

BONANZA CREEK ENERGY OPERATING

Well Name: **Antelope K-O-18HNB**

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

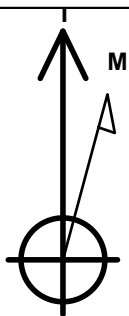
Ground Elevation: 4614.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1392358.57	3314459.74	40.404930	-104.370810	

RKB - 12' WELL @ 4626.0ft (RKB - 12')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 470'FSL, 2415'FWL	6340.0	-4236.9	1220.0	Point
T1 510'FNL, 2374'FWL	6340.0	113.0	1091.7	Point



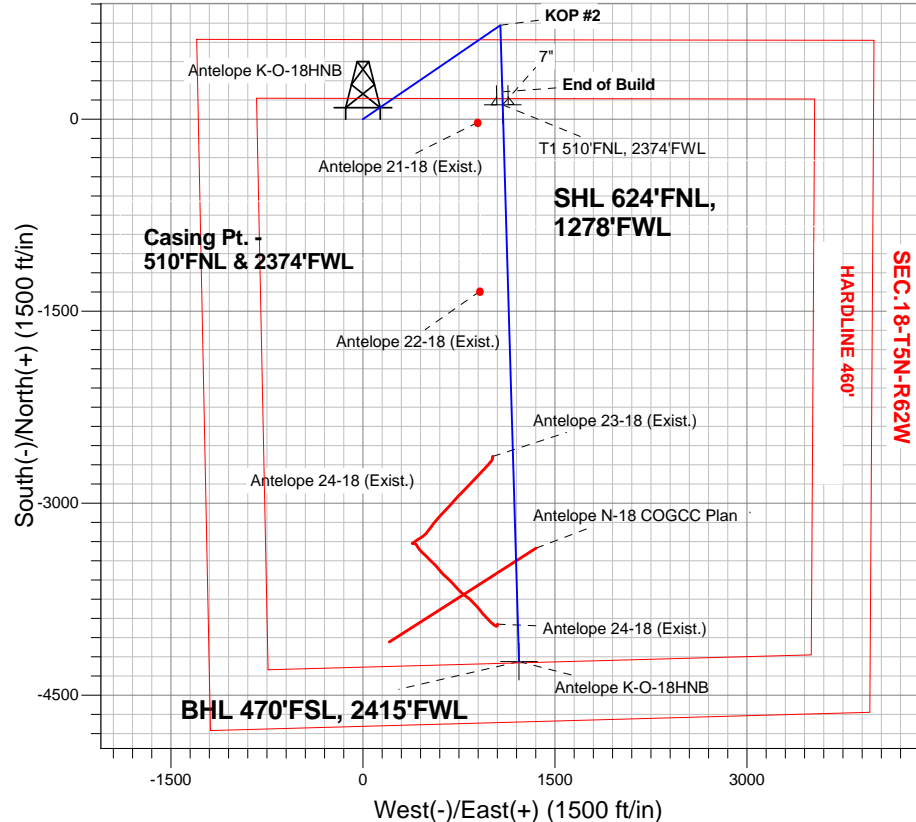
Azimuths to True North
Magnetic North: 8.46°

Magnetic Field
Strength: 53030.4nT
Dip Angle: 67.07°
Date: 11/5/2012
Model: IGRF2010

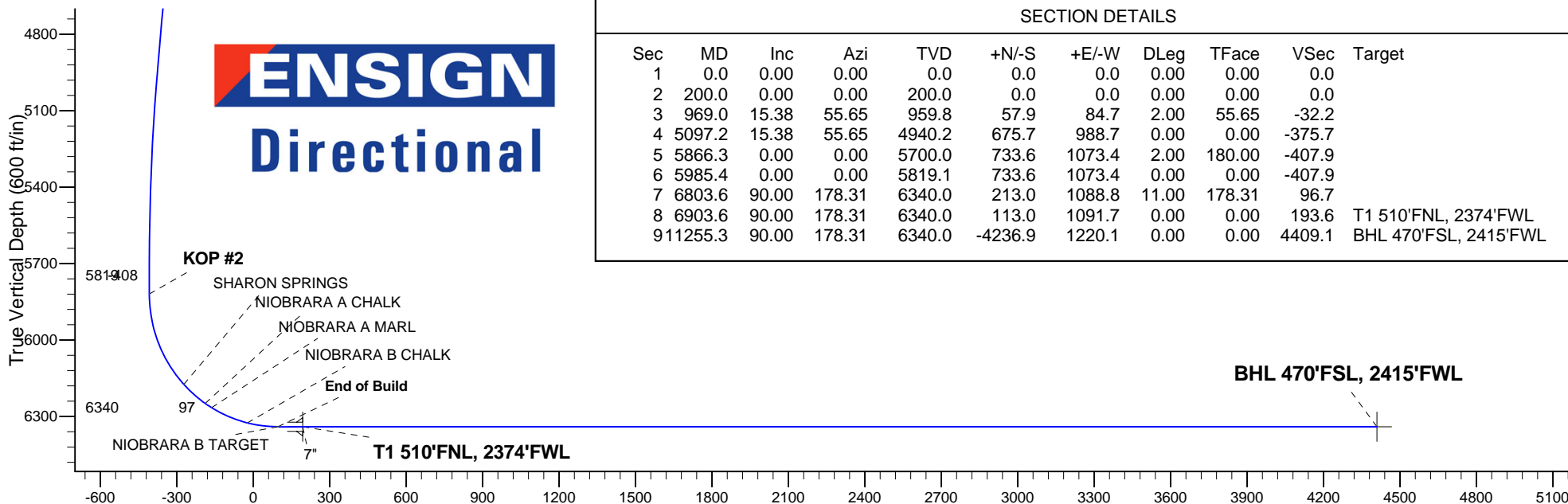
ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP #1
5819.1	5985.4	KOP #2
6340.0	6803.6	End of Build

Antelope F-18 Pad Sec.18-T5N-R62W
Antelope K-O-18HNB
Plan #2 (11-02-12)



ENSIGN
Directional



SECTION DETAILS

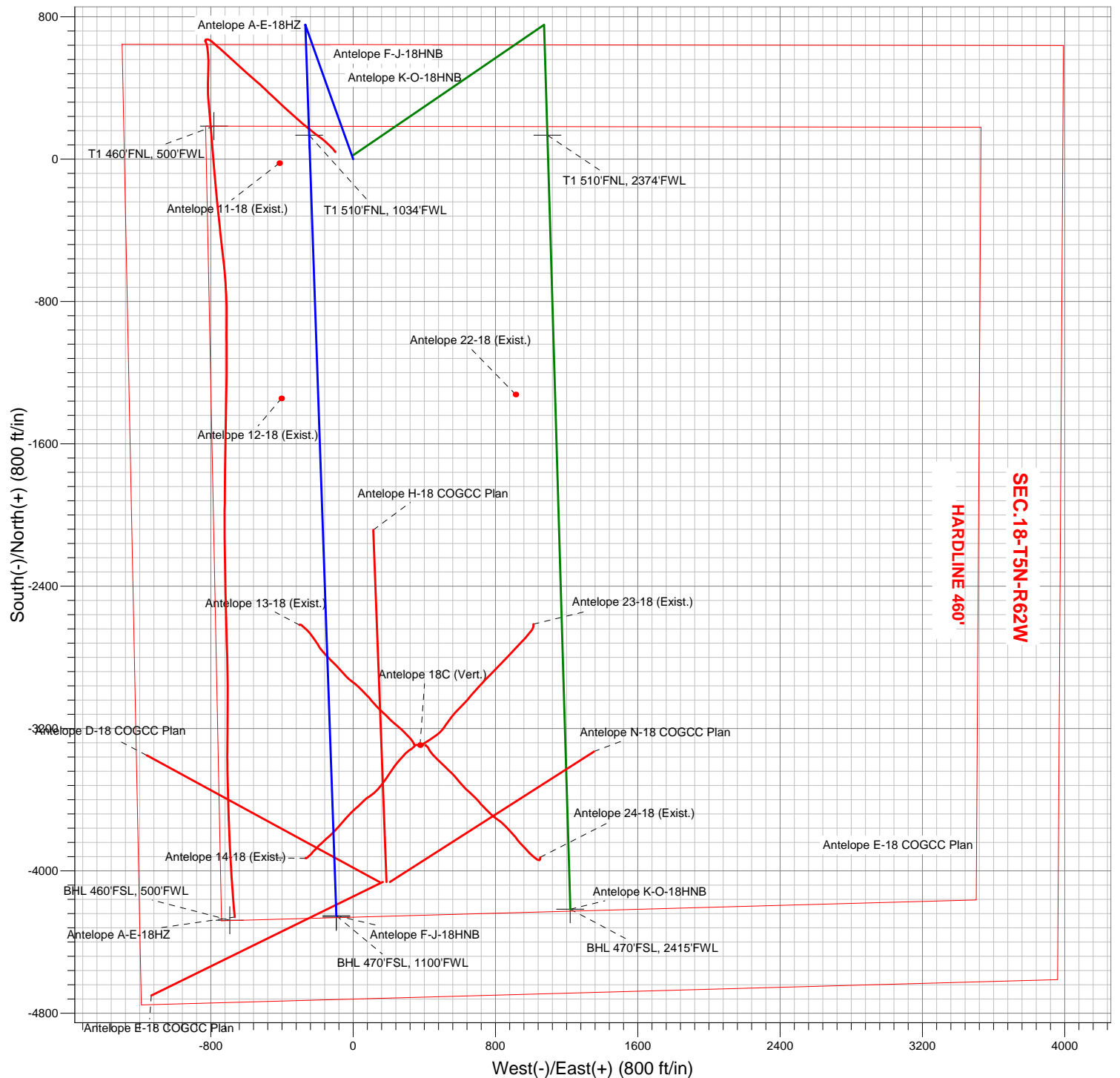
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	969.0	15.38	55.65	959.8	57.9	84.7	2.00	55.65	-32.2	
4	5097.2	15.38	55.65	4940.2	675.7	988.7	0.00	0.00	-375.7	
5	5866.3	0.00	0.00	5700.0	733.6	1073.4	2.00	180.00	-407.9	
6	5985.4	0.00	0.00	5819.1	733.6	1073.4	0.00	0.00	-407.9	
7	6803.6	90.00	178.31	6340.0	213.0	1088.8	11.00	178.31	96.7	
8	6903.6	90.00	178.31	6340.0	113.0	1091.7	0.00	0.00	193.6	T1 510'FNL, 2374'FWL
9	11255.3	90.00	178.31	6340.0	-4236.9	1220.1	0.00	0.00	4409.1	BHL 470'FSL, 2415'FWL

Vertical Section at 163.93° (600 ft/in)

Surface Location: Antelope F-18 Pad Sec.18-T5N-R62W

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1392336.70	3314460.02	40.404870	-104.370810	



ENSIGN
Directional

Surface Location: Antelope F-18 Pad Sec.18-T5N-R62W

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

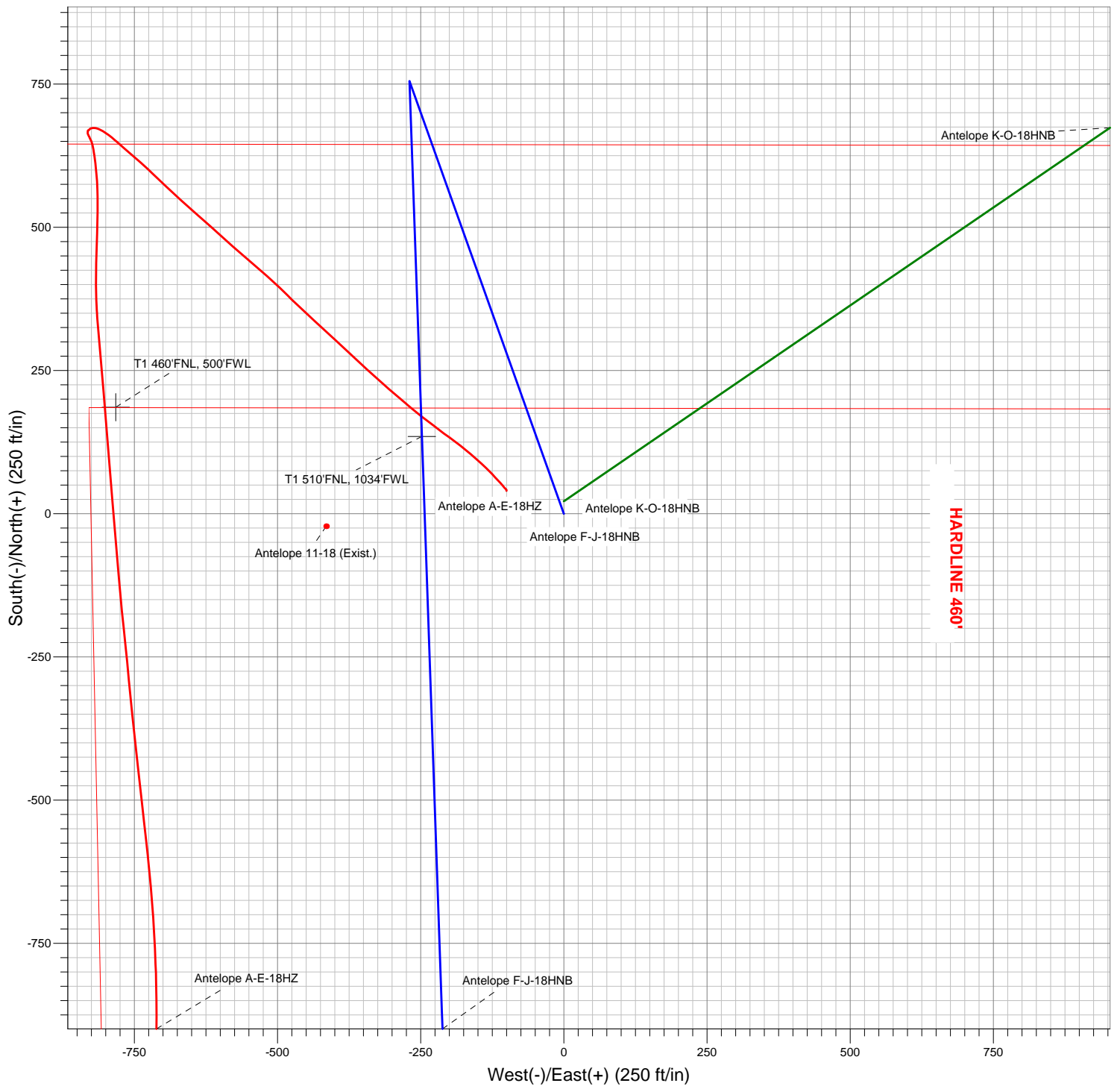
+N/-S +E/-W Northing
0.0 0.0 1392336.70

Ground Elevation: 4614.0
Easting
3314460.02

Latitude
40.404870

Longitude
-104.370810

Slot



ENSIGN
Directional



Directional

BONANZA CREEK ENERGY OPERATING

SEC.18-T5N-R62W

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

Antelope K-O-18HNB

Wellbore #1

Plan: Plan #2 (11-02-12)

Standard Planning Report

06 November, 2012

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
969.0	15.38	55.65	959.8	57.9	84.7	2.00	2.00	0.00	55.65	
5,097.2	15.38	55.65	4,940.2	675.7	988.7	0.00	0.00	0.00	0.00	
5,866.3	0.00	0.00	5,700.0	733.6	1,073.4	2.00	-2.00	0.00	180.00	
5,985.4	0.00	0.00	5,819.1	733.6	1,073.4	0.00	0.00	0.00	0.00	
6,803.6	90.00	178.31	6,340.0	213.0	1,088.8	11.00	11.00	0.00	178.31	
6,903.6	90.00	178.31	6,340.0	113.0	1,091.7	0.00	0.00	0.00	0.00	T1 510'FNL, 2374'F
11,255.3	90.00	178.31	6,340.0	-4,236.9	1,220.1	0.00	0.00	0.00	0.00	BHL 470'FSL, 2415'F

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Project:	SEC.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site:	Antelope F-18 Pad Sec.18-T5N-R62W	North Reference:	True
Well:	Antelope K-O-18HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-02-12)		

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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
240.0	0.80	55.65	240.0	0.2	0.2	-0.1	2.00	2.00	0.00
280.0	1.60	55.65	280.0	0.6	0.9	-0.4	2.00	2.00	0.00
320.0	2.40	55.65	320.0	1.4	2.1	-0.8	2.00	2.00	0.00
360.0	3.20	55.65	359.9	2.5	3.7	-1.4	2.00	2.00	0.00
400.0	4.00	55.65	399.8	3.9	5.8	-2.2	2.00	2.00	0.00
440.0	4.80	55.65	439.7	5.7	8.3	-3.2	2.00	2.00	0.00
480.0	5.60	55.65	479.6	7.7	11.3	-4.3	2.00	2.00	0.00
520.0	6.40	55.65	519.3	10.1	14.7	-5.6	2.00	2.00	0.00
560.0	7.20	55.65	559.1	12.7	18.7	-7.1	2.00	2.00	0.00
600.0	8.00	55.65	598.7	15.7	23.0	-8.7	2.00	2.00	0.00
640.0	8.80	55.65	638.3	19.0	27.8	-10.6	2.00	2.00	0.00
680.0	9.60	55.65	677.8	22.6	33.1	-12.6	2.00	2.00	0.00
720.0	10.40	55.65	717.1	26.6	38.9	-14.8	2.00	2.00	0.00
760.0	11.20	55.65	756.4	30.8	45.0	-17.1	2.00	2.00	0.00
800.0	12.00	55.65	795.6	35.3	51.7	-19.6	2.00	2.00	0.00
840.0	12.80	55.65	834.7	40.2	58.8	-22.3	2.00	2.00	0.00
880.0	13.60	55.65	873.6	45.3	66.3	-25.2	2.00	2.00	0.00
920.0	14.40	55.65	912.4	50.8	74.3	-28.2	2.00	2.00	0.00
960.0	15.20	55.65	951.1	56.5	82.7	-31.4	2.00	2.00	0.00
969.0	15.38	55.65	959.8	57.9	84.7	-32.2	2.00	2.00	0.00
1,000.0	15.38	55.65	989.7	62.5	91.5	-34.8	0.00	0.00	0.00
1,040.0	15.38	55.65	1,028.3	68.5	100.2	-38.1	0.00	0.00	0.00
1,080.0	15.38	55.65	1,066.8	74.5	109.0	-41.4	0.00	0.00	0.00
1,120.0	15.38	55.65	1,105.4	80.5	117.8	-44.8	0.00	0.00	0.00
1,160.0	15.38	55.65	1,144.0	86.5	126.5	-48.1	0.00	0.00	0.00
1,200.0	15.38	55.65	1,182.5	92.5	135.3	-51.4	0.00	0.00	0.00
1,240.0	15.38	55.65	1,221.1	98.4	144.0	-54.7	0.00	0.00	0.00
1,280.0	15.38	55.65	1,259.7	104.4	152.8	-58.1	0.00	0.00	0.00
1,320.0	15.38	55.65	1,298.2	110.4	161.6	-61.4	0.00	0.00	0.00
1,360.0	15.38	55.65	1,336.8	116.4	170.3	-64.7	0.00	0.00	0.00
1,400.0	15.38	55.65	1,375.4	122.4	179.1	-68.1	0.00	0.00	0.00
1,440.0	15.38	55.65	1,413.9	128.4	187.8	-71.4	0.00	0.00	0.00
1,480.0	15.38	55.65	1,452.5	134.4	196.6	-74.7	0.00	0.00	0.00
1,520.0	15.38	55.65	1,491.1	140.3	205.4	-78.0	0.00	0.00	0.00
1,560.0	15.38	55.65	1,529.6	146.3	214.1	-81.4	0.00	0.00	0.00
1,600.0	15.38	55.65	1,568.2	152.3	222.9	-84.7	0.00	0.00	0.00
1,640.0	15.38	55.65	1,606.8	158.3	231.6	-88.0	0.00	0.00	0.00
1,680.0	15.38	55.65	1,645.3	164.3	240.4	-91.4	0.00	0.00	0.00
1,720.0	15.38	55.65	1,683.9	170.3	249.2	-94.7	0.00	0.00	0.00
1,760.0	15.38	55.65	1,722.5	176.3	257.9	-98.0	0.00	0.00	0.00
1,800.0	15.38	55.65	1,761.0	182.3	266.7	-101.3	0.00	0.00	0.00
1,840.0	15.38	55.65	1,799.6	188.2	275.4	-104.7	0.00	0.00	0.00
1,880.0	15.38	55.65	1,838.2	194.2	284.2	-108.0	0.00	0.00	0.00
1,920.0	15.38	55.65	1,876.7	200.2	292.9	-111.3	0.00	0.00	0.00
1,960.0	15.38	55.65	1,915.3	206.2	301.7	-114.7	0.00	0.00	0.00
2,000.0	15.38	55.65	1,953.9	212.2	310.5	-118.0	0.00	0.00	0.00
2,040.0	15.38	55.65	1,992.4	218.2	319.2	-121.3	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Project:	SEC.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site:	Antelope F-18 Pad Sec.18-T5N-R62W	North Reference:	True
Well:	Antelope K-O-18HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-02-12)		

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)
2,080.0	15.38	55.65	2,031.0	224.2	328.0	-124.6	0.00	0.00	0.00
2,120.0	15.38	55.65	2,069.6	230.1	336.7	-128.0	0.00	0.00	0.00
2,160.0	15.38	55.65	2,108.1	236.1	345.5	-131.3	0.00	0.00	0.00
2,200.0	15.38	55.65	2,146.7	242.1	354.3	-134.6	0.00	0.00	0.00
2,240.0	15.38	55.65	2,185.3	248.1	363.0	-138.0	0.00	0.00	0.00
2,280.0	15.38	55.65	2,223.8	254.1	371.8	-141.3	0.00	0.00	0.00
2,320.0	15.38	55.65	2,262.4	260.1	380.5	-144.6	0.00	0.00	0.00
2,360.0	15.38	55.65	2,301.0	266.1	389.3	-147.9	0.00	0.00	0.00
2,400.0	15.38	55.65	2,339.5	272.0	398.1	-151.3	0.00	0.00	0.00
2,440.0	15.38	55.65	2,378.1	278.0	406.8	-154.6	0.00	0.00	0.00
2,480.0	15.38	55.65	2,416.7	284.0	415.6	-157.9	0.00	0.00	0.00
2,520.0	15.38	55.65	2,455.2	290.0	424.3	-161.3	0.00	0.00	0.00
2,560.0	15.38	55.65	2,493.8	296.0	433.1	-164.6	0.00	0.00	0.00
2,600.0	15.38	55.65	2,532.4	302.0	441.9	-167.9	0.00	0.00	0.00
2,640.0	15.38	55.65	2,571.0	308.0	450.6	-171.2	0.00	0.00	0.00
2,680.0	15.38	55.65	2,609.5	314.0	459.4	-174.6	0.00	0.00	0.00
2,720.0	15.38	55.65	2,648.1	319.9	468.1	-177.9	0.00	0.00	0.00
2,760.0	15.38	55.65	2,686.7	325.9	476.9	-181.2	0.00	0.00	0.00
2,800.0	15.38	55.65	2,725.2	331.9	485.6	-184.6	0.00	0.00	0.00
2,840.0	15.38	55.65	2,763.8	337.9	494.4	-187.9	0.00	0.00	0.00
2,880.0	15.38	55.65	2,802.4	343.9	503.2	-191.2	0.00	0.00	0.00
2,920.0	15.38	55.65	2,840.9	349.9	511.9	-194.5	0.00	0.00	0.00
2,960.0	15.38	55.65	2,879.5	355.9	520.7	-197.9	0.00	0.00	0.00
3,000.0	15.38	55.65	2,918.1	361.8	529.4	-201.2	0.00	0.00	0.00
3,040.0	15.38	55.65	2,956.6	367.8	538.2	-204.5	0.00	0.00	0.00
3,080.0	15.38	55.65	2,995.2	373.8	547.0	-207.9	0.00	0.00	0.00
3,120.0	15.38	55.65	3,033.8	379.8	555.7	-211.2	0.00	0.00	0.00
3,160.0	15.38	55.65	3,072.3	385.8	564.5	-214.5	0.00	0.00	0.00
3,200.0	15.38	55.65	3,110.9	391.8	573.2	-217.8	0.00	0.00	0.00
3,240.0	15.38	55.65	3,149.5	397.8	582.0	-221.2	0.00	0.00	0.00
3,280.0	15.38	55.65	3,188.0	403.7	590.8	-224.5	0.00	0.00	0.00
3,320.0	15.38	55.65	3,226.6	409.7	599.5	-227.8	0.00	0.00	0.00
3,360.0	15.38	55.65	3,265.2	415.7	608.3	-231.2	0.00	0.00	0.00
3,400.0	15.38	55.65	3,303.7	421.7	617.0	-234.5	0.00	0.00	0.00
3,440.0	15.38	55.65	3,342.3	427.7	625.8	-237.8	0.00	0.00	0.00
3,454.2	15.38	55.65	3,356.0	429.8	628.9	-239.0	0.00	0.00	0.00
PARKMAN									
3,480.0	15.38	55.65	3,380.9	433.7	634.6	-241.1	0.00	0.00	0.00
3,520.0	15.38	55.65	3,419.4	439.7	643.3	-244.5	0.00	0.00	0.00
3,560.0	15.38	55.65	3,458.0	445.6	652.1	-247.8	0.00	0.00	0.00
3,600.0	15.38	55.65	3,496.6	451.6	660.8	-251.1	0.00	0.00	0.00
3,640.0	15.38	55.65	3,535.1	457.6	669.6	-254.5	0.00	0.00	0.00
3,680.0	15.38	55.65	3,573.7	463.6	678.4	-257.8	0.00	0.00	0.00
3,720.0	15.38	55.65	3,612.3	469.6	687.1	-261.1	0.00	0.00	0.00
3,760.0	15.38	55.65	3,650.8	475.6	695.9	-264.4	0.00	0.00	0.00
3,800.0	15.38	55.65	3,689.4	481.6	704.6	-267.8	0.00	0.00	0.00
3,840.0	15.38	55.65	3,728.0	487.6	713.4	-271.1	0.00	0.00	0.00
3,880.0	15.38	55.65	3,766.5	493.5	722.1	-274.4	0.00	0.00	0.00
3,920.0	15.38	55.65	3,805.1	499.5	730.9	-277.8	0.00	0.00	0.00
3,960.0	15.38	55.65	3,843.7	505.5	739.7	-281.1	0.00	0.00	0.00
4,000.0	15.38	55.65	3,882.2	511.5	748.4	-284.4	0.00	0.00	0.00
4,040.0	15.38	55.65	3,920.8	517.5	757.2	-287.7	0.00	0.00	0.00
4,080.0	15.38	55.65	3,959.4	523.5	765.9	-291.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Project:	SEC.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site:	Antelope F-18 Pad Sec.18-T5N-R62W	North Reference:	True
Well:	Antelope K-O-18HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-02-12)		

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)
4,120.0	15.38	55.65	3,997.9	529.5	774.7	-294.4	0.00	0.00	0.00
4,160.0	15.38	55.65	4,036.5	535.4	783.5	-297.7	0.00	0.00	0.00
4,200.0	15.38	55.65	4,075.1	541.4	792.2	-301.1	0.00	0.00	0.00
4,240.0	15.38	55.65	4,113.6	547.4	801.0	-304.4	0.00	0.00	0.00
4,252.8	15.38	55.65	4,126.0	549.3	803.8	-305.4	0.00	0.00	0.00
SUSSEX									
4,280.0	15.38	55.65	4,152.2	553.4	809.7	-307.7	0.00	0.00	0.00
4,320.0	15.38	55.65	4,190.8	559.4	818.5	-311.0	0.00	0.00	0.00
4,360.0	15.38	55.65	4,229.3	565.4	827.3	-314.4	0.00	0.00	0.00
4,400.0	15.38	55.65	4,267.9	571.4	836.0	-317.7	0.00	0.00	0.00
4,440.0	15.38	55.65	4,306.5	577.3	844.8	-321.0	0.00	0.00	0.00
4,480.0	15.38	55.65	4,345.0	583.3	853.5	-324.4	0.00	0.00	0.00
4,520.0	15.38	55.65	4,383.6	589.3	862.3	-327.7	0.00	0.00	0.00
4,560.0	15.38	55.65	4,422.2	595.3	871.1	-331.0	0.00	0.00	0.00
4,600.0	15.38	55.65	4,460.8	601.3	879.8	-334.3	0.00	0.00	0.00
4,640.0	15.38	55.65	4,499.3	607.3	888.6	-337.7	0.00	0.00	0.00
4,680.0	15.38	55.65	4,537.9	613.3	897.3	-341.0	0.00	0.00	0.00
4,720.0	15.38	55.65	4,576.5	619.3	906.1	-344.3	0.00	0.00	0.00
4,760.0	15.38	55.65	4,615.0	625.2	914.8	-347.7	0.00	0.00	0.00
4,800.0	15.38	55.65	4,653.6	631.2	923.6	-351.0	0.00	0.00	0.00
4,840.0	15.38	55.65	4,692.2	637.2	932.4	-354.3	0.00	0.00	0.00
4,880.0	15.38	55.65	4,730.7	643.2	941.1	-357.6	0.00	0.00	0.00
4,920.0	15.38	55.65	4,769.3	649.2	949.9	-361.0	0.00	0.00	0.00
4,960.0	15.38	55.65	4,807.9	655.2	958.6	-364.3	0.00	0.00	0.00
5,000.0	15.38	55.65	4,846.4	661.2	967.4	-367.6	0.00	0.00	0.00
5,040.0	15.38	55.65	4,885.0	667.1	976.2	-371.0	0.00	0.00	0.00
5,080.0	15.38	55.65	4,923.6	673.1	984.9	-374.3	0.00	0.00	0.00
5,097.2	15.38	55.65	4,940.2	675.7	988.7	-375.7	0.00	0.00	0.00
5,120.0	14.93	55.65	4,962.2	679.1	993.6	-377.6	2.00	-2.00	0.00
5,160.0	14.13	55.65	5,000.9	684.7	1,001.9	-380.7	2.00	-2.00	0.00
5,200.0	13.33	55.65	5,039.7	690.1	1,009.7	-383.7	2.00	-2.00	0.00
5,240.0	12.53	55.65	5,078.7	695.1	1,017.1	-386.5	2.00	-2.00	0.00
5,280.0	11.73	55.65	5,117.8	699.9	1,024.0	-389.2	2.00	-2.00	0.00
5,320.0	10.93	55.65	5,157.0	704.3	1,030.5	-391.6	2.00	-2.00	0.00
5,360.0	10.13	55.65	5,196.4	708.4	1,036.6	-393.9	2.00	-2.00	0.00
5,400.0	9.33	55.65	5,235.8	712.2	1,042.1	-396.0	2.00	-2.00	0.00
5,440.0	8.53	55.65	5,275.3	715.7	1,047.3	-398.0	2.00	-2.00	0.00
5,480.0	7.73	55.65	5,314.9	718.9	1,051.9	-399.7	2.00	-2.00	0.00
5,520.0	6.93	55.65	5,354.6	721.8	1,056.1	-401.3	2.00	-2.00	0.00
5,560.0	6.13	55.65	5,394.3	724.4	1,059.9	-402.8	2.00	-2.00	0.00
5,600.0	5.33	55.65	5,434.1	726.6	1,063.2	-404.0	2.00	-2.00	0.00
5,640.0	4.53	55.65	5,474.0	728.6	1,066.0	-405.1	2.00	-2.00	0.00
5,680.0	3.73	55.65	5,513.9	730.2	1,068.4	-406.0	2.00	-2.00	0.00
5,720.0	2.93	55.65	5,553.8	731.5	1,070.3	-406.7	2.00	-2.00	0.00
5,760.0	2.13	55.65	5,593.8	732.5	1,071.8	-407.3	2.00	-2.00	0.00
5,800.0	1.33	55.65	5,633.7	733.2	1,072.8	-407.7	2.00	-2.00	0.00
5,840.0	0.53	55.65	5,673.7	733.5	1,073.3	-407.9	2.00	-2.00	0.00
5,866.3	0.00	0.00	5,700.0	733.6	1,073.4	-407.9	2.00	-2.00	0.00
5,880.0	0.00	0.00	5,713.7	733.6	1,073.4	-407.9	0.00	0.00	0.00
5,920.0	0.00	0.00	5,753.7	733.6	1,073.4	-407.9	0.00	0.00	0.00
5,960.0	0.00	0.00	5,793.7	733.6	1,073.4	-407.9	0.00	0.00	0.00
5,985.4	0.00	0.00	5,819.1	733.6	1,073.4	-407.9	0.00	0.00	0.00
KOP #2									
6,000.0	1.61	178.31	5,833.7	733.4	1,073.4	-407.7	11.01	11.01	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Project:	SEC.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site:	Antelope F-18 Pad Sec.18-T5N-R62W	North Reference:	True
Well:	Antelope K-O-18HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-02-12)		

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)
6,040.0	6.01	178.31	5,873.6	730.7	1,073.5	-405.1	11.00	11.00	0.00
6,080.0	10.41	178.31	5,913.2	725.0	1,073.7	-399.6	11.00	11.00	0.00
6,120.0	14.81	178.31	5,952.2	716.3	1,073.9	-391.2	11.00	11.00	0.00
6,160.0	19.21	178.31	5,990.5	704.6	1,074.3	-379.8	11.00	11.00	0.00
6,200.0	23.61	178.31	6,027.7	690.0	1,074.7	-365.7	11.00	11.00	0.00
6,240.0	28.01	178.31	6,063.7	672.6	1,075.2	-348.8	11.00	11.00	0.00
6,280.0	32.41	178.31	6,098.3	652.5	1,075.8	-329.3	11.00	11.00	0.00
6,320.0	36.81	178.31	6,131.2	629.8	1,076.5	-307.3	11.00	11.00	0.00
6,360.0	41.21	178.31	6,162.3	604.7	1,077.2	-282.9	11.00	11.00	0.00
6,375.8	42.95	178.31	6,174.0	594.1	1,077.5	-272.7	11.00	11.00	0.00
SHARON SPRINGS									
6,400.0	45.61	178.31	6,191.3	577.2	1,078.0	-256.3	11.00	11.00	0.00
6,440.0	50.01	178.31	6,218.2	547.6	1,078.9	-227.6	11.00	11.00	0.00
6,480.0	54.41	178.31	6,242.7	516.0	1,079.8	-197.0	11.00	11.00	0.00
6,491.0	55.62	178.31	6,249.0	507.0	1,080.1	-188.3	11.00	11.00	0.00
NIOBRARA A CHALK									
6,520.0	58.81	178.31	6,264.7	482.6	1,080.8	-164.7	11.00	11.00	0.00
6,520.6	58.87	178.31	6,265.0	482.1	1,080.8	-164.2	11.00	11.00	0.00
NIOBRARA A MARL									
6,560.0	63.21	178.31	6,284.1	447.6	1,081.8	-130.8	11.00	11.00	0.00
6,600.0	67.61	178.31	6,300.7	411.3	1,082.9	-95.6	11.00	11.00	0.00
6,640.0	72.01	178.31	6,314.5	373.8	1,084.0	-59.2	11.00	11.00	0.00
6,678.3	76.22	178.31	6,325.0	337.0	1,085.1	-23.6	11.00	11.00	0.00
NIOBRARA B CHALK									
6,680.0	76.41	178.31	6,325.4	335.3	1,085.2	-21.9	11.00	11.00	0.00
6,720.0	80.81	178.31	6,333.3	296.1	1,086.3	16.1	11.00	11.00	0.00
6,760.0	85.21	178.31	6,338.2	256.5	1,087.5	54.5	11.00	11.00	0.00
6,800.0	89.61	178.31	6,340.0	216.5	1,088.7	93.2	11.00	11.00	0.00
6,803.6	90.00	178.31	6,340.0	213.0	1,088.8	96.7	11.00	11.00	0.00
End of Build - NIOBRARA B TARGET									
6,840.0	90.00	178.31	6,340.0	176.5	1,089.8	131.9	0.00	0.00	0.00
6,880.0	90.00	178.31	6,340.0	136.6	1,091.0	170.7	0.00	0.00	0.00
6,903.6	90.00	178.31	6,340.0	113.0	1,091.7	193.6	0.00	0.00	0.00
7"									
6,920.0	90.00	178.31	6,340.0	96.6	1,092.2	209.4	0.00	0.00	0.00
6,960.0	90.00	178.31	6,340.0	56.6	1,093.4	248.2	0.00	0.00	0.00
7,000.0	90.00	178.31	6,340.0	16.6	1,094.6	286.9	0.00	0.00	0.00
7,040.0	90.00	178.31	6,340.0	-23.4	1,095.7	325.7	0.00	0.00	0.00
7,080.0	90.00	178.31	6,340.0	-63.4	1,096.9	364.4	0.00	0.00	0.00
7,120.0	90.00	178.31	6,340.0	-103.3	1,098.1	403.2	0.00	0.00	0.00
7,160.0	90.00	178.31	6,340.0	-143.3	1,099.3	441.9	0.00	0.00	0.00
7,200.0	90.00	178.31	6,340.0	-183.3	1,100.5	480.7	0.00	0.00	0.00
7,240.0	90.00	178.31	6,340.0	-223.3	1,101.6	519.4	0.00	0.00	0.00
7,280.0	90.00	178.31	6,340.0	-263.3	1,102.8	558.2	0.00	0.00	0.00
7,320.0	90.00	178.31	6,340.0	-303.2	1,104.0	596.9	0.00	0.00	0.00
7,360.0	90.00	178.31	6,340.0	-343.2	1,105.2	635.7	0.00	0.00	0.00
7,400.0	90.00	178.31	6,340.0	-383.2	1,106.4	674.4	0.00	0.00	0.00
7,440.0	90.00	178.31	6,340.0	-423.2	1,107.5	713.2	0.00	0.00	0.00
7,480.0	90.00	178.31	6,340.0	-463.2	1,108.7	751.9	0.00	0.00	0.00
7,520.0	90.00	178.31	6,340.0	-503.2	1,109.9	790.7	0.00	0.00	0.00
7,560.0	90.00	178.31	6,340.0	-543.1	1,111.1	829.4	0.00	0.00	0.00
7,600.0	90.00	178.31	6,340.0	-583.1	1,112.3	868.2	0.00	0.00	0.00
7,640.0	90.00	178.31	6,340.0	-623.1	1,113.5	906.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Project:	SEC.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site:	Antelope F-18 Pad Sec.18-T5N-R62W	North Reference:	True
Well:	Antelope K-O-18HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-02-12)		

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)
7,680.0	90.00	178.31	6,340.0	-663.1	1,114.6	945.7	0.00	0.00	0.00
7,720.0	90.00	178.31	6,340.0	-703.1	1,115.8	984.4	0.00	0.00	0.00
7,760.0	90.00	178.31	6,340.0	-743.1	1,117.0	1,023.1	0.00	0.00	0.00
7,800.0	90.00	178.31	6,340.0	-783.0	1,118.2	1,061.9	0.00	0.00	0.00
7,840.0	90.00	178.31	6,340.0	-823.0	1,119.4	1,100.6	0.00	0.00	0.00
7,880.0	90.00	178.31	6,340.0	-863.0	1,120.5	1,139.4	0.00	0.00	0.00
7,920.0	90.00	178.31	6,340.0	-903.0	1,121.7	1,178.1	0.00	0.00	0.00
7,960.0	90.00	178.31	6,340.0	-943.0	1,122.9	1,216.9	0.00	0.00	0.00
8,000.0	90.00	178.31	6,340.0	-983.0	1,124.1	1,255.6	0.00	0.00	0.00
8,040.0	90.00	178.31	6,340.0	-1,022.9	1,125.3	1,294.4	0.00	0.00	0.00
8,080.0	90.00	178.31	6,340.0	-1,062.9	1,126.4	1,333.1	0.00	0.00	0.00
8,120.0	90.00	178.31	6,340.0	-1,102.9	1,127.6	1,371.9	0.00	0.00	0.00
8,160.0	90.00	178.31	6,340.0	-1,142.9	1,128.8	1,410.6	0.00	0.00	0.00
8,200.0	90.00	178.31	6,340.0	-1,182.9	1,130.0	1,449.4	0.00	0.00	0.00
8,240.0	90.00	178.31	6,340.0	-1,222.8	1,131.2	1,488.1	0.00	0.00	0.00
8,280.0	90.00	178.31	6,340.0	-1,262.8	1,132.3	1,526.9	0.00	0.00	0.00
8,320.0	90.00	178.31	6,340.0	-1,302.8	1,133.5	1,565.6	0.00	0.00	0.00
8,360.0	90.00	178.31	6,340.0	-1,342.8	1,134.7	1,604.4	0.00	0.00	0.00
8,400.0	90.00	178.31	6,340.0	-1,382.8	1,135.9	1,643.1	0.00	0.00	0.00
8,440.0	90.00	178.31	6,340.0	-1,422.8	1,137.1	1,681.9	0.00	0.00	0.00
8,480.0	90.00	178.31	6,340.0	-1,462.7	1,138.2	1,720.6	0.00	0.00	0.00
8,520.0	90.00	178.31	6,340.0	-1,502.7	1,139.4	1,759.4	0.00	0.00	0.00
8,560.0	90.00	178.31	6,340.0	-1,542.7	1,140.6	1,798.1	0.00	0.00	0.00
8,600.0	90.00	178.31	6,340.0	-1,582.7	1,141.8	1,836.8	0.00	0.00	0.00
8,640.0	90.00	178.31	6,340.0	-1,622.7	1,143.0	1,875.6	0.00	0.00	0.00
8,680.0	90.00	178.31	6,340.0	-1,662.7	1,144.1	1,914.3	0.00	0.00	0.00
8,720.0	90.00	178.31	6,340.0	-1,702.6	1,145.3	1,953.1	0.00	0.00	0.00
8,760.0	90.00	178.31	6,340.0	-1,742.6	1,146.5	1,991.8	0.00	0.00	0.00
8,800.0	90.00	178.31	6,340.0	-1,782.6	1,147.7	2,030.6	0.00	0.00	0.00
8,840.0	90.00	178.31	6,340.0	-1,822.6	1,148.9	2,069.3	0.00	0.00	0.00
8,880.0	90.00	178.31	6,340.0	-1,862.6	1,150.0	2,108.1	0.00	0.00	0.00
8,920.0	90.00	178.31	6,340.0	-1,902.6	1,151.2	2,146.8	0.00	0.00	0.00
8,960.0	90.00	178.31	6,340.0	-1,942.5	1,152.4	2,185.6	0.00	0.00	0.00
9,000.0	90.00	178.31	6,340.0	-1,982.5	1,153.6	2,224.3	0.00	0.00	0.00
9,040.0	90.00	178.31	6,340.0	-2,022.5	1,154.8	2,263.1	0.00	0.00	0.00
9,080.0	90.00	178.31	6,340.0	-2,062.5	1,155.9	2,301.8	0.00	0.00	0.00
9,120.0	90.00	178.31	6,340.0	-2,102.5	1,157.1	2,340.6	0.00	0.00	0.00
9,160.0	90.00	178.31	6,340.0	-2,142.4	1,158.3	2,379.3	0.00	0.00	0.00
9,200.0	90.00	178.31	6,340.0	-2,182.4	1,159.5	2,418.1	0.00	0.00	0.00
9,240.0	90.00	178.31	6,340.0	-2,222.4	1,160.7	2,456.8	0.00	0.00	0.00
9,280.0	90.00	178.31	6,340.0	-2,262.4	1,161.8	2,495.6	0.00	0.00	0.00
9,320.0	90.00	178.31	6,340.0	-2,302.4	1,163.0	2,534.3	0.00	0.00	0.00
9,360.0	90.00	178.31	6,340.0	-2,342.4	1,164.2	2,573.1	0.00	0.00	0.00
9,400.0	90.00	178.31	6,340.0	-2,382.3	1,165.4	2,611.8	0.00	0.00	0.00
9,440.0	90.00	178.31	6,340.0	-2,422.3	1,166.6	2,650.6	0.00	0.00	0.00
9,480.0	90.00	178.31	6,340.0	-2,462.3	1,167.7	2,689.3	0.00	0.00	0.00
9,520.0	90.00	178.31	6,340.0	-2,502.3	1,168.9	2,728.0	0.00	0.00	0.00
9,560.0	90.00	178.31	6,340.0	-2,542.3	1,170.1	2,766.8	0.00	0.00	0.00
9,600.0	90.00	178.31	6,340.0	-2,582.3	1,171.3	2,805.5	0.00	0.00	0.00
9,640.0	90.00	178.31	6,340.0	-2,622.2	1,172.5	2,844.3	0.00	0.00	0.00
9,680.0	90.00	178.31	6,340.0	-2,662.2	1,173.6	2,883.0	0.00	0.00	0.00
9,720.0	90.00	178.31	6,340.0	-2,702.2	1,174.8	2,921.8	0.00	0.00	0.00
9,760.0	90.00	178.31	6,340.0	-2,742.2	1,176.0	2,960.5	0.00	0.00	0.00
9,800.0	90.00	178.31	6,340.0	-2,782.2	1,177.2	2,999.3	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Project:	SEC.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site:	Antelope F-18 Pad Sec.18-T5N-R62W	North Reference:	True
Well:	Antelope K-O-18HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-02-12)		

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)	
9,840.0	90.00	178.31	6,340.0	-2,822.2	1,178.4	3,038.0	0.00	0.00	0.00	
9,880.0	90.00	178.31	6,340.0	-2,862.1	1,179.5	3,076.8	0.00	0.00	0.00	
9,920.0	90.00	178.31	6,340.0	-2,902.1	1,180.7	3,115.5	0.00	0.00	0.00	
9,960.0	90.00	178.31	6,340.0	-2,942.1	1,181.9	3,154.3	0.00	0.00	0.00	
10,000.0	90.00	178.31	6,340.0	-2,982.1	1,183.1	3,193.0	0.00	0.00	0.00	
10,040.0	90.00	178.31	6,340.0	-3,022.1	1,184.3	3,231.8	0.00	0.00	0.00	
10,080.0	90.00	178.31	6,340.0	-3,062.0	1,185.5	3,270.5	0.00	0.00	0.00	
10,120.0	90.00	178.31	6,340.0	-3,102.0	1,186.6	3,309.3	0.00	0.00	0.00	
10,160.0	90.00	178.31	6,340.0	-3,142.0	1,187.8	3,348.0	0.00	0.00	0.00	
10,200.0	90.00	178.31	6,340.0	-3,182.0	1,189.0	3,386.8	0.00	0.00	0.00	
10,240.0	90.00	178.31	6,340.0	-3,222.0	1,190.2	3,425.5	0.00	0.00	0.00	
10,280.0	90.00	178.31	6,340.0	-3,262.0	1,191.4	3,464.3	0.00	0.00	0.00	
10,320.0	90.00	178.31	6,340.0	-3,301.9	1,192.5	3,503.0	0.00	0.00	0.00	
10,360.0	90.00	178.31	6,340.0	-3,341.9	1,193.7	3,541.8	0.00	0.00	0.00	
10,400.0	90.00	178.31	6,340.0	-3,381.9	1,194.9	3,580.5	0.00	0.00	0.00	
10,440.0	90.00	178.31	6,340.0	-3,421.9	1,196.1	3,619.2	0.00	0.00	0.00	
10,480.0	90.00	178.31	6,340.0	-3,461.9	1,197.3	3,658.0	0.00	0.00	0.00	
10,520.0	90.00	178.31	6,340.0	-3,501.9	1,198.4	3,696.7	0.00	0.00	0.00	
10,560.0	90.00	178.31	6,340.0	-3,541.8	1,199.6	3,735.5	0.00	0.00	0.00	
10,600.0	90.00	178.31	6,340.0	-3,581.8	1,200.8	3,774.2	0.00	0.00	0.00	
10,640.0	90.00	178.31	6,340.0	-3,621.8	1,202.0	3,813.0	0.00	0.00	0.00	
10,680.0	90.00	178.31	6,340.0	-3,661.8	1,203.2	3,851.7	0.00	0.00	0.00	
10,720.0	90.00	178.31	6,340.0	-3,701.8	1,204.3	3,890.5	0.00	0.00	0.00	
10,760.0	90.00	178.31	6,340.0	-3,741.8	1,205.5	3,929.2	0.00	0.00	0.00	
10,800.0	90.00	178.31	6,340.0	-3,781.7	1,206.7	3,968.0	0.00	0.00	0.00	
10,840.0	90.00	178.31	6,340.0	-3,821.7	1,207.9	4,006.7	0.00	0.00	0.00	
10,880.0	90.00	178.31	6,340.0	-3,861.7	1,209.1	4,045.5	0.00	0.00	0.00	
10,920.0	90.00	178.31	6,340.0	-3,901.7	1,210.2	4,084.2	0.00	0.00	0.00	
10,960.0	90.00	178.31	6,340.0	-3,941.7	1,211.4	4,123.0	0.00	0.00	0.00	
11,000.0	90.00	178.31	6,340.0	-3,981.6	1,212.6	4,161.7	0.00	0.00	0.00	
11,040.0	90.00	178.31	6,340.0	-4,021.6	1,213.8	4,200.5	0.00	0.00	0.00	
11,080.0	90.00	178.31	6,340.0	-4,061.6	1,215.0	4,239.2	0.00	0.00	0.00	
11,120.0	90.00	178.31	6,340.0	-4,101.6	1,216.1	4,278.0	0.00	0.00	0.00	
11,160.0	90.00	178.31	6,340.0	-4,141.6	1,217.3	4,316.7	0.00	0.00	0.00	
11,200.0	90.00	178.31	6,340.0	-4,181.6	1,218.5	4,355.5	0.00	0.00	0.00	
11,240.0	90.00	178.31	6,340.0	-4,221.5	1,219.7	4,394.2	0.00	0.00	0.00	
11,255.3	90.00	178.31	6,340.0	-4,236.9	1,220.1	4,409.1	0.00	0.00	0.00	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,903.6	6,340.0	7"	7	7-1/2	

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Project:	SEC.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site:	Antelope F-18 Pad Sec.18-T5N-R62W	North Reference:	True
Well:	Antelope K-O-18HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-02-12)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,454.2	3,356.0	PARKMAN		0.00		
4,252.8	4,126.0	SUSSEX		0.00		
6,375.8	6,174.0	SHARON SPRINGS		0.00		
6,491.0	6,249.0	NIOBRARA A CHALK		0.00		
6,520.6	6,265.0	NIOBRARA A MARL		0.00		
6,678.3	6,325.0	NIOBRARA B CHALK		0.00		
6,803.6	6,340.0	NIOBRARA B TARGET		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.0	200.0	0.0	0.0	KOP #1	
5,985.4	5,819.1	733.6	1,073.4	KOP #2	
6,803.6	6,340.0	212.9	1,088.8	End of Build	



Directional

BONANZA CREEK ENERGY OPERATING

SEC.18-T5N-R62W

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

Antelope K-O-18HNB

Wellbore #1

Plan #2 (11-02-12)

Anticollision Report

06 November, 2012

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope K-O-18HNB	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 (11-02-12)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Antelope (Existing Wells) Pad Sec.18-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
100.0	100.0	85.0	85.0	0.1	1.7	-96.01	-43.7	-415.0	417.3	415.5	1.81	230.205	
200.0	200.0	185.0	185.0	0.3	3.7	-96.01	-43.7	-415.0	417.3	413.2	4.04	103.351 CC	
300.0	300.0	285.0	285.0	0.6	5.7	-151.76	-43.7	-415.0	418.8	412.5	6.26	66.948 ES	
400.0	399.8	384.8	384.8	0.8	7.7	-152.05	-43.7	-415.0	423.4	415.0	8.46	50.030	
500.0	499.5	484.5	484.5	1.0	9.7	-152.53	-43.7	-415.0	431.1	420.5	10.66	40.454	
600.0	598.7	583.7	583.7	1.3	11.7	-153.16	-43.7	-415.0	442.0	429.2	12.83	34.444	
700.0	697.5	682.5	682.5	1.7	13.6	-153.92	-43.7	-415.0	456.0	441.1	14.98	30.440	
800.0	795.6	780.6	780.6	2.0	15.6	-154.78	-43.7	-415.0	473.3	456.2	17.10	27.682	
900.0	893.1	878.1	878.1	2.5	17.6	-155.71	-43.7	-415.0	493.8	474.6	19.17	25.758	
969.0	959.8	944.8	944.8	2.8	18.9	-156.39	-43.7	-415.0	509.9	489.3	20.57	24.784	
1,000.0	989.7	974.7	974.7	3.0	19.5	-156.75	-43.7	-415.0	517.5	496.2	21.24	24.360	
1,100.0	1,086.1	1,071.1	1,071.1	3.5	21.4	-157.85	-43.7	-415.0	542.1	518.7	23.41	23.160	
1,200.0	1,182.5	1,167.5	1,167.5	4.0	23.4	-158.86	-43.7	-415.0	566.9	541.3	25.57	22.170	
1,300.0	1,278.9	1,263.9	1,263.9	4.6	25.3	-159.78	-43.7	-415.0	591.8	564.0	27.73	21.341	
1,400.0	1,375.4	1,360.4	1,360.4	5.1	27.2	-160.63	-43.7	-415.0	616.8	586.9	29.89	20.637	
1,500.0	1,471.8	1,456.8	1,456.8	5.6	29.1	-161.41	-43.7	-415.0	642.0	610.0	32.05	20.033	
1,600.0	1,568.2	1,553.2	1,553.2	6.2	31.1	-162.13	-43.7	-415.0	667.3	633.1	34.20	19.509	
1,700.0	1,664.6	1,649.6	1,649.6	6.7	33.0	-162.80	-43.7	-415.0	692.7	656.3	36.36	19.051	
1,800.0	1,761.0	1,746.0	1,746.0	7.3	34.9	-163.43	-43.7	-415.0	718.1	679.6	38.51	18.646	
1,900.0	1,857.5	1,842.5	1,842.5	7.8	36.8	-164.01	-43.7	-415.0	743.7	703.0	40.67	18.287	
2,000.0	1,953.9	1,938.9	1,938.9	8.4	38.8	-164.55	-43.7	-415.0	769.2	726.4	42.82	17.966	
2,100.0	2,050.3	2,035.3	2,035.3	8.9	40.7	-165.06	-43.7	-415.0	794.9	749.9	44.97	17.677	
2,200.0	2,146.7	2,131.7	2,131.7	9.5	42.6	-165.54	-43.7	-415.0	820.6	773.5	47.12	17.416	
2,300.0	2,243.1	2,228.1	2,228.1	10.0	44.6	-165.98	-43.7	-415.0	846.4	797.1	49.27	17.179	
2,400.0	2,339.5	2,324.5	2,324.5	10.6	46.5	-166.41	-43.7	-415.0	872.2	820.8	51.42	16.963	
2,500.0	2,436.0	2,421.0	2,421.0	11.1	48.4	-166.80	-43.7	-415.0	898.0	844.5	53.57	16.765	
2,600.0	2,532.4	2,517.4	2,517.4	11.7	50.3	-167.18	-43.7	-415.0	923.9	868.2	55.71	16.583	
2,700.0	2,628.8	2,613.8	2,613.8	12.3	52.3	-167.53	-43.7	-415.0	949.9	892.0	57.86	16.416	
2,800.0	2,725.2	2,710.2	2,710.2	12.8	54.2	-167.87	-43.7	-415.0	975.8	915.8	60.01	16.261 SF	

Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 18A (Exist.) - Wellbore #1 - Wellbore #1												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	
0.0	0.0	0.0	0.0	0.0	0.0	160.86	-714.1	247.9	756.0				
100.0	100.0	85.0	85.0	0.1	1.7	160.86	-714.1	247.9	755.9	754.0	1.81	417.005	
200.0	200.0	185.0	185.0	0.3	3.7	160.86	-714.1	247.9	755.9	751.8	4.04	187.216	CC
300.0	300.0	285.0	285.0	0.6	5.7	105.33	-714.1	247.9	756.3	750.1	6.26	120.862	
400.0	399.8	384.8	384.8	0.8	7.7	105.68	-714.1	247.9	757.7	749.2	8.48	89.331	
500.0	499.5	484.5	484.5	1.0	9.7	106.26	-714.1	247.9	760.1	749.4	10.72	70.893	
600.0	598.7	583.7	583.7	1.3	11.7	107.07	-714.1	247.9	763.6	750.7	12.98	58.816	
700.0	697.5	682.5	682.5	1.7	13.6	108.08	-714.1	247.9	768.4	753.1	15.27	50.320	
800.0	795.6	780.6	780.6	2.0	15.6	109.28	-714.1	247.9	774.6	757.1	17.58	44.054	
900.0	893.1	878.1	878.1	2.5	17.6	110.65	-714.1	247.9	782.5	762.6	19.92	39.281	
969.0	959.8	944.8	944.8	2.8	18.9	111.69	-714.1	247.9	789.0	767.5	21.54	36.622	
1,000.0	989.7	974.7	974.7	3.0	19.5	112.22	-714.1	247.9	792.2	769.9	22.28	35.553	
1,100.0	1,086.1	1,071.1	1,071.1	3.5	21.4	113.92	-714.1	247.9	802.9	778.2	24.66	32.557	
1,200.0	1,182.5	1,167.5	1,167.5	4.0	23.4	115.58	-714.1	247.9	814.3	787.3	27.04	30.119	
1,300.0	1,278.9	1,263.9	1,263.9	4.6	25.3	117.19	-714.1	247.9	826.5	797.1	29.41	28.106	
1,400.0	1,375.4	1,360.4	1,360.4	5.1	27.2	118.76	-714.1	247.9	839.3	807.5	31.76	26.421	
1,500.0	1,471.8	1,456.8	1,456.8	5.6	29.1	120.28	-714.1	247.9	852.7	818.6	34.11	24.996	
1,600.0	1,568.2	1,553.2	1,553.2	6.2	31.1	121.75	-714.1	247.9	866.7	830.3	36.45	23.778	
1,700.0	1,664.6	1,649.6	1,649.6	6.7	33.0	123.18	-714.1	247.9	881.3	842.6	38.78	22.729	
1,800.0	1,761.0	1,746.0	1,746.0	7.3	34.9	124.57	-714.1	247.9	896.5	855.4	41.09	21.817	
1,900.0	1,857.5	1,842.5	1,842.5	7.8	36.8	125.91	-714.1	247.9	912.2	868.8	43.39	21.021	
2,000.0	1,953.9	1,938.9	1,938.9	8.4	38.8	127.21	-714.1	247.9	928.4	882.7	45.69	20.320	
2,100.0	2,050.3	2,035.3	2,035.3	8.9	40.7	128.46	-714.1	247.9	945.0	897.0	47.97	19.701	
2,200.0	2,146.7	2,131.7	2,131.7	9.5	42.6	129.67	-714.1	247.9	962.1	911.8	50.24	19.150	
2,300.0	2,243.1	2,228.1	2,228.1	10.0	44.6	130.84	-714.1	247.9	979.6	927.1	52.50	18.659	
2,400.0	2,339.5	2,324.5	2,324.5	10.6	46.5	131.97	-714.1	247.9	997.5	942.7	54.75	18.219	
7,300.0	6,340.0	6,325.0	6,325.0	25.5	126.5	90.00	-714.1	247.9	957.9	812.2	145.67	6.576	
7,400.0	6,340.0	6,325.0	6,325.0	26.0	126.5	90.00	-714.1	247.9	920.0	773.4	146.62	6.275	
7,500.0	6,340.0	6,325.0	6,325.0	26.7	126.5	90.00	-714.1	247.9	891.9	744.1	147.71	6.038	
7,600.0	6,340.0	6,325.0	6,325.0	27.5	126.5	90.00	-714.1	247.9	874.3	725.4	148.90	5.871	
7,700.0	6,340.0	6,325.0	6,325.0	28.5	126.5	90.00	-714.1	247.9	867.9	717.7	150.20	5.778	
7,705.4	6,340.0	6,325.0	6,325.0	28.5	126.5	90.00	-714.1	247.9	867.9	717.6	150.27	5.775	ES
7,800.0	6,340.0	6,325.0	6,325.0	29.6	126.5	90.00	-714.1	247.9	873.0	721.5	151.58	5.760	SF
7,900.0	6,340.0	6,325.0	6,325.0	30.8	126.5	90.00	-714.1	247.9	889.4	736.4	153.02	5.812	
8,000.0	6,340.0	6,325.0	6,325.0	32.1	126.5	90.00	-714.1	247.9	916.5	762.0	154.53	5.931	
8,100.0	6,340.0	6,325.0	6,325.0	33.4	126.5	90.00	-714.1	247.9	953.4	797.3	156.09	6.108	
8,200.0	6,340.0	6,325.0	6,325.0	34.9	126.5	90.00	-714.1	247.9	998.9	841.3	157.68	6.335	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope K-O-18HNB	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 (11-02-12)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 18C (Vert.) - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 6850-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
9,800.0	6,340.0	6,325.0	6,325.0	61.6	126.5	90.00	-3,315.2	376.0	962.3	776.3	186.02	5.173	
9,900.0	6,340.0	6,325.0	6,325.0	63.4	126.5	90.00	-3,315.2	376.0	913.3	725.5	187.87	4.861	
10,000.0	6,340.0	6,325.0	6,325.0	65.2	126.5	90.00	-3,315.2	376.0	873.1	683.4	189.73	4.602	
10,100.0	6,340.0	6,325.0	6,325.0	67.1	126.5	90.00	-3,315.2	376.0	842.9	651.3	191.59	4.399	
10,200.0	6,340.0	6,325.0	6,325.0	68.9	126.5	90.00	-3,315.2	376.0	823.8	630.3	193.46	4.258	
10,300.0	6,340.0	6,325.0	6,325.0	70.7	126.5	90.00	-3,315.2	376.0	816.6	621.3	195.33	4.181	
10,309.2	6,340.0	6,325.0	6,325.0	70.9	126.5	90.00	-3,315.2	376.0	816.5	621.0	195.51	4.177 CC, ES	
10,400.0	6,340.0	6,325.0	6,325.0	72.5	126.5	90.00	-3,315.2	376.0	821.6	624.4	197.21	4.166 SF	
10,500.0	6,340.0	6,325.0	6,325.0	74.4	126.5	90.00	-3,315.2	376.0	838.5	639.5	199.08	4.212	
10,600.0	6,340.0	6,325.0	6,325.0	76.2	126.5	90.00	-3,315.2	376.0	866.8	665.8	200.96	4.313	
10,700.0	6,340.0	6,325.0	6,325.0	78.1	126.5	90.00	-3,315.2	376.0	905.2	702.4	202.85	4.463	
10,800.0	6,340.0	6,325.0	6,325.0	79.9	126.5	90.00	-3,315.2	376.0	952.7	748.0	204.73	4.653	

Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 21-18 (Exist.) - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 ft	
Survey Program: 6349-UNKNOWN										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
0.0	0.0	0.0	0.0	0.0	0.0	91.63	-25.5	896.8	897.3				
100.0	100.0	85.0	85.0	0.1	1.7	91.63	-25.5	896.8	897.1	895.3	1.81	494.951	
200.0	200.0	185.0	185.0	0.3	3.7	91.63	-25.5	896.8	897.1	893.1	4.04	222.210	
300.0	300.0	285.0	285.0	0.6	5.7	36.06	-25.5	896.8	895.7	889.5	6.26	143.183	
400.0	399.8	384.8	384.8	0.8	7.7	36.31	-25.5	896.8	891.5	883.0	8.47	105.304	
500.0	499.5	484.5	484.5	1.0	9.7	36.73	-25.5	896.8	884.5	873.8	10.67	82.903	
600.0	598.7	583.7	583.7	1.3	11.7	37.32	-25.5	896.8	874.7	861.9	12.86	67.998	
700.0	697.5	682.5	682.5	1.7	13.6	38.10	-25.5	896.8	862.3	847.2	15.05	57.284	
800.0	795.6	780.6	780.6	2.0	15.6	39.08	-25.5	896.8	847.3	830.0	17.24	49.149	
900.0	893.1	878.1	878.1	2.5	17.6	40.28	-25.5	896.8	829.8	810.4	19.43	42.711	
969.0	959.8	944.8	944.8	2.8	18.9	41.25	-25.5	896.8	816.3	795.4	20.95	38.974	
1,000.0	989.7	974.7	974.7	3.0	19.5	41.62	-25.5	896.8	810.1	788.4	21.66	37.402	
1,100.0	1,086.1	1,071.1	1,071.1	3.5	21.4	42.88	-25.5	896.8	790.1	766.1	23.98	32.950	
1,200.0	1,182.5	1,167.5	1,167.5	4.0	23.4	44.20	-25.5	896.8	770.6	744.2	26.33	29.271	
1,300.0	1,278.9	1,263.9	1,263.9	4.6	25.3	45.58	-25.5	896.8	751.4	722.7	28.69	26.188	
1,400.0	1,375.4	1,360.4	1,360.4	5.1	27.2	47.04	-25.5	896.8	732.8	701.7	31.08	23.574	
1,500.0	1,471.8	1,456.8	1,456.8	5.6	29.1	48.56	-25.5	896.8	714.6	681.1	33.50	21.333	
1,600.0	1,568.2	1,553.2	1,553.2	6.2	31.1	50.16	-25.5	896.8	697.0	661.0	35.93	19.397	
1,700.0	1,664.6	1,649.6	1,649.6	6.7	33.0	51.84	-25.5	896.8	679.9	641.5	38.39	17.711	
1,800.0	1,761.0	1,746.0	1,746.0	7.3	34.9	53.60	-25.5	896.8	663.5	622.6	40.87	16.235	
1,900.0	1,857.5	1,842.5	1,842.5	7.8	36.8	55.44	-25.5	896.8	647.7	604.3	43.37	14.935	
2,000.0	1,953.9	1,938.9	1,938.9	8.4	38.8	57.37	-25.5	896.8	632.7	586.8	45.89	13.786	
2,100.0	2,050.3	2,035.3	2,035.3	8.9	40.7	59.39	-25.5	896.8	618.4	569.9	48.43	12.768	
2,200.0	2,146.7	2,131.7	2,131.7	9.5	42.6	61.49	-25.5	896.8	604.9	553.9	50.99	11.863	
2,300.0	2,243.1	2,228.1	2,228.1	10.0	44.6	63.68	-25.5	896.8	592.4	538.8	53.57	11.057	
2,400.0	2,339.5	2,324.5	2,324.5	10.6	46.5	65.96	-25.5	896.8	580.7	524.6	56.16	10.340	
2,500.0	2,436.0	2,421.0	2,421.0	11.1	48.4	68.32	-25.5	896.8	570.1	511.3	58.77	9.701	
2,600.0	2,532.4	2,517.4	2,517.4	11.7	50.3	70.76	-25.5	896.8	560.5	499.2	61.38	9.133	
2,700.0	2,628.8	2,613.8	2,613.8	12.3	52.3	73.27	-25.5	896.8	552.1	488.1	63.99	8.627	
2,800.0	2,725.2	2,710.2	2,710.2	12.8	54.2	75.85	-25.5	896.8	544.8	478.2	66.60	8.180	
2,900.0	2,821.6	2,806.6	2,806.6	13.4	56.1	78.50	-25.5	896.8	538.7	469.5	69.20	7.784	
3,000.0	2,918.1	2,903.1	2,903.1	13.9	58.1	81.19	-25.5	896.8	533.8	462.0	71.79	7.436	
3,100.0	3,014.5	2,999.5	2,999.5	14.5	60.0	83.92	-25.5	896.8	530.3	455.9	74.36	7.131	
3,200.0	3,110.9	3,095.9	3,095.9	15.0	61.9	86.68	-25.5	896.8	528.0	451.1	76.91	6.865	
3,300.0	3,207.3	3,192.3	3,192.3	15.6	63.8	89.46	-25.5	896.8	527.1	447.6	79.43	6.636	
3,319.4	3,226.0	3,211.0	3,211.0	15.7	64.2	90.00	-25.5	896.8	527.0	447.1	79.91	6.596	
3,400.0	3,303.7	3,288.7	3,288.7	16.1	65.8	92.24	-25.5	896.8	527.5	445.6	81.91	6.440	
3,500.0	3,400.1	3,385.1	3,385.1	16.7	67.7	95.01	-25.5	896.8	529.2	444.9	84.35	6.274	
3,600.0	3,496.6	3,481.6	3,481.6	17.2	69.6	97.75	-25.5	896.8	532.3	445.5	86.76	6.135	
3,700.0	3,593.0	3,578.0	3,578.0	17.8	71.6	100.46	-25.5	896.8	536.6	447.5	89.12	6.021	
3,800.0	3,689.4	3,674.4	3,674.4	18.4	73.5	103.13	-25.5	896.8	542.2	450.8	91.44	5.930	
3,900.0	3,785.8	3,770.8	3,770.8	18.9	75.4	105.73	-25.5	896.8	549.1	455.4	93.72	5.859	
4,000.0	3,882.2	3,867.2	3,867.2	19.5	77.3	108.27	-25.5	896.8	557.1	461.1	95.95	5.806	
4,100.0	3,978.7	3,963.7	3,963.7	20.0	79.3	110.74	-25.5	896.8	566.3	468.1	98.15	5.769	
4,200.0	4,075.1	4,060.1	4,060.1	20.6	81.2	113.14	-25.5	896.8	576.5	476.2	100.32	5.747	
4,300.0	4,171.5	4,156.5	4,156.5	21.1	83.1	115.44	-25.5	896.8	587.7	485.3	102.45	5.737	
4,400.0	4,267.9	4,252.9	4,252.9	21.7	85.1	117.67	-25.5	896.8	599.9	495.4	104.55	5.738	
4,500.0	4,364.3	4,349.3	4,349.3	22.3	87.0	119.81	-25.5	896.8	613.1	506.4	106.62	5.750	
4,600.0	4,460.8	4,445.8	4,445.8	22.8	88.9	121.86	-25.5	896.8	627.0	518.3	108.67	5.770	
4,700.0	4,557.2	4,542.2	4,542.2	23.4	90.8	123.82	-25.5	896.8	641.8	531.1	110.71	5.797	
4,800.0	4,653.6	4,638.6	4,638.6	23.9	92.8	125.69	-25.5	896.8	657.3	544.5	112.72	5.831	
4,900.0	4,750.0	4,735.0	4,735.0	24.5	94.7	127.49	-25.5	896.8	673.4	558.7	114.73	5.870	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope K-O-18HNB	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 (11-02-12)	Offset TVD Reference:	Offset Datum

Offset Design Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 21-18 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 6349-UNKNOWN												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	4,846.4	4,831.4	4,831.4	25.0	96.6	129.20	-25.5	896.8	690.3	573.6	116.72	5.914	
5,097.2	4,940.2	4,925.2	4,925.2	25.6	98.5	130.78	-25.5	896.8	707.2	588.5	118.65	5.960	
5,100.0	4,942.8	4,927.8	4,927.8	25.6	98.6	130.83	-25.5	896.8	707.7	589.0	118.71	5.961	
5,200.0	5,039.7	5,024.7	5,024.7	26.0	100.5	132.54	-25.5	896.8	724.4	603.5	120.93	5.991	
5,300.0	5,137.4	5,122.4	5,122.4	26.4	102.4	133.96	-25.5	896.8	739.2	616.1	123.18	6.001	
5,400.0	5,235.8	5,220.8	5,220.8	26.7	104.4	135.12	-25.5	896.8	751.9	626.5	125.44	5.994	
5,500.0	5,334.7	5,319.7	5,319.7	27.0	106.4	136.03	-25.5	896.8	762.3	634.6	127.69	5.970	
5,600.0	5,434.1	5,419.1	5,419.1	27.2	108.4	136.70	-25.5	896.8	770.3	640.4	129.92	5.929	
5,700.0	5,533.8	5,518.8	5,518.8	27.4	110.4	137.16	-25.5	896.8	775.8	643.7	132.10	5.873	
5,800.0	5,633.7	5,618.7	5,618.7	27.5	112.4	137.40	-25.5	896.8	778.8	644.6	134.23	5.802	
5,866.3	5,700.0	5,685.0	5,685.0	27.6	113.7	-166.90	-25.5	896.8	779.4	644.1	135.25	5.762	
5,900.0	5,733.7	5,718.7	5,718.7	27.6	114.4	-166.90	-25.5	896.8	779.4	643.4	135.96	5.732	
5,985.4	5,819.1	5,804.1	5,804.1	27.7	116.1	-166.90	-25.5	896.8	779.4	641.6	137.78	5.657	
6,000.0	5,833.7	5,818.7	5,818.7	27.7	116.4	14.80	-25.5	896.8	779.2	640.8	138.34	5.632	
6,050.0	5,883.6	5,868.6	5,868.6	27.7	117.4	14.97	-25.5	896.8	775.5	637.3	138.24	5.610	
6,100.0	5,932.8	5,917.8	5,917.8	27.7	118.4	15.38	-25.5	896.8	767.2	630.4	136.86	5.606	
6,150.0	5,981.0	5,966.0	5,966.0	27.6	119.3	16.05	-25.5	896.8	754.5	620.2	134.25	5.620	
6,200.0	6,027.7	6,012.7	6,012.7	27.5	120.3	17.00	-25.5	896.8	737.3	606.9	130.45	5.652	
6,250.0	6,072.5	6,057.5	6,057.5	27.4	121.2	18.32	-25.5	896.8	716.0	590.4	125.59	5.701	
6,300.0	6,115.0	6,100.0	6,100.0	27.3	122.0	20.08	-25.5	896.8	690.7	570.8	119.89	5.761	
6,350.0	6,154.7	6,139.7	6,139.7	27.1	122.8	22.40	-25.5	896.8	661.7	547.9	113.76	5.817	
6,400.0	6,191.3	6,176.3	6,176.3	27.0	123.5	25.47	-25.5	896.8	629.3	521.5	107.85	5.835	
6,450.0	6,224.5	6,209.5	6,209.5	26.8	124.2	29.51	-25.5	896.8	594.0	490.8	103.27	5.752	
6,500.0	6,254.0	6,239.0	6,239.0	26.6	124.8	34.84	-25.5	896.8	556.2	454.5	101.63	5.472	
6,550.0	6,279.5	6,264.5	6,264.5	26.3	125.3	41.76	-25.5	896.8	516.2	411.5	104.70	4.931	
6,600.0	6,300.7	6,285.7	6,285.7	26.1	125.7	50.46	-25.5	896.8	474.8	361.7	113.07	4.199	
6,650.0	6,317.5	6,302.5	6,302.5	25.9	126.1	60.71	-25.5	896.8	432.5	307.9	124.63	3.470	
6,700.0	6,329.7	6,314.7	6,314.7	25.7	126.3	71.57	-25.5	896.8	390.1	254.9	135.19	2.886	
6,750.0	6,337.2	6,322.2	6,322.2	25.6	126.4	81.60	-25.5	896.8	348.5	207.0	141.53	2.463	
6,803.6	6,340.0	6,325.0	6,325.0	25.4	126.5	90.00	-25.5	896.8	306.1	162.5	143.62	2.132	
6,903.6	6,340.0	6,325.0	6,325.0	25.2	126.5	90.00	-25.5	896.8	239.1	95.5	143.63	1.665	
7,000.0	6,340.0	6,325.0	6,325.0	25.1	126.5	90.00	-25.5	896.8	202.2	58.4	143.84	1.406	Level 3
7,036.2	6,340.0	6,325.0	6,325.0	25.0	126.5	90.00	-25.5	896.8	198.9	54.9	144.01	1.382	Level 3, CC, ES, SF
7,100.0	6,340.0	6,325.0	6,325.0	25.1	126.5	90.00	-25.5	896.8	208.9	64.7	144.26	1.448	Level 3
7,200.0	6,340.0	6,325.0	6,325.0	25.2	126.5	90.00	-25.5	896.8	257.7	112.8	144.88	1.779	
7,300.0	6,340.0	6,325.0	6,325.0	25.5	126.5	90.00	-25.5	896.8	330.4	184.7	145.67	2.268	
7,400.0	6,340.0	6,325.0	6,325.0	26.0	126.5	90.00	-25.5	896.8	414.6	268.0	146.62	2.828	
7,500.0	6,340.0	6,325.0	6,325.0	26.7	126.5	90.00	-25.5	896.8	504.6	356.9	147.71	3.416	
7,600.0	6,340.0	6,325.0	6,325.0	27.5	126.5	90.00	-25.5	896.8	597.8	448.9	148.90	4.015	
7,700.0	6,340.0	6,325.0	6,325.0	28.5	126.5	90.00	-25.5	896.8	692.9	542.7	150.20	4.613	
7,800.0	6,340.0	6,325.0	6,325.0	29.6	126.5	90.00	-25.5	896.8	789.2	637.7	151.58	5.207	
7,900.0	6,340.0	6,325.0	6,325.0	30.8	126.5	90.00	-25.5	896.8	886.4	733.3	153.02	5.792	
8,000.0	6,340.0	6,325.0	6,325.0	32.1	126.5	90.00	-25.5	896.8	984.1	829.5	154.53	6.368	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope K-O-18HNB	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 (11-02-12)	Offset TVD Reference:	Offset Datum

Offset Design		Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 22-18 (Exist.) - Wellbore #1 - Wellbore #1										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	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)						
7,400.0	6,340.0	6,325.0	6,325.0	26.0	126.5	90.00	-1,344.3	913.5	980.2	833.6	146.62	6.685					
7,500.0	6,340.0	6,325.0	6,325.0	26.7	126.5	90.00	-1,344.3	913.5	883.1	735.4	147.71	5.979					
7,600.0	6,340.0	6,325.0	6,325.0	27.5	126.5	90.00	-1,344.3	913.5	786.7	637.8	148.90	5.283					
7,700.0	6,340.0	6,325.0	6,325.0	28.5	126.5	90.00	-1,344.3	913.5	691.3	541.1	150.20	4.602					
7,800.0	6,340.0	6,325.0	6,325.0	29.6	126.5	90.00	-1,344.3	913.5	597.4	445.8	151.58	3.941					
7,900.0	6,340.0	6,325.0	6,325.0	30.8	126.5	90.00	-1,344.3	913.5	505.9	352.8	153.02	3.306					
8,000.0	6,340.0	6,325.0	6,325.0	32.1	126.5	90.00	-1,344.3	913.5	418.2	263.7	154.53	2.706					
8,100.0	6,340.0	6,325.0	6,325.0	33.4	126.5	90.00	-1,344.3	913.5	337.5	181.4	156.09	2.162					
8,200.0	6,340.0	6,325.0	6,325.0	34.9	126.5	90.00	-1,344.3	913.5	270.0	112.3	157.68	1.712					
8,300.0	6,340.0	6,325.0	6,325.0	36.3	126.5	90.00	-1,344.3	913.5	227.8	68.5	159.32	1.430 Level 3					
8,355.0	6,340.0	6,325.0	6,325.0	37.2	126.5	90.00	-1,344.3	913.5	221.1	60.9	160.23	1.380 Level 3, CC, ES, SF					
8,400.0	6,340.0	6,325.0	6,325.0	37.9	126.5	90.00	-1,344.3	913.5	225.6	64.7	160.98	1.402 Level 3					
8,500.0	6,340.0	6,325.0	6,325.0	39.4	126.5	90.00	-1,344.3	913.5	264.4	101.8	162.67	1.626					
8,600.0	6,340.0	6,325.0	6,325.0	41.0	126.5	90.00	-1,344.3	913.5	330.0	165.7	164.39	2.008					
8,700.0	6,340.0	6,325.0	6,325.0	42.6	126.5	90.00	-1,344.3	913.5	409.8	243.7	166.12	2.467					
8,800.0	6,340.0	6,325.0	6,325.0	44.3	126.5	90.00	-1,344.3	913.5	496.9	329.1	167.88	2.960					
8,900.0	6,340.0	6,325.0	6,325.0	45.9	126.5	90.00	-1,344.3	913.5	588.2	418.5	169.64	3.467					
9,000.0	6,340.0	6,325.0	6,325.0	47.6	126.5	90.00	-1,344.3	913.5	681.9	510.4	171.43	3.978					
9,100.0	6,340.0	6,325.0	6,325.0	49.3	126.5	90.00	-1,344.3	913.5	777.1	603.9	173.22	4.487					
9,200.0	6,340.0	6,325.0	6,325.0	51.1	126.5	90.00	-1,344.3	913.5	873.5	698.5	175.02	4.991					
9,300.0	6,340.0	6,325.0	6,325.0	52.8	126.5	90.00	-1,344.3	913.5	970.5	793.7	176.84	5.488					

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope K-O-18HNB	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 (11-02-12)	Offset TVD Reference:	Offset Datum

Offset Design		Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 23-18 (Exist.) - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 ft	
Survey Program: 437-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)				
8,700.0	6,340.0	6,429.4	6,336.1	42.6	20.8	94.00	-2,638.3	1,013.3	964.7	906.9	57.82	16.684			
8,800.0	6,340.0	6,428.2	6,334.9	44.3	20.8	93.57	-2,638.4	1,013.3	866.3	806.7	59.55	14.548			
8,900.0	6,340.0	6,427.0	6,333.7	45.9	20.8	93.14	-2,638.4	1,013.3	768.2	706.9	61.29	12.534			
9,000.0	6,340.0	6,425.8	6,332.5	47.6	20.8	92.71	-2,638.4	1,013.3	670.7	607.7	63.04	10.639			
9,100.0	6,340.0	6,424.5	6,331.3	49.3	20.8	92.28	-2,638.4	1,013.3	574.1	509.3	64.81	8.859			
9,200.0	6,340.0	6,423.3	6,330.1	51.1	20.8	91.84	-2,638.4	1,013.3	478.9	412.3	66.58	7.192			
9,300.0	6,340.0	6,422.1	6,328.9	52.8	20.8	91.41	-2,638.4	1,013.3	386.0	317.7	68.36	5.647			
9,400.0	6,340.0	6,420.9	6,327.7	54.5	20.8	90.98	-2,638.4	1,013.3	297.8	227.7	70.15	4.246			
9,500.0	6,340.0	6,419.7	6,326.5	56.3	20.8	90.55	-2,638.5	1,013.4	220.0	148.1	71.94	3.058			
9,600.0	6,340.0	6,418.5	6,325.3	58.1	20.8	90.12	-2,638.5	1,013.4	167.6	93.9	73.74	2.273			
9,651.5	6,340.0	6,417.9	6,324.7	59.0	20.8	89.89	-2,638.5	1,013.4	159.5	84.9	74.67	2.136 CC, ES, SF			
9,700.0	6,340.0	6,417.3	6,324.1	59.9	20.8	89.68	-2,638.5	1,013.4	166.7	91.2	75.54	2.207			
9,800.0	6,340.0	6,416.1	6,322.9	61.6	20.8	89.25	-2,638.5	1,013.4	217.9	140.6	77.35	2.817			
9,900.0	6,340.0	6,414.9	6,321.7	63.4	20.8	88.82	-2,638.5	1,013.4	295.2	216.1	79.15	3.730			
10,000.0	6,340.0	6,413.7	6,320.5	65.2	20.8	88.38	-2,638.5	1,013.4	383.2	302.3	80.96	4.733			
10,100.0	6,340.0	6,412.5	6,319.3	67.1	20.8	87.95	-2,638.5	1,013.4	476.0	393.2	82.77	5.750			
10,200.0	6,340.0	6,411.3	6,318.1	68.9	20.8	87.52	-2,638.6	1,013.4	571.2	486.6	84.58	6.753			
10,300.0	6,340.0	6,410.1	6,316.9	70.7	20.8	87.09	-2,638.6	1,013.4	667.7	581.4	86.38	7.730			
10,400.0	6,340.0	6,408.9	6,315.7	72.5	20.8	86.65	-2,638.6	1,013.4	765.2	677.0	88.19	8.677			
10,500.0	6,340.0	6,407.7	6,314.5	74.4	20.8	86.22	-2,638.6	1,013.4	863.3	773.3	89.99	9.593			
10,600.0	6,340.0	6,406.5	6,313.3	76.2	20.8	85.79	-2,638.6	1,013.4	961.7	869.9	91.79	10.478			

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope K-O-18HNB	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 (11-02-12)	Offset TVD Reference:	Offset Datum

Offset Design Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 24-18 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 437-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
10,000.0	6,340.0	6,435.4	6,348.3	65.2	20.8	98.27	-3,950.6	1,051.5	977.7	896.4	81.35	12.019	
10,100.0	6,340.0	6,433.2	6,346.1	67.1	20.8	97.51	-3,950.7	1,051.5	879.3	796.0	83.24	10.563	
10,200.0	6,340.0	6,431.0	6,343.9	68.9	20.8	96.73	-3,950.7	1,051.5	781.2	696.0	85.14	9.175	
10,300.0	6,340.0	6,428.0	6,340.9	70.7	20.8	95.67	-3,950.8	1,051.4	683.6	596.6	87.04	7.854	
10,400.0	6,340.0	6,426.4	6,339.3	72.5	20.8	95.10	-3,950.8	1,051.4	586.9	498.0	88.92	6.600	
10,500.0	6,340.0	6,424.0	6,336.9	74.4	20.8	94.24	-3,950.9	1,051.4	491.5	400.7	90.80	5.413	
10,600.0	6,340.0	6,421.6	6,334.5	76.2	20.8	93.38	-3,951.0	1,051.4	398.3	305.7	92.68	4.298	
10,700.0	6,340.0	6,419.2	6,332.1	78.1	20.8	92.53	-3,951.0	1,051.4	309.4	214.9	94.54	3.273	
10,800.0	6,340.0	6,416.8	6,329.7	79.9	20.8	91.68	-3,951.1	1,051.4	229.8	133.4	96.39	2.384	
10,900.0	6,340.0	6,414.4	6,327.3	81.8	20.8	90.84	-3,951.1	1,051.4	172.9	74.6	98.23	1.760	
10,964.7	6,340.0	6,412.9	6,325.8	83.0	20.8	90.29	-3,951.2	1,051.4	160.3	60.9	99.41	1.612 CC, ES, SF	
11,000.0	6,340.0	6,412.1	6,325.0	83.6	20.8	90.00	-3,951.2	1,051.4	164.1	64.0	100.05	1.640	
11,100.0	6,340.0	6,409.8	6,322.7	85.5	20.8	89.17	-3,951.2	1,051.4	209.7	107.8	101.86	2.058	
11,200.0	6,340.0	6,407.4	6,320.3	87.3	20.8	88.34	-3,951.3	1,051.3	284.6	180.9	103.65	2.745	
11,255.3	6,340.0	6,406.2	6,319.1	88.4	20.8	87.88	-3,951.3	1,051.3	331.8	227.1	104.64	3.171	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope K-O-18HNB	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 (11-02-12)	Offset TVD Reference:	Offset Datum

Offset Design Antelope D-18 Pad - Plans by another company - Antelope N-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 (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,400.0	6,340.0	6,505.4	6,319.0	54.5	29.5	-90.00	-3,351.1	1,353.2	986.8	914.1	72.72	13.571	
9,500.0	6,340.0	6,505.4	6,319.0	56.3	29.5	-90.00	-3,351.1	1,353.2	888.3	813.7	74.55	11.916	
9,600.0	6,340.0	6,505.4	6,319.0	58.1	29.5	-90.00	-3,351.1	1,353.2	790.1	713.7	76.38	10.344	
9,700.0	6,340.0	6,505.4	6,319.0	59.9	29.5	-90.00	-3,351.1	1,353.2	692.4	614.2	78.23	8.852	
9,800.0	6,340.0	6,505.4	6,319.0	61.6	29.5	-90.00	-3,351.1	1,353.2	595.6	515.5	80.08	7.437	
9,900.0	6,340.0	6,505.4	6,319.0	63.4	29.5	-90.00	-3,351.1	1,353.2	499.9	418.0	81.93	6.102	
10,000.0	6,340.0	6,505.4	6,319.0	65.2	29.5	-90.00	-3,351.1	1,353.2	406.4	322.6	83.79	4.850	
10,100.0	6,340.0	6,505.4	6,319.0	67.1	29.5	-90.00	-3,351.1	1,353.2	316.8	231.1	85.65	3.698	
10,200.0	6,340.0	6,505.4	6,319.0	68.9	29.5	-90.00	-3,351.1	1,353.2	235.7	148.2	87.52	2.693	
10,300.0	6,340.0	6,505.4	6,319.0	70.7	29.5	-90.00	-3,351.1	1,353.2	175.4	86.0	89.39	1.963	
10,373.9	6,340.0	6,505.4	6,319.0	72.1	29.5	-90.00	-3,351.1	1,353.2	159.1	68.3	90.78	1.753 CC, ES, SF	
10,400.0	6,340.0	6,505.4	6,319.0	72.5	29.5	-90.00	-3,351.1	1,353.2	161.2	70.0	91.26	1.767	
10,500.0	6,340.0	6,505.4	6,319.0	74.4	29.5	-90.00	-3,351.1	1,353.2	203.0	109.9	93.14	2.180	
10,600.0	6,340.0	6,505.4	6,319.0	76.2	29.5	-90.00	-3,351.1	1,353.2	276.5	181.4	95.02	2.909	
10,700.0	6,340.0	6,505.4	6,319.0	78.1	29.5	-90.00	-3,351.1	1,353.2	362.8	265.9	96.90	3.744	
10,800.0	6,340.0	6,505.4	6,319.0	79.9	29.5	-90.00	-3,351.1	1,353.2	454.8	356.0	98.79	4.604	
10,900.0	6,340.0	6,505.4	6,319.0	81.8	29.5	-90.00	-3,351.1	1,353.2	549.6	448.9	100.68	5.459	
11,000.0	6,340.0	6,505.4	6,319.0	83.6	29.5	-90.00	-3,351.1	1,353.2	646.0	543.4	102.57	6.298	
11,100.0	6,340.0	6,505.4	6,319.0	85.5	29.5	-90.00	-3,351.1	1,353.2	743.3	638.9	104.46	7.116	
11,200.0	6,340.0	6,505.4	6,319.0	87.3	29.5	-90.00	-3,351.1	1,353.2	841.3	734.9	106.35	7.910	
11,255.3	6,340.0	6,505.4	6,319.0	88.4	29.5	-90.00	-3,351.1	1,353.2	895.7	788.3	107.40	8.340	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope K-O-18HNB	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 (11-02-12)	Offset TVD Reference:	Offset Datum

Offset Design Antelope F-18 Pad Sec.18-T5N-R62W - Antelope A-E-18HZ - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 503-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	-79.71	18.2	-100.3	101.9				
100.0	100.0	100.0	100.0	0.1	0.1	-79.68	18.3	-100.3	101.9	101.7	0.22	453.167	
200.0	200.0	200.0	200.0	0.3	0.2	-79.60	18.4	-100.3	101.9	101.4	0.56	181.415 ES	
300.0	300.0	299.9	299.9	0.6	0.3	-135.77	18.7	-100.3	103.3	102.4	0.90	115.152	
400.0	399.8	399.8	399.8	0.8	0.4	-137.48	19.0	-100.3	107.1	105.9	1.24	86.406	
500.0	499.5	499.4	499.4	1.0	0.6	-140.12	19.5	-100.3	113.8	112.2	1.60	70.939	
600.0	598.7	598.8	598.8	1.3	0.8	-143.40	20.0	-100.3	123.4	121.3	2.06	59.759	
700.0	697.5	696.3	696.3	1.7	1.0	-146.87	20.6	-100.6	136.6	134.1	2.53	53.974	
800.0	795.6	792.9	792.9	2.0	1.2	-150.04	21.8	-102.0	154.3	151.3	3.02	51.095	
900.0	893.1	888.2	888.1	2.5	1.4	-152.44	24.5	-104.5	176.4	172.9	3.52	50.065	
969.0	959.8	953.1	952.9	2.8	1.5	-153.57	27.6	-107.0	194.3	190.4	3.88	50.056 SF	
1,000.0	989.7	981.9	981.6	3.0	1.6	-154.01	29.3	-108.4	202.8	198.8	4.04	50.201	
1,100.0	1,086.1	1,073.7	1,073.1	3.5	1.8	-155.00	35.3	-114.0	231.6	227.0	4.56	50.758	
1,200.0	1,182.5	1,165.3	1,164.0	4.0	2.1	-155.28	43.2	-121.3	261.9	256.8	5.11	51.265	
1,300.0	1,278.9	1,254.5	1,252.2	4.6	2.3	-155.04	52.7	-130.4	294.0	288.3	5.68	51.740	
1,400.0	1,375.4	1,343.0	1,339.3	5.1	2.6	-154.57	63.3	-141.6	328.1	321.8	6.28	52.234	
1,500.0	1,471.8	1,428.1	1,422.7	5.6	3.0	-153.85	75.1	-154.5	364.2	357.3	6.90	52.744	
1,600.0	1,568.2	1,509.5	1,501.7	6.2	3.3	-153.03	87.7	-168.7	402.4	394.9	7.54	53.337	
1,700.0	1,664.6	1,593.9	1,583.5	6.7	3.7	-152.29	100.6	-185.6	443.0	434.8	8.20	54.011	
1,800.0	1,761.0	1,685.4	1,671.9	7.3	4.1	-151.61	114.4	-204.5	484.3	475.4	8.88	54.545	
1,900.0	1,857.5	1,774.3	1,757.7	7.8	4.5	-150.97	128.6	-222.8	525.5	516.0	9.56	54.994	
2,000.0	1,953.9	1,866.0	1,846.2	8.4	4.9	-150.41	143.2	-242.1	567.2	556.9	10.25	55.321	
2,100.0	2,050.3	1,960.4	1,937.3	8.9	5.4	-149.88	158.6	-261.5	608.4	597.4	10.95	55.540	
2,200.0	2,146.7	2,049.9	2,023.6	9.5	5.8	-149.38	173.9	-279.7	649.4	637.7	11.66	55.674	
2,300.0	2,243.1	2,141.7	2,111.9	10.0	6.3	-148.86	190.2	-298.7	690.7	678.3	12.39	55.742	
2,400.0	2,339.5	2,237.2	2,204.0	10.6	6.7	-148.44	206.6	-317.9	731.6	718.5	13.11	55.790	
2,500.0	2,436.0	2,331.8	2,295.3	11.1	7.2	-148.06	222.9	-336.4	772.0	758.2	13.84	55.770	
2,600.0	2,532.4	2,421.0	2,381.2	11.7	7.7	-147.66	239.3	-353.8	812.4	797.8	14.58	55.713	
2,700.0	2,628.8	2,511.0	2,467.9	12.3	8.2	-147.27	256.1	-371.8	853.0	837.7	15.33	55.662	
2,800.0	2,725.2	2,600.9	2,554.4	12.8	8.6	-146.94	272.7	-389.7	893.8	877.7	16.06	55.644	
2,900.0	2,821.6	2,687.5	2,637.7	13.4	9.1	-146.64	288.7	-407.2	934.8	918.1	16.80	55.655	
3,000.0	2,918.1	2,772.1	2,718.7	13.9	9.6	-146.33	305.0	-424.8	976.5	958.9	17.54	55.669	

Antelope F-18 Pad Sec.18-T5N-R62W - Antelope F-J-18HNB - Wellbore #1 - Plan #2 (11-02-12)												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 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	180.00	-21.9	0.0	21.9				
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-21.9	0.0	21.9	21.6	0.22	97.287	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-21.9	0.0	21.9	21.2	0.67	32.429 CC, ES	
300.0	300.0	300.0	300.0	0.6	0.6	127.94	-21.9	0.0	22.9	21.8	1.12	20.392	
400.0	399.8	399.8	399.8	0.8	0.8	136.87	-21.9	0.0	26.4	24.9	1.58	16.736	
500.0	499.5	499.5	499.5	1.0	1.0	147.07	-21.9	0.0	33.3	31.3	2.05	16.287 SF	
600.0	598.7	598.7	598.7	1.3	1.2	155.62	-21.9	0.0	44.1	41.6	2.52	17.518	
700.0	697.5	698.5	698.5	1.7	1.5	163.32	-20.3	-0.6	57.8	54.8	2.98	19.413	
800.0	795.6	797.8	797.7	2.0	1.7	170.97	-15.4	-2.3	74.1	70.7	3.43	21.597	
900.0	893.1	896.4	895.8	2.5	1.9	177.97	-7.4	-5.1	93.6	89.7	3.90	24.030	
969.0	959.8	963.8	962.8	2.8	2.1	-177.70	-0.1	-7.8	109.2	105.0	4.24	25.773	
1,000.0	989.7	993.9	992.7	3.0	2.2	-175.90	3.6	-9.1	116.6	112.2	4.40	26.525	
1,100.0	1,086.1	1,090.8	1,088.4	3.5	2.4	-170.51	17.6	-14.1	140.9	135.9	4.96	28.426	
1,200.0	1,182.5	1,187.0	1,183.2	4.0	2.7	-166.12	33.2	-19.6	165.9	160.3	5.57	29.775	
1,300.0	1,278.9	1,283.1	1,277.9	4.6	3.1	-162.89	48.7	-25.2	191.6	185.4	6.22	30.797	
1,400.0	1,375.4	1,379.3	1,372.6	5.1	3.4	-160.42	64.3	-30.7	217.7	210.8	6.89	31.583	
1,500.0	1,471.8	1,475.4	1,467.3	5.6	3.7	-158.48	79.8	-36.3	244.2	236.6	7.58	32.199	
1,600.0	1,568.2	1,571.6	1,562.1	6.2	4.1	-156.92	95.3	-41.8	270.8	262.5	8.28	32.692	
1,700.0	1,664.6	1,667.7	1,656.8	6.7	4.4	-155.64	110.9	-47.4	297.6	288.6	8.99	33.090	
1,800.0	1,761.0	1,763.9	1,751.5	7.3	4.8	-154.57	126.4	-52.9	324.6	314.8	9.71	33.420	
1,900.0	1,857.5	1,860.0	1,846.2	7.8	5.1	-153.66	141.9	-58.4	351.6	341.1	10.43	33.695	
2,000.0	1,953.9	1,956.2	1,940.9	8.4	5.5	-152.89	157.5	-64.0	378.7	367.5	11.16	33.929	
2,100.0	2,050.3	2,052.3	2,035.7	8.9	5.9	-152.21	173.0	-69.5	405.8	393.9	11.89	34.129	
2,200.0	2,146.7	2,148.4	2,130.4	9.5	6.2	-151.62	188.5	-75.1	433.0	420.4	12.62	34.303	
2,300.0	2,243.1	2,244.6	2,225.1	10.0	6.6	-151.10	204.1	-80.6	460.2	446.8	13.36	34.454	
2,400.0	2,339.5	2,340.7	2,319.8	10.6	7.0	-150.64	219.6	-86.2	487.5	473.4	14.09	34.587	
2,500.0	2,436.0	2,436.9	2,414.5	11.1	7.3	-150.23	235.1	-91.7	514.7	499.9	14.83	34.705	
2,600.0	2,532.4	2,533.0	2,509.2	11.7	7.7	-149.86	250.7	-97.2	542.0	526.5	15.57	34.810	
2,700.0	2,628.8	2,629.2	2,604.0	12.3	8.1	-149.52	266.2	-102.8	569.4	553.0	16.31	34.905	
2,800.0	2,725.2	2,725.3	2,698.7	12.8	8.4	-149.22	281.8	-108.3	596.7	579.6	17.05	34.990	
2,900.0	2,821.6	2,821.5	2,793.4	13.4	8.8	-148.94	297.3	-113.9	624.0	606.2	17.80	35.067	
3,000.0	2,918.1	2,917.6	2,888.1	13.9	9.2	-148.68	312.8	-119.4	651.4	632.9	18.54	35.137	
3,100.0	3,014.5	3,013.8	2,982.8	14.5	9.5	-148.45	328.4	-125.0	678.8	659.5	19.28	35.201	
3,200.0	3,110.9	3,109.9	3,077.6	15.0	9.9	-148.23	343.9	-130.5	706.2	686.1	20.03	35.260	
3,300.0	3,207.3	3,206.0	3,172.3	15.6	10.3	-148.03	359.4	-136.1	733.6	712.8	20.77	35.314	
3,400.0	3,303.7	3,302.2	3,267.0	16.1	10.6	-147.85	375.0	-141.6	761.0	739.4	21.52	35.364	
3,500.0	3,400.1	3,398.3	3,361.7	16.7	11.0	-147.67	390.5	-147.1	788.4	766.1	22.26	35.410	
3,600.0	3,496.6	3,494.5	3,456.4	17.2	11.4	-147.51	406.0	-152.7	815.8	792.8	23.01	35.453	
3,700.0	3,593.0	3,590.6	3,551.2	17.8	11.8	-147.36	421.6	-158.2	843.2	819.4	23.76	35.492	
3,800.0	3,689.4	3,686.8	3,645.9	18.4	12.1	-147.22	437.1	-163.8	870.6	846.1	24.50	35.529	
3,900.0	3,785.8	3,782.9	3,740.6	18.9	12.5	-147.09	452.7	-169.3	898.1	872.8	25.25	35.564	
4,000.0	3,882.2	3,879.1	3,835.3	19.5	12.9	-146.96	468.2	-174.9	925.5	899.5	26.00	35.596	
4,100.0	3,978.7	3,975.2	3,930.0	20.0	13.2	-146.84	483.7	-180.4	952.9	926.2	26.75	35.627	
4,200.0	4,075.1	4,071.3	4,024.7	20.6	13.6	-146.73	499.3	-185.9	980.4	952.9	27.50	35.655	

Reference Depths are relative to WELL @ 4626.0ft (RKB - 12')	Coordinates are relative to: Antelope K-O-18HNB
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.73°



Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope K-O-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (RKB - 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (RKB - 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope K-O-18HNB	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 (11-02-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4626.0ft (RKB - 12')

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Antelope K-O-18HNB

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.73°

