

# **Bill Barrett Corp. (II)**

**Weld Co., CO (NAD 83)**

**Sec.25-T6N-R62W**

**Dutch Lake 17-25H**

**OH**

**Design: OH**

## **Standard Survey Report**

**17 April, 2013**





Bill Barrett Corp. (II)  
 Project: Weld Co., CO (NAD 83)  
 Site: Sec.25-T6N-R62W  
 Well: Dutch Lake 17-25H  
 Wellbore: OH  
 Design: Plan #1 01Apr13 RG  
 Lat: 40° 27' 52.33 N  
 Long: 104° 16' 43.77 W  
 Pad GL: 4671.00  
 KB: RKB=15' @ 4686.00ft (Cade 24)



#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1500.00	0.000	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
2183.70	10.255	19.50	2180.05	57.52	20.37	1.50	19.50	-57.44	Start 2174.64 hold at 2183.70 MD
4358.34	10.255	19.50	4319.95	422.48	149.63	0.00	0.00	-421.84	Start Drop -1.50
5042.03	0.000	0.00	5000.00	480.00	170.00	1.50	180.00	-479.27	Start 634.39 hold at 5042.03 MD
5676.42	0.000	0.00	5634.39	480.00	170.00	0.00	0.00	-479.27	KOP / Start Build 9.00
6679.58	90.284	181.87	6271.00	-159.43	149.12	9.00	181.87	160.07	EOC / Start 4025.19 hold at 6679.53 MD
10704.72	90.284	181.87	6251.05	-4182.39	17.78	0.00	0.00	4182.42	TD at 10704.72

#### WELL DETAILS: Dutch Lake 17-25H

+N/-S	+E/-W	Northing	Ground Level:	4671.00	Latitude	Longitude	Slot
0.00	0.00	1414410.48	Easting	3339775.37	40° 27' 52.33 N	104° 16' 43.77 W	

#### WELLBORE TARGET DETAILS (LAT/LONG)

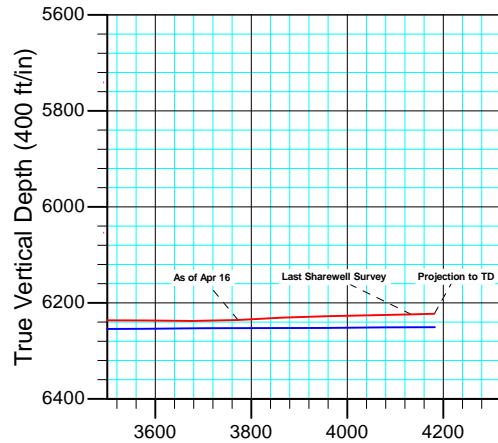
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
Dutch Lake 17-25H PBHL	6251.05	-4182.39	17.78	40° 27' 11.00 N	104° 16' 43.54 W	

#### PROJECT DETAILS: Weld Co., CO (NAD 83)

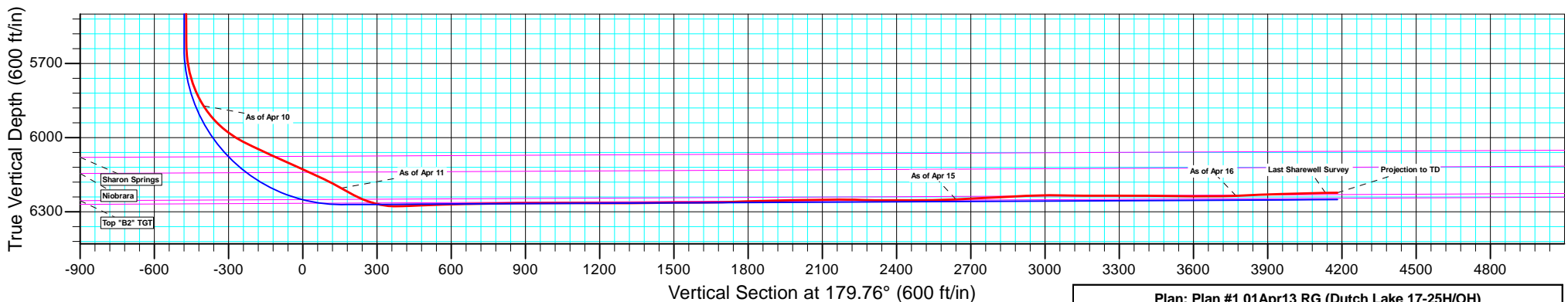
Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Colorado Northern Zone

System Datum: Mean Sea Level

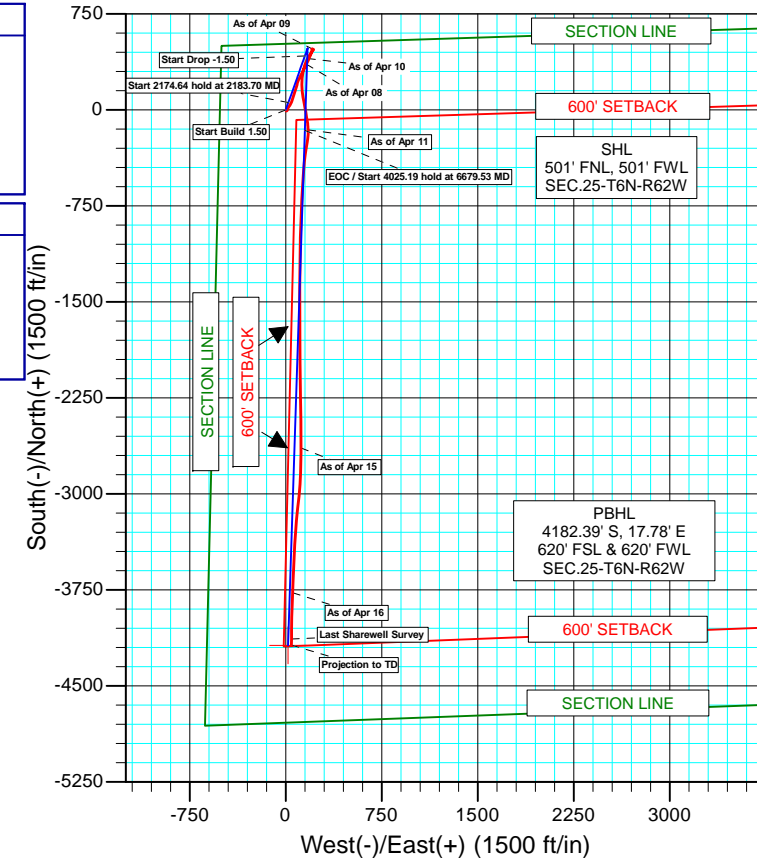
Azimuths to True North  
 Magnetic North: 8.36°  
 Magnetic Field  
 Strength: 53027.9snT  
 Dip Angle: 67.12°  
 Date: 4/1/2013  
 Model: IGRF2010



Vertical Section at 179.76° (400 ft/in)



Vertical Section at 179.76° (600 ft/in)



Plan: Plan #1 01Apr13 RG (Dutch Lake 17-25H/OH)

Created By: Rolando Garza

Date: 6:12, April 17 2013

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well Dutch Lake 17-25H
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Site:</b>	Sec.25-T6N-R62W	<b>MD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Well:</b>	Dutch Lake 17-25H	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	CompassVM

<b>Project</b>	Weld Co., CO (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		

Site		Sec.25-T6N-R62W			
Site Position:		Northing:	1,414,410.49 usft	Latitude:	40° 27' 52.33 N
From:	Lat/Long	Easting:	3,339,775.38 usft	Longitude:	104° 16' 43.77 W
Position Uncertainty:	0.00 ft	Slot Radius:	1.10 ft	Grid Convergence:	0.79 °

Well		Dutch Lake 17-25H				
Well Position	+N/-S	0.00 ft	Northing:	1,414,410.49 usft	Latitude:	40° 27' 52.33 N
	+E/-W	0.00 ft	Easting:	3,339,775.38 usft	Longitude:	104° 16' 43.77 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,671.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	4/1/2013	8.36	67.12	53,028

<b>Design</b>	OH				
<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	179.76	

<b>Survey Program</b>	<b>Date</b>	4/17/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
902.00	10,651.00	MWD (OH)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
902.00	0.500	148.60	901.99	-3.36	2.05	3.37	0.06	0.06	0.00	
991.00	0.700	140.50	990.98	-4.11	2.60	4.12	0.24	0.22	-9.10	
1,087.00	0.800	147.70	1,086.98	-5.13	3.33	5.14	0.14	0.10	7.50	
1,181.00	0.600	137.50	1,180.97	-6.05	4.01	6.06	0.25	-0.21	-10.85	
1,276.00	0.700	157.40	1,275.96	-6.95	4.57	6.97	0.26	0.11	20.95	
1,371.00	0.700	162.30	1,370.96	-8.04	4.97	8.06	0.06	0.00	5.16	
1,466.00	1.800	65.00	1,465.94	-7.96	6.50	7.99	2.12	1.16	-102.42	
1,561.00	3.000	45.40	1,560.85	-5.58	9.62	5.62	1.51	1.26	-20.63	
1,656.00	3.300	19.50	1,655.72	-1.26	12.31	1.31	1.52	0.32	-27.26	

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well Dutch Lake 17-25H
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Site:</b>	Sec.25-T6N-R62W	<b>MD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Well:</b>	Dutch Lake 17-25H	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	CompassVM

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)
1,751.00	4.200	14.00	1,750.51	4.69	14.06	-4.63	1.02	0.95	-5.79
1,847.00	4.700	17.50	1,846.22	11.85	16.09	-11.79	0.59	0.52	3.65
1,942.00	5.200	30.20	1,940.87	19.29	19.43	-19.21	1.26	0.53	13.37
2,037.00	6.400	41.20	2,035.39	26.99	25.08	-26.89	1.72	1.26	11.58
2,133.00	8.000	34.60	2,130.63	36.52	32.40	-36.38	1.87	1.67	-6.88
2,228.00	8.700	24.90	2,224.62	48.48	39.18	-48.31	1.65	0.74	-10.21
2,322.00	9.600	22.20	2,317.43	62.18	45.14	-61.99	1.06	0.96	-2.87
2,417.00	10.700	17.90	2,410.94	77.91	50.84	-77.70	1.41	1.16	-4.53
2,512.00	9.500	17.70	2,504.47	93.77	55.93	-93.54	1.26	-1.26	-0.21
2,608.00	11.200	18.10	2,598.90	110.18	61.24	-109.92	1.77	1.77	0.42
2,703.00	11.100	17.90	2,692.11	127.65	66.92	-127.37	0.11	-0.11	-0.21
2,795.00	10.900	15.00	2,782.42	144.48	71.89	-144.18	0.64	-0.22	-3.15
2,890.00	11.800	18.60	2,875.56	162.37	77.31	-162.04	1.21	0.95	3.79
2,984.00	10.200	18.20	2,967.83	179.38	82.98	-179.03	1.70	-1.70	-0.43
3,079.00	9.500	13.70	3,061.43	194.99	87.46	-194.62	1.09	-0.74	-4.74
3,174.00	8.500	13.50	3,155.26	209.44	90.96	-209.05	1.05	-1.05	-0.21
3,270.00	9.000	20.30	3,250.15	223.38	95.22	-222.98	1.20	0.52	7.08
3,365.00	10.600	25.90	3,343.76	238.21	101.61	-237.78	1.96	1.68	5.89
3,460.00	13.500	26.60	3,436.65	255.99	110.40	-255.52	3.06	3.05	0.74
3,555.00	13.800	27.10	3,528.97	275.99	120.52	-275.48	0.34	0.32	0.53
3,649.00	14.300	26.60	3,620.16	296.35	130.83	-295.80	0.55	0.53	-0.53
3,745.00	14.200	25.90	3,713.21	317.54	141.28	-316.95	0.21	-0.10	-0.73
3,841.00	13.500	25.00	3,806.41	338.29	151.16	-337.65	0.76	-0.73	-0.94
3,934.00	12.500	25.90	3,897.03	357.18	160.15	-356.51	1.10	-1.08	0.97
As of Apr 08									
4,027.00	11.900	25.80	3,987.93	374.87	168.71	-374.16	0.65	-0.65	-0.11
4,123.00	10.400	24.60	4,082.11	391.66	176.63	-390.92	1.58	-1.56	-1.25
4,218.00	10.300	23.30	4,175.57	407.26	183.56	-406.48	0.27	-0.11	-1.37
4,312.00	9.900	24.10	4,268.11	422.35	190.18	-421.55	0.45	-0.43	0.85
4,408.00	7.800	25.40	4,362.96	435.77	196.35	-434.94	2.20	-2.19	1.35
4,503.00	6.500	18.90	4,457.22	446.68	200.85	-445.84	1.61	-1.37	-6.84
4,598.00	5.600	10.20	4,551.70	456.33	203.42	-455.47	1.35	-0.95	-9.16
4,693.00	4.300	355.80	4,646.34	464.44	203.98	-463.59	1.88	-1.37	-15.16
4,789.00	3.600	358.60	4,742.11	471.05	203.64	-470.19	0.76	-0.73	2.92
4,884.00	1.600	42.70	4,837.02	475.00	204.47	-474.14	2.83	-2.11	46.42
4,979.00	1.900	88.60	4,931.98	476.02	206.94	-475.15	1.47	0.32	48.32
5,074.00	1.100	116.60	5,026.95	475.65	209.33	-474.77	1.12	-0.84	29.47
5,169.00	0.500	80.90	5,121.94	475.30	210.55	-474.42	0.79	-0.63	-37.58
5,265.00	1.100	115.60	5,217.93	474.97	211.80	-474.08	0.78	0.63	36.15
5,359.00	1.200	134.70	5,311.91	473.89	213.31	-472.99	0.42	0.11	20.32

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well Dutch Lake 17-25H
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Site:</b>	Sec.25-T6N-R62W	<b>MD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Well:</b>	Dutch Lake 17-25H	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	CompassVM

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)	
5,454.00	1.100	124.70	5,406.89	472.67	214.77	-471.77	0.24	-0.11	-10.53	
5,517.00	1.000	105.30	5,469.88	472.18	215.80	-471.27	0.58	-0.16	-30.79	
<b>As of Apr 09</b>										
5,620.00	0.800	102.50	5,572.87	471.79	217.37	-470.88	0.20	-0.19	-2.72	
5,651.00	0.700	92.60	5,603.87	471.73	217.77	-470.82	0.53	-0.32	-31.94	
5,683.00	2.800	221.60	5,635.85	471.14	217.44	-470.23	10.27	6.56	403.13	
5,715.00	7.400	223.30	5,667.72	469.06	215.51	-468.15	14.38	14.38	5.31	
5,747.00	11.800	220.80	5,699.26	465.08	211.96	-464.19	13.81	13.75	-7.81	
5,778.00	16.000	220.30	5,729.35	459.42	207.12	-458.55	13.55	13.55	-1.61	
5,810.00	20.300	219.60	5,759.75	451.77	200.73	-450.93	13.45	13.44	-2.19	
5,842.00	24.400	216.90	5,789.34	442.21	193.22	-441.39	13.20	12.81	-8.44	
5,873.00	27.700	211.00	5,817.19	430.90	185.66	-430.12	13.52	10.65	-19.03	
5,905.00	30.900	204.10	5,845.10	417.02	178.47	-416.27	14.52	10.00	-21.56	
5,937.00	34.900	203.50	5,871.96	401.12	171.46	-400.40	12.54	12.50	-1.88	
<b>As of Apr 10</b>										
5,969.00	39.300	205.60	5,897.48	383.57	163.43	-382.89	14.31	13.75	6.56	
6,001.00	43.900	204.20	5,921.41	364.31	154.49	-363.66	14.66	14.38	-4.38	
6,032.00	47.300	199.30	5,943.10	343.74	146.32	-343.12	15.74	10.97	-15.81	
6,064.00	51.200	195.40	5,963.99	320.61	139.12	-320.02	15.29	12.19	-12.19	
6,095.00	54.400	190.60	5,982.73	296.56	133.59	-295.99	16.08	10.32	-15.48	
6,127.00	58.300	186.80	6,000.47	270.23	129.58	-269.69	15.69	12.19	-11.88	
6,159.00	62.400	182.20	6,016.30	242.53	127.42	-241.99	17.89	12.81	-14.38	
6,190.00	65.200	180.30	6,029.99	214.72	126.82	-214.19	10.57	9.03	-6.13	
6,222.00	64.700	180.30	6,043.54	185.73	126.67	-185.20	1.56	-1.56	0.00	
6,254.00	64.800	174.40	6,057.20	156.84	128.01	-156.30	16.68	0.31	-18.44	
6,285.00	64.700	172.40	6,070.42	128.99	131.23	-128.44	5.84	-0.32	-6.45	
6,317.00	65.400	171.40	6,083.92	100.26	135.32	-99.70	3.58	2.19	-3.13	
6,349.00	66.200	170.00	6,097.04	71.46	140.03	-70.87	4.71	2.50	-4.38	
6,380.00	66.700	169.40	6,109.42	43.50	145.12	-42.89	2.40	1.61	-1.94	
6,412.00	66.300	168.70	6,122.18	14.69	150.69	-14.06	2.36	-1.25	-2.19	
6,444.00	66.600	169.40	6,134.97	-14.11	156.26	14.77	2.21	0.94	2.19	
6,476.00	65.100	171.00	6,148.06	-42.88	161.23	43.56	6.54	-4.69	5.00	
6,507.00	64.700	171.00	6,161.21	-70.61	165.63	71.30	1.29	-1.29	0.00	
6,539.00	63.100	172.90	6,175.29	-99.06	169.65	99.77	7.31	-5.00	5.94	
6,570.00	61.700	175.40	6,189.65	-126.38	172.46	127.11	8.45	-4.52	8.06	
6,602.00	62.200	174.60	6,204.70	-154.52	174.92	155.25	2.70	1.56	-2.50	
<b>As of Apr 11</b>										
6,634.00	60.000	182.60	6,220.19	-182.49	175.62	183.22	22.93	-6.88	25.00	
6,643.00	61.200	184.00	6,224.60	-190.32	175.17	191.05	19.01	13.33	15.56	
6,680.00	64.400	187.20	6,241.52	-223.06	171.95	223.77	11.57	8.65	8.65	

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well Dutch Lake 17-25H
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Site:</b>	Sec.25-T6N-R62W	<b>MD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Well:</b>	Dutch Lake 17-25H	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	CompassVM

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)
6,711.00	69.200	189.90	6,253.73	-251.22	167.70	251.92	17.43	15.48	8.71
6,743.00	74.200	190.40	6,263.77	-281.11	162.35	281.79	15.70	15.63	1.56
6,774.00	78.100	189.20	6,271.19	-310.77	157.23	311.42	13.13	12.58	-3.87
6,806.00	83.900	187.90	6,276.20	-342.01	152.53	342.65	18.56	18.13	-4.06
6,837.00	89.900	185.20	6,277.87	-372.75	149.01	373.37	21.22	19.35	-8.71
6,869.00	92.400	184.20	6,277.23	-404.63	146.38	405.24	8.41	7.81	-3.13
6,900.00	92.300	184.10	6,275.96	-435.52	144.14	436.12	0.46	-0.32	-0.32
6,932.00	92.200	184.00	6,274.70	-467.42	141.89	468.01	0.44	-0.31	-0.31
7,026.00	91.900	184.00	6,271.34	-561.13	135.33	561.69	0.32	-0.32	0.00
7,121.00	91.200	183.90	6,268.77	-655.87	128.79	656.40	0.74	-0.74	-0.11
7,216.00	90.700	183.70	6,267.20	-750.64	122.50	751.15	0.57	-0.53	-0.21
7,311.00	90.900	181.20	6,265.87	-845.54	118.43	846.03	2.64	0.21	-2.63
7,405.00	90.500	181.20	6,264.72	-939.51	116.47	939.99	0.43	-0.43	0.00
7,500.00	89.800	181.90	6,264.47	-1,034.48	113.90	1,034.94	1.04	-0.74	0.74
7,594.00	89.900	181.20	6,264.72	-1,128.44	111.35	1,128.90	0.75	0.11	-0.74
7,689.00	89.200	181.30	6,265.46	-1,223.41	109.28	1,223.86	0.74	-0.74	0.11
7,783.00	91.000	179.50	6,265.30	-1,317.40	108.63	1,317.85	2.71	1.91	-1.91
7,877.00	90.700	180.00	6,263.91	-1,411.39	109.04	1,411.84	0.62	-0.32	0.53
7,972.00	90.300	179.80	6,263.08	-1,506.39	109.20	1,506.83	0.47	-0.42	-0.21
8,067.00	89.700	179.80	6,263.08	-1,601.39	109.53	1,601.83	0.63	-0.63	0.00
8,161.00	92.100	180.30	6,261.60	-1,695.37	109.45	1,695.81	2.61	2.55	0.53
8,256.00	91.800	179.80	6,258.37	-1,790.31	109.37	1,790.76	0.61	-0.32	-0.53
8,351.00	91.600	179.60	6,255.55	-1,885.27	109.87	1,885.71	0.30	-0.21	-0.21
8,445.00	91.000	179.40	6,253.42	-1,979.24	110.69	1,979.69	0.67	-0.64	-0.21
8,540.00	90.700	178.90	6,252.01	-2,074.22	112.09	2,074.67	0.61	-0.32	-0.53
8,634.00	90.300	178.90	6,251.19	-2,168.20	113.90	2,168.66	0.43	-0.43	0.00
8,728.00	88.100	178.90	6,252.50	-2,262.17	115.70	2,262.63	2.34	-2.34	0.00
8,823.00	90.200	179.60	6,253.91	-2,357.14	116.95	2,357.61	2.33	2.21	0.74
8,917.00	89.700	179.20	6,253.99	-2,451.14	117.93	2,451.61	0.68	-0.53	-0.43
9,011.00	90.900	180.40	6,253.50	-2,545.13	118.26	2,545.61	1.81	1.28	1.28
9,106.00	92.900	179.60	6,250.35	-2,640.07	118.26	2,640.55	2.27	2.11	-0.84
As of Apr 15									
9,201.00	92.900	180.10	6,245.54	-2,734.95	118.51	2,735.42	0.53	0.00	0.53
9,295.00	92.700	183.00	6,240.95	-2,828.80	115.97	2,829.26	3.09	-0.21	3.09
9,390.00	93.700	183.10	6,235.65	-2,923.51	110.92	2,923.95	1.06	1.05	0.11
9,484.00	89.200	186.50	6,233.27	-3,017.11	103.06	3,017.52	6.00	-4.79	3.62
9,579.00	89.000	185.40	6,234.76	-3,111.59	93.21	3,111.95	1.18	-0.21	-1.16
9,673.00	90.200	184.80	6,235.42	-3,205.21	84.86	3,205.54	1.43	1.28	-0.64
9,768.00	89.900	184.30	6,235.33	-3,299.91	77.32	3,300.21	0.61	-0.32	-0.53
9,862.00	89.200	184.40	6,236.07	-3,393.64	70.19	3,393.90	0.75	-0.74	0.11

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well Dutch Lake 17-25H
<b>Project:</b>	Weld Co., CO (NAD 83)	<b>TVD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Site:</b>	Sec.25-T6N-R62W	<b>MD Reference:</b>	RKB=15' @ 4686.00ft (Cade 24)
<b>Well:</b>	Dutch Lake 17-25H	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	CompassVM

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)	
9,957.00	90.100	182.80	6,236.65	-3,488.45	64.23	3,488.68	1.93	0.95	-1.68	
10,051.00	89.500	182.50	6,236.98	-3,582.34	59.88	3,582.56	0.71	-0.64	-0.32	
10,146.00	89.700	180.40	6,237.64	-3,677.31	57.48	3,677.51	2.22	0.21	-2.21	
10,241.00	92.700	183.10	6,235.65	-3,772.22	54.58	3,772.42	4.25	3.16	2.84	
<b>As of Apr 16</b>										
10,336.00	92.700	182.50	6,231.18	-3,867.00	49.94	3,867.18	0.63	0.00	-0.63	
10,431.00	91.200	181.20	6,227.95	-3,961.89	46.88	3,962.05	2.09	-1.58	-1.37	
10,526.00	91.300	180.80	6,225.87	-4,056.86	45.22	4,057.01	0.43	0.11	-0.42	
10,603.00	91.300	180.20	6,224.13	-4,133.83	44.55	4,133.98	0.78	0.00	-0.78	
<b>Last Sharewell Survey</b>										
10,651.00	91.300	180.20	6,223.04	-4,181.82	44.38	4,181.97	0.00	0.00	0.00	
<b>Projection to TD - Dutch Lake 17-25H PBHL</b>										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
3,934.00	3,897.03	357.18	160.15	As of Apr 08	
5,517.00	5,469.88	472.18	215.80	As of Apr 09	
5,937.00	5,871.96	401.12	171.46	As of Apr 10	
6,602.00	6,204.70	-154.52	174.92	As of Apr 11	
9,106.00	6,250.35	-2,640.07	118.26	As of Apr 15	
10,241.00	6,235.65	-3,772.22	54.58	As of Apr 16	
10,603.00	6,224.13	-4,133.83	44.55	Last Sharewell Survey	
10,651.00	6,223.04	-4,181.82	44.38	Projection to TD	

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