

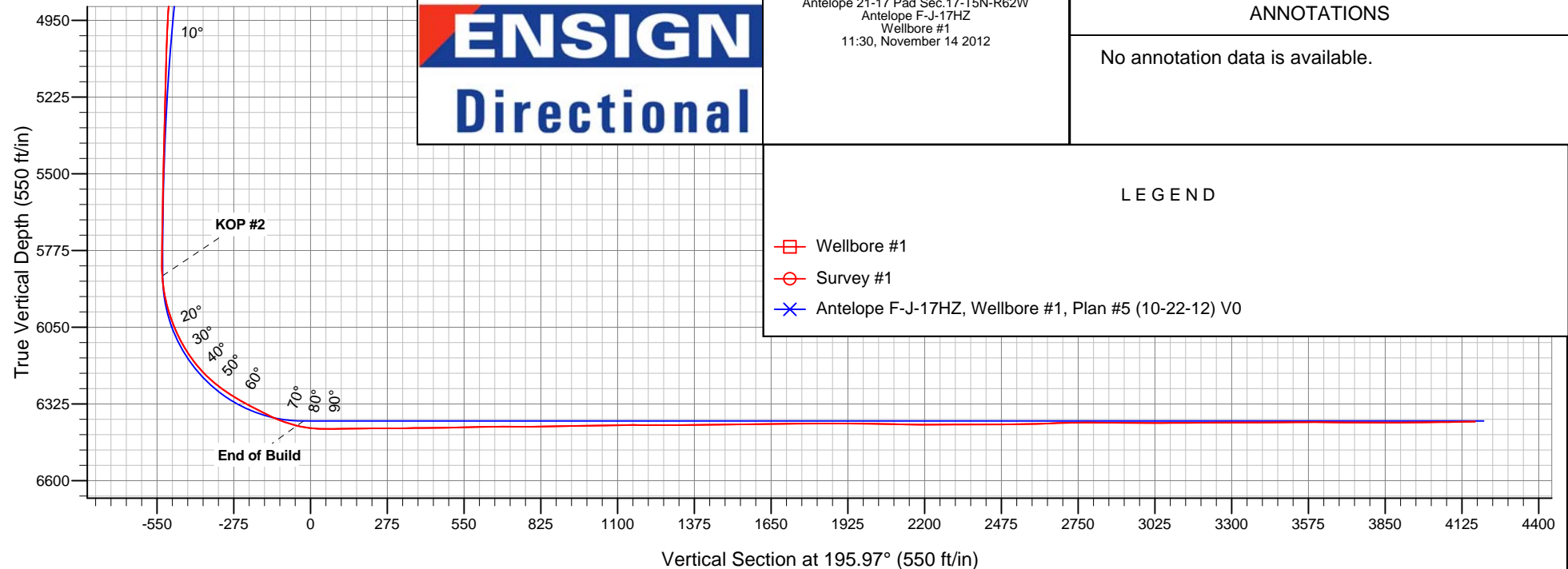
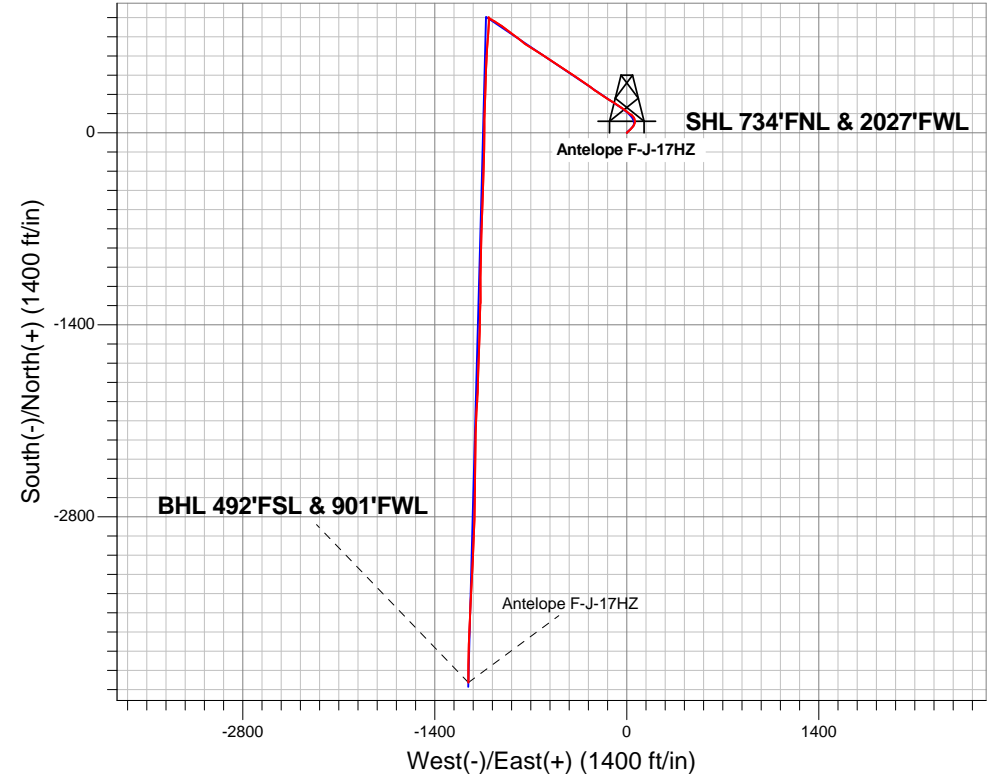
# BONANZA CREEK ENERGY OPERATING

## Well Name: Antelope F-J-17HZ

Surface Location: Antelope 21-17 Pad Sec.17-T5N-R62W  
 North American Datum 1983 , US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4690.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1392319.43 3320484.50 40.404610 -104.349180  
 Est. KB 15' WELL @ 4705.0ft (Est. KB 15')

## FINAL SURVEY

**Projected Bottom Hole Location**  
**11214'MD 6388'TVD 4008'S & 1155'W of SHL**  
**90.90 degree Incl @ 180.20 degree AZM**



Antelope 21-17 Pad Sec.17-T5N-R62W  
 Antelope F-J-17HZ  
 Wellbore #1  
 11:30, November 14 2012

### ANNOTATIONS

No annotation data is available.

### LEGEND

- Wellbore #1
- Survey #1
- Antelope F-J-17HZ, Wellbore #1, Plan #5 (10-22-12) V0



**Directional**

## **BONANZA CREEK ENERGY OPERATING**

**SEC.17-T5N-R62W**

**Antelope 21-17 Pad Sec.17-T5N-R62W**

**Antelope F-J-17HZ**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**14 November, 2012**



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope F-J-17HZ
<b>Project:</b>	SEC.17-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4705.0ft (Est. KB 15')
<b>Site:</b>	Antelope 21-17 Pad Sec.17-T5N-R62W	<b>MD Reference:</b>	WELL @ 4705.0ft (Est. KB 15')
<b>Well:</b>	Antelope F-J-17HZ	<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>	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)
1,323.0	9.60	301.50	1,308.5	141.8	17.8	-141.2	0.98	-0.08	-5.85
1,445.0	11.30	307.30	1,428.5	154.3	-0.4	-148.3	1.64	1.39	4.75
1,568.0	13.20	306.40	1,548.6	170.0	-21.3	-157.6	1.55	1.54	-0.73
1,690.0	13.50	304.50	1,667.4	186.3	-44.2	-167.0	0.44	0.25	-1.56
1,813.0	16.20	303.80	1,786.2	204.0	-70.3	-176.8	2.20	2.20	-0.57
1,936.0	17.40	300.10	1,904.0	222.7	-100.5	-186.5	1.31	0.98	-3.01
2,058.0	18.00	303.10	2,020.2	242.2	-132.0	-196.5	0.89	0.49	2.46
2,180.0	21.30	303.30	2,135.1	264.7	-166.4	-208.7	2.71	2.70	0.16
2,302.0	19.00	303.30	2,249.6	287.7	-201.5	-221.2	1.89	-1.89	0.00
2,425.0	18.70	307.30	2,366.0	310.7	-233.9	-234.3	1.08	-0.24	3.25
2,547.0	19.30	307.50	2,481.4	334.8	-265.5	-248.9	0.49	0.49	0.16
2,669.0	19.60	304.00	2,596.4	358.5	-298.4	-262.6	0.99	0.25	-2.87
2,794.0	19.20	302.90	2,714.3	381.4	-333.1	-275.1	0.43	-0.32	-0.88
2,919.0	20.80	303.10	2,831.8	404.7	-368.9	-287.6	1.28	1.28	0.16
3,042.0	20.70	304.00	2,946.8	428.8	-405.2	-300.8	0.27	-0.08	0.73
3,166.0	19.30	304.10	3,063.3	452.5	-440.4	-313.9	1.13	-1.13	0.08
3,290.0	18.80	305.40	3,180.5	475.6	-473.6	-326.9	0.53	-0.40	1.05
3,415.0	17.90	303.40	3,299.2	497.8	-506.1	-339.4	0.88	-0.72	-1.60
3,541.0	17.60	302.40	3,419.2	518.7	-538.3	-350.6	0.34	-0.24	-0.79
3,665.0	19.20	303.40	3,536.8	540.0	-571.2	-362.0	1.32	1.29	0.81
3,790.0	20.90	302.20	3,654.3	563.2	-607.2	-374.4	1.40	1.36	-0.96
3,915.0	21.70	301.00	3,770.7	586.9	-645.9	-386.6	0.73	0.64	-0.96
4,040.0	21.80	301.70	3,886.8	611.0	-685.4	-398.9	0.22	0.08	0.56
4,165.0	20.70	304.70	4,003.3	635.8	-723.4	-412.3	1.24	-0.88	2.40
4,290.0	18.50	309.10	4,121.1	660.9	-756.9	-427.2	2.12	-1.76	3.52
4,415.0	18.00	308.00	4,239.8	685.3	-787.5	-442.2	0.49	-0.40	-0.88
4,540.0	19.40	307.30	4,358.2	709.8	-819.3	-457.0	1.13	1.12	-0.56
4,666.0	17.90	306.40	4,477.6	733.9	-851.5	-471.4	1.21	-1.19	-0.71
4,791.0	16.40	307.00	4,597.0	756.0	-881.0	-484.4	1.21	-1.20	0.48
4,916.0	13.80	305.00	4,717.7	775.1	-907.4	-495.6	2.12	-2.08	-1.60
5,039.0	13.20	302.90	4,837.3	791.2	-931.2	-504.5	0.63	-0.49	-1.71
5,165.0	10.30	303.10	4,960.6	805.1	-952.7	-512.0	2.30	-2.30	0.16
5,290.0	7.30	299.60	5,084.1	815.2	-969.0	-517.2	2.44	-2.40	-2.80
5,414.0	5.80	298.00	5,207.3	822.0	-981.3	-520.3	1.22	-1.21	-1.29
5,539.0	5.50	300.60	5,331.7	828.0	-992.1	-523.2	0.32	-0.24	2.08
5,664.0	3.90	306.40	5,456.3	833.6	-1,000.7	-526.2	1.33	-1.28	4.64
5,790.0	2.10	317.00	5,582.1	837.8	-1,005.7	-528.9	1.49	-1.43	8.41
5,915.0	1.00	5.30	5,707.1	840.6	-1,007.1	-531.1	1.29	-0.88	38.64
6,005.0	1.10	52.90	5,797.1	841.9	-1,006.4	-532.6	0.95	0.11	52.89
6,036.0	1.70	128.00	5,828.1	841.8	-1,005.8	-532.6	5.71	1.94	242.26
6,069.0	4.10	158.60	5,861.0	840.4	-1,005.0	-531.5	8.41	7.27	92.73
6,100.0	6.80	173.20	5,891.9	837.5	-1,004.3	-528.9	9.72	8.71	47.10
6,131.0	9.90	179.70	5,922.5	833.0	-1,004.1	-524.7	10.44	10.00	20.97
6,161.0	13.10	181.60	5,951.9	827.1	-1,004.2	-518.9	10.74	10.67	6.33
6,191.0	16.10	182.00	5,981.0	819.5	-1,004.4	-511.6	10.01	10.00	1.33
6,222.0	19.20	183.40	6,010.5	810.1	-1,004.9	-502.4	10.09	10.00	4.52
6,254.0	21.90	182.80	6,040.5	798.9	-1,005.5	-491.5	8.46	8.44	-1.88
6,285.0	25.10	182.70	6,068.9	786.6	-1,006.1	-479.5	10.32	10.32	-0.32
6,316.0	28.20	182.30	6,096.6	772.7	-1,006.7	-465.9	10.02	10.00	-1.29
6,347.0	31.60	183.20	6,123.5	757.2	-1,007.4	-450.9	11.06	10.97	2.90
6,377.0	34.50	184.20	6,148.6	740.9	-1,008.5	-434.9	9.84	9.67	3.33
6,408.0	38.10	184.20	6,173.6	722.6	-1,009.8	-417.0	11.61	11.61	0.00
6,440.0	41.90	184.40	6,198.1	702.1	-1,011.4	-396.8	11.88	11.88	0.63
6,469.0	45.40	183.40	6,219.1	682.1	-1,012.7	-377.2	12.30	12.07	-3.45

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope F-J-17HZ
<b>Project:</b>	SEC.17-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4705.0ft (Est. KB 15')
<b>Site:</b>	Antelope 21-17 Pad Sec.17-T5N-R62W	<b>MD Reference:</b>	WELL @ 4705.0ft (Est. KB 15')
<b>Well:</b>	Antelope F-J-17HZ	<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>	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)
6,500.0	49.10	183.20	6,240.1	659.4	-1,014.0	-355.0	11.94	11.94	-0.65
6,531.0	52.80	183.20	6,259.6	635.4	-1,015.4	-331.6	11.94	11.94	0.00
6,561.0	56.00	183.40	6,277.1	611.0	-1,016.8	-307.8	10.68	10.67	0.67
6,593.0	58.50	183.90	6,294.4	584.2	-1,018.5	-281.5	7.92	7.81	1.56
6,624.0	60.40	184.10	6,310.2	557.5	-1,020.4	-255.4	6.15	6.13	0.65
6,656.0	62.00	183.90	6,325.6	529.6	-1,022.3	-227.9	5.03	5.00	-0.63
6,685.0	63.30	184.10	6,338.9	503.9	-1,024.1	-202.7	4.52	4.48	0.69
6,717.0	63.20	182.70	6,353.3	475.4	-1,025.8	-174.8	3.92	-0.31	-4.38
6,748.0	65.30	180.70	6,366.8	447.5	-1,026.6	-147.8	8.92	6.77	-6.45
6,779.0	68.40	180.70	6,379.0	419.0	-1,027.0	-120.3	10.00	10.00	0.00
6,811.0	71.40	181.10	6,390.0	388.9	-1,027.5	-91.3	9.45	9.38	1.25
6,842.0	74.40	182.00	6,399.1	359.3	-1,028.3	-62.6	10.07	9.68	2.90
6,873.0	79.10	182.10	6,406.2	329.1	-1,029.3	-33.3	15.16	15.16	0.32
6,905.0	83.30	182.50	6,411.1	297.6	-1,030.6	-2.6	13.18	13.13	1.25
6,927.0	85.99	181.86	6,413.1	275.7	-1,031.4	18.7	12.59	12.26	-2.91
<b>T1 460'FNL &amp; 1000'FWL</b>									
6,936.0	87.10	181.60	6,413.7	266.7	-1,031.7	27.4	12.59	12.26	-2.89
6,968.0	90.40	182.50	6,414.4	234.7	-1,032.9	58.5	10.69	10.31	2.81
6,999.0	90.80	182.30	6,414.0	203.8	-1,034.2	88.6	1.44	1.29	-0.65
7,023.0	90.90	182.30	6,413.7	179.8	-1,035.1	111.9	0.42	0.42	0.00
7,106.0	90.70	180.90	6,412.5	96.8	-1,037.4	192.3	1.70	-0.24	-1.69
7,137.0	90.10	180.50	6,412.3	65.8	-1,037.8	222.2	2.33	-1.94	-1.29
7,169.0	90.00	179.30	6,412.3	33.8	-1,037.8	253.0	3.76	-0.31	-3.75
7,200.0	90.20	179.10	6,412.2	2.8	-1,037.3	282.6	0.91	0.65	-0.65
7,230.0	90.80	180.40	6,412.0	-27.2	-1,037.2	311.4	4.77	2.00	4.33
7,262.0	90.80	180.70	6,411.5	-59.2	-1,037.5	342.3	0.94	0.00	0.94
7,293.0	90.50	180.50	6,411.2	-90.2	-1,037.8	372.2	1.16	-0.97	-0.65
7,324.0	90.60	182.10	6,410.9	-121.2	-1,038.5	402.2	5.17	0.32	5.16
7,355.0	90.60	181.80	6,410.5	-152.1	-1,039.6	432.2	0.97	0.00	-0.97
7,387.0	90.50	180.90	6,410.2	-184.1	-1,040.3	463.2	2.83	-0.31	-2.81
7,417.0	90.80	180.50	6,409.9	-214.1	-1,040.7	492.1	1.67	1.00	-1.33
7,448.0	91.50	181.30	6,409.3	-245.1	-1,041.2	522.1	3.43	2.26	2.58
7,479.0	91.40	183.20	6,408.5	-276.1	-1,042.4	552.2	6.14	-0.32	6.13
7,509.0	91.60	182.00	6,407.7	-306.0	-1,043.8	581.3	4.05	0.67	-4.00
7,541.0	91.00	183.20	6,407.0	-338.0	-1,045.2	612.5	4.19	-1.88	3.75
7,572.0	91.10	183.50	6,406.4	-368.9	-1,047.0	642.7	1.02	0.32	0.97
7,603.0	89.70	182.10	6,406.2	-399.9	-1,048.5	672.9	6.39	-4.52	-4.52
7,634.0	90.10	183.00	6,406.2	-430.9	-1,049.9	703.1	3.18	1.29	2.90
7,665.0	90.00	182.10	6,406.2	-461.8	-1,051.3	733.2	2.92	-0.32	-2.90
7,695.0	90.00	181.30	6,406.2	-491.8	-1,052.2	762.3	2.67	0.00	-2.67
7,727.0	90.80	181.40	6,406.0	-523.8	-1,053.0	793.2	2.52	2.50	0.31
7,758.0	91.20	181.40	6,405.5	-554.8	-1,053.7	823.2	1.29	1.29	0.00
7,789.0	91.10	181.60	6,404.8	-585.8	-1,054.5	853.3	0.72	-0.32	0.65
7,820.0	90.80	182.50	6,404.3	-616.8	-1,055.6	883.3	3.06	-0.97	2.90
7,852.0	91.00	182.50	6,403.8	-648.7	-1,057.0	914.5	0.63	0.63	0.00
7,883.0	90.00	181.10	6,403.5	-679.7	-1,058.0	944.5	5.55	-3.23	-4.52
7,914.0	90.10	181.30	6,403.5	-710.7	-1,058.6	974.5	0.72	0.32	0.65
7,945.0	91.40	181.80	6,403.1	-741.7	-1,059.5	1,004.5	4.49	4.19	1.61
7,977.0	91.90	182.00	6,402.2	-773.6	-1,060.5	1,035.5	1.68	1.56	0.63
8,007.0	91.40	180.20	6,401.3	-803.6	-1,061.1	1,064.5	6.22	-1.67	-6.00
8,038.0	90.70	182.00	6,400.8	-834.6	-1,061.7	1,094.5	6.23	-2.26	5.81
8,069.0	90.40	181.10	6,400.5	-865.6	-1,062.6	1,124.5	3.06	-0.97	-2.90
8,101.0	89.90	180.70	6,400.4	-897.6	-1,063.1	1,155.4	2.00	-1.56	-1.25
8,132.0	89.70	181.30	6,400.5	-928.6	-1,063.6	1,185.3	2.04	-0.65	1.94

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<b>Site:</b>	Antelope 21-17 Pad Sec.17-T5N-R62W	<b>MD Reference:</b>	WELL @ 4705.0ft (Est. KB 15')
<b>Well:</b>	Antelope F-J-17HZ	<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>	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)	
8,163.0	90.00	180.00	6,400.6	-959.6	-1,063.9	1,215.2	4.30	0.97	-4.19	
8,194.0	90.40	181.30	6,400.5	-990.6	-1,064.3	1,245.1	4.39	1.29	4.19	
8,225.0	90.20	180.90	6,400.3	-1,021.6	-1,064.9	1,275.1	1.44	-0.65	-1.29	
8,256.0	90.00	180.90	6,400.2	-1,052.6	-1,065.4	1,305.0	0.65	-0.65	0.00	
8,288.0	90.50	180.00	6,400.1	-1,084.6	-1,065.6	1,335.9	3.22	1.56	-2.81	
8,319.0	90.80	180.70	6,399.8	-1,115.6	-1,065.8	1,365.7	2.46	0.97	2.26	
8,350.0	90.50	180.20	6,399.4	-1,146.6	-1,066.1	1,395.6	1.88	-0.97	-1.61	
8,382.0	90.00	179.80	6,399.3	-1,178.6	-1,066.1	1,426.4	2.00	-1.56	-1.25	
8,413.0	90.20	180.20	6,399.2	-1,209.6	-1,066.1	1,456.2	1.44	0.65	1.29	
8,443.0	90.60	181.30	6,399.0	-1,239.6	-1,066.5	1,485.1	3.90	1.33	3.67	
8,475.0	91.20	182.30	6,398.5	-1,271.5	-1,067.5	1,516.1	3.64	1.88	3.13	
8,506.0	90.70	181.40	6,398.0	-1,302.5	-1,068.5	1,546.2	3.32	-1.61	-2.90	
8,536.0	90.40	180.90	6,397.7	-1,332.5	-1,069.1	1,575.2	1.94	-1.00	-1.67	
8,568.0	90.30	181.30	6,397.5	-1,364.5	-1,069.7	1,606.1	1.29	-0.31	1.25	
8,599.0	90.50	182.30	6,397.3	-1,395.5	-1,070.7	1,636.2	3.29	0.65	3.23	
8,630.0	90.70	182.30	6,397.0	-1,426.5	-1,071.9	1,666.3	0.65	0.65	0.00	
8,661.0	90.90	181.30	6,396.5	-1,457.4	-1,072.9	1,696.3	3.29	0.65	-3.23	
8,693.0	91.30	180.90	6,395.9	-1,489.4	-1,073.5	1,727.3	1.77	1.25	-1.25	
8,724.0	90.70	182.30	6,395.4	-1,520.4	-1,074.4	1,757.3	4.91	-1.94	4.52	
8,755.0	90.30	181.30	6,395.1	-1,551.4	-1,075.3	1,787.4	3.47	-1.29	-3.23	
8,787.0	90.20	182.10	6,395.0	-1,583.4	-1,076.3	1,818.4	2.52	-0.31	2.50	
8,818.0	90.50	182.30	6,394.8	-1,614.4	-1,077.5	1,848.5	1.16	0.97	0.65	
8,849.0	90.60	181.80	6,394.5	-1,645.3	-1,078.6	1,878.6	1.64	0.32	-1.61	
8,881.0	89.50	182.50	6,394.4	-1,677.3	-1,079.8	1,909.6	4.07	-3.44	2.19	
8,912.0	89.30	181.80	6,394.8	-1,708.3	-1,080.9	1,939.7	2.35	-0.65	-2.26	
8,943.0	89.20	182.30	6,395.2	-1,739.3	-1,082.0	1,969.8	1.64	-0.32	1.61	
8,975.0	89.10	182.50	6,395.6	-1,771.2	-1,083.4	2,000.9	0.70	-0.31	0.63	
9,006.0	89.00	182.10	6,396.2	-1,802.2	-1,084.6	2,031.0	1.33	-0.32	-1.29	
9,037.0	88.70	181.80	6,396.8	-1,833.2	-1,085.7	2,061.1	1.37	-0.97	-0.97	
9,068.0	88.90	182.00	6,397.4	-1,864.2	-1,086.7	2,091.2	0.91	0.65	0.65	
9,099.0	88.80	181.80	6,398.1	-1,895.1	-1,087.7	2,121.2	0.72	-0.32	-0.65	
9,130.0	88.80	182.10	6,398.7	-1,926.1	-1,088.8	2,151.3	0.97	0.00	0.97	
9,161.0	89.60	182.30	6,399.1	-1,957.1	-1,090.0	2,181.4	2.66	2.58	0.65	
9,192.0	90.00	182.70	6,399.2	-1,988.1	-1,091.3	2,211.6	1.82	1.29	1.29	
9,223.0	90.60	183.50	6,399.1	-2,019.0	-1,093.0	2,241.8	3.23	1.94	2.58	
9,254.0	90.80	183.90	6,398.7	-2,049.9	-1,095.0	2,272.1	1.44	0.65	1.29	
9,286.0	90.70	183.50	6,398.3	-2,081.9	-1,097.1	2,303.3	1.29	-0.31	-1.25	
9,317.0	90.00	181.80	6,398.1	-2,112.8	-1,098.5	2,333.5	5.93	-2.26	-5.48	
9,347.0	89.40	182.70	6,398.3	-2,142.8	-1,099.7	2,362.7	3.61	-2.00	3.00	
9,378.0	89.70	182.10	6,398.5	-2,173.8	-1,101.0	2,392.8	2.16	0.97	-1.94	
9,409.0	90.40	181.80	6,398.5	-2,204.8	-1,102.0	2,422.9	2.46	2.26	-0.97	
9,439.0	90.50	181.30	6,398.2	-2,234.8	-1,102.9	2,451.9	1.70	0.33	-1.67	
9,470.0	90.80	180.70	6,397.9	-2,265.8	-1,103.4	2,481.9	2.16	0.97	-1.94	
9,502.0	90.60	180.50	6,397.5	-2,297.7	-1,103.7	2,512.7	0.88	-0.63	-0.63	
9,533.0	90.60	179.10	6,397.2	-2,328.7	-1,103.6	2,542.5	4.52	0.00	-4.52	
9,563.0	91.00	179.70	6,396.7	-2,358.7	-1,103.3	2,571.2	2.40	1.33	2.00	
9,593.0	91.50	180.40	6,396.1	-2,388.7	-1,103.3	2,600.1	2.87	1.67	2.33	
9,625.0	91.70	181.10	6,395.2	-2,420.7	-1,103.8	2,631.0	2.27	0.63	2.19	
9,655.0	92.00	180.00	6,394.2	-2,450.7	-1,104.0	2,659.9	3.80	1.00	-3.67	
9,687.0	91.70	180.90	6,393.2	-2,482.7	-1,104.3	2,690.7	2.96	-0.94	2.81	
9,718.0	90.90	181.40	6,392.5	-2,513.7	-1,104.9	2,720.6	3.04	-2.58	1.61	
9,749.0	90.40	181.10	6,392.1	-2,544.7	-1,105.6	2,750.6	1.88	-1.61	-0.97	
9,780.0	90.70	181.30	6,391.8	-2,575.7	-1,106.2	2,780.6	1.16	0.97	0.65	
9,811.0	90.40	181.40	6,391.5	-2,606.6	-1,107.0	2,810.6	1.02	-0.97	0.32	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope F-J-17HZ
<b>Project:</b>	SEC.17-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4705.0ft (Est. KB 15')
<b>Site:</b>	Antelope 21-17 Pad Sec.17-T5N-R62W	<b>MD Reference:</b>	WELL @ 4705.0ft (Est. KB 15')
<b>Well:</b>	Antelope F-J-17HZ	<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>	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)
9,842.0	89.50	181.30	6,391.6	-2,637.6	-1,107.7	2,840.6	2.92	-2.90	-0.32
9,873.0	89.10	181.30	6,392.0	-2,668.6	-1,108.4	2,870.6	1.29	-1.29	0.00
9,905.0	89.20	181.10	6,392.4	-2,700.6	-1,109.1	2,901.5	0.70	0.31	-0.63
9,936.0	89.40	179.50	6,392.8	-2,731.6	-1,109.2	2,931.4	5.20	0.65	-5.16
9,967.0	89.70	179.30	6,393.0	-2,762.6	-1,108.9	2,961.1	1.16	0.97	-0.65
9,998.0	90.10	180.70	6,393.1	-2,793.6	-1,108.9	2,990.9	4.70	1.29	4.52
10,029.0	90.30	180.50	6,393.0	-2,824.6	-1,109.2	3,020.8	0.91	0.65	-0.65
10,060.0	90.60	182.50	6,392.8	-2,855.6	-1,110.0	3,050.8	6.52	0.97	6.45
10,092.0	90.10	183.20	6,392.6	-2,887.5	-1,111.6	3,081.9	2.69	-1.56	2.19
10,123.0	90.00	182.80	6,392.5	-2,918.5	-1,113.3	3,112.1	1.33	-0.32	-1.29
10,154.0	90.40	183.40	6,392.4	-2,949.5	-1,114.9	3,142.4	2.33	1.29	1.94
10,185.0	90.70	182.50	6,392.1	-2,980.4	-1,116.5	3,172.6	3.06	0.97	-2.90
10,216.0	90.60	182.00	6,391.8	-3,011.4	-1,117.7	3,202.7	1.64	-0.32	-1.61
10,248.0	90.00	182.30	6,391.6	-3,043.4	-1,118.9	3,233.8	2.10	-1.88	0.94
10,279.0	89.90	183.00	6,391.6	-3,074.3	-1,120.4	3,263.9	2.28	-0.32	2.26
10,310.0	89.90	183.20	6,391.7	-3,105.3	-1,122.1	3,294.1	0.65	0.00	0.65
10,341.0	89.90	183.40	6,391.7	-3,136.2	-1,123.8	3,324.4	0.65	0.00	0.65
10,372.0	90.60	182.50	6,391.6	-3,167.2	-1,125.4	3,354.6	3.68	2.26	-2.90
10,402.0	90.70	182.70	6,391.3	-3,197.2	-1,126.8	3,383.8	0.75	0.33	0.67
10,433.0	90.10	182.10	6,391.0	-3,228.1	-1,128.1	3,413.9	2.74	-1.94	-1.94
10,463.0	90.00	183.00	6,391.0	-3,258.1	-1,129.4	3,443.1	3.02	-0.33	3.00
10,494.0	90.10	181.80	6,391.0	-3,289.1	-1,130.7	3,473.2	3.88	0.32	-3.87
10,525.0	90.70	183.00	6,390.8	-3,320.0	-1,132.0	3,503.4	4.33	1.94	3.87
10,556.0	90.90	182.10	6,390.3	-3,351.0	-1,133.4	3,533.5	2.97	0.65	-2.90
10,587.0	90.50	183.40	6,390.0	-3,382.0	-1,134.9	3,563.7	4.39	-1.29	4.19
10,618.0	89.60	183.00	6,389.9	-3,412.9	-1,136.6	3,593.9	3.18	-2.90	-1.29
10,649.0	89.50	184.20	6,390.2	-3,443.9	-1,138.6	3,624.2	3.88	-0.32	3.87
10,680.0	89.50	183.40	6,390.5	-3,474.8	-1,140.6	3,654.5	2.58	0.00	-2.58
10,712.0	89.30	183.40	6,390.8	-3,506.7	-1,142.5	3,685.7	0.63	-0.63	0.00
10,743.0	89.20	182.30	6,391.2	-3,537.7	-1,144.1	3,715.9	3.56	-0.32	-3.55
10,774.0	89.30	181.30	6,391.6	-3,568.7	-1,145.0	3,746.0	3.24	0.32	-3.23
10,805.0	89.70	182.50	6,391.9	-3,599.7	-1,146.1	3,776.0	4.08	1.29	3.87
10,836.0	89.70	182.00	6,392.0	-3,630.6	-1,147.3	3,806.2	1.61	0.00	-1.61
10,867.0	89.90	182.00	6,392.1	-3,661.6	-1,148.4	3,836.2	0.65	0.65	0.00
10,899.0	90.60	182.10	6,392.0	-3,693.6	-1,149.5	3,867.3	2.21	2.19	0.31
10,930.0	91.00	181.60	6,391.6	-3,724.6	-1,150.5	3,897.4	2.07	1.29	-1.61
10,961.0	90.50	181.60	6,391.2	-3,755.6	-1,151.4	3,927.4	1.61	-1.61	0.00
10,993.0	90.30	181.60	6,390.9	-3,787.5	-1,152.3	3,958.4	0.63	-0.63	0.00
11,024.0	90.70	181.60	6,390.7	-3,818.5	-1,153.1	3,988.4	1.29	1.29	0.00
11,055.0	91.30	181.60	6,390.1	-3,849.5	-1,154.0	4,018.4	1.94	1.94	0.00
11,086.0	90.40	180.00	6,389.7	-3,880.5	-1,154.4	4,048.4	5.92	-2.90	-5.16
11,118.0	90.40	180.20	6,389.4	-3,912.5	-1,154.5	4,079.1	0.62	0.00	0.63
11,149.0	90.90	180.20	6,389.1	-3,943.5	-1,154.6	4,109.0	1.61	1.61	0.00
11,214.0	90.90	180.20	6,388.1	-4,008.5	-1,154.8	4,171.5	0.00	0.00	0.00
BHL 460°FSL & 900°FWL									

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope F-J-17HZ
<b>Project:</b>	SEC.17-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4705.0ft (Est. KB 15')
<b>Site:</b>	Antelope 21-17 Pad Sec.17-T5N-R62W	<b>MD Reference:</b>	WELL @ 4705.0ft (Est. KB 15')
<b>Well:</b>	Antelope F-J-17HZ	<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>	Landmark

Wellbore Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
T1 460'FNL & 1000'F	0.00	0.00	6,386.0	273.3	-1,027.7	1,392,579.34	3,319,453.41	40.405360	-104.352870
- survey misses target center by 27.5ft at 6927.6ft MD (6413.2 TVD, 275.0 N, -1031.5 E)									
- Point									
BHL 460'FSL & 900'F	0.00	0.00	6,386.0	-4,040.2	-1,156.0	1,388,264.76	3,319,381.10	40.393520	-104.353330
- survey misses target center by 31.8ft at 11214.0ft MD (6388.1 TVD, -4008.5 N, -1154.8 E)									
- Point									

Checked By: _____	Approved By: _____	Date: _____
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