



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 ANSCHUTZ EQUUS FARMS 4-62-16-0560CH, True North
Vertical (TVD) Reference: KB @ 4539.0ft (Original Well Elev)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: KB @ 4539.0ft (Original Well Elev)
Calculation Method: Minimum Curvature

WELL DETAILS: ANSCHUTZ EQUUS FARMS 4-62-16-0560CH

+N/-S +E/-W Northing Easting Latitude Longitude
0.0 0.0 1361185.68 3327762.37 40° 19' 8.011 N 104° 19' 28.312 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	1817.5	16.35	281.84	1806.4	23.8	-113.4	2.00	281.84	3.7	
4	4825.8	16.35	281.84	4693.1	197.5	-942.2	0.00	0.00	31.0	
5	5643.3	0.00	180.64	5499.6	221.3	-1055.6	2.00	180.00	34.7	
6	5893.3	0.00	180.64	5749.6	221.3	-1055.6	0.00	180.64	34.7	
7	6648.3	90.60	180.64	6227.0	-261.2	-1061.0	12.00	180.64	504.7	AEF 16-0560CH LP
8	10943.4	90.60	180.64	6182.0	-4555.8	-1109.2	0.00	0.00	4688.9	AEF 16-0560CH 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

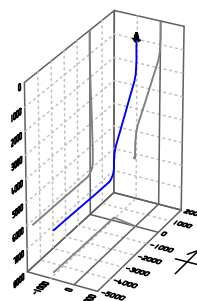
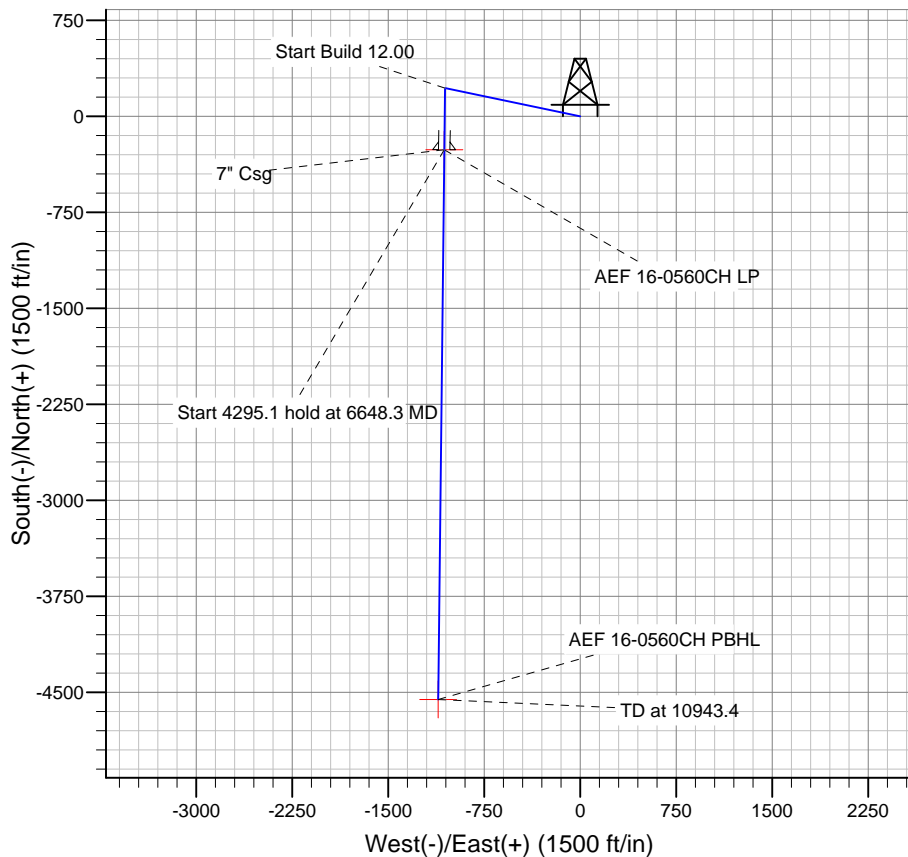
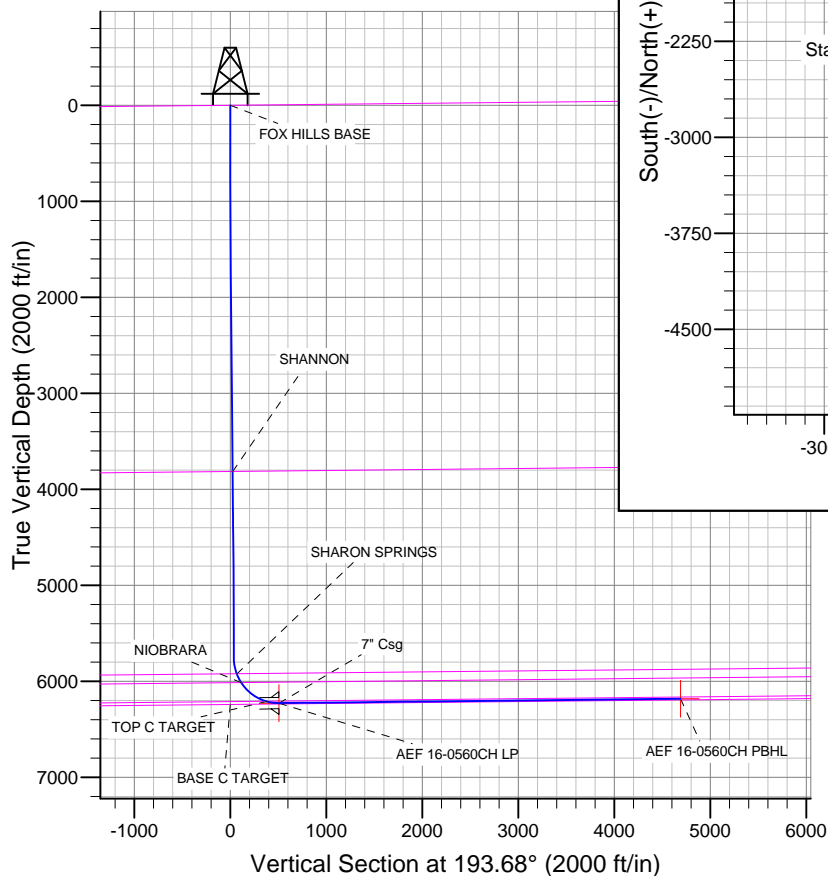
TVDPath	MDPath	Formation
		BASE C TARGET
		FOX HILLS BASE
3815.4	3911.1	SHANNON
5924.8	6072.8	SHARON SPRINGS
6015.3	6175.2	NIOBRARA
6210.5	6517.3	TOP C TARGET

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
AEF 16-0560CH PBHL	6182.0	-4555.8	-1109.2	Point
AEF 16-0560CH LP	6227.0	-261.2	-1061.0	Point

CASING DETAILS

TVD	MD	Name	Size
6227.0	6648.3	7" Csg	7



Azimuths to True North
Magnetic North: 8.26°

Magnetic Field
Strength: 52858.1snT
Dip Angle: 66.96°
Date: 2/6/2014
Model: IGRF2010

BILL BARRETT CORP

WELD COUNTY, COLORADO

ANSCHUTZ EQUUS FARMS 4-62-16 NE PAD

ANSCHUTZ EQUUS FARMS 4-62-16-0560CH

Wellbore #1

Plan: Design #1

Standard Planning Report

06 February, 2014

Bill Barrett Corp

Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well ANSCHUTZ EQUUS FARMS 4-62-16-0560CH
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4539.0ft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB @ 4539.0ft (Original Well Elev)
Site:	ANSCHUTZ EQUUS FARMS 4-62-16 NE PAD	North Reference:	True
Well:	ANSCHUTZ EQUUS FARMS 4-62-16-0560CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	WELD COUNTY, COLORADO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		ANSCHUTZ EQUUS FARMS 4-62-16 NE PAD				
Site Position:		Northing:	1,361,189.10 ft	Latitude:	40° 19' 8.029 N	
From:	Lat/Long	Easting:	3,327,882.51 ft	Longitude:	104° 19' 26.760 W	
Position Uncertainty:		0.0 ft	Slot Radius:	"	Grid Convergence:	0.76 °

Well	ANSCHUTZ EQUUS FARMS 4-62-16-0560CH					
Well Position	+N-S	-1.8 ft	Northing:	1,361,185.68 ft	Latitude:	40° 19' 8.011 N
	+E-W	-120.2 ft	Easting:	3,327,762.37 ft	Longitude:	104° 19' 28.312 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,523.0ft

Wellbore	Wellbore #1
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/6/2014	8.26	66.96	52,858

Design	Design #1
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Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)	Direction (°)
	0.0	0.0	0.0	193.68

Plan Sections										
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	
1,817.5	16.35	281.84	1,806.4	23.8	-113.4	2.00	2.00	0.00	281.84	
4,825.8	16.35	281.84	4,693.1	197.5	-942.2	0.00	0.00	0.00	0.00	
5,643.3	0.00	180.64	5,499.6	221.3	-1,055.6	2.00	-2.00	0.00	180.00	
5,893.3	0.00	180.64	5,749.6	221.3	-1,055.6	0.00	0.00	0.00	180.64	
6,648.3	90.60	180.64	6,227.0	-261.2	-1,061.0	12.00	12.00	0.00	180.64	AEF 16-0560CH LF
10,943.4	90.60	180.64	6,182.0	-4,555.8	-1,109.2	0.00	0.00	0.00	0.00	AEF 16-0560CH PE

Bill Barrett Corp

Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well ANSCHUTZ EQUUS FARMS 4-62-16-0560CH
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4539.0ft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB @ 4539.0ft (Original Well Elev)
Site:	ANSCHUTZ EQUUS FARMS 4-62-16 NE PAD	North Reference:	True
Well:	ANSCHUTZ EQUUS FARMS 4-62-16-0560CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
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	281.84	1,100.0	0.4	-1.7	0.1	2.00	2.00	0.00
1,200.0	4.00	281.84	1,199.8	1.4	-6.8	0.2	2.00	2.00	0.00
1,300.0	6.00	281.84	1,299.5	3.2	-15.4	0.5	2.00	2.00	0.00
1,400.0	8.00	281.84	1,398.7	5.7	-27.3	0.9	2.00	2.00	0.00
1,500.0	10.00	281.84	1,497.5	8.9	-42.6	1.4	2.00	2.00	0.00
1,600.0	12.00	281.84	1,595.6	12.8	-61.3	2.0	2.00	2.00	0.00
1,700.0	14.00	281.84	1,693.1	17.5	-83.3	2.7	2.00	2.00	0.00
1,800.0	16.00	281.84	1,789.6	22.8	-108.6	3.6	2.00	2.00	0.00
1,817.5	16.35	281.84	1,806.4	23.8	-113.4	3.7	2.00	2.00	0.00
1,900.0	16.35	281.84	1,885.6	28.5	-136.1	4.5	0.00	0.00	0.00
2,000.0	16.35	281.84	1,981.6	34.3	-163.7	5.4	0.00	0.00	0.00
2,100.0	16.35	281.84	2,077.5	40.1	-191.2	6.3	0.00	0.00	0.00
2,200.0	16.35	281.84	2,173.5	45.9	-218.8	7.2	0.00	0.00	0.00
2,300.0	16.35	281.84	2,269.4	51.6	-246.3	8.1	0.00	0.00	0.00
2,400.0	16.35	281.84	2,365.4	57.4	-273.9	9.0	0.00	0.00	0.00
2,500.0	16.35	281.84	2,461.4	63.2	-301.4	9.9	0.00	0.00	0.00
2,600.0	16.35	281.84	2,557.3	69.0	-329.0	10.8	0.00	0.00	0.00
2,700.0	16.35	281.84	2,653.3	74.7	-356.5	11.7	0.00	0.00	0.00
2,800.0	16.35	281.84	2,749.2	80.5	-384.1	12.6	0.00	0.00	0.00
2,900.0	16.35	281.84	2,845.2	86.3	-411.6	13.5	0.00	0.00	0.00
3,000.0	16.35	281.84	2,941.1	92.1	-439.2	14.4	0.00	0.00	0.00
3,100.0	16.35	281.84	3,037.1	97.8	-466.7	15.3	0.00	0.00	0.00
3,200.0	16.35	281.84	3,133.0	103.6	-494.3	16.3	0.00	0.00	0.00
3,300.0	16.35	281.84	3,229.0	109.4	-521.8	17.2	0.00	0.00	0.00
3,400.0	16.35	281.84	3,325.0	115.2	-549.4	18.1	0.00	0.00	0.00
3,500.0	16.35	281.84	3,420.9	120.9	-576.9	19.0	0.00	0.00	0.00
3,600.0	16.35	281.84	3,516.9	126.7	-604.5	19.9	0.00	0.00	0.00
3,700.0	16.35	281.84	3,612.8	132.5	-632.0	20.8	0.00	0.00	0.00
3,800.0	16.35	281.84	3,708.8	138.3	-659.6	21.7	0.00	0.00	0.00
3,900.0	16.35	281.84	3,804.7	144.0	-687.1	22.6	0.00	0.00	0.00
3,911.1	16.35	281.84	3,815.4	144.7	-690.2	22.7	0.00	0.00	0.00
SHANNON									
4,000.0	16.35	281.84	3,900.7	149.8	-714.7	23.5	0.00	0.00	0.00
4,100.0	16.35	281.84	3,996.6	155.6	-742.2	24.4	0.00	0.00	0.00
4,200.0	16.35	281.84	4,092.6	161.4	-769.8	25.3	0.00	0.00	0.00
4,300.0	16.35	281.84	4,188.6	167.1	-797.3	26.2	0.00	0.00	0.00
4,400.0	16.35	281.84	4,284.5	172.9	-824.9	27.1	0.00	0.00	0.00
4,500.0	16.35	281.84	4,380.5	178.7	-852.5	28.0	0.00	0.00	0.00
4,600.0	16.35	281.84	4,476.4	184.5	-880.0	28.9	0.00	0.00	0.00
4,700.0	16.35	281.84	4,572.4	190.2	-907.6	29.8	0.00	0.00	0.00

Bill Barrett Corp

Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well ANSCHUTZ EQUUS FARMS 4-62-16-0560CH
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4539.0ft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB @ 4539.0ft (Original Well Elev)
Site:	ANSCHUTZ EQUUS FARMS 4-62-16 NE PAD	North Reference:	True
Well:	ANSCHUTZ EQUUS FARMS 4-62-16-0560CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
4,800.0	16.35	281.84	4,668.3	196.0	-935.1	30.8	0.00	0.00	0.00
4,825.8	16.35	281.84	4,693.1	197.5	-942.2	31.0	0.00	0.00	0.00
4,900.0	14.87	281.84	4,764.6	201.6	-961.8	31.6	2.00	-2.00	0.00
5,000.0	12.87	281.84	4,861.6	206.5	-985.2	32.4	2.00	-2.00	0.00
5,100.0	10.87	281.84	4,959.5	210.7	-1,005.3	33.1	2.00	-2.00	0.00
5,200.0	8.87	281.84	5,058.0	214.2	-1,022.1	33.6	2.00	-2.00	0.00
5,300.0	6.87	281.84	5,157.1	217.1	-1,035.5	34.1	2.00	-2.00	0.00
5,400.0	4.87	281.84	5,256.5	219.2	-1,045.5	34.4	2.00	-2.00	0.00
5,500.0	2.87	281.84	5,356.3	220.5	-1,052.1	34.6	2.00	-2.00	0.00
5,600.0	0.87	281.84	5,456.2	221.2	-1,055.3	34.7	2.00	-2.00	0.00
5,643.3	0.00	180.64	5,499.6	221.3	-1,055.6	34.7	2.00	-2.00	0.00
5,700.0	0.00	180.64	5,556.2	221.3	-1,055.6	34.7	0.00	0.00	0.00
5,800.0	0.00	180.64	5,656.2	221.3	-1,055.6	34.7	0.00	0.00	0.00
5,893.3	0.00	180.64	5,749.6	221.3	-1,055.6	34.7	0.00	0.00	0.00
5,900.0	0.80	180.64	5,756.2	221.2	-1,055.6	34.8	12.00	12.00	0.00
6,000.0	12.80	180.64	5,855.4	209.4	-1,055.7	46.3	12.00	12.00	0.00
6,072.8	21.54	180.64	5,924.8	187.9	-1,056.0	67.2	12.00	12.00	0.00
SHARON SPRINGS									
6,100.0	24.80	180.64	5,949.9	177.2	-1,056.1	77.6	12.00	12.00	0.00
6,175.2	33.80	180.64	6,015.3	140.5	-1,056.5	113.4	11.97	11.97	0.00
NIORARA									
6,200.0	36.80	180.64	6,035.6	126.1	-1,056.7	127.4	12.09	12.09	0.00
6,300.0	48.80	180.64	6,108.8	58.3	-1,057.4	193.5	12.00	12.00	0.00
6,400.0	60.80	180.64	6,166.4	-23.3	-1,058.3	273.0	12.00	12.00	0.00
6,500.0	72.80	180.64	6,205.7	-115.0	-1,059.4	362.3	12.00	12.00	0.00
6,517.3	74.88	180.64	6,210.5	-131.6	-1,059.6	378.5	12.00	12.00	0.00
TOP C TARGET									
6,600.0	84.80	180.64	6,225.1	-212.9	-1,060.5	457.7	12.00	12.00	0.00
6,648.3	90.60	180.64	6,227.0	-261.2	-1,061.0	504.7	12.00	12.00	0.00
7" Csg - AEF 16-0560CH LP									
6,700.0	90.60	180.64	6,226.5	-312.8	-1,061.6	555.1	0.00	0.00	0.00
6,800.0	90.60	180.64	6,225.4	-412.8	-1,062.7	652.5	0.00	0.00	0.00
6,900.0	90.60	180.64	6,224.4	-512.8	-1,063.8	749.9	0.00	0.00	0.00
7,000.0	90.60	180.64	6,223.3	-612.8	-1,065.0	847.3	0.00	0.00	0.00
7,100.0	90.60	180.64	6,222.3	-712.8	-1,066.1	944.7	0.00	0.00	0.00
7,200.0	90.60	180.64	6,221.2	-812.8	-1,067.2	1,042.2	0.00	0.00	0.00
7,300.0	90.60	180.64	6,220.2	-912.8	-1,068.3	1,139.6	0.00	0.00	0.00
7,400.0	90.60	180.64	6,219.1	-1,012.8	-1,069.4	1,237.0	0.00	0.00	0.00
7,500.0	90.60	180.64	6,218.1	-1,112.7	-1,070.6	1,334.4	0.00	0.00	0.00
7,600.0	90.60	180.64	6,217.0	-1,212.7	-1,071.7	1,431.8	0.00	0.00	0.00
7,700.0	90.60	180.64	6,216.0	-1,312.7	-1,072.8	1,529.2	0.00	0.00	0.00
7,800.0	90.60	180.64	6,214.9	-1,412.7	-1,073.9	1,626.7	0.00	0.00	0.00
7,900.0	90.60	180.64	6,213.9	-1,512.7	-1,075.0	1,724.1	0.00	0.00	0.00
8,000.0	90.60	180.64	6,212.8	-1,612.7	-1,076.2	1,821.5	0.00	0.00	0.00
8,100.0	90.60	180.64	6,211.8	-1,712.7	-1,077.3	1,918.9	0.00	0.00	0.00
8,200.0	90.60	180.64	6,210.7	-1,812.7	-1,078.4	2,016.3	0.00	0.00	0.00
8,300.0	90.60	180.64	6,209.7	-1,912.7	-1,079.5	2,113.7	0.00	0.00	0.00
8,400.0	90.60	180.64	6,208.6	-2,012.6	-1,080.7	2,211.2	0.00	0.00	0.00
8,500.0	90.60	180.64	6,207.6	-2,112.6	-1,081.8	2,308.6	0.00	0.00	0.00
8,600.0	90.60	180.64	6,206.6	-2,212.6	-1,082.9	2,406.0	0.00	0.00	0.00
8,700.0	90.60	180.64	6,205.5	-2,312.6	-1,084.0	2,503.4	0.00	0.00	0.00

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Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well ANSCHUTZ EQUUS FARMS 4-62-16-0560CH
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4539.0ft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB @ 4539.0ft (Original Well Elev)
Site:	ANSCHUTZ EQUUS FARMS 4-62-16 NE PAD	North Reference:	True
Well:	ANSCHUTZ EQUUS FARMS 4-62-16-0560CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)	
8,800.0	90.60	180.64	6,204.5	-2,412.6	-1,085.1	2,600.8	0.00	0.00	0.00	
8,900.0	90.60	180.64	6,203.4	-2,512.6	-1,086.3	2,698.2	0.00	0.00	0.00	
9,000.0	90.60	180.64	6,202.4	-2,612.6	-1,087.4	2,795.6	0.00	0.00	0.00	
9,100.0	90.60	180.64	6,201.3	-2,712.6	-1,088.5	2,893.1	0.00	0.00	0.00	
9,200.0	90.60	180.64	6,200.3	-2,812.5	-1,089.6	2,990.5	0.00	0.00	0.00	
9,300.0	90.60	180.64	6,199.2	-2,912.5	-1,090.7	3,087.9	0.00	0.00	0.00	
9,400.0	90.60	180.64	6,198.2	-3,012.5	-1,091.9	3,185.3	0.00	0.00	0.00	
9,500.0	90.60	180.64	6,197.1	-3,112.5	-1,093.0	3,282.7	0.00	0.00	0.00	
9,600.0	90.60	180.64	6,196.1	-3,212.5	-1,094.1	3,380.1	0.00	0.00	0.00	
9,700.0	90.60	180.64	6,195.0	-3,312.5	-1,095.2	3,477.6	0.00	0.00	0.00	
9,800.0	90.60	180.64	6,194.0	-3,412.5	-1,096.3	3,575.0	0.00	0.00	0.00	
9,900.0	90.60	180.64	6,192.9	-3,512.5	-1,097.5	3,672.4	0.00	0.00	0.00	
10,000.0	90.60	180.64	6,191.9	-3,612.5	-1,098.6	3,769.8	0.00	0.00	0.00	
10,100.0	90.60	180.64	6,190.8	-3,712.4	-1,099.7	3,867.2	0.00	0.00	0.00	
10,200.0	90.60	180.64	6,189.8	-3,812.4	-1,100.8	3,964.6	0.00	0.00	0.00	
10,300.0	90.60	180.64	6,188.7	-3,912.4	-1,102.0	4,062.0	0.00	0.00	0.00	
10,400.0	90.60	180.64	6,187.7	-4,012.4	-1,103.1	4,159.5	0.00	0.00	0.00	
10,500.0	90.60	180.64	6,186.6	-4,112.4	-1,104.2	4,256.9	0.00	0.00	0.00	
10,600.0	90.60	180.64	6,185.6	-4,212.4	-1,105.3	4,354.3	0.00	0.00	0.00	
10,700.0	90.60	180.64	6,184.6	-4,312.4	-1,106.4	4,451.7	0.00	0.00	0.00	
10,800.0	90.60	180.64	6,183.5	-4,412.4	-1,107.6	4,549.1	0.00	0.00	0.00	
10,900.0	90.60	180.64	6,182.5	-4,512.3	-1,108.7	4,646.5	0.00	0.00	0.00	
10,943.4	90.60	180.64	6,182.0	-4,555.8	-1,109.2	4,688.9	0.00	0.00	0.00	
AEF 16-0560CH PBHL										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,648.3	6,227.0	7" Csg	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	0.0	FOX HILLS BASE		-0.60	180.64	
3,911.1	3,814.0	SHANNON		-0.60	180.64	
6,072.8	5,923.0	SHARON SPRINGS		-0.60	180.64	
6,175.2	6,014.0	NIOBRARA		-0.60	180.64	
6,517.3	6,212.0	TOP C TARGET		-0.60	180.64	
	6,242.0	BASE C TARGET		-0.60	180.64	