

BONANZA CREEK ENERGY OPERATING

Well Name: **Antelope U-Y-17HNB**

Surface Location: Antelope P-17 Pad Sec.17-T5N-R62W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

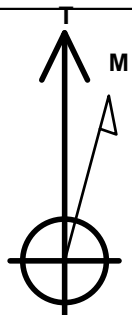
Ground Elevation: 4695.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1392616.05	3322279.83	40.405360	-104.342720	

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

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 470'FSL & 10'FEL	6386.0	-4255.1	1317.5	Point
LANDING PT. 531'FNL & 10'FEL	6386.0	14.6	1398.1	Point



Azimuths to True North
Magnetic North: 8.39°

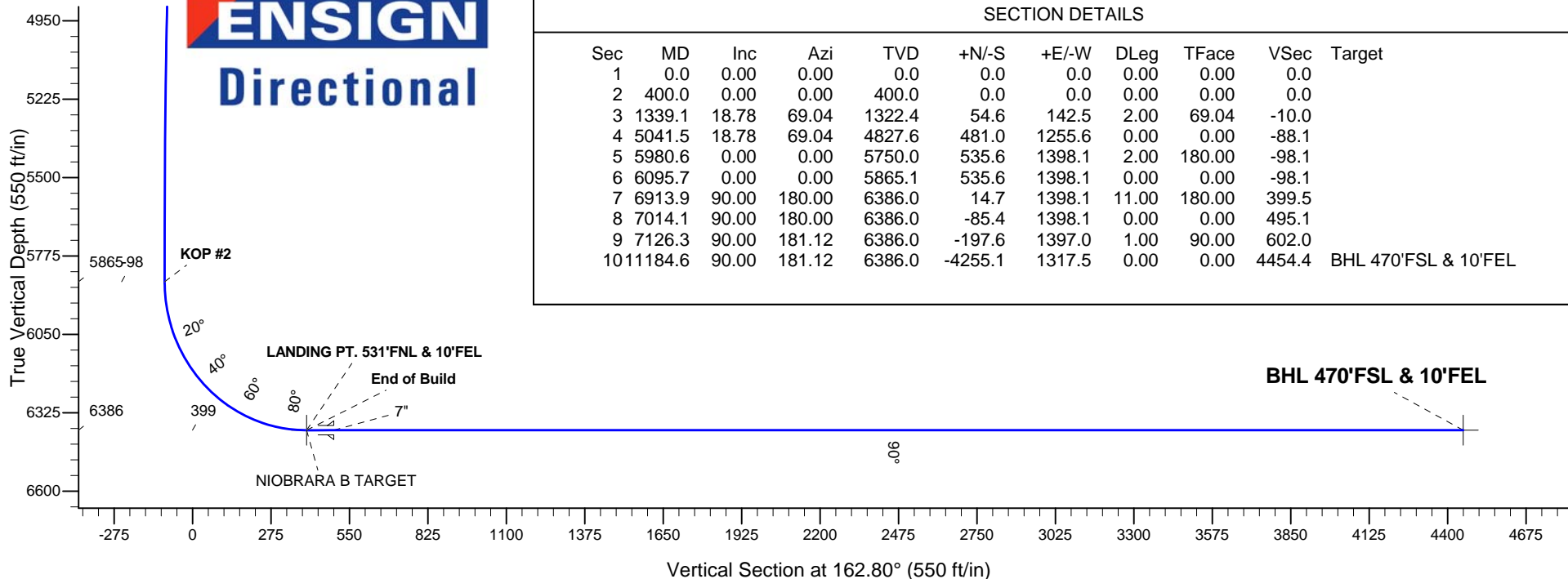
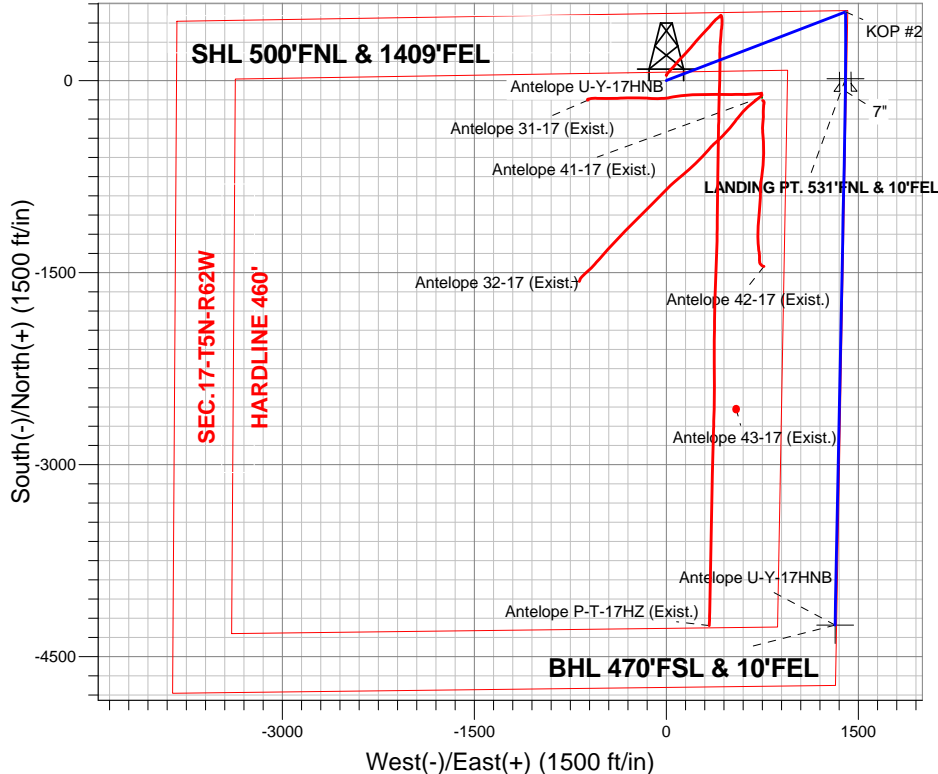
Magnetic Field
Strength: 52989.4nT
Dip Angle: 67.06°
Date: 4/4/2013
Model: IGRF2010

Antelope P-17 Pad Sec.17-T5N-R62W
Antelope U-Y-17HNB
Plan #3 (4-04-13)

ANNOTATIONS

TVD	MD	Annotation
400.0	400.0	KOP #1
5865.1	6095.7	KOP #2
6386.0	6913.9	End of Build

South(-)/North(+) (1500 ft/in)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1339.1	18.78	69.04	1322.4	54.6	142.5	2.00	69.04	-10.0	
4	5041.5	18.78	69.04	4827.6	481.0	1255.6	0.00	0.00	-88.1	
5	5980.6	0.00	0.00	5750.0	535.6	1398.1	2.00	180.00	-98.1	
6	6095.7	0.00	0.00	5865.1	535.6	1398.1	0.00	0.00	-98.1	
7	6913.9	90.00	180.00	6386.0	14.7	1398.1	11.00	180.00	399.5	
8	7014.1	90.00	180.00	6386.0	-85.4	1398.1	0.00	0.00	495.1	
9	7126.3	90.00	181.12	6386.0	-197.6	1397.0	1.00	90.00	602.0	
10	1184.6	90.00	181.12	6386.0	-4255.1	1317.5	0.00	0.00	4454.4	BHL 470'FSL & 10'FEL



Directional

BONANZA CREEK ENERGY OPERATING

SEC.17-T5N-R62W

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

Antelope U-Y-17HNB

Wellbore #1

Plan: Plan #3 (4-04-13)

Standard Planning Report

05 April, 2013

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,339.1	18.78	69.04	1,322.4	54.6	142.5	2.00	2.00	0.00	69.04	
5,041.5	18.78	69.04	4,827.6	481.0	1,255.6	0.00	0.00	0.00	0.00	
5,980.6	0.00	0.00	5,750.0	535.6	1,398.1	2.00	-2.00	0.00	180.00	
6,095.7	0.00	0.00	5,865.1	535.6	1,398.1	0.00	0.00	0.00	0.00	
6,913.9	90.00	180.00	6,386.0	14.7	1,398.1	11.00	11.00	0.00	180.00	
7,014.1	90.00	180.00	6,386.0	-85.4	1,398.1	0.00	0.00	0.00	0.00	
7,126.3	90.00	181.12	6,386.0	-197.6	1,397.0	1.00	0.00	1.00	90.00	
11,184.6	90.00	181.12	6,386.0	-4,255.1	1,317.5	0.00	0.00	0.00	0.00	BHL 470'FSL & 10'

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Project:	SEC.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site:	Antelope P-17 Pad Sec.17-T5N-R62W	North Reference:	True
Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (4-04-13)		

Planned 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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
440.0	0.80	69.04	440.0	0.1	0.3	0.0	2.00	2.00	0.00
480.0	1.60	69.04	480.0	0.4	1.0	-0.1	2.00	2.00	0.00
520.0	2.40	69.04	520.0	0.9	2.3	-0.2	2.00	2.00	0.00
560.0	3.20	69.04	559.9	1.6	4.2	-0.3	2.00	2.00	0.00
600.0	4.00	69.04	599.8	2.5	6.5	-0.5	2.00	2.00	0.00
640.0	4.80	69.04	639.7	3.6	9.4	-0.7	2.00	2.00	0.00
680.0	5.60	69.04	679.6	4.9	12.8	-0.9	2.00	2.00	0.00
720.0	6.40	69.04	719.3	6.4	16.7	-1.2	2.00	2.00	0.00
760.0	7.20	69.04	759.1	8.1	21.1	-1.5	2.00	2.00	0.00
800.0	8.00	69.04	798.7	10.0	26.0	-1.8	2.00	2.00	0.00
840.0	8.80	69.04	838.3	12.1	31.5	-2.2	2.00	2.00	0.00
880.0	9.60	69.04	877.8	14.4	37.5	-2.6	2.00	2.00	0.00
920.0	10.40	69.04	917.1	16.8	43.9	-3.1	2.00	2.00	0.00
960.0	11.20	69.04	956.4	19.5	50.9	-3.6	2.00	2.00	0.00
1,000.0	12.00	69.04	995.6	22.4	58.5	-4.1	2.00	2.00	0.00
1,040.0	12.80	69.04	1,034.7	25.5	66.5	-4.7	2.00	2.00	0.00
1,080.0	13.60	69.04	1,073.6	28.7	75.0	-5.3	2.00	2.00	0.00
1,120.0	14.40	69.04	1,112.4	32.2	84.0	-5.9	2.00	2.00	0.00
1,160.0	15.20	69.04	1,151.1	35.9	93.6	-6.6	2.00	2.00	0.00
1,200.0	16.00	69.04	1,189.6	39.7	103.6	-7.3	2.00	2.00	0.00
1,240.0	16.80	69.04	1,228.0	43.7	114.2	-8.0	2.00	2.00	0.00
1,280.0	17.60	69.04	1,266.2	48.0	125.2	-8.8	2.00	2.00	0.00
1,320.0	18.40	69.04	1,304.3	52.4	136.8	-9.6	2.00	2.00	0.00
1,339.1	18.78	69.04	1,322.4	54.6	142.5	-10.0	2.00	2.00	0.00
1,360.0	18.78	69.04	1,342.2	57.0	148.7	-10.4	0.00	0.00	0.00
1,400.0	18.78	69.04	1,380.0	61.6	160.8	-11.3	0.00	0.00	0.00
1,440.0	18.78	69.04	1,417.9	66.2	172.8	-12.1	0.00	0.00	0.00
1,480.0	18.78	69.04	1,455.8	70.8	184.8	-13.0	0.00	0.00	0.00
1,520.0	18.78	69.04	1,493.6	75.4	196.8	-13.8	0.00	0.00	0.00
1,560.0	18.78	69.04	1,531.5	80.0	208.9	-14.7	0.00	0.00	0.00
1,600.0	18.78	69.04	1,569.4	84.6	220.9	-15.5	0.00	0.00	0.00
1,640.0	18.78	69.04	1,607.2	89.2	232.9	-16.3	0.00	0.00	0.00
1,680.0	18.78	69.04	1,645.1	93.8	245.0	-17.2	0.00	0.00	0.00
1,720.0	18.78	69.04	1,683.0	98.4	257.0	-18.0	0.00	0.00	0.00
1,760.0	18.78	69.04	1,720.9	103.1	269.0	-18.9	0.00	0.00	0.00
1,800.0	18.78	69.04	1,758.7	107.7	281.0	-19.7	0.00	0.00	0.00
1,840.0	18.78	69.04	1,796.6	112.3	293.1	-20.6	0.00	0.00	0.00
1,880.0	18.78	69.04	1,834.5	116.9	305.1	-21.4	0.00	0.00	0.00
1,920.0	18.78	69.04	1,872.3	121.5	317.1	-22.3	0.00	0.00	0.00
1,960.0	18.78	69.04	1,910.2	126.1	329.1	-23.1	0.00	0.00	0.00
2,000.0	18.78	69.04	1,948.1	130.7	341.2	-23.9	0.00	0.00	0.00
2,040.0	18.78	69.04	1,985.9	135.3	353.2	-24.8	0.00	0.00	0.00

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Project:	SEC.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site:	Antelope P-17 Pad Sec.17-T5N-R62W	North Reference:	True
Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (4-04-13)		

Planned 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)
2,080.0	18.78	69.04	2,023.8	139.9	365.2	-25.6	0.00	0.00	0.00
2,120.0	18.78	69.04	2,061.7	144.5	377.2	-26.5	0.00	0.00	0.00
2,160.0	18.78	69.04	2,099.6	149.1	389.3	-27.3	0.00	0.00	0.00
2,200.0	18.78	69.04	2,137.4	153.7	401.3	-28.2	0.00	0.00	0.00
2,240.0	18.78	69.04	2,175.3	158.3	413.3	-29.0	0.00	0.00	0.00
2,280.0	18.78	69.04	2,213.2	162.9	425.4	-29.8	0.00	0.00	0.00
2,320.0	18.78	69.04	2,251.0	167.6	437.4	-30.7	0.00	0.00	0.00
2,360.0	18.78	69.04	2,288.9	172.2	449.4	-31.5	0.00	0.00	0.00
2,400.0	18.78	69.04	2,326.8	176.8	461.4	-32.4	0.00	0.00	0.00
2,440.0	18.78	69.04	2,364.6	181.4	473.5	-33.2	0.00	0.00	0.00
2,480.0	18.78	69.04	2,402.5	186.0	485.5	-34.1	0.00	0.00	0.00
2,520.0	18.78	69.04	2,440.4	190.6	497.5	-34.9	0.00	0.00	0.00
2,560.0	18.78	69.04	2,478.3	195.2	509.5	-35.8	0.00	0.00	0.00
2,600.0	18.78	69.04	2,516.1	199.8	521.6	-36.6	0.00	0.00	0.00
2,640.0	18.78	69.04	2,554.0	204.4	533.6	-37.4	0.00	0.00	0.00
2,680.0	18.78	69.04	2,591.9	209.0	545.6	-38.3	0.00	0.00	0.00
2,720.0	18.78	69.04	2,629.7	213.6	557.6	-39.1	0.00	0.00	0.00
2,760.0	18.78	69.04	2,667.6	218.2	569.7	-40.0	0.00	0.00	0.00
2,800.0	18.78	69.04	2,705.5	222.8	581.7	-40.8	0.00	0.00	0.00
2,840.0	18.78	69.04	2,743.3	227.5	593.7	-41.7	0.00	0.00	0.00
2,880.0	18.78	69.04	2,781.2	232.1	605.8	-42.5	0.00	0.00	0.00
2,920.0	18.78	69.04	2,819.1	236.7	617.8	-43.3	0.00	0.00	0.00
2,960.0	18.78	69.04	2,857.0	241.3	629.8	-44.2	0.00	0.00	0.00
3,000.0	18.78	69.04	2,894.8	245.9	641.8	-45.0	0.00	0.00	0.00
3,040.0	18.78	69.04	2,932.7	250.5	653.9	-45.9	0.00	0.00	0.00
3,080.0	18.78	69.04	2,970.6	255.1	665.9	-46.7	0.00	0.00	0.00
3,120.0	18.78	69.04	3,008.4	259.7	677.9	-47.6	0.00	0.00	0.00
3,160.0	18.78	69.04	3,046.3	264.3	689.9	-48.4	0.00	0.00	0.00
3,200.0	18.78	69.04	3,084.2	268.9	702.0	-49.3	0.00	0.00	0.00
3,240.0	18.78	69.04	3,122.0	273.5	714.0	-50.1	0.00	0.00	0.00
3,280.0	18.78	69.04	3,159.9	278.1	726.0	-50.9	0.00	0.00	0.00
3,320.0	18.78	69.04	3,197.8	282.7	738.0	-51.8	0.00	0.00	0.00
3,360.0	18.78	69.04	3,235.7	287.3	750.1	-52.6	0.00	0.00	0.00
3,400.0	18.78	69.04	3,273.5	292.0	762.1	-53.5	0.00	0.00	0.00
3,440.0	18.78	69.04	3,311.4	296.6	774.1	-54.3	0.00	0.00	0.00
3,480.0	18.78	69.04	3,349.3	301.2	786.2	-55.2	0.00	0.00	0.00
3,520.0	18.78	69.04	3,387.1	305.8	798.2	-56.0	0.00	0.00	0.00
3,560.0	18.78	69.04	3,425.0	310.4	810.2	-56.9	0.00	0.00	0.00
3,600.0	18.78	69.04	3,462.9	315.0	822.2	-57.7	0.00	0.00	0.00
3,640.0	18.78	69.04	3,500.7	319.6	834.3	-58.5	0.00	0.00	0.00
3,680.0	18.78	69.04	3,538.6	324.2	846.3	-59.4	0.00	0.00	0.00
3,720.0	18.78	69.04	3,576.5	328.8	858.3	-60.2	0.00	0.00	0.00
3,760.0	18.78	69.04	3,614.4	333.4	870.3	-61.1	0.00	0.00	0.00
3,800.0	18.78	69.04	3,652.2	338.0	882.4	-61.9	0.00	0.00	0.00
3,840.0	18.78	69.04	3,690.1	342.6	894.4	-62.8	0.00	0.00	0.00
3,880.0	18.78	69.04	3,728.0	347.2	906.4	-63.6	0.00	0.00	0.00
3,920.0	18.78	69.04	3,765.8	351.8	918.4	-64.4	0.00	0.00	0.00
3,960.0	18.78	69.04	3,803.7	356.5	930.5	-65.3	0.00	0.00	0.00
4,000.0	18.78	69.04	3,841.6	361.1	942.5	-66.1	0.00	0.00	0.00
4,040.0	18.78	69.04	3,879.4	365.7	954.5	-67.0	0.00	0.00	0.00
4,080.0	18.78	69.04	3,917.3	370.3	966.6	-67.8	0.00	0.00	0.00
4,120.0	18.78	69.04	3,955.2	374.9	978.6	-68.7	0.00	0.00	0.00
4,160.0	18.78	69.04	3,993.1	379.5	990.6	-69.5	0.00	0.00	0.00
4,200.0	18.78	69.04	4,030.9	384.1	1,002.6	-70.4	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Project:	SEC.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site:	Antelope P-17 Pad Sec.17-T5N-R62W	North Reference:	True
Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (4-04-13)		

Planned 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)
4,240.0	18.78	69.04	4,068.8	388.7	1,014.7	-71.2	0.00	0.00	0.00
4,280.0	18.78	69.04	4,106.7	393.3	1,026.7	-72.0	0.00	0.00	0.00
4,320.0	18.78	69.04	4,144.5	397.9	1,038.7	-72.9	0.00	0.00	0.00
4,360.0	18.78	69.04	4,182.4	402.5	1,050.7	-73.7	0.00	0.00	0.00
4,400.0	18.78	69.04	4,220.3	407.1	1,062.8	-74.6	0.00	0.00	0.00
4,440.0	18.78	69.04	4,258.1	411.7	1,074.8	-75.4	0.00	0.00	0.00
4,480.0	18.78	69.04	4,296.0	416.4	1,086.8	-76.3	0.00	0.00	0.00
4,520.0	18.78	69.04	4,333.9	421.0	1,098.8	-77.1	0.00	0.00	0.00
4,560.0	18.78	69.04	4,371.8	425.6	1,110.9	-78.0	0.00	0.00	0.00
4,600.0	18.78	69.04	4,409.6	430.2	1,122.9	-78.8	0.00	0.00	0.00
4,640.0	18.78	69.04	4,447.5	434.8	1,134.9	-79.6	0.00	0.00	0.00
4,680.0	18.78	69.04	4,485.4	439.4	1,147.0	-80.5	0.00	0.00	0.00
4,720.0	18.78	69.04	4,523.2	444.0	1,159.0	-81.3	0.00	0.00	0.00
4,760.0	18.78	69.04	4,561.1	448.6	1,171.0	-82.2	0.00	0.00	0.00
4,800.0	18.78	69.04	4,599.0	453.2	1,183.0	-83.0	0.00	0.00	0.00
4,840.0	18.78	69.04	4,636.8	457.8	1,195.1	-83.9	0.00	0.00	0.00
4,880.0	18.78	69.04	4,674.7	462.4	1,207.1	-84.7	0.00	0.00	0.00
4,920.0	18.78	69.04	4,712.6	467.0	1,219.1	-85.5	0.00	0.00	0.00
4,960.0	18.78	69.04	4,750.5	471.6	1,231.1	-86.4	0.00	0.00	0.00
5,000.0	18.78	69.04	4,788.3	476.2	1,243.2	-87.2	0.00	0.00	0.00
5,040.0	18.78	69.04	4,826.2	480.9	1,255.2	-88.1	0.00	0.00	0.00
5,041.5	18.78	69.04	4,827.6	481.0	1,255.6	-88.1	0.00	0.00	0.00
5,080.0	18.01	69.04	4,864.1	485.4	1,267.0	-88.9	2.00	-2.00	0.00
5,120.0	17.21	69.04	4,902.3	489.7	1,278.3	-89.7	2.00	-2.00	0.00
5,160.0	16.41	69.04	4,940.6	493.8	1,289.1	-90.5	2.00	-2.00	0.00
5,200.0	15.61	69.04	4,979.0	497.8	1,299.4	-91.2	2.00	-2.00	0.00
5,240.0	14.81	69.04	5,017.6	501.5	1,309.2	-91.9	2.00	-2.00	0.00
5,280.0	14.01	69.04	5,056.3	505.1	1,318.5	-92.5	2.00	-2.00	0.00
5,320.0	13.21	69.04	5,095.2	508.5	1,327.3	-93.1	2.00	-2.00	0.00
5,360.0	12.41	69.04	5,134.2	511.6	1,335.6	-93.7	2.00	-2.00	0.00
5,400.0	11.61	69.04	5,173.3	514.6	1,343.3	-94.3	2.00	-2.00	0.00
5,440.0	10.81	69.04	5,212.6	517.4	1,350.6	-94.8	2.00	-2.00	0.00
5,480.0	10.01	69.04	5,251.9	520.0	1,357.4	-95.2	2.00	-2.00	0.00
5,520.0	9.21	69.04	5,291.4	522.4	1,363.6	-95.7	2.00	-2.00	0.00
5,560.0	8.41	69.04	5,330.9	524.6	1,369.3	-96.1	2.00	-2.00	0.00
5,600.0	7.61	69.04	5,370.5	526.6	1,374.5	-96.5	2.00	-2.00	0.00
5,640.0	6.81	69.04	5,410.2	528.4	1,379.2	-96.8	2.00	-2.00	0.00
5,680.0	6.01	69.04	5,449.9	530.0	1,383.4	-97.1	2.00	-2.00	0.00
5,720.0	5.21	69.04	5,489.7	531.4	1,387.0	-97.3	2.00	-2.00	0.00
5,760.0	4.41	69.04	5,529.6	532.6	1,390.2	-97.5	2.00	-2.00	0.00
5,800.0	3.61	69.04	5,569.5	533.6	1,392.8	-97.7	2.00	-2.00	0.00
5,840.0	2.81	69.04	5,609.4	534.4	1,394.9	-97.9	2.00	-2.00	0.00
5,880.0	2.01	69.04	5,649.4	535.0	1,396.5	-98.0	2.00	-2.00	0.00
5,920.0	1.21	69.04	5,689.4	535.4	1,397.5	-98.1	2.00	-2.00	0.00
5,960.0	0.41	69.04	5,729.4	535.6	1,398.0	-98.1	2.00	-2.00	0.00
5,980.6	0.00	0.00	5,750.0	535.6	1,398.1	-98.1	2.00	-2.00	0.00
6,000.0	0.00	0.00	5,769.4	535.6	1,398.1	-98.1	0.00	0.00	0.00
6,040.0	0.00	0.00	5,809.4	535.6	1,398.1	-98.1	0.00	0.00	0.00
6,080.0	0.00	0.00	5,849.4	535.6	1,398.1	-98.1	0.00	0.00	0.00
6,095.7	0.00	0.00	5,865.1	535.6	1,398.1	-98.1	0.00	0.00	0.00
KOP #2									
6,120.0	2.67	180.00	5,889.4	535.0	1,398.1	-97.6	10.98	10.98	0.00
6,160.0	7.07	180.00	5,929.2	531.6	1,398.1	-94.3	11.00	11.00	0.00
6,200.0	11.47	180.00	5,968.7	525.2	1,398.1	-88.2	11.00	11.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Project:	SEC.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site:	Antelope P-17 Pad Sec.17-T5N-R62W	North Reference:	True
Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (4-04-13)		

Planned 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)
6,240.0	15.87	180.00	6,007.5	515.8	1,398.1	-79.1	11.00	11.00	0.00
6,280.0	20.27	180.00	6,045.6	503.3	1,398.1	-67.3	11.00	11.00	0.00
6,320.0	24.67	180.00	6,082.5	488.1	1,398.1	-52.7	11.00	11.00	0.00
6,360.0	29.07	180.00	6,118.2	470.0	1,398.1	-35.4	11.00	11.00	0.00
6,400.0	33.47	180.00	6,152.4	449.2	1,398.1	-15.6	11.00	11.00	0.00
6,440.0	37.87	180.00	6,184.9	425.9	1,398.1	6.7	11.00	11.00	0.00
6,480.0	42.27	180.00	6,215.5	400.2	1,398.1	31.3	11.00	11.00	0.00
6,520.0	46.67	180.00	6,244.0	372.2	1,398.1	58.0	11.00	11.00	0.00
6,560.0	51.07	180.00	6,270.3	342.0	1,398.1	86.8	11.00	11.00	0.00
6,600.0	55.47	180.00	6,294.2	310.0	1,398.1	117.4	11.00	11.00	0.00
6,640.0	59.87	180.00	6,315.6	276.2	1,398.1	149.7	11.00	11.00	0.00
6,680.0	64.27	180.00	6,334.3	240.9	1,398.1	183.4	11.00	11.00	0.00
6,720.0	68.67	180.00	6,350.3	204.2	1,398.1	218.5	11.00	11.00	0.00
6,760.0	73.07	180.00	6,363.4	166.4	1,398.1	254.6	11.00	11.00	0.00
6,800.0	77.47	180.00	6,373.6	127.8	1,398.1	291.5	11.00	11.00	0.00
6,840.0	81.87	180.00	6,380.8	88.4	1,398.1	329.1	11.00	11.00	0.00
6,880.0	86.27	180.00	6,384.9	48.6	1,398.1	367.1	11.00	11.00	0.00
6,913.9	90.00	180.00	6,386.0	14.7	1,398.1	399.5	11.00	11.00	0.00
End of Build - NIOBRARA B TARGET									
6,920.0	90.00	180.00	6,386.0	8.7	1,398.1	405.3	0.00	0.00	0.00
6,960.0	90.00	180.00	6,386.0	-31.3	1,398.1	443.5	0.00	0.00	0.00
7,000.0	90.00	180.00	6,386.0	-71.3	1,398.1	481.7	0.00	0.00	0.00
7,014.1	90.00	180.00	6,386.0	-85.4	1,398.1	495.1	0.00	0.00	0.00
7"									
7,040.0	90.00	180.26	6,386.0	-111.3	1,398.0	519.9	1.00	0.00	1.00
7,080.0	90.00	180.66	6,386.0	-151.3	1,397.7	558.0	1.00	0.00	1.00
7,120.0	90.00	181.06	6,386.0	-191.3	1,397.1	596.0	1.00	0.00	1.00
7,126.3	90.00	181.12	6,386.0	-197.6	1,397.0	602.0	1.00	0.00	1.00
7,160.0	90.00	181.12	6,386.0	-231.3	1,396.3	634.0	0.00	0.00	0.00
7,200.0	90.00	181.12	6,386.0	-271.3	1,395.6	672.0	0.00	0.00	0.00
7,240.0	90.00	181.12	6,386.0	-311.3	1,394.8	709.9	0.00	0.00	0.00
7,280.0	90.00	181.12	6,386.0	-351.3	1,394.0	747.9	0.00	0.00	0.00
7,320.0	90.00	181.12	6,386.0	-391.3	1,393.2	785.9	0.00	0.00	0.00
7,360.0	90.00	181.12	6,386.0	-431.3	1,392.4	823.8	0.00	0.00	0.00
7,400.0	90.00	181.12	6,386.0	-471.3	1,391.6	861.8	0.00	0.00	0.00
7,440.0	90.00	181.12	6,386.0	-511.3	1,390.9	899.8	0.00	0.00	0.00
7,480.0	90.00	181.12	6,386.0	-551.3	1,390.1	937.8	0.00	0.00	0.00
7,520.0	90.00	181.12	6,386.0	-591.3	1,389.3	975.7	0.00	0.00	0.00
7,560.0	90.00	181.12	6,386.0	-631.3	1,388.5	1,013.7	0.00	0.00	0.00
7,600.0	90.00	181.12	6,386.0	-671.2	1,387.7	1,051.7	0.00	0.00	0.00
7,640.0	90.00	181.12	6,386.0	-711.2	1,386.9	1,089.6	0.00	0.00	0.00
7,680.0	90.00	181.12	6,386.0	-751.2	1,386.2	1,127.6	0.00	0.00	0.00
7,720.0	90.00	181.12	6,386.0	-791.2	1,385.4	1,165.6	0.00	0.00	0.00
7,760.0	90.00	181.12	6,386.0	-831.2	1,384.6	1,203.6	0.00	0.00	0.00
7,800.0	90.00	181.12	6,386.0	-871.2	1,383.8	1,241.5	0.00	0.00	0.00
7,840.0	90.00	181.12	6,386.0	-911.2	1,383.0	1,279.5	0.00	0.00	0.00
7,880.0	90.00	181.12	6,386.0	-951.2	1,382.2	1,317.5	0.00	0.00	0.00
7,920.0	90.00	181.12	6,386.0	-991.2	1,381.5	1,355.4	0.00	0.00	0.00
7,960.0	90.00	181.12	6,386.0	-1,031.2	1,380.7	1,393.4	0.00	0.00	0.00
8,000.0	90.00	181.12	6,386.0	-1,071.2	1,379.9	1,431.4	0.00	0.00	0.00
8,040.0	90.00	181.12	6,386.0	-1,111.2	1,379.1	1,469.4	0.00	0.00	0.00
8,080.0	90.00	181.12	6,386.0	-1,151.2	1,378.3	1,507.3	0.00	0.00	0.00
8,120.0	90.00	181.12	6,386.0	-1,191.1	1,377.5	1,545.3	0.00	0.00	0.00

Planning Report

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Project:	SEC.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site:	Antelope P-17 Pad Sec.17-T5N-R62W	North Reference:	True
Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (4-04-13)		

Planned 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)
8,160.0	90.00	181.12	6,386.0	-1,231.1	1,376.8	1,583.3	0.00	0.00	0.00
8,200.0	90.00	181.12	6,386.0	-1,271.1	1,376.0	1,621.2	0.00	0.00	0.00
8,240.0	90.00	181.12	6,386.0	-1,311.1	1,375.2	1,659.2	0.00	0.00	0.00
8,280.0	90.00	181.12	6,386.0	-1,351.1	1,374.4	1,697.2	0.00	0.00	0.00
8,320.0	90.00	181.12	6,386.0	-1,391.1	1,373.6	1,735.2	0.00	0.00	0.00
8,360.0	90.00	181.12	6,386.0	-1,431.1	1,372.8	1,773.1	0.00	0.00	0.00
8,400.0	90.00	181.12	6,386.0	-1,471.1	1,372.1	1,811.1	0.00	0.00	0.00
8,440.0	90.00	181.12	6,386.0	-1,511.1	1,371.3	1,849.1	0.00	0.00	0.00
8,480.0	90.00	181.12	6,386.0	-1,551.1	1,370.5	1,887.0	0.00	0.00	0.00
8,520.0	90.00	181.12	6,386.0	-1,591.1	1,369.7	1,925.0	0.00	0.00	0.00
8,560.0	90.00	181.12	6,386.0	-1,631.1	1,368.9	1,963.0	0.00	0.00	0.00
8,600.0	90.00	181.12	6,386.0	-1,671.1	1,368.1	2,001.0	0.00	0.00	0.00
8,640.0	90.00	181.12	6,386.0	-1,711.0	1,367.4	2,038.9	0.00	0.00	0.00
8,680.0	90.00	181.12	6,386.0	-1,751.0	1,366.6	2,076.9	0.00	0.00	0.00
8,720.0	90.00	181.12	6,386.0	-1,791.0	1,365.8	2,114.9	0.00	0.00	0.00
8,760.0	90.00	181.12	6,386.0	-1,831.0	1,365.0	2,152.8	0.00	0.00	0.00
8,800.0	90.00	181.12	6,386.0	-1,871.0	1,364.2	2,190.8	0.00	0.00	0.00
8,840.0	90.00	181.12	6,386.0	-1,911.0	1,363.4	2,228.8	0.00	0.00	0.00
8,880.0	90.00	181.12	6,386.0	-1,951.0	1,362.7	2,266.8	0.00	0.00	0.00
8,920.0	90.00	181.12	6,386.0	-1,991.0	1,361.9	2,304.7	0.00	0.00	0.00
8,960.0	90.00	181.12	6,386.0	-2,031.0	1,361.1	2,342.7	0.00	0.00	0.00
9,000.0	90.00	181.12	6,386.0	-2,071.0	1,360.3	2,380.7	0.00	0.00	0.00
9,040.0	90.00	181.12	6,386.0	-2,111.0	1,359.5	2,418.6	0.00	0.00	0.00
9,080.0	90.00	181.12	6,386.0	-2,151.0	1,358.7	2,456.6	0.00	0.00	0.00
9,120.0	90.00	181.12	6,386.0	-2,191.0	1,358.0	2,494.6	0.00	0.00	0.00
9,160.0	90.00	181.12	6,386.0	-2,230.9	1,357.2	2,532.6	0.00	0.00	0.00
9,200.0	90.00	181.12	6,386.0	-2,270.9	1,356.4	2,570.5	0.00	0.00	0.00
9,240.0	90.00	181.12	6,386.0	-2,310.9	1,355.6	2,608.5	0.00	0.00	0.00
9,280.0	90.00	181.12	6,386.0	-2,350.9	1,354.8	2,646.5	0.00	0.00	0.00
9,320.0	90.00	181.12	6,386.0	-2,390.9	1,354.0	2,684.4	0.00	0.00	0.00
9,360.0	90.00	181.12	6,386.0	-2,430.9	1,353.3	2,722.4	0.00	0.00	0.00
9,400.0	90.00	181.12	6,386.0	-2,470.9	1,352.5	2,760.4	0.00	0.00	0.00
9,440.0	90.00	181.12	6,386.0	-2,510.9	1,351.7	2,798.3	0.00	0.00	0.00
9,480.0	90.00	181.12	6,386.0	-2,550.9	1,350.9	2,836.3	0.00	0.00	0.00
9,520.0	90.00	181.12	6,386.0	-2,590.9	1,350.1	2,874.3	0.00	0.00	0.00
9,560.0	90.00	181.12	6,386.0	-2,630.9	1,349.3	2,912.3	0.00	0.00	0.00
9,600.0	90.00	181.12	6,386.0	-2,670.9	1,348.6	2,950.2	0.00	0.00	0.00
9,640.0	90.00	181.12	6,386.0	-2,710.9	1,347.8	2,988.2	0.00	0.00	0.00
9,680.0	90.00	181.12	6,386.0	-2,750.8	1,347.0	3,026.2	0.00	0.00	0.00
9,720.0	90.00	181.12	6,386.0	-2,790.8	1,346.2	3,064.1	0.00	0.00	0.00
9,760.0	90.00	181.12	6,386.0	-2,830.8	1,345.4	3,102.1	0.00	0.00	0.00
9,800.0	90.00	181.12	6,386.0	-2,870.8	1,344.6	3,140.1	0.00	0.00	0.00
9,840.0	90.00	181.12	6,386.0	-2,910.8	1,343.9	3,178.1	0.00	0.00	0.00
9,880.0	90.00	181.12	6,386.0	-2,950.8	1,343.1	3,216.0	0.00	0.00	0.00
9,920.0	90.00	181.12	6,386.0	-2,990.8	1,342.3	3,254.0	0.00	0.00	0.00
9,960.0	90.00	181.12	6,386.0	-3,030.8	1,341.5	3,292.0	0.00	0.00	0.00
10,000.0	90.00	181.12	6,386.0	-3,070.8	1,340.7	3,329.9	0.00	0.00	0.00
10,040.0	90.00	181.12	6,386.0	-3,110.8	1,339.9	3,367.9	0.00	0.00	0.00
10,080.0	90.00	181.12	6,386.0	-3,150.8	1,339.2	3,405.9	0.00	0.00	0.00
10,120.0	90.00	181.12	6,386.0	-3,190.8	1,338.4	3,443.9	0.00	0.00	0.00
10,160.0	90.00	181.12	6,386.0	-3,230.8	1,337.6	3,481.8	0.00	0.00	0.00
10,200.0	90.00	181.12	6,386.0	-3,270.7	1,336.8	3,519.8	0.00	0.00	0.00
10,240.0	90.00	181.12	6,386.0	-3,310.7	1,336.0	3,557.8	0.00	0.00	0.00
10,280.0	90.00	181.12	6,386.0	-3,350.7	1,335.2	3,595.7	0.00	0.00	0.00

Planning Report

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Project:	SEC.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site:	Antelope P-17 Pad Sec.17-T5N-R62W	North Reference:	True
Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (4-04-13)		

Planned 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)	
10,320.0	90.00	181.12	6,386.0	-3,390.7	1,334.5	3,633.7	0.00	0.00	0.00	
10,360.0	90.00	181.12	6,386.0	-3,430.7	1,333.7	3,671.7	0.00	0.00	0.00	
10,400.0	90.00	181.12	6,386.0	-3,470.7	1,332.9	3,709.7	0.00	0.00	0.00	
10,440.0	90.00	181.12	6,386.0	-3,510.7	1,332.1	3,747.6	0.00	0.00	0.00	
10,480.0	90.00	181.12	6,386.0	-3,550.7	1,331.3	3,785.6	0.00	0.00	0.00	
10,520.0	90.00	181.12	6,386.0	-3,590.7	1,330.5	3,823.6	0.00	0.00	0.00	
10,560.0	90.00	181.12	6,386.0	-3,630.7	1,329.8	3,861.5	0.00	0.00	0.00	
10,600.0	90.00	181.12	6,386.0	-3,670.7	1,329.0	3,899.5	0.00	0.00	0.00	
10,640.0	90.00	181.12	6,386.0	-3,710.7	1,328.2	3,937.5	0.00	0.00	0.00	
10,680.0	90.00	181.12	6,386.0	-3,750.7	1,327.4	3,975.5	0.00	0.00	0.00	
10,720.0	90.00	181.12	6,386.0	-3,790.6	1,326.6	4,013.4	0.00	0.00	0.00	
10,760.0	90.00	181.12	6,386.0	-3,830.6	1,325.8	4,051.4	0.00	0.00	0.00	
10,800.0	90.00	181.12	6,386.0	-3,870.6	1,325.1	4,089.4	0.00	0.00	0.00	
10,840.0	90.00	181.12	6,386.0	-3,910.6	1,324.3	4,127.3	0.00	0.00	0.00	
10,880.0	90.00	181.12	6,386.0	-3,950.6	1,323.5	4,165.3	0.00	0.00	0.00	
10,920.0	90.00	181.12	6,386.0	-3,990.6	1,322.7	4,203.3	0.00	0.00	0.00	
10,960.0	90.00	181.12	6,386.0	-4,030.6	1,321.9	4,241.3	0.00	0.00	0.00	
11,000.0	90.00	181.12	6,386.0	-4,070.6	1,321.1	4,279.2	0.00	0.00	0.00	
11,040.0	90.00	181.12	6,386.0	-4,110.6	1,320.4	4,317.2	0.00	0.00	0.00	
11,080.0	90.00	181.12	6,386.0	-4,150.6	1,319.6	4,355.2	0.00	0.00	0.00	
11,120.0	90.00	181.12	6,386.0	-4,190.6	1,318.8	4,393.1	0.00	0.00	0.00	
11,160.0	90.00	181.12	6,386.0	-4,230.6	1,318.0	4,431.1	0.00	0.00	0.00	
11,184.6	90.00	181.12	6,386.0	-4,255.1	1,317.5	4,454.4	0.00	0.00	0.00	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (")	Hole Diameter (")
7,014.1	6,386.0	7"		7	7-1/2

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,913.9	6,386.0	NIOBRARA B TARGET		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
400.0	400.0	0.0	0.0	KOP #1	
6,095.7	5,865.1	535.6	1,398.1	KOP #2	
6,913.9	6,386.0	14.8	1,398.1	End of Build	



Directional

BONANZA CREEK ENERGY OPERATING

SEC.17-T5N-R62W

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

Antelope U-Y-17HNB

Wellbore #1

Plan #3 (4-04-13)

Anticollision Report

05 April, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Reference	Plan #3 (4-04-13)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 4/5/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,184.6	Plan #3 (4-04-13) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Antelope P-17 Pad Sec.17-T5N-R62W						
Antelope 31-17 (Exist.) - Wellbore #1 - Wellbore #1	1,963.5	2,000.4	239.4	223.6	15.131	CC, ES
Antelope 31-17 (Exist.) - Wellbore #1 - Wellbore #1	2,000.0	2,028.5	240.5	224.3	14.849	SF
Antelope 32-17 (Exist.) - Wellbore #1 - Wellbore #1	1,724.3	1,688.7	494.5	482.4	40.894	CC, ES
Antelope 32-17 (Exist.) - Wellbore #1 - Wellbore #1	2,100.0	1,967.8	554.8	538.5	34.007	SF
Antelope 41-17 (Exist.) - Wellbore #1 - Design #1	2,888.4	2,803.1	386.1	365.6	18.887	CC
Antelope 41-17 (Exist.) - Wellbore #1 - Design #1	2,900.0	2,814.2	386.1	365.5	18.792	ES
Antelope 41-17 (Exist.) - Wellbore #1 - Design #1	3,300.0	3,192.9	408.2	384.7	17.345	SF
Antelope 42-17 (Exist.) - Wellbore #1 - Wellbore #1	8,391.8	6,598.4	617.2	557.2	10.279	CC
Antelope 42-17 (Exist.) - Wellbore #1 - Wellbore #1	8,400.0	6,598.5	617.3	557.1	10.257	ES
Antelope 42-17 (Exist.) - Wellbore #1 - Wellbore #1	8,500.0	6,599.2	626.6	564.8	10.132	SF
Antelope 43-17 (Exist.) - Wellbore #1 - Design #1	9,509.7	6,382.0	807.4	739.9	11.966	CC, ES
Antelope 43-17 (Exist.) - Wellbore #1 - Design #1	9,700.0	6,382.0	829.5	758.6	11.695	SF
Antelope P-T-17HZ (Exist.) - Wellbore #1 - Wellbore #1	650.6	648.1	38.2	35.9	17.191	CC, ES
Antelope P-T-17HZ (Exist.) - Wellbore #1 - Wellbore #1	11,184.6	10,919.0	982.2	820.5	6.073	SF

Offset Design		Antelope P-17 Pad Sec.17-T5N-R62W - Antelope 31-17 (Exist.) - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 ft			
Survey Program: 561-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
0.0	0.0	13.9	13.9	0.0	0.0	97.54	-98.4	743.6	750.1	750.1	0.02	N/A					
100.0	100.0	113.3	113.3	0.1	0.1	97.54	-98.5	743.6	750.1	749.9	0.24	3,120.624					
200.0	200.0	212.7	212.7	0.3	0.2	97.57	-98.8	743.7	750.3	749.7	0.58	1,299.725					
300.0	300.0	312.1	312.1	0.6	0.4	97.61	-99.4	743.9	750.5	749.6	0.91	820.983					
400.0	400.0	411.5	411.5	0.8	0.5	97.67	-100.1	744.0	750.8	749.5	1.25	600.139					
500.0	500.0	510.9	510.9	1.0	0.6	28.77	-101.1	744.3	749.6	748.0	1.59	472.819					
600.0	599.8	642.7	642.7	1.2	0.8	29.18	-102.1	743.0	744.4	742.4	2.04	365.026					
700.0	699.5	803.8	803.1	1.5	1.2	30.05	-102.2	729.2	728.1	725.5	2.66	273.643					
800.0	798.7	943.7	941.3	1.7	1.6	31.51	-104.3	707.3	702.6	699.4	3.26	215.515					
900.0	897.5	1,076.2	1,070.5	2.0	2.1	33.55	-106.5	678.6	668.8	664.9	3.88	172.206					
1,000.0	995.6	1,195.5	1,185.5	2.4	2.7	36.21	-108.8	646.5	627.6	623.1	4.53	138.546					
1,100.0	1,093.1	1,317.0	1,300.8	2.8	3.5	39.79	-109.3	608.2	580.2	574.9	5.28	109.929					
1,200.0	1,189.6	1,413.4	1,390.8	3.3	4.1	43.90	-109.1	573.7	527.4	521.3	6.08	86.738					
1,300.0	1,285.3	1,490.8	1,462.7	3.8	4.6	48.47	-109.3	545.2	473.0	466.1	6.95	68.064					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Offset Design												Antelope P-17 Pad Sec.17-T5N-R62W - Antelope 31-17 (Exist.) - Wellbore #1 - Wellbore #1		Offset Site Error:	0.0 ft
Survey Program: 561-MWD												Offset Well Error:	0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
1,400.0	1,380.0	1,564.5	1,531.3	4.5	5.1	53.34	-109.4	518.4	419.5	411.5	7.95	52.739			
1,500.0	1,474.7	1,638.9	1,600.9	5.1	5.6	58.86	-109.7	492.0	369.7	360.6	9.12	40.542			
1,600.0	1,569.4	1,715.2	1,672.5	5.7	6.1	65.60	-109.6	465.7	324.9	314.4	10.48	31.013			
1,700.0	1,664.1	1,792.8	1,745.6	6.4	6.6	73.72	-109.0	439.8	286.9	274.9	12.00	23.913			
1,800.0	1,758.7	1,869.2	1,817.9	7.0	7.1	83.05	-108.8	414.9	258.5	244.9	13.56	19.062			
1,900.0	1,853.4	1,949.8	1,894.3	7.7	7.6	93.97	-108.8	389.3	242.5	227.4	15.04	16.120			
1,963.5	1,913.5	2,000.4	1,942.4	8.1	7.9	101.10	-108.5	373.5	239.4	223.6	15.82	15.131	CC, ES		
2,000.0	1,948.1	2,028.5	1,969.0	8.3	8.1	105.12	-108.5	364.5	240.5	224.3	16.19	14.849	SF		
2,100.0	2,042.8	2,107.2	2,043.4	9.0	8.6	116.14	-109.2	338.8	253.9	237.0	16.91	15.014			
2,200.0	2,137.4	2,189.2	2,121.0	9.7	9.1	126.41	-109.6	312.5	279.6	262.4	17.21	16.246			
2,300.0	2,232.1	2,270.1	2,198.0	10.3	9.6	134.94	-109.9	287.4	314.3	297.0	17.25	18.219			
2,400.0	2,326.8	2,346.1	2,270.0	11.0	10.1	141.71	-110.3	263.1	356.0	338.8	17.21	20.684			
2,500.0	2,421.5	2,432.4	2,351.8	11.7	10.6	148.04	-110.6	235.5	402.4	385.3	17.09	23.550			
2,600.0	2,516.1	2,505.7	2,421.4	12.3	11.1	152.37	-111.1	212.6	451.6	434.5	17.10	26.415			
2,700.0	2,610.8	2,581.9	2,493.4	13.0	11.6	156.10	-112.6	187.9	504.5	487.3	17.14	29.437			
2,800.0	2,705.5	2,668.2	2,575.4	13.7	12.1	159.47	-114.9	160.9	558.5	541.2	17.22	32.438			
2,900.0	2,800.2	2,750.1	2,653.5	14.3	12.6	162.04	-116.9	136.4	612.5	595.1	17.38	35.245			
3,000.0	2,894.8	2,811.6	2,711.9	15.0	13.0	163.70	-119.2	117.2	668.8	651.1	17.63	37.939			
3,100.0	2,989.5	2,888.1	2,784.1	15.7	13.5	165.49	-122.8	92.2	727.1	709.3	17.89	40.651			
3,200.0	3,084.2	2,974.2	2,865.6	16.3	14.1	167.17	-127.1	64.6	785.6	767.5	18.18	43.225			
3,300.0	3,178.9	3,066.3	2,953.0	17.0	14.7	168.67	-131.5	36.2	843.5	825.0	18.49	45.609			
3,400.0	3,273.5	3,144.3	3,027.5	17.7	15.1	169.71	-135.5	13.2	900.7	881.9	18.85	47.778			
3,500.0	3,368.2	3,209.9	3,089.7	18.4	15.5	170.57	-138.4	-7.5	959.3	940.1	19.21	49.942			

Antelope P-17 Pad Sec.17-T5N-R62W - Antelope 32-17 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 561-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.0	0.0	14.3	14.3	0.0	0.0	98.60	-112.9	746.4	754.9	754.9	0.02	N/A	
100.0	100.0	116.4	116.4	0.1	0.1	98.63	-113.2	746.1	754.7	754.5	0.24	3,090.682	
200.0	200.0	218.5	218.5	0.3	0.3	98.69	-114.0	745.6	754.2	753.7	0.58	1,290.668	
300.0	300.0	320.6	320.6	0.6	0.4	98.79	-115.2	744.6	753.5	752.6	0.92	814.989	
400.0	400.0	422.7	422.7	0.8	0.5	98.94	-116.9	743.3	752.5	751.2	1.26	594.993	
500.0	500.0	524.7	524.6	1.0	0.6	30.17	-119.0	741.6	749.7	748.1	1.62	462.959	
600.0	599.8	633.9	633.7	1.2	0.8	30.73	-122.1	739.0	743.3	741.2	2.06	360.453	
700.0	699.5	759.2	758.8	1.5	1.2	31.83	-127.8	732.5	731.6	729.0	2.61	280.042	
800.0	798.7	875.0	873.9	1.7	1.5	33.38	-135.3	722.1	713.6	710.5	3.18	224.602	
900.0	897.5	985.8	983.2	2.0	1.9	35.62	-146.7	709.3	691.8	688.0	3.78	182.854	
1,000.0	995.6	1,116.7	1,111.3	2.4	2.4	39.21	-163.5	687.8	664.0	659.4	4.57	145.385	
1,100.0	1,093.1	1,201.7	1,193.7	2.8	2.8	42.35	-175.7	670.9	632.3	627.0	5.26	120.236	
1,200.0	1,189.6	1,298.1	1,286.4	3.3	3.3	46.73	-192.6	650.8	600.2	594.0	6.14	97.773	
1,300.0	1,285.3	1,376.8	1,361.4	3.8	3.7	51.19	-208.4	632.8	568.0	560.9	7.08	80.181	
1,400.0	1,380.0	1,453.3	1,433.8	4.5	4.2	55.91	-225.8	615.2	539.2	531.0	8.16	66.045	
1,500.0	1,474.7	1,527.4	1,503.3	5.1	4.7	60.78	-244.6	597.5	516.3	506.9	9.33	55.316	
1,600.0	1,569.4	1,595.0	1,566.2	5.7	5.2	65.53	-263.2	581.4	501.2	490.7	10.51	47.700	
1,700.0	1,664.1	1,670.8	1,636.4	6.4	5.7	71.08	-285.3	563.4	494.8	483.0	11.79	41.971	
1,724.3	1,687.1	1,688.7	1,652.9	6.5	5.8	72.40	-290.6	559.1	494.5	482.4	12.09	40.894 CC, ES	
1,800.0	1,758.7	1,740.9	1,701.1	7.0	6.2	76.29	-306.6	546.6	497.2	484.2	13.00	38.234	
1,900.0	1,853.4	1,813.7	1,767.8	7.7	6.8	81.67	-329.8	529.2	509.0	494.8	14.19	35.877	
2,000.0	1,948.1	1,892.7	1,839.8	8.3	7.4	87.43	-355.2	508.8	528.4	513.0	15.32	34.499	
2,100.0	2,042.8	1,967.8	1,908.0	9.0	8.0	92.71	-379.3	488.5	554.8	538.5	16.32	34.007 SF	
2,200.0	2,137.4	2,046.4	1,979.3	9.7	8.5	97.91	-404.2	466.7	587.5	570.3	17.19	34.181	
2,300.0	2,232.1	2,121.6	2,047.4	10.3	9.1	102.59	-427.5	445.1	625.3	607.4	17.96	34.812	
2,400.0	2,326.8	2,189.8	2,108.6	11.0	9.7	106.67	-448.6	423.3	668.2	649.5	18.66	35.800	
2,500.0	2,421.5	2,257.0	2,168.0	11.7	10.3	110.48	-469.7	400.4	716.1	696.8	19.32	37.068	
2,600.0	2,516.1	2,312.0	2,216.3	12.3	10.8	113.40	-487.5	381.0	768.5	748.5	19.93	38.563	
2,700.0	2,610.8	2,370.2	2,267.3	13.0	11.3	116.25	-506.9	360.6	824.7	804.3	20.48	40.265	
2,800.0	2,705.5	2,426.9	2,316.8	13.7	11.9	118.70	-527.0	341.8	884.3	863.3	21.00	42.108	
2,900.0	2,800.2	2,486.7	2,368.9	14.3	12.4	121.01	-549.3	322.6	946.5	925.0	21.50	44.028	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	14.0	14.0	0.0	0.0	99.69	-127.5	746.4	757.2	757.2	0.02	N/A	
100.0	100.0	114.0	114.0	0.1	0.1	99.69	-127.5	746.4	757.2	756.9	0.26	2,955.103	
200.0	200.0	214.0	214.0	0.3	0.4	99.69	-127.5	746.4	757.2	756.5	0.71	1,072.872	
300.0	300.0	314.0	314.0	0.6	0.6	99.69	-127.5	746.4	757.2	756.0	1.16	655.412	
400.0	400.0	414.0	414.0	0.8	0.8	99.69	-127.5	746.4	757.2	755.6	1.60	471.823	
500.0	500.0	514.0	514.0	1.0	1.0	30.74	-127.5	746.4	755.7	753.6	2.05	368.930	
600.0	599.8	613.8	613.8	1.2	1.3	30.99	-127.5	746.4	751.2	748.7	2.49	301.661	
700.0	699.5	713.5	713.5	1.5	1.5	31.41	-127.5	746.4	743.7	740.8	2.94	253.096	
800.0	798.7	812.7	812.7	1.7	1.7	32.02	-127.5	746.4	733.3	730.0	3.40	215.967	
900.0	897.5	911.5	911.5	2.0	1.9	32.82	-127.5	746.4	720.1	716.2	3.87	186.274	
1,000.0	995.6	1,009.6	1,009.6	2.4	2.2	33.84	-127.5	746.4	704.1	699.7	4.35	161.669	
1,100.0	1,093.1	1,107.1	1,107.1	2.8	2.4	35.09	-127.5	746.4	685.4	680.5	4.87	140.702	
1,200.0	1,189.6	1,203.6	1,203.6	3.3	2.6	36.62	-127.5	746.4	664.1	658.7	5.42	122.448	
1,300.0	1,285.3	1,299.3	1,299.3	3.8	2.8	38.45	-127.5	746.4	640.6	634.6	6.03	106.307	
1,400.0	1,380.0	1,394.0	1,394.0	4.5	3.0	40.40	-127.5	746.4	615.4	608.7	6.69	91.974	
1,500.0	1,474.7	1,488.7	1,488.7	5.1	3.2	42.37	-127.5	746.4	590.7	583.3	7.40	79.793	
1,600.0	1,569.4	1,583.4	1,583.4	5.7	3.4	44.51	-127.5	746.4	566.7	558.5	8.15	69.497	
1,700.0	1,664.1	1,678.1	1,678.1	6.4	3.7	46.82	-127.5	746.4	543.6	534.6	8.95	60.759	
1,800.0	1,758.7	1,772.7	1,772.7	7.0	3.9	49.33	-127.5	746.4	521.4	511.6	9.78	53.318	
1,900.0	1,853.4	1,867.4	1,867.4	7.7	4.1	52.03	-127.5	746.4	500.3	489.7	10.65	46.968	
2,000.0	1,948.1	1,962.1	1,962.1	8.3	4.3	54.95	-127.5	746.4	480.5	468.9	11.57	41.542	
2,100.0	2,042.8	2,056.8	2,056.8	9.0	4.5	58.10	-127.5	746.4	462.0	449.5	12.52	36.910	
2,200.0	2,137.4	2,151.4	2,151.4	9.7	4.7	61.48	-127.5	746.4	445.2	431.7	13.50	32.964	
2,300.0	2,232.1	2,246.1	2,246.1	10.3	4.9	65.08	-127.5	746.4	430.0	415.5	14.52	29.619	
2,400.0	2,326.8	2,340.8	2,340.8	11.0	5.1	68.91	-127.5	746.4	416.9	401.3	15.55	26.802	
2,500.0	2,421.5	2,435.5	2,435.5	11.7	5.4	72.95	-127.5	746.4	405.8	389.2	16.60	24.453	
2,600.0	2,516.1	2,530.1	2,530.1	12.3	5.6	77.17	-127.5	746.4	397.1	379.5	17.63	22.520	
2,700.0	2,610.8	2,624.8	2,624.8	13.0	5.8	81.54	-127.5	746.4	390.8	372.2	18.65	20.959	
2,800.0	2,705.5	2,719.5	2,719.5	13.7	6.0	86.01	-127.5	746.4	387.1	367.5	19.62	19.729	
2,888.4	2,789.1	2,803.1	2,803.1	14.3	6.2	90.00	-127.5	746.4	386.1	365.6	20.44	18.887 CC	
2,900.0	2,800.2	2,814.2	2,814.2	14.3	6.2	90.53	-127.5	746.4	386.1	365.5	20.55	18.792 ES	
3,000.0	2,894.8	2,908.8	2,908.8	15.0	6.4	95.04	-127.5	746.4	387.7	366.3	21.40	18.116	
3,100.0	2,989.5	3,003.5	3,003.5	15.7	6.6	99.49	-127.5	746.4	392.0	369.9	22.19	17.668	
3,200.0	3,084.2	3,098.2	3,098.2	16.3	6.9	103.82	-127.5	746.4	398.9	376.0	22.90	17.420	
3,300.0	3,178.9	3,192.9	3,192.9	17.0	7.1	108.00	-127.5	746.4	408.2	384.7	23.53	17.345 SF	
3,400.0	3,273.5	3,287.5	3,287.5	17.7	7.3	112.00	-127.5	746.4	419.7	395.7	24.10	17.419	
3,500.0	3,368.2	3,382.2	3,382.2	18.4	7.5	115.78	-127.5	746.4	433.4	408.8	24.60	17.617	
3,600.0	3,462.9	3,476.9	3,476.9	19.0	7.7	119.33	-127.5	746.4	448.9	423.9	25.05	17.921	
3,700.0	3,557.5	3,571.5	3,571.5	19.7	7.9	122.65	-127.5	746.4	466.2	440.7	25.46	18.312	
3,800.0	3,652.2	3,666.2	3,666.2	20.4	8.1	125.75	-127.5	746.4	485.0	459.1	25.83	18.774	
3,900.0	3,746.9	3,760.9	3,760.9	21.1	8.3	128.62	-127.5	746.4	505.1	478.9	26.18	19.293	
4,000.0	3,841.6	3,855.6	3,855.6	21.7	8.6	131.27	-127.5	746.4	526.5	499.9	26.51	19.856	
4,100.0	3,936.2	3,950.2	3,950.2	22.4	8.8	133.73	-127.5	746.4	548.9	522.0	26.84	20.453	
4,200.0	4,030.9	4,044.9	4,044.9	23.1	9.0	136.00	-127.5	746.4	572.2	545.0	27.15	21.075	
4,300.0	4,125.6	4,139.6	4,139.6	23.8	9.2	138.10	-127.5	746.4	596.3	568.9	27.46	21.714	
4,400.0	4,220.3	4,234.3	4,234.3	24.4	9.4	140.04	-127.5	746.4	621.2	593.5	27.78	22.365	
4,500.0	4,314.9	4,328.9	4,328.9	25.1	9.6	141.84	-127.5	746.4	646.8	618.7	28.10	23.021	
4,600.0	4,409.6	4,423.6	4,423.6	25.8	9.8	143.50	-127.5	746.4	672.9	644.5	28.42	23.678	
4,700.0	4,504.3	4,518.3	4,518.3	26.5	10.0	145.04	-127.5	746.4	699.5	670.7	28.75	24.333	
4,800.0	4,599.0	4,613.0	4,613.0	27.1	10.3	146.47	-127.5	746.4	726.6	697.5	29.08	24.983	
4,900.0	4,693.6	4,707.6	4,707.6	27.8	10.5	147.81	-127.5	746.4	754.0	724.6	29.42	25.626	
5,000.0	4,788.3	4,802.3	4,802.3	28.5	10.7	149.05	-127.5	746.4	781.9	752.1	29.78	26.259	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Offset Design Antelope P-17 Pad Sec.17-T5N-R62W - Antelope 41-17 (Exist.) - Wellbore #1 - Design #1													Offset Site Error: 0.0 ft
Survey Program: 0-MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.0	4,883.2	4,897.2	4,897.2	29.1	10.9	150.35	-127.5	746.4	809.5	779.4	30.11	26.884	
5,200.0	4,979.0	4,993.0	4,993.0	29.6	11.1	151.56	-127.5	746.4	834.8	804.4	30.40	27.459	
5,300.0	5,075.8	5,089.8	5,089.8	30.0	11.3	152.57	-127.5	746.4	857.2	826.5	30.70	27.924	
5,400.0	5,173.3	5,187.3	5,187.3	30.4	11.5	153.40	-127.5	746.4	876.7	845.7	31.00	28.283	
5,500.0	5,271.6	5,285.6	5,285.6	30.7	11.8	154.08	-127.5	746.4	893.3	862.0	31.30	28.543	
5,600.0	5,370.5	5,384.5	5,384.5	31.0	12.0	154.61	-127.5	746.4	906.8	875.3	31.59	28.708	
5,700.0	5,469.8	5,483.8	5,483.8	31.2	12.2	155.00	-127.5	746.4	917.3	885.4	31.87	28.781	
5,800.0	5,569.5	5,583.5	5,583.5	31.4	12.4	155.28	-127.5	746.4	924.6	892.4	32.14	28.767	
5,900.0	5,669.4	5,683.4	5,683.4	31.5	12.7	155.43	-127.5	746.4	928.7	896.3	32.40	28.669	
6,000.0	5,769.4	5,783.4	5,783.4	31.6	12.9	-135.50	-127.5	746.4	929.8	897.1	32.66	28.468	
6,100.0	5,869.4	5,883.4	5,883.4	31.7	13.1	44.51	-127.5	746.4	929.7	896.7	33.00	28.176	
6,200.0	5,968.7	5,982.7	5,982.7	31.7	13.3	45.53	-127.5	746.4	922.4	890.1	32.29	28.567	
6,300.0	6,064.2	6,078.2	6,078.2	31.7	13.5	48.52	-127.5	746.4	902.0	871.3	30.63	29.447	
6,400.0	6,152.4	6,166.4	6,166.4	31.5	13.7	53.56	-127.5	746.4	870.3	841.5	28.72	30.298	
6,500.0	6,230.0	6,244.0	6,244.0	31.3	13.9	60.63	-127.5	746.4	830.0	802.3	27.71	29.951	
6,600.0	6,294.2	6,308.2	6,308.2	31.1	14.1	69.17	-127.5	746.4	784.9	756.6	28.33	27.706	
6,700.0	6,342.7	6,356.7	6,356.7	30.8	14.2	77.89	-127.5	746.4	739.8	710.0	29.84	24.794	
6,800.0	6,373.6	6,387.6	6,387.6	30.6	14.2	85.14	-127.5	746.4	699.9	668.9	31.03	22.558	
6,900.0	6,385.8	6,399.8	6,399.8	30.5	14.3	89.63	-127.5	746.4	670.2	638.5	31.62	21.195	
7,000.0	6,386.0	6,400.0	6,400.0	30.5	14.3	90.00	-127.5	746.4	654.1	622.3	31.87	20.524	
7,062.2	6,386.0	6,400.0	6,400.0	30.5	14.3	90.00	-127.5	746.4	651.5	619.4	32.08	20.308	
7,100.0	6,386.0	6,400.0	6,400.0	30.5	14.3	90.00	-127.5	746.4	652.5	620.4	32.19	20.274	
7,200.0	6,386.0	6,400.0	6,400.0	30.6	14.3	90.00	-127.5	746.4	664.9	632.3	32.64	20.374	
7,300.0	6,386.0	6,400.0	6,400.0	30.9	14.3	90.00	-127.5	746.4	691.6	658.3	33.36	20.734	
7,400.0	6,386.0	6,400.0	6,400.0	31.2	14.3	90.00	-127.5	746.4	731.1	696.9	34.24	21.355	
7,500.0	6,386.0	6,400.0	6,400.0	31.7	14.3	90.00	-127.5	746.4	781.5	746.3	35.26	22.167	
7,600.0	6,386.0	6,400.0	6,400.0	32.3	14.3	90.00	-127.5	746.4	840.8	804.4	36.39	23.103	
7,700.0	6,386.0	6,400.0	6,400.0	33.0	14.3	90.00	-127.5	746.4	907.3	869.7	37.63	24.109	
7,800.0	6,386.0	6,400.0	6,400.0	33.8	14.3	90.00	-127.5	746.4	979.5	940.5	38.96	25.141	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0ft
Survey Program: 560-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	13.7	13.7	0.0	0.0	101.77	-156.6	752.0	768.1	768.1	0.02	N/A		
100.0	100.0	111.6	111.6	0.1	0.1	101.77	-156.7	752.1	768.3	768.0	0.24	3,210.297		
200.0	200.0	209.6	209.6	0.3	0.2	101.78	-156.9	752.5	768.7	768.1	0.58	1,336.317		
300.0	300.0	307.5	307.5	0.6	0.3	101.79	-157.2	753.2	769.4	768.5	0.91	844.429		
400.0	400.0	405.4	405.4	0.8	0.5	101.80	-157.6	754.1	770.4	769.2	1.25	617.756		
500.0	500.0	503.3	503.3	1.0	0.6	32.85	-158.0	755.2	770.2	768.6	1.57	489.811		
600.0	599.8	595.4	595.4	1.2	0.7	33.11	-158.8	756.6	767.5	765.5	1.94	396.466		
700.0	699.5	681.6	681.4	1.5	0.9	33.65	-162.0	758.9	763.6	761.2	2.35	324.514		
800.0	798.7	785.7	785.3	1.7	1.2	34.73	-169.1	762.1	758.0	755.2	2.83	268.146		
900.0	897.5	898.3	897.3	2.0	1.4	36.45	-180.1	761.7	747.3	743.9	3.35	222.876		
1,000.0	995.6	987.1	985.2	2.4	1.7	38.34	-192.4	760.4	734.5	730.6	3.89	188.872		
1,100.0	1,093.1	1,072.8	1,069.7	2.8	2.0	40.59	-207.1	759.4	721.2	716.7	4.48	160.851		
1,200.0	1,189.6	1,157.9	1,153.0	3.3	2.3	43.29	-224.7	758.3	707.8	702.7	5.16	137.139		
1,300.0	1,285.3	1,237.8	1,230.6	3.8	2.7	46.22	-243.5	757.1	695.0	689.1	5.91	117.594		
1,400.0	1,380.0	1,311.0	1,301.3	4.5	3.0	49.07	-262.5	757.1	685.0	678.3	6.72	101.913		
1,500.0	1,474.7	1,405.1	1,391.8	5.1	3.5	52.84	-288.2	756.9	678.5	670.8	7.69	88.275		
1,600.0	1,569.4	1,489.0	1,471.9	5.7	3.9	56.41	-312.9	755.0	675.0	666.4	8.67	77.857		
1,632.8	1,600.4	1,516.5	1,498.1	5.9	4.1	57.63	-321.5	754.1	674.8	665.8	9.00	75.001		
1,700.0	1,664.1	1,574.6	1,553.3	6.4	4.4	60.17	-339.3	752.4	675.7	666.0	9.68	69.838		
1,800.0	1,758.7	1,649.0	1,624.2	7.0	4.8	63.35	-361.8	751.1	680.7	670.1	10.62	64.101		
1,900.0	1,853.4	1,727.8	1,699.1	7.7	5.2	66.60	-386.2	751.5	691.1	679.5	11.58	59.676		
2,000.0	1,948.1	1,812.4	1,779.8	8.3	5.6	69.93	-411.8	752.8	705.0	692.4	12.56	56.109		
2,100.0	2,042.8	1,887.7	1,851.2	9.0	6.1	72.84	-435.7	754.2	723.1	709.6	13.50	53.571		
2,200.0	2,137.4	1,981.2	1,940.0	9.7	6.6	76.21	-465.0	757.0	744.3	729.9	14.48	51.418		
2,300.0	2,232.1	2,084.5	2,038.5	10.3	7.1	79.74	-495.8	759.4	766.6	751.2	15.43	49.693		
2,400.0	2,326.8	2,171.8	2,121.8	11.0	7.6	82.67	-521.7	759.7	790.4	774.1	16.32	48.427		
2,500.0	2,421.5	2,246.4	2,192.8	11.7	8.0	85.13	-544.7	759.2	817.2	800.0	17.19	47.550		
2,600.0	2,516.1	2,327.8	2,269.9	12.3	8.5	87.71	-570.8	758.4	847.2	829.1	18.06	46.909		
2,700.0	2,610.8	2,420.1	2,357.3	13.0	9.1	90.47	-600.4	757.5	879.1	860.2	18.92	46.462		
2,800.0	2,705.5	2,507.9	2,440.7	13.7	9.6	92.89	-627.8	757.2	912.2	892.4	19.75	46.189		
2,900.0	2,800.2	2,603.6	2,531.7	14.3	10.1	95.43	-657.6	755.5	946.6	926.1	20.56	46.035		
3,000.0	2,894.8	2,703.1	2,626.7	15.0	10.7	97.88	-687.2	753.8	981.2	959.8	21.36	45.928		
7,700.0	6,386.0	6,593.1	6,408.4	33.0	26.2	90.78	-1,450.8	755.2	927.1	877.5	49.65	18.674		
7,800.0	6,386.0	6,593.9	6,409.2	33.8	26.2	90.86	-1,450.8	755.2	855.1	804.1	50.98	16.772		
7,900.0	6,386.0	6,594.7	6,410.0	34.7	26.2	90.93	-1,450.8	755.2	789.2	736.8	52.39	15.064		
8,000.0	6,386.0	6,595.4	6,410.8	35.7	26.2	91.00	-1,450.8	755.2	731.1	677.2	53.86	13.574		
8,100.0	6,386.0	6,596.2	6,411.5	36.8	26.2	91.07	-1,450.8	755.2	682.7	627.3	55.38	12.328		
8,200.0	6,386.0	6,597.0	6,412.3	38.0	26.2	91.14	-1,450.8	755.2	646.3	589.4	56.94	11.351		
8,300.0	6,386.0	6,597.7	6,413.1	39.2	26.2	91.21	-1,450.8	755.3	624.0	565.5	58.55	10.658		
8,391.8	6,386.0	6,598.4	6,413.7	40.4	26.2	91.28	-1,450.8	755.3	617.2	557.2	60.05	10.279 CC		
8,400.0	6,386.0	6,598.5	6,413.8	40.5	26.2	91.28	-1,450.8	755.3	617.3	557.1	60.18	10.257 ES		
8,500.0	6,386.0	6,599.2	6,414.5	41.9	26.2	91.35	-1,450.8	755.3	626.6	564.8	61.84	10.132 SF		
8,600.0	6,386.0	6,599.9	6,415.3	43.3	26.2	91.42	-1,450.8	755.3	651.4	587.8	63.53	10.253		
8,700.0	6,386.0	6,600.7	6,416.0	44.7	26.2	91.49	-1,450.8	755.3	689.9	624.6	65.24	10.574		
8,800.0	6,386.0	6,601.4	6,416.7	46.2	26.2	91.55	-1,450.8	755.3	740.0	673.0	66.97	11.049		
8,900.0	6,386.0	6,602.1	6,417.4	47.8	26.2	91.62	-1,450.9	755.4	799.5	730.8	68.71	11.635		
9,000.0	6,386.0	6,602.8	6,418.1	49.3	26.2	91.68	-1,450.9	755.4	866.5	796.0	70.47	12.296		
9,100.0	6,386.0	6,607.0	6,422.3	50.9	26.2	92.07	-1,450.9	755.5	939.4	867.1	72.27	12.999		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Offset Design Antelope P-17 Pad Sec.17-T5N-R62W - Antelope 43-17 (Exist.) - Wellbore #1 - Design #1													Offset Site Error: 0.0 ft
Survey Program: 0-MWD													Offset Well Error: 0.0 ft
Reference	Offset	Semi Major Axis		Distance									Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,000.0	6,386.0	6,382.0	6,382.0	49.3	14.2	90.00	-2,564.8	543.1	954.8	896.4	58.35	16.363	
9,100.0	6,386.0	6,382.0	6,382.0	50.9	14.2	90.00	-2,564.8	543.1	905.4	845.2	60.12	15.060	
9,200.0	6,386.0	6,382.0	6,382.0	52.5	14.2	90.00	-2,564.8	543.1	864.7	802.8	61.90	13.970	
9,300.0	6,386.0	6,382.0	6,382.0	54.1	14.2	90.00	-2,564.8	543.1	834.1	770.5	63.69	13.097	
9,400.0	6,386.0	6,382.0	6,382.0	55.8	14.2	90.00	-2,564.8	543.1	814.8	749.3	65.49	12.442	
9,500.0	6,386.0	6,382.0	6,382.0	57.4	14.2	90.00	-2,564.8	543.1	807.4	740.1	67.29	11.999	
9,509.7	6,386.0	6,382.0	6,382.0	57.6	14.2	90.00	-2,564.8	543.1	807.4	739.9	67.47	11.966 CC, ES	
9,600.0	6,386.0	6,382.0	6,382.0	59.1	14.2	90.00	-2,564.8	543.1	812.4	743.3	69.11	11.756	
9,700.0	6,386.0	6,382.0	6,382.0	60.8	14.2	90.00	-2,564.8	543.1	829.5	758.6	70.93	11.695 SF	
9,800.0	6,386.0	6,382.0	6,382.0	62.5	14.2	90.00	-2,564.8	543.1	858.0	785.2	72.75	11.793	
9,900.0	6,386.0	6,382.0	6,382.0	64.2	14.2	90.00	-2,564.8	543.1	896.7	822.2	74.59	12.023	
10,000.0	6,386.0	6,382.0	6,382.0	66.0	14.2	90.00	-2,564.8	543.1	944.6	868.2	76.42	12.360	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 511-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	40.0	0.0	40.1					
100.0	100.0	98.0	98.0	0.1	0.1	-0.02	40.0	0.0	40.0	39.8	0.22	179.832		
200.0	200.0	198.0	198.0	0.3	0.2	-0.10	40.0	-0.1	40.0	39.5	0.56	71.536		
300.0	300.0	298.0	298.0	0.6	0.3	-0.22	40.0	-0.2	40.0	39.2	0.90	44.648		
400.0	400.0	398.0	398.0	0.8	0.4	-0.39	40.0	-0.3	40.0	38.8	1.23	32.450		
500.0	500.0	498.0	498.0	1.0	0.6	-72.03	40.0	-0.4	39.5	37.9	1.56	25.229		
600.0	599.8	597.7	597.7	1.2	0.8	-79.87	40.2	-0.7	38.4	36.4	1.99	19.297		
650.6	650.3	648.1	648.1	1.3	0.9	-86.01	40.4	-0.9	38.2	35.9	2.22	17.191 CC, ES		
700.0	699.5	697.2	697.2	1.5	1.0	-93.31	40.6	-1.2	38.4	36.0	2.44	15.740		
800.0	798.7	796.5	796.5	1.7	1.2	-110.59	41.0	-1.7	41.6	38.7	2.91	14.311		
900.0	897.5	895.6	895.6	2.0	1.4	-126.21	42.1	-1.1	49.5	46.1	3.37	14.680		
1,000.0	995.6	994.1	994.1	2.4	1.6	-138.50	43.6	0.0	62.2	58.3	3.82	16.267		
1,100.0	1,093.1	1,092.9	1,092.8	2.8	1.8	-146.18	47.2	2.4	78.9	74.6	4.28	18.433		
1,200.0	1,189.6	1,192.5	1,192.0	3.3	2.0	-150.52	53.2	6.7	97.9	93.2	4.76	20.580		
1,300.0	1,285.3	1,293.0	1,291.9	3.8	2.2	-152.77	61.9	13.7	118.2	112.9	5.27	22.410		
1,400.0	1,380.0	1,394.0	1,391.9	4.5	2.5	-153.95	72.9	23.5	138.4	132.6	5.84	23.708		
1,500.0	1,474.7	1,493.1	1,489.5	5.1	2.8	-154.42	84.8	35.0	157.2	150.7	6.45	24.380		
1,600.0	1,569.4	1,590.5	1,585.6	5.7	3.1	-154.62	97.0	45.9	176.3	169.3	7.07	24.926		
1,700.0	1,664.1	1,687.3	1,681.1	6.4	3.4	-155.06	108.3	56.5	195.8	188.1	7.70	25.439		
1,800.0	1,758.7	1,785.1	1,777.7	7.0	3.7	-155.30	120.2	66.4	216.0	207.6	8.34	25.911		
1,900.0	1,853.4	1,881.2	1,872.7	7.7	4.0	-155.55	131.6	76.3	236.1	227.1	8.97	26.323		
2,000.0	1,948.1	1,978.4	1,968.8	8.3	4.3	-155.89	142.7	85.2	257.2	247.6	9.60	26.792		
2,100.0	2,042.8	2,078.8	2,068.2	9.0	4.6	-156.36	153.3	95.0	277.8	267.6	10.22	27.177		
2,200.0	2,137.4	2,174.4	2,162.8	9.7	4.9	-156.84	162.9	104.6	298.1	287.3	10.83	27.525		
2,300.0	2,232.1	2,272.5	2,259.8	10.3	5.2	-157.01	174.1	113.8	319.1	307.6	11.48	27.806		
2,400.0	2,326.8	2,372.0	2,358.1	11.0	5.6	-157.11	185.9	123.5	339.7	327.5	12.14	27.988		
2,500.0	2,421.5	2,472.3	2,457.2	11.7	5.9	-157.30	197.0	133.9	359.7	346.9	12.78	28.135		
2,600.0	2,516.1	2,573.1	2,556.9	12.3	6.2	-157.60	207.4	145.1	378.9	365.5	13.41	28.247		
2,700.0	2,610.8	2,667.5	2,650.1	13.0	6.5	-157.81	217.5	155.5	398.4	384.3	14.04	28.374		
2,800.0	2,705.5	2,765.0	2,746.4	13.7	6.9	-157.83	229.1	165.5	418.4	403.7	14.70	28.456		
2,900.0	2,800.2	2,867.3	2,847.3	14.3	7.2	-157.71	242.3	176.9	437.7	422.3	15.41	28.407		
3,000.0	2,894.8	2,960.5	2,939.2	15.0	7.6	-157.68	253.8	186.9	457.4	441.3	16.07	28.459		
3,100.0	2,989.5	3,056.5	3,034.1	15.7	7.9	-157.80	264.5	196.5	477.7	461.0	16.71	28.587		
3,200.0	3,084.2	3,152.3	3,128.9	16.3	8.2	-157.94	274.8	205.9	498.3	481.0	17.34	28.735		
3,300.0	3,178.9	3,244.1	3,219.8	17.0	8.5	-158.10	284.5	214.0	519.8	501.9	17.95	28.953		
3,400.0	3,273.5	3,341.7	3,316.6	17.7	8.8	-158.30	294.3	221.9	542.1	523.5	18.57	29.188		
3,500.0	3,368.2	3,446.2	3,420.1	18.4	9.1	-158.45	305.4	231.3	563.4	544.2	19.22	29.317		
3,600.0	3,462.9	3,551.1	3,523.7	19.0	9.5	-158.48	317.5	241.9	583.8	563.9	19.90	29.332		
3,700.0	3,557.5	3,658.5	3,629.4	19.7	9.9	-158.30	332.0	254.2	602.6	582.0	20.65	29.183		
3,800.0	3,652.2	3,761.5	3,730.4	20.4	10.3	-157.99	347.6	267.4	620.3	598.9	21.43	28.942		
3,900.0	3,746.9	3,862.5	3,829.4	21.1	10.7	-157.74	362.4	280.7	637.5	615.3	22.20	28.720		
4,000.0	3,841.6	3,955.4	3,920.7	21.7	11.0	-157.66	374.4	292.8	654.8	632.0	22.88	28.615		
4,100.0	3,936.2	4,050.2	4,014.2	22.4	11.4	-157.69	385.5	304.4	673.0	649.5	23.55	28.583		
4,200.0	4,030.9	4,135.4	4,098.2	23.1	11.6	-157.75	395.2	314.0	692.2	668.0	24.17	28.641		
4,300.0	4,125.6	4,225.8	4,187.7	23.8	11.9	-157.85	404.8	322.5	713.1	688.3	24.78	28.773		
4,400.0	4,220.3	4,325.4	4,286.4	24.4	12.3	-157.98	415.2	331.6	734.4	709.0	25.42	28.890		
4,500.0	4,314.9	4,432.0	4,391.8	25.1	12.6	-158.01	427.7	342.1	754.9	728.8	26.11	28.911		
4,600.0	4,409.6	4,533.0	4,491.2	25.8	13.0	-157.93	440.8	352.9	774.6	747.8	26.83	28.870		
4,700.0	4,504.3	4,633.8	4,590.5	26.5	13.4	-157.84	454.2	364.1	793.9	766.4	27.55	28.816		
4,800.0	4,599.0	4,733.7	4,689.2	27.1	13.7	-157.88	465.8	375.4	813.0	784.8	28.22	28.805		
4,900.0	4,693.6	4,834.4	4,788.6	27.8	14.0	-157.97	476.5	387.1	831.8	802.9	28.87	28.807		
5,000.0	4,788.3	4,925.9	4,879.0	28.5	14.4	-158.10	485.5	397.7	850.6	821.1	29.48	28.857		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 511-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.0	4,883.2	4,998.0	4,950.5	29.1	14.6	-158.37	491.5	404.7	870.8	840.8	30.01	29.019	
5,200.0	4,979.0	5,092.0	5,044.0	29.6	14.8	-158.77	497.4	412.1	889.8	859.3	30.49	29.180	
5,300.0	5,075.8	5,172.5	5,124.3	30.0	15.0	-159.13	501.2	417.3	907.1	876.2	30.90	29.356	
5,400.0	5,173.3	5,249.7	5,201.4	30.4	15.2	-159.44	504.0	420.7	923.2	892.0	31.26	29.538	
5,500.0	5,271.6	5,330.6	5,282.2	30.7	15.3	-159.71	506.6	422.4	938.3	906.8	31.57	29.720	
5,600.0	5,370.5	5,422.0	5,373.6	31.0	15.5	-160.01	507.9	423.0	951.7	919.8	31.84	29.885	
5,700.0	5,469.8	5,521.3	5,472.9	31.2	15.7	-160.27	508.7	423.6	962.0	929.9	32.09	29.980	
5,800.0	5,569.5	5,620.9	5,572.5	31.4	15.8	-160.46	509.0	424.1	969.0	936.7	32.30	30.004	
5,900.0	5,669.4	5,723.5	5,675.1	31.5	16.0	-160.59	508.9	424.7	972.7	940.2	32.48	29.945	
6,000.0	5,769.4	5,829.6	5,781.2	31.6	16.1	-91.57	509.0	426.0	972.6	939.9	32.69	29.752	
6,100.0	5,869.4	5,951.8	5,903.1	31.7	16.3	88.06	502.4	429.0	970.3	937.5	32.87	29.520	
6,200.0	5,968.7	6,044.5	5,993.1	31.7	16.3	87.78	481.7	433.2	966.3	933.5	32.79	29.467	
6,292.1	6,056.8	6,095.5	6,041.0	31.7	16.2	87.77	464.2	434.3	964.6	931.9	32.63	29.559	
6,300.0	6,064.2	6,100.5	6,045.6	31.7	16.2	87.77	462.2	434.3	964.6	932.0	32.62	29.575	
6,400.0	6,152.4	6,165.4	6,103.6	31.5	16.1	87.68	433.2	433.1	966.2	934.0	32.26	29.948	
6,500.0	6,230.0	6,228.9	6,157.2	31.3	15.9	87.61	399.3	429.8	971.0	939.1	31.84	30.498	
6,600.0	6,294.2	6,336.0	6,237.6	31.1	15.5	88.00	329.2	423.9	976.0	944.6	31.35	31.128	
6,700.0	6,342.7	6,450.2	6,306.8	30.8	15.2	88.56	238.8	417.7	981.1	950.2	30.95	31.701	
6,800.0	6,373.6	6,579.4	6,360.7	30.6	14.9	89.30	121.7	417.2	981.0	950.2	30.81	31.841	
6,856.0	6,382.8	6,631.1	6,374.2	30.6	14.8	89.61	71.8	417.2	980.9	950.0	30.91	31.736	
6,900.0	6,385.8	6,662.6	6,379.6	30.5	14.8	89.77	40.7	417.1	981.1	950.1	30.99	31.659	
7,000.0	6,386.0	6,740.6	6,385.6	30.5	15.0	90.09	-37.0	414.8	983.9	952.4	31.46	31.270	
7,100.0	6,386.0	6,850.4	6,387.0	30.5	15.5	90.17	-146.7	410.8	987.0	954.7	32.22	30.632	
7,200.0	6,386.0	6,961.0	6,386.7	30.6	16.2	90.16	-257.2	409.4	986.2	953.0	33.29	29.623	
7,233.3	6,386.0	6,991.2	6,386.4	30.7	16.4	90.14	-287.4	408.9	986.2	952.5	33.71	29.257	
7,300.0	6,386.0	7,052.5	6,385.8	30.9	16.9	90.11	-348.7	407.5	986.4	951.8	34.63	28.482	
7,400.0	6,386.0	7,162.3	6,387.1	31.2	17.8	90.18	-458.4	405.7	986.0	949.6	36.38	27.100	
7,500.0	6,386.0	7,270.5	6,388.0	31.7	18.9	90.23	-566.7	404.9	984.8	946.2	38.59	25.522	
7,560.3	6,386.0	7,316.1	6,387.8	32.0	19.4	90.22	-612.3	404.4	984.3	944.5	39.82	24.720	
7,600.0	6,386.0	7,343.8	6,387.6	32.3	19.7	90.21	-640.0	403.7	984.5	944.0	40.59	24.258	
7,700.0	6,386.0	7,465.9	6,386.9	33.0	21.2	90.17	-762.0	400.4	985.4	942.0	43.36	22.726	
7,800.0	6,386.0	7,573.7	6,387.0	33.8	22.5	90.18	-869.8	400.2	983.7	937.6	46.08	21.346	
7,900.0	6,386.0	7,661.9	6,386.9	34.7	23.7	90.17	-958.0	399.7	982.2	933.6	48.69	20.174	
8,000.0	6,386.0	7,757.0	6,388.0	35.7	25.0	90.23	-1,053.0	398.4	981.7	930.2	51.47	19.073	
8,092.6	6,386.0	7,848.7	6,388.3	36.7	26.4	90.25	-1,144.8	396.8	981.5	927.2	54.31	18.072	
8,100.0	6,386.0	7,854.0	6,388.3	36.8	26.4	90.25	-1,150.1	396.6	981.5	927.0	54.50	18.008	
8,200.0	6,386.0	7,968.2	6,388.2	38.0	28.1	90.25	-1,264.3	395.0	981.0	923.2	57.81	16.968	
8,253.7	6,386.0	8,009.6	6,388.5	38.6	28.8	90.26	-1,305.6	394.5	980.7	921.3	59.31	16.533	
8,300.0	6,386.0	8,040.8	6,388.6	39.2	29.2	90.27	-1,336.8	393.7	981.0	920.4	60.54	16.205	
8,400.0	6,386.0	8,125.4	6,388.8	40.5	30.5	90.28	-1,421.3	389.5	983.8	920.3	63.51	15.491	
8,500.0	6,386.0	8,247.4	6,388.5	41.9	32.4	90.26	-1,543.2	384.1	986.4	919.3	67.11	14.699	
8,600.0	6,386.0	8,344.9	6,388.9	43.3	33.9	90.28	-1,640.6	381.1	987.5	917.2	70.34	14.040	
8,700.0	6,386.0	8,452.1	6,389.6	44.7	35.6	90.32	-1,747.8	378.4	988.1	914.3	73.81	13.387	
8,800.0	6,386.0	8,565.5	6,389.7	46.2	37.5	90.33	-1,861.2	376.6	987.7	910.2	77.45	12.752	
8,900.0	6,386.0	8,658.6	6,389.4	47.8	39.0	90.31	-1,954.3	375.1	987.3	906.6	80.72	12.231	
9,000.0	6,386.0	8,770.0	6,388.2	49.3	40.8	90.24	-2,065.7	373.4	986.9	902.6	84.33	11.703	
9,100.0	6,386.0	8,894.0	6,387.4	50.9	42.9	90.20	-2,189.6	373.5	985.0	896.9	88.15	11.174	
9,200.0	6,386.0	8,983.8	6,387.8	52.5	44.4	90.22	-2,279.5	374.6	981.9	890.4	91.45	10.737	
9,300.0	6,386.0	9,073.4	6,388.7	54.1	45.9	90.28	-2,369.0	374.7	979.7	885.0	94.76	10.339	
9,400.0	6,386.0	9,170.3	6,390.8	55.8	47.5	90.40	-2,465.9	373.9	978.7	880.5	98.20	9.966	
9,500.0	6,386.0	9,256.2	6,393.3	57.4	48.9	90.55	-2,551.8	372.7	978.0	876.6	101.49	9.637	
9,505.8	6,386.0	9,262.1	6,393.5	57.5	49.0	90.56	-2,557.6	372.6	978.0	876.3	101.70	9.617	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Offset Design Antelope P-17 Pad Sec.17-T5N-R62W - Antelope P-T-17HZ (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 511-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,600.0	6,386.0	9,354.5	6,395.6	59.1	50.6	90.68	-2,650.0	370.6	978.2	873.2	105.04	9.313	
9,700.0	6,386.0	9,430.7	6,395.8	60.8	51.9	90.69	-2,726.2	368.5	979.2	871.0	108.18	9.052	
9,800.0	6,386.0	9,545.0	6,393.0	62.5	54.0	90.53	-2,840.3	364.3	980.9	868.9	112.02	8.756	
9,900.0	6,386.0	9,651.6	6,390.5	64.2	55.8	90.38	-2,946.9	361.9	981.1	865.5	115.67	8.482	
10,000.0	6,386.0	9,746.5	6,389.4	66.0	57.4	90.32	-3,041.8	359.9	981.3	862.2	119.11	8.239	
10,100.0	6,386.0	9,860.6	6,389.6	67.7	59.3	90.32	-3,155.8	356.3	982.6	859.7	122.95	7.992	
10,200.0	6,386.0	9,962.6	6,389.6	69.5	61.1	90.33	-3,257.8	355.0	981.9	855.4	126.59	7.757	
10,300.0	6,386.0	10,063.4	6,389.5	71.2	62.9	90.32	-3,358.6	354.0	980.9	850.7	130.23	7.532	
10,333.3	6,386.0	10,088.0	6,389.4	71.8	63.3	90.31	-3,383.1	353.6	980.9	849.6	131.27	7.472	
10,400.0	6,386.0	10,143.0	6,389.5	73.0	64.2	90.32	-3,438.2	352.3	981.2	847.7	133.43	7.353	
10,500.0	6,386.0	10,264.6	6,389.0	74.8	66.3	90.29	-3,559.7	349.3	981.7	844.3	137.40	7.145	
10,548.2	6,386.0	10,304.5	6,388.6	75.6	67.0	90.27	-3,599.6	348.7	981.4	842.5	138.99	7.061	
10,600.0	6,386.0	10,345.6	6,388.8	76.5	67.7	90.28	-3,640.7	347.6	981.8	841.1	140.66	6.980	
10,700.0	6,386.0	10,455.0	6,391.0	78.3	69.6	90.41	-3,750.0	344.7	982.6	838.2	144.42	6.804	
10,800.0	6,386.0	10,562.1	6,391.4	80.1	71.5	90.43	-3,857.1	342.3	982.8	834.6	148.21	6.631	
10,900.0	6,386.0	10,673.9	6,389.9	81.9	73.5	90.35	-3,968.9	341.8	981.3	829.2	152.07	6.453	
11,000.0	6,386.0	10,762.0	6,388.4	83.7	75.1	90.25	-4,057.0	341.1	980.2	824.7	155.51	6.303	
11,035.5	6,386.0	10,790.6	6,387.8	84.4	75.6	90.22	-4,085.6	340.6	980.1	823.4	156.67	6.256	
11,100.0	6,386.0	10,843.8	6,387.1	85.5	76.5	90.18	-4,138.8	339.3	980.4	821.6	158.81	6.173	
11,184.6	6,386.0	10,919.0	6,386.7	87.1	77.8	90.16	-4,213.9	336.2	982.2	820.5	161.73	6.073 SF	

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Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope U-Y-17HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #3 (4-04-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4708.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Antelope U-Y-17HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.75°



Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope U-Y-17HNB
Project:	SEC.17-T5N-R62W	TVD Reference:	WELL @ 4708.0ft (RKB - 13')
Reference Site:	Antelope P-17 Pad Sec.17-T5N-R62W	MD Reference:	WELL @ 4708.0ft (RKB - 13')
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