



Bill Barrett Corporation

Bill Barrett Corp.

Weld Co., CO

Sec.22-T5N-R63W

70 Ranch 5-63-22-58H

Wellbore #1

Survey: Survey #1

Standard Survey Report

28 November, 2012



Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well 70 Ranch 5-63-22-58H
Project:	Weld Co., CO	TVD Reference:	WELL @ 4655.00usft
Site:	Sec.22-T5N-R63W	MD Reference:	WELL @ 4655.00usft
Well:	70 Ranch 5-63-22-58H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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.22-T5N-R63W				
Site Position:		Northing:	1,387,272.352 usft	Latitude:	40° 23' 29.004 N
From:	Lat/Long	Easting:	3,302,183.936 usft	Longitude:	104° 24' 54.396 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.70 °

Well	70 Ranch 5-63-22-58H					
Well Position	+N/-S	0.00 usft	Northing:	1,387,272.348 usft	Latitude:	40° 23' 29.004 N
	+E/-W	0.00 usft	Easting:	3,302,183.937 usft	Longitude:	104° 24' 54.396 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,637.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/04/12	8.51	67.06	53,036

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	178.16	

Survey Program	Date	11/28/12			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
846.00	10,838.00	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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
First Sharewell Survey									
846.00	0.10	335.10	846.00	0.67	-0.31	-0.68	0.01	0.01	0.00
937.00	0.10	310.30	937.00	0.79	-0.40	-0.81	0.05	0.00	-27.25
997.00	1.30	329.50	996.99	1.41	-0.79	-1.44	2.01	2.00	32.00
1,095.00	2.70	354.60	1,094.93	4.67	-1.57	-4.72	1.65	1.43	25.61
1,190.00	2.90	0.20	1,189.82	9.30	-1.77	-9.35	0.36	0.21	5.89
1,285.00	3.20	1.70	1,284.69	14.35	-1.69	-14.40	0.33	0.32	1.58
1,380.00	3.10	8.20	1,379.54	19.55	-1.24	-19.58	0.39	-0.11	6.84
1,476.00	3.20	10.60	1,475.40	24.75	-0.38	-24.75	0.17	0.10	2.50
1,570.00	2.40	12.60	1,569.28	29.25	0.53	-29.22	0.86	-0.85	2.13
1,665.00	3.10	355.70	1,664.18	33.75	0.77	-33.71	1.12	0.74	-17.79
1,760.00	2.80	351.10	1,759.05	38.61	0.22	-38.58	0.40	-0.32	-4.84

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Well:	70 Ranch 5-63-22-58H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)	
1,856.00	3.90	350.90	1,854.88	44.15	-0.66	-44.14	1.15	1.15	-0.21	
1,950.00	3.20	330.80	1,948.71	49.59	-2.44	-49.65	1.51	-0.74	-21.38	
2,047.00	4.00	337.00	2,045.52	55.07	-5.08	-55.21	0.92	0.82	6.39	
2,143.00	3.40	358.10	2,141.32	61.00	-6.49	-61.18	1.54	-0.62	21.98	
2,238.00	3.70	18.40	2,236.14	66.72	-5.61	-66.87	1.35	0.32	21.37	
2,334.00	2.80	3.30	2,331.99	72.00	-4.50	-72.11	1.29	-0.94	-15.73	
2,430.00	3.40	13.50	2,427.85	77.11	-3.70	-77.19	0.85	0.62	10.62	
2,525.00	3.10	7.00	2,522.69	82.40	-2.73	-82.45	0.50	-0.32	-6.84	
2,622.00	3.00	354.60	2,619.56	87.53	-2.65	-87.57	0.69	-0.10	-12.78	
2,716.00	4.40	2.90	2,713.36	93.58	-2.70	-93.62	1.59	1.49	8.83	
2,813.00	4.40	356.80	2,810.07	101.01	-2.72	-101.05	0.48	0.00	-6.29	
2,908.00	4.40	15.50	2,904.80	108.16	-1.95	-108.17	1.50	0.00	19.68	
3,003.00	2.60	16.90	2,999.62	113.74	-0.35	-113.69	1.90	-1.89	1.47	
3,099.00	2.40	16.00	3,095.53	117.75	0.84	-117.66	0.21	-0.21	-0.94	
3,195.00	2.40	345.30	3,191.45	121.63	0.88	-121.54	1.32	0.00	-31.98	
3,291.00	2.70	354.80	3,287.35	125.83	0.17	-125.76	0.54	0.31	9.90	
3,387.00	2.50	11.50	3,383.25	130.13	0.38	-130.05	0.81	-0.21	17.40	
3,483.00	2.40	16.70	3,479.17	134.11	1.38	-133.99	0.25	-0.10	5.42	
3,579.00	3.20	351.30	3,575.06	138.68	1.55	-138.56	1.52	0.83	-26.46	
3,675.00	3.30	347.90	3,670.90	144.03	0.56	-143.94	0.23	0.10	-3.54	
3,771.00	4.20	2.40	3,766.70	150.24	0.13	-150.16	1.35	0.94	15.10	
3,867.00	4.20	358.60	3,862.44	157.27	0.19	-157.18	0.29	0.00	-3.96	
3,963.00	4.50	0.00	3,958.16	164.55	0.11	-164.46	0.33	0.31	1.46	
4,059.00	4.50	359.60	4,053.87	172.08	0.08	-171.99	0.03	0.00	-0.42	
4,154.00	4.00	1.90	4,148.60	179.12	0.17	-179.02	0.56	-0.53	2.42	
4,250.00	2.90	356.10	4,244.43	184.89	0.11	-184.79	1.20	-1.15	-6.04	
4,347.00	2.60	348.20	4,341.32	189.49	-0.51	-189.41	0.50	-0.31	-8.14	
4,441.00	4.00	7.40	4,435.16	194.83	-0.52	-194.75	1.88	1.49	20.43	
4,537.00	4.40	8.20	4,530.90	201.80	0.44	-201.68	0.42	0.42	0.83	
4,632.00	5.10	359.60	4,625.58	209.63	0.93	-209.49	1.05	0.74	-9.05	
4,728.00	3.00	353.90	4,721.33	216.39	0.63	-216.26	2.22	-2.19	-5.94	
4,824.00	2.00	21.60	4,817.25	220.45	0.98	-220.30	1.61	-1.04	28.85	
4,919.00	0.70	21.40	4,912.22	222.53	1.80	-222.36	1.37	-1.37	-0.21	
5,015.00	0.20	89.90	5,008.21	223.08	2.18	-222.89	0.68	-0.52	71.35	
5,111.00	0.40	104.00	5,104.21	223.00	2.68	-222.79	0.22	0.21	14.69	
5,205.00	0.50	109.60	5,198.21	222.78	3.38	-222.55	0.12	0.11	5.96	
5,301.00	0.30	59.00	5,294.21	222.77	3.99	-222.52	0.40	-0.21	-52.71	
5,396.00	0.30	69.80	5,389.21	222.98	4.44	-222.72	0.06	0.00	11.37	
5,492.00	0.20	150.40	5,485.21	222.92	4.76	-222.65	0.35	-0.10	83.96	
5,587.00	0.40	131.40	5,580.20	222.56	5.09	-222.28	0.23	0.21	-20.00	
5,683.00	1.10	147.90	5,676.20	221.56	5.83	-221.25	0.76	0.73	17.19	
5,780.00	1.10	160.90	5,773.18	219.89	6.63	-219.56	0.26	0.00	13.40	
5,874.00	7.20	174.90	5,866.89	213.16	7.45	-212.81	6.53	6.49	14.89	
5,906.00	10.30	173.00	5,898.51	208.32	7.97	-207.96	9.73	9.69	-5.94	
5,938.00	12.50	172.60	5,929.88	202.05	8.77	-201.66	6.88	6.87	-1.25	
5,970.00	14.30	172.40	5,961.01	194.70	9.74	-194.28	5.63	5.62	-0.62	
6,002.00	16.40	170.60	5,991.86	186.32	11.00	-185.87	6.73	6.56	-5.62	
6,034.00	19.10	171.50	6,022.34	176.69	12.51	-176.19	8.48	8.44	2.81	
6,067.00	21.80	172.40	6,053.25	165.27	14.12	-164.73	8.24	8.18	2.73	
6,099.00	24.50	172.90	6,082.68	152.79	15.73	-152.21	8.46	8.44	1.56	
6,131.00	27.00	172.70	6,111.50	139.00	17.47	-138.37	7.82	7.81	-0.62	
6,163.00	29.90	172.30	6,139.63	123.89	19.46	-123.20	9.08	9.06	-1.25	
6,195.00	33.50	172.10	6,166.85	107.23	21.74	-106.48	11.25	11.25	-0.62	
6,227.00	37.60	172.30	6,192.88	88.80	24.27	-87.98	12.82	12.81	0.62	

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6,259.00	41.80	173.50	6,217.49	68.52	26.78	-67.63	13.34	13.12	3.75	
6,291.00	45.40	176.60	6,240.67	46.55	28.67	-45.60	13.08	11.25	9.69	
6,322.00	49.30	179.40	6,261.67	23.77	29.45	-22.81	14.22	12.58	9.03	
6,354.00	52.40	182.40	6,281.87	-1.04	29.04	1.97	12.11	9.69	9.37	
6,386.00	54.90	182.90	6,300.84	-26.78	27.85	27.66	7.91	7.81	1.56	
6,418.00	57.40	183.00	6,318.66	-53.32	26.48	54.14	7.82	7.81	0.31	
6,450.00	60.80	183.10	6,335.09	-80.73	25.02	81.50	10.63	10.62	0.31	
6,482.00	63.30	182.50	6,350.09	-108.97	23.64	109.67	7.99	7.81	-1.87	
6,514.00	64.80	181.80	6,364.09	-137.72	22.56	138.37	5.08	4.69	-2.19	
6,546.00	65.80	181.80	6,377.46	-166.78	21.65	167.38	3.12	3.12	0.00	
6,577.00	67.10	181.70	6,389.85	-195.18	20.78	195.75	4.20	4.19	-0.32	
6,609.00	69.80	182.00	6,401.60	-224.92	19.82	225.44	8.48	8.44	0.94	
6,641.00	73.50	181.90	6,411.67	-255.27	18.79	255.75	11.57	11.56	-0.31	
6,673.00	75.30	181.50	6,420.28	-286.08	17.87	286.51	5.75	5.62	-1.25	
6,705.00	77.90	180.60	6,427.69	-317.20	17.30	317.59	8.57	8.12	-2.81	
6,737.00	81.30	179.70	6,433.47	-348.67	17.22	349.04	10.98	10.62	-2.81	
6,768.00	84.60	178.60	6,437.28	-379.43	17.68	379.80	11.21	10.65	-3.55	
6,816.00	87.70	177.20	6,440.50	-427.28	19.44	427.68	7.08	6.46	-2.92	
6,847.00	87.90	176.90	6,441.69	-458.22	21.03	458.66	1.16	0.65	-0.97	
6,879.00	88.00	177.00	6,442.83	-490.15	22.73	490.63	0.44	0.31	0.31	
6,910.00	88.20	177.20	6,443.86	-521.09	24.30	521.61	0.91	0.65	0.65	
6,942.00	89.50	176.70	6,444.50	-553.04	26.00	553.59	4.35	4.06	-1.56	
6,973.00	90.60	177.20	6,444.48	-584.00	27.65	584.58	3.90	3.55	1.61	
7,005.00	89.90	176.60	6,444.34	-615.95	29.38	616.58	2.88	-2.19	-1.87	
7,037.00	88.60	176.60	6,444.75	-647.89	31.28	648.56	4.06	-4.06	0.00	
7,069.00	88.90	176.70	6,445.45	-679.83	33.15	680.54	0.99	0.94	0.31	
7,101.00	89.90	177.00	6,445.79	-711.78	34.91	712.53	3.26	3.12	0.94	
7,133.00	90.20	177.10	6,445.76	-743.73	36.55	744.52	0.99	0.94	0.31	
7,164.00	90.10	176.60	6,445.68	-774.69	38.26	775.52	1.64	-0.32	-1.61	
7,195.00	90.40	176.70	6,445.54	-805.63	40.07	806.51	1.02	0.97	0.32	
7,227.00	91.60	178.10	6,444.99	-837.59	41.52	838.50	5.76	3.75	4.37	
7,258.00	92.50	178.60	6,443.88	-868.56	42.41	869.48	3.32	2.90	1.61	
7,290.00	92.30	179.20	6,442.54	-900.53	43.03	901.44	1.97	-0.62	1.87	
7,322.00	91.10	180.50	6,441.59	-932.51	43.11	933.42	5.53	-3.75	4.06	
7,353.00	91.10	180.60	6,440.99	-963.50	42.81	964.38	0.32	0.00	0.32	
7,385.00	90.10	180.50	6,440.66	-995.50	42.50	996.35	3.14	-3.12	-0.31	
7,417.00	89.20	180.30	6,440.85	-1,027.50	42.28	1,028.33	2.88	-2.81	-0.62	
7,449.00	88.90	179.40	6,441.38	-1,059.49	42.36	1,060.31	2.96	-0.94	-2.81	
7,481.00	88.80	179.70	6,442.02	-1,091.49	42.62	1,092.29	0.99	-0.31	0.94	
7,512.00	89.30	180.20	6,442.54	-1,122.48	42.64	1,123.27	2.28	1.61	1.61	
7,543.00	90.80	179.80	6,442.51	-1,153.48	42.64	1,154.26	5.01	4.84	-1.29	
7,575.00	91.20	179.40	6,441.95	-1,185.48	42.87	1,186.24	1.77	1.25	-1.25	
7,607.00	90.20	179.00	6,441.56	-1,217.47	43.31	1,218.23	3.37	-3.12	-1.25	
7,638.00	89.80	179.50	6,441.56	-1,248.47	43.72	1,249.23	2.07	-1.29	1.61	
7,670.00	89.20	179.30	6,441.84	-1,280.46	44.05	1,281.22	1.98	-1.87	-0.62	
7,701.00	88.90	179.70	6,442.36	-1,311.46	44.32	1,312.21	1.61	-0.97	1.29	
7,733.00	88.20	178.80	6,443.17	-1,343.44	44.74	1,344.19	3.56	-2.19	-2.81	
7,765.00	87.80	178.70	6,444.28	-1,375.42	45.44	1,376.17	1.29	-1.25	-0.31	
7,797.00	88.00	178.10	6,445.45	-1,407.38	46.33	1,408.15	1.98	0.62	-1.87	
7,828.00	88.00	177.20	6,446.54	-1,438.34	47.60	1,439.12	2.90	0.00	-2.90	
7,860.00	88.30	177.20	6,447.57	-1,470.28	49.17	1,471.10	0.94	0.94	0.00	
7,891.00	88.40	177.00	6,448.46	-1,501.23	50.73	1,502.09	0.72	0.32	-0.65	
7,923.00	88.50	177.10	6,449.33	-1,533.18	52.38	1,534.07	0.44	0.31	0.31	
7,956.00	88.40	177.30	6,450.22	-1,566.13	53.99	1,567.05	0.68	-0.30	0.61	

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7,987.00	88.50	177.00	6,451.06	-1,597.08	55.53	1,598.04	1.02	0.32	-0.97	
8,019.00	88.40	176.90	6,451.92	-1,629.02	57.23	1,630.02	0.44	-0.31	-0.31	
8,050.00	88.70	177.10	6,452.71	-1,659.97	58.86	1,661.00	1.16	0.97	0.65	
8,082.00	89.20	177.20	6,453.30	-1,691.92	60.45	1,692.99	1.59	1.56	0.31	
8,114.00	89.30	177.40	6,453.71	-1,723.88	61.95	1,724.98	0.70	0.31	0.62	
8,145.00	89.10	177.00	6,454.15	-1,754.84	63.47	1,755.98	1.44	-0.65	-1.29	
8,176.00	88.80	177.30	6,454.72	-1,785.80	65.01	1,786.97	1.37	-0.97	0.97	
8,208.00	89.70	177.30	6,455.13	-1,817.76	66.52	1,818.96	2.81	2.81	0.00	
8,239.00	90.60	178.40	6,455.05	-1,848.74	67.68	1,849.96	4.58	2.90	3.55	
8,271.00	90.90	178.20	6,454.63	-1,880.72	68.63	1,881.95	1.13	0.94	-0.62	
8,303.00	90.90	178.40	6,454.13	-1,912.70	69.58	1,913.95	0.62	0.00	0.62	
8,334.00	90.50	177.80	6,453.75	-1,943.68	70.61	1,944.95	2.33	-1.29	-1.94	
8,366.00	89.20	178.50	6,453.84	-1,975.67	71.64	1,976.95	4.61	-4.06	2.19	
8,397.00	89.00	178.60	6,454.32	-2,006.65	72.42	2,007.94	0.72	-0.65	0.32	
8,429.00	88.90	178.40	6,454.91	-2,038.64	73.26	2,039.94	0.70	-0.31	-0.62	
8,460.00	89.40	178.10	6,455.37	-2,069.62	74.21	2,070.93	1.88	1.61	-0.97	
8,492.00	89.50	178.50	6,455.68	-2,101.60	75.16	2,102.93	1.29	0.31	1.25	
8,524.00	89.60	178.10	6,455.93	-2,133.59	76.11	2,134.93	1.29	0.31	-1.25	
8,555.00	88.30	178.10	6,456.50	-2,164.56	77.13	2,165.92	4.19	-4.19	0.00	
8,586.00	87.80	178.30	6,457.55	-2,195.53	78.11	2,196.91	1.74	-1.61	0.65	
8,618.00	87.90	177.90	6,458.75	-2,227.49	79.17	2,228.88	1.29	0.31	-1.25	
8,650.00	88.50	177.30	6,459.76	-2,259.45	80.51	2,260.87	2.65	1.87	-1.87	
8,681.00	88.90	177.30	6,460.46	-2,290.40	81.97	2,291.85	1.29	1.29	0.00	
8,713.00	88.60	176.90	6,461.16	-2,322.35	83.58	2,323.84	1.56	-0.94	-1.25	
8,745.00	88.40	176.60	6,462.00	-2,354.29	85.40	2,355.82	1.13	-0.62	-0.94	
8,777.00	89.10	176.60	6,462.69	-2,386.23	87.30	2,387.80	2.19	2.19	0.00	
8,808.00	89.60	176.70	6,463.05	-2,417.17	89.11	2,418.79	1.64	1.61	0.32	
8,840.00	89.80	175.90	6,463.21	-2,449.11	91.17	2,450.77	2.58	0.62	-2.50	
8,872.00	89.80	176.00	6,463.32	-2,481.03	93.43	2,482.75	0.31	0.00	0.31	
8,904.00	89.80	177.20	6,463.44	-2,512.97	95.33	2,514.73	3.75	0.00	3.75	
8,936.00	90.10	178.00	6,463.46	-2,544.94	96.67	2,546.73	2.67	0.94	2.50	
8,968.00	90.60	178.00	6,463.27	-2,576.92	97.79	2,578.73	1.56	1.56	0.00	
9,000.00	90.40	178.30	6,462.99	-2,608.90	98.82	2,610.73	1.13	-0.62	0.94	
9,032.00	89.30	179.30	6,463.07	-2,640.89	99.49	2,642.73	4.65	-3.44	3.12	
9,063.00	89.20	179.50	6,463.48	-2,671.89	99.81	2,673.72	0.72	-0.32	0.65	
9,095.00	89.50	179.50	6,463.84	-2,703.89	100.09	2,705.71	0.94	0.94	0.00	
9,127.00	89.40	179.30	6,464.15	-2,735.88	100.43	2,737.70	0.70	-0.31	-0.62	
9,159.00	89.10	179.30	6,464.57	-2,767.88	100.82	2,769.69	0.94	-0.94	0.00	
9,190.00	89.60	179.30	6,464.92	-2,798.87	101.20	2,800.68	1.61	1.61	0.00	
9,222.00	89.70	179.60	6,465.12	-2,830.87	101.51	2,832.67	0.99	0.31	0.94	
9,254.00	89.90	179.60	6,465.23	-2,862.87	101.73	2,864.66	0.62	0.62	0.00	
9,286.00	90.40	179.60	6,465.14	-2,894.87	101.95	2,896.65	1.56	1.56	0.00	
9,318.00	89.70	179.50	6,465.12	-2,926.87	102.20	2,928.64	2.21	-2.19	-0.31	
9,351.00	88.70	179.30	6,465.58	-2,959.86	102.55	2,961.63	3.09	-3.03	-0.61	
9,383.00	88.70	179.10	6,466.30	-2,991.85	103.00	2,993.62	0.62	0.00	-0.62	
9,414.00	89.30	178.70	6,466.84	-3,022.84	103.59	3,024.61	2.33	1.94	-1.29	
9,446.00	90.80	178.90	6,466.82	-3,054.83	104.26	3,056.61	4.73	4.69	0.62	
9,478.00	91.00	178.90	6,466.31	-3,086.82	104.88	3,088.60	0.62	0.62	0.00	
9,509.00	89.90	176.90	6,466.07	-3,117.80	106.01	3,119.60	7.36	-3.55	-6.45	
9,541.00	90.10	176.30	6,466.07	-3,149.74	107.91	3,151.58	1.98	0.62	-1.87	
9,573.00	90.90	176.60	6,465.79	-3,181.68	109.89	3,183.57	2.67	2.50	0.94	
9,605.00	91.00	176.20	6,465.26	-3,213.61	111.90	3,215.55	1.29	0.31	-1.25	
9,637.00	89.50	176.10	6,465.12	-3,245.54	114.05	3,247.53	4.70	-4.69	-0.31	
9,669.00	89.60	176.50	6,465.37	-3,277.47	116.11	3,279.51	1.29	0.31	1.25	

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well 70 Ranch 5-63-22-58H
Project:	Weld Co., CO	TVD Reference:	WELL @ 4655.00usft
Site:	Sec.22-T5N-R63W	MD Reference:	WELL @ 4655.00usft
Well:	70 Ranch 5-63-22-58H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)	
9,701.00	89.80	175.90	6,465.54	-3,309.40	118.23	3,311.49	1.98	0.62	-1.87	
9,733.00	90.10	175.90	6,465.57	-3,341.32	120.52	3,343.47	0.94	0.94	0.00	
9,766.00	90.50	176.50	6,465.39	-3,374.24	122.71	3,376.45	2.19	1.21	1.82	
9,798.00	90.40	176.10	6,465.14	-3,406.18	124.77	3,408.43	1.29	-0.31	-1.25	
9,830.00	90.30	176.00	6,464.95	-3,438.10	126.98	3,440.41	0.44	-0.31	-0.31	
9,862.00	90.70	176.00	6,464.67	-3,470.02	129.21	3,472.38	1.25	1.25	0.00	
9,894.00	90.40	176.40	6,464.36	-3,501.95	131.33	3,504.36	1.56	-0.94	1.25	
9,926.00	89.60	176.60	6,464.36	-3,533.89	133.28	3,536.35	2.58	-2.50	0.62	
9,957.00	90.00	177.10	6,464.47	-3,564.84	134.99	3,567.34	2.07	1.29	1.61	
9,988.00	90.50	177.50	6,464.33	-3,595.81	136.45	3,598.33	2.07	1.61	1.29	
10,021.00	89.60	178.80	6,464.30	-3,628.79	137.51	3,631.33	4.79	-2.73	3.94	
10,053.00	90.50	180.20	6,464.28	-3,660.79	137.79	3,663.32	5.20	2.81	4.37	
10,085.00	90.60	180.10	6,463.97	-3,692.78	137.71	3,695.30	0.44	0.31	-0.31	
10,117.00	90.70	179.60	6,463.61	-3,724.78	137.79	3,727.29	1.59	0.31	-1.56	
10,149.00	89.50	179.50	6,463.55	-3,756.78	138.04	3,759.28	3.76	-3.75	-0.31	
10,181.00	89.00	179.90	6,463.97	-3,788.78	138.21	3,791.26	2.00	-1.56	1.25	
10,213.00	89.50	180.00	6,464.39	-3,820.77	138.24	3,823.24	1.59	1.56	0.31	
10,245.00	90.20	180.10	6,464.47	-3,852.77	138.21	3,855.23	2.21	2.19	0.31	
10,277.00	90.80	180.10	6,464.19	-3,884.77	138.16	3,887.21	1.87	1.87	0.00	
10,309.00	89.50	179.50	6,464.11	-3,916.77	138.27	3,919.19	4.47	-4.06	-1.87	
10,341.00	89.10	179.40	6,464.50	-3,948.77	138.57	3,951.18	1.29	-1.25	-0.31	
10,372.00	89.50	179.20	6,464.88	-3,979.76	138.95	3,982.17	1.44	1.29	-0.65	
10,404.00	89.80	179.10	6,465.07	-4,011.76	139.43	4,014.17	0.99	0.94	-0.31	
10,436.00	90.00	179.10	6,465.13	-4,043.76	139.93	4,046.16	0.62	0.62	0.00	
10,468.00	90.30	178.80	6,465.05	-4,075.75	140.52	4,078.16	1.33	0.94	-0.94	
10,500.00	90.60	179.30	6,464.80	-4,107.74	141.05	4,110.16	1.82	0.94	1.56	
10,531.00	89.90	178.10	6,464.66	-4,138.73	141.75	4,141.15	4.48	-2.26	-3.87	
10,563.00	88.90	176.90	6,465.00	-4,170.70	143.15	4,173.15	4.88	-3.12	-3.75	
10,594.00	89.80	177.90	6,465.35	-4,201.67	144.55	4,204.14	4.34	2.90	3.23	
10,626.00	91.40	179.30	6,465.01	-4,233.65	145.33	4,236.14	6.64	5.00	4.37	
10,658.00	91.70	179.70	6,464.15	-4,265.64	145.61	4,268.12	1.56	0.94	1.25	
10,690.00	90.30	178.90	6,463.59	-4,297.63	146.00	4,300.11	5.04	-4.37	-2.50	
10,722.00	90.10	179.00	6,463.48	-4,329.63	146.59	4,332.10	0.70	-0.62	0.31	
10,754.00	90.00	178.80	6,463.45	-4,361.62	147.20	4,364.10	0.70	-0.31	-0.62	
Last Sharewell Survey										
10,781.00	90.10	178.60	6,463.42	-4,388.61	147.82	4,391.10	0.83	0.37	-0.74	
Proj. to Bit										
10,838.00	90.10	178.60	6,463.32	-4,445.60	149.21	4,448.10	0.00	0.00	0.00	

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
846.00	846.00	0.67	-0.31	First Sharewell Survey	
10,781.00	6,463.42	-4,388.61	147.82	Last Sharewell Survey	
10,838.00	6,463.32	-4,445.60	149.21	Proj. to Bit	

Checked By: _____ Approved By: _____ Date: _____