524.7	-2,321.7	739.0	4,497.9	4,558.1	0.00	0.00	0.00



# Survey Report



<b>Company:</b>	BILL BARRETT CORPORATION	<b>Local Co-ordinate Reference:</b>	Well STATE OF COLORADO 1S-66-36-0108BH
<b>Project:</b>	ADAMS COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 5203.0usft (NABORS M37)
<b>Site:</b>	SW NW SEC. 36 T1S R66W 6th P.M.	<b>MD Reference:</b>	KB @ 5203.0usft (NABORS M37)
<b>Well:</b>	STATE OF COLORADO 1S-66-36-0108BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2009266	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
BHL - SOC 1S-66-36-01	0.00	0.00	7,515.0	756.7	4,499.1	1,217,399.74	3,219,767.36	39° 55' 38.917 N	104° 42' 58.932 W
- survey misses target center by 20.2usft at 12158.0usft MD (7524.7 TVD, 739.0 N, 4497.9 E)									
- Point									
BTV - SOC 1S-66-36-01	0.00	0.00	7,057.5	752.2	-276.4	1,217,353.94	3,214,992.18	39° 55' 38.877 N	104° 44' 0.231 W
- survey misses target center by 19.9usft at 7118.3usft MD (7056.8 TVD, 732.4 N, -275.6 E)									
- Point									
ENTRY PNT - SOC 1S-66-36-01	0.00	0.00	7,543.0	752.6	203.3	1,217,358.51	3,215,471.88	39° 55' 38.881 N	104° 43' 54.073 W
- survey misses target center by 39.8usft at 7860.1usft MD (7543.1 TVD, 712.9 N, 204.0 E)									
- Point									
EXIST VERT CO STATE	0.00	0.00	8,332.0	600.7	1,685.1	1,217,219.40	3,216,954.90	39° 55' 37.379 N	104° 43' 35.053 W
- survey misses target center by 803.4usft at 9336.4usft MD (7542.3 TVD, 748.5 N, 1677.9 E)									
- Circle (radius 30.0)									
ENTRY PNT - SOC 1S-66-36-01	0.00	0.00	7,535.0	752.6	203.3	1,217,358.51	3,215,471.88	39° 55' 38.881 N	104° 43' 54.073 W
- survey misses target center by 40.5usft at 7858.4usft MD (7542.7 TVD, 712.9 N, 202.3 E)									
- Point									
EXIST VERT CO STATE	0.00	0.00	8,294.0	603.8	4,334.4	1,217,245.40	3,219,604.00	39° 55' 37.406 N	104° 43' 1.046 W
- survey misses target center by 783.1usft at 12004.3usft MD (7522.7 TVD, 738.6 N, 4344.2 E)									
- Circle (radius 30.0)									
EXIST VERT STATE A #	0.00	0.00	8,315.0	-877.2	474.1	1,215,731.10	3,215,756.70	39° 55' 22.774 N	104° 43' 50.598 W
- survey misses target center by 1766.5usft at 8167.3usft MD (7549.0 TVD, 714.2 N, 510.5 E)									
- Circle (radius 30.0)									
BTV - SOC 1S-66-36-01	0.00	0.00	7,065.5	752.1	-277.2	1,217,353.83	3,214,991.38	39° 55' 38.876 N	104° 44' 0.241 W
- survey misses target center by 20.1usft at 7126.2usft MD (7064.7 TVD, 732.2 N, -275.3 E)									
- Point									
EXIST VERT STATE A #	0.00	0.00	8,336.0	-426.6	3,320.8	1,216,206.30	3,218,599.40	39° 55' 27.225 N	104° 43' 14.059 W
- survey misses target center by 1400.6usft at 10978.1usft MD (7540.3 TVD, 725.9 N, 3318.5 E)									
- Circle (radius 30.0)									
BHL - SOC 1S-66-36-01	0.00	0.00	7,516.0	756.7	4,499.1	1,217,399.74	3,219,767.36	39° 55' 38.917 N	104° 42' 58.932 W
- survey misses target center by 19.8usft at 12158.0usft MD (7524.7 TVD, 739.0 N, 4497.9 E)									
- Point									

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
1,421.0	1,420.9	-4.0	-7.4	SURFACE CASING
7,935.0	7,551.4	714.2	278.3	ICP
12,085.0	7,523.8	739.4	4,424.9	LAST SURVEY - FEB 26, 2014
12,158.0	7,524.7	739.0	4,497.9	EXTRAPOLATION TO TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_