

BONANZA CREEK ENERGY OPERATING

Well Name: Antelope F-J-31HZ

Surface Location: Antelope F-J-31HZ Pad Sec.31-T5N-R62W
North American Datum 1983 , US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4608.0

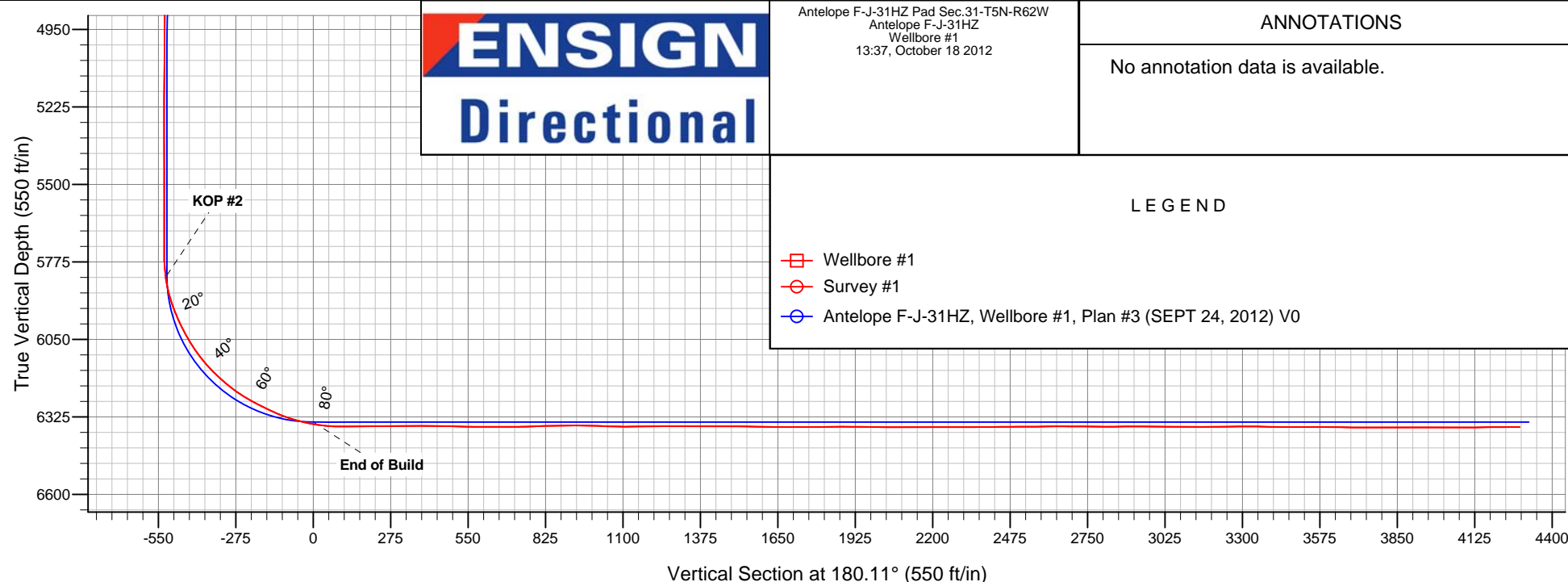
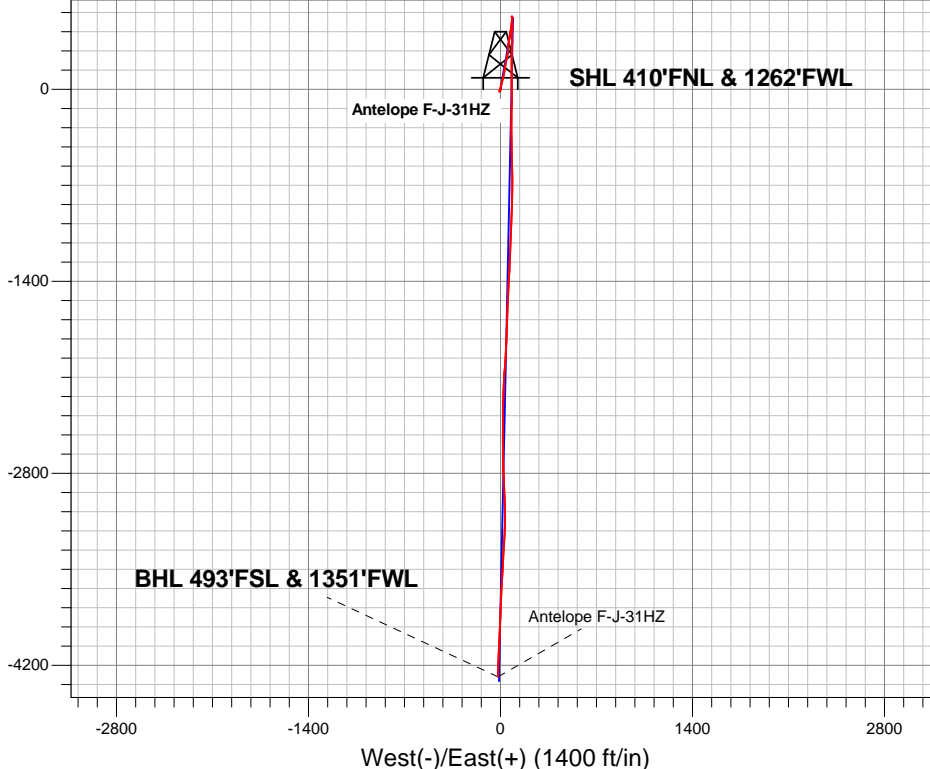
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1376790.16	3314685.87	40.362190	-104.370710	

Original Well Elev WELL @ 4623.0ft (Original Well Elev)

FINAL SURVEY

Projected Bottom Hole Location
10960'MD 6361'TVD 4284'S & 19'W of SHL
90.40 degree Incl @ 181.10 degree AZM

South(-)/North(+) (1400 ft/in)



Antelope F-J-31HZ Pad Sec.31-T5N-R62W
Antelope F-J-31HZ
Wellbore #1
13:37, October 18 2012

ANNOTATIONS

No annotation data is available.

LEGEND

- Wellbore #1
- Survey #1
- Antelope F-J-31HZ, Wellbore #1, Plan #3 (SEPT 24, 2012) V0



Directional

BONANZA CREEK ENERGY OPERATING

SEC.31-T5N-R62W

Antelope F-J-31HZ Pad Sec.31-T5N-R62W

Antelope F-J-31HZ

Wellbore #1

Survey: Survey #1

Standard Survey Report

18 October, 2012

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)	
56.0	0.00	0.00	56.0	0.0	0.0	0.0	0.00	0.00	0.00	
121.0	0.60	250.30	121.0	-0.1	-0.3	0.1	0.92	0.92	0.00	
236.0	0.70	232.60	236.0	-0.7	-1.4	0.7	0.19	0.09	-15.39	
329.0	0.40	218.50	329.0	-1.3	-2.1	1.3	0.35	-0.32	-15.16	
401.0	0.30	224.30	401.0	-1.7	-2.4	1.7	0.15	-0.14	8.06	
539.0	1.00	212.60	539.0	-2.9	-3.3	3.0	0.51	0.51	-8.48	
662.0	1.30	211.20	662.0	-5.0	-4.6	5.1	0.24	0.24	-1.14	
786.0	1.60	215.40	785.9	-7.7	-6.3	7.7	0.26	0.24	3.39	
910.0	2.10	195.30	909.8	-11.3	-7.9	11.3	0.65	0.40	-16.21	
1,034.0	1.40	181.60	1,033.8	-15.0	-8.6	15.0	0.65	-0.56	-11.05	
1,160.0	0.60	92.70	1,159.8	-16.5	-7.9	16.6	1.20	-0.63	-70.56	
1,283.0	0.80	89.00	1,282.8	-16.6	-6.4	16.6	0.17	0.16	-3.01	
1,405.0	0.80	67.50	1,404.8	-16.2	-4.8	16.2	0.24	0.00	-17.62	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-31HZ
Project:	SEC.31-T5N-R62W	TVD Reference:	WELL @ 4623.0ft (Original Well Elev)
Site:	Antelope F-J-31HZ Pad Sec.31-T5N-R62W	MD Reference:	WELL @ 4623.0ft (Original Well Elev)
Well:	Antelope F-J-31HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)	
1,528.0	1.20	55.40	1,527.7	-15.2	-3.0	15.2	0.37	0.33	-9.84	
1,650.0	2.60	11.60	1,649.7	-11.7	-1.3	11.7	1.58	1.15	-35.90	
1,773.0	4.60	7.10	1,772.4	-4.1	-0.2	4.1	1.64	1.63	-3.66	
1,896.0	5.80	0.70	1,894.9	7.0	0.5	-7.0	1.08	0.98	-5.20	
2,018.0	7.90	13.20	2,016.0	21.4	2.5	-21.4	2.10	1.72	10.25	
2,141.0	9.40	15.20	2,137.6	39.3	7.1	-39.3	1.24	1.22	1.63	
2,263.0	10.00	16.70	2,257.9	59.0	12.7	-59.1	0.53	0.49	1.23	
2,385.0	10.80	14.80	2,377.9	80.2	18.7	-80.3	0.71	0.66	-1.56	
2,508.0	10.90	9.00	2,498.7	102.9	23.4	-102.9	0.89	0.08	-4.72	
2,630.0	11.50	9.20	2,618.4	126.3	27.2	-126.3	0.49	0.49	0.16	
2,755.0	12.90	9.90	2,740.5	152.3	31.6	-152.4	1.13	1.12	0.56	
2,880.0	12.30	9.70	2,862.5	179.2	36.2	-179.2	0.48	-0.48	-0.16	
3,004.0	11.80	12.50	2,983.8	204.6	41.2	-204.7	0.62	-0.40	2.26	
3,128.0	11.20	11.50	3,105.3	228.8	46.3	-228.8	0.51	-0.48	-0.81	
3,253.0	10.10	9.50	3,228.2	251.5	50.6	-251.6	0.93	-0.88	-1.60	
3,378.0	10.20	5.50	3,351.2	273.3	53.4	-273.4	0.57	0.08	-3.20	
3,503.0	12.60	5.10	3,473.7	297.9	55.7	-298.0	1.92	1.92	-0.32	
3,628.0	13.70	6.00	3,595.4	326.2	58.5	-326.3	0.90	0.88	0.72	
3,753.0	14.90	8.00	3,716.6	356.8	62.3	-356.9	1.04	0.96	1.60	
3,878.0	15.00	10.20	3,837.3	388.7	67.4	-388.8	0.46	0.08	1.76	
4,002.0	14.50	10.10	3,957.3	419.7	72.9	-419.9	0.40	-0.40	-0.08	
4,128.0	12.30	6.20	4,079.8	448.6	77.1	-448.8	1.89	-1.75	-3.10	
4,253.0	10.50	7.20	4,202.4	473.2	80.0	-473.3	1.45	-1.44	0.80	
4,378.0	8.10	8.80	4,325.7	493.2	82.8	-493.3	1.93	-1.92	1.28	
4,502.0	5.90	0.70	4,448.8	508.2	84.2	-508.3	1.94	-1.77	-6.53	
4,627.0	3.60	3.90	4,573.3	518.5	84.5	-518.7	1.85	-1.84	2.56	
4,752.0	1.80	359.70	4,698.2	524.4	84.8	-524.5	1.45	-1.44	-3.36	
4,876.0	0.60	339.50	4,822.2	526.9	84.6	-527.1	1.01	-0.97	-16.29	
5,001.0	0.50	307.50	4,947.2	527.9	83.9	-528.0	0.25	-0.08	-25.60	
5,126.0	0.60	313.30	5,072.2	528.7	83.0	-528.8	0.09	0.08	4.64	
5,252.0	0.70	305.00	5,198.1	529.6	81.9	-529.7	0.11	0.08	-6.59	
5,377.0	0.30	204.70	5,323.1	529.7	81.1	-529.9	0.65	-0.32	-80.24	
5,502.0	0.40	118.50	5,448.1	529.2	81.4	-529.4	0.39	0.08	-68.96	
5,628.0	0.60	91.10	5,574.1	529.0	82.4	-529.1	0.24	0.16	-21.75	
5,753.0	0.80	82.00	5,699.1	529.1	83.9	-529.2	0.18	0.16	-7.28	
5,792.0	1.10	84.20	5,738.1	529.2	84.6	-529.3	0.77	0.77	5.64	
5,824.0	1.90	156.70	5,770.1	528.7	85.1	-528.9	5.90	2.50	226.56	
5,855.0	5.10	174.60	5,801.0	526.9	85.4	-527.0	10.78	10.32	57.74	
5,887.0	7.90	177.10	5,832.8	523.2	85.7	-523.4	8.79	8.75	7.81	
5,918.0	11.70	177.60	5,863.4	518.0	85.9	-518.1	12.26	12.26	1.61	
5,950.0	15.30	178.30	5,894.5	510.5	86.2	-510.7	11.26	11.25	2.19	
5,981.0	19.30	179.20	5,924.1	501.3	86.4	-501.5	12.93	12.90	2.90	
6,012.0	22.10	179.50	5,953.1	490.3	86.5	-490.5	9.04	9.03	0.97	
6,044.0	24.20	180.60	5,982.5	477.8	86.5	-477.9	6.70	6.56	3.44	
6,075.0	26.90	180.60	6,010.5	464.4	86.3	-464.6	8.71	8.71	0.00	
6,106.0	28.90	182.30	6,037.9	449.9	86.0	-450.1	6.94	6.45	5.48	
6,137.0	32.00	181.80	6,064.6	434.2	85.4	-434.4	10.03	10.00	-1.61	
6,169.0	34.90	180.60	6,091.3	416.6	85.0	-416.7	9.29	9.06	-3.75	
6,200.0	38.50	180.40	6,116.1	398.0	84.9	-398.2	11.62	11.61	-0.65	
6,231.0	41.30	179.30	6,139.9	378.2	84.9	-378.3	9.31	9.03	-3.55	
6,262.0	44.40	179.50	6,162.6	357.1	85.1	-357.2	10.01	10.00	0.65	
6,293.0	47.30	181.10	6,184.2	334.8	85.0	-335.0	10.06	9.35	5.16	
6,325.0	50.20	181.40	6,205.3	310.8	84.5	-311.0	9.09	9.06	0.94	
6,356.0	53.20	182.20	6,224.5	286.5	83.7	-286.6	9.89	9.68	2.58	

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Well:	Antelope F-J-31HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)
6,387.0	55.70	180.90	6,242.6	261.3	83.1	-261.4	8.76	8.06	-4.19
6,418.0	59.40	181.10	6,259.2	235.1	82.6	-235.3	11.95	11.94	0.65
6,449.0	62.30	181.80	6,274.3	208.1	81.9	-208.2	9.56	9.35	2.26
6,481.0	64.50	181.10	6,288.6	179.5	81.2	-179.6	7.15	6.88	-2.19
6,512.0	64.30	180.60	6,302.0	151.5	80.8	-151.7	1.59	-0.65	-1.61
6,543.0	66.70	179.90	6,314.9	123.3	80.6	-123.4	8.01	7.74	-2.26
6,575.0	71.10	179.90	6,326.4	93.4	80.7	-93.6	13.75	13.75	0.00
6,606.0	74.60	178.60	6,335.5	63.8	81.1	-64.0	11.98	11.29	-4.19
6,637.0	76.60	177.60	6,343.2	33.8	82.1	-34.0	7.17	6.45	-3.23
6,669.0	79.60	178.80	6,349.8	2.5	83.1	-2.7	10.07	9.38	3.75
6,700.0	82.40	180.20	6,354.7	-28.1	83.3	27.9	10.07	9.03	4.52
6,721.5	85.09	180.54	6,357.0	-49.5	83.2	49.3	12.60	12.50	1.57
T1 460'FNL & 1358'FWL									
6,732.0	86.40	180.70	6,357.8	-59.9	83.1	59.8	12.60	12.50	1.56
6,763.0	90.00	181.80	6,358.8	-90.9	82.4	90.7	12.14	11.61	3.55
6,794.0	90.10	181.60	6,358.7	-121.9	81.5	121.7	0.72	0.32	-0.65
6,826.0	90.20	181.60	6,358.7	-153.9	80.6	153.7	0.31	0.31	0.00
6,901.0	90.80	180.20	6,358.0	-228.9	79.4	228.7	2.03	0.80	-1.87
6,932.0	91.10	180.20	6,357.5	-259.8	79.3	259.7	0.97	0.97	0.00
6,963.0	90.70	179.00	6,357.0	-290.8	79.5	290.7	4.08	-1.29	-3.87
6,995.0	90.10	179.00	6,356.8	-322.8	80.1	322.7	1.88	-1.88	0.00
7,026.0	90.00	180.00	6,356.8	-353.8	80.4	353.7	3.24	-0.32	3.23
7,057.0	90.40	179.20	6,356.6	-384.8	80.6	384.7	2.89	1.29	-2.58
7,089.0	89.60	179.30	6,356.6	-416.8	81.0	416.7	2.52	-2.50	0.31
7,120.0	88.50	177.90	6,357.2	-447.8	81.7	447.7	5.74	-3.55	-4.52
7,151.0	88.50	178.50	6,358.0	-478.8	82.7	478.6	1.93	0.00	1.94
7,183.0	88.50	178.10	6,358.8	-510.8	83.7	510.6	1.25	0.00	-1.25
7,214.0	89.10	179.50	6,359.5	-541.8	84.3	541.6	4.91	1.94	4.52
7,246.0	89.50	179.70	6,359.9	-573.7	84.5	573.6	1.40	1.25	0.63
7,277.0	90.00	178.30	6,360.0	-604.7	85.1	604.6	4.80	1.61	-4.52
7,308.0	90.30	180.00	6,359.9	-635.7	85.5	635.6	5.57	0.97	5.48
7,340.0	90.10	179.90	6,359.8	-667.7	85.6	667.6	0.70	-0.63	-0.31
7,371.0	90.00	179.00	6,359.8	-698.7	85.9	698.6	2.92	-0.32	-2.90
7,402.0	90.20	179.70	6,359.7	-729.7	86.2	729.6	2.35	0.65	2.26
7,434.0	91.50	181.30	6,359.2	-761.7	85.9	761.6	6.44	4.06	5.00
7,465.0	91.90	180.70	6,358.3	-792.7	85.4	792.5	2.33	1.29	-1.94
7,496.0	91.80	181.80	6,357.3	-823.7	84.7	823.5	3.56	-0.32	3.55
7,527.0	91.70	182.50	6,356.4	-854.6	83.6	854.5	2.28	-0.32	2.26
7,559.0	91.30	182.90	6,355.5	-886.6	82.1	886.4	1.77	-1.25	1.25
7,590.0	90.10	181.80	6,355.2	-917.6	80.8	917.4	5.25	-3.87	-3.55
7,622.0	88.90	182.30	6,355.4	-949.6	79.6	949.4	4.06	-3.75	1.56
7,653.0	88.30	182.30	6,356.2	-980.5	78.4	980.4	1.94	-1.94	0.00
7,684.0	88.20	182.20	6,357.1	-1,011.5	77.2	1,011.3	0.46	-0.32	-0.32
7,716.0	88.20	181.80	6,358.1	-1,043.4	76.1	1,043.3	1.25	0.00	-1.25
7,748.0	88.90	182.30	6,359.0	-1,075.4	74.9	1,075.3	2.69	2.19	1.56
7,778.0	89.60	182.30	6,359.3	-1,105.4	73.7	1,105.2	2.33	2.33	0.00
7,809.0	90.20	181.30	6,359.4	-1,136.4	72.7	1,136.2	3.76	1.94	-3.23
7,841.0	91.10	181.40	6,359.0	-1,168.4	72.0	1,168.2	2.83	2.81	0.31
7,872.0	91.30	182.20	6,358.4	-1,199.3	71.0	1,199.2	2.66	0.65	2.58
7,902.0	90.90	183.60	6,357.8	-1,229.3	69.5	1,229.2	4.85	-1.33	4.67
7,933.0	89.90	183.70	6,357.6	-1,260.2	67.5	1,260.1	3.24	-3.23	0.32
7,964.0	89.50	182.50	6,357.8	-1,291.2	65.8	1,291.0	4.08	-1.29	-3.87
7,995.0	89.50	182.90	6,358.0	-1,322.1	64.4	1,322.0	1.29	0.00	1.29
8,026.0	90.00	182.70	6,358.2	-1,353.1	62.9	1,353.0	1.74	1.61	-0.65

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey										
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8,057.0	90.00	183.40	6,358.2	-1,384.1	61.2	1,383.9	2.26	0.00	2.26	
8,089.0	89.50	182.90	6,358.3	-1,416.0	59.5	1,415.9	2.21	-1.56	-1.56	
8,119.0	90.10	182.90	6,358.4	-1,446.0	57.9	1,445.9	2.00	2.00	0.00	
8,151.0	90.20	182.50	6,358.3	-1,477.9	56.4	1,477.8	1.29	0.31	-1.25	
8,182.0	89.10	182.20	6,358.5	-1,508.9	55.2	1,508.8	3.68	-3.55	-0.97	
8,214.0	88.70	181.80	6,359.1	-1,540.9	54.1	1,540.8	1.77	-1.25	-1.25	
8,245.0	89.20	182.50	6,359.7	-1,571.9	52.9	1,571.8	2.77	1.61	2.26	
8,276.0	89.70	182.50	6,360.0	-1,602.8	51.5	1,602.7	1.61	1.61	0.00	
8,307.0	89.40	181.30	6,360.2	-1,633.8	50.5	1,633.7	3.99	-0.97	-3.87	
8,338.0	89.50	182.70	6,360.5	-1,664.8	49.4	1,664.7	4.53	0.32	4.52	
8,368.0	89.90	182.20	6,360.7	-1,694.8	48.1	1,694.7	2.13	1.33	-1.67	
8,400.0	89.30	182.20	6,360.9	-1,726.7	46.9	1,726.6	1.88	-1.88	0.00	
8,431.0	90.00	181.80	6,361.1	-1,757.7	45.8	1,757.6	2.60	2.26	-1.29	
8,462.0	90.90	181.80	6,360.9	-1,788.7	44.9	1,788.6	2.90	2.90	0.00	
8,493.0	92.00	182.00	6,360.1	-1,819.7	43.8	1,819.6	3.61	3.55	0.65	
8,525.0	90.40	182.30	6,359.4	-1,851.6	42.6	1,851.6	5.09	-5.00	0.94	
8,556.0	89.30	183.60	6,359.5	-1,882.6	41.0	1,882.5	5.49	-3.55	4.19	
8,587.0	89.30	183.90	6,359.9	-1,913.5	39.0	1,913.5	0.97	0.00	0.97	
8,619.0	89.70	184.10	6,360.1	-1,945.5	36.8	1,945.4	1.40	1.25	0.63	
8,650.0	89.90	183.70	6,360.3	-1,976.4	34.7	1,976.3	1.44	0.65	-1.29	
8,681.0	89.10	183.90	6,360.5	-2,007.3	32.6	2,007.2	2.66	-2.58	0.65	
8,712.0	89.10	183.70	6,361.0	-2,038.2	30.6	2,038.2	0.65	0.00	-0.65	
8,743.0	89.50	182.70	6,361.4	-2,069.2	28.8	2,069.1	3.47	1.29	-3.23	
8,774.0	89.90	183.00	6,361.6	-2,100.1	27.3	2,100.1	1.61	1.29	0.97	
8,806.0	90.20	183.60	6,361.5	-2,132.1	25.4	2,132.0	2.10	0.94	1.88	
8,837.0	90.60	182.50	6,361.3	-2,163.0	23.8	2,163.0	3.78	1.29	-3.55	
8,869.0	90.50	182.50	6,361.0	-2,195.0	22.4	2,195.0	0.31	-0.31	0.00	
8,900.0	89.40	181.60	6,361.0	-2,226.0	21.3	2,226.0	4.58	-3.55	-2.90	
8,931.0	89.90	182.20	6,361.2	-2,257.0	20.3	2,256.9	2.52	1.61	1.94	
8,963.0	90.20	181.60	6,361.2	-2,289.0	19.2	2,288.9	2.10	0.94	-1.88	
8,994.0	90.00	180.20	6,361.1	-2,320.0	18.7	2,319.9	4.56	-0.65	-4.52	
9,025.0	90.60	181.30	6,361.0	-2,351.0	18.3	2,350.9	4.04	1.94	3.55	
9,057.0	90.90	180.40	6,360.6	-2,382.9	17.8	2,382.9	2.96	0.94	-2.81	
9,088.0	90.20	180.90	6,360.3	-2,413.9	17.5	2,413.9	2.77	-2.26	1.61	
9,119.0	90.00	180.20	6,360.2	-2,444.9	17.2	2,444.9	2.35	-0.65	-2.26	
9,150.0	90.70	180.20	6,360.0	-2,475.9	17.1	2,475.9	2.26	2.26	0.00	
9,181.0	91.10	179.00	6,359.5	-2,506.9	17.3	2,506.9	4.08	1.29	-3.87	
9,213.0	90.20	178.80	6,359.2	-2,538.9	17.9	2,538.9	2.88	-2.81	-0.63	
9,244.0	89.80	179.50	6,359.2	-2,569.9	18.4	2,569.9	2.60	-1.29	2.26	
9,276.0	90.70	179.50	6,359.0	-2,601.9	18.6	2,601.9	2.81	2.81	0.00	
9,307.0	90.90	179.50	6,358.6	-2,632.9	18.9	2,632.9	0.65	0.65	0.00	
9,338.0	89.70	179.20	6,358.4	-2,663.9	19.3	2,663.9	3.99	-3.87	-0.97	
9,369.0	89.40	178.80	6,358.7	-2,694.9	19.8	2,694.9	1.61	-0.97	-1.29	
9,401.0	89.70	179.00	6,358.9	-2,726.9	20.4	2,726.9	1.13	0.94	0.63	
9,432.0	89.70	178.50	6,359.1	-2,757.9	21.1	2,757.8	1.61	0.00	-1.61	
9,463.0	89.70	178.10	6,359.2	-2,788.9	22.0	2,788.8	1.29	0.00	-1.29	
9,493.0	90.00	177.10	6,359.3	-2,818.9	23.3	2,818.8	3.48	1.00	-3.33	
9,524.0	90.60	177.40	6,359.2	-2,849.8	24.8	2,849.8	2.16	1.94	0.97	
9,556.0	90.20	177.80	6,358.9	-2,881.8	26.1	2,881.7	1.77	-1.25	1.25	
9,587.0	90.20	177.40	6,358.8	-2,912.8	27.4	2,912.7	1.29	0.00	-1.29	
9,618.0	89.70	178.30	6,358.9	-2,943.7	28.6	2,943.7	3.32	-1.61	2.90	
9,650.0	89.60	178.10	6,359.1	-2,975.7	29.6	2,975.7	0.70	-0.31	-0.63	
9,681.0	89.00	177.40	6,359.4	-3,006.7	30.8	3,006.6	2.97	-1.94	-2.26	
9,712.0	89.60	178.60	6,359.8	-3,037.7	31.9	3,037.6	4.33	1.94	3.87	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-31HZ
Project:	SEC.31-T5N-R62W	TVD Reference:	WELL @ 4623.0ft (Original Well Elev)
Site:	Antelope F-J-31HZ Pad Sec.31-T5N-R62W	MD Reference:	WELL @ 4623.0ft (Original Well Elev)
Well:	Antelope F-J-31HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)
9,743.0	90.30	179.50	6,359.8	-3,068.7	32.4	3,068.6	3.68	2.26	2.90
9,774.0	90.00	180.00	6,359.8	-3,099.7	32.5	3,099.6	1.88	-0.97	1.61
9,806.0	89.80	179.50	6,359.8	-3,131.7	32.7	3,131.6	1.68	-0.63	-1.56
9,837.0	89.30	180.00	6,360.1	-3,162.7	32.8	3,162.6	2.28	-1.61	1.61
9,868.0	90.00	181.60	6,360.2	-3,193.7	32.4	3,193.6	5.63	2.26	5.16
9,899.0	91.00	183.40	6,360.0	-3,224.6	31.0	3,224.6	6.64	3.23	5.81
9,930.0	90.70	183.70	6,359.5	-3,255.6	29.1	3,255.5	1.37	-0.97	0.97
9,962.0	91.20	183.20	6,359.0	-3,287.5	27.2	3,287.4	2.21	1.56	-1.56
9,993.0	90.20	182.90	6,358.6	-3,318.5	25.5	3,318.4	3.37	-3.23	-0.97
10,025.0	88.70	183.60	6,358.9	-3,350.4	23.7	3,350.3	5.17	-4.69	2.19
10,056.0	88.70	183.70	6,359.6	-3,381.3	21.7	3,381.3	0.32	0.00	0.32
10,087.0	89.10	183.00	6,360.2	-3,412.3	19.9	3,412.2	2.60	1.29	-2.26
10,118.0	89.30	183.40	6,360.6	-3,443.2	18.2	3,443.2	1.44	0.65	1.29
10,149.0	89.40	182.00	6,361.0	-3,474.2	16.7	3,474.1	4.53	0.32	-4.52
10,180.0	89.90	183.00	6,361.2	-3,505.2	15.4	3,505.1	3.61	1.61	3.23
10,212.0	91.40	183.20	6,360.8	-3,537.1	13.6	3,537.1	4.73	4.69	0.63
10,243.0	90.00	183.40	6,360.4	-3,568.0	11.9	3,568.0	4.56	-4.52	0.65
10,274.0	89.20	183.00	6,360.7	-3,599.0	10.1	3,599.0	2.89	-2.58	-1.29
10,306.0	88.90	182.50	6,361.2	-3,631.0	8.6	3,630.9	1.82	-0.94	-1.56
10,335.0	89.30	183.20	6,361.6	-3,659.9	7.2	3,659.9	2.78	1.38	2.41
10,366.0	89.70	182.90	6,361.9	-3,690.9	5.5	3,690.9	1.61	1.29	-0.97
10,397.0	90.00	183.20	6,362.0	-3,721.8	3.9	3,721.8	1.37	0.97	0.97
10,428.0	89.50	182.50	6,362.1	-3,752.8	2.3	3,752.8	2.77	-1.61	-2.26
10,460.0	89.60	182.50	6,362.4	-3,784.8	0.9	3,784.7	0.31	0.31	0.00
10,491.0	89.90	182.50	6,362.5	-3,815.7	-0.4	3,815.7	0.97	0.97	0.00
10,523.0	90.30	181.80	6,362.5	-3,847.7	-1.6	3,847.7	2.52	1.25	-2.19
10,554.0	90.80	181.40	6,362.2	-3,878.7	-2.5	3,878.7	2.07	1.61	-1.29
10,584.0	90.70	183.00	6,361.8	-3,908.7	-3.7	3,908.7	5.34	-0.33	5.33
10,614.0	90.10	182.80	6,361.6	-3,938.6	-5.2	3,938.6	2.11	-2.00	-0.67
10,645.0	89.30	181.80	6,361.7	-3,969.6	-6.4	3,969.6	4.13	-2.58	-3.23
10,676.0	89.10	182.50	6,362.2	-4,000.6	-7.6	4,000.6	2.35	-0.65	2.26
10,707.0	89.40	181.80	6,362.6	-4,031.6	-8.7	4,031.6	2.46	0.97	-2.26
10,739.0	89.70	182.20	6,362.8	-4,063.5	-9.9	4,063.5	1.56	0.94	1.25
10,770.0	90.50	183.00	6,362.8	-4,094.5	-11.3	4,094.5	3.65	2.58	2.58
10,801.0	91.50	183.20	6,362.2	-4,125.4	-12.9	4,125.5	3.29	3.23	0.65
10,833.0	90.80	182.30	6,361.6	-4,157.4	-14.5	4,157.4	3.56	-2.19	-2.81
10,864.0	90.40	182.70	6,361.3	-4,188.4	-15.8	4,188.4	1.82	-1.29	1.29
10,895.0	90.20	181.60	6,361.1	-4,219.3	-17.0	4,219.4	3.61	-0.65	-3.55
10,908.0	90.20	181.10	6,361.0	-4,232.3	-17.3	4,232.4	3.85	0.00	-3.85
10,960.0	90.40	181.10	6,360.8	-4,284.3	-18.3	4,284.4	0.38	0.38	0.00
BHL 460'FSL & 1358'FWL									

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-31HZ
Project:	SEC.31-T5N-R62W	TVD Reference:	WELL @ 4623.0ft (Original Well Elev)
Site:	Antelope F-J-31HZ Pad Sec.31-T5N-R62W	MD Reference:	WELL @ 4623.0ft (Original Well Elev)
Well:	Antelope F-J-31HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Wellbore Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
BHL 460'FSL & 1358'I	0.00	0.00	6,343.0	-4,317.0	-8.4	1,372,473.57	3,314,732.48	40.350340	-104.370740
- survey misses target center by 38.5ft at 10960.0ft MD (6360.8 TVD, -4284.3 N, -18.3 E)									
- Point									
T1 460'FNL & 1358'F\	0.00	0.00	6,343.0	-51.0	94.8	1,376,740.41	3,314,781.26	40.362050	-104.370370
- survey misses target center by 18.2ft at 6721.8ft MD (6357.1 TVD, -49.8 N, 83.2 E)									
- Point									

Checked By: _____	Approved By: _____	Date: _____
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