



Bill Barrett Corporation

Bill Barrett Corp.

Weld Co., CO

Sec.18-T6N-R61W

Greasewood #8-18H

Wellbore #1

Plan: Design #1

Standard Planning Report

01 August, 2013

Archer



Bill Barrett Corp.
 Project: Weld Co., CO
 Site: Sec.18-T6N-R61W
 Well: Greasewood #8-18H
 Wellbore: Wellbore #1
 Design: Design #1
 Lat: 40° 29' 37.550 N
 Long: 104° 15' 5.209 W
 Pad GL: 4727.00
 KB: WELL @ 4743.00usft



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00°
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	Start 3625.93' hold at 1348.84 MD
1348.84	8.98	40.69	1347.01	26.61	22.87	2.00	40.69	-24.38	Start Drop -2.00°
4974.77	8.98	40.69	4928.53	455.63	391.71	0.00	0.00	-417.44	Start 500.00' hold at 5423.62 MD
5423.62	0.00	0.00	5375.54	482.24	414.58	2.00	180.00	-441.82	KOP / Start Build 12.00°
5923.62	0.00	0.00	5875.54	482.24	414.58	0.00	0.00	-441.82	EOC / Start 4250.04' hold at 6673.62 MD
6673.62	90.00	180.24	6353.00	4.78	412.54	12.00	180.24	33.41	TD at 10923.66
10923.66	90.00	180.24	6353.00	-4245.23	394.41	0.00	0.00	4263.51	

WELL DETAILS: Greasewood #8-18H

+N/-S	+E/-W	Northing	Ground Level: Easting	4727.00 Latitude	Longitude	Slot
0.00	0.00	1425163.332	3347242.514	40° 29' 37.550 N	104° 15' 5.209 W	

PROJECT DETAILS: Weld Co., CO

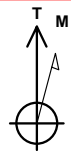
Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Northern Zone
 System Datum: Mean Sea Level

WELLBORE TARGET DETAILS (LAT/LONG)

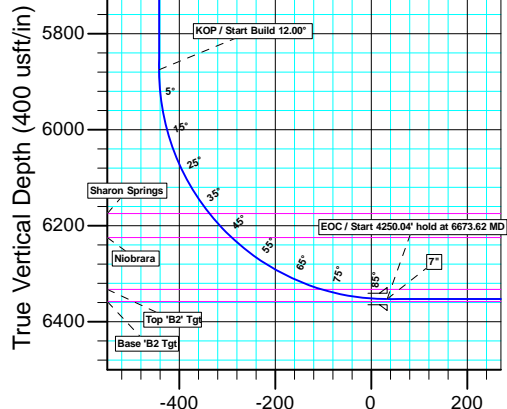
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
Greasewood 8-18H PBHL	6353.00	-4245.23	394.41	40° 28' 55.600 N	104° 15' 0.105 W	
Greasewood 8-18H LP	6353.00	4.78	412.54	40° 29' 37.597 N	104° 14' 59.869 W	

CASING DETAILS

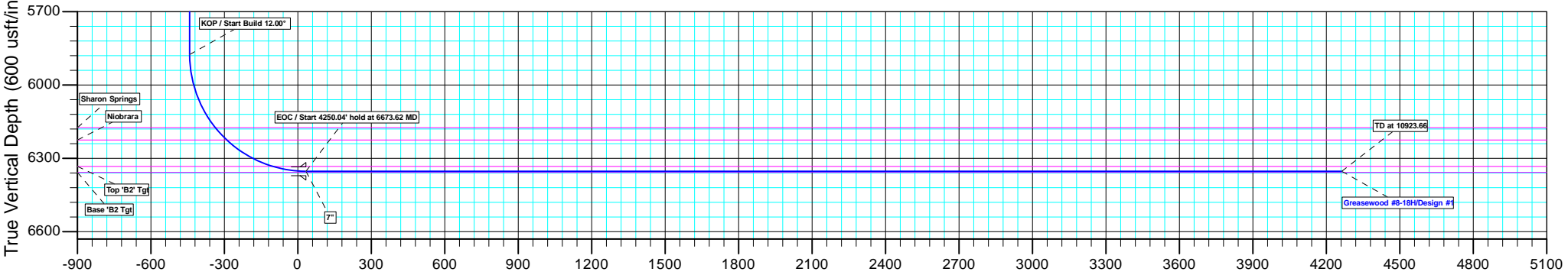
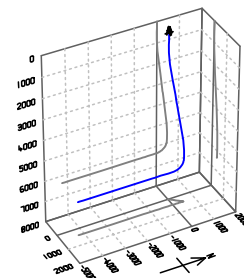
TVD	MD	Name
800.00	800.00	9 5/8"
6353.00	6673.62	7"



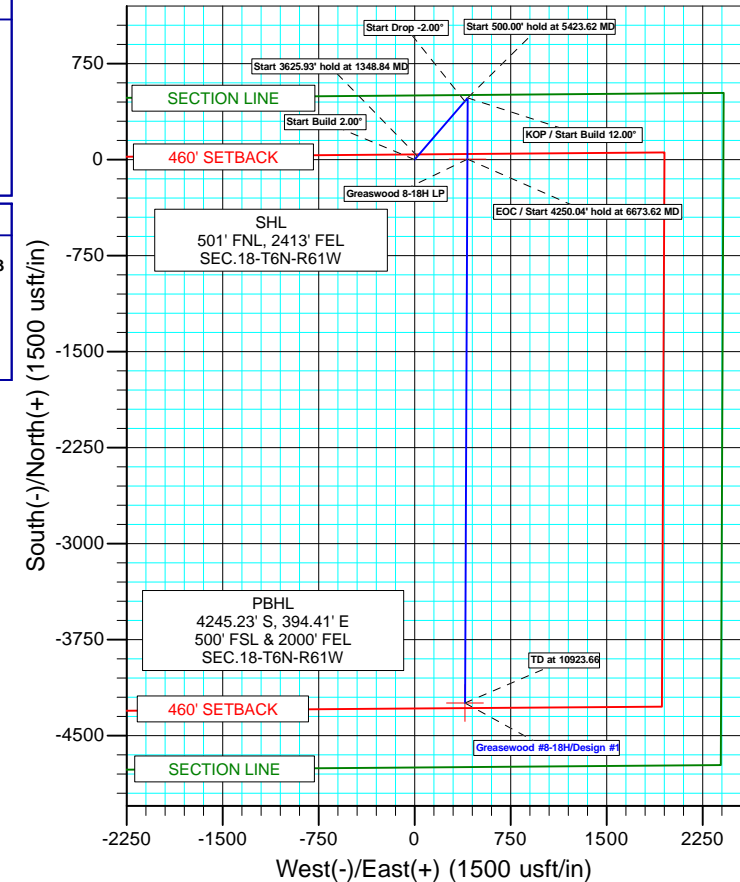
Azimuths to True North
 Magnetic North: 8.31°
 Magnetic Field
 Strength: 53010.0snT
 Dip Angle: 67.14°
 Date: 08/01/2013
 Model: IGRF2010



Vertical Section at 174.69° (400 usft/in)



Vertical Section at 174.69° (600 usft/in)



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Greasewood #8-18H
Company:	Bill Barrett Corp.	TVD Reference:	WELL @ 4743.00usft
Project:	Weld Co., CO	MD Reference:	WELL @ 4743.00usft
Site:	Sec.18-T6N-R61W	North Reference:	True
Well:	Greasewood #8-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Weld Co., CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Sec.18-T6N-R61W				
Site Position:		Northing:	1,425,163.340 usft	Latitude:	40° 29' 37.550 N
From:	Lat/Long	Easting:	3,347,242.514 usft	Longitude:	104° 15' 5.209 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.81 °

Well	Greasewood #8-18H					
Well Position	+N/-S	-0.01 usft	Northing:	1,425,163.332 usft	Latitude:	40° 29' 37.550 N
	+E/-W	0.00 usft	Easting:	3,347,242.514 usft	Longitude:	104° 15' 5.209 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,727.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/01/13	8.31	67.14	53,010

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	6,353.00	0.00	0.00	174.69

Plan Sections										
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	
1,348.84	8.98	40.69	1,347.01	26.61	22.87	2.00	2.00	0.00	40.69	
4,974.77	8.98	40.69	4,928.53	455.63	391.71	0.00	0.00	0.00	0.00	
5,423.62	0.00	0.00	5,375.54	482.24	414.58	2.00	-2.00	0.00	180.00	
5,923.62	0.00	0.00	5,875.54	482.24	414.58	0.00	0.00	0.00	0.00	
6,673.62	90.00	180.24	6,353.00	4.78	412.54	12.00	12.00	0.00	180.24	Greasewood 8-18H P
10,923.66	90.00	180.24	6,353.00	-4,245.23	394.41	0.00	0.00	0.00	0.00	Greasewood 8-18H P

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Greasewood #8-18H
Company:	Bill Barrett Corp.	TVD Reference:	WELL @ 4743.00usft
Project:	Weld Co., CO	MD Reference:	WELL @ 4743.00usft
Site:	Sec.18-T6N-R61W	North Reference:	True
Well:	Greasewood #8-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
Pierre										
421.00	0.00	0.00	421.00	0.00	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	0.00
600.00	0.00	0.00	600.00	0.00	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	0.00
9 5/8"										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00°										
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	2.00	40.69	999.98	1.32	1.14	-1.21	2.00	2.00	2.00	0.00
1,100.00	4.00	40.69	1,099.84	5.29	4.55	-4.85	2.00	2.00	2.00	0.00
1,200.00	6.00	40.69	1,199.45	11.90	10.23	-10.90	2.00	2.00	2.00	0.00
1,300.00	8.00	40.69	1,298.70	21.14	18.18	-19.37	2.00	2.00	2.00	0.00
Start 3625.93' hold at 1348.84 MD										
1,348.84	8.98	40.69	1,347.01	26.61	22.87	-24.38	2.00	2.00	0.00	0.00
1,400.00	8.98	40.69	1,397.54	32.66	28.08	-29.92	0.00	0.00	0.00	0.00
1,500.00	8.98	40.69	1,496.31	44.49	38.25	-40.76	0.00	0.00	0.00	0.00
1,600.00	8.98	40.69	1,595.09	56.33	48.42	-51.60	0.00	0.00	0.00	0.00
1,700.00	8.98	40.69	1,693.86	68.16	58.59	-62.44	0.00	0.00	0.00	0.00
1,800.00	8.98	40.69	1,792.64	79.99	68.77	-73.29	0.00	0.00	0.00	0.00
1,900.00	8.98	40.69	1,891.42	91.82	78.94	-84.13	0.00	0.00	0.00	0.00
2,000.00	8.98	40.69	1,990.19	103.65	89.11	-94.97	0.00	0.00	0.00	0.00
2,100.00	8.98	40.69	2,088.97	115.49	99.28	-105.81	0.00	0.00	0.00	0.00
2,200.00	8.98	40.69	2,187.74	127.32	109.45	-116.65	0.00	0.00	0.00	0.00
2,300.00	8.98	40.69	2,286.52	139.15	119.63	-127.49	0.00	0.00	0.00	0.00
2,400.00	8.98	40.69	2,385.29	150.98	129.80	-138.33	0.00	0.00	0.00	0.00
2,500.00	8.98	40.69	2,484.07	162.81	139.97	-149.17	0.00	0.00	0.00	0.00
2,600.00	8.98	40.69	2,582.84	174.65	150.14	-160.01	0.00	0.00	0.00	0.00
2,700.00	8.98	40.69	2,681.62	186.48	160.31	-170.85	0.00	0.00	0.00	0.00
2,800.00	8.98	40.69	2,780.39	198.31	170.49	-181.69	0.00	0.00	0.00	0.00
2,900.00	8.98	40.69	2,879.17	210.14	180.66	-192.53	0.00	0.00	0.00	0.00
3,000.00	8.98	40.69	2,977.94	221.97	190.83	-203.37	0.00	0.00	0.00	0.00
3,100.00	8.98	40.69	3,076.72	233.81	201.00	-214.21	0.00	0.00	0.00	0.00
3,200.00	8.98	40.69	3,175.49	245.64	211.17	-225.05	0.00	0.00	0.00	0.00
3,300.00	8.98	40.69	3,274.27	257.47	221.35	-235.89	0.00	0.00	0.00	0.00
3,400.00	8.98	40.69	3,373.04	269.30	231.52	-246.73	0.00	0.00	0.00	0.00
Parkman										
3,408.06	8.98	40.69	3,381.00	270.26	232.34	-247.60	0.00	0.00	0.00	0.00
3,500.00	8.98	40.69	3,471.82	281.14	241.69	-257.57	0.00	0.00	0.00	0.00
3,600.00	8.98	40.69	3,570.59	292.97	251.86	-268.41	0.00	0.00	0.00	0.00
3,700.00	8.98	40.69	3,669.37	304.80	262.03	-279.25	0.00	0.00	0.00	0.00
3,800.00	8.98	40.69	3,768.14	316.63	272.21	-290.09	0.00	0.00	0.00	0.00
3,900.00	8.98	40.69	3,866.92	328.46	282.38	-300.93	0.00	0.00	0.00	0.00
4,000.00	8.98	40.69	3,965.69	340.30	292.55	-311.77	0.00	0.00	0.00	0.00
4,100.00	8.98	40.69	4,064.47	352.13	302.72	-322.61	0.00	0.00	0.00	0.00
4,200.00	8.98	40.69	4,163.24	363.96	312.90	-333.45	0.00	0.00	0.00	0.00
Terry/Sussex										
4,231.14	8.98	40.69	4,194.00	367.64	316.06	-336.83	0.00	0.00	0.00	0.00

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Company:	Bill Barrett Corp.	TVD Reference:	WELL @ 4743.00usft
Project:	Weld Co., CO	MD Reference:	WELL @ 4743.00usft
Site:	Sec.18-T6N-R61W	North Reference:	True
Well:	Greasewood #8-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)	
4,300.00	8.98	40.69	4,262.02	375.79	323.07	-344.29	0.00	0.00	0.00	
4,400.00	8.98	40.69	4,360.79	387.62	333.24	-355.13	0.00	0.00	0.00	
4,500.00	8.98	40.69	4,459.57	399.46	343.41	-365.97	0.00	0.00	0.00	
4,600.00	8.98	40.69	4,558.34	411.29	353.58	-376.81	0.00	0.00	0.00	
4,700.00	8.98	40.69	4,657.12	423.12	363.76	-387.66	0.00	0.00	0.00	
Shannon										
4,784.92	8.98	40.69	4,741.00	433.17	372.39	-396.86	0.00	0.00	0.00	
4,800.00	8.98	40.69	4,755.89	434.95	373.93	-398.50	0.00	0.00	0.00	
4,900.00	8.98	40.69	4,854.67	446.78	384.10	-409.34	0.00	0.00	0.00	
Start Drop -2.00°										
4,974.77	8.98	40.69	4,928.53	455.63	391.71	-417.44	0.00	0.00	0.00	
5,000.00	8.47	40.69	4,953.46	458.53	394.20	-420.10	2.00	-2.00	0.00	
5,100.00	6.47	40.69	5,052.61	468.39	402.68	-429.13	2.00	-2.00	0.00	
5,200.00	4.47	40.69	5,152.15	475.63	408.89	-435.76	2.00	-2.00	0.00	
5,300.00	2.47	40.69	5,251.96	480.22	412.84	-439.97	2.00	-2.00	0.00	
5,400.00	0.47	40.69	5,351.92	482.17	414.52	-441.75	2.00	-2.00	0.00	
Start 500.00' hold at 5423.62 MD										
5,423.62	0.00	0.00	5,375.54	482.24	414.58	-441.82	2.00	-2.00	0.00	
5,500.00	0.00	0.00	5,451.92	482.24	414.58	-441.82	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,551.92	482.24	414.58	-441.82	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,651.92	482.24	414.58	-441.82	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,751.92	482.24	414.58	-441.82	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,851.92	482.24	414.58	-441.82	0.00	0.00	0.00	
KOP / Start Build 12.00°										
5,923.62	0.00	0.00	5,875.54	482.24	414.58	-441.82	0.00	0.00	0.00	
5,925.00	0.17	180.24	5,876.92	482.24	414.58	-441.82	12.00	12.00	0.00	
5,950.00	3.17	180.24	5,901.91	481.51	414.58	-441.09	12.00	12.00	0.00	
5,975.00	6.17	180.24	5,926.82	479.48	414.57	-439.07	12.00	12.00	0.00	
6,000.00	9.17	180.24	5,951.59	476.14	414.55	-435.75	12.00	12.00	0.00	
6,025.00	12.17	180.24	5,976.16	471.52	414.53	-431.15	12.00	12.00	0.00	
6,050.00	15.17	180.24	6,000.45	465.61	414.51	-425.27	12.00	12.00	0.00	
6,075.00	18.17	180.24	6,024.40	458.44	414.48	-418.13	12.00	12.00	0.00	
6,100.00	21.17	180.24	6,047.94	450.03	414.44	-409.76	12.00	12.00	0.00	
6,125.00	24.17	180.24	6,071.00	440.40	414.40	-400.17	12.00	12.00	0.00	
6,150.00	27.17	180.24	6,093.53	429.57	414.36	-389.40	12.00	12.00	0.00	
6,175.00	30.17	180.24	6,115.47	417.58	414.30	-377.46	12.00	12.00	0.00	
6,200.00	33.17	180.24	6,136.74	404.46	414.25	-364.40	12.00	12.00	0.00	
6,225.00	36.17	180.24	6,157.30	390.24	414.19	-350.25	12.00	12.00	0.00	
Sharon Springs										
6,247.31	38.84	180.24	6,175.00	376.65	414.13	-336.73	12.00	12.00	0.00	
6,250.00	39.17	180.24	6,177.09	374.96	414.12	-335.04	12.00	12.00	0.00	
6,275.00	42.17	180.24	6,196.05	358.67	414.05	-318.83	12.00	12.00	0.00	
6,300.00	45.17	180.24	6,214.13	341.41	413.98	-301.65	12.00	12.00	0.00	
Niobrara										
6,315.68	47.05	180.24	6,225.00	330.12	413.93	-290.41	12.00	12.00	0.00	
6,325.00	48.17	180.24	6,231.29	323.23	413.90	-283.56	12.00	12.00	0.00	
6,350.00	51.17	180.24	6,247.46	304.18	413.82	-264.59	12.00	12.00	0.00	
6,375.00	54.17	180.24	6,262.62	284.30	413.74	-244.81	12.00	12.00	0.00	
6,400.00	57.17	180.24	6,276.72	263.66	413.65	-224.26	12.00	12.00	0.00	
6,425.00	60.17	180.24	6,289.72	242.31	413.56	-203.01	12.00	12.00	0.00	
6,450.00	63.17	180.24	6,301.59	220.31	413.46	-181.11	12.00	12.00	0.00	
6,475.00	66.17	180.24	6,312.28	197.71	413.37	-158.63	12.00	12.00	0.00	
6,500.00	69.17	180.24	6,321.78	174.59	413.27	-135.61	12.00	12.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Greasewood #8-18H
Company:	Bill Barrett Corp.	TVD Reference:	WELL @ 4743.00usft
Project:	Weld Co., CO	MD Reference:	WELL @ 4743.00usft
Site:	Sec.18-T6N-R61W	North Reference:	True
Well:	Greasewood #8-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)	
6,525.00	72.17	180.24	6,330.06	151.01	413.17	-112.14	12.00	12.00	0.00	
Top 'B2' Tgt										
6,534.93	73.36	180.24	6,333.00	141.52	413.13	-102.70	12.00	12.00	0.00	
6,550.00	75.17	180.24	6,337.09	127.02	413.06	-88.26	12.00	12.00	0.00	
6,575.00	78.17	180.24	6,342.85	102.69	412.96	-64.05	12.00	12.00	0.00	
6,600.00	81.17	180.24	6,347.34	78.10	412.86	-39.57	12.00	12.00	0.00	
6,625.00	84.17	180.24	6,350.53	53.31	412.75	-14.90	12.00	12.00	0.00	
6,650.00	87.17	180.24	6,352.42	28.38	412.64	9.91	12.00	12.00	0.00	
Greasewood 8-18H LP										
6,673.61	90.00	180.24	6,353.00	4.78	412.54	33.40	12.00	12.00	0.00	
EOC / Start 4250.04' hold at 6673.62 MD - 7"										
6,673.62	90.00	180.24	6,353.00	4.77	412.54	33.41	12.00	12.00	0.00	
6,700.00	90.00	180.24	6,353.00	-21.60	412.43	59.67	0.00	0.00	0.00	
6,800.00	90.00	180.24	6,353.00	-121.60	412.00	159.20	0.00	0.00	0.00	
6,900.00	90.00	180.24	6,353.00	-221.60	411.58	258.73	0.00	0.00	0.00	
7,000.00	90.00	180.24	6,353.00	-321.60	411.15	358.26	0.00	0.00	0.00	
7,100.00	90.00	180.24	6,353.00	-421.60	410.72	457.79	0.00	0.00	0.00	
7,200.00	90.00	180.24	6,353.00	-521.60	410.30	557.32	0.00	0.00	0.00	
7,300.00	90.00	180.24	6,353.00	-621.60	409.87	656.85	0.00	0.00	0.00	
7,400.00	90.00	180.24	6,353.00	-721.60	409.44	756.38	0.00	0.00	0.00	
7,500.00	90.00	180.24	6,353.00	-821.60	409.02	855.91	0.00	0.00	0.00	
7,600.00	90.00	180.24	6,353.00	-921.60	408.59	955.44	0.00	0.00	0.00	
7,700.00	90.00	180.24	6,353.00	-1,021.60	408.16	1,054.97	0.00	0.00	0.00	
7,800.00	90.00	180.24	6,353.00	-1,121.59	407.74	1,154.50	0.00	0.00	0.00	
7,900.00	90.00	180.24	6,353.00	-1,221.59	407.31	1,254.04	0.00	0.00	0.00	
8,000.00	90.00	180.24	6,353.00	-1,321.59	406.89	1,353.57	0.00	0.00	0.00	
8,100.00	90.00	180.24	6,353.00	-1,421.59	406.46	1,453.10	0.00	0.00	0.00	
8,200.00	90.00	180.24	6,353.00	-1,521.59	406.03	1,552.63	0.00	0.00	0.00	
8,300.00	90.00	180.24	6,353.00	-1,621.59	405.61	1,652.16	0.00	0.00	0.00	
8,400.00	90.00	180.24	6,353.00	-1,721.59	405.18	1,751.69	0.00	0.00	0.00	
8,500.00	90.00	180.24	6,353.00	-1,821.59	404.75	1,851.22	0.00	0.00	0.00	
8,600.00	90.00	180.24	6,353.00	-1,921.59	404.33	1,950.75	0.00	0.00	0.00	
8,700.00	90.00	180.24	6,353.00	-2,021.59	403.90	2,050.28	0.00	0.00	0.00	
8,800.00	90.00	180.24	6,353.00	-2,121.59	403.47	2,149.81	0.00	0.00	0.00	
8,900.00	90.00	180.24	6,353.00	-2,221.58	403.05	2,249.34	0.00	0.00	0.00	
9,000.00	90.00	180.24	6,353.00	-2,321.58	402.62	2,348.87	0.00	0.00	0.00	
9,100.00	90.00	180.24	6,353.00	-2,421.58	402.19	2,448.41	0.00	0.00	0.00	
9,200.00	90.00	180.24	6,353.00	-2,521.58	401.77	2,547.94	0.00	0.00	0.00	
9,300.00	90.00	180.24	6,353.00	-2,621.58	401.34	2,647.47	0.00	0.00	0.00	
9,400.00	90.00	180.24	6,353.00	-2,721.58	400.91	2,747.00	0.00	0.00	0.00	
9,500.00	90.00	180.24	6,353.00	-2,821.58	400.49	2,846.53	0.00	0.00	0.00	
9,600.00	90.00	180.24	6,353.00	-2,921.58	400.06	2,946.06	0.00	0.00	0.00	
9,700.00	90.00	180.24	6,353.00	-3,021.58	399.63	3,045.59	0.00	0.00	0.00	
9,800.00	90.00	180.24	6,353.00	-3,121.58	399.21	3,145.12	0.00	0.00	0.00	
9,900.00	90.00	180.24	6,353.00	-3,221.58	398.78	3,244.65	0.00	0.00	0.00	
10,000.00	90.00	180.24	6,353.00	-3,321.57	398.35	3,344.18	0.00	0.00	0.00	
10,100.00	90.00	180.24	6,353.00	-3,421.57	397.93	3,443.71	0.00	0.00	0.00	
10,200.00	90.00	180.24	6,353.00	-3,521.57	397.50	3,543.24	0.00	0.00	0.00	
10,300.00	90.00	180.24	6,353.00	-3,621.57	397.07	3,642.78	0.00	0.00	0.00	
10,400.00	90.00	180.24	6,353.00	-3,721.57	396.65	3,742.31	0.00	0.00	0.00	
10,500.00	90.00	180.24	6,353.00	-3,821.57	396.22	3,841.84	0.00	0.00	0.00	
10,600.00	90.00	180.24	6,353.00	-3,921.57	395.79	3,941.37	0.00	0.00	0.00	
10,700.00	90.00	180.24	6,353.00	-4,021.57	395.37	4,040.90	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Greasewood #8-18H
Company:	Bill Barrett Corp.	TVD Reference:	WELL @ 4743.00usft
Project:	Weld Co., CO	MD Reference:	WELL @ 4743.00usft
Site:	Sec.18-T6N-R61W	North Reference:	True
Well:	Greasewood #8-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
10,800.00	90.00	180.24	6,353.00	-4,121.57	394.94	4,140.43	0.00	0.00	0.00
10,900.00	90.00	180.24	6,353.00	-4,221.57	394.51	4,239.96	0.00	0.00	0.00
TD at 10923.66 - Greasewood 8-18H PBHL									
10,923.66	90.00	180.24	6,353.00	-4,245.23	394.41	4,263.51	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
Greasewood 8-18H LP - hit/miss target - Shape - Point	0.00	0.00	6,353.00	4.78	412.54	1,425,173.920	3,347,654.950	40° 29' 37.597 N	104° 14' 59.869 W
Greasewood 8-18H PBI - plan hits target center - Point	0.00	0.00	6,353.00	-4,245.23	394.41	1,420,924.080	3,347,696.660	40° 28' 55.600 N	104° 15' 0.105 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
800.00	800.00	9 5/8"	9-5/8	12-1/4	
6,673.62	6,353.00	7"	7	8-3/4	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
421.00	421.00	Pierre		0.00	
3,408.06	3,381.00	Parkman		0.00	
4,231.14	4,194.00	Terry/Sussex		0.00	
4,784.92	4,741.00	Shannon		0.00	
6,247.31	6,175.00	Sharon Springs		0.00	
6,315.68	6,225.00	Niobrara		0.00	
6,534.93	6,333.00	Top 'B2' Tgt		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment	
900.00	900.00	0.00	0.00	Start Build 2.00°	
1,348.84	1,347.01	26.61	22.87	Start 3625.93' hold at 1348.84 MD	
4,974.77	4,928.53	455.63	391.71	Start Drop -2.00°	
5,423.62	5,375.54	482.24	414.58	Start 500.00' hold at 5423.62 MD	
5,923.62	5,875.54	482.24	414.58	KOP / Start Build 12.00°	
6,673.62	6,353.00	4.78	412.54	EOC / Start 4250.04' hold at 6673.62 MD	
10,923.66	6,353.00	-4,245.23	394.41	TD at 10923.66	