

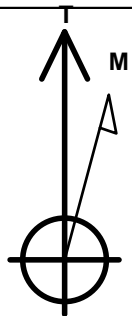
BONANZA CREEK ENERGY OPERATING

Well Name: **Antelope 44-41-21HNB**

Surface Location: Antelope S-21 Pad Sec.21-T5N-R62W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4668.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1383646.48 3327554.05 40.380550 -104.324210
 EST KIB 15' RKB @ 4683.0ft (EST KIB 15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 935'FSL & 1295'FEL	1.0	0.0	0.0	Point
BHL 470'FNL & 650'FEL	6302.0	3901.8	702.0	Point
T1 470'FSL & 647'FEL	6302.0	-459.0	640.8	Point



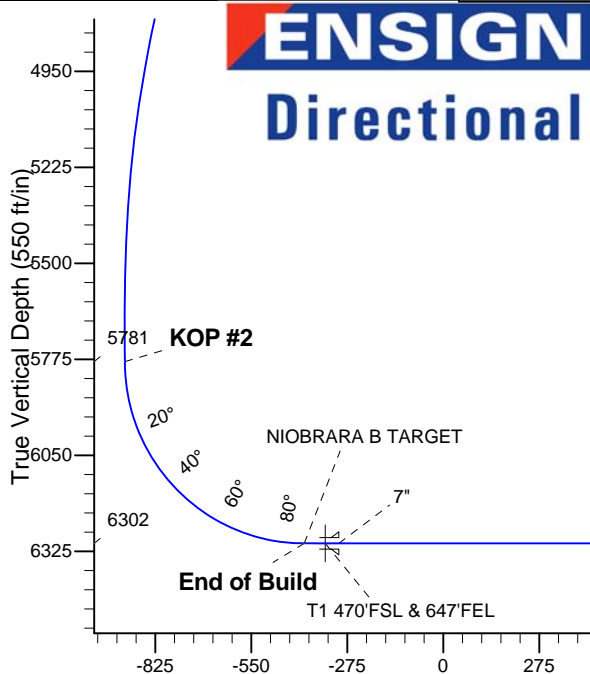
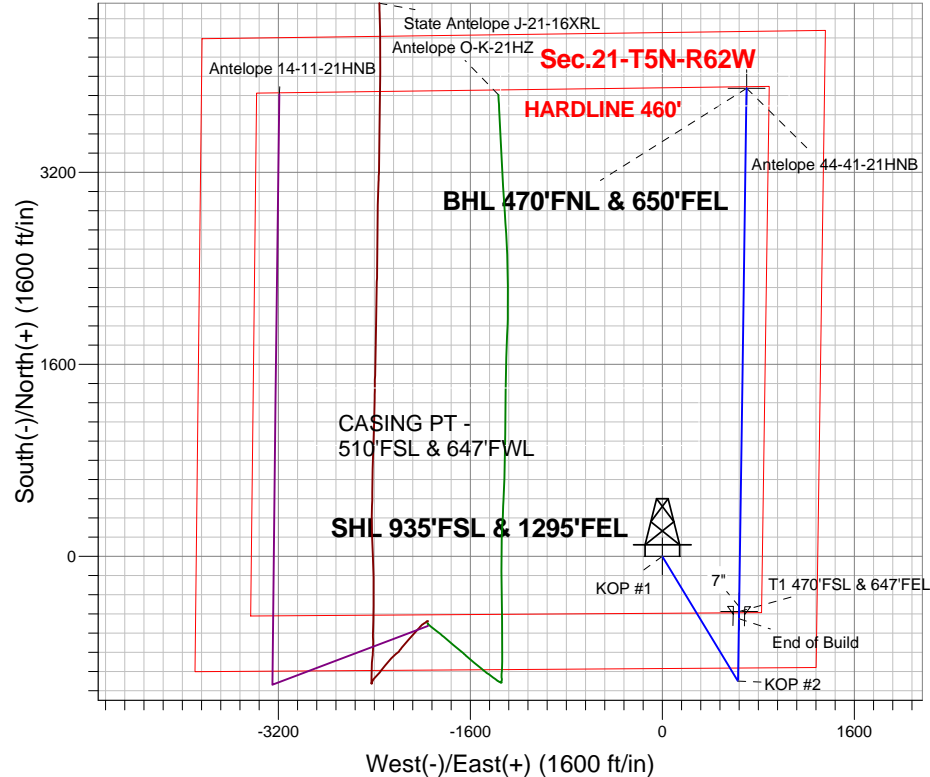
Azimuths to True North
 Magnetic North: 8.43°

Magnetic Field
 Strength: 53020.9nT
 Dip Angle: 67.06°
 Date: 11/9/2012
 Model: IGRF2010

Antelope S-21 Pad Sec.21-T5N-R62W
 Antelope 44-41-21HNB
 Plan #2 (11-15-12)
 11:30, November 15 2012

ANNOTATIONS

TVD	MD	Annotation
600.0	600.0	KOP #1
5781.2	5943.5	KOP #2
6302.0	6761.7	End of Build



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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1410.6	16.21	148.75	1399.8	-97.4	59.1	2.00	148.75	-85.4	
4	4951.8	16.21	148.75	4800.2	-942.6	571.9	0.00	0.00	-826.5	
5	5762.3	0.00	0.00	5600.0	-1040.0	631.0	2.00	180.00	-911.8	
6	5943.5	0.00	0.00	5781.1	-1040.0	631.0	0.00	0.00	-911.8	
7	6761.7	90.00	0.90	6302.0	-519.2	639.2	11.00	0.90	-397.8	
8	6861.9	90.00	0.90	6302.0	-419.0	640.8	0.00	0.00	-298.9	
9	6866.5	90.00	0.81	6302.0	-414.4	640.9	2.00	-90.00	-294.3	
10	11183.1	90.00	0.81	6302.0	3901.8	702.0	0.00	0.00	3964.4	BHL 470'FNL & 650'FEL

BHL 470'FNL & 650'FEL

Vertical Section at 10.20° (550 ft/in)



BONANZA CREEK ENERGY OPERATING

SEC.21-T5N-R62W

Antelope S-21 Pad Sec.21-T5N-R62W

Antelope 44-41-21HNB

Wellbore #1

Plan: Plan #2 (11-15-12)

Standard Planning Report

15 November, 2012

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Project:	SEC.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site:	Antelope S-21 Pad Sec.21-T5N-R62W	North Reference:	True
Well:	Antelope 44-41-21HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-15-12)		

Project	SEC.21-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 S-21 Pad Sec.21-T5N-R62W			
Site Position:		Northing:	1,383,646.48 ft	Latitude:	40.380550
From:	Lat/Long	Easting:	3,327,554.05 ft	Longitude:	-104.324210
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.76 °

Well	Antelope 44-41-21HNB					
Well Position	+N-S	0.0 ft	Northing:	1,383,646.48 ft	Latitude:	40.380550
	+E-W	0.0 ft	Easting:	3,327,554.05 ft	Longitude:	-104.324210
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,668.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/9/2012	8.44	67.06	53,021

Design	Plan #2 (11-15-12)			
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	10.20

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,410.6	16.21	148.75	1,399.8	-97.4	59.1	2.00	2.00	0.00	148.75	
4,951.8	16.21	148.75	4,800.2	-942.6	571.9	0.00	0.00	0.00	0.00	
5,762.3	0.00	0.00	5,600.0	-1,040.0	631.0	2.00	-2.00	0.00	180.00	
5,943.5	0.00	0.00	5,781.1	-1,040.0	631.0	0.00	0.00	0.00	0.00	
6,761.7	90.00	0.90	6,302.0	-519.2	639.2	11.00	11.00	0.00	0.90	
6,861.9	90.00	0.90	6,302.0	-419.0	640.8	0.00	0.00	0.00	0.00	
6,866.5	90.00	0.81	6,302.0	-414.4	640.9	2.00	0.00	-2.00	-90.00	
11,183.1	90.00	0.81	6,302.0	3,901.8	702.0	0.00	0.00	0.00	0.00	BHL 470'FNL & 65C

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Project:	SEC.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site:	Antelope S-21 Pad Sec.21-T5N-R62W	North Reference:	True
Well:	Antelope 44-41-21HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-15-12)		

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
SHL 935'FSL & 1295'FEL									
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
KOP #1									
700.0	2.00	148.75	700.0	-1.5	0.9	-1.3	2.00	2.00	0.00
800.0	4.00	148.75	799.8	-6.0	3.6	-5.2	2.00	2.00	0.00
900.0	6.00	148.75	899.5	-13.4	8.1	-11.8	2.00	2.00	0.00
1,000.0	8.00	148.75	998.7	-23.8	14.5	-20.9	2.00	2.00	0.00
1,100.0	10.00	148.75	1,097.5	-37.2	22.6	-32.6	2.00	2.00	0.00
1,200.0	12.00	148.75	1,195.6	-53.5	32.5	-46.9	2.00	2.00	0.00
1,300.0	14.00	148.75	1,293.1	-72.8	44.1	-63.8	2.00	2.00	0.00
1,400.0	16.00	148.75	1,389.6	-94.9	57.6	-83.2	2.00	2.00	0.00
1,410.6	16.21	148.75	1,399.8	-97.4	59.1	-85.4	2.00	2.00	0.00
1,500.0	16.21	148.75	1,485.7	-118.7	72.0	-104.1	0.00	0.00	0.00
1,600.0	16.21	148.75	1,581.7	-142.6	86.5	-125.0	0.00	0.00	0.00
1,700.0	16.21	148.75	1,677.7	-166.5	101.0	-146.0	0.00	0.00	0.00
1,800.0	16.21	148.75	1,773.7	-190.3	115.5	-166.9	0.00	0.00	0.00
1,900.0	16.21	148.75	1,869.8	-214.2	130.0	-187.8	0.00	0.00	0.00
2,000.0	16.21	148.75	1,965.8	-238.1	144.4	-208.7	0.00	0.00	0.00
2,100.0	16.21	148.75	2,061.8	-261.9	158.9	-229.7	0.00	0.00	0.00
2,200.0	16.21	148.75	2,157.8	-285.8	173.4	-250.6	0.00	0.00	0.00
2,300.0	16.21	148.75	2,253.9	-309.7	187.9	-271.5	0.00	0.00	0.00
2,400.0	16.21	148.75	2,349.9	-333.5	202.4	-292.4	0.00	0.00	0.00
2,500.0	16.21	148.75	2,445.9	-357.4	216.9	-313.4	0.00	0.00	0.00
2,600.0	16.21	148.75	2,541.9	-381.3	231.3	-334.3	0.00	0.00	0.00
2,700.0	16.21	148.75	2,638.0	-405.2	245.8	-355.2	0.00	0.00	0.00
2,800.0	16.21	148.75	2,734.0	-429.0	260.3	-376.2	0.00	0.00	0.00
2,900.0	16.21	148.75	2,830.0	-452.9	274.8	-397.1	0.00	0.00	0.00
3,000.0	16.21	148.75	2,926.0	-476.8	289.3	-418.0	0.00	0.00	0.00
3,100.0	16.21	148.75	3,022.1	-500.6	303.7	-438.9	0.00	0.00	0.00
3,200.0	16.21	148.75	3,118.1	-524.5	318.2	-459.9	0.00	0.00	0.00
3,300.0	16.21	148.75	3,214.1	-548.4	332.7	-480.8	0.00	0.00	0.00
3,400.0	16.21	148.75	3,310.1	-572.2	347.2	-501.7	0.00	0.00	0.00
3,500.0	16.21	148.75	3,406.1	-596.1	361.7	-522.6	0.00	0.00	0.00
3,600.0	16.21	148.75	3,502.2	-620.0	376.2	-543.6	0.00	0.00	0.00
3,700.0	16.21	148.75	3,598.2	-643.8	390.6	-564.5	0.00	0.00	0.00
3,800.0	16.21	148.75	3,694.2	-667.7	405.1	-585.4	0.00	0.00	0.00
3,900.0	16.21	148.75	3,790.2	-691.6	419.6	-606.3	0.00	0.00	0.00
4,000.0	16.21	148.75	3,886.3	-715.4	434.1	-627.3	0.00	0.00	0.00
4,100.0	16.21	148.75	3,982.3	-739.3	448.6	-648.2	0.00	0.00	0.00
4,200.0	16.21	148.75	4,078.3	-763.2	463.0	-669.1	0.00	0.00	0.00
4,300.0	16.21	148.75	4,174.3	-787.0	477.5	-690.1	0.00	0.00	0.00
4,400.0	16.21	148.75	4,270.4	-810.9	492.0	-711.0	0.00	0.00	0.00
4,500.0	16.21	148.75	4,366.4	-834.8	506.5	-731.9	0.00	0.00	0.00
4,600.0	16.21	148.75	4,462.4	-858.7	521.0	-752.8	0.00	0.00	0.00
4,700.0	16.21	148.75	4,558.4	-882.5	535.5	-773.8	0.00	0.00	0.00
4,800.0	16.21	148.75	4,654.5	-906.4	549.9	-794.7	0.00	0.00	0.00
4,900.0	16.21	148.75	4,750.5	-930.3	564.4	-815.6	0.00	0.00	0.00

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Site:	Antelope S-21 Pad Sec.21-T5N-R62W	North Reference:	True
Well:	Antelope 44-41-21HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-15-12)		

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)
4,951.8	16.21	148.75	4,800.2	-942.6	571.9	-826.5	0.00	0.00	0.00
5,000.0	15.25	148.75	4,846.6	-953.8	578.7	-836.3	2.00	-2.00	0.00
5,100.0	13.25	148.75	4,943.5	-974.8	591.5	-854.7	2.00	-2.00	0.00
5,200.0	11.25	148.75	5,041.3	-993.0	602.5	-870.6	2.00	-2.00	0.00
5,300.0	9.25	148.75	5,139.7	-1,008.2	611.7	-883.9	2.00	-2.00	0.00
5,400.0	7.25	148.75	5,238.6	-1,020.4	619.1	-894.7	2.00	-2.00	0.00
5,500.0	5.25	148.75	5,338.0	-1,029.7	624.8	-902.8	2.00	-2.00	0.00
5,600.0	3.25	148.75	5,437.7	-1,036.1	628.6	-908.4	2.00	-2.00	0.00
5,700.0	1.25	148.75	5,537.7	-1,039.4	630.6	-911.3	2.00	-2.00	0.00
5,762.3	0.00	0.00	5,600.0	-1,040.0	631.0	-911.8	2.00	-2.00	0.00
5,800.0	0.00	0.00	5,637.7	-1,040.0	631.0	-911.8	0.00	0.00	0.00
5,900.0	0.00	0.00	5,737.7	-1,040.0	631.0	-911.8	0.00	0.00	0.00
5,943.5	0.00	0.00	5,781.2	-1,040.0	631.0	-911.8	0.00	0.00	0.00
KOP #2									
6,000.0	6.22	0.90	5,837.5	-1,036.9	631.0	-908.8	11.00	11.00	0.00
6,100.0	17.22	0.90	5,935.3	-1,016.7	631.4	-888.8	11.00	11.00	0.00
6,200.0	28.22	0.90	6,027.4	-978.1	632.0	-850.7	11.00	11.00	0.00
6,300.0	39.22	0.90	6,110.5	-922.7	632.9	-796.1	11.00	11.00	0.00
6,400.0	50.22	0.90	6,181.4	-852.4	634.0	-726.7	11.00	11.00	0.00
6,500.0	61.22	0.90	6,237.6	-770.0	635.3	-645.3	11.00	11.00	0.00
6,600.0	72.22	0.90	6,277.1	-678.2	636.7	-554.8	11.00	11.00	0.00
6,700.0	83.22	0.90	6,298.4	-580.7	638.2	-458.5	11.00	11.00	0.00
6,761.7	90.00	0.90	6,302.0	-519.2	639.2	-397.8	11.00	11.00	0.00
End of Build - NIOBRARA B TARGET									
6,800.0	90.00	0.90	6,302.0	-480.9	639.8	-360.0	0.00	0.00	0.00
6,821.8	90.00	0.90	6,302.0	-459.0	640.2	-338.4	0.00	0.00	0.00
T1 470'FSL & 647'FEL									
6,861.9	90.00	0.90	6,302.0	-419.0	640.8	-298.9	0.00	0.00	0.00
7"									
6,866.5	90.00	0.81	6,302.0	-414.4	640.9	-294.3	2.02	0.00	-2.02
6,900.0	90.00	0.81	6,302.0	-380.9	641.3	-261.3	0.00	0.00	0.00
7,000.0	90.00	0.81	6,302.0	-280.9	642.8	-162.6	0.00	0.00	0.00
7,100.0	90.00	0.81	6,302.0	-180.9	644.2	-64.0	0.00	0.00	0.00
7,200.0	90.00	0.81	6,302.0	-80.9	645.6	34.7	0.00	0.00	0.00
7,300.0	90.00	0.81	6,302.0	19.1	647.0	133.4	0.00	0.00	0.00
7,400.0	90.00	0.81	6,302.0	119.1	648.4	232.0	0.00	0.00	0.00
7,500.0	90.00	0.81	6,302.0	219.1	649.8	330.7	0.00	0.00	0.00
7,600.0	90.00	0.81	6,302.0	319.1	651.2	429.3	0.00	0.00	0.00
7,700.0	90.00	0.81	6,302.0	419.1	652.7	528.0	0.00	0.00	0.00
7,800.0	90.00	0.81	6,302.0	519.0	654.1	626.7	0.00	0.00	0.00
7,900.0	90.00	0.81	6,302.0	619.0	655.5	725.3	0.00	0.00	0.00
8,000.0	90.00	0.81	6,302.0	719.0	656.9	824.0	0.00	0.00	0.00
8,100.0	90.00	0.81	6,302.0	819.0	658.3	922.6	0.00	0.00	0.00
8,200.0	90.00	0.81	6,302.0	919.0	659.7	1,021.3	0.00	0.00	0.00
8,300.0	90.00	0.81	6,302.0	1,019.0	661.2	1,120.0	0.00	0.00	0.00
8,400.0	90.00	0.81	6,302.0	1,119.0	662.6	1,218.6	0.00	0.00	0.00
8,500.0	90.00	0.81	6,302.0	1,219.0	664.0	1,317.3	0.00	0.00	0.00
8,600.0	90.00	0.81	6,302.0	1,319.0	665.4	1,415.9	0.00	0.00	0.00
8,700.0	90.00	0.81	6,302.0	1,419.0	666.8	1,514.6	0.00	0.00	0.00
8,800.0	90.00	0.81	6,302.0	1,518.9	668.2	1,613.3	0.00	0.00	0.00
8,900.0	90.00	0.81	6,302.0	1,618.9	669.6	1,711.9	0.00	0.00	0.00
9,000.0	90.00	0.81	6,302.0	1,718.9	671.1	1,810.6	0.00	0.00	0.00
9,100.0	90.00	0.81	6,302.0	1,818.9	672.5	1,909.2	0.00	0.00	0.00

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)	
9,200.0	90.00	0.81	6,302.0	1,918.9	673.9	2,007.9	0.00	0.00	0.00	
9,300.0	90.00	0.81	6,302.0	2,018.9	675.3	2,106.6	0.00	0.00	0.00	
9,400.0	90.00	0.81	6,302.0	2,118.9	676.7	2,205.2	0.00	0.00	0.00	
9,500.0	90.00	0.81	6,302.0	2,218.9	678.1	2,303.9	0.00	0.00	0.00	
9,600.0	90.00	0.81	6,302.0	2,318.9	679.6	2,402.5	0.00	0.00	0.00	
9,700.0	90.00	0.81	6,302.0	2,418.9	681.0	2,501.2	0.00	0.00	0.00	
9,800.0	90.00	0.81	6,302.0	2,518.8	682.4	2,599.9	0.00	0.00	0.00	
9,900.0	90.00	0.81	6,302.0	2,618.8	683.8	2,698.5	0.00	0.00	0.00	
10,000.0	90.00	0.81	6,302.0	2,718.8	685.2	2,797.2	0.00	0.00	0.00	
10,100.0	90.00	0.81	6,302.0	2,818.8	686.6	2,895.9	0.00	0.00	0.00	
10,200.0	90.00	0.81	6,302.0	2,918.8	688.1	2,994.5	0.00	0.00	0.00	
10,300.0	90.00	0.81	6,302.0	3,018.8	689.5	3,093.2	0.00	0.00	0.00	
10,400.0	90.00	0.81	6,302.0	3,118.8	690.9	3,191.8	0.00	0.00	0.00	
10,500.0	90.00	0.81	6,302.0	3,218.8	692.3	3,290.5	0.00	0.00	0.00	
10,600.0	90.00	0.81	6,302.0	3,318.8	693.7	3,389.2	0.00	0.00	0.00	
10,700.0	90.00	0.81	6,302.0	3,418.8	695.1	3,487.8	0.00	0.00	0.00	
10,800.0	90.00	0.81	6,302.0	3,518.7	696.5	3,586.5	0.00	0.00	0.00	
10,900.0	90.00	0.81	6,302.0	3,618.7	698.0	3,685.1	0.00	0.00	0.00	
11,000.0	90.00	0.81	6,302.0	3,718.7	699.4	3,783.8	0.00	0.00	0.00	
11,100.0	90.00	0.81	6,302.0	3,818.7	700.8	3,882.5	0.00	0.00	0.00	
11,183.1	90.00	0.81	6,302.0	3,901.8	702.0	3,964.4	0.00	0.00	0.00	
BHL 470'FNL & 650'FEL										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
6,861.9	6,302.0	7"		7	8-3/4

COMPASS 2003.21 Build 46

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Project:	SEC.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site:	Antelope S-21 Pad Sec.21-T5N-R62W	North Reference:	True
Well:	Antelope 44-41-21HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-15-12)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.0	600.0	0.0	0.0	KOP #1
5,943.5	5,781.2	-1,040.0	631.0	KOP #2
6,761.7	6,302.0	-519.2	639.2	End of Build



BONANZA CREEK ENERGY OPERATING

SEC.21-T5N-R62W

Antelope S-21 Pad Sec.21-T5N-R62W

Antelope 44-41-21HNB

Wellbore #1

Plan #2 (11-15-12)

Anticollision Report

15 November, 2012

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Reference	Plan #2 (11-15-12)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 11/15/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,183.0	Plan #2 (11-15-12) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Antelope O-K-21HZ Pad Sec.21-T5N-R62W						
Antelope O-K-21HZ - Wellbore #1 - Wellbore #1	4,740.5	4,891.5	1,956.7	1,921.9	56.232	CC
Antelope O-K-21HZ - Wellbore #1 - Wellbore #1	9,700.0	9,618.0	1,973.3	1,862.6	17.825	ES
Antelope O-K-21HZ - Wellbore #1 - Wellbore #1	11,183.1	11,039.0	2,071.1	1,908.1	12.708	SF
State Antelope J-21 Pad Sec.21-T5N-R62W						
Antelope 14-11-21HNB - Wellbore #1 - Plan #1 (11-15-12)	200.0	167.0	2,037.1	2,036.5	3,394.487	CC, ES
Antelope 14-11-21HNB - Wellbore #1 - Plan #1 (11-15-12)	11,183.1	11,210.0	3,895.3	3,724.7	22.845	SF
State Antelope J-21-16XRL - Wellbore #1 - Wellbore #1	124.6	88.6	2,026.0	2,025.7	7,279.103	CC, ES
State Antelope J-21-16XRL - Wellbore #1 - Wellbore #1	11,183.1	11,100.9	3,053.8	2,890.2	18.669	SF

Offset Design Antelope O-K-21HZ Pad Sec.21-T5N-R62W - Antelope O-K-21HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0ft
Survey Program: 539-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)	Offset Wellbore Centre +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	-105.93	-557.3	-1,953.0	2,031.3					
100.0	100.0	61.8	61.8	0.1	0.1	-105.93	-557.3	-1,953.1	2,031.0	2,030.9	0.18	N/A		
200.0	200.0	158.5	158.5	0.3	0.2	-105.92	-557.3	-1,953.3	2,031.2	2,030.7	0.52	3,939.850		
300.0	300.0	255.1	255.1	0.6	0.3	-105.92	-557.2	-1,953.7	2,031.6	2,030.7	0.85	2,392.941		
400.0	400.0	351.8	351.8	0.8	0.4	-105.91	-557.1	-1,954.2	2,032.1	2,030.9	1.18	1,718.599		
500.0	500.0	448.4	448.4	1.0	0.5	-105.90	-556.9	-1,955.0	2,032.8	2,031.3	1.52	1,341.027		
600.0	600.0	545.4	545.4	1.2	0.6	-105.89	-556.7	-1,955.9	2,033.6	2,031.8	1.86	1,096.041		
700.0	700.0	676.6	676.6	1.4	0.9	105.42	-556.5	-1,956.5	2,034.6	2,032.3	2.31	880.913		
800.0	799.8	755.0	755.0	1.6	1.0	105.51	-556.1	-1,956.4	2,035.7	2,033.1	2.66	766.541		
900.0	899.5	858.2	858.2	1.8	1.3	105.69	-556.8	-1,956.9	2,038.8	2,035.7	3.08	661.800		
1,000.0	998.7	1,031.4	1,031.2	2.1	1.6	106.04	-562.7	-1,952.8	2,040.9	2,037.2	3.68	554.775		
1,100.0	1,097.5	1,227.8	1,226.4	2.4	2.1	106.41	-576.6	-1,937.2	2,039.3	2,034.9	4.42	461.298		
1,200.0	1,195.6	1,421.8	1,417.2	2.7	2.7	106.70	-598.7	-1,909.8	2,033.7	2,028.4	5.33	381.747		
1,300.0	1,293.1	1,528.0	1,520.9	3.1	3.1	106.95	-613.1	-1,891.8	2,027.2	2,021.1	6.08	333.613		
1,400.0	1,389.6	1,621.0	1,611.7	3.6	3.5	107.26	-625.6	-1,876.1	2,021.7	2,014.9	6.82	296.480		
1,410.6	1,399.8	1,630.7	1,621.1	3.6	3.5	107.30	-626.9	-1,874.5	2,021.2	2,014.3	6.90	292.997		
1,500.0	1,485.7	1,711.8	1,700.5	4.1	3.8	107.54	-637.1	-1,861.3	2,017.3	2,009.7	7.58	265.957		
1,600.0	1,581.7	1,793.0	1,780.0	4.6	4.1	107.79	-647.2	-1,848.5	2,013.4	2,005.0	8.35	241.121		
1,700.0	1,677.7	1,886.0	1,871.3	5.2	4.4	108.10	-658.6	-1,834.5	2,010.3	2,001.1	9.17	219.242		

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 539-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
1,800.0	1,773.7	1,975.5	1,959.1	5.7	4.7	108.38	-669.9	-1,821.6	2,007.8	1,997.8	10.00	200.800	
1,900.0	1,869.8	2,094.7	2,075.9	6.3	5.2	108.75	-685.1	-1,803.7	2,004.8	1,993.9	10.94	183.304	
2,000.0	1,965.8	2,181.1	2,160.8	6.8	5.5	109.05	-695.2	-1,790.9	2,001.9	1,990.2	11.75	170.309	
2,100.0	2,061.8	2,265.8	2,244.1	7.4	5.8	109.36	-704.5	-1,779.0	1,999.8	1,987.2	12.56	159.211	
2,200.0	2,157.8	2,355.2	2,332.2	8.0	6.2	109.69	-714.6	-1,767.0	1,998.4	1,985.0	13.39	149.263	
2,300.0	2,253.9	2,457.9	2,433.2	8.6	6.6	110.04	-727.1	-1,753.3	1,997.2	1,982.9	14.27	139.926	
2,400.0	2,349.9	2,571.3	2,544.6	9.1	7.0	110.42	-741.1	-1,737.5	1,995.6	1,980.4	15.19	131.353	
2,500.0	2,445.9	2,680.1	2,651.4	9.7	7.4	110.78	-754.3	-1,721.7	1,993.4	1,977.3	16.10	123.850	
2,600.0	2,541.9	2,778.5	2,747.9	10.3	7.8	111.10	-766.8	-1,707.0	1,991.1	1,974.1	16.97	117.325	
2,700.0	2,638.0	2,868.7	2,836.5	10.9	8.2	111.41	-777.7	-1,694.0	1,989.2	1,971.3	17.80	111.725	
2,800.0	2,734.0	2,956.2	2,922.7	11.5	8.5	111.74	-787.0	-1,682.0	1,987.8	1,969.2	18.61	106.819	
2,900.0	2,830.0	3,047.1	3,012.3	12.1	8.8	112.11	-796.4	-1,670.2	1,987.1	1,967.7	19.42	102.336	
2,997.8	2,923.9	3,135.7	3,099.7	12.6	9.1	112.45	-805.9	-1,658.7	1,986.7	1,966.5	20.21	98.308	
3,000.0	2,926.0	3,137.3	3,101.2	12.7	9.1	112.46	-806.0	-1,658.5	1,986.7	1,966.5	20.23	98.227	
3,100.0	3,022.1	3,205.0	3,168.1	13.2	9.4	112.73	-812.9	-1,650.6	1,987.5	1,966.6	20.96	94.806	
3,200.0	3,118.1	3,288.1	3,250.4	13.8	9.7	113.08	-821.2	-1,641.9	1,989.6	1,967.9	21.73	91.558	
3,300.0	3,214.1	3,463.4	3,423.2	14.4	10.3	113.73	-841.3	-1,620.6	1,990.3	1,967.5	22.78	87.355	
3,400.0	3,310.1	3,658.4	3,613.3	15.0	11.2	114.25	-869.2	-1,587.7	1,986.8	1,962.7	24.01	82.752	
3,500.0	3,406.1	3,758.4	3,710.1	15.6	11.7	114.47	-885.1	-1,568.1	1,980.7	1,955.7	24.94	79.431	
3,600.0	3,502.2	3,844.2	3,793.3	16.2	12.1	114.65	-898.6	-1,551.7	1,975.2	1,949.4	25.80	76.567	
3,700.0	3,598.2	3,920.7	3,867.7	16.8	12.4	114.85	-909.7	-1,537.9	1,970.6	1,944.0	26.60	74.080	
3,800.0	3,694.2	3,988.0	3,933.3	17.4	12.7	115.06	-918.7	-1,526.7	1,967.4	1,940.0	27.36	71.914	
3,900.0	3,790.2	4,055.0	3,999.2	18.0	13.0	115.29	-926.9	-1,517.0	1,966.2	1,938.1	28.10	69.977	
3,922.2	3,811.6	4,064.4	4,008.4	18.1	13.0	115.32	-928.0	-1,515.8	1,966.2	1,937.9	28.24	69.612	
4,000.0	3,886.3	4,138.9	4,081.8	18.5	13.3	115.60	-936.4	-1,506.0	1,966.3	1,937.5	28.86	68.123	
4,100.0	3,982.3	4,275.1	4,215.7	19.1	13.8	116.09	-952.2	-1,487.0	1,965.8	1,936.0	29.77	66.026	
4,200.0	4,078.3	4,379.2	4,317.8	19.7	14.2	116.47	-964.3	-1,471.0	1,963.9	1,933.3	30.60	64.184	
4,300.0	4,174.3	4,480.9	4,417.8	20.3	14.6	116.85	-975.4	-1,455.9	1,962.6	1,931.2	31.40	62.504	
4,400.0	4,270.4	4,586.2	4,521.2	20.9	15.0	117.26	-986.8	-1,439.4	1,960.5	1,928.3	32.21	60.874	
4,500.0	4,366.4	4,674.6	4,608.0	21.5	15.4	117.58	-996.8	-1,425.8	1,958.9	1,925.9	32.97	59.414	
4,600.0	4,462.4	4,772.9	4,704.6	22.1	15.8	117.95	-1,008.0	-1,411.1	1,957.7	1,924.0	33.76	57.997	
4,700.0	4,558.4	4,860.0	4,790.1	22.7	16.1	118.27	-1,017.8	-1,398.2	1,956.8	1,922.3	34.50	56.711	
4,740.5	4,597.4	4,891.5	4,821.1	22.9	16.2	118.39	-1,021.2	-1,393.7	1,956.7	1,921.9	34.80	56.232 CC	
4,800.0	4,654.5	4,934.7	4,863.7	23.3	16.4	118.57	-1,025.6	-1,387.9	1,956.9	1,921.7	35.21	55.583	
4,900.0	4,750.5	4,996.0	4,924.2	23.9	16.6	118.84	-1,031.1	-1,380.3	1,958.6	1,922.7	35.86	54.613	
4,951.8	4,800.2	5,036.0	4,963.8	24.2	16.7	119.04	-1,034.1	-1,375.8	1,960.1	1,923.9	36.20	54.148	
5,000.0	4,846.6	5,065.4	4,993.0	24.4	16.8	119.21	-1,036.0	-1,372.9	1,961.8	1,925.3	36.45	53.826	
5,100.0	4,943.5	5,135.7	5,063.0	24.8	17.0	119.60	-1,039.7	-1,366.8	1,965.5	1,928.6	36.86	53.317	
5,200.0	5,041.3	5,209.1	5,136.2	25.2	17.2	119.96	-1,042.8	-1,361.3	1,968.7	1,931.5	37.24	52.863	
5,300.0	5,139.7	5,279.0	5,205.9	25.5	17.3	120.26	-1,045.2	-1,357.2	1,971.8	1,934.3	37.58	52.473	
5,400.0	5,238.6	5,365.1	5,291.8	25.7	17.5	120.54	-1,047.6	-1,353.0	1,974.3	1,936.5	37.90	52.097	
5,500.0	5,338.0	5,454.3	5,380.9	25.9	17.7	120.75	-1,049.5	-1,349.2	1,975.6	1,937.5	38.19	51.729	
5,600.0	5,437.7	5,538.8	5,465.4	26.1	17.8	120.87	-1,050.8	-1,346.1	1,975.8	1,937.4	38.45	51.385	
5,700.0	5,537.7	5,628.3	5,554.9	26.2	18.0	120.93	-1,051.3	-1,343.5	1,974.9	1,936.2	38.68	51.052	
5,762.3	5,600.0	5,684.0	5,610.5	26.3	18.1	-90.32	-1,051.1	-1,342.1	1,973.7	1,934.6	39.05	50.545	
5,800.0	5,637.7	5,716.9	5,643.4	26.3	18.1	-90.32	-1,051.0	-1,341.4	1,972.8	1,933.7	39.14	50.407	
5,900.0	5,737.7	5,794.3	5,720.8	26.4	18.2	-90.33	-1,051.3	-1,340.1	1,971.2	1,931.8	39.36	50.085	
5,943.5	5,781.1	5,832.0	5,758.5	26.5	18.3	-90.32	-1,051.1	-1,339.8	1,970.9	1,931.5	39.45	49.954	
5,950.0	5,787.7	5,832.0	5,758.5	26.5	18.3	-91.23	-1,051.1	-1,339.8	1,970.9	1,931.6	39.24	50.230	
6,000.0	5,837.5	5,891.8	5,818.2	26.5	18.3	-91.29	-1,048.5	-1,339.5	1,970.7	1,931.4	39.33	50.102	
6,050.0	5,886.9	5,969.9	5,895.3	26.4	18.4	-91.36	-1,036.7	-1,338.5	1,970.2	1,930.9	39.32	50.109	
6,100.0	5,935.3	6,004.0	5,928.5	26.4	18.4	-91.44	-1,028.5	-1,338.0	1,969.7	1,930.4	39.22	50.227	

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 539-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		
6,113.7	5,948.4	6,004.0	5,928.5	26.3	18.4	-91.45	-1,028.5	-1,338.0	1,969.6	1,930.4	39.17	50.277		
6,150.0	5,982.3	6,020.6	5,944.4	26.2	18.3	-91.47	-1,023.9	-1,338.0	1,969.8	1,930.8	39.05	50.445		
6,200.0	6,027.4	6,051.9	5,974.2	26.1	18.3	-91.49	-1,014.5	-1,338.4	1,970.8	1,932.0	38.81	50.774		
6,250.0	6,070.3	6,195.8	6,103.6	25.9	18.1	-91.87	-952.2	-1,337.2	1,970.8	1,932.4	38.34	51.398		
6,300.0	6,110.5	6,248.3	6,146.8	25.6	17.9	-92.03	-922.5	-1,335.4	1,969.6	1,931.6	37.95	51.906		
6,350.0	6,147.6	6,287.0	6,176.8	25.3	17.9	-92.16	-898.1	-1,334.4	1,968.8	1,931.3	37.54	52.445		
6,393.8	6,177.4	6,319.0	6,200.4	25.1	17.8	-92.26	-876.4	-1,333.7	1,968.6	1,931.4	37.17	52.964		
6,400.0	6,181.4	6,319.0	6,200.4	25.1	17.8	-92.26	-876.4	-1,333.7	1,968.6	1,931.5	37.13	53.025		
6,450.0	6,211.5	6,350.0	6,222.2	24.7	17.7	-92.32	-854.4	-1,333.5	1,969.1	1,932.4	36.70	53.659		
6,500.0	6,237.6	6,386.7	6,246.4	24.4	17.6	-92.37	-826.8	-1,333.7	1,970.3	1,934.0	36.25	54.349		
6,550.0	6,259.6	6,425.0	6,269.3	24.1	17.5	-92.40	-796.2	-1,334.1	1,971.9	1,936.1	35.81	55.059		
6,600.0	6,277.1	6,472.8	6,294.4	23.8	17.3	-92.44	-755.5	-1,335.1	1,974.0	1,938.7	35.39	55.778		
6,650.0	6,290.1	6,558.8	6,328.3	23.5	17.1	-92.58	-676.6	-1,336.1	1,975.5	1,940.5	35.01	56.421		
6,700.0	6,298.4	6,654.0	6,350.2	23.1	17.0	-92.65	-584.1	-1,336.2	1,976.4	1,941.6	34.82	56.760		
6,750.0	6,301.9	6,688.1	6,354.6	22.8	16.9	-92.61	-550.3	-1,336.1	1,977.3	1,942.6	34.65	57.066		
6,761.7	6,302.0	6,702.5	6,356.0	22.8	16.9	-92.61	-536.0	-1,336.2	1,977.6	1,942.9	34.64	57.088		
6,800.0	6,302.0	6,746.4	6,359.1	22.5	17.0	-92.70	-492.1	-1,336.4	1,978.4	1,943.7	34.67	57.062		
6,861.9	6,302.0	6,811.0	6,361.7	22.2	17.1	-92.77	-427.6	-1,336.5	1,979.6	1,944.8	34.78	56.924		
6,866.5	6,302.0	6,811.0	6,361.7	22.2	17.1	-92.77	-427.6	-1,336.5	1,979.7	1,944.9	34.77	56.938		
6,900.0	6,302.0	6,832.6	6,362.3	22.0	17.2	-92.79	-406.1	-1,336.7	1,980.5	1,945.7	34.78	56.943		
7,000.0	6,302.0	6,928.7	6,362.0	21.6	17.7	-92.78	-309.9	-1,337.8	1,983.1	1,947.8	35.35	56.099		
7,100.0	6,302.0	7,069.7	6,361.3	21.3	18.6	-92.75	-168.9	-1,338.7	1,985.2	1,948.6	36.51	54.373		
7,200.0	6,302.0	7,147.4	6,360.7	21.1	19.3	-92.73	-91.3	-1,338.7	1,986.6	1,949.1	37.49	52.987		
7,300.0	6,302.0	7,225.4	6,361.5	21.1	20.0	-92.75	-13.2	-1,339.6	1,989.2	1,950.5	38.69	51.408		
7,400.0	6,302.0	7,469.4	6,370.5	21.3	22.6	-93.01	230.5	-1,334.8	1,989.1	1,947.0	42.07	47.276		
7,500.0	6,302.0	7,547.8	6,374.1	22.0	23.6	-93.12	308.7	-1,330.8	1,985.6	1,941.7	43.89	45.240		
7,600.0	6,302.0	7,661.0	6,377.3	22.9	25.2	-93.22	421.7	-1,325.5	1,982.6	1,936.2	46.44	42.694		
7,700.0	6,302.0	7,748.2	6,377.9	24.0	26.4	-93.24	508.8	-1,321.4	1,979.3	1,930.5	48.75	40.599		
7,800.0	6,302.0	7,821.6	6,376.9	25.2	27.5	-93.22	582.1	-1,318.4	1,976.6	1,925.6	51.01	38.751		
7,900.0	6,302.0	7,919.2	6,375.4	26.5	28.9	-93.18	679.7	-1,316.0	1,975.4	1,921.7	53.69	36.794		
8,000.0	6,302.0	8,038.0	6,373.4	27.8	30.6	-93.12	798.4	-1,311.5	1,972.9	1,916.1	56.76	34.761		
8,098.4	6,302.0	8,085.0	6,373.1	29.2	31.2	-93.11	845.4	-1,310.2	1,971.6	1,912.9	58.79	33.539		
8,100.0	6,302.0	8,085.0	6,373.1	29.3	31.2	-93.11	845.4	-1,310.2	1,971.6	1,912.8	58.81	33.527		
8,200.0	6,302.0	8,169.8	6,373.6	30.7	32.4	-93.13	930.2	-1,309.6	1,972.3	1,910.8	61.51	32.065		
8,300.0	6,302.0	8,268.1	6,375.4	32.2	33.9	-93.18	1,028.5	-1,309.4	1,973.6	1,909.1	64.51	30.594		
8,400.0	6,302.0	8,377.1	6,377.1	33.8	35.6	-93.23	1,137.4	-1,308.4	1,974.2	1,906.4	67.82	29.110		
8,500.0	6,302.0	8,509.0	6,378.9	35.4	37.7	-93.28	1,269.3	-1,306.9	1,974.8	1,903.2	71.55	27.601		
8,581.6	6,302.0	8,568.2	6,378.9	36.7	38.6	-93.28	1,328.4	-1,305.5	1,974.1	1,900.3	73.82	26.742		
8,600.0	6,302.0	8,578.4	6,379.0	37.0	38.8	-93.28	1,338.7	-1,305.4	1,974.1	1,899.8	74.28	26.577		
8,700.0	6,302.0	8,651.0	6,379.0	38.6	40.0	-93.28	1,411.3	-1,305.4	1,975.4	1,898.3	77.11	25.618		
8,800.0	6,302.0	8,847.0	6,377.1	40.3	43.2	-93.23	1,607.3	-1,301.7	1,975.1	1,893.1	82.02	24.080		
8,900.0	6,302.0	8,927.0	6,377.7	42.0	44.4	-93.25	1,687.1	-1,298.4	1,972.4	1,887.4	84.99	23.208		
9,000.0	6,302.0	9,029.0	6,376.4	43.7	46.1	-93.21	1,789.1	-1,294.7	1,970.1	1,881.7	88.42	22.280		
9,100.0	6,302.0	9,124.0	6,374.7	45.4	47.7	-93.17	1,884.0	-1,290.7	1,967.3	1,875.6	91.72	21.449		
9,200.0	6,302.0	9,200.1	6,374.6	47.1	48.9	-93.17	1,960.0	-1,289.0	1,966.3	1,871.6	94.72	20.759		
9,254.5	6,302.0	9,241.3	6,374.6	48.1	49.6	-93.17	2,001.2	-1,288.2	1,966.1	1,869.7	96.38	20.399		
9,300.0	6,302.0	9,266.0	6,374.6	48.9	50.1	-93.17	2,025.9	-1,287.9	1,966.3	1,868.7	97.60	20.147		
9,400.0	6,302.0	9,357.7	6,374.9	50.6	51.6	-93.17	2,117.6	-1,287.8	1,967.5	1,866.6	100.90	19.500		
9,500.0	6,302.0	9,455.0	6,376.8	52.4	53.2	-93.23	2,214.9	-1,287.7	1,968.9	1,864.7	104.29	18.880		
9,600.0	6,302.0	9,550.0	6,377.9	54.2	54.8	-93.25	2,309.9	-1,287.9	1,970.7	1,863.0	107.74	18.292		
9,700.0	6,302.0	9,618.0	6,377.4	56.0	56.0	-93.24	2,377.9	-1,288.8	1,973.3	1,862.6	110.70	17.825 ES		
9,800.0	6,302.0	9,700.0	6,377.4	57.8	57.3	-93.23	2,459.8	-1,290.8	1,977.2	1,863.3	113.90	17.359		

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design Antelope O-K-21HZ Pad Sec.21-T5N-R62W - Antelope O-K-21HZ - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 539-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
9,900.0	6,302.0	9,785.0	6,378.3	59.6	58.8	-93.25	2,544.8	-1,293.5	1,981.9	1,864.8	117.17	16.915	
10,000.0	6,302.0	9,856.2	6,378.4	61.4	60.0	-93.25	2,615.9	-1,296.7	1,987.8	1,867.6	120.24	16.532	
10,100.0	6,302.0	9,947.9	6,378.9	63.2	61.6	-93.25	2,707.5	-1,301.6	1,994.6	1,870.9	123.68	16.127	
10,200.0	6,302.0	10,006.1	6,378.9	65.0	62.6	-93.24	2,765.6	-1,305.5	2,002.6	1,876.0	126.53	15.826	
10,300.0	6,302.0	10,115.0	6,377.9	66.8	64.5	-93.20	2,874.2	-1,313.5	2,011.3	1,881.0	130.31	15.435	
10,400.0	6,302.0	10,236.2	6,376.7	68.6	66.6	-93.15	2,995.1	-1,321.5	2,019.2	1,884.9	134.25	15.040	
10,500.0	6,302.0	10,346.1	6,376.7	70.5	68.5	-93.14	3,104.8	-1,327.9	2,026.5	1,888.5	138.02	14.683	
10,600.0	6,302.0	10,467.4	6,377.3	72.3	70.6	-93.15	3,226.0	-1,333.3	2,032.2	1,890.2	141.99	14.312	
10,700.0	6,302.0	10,538.0	6,376.5	74.1	71.8	-93.11	3,296.5	-1,337.0	2,038.8	1,893.7	145.10	14.051	
10,800.0	6,302.0	10,645.3	6,375.7	76.0	73.7	-93.08	3,403.6	-1,343.6	2,046.3	1,897.4	148.85	13.747	
10,900.0	6,302.0	10,769.9	6,377.8	77.8	75.8	-93.13	3,527.9	-1,350.6	2,053.6	1,900.7	152.88	13.432	
11,000.0	6,302.0	10,858.7	6,379.8	79.7	77.4	-93.17	3,616.7	-1,354.7	2,059.8	1,903.5	156.32	13.176	
11,100.0	6,302.0	10,976.7	6,379.3	81.5	79.5	-93.15	3,734.4	-1,360.6	2,066.2	1,905.9	160.31	12.889	
11,183.1	6,302.0	11,039.0	6,378.1	83.1	80.6	-93.11	3,796.7	-1,363.4	2,071.1	1,908.1	162.97	12.708 SF	

State Antelope J-21 Pad Sec.21-T5N-R62W - Antelope 14-11-21HNB - Wellbore #1 - Plan #1 (11-15-12)													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	-106.52	-579.2	-1,953.0	2,037.4					
100.0	100.0	67.0	67.0	0.1	0.1	-106.52	-579.2	-1,953.0	2,037.1	2,036.9	0.19	N/A		
200.0	200.0	167.0	167.0	0.3	0.3	-106.52	-579.2	-1,953.0	2,037.1	2,036.5	0.60	3,394.487 CC, ES		
300.0	300.0	239.2	239.2	0.6	0.4	-106.52	-579.3	-1,953.3	2,037.6	2,036.6	0.98	2,075.457		
400.0	400.0	300.0	300.0	0.8	0.5	-106.52	-579.8	-1,954.7	2,040.0	2,038.6	1.33	1,528.490		
500.0	500.0	356.1	356.0	1.0	0.7	-106.53	-580.7	-1,957.0	2,044.4	2,042.7	1.68	1,215.429		
600.0	600.0	400.0	399.8	1.2	0.8	-106.53	-581.7	-1,959.6	2,050.9	2,048.9	2.00	1,023.966		
700.0	700.0	472.4	472.0	1.4	0.9	104.56	-583.8	-1,965.2	2,059.7	2,057.3	2.37	867.485		
800.0	799.8	530.1	529.4	1.6	1.1	104.40	-585.9	-1,970.8	2,071.5	2,068.8	2.70	766.930		
900.0	899.5	600.0	598.7	1.8	1.3	104.26	-589.0	-1,979.1	2,086.2	2,083.1	3.08	676.841		
1,000.0	998.7	643.9	642.2	2.1	1.5	104.06	-591.3	-1,985.2	2,103.6	2,100.2	3.44	612.062		
1,100.0	1,097.5	700.0	697.5	2.4	1.6	103.87	-594.6	-1,993.8	2,123.9	2,120.0	3.86	550.030		
1,200.0	1,195.6	754.8	751.4	2.7	1.9	103.67	-598.1	-2,003.2	2,147.0	2,142.6	4.34	494.974		
1,300.0	1,293.1	800.0	795.6	3.1	2.0	103.40	-601.3	-2,011.6	2,172.8	2,168.0	4.84	448.481		
1,400.0	1,389.6	861.9	856.0	3.6	2.3	103.21	-606.1	-2,024.3	2,201.4	2,195.9	5.46	403.030		
1,410.6	1,399.8	867.4	861.4	3.6	2.3	103.18	-606.5	-2,025.4	2,204.5	2,199.0	5.53	398.771		
1,500.0	1,485.7	900.0	893.1	4.1	2.5	103.40	-609.3	-2,032.7	2,232.4	2,226.3	6.06	368.273		
1,600.0	1,581.7	965.4	956.4	4.6	2.8	103.84	-615.1	-2,048.1	2,265.1	2,258.4	6.76	335.272		
1,700.0	1,677.7	1,016.3	1,005.3	5.2	3.1	104.17	-620.0	-2,061.1	2,299.8	2,292.4	7.43	309.665		
1,800.0	1,773.7	1,081.4	1,067.6	5.7	3.5	104.58	-626.7	-2,078.7	2,336.2	2,328.1	8.15	286.810		
1,900.0	1,869.8	1,171.8	1,154.1	6.3	4.0	105.13	-636.0	-2,103.4	2,373.1	2,364.2	8.92	265.963		
2,000.0	1,965.8	1,262.1	1,240.5	6.8	4.6	105.67	-645.3	-2,128.0	2,410.3	2,400.5	9.71	248.317		
2,100.0	2,061.8	1,352.5	1,326.9	7.4	5.1	106.19	-654.6	-2,152.7	2,447.5	2,437.0	10.50	233.133		
2,200.0	2,157.8	1,442.9	1,413.3	8.0	5.7	106.70	-663.9	-2,177.4	2,485.0	2,473.7	11.29	220.027		
2,300.0	2,253.9	1,533.2	1,499.8	8.6	6.2	107.19	-673.2	-2,202.0	2,522.7	2,510.6	12.09	208.578		
2,400.0	2,349.9	1,623.6	1,586.2	9.1	6.8	107.67	-682.5	-2,226.7	2,560.5	2,547.6	12.90	198.506		
2,500.0	2,445.9	1,713.9	1,672.6	9.7	7.3	108.14	-691.9	-2,251.3	2,598.4	2,584.7	13.71	189.586		
2,600.0	2,541.9	1,804.3	1,759.0	10.3	7.9	108.59	-701.2	-2,276.0	2,636.6	2,622.0	14.52	181.636		
2,700.0	2,638.0	1,894.6	1,845.5	10.9	8.4	109.03	-710.5	-2,300.7	2,674.8	2,659.5	15.33	174.509		
2,800.0	2,734.0	1,985.0	1,931.9	11.5	9.0	109.46	-719.8	-2,325.3	2,713.2	2,697.1	16.14	168.087		
2,900.0	2,830.0	2,075.3	2,018.3	12.1	9.6	109.88	-729.1	-2,350.0	2,751.7	2,734.8	16.96	162.273		
3,000.0	2,926.0	2,165.7	2,104.7	12.7	10.1	110.29	-738.4	-2,374.6	2,790.4	2,772.6	17.77	156.987		
3,100.0	3,022.1	2,256.0	2,191.2	13.2	10.7	110.68	-747.7	-2,399.3	2,829.2	2,810.6	18.59	152.161		
3,200.0	3,118.1	2,346.4	2,277.6	13.8	11.3	111.07	-757.1	-2,424.0	2,868.0	2,848.6	19.41	147.739		
3,300.0	3,214.1	2,436.8	2,364.0	14.4	11.8	111.44	-766.4	-2,448.6	2,907.0	2,886.8	20.23	143.672		
3,400.0	3,310.1	2,527.1	2,450.4	15.0	12.4	111.81	-775.7	-2,473.3	2,946.2	2,925.1	21.06	139.921		
3,500.0	3,406.1	2,617.5	2,536.9	15.6	12.9	112.16	-785.0	-2,497.9	2,985.4	2,963.5	21.88	136.449		
3,600.0	3,502.2	2,707.8	2,623.3	16.2	13.5	112.51	-794.3	-2,522.6	3,024.7	3,002.0	22.70	133.228		
3,700.0	3,598.2	2,798.2	2,709.7	16.8	14.1	112.85	-803.6	-2,547.3	3,064.1	3,040.5	23.53	130.232		
3,800.0	3,694.2	2,888.5	2,796.1	17.4	14.6	113.18	-813.0	-2,571.9	3,103.6	3,079.2	24.35	127.438		
3,900.0	3,790.2	2,978.9	2,882.6	18.0	15.2	113.50	-822.3	-2,596.6	3,143.2	3,118.0	25.18	124.826		
4,000.0	3,886.3	3,069.2	2,969.0	18.5	15.8	113.82	-831.6	-2,621.2	3,182.8	3,156.8	26.01	122.381		
4,100.0	3,982.3	3,159.6	3,055.4	19.1	16.3	114.12	-840.9	-2,645.9	3,222.6	3,195.7	26.84	120.086		
4,200.0	4,078.3	3,250.0	3,141.8	19.7	16.9	114.42	-850.2	-2,670.5	3,262.4	3,234.7	27.66	117.928		
4,300.0	4,174.3	3,340.3	3,228.3	20.3	17.5	114.72	-859.5	-2,695.2	3,302.3	3,273.8	28.49	115.895		
4,400.0	4,270.4	3,430.7	3,314.7	20.9	18.0	115.00	-868.8	-2,719.9	3,342.3	3,313.0	29.32	113.978		
4,500.0	4,366.4	3,521.0	3,401.1	21.5	18.6	115.28	-878.2	-2,744.5	3,382.3	3,352.2	30.15	112.166		
4,600.0	4,462.4	3,611.4	3,487.5	22.1	19.2	115.56	-887.5	-2,769.2	3,422.4	3,391.5	30.99	110.451		
4,700.0	4,558.4	3,701.7	3,574.0	22.7	19.7	115.82	-896.8	-2,793.8	3,462.6	3,430.8	31.82	108.826		
4,800.0	4,654.5	3,792.1	3,660.4	23.3	20.3	116.08	-906.1	-2,818.5	3,502.9	3,470.2	32.65	107.283		
4,900.0	4,750.5	3,882.4	3,746.8	23.9	20.9	116.34	-915.4	-2,843.2	3,543.2	3,509.7	33.48	105.818		
4,951.8	4,800.2	3,929.2	3,791.6	24.2	21.2	116.47	-920.2	-2,855.9	3,564.1	3,530.1	33.92	105.087		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design													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	4,846.6	3,972.9	3,833.4	24.4	21.4	116.96	-924.7	-2,867.9	3,583.4	3,549.0	34.32	104.425		
5,100.0	4,943.5	4,064.3	3,920.8	24.8	22.0	117.90	-934.2	-2,892.8	3,622.3	3,587.3	35.05	103.339		
5,200.0	5,041.3	4,156.6	4,009.1	25.2	22.6	118.75	-943.7	-2,918.0	3,659.8	3,624.1	35.77	102.330		
5,300.0	5,139.7	4,249.8	4,098.2	25.5	23.2	119.51	-953.3	-2,943.4	3,695.8	3,659.3	36.45	101.401		
5,400.0	5,238.6	4,343.7	4,188.0	25.7	23.8	120.18	-963.0	-2,969.1	3,730.1	3,693.0	37.10	100.555		
5,500.0	5,338.0	4,438.2	4,278.4	25.9	24.3	120.76	-972.7	-2,994.8	3,762.8	3,725.1	37.71	99.794		
5,600.0	5,437.7	4,533.2	4,369.2	26.1	24.9	121.26	-982.5	-3,020.8	3,793.8	3,755.5	38.28	99.120		
5,700.0	5,537.7	4,628.5	4,460.5	26.2	25.5	121.67	-992.3	-3,046.8	3,823.1	3,784.3	38.80	98.531		
5,762.3	5,600.0	4,688.1	4,517.5	26.3	25.9	-89.36	-998.5	-3,063.1	3,840.5	3,801.4	39.07	98.285		
5,800.0	5,637.7	4,724.2	4,551.9	26.3	26.1	-89.42	-1,002.2	-3,072.9	3,850.8	3,811.5	39.24	98.138		
5,900.0	5,737.7	4,819.8	4,643.4	26.4	26.7	-89.57	-1,012.0	-3,099.0	3,878.1	3,838.5	39.66	97.778		
5,943.5	5,781.1	5,942.4	5,748.1	26.5	29.9	-90.43	-1,069.1	-3,250.0	3,881.2	3,839.1	42.01	92.386		
5,950.0	5,787.7	5,948.9	5,754.7	26.5	30.0	-91.33	-1,069.1	-3,250.0	3,881.2	3,839.1	42.08	92.241		
6,000.0	5,837.5	5,999.9	5,805.6	26.5	30.0	-91.37	-1,069.0	-3,250.0	3,881.2	3,839.1	42.15	92.089		
6,050.0	5,886.9	6,058.5	5,864.1	26.4	30.0	-91.43	-1,064.9	-3,250.0	3,881.3	3,839.2	42.14	92.113		
6,100.0	5,935.3	6,117.7	5,922.3	26.4	30.0	-91.48	-1,054.1	-3,249.9	3,881.5	3,839.5	42.03	92.358		
6,150.0	5,982.3	6,177.5	5,979.3	26.2	30.0	-91.51	-1,036.6	-3,249.7	3,881.6	3,839.8	41.82	92.815		
6,200.0	6,027.4	6,237.5	6,034.3	26.1	29.9	-91.52	-1,012.5	-3,249.4	3,881.7	3,840.2	41.53	93.470		
6,250.0	6,070.3	6,297.7	6,086.3	25.9	29.8	-91.52	-982.2	-3,249.1	3,881.9	3,840.7	41.16	94.302		
6,300.0	6,110.5	6,357.9	6,134.4	25.6	29.7	-91.50	-946.0	-3,248.6	3,882.0	3,841.2	40.74	95.285		
6,350.0	6,147.6	6,418.0	6,178.0	25.3	29.6	-91.46	-904.7	-3,248.2	3,882.1	3,841.8	40.28	96.375		
6,400.0	6,181.4	6,477.8	6,216.3	25.1	29.5	-91.41	-858.8	-3,247.7	3,882.2	3,842.4	39.81	97.525		
6,450.0	6,211.5	6,537.2	6,248.9	24.7	29.3	-91.34	-809.3	-3,247.1	3,882.3	3,843.0	39.34	98.685		
6,500.0	6,237.6	6,595.9	6,275.4	24.4	29.2	-91.26	-756.8	-3,246.5	3,882.4	3,843.5	38.90	99.801		
6,550.0	6,259.6	6,654.1	6,295.7	24.1	29.1	-91.16	-702.4	-3,245.9	3,882.5	3,844.0	38.51	100.812		
6,600.0	6,277.1	6,711.4	6,309.6	23.8	28.9	-91.05	-646.8	-3,245.3	3,882.6	3,844.5	38.19	101.667		
6,650.0	6,290.1	6,767.9	6,317.3	23.5	28.8	-90.94	-590.9	-3,244.6	3,882.8	3,844.8	37.94	102.332		
6,700.0	6,298.4	6,822.2	6,319.0	23.1	28.8	-90.82	-536.6	-3,244.0	3,882.9	3,845.1	37.78	102.786		
6,750.0	6,301.9	6,872.0	6,319.0	22.8	28.7	-90.75	-486.8	-3,243.4	3,883.0	3,845.4	37.69	103.034		
6,761.7	6,302.0	6,883.7	6,319.0	22.8	28.7	-90.74	-475.1	-3,243.3	3,883.1	3,845.4	37.67	103.076		
6,800.0	6,302.0	6,923.5	6,319.0	22.5	28.7	-90.74	-435.4	-3,242.9	3,883.3	3,845.6	37.67	103.073		
6,861.9	6,302.0	6,985.3	6,319.0	22.2	28.7	-90.74	-373.5	-3,242.1	3,883.5	3,845.7	37.76	102.840		
6,866.5	6,302.0	6,990.0	6,319.0	22.2	28.8	-90.74	-368.9	-3,242.1	3,883.5	3,845.7	37.78	102.796		
6,900.0	6,302.0	7,023.5	6,319.0	22.0	28.8	-90.74	-335.4	-3,241.7	3,883.6	3,845.7	37.88	102.516		
7,000.0	6,302.0	7,123.5	6,319.0	21.6	28.9	-90.74	-235.4	-3,240.5	3,883.9	3,845.3	38.51	100.859		
7,100.0	6,302.0	7,223.5	6,319.0	21.3	29.2	-90.74	-135.4	-3,239.3	3,884.1	3,844.6	39.48	98.378		
7,200.0	6,302.0	7,323.5	6,319.0	21.1	29.7	-90.74	-35.4	-3,238.2	3,884.3	3,843.6	40.78	95.249		
7,300.0	6,302.0	7,423.5	6,319.0	21.1	30.2	-90.74	64.6	-3,237.0	3,884.6	3,842.2	42.38	91.665		
7,400.0	6,302.0	7,523.5	6,319.0	21.3	30.9	-90.74	164.6	-3,235.8	3,884.8	3,840.6	44.24	87.806		
7,500.0	6,302.0	7,623.5	6,319.0	22.0	31.7	-90.74	264.6	-3,234.7	3,885.1	3,838.7	46.35	83.825		
7,600.0	6,302.0	7,723.5	6,319.0	22.9	32.7	-90.74	364.6	-3,233.5	3,885.3	3,836.7	48.66	79.846		
7,700.0	6,302.0	7,823.5	6,319.0	24.0	33.7	-90.74	464.6	-3,232.3	3,885.6	3,834.4	51.16	75.956		
7,800.0	6,302.0	7,923.5	6,319.0	25.2	34.9	-90.74	564.6	-3,231.1	3,885.8	3,832.0	53.81	72.215		
7,900.0	6,302.0	8,023.5	6,319.0	26.5	36.1	-90.74	664.6	-3,230.0	3,886.0	3,829.5	56.60	68.661		
8,000.0	6,302.0	8,123.5	6,319.0	27.8	37.4	-90.74	764.5	-3,228.8	3,886.3	3,826.8	59.50	65.311		
8,100.0	6,302.0	8,223.4	6,319.0	29.3	38.8	-90.74	864.5	-3,227.6	3,886.5	3,824.0	62.51	62.172		
8,200.0	6,302.0	8,323.4	6,319.0	30.7	40.2	-90.74	964.5	-3,226.4	3,886.8	3,821.2	65.61	59.242		
8,300.0	6,302.0	8,423.4	6,319.0	32.2	41.7	-90.74	1,064.5	-3,225.3	3,887.0	3,818.2	68.78	56.514		
8,400.0	6,302.0	8,523.4	6,319.0	33.8	43.2	-90.74	1,164.5	-3,224.1	3,887.3	3,815.3	72.02	53.978		
8,500.0	6,302.0	8,623.4	6,319.0	35.4	44.8	-90.74	1,264.5	-3,222.9	3,887.5	3,812.2	75.31	51.620		
8,600.0	6,302.0	8,723.4	6,319.0	37.0	46.3	-90.74	1,364.5	-3,221.8	3,887.8	3,809.1	78.65	49.429		
8,700.0	6,302.0	8,823.4	6,319.0	38.6	47.9	-90.74	1,464.5	-3,220.6	3,888.0	3,806.0	82.04	47.391		

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

Offset Design State Antelope J-21 Pad Sec.21-T5N-R62W - Antelope 14-11-21HNB - Wellbore #1 - Plan #1 (11-15-12)													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	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)			
8,800.0	6,302.0	8,923.4	6,319.0	40.3	49.6	-90.74	1,564.5	-3,219.4	3,888.2	3,802.8	85.47	45.494		
8,900.0	6,302.0	9,023.4	6,319.0	42.0	51.2	-90.74	1,664.5	-3,218.2	3,888.5	3,799.6	88.93	43.727		
9,000.0	6,302.0	9,123.4	6,319.0	43.7	52.9	-90.74	1,764.5	-3,217.1	3,888.7	3,796.3	92.42	42.078		
9,100.0	6,302.0	9,223.4	6,319.0	45.4	54.6	-90.74	1,864.5	-3,215.9	3,889.0	3,793.0	95.93	40.539		
9,200.0	6,302.0	9,323.4	6,319.0	47.1	56.3	-90.74	1,964.5	-3,214.7	3,889.2	3,789.7	99.47	39.098		
9,300.0	6,302.0	9,423.4	6,319.0	48.9	58.0	-90.74	2,064.5	-3,213.6	3,889.5	3,786.4	103.03	37.749		
9,400.0	6,302.0	9,523.4	6,319.0	50.6	59.7	-90.74	2,164.4	-3,212.4	3,889.7	3,783.1	106.62	36.483		
9,500.0	6,302.0	9,623.4	6,319.0	52.4	61.4	-90.74	2,264.4	-3,211.2	3,890.0	3,779.7	110.21	35.295		
9,600.0	6,302.0	9,723.4	6,319.0	54.2	63.2	-90.74	2,364.4	-3,210.0	3,890.2	3,776.4	113.83	34.176		
9,700.0	6,302.0	9,823.4	6,319.0	56.0	65.0	-90.74	2,464.4	-3,208.9	3,890.4	3,773.0	117.46	33.123		
9,800.0	6,302.0	9,923.4	6,319.0	57.8	66.7	-90.74	2,564.4	-3,207.7	3,890.7	3,769.6	121.10	32.129		
9,900.0	6,302.0	10,023.4	6,319.0	59.6	68.5	-90.74	2,664.4	-3,206.5	3,890.9	3,766.2	124.75	31.190		
10,000.0	6,302.0	10,123.4	6,319.0	61.4	70.3	-90.74	2,764.4	-3,205.4	3,891.2	3,762.8	128.41	30.302		
10,100.0	6,302.0	10,223.4	6,319.0	63.2	72.1	-90.74	2,864.4	-3,204.2	3,891.4	3,759.3	132.09	29.461		
10,200.0	6,302.0	10,323.4	6,319.0	65.0	73.9	-90.74	2,964.4	-3,203.0	3,891.7	3,755.9	135.77	28.664		
10,300.0	6,302.0	10,423.4	6,319.0	66.8	75.7	-90.74	3,064.4	-3,201.8	3,891.9	3,752.4	139.46	27.907		
10,400.0	6,302.0	10,523.4	6,319.0	68.6	77.5	-90.74	3,164.4	-3,200.7	3,892.1	3,749.0	143.16	27.188		
10,500.0	6,302.0	10,623.4	6,319.0	70.5	79.3	-90.74	3,264.4	-3,199.5	3,892.4	3,745.5	146.86	26.504		
10,600.0	6,302.0	10,723.4	6,319.0	72.3	81.1	-90.74	3,364.4	-3,198.3	3,892.6	3,742.1	150.57	25.852		
10,700.0	6,302.0	10,823.4	6,319.0	74.1	82.9	-90.74	3,464.4	-3,197.2	3,892.9	3,738.6	154.29	25.231		
10,800.0	6,302.0	10,923.4	6,319.0	76.0	84.7	-90.74	3,564.3	-3,196.0	3,893.1	3,735.1	158.02	24.638		
10,900.0	6,302.0	11,023.4	6,319.0	77.8	86.6	-90.74	3,664.3	-3,194.8	3,893.4	3,731.6	161.74	24.071		
11,000.0	6,302.0	11,123.4	6,319.0	79.7	88.4	-90.74	3,764.3	-3,193.6	3,893.6	3,728.1	165.48	23.529		
11,100.0	6,302.0	11,210.0	6,319.0	81.5	90.0	-90.74	3,859.9	-3,192.6	3,893.9	3,724.9	168.96	23.046		
11,183.1	6,302.0	11,210.0	6,319.0	83.1	90.0	-90.74	3,850.9	-3,192.6	3,895.3	3,724.7	170.51	22.845 SF		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 77-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	-105.43	-539.1	-1,953.0	2,026.4					
100.0	100.0	67.2	67.2	0.1	0.1	-105.43	-538.9	-1,953.0	2,026.0	2,025.9	0.19	N/A		
124.6	124.6	88.6	88.6	0.2	0.1	-105.42	-538.8	-1,953.1	2,026.0	2,025.7	0.28	7,279.103 CC, ES		
200.0	200.0	145.8	145.8	0.3	0.2	-105.42	-538.8	-1,953.3	2,026.3	2,025.8	0.57	3,579.060		
300.0	300.0	236.6	236.5	0.6	0.4	-105.43	-539.4	-1,954.3	2,027.6	2,026.6	0.98	2,063.939		
400.0	400.0	342.9	342.9	0.8	0.6	-105.42	-539.6	-1,955.7	2,028.8	2,027.4	1.43	1,415.421		
500.0	500.0	441.0	441.0	1.0	0.8	-105.43	-539.9	-1,956.6	2,029.9	2,028.0	1.86	1,091.541		
600.0	600.0	540.0	540.0	1.2	1.1	-105.44	-540.6	-1,957.7	2,031.1	2,028.8	2.29	886.407		
700.0	700.0	640.3	640.3	1.4	1.3	105.83	-540.9	-1,958.8	2,032.7	2,030.0	2.71	751.054		
800.0	799.8	742.1	742.0	1.6	1.5	105.93	-541.0	-1,959.9	2,035.3	2,032.1	3.11	655.360		
900.0	899.5	828.0	827.9	1.8	1.7	106.06	-541.2	-1,961.0	2,038.9	2,035.4	3.49	583.732		
1,000.0	998.7	906.2	906.1	2.1	1.8	106.20	-541.8	-1,962.5	2,044.5	2,040.6	3.90	524.169		
1,100.0	1,097.5	1,005.6	1,005.4	2.4	2.0	106.45	-543.7	-1,965.0	2,051.8	2,047.4	4.39	467.410		
1,200.0	1,195.6	1,074.0	1,073.8	2.7	2.2	106.58	-545.8	-1,966.8	2,060.8	2,055.9	4.87	423.569		
1,300.0	1,293.1	1,142.0	1,141.7	3.1	2.3	106.72	-548.2	-1,969.7	2,072.4	2,067.0	5.40	383.841		
1,400.0	1,389.6	1,212.3	1,211.9	3.6	2.5	106.88	-551.0	-1,973.5	2,086.4	2,080.4	6.00	347.650		
1,410.6	1,399.8	1,219.4	1,218.9	3.6	2.5	106.90	-551.2	-1,973.9	2,088.1	2,082.0	6.07	344.101		
1,500.0	1,485.7	1,289.0	1,288.3	4.1	2.7	107.36	-554.3	-1,978.7	2,102.7	2,096.0	6.66	315.504		
1,600.0	1,581.7	1,337.0	1,336.1	4.6	2.8	107.68	-556.7	-1,982.7	2,120.6	2,113.3	7.29	291.072		
1,700.0	1,677.7	1,396.4	1,395.1	5.2	3.0	108.05	-560.0	-1,988.5	2,140.5	2,132.6	7.94	269.459		
1,800.0	1,773.7	1,472.0	1,470.0	5.7	3.2	108.50	-565.4	-1,996.9	2,162.0	2,153.4	8.65	250.011		
1,900.0	1,869.8	1,576.3	1,573.3	6.3	3.5	109.05	-575.3	-2,008.2	2,184.0	2,174.6	9.41	231.978		
2,000.0	1,965.8	1,677.4	1,673.3	6.8	3.8	109.52	-586.6	-2,017.9	2,205.2	2,195.0	10.18	216.595		
2,100.0	2,061.8	1,745.0	1,739.9	7.4	4.0	109.81	-594.9	-2,025.3	2,227.9	2,217.0	10.89	204.596		
2,200.0	2,157.8	1,820.1	1,813.8	8.0	4.2	110.11	-604.7	-2,034.2	2,251.7	2,240.1	11.63	193.640		
2,300.0	2,253.9	1,920.5	1,912.7	8.6	4.5	110.50	-618.2	-2,045.4	2,275.0	2,262.6	12.42	183.151		
2,400.0	2,349.9	1,989.1	1,980.2	9.1	4.8	110.78	-627.2	-2,053.9	2,299.6	2,286.5	13.15	174.908		
2,500.0	2,445.9	2,088.7	2,078.0	9.7	5.1	111.14	-641.2	-2,066.8	2,325.0	2,311.0	13.96	166.516		
2,600.0	2,541.9	2,196.8	2,184.2	10.3	5.5	111.53	-656.2	-2,079.5	2,349.3	2,334.5	14.79	158.828		
2,700.0	2,638.0	2,279.1	2,265.1	10.9	5.8	111.83	-667.2	-2,089.9	2,374.4	2,358.8	15.56	152.598		
2,800.0	2,734.0	2,387.4	2,371.6	11.5	6.2	112.21	-681.9	-2,103.4	2,399.5	2,383.1	16.40	146.320		
2,900.0	2,830.0	2,487.8	2,470.4	12.1	6.5	112.57	-695.0	-2,115.4	2,424.1	2,406.9	17.22	140.811		
3,000.0	2,926.0	2,607.1	2,587.8	12.7	7.0	112.98	-710.8	-2,129.4	2,448.6	2,430.6	18.09	135.389		
3,100.0	3,022.1	2,672.1	2,651.8	13.2	7.2	113.20	-719.3	-2,136.8	2,473.0	2,454.2	18.82	131.434		
3,200.0	3,118.1	2,762.9	2,741.0	13.8	7.5	113.49	-731.9	-2,148.5	2,498.8	2,479.2	19.62	127.339		
3,300.0	3,214.1	2,994.3	2,969.4	14.4	8.3	114.25	-761.1	-2,170.9	2,521.2	2,500.5	20.77	121.359		
3,400.0	3,310.1	3,064.6	3,039.1	15.0	8.5	114.51	-768.4	-2,176.4	2,542.1	2,520.6	21.50	118.236		
3,500.0	3,406.1	3,187.3	3,160.7	15.6	8.9	114.98	-780.6	-2,186.5	2,563.4	2,541.1	22.35	114.698		
3,600.0	3,502.2	3,281.0	3,253.8	16.2	9.2	115.33	-789.6	-2,193.5	2,584.0	2,560.9	23.12	111.740		
3,700.0	3,598.2	3,341.4	3,313.7	16.8	9.3	115.55	-795.4	-2,198.4	2,605.4	2,581.6	23.82	109.361		
3,800.0	3,694.2	3,395.9	3,367.7	17.4	9.5	115.75	-800.5	-2,203.7	2,628.3	2,603.8	24.51	107.240		
3,900.0	3,790.2	3,467.0	3,437.9	18.0	9.8	116.00	-807.9	-2,212.0	2,653.1	2,627.9	25.24	105.118		
4,000.0	3,886.3	3,501.0	3,471.3	18.5	9.9	116.12	-811.7	-2,216.5	2,679.3	2,653.4	25.88	103.521		
4,100.0	3,982.3	3,562.0	3,531.3	19.1	10.1	116.31	-819.0	-2,225.3	2,707.0	2,680.4	26.60	101.778		
4,200.0	4,078.3	3,616.0	3,584.1	19.7	10.4	116.46	-826.0	-2,233.8	2,736.2	2,708.9	27.30	100.215		
4,300.0	4,174.3	3,719.2	3,684.9	20.3	10.8	116.72	-840.7	-2,250.9	2,766.4	2,738.2	28.16	98.240		
4,400.0	4,270.4	3,919.4	3,880.8	20.9	11.6	117.17	-871.1	-2,278.6	2,793.7	2,764.4	29.30	95.353		
4,500.0	4,366.4	4,059.2	4,018.2	21.5	12.1	117.49	-891.6	-2,294.2	2,818.7	2,788.4	30.25	93.174		
4,600.0	4,462.4	4,138.1	4,095.8	22.1	12.4	117.68	-902.4	-2,302.9	2,843.5	2,812.5	31.02	91.669		
4,700.0	4,558.4	4,220.9	4,177.4	22.7	12.7	117.89	-913.4	-2,312.5	2,869.0	2,837.2	31.80	90.227		
4,800.0	4,654.5	4,318.7	4,273.6	23.3	13.0	118.12	-926.4	-2,324.0	2,894.6	2,862.0	32.62	88.739		
4,900.0	4,750.5	4,435.1	4,388.2	23.9	13.5	118.40	-942.0	-2,337.4	2,920.1	2,886.6	33.50	87.167		

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0ft
Survey Program: 77-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		
4,951.8	4,800.2	4,514.8	4,466.7	24.2	13.8	118.58	-952.9	-2,345.7	2,932.8	2,898.7	34.01	86.224		
5,000.0	4,846.6	4,567.8	4,518.9	24.4	14.0	118.89	-960.3	-2,350.9	2,944.1	2,909.7	34.40	85.587		
5,100.0	4,943.5	4,643.0	4,593.0	24.8	14.2	119.42	-970.6	-2,358.4	2,966.6	2,931.6	34.99	84.777		
5,200.0	5,041.3	4,691.0	4,640.3	25.2	14.4	119.87	-976.7	-2,363.7	2,988.6	2,953.1	35.46	84.268		
5,300.0	5,139.7	4,761.7	4,709.9	25.5	14.7	120.29	-985.8	-2,372.3	3,010.0	2,974.0	35.97	83.691		
5,400.0	5,238.6	4,849.4	4,796.0	25.7	15.0	120.63	-997.7	-2,384.1	3,030.8	2,994.3	36.49	83.048		
5,500.0	5,338.0	5,245.2	5,187.7	25.9	16.3	120.73	-1,042.3	-2,417.3	3,044.2	3,006.4	37.85	80.423		
5,600.0	5,437.7	5,404.0	5,346.1	26.1	16.6	120.84	-1,052.7	-2,421.1	3,050.3	3,011.9	38.39	79.457		
5,700.0	5,537.7	5,536.0	5,477.9	26.2	16.9	120.88	-1,058.0	-2,423.0	3,053.8	3,015.0	38.79	78.729		
5,762.3	5,600.0	5,627.7	5,569.6	26.3	17.0	-90.37	-1,059.9	-2,423.3	3,054.4	3,015.3	39.09	78.131		
5,800.0	5,637.7	5,682.2	5,624.0	26.3	17.1	-90.38	-1,060.1	-2,423.0	3,054.2	3,015.0	39.22	77.872		
5,900.0	5,737.7	5,760.7	5,702.6	26.4	17.2	-90.36	-1,059.4	-2,422.6	3,053.7	3,014.3	39.43	77.453		
5,903.2	5,740.9	5,763.0	5,704.9	26.4	17.2	-90.36	-1,059.4	-2,422.6	3,053.7	3,014.3	39.43	77.441		
5,943.5	5,781.1	5,790.0	5,731.9	26.5	17.2	-90.35	-1,058.7	-2,422.7	3,053.8	3,014.3	39.51	77.295		
5,950.0	5,787.7	5,790.0	5,731.9	26.5	17.2	-91.25	-1,058.7	-2,422.7	3,053.8	3,014.4	39.44	77.422		
6,000.0	5,837.5	5,822.0	5,763.8	26.5	17.3	-91.19	-1,056.9	-2,423.1	3,054.4	3,014.9	39.48	77.358		
6,050.0	5,886.9	5,907.1	5,847.8	26.4	17.3	-91.14	-1,043.8	-2,423.6	3,054.9	3,015.4	39.44	77.457		
6,100.0	5,935.3	5,948.0	5,887.3	26.4	17.3	-91.09	-1,033.0	-2,423.8	3,055.3	3,016.0	39.30	77.745		
6,150.0	5,982.3	6,062.3	5,992.9	26.2	17.0	-91.00	-989.6	-2,422.6	3,054.6	3,015.7	38.91	78.498		
6,200.0	6,027.4	6,090.3	6,017.5	26.1	17.0	-91.00	-976.4	-2,422.3	3,054.4	3,015.8	38.65	79.035		
6,250.0	6,070.3	6,325.0	6,198.7	25.9	16.2	-90.54	-829.2	-2,413.9	3,053.2	3,015.6	37.64	81.120		
6,300.0	6,110.5	6,343.8	6,210.8	25.6	16.1	-90.75	-815.0	-2,412.7	3,050.5	3,013.2	37.33	81.709		
6,350.0	6,147.6	6,356.0	6,218.5	25.3	16.1	-90.94	-805.4	-2,412.1	3,048.5	3,011.5	37.02	82.356		
6,400.0	6,181.4	6,388.0	6,237.3	25.1	16.0	-91.03	-779.6	-2,410.7	3,047.0	3,010.3	36.62	83.206		
6,450.0	6,211.5	6,400.0	6,244.0	24.7	15.9	-91.12	-769.6	-2,410.4	3,046.0	3,009.8	36.26	83.994		
6,487.2	6,231.4	6,419.0	6,254.1	24.5	15.9	-91.15	-753.5	-2,410.1	3,045.9	3,009.9	35.97	84.676		
6,500.0	6,237.6	6,419.0	6,254.1	24.4	15.9	-91.15	-753.5	-2,410.1	3,045.9	3,010.0	35.89	84.877		
6,550.0	6,259.6	6,429.4	6,259.5	24.1	15.9	-91.12	-744.6	-2,410.1	3,046.3	3,010.8	35.53	85.734		
6,600.0	6,277.1	6,462.1	6,275.3	23.8	15.8	-91.10	-716.0	-2,410.2	3,047.3	3,012.2	35.15	86.688		
6,650.0	6,290.1	6,614.9	6,318.1	23.5	15.5	-91.13	-570.6	-2,409.5	3,048.2	3,013.4	34.80	87.604		
6,700.0	6,298.4	6,670.0	6,318.3	23.1	15.5	-91.01	-515.5	-2,408.3	3,047.8	3,013.2	34.61	88.063		
6,750.0	6,301.9	6,710.1	6,317.2	22.8	15.5	-90.96	-475.4	-2,407.5	3,047.5	3,013.1	34.40	88.582		
6,761.7	6,302.0	6,717.7	6,317.0	22.8	15.6	-90.96	-467.8	-2,407.4	3,047.5	3,013.1	34.36	88.699		
6,800.0	6,302.0	6,753.8	6,316.2	22.5	15.7	-90.94	-431.8	-2,406.8	3,047.4	3,013.1	34.32	88.789		
6,815.3	6,302.0	6,769.1	6,315.8	22.5	15.7	-90.94	-416.5	-2,406.6	3,047.4	3,013.1	34.33	88.772		
6,861.9	6,302.0	6,797.9	6,315.1	22.2	15.8	-90.92	-387.7	-2,406.2	3,047.6	3,013.2	34.31	88.822		
6,866.5	6,302.0	6,800.7	6,315.1	22.2	15.9	-90.92	-384.9	-2,406.2	3,047.6	3,013.3	34.32	88.799		
6,900.0	6,302.0	6,820.9	6,314.6	22.0	16.0	-90.91	-364.6	-2,406.0	3,047.8	3,013.5	34.31	88.823		
7,000.0	6,302.0	6,906.0	6,312.3	21.6	16.5	-90.87	-279.6	-2,406.1	3,049.2	3,014.5	34.70	87.883		
7,100.0	6,302.0	6,983.2	6,310.7	21.3	17.0	-90.84	-202.5	-2,406.7	3,051.3	3,016.0	35.25	86.568		
7,200.0	6,302.0	7,031.0	6,311.8	21.1	17.4	-90.86	-154.7	-2,407.3	3,054.2	3,018.3	35.84	85.206		
7,300.0	6,302.0	7,124.0	6,313.7	21.1	18.2	-90.90	-61.7	-2,409.5	3,057.9	3,020.7	37.15	82.309		
7,400.0	6,302.0	7,187.0	6,313.4	21.3	18.9	-90.89	1.3	-2,411.6	3,062.6	3,024.1	38.51	79.528		
7,500.0	6,302.0	7,259.3	6,311.7	22.0	19.7	-90.86	73.4	-2,414.7	3,068.4	3,028.3	40.10	76.521		
7,600.0	6,302.0	7,580.6	6,307.6	22.9	23.5	-90.78	394.5	-2,419.5	3,072.0	3,027.1	44.91	68.408		
7,700.0	6,302.0	7,654.0	6,306.8	24.0	24.5	-90.76	468.0	-2,418.0	3,071.3	3,024.3	46.98	65.378		
7,800.0	6,302.0	7,766.5	6,305.1	25.2	26.0	-90.73	580.5	-2,416.2	3,071.1	3,021.4	49.73	61.761		
7,900.0	6,302.0	7,868.7	6,304.4	26.5	27.5	-90.72	682.6	-2,414.3	3,070.7	3,018.2	52.50	58.488		
8,000.0	6,302.0	7,993.7	6,302.3	27.8	29.4	-90.68	807.6	-2,411.4	3,069.8	3,014.0	55.79	55.024		
8,100.0	6,302.0	8,118.2	6,301.0	29.3	31.2	-90.65	932.0	-2,407.4	3,068.0	3,009.0	59.04	51.963		
8,200.0	6,302.0	8,192.0	6,300.7	30.7	32.3	-90.65	1,005.8	-2,405.0	3,066.2	3,004.6	61.59	49.783		
8,300.0	6,302.0	8,315.0	6,300.9	32.2	34.2	-90.65	1,128.6	-2,400.9	3,064.3	2,999.2	65.05	47.108		

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design		State Antelope J-21 Pad Sec.21-T5N-R62W - State Antelope J-21-16XRL - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 ft		
Survey Program: 77-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		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
							+N/-S (ft)	+E/-W (ft)								
8,400.0	6,302.0	8,366.1	6,300.6	33.8	34.9	-90.65	1,179.7	-2,399.5	3,062.9	2,995.5	67.38	45.456				
8,500.0	6,302.0	8,480.6	6,300.0	35.4	36.7	-90.64	1,294.2	-2,397.1	3,062.2	2,991.4	70.80	43.254				
8,575.7	6,302.0	8,524.4	6,299.5	36.6	37.5	-90.63	1,338.0	-2,396.2	3,061.7	2,989.0	72.75	42.087				
8,600.0	6,302.0	8,535.0	6,299.5	37.0	37.6	-90.63	1,348.6	-2,396.0	3,061.8	2,988.5	73.31	41.764				
8,700.0	6,302.0	8,642.8	6,299.0	38.6	39.3	-90.62	1,456.4	-2,394.7	3,061.9	2,985.2	76.69	39.924				
8,800.0	6,302.0	8,777.3	6,298.3	40.3	41.5	-90.60	1,590.9	-2,392.2	3,061.4	2,980.9	80.57	37.996				
8,900.0	6,302.0	8,894.0	6,298.3	42.0	43.4	-90.61	1,707.5	-2,388.4	3,059.5	2,975.3	84.16	36.355				
8,973.0	6,302.0	8,921.8	6,298.5	43.2	43.8	-90.61	1,735.2	-2,387.8	3,059.0	2,973.1	85.87	35.625				
9,000.0	6,302.0	8,932.3	6,298.6	43.7	44.0	-90.61	1,745.8	-2,387.7	3,059.0	2,972.5	86.50	35.364				
9,100.0	6,302.0	9,027.5	6,298.8	45.4	45.6	-90.61	1,840.9	-2,387.5	3,060.2	2,970.4	89.85	34.060				
9,200.0	6,302.0	9,183.7	6,301.1	47.1	48.2	-90.66	1,997.1	-2,384.7	3,059.8	2,965.6	94.22	32.476				
9,300.0	6,302.0	9,267.4	6,301.3	48.9	49.6	-90.66	2,080.8	-2,382.3	3,058.5	2,961.1	97.40	31.402				
9,400.0	6,302.0	9,350.0	6,302.3	50.6	51.0	-90.68	2,163.4	-2,380.9	3,058.1	2,957.5	100.58	30.406				
9,500.0	6,302.0	9,476.0	6,302.5	52.4	53.2	-90.68	2,289.3	-2,378.3	3,057.5	2,952.9	104.54	29.247				
9,600.0	6,302.0	9,551.5	6,302.5	54.2	54.5	-90.68	2,364.8	-2,376.8	3,056.9	2,949.3	107.64	28.400				
9,624.3	6,302.0	9,570.0	6,302.4	54.6	54.8	-90.68	2,383.3	-2,376.6	3,057.0	2,948.6	108.40	28.199				
9,700.0	6,302.0	9,644.0	6,301.8	56.0	56.1	-90.67	2,457.3	-2,375.5	3,057.0	2,945.9	111.02	27.536				
9,800.0	6,302.0	9,726.8	6,302.2	57.8	57.5	-90.68	2,540.1	-2,374.8	3,057.5	2,943.3	114.24	26.763				
9,900.0	6,302.0	9,789.8	6,302.5	59.6	58.6	-90.68	2,603.1	-2,374.6	3,058.7	2,941.5	117.13	26.113				
10,000.0	6,302.0	9,968.6	6,301.3	61.4	61.7	-90.66	2,781.8	-2,374.2	3,060.3	2,938.2	122.06	25.071				
10,100.0	6,302.0	10,100.3	6,302.6	63.2	63.9	-90.69	2,913.5	-2,370.7	3,059.0	2,932.9	126.13	24.253				
10,200.0	6,302.0	10,197.0	6,302.6	65.0	65.6	-90.69	3,010.2	-2,367.8	3,057.4	2,927.8	129.65	23.582				
10,300.0	6,302.0	10,306.4	6,301.8	66.8	67.5	-90.67	3,119.5	-2,364.2	3,055.6	2,922.2	133.39	22.907				
10,400.0	6,302.0	10,385.0	6,301.3	68.6	68.8	-90.66	3,198.1	-2,362.0	3,054.1	2,917.6	136.56	22.365				
10,490.6	6,302.0	10,438.9	6,303.3	70.3	69.7	-90.70	3,251.9	-2,360.8	3,053.5	2,914.3	139.13	21.946				
10,500.0	6,302.0	10,447.0	6,303.7	70.5	69.8	-90.71	3,260.0	-2,360.7	3,053.5	2,914.0	139.45	21.897				
10,600.0	6,302.0	10,534.9	6,305.6	72.3	71.4	-90.74	3,347.8	-2,359.6	3,053.8	2,910.9	142.87	21.374				
10,700.0	6,302.0	10,643.3	6,304.8	74.1	73.3	-90.73	3,456.2	-2,358.7	3,054.3	2,907.6	146.64	20.828				
10,800.0	6,302.0	10,801.1	6,306.0	76.0	76.0	-90.75	3,614.0	-2,354.9	3,053.2	2,902.0	151.21	20.192				
10,869.3	6,302.0	10,818.4	6,306.0	77.3	76.3	-90.75	3,631.3	-2,354.5	3,052.6	2,899.8	152.80	19.978				
10,900.0	6,302.0	10,834.0	6,305.8	77.8	76.6	-90.75	3,646.9	-2,354.4	3,052.8	2,899.1	153.65	19.868				
11,000.0	6,302.0	10,929.0	6,303.3	79.7	78.3	-90.70	3,741.8	-2,353.2	3,052.9	2,895.7	157.19	19.422				
11,100.0	6,302.0	11,009.7	6,302.0	81.5	79.7	-90.68	3,822.6	-2,352.1	3,053.1	2,892.7	160.43	19.031				
11,183.1	6,302.0	11,100.9	6,301.6	83.1	81.3	-90.67	3,913.8	-2,351.6	3,053.8	2,890.2	163.58	18.669 SF				

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 4683.0ft (EST KIB 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Antelope 44-41-21HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.76°



Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope 44-41-21HNB
Project:	SEC.21-T5N-R62W	TVD Reference:	RKB @ 4683.0ft (EST KIB 15')
Reference Site:	Antelope S-21 Pad Sec.21-T5N-R62W	MD Reference:	RKB @ 4683.0ft (EST KIB 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 44-41-21HNB	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 #2 (11-15-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 4683.0ft (EST KIB 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Antelope 44-41-21HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.76°

