

BONANZA CREEK ENERGY OPERATING

Well Name: **Antelope K-O-17HNB**

Surface Location: Antelope P-17 Pad Sec.17-T5N-R62W

North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4695.0

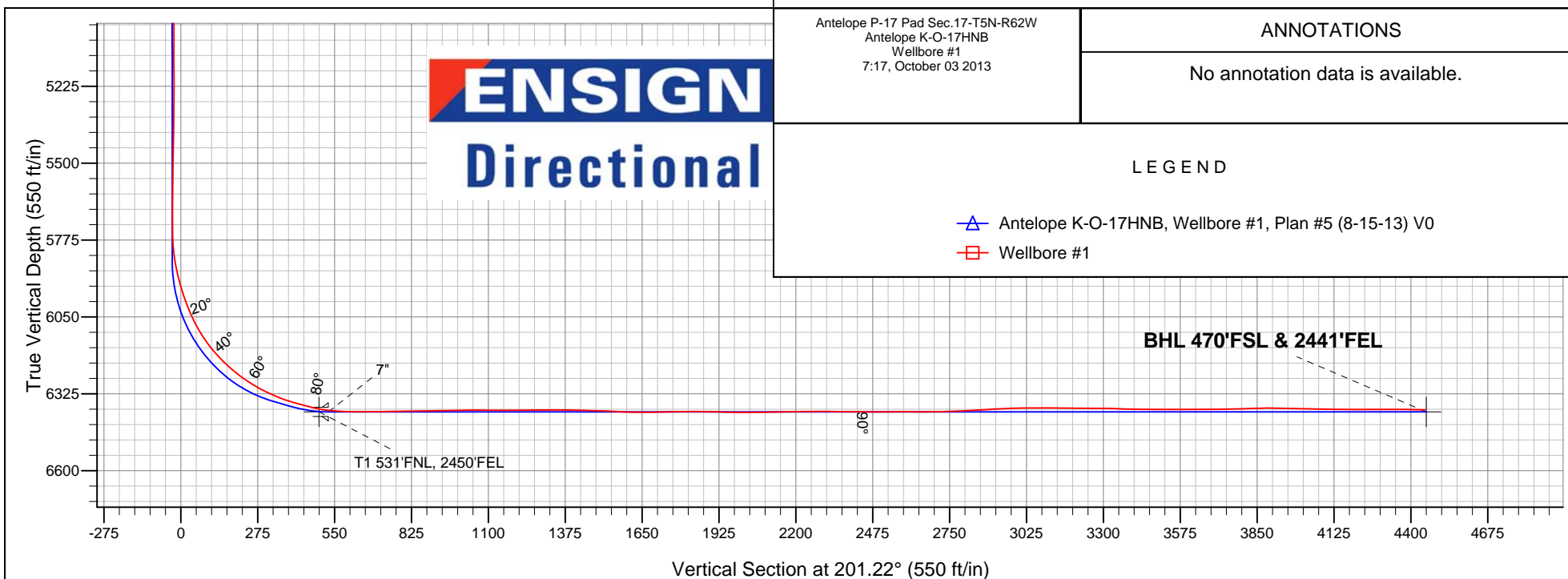
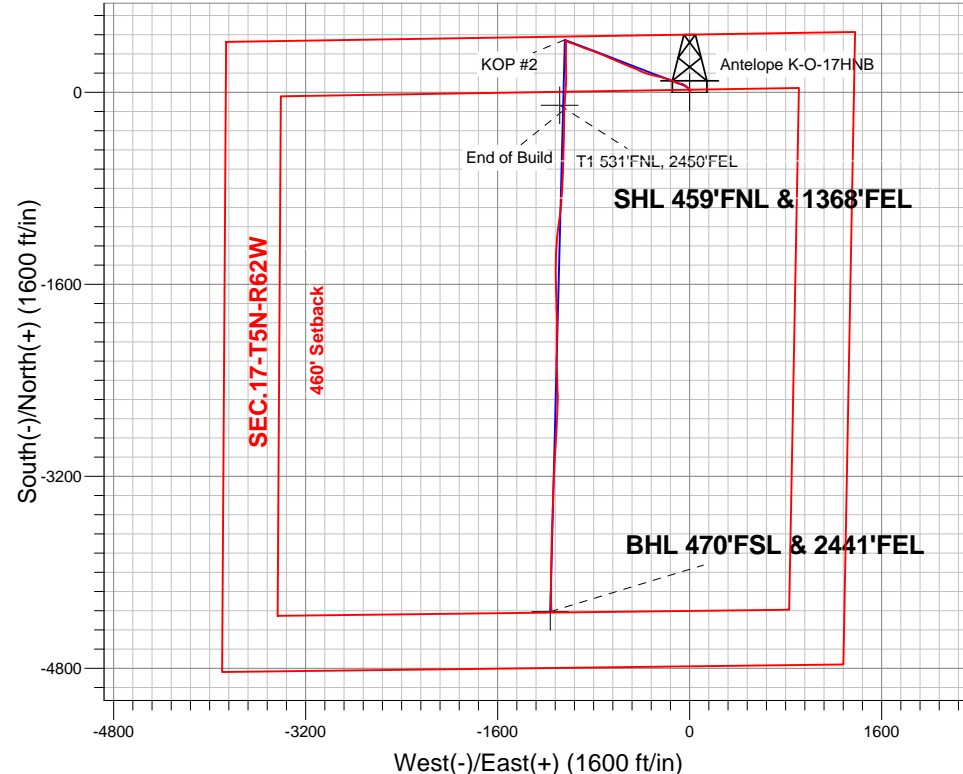
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1392660.28	3322318.25	40.405480	-104.342580	

Ensign 136 RKB - 13' WELL @ 4708.0ft (Ensign 136 RKB - 13')

FINAL SURVEY

Projected Bottom Hole Location

11010' MD 6382' TVD 4328' S & 1153' W of SHL
89.5 degree Incl @ 177.8 degree AZM



Antelope P-17 Pad Sec.17-T5N-R62W
Antelope K-O-17HNB
Wellbore #1
7:17, October 03 2013

ANNOTATIONS

No annotation data is available.

LEGEND

- Antelope K-O-17HNB, Wellbore #1, Plan #5 (8-15-13) V0
- Wellbore #1



BONANZA CREEK ENERGY OPERATING

SEC.17-T5N-R62W

Antelope P-17 Pad Sec.17-T5N-R62W

Antelope K-O-17HNB

Wellbore #1

Design: Wellbore #1

Standard Survey Report

03 October, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (Ensign 136 RKB - 13')
Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (Ensign 136 RKB - 13')
Well:	Antelope K-O-17HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.17-T5N-R62W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Antelope P-17 Pad Sec.17-T5N-R62W				
Site Position:		Northing:	1,392,656.13ft	Latitude:	40.405470
From:	Lat/Long	Easting:	3,322,279.31 ft	Longitude:	-104.342720
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.75 °

Well	Antelope K-O-17HNB					
Well Position	+N/-S	0.0 ft	Northing:	1,392,660.28 ft	Latitude:	40.405480
	+E/-W	0.0 ft	Easting:	3,322,318.25 ft	Longitude:	-104.342580
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,695.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/15/2013	8.34	67.05	52,951

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	201.22	

Survey Program	Date	10/3/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
78.0	11,010.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1.0	0.01	108.90	1.0	0.0	0.0	0.0	0.64	0.64	0.00	
SHL 459'FNL & 1368'FEL										
78.0	0.50	108.90	78.0	-0.1	0.3	0.0	0.64	0.64	0.00	
167.0	0.70	92.50	167.0	-0.3	1.2	-0.2	0.29	0.22	-18.43	
270.0	1.80	40.20	270.0	0.9	2.9	-1.9	1.44	1.07	-50.78	
397.0	3.80	355.90	396.8	6.7	3.9	-7.6	2.21	1.57	-34.88	
513.0	6.10	341.30	512.4	16.3	1.6	-15.8	2.25	1.98	-12.59	
669.0	13.20	311.60	666.2	36.1	-14.4	-28.4	5.42	4.55	-19.04	
793.0	12.70	310.70	787.0	54.3	-35.3	-37.9	0.43	-0.40	-0.73	
918.0	11.10	289.40	909.4	67.3	-57.1	-42.1	3.71	-1.28	-17.04	
1,039.0	12.30	271.10	1,027.9	71.4	-80.9	-37.3	3.21	0.99	-15.12	
1,161.0	16.10	292.20	1,146.2	78.1	-109.6	-33.1	5.22	3.11	17.30	

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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)	
1,282.0	16.00	299.10	1,262.5	92.5	-139.7	-35.7	1.58	-0.08	5.70	
1,403.0	15.30	288.20	1,379.1	105.6	-169.5	-37.1	2.49	-0.58	-9.01	
1,603.0	14.90	287.00	1,572.2	121.4	-219.1	-33.8	0.25	-0.20	-0.60	
1,772.0	15.20	279.70	1,735.4	131.5	-261.8	-27.8	1.13	0.18	-4.32	
1,899.0	13.50	284.30	1,858.4	137.9	-292.5	-22.7	1.61	-1.34	3.62	
2,026.0	12.30	284.00	1,982.2	144.9	-320.0	-19.2	0.95	-0.94	-0.24	
2,153.0	12.30	286.80	2,106.3	152.1	-346.1	-16.5	0.47	0.00	2.20	
2,280.0	12.80	289.80	2,230.3	160.7	-372.3	-15.1	0.65	0.39	2.36	
2,408.0	12.60	293.10	2,355.1	171.0	-398.5	-15.2	0.59	-0.16	2.58	
2,534.0	12.60	296.40	2,478.1	182.5	-423.4	-16.9	0.57	0.00	2.62	
2,663.0	13.80	294.50	2,603.7	195.2	-450.0	-19.0	0.99	0.93	-1.47	
2,791.0	14.70	289.90	2,727.8	207.0	-479.2	-19.5	1.13	0.70	-3.59	
2,919.0	14.20	293.30	2,851.7	218.7	-508.9	-19.7	0.77	-0.39	2.66	
3,048.0	13.50	291.90	2,977.0	230.6	-537.4	-20.5	0.60	-0.54	-1.09	
3,176.0	13.70	294.20	3,101.4	242.4	-565.1	-21.4	0.45	0.16	1.80	
3,305.0	12.60	292.50	3,227.0	254.1	-592.0	-22.5	0.90	-0.85	-1.32	
3,433.0	13.20	292.20	3,351.8	264.9	-618.4	-23.1	0.47	0.47	-0.23	
3,561.0	14.10	295.20	3,476.1	277.1	-646.1	-24.4	0.89	0.70	2.34	
3,690.0	15.20	294.70	3,600.9	290.8	-675.7	-26.6	0.86	0.85	-0.39	
3,818.0	15.50	291.90	3,724.4	304.2	-706.8	-27.8	0.62	0.23	-2.19	
3,946.0	14.80	290.60	3,847.9	316.4	-737.9	-27.8	0.61	-0.55	-1.02	
4,075.0	14.00	291.20	3,972.9	327.8	-767.9	-27.6	0.63	-0.62	0.47	
4,206.0	13.00	294.50	4,100.3	339.6	-796.1	-28.5	0.96	-0.76	2.52	
4,332.0	13.40	289.40	4,222.9	350.4	-822.8	-28.8	0.98	0.32	-4.05	
4,460.0	14.20	288.20	4,347.2	360.2	-851.7	-27.5	0.66	0.63	-0.94	
4,588.0	13.50	288.50	4,471.5	369.8	-880.8	-26.0	0.55	-0.55	0.23	
4,717.0	14.10	289.60	4,596.8	379.9	-909.8	-24.8	0.51	0.47	0.85	
4,845.0	14.20	292.60	4,720.9	391.2	-939.0	-24.7	0.58	0.08	2.34	
4,973.0	12.60	292.10	4,845.4	402.4	-966.5	-25.3	1.25	-1.25	-0.39	
5,102.0	10.00	288.40	4,971.9	411.3	-990.1	-25.0	2.09	-2.02	-2.87	
5,230.0	6.90	295.70	5,098.5	418.1	-1,007.6	-25.1	2.56	-2.42	5.70	
5,359.0	3.80	277.30	5,226.9	422.0	-1,018.8	-24.6	2.72	-2.40	-14.26	
5,487.0	2.80	318.60	5,354.7	424.9	-1,025.1	-25.1	1.96	-0.78	32.27	
5,615.0	2.60	321.10	5,482.6	429.5	-1,029.0	-27.9	0.18	-0.16	1.95	
5,744.0	2.00	297.10	5,611.5	432.8	-1,032.8	-29.6	0.87	-0.47	-18.60	
5,870.0	0.20	227.90	5,737.5	433.7	-1,035.0	-29.7	1.54	-1.43	-54.92	
5,913.0	3.60	164.40	5,780.4	432.3	-1,034.6	-28.5	8.18	7.91	-147.67	
5,956.0	7.90	170.80	5,823.2	428.1	-1,033.8	-24.9	10.10	10.00	14.88	
5,998.0	11.80	172.70	5,864.6	421.0	-1,032.8	-18.6	9.32	9.29	4.52	
6,041.0	15.50	176.60	5,906.4	410.9	-1,031.9	-9.5	8.86	8.60	9.07	
6,084.0	18.30	178.00	5,947.5	398.4	-1,031.3	1.9	6.58	6.51	3.26	
6,127.0	20.00	179.70	5,988.1	384.3	-1,031.1	15.0	4.16	3.95	3.95	
6,169.0	24.20	181.70	6,027.0	368.5	-1,031.3	29.8	10.16	10.00	4.76	
6,212.0	28.40	178.50	6,065.6	349.5	-1,031.3	47.5	10.31	9.77	-7.44	
6,255.0	32.90	179.00	6,102.6	327.6	-1,030.8	67.8	10.48	10.47	1.16	
6,298.0	37.20	179.60	6,137.7	302.9	-1,030.5	90.7	10.03	10.00	1.40	
6,340.0	41.80	179.90	6,170.1	276.2	-1,030.4	115.5	10.96	10.95	0.71	
6,383.0	46.20	181.30	6,201.1	246.3	-1,030.7	143.5	10.48	10.23	3.26	
6,426.0	50.30	180.10	6,229.7	214.2	-1,031.1	173.5	9.76	9.53	-2.79	
6,469.0	54.10	178.50	6,256.1	180.3	-1,030.7	205.0	9.31	8.84	-3.72	
6,512.0	58.30	179.40	6,280.0	144.5	-1,030.0	238.1	9.92	9.77	2.09	
6,554.0	62.40	179.70	6,300.7	108.1	-1,029.7	272.0	9.78	9.76	0.71	
6,597.0	65.40	182.90	6,319.7	69.5	-1,030.6	308.3	9.66	6.98	7.44	
6,640.0	68.40	185.20	6,336.5	30.0	-1,033.4	346.1	8.54	6.98	5.35	

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Well:	Antelope K-O-17HNB	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)
6,683.0	73.20	184.50	6,350.7	-10.4	-1,036.9	385.0	11.27	11.16	-1.63
6,726.0	75.50	183.40	6,362.3	-51.7	-1,039.7	424.6	5.89	5.35	-2.56
6,768.0	76.20	183.60	6,372.5	-92.4	-1,042.2	463.4	1.73	1.67	0.48
6,790.1	78.72	183.03	6,377.3	-113.9	-1,043.4	483.9	11.67	11.39	-2.58
T1 531'FNL, 2450'FEL									
6,811.0	81.10	182.50	6,381.0	-134.5	-1,044.4	503.4	11.67	11.40	-2.54
6,854.0	85.60	180.40	6,386.0	-177.2	-1,045.5	543.6	11.53	10.47	-4.88
6,940.0	89.70	180.10	6,389.5	-263.1	-1,045.9	623.8	4.78	4.77	-0.35
6,983.0	90.60	180.40	6,389.4	-306.1	-1,046.1	663.9	2.21	2.09	0.70
7,025.0	90.90	181.30	6,388.8	-348.1	-1,046.7	703.3	2.26	0.71	2.14
7,068.0	90.40	182.00	6,388.3	-391.0	-1,047.9	743.8	2.00	-1.16	1.63
7,110.0	90.70	182.40	6,387.9	-433.0	-1,049.5	783.5	1.19	0.71	0.95
7,152.0	91.40	182.40	6,387.2	-475.0	-1,051.3	823.3	1.67	1.67	0.00
7,194.0	90.50	181.80	6,386.5	-516.9	-1,052.8	863.0	2.58	-2.14	-1.43
7,237.0	90.20	182.00	6,386.2	-559.9	-1,054.3	903.5	0.84	-0.70	0.47
7,280.0	91.00	181.00	6,385.8	-602.9	-1,055.4	944.0	2.98	1.86	-2.33
7,323.0	91.40	181.30	6,384.9	-645.9	-1,056.3	984.4	1.16	0.93	0.70
7,365.0	91.20	182.20	6,383.9	-687.8	-1,057.5	1,024.0	2.19	-0.48	2.14
7,408.0	89.60	182.00	6,383.6	-730.8	-1,059.1	1,064.6	3.75	-3.72	-0.47
7,451.0	88.50	182.20	6,384.3	-773.8	-1,060.7	1,105.2	2.60	-2.56	0.47
7,494.0	90.70	183.60	6,384.6	-816.7	-1,062.9	1,146.0	6.06	5.12	3.26
7,536.0	90.50	184.10	6,384.2	-858.6	-1,065.7	1,186.1	1.28	-0.48	1.19
7,579.0	90.50	184.80	6,383.8	-901.5	-1,069.0	1,227.3	1.63	0.00	1.63
7,622.0	90.40	185.40	6,383.5	-944.3	-1,072.8	1,268.6	1.41	-0.23	1.40
7,665.0	90.40	186.40	6,383.2	-987.1	-1,077.3	1,310.1	2.33	0.00	2.33
7,708.0	89.70	187.60	6,383.1	-1,029.8	-1,082.5	1,351.8	3.23	-1.63	2.79
7,750.0	89.00	188.00	6,383.6	-1,071.4	-1,088.2	1,392.6	1.92	-1.67	0.95
7,793.0	88.80	187.30	6,384.4	-1,114.0	-1,093.9	1,434.4	1.69	-0.47	-1.63
7,836.0	88.30	186.10	6,385.5	-1,156.7	-1,098.9	1,476.0	3.02	-1.16	-2.79
7,879.0	88.10	186.10	6,386.9	-1,199.4	-1,103.5	1,517.5	0.47	-0.47	0.00
7,922.0	87.70	185.50	6,388.5	-1,242.1	-1,107.8	1,558.9	1.68	-0.93	-1.40
7,964.0	88.10	183.20	6,390.0	-1,284.0	-1,111.0	1,599.1	5.55	0.95	-5.48
8,007.0	88.80	181.80	6,391.2	-1,326.9	-1,112.9	1,639.8	3.64	1.63	-3.26
8,050.0	90.50	181.80	6,391.4	-1,369.9	-1,114.3	1,680.3	3.95	3.95	0.00
8,093.0	92.20	182.00	6,390.4	-1,412.9	-1,115.7	1,720.9	3.98	3.95	0.47
8,136.0	91.30	180.80	6,389.1	-1,455.8	-1,116.7	1,761.3	3.49	-2.09	-2.79
8,178.0	89.80	179.70	6,388.7	-1,497.8	-1,116.9	1,800.6	4.43	-3.57	-2.62
8,221.0	88.80	179.20	6,389.2	-1,540.8	-1,116.5	1,840.5	2.60	-2.33	-1.16
8,264.0	89.60	178.70	6,389.8	-1,583.8	-1,115.7	1,880.3	2.19	1.86	-1.16
8,307.0	88.90	178.50	6,390.4	-1,626.8	-1,114.7	1,920.0	1.69	-1.63	-0.47
8,349.0	88.80	178.00	6,391.2	-1,668.8	-1,113.4	1,958.6	1.21	-0.24	-1.19
8,392.0	89.30	177.80	6,391.9	-1,711.7	-1,111.8	1,998.1	1.25	1.16	-0.47
8,435.0	90.60	178.10	6,392.0	-1,754.7	-1,110.3	2,037.6	3.10	3.02	0.70
8,478.0	91.00	178.30	6,391.4	-1,797.7	-1,108.9	2,077.2	1.04	0.93	0.47
8,521.0	91.40	178.50	6,390.5	-1,840.7	-1,107.7	2,116.8	1.04	0.93	0.47
8,563.0	91.10	179.20	6,389.6	-1,882.6	-1,106.9	2,155.6	1.81	-0.71	1.67
8,606.0	90.70	179.90	6,388.9	-1,925.6	-1,106.5	2,195.6	1.87	-0.93	1.63
8,649.0	90.50	181.30	6,388.4	-1,968.6	-1,107.0	2,235.8	3.29	-0.47	3.26
8,692.0	90.00	180.80	6,388.2	-2,011.6	-1,107.8	2,276.2	1.64	-1.16	-1.16
8,735.0	89.20	180.40	6,388.5	-2,054.6	-1,108.2	2,316.4	2.08	-1.86	-0.93
8,777.0	89.70	180.30	6,388.9	-2,096.6	-1,108.5	2,355.7	1.21	1.19	-0.24
8,820.0	89.30	180.10	6,389.3	-2,139.6	-1,108.6	2,395.8	1.04	-0.93	-0.47
8,863.0	89.60	180.10	6,389.7	-2,182.6	-1,108.7	2,435.9	0.70	0.70	0.00
8,906.0	89.70	180.10	6,390.0	-2,225.6	-1,108.8	2,476.0	0.23	0.23	0.00

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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)
8,949.0	90.30	179.60	6,390.0	-2,268.6	-1,108.7	2,516.1	1.82	1.40	-1.16
8,991.0	90.80	177.60	6,389.6	-2,310.6	-1,107.6	2,554.8	4.91	1.19	-4.76
9,034.0	90.20	177.30	6,389.2	-2,353.5	-1,105.7	2,594.2	1.56	-1.40	-0.70
9,077.0	89.40	177.40	6,389.4	-2,396.5	-1,103.7	2,633.5	1.87	-1.86	0.23
9,120.0	89.70	178.00	6,389.7	-2,439.5	-1,102.0	2,672.9	1.56	0.70	1.40
9,162.0	90.70	179.00	6,389.6	-2,481.5	-1,100.9	2,711.7	3.37	2.38	2.38
9,205.0	92.10	179.60	6,388.5	-2,524.4	-1,100.4	2,751.6	3.54	3.26	1.40
9,248.0	92.70	181.00	6,386.7	-2,567.4	-1,100.6	2,791.7	3.54	1.40	3.26
9,291.0	93.20	181.50	6,384.5	-2,610.3	-1,101.6	2,832.0	1.64	1.16	1.16
9,334.0	93.60	182.50	6,381.9	-2,653.2	-1,103.1	2,872.6	2.50	0.93	2.33
9,376.0	92.70	183.40	6,379.6	-2,695.1	-1,105.2	2,912.4	3.03	-2.14	2.14
9,419.0	92.20	183.10	6,377.8	-2,738.0	-1,107.6	2,953.3	1.36	-1.16	-0.70
9,462.0	91.20	182.70	6,376.5	-2,780.9	-1,109.8	2,994.1	2.50	-2.33	-0.93
9,505.0	90.00	182.00	6,376.1	-2,823.9	-1,111.6	3,034.8	3.23	-2.79	-1.63
9,548.0	89.40	182.20	6,376.3	-2,866.9	-1,113.2	3,075.4	1.47	-1.40	0.47
9,590.0	90.20	183.40	6,376.4	-2,908.8	-1,115.2	3,115.2	3.43	1.90	2.86
9,633.0	89.80	183.40	6,376.4	-2,951.7	-1,117.8	3,156.2	0.93	-0.93	0.00
9,676.0	89.60	183.60	6,376.7	-2,994.6	-1,120.4	3,197.1	0.66	-0.47	0.47
9,719.0	90.30	183.60	6,376.7	-3,037.6	-1,123.1	3,238.1	1.63	1.63	0.00
9,761.0	89.80	183.10	6,376.7	-3,079.5	-1,125.5	3,278.1	1.68	-1.19	-1.19
9,804.0	87.90	183.10	6,377.5	-3,122.4	-1,127.9	3,318.9	4.42	-4.42	0.00
9,847.0	88.00	183.60	6,379.1	-3,165.3	-1,130.4	3,359.8	1.19	0.23	1.16
9,890.0	88.90	183.20	6,380.2	-3,208.2	-1,132.9	3,400.8	2.29	2.09	-0.93
9,933.0	89.00	182.50	6,381.0	-3,251.2	-1,135.1	3,441.6	1.64	0.23	-1.63
9,975.0	89.80	182.40	6,381.5	-3,293.1	-1,136.9	3,481.3	1.92	1.90	-0.24
10,018.0	90.00	181.70	6,381.5	-3,336.1	-1,138.4	3,521.9	1.69	0.47	-1.63
10,061.0	90.60	181.00	6,381.3	-3,379.1	-1,139.4	3,562.4	2.14	1.40	-1.63
10,104.0	89.70	181.00	6,381.2	-3,422.1	-1,140.2	3,602.7	2.09	-2.09	0.00
10,146.0	90.40	181.30	6,381.2	-3,464.1	-1,141.0	3,642.2	1.81	1.67	0.71
10,189.0	90.10	181.10	6,381.0	-3,507.1	-1,141.9	3,682.6	0.84	-0.70	-0.47
10,232.0	91.10	181.30	6,380.5	-3,550.0	-1,142.8	3,723.0	2.37	2.33	0.47
10,275.0	91.10	182.00	6,379.7	-3,593.0	-1,144.0	3,763.5	1.63	0.00	1.63
10,318.0	92.10	182.20	6,378.5	-3,636.0	-1,145.6	3,804.1	2.37	2.33	0.47
10,360.0	91.50	183.10	6,377.2	-3,677.9	-1,147.6	3,843.9	2.57	-1.43	2.14
10,403.0	90.40	182.70	6,376.5	-3,720.8	-1,149.7	3,884.7	2.72	-2.56	-0.93
10,446.0	88.90	181.30	6,376.7	-3,763.8	-1,151.2	3,925.3	4.77	-3.49	-3.26
10,489.0	88.50	181.30	6,377.7	-3,806.8	-1,152.2	3,965.7	0.93	-0.93	0.00
10,532.0	88.50	180.60	6,378.8	-3,849.8	-1,152.9	4,006.0	1.63	0.00	-1.63
10,574.0	89.00	180.80	6,379.7	-3,891.8	-1,153.4	4,045.4	1.28	1.19	0.48
10,619.0	89.10	181.00	6,380.5	-3,936.7	-1,154.1	4,087.6	0.50	0.22	0.44
10,664.0	89.50	180.80	6,381.0	-3,981.7	-1,154.8	4,129.8	0.99	0.89	-0.44
10,709.0	90.10	181.10	6,381.2	-4,026.7	-1,155.6	4,172.0	1.49	1.33	0.67
10,753.0	89.50	179.60	6,381.4	-4,070.7	-1,155.9	4,213.1	3.67	-1.36	-3.41
10,798.0	90.10	180.60	6,381.5	-4,115.7	-1,155.9	4,255.1	2.59	1.33	2.22
10,843.0	90.00	180.30	6,381.5	-4,160.7	-1,156.3	4,297.1	0.70	-0.22	-0.67
10,888.0	89.90	179.60	6,381.5	-4,205.7	-1,156.3	4,339.1	1.57	-0.22	-1.56
10,933.0	89.90	178.50	6,381.6	-4,250.7	-1,155.5	4,380.7	2.44	0.00	-2.44
10,956.0	89.50	177.80	6,381.7	-4,273.7	-1,154.8	4,401.9	3.51	-1.74	-3.04
11,010.0	89.50	177.80	6,382.2	-4,327.7	-1,152.7	4,451.4	0.00	0.00	0.00

BHL 470'FSL & 2450'FEL

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (Ensign 136 RKB - 13')
Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (Ensign 136 RKB - 13')
Well:	Antelope K-O-17HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Checked By: _____ Approved By: _____ Date: _____