



**Bill Barrett Corporation**

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

Garfield Co., CO (NAD83)

MDP 26 Pad

Fed 13C-34-691

Wellbore #1

Design: Wellbore #1

## **Standard Survey Report**

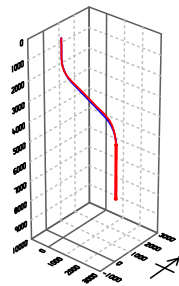
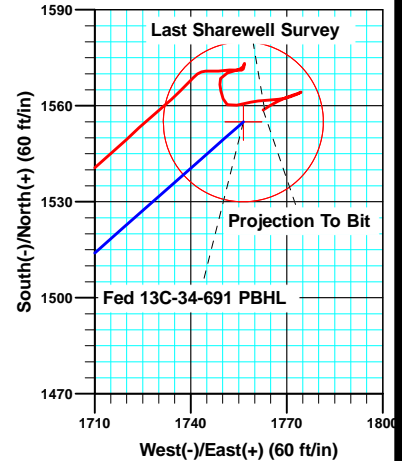
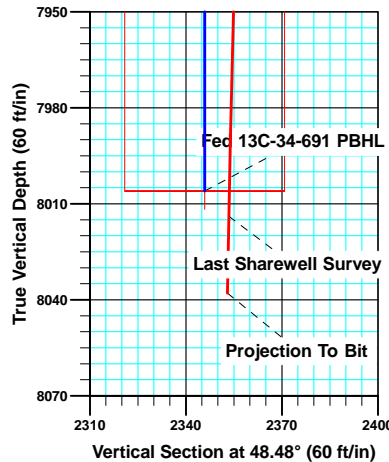
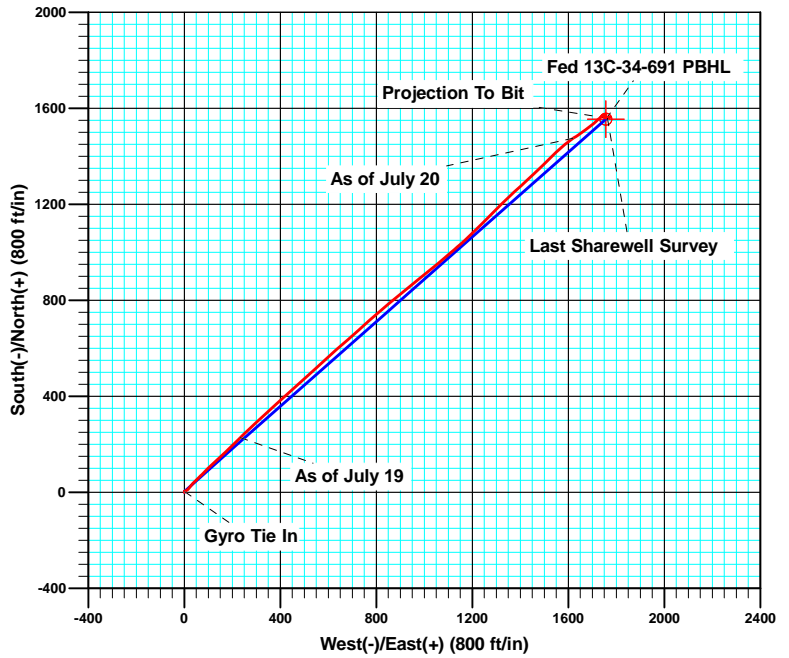
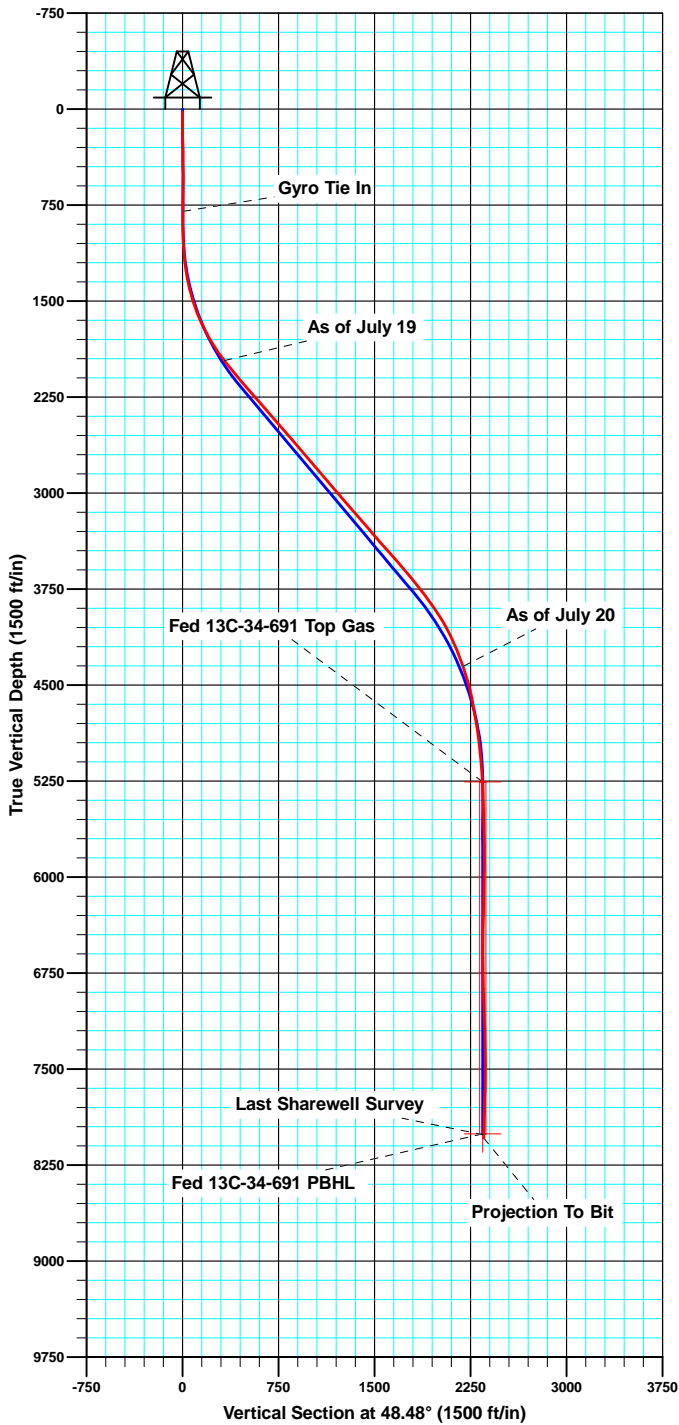
23 July, 2012



# Fed 13C-34-691



US State Plane 1983 North American Datum 1983 Colorado Central Zone  
 +N/-S +E/-W Northing Easting Latitude Longitude  
 0.00 0.00 1605982.80 2420460.47 39° 28' 45.17 N 107° 33' 11.99 W  
 KB @ 6776.00ft GL @ 6753.00



T  
 M Azimuths to True North  
 Magnetic North: 10.03°

Magnetic Field  
 Strength: 52201.0snT  
 Dip Angle: 65.78°  
 Date: 05/09/2012  
 Model: IGRF2010

### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
775.99	776.00	0.390	15.89	2.98	1.90	3.40	4.70	Gyro Tie In
1946.75	2013.00	36.700	45.00	218.38	223.60	312.17	315.10	As of July 19
4332.98	5060.00	20.000	56.10	1470.93	1614.22	2183.66	2187.76	As of July 20
7990.94	8736.00	1.100	239.10	1559.19	1763.44	2353.89	2423.23	Last Sharewell Survey
8037.93	8783.00	1.100	239.10	1558.72	1762.67	2353.00	2424.13	Projection To Bit

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well Fed 13C-34-691
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>TVD Reference:</b>	KB @ 6776.00ft
<b>Site:</b>	MDP 26 Pad	<b>MD Reference:</b>	KB @ 6776.00ft
<b>Well:</b>	Fed 13C-34-691	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	CompassVM

<b>Project</b>	Garfield Co., CO (NAD83)		
<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 Central Zone		

<b>Site</b>	MDP 26 Pad				
<b>Site Position:</b>		<b>Northing:</b>	1,605,969.19 usft	<b>Latitude:</b>	39° 28' 45.04 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,420,482.75 usft	<b>Longitude:</b>	107° 33' 11.70 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	1.10 ft	<b>Grid Convergence:</b>	-1.29 °

<b>Well</b>	Fed 13C-34-691					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,605,982.80 usft	<b>Latitude:</b>	39° 28' 45.17 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,420,460.47 usft	<b>Longitude:</b>	107° 33' 11.99 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	6,753.00 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	05/09/12	10.03	65.78	52,201

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	23.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	23.00	0.00	0.00	48.48	

<b>Survey Program</b>	<b>Date</b>	07/23/12			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
123.00	776.00	Survey #1 (Wellbore #1)	GYRO	GyroCompass Mode	
970.00	8,783.00	Survey #2 (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>	
23.00	0.000	0.00	23.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123.00	0.390	57.74	123.00	0.18	0.29	0.34	0.39	0.39	0.00	
223.00	0.650	1.26	223.00	0.93	0.59	1.06	0.54	0.26	-56.48	
323.00	0.310	88.33	322.99	1.51	0.87	1.65	0.71	-0.34	87.07	
423.00	0.370	57.11	422.99	1.69	1.41	2.18	0.19	0.06	-31.22	
523.00	0.480	349.88	522.99	2.28	1.61	2.71	0.48	0.11	-67.23	
623.00	0.150	156.32	622.99	2.57	1.59	2.89	0.63	-0.33	166.44	
723.00	0.310	30.97	722.99	2.68	1.78	3.11	0.42	0.16	-125.35	
776.00	0.390	15.89	775.99	2.98	1.90	3.40	0.23	0.15	-28.45	
<b>Gyro Tie In</b>										

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well Fed 13C-34-691
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>TVD Reference:</b>	KB @ 6776.00ft
<b>Site:</b>	MDP 26 Pad	<b>MD Reference:</b>	KB @ 6776.00ft
<b>Well:</b>	Fed 13C-34-691	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<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)	
970.00	0.300	352.60	969.98	4.12	2.02	4.24	0.08	-0.05	-12.01	
1,065.00	3.000	62.10	1,064.94	5.53	4.19	6.80	3.06	2.84	73.16	
1,160.00	6.200	61.40	1,159.62	9.15	10.89	14.21	3.37	3.37	-0.74	
1,256.00	8.300	38.60	1,254.87	17.05	19.76	26.10	3.67	2.19	-23.75	
1,351.00	11.800	38.30	1,348.39	30.03	30.07	42.42	3.68	3.68	-0.32	
1,446.00	14.900	46.00	1,440.82	46.14	44.88	64.19	3.75	3.26	8.11	
1,541.00	18.800	45.40	1,531.73	65.38	64.57	91.69	4.11	4.11	-0.63	
1,636.00	22.900	44.30	1,620.49	89.37	88.39	125.42	4.34	4.32	-1.16	
1,731.00	25.900	47.10	1,706.99	116.73	116.50	164.61	3.38	3.16	2.95	
1,826.00	30.100	47.90	1,790.86	146.84	149.39	209.19	4.44	4.42	0.84	
1,918.00	33.500	45.80	1,869.04	180.02	184.72	257.64	3.89	3.70	-2.28	
2,013.00	36.700	45.00	1,946.75	218.38	223.60	312.17	3.40	3.37	-0.84	
<b>As of July 19</b>										
2,111.00	39.600	46.90	2,023.81	260.43	267.12	372.64	3.19	2.96	1.94	
2,207.00	40.900	47.00	2,097.08	302.78	312.45	434.64	1.36	1.35	0.10	
2,302.00	39.400	47.60	2,169.69	344.32	357.46	495.88	1.63	-1.58	0.63	
2,397.00	41.700	47.90	2,241.87	385.84	403.18	557.64	2.43	2.42	0.32	
2,492.00	41.600	48.40	2,312.86	427.96	450.21	620.77	0.37	-0.11	0.53	
2,587.00	41.300	47.70	2,384.07	470.00	496.98	683.65	0.58	-0.32	-0.74	
2,682.00	41.000	47.30	2,455.60	512.23	543.07	746.16	0.42	-0.32	-0.42	
2,777.00	40.100	47.50	2,527.78	554.04	588.53	807.91	0.96	-0.95	0.21	
2,872.00	40.300	48.90	2,600.35	594.90	634.24	869.22	0.97	0.21	1.47	
2,967.00	41.500	49.10	2,672.15	635.71	681.18	931.42	1.27	1.26	0.21	
3,062.00	40.900	48.10	2,743.63	677.09	728.12	993.99	0.94	-0.63	-1.05	
3,158.00	40.100	48.40	2,816.63	718.60	774.63	1,056.34	0.86	-0.83	0.31	
3,253.00	39.600	48.20	2,889.56	759.10	820.09	1,117.21	0.54	-0.53	-0.21	
3,348.00	41.300	51.00	2,961.86	799.01	867.03	1,178.82	2.62	1.79	2.95	
3,443.00	40.100	51.00	3,033.88	838.00	915.17	1,240.70	1.26	-1.26	0.00	
3,538.00	41.600	50.40	3,105.74	877.36	963.25	1,302.79	1.63	1.58	-0.63	
3,633.00	40.200	51.70	3,177.54	916.46	1,011.61	1,364.93	1.72	-1.47	1.37	
3,728.00	41.400	49.30	3,249.46	955.95	1,059.49	1,426.95	2.08	1.26	-2.53	
3,823.00	40.100	50.20	3,321.43	996.03	1,106.82	1,488.95	1.50	-1.37	0.95	
3,918.00	41.800	48.50	3,393.18	1,036.59	1,154.04	1,551.20	2.14	1.79	-1.79	
4,013.00	42.300	45.30	3,463.73	1,080.06	1,200.48	1,614.78	2.32	0.53	-3.37	
4,109.00	41.100	45.60	3,535.41	1,124.86	1,245.99	1,678.55	1.27	-1.25	0.31	
4,204.00	39.800	44.40	3,607.70	1,168.44	1,289.58	1,740.07	1.59	-1.37	-1.26	
4,299.00	38.600	45.00	3,681.32	1,211.12	1,331.81	1,799.98	1.32	-1.26	0.63	
4,394.00	38.800	49.00	3,755.47	1,251.61	1,375.23	1,859.33	2.64	0.21	4.21	
4,489.00	36.500	46.20	3,830.69	1,290.70	1,418.09	1,917.34	3.02	-2.42	-2.95	
4,584.00	34.400	46.40	3,908.07	1,328.76	1,457.93	1,972.40	2.21	-2.21	0.21	
4,679.00	31.000	45.90	3,988.01	1,364.31	1,494.94	2,023.67	3.59	-3.58	-0.53	
4,774.00	27.900	45.70	4,070.72	1,396.86	1,528.42	2,070.32	3.26	-3.26	-0.21	
4,869.00	24.500	47.30	4,155.95	1,425.75	1,558.82	2,112.23	3.66	-3.58	1.68	

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well Fed 13C-34-691
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>TVD Reference:</b>	KB @ 6776.00ft
<b>Site:</b>	MDP 26 Pad	<b>MD Reference:</b>	KB @ 6776.00ft
<b>Well:</b>	Fed 13C-34-691	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<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)	
4,964.00	21.800	50.30	4,243.29	1,450.38	1,586.87	2,149.56	3.10	-2.84	3.16	
5,060.00	20.000	56.10	4,332.98	1,470.93	1,614.22	2,183.66	2.85	-1.88	6.04	
<b>As of July 20</b>										
5,155.00	17.500	57.60	4,422.94	1,487.65	1,639.77	2,213.87	2.68	-2.63	1.58	
5,250.00	14.700	51.60	4,514.21	1,502.79	1,661.28	2,240.01	3.42	-2.95	-6.32	
5,345.00	11.000	55.40	4,606.81	1,515.43	1,678.19	2,261.05	3.99	-3.89	4.00	
5,440.00	10.100	51.90	4,700.21	1,525.72	1,692.21	2,278.37	1.16	-0.95	-3.68	
5,535.00	9.500	49.10	4,793.82	1,535.99	1,704.69	2,294.52	0.81	-0.63	-2.95	
5,630.00	7.800	48.20	4,887.74	1,545.42	1,715.42	2,308.81	1.80	-1.79	-0.95	
5,725.00	6.000	47.00	4,982.05	1,553.11	1,723.86	2,320.22	1.90	-1.89	-1.26	
5,820.00	5.400	49.90	5,076.58	1,559.37	1,730.91	2,329.65	0.70	-0.63	3.05	
5,915.00	3.900	45.70	5,171.26	1,564.51	1,736.64	2,337.35	1.62	-1.58	-4.42	
6,011.00	3.300	42.60	5,267.07	1,568.82	1,740.85	2,343.36	0.66	-0.63	-3.23	
6,106.00	2.400	90.90	5,361.96	1,570.80	1,744.69	2,347.55	2.60	-0.95	50.84	
6,201.00	2.400	88.00	5,456.88	1,570.84	1,748.66	2,350.55	0.13	0.00	-3.05	
6,296.00	1.800	80.10	5,551.82	1,571.17	1,752.12	2,353.35	0.70	-0.63	-8.32	
6,391.00	1.800	100.40	5,646.77	1,571.15	1,755.06	2,355.54	0.67	0.00	21.37	
6,486.00	1.600	4.40	5,741.75	1,572.21	1,756.63	2,357.42	2.66	-0.21	-101.05	
6,581.00	0.400	163.00	5,836.73	1,573.21	1,756.83	2,358.23	2.08	-1.26	166.95	
6,676.00	1.000	218.50	5,931.73	1,572.25	1,756.41	2,357.28	0.89	0.63	58.42	
6,771.00	0.800	257.00	6,026.72	1,571.45	1,755.25	2,355.88	0.66	-0.21	40.53	
6,866.00	1.000	249.80	6,121.71	1,571.01	1,753.82	2,354.52	0.24	0.21	-7.58	
6,962.00	2.000	253.20	6,217.67	1,570.24	1,751.43	2,352.22	1.05	1.04	3.54	
7,057.00	1.600	204.20	6,312.63	1,568.55	1,749.30	2,349.51	1.62	-0.42	-51.58	
7,152.00	1.000	153.00	6,407.61	1,566.60	1,749.13	2,348.09	1.31	-0.63	-53.89	
7,247.00	1.500	181.40	6,502.59	1,564.62	1,749.48	2,347.04	0.82	0.53	29.89	
7,342.00	1.600	151.50	6,597.55	1,562.21	1,750.08	2,345.89	0.85	0.11	-31.47	
7,437.00	1.200	135.40	6,692.52	1,560.34	1,751.41	2,345.64	0.59	-0.42	-16.95	
7,532.00	2.900	75.50	6,787.47	1,560.23	1,754.44	2,347.84	2.65	1.79	-63.05	
7,627.00	2.500	80.40	6,882.36	1,561.18	1,758.81	2,351.74	0.49	-0.42	5.16	
7,722.00	2.500	84.70	6,977.27	1,561.72	1,762.91	2,355.17	0.20	0.00	4.53	
7,817.00	2.000	88.90	7,072.20	1,561.94	1,766.63	2,358.10	0.55	-0.53	4.42	
7,913.00	1.900	73.00	7,168.14	1,562.44	1,769.83	2,360.83	0.57	-0.10	-16.56	
8,008.00	0.800	65.60	7,263.12	1,563.17	1,771.94	2,362.89	1.17	-1.16	-7.79	
8,103.00	1.200	69.50	7,358.10	1,563.79	1,773.48	2,364.45	0.43	0.42	4.11	
8,198.00	0.200	28.40	7,453.09	1,564.29	1,774.49	2,365.54	1.11	-1.05	-43.26	
8,293.00	1.400	241.50	7,548.09	1,563.88	1,773.55	2,364.56	1.65	1.26	-154.63	
8,388.00	1.100	260.50	7,643.06	1,563.18	1,771.63	2,362.66	0.53	-0.32	20.00	
8,483.00	1.600	247.30	7,738.04	1,562.51	1,769.50	2,360.63	0.62	0.53	-13.89	
8,578.00	1.600	242.00	7,833.00	1,561.38	1,767.11	2,358.09	0.16	0.00	-5.58	
8,673.00	1.700	237.50	7,927.96	1,560.00	1,764.75	2,355.41	0.17	0.11	-4.74	
8,736.00	1.100	239.10	7,990.94	1,559.19	1,763.44	2,353.89	0.95	-0.95	2.54	
<b>Last Sharewell Survey</b>										
8,783.00	1.100	239.10	8,037.93	1,558.72	1,762.67	2,353.00	0.00	0.00	0.00	

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well Fed 13C-34-691
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<b>Site:</b>	MDP 26 Pad	<b>MD Reference:</b>	KB @ 6776.00ft
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<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	CompassVM

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Projection To Bit									

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
776.00	775.99	2.98	1.90	Gyro Tie In
2,013.00	1,946.75	218.38	223.60	As of July 19
5,060.00	4,332.98	1,470.93	1,614.22	As of July 20
8,736.00	7,990.94	1,559.19	1,763.44	Last Sharewell Survey
8,783.00	8,037.93	1,558.72	1,762.67	Projection To Bit

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