

# BONANZA CREEK ENERGY OPERATING

Well Name: **Antelope 11-14-18HZ**

Surface Location: Antelope F-18 Pad Sec.18-T5N-R62W  
North American Datum 1983, US State Plane 1983, Colorado Northern Zone

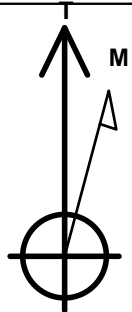
Ground Elevation: 4614.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1392357.29	3314359.49	40.404930	-104.371170	

Original Well Elev WELL @ 4626.0ft (Original Well Elev)

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HARDLINE BHL 460'FSL	1.0	-4280.7	-394.4	Polygon
HARDLINE SHL 460'FNL	1.0	165.0	-400.0	Polygon
BHL 460'FSL, 1100'FWL	6334.0	-4280.7	5.6	Point
T1 460'FNL, 1000'FWL	6334.0	164.0	-181.0	Point



Azimuths to True North  
Magnetic North: 8.52°

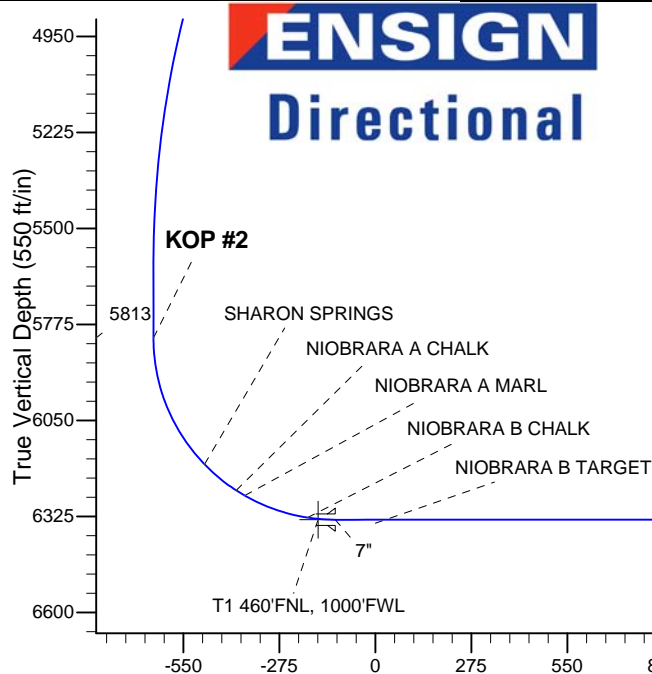
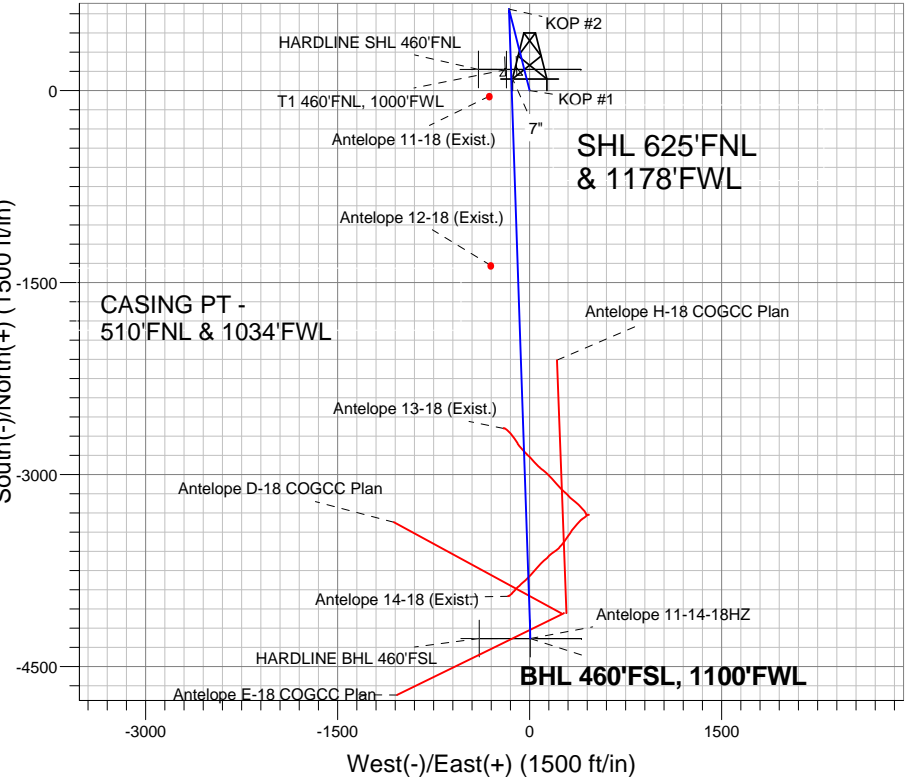
Magnetic Field  
Strength: 53071.8nT  
Dip Angle: 67.08°  
Date: 6/15/2012  
Model: IGRF2010

Antelope F-18 Pad Sec.18-T5N-R62W  
Antelope 11-14-18HZ  
Plan #1 (6-12-12)  
11:05, June 20 2012

## ANNOTATIONS

TVD	MD	Annotation
2400.0	2400.0	KOP #1
5813.1	5890.9	KOP #2

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	2400.0	0.00	0.00	2400.0	0.0	0.0	0.00	0.00	0.0	
3	3150.7	15.01	345.74	3142.2	94.8	-24.1	2.00	345.74	-94.8	
4	4927.0	15.01	345.74	4857.8	540.8	-137.4	0.00	0.00	-541.0	
5	5677.8	0.00	0.00	5600.0	635.6	-161.5	2.00	180.00	-635.8	
6	5890.9	0.00	0.00	5813.1	635.6	-161.5	0.00	0.00	-635.8	
7	6709.1	90.00	178.05	6334.0	115.0	-143.8	11.00	178.05	-115.2	
8	81107.3	90.00	178.05	6334.0	-4280.7	5.6	0.00	0.00	4280.7	BHL 460'FSL, 1100'FWL

Vertical Section at 179.93° (550 ft/in)



# **BONANZA CREEK ENERGY OPERATING**

**SEC.18-T5N-R62W**

**Antelope F-18 Pad Sec.18-T5N-R62W**

**Antelope 11-14-18HZ**

**Wellbore #1**

**Plan: Plan #1 (6-12-12)**

## **Standard Planning Report**

**20 June, 2012**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Project:</b>	SEC.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-12-12)		

<b>Project</b>	SEC.18-T5N-R62W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	Antelope F-18 Pad Sec.18-T5N-R62W				
Site Position:		Northing:	1,392,415.58 ft	Latitude:	40.405090
From:	Lat/Long	Easting:	3,314,358.75 ft	Longitude:	-104.371170
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.73 °

Well	Antelope 11-14-18HZ					
Well Position	+N/-S	-58.3 ft	Northing:	1,392,357.29 ft	Latitude:	40.404930
	+E/-W	0.0 ft	Easting:	3,314,359.49 ft	Longitude:	-104.371170
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,614.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	6/15/2012	8.52	67.08	53,072

<b>Design</b>	Plan #1 (6-12-12)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	179.93

<b>Plan Sections</b>										
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	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,150.7	15.01	345.74	3,142.2	94.8	-24.1	2.00	2.00	0.00	345.74	
4,927.0	15.01	345.74	4,857.8	540.8	-137.4	0.00	0.00	0.00	0.00	
5,677.8	0.00	0.00	5,600.0	635.6	-161.5	2.00	-2.00	0.00	180.00	
5,890.9	0.00	0.00	5,813.1	635.6	-161.5	0.00	0.00	0.00	0.00	
6,709.1	90.00	178.05	6,334.0	115.0	-143.8	11.00	11.00	0.00	178.05	
11,107.3	90.00	178.05	6,334.0	-4,280.7	5.6	0.00	0.00	0.00	0.00	BHL 460'FSL, 1100

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<b>Project:</b>	SEC.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-12-12)		

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
<b>HARDLINE BHL 460°FSL - HARDLINE SHL 460°FNL</b>									
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
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP #1</b>									
2,500.0	2.00	345.74	2,500.0	1.7	-0.4	-1.7	2.00	2.00	0.00
2,600.0	4.00	345.74	2,599.8	6.8	-1.7	-6.8	2.00	2.00	0.00
2,700.0	6.00	345.74	2,699.5	15.2	-3.9	-15.2	2.00	2.00	0.00
2,800.0	8.00	345.74	2,798.7	27.0	-6.9	-27.0	2.00	2.00	0.00
2,900.0	10.00	345.74	2,897.5	42.2	-10.7	-42.2	2.00	2.00	0.00
3,000.0	12.00	345.74	2,995.6	60.7	-15.4	-60.7	2.00	2.00	0.00
3,100.0	14.00	345.74	3,093.1	82.5	-21.0	-82.5	2.00	2.00	0.00
3,150.7	15.01	345.74	3,142.2	94.8	-24.1	-94.8	2.00	2.00	0.00
3,200.0	15.01	345.74	3,189.8	107.2	-27.2	-107.2	0.00	0.00	0.00
3,300.0	15.01	345.74	3,286.3	132.3	-33.6	-132.3	0.00	0.00	0.00
3,374.2	15.01	345.74	3,358.0	150.9	-38.3	-151.0	0.00	0.00	0.00
<b>PARKMAN</b>									
3,400.0	15.01	345.74	3,382.9	157.4	-40.0	-157.4	0.00	0.00	0.00
3,500.0	15.01	345.74	3,479.5	182.5	-46.4	-182.6	0.00	0.00	0.00
3,600.0	15.01	345.74	3,576.1	207.6	-52.7	-207.7	0.00	0.00	0.00
3,700.0	15.01	345.74	3,672.7	232.7	-59.1	-232.8	0.00	0.00	0.00
3,800.0	15.01	345.74	3,769.3	257.8	-65.5	-257.9	0.00	0.00	0.00
3,900.0	15.01	345.74	3,865.9	282.9	-71.9	-283.0	0.00	0.00	0.00
4,000.0	15.01	345.74	3,962.4	308.0	-78.3	-308.1	0.00	0.00	0.00
4,100.0	15.01	345.74	4,059.0	333.1	-84.6	-333.3	0.00	0.00	0.00
4,156.9	15.01	345.74	4,114.0	347.4	-88.3	-347.6	0.00	0.00	0.00
<b>SUSSEX</b>									
4,200.0	15.01	345.74	4,155.6	358.3	-91.0	-358.4	0.00	0.00	0.00
4,300.0	15.01	345.74	4,252.2	383.4	-97.4	-383.5	0.00	0.00	0.00
4,400.0	15.01	345.74	4,348.8	408.5	-103.8	-408.6	0.00	0.00	0.00
4,500.0	15.01	345.74	4,445.4	433.6	-110.2	-433.7	0.00	0.00	0.00

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<b>Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-12-12)		

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)
4,600.0	15.01	345.74	4,542.0	458.7	-116.5	-458.8	0.00	0.00	0.00
4,700.0	15.01	345.74	4,638.5	483.8	-122.9	-484.0	0.00	0.00	0.00
4,800.0	15.01	345.74	4,735.1	508.9	-129.3	-509.1	0.00	0.00	0.00
4,900.0	15.01	345.74	4,831.7	534.0	-135.7	-534.2	0.00	0.00	0.00
4,927.0	15.01	345.74	4,857.8	540.8	-137.4	-541.0	0.00	0.00	0.00
5,000.0	13.56	345.74	4,928.5	558.3	-141.8	-558.4	2.00	-2.00	0.00
5,100.0	11.56	345.74	5,026.1	579.3	-147.2	-579.5	2.00	-2.00	0.00
5,200.0	9.56	345.74	5,124.4	597.1	-151.7	-597.3	2.00	-2.00	0.00
5,300.0	7.56	345.74	5,223.3	611.5	-155.4	-611.7	2.00	-2.00	0.00
5,400.0	5.56	345.74	5,322.7	622.6	-158.2	-622.8	2.00	-2.00	0.00
5,500.0	3.56	345.74	5,422.3	630.3	-160.1	-630.5	2.00	-2.00	0.00
5,600.0	1.56	345.74	5,522.2	634.6	-161.2	-634.8	2.00	-2.00	0.00
5,677.8	0.00	0.00	5,600.0	635.6	-161.5	-635.8	2.00	-2.00	0.00
5,700.0	0.00	0.00	5,622.2	635.6	-161.5	-635.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,722.2	635.6	-161.5	-635.8	0.00	0.00	0.00
5,890.9	0.00	0.00	5,813.1	635.6	-161.5	-635.8	0.00	0.00	0.00
<b>KOP #2</b>									
5,900.0	1.00	178.05	5,822.2	635.5	-161.5	-635.7	11.00	11.00	0.00
6,000.0	12.00	178.05	5,921.4	624.2	-161.1	-624.4	11.00	11.00	0.00
6,100.0	23.00	178.05	6,016.7	594.2	-160.1	-594.4	11.00	11.00	0.00
6,200.0	34.00	178.05	6,104.4	546.6	-158.5	-546.8	11.00	11.00	0.00
6,291.0	44.01	178.05	6,175.0	489.5	-156.5	-489.7	11.00	11.00	0.00
<b>SHARON SPRINGS</b>									
6,300.0	45.00	178.05	6,181.4	483.1	-156.3	-483.3	11.00	11.00	0.00
6,400.0	56.00	178.05	6,245.0	406.1	-153.7	-406.3	11.00	11.00	0.00
6,409.1	57.01	178.05	6,250.0	398.5	-153.4	-398.7	11.00	11.00	0.00
<b>NIOBRARA A CHALK</b>									
6,437.9	60.17	178.05	6,265.0	374.0	-152.6	-374.2	11.00	11.00	0.00
<b>NIOBRARA A MARL</b>									
6,500.0	67.00	178.05	6,292.6	318.4	-150.7	-318.6	11.00	11.00	0.00
6,600.0	78.00	178.05	6,322.6	223.3	-147.5	-223.4	11.00	11.00	0.00
6,629.9	81.30	178.05	6,328.0	193.8	-146.5	-194.0	11.00	11.00	0.00
<b>NIOBRARA B CHALK</b>									
6,659.0	84.50	178.05	6,331.6	165.0	-145.5	-165.2	11.00	11.00	0.00
<b>T1 460'FNL, 1000'FWL</b>									
6,700.0	89.00	178.05	6,333.9	124.1	-144.1	-124.3	11.00	11.00	0.00
6,709.1	90.00	178.05	6,334.0	115.0	-143.8	-115.2	10.98	10.98	0.00
<b>7"</b>									
6,800.0	90.00	178.05	6,334.0	24.2	-140.7	-24.3	0.00	0.00	0.00
6,900.0	90.00	178.05	6,334.0	-75.8	-137.3	75.6	0.00	0.00	0.00
7,000.0	90.00	178.05	6,334.0	-175.7	-133.9	175.5	0.00	0.00	0.00
7,100.0	90.00	178.05	6,334.0	-275.7	-130.5	275.5	0.00	0.00	0.00
7,200.0	90.00	178.05	6,334.0	-375.6	-127.1	375.4	0.00	0.00	0.00
7,300.0	90.00	178.05	6,334.0	-475.5	-123.7	475.4	0.00	0.00	0.00
7,400.0	90.00	178.05	6,334.0	-575.5	-120.3	575.3	0.00	0.00	0.00
7,500.0	90.00	178.05	6,334.0	-675.4	-116.9	675.3	0.00	0.00	0.00
7,600.0	90.00	178.05	6,334.0	-775.4	-113.6	775.2	0.00	0.00	0.00
7,700.0	90.00	178.05	6,334.0	-875.3	-110.2	875.2	0.00	0.00	0.00
7,800.0	90.00	178.05	6,334.0	-975.3	-106.8	975.1	0.00	0.00	0.00
7,900.0	90.00	178.05	6,334.0	-1,075.2	-103.4	1,075.1	0.00	0.00	0.00
8,000.0	90.00	178.05	6,334.0	-1,175.1	-100.0	1,175.0	0.00	0.00	0.00
8,100.0	90.00	178.05	6,334.0	-1,275.1	-96.6	1,275.0	0.00	0.00	0.00
8,200.0	90.00	178.05	6,334.0	-1,375.0	-93.2	1,374.9	0.00	0.00	0.00

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<b>Project:</b>	SEC.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-12-12)		

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)
8,300.0	90.00	178.05	6,334.0	-1,475.0	-89.8	1,474.9	0.00	0.00	0.00
8,400.0	90.00	178.05	6,334.0	-1,574.9	-86.4	1,574.8	0.00	0.00	0.00
8,500.0	90.00	178.05	6,334.0	-1,674.9	-83.0	1,674.7	0.00	0.00	0.00
8,600.0	90.00	178.05	6,334.0	-1,774.8	-79.6	1,774.7	0.00	0.00	0.00
8,700.0	90.00	178.05	6,334.0	-1,874.7	-76.2	1,874.6	0.00	0.00	0.00
8,800.0	90.00	178.05	6,334.0	-1,974.7	-72.8	1,974.6	0.00	0.00	0.00
8,900.0	90.00	178.05	6,334.0	-2,074.6	-69.4	2,074.5	0.00	0.00	0.00
9,000.0	90.00	178.05	6,334.0	-2,174.6	-66.0	2,174.5	0.00	0.00	0.00
9,100.0	90.00	178.05	6,334.0	-2,274.5	-62.6	2,274.4	0.00	0.00	0.00
9,200.0	90.00	178.05	6,334.0	-2,374.5	-59.2	2,374.4	0.00	0.00	0.00
9,300.0	90.00	178.05	6,334.0	-2,474.4	-55.8	2,474.3	0.00	0.00	0.00
9,400.0	90.00	178.05	6,334.0	-2,574.3	-52.4	2,574.3	0.00	0.00	0.00
9,500.0	90.00	178.05	6,334.0	-2,674.3	-49.0	2,674.2	0.00	0.00	0.00
9,600.0	90.00	178.05	6,334.0	-2,774.2	-45.6	2,774.2	0.00	0.00	0.00
9,700.0	90.00	178.05	6,334.0	-2,874.2	-42.2	2,874.1	0.00	0.00	0.00
9,800.0	90.00	178.05	6,334.0	-2,974.1	-38.8	2,974.1	0.00	0.00	0.00
9,900.0	90.00	178.05	6,334.0	-3,074.0	-35.4	3,074.0	0.00	0.00	0.00
10,000.0	90.00	178.05	6,334.0	-3,174.0	-32.0	3,173.9	0.00	0.00	0.00
10,100.0	90.00	178.05	6,334.0	-3,273.9	-28.6	3,273.9	0.00	0.00	0.00
10,200.0	90.00	178.05	6,334.0	-3,373.9	-25.2	3,373.8	0.00	0.00	0.00
10,300.0	90.00	178.05	6,334.0	-3,473.8	-21.8	3,473.8	0.00	0.00	0.00
10,400.0	90.00	178.05	6,334.0	-3,573.8	-18.5	3,573.7	0.00	0.00	0.00
10,500.0	90.00	178.05	6,334.0	-3,673.7	-15.1	3,673.7	0.00	0.00	0.00
10,600.0	90.00	178.05	6,334.0	-3,773.6	-11.7	3,773.6	0.00	0.00	0.00
10,700.0	90.00	178.05	6,334.0	-3,873.6	-8.3	3,873.6	0.00	0.00	0.00
10,800.0	90.00	178.05	6,334.0	-3,973.5	-4.9	3,973.5	0.00	0.00	0.00
10,900.0	90.00	178.05	6,334.0	-4,073.5	-1.5	4,073.5	0.00	0.00	0.00
11,000.0	90.00	178.05	6,334.0	-4,173.4	1.9	4,173.4	0.00	0.00	0.00
11,100.0	90.00	178.05	6,334.0	-4,273.4	5.3	4,273.4	0.00	0.00	0.00
11,107.3	90.00	178.05	6,334.0	-4,280.7	5.6	4,280.7	0.00	0.00	0.00
BHL 460'FSL, 1100'FWL									

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Project:</b>	SEC.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-12-12)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
T1 460'FNL, 1000'FW	0.00	0.00	6,334.0	164.0	-181.0	1,392,518.92	3,314,176.40	40.405380	-104.371820
- plan misses target center by 35.6ft at 6659.0ft MD (6331.6 TVD, 165.0 N, -145.5 E)									
- Point									
BHL 460'FSL, 1100'F	0.00	0.00	6,334.0	-4,280.7	5.6	1,388,077.23	3,314,419.55	40.393180	-104.371150
- plan hits target center									
- Point									
HARDLINE BHL 460'F	0.00	0.00	1.0	-4,280.7	-394.4	1,388,072.09	3,314,019.63	40.393180	-104.372586
- plan misses target center by 4298.8ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,388,072.09	3,314,019.63		
Point 2			1.0	0.0	800.0	1,388,082.28	3,314,819.53		
HARDLINE SHL 460'F	0.00	0.00	1.0	165.0	-400.0	1,392,517.18	3,313,957.44	40.405383	-104.372606
- plan misses target center by 432.7ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,392,517.18	3,313,957.44		
Point 2			1.0	0.0	800.0	1,392,527.36	3,314,757.34		

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,709.1	6,334.0	7"	7	7-1/2

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,374.2	3,358.0	PARKMAN		0.00		
4,156.9	4,114.0	SUSSEX		0.00		
6,291.0	6,175.0	SHARON SPRINGS		0.00		
6,409.1	6,250.0	NIOBRARA A CHALK		0.00		
6,437.9	6,265.0	NIOBRARA A MARL		0.00		
6,629.9	6,328.0	NIOBRARA B CHALK		0.00		
	6,344.0	NIOBRARA B TARGET		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,400.0	2,400.0	0.0	0.0	KOP #1	
5,890.9	5,813.1	635.6	-161.5	KOP #2	



# **BONANZA CREEK ENERGY OPERATING**

**SEC.18-T5N-R62W**

**Antelope F-18 Pad Sec.18-T5N-R62W**

**Antelope 11-14-18HZ**

**Wellbore #1**

**Plan #1 (6-12-12)**

## **Anticollision Report**

**20 June, 2012**





<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 6349-UNKNOWN													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		
1,100.0	1,100.0	1,085.0	1,085.0	2.4	21.7	-97.91	-43.7	-314.7	317.7	293.7	24.06	13.206		
1,200.0	1,200.0	1,185.0	1,185.0	2.6	23.7	-97.91	-43.7	-314.7	317.7	291.4	26.28	12.088		
1,300.0	1,300.0	1,285.0	1,285.0	2.8	25.7	-97.91	-43.7	-314.7	317.7	289.2	28.51	11.145		
1,400.0	1,400.0	1,385.0	1,385.0	3.0	27.7	-97.91	-43.7	-314.7	317.7	287.0	30.73	10.338		
1,500.0	1,500.0	1,485.0	1,485.0	3.3	29.7	-97.91	-43.7	-314.7	317.7	284.8	32.96	9.640		
1,600.0	1,600.0	1,585.0	1,585.0	3.5	31.7	-97.91	-43.7	-314.7	317.7	282.5	35.18	9.030		
1,700.0	1,700.0	1,685.0	1,685.0	3.7	33.7	-97.91	-43.7	-314.7	317.7	280.3	37.41	8.493		
1,800.0	1,800.0	1,785.0	1,785.0	3.9	35.7	-97.91	-43.7	-314.7	317.7	278.1	39.63	8.017		
1,900.0	1,900.0	1,885.0	1,885.0	4.2	37.7	-97.91	-43.7	-314.7	317.7	275.9	41.86	7.591		
2,000.0	2,000.0	1,985.0	1,985.0	4.4	39.7	-97.91	-43.7	-314.7	317.7	273.6	44.08	7.208		
2,074.0	2,074.0	2,059.0	2,059.0	4.5	41.2	-97.91	-43.7	-314.7	317.7	272.0	45.73	6.948		
2,100.0	2,100.0	2,085.0	2,085.0	4.6	41.7	-97.91	-43.7	-314.7	317.7	271.4	46.31	6.861		
2,200.0	2,200.0	2,185.0	2,185.0	4.8	43.7	-97.91	-43.7	-314.7	317.7	269.2	48.53	6.547		
2,300.0	2,300.0	2,285.0	2,285.0	5.1	45.7	-97.91	-43.7	-314.7	317.7	267.0	50.76	6.260		
2,400.0	2,400.0	2,385.0	2,385.0	5.3	47.7	-97.91	-43.7	-314.7	317.7	264.7	52.98	5.997		
2,500.0	2,500.0	2,485.0	2,485.0	5.5	49.7	-83.97	-43.7	-314.7	317.5	262.3	55.20	5.752		
2,600.0	2,599.8	2,584.8	2,584.8	5.7	51.7	-84.92	-43.7	-314.7	317.0	259.6	57.42	5.521		
2,700.0	2,699.5	2,684.5	2,684.5	6.0	53.7	-86.50	-43.7	-314.7	316.4	256.7	59.64	5.305		
2,800.0	2,798.7	2,783.7	2,783.7	6.2	55.7	-88.70	-43.7	-314.7	315.9	254.0	61.86	5.106		
2,849.1	2,847.3	2,832.3	2,832.3	6.3	56.6	-90.00	-43.7	-314.7	315.8	252.8	62.95	5.017		
2,900.0	2,897.5	2,882.5	2,882.5	6.4	57.6	-91.50	-43.7	-314.7	315.9	251.8	64.07	4.930		
3,000.0	2,995.6	2,980.6	2,980.6	6.7	59.6	-94.86	-43.7	-314.7	317.0	250.7	66.29	4.781		
3,100.0	3,093.1	3,078.1	3,078.1	7.0	61.6	-98.73	-43.7	-314.7	319.7	251.2	68.50	4.668		
3,150.7	3,142.2	3,127.2	3,127.2	7.1	62.5	-100.85	-43.7	-314.7	321.9	252.3	69.60	4.626		
3,200.0	3,189.8	3,174.8	3,174.8	7.3	63.5	-102.99	-43.7	-314.7	324.7	254.0	70.68	4.594		
3,300.0	3,286.3	3,271.3	3,271.3	7.6	65.4	-107.22	-43.7	-314.7	331.6	258.8	72.85	4.552		
3,400.0	3,382.9	3,367.9	3,367.9	8.0	67.4	-111.27	-43.7	-314.7	340.5	265.4	75.02	4.538		
3,500.0	3,479.5	3,464.5	3,464.5	8.4	69.3	-115.10	-43.7	-314.7	351.0	273.8	77.16	4.548		
3,600.0	3,576.1	3,561.1	3,561.1	8.8	71.2	-118.71	-43.7	-314.7	363.0	283.7	79.30	4.578		
3,700.0	3,672.7	3,657.7	3,657.7	9.2	73.2	-122.08	-43.7	-314.7	376.5	295.1	81.42	4.624		
3,800.0	3,769.3	3,754.3	3,754.3	9.6	75.1	-125.23	-43.7	-314.7	391.2	307.6	83.53	4.683		
3,900.0	3,865.9	3,850.9	3,850.9	10.1	77.0	-128.15	-43.7	-314.7	407.0	321.4	85.63	4.753		
4,000.0	3,962.4	3,947.4	3,947.4	10.5	78.9	-130.85	-43.7	-314.7	423.8	336.1	87.73	4.831		
4,100.0	4,059.0	4,044.0	4,044.0	11.0	80.9	-133.35	-43.7	-314.7	441.5	351.7	89.82	4.916		
4,200.0	4,155.6	4,140.6	4,140.6	11.4	82.8	-135.66	-43.7	-314.7	460.0	368.1	91.90	5.005		
4,300.0	4,252.2	4,237.2	4,237.2	11.9	84.7	-137.79	-43.7	-314.7	479.2	385.2	93.99	5.098		
4,400.0	4,348.8	4,333.8	4,333.8	12.4	86.7	-139.76	-43.7	-314.7	499.0	402.9	96.07	5.194		
4,500.0	4,445.4	4,430.4	4,430.4	12.9	88.6	-141.58	-43.7	-314.7	519.3	421.1	98.15	5.290		
4,600.0	4,542.0	4,527.0	4,527.0	13.3	90.5	-143.27	-43.7	-314.7	540.1	439.8	100.24	5.388		
4,700.0	4,638.5	4,623.5	4,623.5	13.8	92.5	-144.83	-43.7	-314.7	561.3	459.0	102.32	5.486		
4,800.0	4,735.1	4,720.1	4,720.1	14.3	94.4	-146.28	-43.7	-314.7	582.9	478.5	104.41	5.583		
4,900.0	4,831.7	4,816.7	4,816.7	14.8	96.3	-147.63	-43.7	-314.7	604.8	498.3	106.50	5.679		
4,927.0	4,857.8	4,842.8	4,842.8	14.9	96.9	-147.98	-43.7	-314.7	610.8	503.8	107.06	5.705		
5,000.0	4,928.5	4,913.5	4,913.5	15.3	98.3	-149.01	-43.7	-314.7	626.3	517.3	109.01	5.745		
5,100.0	5,026.1	5,011.1	5,011.1	15.6	100.2	-150.19	-43.7	-314.7	645.2	533.5	111.65	5.779		
5,200.0	5,124.4	5,109.4	5,109.4	15.9	102.2	-151.13	-43.7	-314.7	661.2	547.0	114.24	5.788		
5,300.0	5,223.3	5,208.3	5,208.3	16.2	104.2	-151.87	-43.7	-314.7	674.3	557.5	116.78	5.774		
5,400.0	5,322.7	5,307.7	5,307.7	16.5	106.2	-152.41	-43.7	-314.7	684.4	565.2	119.24	5.740		
5,500.0	5,422.3	5,407.3	5,407.3	16.7	108.1	-152.78	-43.7	-314.7	691.5	569.9	121.61	5.686		
5,600.0	5,522.2	5,507.2	5,507.2	16.9	110.1	-152.99	-43.7	-314.7	695.4	571.6	123.88	5.614		
5,677.8	5,600.0	5,585.0	5,585.0	17.0	111.7	-167.29	-43.7	-314.7	696.4	570.7	125.69	5.540		
5,700.0	5,622.2	5,607.2	5,607.2	17.0	112.1	-167.29	-43.7	-314.7	696.4	570.2	126.17	5.519		

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

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Antelope (Existing Wells) Pad Sec.8-T5N-R62W - Antelope 11-18 (Exist.) - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 6349-UNKNOWN													
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
5,800.0	5,722.2	5,707.2	5,707.2	17.2	114.1	-167.29	-43.7	-314.7	696.4	568.0	128.36	5.425	
5,890.9	5,813.1	5,798.1	5,798.1	17.3	116.0	-167.29	-43.7	-314.7	696.4	566.0	130.36	5.342	
5,900.0	5,822.2	5,807.2	5,807.2	17.3	116.1	14.66	-43.7	-314.7	696.3	565.9	130.40	5.340	
5,950.0	5,872.1	5,857.1	5,857.1	17.4	117.1	14.82	-43.7	-314.7	693.1	562.5	130.61	5.307	
6,000.0	5,921.4	5,906.4	5,906.4	17.3	118.1	15.21	-43.7	-314.7	685.4	555.7	129.71	5.284	
6,050.0	5,969.8	5,954.8	5,954.8	17.3	119.1	15.88	-43.7	-314.7	673.1	545.4	127.71	5.270	
6,100.0	6,016.7	6,001.7	6,001.7	17.2	120.0	16.84	-43.7	-314.7	656.4	531.7	124.69	5.264	
6,150.0	6,061.7	6,046.7	6,046.7	17.0	120.9	18.18	-43.7	-314.7	635.5	514.7	120.77	5.262	
6,200.0	6,104.4	6,089.4	6,089.4	16.9	121.8	19.98	-43.7	-314.7	610.6	494.4	116.19	5.255	
6,250.0	6,144.5	6,129.5	6,129.5	16.7	122.6	22.37	-43.7	-314.7	582.1	470.7	111.36	5.227	
6,300.0	6,181.4	6,166.4	6,166.4	16.5	123.3	25.55	-43.7	-314.7	550.1	443.2	106.93	5.145	
6,350.0	6,215.1	6,200.1	6,200.1	16.2	124.0	29.78	-43.7	-314.7	515.2	411.3	103.95	4.956	
6,400.0	6,245.0	6,230.0	6,230.0	16.0	124.6	35.36	-43.7	-314.7	477.8	373.9	103.87	4.600	
6,450.0	6,270.9	6,255.9	6,255.9	15.8	125.1	42.61	-43.7	-314.7	438.3	330.3	108.01	4.058	
6,500.0	6,292.6	6,277.6	6,277.6	15.7	125.6	51.68	-43.7	-314.7	397.5	281.1	116.48	3.413	
6,550.0	6,309.9	6,294.9	6,294.9	15.5	125.9	62.16	-43.7	-314.7	356.1	229.1	126.97	2.805	
6,600.0	6,322.6	6,307.6	6,307.6	15.4	126.2	72.87	-43.7	-314.7	315.0	179.3	135.69	2.322	
6,650.0	6,330.7	6,315.7	6,315.7	15.3	126.3	82.25	-43.7	-314.7	275.5	135.2	140.35	1.963	
6,700.0	6,333.9	6,318.9	6,318.9	15.3	126.4	89.08	-43.7	-314.7	239.3	97.7	141.60	1.690	
6,709.1	6,334.0	6,319.0	6,319.0	15.3	126.4	90.00	-43.7	-314.7	233.3	91.6	141.62	1.647	
6,800.0	6,334.0	6,319.0	6,319.0	15.4	126.4	90.00	-43.7	-314.7	186.8	45.0	141.80	1.317	Level 3
6,861.9	6,334.0	6,319.0	6,319.0	15.7	126.4	90.00	-43.7	-314.7	176.2	34.1	142.07	1.240	Level 2, CC, ES, SF
6,900.0	6,334.0	6,319.0	6,319.0	15.9	126.4	90.00	-43.7	-314.7	180.3	38.0	142.23	1.267	Level 3
7,000.0	6,334.0	6,319.0	6,319.0	16.5	126.4	90.00	-43.7	-314.7	223.8	81.0	142.88	1.567	
7,100.0	6,334.0	6,319.0	6,319.0	17.3	126.4	90.00	-43.7	-314.7	296.2	152.5	143.71	2.061	
7,200.0	6,334.0	6,319.0	6,319.0	18.4	126.4	90.00	-43.7	-314.7	381.2	236.5	144.72	2.634	
7,300.0	6,334.0	6,319.0	6,319.0	19.5	126.4	90.00	-43.7	-314.7	472.2	326.3	145.86	3.237	
7,400.0	6,334.0	6,319.0	6,319.0	20.8	126.4	90.00	-43.7	-314.7	566.2	419.1	147.13	3.848	
7,500.0	6,334.0	6,319.0	6,319.0	22.1	126.4	90.00	-43.7	-314.7	661.9	513.5	148.49	4.458	
7,600.0	6,334.0	6,319.0	6,319.0	23.6	126.4	90.00	-43.7	-314.7	758.8	608.9	149.93	5.061	
7,700.0	6,334.0	6,319.0	6,319.0	25.1	126.4	90.00	-43.7	-314.7	856.4	705.0	151.44	5.655	
7,800.0	6,334.0	6,319.0	6,319.0	26.7	126.4	90.00	-43.7	-314.7	954.5	801.5	153.00	6.238	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
Antelope (Existing Wells) Pad Sec.8-T5N-R62W - Antelope 12-18 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Well Error:</b>	0.0 ft
Survey Program: 6349-UNKNOWN													
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
7,300.0	6,334.0	6,319.0	6,319.0	19.5	126.4	90.00	-1,366.2	-303.6	908.6	762.7	145.86	6.229	
7,400.0	6,334.0	6,319.0	6,319.0	20.8	126.4	90.00	-1,366.2	-303.6	811.6	664.5	147.13	5.517	
7,500.0	6,334.0	6,319.0	6,319.0	22.1	126.4	90.00	-1,366.2	-303.6	715.5	567.0	148.49	4.819	
7,600.0	6,334.0	6,319.0	6,319.0	23.6	126.4	90.00	-1,366.2	-303.6	620.6	470.7	149.93	4.139	
7,700.0	6,334.0	6,319.0	6,319.0	25.1	126.4	90.00	-1,366.2	-303.6	527.6	376.1	151.44	3.484	
7,800.0	6,334.0	6,319.0	6,319.0	26.7	126.4	90.00	-1,366.2	-303.6	437.7	284.7	153.00	2.861	
7,900.0	6,334.0	6,319.0	6,319.0	28.3	126.4	90.00	-1,366.2	-303.6	353.2	198.6	154.61	2.284	
8,000.0	6,334.0	6,319.0	6,319.0	29.9	126.4	90.00	-1,366.2	-303.6	279.2	122.9	156.26	1.787	
8,100.0	6,334.0	6,319.0	6,319.0	31.6	126.4	90.00	-1,366.2	-303.6	226.2	68.2	157.94	1.432	Level 3
8,184.0	6,334.0	6,319.0	6,319.0	33.0	126.4	90.00	-1,366.2	-303.6	210.0	50.6	159.37	1.318	Level 3, CC, ES, SF
8,200.0	6,334.0	6,319.0	6,319.0	33.3	126.4	90.00	-1,366.2	-303.6	210.6	50.9	159.65	1.319	Level 3
8,300.0	6,334.0	6,319.0	6,319.0	35.0	126.4	90.00	-1,366.2	-303.6	239.9	78.5	161.38	1.487	Level 3
8,400.0	6,334.0	6,319.0	6,319.0	36.8	126.4	90.00	-1,366.2	-303.6	301.3	138.1	163.13	1.847	
8,500.0	6,334.0	6,319.0	6,319.0	38.6	126.4	90.00	-1,366.2	-303.6	379.4	214.5	164.90	2.301	
8,600.0	6,334.0	6,319.0	6,319.0	40.3	126.4	90.00	-1,366.2	-303.6	466.0	299.3	166.69	2.796	
8,700.0	6,334.0	6,319.0	6,319.0	42.1	126.4	90.00	-1,366.2	-303.6	557.1	388.6	168.49	3.306	
8,800.0	6,334.0	6,319.0	6,319.0	43.9	126.4	90.00	-1,366.2	-303.6	650.8	480.5	170.30	3.822	
8,900.0	6,334.0	6,319.0	6,319.0	45.8	126.4	90.00	-1,366.2	-303.6	746.2	574.0	172.12	4.335	
9,000.0	6,334.0	6,319.0	6,319.0	47.6	126.4	90.00	-1,366.2	-303.6	842.6	668.6	173.95	4.844	
9,100.0	6,334.0	6,319.0	6,319.0	49.4	126.4	90.00	-1,366.2	-303.6	939.8	764.0	175.78	5.346	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Antelope (Existing Wells) Pad Sec.8-T5N-R62W - Antelope 13-18 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 469-MWD												<b>Offset Well Error:</b>	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	
8,500.0	6,334.0	6,398.8	6,311.9	38.6	21.1	87.31	-2,638.3	-201.4	970.7	913.7	56.94	17.046	
8,600.0	6,334.0	6,399.5	6,312.6	40.3	21.1	87.57	-2,638.3	-201.4	872.0	813.3	58.73	14.848	
8,700.0	6,334.0	6,400.2	6,313.3	42.1	21.1	87.82	-2,638.3	-201.4	773.7	713.2	60.53	12.783	
8,800.0	6,334.0	6,400.9	6,313.9	43.9	21.1	88.08	-2,638.3	-201.4	676.0	613.6	62.34	10.843	
8,900.0	6,334.0	6,401.5	6,314.6	45.8	21.1	88.34	-2,638.3	-201.4	578.9	514.8	64.16	9.023	
9,000.0	6,334.0	6,402.2	6,315.3	47.6	21.1	88.60	-2,638.3	-201.4	483.1	417.1	65.99	7.320	
9,100.0	6,334.0	6,402.9	6,316.0	49.4	21.1	88.86	-2,638.3	-201.4	389.4	321.5	67.83	5.740	
9,200.0	6,334.0	6,403.6	6,316.7	51.3	21.1	89.12	-2,638.3	-201.4	299.7	230.1	69.67	4.302	
9,300.0	6,334.0	6,404.3	6,317.4	53.1	21.1	89.39	-2,638.3	-201.4	219.2	147.7	71.52	3.065	
9,400.0	6,334.0	6,405.0	6,318.1	55.0	21.1	89.65	-2,638.3	-201.4	162.1	88.8	73.37	2.210	
9,458.8	6,334.0	6,405.4	6,318.5	56.1	21.1	89.81	-2,638.3	-201.4	151.1	76.6	74.47	2.029 CC, ES, SF	
9,500.0	6,334.0	6,405.7	6,318.8	56.8	21.1	89.92	-2,638.3	-201.4	156.6	81.3	75.23	2.081	
9,600.0	6,334.0	6,406.4	6,319.5	58.7	21.1	90.19	-2,638.3	-201.4	206.7	129.6	77.09	2.682	
9,700.0	6,334.0	6,407.1	6,320.2	60.6	21.1	90.46	-2,638.3	-201.4	284.5	205.6	78.96	3.604	
9,800.0	6,334.0	6,407.9	6,320.9	62.5	21.1	90.73	-2,638.3	-201.4	373.1	292.2	80.82	4.616	
9,900.0	6,334.0	6,408.6	6,321.7	64.3	21.1	91.01	-2,638.3	-201.4	466.3	383.6	82.69	5.639	
10,000.0	6,334.0	6,409.3	6,322.4	66.2	21.1	91.28	-2,638.3	-201.4	561.8	477.2	84.56	6.644	
10,100.0	6,334.0	6,410.0	6,323.1	68.1	21.1	91.56	-2,638.3	-201.4	658.7	572.2	86.43	7.621	
10,200.0	6,334.0	6,410.8	6,323.9	70.0	21.1	91.84	-2,638.3	-201.4	756.3	668.0	88.30	8.565	
10,300.0	6,334.0	6,411.5	6,324.6	71.9	21.1	92.12	-2,638.4	-201.4	854.6	764.4	90.17	9.477	
10,400.0	6,334.0	6,412.3	6,325.3	73.8	21.1	92.40	-2,638.4	-201.4	953.1	861.1	92.04	10.355	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Antelope (Existing Wells) Pad Sec.8-T5N-R62W - Antelope 14-18 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 439-MWD												<b>Offset Well Error:</b>	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
9,800.0	6,334.0	6,394.3	6,312.6	62.5	20.4	87.71	-3,949.6	-166.8	983.9	904.1	79.84	12.324	
9,900.0	6,334.0	6,394.8	6,313.1	64.3	20.4	87.91	-3,949.6	-166.8	885.4	803.7	81.72	10.835	
10,000.0	6,334.0	6,395.4	6,313.7	66.2	20.4	88.10	-3,949.6	-166.8	787.3	703.7	83.61	9.417	
10,100.0	6,334.0	6,395.9	6,314.2	68.1	20.4	88.30	-3,949.6	-166.8	689.7	604.2	85.49	8.067	
10,200.0	6,334.0	6,396.5	6,314.8	70.0	20.4	88.49	-3,949.6	-166.8	592.9	505.5	87.38	6.786	
10,300.0	6,334.0	6,397.0	6,315.3	71.9	20.4	88.69	-3,949.7	-166.8	497.4	408.2	89.27	5.572	
10,400.0	6,334.0	6,397.6	6,315.9	73.8	20.4	88.89	-3,949.7	-166.8	404.1	313.0	91.17	4.433	
10,500.0	6,334.0	6,398.1	6,316.4	75.7	20.4	89.08	-3,949.7	-166.8	314.9	221.9	93.06	3.384	
10,600.0	6,334.0	6,398.7	6,317.0	77.6	20.4	89.28	-3,949.7	-166.8	234.6	139.7	94.96	2.471	
10,700.0	6,334.0	6,399.2	6,317.5	79.5	20.4	89.48	-3,949.7	-166.8	175.9	79.0	96.85	1.816	
10,770.7	6,334.0	6,399.6	6,317.9	80.8	20.4	89.62	-3,949.7	-166.8	161.0	62.8	98.20	1.640 CC, ES, SF	
10,800.0	6,334.0	6,399.8	6,318.1	81.4	20.4	89.67	-3,949.7	-166.8	163.7	64.9	98.75	1.658	
10,900.0	6,334.0	6,400.4	6,318.6	83.3	20.4	89.87	-3,949.7	-166.8	206.5	105.9	100.65	2.052	
11,000.0	6,334.0	6,400.9	6,319.2	85.2	20.4	90.07	-3,949.7	-166.8	280.2	177.7	102.55	2.733	
11,107.3	6,334.0	6,401.5	6,319.8	86.8	20.4	90.28	-3,949.7	-166.8	373.2	269.0	104.17	3.582	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Antelope D-18 Pad - Plans by another company - Antelope H-18 COGCC Plan - Wellbore #1 - Wellbore										Offset Site Error:		0.0 ft			
Survey Program: 100-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)						
8,000.0	6,334.0	6,712.8	6,313.0	29.9	39.1	-90.00	-2,105.6	213.6	981.8	912.9	68.96	14.238	3.294 CC, ES, SF				
8,100.0	6,334.0	6,712.8	6,313.0	31.6	39.1	-90.00	-2,105.6	213.6	886.5	815.9	70.64	12.550					
8,200.0	6,334.0	6,712.8	6,313.0	33.3	39.1	-90.00	-2,105.6	213.6	792.3	720.0	72.35	10.952					
8,300.0	6,334.0	6,712.8	6,313.0	35.0	39.1	-90.00	-2,105.6	213.6	699.8	625.7	74.08	9.446					
8,400.0	6,334.0	6,712.8	6,313.0	36.8	39.1	-90.00	-2,105.6	213.6	609.6	533.7	75.83	8.038					
8,500.0	6,334.0	6,712.8	6,313.0	38.6	39.1	-90.00	-2,105.6	213.6	523.0	445.4	77.60	6.739					
8,600.0	6,334.0	6,712.8	6,313.0	40.3	39.1	-90.00	-2,105.6	213.6	442.0	362.6	79.39	5.568					
8,700.0	6,334.0	6,712.8	6,313.0	42.1	39.1	-90.00	-2,105.6	213.6	370.5	289.3	81.19	4.564					
8,800.0	6,334.0	6,712.8	6,313.0	43.9	39.1	-90.00	-2,105.6	213.6	314.9	231.9	83.00	3.794					
8,900.0	6,334.0	6,712.8	6,313.0	45.8	39.1	-90.00	-2,105.6	213.6	284.7	199.9	84.82	3.357					
8,940.5	6,334.0	6,712.8	6,313.0	46.5	39.1	-90.00	-2,105.6	213.6	281.8	196.2	85.56						
9,000.0	6,334.0	6,712.8	6,313.0	47.6	39.1	-90.00	-2,105.6	213.6	288.0	201.4	86.65	3.324					
9,100.0	6,334.0	6,712.8	6,313.0	49.4	39.1	-90.00	-2,105.6	213.6	323.8	235.3	88.48	3.659					
9,200.0	6,334.0	6,712.8	6,313.0	51.3	39.1	-90.00	-2,105.6	213.6	383.1	292.7	90.33	4.241					
9,300.0	6,334.0	6,712.8	6,313.0	53.1	39.1	-90.00	-2,105.6	213.6	456.8	364.6	92.18	4.955					
9,400.0	6,334.0	6,712.8	6,313.0	55.0	39.1	-90.00	-2,105.6	213.6	539.0	445.0	94.04	5.732					
9,500.0	6,334.0	6,712.8	6,313.0	56.8	39.1	-90.00	-2,105.6	213.6	626.4	530.5	95.90	6.532					
9,600.0	6,334.0	6,712.8	6,313.0	58.7	39.1	-90.00	-2,105.6	213.6	717.1	619.4	97.76	7.335					
9,700.0	6,334.0	6,712.8	6,313.0	60.6	39.1	-90.00	-2,105.6	213.6	810.1	710.4	99.64	8.130					
9,800.0	6,334.0	6,712.8	6,313.0	62.5	39.1	-90.00	-2,105.6	213.6	904.5	803.0	101.51	8.910					
9,900.0	6,334.0	6,712.8	6,313.0	64.3	39.1	-90.00	-2,105.6	213.6	1,000.0	896.6	103.39	9.672					



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	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	0.0	0.0	0.0	0.0	0.00	18.2	0.0	18.2	18.2	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	0.00	18.2	0.0	18.2	18.0	0.22	81.043	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	18.2	0.0	18.2	17.5	0.67	27.014	
300.0	300.0	300.0	300.0	0.6	0.6	0.00	18.2	0.0	18.2	17.1	1.12	16.209	
400.0	400.0	400.0	400.0	0.8	0.8	0.00	18.2	0.0	18.2	16.6	1.57	11.578	
500.0	500.0	500.0	500.0	1.0	1.0	0.00	18.2	0.0	18.2	16.2	2.02	9.005	
600.0	600.0	600.0	600.0	1.2	1.2	0.00	18.2	0.0	18.2	15.7	2.47	7.368	
700.0	700.0	700.0	700.0	1.5	1.5	0.00	18.2	0.0	18.2	15.3	2.92	6.234	
800.0	800.0	800.0	800.0	1.7	1.7	0.00	18.2	0.0	18.2	14.8	3.37	5.403 CC, ES	
900.0	900.0	899.5	899.5	1.9	1.9	-3.82	19.4	-1.3	19.4	15.6	3.82	5.087	
1,000.0	1,000.0	998.8	998.7	2.1	2.1	-12.74	22.8	-5.2	23.4	19.1	4.26	5.493	
1,100.0	1,100.0	1,097.7	1,097.1	2.4	2.4	-22.07	28.5	-11.5	30.9	26.2	4.72	6.546	
1,200.0	1,200.0	1,195.8	1,194.5	2.6	2.6	-29.30	36.3	-20.4	42.0	36.9	5.17	8.125	
1,300.0	1,300.0	1,293.0	1,290.5	2.8	2.9	-34.32	46.3	-31.6	56.9	51.2	5.64	10.089	
1,400.0	1,400.0	1,389.0	1,384.9	3.0	3.2	-37.72	58.3	-45.1	75.2	69.1	6.11	12.322	
1,500.0	1,500.0	1,483.8	1,477.3	3.3	3.5	-40.07	72.2	-60.7	97.0	90.4	6.58	14.741	
1,600.0	1,600.0	1,578.0	1,568.5	3.5	3.9	-41.73	87.9	-78.4	121.9	114.9	7.06	17.267	
1,700.0	1,700.0	1,674.6	1,661.7	3.7	4.4	-42.89	104.6	-97.2	147.8	140.2	7.55	19.584	
1,800.0	1,800.0	1,771.1	1,755.0	3.9	4.8	-43.71	121.3	-115.9	173.7	165.7	8.03	21.621	
1,900.0	1,900.0	1,867.7	1,848.2	4.2	5.3	-44.32	137.9	-134.7	199.6	191.1	8.53	23.415	
2,000.0	2,000.0	1,964.2	1,941.4	4.4	5.8	-44.78	154.6	-153.5	225.6	216.6	9.02	25.006	
2,100.0	2,100.0	2,060.8	2,034.7	4.6	6.3	-45.15	171.3	-172.2	251.5	242.0	9.52	26.424	
2,200.0	2,200.0	2,157.4	2,127.9	4.8	6.8	-45.46	188.0	-191.0	277.5	267.5	10.02	27.694	
2,300.0	2,300.0	2,253.9	2,221.2	5.1	7.3	-45.70	204.7	-209.8	303.5	293.0	10.52	28.838	
2,400.0	2,400.0	2,350.5	2,314.4	5.3	7.8	-45.91	221.3	-228.5	329.5	318.4	11.03	29.873	
2,500.0	2,500.0	2,447.4	2,408.0	5.5	8.3	-31.73	238.1	-247.4	354.0	342.8	11.26	31.429	
2,600.0	2,599.8	2,544.9	2,502.2	5.7	8.8	-32.07	254.9	-266.3	375.7	363.9	11.76	31.960	
2,700.0	2,699.5	2,643.0	2,596.9	6.0	9.3	-32.66	271.9	-285.4	394.5	382.3	12.24	32.229	
2,800.0	2,798.7	2,741.5	2,691.9	6.2	9.8	-33.47	288.9	-304.5	410.6	397.9	12.73	32.265	
2,900.0	2,897.5	2,840.2	2,787.3	6.4	10.4	-34.51	305.9	-323.7	423.9	410.7	13.21	32.088	
3,000.0	2,995.6	2,939.1	2,882.8	6.7	10.9	-35.76	323.0	-342.9	434.6	420.8	13.70	31.712	
3,100.0	3,093.1	3,038.0	2,978.3	7.0	11.4	-37.24	340.1	-362.2	442.7	428.5	14.21	31.146	
3,150.7	3,142.2	3,088.2	3,026.7	7.1	11.7	-38.08	348.8	-371.9	445.9	431.4	14.48	30.788	
3,200.0	3,189.8	3,136.9	3,073.7	7.3	12.0	-38.96	357.2	-381.4	448.8	434.0	14.77	30.384	
3,300.0	3,286.3	3,235.7	3,169.2	7.6	12.5	-40.70	374.3	-400.6	454.9	439.6	15.38	29.586	
3,400.0	3,382.9	3,334.5	3,264.6	8.0	13.0	-42.40	391.3	-419.8	461.5	445.5	16.01	28.817	
3,500.0	3,479.5	3,433.4	3,360.1	8.4	13.6	-44.05	408.4	-439.0	468.5	451.8	16.69	28.077	
3,600.0	3,576.1	3,532.2	3,455.5	8.8	14.1	-45.65	425.5	-458.2	475.8	458.5	17.39	27.367	
3,700.0	3,672.7	3,631.1	3,550.9	9.2	14.7	-47.21	442.6	-477.4	483.6	465.4	18.12	26.686	
3,800.0	3,769.3	3,729.9	3,646.4	9.6	15.2	-48.71	459.6	-496.6	491.6	472.7	18.88	26.035	
3,900.0	3,865.9	3,828.8	3,741.8	10.1	15.7	-50.16	476.7	-515.8	500.0	480.4	19.67	25.415	
4,000.0	3,962.4	3,927.6	3,837.3	10.5	16.3	-51.57	493.8	-535.1	508.7	488.3	20.49	24.826	
4,100.0	4,059.0	4,026.4	3,932.7	11.0	16.8	-52.93	510.9	-554.3	517.8	496.4	21.34	24.268	
4,200.0	4,155.6	4,125.3	4,028.1	11.4	17.4	-54.24	527.9	-573.5	527.1	504.9	22.20	23.739	
4,300.0	4,252.2	4,224.1	4,123.6	11.9	17.9	-55.51	545.0	-592.7	536.6	513.5	23.09	23.240	
4,400.0	4,348.8	4,323.0	4,219.0	12.4	18.4	-56.73	562.1	-611.9	546.4	522.4	24.00	22.770	
4,500.0	4,445.4	4,434.9	4,327.4	12.9	19.0	-58.11	580.8	-632.9	555.8	530.8	24.96	22.264	
4,600.0	4,542.0	4,554.9	4,444.6	13.3	19.4	-59.73	597.9	-652.2	561.9	536.0	25.97	21.641	
4,700.0	4,638.5	4,674.6	4,562.5	13.8	19.8	-61.55	611.7	-667.7	564.7	537.7	26.99	20.920	
4,800.0	4,735.1	4,793.8	4,680.5	14.3	20.1	-63.59	622.1	-679.4	564.3	536.3	28.05	20.118	
4,900.0	4,831.7	4,911.8	4,798.1	14.8	20.3	-65.86	629.3	-687.5	561.0	531.8	29.13	19.256	
4,927.0	4,857.8	4,943.5	4,829.7	14.9	20.4	-66.52	630.7	-689.0	559.6	530.1	29.43	19.016	

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



Antelope F-18 Pad Sec.18-T5N-R62W - Antelope A-E-18HZ - Wellbore #1 - Plan #1 (6-11-12)													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	
5,000.0	4,928.5	5,028.7	4,914.8	15.3	20.5	-68.23	633.2	-691.9	555.3	525.1	30.15	18.417		
5,100.0	5,026.1	5,140.0	5,026.1	15.6	20.7	-70.39	634.0	-692.8	548.3	517.3	31.01	17.684		
5,200.0	5,124.4	5,238.3	5,124.4	15.9	20.8	-72.07	634.0	-692.8	542.3	510.6	31.73	17.091		
5,300.0	5,223.3	5,337.2	5,223.3	16.2	20.9	-73.48	634.0	-692.8	537.9	505.5	32.38	16.610		
5,400.0	5,322.7	5,436.5	5,322.7	16.5	21.0	-74.58	634.0	-692.8	534.7	501.8	32.95	16.229		
5,500.0	5,422.3	5,536.2	5,422.3	16.7	21.1	-75.37	634.0	-692.8	532.7	499.2	33.43	15.936		
5,600.0	5,522.2	5,636.1	5,522.2	16.9	21.2	-75.81	634.0	-692.8	531.6	497.7	33.81	15.721		
5,677.8	5,600.0	5,713.9	5,600.0	17.0	21.3	-90.17	634.0	-692.8	531.3	497.6	33.72	15.757		
5,700.0	5,622.2	5,736.1	5,622.2	17.0	21.4	-90.17	634.0	-692.8	531.3	497.5	33.79	15.726		
5,800.0	5,722.2	5,836.1	5,722.2	17.2	21.5	-90.17	634.0	-692.8	531.3	497.2	34.10	15.582		
5,890.9	5,813.1	5,927.0	5,813.1	17.3	21.6	-90.17	634.0	-692.8	531.3	496.9	34.38	15.453		
5,900.0	5,822.2	5,936.1	5,822.2	17.3	21.6	91.78	634.0	-692.8	531.3	496.6	34.73	15.298		
5,950.0	5,872.1	5,986.9	5,873.0	17.4	21.7	91.93	632.1	-692.8	531.4	496.6	34.78	15.278		
6,000.0	5,921.4	6,038.0	5,923.6	17.3	21.7	92.05	625.2	-692.6	531.5	496.8	34.74	15.299		
6,050.0	5,969.8	6,089.2	5,973.4	17.3	21.6	92.16	613.3	-692.4	531.7	497.1	34.62	15.360		
6,100.0	6,016.7	6,140.6	6,021.9	17.2	21.5	92.25	596.6	-692.0	532.0	497.6	34.41	15.460		
6,150.0	6,061.7	6,192.0	6,068.6	17.0	21.4	92.32	575.2	-691.6	532.3	498.2	34.14	15.594		
6,200.0	6,104.4	6,243.5	6,113.1	16.9	21.3	92.37	549.2	-691.1	532.7	498.9	33.81	15.757		
6,250.0	6,144.5	6,295.1	6,154.8	16.7	21.1	92.39	518.8	-690.5	533.1	499.7	33.44	15.944		
6,300.0	6,181.4	6,346.8	6,193.4	16.5	21.0	92.39	484.5	-689.8	533.6	500.6	33.04	16.149		
6,350.0	6,215.1	6,398.5	6,228.4	16.2	20.8	92.37	446.5	-689.0	534.1	501.5	32.64	16.362		
6,400.0	6,245.0	6,450.2	6,259.5	16.0	20.6	92.32	405.2	-688.2	534.7	502.4	32.26	16.574		
6,450.0	6,270.9	6,502.0	6,286.3	15.8	20.4	92.25	361.0	-687.3	535.3	503.4	31.91	16.775		
6,500.0	6,292.6	6,553.7	6,308.6	15.7	20.2	92.17	314.3	-686.4	535.9	504.3	31.61	16.952		
6,550.0	6,309.9	6,605.4	6,326.2	15.5	19.9	92.06	265.7	-685.4	536.5	505.1	31.38	17.096		
6,600.0	6,322.6	6,657.1	6,338.8	15.4	19.8	91.93	215.7	-684.4	537.2	505.9	31.24	17.197		
6,650.0	6,330.7	6,708.7	6,346.5	15.3	19.6	91.78	164.7	-683.3	537.8	506.7	31.18	17.247		
6,700.0	6,333.9	6,760.2	6,349.0	15.3	19.4	91.62	113.3	-682.3	538.5	507.3	31.22	17.246		
6,709.1	6,334.0	6,769.3	6,349.0	15.3	19.4	91.60	104.2	-682.1	538.6	507.4	31.25	17.238		
6,800.0	6,334.0	6,860.2	6,349.0	15.4	19.1	91.59	13.3	-680.3	539.9	508.2	31.63	17.067		
6,900.0	6,334.0	6,960.2	6,349.0	15.9	18.9	91.59	-86.7	-678.3	541.3	508.8	32.46	16.673		
7,000.0	6,334.0	7,060.2	6,349.0	16.5	18.9	91.58	-186.7	-676.2	542.6	508.9	33.74	16.082		
7,100.0	6,334.0	7,160.1	6,349.0	17.3	19.4	91.58	-286.6	-674.2	544.0	508.6	35.37	15.379		
7,200.0	6,334.0	7,260.1	6,349.0	18.4	20.2	91.58	-386.6	-672.2	545.4	508.1	37.34	14.605		
7,300.0	6,334.0	7,360.1	6,349.0	19.5	21.3	91.57	-486.6	-670.2	546.8	507.2	39.59	13.810		
7,400.0	6,334.0	7,460.1	6,349.0	20.8	22.6	91.57	-586.5	-668.2	548.2	506.1	42.08	13.028		
7,500.0	6,334.0	7,560.1	6,349.0	22.1	23.9	91.56	-686.5	-666.2	549.5	504.8	44.76	12.278		
7,600.0	6,334.0	7,660.1	6,349.0	23.6	25.3	91.56	-786.5	-664.2	550.9	503.3	47.60	11.574		
7,700.0	6,334.0	7,760.1	6,349.0	25.1	26.8	91.56	-886.4	-662.1	552.3	501.7	50.58	10.919		
7,800.0	6,334.0	7,860.1	6,349.0	26.7	28.3	91.55	-986.4	-660.1	553.7	500.0	53.67	10.316		
7,900.0	6,334.0	7,960.1	6,349.0	28.3	29.8	91.55	-1,086.4	-658.1	555.1	498.2	56.86	9.762		
8,000.0	6,334.0	8,060.1	6,349.0	29.9	31.4	91.54	-1,186.4	-656.1	556.4	496.3	60.13	9.255		
8,100.0	6,334.0	8,160.0	6,349.0	31.6	33.1	91.54	-1,286.3	-654.1	557.8	494.4	63.46	8.790		
8,200.0	6,334.0	8,260.0	6,349.0	33.3	34.7	91.54	-1,386.3	-652.1	559.2	492.3	66.85	8.365		
8,300.0	6,334.0	8,360.0	6,349.0	35.0	36.4	91.53	-1,486.3	-650.0	560.6	490.3	70.29	7.975		
8,400.0	6,334.0	8,460.0	6,349.0	36.8	38.1	91.53	-1,586.2	-648.0	562.0	488.2	73.77	7.618		
8,500.0	6,334.0	8,560.0	6,349.0	38.6	39.9	91.53	-1,686.2	-646.0	563.3	486.0	77.29	7.289		
8,600.0	6,334.0	8,660.0	6,349.0	40.3	41.6	91.52	-1,786.2	-644.0	564.7	483.9	80.84	6.986		
8,700.0	6,334.0	8,760.0	6,349.0	42.1	43.4	91.52	-1,886.2	-642.0	566.1	481.7	84.41	6.706		
8,800.0	6,334.0	8,860.0	6,349.0	43.9	45.1	91.51	-1,986.1	-640.0	567.5	479.5	88.02	6.447		
8,900.0	6,334.0	8,960.0	6,349.0	45.8	46.9	91.51	-2,086.1	-637.9	568.9	477.2	91.64	6.208		
9,000.0	6,334.0	9,060.0	6,349.0	47.6	48.7	91.51	-2,186.1	-635.9	570.2	475.0	95.28	5.985		

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Antelope F-18 Pad Sec.18-T5N-R62W - Antelope A-E-18HZ - Wellbore #1 - Plan #1 (6-11-12)													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	
9,100.0	6,334.0	9,160.0	6,349.0	49.4	50.5	91.50	-2,286.0	-633.9	571.6	472.7	98.94	5.777		
9,200.0	6,334.0	9,259.9	6,349.0	51.3	52.3	91.50	-2,386.0	-631.9	573.0	470.4	102.61	5.584		
9,300.0	6,334.0	9,359.9	6,349.0	53.1	54.1	91.50	-2,486.0	-629.9	574.4	468.1	106.30	5.403		
9,400.0	6,334.0	9,459.9	6,349.0	55.0	56.0	91.49	-2,585.9	-627.9	575.8	465.8	110.00	5.234		
9,500.0	6,334.0	9,559.9	6,349.0	56.8	57.8	91.49	-2,685.9	-625.8	577.1	463.4	113.71	5.076		
9,600.0	6,334.0	9,659.9	6,349.0	58.7	59.6	91.49	-2,785.9	-623.8	578.5	461.1	117.43	4.927		
9,700.0	6,334.0	9,759.9	6,349.0	60.6	61.5	91.48	-2,885.9	-621.8	579.9	458.7	121.16	4.786		
9,800.0	6,334.0	9,859.9	6,349.0	62.5	63.3	91.48	-2,985.8	-619.8	581.3	456.4	124.90	4.654		
9,900.0	6,334.0	9,959.9	6,349.0	64.3	65.2	91.48	-3,085.8	-617.8	582.7	454.0	128.64	4.529		
10,000.0	6,334.0	10,059.9	6,349.0	66.2	67.0	91.47	-3,185.8	-615.8	584.0	451.6	132.39	4.411		
10,100.0	6,334.0	10,159.9	6,349.0	68.1	68.9	91.47	-3,285.7	-613.7	585.4	449.3	136.15	4.300		
10,200.0	6,334.0	10,259.8	6,349.0	70.0	70.8	91.46	-3,385.7	-611.7	586.8	446.9	139.91	4.194		
10,300.0	6,334.0	10,359.8	6,349.0	71.9	72.6	91.46	-3,485.7	-609.7	588.2	444.5	143.68	4.094		
10,400.0	6,334.0	10,459.8	6,349.0	73.8	74.5	91.46	-3,585.6	-607.7	589.6	442.1	147.46	3.998		
10,500.0	6,334.0	10,559.8	6,349.0	75.7	76.4	91.45	-3,685.6	-605.7	590.9	439.7	151.23	3.907		
10,600.0	6,334.0	10,659.8	6,349.0	77.6	78.2	91.45	-3,785.6	-603.7	592.3	437.3	155.02	3.821		
10,700.0	6,334.0	10,759.8	6,349.0	79.5	80.1	91.45	-3,885.6	-601.6	593.7	434.9	158.80	3.739		
10,800.0	6,334.0	10,859.8	6,349.0	81.4	82.0	91.44	-3,985.5	-599.6	595.1	432.5	162.59	3.660		
10,900.0	6,334.0	10,959.8	6,349.0	83.3	83.9	91.44	-4,085.5	-597.6	596.5	430.1	166.39	3.585		
11,000.0	6,334.0	11,059.8	6,349.0	85.2	85.8	91.44	-4,185.5	-595.6	597.8	427.7	170.18	3.513		
11,107.3	6,334.0	11,167.1	6,349.0	86.8	87.8	91.43	-4,292.7	-593.4	599.3	425.5	173.85	3.447 SF		

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Antelope F-18 Pad Sec.18-T5N-R62W - Antelope F-J-18HZ - Wellbore #1 - Plan #1 (6-11-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis 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	0.0	0.0	0.0	0.0	0.00	40.1	0.0	40.1					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	40.1	0.0	40.1	39.8	0.22	178.294		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	40.1	0.0	40.1	39.4	0.67	59.431		
300.0	300.0	300.0	300.0	0.6	0.6	0.00	40.1	0.0	40.1	39.0	1.12	35.659		
400.0	400.0	400.0	400.0	0.8	0.8	0.00	40.1	0.0	40.1	38.5	1.57	25.471		
500.0	500.0	500.0	500.0	1.0	1.0	0.00	40.1	0.0	40.1	38.1	2.02	19.810		
600.0	600.0	600.0	600.0	1.2	1.2	0.00	40.1	0.0	40.1	37.6	2.47	16.209 CC, ES		
700.0	700.0	698.9	698.9	1.5	1.5	1.52	41.4	1.1	41.4	38.5	2.92	14.194		
800.0	800.0	797.6	797.4	1.7	1.7	5.52	45.3	4.4	45.6	42.2	3.37	13.543		
900.0	900.0	895.8	895.2	1.9	1.9	10.73	51.8	9.8	52.9	49.1	3.82	13.858		
1,000.0	1,000.0	993.3	992.0	2.1	2.2	15.93	60.7	17.3	63.6	59.4	4.27	14.903		
1,100.0	1,100.0	1,089.9	1,087.5	2.4	2.4	20.44	72.1	26.9	77.9	73.2	4.72	16.493		
1,200.0	1,200.0	1,185.7	1,181.6	2.6	2.7	24.09	85.8	38.3	95.7	90.5	5.18	18.467		
1,300.0	1,300.0	1,283.7	1,277.7	2.8	3.1	26.81	100.7	50.9	115.0	109.4	5.64	20.398		
1,400.0	1,400.0	1,381.7	1,373.7	3.0	3.5	28.75	115.7	63.5	134.5	128.4	6.10	22.066		
1,500.0	1,500.0	1,479.7	1,469.7	3.3	3.9	30.20	130.6	76.0	154.2	147.6	6.56	23.501		
1,600.0	1,600.0	1,577.7	1,565.7	3.5	4.2	31.32	145.6	88.6	173.8	166.8	7.03	24.745		
1,700.0	1,700.0	1,675.7	1,661.8	3.7	4.6	32.21	160.6	101.1	193.6	186.1	7.49	25.829		
1,800.0	1,800.0	1,773.7	1,757.8	3.9	5.0	32.94	175.5	113.7	213.3	205.4	7.97	26.781		
1,900.0	1,900.0	1,871.6	1,853.8	4.2	5.4	33.54	190.5	126.3	233.1	224.7	8.44	27.622		
2,000.0	2,000.0	1,969.6	1,949.8	4.4	5.8	34.05	205.4	138.8	253.0	244.0	8.92	28.369		
2,100.0	2,100.0	2,067.6	2,045.9	4.6	6.3	34.48	220.4	151.4	272.8	263.4	9.39	29.038		
2,200.0	2,200.0	2,165.6	2,141.9	4.8	6.7	34.86	235.4	163.9	292.6	282.8	9.87	29.638		
2,300.0	2,300.0	2,263.6	2,237.9	5.1	7.1	35.19	250.3	176.5	312.5	302.1	10.35	30.181		
2,400.0	2,400.0	2,361.6	2,334.0	5.3	7.5	35.48	265.3	189.0	332.4	321.5	10.84	30.673		
2,500.0	2,500.0	2,459.8	2,430.2	5.5	7.9	49.92	280.3	201.6	351.1	339.8	11.30	31.075		
2,600.0	2,599.8	2,558.3	2,526.6	5.7	8.3	50.51	295.3	214.3	367.8	356.0	11.78	31.221		
2,700.0	2,699.5	2,656.9	2,623.3	6.0	8.8	51.47	310.3	226.9	382.3	370.0	12.26	31.195		
2,800.0	2,798.7	2,755.6	2,720.0	6.2	9.2	52.78	325.4	239.5	394.9	382.2	12.73	31.015		
2,900.0	2,897.5	2,854.2	2,816.6	6.4	9.6	54.40	340.5	252.2	405.7	392.5	13.22	30.691		
3,000.0	2,995.6	2,952.6	2,913.1	6.7	10.0	56.34	355.5	264.8	415.0	401.3	13.73	30.232		
3,100.0	3,093.1	3,050.7	3,009.2	7.0	10.4	58.59	370.5	277.4	423.0	408.8	14.27	29.641		
3,150.7	3,142.2	3,100.3	3,057.8	7.1	10.7	59.85	378.0	283.7	426.7	412.2	14.57	29.294		
3,200.0	3,189.8	3,148.4	3,104.9	7.3	10.9	61.16	385.4	289.9	430.3	415.4	14.87	28.936		
3,300.0	3,286.3	3,246.1	3,200.6	7.6	11.3	63.75	400.3	302.4	438.3	422.7	15.52	28.241		
3,400.0	3,382.9	3,343.7	3,296.3	8.0	11.7	66.24	415.2	314.9	447.1	430.9	16.21	27.587		
3,500.0	3,479.5	3,441.4	3,392.1	8.4	12.1	68.64	430.1	327.4	456.8	439.9	16.93	26.977		
3,600.0	3,576.1	3,539.0	3,487.8	8.8	12.5	70.94	445.0	339.9	467.3	449.6	17.69	26.411		
3,700.0	3,672.7	3,636.7	3,583.5	9.2	13.0	73.13	459.9	352.5	478.5	460.1	18.48	25.889		
3,800.0	3,769.3	3,734.4	3,679.2	9.6	13.4	75.23	474.8	365.0	490.4	471.1	19.30	25.410		
3,900.0	3,865.9	3,832.0	3,774.9	10.1	13.8	77.23	489.7	377.5	503.0	482.8	20.14	24.974		
4,000.0	3,962.4	3,929.7	3,870.6	10.5	14.2	79.13	504.7	390.0	516.1	495.1	21.00	24.578		
4,100.0	4,059.0	4,027.4	3,966.3	11.0	14.7	80.93	519.6	402.5	529.8	507.9	21.87	24.221		
4,200.0	4,155.6	4,125.0	4,062.0	11.4	15.1	82.65	534.5	415.0	544.0	521.2	22.76	23.900		
4,300.0	4,252.2	4,222.7	4,157.7	11.9	15.5	84.28	549.4	427.6	558.6	535.0	23.66	23.612		
4,400.0	4,348.8	4,320.4	4,253.4	12.4	15.9	85.83	564.3	440.1	573.7	549.2	24.57	23.355		
4,500.0	4,445.4	4,418.0	4,349.1	12.9	16.3	87.30	579.2	452.6	589.2	563.7	25.48	23.126		
4,600.0	4,542.0	4,519.0	4,448.0	13.3	16.8	88.75	594.6	465.5	605.0	578.6	26.40	22.914		
4,700.0	4,638.5	4,636.8	4,564.1	13.8	17.2	90.52	610.1	478.6	619.1	591.7	27.36	22.625		
4,800.0	4,735.1	4,754.6	4,680.9	14.3	17.5	92.47	622.0	488.5	630.5	602.2	28.29	22.286		
4,900.0	4,831.7	4,872.0	4,797.8	14.8	17.7	94.61	630.2	495.4	639.3	610.1	29.20	21.894		
4,927.0	4,857.8	4,903.6	4,829.3	14.9	17.8	95.23	631.8	496.7	641.3	611.8	29.44	21.781		

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

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Antelope F-18 Pad Sec.18-T5N-R62W - Antelope F-J-18HZ - Wellbore #1 - Plan #1 (6-11-12)												Offset Site Error:	0.0ft
Survey Program: 0-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	
5,000.0	4,928.5	4,988.9	4,914.5	15.3	17.9	96.96	634.7	499.2	645.7	615.7	30.04	21.492	
5,100.0	5,026.1	5,100.6	5,026.1	15.6	18.1	99.10	635.7	500.0	649.6	618.9	30.74	21.135	
5,200.0	5,124.4	5,198.9	5,124.4	15.9	18.2	100.72	635.7	500.0	652.9	621.5	31.34	20.830	
5,300.0	5,223.3	5,297.7	5,223.3	16.2	18.3	102.04	635.7	500.0	655.8	623.9	31.89	20.568	
5,400.0	5,322.7	5,397.1	5,322.7	16.5	18.5	103.06	635.7	500.0	658.3	625.9	32.37	20.338	
5,500.0	5,422.3	5,496.8	5,422.3	16.7	18.6	103.76	635.7	500.0	660.2	627.4	32.79	20.131	
5,600.0	5,522.2	5,596.7	5,522.2	16.9	18.7	104.16	635.7	500.0	661.2	628.1	33.16	19.940	
5,677.8	5,600.0	5,674.4	5,600.0	17.0	18.9	89.99	635.7	500.0	661.5	628.0	33.52	19.735	
5,700.0	5,622.2	5,696.6	5,622.2	17.0	18.9	89.99	635.7	500.0	661.5	627.9	33.59	19.696	
5,800.0	5,722.2	5,796.6	5,722.2	17.2	19.0	89.99	635.7	500.0	661.5	627.6	33.90	19.513	
5,860.3	5,782.5	5,856.9	5,782.5	17.3	19.1	89.99	635.7	500.0	661.5	627.4	34.09	19.404	
5,890.9	5,813.1	5,887.5	5,813.1	17.3	19.2	89.99	635.7	500.0	661.5	627.3	34.19	19.349	
5,900.0	5,822.2	5,896.2	5,821.8	17.3	19.2	-88.06	635.6	500.0	661.5	627.4	34.10	19.397	
5,950.0	5,872.1	5,944.3	5,869.8	17.4	19.2	-88.06	632.5	500.1	661.5	627.3	34.17	19.359	
6,000.0	5,921.4	5,992.4	5,917.2	17.3	19.2	-88.08	625.0	500.3	661.5	627.3	34.15	19.372	
6,050.0	5,969.8	6,040.4	5,963.8	17.3	19.2	-88.12	613.1	500.7	661.4	627.4	34.03	19.437	
6,100.0	6,016.7	6,088.6	6,009.1	17.2	19.1	-88.18	597.0	501.2	661.4	627.6	33.83	19.548	
6,150.0	6,061.7	6,136.7	6,052.8	17.0	19.0	-88.25	576.8	501.9	661.3	627.8	33.57	19.703	
6,200.0	6,104.4	6,185.0	6,094.5	16.9	18.9	-88.33	552.5	502.7	661.2	628.0	33.24	19.895	
6,250.0	6,144.5	6,233.4	6,133.9	16.7	18.7	-88.43	524.5	503.6	661.2	628.3	32.87	20.117	
6,300.0	6,181.4	6,281.8	6,170.5	16.5	18.5	-88.55	492.8	504.6	661.1	628.6	32.47	20.361	
6,350.0	6,215.1	6,330.4	6,204.2	16.2	18.4	-88.68	457.8	505.7	661.0	628.9	32.06	20.617	
6,400.0	6,245.0	6,379.1	6,234.5	16.0	18.2	-88.82	419.8	506.9	660.9	629.2	31.66	20.872	
6,450.0	6,270.9	6,427.9	6,261.2	15.8	18.0	-88.97	378.9	508.2	660.8	629.5	31.30	21.113	
6,500.0	6,292.6	6,476.9	6,284.0	15.7	17.8	-89.13	335.6	509.6	660.6	629.7	30.98	21.325	
6,550.0	6,309.9	6,526.0	6,302.6	15.5	17.6	-89.30	290.2	511.1	660.5	629.8	30.73	21.494	
6,600.0	6,322.6	6,575.4	6,317.0	15.4	17.4	-89.48	243.0	512.6	660.4	629.9	30.57	21.607	
6,650.0	6,330.7	6,624.9	6,326.9	15.3	17.2	-89.66	194.6	514.2	660.3	629.8	30.50	21.653	
6,700.0	6,333.9	6,674.6	6,332.1	15.3	17.1	-89.84	145.2	515.8	660.2	629.7	30.53	21.626	
6,709.1	6,334.0	6,683.6	6,332.6	15.3	17.1	-89.88	136.2	516.0	660.2	629.7	30.54	21.614	
6,800.0	6,334.0	6,774.5	6,333.0	15.4	16.9	-89.91	45.4	519.0	660.0	629.1	30.95	21.326	
6,900.0	6,334.0	6,874.5	6,333.0	15.9	16.8	-89.91	-54.6	522.2	659.8	628.0	31.82	20.739	
7,000.0	6,334.0	6,974.5	6,333.0	16.5	17.3	-89.91	-154.5	525.4	659.7	626.5	33.13	19.914	
7,100.0	6,334.0	7,074.5	6,333.0	17.3	18.2	-89.91	-254.5	528.6	659.5	624.7	34.81	18.943	
7,200.0	6,334.0	7,174.5	6,333.0	18.4	19.3	-89.91	-354.4	531.8	659.3	622.5	36.83	17.900	
7,300.0	6,334.0	7,274.5	6,333.0	19.5	20.4	-89.91	-454.4	535.0	659.1	620.0	39.13	16.844	
7,400.0	6,334.0	7,374.5	6,333.0	20.8	21.7	-89.91	-554.3	538.2	658.9	617.3	41.66	15.816	
7,500.0	6,334.0	7,474.5	6,333.0	22.1	23.1	-89.91	-654.3	541.4	658.7	614.3	44.39	14.840	
7,600.0	6,334.0	7,574.5	6,333.0	23.6	24.5	-89.91	-754.2	544.7	658.5	611.3	47.27	13.931	
7,700.0	6,334.0	7,674.5	6,333.0	25.1	26.0	-89.91	-854.2	547.9	658.4	608.1	50.29	13.091	
7,800.0	6,334.0	7,774.5	6,333.0	26.7	27.5	-89.91	-954.1	551.1	658.2	604.8	53.42	12.321	
7,900.0	6,334.0	7,874.5	6,333.0	28.3	29.1	-89.91	-1,054.1	554.3	658.0	601.4	56.64	11.618	
8,000.0	6,334.0	7,974.5	6,333.0	29.9	30.8	-89.91	-1,154.0	557.5	657.8	597.9	59.93	10.975	
8,100.0	6,334.0	8,074.5	6,333.0	31.6	32.4	-89.91	-1,254.0	560.7	657.6	594.3	63.30	10.390	
8,200.0	6,334.0	8,174.5	6,333.0	33.3	34.1	-89.91	-1,353.9	563.9	657.4	590.7	66.71	9.855	
8,300.0	6,334.0	8,274.5	6,333.0	35.0	35.8	-89.91	-1,453.9	567.1	657.3	587.1	70.18	9.366	
8,400.0	6,334.0	8,374.5	6,333.0	36.8	37.5	-89.91	-1,553.8	570.3	657.1	583.4	73.68	8.918	
8,500.0	6,334.0	8,474.5	6,333.0	38.6	39.3	-89.91	-1,653.8	573.6	656.9	579.7	77.22	8.507	
8,600.0	6,334.0	8,574.5	6,333.0	40.3	41.1	-89.91	-1,753.7	576.8	656.7	575.9	80.79	8.128	
8,700.0	6,334.0	8,674.5	6,333.0	42.1	42.8	-89.91	-1,853.7	580.0	656.5	572.1	84.39	7.780	
8,800.0	6,334.0	8,774.5	6,333.0	43.9	44.6	-89.91	-1,953.6	583.2	656.3	568.3	88.01	7.458	
8,900.0	6,334.0	8,874.5	6,333.0	45.8	46.4	-89.91	-2,053.6	586.4	656.1	564.5	91.65	7.160	

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

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

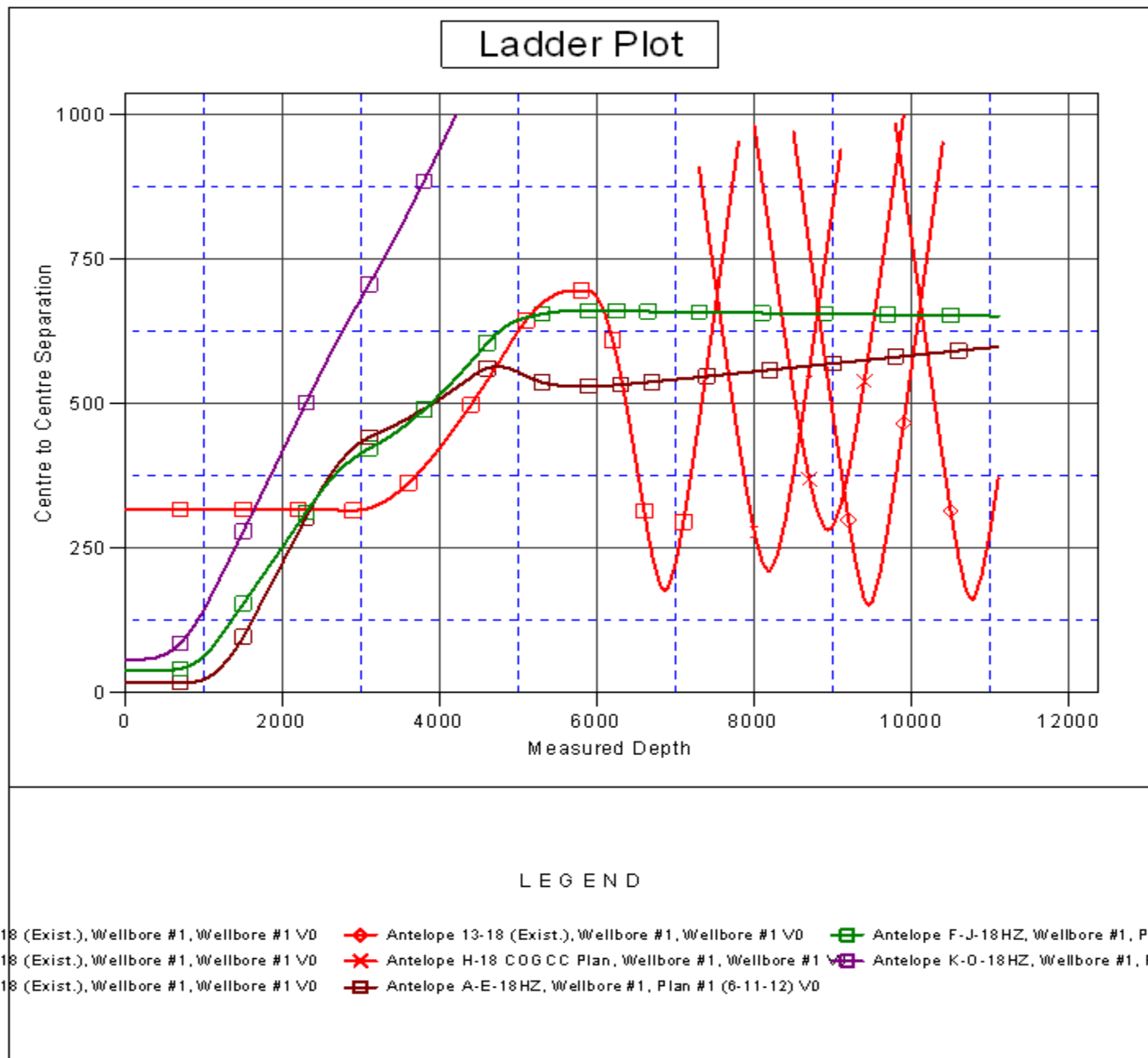
<b>Offset Design</b> Antelope F-18 Pad Sec.18-T5N-R62W - Antelope F-J-18HZ - Wellbore #1 - Plan #1 (6-11-12)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (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
9,000.0	6,334.0	8,974.5	6,333.0	47.6	48.2	-89.91	-2,153.5	589.6	656.0	560.7	95.30	6.883	
9,100.0	6,334.0	9,074.5	6,333.0	49.4	50.1	-89.91	-2,253.4	592.8	655.8	556.8	98.98	6.625	
9,200.0	6,334.0	9,174.5	6,333.0	51.3	51.9	-89.91	-2,353.4	596.0	655.6	552.9	102.67	6.386	
9,300.0	6,334.0	9,274.5	6,333.0	53.1	53.7	-89.91	-2,453.3	599.3	655.4	549.0	106.37	6.162	
9,400.0	6,334.0	9,374.5	6,333.0	55.0	55.6	-89.91	-2,553.3	602.5	655.2	545.1	110.08	5.952	
9,500.0	6,334.0	9,474.5	6,333.0	56.8	57.4	-89.91	-2,653.2	605.7	655.0	541.2	113.80	5.756	
9,600.0	6,334.0	9,574.5	6,333.0	58.7	59.3	-89.91	-2,753.2	608.9	654.8	537.3	117.54	5.571	
9,700.0	6,334.0	9,674.5	6,333.0	60.6	61.1	-89.91	-2,853.1	612.1	654.7	533.4	121.28	5.398	
9,800.0	6,334.0	9,774.5	6,333.0	62.5	63.0	-89.91	-2,953.1	615.3	654.5	529.4	125.03	5.235	
9,900.0	6,334.0	9,874.5	6,333.0	64.3	64.9	-89.91	-3,053.0	618.5	654.3	525.5	128.78	5.081	
10,000.0	6,334.0	9,974.5	6,333.0	66.2	66.7	-89.91	-3,153.0	621.7	654.1	521.6	132.55	4.935	
10,100.0	6,334.0	10,074.5	6,333.0	68.1	68.6	-89.91	-3,252.9	624.9	653.9	517.6	136.31	4.797	
10,200.0	6,334.0	10,174.5	6,333.0	70.0	70.5	-89.91	-3,352.9	628.2	653.7	513.6	140.09	4.667	
10,300.0	6,334.0	10,274.5	6,333.0	71.9	72.4	-89.91	-3,452.8	631.4	653.6	509.7	143.87	4.543	
10,400.0	6,334.0	10,374.5	6,333.0	73.8	74.3	-89.91	-3,552.8	634.6	653.4	505.7	147.65	4.425	
10,500.0	6,334.0	10,474.5	6,333.0	75.7	76.1	-89.91	-3,652.7	637.8	653.2	501.7	151.44	4.313	
10,600.0	6,334.0	10,574.5	6,333.0	77.6	78.0	-89.91	-3,752.7	641.0	653.0	497.8	155.23	4.207	
10,700.0	6,334.0	10,674.5	6,333.0	79.5	79.9	-89.91	-3,852.6	644.2	652.8	493.8	159.03	4.105	
10,800.0	6,334.0	10,774.5	6,333.0	81.4	81.8	-89.91	-3,952.6	647.4	652.6	489.8	162.83	4.008	
10,900.0	6,334.0	10,874.5	6,333.0	83.3	83.7	-89.91	-4,052.5	650.6	652.4	485.8	166.63	3.915	
11,000.0	6,334.0	10,974.5	6,333.0	85.2	85.6	-89.91	-4,152.5	653.8	652.3	481.8	170.44	3.827	
11,107.3	6,334.0	11,081.8	6,333.0	86.8	87.6	-89.91	-4,259.7	657.3	652.1	477.9	174.11	3.745 SF	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Antelope F-18 Pad Sec.18-T5N-R62W - Antelope K-O-18HZ - Wellbore #1 - Plan #1 (6-11-12)													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		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	58.3	0.0	58.3					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	58.3	0.0	58.3	58.1	0.22	259.354		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	58.3	0.0	58.3	57.6	0.67	86.451 CC, ES		
300.0	300.0	299.1	299.1	0.6	0.6	1.49	59.0	1.5	59.1	58.0	1.12	52.856		
400.0	400.0	397.9	397.8	0.8	0.8	5.72	61.3	6.1	61.6	60.1	1.57	39.270		
500.0	500.0	496.3	495.8	1.0	1.0	11.95	65.0	13.8	66.6	64.5	2.03	32.719		
600.0	600.0	594.0	592.7	1.2	1.3	19.11	70.2	24.3	74.6	72.1	2.51	29.738		
700.0	700.0	690.7	688.3	1.5	1.6	26.17	76.7	37.7	86.2	83.2	2.98	28.907 SF		
800.0	800.0	786.4	782.3	1.7	2.0	32.45	84.5	53.7	101.7	98.3	3.45	29.445		
900.0	900.0	880.7	874.3	1.9	2.4	37.70	93.6	72.3	121.0	117.1	3.92	30.858		
1,000.0	1,000.0	973.6	964.2	2.1	2.8	41.95	103.8	93.3	144.1	139.7	4.39	32.821		
1,100.0	1,100.0	1,067.5	1,054.4	2.4	3.3	45.37	115.3	116.8	170.3	165.4	4.87	35.001		
1,200.0	1,200.0	1,163.4	1,146.5	2.6	3.9	47.97	127.1	141.0	197.2	191.9	5.33	36.974		
1,300.0	1,300.0	1,259.4	1,238.6	2.8	4.4	49.95	138.9	165.3	224.5	218.7	5.81	38.634		
1,400.0	1,400.0	1,355.4	1,330.7	3.0	5.0	51.50	150.8	189.6	252.0	245.7	6.29	40.031		
1,500.0	1,500.0	1,451.3	1,422.7	3.3	5.5	52.75	162.6	213.8	279.5	272.8	6.78	41.214		
1,600.0	1,600.0	1,547.3	1,514.8	3.5	6.1	53.77	174.5	238.1	307.2	299.9	7.28	42.224		
1,700.0	1,700.0	1,643.2	1,606.9	3.7	6.6	54.62	186.3	262.4	335.0	327.2	7.77	43.093		
1,800.0	1,800.0	1,739.2	1,699.0	3.9	7.2	55.35	198.1	286.6	362.8	354.5	8.27	43.847		
1,900.0	1,900.0	1,835.1	1,791.1	4.2	7.8	55.97	210.0	310.9	390.7	381.9	8.78	44.506		
2,000.0	2,000.0	1,931.1	1,883.1	4.4	8.3	56.50	221.8	335.2	418.6	409.3	9.28	45.085		
2,100.0	2,100.0	2,027.1	1,975.2	4.6	8.9	56.97	233.7	359.4	446.5	436.7	9.79	45.598		
2,200.0	2,200.0	2,123.0	2,067.3	4.8	9.4	57.39	245.5	383.7	474.5	464.2	10.30	46.055		
2,300.0	2,300.0	2,219.0	2,159.4	5.1	10.0	57.76	257.3	408.0	502.4	491.6	10.81	46.465		
2,400.0	2,400.0	2,314.9	2,251.5	5.3	10.6	58.09	269.2	432.3	530.4	519.1	11.33	46.833		
2,500.0	2,500.0	2,411.0	2,343.6	5.5	11.1	72.27	281.0	456.5	557.9	546.1	11.84	47.122		
2,600.0	2,599.8	2,507.1	2,435.9	5.7	11.7	72.52	292.9	480.9	584.5	572.1	12.35	47.338		
2,700.0	2,699.5	2,603.2	2,528.1	6.0	12.3	73.03	304.7	505.2	610.2	597.3	12.85	47.495		
2,800.0	2,798.7	2,699.1	2,620.1	6.2	12.8	73.78	316.6	529.4	635.1	621.7	13.35	47.589		
2,900.0	2,897.5	2,794.8	2,711.9	6.4	13.4	74.73	328.4	553.6	659.4	645.5	13.85	47.611		
3,000.0	2,995.6	2,890.1	2,803.4	6.7	14.0	75.87	340.1	577.7	683.3	668.9	14.37	47.547		
3,100.0	3,093.1	2,984.9	2,894.3	7.0	14.5	77.16	351.8	601.7	706.9	692.0	14.92	47.384		
3,150.7	3,142.2	3,032.7	2,940.3	7.1	14.8	77.87	357.7	613.8	718.9	703.7	15.21	47.260		
3,200.0	3,189.8	3,079.1	2,984.8	7.3	15.1	78.80	363.5	625.5	730.6	715.1	15.50	47.135		
3,300.0	3,286.3	3,173.3	3,075.1	7.6	15.6	80.59	375.1	649.3	755.0	738.9	16.12	46.839		
3,400.0	3,382.9	3,267.5	3,165.5	8.0	16.2	82.28	386.7	673.1	780.0	763.2	16.77	46.501		
3,500.0	3,479.5	3,361.6	3,255.8	8.4	16.7	83.86	398.3	697.0	805.7	788.2	17.46	46.133		
3,600.0	3,576.1	3,455.8	3,346.2	8.8	17.3	85.35	409.9	720.8	831.9	813.8	18.19	45.748		
3,700.0	3,672.7	3,550.0	3,436.6	9.2	17.8	86.76	421.6	744.6	858.7	839.8	18.93	45.356		
3,800.0	3,769.3	3,644.1	3,526.9	9.6	18.4	88.08	433.2	768.4	885.9	866.2	19.70	44.964		
3,900.0	3,865.9	3,738.3	3,617.3	10.1	19.0	89.32	444.8	792.2	913.6	893.1	20.49	44.578		
4,000.0	3,962.4	3,832.5	3,707.7	10.5	19.5	90.49	456.4	816.0	941.7	920.4	21.30	44.203		
4,100.0	4,059.0	3,926.6	3,798.0	11.0	20.1	91.60	468.0	839.9	970.1	947.9	22.13	43.842		
4,200.0	4,155.6	4,020.8	3,888.4	11.4	20.6	92.65	479.7	863.7	998.8	975.8	22.96	43.495		

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Antelope 11-14-18HZ
<b>Project:</b>	SEC.18-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Reference Site:</b>	Antelope F-18 Pad Sec.18-T5N-R62W	<b>MD Reference:</b>	WELL @ 4626.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Antelope 11-14-18HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (6-12-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4626.0ft (Original Well Elev) Coordinates are relative to: Antelope 11-14-18HZ  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.73°





Reference Depths are relative to WELL @ 4626.0ft (Original Well Elev)Coordinates are relative to: Antelope 11-14-18HZ  
Offset Depths are relative to Offset DatumCoordinate System is US State Plane 1983, Colorado Northern Zone  
Central Meridian is -105.500000 °Grid Convergence at Surface is: 0.73°

