

BONANZA CREEK ENERGY OPERATING

Well Name: **State Antelope U41-Y44-30HNB**

Surface Location: State Antelope P-30 Pad Sec.30-T5N-R62W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4661.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1382071.08	3317675.17	40.376580	-104.359740	

RKB - 13' WELL @ 4674.0ft (RKB - 13')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 420'FNL & 841'FEL	1.0	0.0	0.0	Point
BHL 470'FSL & 319'FEL	6409.0	-4328.0	473.7	Point
T1 531'FNL & 315'FEL	6409.0	-91.1	523.8	Point



Azimuths to True North
Magnetic North: 8.32°

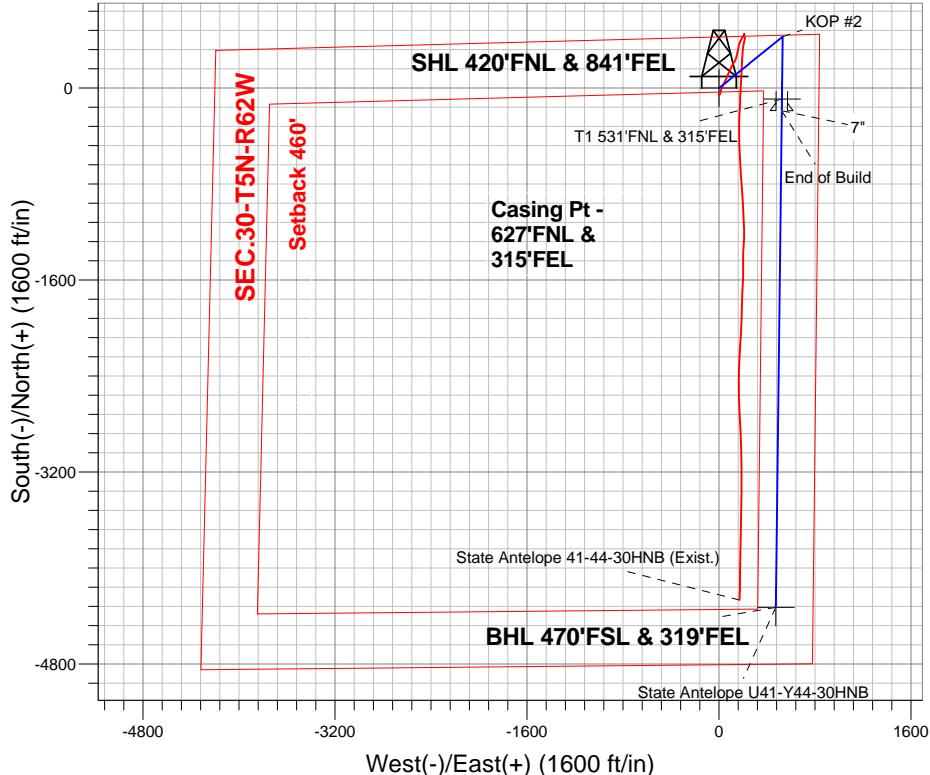
Magnetic Field
Strength: 52912.6srT
Dip Angle: 67.01°
Date: 10/29/2013
Model: IGRF2010

State Antelope P-30 Pad Sec.30-T5N-R62W
State Antelope U41-Y44-30HNB
Plan #1 (10-29-13)
13:26, October 29 2013

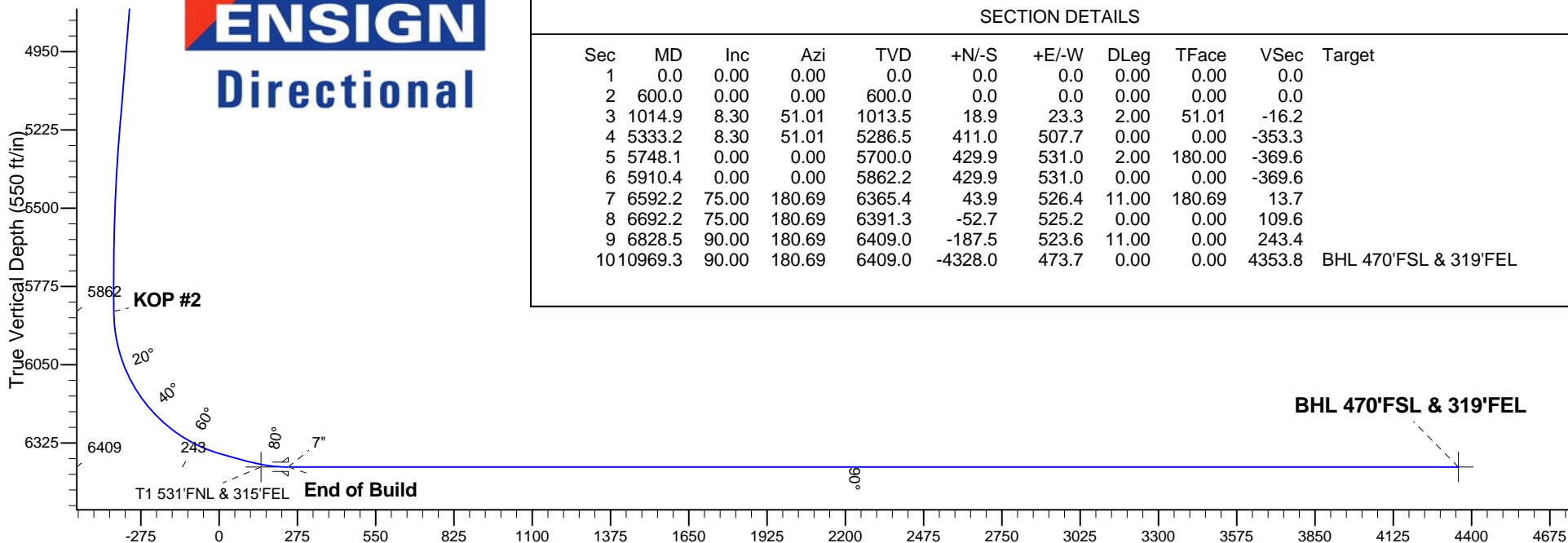
ANNOTATIONS

TVD	MD	Annotation
600.0	600.0	KOP #1
5862.3	5910.4	KOP #2
6409.0	6828.5	End of Build

South(-)/North(+) (1600 ft/in)



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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1014.9	8.30	51.01	1013.5	18.9	23.3	2.00	51.01	-16.2	
4	5333.2	8.30	51.01	5286.5	411.0	507.7	0.00	0.00	-353.3	
5	5748.1	0.00	0.00	5700.0	429.9	531.0	2.00	180.00	-369.6	
6	5910.4	0.00	0.00	5862.2	429.9	531.0	0.00	0.00	-369.6	
7	6592.2	75.00	180.69	6365.4	43.9	526.4	11.00	180.69	13.7	
8	6692.2	75.00	180.69	6391.3	-52.7	525.2	0.00	0.00	109.6	
9	6828.5	90.00	180.69	6409.0	-187.5	523.6	11.00	0.00	243.4	
10	10969.3	90.00	180.69	6409.0	-4328.0	473.7	0.00	0.00	4353.8	BHL 470'FSL & 319'FEL

Vertical Section at 173.75° (550 ft/in)



BONANZA CREEK ENERGY OPERATING

SEC.30-T5N-R62W

State Antelope P-30 Pad Sec.30-T5N-R62W

State Antelope U41-Y44-30HNB

Wellbore #1

Plan: Plan #1 (10-29-13)

Standard Planning Report

29 October, 2013

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,014.9	8.30	51.01	1,013.5	18.9	23.3	2.00	2.00	0.00	51.01	
5,333.2	8.30	51.01	5,286.5	411.0	507.7	0.00	0.00	0.00	0.00	
5,748.1	0.00	0.00	5,700.0	429.9	531.0	2.00	-2.00	0.00	180.00	
5,910.4	0.00	0.00	5,862.2	429.9	531.0	0.00	0.00	0.00	0.00	
6,592.2	75.00	180.69	6,365.4	43.9	526.4	11.00	11.00	0.00	180.69	
6,692.2	75.00	180.69	6,391.3	-52.7	525.2	0.00	0.00	0.00	0.00	
6,828.5	90.00	180.69	6,409.0	-187.5	523.6	11.00	11.00	0.00	0.00	
10,969.3	90.00	180.69	6,409.0	-4,328.0	473.7	0.00	0.00	0.00	0.00	BHL 470°FSL & 319

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope U41-Y44-30HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Project:	SEC.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	North Reference:	True
Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-29-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 420'FNL & 841'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	51.01	700.0	1.1	1.4	-0.9	2.00	2.00	0.00
800.0	4.00	51.01	799.8	4.4	5.4	-3.8	2.00	2.00	0.00
900.0	6.00	51.01	899.5	9.9	12.2	-8.5	2.00	2.00	0.00
1,000.0	8.00	51.01	998.7	17.5	21.7	-15.1	2.00	2.00	0.00
1,014.9	8.30	51.01	1,013.5	18.9	23.3	-16.2	2.00	2.00	0.00
1,100.0	8.30	51.01	1,097.7	26.6	32.9	-22.9	0.00	0.00	0.00
1,200.0	8.30	51.01	1,196.6	35.7	44.1	-30.7	0.00	0.00	0.00
1,300.0	8.30	51.01	1,295.6	44.8	55.3	-38.5	0.00	0.00	0.00
1,400.0	8.30	51.01	1,394.5	53.8	66.5	-46.3	0.00	0.00	0.00
1,500.0	8.30	51.01	1,493.5	62.9	77.7	-54.1	0.00	0.00	0.00
1,600.0	8.30	51.01	1,592.4	72.0	88.9	-61.9	0.00	0.00	0.00
1,700.0	8.30	51.01	1,691.4	81.1	100.2	-69.7	0.00	0.00	0.00
1,800.0	8.30	51.01	1,790.3	90.2	111.4	-77.5	0.00	0.00	0.00
1,900.0	8.30	51.01	1,889.3	99.3	122.6	-85.3	0.00	0.00	0.00
2,000.0	8.30	51.01	1,988.2	108.3	133.8	-93.1	0.00	0.00	0.00
2,100.0	8.30	51.01	2,087.2	117.4	145.0	-100.9	0.00	0.00	0.00
2,200.0	8.30	51.01	2,186.1	126.5	156.2	-108.7	0.00	0.00	0.00
2,300.0	8.30	51.01	2,285.1	135.6	167.5	-116.5	0.00	0.00	0.00
2,400.0	8.30	51.01	2,384.1	144.7	178.7	-124.4	0.00	0.00	0.00
2,500.0	8.30	51.01	2,483.0	153.7	189.9	-132.2	0.00	0.00	0.00
2,600.0	8.30	51.01	2,582.0	162.8	201.1	-140.0	0.00	0.00	0.00
2,700.0	8.30	51.01	2,680.9	171.9	212.3	-147.8	0.00	0.00	0.00
2,800.0	8.30	51.01	2,779.9	181.0	223.5	-155.6	0.00	0.00	0.00
2,900.0	8.30	51.01	2,878.8	190.1	234.8	-163.4	0.00	0.00	0.00
3,000.0	8.30	51.01	2,977.8	199.1	246.0	-171.2	0.00	0.00	0.00
3,100.0	8.30	51.01	3,076.7	208.2	257.2	-179.0	0.00	0.00	0.00
3,200.0	8.30	51.01	3,175.7	217.3	268.4	-186.8	0.00	0.00	0.00
3,300.0	8.30	51.01	3,274.6	226.4	279.6	-194.6	0.00	0.00	0.00
3,400.0	8.30	51.01	3,373.6	235.5	290.8	-202.4	0.00	0.00	0.00
3,500.0	8.30	51.01	3,472.5	244.6	302.1	-210.2	0.00	0.00	0.00
3,600.0	8.30	51.01	3,571.5	253.6	313.3	-218.0	0.00	0.00	0.00
3,700.0	8.30	51.01	3,670.4	262.7	324.5	-225.8	0.00	0.00	0.00
3,800.0	8.30	51.01	3,769.4	271.8	335.7	-233.7	0.00	0.00	0.00
3,900.0	8.30	51.01	3,868.3	280.9	346.9	-241.5	0.00	0.00	0.00
4,000.0	8.30	51.01	3,967.3	290.0	358.1	-249.3	0.00	0.00	0.00
4,100.0	8.30	51.01	4,066.3	299.0	369.4	-257.1	0.00	0.00	0.00
4,200.0	8.30	51.01	4,165.2	308.1	380.6	-264.9	0.00	0.00	0.00
4,300.0	8.30	51.01	4,264.2	317.2	391.8	-272.7	0.00	0.00	0.00
4,400.0	8.30	51.01	4,363.1	326.3	403.0	-280.5	0.00	0.00	0.00
4,500.0	8.30	51.01	4,462.1	335.4	414.2	-288.3	0.00	0.00	0.00
4,600.0	8.30	51.01	4,561.0	344.4	425.4	-296.1	0.00	0.00	0.00
4,700.0	8.30	51.01	4,660.0	353.5	436.7	-303.9	0.00	0.00	0.00
4,800.0	8.30	51.01	4,758.9	362.6	447.9	-311.7	0.00	0.00	0.00
4,900.0	8.30	51.01	4,857.9	371.7	459.1	-319.5	0.00	0.00	0.00

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Project:	SEC.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	North Reference:	True
Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-29-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,000.0	8.30	51.01	4,956.8	380.8	470.3	-327.3	0.00	0.00	0.00
5,100.0	8.30	51.01	5,055.8	389.8	481.5	-335.1	0.00	0.00	0.00
5,200.0	8.30	51.01	5,154.7	398.9	492.7	-342.9	0.00	0.00	0.00
5,300.0	8.30	51.01	5,253.7	408.0	504.0	-350.8	0.00	0.00	0.00
5,333.2	8.30	51.01	5,286.5	411.0	507.7	-353.3	0.00	0.00	0.00
5,400.0	6.96	51.01	5,352.7	416.6	514.6	-358.1	2.00	-2.00	0.00
5,500.0	4.96	51.01	5,452.2	423.1	522.7	-363.8	2.00	-2.00	0.00
5,600.0	2.96	51.01	5,552.0	427.5	528.0	-367.5	2.00	-2.00	0.00
5,700.0	0.96	51.01	5,651.9	429.6	530.7	-369.4	2.00	-2.00	0.00
5,748.1	0.00	0.00	5,700.0	429.9	531.0	-369.6	2.00	-2.00	0.00
5,800.0	0.00	0.00	5,751.9	429.9	531.0	-369.6	0.00	0.00	0.00
5,900.0	0.00	0.00	5,851.9	429.9	531.0	-369.6	0.00	0.00	0.00
5,910.4	0.00	0.00	5,862.3	429.9	531.0	-369.6	0.00	0.00	0.00
KOP #2									
6,000.0	9.86	180.69	5,951.5	422.2	530.9	-361.9	11.01	11.01	0.00
6,100.0	20.86	180.69	6,047.7	395.8	530.6	-335.7	11.00	11.00	0.00
6,200.0	31.86	180.69	6,137.2	351.4	530.1	-291.7	11.00	11.00	0.00
6,300.0	42.86	180.69	6,216.6	290.8	529.3	-231.5	11.00	11.00	0.00
6,400.0	53.86	180.69	6,282.9	216.2	528.4	-157.4	11.00	11.00	0.00
6,500.0	64.86	180.69	6,333.8	130.3	527.4	-72.2	11.00	11.00	0.00
6,592.2	75.00	180.69	6,365.4	43.9	526.4	13.7	11.00	11.00	0.00
6,600.0	75.00	180.69	6,367.4	36.3	526.3	21.2	0.00	0.00	0.00
6,692.2	75.00	180.69	6,391.3	-52.7	525.2	109.6	0.00	0.00	0.00
6,700.0	75.86	180.69	6,393.2	-60.3	525.1	117.1	11.00	11.00	0.00
6,732.9	79.48	180.69	6,400.2	-92.4	524.7	148.9	11.00	11.00	0.00
T1 531'FNL & 315'FEL									
6,800.0	86.86	180.69	6,408.2	-159.0	523.9	215.1	11.00	11.00	0.00
6,828.5	90.00	180.69	6,409.0	-187.5	523.6	243.3	11.00	11.00	0.00
End of Build - 7"									
6,900.0	90.00	180.69	6,409.0	-259.0	522.7	314.3	0.01	0.01	0.00
7,000.0	90.00	180.69	6,409.0	-359.0	521.5	413.6	0.00	0.00	0.00
7,100.0	90.00	180.69	6,409.0	-459.0	520.3	512.9	0.00	0.00	0.00
7,200.0	90.00	180.69	6,409.0	-559.0	519.1	612.1	0.00	0.00	0.00
7,300.0	90.00	180.69	6,409.0	-658.9	517.9	711.4	0.00	0.00	0.00
7,400.0	90.00	180.69	6,409.0	-758.9	516.7	810.7	0.00	0.00	0.00
7,500.0	90.00	180.69	6,409.0	-858.9	515.5	909.9	0.00	0.00	0.00
7,600.0	90.00	180.69	6,409.0	-958.9	514.3	1,009.2	0.00	0.00	0.00
7,700.0	90.00	180.69	6,409.0	-1,058.9	513.1	1,108.5	0.00	0.00	0.00
7,800.0	90.00	180.69	6,409.0	-1,158.9	511.9	1,207.7	0.00	0.00	0.00
7,900.0	90.00	180.69	6,409.0	-1,258.9	510.7	1,307.0	0.00	0.00	0.00
8,000.0	90.00	180.69	6,409.0	-1,358.9	509.5	1,406.3	0.00	0.00	0.00
8,100.0	90.00	180.69	6,409.0	-1,458.9	508.3	1,505.5	0.00	0.00	0.00
8,200.0	90.00	180.69	6,409.0	-1,558.9	507.1	1,604.8	0.00	0.00	0.00
8,300.0	90.00	180.69	6,409.0	-1,658.9	505.9	1,704.1	0.00	0.00	0.00
8,400.0	90.00	180.69	6,409.0	-1,758.9	504.7	1,803.3	0.00	0.00	0.00
8,500.0	90.00	180.69	6,409.0	-1,858.9	503.5	1,902.6	0.00	0.00	0.00
8,600.0	90.00	180.69	6,409.0	-1,958.9	502.2	2,001.9	0.00	0.00	0.00
8,700.0	90.00	180.69	6,409.0	-2,058.8	501.0	2,101.1	0.00	0.00	0.00
8,800.0	90.00	180.69	6,409.0	-2,158.8	499.8	2,200.4	0.00	0.00	0.00
8,900.0	90.00	180.69	6,409.0	-2,258.8	498.6	2,299.7	0.00	0.00	0.00
9,000.0	90.00	180.69	6,409.0	-2,358.8	497.4	2,398.9	0.00	0.00	0.00
9,100.0	90.00	180.69	6,409.0	-2,458.8	496.2	2,498.2	0.00	0.00	0.00
9,200.0	90.00	180.69	6,409.0	-2,558.8	495.0	2,597.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope U41-Y44-30HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Project:	SEC.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	North Reference:	True
Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-29-13)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,300.0	90.00	180.69	6,409.0	-2,658.8	493.8	2,696.8	0.00	0.00	0.00	
9,400.0	90.00	180.69	6,409.0	-2,758.8	492.6	2,796.0	0.00	0.00	0.00	
9,500.0	90.00	180.69	6,409.0	-2,858.8	491.4	2,895.3	0.00	0.00	0.00	
9,600.0	90.00	180.69	6,409.0	-2,958.8	490.2	2,994.6	0.00	0.00	0.00	
9,700.0	90.00	180.69	6,409.0	-3,058.8	489.0	3,093.8	0.00	0.00	0.00	
9,800.0	90.00	180.69	6,409.0	-3,158.8	487.8	3,193.1	0.00	0.00	0.00	
9,900.0	90.00	180.69	6,409.0	-3,258.8	486.6	3,292.4	0.00	0.00	0.00	
10,000.0	90.00	180.69	6,409.0	-3,358.8	485.4	3,391.6	0.00	0.00	0.00	
10,100.0	90.00	180.69	6,409.0	-3,458.7	484.2	3,490.9	0.00	0.00	0.00	
10,200.0	90.00	180.69	6,409.0	-3,558.7	483.0	3,590.2	0.00	0.00	0.00	
10,300.0	90.00	180.69	6,409.0	-3,658.7	481.8	3,689.4	0.00	0.00	0.00	
10,400.0	90.00	180.69	6,409.0	-3,758.7	480.6	3,788.7	0.00	0.00	0.00	
10,500.0	90.00	180.69	6,409.0	-3,858.7	479.4	3,888.0	0.00	0.00	0.00	
10,600.0	90.00	180.69	6,409.0	-3,958.7	478.2	3,987.2	0.00	0.00	0.00	
10,700.0	90.00	180.69	6,409.0	-4,058.7	477.0	4,086.5	0.00	0.00	0.00	
10,800.0	90.00	180.69	6,409.0	-4,158.7	475.8	4,185.8	0.00	0.00	0.00	
10,900.0	90.00	180.69	6,409.0	-4,258.7	474.6	4,285.0	0.00	0.00	0.00	
10,969.3	90.00	180.69	6,409.0	-4,328.0	473.7	4,353.8	0.00	0.00	0.00	
BHL 470'FSL & 319'FEL										

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
BHL 470'FSL & 319'F - hit/miss target - Shape - Point	0.00	0.00	6,409.0	-4,328.0	473.7	1,377,749.72	3,318,204.50	40.364700	-104.358040	
T1 531'FNL & 315'FEI - plan misses target center by 8.9ft at 6732.9ft MD (6400.2 TVD, -92.4 N, 524.7 E) - Point	0.00	0.00	6,409.0	-91.1	523.8	1,381,986.76	3,318,200.08	40.376330	-104.357860	
SHL 420'FNL & 841'F - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,382,071.08	3,317,675.17	40.376580	-104.359740	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,828.5	6,409.0	7"	7	7-1/2	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
600.0	600.0	0.0	0.0	KOP #1	
5,910.4	5,862.3	429.9	531.0	KOP #2	
6,828.5	6,409.0	-187.5	523.6	End of Build	



BONANZA CREEK ENERGY OPERATING

SEC.30-T5N-R62W

State Antelope P-30 Pad Sec.30-T5N-R62W

State Antelope U41-Y44-30HNB

Wellbore #1

Plan #1 (10-29-13)

Anticollision Report

29 October, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (10-29-13)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCSWA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	10/29/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	10,969.3	Plan #1 (10-29-13) (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
State Antelope 41-44-30HNB Pad Sec.30-T5N-R62W						
State Antelope 41-44-30HNB (Exist.) - Wellbore #1 - We	687.3	691.2	46.9	44.5	19.624	CC
State Antelope 41-44-30HNB (Exist.) - Wellbore #1 - We	700.0	703.8	46.9	44.5	19.211	ES
State Antelope 41-44-30HNB (Exist.) - Wellbore #1 - We	10,900.0	10,850.4	303.1	142.0	1.881	SF
State Antelope P-30 Pad Sec.30-T5N-R62W						
State Antelope P41-T44-30HNB - Wellbore #1 - Plan #1	588.8	589.0	17.1	14.7	7.095	CC
State Antelope P41-T44-30HNB - Wellbore #1 - Plan #1	600.0	600.1	17.1	14.7	6.958	ES
State Antelope P41-T44-30HNB - Wellbore #1 - Plan #1	10,969.3	10,913.8	638.0	466.8	3.725	SF
State Antelope P-T-30HNB - Wellbore #1 - Plan #1 (10-2	200.0	200.0	40.1	39.4	59.431	CC
State Antelope P-T-30HNB - Wellbore #1 - Plan #1 (10-2	300.0	300.0	40.1	39.0	35.997	ES
State Antelope P-T-30HNB - Wellbore #1 - Plan #1 (10-2	10,969.3	10,906.7	955.6	784.8	5.594	SF
State Antelope U-Y-30HNB - Wellbore #1 - Plan #1 (10-2	200.0	200.0	21.9	21.2	32.411	CC, ES
State Antelope U-Y-30HNB - Wellbore #1 - Plan #1 (10-2	10,969.3	11,012.8	309.3	137.5	1.800	SF

State Antelope 41-44-30HNB Pad Sec.30-T5N-R62W - State Antelope 41-44-30HNB (Exist.) - Wellbore													Offset Site Error:	0.0 ft
Survey Program: 518-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	3.0	3.0	0.0	0.0	180.00	-58.3	0.0	58.3	58.3	0.00	N/A		
100.0	100.0	103.4	103.4	0.1	0.1	179.87	-58.0	0.1	58.0	57.8	0.23	250.093		
200.0	200.0	203.7	203.7	0.3	0.2	179.47	-57.1	0.5	57.1	56.5	0.57	99.729		
300.0	300.0	304.0	304.0	0.6	0.4	178.79	-55.6	1.2	55.6	54.7	0.91	60.905		
400.0	400.0	404.3	404.2	0.8	0.5	177.78	-53.5	2.1	53.6	52.3	1.25	42.721		
500.0	500.0	504.6	504.5	1.0	0.6	176.36	-50.8	3.2	51.0	49.4	1.59	31.958		
600.0	600.0	604.4	604.3	1.2	0.8	174.10	-47.9	4.9	48.1	46.1	2.03	23.743		
687.3	687.3	691.2	691.0	1.4	1.0	121.75	-45.7	7.0	46.9	44.5	2.39	19.624 CC		
700.0	700.0	703.8	703.6	1.5	1.0	121.88	-45.4	7.2	46.9	44.5	2.44	19.211 ES		
800.0	799.8	803.1	802.9	1.7	1.2	125.95	-44.7	8.0	49.2	46.3	2.86	17.211		
900.0	899.5	902.3	902.1	1.9	1.4	133.29	-45.0	7.9	55.1	51.8	3.28	16.787		
1,000.0	998.7	1,001.1	1,000.8	2.2	1.6	141.24	-46.0	7.5	65.1	61.4	3.72	17.492		
1,100.0	1,097.7	1,101.5	1,101.3	2.5	1.8	148.08	-46.3	7.3	77.3	73.1	4.17	18.550		
1,200.0	1,196.6	1,203.4	1,203.2	2.8	2.0	153.41	-44.0	7.8	87.6	83.0	4.62	18.979		
1,300.0	1,295.6	1,306.3	1,305.8	3.1	2.2	158.30	-37.9	9.0	95.0	89.9	5.06	18.763		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 518-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
1,400.0	1,394.5	1,409.8	1,408.8	3.4	2.5	162.56	-28.3	12.3	99.0	93.5	5.52	17.945		
1,500.0	1,493.5	1,512.8	1,510.9	3.7	2.8	166.73	-15.4	17.4	99.9	94.0	5.98	16.704		
1,596.3	1,588.7	1,608.9	1,605.9	4.0	3.1	170.77	-2.1	22.9	99.7	93.3	6.43	15.507		
1,600.0	1,592.4	1,612.6	1,609.6	4.0	3.1	170.93	-1.5	23.1	99.7	93.3	6.45	15.465		
1,700.0	1,691.4	1,712.7	1,708.5	4.4	3.4	175.17	12.5	28.9	99.9	93.0	6.93	14.417		
1,800.0	1,790.3	1,812.2	1,806.9	4.7	3.7	179.29	26.6	34.8	100.4	93.0	7.42	13.539		
1,900.0	1,889.3	1,911.6	1,905.1	5.0	4.0	-177.02	39.9	40.9	101.8	93.9	7.91	12.872		
2,000.0	1,988.2	2,011.2	2,003.8	5.4	4.3	-174.12	52.0	47.3	104.0	95.6	8.41	12.360		
2,100.0	2,087.2	2,112.1	2,103.6	5.7	4.6	-171.01	65.0	54.0	105.9	96.9	8.95	11.837		
2,200.0	2,186.1	2,210.8	2,201.2	6.1	4.9	-167.53	78.7	60.1	108.1	98.6	9.50	11.371		
2,300.0	2,285.1	2,310.0	2,299.4	6.4	5.2	-164.40	91.6	65.5	111.6	101.5	10.07	11.078		
2,400.0	2,384.1	2,410.1	2,398.5	6.7	5.5	-161.54	104.5	71.0	115.5	104.8	10.66	10.831		
2,500.0	2,483.0	2,510.7	2,498.1	7.1	5.8	-158.86	117.6	77.1	119.0	107.7	11.28	10.553		
2,600.0	2,582.0	2,610.5	2,596.7	7.4	6.1	-156.07	131.4	83.3	122.5	110.5	11.92	10.274		
2,700.0	2,680.9	2,710.7	2,695.7	7.8	6.5	-153.01	146.0	89.5	126.1	113.4	12.61	9.998		
2,800.0	2,779.9	2,811.1	2,794.7	8.1	6.8	-149.79	161.6	96.0	129.6	116.2	13.33	9.716		
2,900.0	2,878.8	2,911.5	2,893.5	8.5	7.2	-146.68	177.3	103.0	132.9	118.8	14.08	9.438		
3,000.0	2,977.8	3,011.8	2,992.5	8.8	7.5	-144.29	191.7	110.6	136.1	121.3	14.79	9.200		
3,100.0	3,076.7	3,112.4	3,091.9	9.2	7.9	-142.43	205.1	118.8	139.0	123.5	15.48	8.980		
3,200.0	3,175.7	3,211.0	3,189.3	9.5	8.2	-141.05	217.5	126.7	142.1	126.0	16.13	8.812		
3,300.0	3,274.6	3,308.7	3,286.2	9.9	8.5	-140.04	228.9	133.3	146.6	129.8	16.76	8.746		
3,400.0	3,373.6	3,406.5	3,383.1	10.2	8.8	-138.81	241.1	138.4	152.7	135.3	17.42	8.768		
3,500.0	3,472.5	3,505.9	3,481.4	10.6	9.1	-137.22	254.8	143.0	159.5	141.4	18.12	8.802		
3,600.0	3,571.5	3,605.6	3,579.8	10.9	9.5	-135.08	270.5	147.7	166.5	147.6	18.90	8.809		
3,700.0	3,670.4	3,704.4	3,676.8	11.2	9.8	-132.29	288.5	152.6	173.9	154.1	19.75	8.804		
3,800.0	3,769.4	3,802.4	3,772.7	11.6	10.2	-129.15	308.3	157.1	182.3	161.6	20.63	8.833		
3,900.0	3,868.3	3,900.2	3,868.3	11.9	10.6	-126.28	328.4	161.0	191.9	170.4	21.50	8.927		
4,000.0	3,967.3	3,999.0	3,965.1	12.3	11.0	-123.96	347.7	164.2	202.4	180.1	22.32	9.070		
4,100.0	4,066.3	4,103.0	4,067.4	12.6	11.4	-122.24	366.1	168.0	212.2	189.1	23.09	9.190		
4,200.0	4,165.2	4,207.5	4,170.5	13.0	11.7	-121.13	382.1	173.7	219.7	195.9	23.83	9.221		
4,300.0	4,264.2	4,309.5	4,271.3	13.3	12.1	-120.36	396.2	180.7	225.4	200.9	24.53	9.188		
4,400.0	4,363.1	4,408.6	4,369.3	13.7	12.4	-119.77	409.4	187.3	231.2	206.0	25.21	9.170		
4,500.0	4,462.1	4,511.0	4,470.7	14.0	12.7	-119.33	422.3	194.4	236.5	210.6	25.89	9.135		
4,600.0	4,561.0	4,610.9	4,569.6	14.4	13.0	-119.14	433.9	201.6	241.2	214.6	26.53	9.091		
4,700.0	4,660.0	4,708.8	4,666.8	14.7	13.3	-119.41	443.6	207.6	246.2	219.1	27.11	9.081		
4,800.0	4,758.9	4,805.3	4,763.1	15.1	13.5	-120.66	449.4	210.8	252.4	224.8	27.59	9.149		
4,900.0	4,857.9	4,902.0	4,859.7	15.4	13.7	-122.64	452.4	211.7	260.2	232.2	27.97	9.302		
5,000.0	4,956.8	5,001.8	4,959.6	15.8	13.8	-125.30	452.2	211.2	268.7	240.5	28.24	9.516		
5,100.0	5,055.8	5,103.4	5,061.1	16.1	14.0	-128.54	448.5	210.7	277.1	248.7	28.41	9.756		
5,200.0	5,154.7	5,203.4	5,160.8	16.5	14.0	-131.94	442.8	210.7	285.4	256.9	28.50	10.013		
5,300.0	5,253.7	5,301.6	5,258.9	16.8	14.1	-135.14	436.8	210.9	294.5	265.9	28.58	10.303		
5,400.0	5,352.7	5,400.8	5,358.0	17.1	14.2	-138.02	431.5	211.2	303.7	275.1	28.67	10.594		
5,500.0	5,452.2	5,500.7	5,457.7	17.4	14.4	-140.15	427.4	211.8	310.8	282.1	28.78	10.800		
5,600.0	5,552.0	5,601.5	5,558.5	17.6	14.5	-141.55	424.4	212.8	315.3	286.3	28.95	10.891		
5,700.0	5,651.9	5,702.7	5,659.7	17.7	14.6	-142.33	422.3	214.2	316.6	287.5	29.15	10.861		
5,800.0	5,751.9	5,803.3	5,780.2	17.9	14.8	-91.58	421.2	215.9	315.3	286.0	29.35	10.744		
5,859.1	5,811.0	5,857.0	5,813.9	18.0	14.9	-91.80	420.0	216.5	314.6	285.1	29.51	10.663		
5,900.0	5,851.9	5,899.0	5,845.8	18.0	14.9	-92.26	417.5	216.3	315.1	285.5	29.56	10.660		
6,000.0	5,951.5	5,974.2	5,929.4	18.1	14.9	84.89	401.6	213.0	319.5	290.0	29.47	10.841		
6,100.0	6,047.7	6,060.8	6,010.7	18.1	14.7	83.04	372.7	207.1	326.8	297.6	29.11	11.225		
6,200.0	6,137.2	6,162.2	6,100.7	17.9	14.5	82.26	327.0	198.7	334.6	305.9	28.68	11.666		
6,300.0	6,216.6	6,260.3	6,179.2	17.7	14.2	82.05	268.5	193.6	338.9	310.7	28.23	12.007		

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 State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 518-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	
6,400.0	6,282.9	6,363.1	6,252.1	17.5	13.8	82.99	196.2	190.2	340.5	312.6	27.90	12.202	
6,500.0	6,333.8	6,448.3	6,303.2	17.3	13.6	84.44	128.1	187.5	341.5	313.7	27.80	12.286	
6,600.0	6,367.4	6,542.8	6,346.0	17.1	13.4	86.24	44.2	182.8	344.4	316.5	27.93	12.334	
6,700.0	6,393.2	6,640.2	6,377.4	17.0	13.4	87.33	-47.8	178.4	347.5	319.1	28.36	12.251	
6,800.0	6,408.2	6,739.3	6,393.4	17.1	13.7	87.17	-145.3	174.3	350.4	321.2	29.13	12.028	
6,900.0	6,409.0	6,836.2	6,395.8	17.6	14.3	87.37	-242.1	169.9	353.6	323.3	30.32	11.664	
7,000.0	6,409.0	6,954.0	6,393.7	18.3	15.0	87.04	-359.9	167.6	354.4	322.6	31.76	11.157	
7,100.0	6,409.0	7,064.2	6,395.6	19.3	15.7	87.33	-470.0	168.9	351.9	318.4	33.49	10.509	
7,200.0	6,409.0	7,172.8	6,398.3	20.4	16.9	87.72	-578.4	173.6	346.3	310.5	35.82	9.668	
7,300.0	6,409.0	7,275.4	6,398.1	21.7	18.1	87.65	-680.9	179.7	339.1	300.9	38.26	8.864	
7,400.0	6,409.0	7,379.8	6,398.8	23.0	19.4	87.70	-785.1	187.0	331.0	290.0	40.97	8.080	
7,500.0	6,409.0	7,473.3	6,397.6	24.4	20.7	87.43	-878.2	194.1	322.3	278.6	43.64	7.384	
7,600.0	6,409.0	7,571.6	6,397.0	25.9	22.0	87.28	-976.4	199.6	315.5	269.1	46.41	6.799	
7,700.0	6,409.0	7,667.9	6,396.8	27.4	23.4	87.17	-1,072.5	204.7	309.1	259.7	49.38	6.258	
7,800.0	6,409.0	7,766.0	6,396.7	28.9	24.8	87.10	-1,170.5	209.0	303.5	251.1	52.34	5.798	
7,855.6	6,409.0	7,806.4	6,396.6	29.8	25.4	87.08	-1,210.9	209.4	302.3	248.4	53.85	5.613	
7,900.0	6,409.0	7,841.4	6,396.2	30.6	25.9	87.02	-1,245.9	208.3	303.0	248.0	55.08	5.502	
8,000.0	6,409.0	7,942.8	6,398.7	32.2	27.3	87.52	-1,347.2	203.7	306.3	248.1	58.23	5.260	
8,100.0	6,409.0	8,051.2	6,401.2	33.9	29.0	87.99	-1,455.4	200.8	307.7	245.9	61.73	4.984	
8,200.0	6,409.0	8,155.8	6,399.5	35.5	30.7	87.65	-1,560.1	201.8	305.5	240.4	65.12	4.692	
8,219.8	6,409.0	8,170.8	6,399.4	35.9	30.9	87.64	-1,575.1	201.7	305.4	239.7	65.69	4.649	
8,300.0	6,409.0	8,236.2	6,400.2	37.3	31.9	87.81	-1,640.4	198.9	307.7	239.6	68.08	4.520	
8,400.0	6,409.0	8,340.8	6,401.6	39.0	33.6	88.09	-1,744.8	193.1	312.0	240.4	71.57	4.359	
8,500.0	6,409.0	8,446.5	6,401.7	40.7	35.4	88.12	-1,850.4	189.2	314.6	239.4	75.15	4.186	
8,600.0	6,409.0	8,550.1	6,399.9	42.5	37.2	87.79	-1,954.0	187.2	315.4	236.6	78.70	4.007	
8,700.0	6,409.0	8,634.5	6,397.4	44.3	38.5	87.36	-2,038.3	184.1	317.9	236.1	81.83	3.885	
8,800.0	6,409.0	8,733.3	6,397.4	46.1	40.1	87.41	-2,136.8	177.1	323.8	238.6	85.23	3.799	
8,900.0	6,409.0	8,838.6	6,397.3	47.9	41.9	87.44	-2,242.0	170.8	328.6	239.8	88.81	3.700	
9,000.0	6,409.0	8,947.6	6,397.4	49.7	43.7	87.47	-2,350.9	166.8	331.1	238.6	92.51	3.579	
9,100.0	6,409.0	9,054.3	6,396.8	51.5	45.6	87.37	-2,457.5	165.0	331.5	235.3	96.20	3.446	
9,200.0	6,409.0	9,164.4	6,397.0	53.3	47.5	87.39	-2,567.6	166.3	329.1	229.2	99.93	3.294	
9,300.0	6,409.0	9,268.3	6,397.0	55.1	49.4	87.35	-2,671.5	169.8	324.6	220.9	103.65	3.131	
9,400.0	6,409.0	9,371.8	6,397.8	56.9	51.1	87.45	-2,774.8	174.3	319.1	211.8	107.23	2.976	
9,500.0	6,409.0	9,472.3	6,399.5	58.8	52.9	87.70	-2,875.2	180.4	311.7	200.8	110.88	2.811	
9,600.0	6,409.0	9,565.6	6,400.0	60.6	54.5	87.76	-2,968.4	183.3	307.3	192.9	114.35	2.687	
9,700.0	6,409.0	9,662.7	6,400.1	62.5	56.2	87.75	-3,065.5	186.5	302.9	185.0	117.87	2.569	
9,800.0	6,409.0	9,754.3	6,399.0	64.3	57.8	87.52	-3,157.1	187.0	301.1	179.8	121.29	2.482	
9,900.0	6,409.0	9,857.3	6,398.6	66.2	59.5	87.43	-3,260.0	187.7	299.2	174.4	124.89	2.396	
10,000.0	6,409.0	9,957.0	6,400.5	68.0	61.2	87.78	-3,359.7	188.7	296.9	168.4	128.53	2.310	
10,078.7	6,409.0	10,031.4	6,401.3	69.5	62.5	87.93	-3,434.1	188.4	296.3	165.0	131.32	2.256	
10,100.0	6,409.0	10,049.6	6,401.2	69.9	62.9	87.92	-3,452.3	188.1	296.4	164.4	132.04	2.245	
10,200.0	6,409.0	10,147.0	6,399.7	71.8	64.6	87.63	-3,549.7	185.7	297.6	162.0	135.60	2.195	
10,300.0	6,409.0	10,244.1	6,400.0	73.6	66.2	87.71	-3,646.7	182.4	299.9	160.8	139.08	2.156	
10,400.0	6,409.0	10,352.7	6,402.5	75.5	68.1	88.18	-3,755.2	179.6	301.2	158.2	142.94	2.107	
10,406.9	6,409.0	10,359.8	6,402.6	75.6	68.2	88.21	-3,762.3	179.5	301.2	158.0	143.20	2.103	
10,500.0	6,409.0	10,447.7	6,402.7	77.4	69.8	88.24	-3,850.2	177.7	302.0	155.4	146.51	2.061	
10,600.0	6,409.0	10,551.5	6,402.2	79.2	71.6	88.14	-3,954.0	175.6	302.8	152.6	150.22	2.016	
10,700.0	6,409.0	10,657.1	6,402.3	81.1	73.4	88.15	-4,059.5	176.0	301.1	147.2	153.93	1.956	
10,756.8	6,409.0	10,709.5	6,403.4	82.2	74.4	88.36	-4,111.9	175.9	300.5	144.5	155.95	1.927	
10,800.0	6,409.0	10,744.1	6,403.4	83.0	75.0	88.36	-4,146.5	175.1	301.1	143.7	157.37	1.913	
10,900.0	6,409.0	10,850.4	6,400.7	84.9	76.8	87.86	-4,252.7	171.8	303.1	142.0	161.07	1.881 SF	
10,969.3	6,409.0	10,863.0	6,400.4	86.2	77.1	87.81	-4,265.3	171.5	308.9	146.3	162.59	1.900	

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 State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							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	-180.00	-18.2	0.0	18.2	18.2	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-18.2	0.0	18.2	18.0	0.22	81.042		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-18.2	0.0	18.2	17.5	0.67	27.014		
300.0	300.0	300.0	300.0	0.6	0.6	-180.00	-18.2	0.0	18.2	17.1	1.12	16.208		
400.0	400.0	400.0	400.0	0.8	0.8	-180.00	-18.2	0.0	18.2	16.6	1.57	11.577		
500.0	500.0	500.2	500.2	1.0	1.0	-174.66	-17.6	-1.6	17.7	15.7	2.02	8.775		
588.8	588.8	589.0	588.8	1.2	1.2	-160.00	-16.1	-5.9	17.1	14.7	2.41	7.095 CC		
600.0	600.0	600.1	599.9	1.2	1.2	-157.47	-15.8	-6.6	17.1	14.7	2.46	6.958 ES		
700.0	700.0	699.6	699.1	1.5	1.5	176.98	-13.0	-14.3	21.1	18.2	2.92	7.227		
800.0	799.8	799.8	798.9	1.7	1.7	-166.55	-8.6	-21.6	30.0	26.6	3.36	8.906		
900.0	899.5	900.0	898.7	1.9	2.0	-156.53	-1.1	-27.0	40.7	36.9	3.81	10.694		
1,000.0	998.7	1,000.2	998.3	2.2	2.2	-149.76	9.3	-30.5	52.9	48.6	4.27	12.375		
1,100.0	1,097.7	1,099.6	1,096.9	2.5	2.5	-144.99	21.6	-32.7	65.7	61.0	4.77	13.776		
1,200.0	1,196.6	1,198.7	1,195.1	2.8	2.7	-141.77	34.1	-34.8	78.9	73.6	5.30	14.877		
1,300.0	1,295.6	1,297.7	1,293.4	3.1	3.0	-139.47	46.6	-36.9	92.2	86.4	5.85	15.762		
1,400.0	1,394.5	1,396.8	1,391.6	3.4	3.3	-137.75	59.0	-39.0	105.6	99.2	6.41	16.479		
1,500.0	1,493.5	1,495.8	1,489.9	3.7	3.6	-136.42	71.5	-41.1	119.1	112.2	6.98	17.066		
1,600.0	1,592.4	1,594.9	1,588.1	4.0	3.9	-135.37	83.9	-43.2	132.7	125.1	7.56	17.553		
1,700.0	1,691.4	1,693.9	1,686.3	4.4	4.2	-134.51	96.4	-45.2	146.3	138.1	8.14	17.962		
1,800.0	1,790.3	1,793.0	1,784.6	4.7	4.5	-133.79	108.8	-47.3	159.9	151.2	8.73	18.309		
1,900.0	1,889.3	1,892.0	1,882.8	5.0	4.9	-133.19	121.3	-49.4	173.5	164.2	9.33	18.605		
2,000.0	1,988.2	1,991.1	1,981.1	5.4	5.2	-132.67	133.7	-51.5	187.2	177.3	9.92	18.862		
2,100.0	2,087.2	2,090.1	2,079.3	5.7	5.5	-132.23	146.2	-53.6	200.9	190.3	10.52	19.086		
2,200.0	2,186.1	2,189.2	2,177.6	6.1	5.8	-131.84	158.6	-55.7	214.5	203.4	11.13	19.282		
2,300.0	2,285.1	2,288.2	2,275.8	6.4	6.1	-131.50	171.1	-57.8	228.2	216.5	11.73	19.456		
2,400.0	2,384.1	2,387.3	2,374.0	6.7	6.4	-131.20	183.5	-59.9	241.9	229.6	12.34	19.610		
2,500.0	2,483.0	2,486.3	2,472.3	7.1	6.7	-130.93	196.0	-62.0	255.6	242.7	12.94	19.749		
2,600.0	2,582.0	2,585.4	2,570.5	7.4	7.0	-130.68	208.4	-64.1	269.3	255.8	13.55	19.873		
2,700.0	2,680.9	2,684.4	2,668.8	7.8	7.4	-130.46	220.9	-66.2	283.0	268.9	14.16	19.986		
2,800.0	2,779.9	2,783.5	2,767.0	8.1	7.7	-130.26	233.3	-68.3	296.7	282.0	14.77	20.088		
2,900.0	2,878.8	2,882.5	2,865.3	8.5	8.0	-130.08	245.8	-70.4	310.5	295.1	15.38	20.181		
3,000.0	2,977.8	2,981.6	2,963.5	8.8	8.3	-129.92	258.2	-72.4	324.2	308.2	16.00	20.267		
3,100.0	3,076.7	3,080.6	3,061.7	9.2	8.6	-129.76	270.7	-74.5	337.9	321.3	16.61	20.345		
3,200.0	3,175.7	3,179.7	3,160.0	9.5	8.9	-129.62	283.1	-76.6	351.6	334.4	17.22	20.417		
3,300.0	3,274.6	3,278.7	3,258.2	9.9	9.3	-129.49	295.6	-78.7	365.3	347.5	17.84	20.484		
3,400.0	3,373.6	3,377.8	3,356.5	10.2	9.6	-129.37	308.0	-80.8	379.1	360.6	18.45	20.546		
3,500.0	3,472.5	3,476.8	3,454.7	10.6	9.9	-129.26	320.5	-82.9	392.8	373.7	19.06	20.603		
3,600.0	3,571.5	3,575.9	3,553.0	10.9	10.2	-129.15	332.9	-85.0	406.5	386.8	19.68	20.657		
3,700.0	3,670.4	3,674.9	3,651.2	11.2	10.5	-129.06	345.4	-87.1	420.2	400.0	20.30	20.707		
3,800.0	3,769.4	3,774.0	3,749.4	11.6	10.8	-128.96	357.8	-89.2	434.0	413.1	20.91	20.753		
3,900.0	3,868.3	3,873.0	3,847.7	11.9	11.2	-128.88	370.3	-91.3	447.7	426.2	21.53	20.797		
4,000.0	3,967.3	3,972.8	3,946.6	12.3	11.5	-128.80	382.8	-93.4	461.4	439.3	22.14	20.840		
4,100.0	4,066.3	4,071.3	4,051.4	12.6	11.7	-128.99	393.7	-95.2	474.4	451.7	22.70	20.900		
4,200.0	4,165.2	4,183.7	4,156.7	13.0	12.0	-129.60	400.8	-96.4	486.0	462.8	23.20	20.945		
4,300.0	4,264.2	4,289.0	4,261.9	13.3	12.1	-130.59	404.1	-97.0	496.4	472.8	23.66	20.979		
4,400.0	4,363.1	4,390.2	4,363.1	13.7	12.3	-131.83	404.4	-97.0	506.1	482.0	24.09	21.008		
4,500.0	4,462.1	4,489.1	4,462.1	14.0	12.5	-133.02	404.4	-97.0	515.9	491.3	24.52	21.036		
4,600.0	4,561.0	4,588.1	4,561.0	14.4	12.6	-134.16	404.4	-97.0	525.9	500.9	24.95	21.073		
4,700.0	4,660.0	4,687.0	4,660.0	14.7	12.8	-135.26	404.4	-97.0	536.1	510.7	25.38	21.120		
4,800.0	4,758.9	4,786.0	4,758.9	15.1	13.0	-136.32	404.4	-97.0	546.5	520.7	25.81	21.174		
4,900.0	4,857.9	4,884.9	4,857.9	15.4	13.1	-137.34	404.4	-97.0	557.1	530.8	26.23	21.236		
5,000.0	4,956.8	4,983.9	4,956.8	15.8	13.3	-138.32	404.4	-97.0	567.8	541.2	26.65	21.303		

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 State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWDD												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
5,100.0	5,055.8	5,082.8	5,055.8	16.1	13.5	-139.27	404.4	-97.0	578.7	551.6	27.07	21.375	
5,200.0	5,154.7	5,181.8	5,154.7	16.5	13.7	-140.18	404.4	-97.0	589.8	562.3	27.49	21.452	
5,300.0	5,253.7	5,280.7	5,253.7	16.8	13.8	-141.06	404.4	-97.0	601.0	573.1	27.91	21.532	
5,400.0	5,352.7	5,379.8	5,352.7	17.1	14.0	-141.95	404.4	-97.0	611.7	583.4	28.33	21.591	
5,500.0	5,452.2	5,479.3	5,452.2	17.4	14.2	-142.64	404.4	-97.0	619.9	591.2	28.71	21.593	
5,600.0	5,552.0	5,579.0	5,552.0	17.6	14.4	-143.09	404.4	-97.0	625.5	596.4	29.07	21.518	
5,700.0	5,651.9	5,678.9	5,651.9	17.7	14.6	-143.31	404.4	-97.0	628.2	598.8	29.40	21.367	
5,800.0	5,751.9	5,778.9	5,751.9	17.9	14.8	-92.33	404.4	-97.0	628.5	598.8	29.69	21.168	
5,900.0	5,851.9	5,878.9	5,851.9	18.0	14.9	-92.33	404.4	-97.0	628.5	598.5	30.06	20.910	
6,000.0	5,951.5	5,973.4	5,946.0	18.1	15.0	87.03	397.6	-97.1	628.5	598.2	30.29	20.748	
6,100.0	6,047.7	6,067.4	6,036.9	18.1	15.0	87.17	374.2	-97.4	628.5	598.3	30.22	20.795	
6,200.0	6,137.2	6,161.7	6,122.4	17.9	14.9	87.41	334.8	-98.0	628.4	598.5	29.96	20.978	
6,300.0	6,216.6	6,256.6	6,199.9	17.7	14.7	87.75	280.2	-98.8	628.4	598.8	29.59	21.236	
6,386.1	6,274.5	6,338.8	6,258.0	17.5	14.5	88.10	222.2	-99.6	628.4	599.1	29.30	21.450	
6,400.0	6,282.9	6,352.2	6,266.6	17.5	14.5	88.16	211.9	-99.7	628.4	599.1	29.25	21.483	
6,500.0	6,333.8	6,448.6	6,320.1	17.3	14.4	88.64	131.9	-100.9	628.4	599.3	29.08	21.613	
6,600.0	6,367.4	6,546.1	6,358.3	17.1	14.4	89.16	42.3	-102.2	628.5	599.3	29.20	21.525	
6,700.0	6,393.2	6,645.7	6,384.7	17.0	14.6	89.22	-53.6	-103.5	628.7	599.0	29.73	21.148	
6,800.0	6,408.2	6,744.7	6,405.2	17.1	15.1	89.73	-150.4	-104.9	628.9	598.2	30.67	20.502	
6,900.0	6,409.0	6,844.5	6,409.0	17.6	15.8	90.00	-250.0	-106.3	629.1	597.1	32.03	19.638	
7,000.0	6,409.0	6,944.5	6,409.0	18.3	16.6	90.00	-350.0	-107.7	629.3	595.6	33.75	18.647	
7,100.0	6,409.0	7,044.5	6,409.0	19.3	17.7	90.00	-450.0	-109.2	629.5	593.7	35.79	17.589	
7,200.0	6,409.0	7,144.5	6,409.0	20.4	18.8	90.00	-550.0	-110.6	629.7	591.6	38.11	16.525	
7,300.0	6,409.0	7,244.5	6,409.0	21.7	20.1	90.00	-650.0	-112.0	630.0	589.3	40.66	15.494	
7,400.0	6,409.0	7,344.5	6,409.0	23.0	21.5	90.00	-750.0	-113.4	630.2	586.8	43.40	14.522	
7,500.0	6,409.0	7,444.5	6,409.0	24.4	22.9	90.00	-850.0	-114.9	630.4	584.1	46.29	13.618	
7,600.0	6,409.0	7,544.5	6,409.0	25.9	24.5	90.00	-950.0	-116.3	630.6	581.3	49.31	12.788	
7,700.0	6,409.0	7,644.5	6,409.0	27.4	26.0	90.00	-1,049.9	-117.7	630.8	578.4	52.44	12.029	
7,800.0	6,409.0	7,744.5	6,409.0	28.9	27.6	90.00	-1,149.9	-119.1	631.1	575.4	55.66	11.338	
7,900.0	6,409.0	7,844.5	6,409.0	30.6	29.3	90.00	-1,249.9	-120.5	631.3	572.3	58.95	10.709	
8,000.0	6,409.0	7,944.5	6,409.0	32.2	31.0	90.00	-1,349.9	-122.0	631.5	569.2	62.30	10.136	
8,100.0	6,409.0	8,044.5	6,409.0	33.9	32.7	90.00	-1,449.9	-123.4	631.7	566.0	65.71	9.614	
8,200.0	6,409.0	8,144.5	6,409.0	35.5	34.4	90.00	-1,549.9	-124.8	631.9	562.8	69.16	9.137	
8,300.0	6,409.0	8,244.5	6,409.0	37.3	36.2	90.00	-1,649.9	-126.2	632.2	559.5	72.65	8.702	
8,400.0	6,409.0	8,344.5	6,409.0	39.0	37.9	90.00	-1,749.9	-127.7	632.4	556.2	76.17	8.302	
8,500.0	6,409.0	8,444.5	6,409.0	40.7	39.7	90.00	-1,849.9	-129.1	632.6	552.9	79.72	7.935	
8,600.0	6,409.0	8,544.5	6,409.0	42.5	41.5	90.00	-1,949.8	-130.5	632.8	549.5	83.30	7.597	
8,700.0	6,409.0	8,644.5	6,409.0	44.3	43.3	90.00	-2,049.8	-131.9	633.0	546.1	86.90	7.285	
8,800.0	6,409.0	8,744.5	6,409.0	46.1	45.1	90.00	-2,149.8	-133.4	633.3	542.7	90.51	6.996	
8,900.0	6,409.0	8,844.5	6,409.0	47.9	46.9	90.00	-2,249.8	-134.8	633.5	539.3	94.15	6.729	
9,000.0	6,409.0	8,944.5	6,409.0	49.7	48.7	90.00	-2,349.8	-136.2	633.7	535.9	97.80	6.480	
9,100.0	6,409.0	9,044.5	6,409.0	51.5	50.6	90.00	-2,449.8	-137.6	633.9	532.5	101.46	6.248	
9,200.0	6,409.0	9,144.5	6,409.0	53.3	52.4	90.00	-2,549.8	-139.1	634.1	529.0	105.14	6.032	
9,300.0	6,409.0	9,244.5	6,409.0	55.1	54.3	90.00	-2,649.8	-140.5	634.4	525.5	108.82	5.829	
9,400.0	6,409.0	9,344.5	6,409.0	56.9	56.1	90.00	-2,749.8	-141.9	634.6	522.1	112.52	5.640	
9,500.0	6,409.0	9,444.5	6,409.0	58.8	58.0	90.00	-2,849.8	-143.3	634.8	518.6	116.22	5.462	
9,600.0	6,409.0	9,544.5	6,409.0	60.6	59.8	90.00	-2,949.7	-144.7	635.0	515.1	119.94	5.295	
9,700.0	6,409.0	9,644.5	6,409.0	62.5	61.7	90.00	-3,049.7	-146.2	635.2	511.6	123.66	5.137	
9,800.0	6,409.0	9,744.5	6,409.0	64.3	63.5	90.00	-3,149.7	-147.6	635.5	508.1	127.38	4.989	
9,900.0	6,409.0	9,844.5	6,409.0	66.2	65.4	90.00	-3,249.7	-149.0	635.7	504.6	131.12	4.848	
10,000.0	6,409.0	9,944.5	6,409.0	68.0	67.3	90.00	-3,349.7	-150.4	635.9	501.0	134.86	4.715	
10,100.0	6,409.0	10,044.5	6,409.0	69.9	69.1	90.00	-3,449.7	-151.9	636.1	497.5	138.60	4.590	

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 State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Offset Design State Antelope P-30 Pad Sec.30-T5N-R62W - State Antelope P41-T44-30HNB - Wellbore #1 - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	6,409.0	10,144.5	6,409.0	71.8	71.0	90.00	-3,549.7	-153.3	636.3	494.0	142.35	4.470	
10,300.0	6,409.0	10,244.5	6,409.0	73.6	72.9	90.00	-3,649.7	-154.7	636.6	490.5	146.10	4.357	
10,400.0	6,409.0	10,344.5	6,409.0	75.5	74.8	90.00	-3,749.7	-156.1	636.8	486.9	149.86	4.249	
10,500.0	6,409.0	10,444.5	6,409.0	77.4	76.7	90.00	-3,849.7	-157.6	637.0	483.4	153.62	4.147	
10,600.0	6,409.0	10,544.5	6,409.0	79.2	78.5	90.00	-3,949.6	-159.0	637.2	479.8	157.38	4.049	
10,700.0	6,409.0	10,644.5	6,409.0	81.1	80.4	90.00	-4,049.6	-160.4	637.4	476.3	161.15	3.956	
10,800.0	6,409.0	10,744.5	6,409.0	83.0	82.3	90.00	-4,149.6	-161.8	637.7	472.7	164.92	3.866	
10,900.0	6,409.0	10,844.5	6,409.0	84.9	84.2	90.00	-4,249.6	-163.2	637.9	469.2	168.70	3.781	
10,969.3	6,409.0	10,913.8	6,409.0	86.2	85.5	90.00	-4,318.9	-164.2	638.0	466.8	171.26	3.725 SF	

Offset Design		State Antelope P-30 Pad Sec.30-T5N-R62W - State Antelope P-T-30HNB - Wellbore #1 - Plan #1 (10-2)										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												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	-180.00	-40.1	0.0	40.1					
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-40.1	0.0	40.1	39.8	0.22	178.293		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-40.1	0.0	40.1	39.4	0.67	59.431 CC		
227.7	227.7	227.7	227.7	0.4	0.4	-179.81	-40.1	-0.1	40.1	39.3	0.80	50.323		
300.0	300.0	300.0	299.9	0.6	0.6	-177.51	-40.1	-1.7	40.1	39.0	1.11	35.997 ES		
400.0	400.0	399.7	399.5	0.8	0.8	-170.15	-40.1	-7.0	40.7	39.1	1.56	26.033		
500.0	500.0	499.2	498.7	1.0	1.0	-159.24	-40.1	-15.2	42.9	40.8	2.03	21.099		
600.0	600.0	600.2	599.3	1.2	1.3	-148.07	-38.3	-23.9	45.2	42.7	2.51	17.977		
700.0	700.0	701.0	699.6	1.5	1.5	173.61	-33.0	-32.3	48.0	45.0	2.96	16.185		
800.0	799.8	800.9	798.8	1.7	1.8	-173.21	-24.6	-40.5	54.3	50.9	3.43	15.840		
900.0	899.5	899.7	896.8	1.9	2.1	-163.53	-15.5	-48.5	65.9	62.0	3.90	16.884		
1,000.0	998.7	998.1	994.5	2.2	2.4	-157.73	-6.5	-56.5	81.9	77.5	4.38	18.702		
1,100.0	1,097.7	1,096.2	1,091.9	2.5	2.7	-154.46	2.5	-64.5	100.5	95.6	4.87	20.610		
1,200.0	1,196.6	1,194.4	1,189.3	2.8	3.0	-152.23	11.5	-72.5	119.3	113.9	5.38	22.159		
1,300.0	1,295.6	1,292.5	1,286.7	3.1	3.3	-150.61	20.5	-80.4	138.2	132.3	5.90	23.421		
1,400.0	1,394.5	1,390.6	1,384.1	3.4	3.6	-149.38	29.5	-88.4	157.2	150.8	6.42	24.465		
1,500.0	1,493.5	1,488.8	1,481.5	3.7	3.9	-148.42	38.5	-96.4	176.2	169.3	6.96	25.336		
1,600.0	1,592.4	1,586.9	1,578.9	4.0	4.2	-147.65	47.5	-104.4	195.3	187.8	7.49	26.071		
1,700.0	1,691.4	1,685.0	1,676.3	4.4	4.5	-147.01	56.5	-112.3	214.5	206.4	8.03	26.698		
1,800.0	1,790.3	1,783.1	1,773.6	4.7	4.8	-146.48	65.5	-120.3	233.6	225.0	8.58	27.239		
1,900.0	1,889.3	1,881.3	1,871.0	5.0	5.1	-146.02	74.5	-128.3	252.8	243.6	9.12	27.708		
2,000.0	1,988.2	1,979.4	1,968.4	5.4	5.5	-145.64	83.5	-136.3	271.9	262.3	9.67	28.120		
2,100.0	2,087.2	2,077.5	2,065.8	5.7	5.8	-145.30	92.5	-144.2	291.1	280.9	10.22	28.483		
2,200.0	2,186.1	2,175.7	2,163.2	6.1	6.1	-145.00	101.5	-152.2	310.3	299.5	10.77	28.805		
2,300.0	2,285.1	2,273.8	2,260.6	6.4	6.4	-144.74	110.5	-160.2	329.5	318.2	11.33	29.093		
2,400.0	2,384.1	2,371.9	2,358.0	6.7	6.7	-144.51	119.5	-168.2	348.7	336.8	11.88	29.352		
2,500.0	2,483.0	2,470.0	2,455.4	7.1	7.0	-144.30	128.5	-176.1	367.9	355.5	12.44	29.586		
2,600.0	2,582.0	2,568.2	2,552.8	7.4	7.3	-144.11	137.5	-184.1	387.2	374.2	12.99	29.798		
2,700.0	2,680.9	2,666.3	2,650.1	7.8	7.6	-143.94	146.5	-192.1	406.4	392.8	13.55	29.991		
2,800.0	2,779.9	2,764.4	2,747.5	8.1	7.9	-143.79	155.5	-200.1	425.6	411.5	14.11	30.168		
2,900.0	2,878.8	2,862.6	2,844.9	8.5	8.3	-143.65	164.5	-208.0	444.8	430.2	14.67	30.330		
3,000.0	2,977.8	2,960.7	2,942.3	8.8	8.6	-143.52	173.5	-216.0	464.1	448.8	15.23	30.479		
3,100.0	3,076.7	3,058.8	3,039.7	9.2	8.9	-143.40	182.5	-224.0	483.3	467.5	15.78	30.617		
3,200.0	3,175.7	3,156.9	3,137.1	9.5	9.2	-143.29	191.5	-232.0	502.5	486.2	16.34	30.744		
3,300.0	3,274.6	3,255.1	3,234.5	9.9	9.5	-143.19	200.5	-239.9	521.7	504.8	16.91	30.863		
3,400.0	3,373.6	3,353.2	3,331.9	10.2	9.8	-143.09	209.5	-247.9	541.0	523.5	17.47	30.973		
3,500.0	3,472.5	3,451.3	3,429.3	10.6	10.1	-143.01	218.5	-255.9	560.2	542.2	18.03	31.076		
3,600.0	3,571.5	3,549.5	3,526.6	10.9	10.5	-142.92	227.5	-263.9	579.5	560.9	18.59	31.172		
3,700.0	3,670.4	3,647.6	3,624.0	11.2	10.8	-142.85	236.5	-271.8	598.7	579.5	19.15	31.263		
3,800.0	3,769.4	3,745.7	3,721.4	11.6	11.1	-142.77	245.5	-279.8	617.9	598.2	19.71	31.347		
3,900.0	3,868.3	3,843.8	3,818.8	11.9	11.4	-142.71	254.5	-287.8	637.2	616.9	20.27	31.427		
4,000.0	3,967.3	3,942.0	3,916.2	12.3	11.7	-142.64	263.5	-295.7	656.4	635.6	20.84	31.502		
4,100.0	4,066.3	4,040.1	4,013.6	12.6	12.0	-142.58	272.5	-303.7	675.7	654.3	21.40	31.573		
4,200.0	4,165.2	4,138.2	4,111.0	13.0	12.3	-142.52	281.5	-311.7	694.9	672.9	21.96	31.640		
4,300.0	4,264.2	4,236.4	4,208.4	13.3	12.6	-142.47	290.5	-319.7	714.1	691.6	22.53	31.703		
4,400.0	4,363.1	4,334.5	4,305.8	13.7	13.0	-142.42	299.5	-327.6	733.4	710.3	23.09	31.764		
4,500.0	4,462.1	4,432.6	4,403.2	14.0	13.3	-142.37	308.5	-335.6	752.6	729.0	23.65	31.821		
4,600.0	4,561.0	4,530.7	4,500.5	14.4	13.6	-142.33	317.5	-343.6	771.9	747.7	24.22	31.875		
4,700.0	4,660.0	4,628.9	4,597.9	14.7	13.9	-142.28	326.5	-351.6	791.1	766.3	24.78	31.926		
4,800.0	4,758.9	4,727.0	4,695.3	15.1	14.2	-142.24	335.5	-359.5	810.4	785.0	25.34	31.975		
4,900.0	4,857.9	4,825.1	4,792.7	15.4	14.5	-142.20	344.5	-367.5	829.6	803.7	25.91	32.022		
5,000.0	4,956.8	4,923.3	4,890.1	15.8	14.8	-142.16	353.5	-375.5	848.9	822.4	26.47	32.067		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWDD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,055.8	5,021.4	4,987.5	16.1	15.2	-142.13	362.4	-383.5	868.1	841.1	27.04	32.109		
5,200.0	5,154.7	5,119.5	5,084.9	16.5	15.5	-142.09	371.4	-391.4	887.4	859.8	27.60	32.150		
5,300.0	5,253.7	5,226.2	5,190.8	16.8	15.8	-142.07	381.0	-399.9	906.5	878.3	28.17	32.182		
5,400.0	5,352.7	5,350.3	5,314.4	17.1	16.0	-142.34	389.0	-407.0	922.8	894.1	28.72	32.128		
5,500.0	5,452.2	5,475.6	5,439.6	17.4	16.3	-142.71	393.0	-410.6	933.8	904.6	29.20	31.985		
5,600.0	5,552.0	5,588.0	5,552.0	17.6	16.4	-143.04	393.5	-411.0	939.6	910.1	29.59	31.757		
5,700.0	5,651.9	5,687.9	5,651.9	17.7	16.6	-143.20	393.5	-411.0	942.4	912.4	29.94	31.477		
5,800.0	5,751.9	5,787.9	5,751.9	17.9	16.7	-92.21	393.5	-411.0	942.7	912.4	30.26	31.151		
5,900.0	5,851.9	5,887.9	5,851.9	18.0	16.9	-92.21	393.5	-411.0	942.7	912.1	30.62	30.789		
6,000.0	5,951.5	5,980.0	5,943.7	18.1	17.0	87.14	387.1	-411.1	942.7	911.9	30.81	30.594		
6,100.0	6,047.7	6,071.4	6,032.2	18.1	17.0	87.27	365.0	-411.4	942.6	911.9	30.73	30.673		
6,200.0	6,137.2	6,163.3	6,116.0	17.9	16.9	87.50	327.6	-412.0	942.6	912.1	30.45	30.956		
6,300.0	6,216.6	6,255.8	6,192.4	17.7	16.7	87.81	275.5	-412.8	942.5	912.5	30.06	31.359		
6,400.0	6,282.9	6,350.0	6,259.5	17.5	16.5	88.21	209.6	-413.8	942.5	912.8	29.68	31.760		
6,420.3	6,294.5	6,368.5	6,271.2	17.4	16.4	88.29	195.3	-414.0	942.5	912.9	29.63	31.813		
6,500.0	6,333.8	6,444.1	6,313.5	17.3	16.3	88.66	132.8	-414.9	942.5	913.1	29.45	32.001		
6,600.0	6,367.4	6,540.2	6,353.6	17.1	16.1	89.16	45.6	-416.2	942.6	913.1	29.52	31.937		
6,700.0	6,393.2	6,639.1	6,380.6	17.0	15.9	89.25	-49.5	-417.7	942.9	912.9	29.98	31.448		
6,800.0	6,408.2	6,737.9	6,403.1	17.1	15.9	89.70	-145.6	-419.1	943.1	912.3	30.85	30.573		
6,900.0	6,409.0	6,837.4	6,409.0	17.6	16.4	90.00	-244.8	-420.6	943.4	911.3	32.13	29.366		
7,000.0	6,409.0	6,937.4	6,409.0	18.3	17.2	90.00	-344.8	-422.1	943.7	909.9	33.78	27.935		
7,100.0	6,409.0	7,037.4	6,409.0	19.3	18.2	90.00	-444.8	-423.6	944.0	908.2	35.77	26.394		
7,200.0	6,409.0	7,137.4	6,409.0	20.4	19.3	90.00	-544.8	-425.1	944.3	906.3	38.03	24.829		
7,300.0	6,409.0	7,237.4	6,409.0	21.7	20.6	90.00	-644.7	-426.6	944.6	904.1	40.54	23.303		
7,400.0	6,409.0	7,337.4	6,409.0	23.0	21.9	90.00	-744.7	-428.1	944.9	901.7	43.24	21.855		
7,500.0	6,409.0	7,437.4	6,409.0	24.4	23.3	90.00	-844.7	-429.6	945.2	899.1	46.10	20.505		
7,600.0	6,409.0	7,537.4	6,409.0	25.9	24.8	90.00	-944.7	-431.1	945.5	896.4	49.09	19.261		
7,700.0	6,409.0	7,637.4	6,409.0	27.4	26.3	90.00	-1,044.7	-432.6	945.8	893.6	52.19	18.121		
7,800.0	6,409.0	7,737.4	6,409.0	28.9	27.9	90.00	-1,144.7	-434.1	946.1	890.7	55.39	17.081		
7,900.0	6,409.0	7,837.4	6,409.0	30.6	29.5	90.00	-1,244.7	-435.6	946.4	887.8	58.66	16.134		
8,000.0	6,409.0	7,937.4	6,409.0	32.2	31.1	90.00	-1,344.7	-437.1	946.7	884.7	62.00	15.271		
8,100.0	6,409.0	8,037.4	6,409.0	33.9	32.8	90.00	-1,444.7	-438.6	947.0	881.6	65.39	14.483		
8,200.0	6,409.0	8,137.4	6,409.0	35.5	34.5	90.00	-1,544.6	-440.1	947.3	878.5	68.82	13.764		
8,300.0	6,409.0	8,237.4	6,409.0	37.3	36.2	90.00	-1,644.6	-441.6	947.6	875.3	72.30	13.106		
8,400.0	6,409.0	8,337.4	6,409.0	39.0	38.0	90.00	-1,744.6	-443.1	947.9	872.1	75.81	12.503		
8,500.0	6,409.0	8,437.4	6,409.0	40.7	39.7	90.00	-1,844.6	-444.6	948.2	868.9	79.35	11.949		
8,600.0	6,409.0	8,537.4	6,409.0	42.5	41.5	90.00	-1,944.6	-446.2	948.5	865.6	82.92	11.439		
8,700.0	6,409.0	8,637.4	6,409.0	44.3	43.3	90.00	-2,044.6	-447.7	948.8	862.3	86.51	10.967		
8,800.0	6,409.0	8,737.4	6,409.0	46.1	45.1	90.00	-2,144.6	-449.2	949.1	859.0	90.12	10.531		
8,900.0	6,409.0	8,837.4	6,409.0	47.9	46.9	90.00	-2,244.6	-450.7	949.4	855.7	93.75	10.127		
9,000.0	6,409.0	8,937.4	6,409.0	49.7	48.7	90.00	-2,344.5	-452.2	949.7	852.3	97.39	9.751		
9,100.0	6,409.0	9,037.4	6,409.0	51.5	50.5	90.00	-2,444.5	-453.7	950.0	849.0	101.05	9.401		
9,200.0	6,409.0	9,137.4	6,409.0	53.3	52.3	90.00	-2,544.5	-455.2	950.3	845.6	104.72	9.075		
9,300.0	6,409.0	9,237.4	6,409.0	55.1	54.1	90.00	-2,644.5	-456.7	950.6	842.2	108.40	8.769		
9,400.0	6,409.0	9,337.4	6,409.0	56.9	56.0	90.00	-2,744.5	-458.2	950.9	838.8	112.09	8.483		
9,500.0	6,409.0	9,437.4	6,409.0	58.8	57.8	90.00	-2,844.5	-459.7	951.2	835.4	115.79	8.215		
9,600.0	6,409.0	9,537.4	6,409.0	60.6	59.7	90.00	-2,944.5	-461.2	951.5	832.0	119.50	7.962		
9,700.0	6,409.0	9,637.4	6,409.0	62.5	61.5	90.00	-3,044.5	-462.7	951.8	828.6	123.22	7.724		
9,800.0	6,409.0	9,737.4	6,409.0	64.3	63.4	90.00	-3,144.5	-464.2	952.1	825.2	126.94	7.500		
9,900.0	6,409.0	9,837.4	6,409.0	66.2	65.2	90.00	-3,244.4	-465.7	952.4	821.7	130.67	7.288		
10,000.0	6,409.0	9,937.4	6,409.0	68.0	67.1	90.00	-3,344.4	-467.2	952.7	818.3	134.41	7.088		
10,100.0	6,409.0	10,037.4	6,409.0	69.9	69.0	90.00	-3,444.4	-468.7	953.0	814.9	138.15	6.898		

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 State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Offset Design State Antelope P-30 Pad Sec.30-T5N-R62W - State Antelope P-T-30HNB - Wellbore #1 - Plan #1 (10-2												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	6,409.0	10,137.4	6,409.0	71.8	70.8	90.00	-3,544.4	-470.2	953.3	811.4	141.90	6.718	
10,300.0	6,409.0	10,237.4	6,409.0	73.6	72.7	90.00	-3,644.4	-471.7	953.6	808.0	145.65	6.547	
10,400.0	6,409.0	10,337.3	6,409.0	75.5	74.6	90.00	-3,744.4	-473.2	953.9	804.5	149.40	6.385	
10,500.0	6,409.0	10,437.3	6,409.0	77.4	76.4	90.00	-3,844.4	-474.7	954.2	801.0	153.16	6.230	
10,600.0	6,409.0	10,537.3	6,409.0	79.2	78.3	90.00	-3,944.4	-476.2	954.5	797.6	156.92	6.083	
10,700.0	6,409.0	10,637.3	6,409.0	81.1	80.2	90.00	-4,044.3	-477.7	954.8	794.1	160.69	5.942	
10,800.0	6,409.0	10,737.3	6,409.0	83.0	82.1	90.00	-4,144.3	-479.2	955.1	790.6	164.46	5.808	
10,900.0	6,409.0	10,837.3	6,409.0	84.9	84.0	90.00	-4,244.3	-480.7	955.4	787.2	168.23	5.679	
10,969.3	6,409.0	10,906.7	6,409.0	86.2	85.2	90.00	-4,313.6	-481.8	955.6	784.8	170.82	5.594 SF	

Offset Design		State Antelope P-30 Pad Sec.30-T5N-R62W - State Antelope U-Y-30HNB - Wellbore #1 - Plan #1 (10-2)										Offset Site Error:		0.0 ft		
Survey Program: 0-MWD														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	0.00	21.9	0.0	21.9							
100.0	100.0	100.0	100.0	0.1	0.1	0.00	21.9	0.0	21.9	21.6	0.22	97.232				
200.0	200.0	200.0	200.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.67	32.411	CC, ES			
300.0	300.0	299.6	299.6	0.6	0.6	3.91	22.6	1.5	22.7	21.6	1.12	20.300				
400.0	400.0	399.0	398.8	0.8	0.8	13.91	24.9	6.2	25.7	24.2	1.57	16.413				
500.0	500.0	497.9	497.4	1.0	1.0	25.68	28.8	13.8	32.0	30.0	2.04	15.698				
600.0	600.0	596.1	594.8	1.2	1.3	35.64	34.1	24.4	42.3	39.7	2.55	16.598				
700.0	700.0	693.6	691.2	1.5	1.6	-8.34	40.8	37.9	54.7	51.8	2.97	18.439				
800.0	799.8	792.0	787.9	1.7	2.0	-3.47	48.9	54.0	66.9	63.5	3.42	19.546				
900.0	899.5	891.5	885.6	1.9	2.4	-0.05	57.1	70.5	76.3	72.4	3.88	19.674				
1,000.0	998.7	991.2	983.7	2.2	2.8	2.72	65.4	87.0	82.4	78.0	4.33	19.000				
1,100.0	1,097.7	1,091.0	1,081.8	2.5	3.2	5.24	73.7	103.5	86.4	81.6	4.81	17.970				
1,200.0	1,196.6	1,190.9	1,179.9	2.8	3.6	7.53	82.0	120.1	90.5	85.3	5.29	17.123				
1,300.0	1,295.6	1,290.7	1,278.0	3.1	4.0	9.62	90.2	136.6	94.8	89.0	5.77	16.428				
1,400.0	1,394.5	1,390.6	1,376.1	3.4	4.4	11.52	98.5	153.2	99.2	92.9	6.26	15.839				
1,500.0	1,493.5	1,490.4	1,474.3	3.7	4.8	13.26	106.8	169.7	103.7	96.9	6.76	15.335				
1,600.0	1,592.4	1,590.3	1,572.4	4.0	5.2	14.86	115.1	186.2	108.3	101.0	7.27	14.899				
1,700.0	1,691.4	1,690.1	1,670.5	4.4	5.6	16.33	123.4	202.8	112.9	105.2	7.78	14.516				
1,800.0	1,790.3	1,790.0	1,768.6	4.7	6.0	17.68	131.6	219.3	117.7	109.4	8.30	14.178				
1,900.0	1,889.3	1,889.9	1,866.8	5.0	6.5	18.92	139.9	235.9	122.5	113.6	8.83	13.876				
2,000.0	1,988.2	1,989.7	1,964.9	5.4	6.9	20.07	148.2	252.4	127.3	117.9	9.36	13.604				
2,100.0	2,087.2	2,089.6	2,063.0	5.7	7.3	21.14	156.5	269.0	132.2	122.3	9.89	13.359				
2,200.0	2,186.1	2,189.4	2,161.1	6.1	7.7	22.13	164.8	285.5	137.1	126.7	10.44	13.136				
2,300.0	2,285.1	2,289.3	2,259.2	6.4	8.1	23.05	173.1	302.0	142.1	131.1	10.99	12.933				
2,400.0	2,384.1	2,389.1	2,357.4	6.7	8.5	23.91	181.3	318.6	147.1	135.5	11.54	12.746				
2,500.0	2,483.0	2,489.0	2,455.5	7.1	8.9	24.71	189.6	335.1	152.1	140.0	12.10	12.575				
2,600.0	2,582.0	2,588.8	2,553.6	7.4	9.4	25.46	197.9	351.7	157.2	144.5	12.66	12.418				
2,700.0	2,680.9	2,688.7	2,651.7	7.8	9.8	26.16	206.2	368.2	162.3	149.0	13.22	12.272				
2,800.0	2,779.9	2,788.5	2,749.9	8.1	10.2	26.82	214.5	384.8	167.4	153.6	13.79	12.136				
2,900.0	2,878.8	2,888.4	2,848.0	8.5	10.6	27.44	222.7	401.3	172.5	158.1	14.36	12.011				
3,000.0	2,977.8	2,988.2	2,946.1	8.8	11.0	28.03	231.0	417.8	177.6	162.7	14.94	11.894				
3,100.0	3,076.7	3,088.1	3,044.2	9.2	11.4	28.58	239.3	434.4	182.8	167.3	15.51	11.784				
3,200.0	3,175.7	3,187.9	3,142.3	9.5	11.8	29.10	247.6	450.9	188.0	171.9	16.09	11.682				
3,300.0	3,274.6	3,287.8	3,240.5	9.9	12.3	29.60	255.9	467.5	193.2	176.5	16.67	11.586				
3,400.0	3,373.6	3,387.6	3,338.6	10.2	12.7	30.06	264.2	484.0	198.4	181.1	17.26	11.496				
3,500.0	3,472.5	3,487.5	3,436.7	10.6	13.1	30.51	272.4	500.6	203.6	185.8	17.84	11.412				
3,600.0	3,571.5	3,587.3	3,534.8	10.9	13.5	30.93	280.7	517.1	208.9	190.4	18.43	11.332				
3,700.0	3,670.4	3,687.2	3,633.0	11.2	13.9	31.33	289.0	533.6	214.1	195.1	19.02	11.257				
3,800.0	3,769.4	3,787.0	3,731.1	11.6	14.3	31.71	297.3	550.2	219.4	199.7	19.61	11.186				
3,900.0	3,868.3	3,886.9	3,829.2	11.9	14.8	32.08	305.6	566.7	224.6	204.4	20.20	11.118				
4,000.0	3,967.3	3,986.7	3,927.3	12.3	15.2	32.43	313.8	583.3	229.9	209.1	20.80	11.055				
4,100.0	4,066.3	4,086.6	4,025.5	12.6	15.6	32.76	322.1	599.8	235.2	213.8	21.39	10.994				
4,200.0	4,165.2	4,186.4	4,123.6	13.0	16.0	33.07	330.4	616.4	240.5	218.5	21.99	10.937				
4,300.0	4,264.2	4,286.3	4,221.7	13.3	16.4	33.38	338.7	632.9	245.8	223.2	22.58	10.882				
4,400.0	4,363.1	4,386.1	4,319.8	13.7	16.8	33.67	347.0	649.4	251.1	227.9	23.18	10.830				
4,500.0	4,462.1	4,486.0	4,417.9	14.0	17.2	33.95	355.2	666.0	256.4	232.6	23.78	10.781				
4,600.0	4,561.0	4,585.8	4,516.1	14.4	17.7	34.21	363.5	682.5	261.7	237.3	24.38	10.734				
4,700.0	4,660.0	4,685.7	4,614.2	14.7	18.1	34.47	371.8	699.1	267.0	242.0	24.98	10.689				
4,800.0	4,758.9	4,785.5	4,712.3	15.1	18.5	34.72	380.1	715.6	272.3	246.7	25.58	10.645				
4,900.0	4,857.9	4,885.4	4,810.4	15.4	18.9	34.96	388.4	732.2	277.7	251.5	26.18	10.604				
5,000.0	4,956.8	4,985.2	4,908.6	15.8	19.3	35.18	396.7	748.7	283.0	256.2	26.79	10.565				
5,100.0	5,055.8	5,085.1	5,006.7	16.1	19.7	35.40	404.9	765.2	288.3	260.9	27.39	10.527				

COMPASS 2003.21 Build 46

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						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	
5,200.0	5,154.7	5,184.9	5,104.8	16.5	20.2	35.62	413.2	781.8	293.7	265.7	27.99	10.491	
5,300.0	5,253.7	5,288.4	5,206.5	16.8	20.6	35.85	421.7	798.7	298.8	270.2	28.60	10.447	
5,400.0	5,352.7	5,399.0	5,315.8	17.1	20.9	36.27	429.3	813.9	301.8	272.6	29.18	10.345	
5,500.0	5,452.2	5,509.6	5,425.7	17.4	21.1	36.60	435.0	825.2	304.0	274.3	29.64	10.256	
5,600.0	5,552.0	5,620.3	5,536.0	17.6	21.4	36.82	438.8	832.8	305.4	275.4	30.02	10.172	
5,700.0	5,651.9	5,731.1	5,646.7	17.7	21.5	36.93	440.6	836.6	306.1	275.8	30.33	10.092	
5,800.0	5,751.9	5,836.3	5,751.9	17.9	21.7	87.95	440.9	837.0	306.2	275.7	30.50	10.039	
5,900.0	5,851.9	5,936.3	5,851.9	18.0	21.8	87.95	440.9	837.0	306.2	275.3	30.85	9.926	
6,000.0	5,951.5	6,038.8	5,954.0	18.1	21.8	-92.70	432.7	836.9	306.2	275.0	31.16	9.826	
6,100.0	6,047.7	6,141.5	6,052.6	18.1	21.8	-92.56	404.8	836.6	306.2	275.1	31.10	9.844	
6,200.0	6,137.2	6,244.1	6,143.8	17.9	21.7	-92.32	358.2	836.1	306.2	275.3	30.86	9.922	
6,300.0	6,216.6	6,346.3	6,223.8	17.7	21.5	-91.99	294.9	835.3	306.1	275.6	30.52	10.030	
6,400.0	6,282.9	6,448.1	6,289.8	17.5	21.3	-91.59	217.5	834.5	306.1	275.9	30.22	10.129	
6,425.2	6,297.3	6,473.7	6,303.9	17.4	21.2	-91.48	196.2	834.2	306.1	275.9	30.19	10.141	
6,500.0	6,333.8	6,549.5	6,339.2	17.3	21.1	-91.13	129.3	833.5	306.1	276.0	30.10	10.170	
6,600.0	6,367.4	6,650.2	6,371.0	17.1	21.0	-90.71	33.8	832.4	306.2	275.9	30.29	10.109	
6,700.0	6,393.2	6,750.3	6,396.5	17.0	21.0	-90.63	-63.0	831.3	306.2	275.4	30.83	9.934	
6,800.0	6,408.2	6,850.7	6,408.8	17.1	21.1	-90.11	-162.5	830.2	306.3	274.5	31.82	9.625	
6,900.0	6,409.0	6,950.7	6,409.0	17.6	21.4	-90.00	-262.4	829.0	306.3	273.2	33.19	9.230	
7,000.0	6,409.0	7,050.7	6,409.0	18.3	21.9	-90.00	-362.4	827.9	306.4	271.5	34.90	8.781	
7,100.0	6,409.0	7,150.7	6,409.0	19.3	22.6	-90.00	-462.4	826.8	306.5	269.6	36.92	8.301	
7,200.0	6,409.0	7,250.7	6,409.0	20.4	23.5	-90.00	-562.4	825.6	306.6	267.3	39.22	7.817	
7,300.0	6,409.0	7,350.7	6,409.0	21.7	24.5	-90.00	-662.4	824.5	306.6	264.9	41.74	7.346	
7,400.0	6,409.0	7,450.7	6,409.0	23.0	25.7	-90.00	-762.4	823.4	306.7	262.3	44.45	6.900	
7,500.0	6,409.0	7,550.7	6,409.0	24.4	26.9	-90.00	-862.4	822.2	306.8	259.5	47.32	6.483	
7,600.0	6,409.0	7,650.7	6,409.0	25.9	28.2	-90.00	-962.4	821.1	306.8	256.5	50.32	6.098	
7,700.0	6,409.0	7,750.7	6,409.0	27.4	29.6	-90.00	-1,062.4	820.0	306.9	253.5	53.42	5.745	
7,800.0	6,409.0	7,850.7	6,409.0	28.9	31.1	-90.00	-1,162.4	818.9	307.0	250.4	56.61	5.423	
7,900.0	6,409.0	7,950.7	6,409.0	30.6	32.6	-90.00	-1,262.4	817.7	307.1	247.2	59.88	5.128	
8,000.0	6,409.0	8,050.7	6,409.0	32.2	34.1	-90.00	-1,362.4	816.6	307.1	243.9	63.21	4.859	
8,100.0	6,409.0	8,150.7	6,409.0	33.9	35.7	-90.00	-1,462.4	815.5	307.2	240.6	66.60	4.613	
8,200.0	6,409.0	8,250.7	6,409.0	35.5	37.4	-90.00	-1,562.4	814.3	307.3	237.2	70.03	4.388	
8,300.0	6,409.0	8,350.7	6,409.0	37.3	39.0	-90.00	-1,662.4	813.2	307.4	233.8	73.51	4.181	
8,400.0	6,409.0	8,450.7	6,409.0	39.0	40.7	-90.00	-1,762.3	812.1	307.4	230.4	77.01	3.992	
8,500.0	6,409.0	8,550.7	6,409.0	40.7	42.4	-90.00	-1,862.3	810.9	307.5	226.9	80.55	3.817	
8,600.0	6,409.0	8,650.7	6,409.0	42.5	44.1	-90.00	-1,962.3	809.8	307.6	223.5	84.11	3.657	
8,700.0	6,409.0	8,750.7	6,409.0	44.3	45.8	-90.00	-2,062.3	808.7	307.6	219.9	87.70	3.508	
8,800.0	6,409.0	8,850.7	6,409.0	46.1	47.5	-90.00	-2,162.3	807.5	307.7	216.4	91.30	3.370	
8,900.0	6,409.0	8,950.7	6,409.0	47.9	49.3	-90.00	-2,262.3	806.4	307.8	212.9	94.93	3.242	
9,000.0	6,409.0	9,050.7	6,409.0	49.7	51.0	-90.00	-2,362.3	805.3	307.9	209.3	98.57	3.123	
9,100.0	6,409.0	9,150.7	6,409.0	51.5	52.8	-90.00	-2,462.3	804.1	307.9	205.7	102.22	3.012	
9,200.0	6,409.0	9,250.7	6,409.0	53.3	54.6	-90.00	-2,562.3	803.0	308.0	202.1	105.89	2.909	
9,300.0	6,409.0	9,350.7	6,409.0	55.1	56.4	-90.00	-2,662.3	801.9	308.1	198.5	109.57	2.812	
9,400.0	6,409.0	9,450.7	6,409.0	56.9	58.2	-90.00	-2,762.3	800.7	308.1	194.9	113.25	2.721	
9,500.0	6,409.0	9,550.7	6,409.0	58.8	60.0	-90.00	-2,862.3	799.6	308.2	191.3	116.95	2.635	
9,600.0	6,409.0	9,650.7	6,409.0	60.6	61.8	-90.00	-2,962.3	798.5	308.3	187.6	120.66	2.555	
9,700.0	6,409.0	9,750.7	6,409.0	62.5	63.6	-90.00	-3,062.3	797.3	308.4	184.0	124.37	2.479	
9,800.0	6,409.0	9,850.7	6,409.0	64.3	65.5	-90.00	-3,162.3	796.2	308.4	180.3	128.09	2.408	
9,900.0	6,409.0	9,950.7	6,409.0	66.2	67.3	-90.00	-3,262.3	795.1	308.5	176.7	131.82	2.340	
10,000.0	6,409.0	10,050.7	6,409.0	68.0	69.1	-90.00	-3,362.2	793.9	308.6	173.0	135.56	2.276	
10,100.0	6,409.0	10,150.7	6,409.0	69.9	71.0	-90.00	-3,462.2	792.8	308.6	169.3	139.29	2.216	
10,200.0	6,409.0	10,250.7	6,409.0	71.8	72.8	-90.00	-3,562.2	791.7	308.7	165.7	143.04	2.158	

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 State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Offset Design State Antelope P-30 Pad Sec.30-T5N-R62W - State Antelope U-Y-30HNB - Wellbore #1 - Plan #1 (10-2												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	6,409.0	10,350.7	6,409.0	73.6	74.7	-90.00	-3,662.2	790.6	308.8	162.0	146.79	2.104	
10,400.0	6,409.0	10,450.7	6,409.0	75.5	76.5	-90.00	-3,762.2	789.4	308.9	158.3	150.54	2.052	
10,500.0	6,409.0	10,550.7	6,409.0	77.4	78.4	-90.00	-3,862.2	788.3	308.9	154.6	154.30	2.002	
10,600.0	6,409.0	10,650.7	6,409.0	79.2	80.2	-90.00	-3,962.2	787.2	309.0	150.9	158.06	1.955	
10,700.0	6,409.0	10,750.7	6,409.0	81.1	82.1	-90.00	-4,062.2	786.0	309.1	147.2	161.82	1.910	
10,800.0	6,409.0	10,850.7	6,409.0	83.0	83.9	-90.00	-4,162.2	784.9	309.1	143.5	165.59	1.867	
10,900.0	6,409.0	10,950.7	6,409.0	84.9	85.8	-90.00	-4,262.2	783.8	309.2	139.8	169.36	1.826	
10,936.7	6,409.0	10,987.4	6,409.0	85.6	86.5	-90.00	-4,298.9	783.3	309.2	138.5	170.75	1.811	
10,969.3	6,409.0	11,012.8	6,409.0	86.2	87.0	-90.00	-4,324.3	783.1	309.3	137.5	171.84	1.800 SF	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4674.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: State Antelope U41-Y44-30HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.74°



Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope U41-Y44-30HNB
Project:	SEC.30-T5N-R62W	TVD Reference:	WELL @ 4674.0ft (RKB - 13')
Reference Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	MD Reference:	WELL @ 4674.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope U41-Y44-30HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-29-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4674.0ft (RKB - 13')

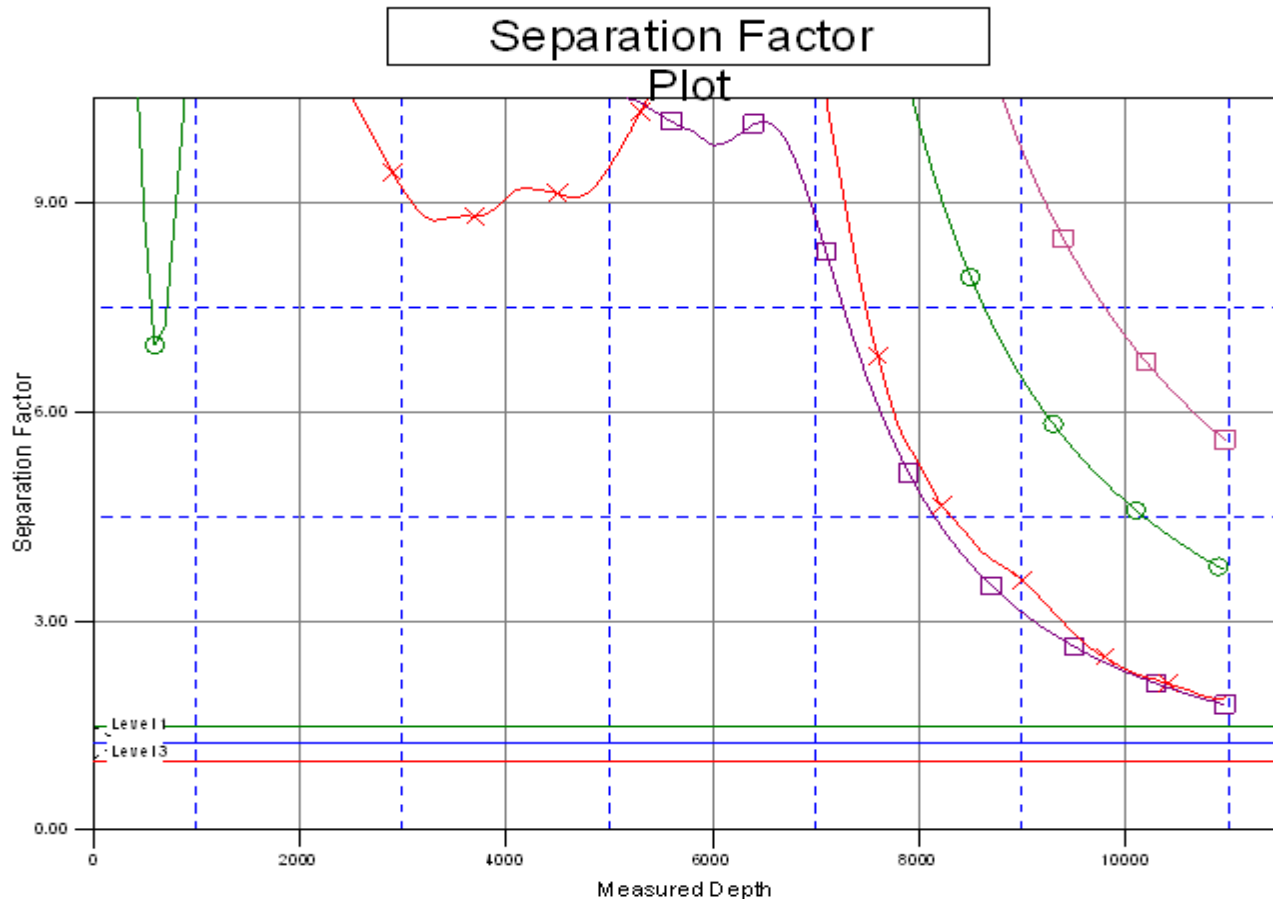
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °



Coordinates are relative to: State Antelope U41-Y44-30HNB

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.74°



LEGEND

1, Wellbore #1, Plan #1 (10-29-13) V/D		State Antelope P41-T44-30HNB, Wellbore #1, Plan #1 (10-29-13) V/D
3, Wellbore #1, Plan #1 (10-29-13) V/D		State Antelope 41-44-30HNB (Exist), Wellbore #1, Wellbore #1 V/D