



**Bill Barrett Corporation**

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

Weld Co., CO

Sec.27-T5N-R63W

70 Ranch 5-63-27-33H

Wellbore #1

Survey: OH

## **Standard Survey Report**

30 August, 2012





Bill Barrett Corp. (II)  
Project: Weld Co., CO  
Site: Sec.27-T5N-R63W  
Well: 70 Ranch 5-63-27-33H  
Wellbore: Wellbore #1  
Design: OH  
Lat: 40° 22' 7.03 N  
Long: 104° 24' 47.41 W  
Pad GL: 4595.01  
KB: WELL @ 4613.01ft



#### WELL DETAILS: 70 Ranch 5-63-27-33H

+N/-S	+E/-W	Northing	Ground Level: Easting	4595.01 Latitude	Longitude	Slot
0.00	0.00	1378984.58	3302825.94	40° 22' 7.03 N	104° 24' 47.41 W	

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

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	6391.01	248.12	-4405.25	40° 22' 9.48 N	104° 25' 44.33 W	Point

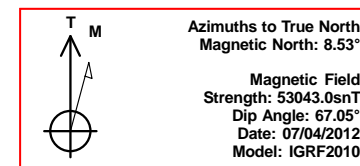
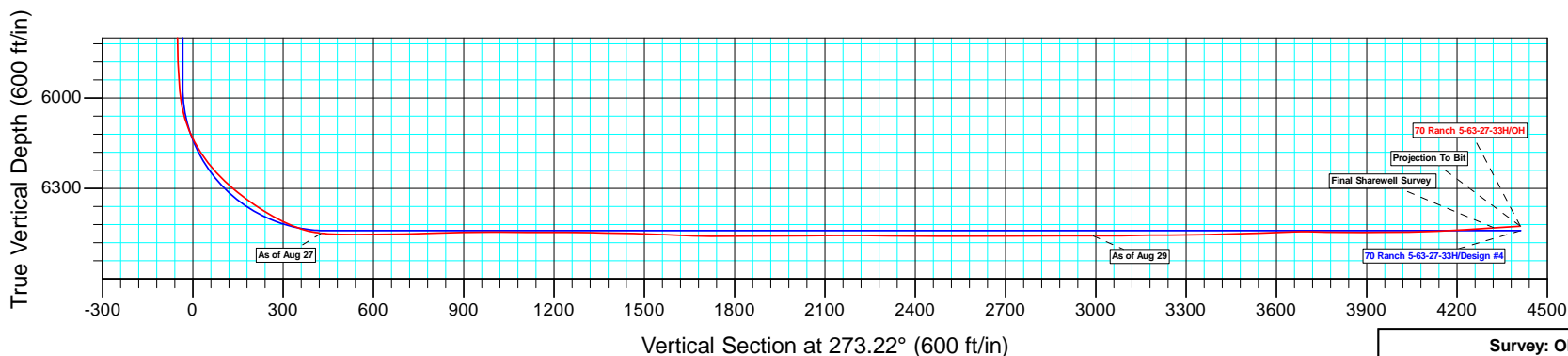
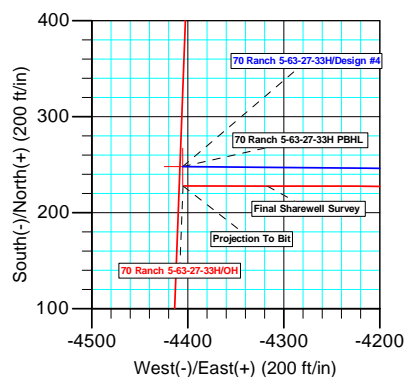
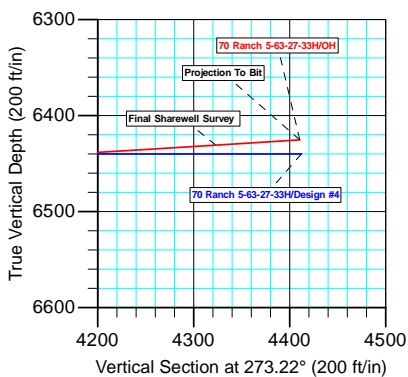
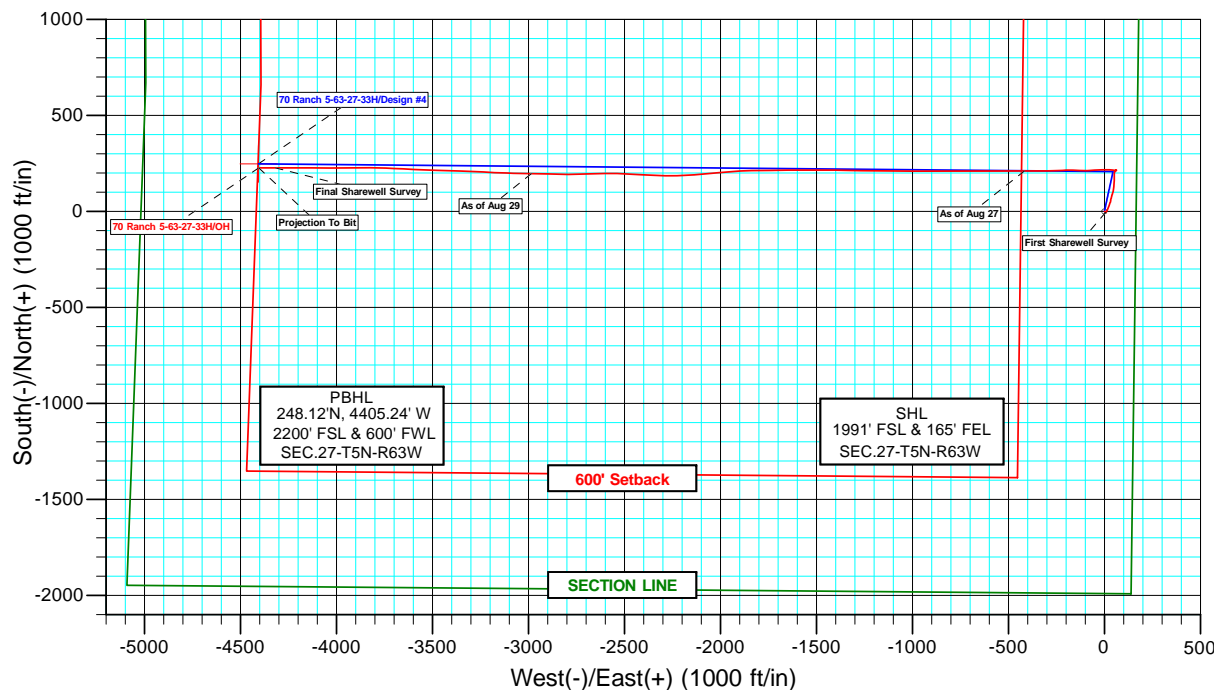
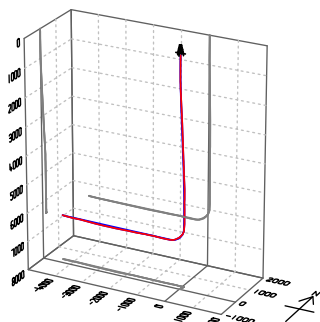
#### PROJECT DETAILS: Weld Co., CO

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

System Datum: Mean Sea Level

#### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
876.96	877.00	1.000	128.10	-4.72	6.02	-6.28	7.65	First Sharewell Survey
6448.60	6697.00	83.600	270.90	211.63	-415.33	426.57	728.78	As of Aug 27
6456.53	9268.00	89.300	271.60	197.40	-2984.28	2990.66	3299.26	As of Aug 29
6430.93	10602.00	93.600	270.10	227.79	-4317.08	4323.06	4632.69	Final Sharewell Survey
6425.41	10690.00	93.600	270.10	227.94	-4404.91	4410.76	4720.51	Projection To Bit



Survey: OH (70 Ranch 5-63-27-33H/Wellbore #1)

Created By: Rolando Garza Date: 8:26, August 30 2012

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well 70 Ranch 5-63-27-33H
<b>Project:</b>	Weld Co., CO	<b>TVD Reference:</b>	WELL @ 4613.01ft
<b>Site:</b>	Sec.27-T5N-R63W	<b>MD Reference:</b>	WELL @ 4613.01ft
<b>Well:</b>	70 Ranch 5-63-27-33H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	CompassVM

<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.27-T5N-R63W					
Site Position:		Northing:	1,378,940.88	usft	Latitude:	40° 22' 6.60 N	
From:	Lat/Long	Easting:	3,302,826.48	usft	Longitude:	104° 24' 47.41 W	
Position Uncertainty:	0.00	ft	Slot Radius:	1.10	ft	Grid Convergence:	0.70 °

Well	70 Ranch 5-63-27-33H					
Well Position	+N/-S	0.00 ft	Northing:	1,378,984.58 usft	Latitude:	40° 22' 7.03 N
	+E/-W	0.00 ft	Easting:	3,302,825.94 usft	Longitude:	104° 24' 47.41 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,595.01 ft

<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	07/04/12	8.53	67.05	53,043

<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	273.22	

<b>Survey Program</b>	<b>Date</b>	08/30/12			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
877.00	10,690.00	OH (Wellbore #1)	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
877.00	1.000	128.10	876.96	-4.72	6.02	-6.28	0.11	0.11	0.00
<b>First Sharewell Survey</b>									
969.00	1.800	47.90	968.93	-4.25	7.73	-7.95	2.07	0.87	-87.17
1,064.00	3.700	28.50	1,063.82	-0.55	10.30	-10.31	2.20	2.00	-20.42
1,159.00	3.900	29.50	1,158.61	4.95	13.35	-13.05	0.22	0.21	1.05
1,254.00	4.200	29.90	1,253.38	10.78	16.67	-16.04	0.32	0.32	0.42
1,349.00	4.700	19.00	1,348.09	17.48	19.68	-18.66	1.03	0.53	-11.47
1,443.00	3.300	24.30	1,441.86	23.58	22.04	-20.68	1.54	-1.49	5.64
1,538.00	2.900	19.30	1,536.72	28.34	23.96	-22.33	0.51	-0.42	-5.26
1,633.00	3.900	21.30	1,631.55	33.62	25.93	-24.00	1.06	1.05	2.11

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well 70 Ranch 5-63-27-33H
<b>Project:</b>	Weld Co., CO	<b>TVD Reference:</b>	WELL @ 4613.01ft
<b>Site:</b>	Sec.27-T5N-R63W	<b>MD Reference:</b>	WELL @ 4613.01ft
<b>Well:</b>	70 Ranch 5-63-27-33H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<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)
1,728.00	3.400	9.60	1,726.36	39.41	27.57	-25.31	0.94	-0.53	-12.32
1,823.00	3.800	26.40	1,821.18	45.01	29.44	-26.87	1.18	0.42	17.68
1,918.00	2.500	7.50	1,916.03	49.88	31.11	-28.26	1.73	-1.37	-19.89
2,013.00	2.200	19.80	2,010.95	53.65	32.00	-28.93	0.62	-0.32	12.95
2,108.00	3.500	8.80	2,105.83	58.23	33.06	-29.74	1.48	1.37	-11.58
2,202.00	2.600	8.90	2,199.70	63.17	33.83	-30.23	0.96	-0.96	0.11
2,295.00	4.000	16.70	2,292.54	68.36	35.09	-31.19	1.58	1.51	8.39
2,390.00	3.700	17.50	2,387.33	74.46	36.96	-32.72	0.32	-0.32	0.84
2,484.00	3.300	14.10	2,481.15	79.98	38.54	-33.98	0.48	-0.43	-3.62
2,578.00	3.000	11.00	2,575.01	85.02	39.66	-34.82	0.37	-0.32	-3.30
2,672.00	4.400	17.20	2,668.81	90.88	41.20	-36.02	1.55	1.49	6.60
2,767.00	4.500	16.00	2,763.53	97.94	43.31	-37.73	0.14	0.11	-1.26
2,861.00	4.000	14.80	2,857.27	104.65	45.16	-39.20	0.54	-0.53	-1.28
2,956.00	3.700	11.20	2,952.06	110.87	46.60	-40.29	0.41	-0.32	-3.79
3,051.00	2.700	6.00	3,046.91	116.10	47.43	-40.83	1.10	-1.05	-5.47
3,146.00	3.700	7.40	3,141.76	121.36	48.06	-41.16	1.06	1.05	1.47
3,240.00	3.200	4.40	3,235.59	126.99	48.65	-41.43	0.57	-0.53	-3.19
3,335.00	3.900	11.00	3,330.40	132.80	49.47	-41.92	0.85	0.74	6.95
3,430.00	3.800	5.50	3,425.19	139.11	50.39	-42.49	0.40	-0.11	-5.79
3,524.00	4.200	2.00	3,518.96	145.65	50.81	-42.54	0.50	0.43	-3.72
3,619.00	4.500	0.90	3,613.69	152.85	50.99	-42.31	0.33	0.32	-1.16
3,714.00	5.100	3.80	3,708.35	160.79	51.33	-42.20	0.68	0.63	3.05
3,809.00	4.700	0.50	3,803.01	168.90	51.64	-42.06	0.51	-0.42	-3.47
3,904.00	4.700	356.10	3,897.69	176.67	51.41	-41.39	0.38	0.00	-4.63
3,999.00	4.600	3.10	3,992.38	184.36	51.35	-40.90	0.61	-0.11	7.37
4,094.00	4.300	354.30	4,087.09	191.71	51.20	-40.34	0.78	-0.32	-9.26
4,189.00	3.500	13.80	4,181.87	198.07	51.54	-40.32	1.62	-0.84	20.53
4,284.00	3.400	12.80	4,276.70	203.63	52.86	-41.32	0.12	-0.11	-1.05
4,379.00	3.300	42.60	4,371.55	208.39	55.33	-43.53	1.82	-0.11	31.37
4,474.00	1.600	22.80	4,466.46	211.62	57.70	-45.70	1.97	-1.79	-20.84
4,569.00	0.200	258.50	4,561.45	212.81	58.05	-45.99	1.81	-1.47	-130.84
4,664.00	1.100	8.90	4,656.44	213.68	58.03	-45.92	1.25	0.95	116.21
4,758.00	1.400	14.40	4,750.42	215.69	58.45	-46.23	0.34	0.32	5.85
4,853.00	0.500	321.50	4,845.40	217.13	58.48	-46.18	1.23	-0.95	-55.68
4,948.00	0.100	293.20	4,940.40	217.49	58.15	-45.83	0.44	-0.42	-29.79
5,043.00	0.300	148.00	5,035.40	217.31	58.20	-45.89	0.41	0.21	-152.84
5,138.00	0.600	100.40	5,130.40	217.01	58.82	-46.53	0.48	0.32	-50.11
5,233.00	1.000	104.50	5,225.39	216.71	60.12	-47.83	0.43	0.42	4.32
5,328.00	0.700	94.50	5,320.38	216.46	61.50	-49.23	0.35	-0.32	-10.53
5,422.00	0.800	118.80	5,414.37	216.10	62.64	-50.39	0.35	0.11	25.85
5,517.00	0.200	207.10	5,509.37	215.63	63.15	-50.92	0.86	-0.63	92.95
5,611.00	0.400	189.60	5,603.37	215.16	63.02	-50.82	0.23	0.21	-18.62
5,705.00	0.300	200.50	5,697.37	214.61	62.88	-50.71	0.13	-0.11	11.60

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<b>Project:</b>	Weld Co., CO	<b>TVD Reference:</b>	WELL @ 4613.01ft
<b>Site:</b>	Sec.27-T5N-R63W	<b>MD Reference:</b>	WELL @ 4613.01ft
<b>Well:</b>	70 Ranch 5-63-27-33H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<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)
5,795.00	0.500	184.90	5,787.36	214.00	62.76	-50.63	0.25	0.22	-17.33
5,889.00	2.000	261.30	5,881.34	213.34	61.11	-49.01	2.07	1.60	81.28
5,984.00	5.100	278.40	5,976.15	213.71	55.29	-43.18	3.41	3.26	18.00
6,015.00	9.400	280.90	6,006.90	214.39	51.44	-39.30	13.90	13.87	8.06
6,046.00	13.000	283.50	6,037.30	215.68	45.56	-33.36	11.72	11.61	8.39
6,078.00	16.400	275.90	6,068.25	216.99	37.56	-25.30	12.19	10.63	-23.75
6,108.00	20.600	270.80	6,096.70	217.49	28.07	-15.79	14.99	14.00	-17.00
6,139.00	24.700	269.20	6,125.30	217.48	16.14	-3.88	13.37	13.23	-5.16
6,169.00	28.500	270.70	6,152.12	217.48	2.71	9.53	12.86	12.67	5.00
6,200.00	32.500	268.60	6,178.83	217.37	-13.02	25.22	13.35	12.90	-6.77
6,231.00	37.100	266.60	6,204.28	216.61	-30.69	42.82	15.29	14.84	-6.45
6,263.00	40.400	266.90	6,229.23	215.48	-50.69	62.72	10.33	10.31	0.94
6,294.00	43.100	267.60	6,252.35	214.49	-71.30	83.25	8.84	8.71	2.26
6,325.00	46.100	268.80	6,274.42	213.81	-93.05	104.93	10.05	9.68	3.87
6,357.00	49.400	271.00	6,295.94	213.78	-116.74	128.57	11.50	10.31	6.88
6,388.00	51.500	271.90	6,315.68	214.39	-140.63	152.46	7.13	6.77	2.90
6,420.00	54.200	271.10	6,335.00	215.05	-166.12	177.95	8.67	8.44	-2.50
6,451.00	55.400	268.90	6,352.87	215.05	-191.45	203.24	6.97	3.87	-7.10
6,482.00	58.000	268.20	6,369.89	214.39	-217.35	229.06	8.60	8.39	-2.26
6,513.00	59.900	268.20	6,385.88	213.56	-243.90	255.52	6.13	6.13	0.00
6,545.00	62.300	267.70	6,401.34	212.55	-271.89	283.41	7.62	7.50	-1.56
6,576.00	65.000	267.80	6,415.10	211.46	-299.65	311.06	8.71	8.71	0.32
6,607.00	69.100	269.60	6,427.19	210.82	-328.18	339.51	14.27	13.23	5.81
6,639.00	73.800	270.40	6,437.36	210.83	-358.51	369.79	14.88	14.69	2.50
6,672.00	79.600	271.00	6,444.95	211.22	-390.60	401.86	17.66	17.58	1.82
6,697.00	83.600	270.90	6,448.60	211.63	-415.33	426.57	16.00	16.00	-0.40
<b>As of Aug 27</b>									
6,786.00	91.000	270.40	6,452.79	212.64	-504.16	515.32	8.33	8.31	-0.56
6,882.00	89.700	268.70	6,452.21	211.88	-600.15	611.12	2.23	-1.35	-1.77
6,977.00	91.300	269.20	6,451.38	210.14	-695.13	705.84	1.76	1.68	0.53
7,072.00	92.100	270.00	6,448.56	209.48	-790.08	800.61	1.19	0.84	0.84
7,167.00	90.800	270.30	6,446.16	209.73	-885.05	895.44	1.40	-1.37	0.32
7,263.00	90.600	270.10	6,444.98	210.06	-981.04	991.30	0.29	-0.21	-0.21
7,359.00	88.700	271.00	6,445.57	210.98	-1,077.03	1,087.19	2.19	-1.98	0.94
7,454.00	90.600	271.10	6,446.15	212.73	-1,172.01	1,182.12	2.00	2.00	0.11
7,549.00	89.500	270.00	6,446.07	213.64	-1,267.00	1,277.01	1.64	-1.16	-1.16
7,643.00	88.700	271.10	6,447.54	214.54	-1,360.98	1,370.89	1.45	-0.85	1.17
7,738.00	88.700	269.70	6,449.70	215.20	-1,455.95	1,465.75	1.47	0.00	-1.47
7,834.00	87.400	270.50	6,452.96	215.37	-1,551.89	1,561.55	1.59	-1.35	0.83
7,929.00	87.700	269.50	6,457.03	215.37	-1,646.81	1,656.31	1.10	0.32	-1.05
8,025.00	90.400	270.00	6,458.62	214.95	-1,742.78	1,752.11	2.86	2.81	0.52
8,120.00	90.200	268.20	6,458.12	213.46	-1,837.77	1,846.86	1.91	-0.21	-1.89
8,216.00	90.500	265.60	6,457.53	208.27	-1,933.62	1,942.27	2.73	0.31	-2.71

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<b>Site:</b>	Sec.27-T5N-R63W	<b>MD Reference:</b>	WELL @ 4613.01ft
<b>Well:</b>	70 Ranch 5-63-27-33H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<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)
8,312.00	90.300	265.00	6,456.86	200.40	-2,029.29	2,037.35	0.66	-0.21	-0.63
8,407.00	90.300	265.30	6,456.37	192.37	-2,123.95	2,131.40	0.32	0.00	0.32
8,503.00	90.000	268.20	6,456.11	186.93	-2,219.78	2,226.78	3.04	-0.31	3.02
8,598.00	88.500	272.30	6,457.36	187.34	-2,314.75	2,321.62	4.60	-1.58	4.32
8,694.00	90.100	272.80	6,458.53	191.61	-2,410.65	2,417.61	1.75	1.67	0.52
8,789.00	90.800	273.60	6,457.79	196.92	-2,505.49	2,512.60	1.12	0.74	0.84
8,885.00	89.800	268.60	6,457.28	198.76	-2,601.44	2,608.50	5.31	-1.04	-5.21
8,981.00	89.400	267.10	6,457.95	195.16	-2,697.37	2,704.08	1.62	-0.42	-1.56
9,077.00	90.400	271.00	6,458.12	193.56	-2,793.34	2,799.80	4.19	1.04	4.06
9,173.00	91.100	271.00	6,456.86	195.24	-2,889.31	2,895.72	0.73	0.73	0.00
9,268.00	89.300	271.60	6,456.53	197.40	-2,984.28	2,990.66	2.00	-1.89	0.63
As of Aug 29									
9,363.00	90.800	270.90	6,456.45	199.47	-3,079.26	3,085.60	1.74	1.58	-0.74
9,459.00	90.700	273.20	6,455.19	202.90	-3,175.18	3,181.57	2.40	-0.10	2.40
9,554.00	90.500	272.40	6,454.20	207.54	-3,270.06	3,276.56	0.87	-0.21	-0.84
9,650.00	90.800	271.90	6,453.11	211.14	-3,365.99	3,372.53	0.61	0.31	-0.52
9,745.00	91.700	271.90	6,451.04	214.29	-3,460.91	3,467.49	0.95	0.95	0.00
9,841.00	92.700	272.10	6,447.35	217.64	-3,556.78	3,563.39	1.06	1.04	0.21
9,937.00	91.200	273.30	6,444.08	222.16	-3,652.61	3,659.33	2.00	-1.56	1.25
10,032.00	88.200	271.80	6,444.58	226.39	-3,747.51	3,754.31	3.53	-3.16	-1.58
10,127.00	90.500	270.30	6,445.66	228.13	-3,842.47	3,849.22	2.89	2.42	-1.58
10,223.00	90.000	268.50	6,445.24	227.12	-3,938.46	3,945.00	1.95	-0.52	-1.88
10,318.00	90.800	271.00	6,444.58	226.71	-4,033.45	4,039.82	2.76	0.84	2.63
10,414.00	92.400	270.00	6,441.90	227.54	-4,129.41	4,135.67	1.97	1.67	-1.04
10,510.00	93.700	270.10	6,436.79	227.63	-4,225.27	4,231.38	1.36	1.35	0.10
10,602.00	93.600	270.10	6,430.93	227.79	-4,317.08	4,323.06	0.11	-0.11	0.00
Final Sharewell Survey									
10,690.00	93.600	270.10	6,425.41	227.94	-4,404.91	4,410.76	0.00	0.00	0.00
Projection To Bit									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
877.00	876.96	-4.72	6.02	First Sharewell Survey
6,697.00	6,448.60	211.63	-415.33	As of Aug 27
9,268.00	6,456.53	197.40	-2,984.28	As of Aug 29
10,602.00	6,430.93	227.79	-4,317.08	Final Sharewell Survey
10,690.00	6,425.41	227.94	-4,404.91	Projection To Bit

Checked By: _____	Approved By: _____	Date: _____
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