BONANZA CREEK ENERGY OPERATING

Well Name: **Antelope O34-K31-20HNB**

Surface Location: Antelope J-20 Pad Sec.20-T5N-R62W

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

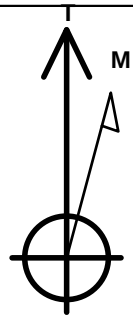
Ground Elevation: 4665.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1382931.04	3319946.01	40.378860	-104.351550	

RKB - 13' WELL @ 4678.0ft (RKB - 13')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 370'FSL & 1435'FWL	1.0	0.0	0.0	Point
BHL 470'FNL & 2580'FWL	6388.0	4430.1	1175.5	Point
T1 531'FSL & 2570'FWL	6388.0	167.6	1136.7	Point



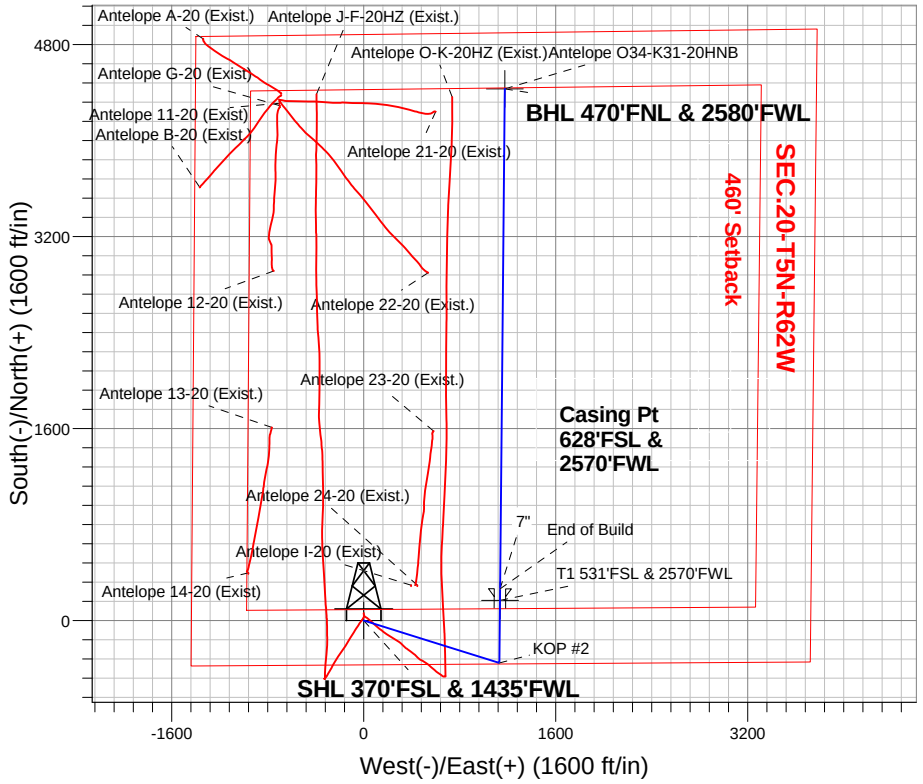
Azimuths to True North
Magnetic North: 8.31°

Magnetic Field
Strength: 52910.2snT
Dip Angle: 67.02°
Date: 11/13/2013
Model: IGRF2010

Antelope J-20 Pad Sec.20-T5N-R62W
Antelope O34-K31-20HNB
Plan #1 (11-13-13)
17:18, November 14 2013

ANNOTATIONS

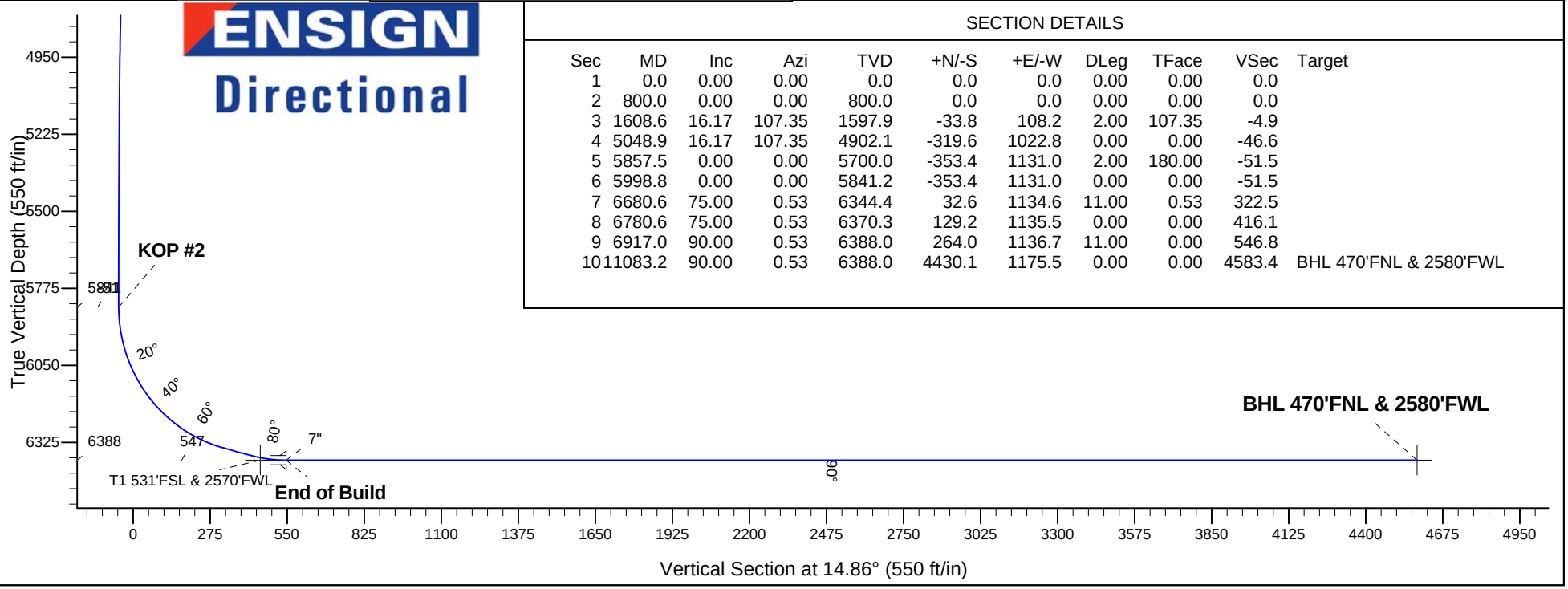
TVD	MD	Annotation
800.0	800.0	KOP #1
5841.3	5998.8	KOP #2
6388.0	6917.0	End of Build



ENSIGN Directional

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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1608.6	16.17	107.35	1597.9	-33.8	108.2	2.00	107.35	-4.9	
4	5048.9	16.17	107.35	4902.1	-319.6	1022.8	0.00	0.00	-46.6	
5	5857.5	0.00	0.00	5700.0	-353.4	1131.0	2.00	180.00	-51.5	
6	5998.8	0.00	0.00	5841.2	-353.4	1131.0	0.00	0.00	-51.5	
7	6680.6	75.00	0.53	6344.4	32.6	1134.6	11.00	0.53	322.5	
8	6780.6	75.00	0.53	6370.3	129.2	1135.5	0.00	0.00	416.1	
9	6917.0	90.00	0.53	6388.0	264.0	1136.7	11.00	0.00	546.8	
10	11083.2	90.00	0.53	6388.0	4430.1	1175.5	0.00	0.00	4583.4	BHL 470'FNL & 2580'FWL



BONANZA CREEK ENERGY OPERATING

SEC.20-T5N-R62W
Antelope J-20 Pad Sec.20-T5N-R62W
Antelope O34-K31-20HNB

Wellbore #1

Plan: Plan #1 (11-13-13)

Standard Planning Report

14 November, 2013

Database:	Landmark	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Company:	BONANZA CREEK ENERGY OPERATING	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Project:	SEC.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**North Reference:**	True
Well:	Antelope O34-K31-20HNB	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-13-13)		

Project SEC.20-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 J-20 Pad Sec.20-T5N-R62W

Site Position:		**Northing:**	1,382,931.05 ft	**Latitude:**	40.378860
From:	Lat/Long	**Easting:**	3,319,946.01 ft	**Longitude:**	-104.351550
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.74 °

Well Antelope O34-K31-20HNB

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,382,931.04 ft	**Latitude:**	40.378860
	+E/-W	0.0 ft	**Easting:**	3,319,946.01 ft	**Longitude:**	-104.351550
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,665.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/13/2013	8.31	67.02	52,910

Design Plan #1 (11-13-13)

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	14.86

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,608.6	16.17	107.35	1,597.9	-33.8	108.2	2.00	2.00	0.00	107.35	
5,048.9	16.17	107.35	4,902.1	-319.6	1,022.8	0.00	0.00	0.00	0.00	
5,857.5	0.00	0.00	5,700.0	-353.4	1,131.0	2.00	-2.00	0.00	180.00	
5,998.8	0.00	0.00	5,841.2	-353.4	1,131.0	0.00	0.00	0.00	0.00	
6,680.6	75.00	0.53	6,344.4	32.6	1,134.6	11.00	11.00	0.00	0.53	
6,780.6	75.00	0.53	6,370.3	129.2	1,135.5	0.00	0.00	0.00	0.00	
6,917.0	90.00	0.53	6,388.0	264.0	1,136.7	11.00	11.00	0.00	0.00	
11,083.2	90.00	0.53	6,388.0	4,430.1	1,175.5	0.00	0.00	0.00	0.00	BHL 470'FNL & 25

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Project:	SEC.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**North Reference:**	True
Well:	Antelope O34-K31-20HNB	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-13-13)		

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
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 370'FSL & 1435'FWL									
100.0	0.00	0.00	100.0	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
300.0	0.00	0.00	300.0	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
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
900.0	2.00	107.35	900.0	-0.5	1.7	-0.1	2.00	2.00	0.00
1,000.0	4.00	107.35	999.8	-2.1	6.7	-0.3	2.00	2.00	0.00
1,100.0	6.00	107.35	1,099.5	-4.7	15.0	-0.7	2.00	2.00	0.00
1,200.0	8.00	107.35	1,198.7	-8.3	26.6	-1.2	2.00	2.00	0.00
1,300.0	10.00	107.35	1,297.5	-13.0	41.5	-1.9	2.00	2.00	0.00
1,400.0	12.00	107.35	1,395.6	-18.7	59.8	-2.7	2.00	2.00	0.00
1,500.0	14.00	107.35	1,493.1	-25.4	81.2	-3.7	2.00	2.00	0.00
1,600.0	16.00	107.35	1,589.6	-33.1	105.9	-4.8	2.00	2.00	0.00
1,608.6	16.17	107.35	1,597.9	-33.8	108.2	-4.9	2.00	2.00	0.00
1,700.0	16.17	107.35	1,685.7	-41.4	132.5	-6.0	0.00	0.00	0.00
1,800.0	16.17	107.35	1,781.7	-49.7	159.1	-7.2	0.00	0.00	0.00
1,900.0	16.17	107.35	1,877.8	-58.0	185.7	-8.5	0.00	0.00	0.00
2,000.0	16.17	107.35	1,973.8	-66.3	212.3	-9.7	0.00	0.00	0.00
2,100.0	16.17	107.35	2,069.9	-74.6	238.8	-10.9	0.00	0.00	0.00
2,200.0	16.17	107.35	2,165.9	-82.9	265.4	-12.1	0.00	0.00	0.00
2,300.0	16.17	107.35	2,261.9	-91.2	292.0	-13.3	0.00	0.00	0.00
2,400.0	16.17	107.35	2,358.0	-99.5	318.6	-14.5	0.00	0.00	0.00
2,500.0	16.17	107.35	2,454.0	-107.9	345.2	-15.7	0.00	0.00	0.00
2,600.0	16.17	107.35	2,550.1	-116.2	371.8	-16.9	0.00	0.00	0.00
2,700.0	16.17	107.35	2,646.1	-124.5	398.3	-18.1	0.00	0.00	0.00
2,800.0	16.17	107.35	2,742.2	-132.8	424.9	-19.4	0.00	0.00	0.00
2,900.0	16.17	107.35	2,838.2	-141.1	451.5	-20.6	0.00	0.00	0.00
3,000.0	16.17	107.35	2,934.2	-149.4	478.1	-21.8	0.00	0.00	0.00
3,100.0	16.17	107.35	3,030.3	-157.7	504.7	-23.0	0.00	0.00	0.00
3,200.0	16.17	107.35	3,126.3	-166.0	531.3	-24.2	0.00	0.00	0.00
3,300.0	16.17	107.35	3,222.4	-174.3	557.9	-25.4	0.00	0.00	0.00
3,400.0	16.17	107.35	3,318.4	-182.6	584.4	-26.6	0.00	0.00	0.00
3,500.0	16.17	107.35	3,414.5	-190.9	611.0	-27.8	0.00	0.00	0.00
3,600.0	16.17	107.35	3,510.5	-199.2	637.6	-29.0	0.00	0.00	0.00
3,700.0	16.17	107.35	3,606.5	-207.5	664.2	-30.2	0.00	0.00	0.00
3,800.0	16.17	107.35	3,702.6	-215.8	690.8	-31.5	0.00	0.00	0.00
3,900.0	16.17	107.35	3,798.6	-224.2	717.4	-32.7	0.00	0.00	0.00
4,000.0	16.17	107.35	3,894.7	-232.5	743.9	-33.9	0.00	0.00	0.00
4,100.0	16.17	107.35	3,990.7	-240.8	770.5	-35.1	0.00	0.00	0.00
4,200.0	16.17	107.35	4,086.8	-249.1	797.1	-36.3	0.00	0.00	0.00
4,300.0	16.17	107.35	4,182.8	-257.4	823.7	-37.5	0.00	0.00	0.00
4,400.0	16.17	107.35	4,278.8	-265.7	850.3	-38.7	0.00	0.00	0.00
4,500.0	16.17	107.35	4,374.9	-274.0	876.9	-39.9	0.00	0.00	0.00
4,600.0	16.17	107.35	4,470.9	-282.3	903.5	-41.1	0.00	0.00	0.00
4,700.0	16.17	107.35	4,567.0	-290.6	930.0	-42.4	0.00	0.00	0.00
4,800.0	16.17	107.35	4,663.0	-298.9	956.6	-43.6	0.00	0.00	0.00
4,900.0	16.17	107.35	4,759.1	-307.2	983.2	-44.8	0.00	0.00	0.00

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Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**North Reference:**	True
Well:	Antelope O34-K31-20HNB	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-13-13)		

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)
5,000.0	16.17	107.35	4,855.1	-315.5	1,009.8	-46.0	0.00	0.00	0.00
5,048.9	16.17	107.35	4,902.1	-319.6	1,022.8	-46.6	0.00	0.00	0.00
5,100.0	15.15	107.35	4,951.3	-323.7	1,036.0	-47.2	2.00	-2.00	0.00
5,200.0	13.15	107.35	5,048.2	-331.0	1,059.3	-48.2	2.00	-2.00	0.00
5,300.0	11.15	107.35	5,146.0	-337.3	1,079.4	-49.2	2.00	-2.00	0.00
5,400.0	9.15	107.35	5,244.4	-342.5	1,096.2	-49.9	2.00	-2.00	0.00
5,500.0	7.15	107.35	5,343.4	-346.8	1,109.7	-50.5	2.00	-2.00	0.00
5,600.0	5.15	107.35	5,442.8	-350.0	1,120.0	-51.0	2.00	-2.00	0.00
5,700.0	3.15	107.35	5,542.6	-352.1	1,126.9	-51.3	2.00	-2.00	0.00
5,800.0	1.15	107.35	5,642.5	-353.2	1,130.4	-51.5	2.00	-2.00	0.00
5,857.5	0.00	0.00	5,700.0	-353.4	1,131.0	-51.5	2.00	-2.00	0.00
5,900.0	0.00	0.00	5,742.5	-353.4	1,131.0	-51.5	0.00	0.00	0.00
5,998.8	0.00	0.00	5,841.3	-353.4	1,131.0	-51.5	0.00	0.00	0.00
KOP #2									
6,000.0	0.14	0.53	5,842.5	-353.4	1,131.0	-51.5	11.29	11.29	0.00
6,100.0	11.14	0.53	5,941.8	-343.6	1,131.1	-42.0	11.00	11.00	0.00
6,200.0	22.14	0.53	6,037.5	-315.0	1,131.4	-14.3	11.00	11.00	0.00
6,300.0	33.14	0.53	6,126.0	-268.7	1,131.8	30.6	11.00	11.00	0.00
6,400.0	44.14	0.53	6,204.0	-206.4	1,132.4	91.0	11.00	11.00	0.00
6,500.0	55.14	0.53	6,268.6	-130.3	1,133.1	164.7	11.00	11.00	0.00
6,600.0	66.14	0.53	6,317.6	-43.3	1,133.9	249.0	11.00	11.00	0.00
6,680.6	75.00	0.53	6,344.4	32.6	1,134.6	322.5	11.00	11.00	0.00
6,700.0	75.00	0.53	6,349.4	51.4	1,134.8	340.7	0.00	0.00	0.00
6,780.6	75.00	0.53	6,370.3	129.2	1,135.5	416.1	0.00	0.00	0.00
6,800.0	77.14	0.53	6,374.9	148.1	1,135.7	434.4	11.00	11.00	0.00
6,821.1	79.46	0.53	6,379.2	168.7	1,135.9	454.4	11.00	11.00	0.00
T1 531'FSL & 2570'FWL									
6,900.0	88.14	0.53	6,387.7	247.1	1,136.6	530.3	11.00	11.00	0.00
6,917.0	90.00	0.53	6,388.0	264.1	1,136.7	546.8	10.97	10.97	0.00
End of Build - 7"									
7,000.0	90.00	0.53	6,388.0	347.1	1,137.5	627.2	0.00	0.00	0.00
7,100.0	90.00	0.53	6,388.0	447.1	1,138.5	724.1	0.00	0.00	0.00
7,200.0	90.00	0.53	6,388.0	547.1	1,139.4	821.0	0.00	0.00	0.00
7,300.0	90.00	0.53	6,388.0	647.1	1,140.3	917.9	0.00	0.00	0.00
7,400.0	90.00	0.53	6,388.0	747.1	1,141.2	1,014.8	0.00	0.00	0.00
7,500.0	90.00	0.53	6,388.0	847.1	1,142.2	1,111.7	0.00	0.00	0.00
7,600.0	90.00	0.53	6,388.0	947.1	1,143.1	1,208.6	0.00	0.00	0.00
7,700.0	90.00	0.53	6,388.0	1,047.1	1,144.0	1,305.4	0.00	0.00	0.00
7,800.0	90.00	0.53	6,388.0	1,147.0	1,145.0	1,402.3	0.00	0.00	0.00
7,900.0	90.00	0.53	6,388.0	1,247.0	1,145.9	1,499.2	0.00	0.00	0.00
8,000.0	90.00	0.53	6,388.0	1,347.0	1,146.8	1,596.1	0.00	0.00	0.00
8,100.0	90.00	0.53	6,388.0	1,447.0	1,147.8	1,693.0	0.00	0.00	0.00
8,200.0	90.00	0.53	6,388.0	1,547.0	1,148.7	1,789.9	0.00	0.00	0.00
8,300.0	90.00	0.53	6,388.0	1,647.0	1,149.6	1,886.8	0.00	0.00	0.00
8,400.0	90.00	0.53	6,388.0	1,747.0	1,150.5	1,983.7	0.00	0.00	0.00
8,500.0	90.00	0.53	6,388.0	1,847.0	1,151.5	2,080.6	0.00	0.00	0.00
8,600.0	90.00	0.53	6,388.0	1,947.0	1,152.4	2,177.5	0.00	0.00	0.00
8,700.0	90.00	0.53	6,388.0	2,047.0	1,153.3	2,274.3	0.00	0.00	0.00
8,800.0	90.00	0.53	6,388.0	2,147.0	1,154.3	2,371.2	0.00	0.00	0.00
8,900.0	90.00	0.53	6,388.0	2,247.0	1,155.2	2,468.1	0.00	0.00	0.00
9,000.0	90.00	0.53	6,388.0	2,347.0	1,156.1	2,565.0	0.00	0.00	0.00
9,100.0	90.00	0.53	6,388.0	2,447.0	1,157.1	2,661.9	0.00	0.00	0.00
9,200.0	90.00	0.53	6,388.0	2,547.0	1,158.0	2,758.8	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Company:	BONANZA CREEK ENERGY OPERATING	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Project:	SEC.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**North Reference:**	True
Well:	Antelope O34-K31-20HNB	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-13-13)		

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)
9,300.0	90.00	0.53	6,388.0	2,647.0	1,158.9	2,855.7	0.00	0.00	0.00
9,400.0	90.00	0.53	6,388.0	2,747.0	1,159.9	2,952.6	0.00	0.00	0.00
9,500.0	90.00	0.53	6,388.0	2,847.0	1,160.8	3,049.5	0.00	0.00	0.00
9,600.0	90.00	0.53	6,388.0	2,947.0	1,161.7	3,146.3	0.00	0.00	0.00
9,700.0	90.00	0.53	6,388.0	3,047.0	1,162.6	3,243.2	0.00	0.00	0.00
9,800.0	90.00	0.53	6,388.0	3,147.0	1,163.6	3,340.1	0.00	0.00	0.00
9,900.0	90.00	0.53	6,388.0	3,247.0	1,164.5	3,437.0	0.00	0.00	0.00
10,000.0	90.00	0.53	6,388.0	3,347.0	1,165.4	3,533.9	0.00	0.00	0.00
10,100.0	90.00	0.53	6,388.0	3,446.9	1,166.4	3,630.8	0.00	0.00	0.00
10,200.0	90.00	0.53	6,388.0	3,546.9	1,167.3	3,727.7	0.00	0.00	0.00
10,300.0	90.00	0.53	6,388.0	3,646.9	1,168.2	3,824.6	0.00	0.00	0.00
10,400.0	90.00	0.53	6,388.0	3,746.9	1,169.2	3,921.5	0.00	0.00	0.00
10,500.0	90.00	0.53	6,388.0	3,846.9	1,170.1	4,018.4	0.00	0.00	0.00
10,600.0	90.00	0.53	6,388.0	3,946.9	1,171.0	4,115.2	0.00	0.00	0.00
10,700.0	90.00	0.53	6,388.0	4,046.9	1,172.0	4,212.1	0.00	0.00	0.00
10,800.0	90.00	0.53	6,388.0	4,146.9	1,172.9	4,309.0	0.00	0.00	0.00
10,900.0	90.00	0.53	6,388.0	4,246.9	1,173.8	4,405.9	0.00	0.00	0.00
11,000.0	90.00	0.53	6,388.0	4,346.9	1,174.7	4,502.8	0.00	0.00	0.00
11,083.2	90.00	0.53	6,388.0	4,430.1	1,175.5	4,583.4	0.00	0.00	0.00
BHL 470'FNL & 2580'FWL									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
T1 531'FSL & 2570'F\	0.00	0.00	6,388.0	167.6	1,136.7	1,383,113.36	3,321,080.42	40.379320	-104.347470
- plan misses target center by 8.9ft at 6821.1ft MD (6379.2 TVD, 168.7 N, 1135.9 E)									
- Point									
SHL 370'FSL & 1435'I	0.00	0.00	1.0	0.0	0.0	1,382,931.05	3,319,946.01	40.378860	-104.351550
- plan hits target center									
- Point									
BHL 470'FNL & 2580'	0.00	0.00	6,388.0	4,430.1	1,175.5	1,387,375.77	3,321,064.01	40.391020	-104.347330
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,917.0	6,388.0	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
800.0	800.0	0.0	0.0	KOP #1
5,998.8	5,841.3	-353.4	1,131.0	KOP #2
6,917.0	6,388.0	264.1	1,136.7	End of Build

ENSIGN Directional

BONANZA CREEK ENERGY OPERATING

SEC.20-T5N-R62W
Antelope J-20 Pad Sec.20-T5N-R62W
Antelope O34-K31-20HNB

Wellbore #1
Plan #1 (11-13-13)

Anticollision Report

14 November, 2013

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Reference Plan #1 (11-13-13)

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** 11/14/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,083.2	Plan #1 (11-13-13) (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Antelope J-20 Pad Sec.20-T5N-R62W						
Antelope 24-21-20HC - Wellbore #1 - Plan #2 (11-13-13)	200.0	200.0	21.9	21.2	32.417	CC
Antelope 24-21-20HC - Wellbore #1 - Plan #2 (11-13-13)	906.9	909.3	24.2	20.4	6.420	ES
Antelope 24-21-20HC - Wellbore #1 - Plan #2 (11-13-13)	1,000.0	1,002.5	26.0	21.8	6.249	SF
Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W						
Antelope 11-20 (Exist) - Wellbore #1 - Wellbore #1						Out of range
Antelope 12-20 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope 13-20 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope 14-20 (Exist) - Wellbore #1 - Wellbore #1						Out of range
Antelope 21-20 (Exist.) - Wellbore #1 - Wellbore #1	10,889.4	6,561.4	577.9	477.6	5.765	CC
Antelope 21-20 (Exist.) - Wellbore #1 - Wellbore #1	10,900.0	6,561.4	578.0	477.5	5.755	ES
Antelope 21-20 (Exist.) - Wellbore #1 - Wellbore #1	11,000.0	6,561.4	588.4	486.0	5.751	SF
Antelope 22-20 (Exist.) - Wellbore #1 - Wellbore #1	9,549.3	6,744.5	631.5	541.4	7.005	CC, ES
Antelope 22-20 (Exist.) - Wellbore #1 - Wellbore #1	9,600.0	6,743.9	633.6	542.5	6.956	SF
Antelope 23-20 (Exist.) - Wellbore #1 - Wellbore #1	0.0	0.0	520.8			
Antelope 23-20 (Exist.) - Wellbore #1 - Wellbore #1	8,225.0	6,560.3	569.6	507.8	9.215	ES
Antelope 23-20 (Exist.) - Wellbore #1 - Wellbore #1	8,300.0	6,560.7	574.5	511.4	9.105	SF
Antelope 24-20 (Exist.) - Wellbore #1 - Wellbore #1	2,413.2	2,365.7	414.6	358.9	7.438	CC
Antelope 24-20 (Exist.) - Wellbore #1 - Wellbore #1	2,500.0	2,449.0	415.3	357.4	7.174	ES
Antelope 24-20 (Exist.) - Wellbore #1 - Wellbore #1	6,941.6	6,382.0	691.2	545.8	4.753	SF
Antelope A-20 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope B-20 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope G-20 (Exist) - Wellbore #1 - Wellbore #1						Out of range
Antelope I-20 (Exist) - Wellbore #1 - Wellbore #1	2,241.4	2,191.6	399.7	348.4	7.794	CC
Antelope I-20 (Exist) - Wellbore #1 - Wellbore #1	2,400.0	2,344.0	402.1	346.9	7.288	ES
Antelope I-20 (Exist) - Wellbore #1 - Wellbore #1	6,941.1	6,374.8	741.4	596.1	5.103	SF
Antelope J-F-20HZ (Exist.) - Wellbore #1 - Wellbore #1	966.7	967.8	50.7	46.9	13.139	CC
Antelope J-F-20HZ (Exist.) - Wellbore #1 - Wellbore #1	1,000.0	1,001.0	50.8	46.8	12.715	ES
Antelope J-F-20HZ (Exist.) - Wellbore #1 - Wellbore #1	1,200.0	1,200.5	57.4	52.5	11.808	SF
Antelope O-K-20HZ (Exist.) - Wellbore #1 - Wellbore #1	472.4	474.2	33.4	31.5	17.485	CC
Antelope O-K-20HZ (Exist.) - Wellbore #1 - Wellbore #1	500.0	501.7	33.6	31.5	16.502	ES
Antelope O-K-20HZ (Exist.) - Wellbore #1 - Wellbore #1	11,000.0	11,007.4	437.4	271.8	2.641	SF

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-20 Pad Sec.20-T5N-R62W - Antelope 24-21-20HC - Wellbore #1 - Plan #2 (11-13-13) **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	21.9	0.0	21.9				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	21.9	0.0	21.9	21.6	0.22	97.251	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.67	32.417	CC
227.7	227.7	227.7	227.7	0.4	0.4	-0.35	21.9	-0.1	21.9	21.1	0.80	27.458	
300.0	300.0	300.0	299.9	0.6	0.6	-4.56	21.9	-1.7	21.9	20.8	1.11	19.675	
400.0	400.0	399.7	399.5	0.8	0.8	-17.65	21.9	-7.0	22.9	21.4	1.56	14.696	
500.0	500.0	499.6	499.1	1.0	1.0	-34.60	21.6	-14.9	26.2	24.2	2.02	13.021	
600.0	600.0	600.4	599.7	1.2	1.2	-47.22	19.4	-20.9	28.5	26.1	2.45	11.651	
700.0	700.0	701.2	700.4	1.5	1.4	-58.34	14.9	-24.2	28.5	25.6	2.89	9.861	
800.0	800.0	801.9	800.9	1.7	1.7	-71.47	8.3	-24.8	26.1	22.8	3.33	7.849	
900.0	900.0	902.3	900.9	1.9	1.9	162.65	-0.5	-22.5	24.2	20.5	3.74	6.474	
906.9	906.9	909.3	907.7	1.9	1.9	161.20	-1.2	-22.3	24.2	20.4	3.77	6.420	ES
1,000.0	999.8	1,002.5	1,000.2	2.1	2.1	141.40	-11.5	-17.6	26.0	21.8	4.16	6.249	SF
1,100.0	1,099.5	1,102.0	1,098.8	2.3	2.4	126.36	-23.7	-11.1	32.2	27.6	4.62	6.980	
1,200.0	1,198.7	1,201.5	1,197.4	2.6	2.7	120.79	-35.8	-4.6	41.6	36.5	5.12	8.125	
1,300.0	1,297.5	1,300.9	1,295.8	2.8	3.0	120.56	-48.0	1.9	52.9	47.2	5.67	9.325	
1,400.0	1,395.6	1,400.0	1,393.9	3.2	3.3	122.94	-60.1	8.4	66.0	59.7	6.27	10.527	
1,500.0	1,493.1	1,498.7	1,491.7	3.5	3.6	126.47	-72.1	14.8	81.2	74.3	6.90	11.766	
1,600.0	1,589.6	1,596.9	1,588.9	4.0	3.9	130.36	-84.1	21.3	98.9	91.3	7.56	13.079	
1,700.0	1,685.7	1,694.8	1,685.9	4.5	4.2	133.96	-96.1	27.6	118.3	110.0	8.24	14.354	
1,800.0	1,781.7	1,792.6	1,782.8	5.0	4.6	136.57	-108.1	34.0	138.0	129.1	8.93	15.459	
1,900.0	1,877.8	1,890.5	1,879.7	5.5	4.9	138.52	-120.0	40.4	157.9	148.3	9.62	16.421	
2,000.0	1,973.8	1,988.4	1,976.6	6.1	5.2	140.03	-132.0	46.8	178.0	167.7	10.31	17.260	
2,100.0	2,069.9	2,086.2	2,073.6	6.6	5.6	141.24	-143.9	53.2	198.2	187.1	11.01	17.998	
2,200.0	2,165.9	2,184.1	2,170.5	7.2	5.9	142.22	-155.9	59.6	218.4	206.7	11.71	18.648	
2,300.0	2,261.9	2,282.0	2,267.4	7.8	6.2	143.04	-167.9	66.0	238.7	226.3	12.41	19.226	
2,400.0	2,358.0	2,379.8	2,364.3	8.4	6.6	143.73	-179.8	72.4	259.0	245.9	13.12	19.742	
2,500.0	2,454.0	2,477.7	2,461.3	8.9	6.9	144.32	-191.8	78.8	279.4	265.5	13.83	20.205	
2,600.0	2,550.1	2,575.6	2,558.2	9.5	7.2	144.82	-203.7	85.2	299.7	285.2	14.54	20.622	
2,700.0	2,646.1	2,673.4	2,655.1	10.1	7.6	145.27	-215.7	91.6	320.1	304.9	15.25	20.999	
2,800.0	2,742.2	2,771.3	2,752.0	10.7	7.9	145.66	-227.7	98.0	340.6	324.6	15.96	21.343	
2,900.0	2,838.2	2,869.2	2,849.0	11.3	8.3	146.01	-239.6	104.4	361.0	344.3	16.67	21.657	
3,000.0	2,934.2	2,967.1	2,945.9	11.9	8.6	146.31	-251.6	110.8	381.4	364.0	17.38	21.944	
3,100.0	3,030.3	3,064.9	3,042.8	12.4	8.9	146.59	-263.5	117.2	401.9	383.8	18.10	22.208	
3,200.0	3,126.3	3,162.8	3,139.7	13.0	9.3	146.84	-275.5	123.6	422.3	403.5	18.81	22.452	
3,300.0	3,222.4	3,260.7	3,236.7	13.6	9.6	147.07	-287.5	130.0	442.8	423.3	19.53	22.677	
3,400.0	3,318.4	3,358.5	3,333.6	14.2	10.0	147.28	-299.4	136.4	463.3	443.0	20.24	22.886	
3,500.0	3,414.5	3,456.4	3,430.5	14.8	10.3	147.47	-311.4	142.8	483.8	462.8	20.96	23.081	
3,600.0	3,510.5	3,554.3	3,527.4	15.4	10.6	147.64	-323.3	149.2	504.2	482.6	21.68	23.262	
3,700.0	3,606.5	3,651.2	3,623.4	16.0	11.0	147.81	-335.1	155.5	524.7	502.4	22.38	23.449	
3,800.0	3,702.6	3,744.6	3,716.2	16.6	11.2	148.18	-344.6	160.6	545.8	522.8	22.96	23.769	
3,900.0	3,798.6	3,837.3	3,808.6	17.2	11.4	148.83	-351.4	164.2	567.7	544.3	23.46	24.200	
4,000.0	3,894.7	3,929.2	3,900.4	17.8	11.5	149.70	-355.5	166.4	590.6	566.7	23.89	24.720	
4,100.0	3,990.7	4,020.1	3,991.3	18.4	11.7	150.77	-357.0	167.2	614.4	590.2	24.26	25.326	
4,200.0	4,086.8	4,115.6	4,086.8	19.0	11.8	151.97	-357.0	167.2	639.1	614.5	24.60	25.975	
4,300.0	4,182.8	4,211.7	4,182.8	19.6	12.0	153.09	-357.0	167.2	664.0	639.1	24.94	26.625	
4,400.0	4,278.8	4,307.7	4,278.8	20.2	12.1	154.13	-357.0	167.2	689.2	663.9	25.28	27.261	
4,500.0	4,374.9	4,403.8	4,374.9	20.8	12.2	155.10	-357.0	167.2	714.5	688.9	25.63	27.881	
4,600.0	4,470.9	4,499.8	4,470.9	21.4	12.4	156.00	-357.0	167.2	740.0	714.1	25.98	28.486	
4,700.0	4,567.0	4,595.8	4,567.0	22.0	12.5	156.85	-357.0	167.2	765.7	739.4	26.34	29.074	
4,800.0	4,663.0	4,691.9	4,663.0	22.6	12.6	157.63	-357.0	167.2	791.6	764.9	26.70	29.645	
4,900.0	4,759.1	4,787.9	4,759.1	23.1	12.8	158.37	-357.0	167.2	817.5	790.5	27.07	30.200	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-20 Pad Sec.20-T5N-R62W - Antelope 24-21-20HC - Wellbore #1 - Plan #2 (11-13-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,855.1	4,884.0	4,855.1	23.7	12.9	159.07	-357.0	167.2	843.6	816.2	27.45	30.738	
5,100.0	4,951.3	4,980.1	4,951.3	24.3	13.1	159.80	-357.0	167.2	869.4	841.6	27.84	31.233	
5,200.0	5,048.2	5,077.1	5,048.2	24.7	13.2	160.50	-357.0	167.2	892.5	864.3	28.20	31.653	
5,300.0	5,146.0	5,174.9	5,146.0	25.1	13.4	161.07	-357.0	167.2	912.4	883.9	28.54	31.967	
5,400.0	5,244.4	5,273.3	5,244.4	25.4	13.6	161.53	-357.0	167.2	929.1	900.2	28.87	32.181	
5,500.0	5,343.4	5,372.3	5,343.4	25.6	13.7	161.89	-357.0	167.2	942.6	913.4	29.18	32.302	
5,600.0	5,442.8	5,471.7	5,442.8	25.9	13.9	162.15	-357.0	167.2	952.8	923.3	29.47	32.334	
5,700.0	5,542.6	5,571.4	5,542.6	26.0	14.0	162.33	-357.0	167.2	959.7	930.0	29.73	32.280	
5,800.0	5,642.5	5,671.3	5,642.5	26.2	14.2	162.42	-357.0	167.2	963.3	933.3	29.97	32.143	
5,900.0	5,742.5	5,771.3	5,742.5	26.3	14.4	-90.22	-357.0	167.2	963.8	933.5	30.33	31.777	
5,966.3	5,808.7	5,837.6	5,808.7	26.3	14.5	-90.75	-357.0	167.2	963.8	933.4	30.45	31.653	
6,000.0	5,842.5	5,871.3	5,842.5	26.4	14.5	-90.75	-357.0	167.2	963.8	933.2	30.56	31.541	
6,100.0	5,941.8	5,970.7	5,941.8	26.4	14.7	-91.31	-357.0	167.2	964.0	933.1	30.93	31.171	
6,200.0	6,037.5	6,070.3	6,041.4	26.4	14.9	-92.77	-354.7	167.2	965.0	933.7	31.31	30.817	
6,300.0	6,126.0	6,177.7	6,146.5	26.4	14.9	-94.34	-333.7	167.2	967.0	935.5	31.48	30.719	
6,400.0	6,204.0	6,292.4	6,251.4	26.3	14.9	-95.81	-288.0	167.3	969.7	938.3	31.39	30.896	
6,500.0	6,268.6	6,415.0	6,349.7	26.2	14.7	-97.09	-215.1	167.4	972.8	941.6	31.16	31.219	
6,600.0	6,317.6	6,545.3	6,432.3	26.1	14.6	-98.10	-114.8	167.5	975.8	944.8	31.05	31.431	
6,700.0	6,349.4	6,681.9	6,489.5	26.0	14.6	-98.74	8.8	167.6	978.2	946.8	31.38	31.174	
6,800.0	6,374.9	6,787.8	6,517.3	26.0	14.9	-98.76	111.0	167.7	979.0	946.9	32.18	30.422	
6,900.0	6,387.7	6,922.1	6,538.7	26.1	15.7	-98.88	243.2	167.9	980.4	946.8	33.65	29.136	
7,000.0	6,388.0	7,027.1	6,539.0	26.3	16.7	-98.85	348.2	168.0	981.2	945.8	35.35	27.754	
7,100.0	6,388.0	7,127.1	6,539.0	26.6	17.7	-98.85	448.2	168.1	982.0	944.7	37.31	26.319	
7,200.0	6,388.0	7,227.1	6,539.0	27.0	18.8	-98.84	548.2	168.2	982.8	943.3	39.54	24.857	
7,300.0	6,388.0	7,327.1	6,539.0	27.7	20.1	-98.83	648.2	168.4	983.6	941.6	41.99	23.424	
7,400.0	6,388.0	7,427.1	6,539.0	28.4	21.5	-98.82	748.2	168.5	984.4	939.8	44.63	22.055	
7,500.0	6,388.0	7,527.1	6,539.0	29.4	23.0	-98.82	848.2	168.6	985.2	937.8	47.43	20.770	
7,600.0	6,388.0	7,627.1	6,539.0	30.4	24.5	-98.81	948.2	168.7	986.0	935.7	50.37	19.577	
7,700.0	6,388.0	7,727.0	6,539.0	31.6	26.0	-98.80	1,048.2	168.8	986.8	933.4	53.41	18.478	
7,800.0	6,388.0	7,827.0	6,539.0	32.9	27.7	-98.79	1,148.2	168.9	987.6	931.1	56.54	17.468	
7,900.0	6,388.0	7,927.0	6,539.0	34.2	29.3	-98.79	1,248.2	169.1	988.4	928.7	59.75	16.543	
8,000.0	6,388.0	8,027.0	6,539.0	35.6	31.0	-98.78	1,348.2	169.2	989.3	926.2	63.03	15.696	
8,100.0	6,388.0	8,127.0	6,539.0	37.1	32.7	-98.77	1,448.2	169.3	990.1	923.7	66.36	14.920	
8,200.0	6,388.0	8,227.0	6,539.0	38.6	34.4	-98.77	1,548.2	169.4	990.9	921.1	69.74	14.208	
8,300.0	6,388.0	8,327.0	6,539.0	40.2	36.2	-98.76	1,648.2	169.5	991.7	918.5	73.16	13.555	
8,400.0	6,388.0	8,427.0	6,539.0	41.8	37.9	-98.75	1,748.2	169.6	992.5	915.9	76.62	12.954	
8,500.0	6,388.0	8,527.0	6,539.0	43.4	39.7	-98.74	1,848.1	169.7	993.3	913.2	80.11	12.400	
8,600.0	6,388.0	8,627.0	6,539.0	45.0	41.5	-98.74	1,948.1	169.9	994.1	910.5	83.62	11.888	
8,700.0	6,388.0	8,727.0	6,539.0	46.7	43.3	-98.73	2,048.1	170.0	994.9	907.7	87.16	11.414	
8,800.0	6,388.0	8,827.0	6,539.0	48.4	45.1	-98.72	2,148.1	170.1	995.7	905.0	90.72	10.975	
8,900.0	6,388.0	8,927.0	6,539.0	50.1	46.9	-98.72	2,248.1	170.2	996.5	902.2	94.30	10.567	
9,000.0	6,388.0	9,027.0	6,539.0	51.8	48.8	-98.71	2,348.1	170.3	997.3	899.4	97.90	10.187	
9,100.0	6,388.0	9,127.0	6,539.0	53.6	50.6	-98.70	2,448.1	170.4	998.1	896.6	101.51	9.832	
9,200.0	6,388.0	9,227.0	6,539.0	55.3	52.4	-98.69	2,548.1	170.6	998.9	893.8	105.14	9.501	
9,300.0	6,388.0	9,327.0	6,539.0	57.1	54.3	-98.69	2,648.1	170.7	999.7	891.0	108.78	9.191	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope 21-20 (Exist.) - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 ft

Survey Program: 530-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,100.0	6,388.0	6,561.6	6,381.4	71.4	27.6	-91.03	4,241.7	596.0	978.3	892.9	85.44	11.450	
10,200.0	6,388.0	6,561.5	6,381.3	73.2	27.6	-91.03	4,241.7	596.0	899.6	812.3	87.31	10.303	
10,300.0	6,388.0	6,561.5	6,381.3	75.1	27.6	-91.02	4,241.7	596.0	825.4	736.2	89.18	9.256	
10,400.0	6,388.0	6,561.5	6,381.3	76.9	27.6	-91.02	4,241.7	596.0	757.3	666.2	91.05	8.317	
10,500.0	6,388.0	6,561.5	6,381.3	78.7	27.6	-91.02	4,241.7	596.0	696.8	603.9	92.92	7.499	
10,600.0	6,388.0	6,561.5	6,381.3	80.6	27.6	-91.02	4,241.7	596.0	646.3	551.5	94.79	6.818	
10,700.0	6,388.0	6,561.5	6,381.3	82.4	27.6	-91.02	4,241.7	596.0	608.1	511.4	96.67	6.291	
10,800.0	6,388.0	6,561.5	6,381.2	84.3	27.6	-91.02	4,241.7	596.0	584.7	486.2	98.55	5.933	
10,889.4	6,388.0	6,561.4	6,381.2	85.9	27.6	-91.01	4,241.7	596.0	577.9	477.6	100.23	5.765	CC
10,900.0	6,388.0	6,561.4	6,381.2	86.1	27.6	-91.01	4,241.7	596.0	578.0	477.5	100.43	5.755	ES
11,000.0	6,388.0	6,561.4	6,381.2	88.0	27.6	-91.01	4,241.7	596.0	588.4	486.0	102.31	5.751	SF
11,083.2	6,388.0	6,561.4	6,381.2	89.5	27.6	-91.01	4,241.7	596.0	609.5	505.6	103.88	5.867	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope 22-20 (Exist.) - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 ft

Survey Program: 530-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,800.0	6,388.0	6,752.8	6,394.8	48.4	37.6	-92.16	2,902.0	530.1	979.9	903.3	76.58	12.796	
8,900.0	6,388.0	6,751.8	6,393.7	50.1	37.6	-92.06	2,902.0	530.1	905.7	827.3	78.36	11.558	
9,000.0	6,388.0	6,750.7	6,392.7	51.8	37.6	-91.97	2,902.0	530.1	836.9	756.8	80.16	10.441	
9,100.0	6,388.0	6,749.6	6,391.6	53.6	37.6	-91.87	2,902.0	530.1	775.0	693.0	81.97	9.455	
9,200.0	6,388.0	6,748.5	6,390.5	55.3	37.6	-91.76	2,902.1	530.0	721.6	637.9	83.78	8.614	
9,300.0	6,388.0	6,747.4	6,389.3	57.1	37.6	-91.66	2,902.1	530.0	678.9	593.3	85.60	7.932	
9,400.0	6,388.0	6,746.2	6,388.2	58.8	37.6	-91.56	2,902.1	530.0	648.9	561.5	87.42	7.423	
9,500.0	6,388.0	6,745.0	6,387.0	60.6	37.6	-91.45	2,902.1	530.0	633.4	544.2	89.25	7.097	
9,549.3	6,388.0	6,744.5	6,386.4	61.5	37.6	-91.40	2,902.1	529.9	631.5	541.4	90.15	7.005	CC, ES
9,600.0	6,388.0	6,743.9	6,385.8	62.4	37.6	-91.35	2,902.1	529.9	633.6	542.5	91.08	6.956	SF
9,700.0	6,388.0	6,742.7	6,384.6	64.2	37.6	-91.24	2,902.1	529.9	649.3	556.3	92.92	6.987	
9,800.0	6,388.0	6,741.4	6,383.4	66.0	37.6	-91.13	2,902.1	529.9	679.5	584.7	94.76	7.170	
9,900.0	6,388.0	6,740.2	6,382.2	67.8	37.6	-91.01	2,902.2	529.8	722.4	625.8	96.61	7.477	
10,000.0	6,388.0	6,738.9	6,380.9	69.6	37.6	-90.90	2,902.2	529.8	775.9	677.4	98.46	7.880	
10,100.0	6,388.0	6,737.6	6,379.6	71.4	37.6	-90.78	2,902.2	529.8	837.9	737.6	100.31	8.353	
10,200.0	6,388.0	6,736.3	6,378.3	73.2	37.6	-90.66	2,902.2	529.7	906.8	804.6	102.17	8.875	
10,300.0	6,388.0	6,735.0	6,377.0	75.1	37.6	-90.54	2,902.2	529.7	981.0	877.0	104.02	9.431	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope 23-20 (Exist.) - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 ft

Survey Program: 499-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	55.48	295.1	429.1	520.8				
100.0	100.0	93.6	93.6	0.1	0.1	55.48	295.2	429.1	520.9	520.6	0.22	2,388.249	
200.0	200.0	192.2	192.2	0.3	0.2	55.48	295.4	429.5	521.3	520.7	0.55	941.034	
300.0	300.0	290.8	290.8	0.6	0.3	55.47	295.8	430.0	521.9	521.0	0.89	586.609	
400.0	400.0	389.3	389.3	0.8	0.4	55.46	296.4	430.7	522.9	521.7	1.23	426.645	
500.0	500.0	487.9	487.9	1.0	0.6	55.45	297.2	431.6	524.1	522.5	1.56	335.668	
600.0	600.0	579.3	579.2	1.2	0.7	55.32	299.3	432.5	526.2	524.2	1.98	266.071	
700.0	700.0	664.8	664.5	1.5	0.9	54.89	304.6	433.2	530.5	528.1	2.40	220.699	
800.0	800.0	746.1	745.3	1.7	1.2	54.17	313.5	434.3	537.9	535.1	2.84	189.313	
900.0	900.0	827.1	825.4	1.9	1.4	-54.10	326.1	436.0	547.9	544.6	3.26	167.915	
1,000.0	999.8	904.8	901.4	2.1	1.7	-55.42	341.8	438.0	559.5	555.8	3.70	151.267	
1,100.0	1,099.5	978.2	972.5	2.3	2.0	-56.93	359.7	441.1	573.8	569.7	4.16	138.095	
1,200.0	1,198.7	1,064.0	1,054.6	2.6	2.4	-59.16	384.4	444.3	590.0	585.3	4.70	125.514	
1,300.0	1,297.5	1,157.4	1,143.4	2.8	2.9	-61.89	413.1	446.9	606.7	601.4	5.29	114.773	
1,400.0	1,395.6	1,255.3	1,236.9	3.2	3.4	-64.81	442.3	449.9	623.2	617.3	5.89	105.747	
1,500.0	1,493.1	1,352.3	1,329.7	3.5	3.9	-67.75	470.2	452.6	639.3	632.7	6.54	97.711	
1,600.0	1,589.6	1,428.8	1,402.7	4.0	4.3	-70.11	493.0	454.8	657.0	649.7	7.21	91.161	
1,700.0	1,685.7	1,522.1	1,491.4	4.5	4.8	-73.41	521.9	457.2	677.2	669.2	7.97	84.998	
1,800.0	1,781.7	1,621.1	1,585.8	5.0	5.4	-76.77	551.7	459.2	698.7	690.0	8.75	79.872	
1,900.0	1,877.8	1,710.9	1,671.6	5.5	5.8	-79.63	578.1	460.9	721.7	712.2	9.51	75.895	
2,000.0	1,973.8	1,813.7	1,770.1	6.1	6.4	-82.67	607.4	463.1	745.8	735.5	10.30	72.410	
2,100.0	2,069.9	1,891.8	1,845.0	6.6	6.8	-84.84	629.4	464.9	771.5	760.4	11.04	69.895	
2,200.0	2,165.9	1,994.6	1,943.5	7.2	7.4	-87.46	658.7	468.3	799.0	787.2	11.83	67.542	
2,300.0	2,261.9	2,067.4	2,013.3	7.8	7.8	-89.22	679.1	470.4	827.4	814.9	12.56	65.877	
2,400.0	2,358.0	2,152.2	2,094.1	8.4	8.2	-91.22	705.0	472.4	859.1	845.7	13.32	64.480	
2,500.0	2,454.0	2,244.6	2,182.2	8.9	8.7	-93.27	732.6	474.3	891.2	877.1	14.10	63.209	
2,600.0	2,550.1	2,345.4	2,278.4	9.5	9.3	-95.26	762.4	477.9	924.2	909.4	14.89	62.080	
2,700.0	2,646.1	2,434.8	2,364.2	10.1	9.8	-96.89	787.6	481.1	956.8	941.1	15.65	61.122	
2,800.0	2,742.2	2,525.5	2,450.9	10.7	10.3	-98.42	814.0	485.1	991.0	974.5	16.43	60.328	
7,500.0	6,388.0	6,557.5	6,385.6	29.4	26.2	-90.26	1,577.3	579.4	922.0	871.7	50.27	18.340	
7,600.0	6,388.0	6,557.9	6,386.0	30.4	26.2	-90.30	1,577.3	579.4	845.6	793.9	51.72	16.349	
7,700.0	6,388.0	6,558.3	6,386.3	31.6	26.2	-90.34	1,577.3	579.4	774.6	721.4	53.23	14.552	
7,800.0	6,388.0	6,558.7	6,386.7	32.9	26.2	-90.38	1,577.3	579.4	710.6	655.9	54.79	12.970	
7,900.0	6,388.0	6,559.1	6,387.1	34.2	26.2	-90.42	1,577.3	579.4	655.8	599.4	56.39	11.629	
8,000.0	6,388.0	6,559.4	6,387.5	35.6	26.2	-90.45	1,577.3	579.4	612.4	554.4	58.03	10.554	
8,100.0	6,388.0	6,559.8	6,387.9	37.1	26.2	-90.49	1,577.3	579.4	583.1	523.4	59.69	9.769	
8,200.0	6,388.0	6,560.2	6,388.3	38.6	26.2	-90.54	1,577.3	579.4	570.1	508.7	61.39	9.288	
8,225.0	6,388.0	6,560.3	6,388.4	39.0	26.2	-90.55	1,577.3	579.4	569.6	507.8	61.81	9.215	ES
8,300.0	6,388.0	6,560.7	6,388.7	40.2	26.2	-90.58	1,577.3	579.4	574.5	511.4	63.10	9.105	SF
8,400.0	6,388.0	6,561.1	6,389.1	41.8	26.2	-90.62	1,577.3	579.4	595.9	531.0	64.83	9.191	
8,500.0	6,388.0	6,561.5	6,389.5	43.4	26.2	-90.66	1,577.3	579.4	632.5	565.9	66.58	9.499	
8,600.0	6,388.0	6,561.9	6,390.0	45.0	26.2	-90.70	1,577.3	579.4	682.0	613.6	68.35	9.978	
8,700.0	6,388.0	6,562.3	6,390.4	46.7	26.2	-90.74	1,577.3	579.4	741.7	671.5	70.13	10.576	
8,800.0	6,388.0	6,562.7	6,390.8	48.4	26.2	-90.78	1,577.3	579.4	809.4	737.5	71.92	11.254	
8,900.0	6,388.0	6,563.1	6,391.2	50.1	26.2	-90.83	1,577.3	579.4	883.2	809.5	73.72	11.981	
9,000.0	6,388.0	6,563.6	6,391.6	51.8	26.2	-90.87	1,577.3	579.4	961.8	886.3	75.52	12.735	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope 24-20 (Exist.) - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 ft

Survey Program: 6382-UNKNOWN — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	56.50	295.1	445.8	534.6				
100.0	100.0	95.0	95.0	0.1	1.9	56.50	295.1	445.8	534.6	532.6	2.01	265.627	
200.0	200.0	195.0	195.0	0.3	3.9	56.50	295.1	445.8	534.6	530.4	4.24	126.163	
300.0	300.0	295.0	295.0	0.6	5.9	56.50	295.1	445.8	534.6	528.1	6.46	82.728	
400.0	400.0	395.0	395.0	0.8	7.9	56.50	295.1	445.8	534.6	525.9	8.69	61.541	
500.0	500.0	495.0	495.0	1.0	9.9	56.50	295.1	445.8	534.6	523.7	10.91	48.993	
600.0	600.0	595.0	595.0	1.2	11.9	56.50	295.1	445.8	534.6	521.5	13.14	40.696	
700.0	700.0	695.0	695.0	1.5	13.9	56.50	295.1	445.8	534.6	519.2	15.36	34.802	
800.0	800.0	795.0	795.0	1.7	15.9	56.50	295.1	445.8	534.6	517.0	17.59	30.399	
900.0	900.0	895.0	895.0	1.9	17.9	-51.02	295.1	445.8	533.5	513.7	19.79	26.960	
1,000.0	999.8	994.8	994.8	2.1	19.9	-51.51	295.1	445.8	530.2	508.2	21.97	24.136	
1,100.0	1,099.5	1,094.5	1,094.5	2.3	21.9	-52.34	295.1	445.8	524.8	500.7	24.14	21.737	
1,200.0	1,198.7	1,193.7	1,193.7	2.6	23.9	-53.52	295.1	445.8	517.4	491.1	26.32	19.658	
1,300.0	1,297.5	1,292.5	1,292.5	2.8	25.8	-55.08	295.1	445.8	508.2	479.7	28.51	17.826	
1,400.0	1,395.6	1,390.6	1,390.6	3.2	27.8	-57.04	295.1	445.8	497.5	466.7	30.72	16.191	
1,500.0	1,493.1	1,488.1	1,488.1	3.5	29.8	-59.43	295.1	445.8	485.4	452.4	32.98	14.717	
1,600.0	1,589.6	1,584.6	1,584.6	4.0	31.7	-62.30	295.1	445.8	472.4	437.1	35.30	13.383	
1,700.0	1,685.7	1,680.7	1,680.7	4.5	33.6	-65.29	295.1	445.8	459.7	422.0	37.74	12.182	
1,800.0	1,781.7	1,776.7	1,776.7	5.0	35.5	-68.41	295.1	445.8	448.4	408.2	40.23	11.148	
1,900.0	1,877.8	1,872.8	1,872.8	5.5	37.5	-71.68	295.1	445.8	438.6	395.8	42.74	10.261	
2,000.0	1,973.8	1,968.8	1,968.8	6.1	39.4	-75.07	295.1	445.8	430.3	385.0	45.28	9.503	
2,100.0	2,069.9	2,064.9	2,064.9	6.6	41.3	-78.57	295.1	445.8	423.7	375.9	47.82	8.859	
2,200.0	2,165.9	2,160.9	2,160.9	7.2	43.2	-82.17	295.1	445.8	418.8	368.5	50.37	8.315	
2,300.0	2,261.9	2,256.9	2,256.9	7.8	45.1	-85.82	295.1	445.8	415.8	362.9	52.90	7.860	
2,400.0	2,358.0	2,353.0	2,353.0	8.4	47.1	-89.51	295.1	445.8	414.6	359.2	55.41	7.483	
2,413.2	2,370.7	2,365.7	2,365.7	8.4	47.3	-90.00	295.1	445.8	414.6	358.9	55.74	7.438	CC
2,500.0	2,454.0	2,449.0	2,449.0	8.9	49.0	-93.20	295.1	445.8	415.3	357.4	57.89	7.174	ES
2,600.0	2,550.1	2,545.1	2,545.1	9.5	50.9	-96.87	295.1	445.8	417.9	357.5	60.33	6.926	
2,700.0	2,646.1	2,641.1	2,641.1	10.1	52.8	-100.48	295.1	445.8	422.2	359.5	62.72	6.732	
2,800.0	2,742.2	2,737.2	2,737.2	10.7	54.7	-104.01	295.1	445.8	428.4	363.3	65.07	6.583	
2,900.0	2,838.2	2,833.2	2,833.2	11.3	56.7	-107.43	295.1	445.8	436.2	368.8	67.37	6.475	
3,000.0	2,934.2	2,929.2	2,929.2	11.9	58.6	-110.73	295.1	445.8	445.7	376.0	69.62	6.401	
3,100.0	3,030.3	3,025.3	3,025.3	12.4	60.5	-113.90	295.1	445.8	456.6	384.8	71.83	6.357	
3,200.0	3,126.3	3,121.3	3,121.3	13.0	62.4	-116.91	295.1	445.8	469.0	395.0	74.00	6.337	
3,300.0	3,222.4	3,217.4	3,217.4	13.6	64.3	-119.77	295.1	445.8	482.6	406.5	76.14	6.339	
3,400.0	3,318.4	3,313.4	3,313.4	14.2	66.3	-122.48	295.1	445.8	497.4	419.2	78.24	6.358	
3,500.0	3,414.5	3,409.5	3,409.5	14.8	68.2	-125.04	295.1	445.8	513.3	433.0	80.32	6.391	
3,600.0	3,510.5	3,505.5	3,505.5	15.4	70.1	-127.44	295.1	445.8	530.2	447.9	82.37	6.437	
3,700.0	3,606.5	3,601.5	3,601.5	16.0	72.0	-129.70	295.1	445.8	548.0	463.6	84.42	6.492	
3,800.0	3,702.6	3,697.6	3,697.6	16.6	74.0	-131.82	295.1	445.8	566.6	480.2	86.44	6.555	
3,900.0	3,798.6	3,793.6	3,793.6	17.2	75.9	-133.81	295.1	445.8	586.0	497.5	88.46	6.624	
4,000.0	3,894.7	3,889.7	3,889.7	17.8	77.8	-135.67	295.1	445.8	606.0	515.5	90.48	6.698	
4,100.0	3,990.7	3,985.7	3,985.7	18.4	79.7	-137.42	295.1	445.8	626.6	534.1	92.48	6.775	
4,200.0	4,086.8	4,081.8	4,081.8	19.0	81.6	-139.06	295.1	445.8	647.7	553.2	94.49	6.855	
4,300.0	4,182.8	4,177.8	4,177.8	19.6	83.6	-140.60	295.1	445.8	669.4	572.9	96.49	6.937	
4,400.0	4,278.8	4,273.8	4,273.8	20.2	85.5	-142.04	295.1	445.8	691.5	593.0	98.50	7.020	
4,500.0	4,374.9	4,369.9	4,369.9	20.8	87.4	-143.40	295.1	445.8	713.9	613.4	100.51	7.103	
4,600.0	4,470.9	4,465.9	4,465.9	21.4	89.3	-144.67	295.1	445.8	736.8	634.3	102.51	7.187	
4,700.0	4,567.0	4,562.0	4,562.0	22.0	91.2	-145.87	295.1	445.8	760.0	655.5	104.53	7.271	
4,800.0	4,663.0	4,658.0	4,658.0	22.6	93.2	-147.00	295.1	445.8	783.5	676.9	106.54	7.354	
4,900.0	4,759.1	4,754.1	4,754.1	23.1	95.1	-148.07	295.1	445.8	807.2	698.7	108.56	7.436	
5,000.0	4,855.1	4,850.1	4,850.1	23.7	97.0	-149.07	295.1	445.8	831.3	720.7	110.58	7.517	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope 24-20 (Exist.) - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 ft

Survey Program: 6382-UNKNOWN — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	4,951.3	4,946.3	4,946.3	24.3	98.9	-150.13	295.1	445.8	855.1	742.2	112.92	7.573	
5,200.0	5,048.2	5,043.2	5,043.2	24.7	100.9	-151.13	295.1	445.8	876.6	761.0	115.54	7.587	
5,300.0	5,146.0	5,141.0	5,141.0	25.1	102.8	-151.96	295.1	445.8	895.2	777.1	118.12	7.578	
5,400.0	5,244.4	5,239.4	5,239.4	25.4	104.8	-152.62	295.1	445.8	910.8	790.2	120.66	7.549	
5,500.0	5,343.4	5,338.4	5,338.4	25.6	106.8	-153.14	295.1	445.8	923.5	800.4	123.13	7.500	
5,600.0	5,442.8	5,437.8	5,437.8	25.9	108.8	-153.53	295.1	445.8	933.1	807.5	125.52	7.433	
5,700.0	5,542.6	5,537.6	5,537.6	26.0	110.8	-153.78	295.1	445.8	939.6	811.7	127.82	7.351	
5,800.0	5,642.5	5,637.5	5,637.5	26.2	112.7	-153.91	295.1	445.8	942.9	812.9	130.01	7.253	
5,900.0	5,742.5	5,737.5	5,737.5	26.3	114.7	-46.58	295.1	445.8	943.4	811.4	132.03	7.146	
6,000.0	5,842.5	5,837.5	5,837.5	26.4	116.7	-47.11	295.1	445.8	943.4	809.2	134.27	7.027	
6,100.0	5,941.8	5,936.8	5,936.8	26.4	118.7	-48.09	295.1	445.8	936.8	802.0	134.76	6.951	
6,200.0	6,037.5	6,032.5	6,032.5	26.4	120.7	-51.03	295.1	445.8	917.7	784.6	133.16	6.892	
6,300.0	6,126.0	6,121.0	6,121.0	26.4	122.4	-55.97	295.1	445.8	888.0	756.7	131.29	6.764	
6,400.0	6,204.0	6,199.0	6,199.0	26.3	124.0	-62.80	295.1	445.8	850.2	718.6	131.58	6.462	
6,500.0	6,268.6	6,263.6	6,263.6	26.2	125.3	-70.89	295.1	445.8	808.3	673.3	134.98	5.988	
6,600.0	6,317.6	6,312.6	6,312.6	26.1	126.3	-79.00	295.1	445.8	766.8	627.3	139.50	5.497	
6,700.0	6,349.4	6,344.4	6,344.4	26.0	126.9	-84.92	295.1	445.8	730.8	588.4	142.45	5.131	
6,800.0	6,374.9	6,369.9	6,369.9	26.0	127.4	-87.41	295.1	445.8	705.4	561.4	143.95	4.900	
6,900.0	6,387.7	6,382.0	6,382.0	26.1	127.6	-89.83	295.1	445.8	692.5	547.4	145.10	4.772	
6,941.6	6,388.8	6,382.0	6,382.0	26.1	127.6	-89.85	295.1	445.8	691.2	545.8	145.43	4.753 SF	
7,000.0	6,388.0	6,382.0	6,382.0	26.3	127.6	-89.92	295.1	445.8	693.7	547.8	145.89	4.755	
7,100.0	6,388.0	6,382.0	6,382.0	26.6	127.6	-89.92	295.1	445.8	709.2	562.3	146.83	4.830	
7,200.0	6,388.0	6,382.0	6,382.0	27.0	127.6	-89.92	295.1	445.8	738.0	590.0	147.92	4.989	
7,300.0	6,388.0	6,382.0	6,382.0	27.7	127.6	-89.92	295.1	445.8	778.6	629.5	149.11	5.222	
7,400.0	6,388.0	6,382.0	6,382.0	28.4	127.6	-89.92	295.1	445.8	829.4	679.0	150.41	5.515	
7,500.0	6,388.0	6,382.0	6,382.0	29.4	127.6	-89.92	295.1	445.8	888.6	736.8	151.79	5.854	
7,600.0	6,388.0	6,382.0	6,382.0	30.4	127.6	-89.92	295.1	445.8	954.6	801.4	153.24	6.230	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope I-20 (Exist) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 7500-UNKNOWN

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	53.28	295.1	395.6	493.8				
100.0	100.0	86.0	86.0	0.1	1.7	53.28	295.1	395.6	493.6	491.7	1.83	269.322	
200.0	200.0	186.0	186.0	0.3	3.7	53.28	295.1	395.6	493.6	489.5	4.06	121.645	
300.0	300.0	286.0	286.0	0.6	5.7	53.28	295.1	395.6	493.6	487.3	6.28	78.565	
400.0	400.0	386.0	386.0	0.8	7.7	53.28	295.1	395.6	493.6	485.0	8.51	58.018	
500.0	500.0	486.0	486.0	1.0	9.7	53.28	295.1	395.6	493.6	482.8	10.73	45.991	
600.0	600.0	586.0	586.0	1.2	11.7	53.28	295.1	395.6	493.6	480.6	12.96	38.094	
700.0	700.0	686.0	686.0	1.5	13.7	53.28	295.1	395.6	493.6	478.4	15.18	32.511	
800.0	800.0	786.0	786.0	1.7	15.7	53.28	295.1	395.6	493.6	476.1	17.41	28.356	
900.0	900.0	886.0	886.0	1.9	17.7	-54.25	295.1	395.6	492.5	472.9	19.61	25.118	
1,000.0	999.8	985.8	985.8	2.1	19.7	-54.80	295.1	395.6	489.5	467.7	21.79	22.463	
1,100.0	1,099.5	1,085.5	1,085.5	2.3	21.7	-55.72	295.1	395.6	484.5	460.5	23.97	20.210	
1,200.0	1,198.7	1,184.7	1,184.7	2.6	23.7	-57.04	295.1	395.6	477.7	451.6	26.16	18.261	
1,300.0	1,297.5	1,283.5	1,283.5	2.8	25.7	-58.77	295.1	395.6	469.3	441.0	28.36	16.547	
1,400.0	1,395.6	1,381.6	1,381.6	3.2	27.6	-60.94	295.1	395.6	459.6	429.0	30.60	15.022	
1,500.0	1,493.1	1,479.1	1,479.1	3.5	29.6	-63.60	295.1	395.6	448.9	416.1	32.88	13.654	
1,600.0	1,589.6	1,575.6	1,575.6	4.0	31.5	-66.75	295.1	395.6	437.8	402.5	35.23	12.425	
1,700.0	1,685.7	1,671.7	1,671.7	4.5	33.4	-70.08	295.1	395.6	427.2	389.5	37.68	11.335	
1,800.0	1,781.7	1,767.7	1,767.7	5.0	35.4	-73.54	295.1	395.6	418.1	378.0	40.18	10.407	
1,900.0	1,877.8	1,863.8	1,863.8	5.5	37.3	-77.13	295.1	395.6	410.8	368.1	42.69	9.623	
2,000.0	1,973.8	1,959.8	1,959.8	6.1	39.2	-80.82	295.1	395.6	405.3	360.1	45.22	8.963	
2,100.0	2,069.9	2,055.9	2,055.9	6.6	41.1	-84.59	295.1	395.6	401.6	353.9	47.74	8.412	
2,200.0	2,165.9	2,151.9	2,151.9	7.2	43.0	-88.41	295.1	395.6	399.8	349.6	50.25	7.957	
2,241.4	2,205.6	2,191.6	2,191.6	7.4	43.8	-90.00	295.1	395.6	399.7	348.4	51.28	7.794	CC
2,300.0	2,261.9	2,247.9	2,247.9	7.8	45.0	-92.25	295.1	395.6	400.0	347.3	52.73	7.586	
2,400.0	2,358.0	2,344.0	2,344.0	8.4	46.9	-96.06	295.1	395.6	402.1	346.9	55.17	7.288	ES
2,500.0	2,454.0	2,440.0	2,440.0	8.9	48.8	-99.82	295.1	395.6	406.1	348.5	57.58	7.053	
2,600.0	2,550.1	2,536.1	2,536.1	9.5	50.7	-103.50	295.1	395.6	411.9	352.0	59.94	6.872	
2,700.0	2,646.1	2,632.1	2,632.1	10.1	52.6	-107.06	295.1	395.6	419.6	357.3	62.26	6.739	
2,800.0	2,742.2	2,728.2	2,728.2	10.7	54.6	-110.50	295.1	395.6	428.9	364.3	64.53	6.646	
2,900.0	2,838.2	2,824.2	2,824.2	11.3	56.5	-113.79	295.1	395.6	439.7	373.0	66.75	6.588	
3,000.0	2,934.2	2,920.2	2,920.2	11.9	58.4	-116.92	295.1	395.6	452.1	383.1	68.94	6.558	
3,100.0	3,030.3	3,016.3	3,016.3	12.4	60.3	-119.89	295.1	395.6	465.7	394.7	71.09	6.552	
3,200.0	3,126.3	3,112.3	3,112.3	13.0	62.2	-122.69	295.1	395.6	480.6	407.4	73.20	6.566	
3,300.0	3,222.4	3,208.4	3,208.4	13.6	64.2	-125.32	295.1	395.6	496.7	421.4	75.30	6.596	
3,400.0	3,318.4	3,304.4	3,304.4	14.2	66.1	-127.79	295.1	395.6	513.7	436.3	77.37	6.639	
3,500.0	3,414.5	3,400.5	3,400.5	14.8	68.0	-130.11	295.1	395.6	531.6	452.2	79.42	6.693	
3,600.0	3,510.5	3,496.5	3,496.5	15.4	69.9	-132.28	295.1	395.6	550.4	468.9	81.47	6.756	
3,700.0	3,606.5	3,592.5	3,592.5	16.0	71.9	-134.31	295.1	395.6	569.9	486.4	83.50	6.825	
3,800.0	3,702.6	3,688.6	3,688.6	16.6	73.8	-136.21	295.1	395.6	590.1	504.5	85.52	6.899	
3,900.0	3,798.6	3,784.6	3,784.6	17.2	75.7	-137.99	295.1	395.6	610.8	523.3	87.54	6.978	
4,000.0	3,894.7	3,880.7	3,880.7	17.8	77.6	-139.65	295.1	395.6	632.2	542.6	89.56	7.058	
4,100.0	3,990.7	3,976.7	3,976.7	18.4	79.5	-141.21	295.1	395.6	654.0	562.4	91.58	7.141	
4,200.0	4,086.8	4,072.8	4,072.8	19.0	81.5	-142.66	295.1	395.6	676.3	582.7	93.60	7.225	
4,300.0	4,182.8	4,168.8	4,168.8	19.6	83.4	-144.03	295.1	395.6	698.9	603.3	95.61	7.310	
4,400.0	4,278.8	4,264.8	4,264.8	20.2	85.3	-145.31	295.1	395.6	721.9	624.3	97.64	7.394	
4,500.0	4,374.9	4,360.9	4,360.9	20.8	87.2	-146.52	295.1	395.6	745.3	645.6	99.66	7.479	
4,600.0	4,470.9	4,456.9	4,456.9	21.4	89.1	-147.65	295.1	395.6	768.9	667.3	101.68	7.562	
4,700.0	4,567.0	4,553.0	4,553.0	22.0	91.1	-148.71	295.1	395.6	792.9	689.2	103.71	7.645	
4,800.0	4,663.0	4,649.0	4,649.0	22.6	93.0	-149.72	295.1	395.6	817.1	711.3	105.74	7.727	
4,900.0	4,759.1	4,745.1	4,745.1	23.1	94.9	-150.67	295.1	395.6	841.5	733.7	107.78	7.807	
5,000.0	4,855.1	4,841.1	4,841.1	23.7	96.8	-151.56	295.1	395.6	866.1	756.2	109.82	7.886	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope I-20 (Exist) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 7500-UNKNOWN

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	4,951.3	4,937.3	4,937.3	24.3	98.7	-152.51	295.1	395.6	890.5	778.3	112.20	7.937	
5,200.0	5,048.2	5,034.2	5,034.2	24.7	100.7	-153.42	295.1	395.6	912.4	797.5	114.86	7.943	
5,300.0	5,146.0	5,132.0	5,132.0	25.1	102.6	-154.16	295.1	395.6	931.4	813.9	117.49	7.927	
5,400.0	5,244.4	5,230.4	5,230.4	25.4	104.6	-154.76	295.1	395.6	947.3	827.2	120.06	7.890	
5,500.0	5,343.4	5,329.4	5,329.4	25.6	106.6	-155.23	295.1	395.6	960.2	837.6	122.55	7.835	
5,600.0	5,442.8	5,428.8	5,428.8	25.9	108.6	-155.58	295.1	395.6	969.9	845.0	124.96	7.762	
5,700.0	5,542.6	5,528.6	5,528.6	26.0	110.6	-155.81	295.1	395.6	976.5	849.3	127.27	7.673	
5,800.0	5,642.5	5,628.5	5,628.5	26.2	112.6	-155.93	295.1	395.6	979.9	850.5	129.46	7.569	
5,900.0	5,742.5	5,728.5	5,728.5	26.3	114.6	-48.59	295.1	395.6	980.5	849.0	131.49	7.457	
6,000.0	5,842.5	5,828.5	5,828.5	26.4	116.6	-49.13	295.1	395.6	980.5	846.7	133.72	7.332	
6,100.0	5,941.8	5,927.8	5,927.8	26.4	118.6	-50.10	295.1	395.6	974.1	839.8	134.33	7.252	
6,200.0	6,037.5	6,023.5	6,023.5	26.4	120.5	-53.00	295.1	395.6	955.8	822.8	133.03	7.185	
6,300.0	6,126.0	6,112.0	6,112.0	26.4	122.2	-57.83	295.1	395.6	927.3	795.7	131.58	7.047	
6,400.0	6,204.0	6,190.0	6,190.0	26.3	123.8	-64.42	295.1	395.6	891.2	759.0	132.16	6.743	
6,500.0	6,268.6	6,254.6	6,254.6	26.2	125.1	-72.12	295.1	395.6	851.3	715.9	135.47	6.284	
6,600.0	6,317.6	6,303.6	6,303.6	26.1	126.1	-79.75	295.1	395.6	812.1	672.5	139.65	5.815	
6,700.0	6,349.4	6,335.4	6,335.4	26.0	126.7	-85.27	295.1	395.6	778.3	635.9	142.36	5.467	
6,800.0	6,374.9	6,360.9	6,360.9	26.0	127.2	-87.59	295.1	395.6	754.5	610.7	143.80	5.247	
6,900.0	6,387.7	6,373.7	6,373.7	26.1	127.5	-89.90	295.1	395.6	742.5	597.6	144.94	5.123	
6,941.1	6,388.8	6,374.8	6,374.8	26.1	127.5	-90.00	295.1	395.6	741.4	596.1	145.29	5.103 SF	
7,000.0	6,388.0	6,374.0	6,374.0	26.3	127.5	-90.00	295.1	395.6	743.7	598.0	145.74	5.103	
7,100.0	6,388.0	6,374.0	6,374.0	26.6	127.5	-90.00	295.1	395.6	758.2	611.5	146.68	5.169	
7,200.0	6,388.0	6,374.0	6,374.0	27.0	127.5	-90.00	295.1	395.6	785.3	637.5	147.76	5.315	
7,300.0	6,388.0	6,374.0	6,374.0	27.7	127.5	-90.00	295.1	395.6	823.7	674.7	148.96	5.530	
7,400.0	6,388.0	6,374.0	6,374.0	28.4	127.5	-90.00	295.1	395.6	871.9	721.7	150.26	5.803	
7,500.0	6,388.0	6,374.0	6,374.0	29.4	127.5	-90.00	295.1	395.6	928.4	776.8	151.64	6.123	
7,600.0	6,388.0	6,374.0	6,374.0	30.4	127.5	-90.00	295.1	395.6	991.9	838.8	153.08	6.479	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope J-F-20HZ (Exist.) - Wellbore #1 - Wellbor

Offset Site Error: 0.0 ft

Survey Program: 221-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	61.9	0.0	61.9				
100.0	100.0	100.4	100.4	0.1	0.1	-0.03	61.6	0.0	61.6	61.4	0.23	272.090	
200.0	200.0	200.8	200.8	0.3	0.2	-0.13	60.7	-0.1	60.7	60.1	0.57	107.361	
300.0	300.0	300.8	300.7	0.6	0.4	-0.23	59.3	-0.2	59.3	58.4	0.98	60.702	
400.0	400.0	400.7	400.6	0.8	0.6	-0.20	58.2	-0.2	58.2	56.8	1.41	41.293	
500.0	500.0	500.8	500.8	1.0	0.8	-0.07	56.9	-0.1	56.9	55.1	1.85	30.846	
600.0	600.0	600.8	600.8	1.2	1.0	0.08	55.5	0.1	55.5	53.2	2.28	24.308	
700.0	700.0	700.9	700.8	1.5	1.3	0.34	54.0	0.3	54.1	51.3	2.72	19.858	
800.0	800.0	801.0	800.9	1.7	1.5	0.83	52.4	0.8	52.4	49.2	3.17	16.554	
900.0	900.0	901.1	901.0	1.9	1.7	-107.76	50.5	1.3	51.1	47.5	3.58	14.250	
966.7	966.6	967.8	967.7	2.0	1.8	-110.73	49.2	1.7	50.7	46.9	3.86	13.139	CC
1,000.0	999.8	1,001.0	1,000.9	2.1	1.9	-112.83	48.5	1.8	50.8	46.8	4.00	12.715	ES
1,100.0	1,099.5	1,100.8	1,100.7	2.3	2.1	-121.24	46.5	2.3	52.7	48.3	4.42	11.912	
1,200.0	1,198.7	1,200.5	1,200.4	2.6	2.4	-131.69	43.9	2.9	57.4	52.5	4.86	11.808	SF
1,300.0	1,297.5	1,299.3	1,299.1	2.8	2.6	-142.41	41.0	3.3	66.2	60.9	5.29	12.508	
1,400.0	1,395.6	1,397.5	1,397.2	3.2	2.8	-151.93	38.0	3.1	80.1	74.4	5.71	14.015	
1,500.0	1,493.1	1,494.7	1,494.4	3.5	3.0	-159.71	34.5	2.2	99.1	93.0	6.13	16.159	
1,600.0	1,589.6	1,591.0	1,590.6	4.0	3.2	-165.73	30.4	0.7	122.9	116.3	6.55	18.752	
1,700.0	1,685.7	1,686.7	1,686.1	4.5	3.5	-170.30	25.8	-1.2	149.7	142.7	7.01	21.366	
1,800.0	1,781.7	1,780.3	1,779.6	5.0	3.7	-173.69	20.8	-4.0	177.7	170.2	7.47	23.790	
1,900.0	1,877.8	1,876.0	1,875.0	5.5	3.9	-176.48	15.2	-7.8	206.9	198.9	7.95	26.025	
2,000.0	1,973.8	1,970.3	1,969.0	6.1	4.1	-178.84	8.4	-11.6	236.0	227.6	8.44	27.961	
2,100.0	2,069.9	2,060.1	2,058.3	6.6	4.4	179.02	0.8	-17.0	266.9	258.0	8.94	29.859	
2,200.0	2,165.9	2,152.5	2,149.9	7.2	4.6	176.88	-8.6	-24.1	299.4	289.9	9.48	31.590	
2,300.0	2,261.9	2,246.5	2,242.9	7.8	4.9	174.80	-19.7	-32.2	332.5	322.5	10.04	33.122	
2,400.0	2,358.0	2,338.7	2,333.9	8.4	5.2	172.92	-31.9	-40.2	365.9	355.3	10.62	34.460	
2,500.0	2,454.0	2,427.0	2,420.8	8.9	5.5	171.18	-44.9	-49.0	400.6	389.4	11.21	35.735	
2,600.0	2,550.1	2,522.3	2,514.4	9.5	5.8	169.43	-59.9	-59.0	435.9	424.0	11.84	36.802	
2,700.0	2,646.1	2,617.0	2,607.4	10.1	6.1	167.90	-75.5	-68.5	471.0	458.6	12.48	37.746	
2,800.0	2,742.2	2,707.2	2,695.8	10.7	6.5	166.60	-90.6	-77.5	506.3	493.2	13.11	38.612	
2,900.0	2,838.2	2,793.0	2,779.7	11.3	6.8	165.39	-105.9	-87.2	543.0	529.3	13.75	39.484	
3,000.0	2,934.2	2,889.2	2,873.7	11.9	7.1	164.22	-123.0	-98.4	580.2	565.8	14.42	40.239	
3,100.0	3,030.3	2,989.2	2,971.9	12.4	7.4	163.31	-139.2	-108.8	616.6	601.5	15.06	40.932	
3,200.0	3,126.3	3,088.9	3,070.0	13.0	7.8	162.64	-154.0	-118.0	651.9	636.2	15.70	41.528	
3,300.0	3,222.4	3,185.4	3,165.1	13.6	8.1	162.06	-168.4	-126.2	686.5	670.2	16.34	42.013	
3,400.0	3,318.4	3,274.5	3,252.8	14.2	8.4	161.53	-182.3	-134.0	721.4	704.4	16.99	42.458	
3,500.0	3,414.5	3,362.8	3,339.5	14.8	8.7	161.02	-196.3	-142.2	757.0	739.3	17.64	42.912	
3,600.0	3,510.5	3,447.1	3,422.4	15.4	9.0	160.60	-209.4	-150.7	793.3	775.0	18.28	43.398	
3,700.0	3,606.5	3,524.7	3,498.3	16.0	9.3	160.17	-222.4	-159.7	831.1	812.2	18.91	43.957	
3,800.0	3,702.6	3,604.6	3,576.1	16.6	9.7	159.66	-237.3	-170.3	870.6	851.0	19.58	44.452	
3,900.0	3,798.6	3,688.7	3,657.5	17.2	10.1	159.05	-254.6	-182.3	911.2	890.9	20.29	44.903	
4,000.0	3,894.7	3,788.0	3,753.7	17.8	10.5	158.38	-275.2	-196.2	951.7	930.6	21.05	45.203	
4,100.0	3,990.7	3,888.6	3,851.3	18.4	10.9	157.82	-295.1	-209.5	991.4	969.6	21.78	45.520	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope O-K-20HZ (Exist.) - Wellbore #1 - Wellbo

Offset Site Error: 0.0 ft

Survey Program: 122-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	3.65	43.7	2.8	43.8	43.8	0.00	N/A	
100.0	100.0	101.7	101.7	0.1	0.1	3.08	43.0	2.3	43.0	42.8	0.23	187.912	
200.0	200.0	202.2	202.2	0.3	0.3	3.11	40.7	2.2	40.8	40.1	0.65	62.509	
300.0	300.0	302.5	302.3	0.6	0.5	7.95	37.0	5.2	37.4	36.3	1.11	33.674	
400.0	400.0	402.2	401.8	0.8	0.8	19.06	32.4	11.2	34.3	32.7	1.58	21.689	
472.4	472.4	474.2	473.4	0.9	1.0	31.73	28.4	17.6	33.4	31.5	1.91	17.485	CC
500.0	500.0	501.7	500.7	1.0	1.1	36.81	26.9	20.1	33.6	31.5	2.03	16.502	ES
600.0	600.0	601.2	599.5	1.2	1.4	56.07	20.0	29.8	35.9	33.5	2.47	14.551	
700.0	700.0	699.8	697.0	1.5	1.7	75.21	10.8	40.9	42.5	39.6	2.95	14.426	
800.0	800.0	797.3	792.9	1.7	2.1	90.95	-0.9	54.1	54.7	51.2	3.50	15.628	
900.0	900.0	894.4	887.9	1.9	2.5	-5.94	-14.1	69.0	69.9	65.9	4.00	17.455	
1,000.0	999.8	991.7	982.7	2.1	2.9	1.29	-28.6	85.1	84.8	80.4	4.43	19.157	
1,100.0	1,099.5	1,088.4	1,076.7	2.3	3.4	6.76	-44.1	102.5	98.9	94.1	4.85	20.384	
1,200.0	1,198.7	1,185.4	1,170.3	2.6	3.9	11.04	-60.4	121.7	112.3	107.0	5.29	21.231	
1,300.0	1,297.5	1,282.6	1,263.8	2.8	4.5	14.54	-77.0	142.4	124.4	118.6	5.73	21.687	
1,400.0	1,395.6	1,380.3	1,357.5	3.2	5.0	17.58	-93.9	164.6	134.9	128.7	6.20	21.750	
1,500.0	1,493.1	1,480.4	1,453.3	3.5	5.5	20.43	-110.8	188.0	142.7	136.0	6.69	21.320	
1,600.0	1,589.6	1,583.3	1,552.1	4.0	6.0	23.28	-126.7	211.6	146.4	139.1	7.23	20.256	
1,700.0	1,685.7	1,688.9	1,654.5	4.5	6.5	26.34	-140.7	233.9	145.5	137.7	7.84	18.554	
1,800.0	1,781.7	1,792.1	1,755.3	5.0	6.9	29.78	-152.1	252.2	141.1	132.5	8.53	16.537	
1,900.0	1,877.8	1,892.6	1,853.9	5.5	7.3	33.50	-162.7	269.1	136.1	126.8	9.30	14.641	
2,000.0	1,973.8	1,993.4	1,952.9	6.1	7.7	37.53	-172.5	285.4	130.7	120.6	10.17	12.854	
2,100.0	2,069.9	2,091.7	2,049.5	6.6	8.0	42.29	-182.6	300.2	126.1	114.9	11.18	11.276	
2,200.0	2,165.9	2,191.9	2,148.1	7.2	8.4	48.23	-193.9	314.1	122.6	110.2	12.38	9.903	
2,300.0	2,261.9	2,292.4	2,247.2	7.8	8.8	55.21	-204.7	326.1	119.5	105.8	13.76	8.685	
2,400.0	2,358.0	2,391.3	2,345.2	8.4	9.1	63.29	-214.9	335.9	117.4	102.1	15.30	7.676	
2,424.6	2,381.6	2,415.3	2,368.9	8.5	9.2	65.23	-217.4	338.4	117.3	101.7	15.67	7.486	
2,500.0	2,454.0	2,489.5	2,442.2	8.9	9.4	70.93	-225.3	346.7	118.1	101.3	16.80	7.033	
2,600.0	2,550.1	2,589.9	2,541.4	9.5	9.8	77.86	-235.4	359.1	120.3	102.0	18.22	6.599	
2,700.0	2,646.1	2,689.0	2,639.0	10.1	10.1	83.69	-244.8	373.0	123.3	103.7	19.53	6.311	
2,800.0	2,742.2	2,786.8	2,735.0	10.7	10.5	88.42	-254.9	388.1	127.9	107.1	20.73	6.167	
2,900.0	2,838.2	2,885.0	2,831.4	11.3	10.9	92.55	-266.7	403.4	134.7	112.9	21.85	6.165	
3,000.0	2,934.2	2,984.3	2,929.0	11.9	11.3	96.78	-278.0	417.7	142.2	119.3	22.91	6.210	
3,100.0	3,030.3	3,081.2	3,024.3	12.4	11.7	100.91	-289.4	430.4	151.4	127.5	23.86	6.344	
3,200.0	3,126.3	3,180.1	3,121.8	13.0	12.0	104.99	-301.1	441.9	162.1	137.3	24.72	6.556	
3,300.0	3,222.4	3,280.5	3,221.1	13.6	12.4	108.96	-312.1	453.1	173.1	147.6	25.50	6.788	
3,400.0	3,318.4	3,383.1	3,322.4	14.2	12.7	112.47	-322.2	465.7	183.3	157.1	26.23	6.987	
3,500.0	3,414.5	3,486.9	3,424.7	14.8	13.1	115.34	-331.1	480.9	191.5	164.5	26.96	7.102	
3,600.0	3,510.5	3,587.5	3,523.4	15.4	13.5	117.43	-339.8	497.7	198.7	171.0	27.73	7.167	
3,700.0	3,606.5	3,682.7	3,616.6	16.0	13.9	118.68	-350.1	514.6	206.9	178.3	28.56	7.244	
3,800.0	3,702.6	3,780.1	3,711.6	16.6	14.3	119.36	-363.2	531.8	216.9	187.4	29.45	7.364	
3,900.0	3,798.6	3,878.5	3,807.7	17.2	14.8	120.09	-376.3	548.6	227.4	197.0	30.34	7.495	
4,000.0	3,894.7	3,976.3	3,903.0	17.8	15.2	120.62	-390.2	565.2	238.5	207.3	31.24	7.636	
4,100.0	3,990.7	4,074.6	3,999.0	18.4	15.6	121.22	-404.2	581.2	250.2	218.1	32.12	7.790	
4,200.0	4,086.8	4,174.2	4,096.6	19.0	16.0	122.16	-417.1	596.2	262.1	229.2	32.92	7.963	
4,300.0	4,182.8	4,274.2	4,195.0	19.6	16.4	123.47	-428.3	610.0	273.8	240.2	33.62	8.145	
4,400.0	4,278.8	4,373.7	4,293.0	20.2	16.8	124.83	-438.7	623.6	285.4	251.1	34.28	8.326	
4,500.0	4,374.9	4,471.7	4,389.8	20.8	17.1	126.38	-447.6	635.9	297.3	262.5	34.85	8.531	
4,600.0	4,470.9	4,566.3	4,483.7	21.4	17.4	128.28	-454.5	645.6	310.3	275.0	35.27	8.799	
4,700.0	4,567.0	4,662.4	4,579.3	22.0	17.6	130.57	-459.6	652.9	324.8	289.3	35.53	9.143	
4,800.0	4,663.0	4,758.7	4,675.4	22.6	17.9	133.03	-463.1	658.7	340.3	304.7	35.67	9.541	
4,900.0	4,759.1	4,854.7	4,771.2	23.1	18.0	135.48	-465.6	663.6	356.9	321.2	35.74	9.986	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope O-K-20HZ (Exist.) - Wellbore #1 - Wellbo

Offset Site Error: 0.0 ft

Survey Program: 122-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,855.1	4,949.6	4,866.0	23.7	18.2	137.93	-467.0	667.3	374.6	338.9	35.74	10.483	
5,100.0	4,951.3	5,044.5	4,960.9	24.3	18.4	140.43	-467.4	670.0	393.3	357.7	35.66	11.030	
5,200.0	5,048.2	5,140.4	5,056.8	24.7	18.5	142.66	-467.4	672.0	410.7	375.2	35.52	11.562	
5,300.0	5,146.0	5,237.9	5,154.3	25.1	18.6	144.46	-467.4	673.8	426.0	390.6	35.45	12.018	
5,400.0	5,244.4	5,337.0	5,253.4	25.4	18.8	145.84	-467.5	675.7	438.8	403.3	35.45	12.379	
5,500.0	5,343.4	5,435.4	5,351.8	25.6	18.9	146.91	-467.4	677.5	448.8	413.3	35.48	12.649	
5,600.0	5,442.8	5,535.4	5,451.7	25.9	19.1	147.75	-466.8	679.0	456.2	420.7	35.54	12.838	
5,700.0	5,542.6	5,634.4	5,550.8	26.0	19.2	148.33	-465.9	680.6	460.6	425.0	35.62	12.931	
5,800.0	5,642.5	5,732.3	5,648.6	26.2	19.3	148.65	-465.1	681.7	462.5	426.8	35.74	12.943	
5,900.0	5,742.5	5,831.8	5,748.1	26.3	19.4	-103.89	-464.3	682.6	461.9	425.9	36.08	12.801	
6,000.0	5,842.5	5,934.2	5,850.2	26.4	19.5	-103.61	-457.7	681.8	461.2	425.3	35.89	12.850	
6,100.0	5,941.8	6,061.7	5,973.2	26.4	19.4	-101.35	-425.3	681.4	458.1	422.9	35.17	13.027	
6,200.0	6,037.5	6,169.8	6,070.7	26.4	19.2	-99.46	-378.8	680.2	456.7	422.5	34.19	13.357	
6,254.0	6,086.4	6,228.6	6,120.1	26.4	19.1	-98.51	-347.0	679.7	456.3	422.7	33.61	13.579	
6,300.0	6,126.0	6,276.6	6,158.2	26.4	19.0	-97.77	-317.8	678.8	456.7	423.6	33.14	13.781	
6,400.0	6,204.0	6,377.9	6,231.3	26.3	18.7	-96.41	-247.8	676.9	458.1	425.9	32.24	14.210	
6,500.0	6,268.6	6,492.1	6,294.5	26.2	18.3	-94.48	-153.1	674.2	460.1	428.7	31.46	14.623	
6,600.0	6,317.6	6,580.9	6,329.8	26.1	18.1	-92.92	-71.8	671.4	463.5	432.3	31.21	14.851	
6,700.0	6,349.4	6,680.2	6,360.7	26.0	17.9	-92.28	22.4	667.2	468.6	437.2	31.46	14.895	
6,800.0	6,374.9	6,773.1	6,378.7	26.0	17.8	-91.38	113.3	661.0	475.9	443.8	32.14	14.809	
6,900.0	6,387.7	6,874.8	6,382.4	26.1	18.0	-89.39	214.6	654.1	483.6	450.5	33.09	14.615	
7,000.0	6,388.0	6,992.5	6,382.7	26.3	18.5	-89.27	332.2	648.7	489.1	454.6	34.53	14.166	
7,100.0	6,388.0	7,096.6	6,383.5	26.6	19.2	-89.36	436.3	647.7	490.9	454.6	36.25	13.540	
7,200.0	6,388.0	7,228.6	6,385.9	27.0	20.4	-89.64	568.2	648.6	491.3	452.6	38.62	12.721	
7,300.0	6,388.0	7,338.0	6,387.1	27.7	21.6	-89.77	677.4	654.9	486.4	445.3	41.02	11.857	
7,400.0	6,388.0	7,432.0	6,386.7	28.4	22.7	-89.73	771.3	659.8	482.0	438.6	43.44	11.098	
7,500.0	6,388.0	7,533.2	6,387.1	29.4	24.0	-89.77	872.4	664.9	478.0	431.9	46.08	10.373	
7,600.0	6,388.0	7,627.7	6,385.8	30.4	25.2	-89.62	966.8	669.7	473.8	425.1	48.73	9.724	
7,700.0	6,388.0	7,735.2	6,385.2	31.6	26.5	-89.53	1,074.2	674.2	470.6	419.0	51.60	9.120	
7,800.0	6,388.0	7,835.1	6,385.9	32.9	27.9	-89.61	1,173.9	679.4	466.3	411.8	54.53	8.551	
7,900.0	6,388.0	7,928.8	6,386.4	34.2	29.1	-89.68	1,267.5	683.2	463.1	405.7	57.47	8.058	
8,000.0	6,388.0	8,025.0	6,386.2	35.6	30.6	-89.65	1,363.6	687.9	459.2	398.6	60.57	7.581	
8,065.8	6,388.0	8,078.5	6,387.0	36.6	31.3	-89.75	1,417.1	689.0	458.4	396.0	62.45	7.341	
8,100.0	6,388.0	8,110.1	6,387.5	37.1	31.8	-89.82	1,448.7	689.2	458.6	395.1	63.52	7.220	
8,188.4	6,388.0	8,200.6	6,388.3	38.4	33.2	-89.92	1,539.1	690.7	457.9	391.4	66.48	6.887	
8,200.0	6,388.0	8,211.0	6,388.3	38.6	33.3	-89.92	1,549.6	690.8	457.9	391.1	66.84	6.850	
8,300.0	6,388.0	8,301.0	6,388.3	40.2	34.7	-89.92	1,639.6	690.9	458.8	388.8	69.96	6.558	
8,400.0	6,388.0	8,397.0	6,388.0	41.8	36.2	-89.88	1,735.5	689.5	461.2	387.9	73.26	6.295	
8,500.0	6,388.0	8,502.9	6,388.7	43.4	37.8	-89.96	1,841.4	687.3	464.2	387.5	76.75	6.049	
8,600.0	6,388.0	8,601.2	6,387.9	45.0	39.4	-89.86	1,939.7	685.5	467.0	386.9	80.13	5.828	
8,700.0	6,388.0	8,703.4	6,387.7	46.7	41.0	-89.84	2,041.9	684.4	468.9	385.4	83.57	5.611	
8,800.0	6,388.0	8,815.2	6,389.3	48.4	42.8	-90.03	2,153.7	685.5	468.8	381.6	87.23	5.375	
8,900.0	6,388.0	8,919.4	6,389.6	50.1	44.5	-90.07	2,257.9	687.3	468.0	377.2	90.79	5.155	
9,000.0	6,388.0	9,018.4	6,390.7	51.8	46.1	-90.21	2,356.8	689.1	467.2	372.9	94.27	4.955	
9,034.4	6,388.0	9,044.2	6,390.7	52.4	46.5	-90.21	2,382.6	689.4	467.0	371.7	95.34	4.899	
9,100.0	6,388.0	9,108.6	6,390.0	53.6	47.6	-90.12	2,447.0	689.8	467.3	369.6	97.62	4.786	
9,200.0	6,388.0	9,212.8	6,389.5	55.3	49.3	-90.07	2,551.1	690.7	467.3	366.2	101.17	4.619	
9,300.0	6,388.0	9,311.7	6,390.6	57.1	51.0	-90.19	2,650.1	691.3	467.6	362.9	104.71	4.466	
9,400.0	6,388.0	9,401.9	6,390.1	58.8	52.5	-90.14	2,740.3	690.5	469.4	361.2	108.11	4.342	
9,500.0	6,388.0	9,513.6	6,388.2	60.6	54.4	-89.91	2,851.9	689.8	471.0	359.2	111.84	4.211	
9,600.0	6,388.0	9,619.2	6,387.5	62.4	56.1	-89.82	2,957.5	691.9	470.0	354.5	115.45	4.071	
9,700.0	6,388.0	9,717.0	6,389.7	64.2	57.8	-90.08	3,055.3	693.3	469.4	350.4	119.02	3.944	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope J-F-20HZ (Exist) Pad Sec.20-T5N-R62W - Antelope O-K-20HZ (Exist.) - Wellbore #1 - Wellbo

Offset Site Error: 0.0 ft

Survey Program: 122-MWD

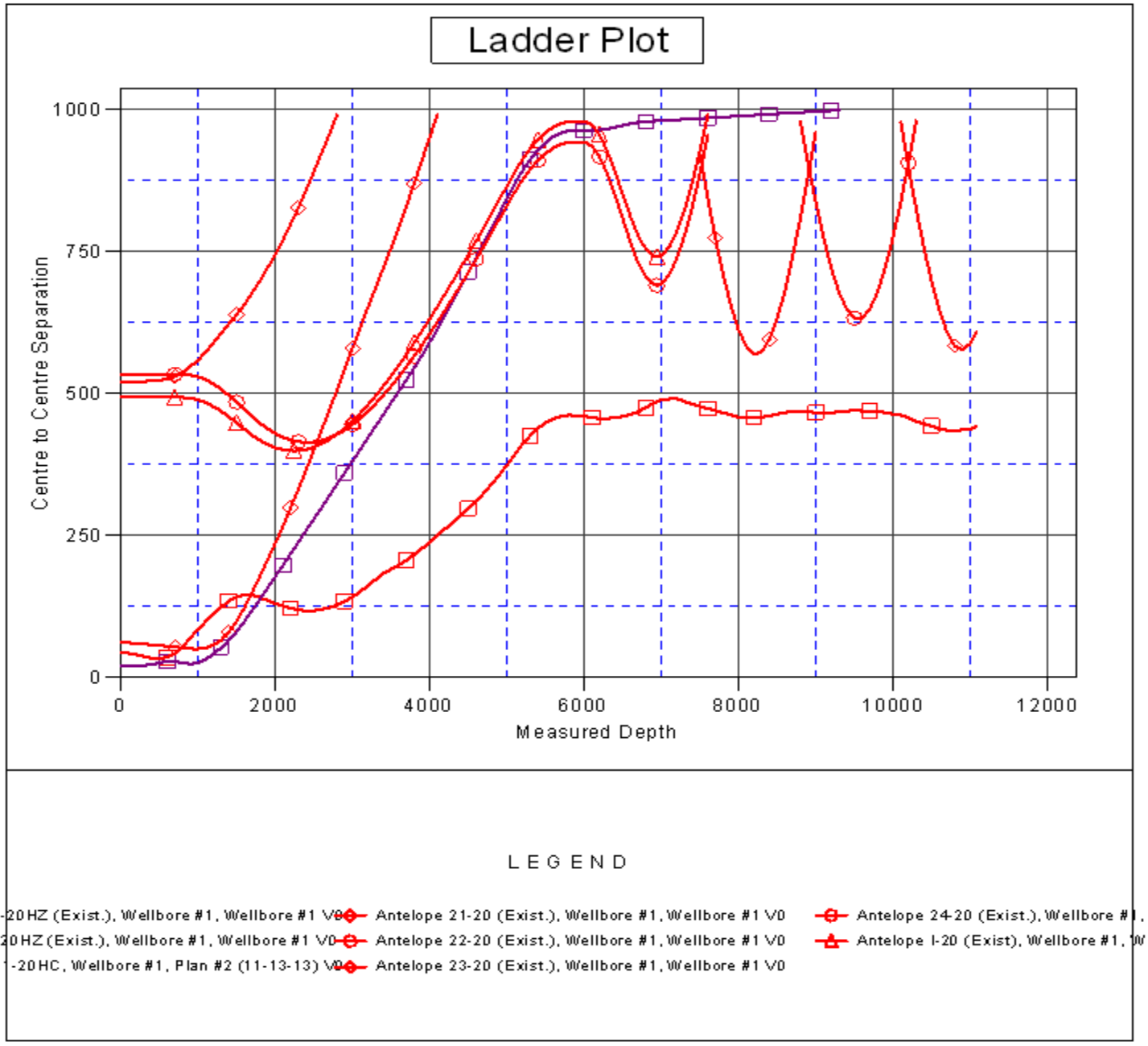
Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,800.0	6,388.0	9,816.7	6,390.1	66.0	59.5	-90.13	3,155.0	694.6	469.1	346.4	122.64	3.825	
9,900.0	6,388.0	9,926.3	6,388.5	67.8	61.4	-89.94	3,264.5	697.7	467.2	340.8	126.37	3.697	
10,000.0	6,388.0	10,026.6	6,389.1	69.6	63.1	-90.02	3,364.7	701.3	464.4	334.5	129.92	3.575	
10,100.0	6,388.0	10,133.3	6,388.3	71.4	64.9	-89.91	3,471.4	704.8	462.2	328.6	133.64	3.458	
10,200.0	6,388.0	10,239.9	6,386.5	73.2	66.7	-89.69	3,577.8	710.5	457.8	320.5	137.29	3.335	
10,300.0	6,388.0	10,331.2	6,385.8	75.1	68.3	-89.60	3,668.9	716.8	451.9	311.2	140.71	3.212	
10,400.0	6,388.0	10,432.8	6,386.3	76.9	70.0	-89.66	3,770.3	722.3	447.5	303.2	144.33	3.101	
10,500.0	6,388.0	10,531.1	6,387.3	78.7	71.7	-89.78	3,868.5	727.1	443.5	295.6	147.88	2.999	
10,600.0	6,388.0	10,633.0	6,387.0	80.6	73.4	-89.74	3,970.2	733.2	438.4	286.9	151.51	2.894	
10,700.0	6,388.0	10,721.8	6,387.2	82.4	75.0	-89.77	4,058.9	736.6	435.6	280.7	154.92	2.812	
10,735.8	6,388.0	10,749.7	6,387.5	83.1	75.4	-89.81	4,086.8	737.1	435.2	279.1	156.08	2.788	
10,800.0	6,388.0	10,808.8	6,387.8	84.3	76.5	-89.84	4,145.9	737.2	435.7	277.4	158.34	2.752	
10,900.0	6,388.0	10,912.8	6,387.2	86.1	78.3	-89.77	4,249.9	737.3	436.6	274.5	162.05	2.694	
11,000.0	6,388.0	11,007.4	6,384.4	88.0	80.0	-89.40	4,344.5	737.4	437.4	271.8	165.60	2.641	SF
11,083.2	6,388.0	11,027.0	6,383.7	89.5	80.3	-89.31	4,364.0	737.3	443.2	275.7	167.51	2.646	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4678.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Antelope O34-K31-20HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.74°



Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Antelope O34-K31-20HNB
Project:	SEC.20-T5N-R62W	**TVD Reference:**	WELL @ 4678.0ft (RKB - 13')
Reference Site:	Antelope J-20 Pad Sec.20-T5N-R62W	**MD Reference:**	WELL @ 4678.0ft (RKB - 13')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope O34-K31-20HNB	**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 #1 (11-13-13)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4678.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Antelope O34-K31-20HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.74°