BONANZA CREEK ENERGY OPERATING

Well Name: **State Antelope P-T-30HNB**

Surface Location: State Antelope P-30 Pad Sec.30-T5N-R62W

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

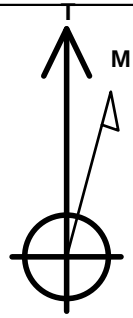
Ground Elevation: 4661.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1382031.01	3317675.69	40.376470	-104.359740	

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

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 460'FNL & 839'FEL	1.0	0.0	0.0	Point
BHL 470'FSL & 1274'FEL	6409.0	-4295.2	-482.1	Point
T1 531'FNL & 1261'FEL	6409.0	-87.4	-420.7	Point



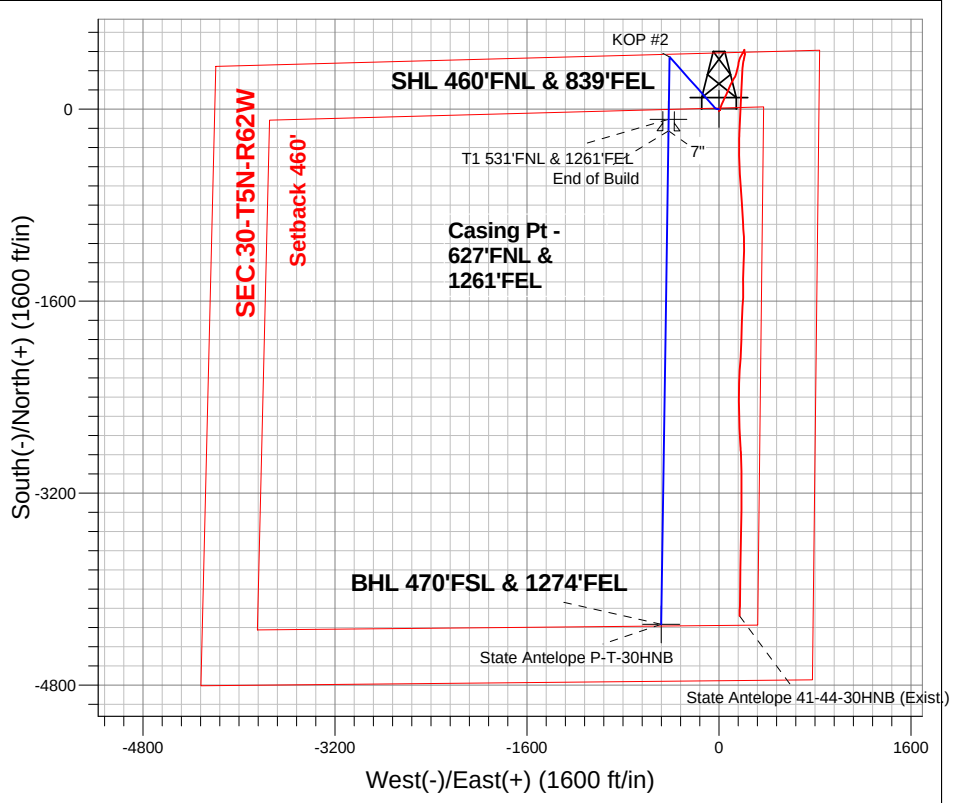
Azimuths to True North
Magnetic North: 8.32°

Magnetic Field
Strength: 52912.5snT
Dip Angle: 67.01°
Date: 10/29/2013
Model: IGRF2010

State Antelope P-30 Pad Sec.30-T5N-R62W
State Antelope P-T-30HNB
Plan #1 (10-29-13)
13:35, October 29 2013

ANNOTATIONS

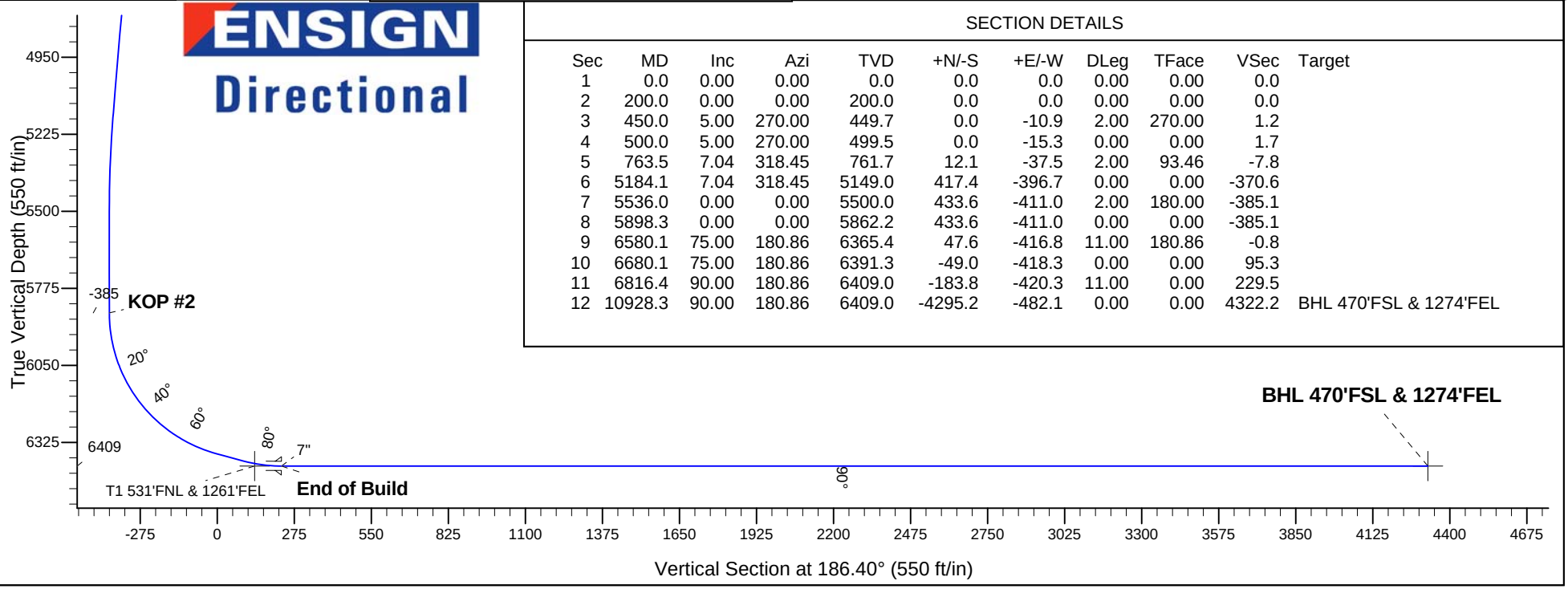
TVD	MD	Annotation
200.0	200.0	KOP #1
5862.3	5898.3	KOP #2
6409.0	6816.4	End of Build



ENSIGN Directional

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	450.0	5.00	270.00	449.7	0.0	-10.9	2.00	270.00	1.2	
4	500.0	5.00	270.00	499.5	0.0	-15.3	0.00	0.00	1.7	
5	763.5	7.04	318.45	761.7	12.1	-37.5	2.00	93.46	-7.8	
6	5184.1	7.04	318.45	5149.0	417.4	-396.7	0.00	0.00	-370.6	
7	5536.0	0.00	0.00	5500.0	433.6	-411.0	2.00	180.00	-385.1	
8	5898.3	0.00	0.00	5862.2	433.6	-411.0	0.00	0.00	-385.1	
9	6580.1	75.00	180.86	6365.4	47.6	-416.8	11.00	180.86	-0.8	
10	6680.1	75.00	180.86	6391.3	-49.0	-418.3	0.00	0.00	95.3	
11	6816.4	90.00	180.86	6409.0	-183.8	-420.3	11.00	0.00	229.5	
12	10928.3	90.00	180.86	6409.0	-4295.2	-482.1	0.00	0.00	4322.2	BHL 470'FSL & 1274'FEL



BONANZA CREEK ENERGY OPERATING

SEC.30-T5N-R62W
State Antelope P-30 Pad Sec.30-T5N-R62W
State Antelope P-T-30HNB

Wellbore #1

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

Standard Planning Report

29 October, 2013

Database:	Landmark	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-30HNB	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-29-13)		

Project SEC.30-T5N-R62W, Weld County, Colorado

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

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

Site Position:		**Northing:**	1,382,092.94 ft	**Latitude:**	40.376640
From:	Lat/Long	**Easting:**	3,317,674.89 ft	**Longitude:**	-104.359740
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.74 °

Well State Antelope P-T-30HNB

Well Position	**+N/-S**	-61.9 ft	**Northing:**	1,382,031.01 ft	**Latitude:**	40.376470
	+E/-W	0.0 ft	**Easting:**	3,317,675.69 ft	**Longitude:**	-104.359740
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,661.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/29/2013	8.32	67.01	52,913

Design Plan #1 (10-29-13)

Audit Notes:

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

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	186.40

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	
450.0	5.00	270.00	449.7	0.0	-10.9	2.00	2.00	0.00	270.00	
500.0	5.00	270.00	499.5	0.0	-15.3	0.00	0.00	0.00	0.00	
763.5	7.04	318.45	761.7	12.1	-37.5	2.00	0.77	18.39	93.46	
5,184.1	7.04	318.45	5,149.0	417.4	-396.7	0.00	0.00	0.00	0.00	
5,536.0	0.00	0.00	5,500.0	433.6	-411.0	2.00	-2.00	0.00	180.00	
5,898.3	0.00	0.00	5,862.2	433.6	-411.0	0.00	0.00	0.00	0.00	
6,580.1	75.00	180.86	6,365.4	47.6	-416.8	11.00	11.00	0.00	180.86	
6,680.1	75.00	180.86	6,391.3	-49.0	-418.3	0.00	0.00	0.00	0.00	
6,816.4	90.00	180.86	6,409.0	-183.8	-420.3	11.00	11.00	0.00	0.00	
10,928.3	90.00	180.86	6,409.0	-4,295.2	-482.1	0.00	0.00	0.00	0.00	BHL 470'FSL & 127

Database:	Landmark	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 460'FNL & 839'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
KOP #1									
300.0	2.00	270.00	300.0	0.0	-1.7	0.2	2.00	2.00	0.00
400.0	4.00	270.00	399.8	0.0	-7.0	0.8	2.00	2.00	0.00
450.0	5.00	270.00	449.7	0.0	-10.9	1.2	2.00	2.00	0.00
500.0	5.00	270.00	499.5	0.0	-15.3	1.7	0.00	0.00	0.00
600.0	5.27	292.28	599.1	1.7	-23.9	0.9	2.00	0.27	22.28
700.0	6.21	310.08	698.6	7.0	-32.3	-3.3	2.00	0.94	17.80
763.5	7.04	318.45	761.7	12.1	-37.5	-7.8	2.00	1.31	13.18
800.0	7.04	318.45	797.9	15.4	-40.4	-10.8	0.00	0.00	0.00
900.0	7.04	318.45	897.2	24.6	-48.6	-19.0	0.00	0.00	0.00
1,000.0	7.04	318.45	996.4	33.8	-56.7	-27.2	0.00	0.00	0.00
1,100.0	7.04	318.45	1,095.6	42.9	-64.8	-35.4	0.00	0.00	0.00
1,200.0	7.04	318.45	1,194.9	52.1	-72.9	-43.7	0.00	0.00	0.00
1,300.0	7.04	318.45	1,294.1	61.3	-81.1	-51.9	0.00	0.00	0.00
1,400.0	7.04	318.45	1,393.4	70.5	-89.2	-60.1	0.00	0.00	0.00
1,500.0	7.04	318.45	1,492.6	79.6	-97.3	-68.3	0.00	0.00	0.00
1,600.0	7.04	318.45	1,591.9	88.8	-105.4	-76.5	0.00	0.00	0.00
1,700.0	7.04	318.45	1,691.1	98.0	-113.6	-84.7	0.00	0.00	0.00
1,800.0	7.04	318.45	1,790.4	107.1	-121.7	-92.9	0.00	0.00	0.00
1,900.0	7.04	318.45	1,889.6	116.3	-129.8	-101.1	0.00	0.00	0.00
2,000.0	7.04	318.45	1,988.9	125.5	-137.9	-109.3	0.00	0.00	0.00
2,100.0	7.04	318.45	2,088.1	134.6	-146.1	-117.5	0.00	0.00	0.00
2,200.0	7.04	318.45	2,187.4	143.8	-154.2	-125.7	0.00	0.00	0.00
2,300.0	7.04	318.45	2,286.6	153.0	-162.3	-133.9	0.00	0.00	0.00
2,400.0	7.04	318.45	2,385.9	162.2	-170.4	-142.1	0.00	0.00	0.00
2,500.0	7.04	318.45	2,485.1	171.3	-178.6	-150.3	0.00	0.00	0.00
2,600.0	7.04	318.45	2,584.3	180.5	-186.7	-158.5	0.00	0.00	0.00
2,700.0	7.04	318.45	2,683.6	189.7	-194.8	-166.7	0.00	0.00	0.00
2,800.0	7.04	318.45	2,782.8	198.8	-203.0	-175.0	0.00	0.00	0.00
2,900.0	7.04	318.45	2,882.1	208.0	-211.1	-183.2	0.00	0.00	0.00
3,000.0	7.04	318.45	2,981.3	217.2	-219.2	-191.4	0.00	0.00	0.00
3,100.0	7.04	318.45	3,080.6	226.3	-227.3	-199.6	0.00	0.00	0.00
3,200.0	7.04	318.45	3,179.8	235.5	-235.5	-207.8	0.00	0.00	0.00
3,300.0	7.04	318.45	3,279.1	244.7	-243.6	-216.0	0.00	0.00	0.00
3,400.0	7.04	318.45	3,378.3	253.8	-251.7	-224.2	0.00	0.00	0.00
3,500.0	7.04	318.45	3,477.6	263.0	-259.8	-232.4	0.00	0.00	0.00
3,600.0	7.04	318.45	3,576.8	272.2	-268.0	-240.6	0.00	0.00	0.00
3,700.0	7.04	318.45	3,676.1	281.4	-276.1	-248.8	0.00	0.00	0.00
3,800.0	7.04	318.45	3,775.3	290.5	-284.2	-257.0	0.00	0.00	0.00
3,900.0	7.04	318.45	3,874.6	299.7	-292.3	-265.2	0.00	0.00	0.00
4,000.0	7.04	318.45	3,973.8	308.9	-300.5	-273.4	0.00	0.00	0.00
4,100.0	7.04	318.45	4,073.0	318.0	-308.6	-281.6	0.00	0.00	0.00
4,200.0	7.04	318.45	4,172.3	327.2	-316.7	-289.8	0.00	0.00	0.00
4,300.0	7.04	318.45	4,271.5	336.4	-324.8	-298.0	0.00	0.00	0.00
4,400.0	7.04	318.45	4,370.8	345.5	-333.0	-306.2	0.00	0.00	0.00
4,500.0	7.04	318.45	4,470.0	354.7	-341.1	-314.5	0.00	0.00	0.00
4,600.0	7.04	318.45	4,569.3	363.9	-349.2	-322.7	0.00	0.00	0.00
4,700.0	7.04	318.45	4,668.5	373.1	-357.3	-330.9	0.00	0.00	0.00
4,800.0	7.04	318.45	4,767.8	382.2	-365.5	-339.1	0.00	0.00	0.00

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Site:	State Antelope P-30 Pad Sec.30-T5N-R62W	**North Reference:**	True
Well:	State Antelope P-T-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)
4,900.0	7.04	318.45	4,867.0	391.4	-373.6	-347.3	0.00	0.00	0.00
5,000.0	7.04	318.45	4,966.3	400.6	-381.7	-355.5	0.00	0.00	0.00
5,100.0	7.04	318.45	5,065.5	409.7	-389.8	-363.7	0.00	0.00	0.00
5,184.1	7.04	318.45	5,149.0	417.4	-396.7	-370.6	0.00	0.00	0.00
5,200.0	6.72	318.45	5,164.8	418.9	-397.9	-371.9	2.00	-2.00	0.00
5,300.0	4.72	318.45	5,264.3	426.3	-404.6	-378.5	2.00	-2.00	0.00
5,400.0	2.72	318.45	5,364.0	431.2	-408.9	-382.9	2.00	-2.00	0.00
5,500.0	0.72	318.45	5,464.0	433.4	-410.8	-384.9	2.00	-2.00	0.00
5,536.0	0.00	0.00	5,500.0	433.6	-411.0	-385.1	2.00	-2.00	0.00
5,600.0	0.00	0.00	5,564.0	433.6	-411.0	-385.1	0.00	0.00	0.00
5,700.0	0.00	0.00	5,664.0	433.6	-411.0	-385.1	0.00	0.00	0.00
5,800.0	0.00	0.00	5,764.0	433.6	-411.0	-385.1	0.00	0.00	0.00
5,898.3	0.00	0.00	5,862.3	433.6	-411.0	-385.1	0.00	0.00	0.00
KOP #2									
5,900.0	0.19	180.86	5,864.0	433.6	-411.0	-385.0	11.31	11.31	0.00
6,000.0	11.19	180.86	5,963.3	423.7	-411.1	-375.2	11.00	11.00	0.00
6,100.0	22.19	180.86	6,059.0	395.0	-411.6	-346.6	11.00	11.00	0.00
6,200.0	33.19	180.86	6,147.4	348.6	-412.3	-300.5	11.00	11.00	0.00
6,300.0	44.19	180.86	6,225.3	286.2	-413.2	-238.3	11.00	11.00	0.00
6,400.0	55.19	180.86	6,289.9	210.1	-414.4	-162.6	11.00	11.00	0.00
6,500.0	66.19	180.86	6,338.8	123.0	-415.7	-75.9	11.00	11.00	0.00
6,580.1	75.00	180.86	6,365.4	47.6	-416.8	-0.8	11.00	11.00	0.00
6,600.0	75.00	180.86	6,370.5	28.3	-417.1	18.4	0.00	0.00	0.00
6,680.1	75.00	180.86	6,391.3	-49.0	-418.3	95.3	0.00	0.00	0.00
6,700.0	77.19	180.86	6,396.0	-68.3	-418.5	114.6	11.00	11.00	0.00
6,720.6	79.46	180.86	6,400.2	-88.5	-418.9	134.7	11.00	11.00	0.00
T1 531'FNL & 1261'FEL									
6,800.0	88.19	180.86	6,408.7	-167.4	-420.0	213.2	11.00	11.00	0.00
6,816.4	90.00	180.86	6,409.0	-183.8	-420.3	229.5	11.00	11.00	0.00
End of Build - 7"									
6,900.0	90.00	180.86	6,409.0	-267.3	-421.5	312.7	0.00	0.00	0.00
7,000.0	90.00	180.86	6,409.0	-367.3	-423.0	412.2	0.00	0.00	0.00
7,100.0	90.00	180.86	6,409.0	-467.3	-424.5	511.8	0.00	0.00	0.00
7,200.0	90.00	180.86	6,409.0	-567.3	-426.0	611.3	0.00	0.00	0.00
7,300.0	90.00	180.86	6,409.0	-667.3	-427.6	710.8	0.00	0.00	0.00
7,400.0	90.00	180.86	6,409.0	-767.3	-429.1	810.4	0.00	0.00	0.00
7,500.0	90.00	180.86	6,409.0	-867.3	-430.6	909.9	0.00	0.00	0.00
7,600.0	90.00	180.86	6,409.0	-967.3	-432.1	1,009.4	0.00	0.00	0.00
7,700.0	90.00	180.86	6,409.0	-1,067.3	-433.6	1,109.0	0.00	0.00	0.00
7,800.0	90.00	180.86	6,409.0	-1,167.2	-435.1	1,208.5	0.00	0.00	0.00
7,900.0	90.00	180.86	6,409.0	-1,267.2	-436.6	1,308.0	0.00	0.00	0.00
8,000.0	90.00	180.86	6,409.0	-1,367.2	-438.1	1,407.6	0.00	0.00	0.00
8,100.0	90.00	180.86	6,409.0	-1,467.2	-439.6	1,507.1	0.00	0.00	0.00
8,200.0	90.00	180.86	6,409.0	-1,567.2	-441.1	1,606.6	0.00	0.00	0.00
8,300.0	90.00	180.86	6,409.0	-1,667.2	-442.6	1,706.2	0.00	0.00	0.00
8,400.0	90.00	180.86	6,409.0	-1,767.2	-444.1	1,805.7	0.00	0.00	0.00
8,500.0	90.00	180.86	6,409.0	-1,867.2	-445.6	1,905.2	0.00	0.00	0.00
8,600.0	90.00	180.86	6,409.0	-1,967.2	-447.1	2,004.8	0.00	0.00	0.00
8,700.0	90.00	180.86	6,409.0	-2,067.1	-448.6	2,104.3	0.00	0.00	0.00
8,800.0	90.00	180.86	6,409.0	-2,167.1	-450.1	2,203.8	0.00	0.00	0.00
8,900.0	90.00	180.86	6,409.0	-2,267.1	-451.6	2,303.3	0.00	0.00	0.00
9,000.0	90.00	180.86	6,409.0	-2,367.1	-453.1	2,402.9	0.00	0.00	0.00
9,100.0	90.00	180.86	6,409.0	-2,467.1	-454.6	2,502.4	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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)
9,200.0	90.00	180.86	6,409.0	-2,567.1	-456.1	2,601.9	0.00	0.00	0.00
9,300.0	90.00	180.86	6,409.0	-2,667.1	-457.6	2,701.5	0.00	0.00	0.00
9,400.0	90.00	180.86	6,409.0	-2,767.1	-459.1	2,801.0	0.00	0.00	0.00
9,500.0	90.00	180.86	6,409.0	-2,867.1	-460.6	2,900.5	0.00	0.00	0.00
9,600.0	90.00	180.86	6,409.0	-2,967.0	-462.1	3,000.1	0.00	0.00	0.00
9,700.0	90.00	180.86	6,409.0	-3,067.0	-463.6	3,099.6	0.00	0.00	0.00
9,800.0	90.00	180.86	6,409.0	-3,167.0	-465.1	3,199.1	0.00	0.00	0.00
9,900.0	90.00	180.86	6,409.0	-3,267.0	-466.6	3,298.7	0.00	0.00	0.00
10,000.0	90.00	180.86	6,409.0	-3,367.0	-468.1	3,398.2	0.00	0.00	0.00
10,100.0	90.00	180.86	6,409.0	-3,467.0	-469.6	3,497.7	0.00	0.00	0.00
10,200.0	90.00	180.86	6,409.0	-3,567.0	-471.1	3,597.3	0.00	0.00	0.00
10,300.0	90.00	180.86	6,409.0	-3,667.0	-472.6	3,696.8	0.00	0.00	0.00
10,400.0	90.00	180.86	6,409.0	-3,767.0	-474.2	3,796.3	0.00	0.00	0.00
10,500.0	90.00	180.86	6,409.0	-3,866.9	-475.7	3,895.9	0.00	0.00	0.00
10,600.0	90.00	180.86	6,409.0	-3,966.9	-477.2	3,995.4	0.00	0.00	0.00
10,700.0	90.00	180.86	6,409.0	-4,066.9	-478.7	4,094.9	0.00	0.00	0.00
10,800.0	90.00	180.86	6,409.0	-4,166.9	-480.2	4,194.5	0.00	0.00	0.00
10,900.0	90.00	180.86	6,409.0	-4,266.9	-481.7	4,294.0	0.00	0.00	0.00
10,928.3	90.00	180.86	6,409.0	-4,295.2	-482.1	4,322.2	0.00	0.00	0.00
BHL 470'FSL & 1274'FEL									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
BHL 470'FSL & 1274'I - plan hits target center - Point	0.00	0.00	6,409.0	-4,295.2	-482.1	1,377,730.14	3,317,248.88	40.364680	-104.361470
SHL 460'FNL & 839'F - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,382,031.01	3,317,675.69	40.376470	-104.359740
T1 531'FNL & 1261'FI - plan misses target center by 9.1ft at 6720.6ft MD (6400.2 TVD, -88.5 N, -418.9 E) - Point	0.00	0.00	6,409.0	-87.4	-420.7	1,381,938.18	3,317,256.15	40.376230	-104.361250

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,816.4	6,409.0	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
200.0	200.0	0.0	0.0	KOP #1
5,898.3	5,862.3	433.6	-411.0	KOP #2
6,816.4	6,409.0	-183.8	-420.3	End of Build

ENSIGN Directional

BONANZA CREEK ENERGY OPERATING

SEC.30-T5N-R62W
State Antelope P-30 Pad Sec.30-T5N-R62W
State Antelope P-T-30HNB

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

Anticollision Report

29 October, 2013

ENSIGN Directional

Anticollision Report

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	**Error Surface:**	Elliptical Conic

Warning Levels Evaluated at: 2.00 **Sigma**

Survey Tool Program **Date** 10/29/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	10,927.4	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	343.0	346.2	15.6	14.5	14.915	CC, ES
State Antelope 41-44-30HNB (Exist.) - Wellbore #1 - We	10,900.0	10,863.0	654.6	492.8	4.045	SF
State Antelope P-30 Pad Sec.30-T5N-R62W						
State Antelope P41-T44-30HNB - Wellbore #1 - Plan #1	200.0	200.0	21.9	21.2	32.417	CC
State Antelope P41-T44-30HNB - Wellbore #1 - Plan #1	300.0	300.0	21.9	20.8	19.688	ES
State Antelope P41-T44-30HNB - Wellbore #1 - Plan #1	10,928.3	10,927.0	317.7	146.7	1.858	SF
State Antelope U41-Y44-30HNB - Wellbore #1 - Plan #1	200.0	200.0	40.1	39.4	59.431	CC
State Antelope U41-Y44-30HNB - Wellbore #1 - Plan #1	300.0	300.0	40.1	39.0	36.015	ES
State Antelope U41-Y44-30HNB - Wellbore #1 - Plan #1	10,928.3	10,969.3	955.9	784.7	5.585	SF
State Antelope U-Y-30HNB - Wellbore #1 - Plan #1 (10-2	200.0	200.0	61.9	61.3	91.842	CC, ES
State Antelope U-Y-30HNB - Wellbore #1 - Plan #1 (10-2	700.0	684.8	101.8	98.8	33.832	SF

Offset Design 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	3.0	3.0	0.0	0.0	180.00	-18.2	0.0	18.2	18.2	0.00	4,987.917	
100.0	100.0	103.1	103.1	0.1	0.1	179.57	-17.9	0.1	17.9	17.7	0.23	77.513	
200.0	200.0	203.2	203.2	0.3	0.2	178.23	-17.0	0.5	17.0	16.5	0.57	29.821	
300.0	300.0	303.3	303.2	0.6	0.3	-100.65	-15.5	1.2	15.8	14.9	0.90	17.605	
343.0	343.0	346.2	346.2	0.6	0.4	-109.12	-14.7	1.5	15.6	14.5	1.04	14.915	CC, ES
400.0	399.8	403.1	403.1	0.8	0.5	-123.88	-13.5	2.1	16.2	15.0	1.24	13.078	
500.0	499.5	502.7	502.6	1.0	0.6	-149.58	-10.8	3.2	21.4	19.8	1.60	13.361	
600.0	599.1	601.9	601.7	1.3	0.8	176.18	-7.9	4.9	30.3	28.3	2.03	14.942	
700.0	698.6	701.4	701.2	1.5	1.0	157.23	-5.4	7.1	41.3	38.8	2.45	16.832	
800.0	797.9	801.0	800.8	1.8	1.2	153.91	-4.7	8.0	52.4	49.5	2.87	18.262	
900.0	897.2	900.4	900.2	2.1	1.4	159.03	-4.9	7.9	63.7	60.4	3.29	19.382	
1,000.0	996.4	999.4	999.2	2.4	1.6	163.15	-5.9	7.5	75.4	71.7	3.72	20.304	
1,100.0	1,095.6	1,099.2	1,098.9	2.7	1.8	165.78	-6.3	7.3	87.3	83.1	4.15	21.017	
1,200.0	1,194.9	1,199.8	1,199.5	3.0	2.0	166.31	-4.0	7.7	98.3	93.7	4.60	21.360	
1,300.0	1,294.1	1,300.3	1,299.9	3.3	2.2	164.99	1.8	8.9	107.9	102.8	5.06	21.312	
1,400.0	1,393.4	1,399.5	1,398.7	3.6	2.5	162.06	10.7	11.8	117.4	111.8	5.54	21.170	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,500.0	1,492.6	1,498.8	1,497.0	3.9	2.7	157.97	22.7	16.6	127.4	121.3	6.07	20.982	
1,600.0	1,591.9	1,597.8	1,594.9	4.3	3.0	153.67	36.4	22.2	138.0	131.4	6.63	20.806	
1,700.0	1,691.1	1,696.6	1,692.6	4.6	3.3	149.93	50.3	27.9	149.3	142.1	7.22	20.689	
1,800.0	1,790.4	1,795.1	1,790.0	4.9	3.6	146.67	64.3	33.8	161.3	153.5	7.80	20.667	
1,900.0	1,889.6	1,893.5	1,887.2	5.2	3.9	144.07	77.6	39.7	174.0	165.6	8.39	20.750	
2,000.0	1,988.9	1,991.0	1,983.8	5.5	4.2	142.15	89.7	46.0	187.5	178.6	8.95	20.958	
2,100.0	2,088.1	2,090.5	2,082.3	5.8	4.5	140.43	102.1	52.6	201.5	191.9	9.53	21.131	
2,200.0	2,187.4	2,190.8	2,181.4	6.2	4.8	138.56	116.0	58.9	215.1	205.0	10.13	21.227	
2,300.0	2,286.6	2,290.8	2,280.4	6.5	5.1	137.12	129.2	64.5	228.2	217.5	10.72	21.279	
2,400.0	2,385.9	2,389.3	2,377.9	6.8	5.4	135.93	141.9	69.8	241.4	230.1	11.31	21.347	
2,500.0	2,485.1	2,486.4	2,474.1	7.1	5.7	134.84	154.5	75.6	255.1	243.2	11.90	21.447	
2,600.0	2,584.3	2,585.9	2,572.4	7.4	6.1	133.72	168.0	81.8	269.2	256.7	12.50	21.532	
2,700.0	2,683.6	2,684.6	2,669.9	7.7	6.4	132.54	182.2	87.9	283.3	270.2	13.12	21.589	
2,800.0	2,782.8	2,782.4	2,766.3	8.1	6.7	131.31	197.1	94.1	297.7	283.9	13.75	21.653	
2,900.0	2,882.1	2,879.4	2,861.9	8.4	7.1	130.12	212.4	100.7	312.7	298.3	14.38	21.750	
3,000.0	2,981.3	2,976.5	2,957.7	8.7	7.4	129.19	226.9	107.9	328.3	313.3	14.99	21.904	
3,100.0	3,080.6	3,073.4	3,053.3	9.0	7.7	128.55	240.1	115.5	344.5	328.9	15.58	22.109	
3,200.0	3,179.8	3,173.2	3,152.0	9.3	8.1	128.08	252.9	123.8	361.0	344.8	16.17	22.327	
3,300.0	3,279.1	3,277.2	3,254.9	9.7	8.4	127.80	265.2	131.3	376.5	359.7	16.76	22.466	
3,400.0	3,378.3	3,382.8	3,359.5	10.0	8.7	127.45	278.1	137.3	390.3	373.0	17.35	22.497	
3,500.0	3,477.6	3,481.9	3,457.7	10.3	9.0	126.97	291.5	141.9	403.4	385.4	17.95	22.473	
3,600.0	3,576.8	3,579.4	3,554.0	10.6	9.4	126.30	306.2	146.5	416.6	398.1	18.57	22.433	
3,700.0	3,676.1	3,676.9	3,649.8	10.9	9.7	125.34	323.3	151.2	430.4	411.2	19.22	22.392	
3,800.0	3,775.3	3,775.8	3,746.7	11.3	10.1	124.14	342.9	156.0	444.4	424.5	19.90	22.337	
3,900.0	3,874.6	3,878.4	3,846.9	11.6	10.5	122.86	364.0	160.2	458.1	437.5	20.59	22.250	
4,000.0	3,973.8	3,980.9	3,947.4	11.9	10.9	121.74	384.4	163.7	471.2	449.9	21.26	22.159	
4,100.0	4,073.0	4,077.0	4,041.8	12.2	11.3	120.93	401.9	166.9	484.0	462.1	21.89	22.109	
4,200.0	4,172.3	4,170.1	4,133.6	12.5	11.6	120.46	416.7	171.5	498.1	475.6	22.50	22.140	
4,300.0	4,271.5	4,263.0	4,225.4	12.8	11.9	120.21	430.0	177.4	513.3	490.2	23.08	22.237	
4,400.0	4,370.8	4,364.8	4,325.9	13.2	12.2	120.07	443.6	184.5	528.8	505.1	23.68	22.331	
4,500.0	4,470.0	4,462.6	4,422.7	13.5	12.6	119.97	456.4	191.0	544.0	519.8	24.26	22.421	
4,600.0	4,569.3	4,561.4	4,520.6	13.8	12.9	119.98	468.4	198.1	559.6	534.7	24.84	22.528	
4,700.0	4,668.5	4,668.6	4,626.8	14.1	13.2	120.11	480.1	205.4	574.5	549.1	25.42	22.599	
4,800.0	4,767.8	4,794.4	4,752.1	14.4	13.5	120.66	489.0	210.6	586.2	560.2	26.01	22.537	
4,900.0	4,867.0	4,912.9	4,870.6	14.8	13.7	121.55	492.6	211.7	594.0	567.4	26.53	22.390	
5,000.0	4,966.3	5,018.4	4,976.1	15.1	13.9	122.66	491.9	211.1	599.9	572.9	26.98	22.236	
5,100.0	5,065.5	5,115.6	5,073.3	15.4	14.0	123.97	488.0	210.7	605.6	578.2	27.37	22.127	
5,200.0	5,164.8	5,213.3	5,170.7	15.7	14.1	125.44	482.2	210.8	612.0	584.3	27.74	22.062	
5,300.0	5,264.3	5,311.6	5,268.8	15.9	14.1	126.82	476.3	210.9	617.5	589.4	28.05	22.011	
5,400.0	5,364.0	5,409.0	5,366.1	16.1	14.2	127.82	471.2	211.3	621.4	593.1	28.34	21.928	
5,500.0	5,464.0	5,506.2	5,463.3	16.3	14.4	128.43	467.2	211.9	623.7	595.1	28.61	21.797	
5,600.0	5,564.0	5,603.4	5,560.4	16.4	14.5	87.17	464.4	212.8	624.6	595.7	28.91	21.604	
5,700.0	5,664.0	5,700.9	5,657.8	16.6	14.6	87.36	462.4	214.2	625.9	596.7	29.22	21.417	
5,800.0	5,764.0	5,799.4	5,756.4	16.8	14.8	87.47	461.3	215.8	627.5	597.9	29.55	21.235	
5,900.0	5,864.0	5,942.4	5,898.6	16.9	14.9	-92.31	449.3	214.7	626.7	596.9	29.80	21.029	
6,000.0	5,963.3	6,071.9	6,020.9	17.0	14.7	-90.44	408.4	206.1	619.9	590.2	29.65	20.909	
6,100.0	6,059.0	6,154.4	6,094.1	16.9	14.5	-89.86	371.1	199.2	612.1	582.7	29.37	20.841	
6,200.0	6,147.4	6,242.4	6,165.6	16.8	14.2	-89.26	320.2	194.4	607.6	578.6	28.93	21.001	
6,300.0	6,225.3	6,327.1	6,227.3	16.6	13.9	-88.93	262.3	191.1	604.8	576.3	28.47	21.244	
6,400.0	6,289.9	6,435.4	6,296.1	16.4	13.6	-89.06	179.1	188.1	603.3	575.3	28.05	21.507	
6,500.0	6,338.8	6,534.7	6,342.9	16.1	13.4	-89.24	91.8	183.2	599.7	571.8	27.89	21.504	
6,600.0	6,370.5	6,632.5	6,375.5	16.0	13.3	-89.69	-0.2	178.7	596.5	568.4	28.09	21.240	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,700.0	6,396.0	6,727.4	6,392.2	15.9	13.7	-89.01	-93.5	174.8	593.9	565.2	28.68	20.707	
6,800.0	6,408.7	6,828.5	6,395.9	16.2	14.2	-88.41	-194.4	170.2	591.1	561.4	29.71	19.892	
6,894.1	6,410.3	6,903.2	6,394.2	16.8	14.7	-88.15	-269.0	167.8	589.6	558.8	30.79	19.145	
6,900.0	6,409.0	6,909.0	6,394.1	16.9	14.7	-88.26	-274.8	167.7	589.5	558.7	30.87	19.099	
7,000.0	6,409.0	6,996.9	6,393.9	17.8	15.2	-88.25	-362.6	167.8	591.1	558.9	32.22	18.346	
7,100.0	6,409.0	7,081.5	6,396.1	18.9	15.9	-88.47	-447.2	169.5	594.6	560.7	33.92	17.527	
7,200.0	6,409.0	7,168.9	6,398.2	20.1	16.8	-88.68	-534.5	173.4	600.5	564.5	36.06	16.655	
7,300.0	6,409.0	7,261.9	6,398.1	21.4	17.9	-88.68	-627.3	178.9	607.9	569.4	38.45	15.808	
7,400.0	6,409.0	7,355.6	6,398.9	22.8	19.1	-88.78	-720.8	185.1	616.1	575.1	40.97	15.036	
7,500.0	6,409.0	7,457.2	6,397.8	24.2	20.5	-88.69	-822.1	193.1	625.4	581.6	43.82	14.274	
7,600.0	6,409.0	7,568.2	6,397.0	25.7	21.9	-88.64	-932.9	199.4	632.6	585.8	46.79	13.520	
7,700.0	6,409.0	7,674.8	6,396.7	27.3	23.5	-88.63	-1,039.4	205.0	639.3	589.4	49.93	12.804	
7,800.0	6,409.0	7,819.9	6,396.5	28.9	25.6	-88.62	-1,184.3	209.1	644.6	591.0	53.61	12.024	
7,900.0	6,409.0	7,929.9	6,398.3	30.5	27.1	-88.77	-1,294.3	204.2	641.5	584.7	56.82	11.290	
8,000.0	6,409.0	8,017.8	6,401.1	32.2	28.5	-89.03	-1,382.1	201.4	639.7	579.8	59.90	10.680	
8,027.3	6,409.0	8,039.9	6,401.3	32.6	28.8	-89.04	-1,404.2	201.0	639.6	578.9	60.74	10.531	
8,100.0	6,409.0	8,095.9	6,400.5	33.9	29.8	-88.97	-1,460.1	200.8	640.5	577.6	62.91	10.181	
8,200.0	6,409.0	8,243.7	6,400.4	35.6	32.0	-88.96	-1,607.7	198.5	640.9	574.0	66.92	9.578	
8,300.0	6,409.0	8,332.2	6,401.5	37.3	33.5	-89.06	-1,696.2	193.5	636.9	566.7	70.12	9.083	
8,400.0	6,409.0	8,423.1	6,401.8	39.1	35.0	-89.08	-1,787.0	189.8	634.3	560.9	73.44	8.638	
8,500.0	6,409.0	8,513.9	6,400.8	40.8	36.6	-88.99	-1,877.7	187.7	633.5	556.7	76.77	8.252	
8,600.0	6,409.0	8,647.7	6,397.3	42.6	38.7	-88.67	-2,011.4	183.2	632.0	551.3	80.76	7.826	
8,700.0	6,409.0	8,747.1	6,397.4	44.4	40.4	-88.66	-2,110.5	176.2	626.4	542.3	84.18	7.441	
8,800.0	6,409.0	8,835.9	6,397.3	46.2	41.8	-88.65	-2,199.2	170.9	622.0	534.6	87.47	7.111	
8,900.0	6,409.0	8,920.2	6,397.3	48.0	43.3	-88.64	-2,283.4	167.5	619.5	528.7	90.75	6.826	
9,000.0	6,409.0	9,013.9	6,397.3	49.8	44.9	-88.64	-2,377.1	165.5	618.9	524.7	94.20	6.570	
9,010.1	6,409.0	9,023.3	6,397.2	50.0	45.1	-88.63	-2,386.5	165.4	618.9	524.3	94.55	6.546	
9,100.0	6,409.0	9,099.0	6,396.7	51.6	46.4	-88.58	-2,462.2	165.1	619.9	522.4	97.50	6.358	
9,200.0	6,409.0	9,185.3	6,397.2	53.5	47.9	-88.63	-2,548.5	166.9	623.5	522.6	100.85	6.182	
9,300.0	6,409.0	9,278.5	6,397.0	55.3	49.6	-88.63	-2,641.5	170.2	628.6	524.2	104.38	6.022	
9,400.0	6,409.0	9,372.5	6,397.8	57.1	51.1	-88.72	-2,735.5	174.3	634.4	526.6	107.79	5.885	
9,500.0	6,409.0	9,470.0	6,399.5	59.0	52.9	-88.88	-2,832.8	180.3	642.0	530.6	111.37	5.764	
9,600.0	6,409.0	9,581.8	6,400.0	60.8	54.8	-88.94	-2,944.5	183.9	646.5	531.4	115.16	5.614	
9,700.0	6,409.0	9,701.9	6,399.9	62.7	56.8	-88.93	-3,064.6	187.0	650.7	531.7	119.07	5.465	
9,800.0	6,409.0	9,798.0	6,398.3	64.5	58.5	-88.80	-3,160.7	187.0	652.3	529.7	122.59	5.321	
9,900.0	6,409.0	9,897.0	6,399.4	66.4	60.2	-88.89	-3,259.7	187.9	654.7	528.6	126.14	5.190	
10,000.0	6,409.0	10,007.9	6,401.2	68.3	62.1	-89.06	-3,370.5	188.5	656.8	526.8	129.95	5.054	
10,100.0	6,409.0	10,119.7	6,400.3	70.1	64.1	-88.98	-3,482.3	186.5	656.4	522.6	133.81	4.905	
10,200.0	6,409.0	10,230.4	6,399.7	72.0	65.9	-88.92	-3,592.9	182.9	654.7	517.2	137.53	4.761	
10,300.0	6,409.0	10,317.4	6,401.8	73.9	67.5	-89.10	-3,679.9	180.1	653.0	512.1	140.93	4.633	
10,400.0	6,409.0	10,423.2	6,402.8	75.7	69.4	-89.20	-3,785.7	178.4	652.9	508.2	144.71	4.512	
10,500.0	6,409.0	10,516.6	6,402.7	77.6	71.0	-89.19	-3,879.1	176.2	652.0	503.8	148.22	4.399	
10,532.3	6,409.0	10,546.6	6,402.3	78.2	71.5	-89.14	-3,909.0	175.7	651.9	502.6	149.37	4.365	
10,600.0	6,409.0	10,599.5	6,401.3	79.5	72.5	-89.06	-3,961.9	175.4	652.6	501.0	151.58	4.305	
10,700.0	6,409.0	10,714.8	6,403.5	81.4	74.5	-89.25	-4,077.2	175.9	654.7	499.2	155.47	4.211	
10,800.0	6,409.0	10,818.6	6,401.4	83.2	76.3	-89.07	-4,180.8	172.4	652.8	493.6	159.19	4.101	
10,842.1	6,409.0	10,860.9	6,400.5	84.0	77.0	-88.99	-4,223.2	171.6	652.6	491.9	160.71	4.061	
10,900.0	6,409.0	10,863.0	6,400.4	85.1	77.1	-88.98	-4,225.2	171.5	654.6	492.8	161.83	4.045	SF
10,928.3	6,409.0	10,863.0	6,400.4	85.6	77.1	-88.98	-4,225.2	171.5	657.4	495.2	162.26	4.052	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	21.9	0.0	21.9				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	21.9	0.0	21.9	21.6	0.22	97.251	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.67	32.417	CC
227.7	227.7	227.7	227.7	0.4	0.4	90.35	21.9	0.0	21.9	21.1	0.80	27.464	
300.0	300.0	300.0	300.0	0.6	0.6	94.56	21.9	0.0	21.9	20.8	1.11	19.688	ES
400.0	399.8	399.8	399.8	0.8	0.8	107.67	21.9	0.0	22.9	21.4	1.56	14.694	
500.0	499.5	499.7	499.7	1.0	1.0	121.19	22.5	-1.6	26.3	24.2	2.02	13.006	
600.0	599.1	599.9	599.7	1.3	1.2	105.35	24.2	-6.5	28.4	25.9	2.48	11.466	
700.0	698.6	700.0	699.5	1.5	1.5	91.81	27.1	-14.3	27.0	24.0	2.97	9.089	
800.0	797.9	799.0	798.2	1.8	1.7	91.27	31.5	-21.5	24.8	21.3	3.46	7.164	
819.9	817.6	818.7	817.8	1.9	1.8	92.89	32.7	-22.8	24.7	21.2	3.56	6.941	
900.0	897.2	898.2	896.9	2.1	1.9	98.17	38.8	-26.9	25.9	21.9	3.97	6.518	
1,000.0	996.4	997.2	995.3	2.4	2.2	101.13	49.0	-30.5	30.3	25.8	4.51	6.724	
1,100.0	1,095.6	1,096.7	1,094.0	2.7	2.5	101.37	61.4	-32.6	37.1	32.0	5.09	7.295	
1,200.0	1,194.9	1,196.4	1,192.9	3.0	2.7	101.46	73.9	-34.7	44.0	38.3	5.68	7.755	
1,300.0	1,294.1	1,296.2	1,291.9	3.3	3.0	101.52	86.4	-36.8	50.9	44.6	6.27	8.117	
1,400.0	1,393.4	1,396.0	1,390.8	3.6	3.3	101.56	99.0	-39.0	57.8	50.9	6.88	8.410	
1,500.0	1,492.6	1,495.7	1,489.8	3.9	3.6	101.60	111.5	-41.1	64.7	57.2	7.48	8.650	
1,600.0	1,591.9	1,595.5	1,588.7	4.3	3.9	101.63	124.1	-43.2	71.6	63.5	8.09	8.850	
1,700.0	1,691.1	1,695.3	1,687.7	4.6	4.2	101.65	136.6	-45.3	78.5	69.8	8.71	9.019	
1,800.0	1,790.4	1,795.0	1,786.6	4.9	4.5	101.67	149.1	-47.4	85.4	76.1	9.32	9.163	
1,900.0	1,889.6	1,894.8	1,885.6	5.2	4.9	101.69	161.7	-49.5	92.3	82.4	9.94	9.288	
2,000.0	1,988.9	1,994.5	1,984.5	5.5	5.2	101.71	174.2	-51.6	99.3	88.7	10.56	9.397	
2,100.0	2,088.1	2,094.3	2,083.5	5.8	5.5	101.72	186.8	-53.7	106.2	95.0	11.18	9.493	
2,200.0	2,187.4	2,194.1	2,182.4	6.2	5.8	101.73	199.3	-55.8	113.1	101.3	11.80	9.578	
2,300.0	2,286.6	2,293.8	2,281.4	6.5	6.1	101.74	211.8	-57.9	120.0	107.5	12.43	9.654	
2,400.0	2,385.9	2,393.6	2,380.3	6.8	6.4	101.75	224.4	-60.0	126.9	113.8	13.05	9.722	
2,500.0	2,485.1	2,493.3	2,479.3	7.1	6.7	101.76	236.9	-62.1	133.8	120.1	13.67	9.783	
2,600.0	2,584.3	2,593.1	2,578.2	7.4	7.1	101.77	249.5	-64.2	140.7	126.4	14.30	9.839	
2,700.0	2,683.6	2,692.9	2,677.2	7.7	7.4	101.77	262.0	-66.3	147.6	132.7	14.92	9.889	
2,800.0	2,782.8	2,792.6	2,776.1	8.1	7.7	101.78	274.6	-68.5	154.5	138.9	15.55	9.936	
2,900.0	2,882.1	2,892.4	2,875.1	8.4	8.0	101.78	287.1	-70.6	161.4	145.2	16.18	9.978	
3,000.0	2,981.3	2,992.2	2,974.0	8.7	8.3	101.79	299.6	-72.7	168.3	151.5	16.80	10.017	
3,100.0	3,080.6	3,091.9	3,072.9	9.0	8.7	101.79	312.2	-74.8	175.2	157.8	17.43	10.053	
3,200.0	3,179.8	3,191.7	3,171.9	9.3	9.0	101.80	324.7	-76.9	182.1	164.1	18.06	10.086	
3,300.0	3,279.1	3,291.4	3,270.8	9.7	9.3	101.80	337.3	-79.0	189.0	170.3	18.68	10.118	
3,400.0	3,378.3	3,391.2	3,369.8	10.0	9.6	101.81	349.8	-81.1	195.9	176.6	19.31	10.146	
3,500.0	3,477.6	3,491.0	3,468.7	10.3	9.9	101.81	362.3	-83.2	202.8	182.9	19.94	10.173	
3,600.0	3,576.8	3,590.7	3,567.7	10.6	10.3	101.81	374.9	-85.3	209.7	189.2	20.57	10.199	
3,700.0	3,676.1	3,690.5	3,666.6	10.9	10.6	101.81	387.4	-87.4	216.6	195.4	21.19	10.222	
3,800.0	3,775.3	3,790.2	3,765.6	11.3	10.9	101.82	400.0	-89.5	223.5	201.7	21.82	10.245	
3,900.0	3,874.6	3,890.0	3,864.5	11.6	11.2	101.82	412.5	-91.6	230.5	208.0	22.45	10.265	
4,000.0	3,973.8	3,990.6	3,964.3	11.9	11.5	101.86	425.0	-93.7	237.3	214.2	23.07	10.287	
4,100.0	4,073.0	4,093.3	4,066.5	12.2	11.8	102.50	435.1	-95.4	243.3	219.6	23.62	10.301	
4,200.0	4,172.3	4,195.8	4,168.8	12.5	12.0	103.92	441.5	-96.5	248.1	224.0	24.12	10.287	
4,300.0	4,271.5	4,297.9	4,270.8	12.8	12.1	106.07	444.3	-97.0	252.1	227.6	24.58	10.259	
4,400.0	4,370.8	4,397.8	4,370.8	13.2	12.3	108.67	444.5	-97.0	255.9	230.9	24.99	10.237	
4,500.0	4,470.0	4,497.1	4,470.0	13.5	12.5	111.21	444.5	-97.0	260.1	234.7	25.41	10.237	
4,600.0	4,569.3	4,596.3	4,569.3	13.8	12.6	113.67	444.5	-97.0	264.8	239.0	25.80	10.262	
4,700.0	4,668.5	4,695.6	4,668.5	14.1	12.8	116.04	444.5	-97.0	270.0	243.8	26.19	10.309	
4,800.0	4,767.8	4,794.8	4,767.8	14.4	13.0	118.31	444.5	-97.0	275.6	249.0	26.56	10.377	
4,900.0	4,867.0	4,894.1	4,867.0	14.8	13.1	120.50	444.5	-97.0	281.6	254.7	26.92	10.463	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,966.3	4,993.3	4,966.3	15.1	13.3	122.59	444.5	-97.0	288.1	260.8	27.27	10.564	
5,100.0	5,065.5	5,092.6	5,065.5	15.4	13.5	124.58	444.5	-97.0	294.9	267.3	27.62	10.677	
5,200.0	5,164.8	5,191.8	5,164.8	15.7	13.7	126.50	444.5	-97.0	302.0	274.1	27.96	10.803	
5,300.0	5,264.3	5,291.3	5,264.3	15.9	13.9	128.08	444.5	-97.0	308.1	279.8	28.26	10.904	
5,400.0	5,364.0	5,391.1	5,364.0	16.1	14.0	129.08	444.5	-97.0	312.1	283.6	28.56	10.930	
5,500.0	5,464.0	5,491.0	5,464.0	16.3	14.2	129.53	444.5	-97.0	314.0	285.2	28.86	10.880	
5,600.0	5,564.0	5,591.0	5,564.0	16.4	14.4	88.02	444.5	-97.0	314.2	284.9	29.26	10.737	
5,700.0	5,664.0	5,691.0	5,664.0	16.6	14.6	88.02	444.5	-97.0	314.2	284.6	29.62	10.606	
5,800.0	5,764.0	5,791.0	5,764.0	16.8	14.8	88.02	444.5	-97.0	314.2	284.2	29.99	10.478	
5,900.0	5,864.0	5,891.1	5,864.0	16.9	15.0	-92.84	444.5	-97.0	314.2	283.9	30.29	10.372	
6,000.0	5,963.3	5,994.1	5,966.4	17.0	15.0	-92.79	434.0	-97.1	314.2	283.7	30.43	10.323	
6,100.0	6,059.0	6,097.0	6,064.5	16.9	15.0	-92.63	403.6	-97.6	314.2	283.9	30.28	10.376	
6,200.0	6,147.4	6,199.6	6,154.6	16.8	14.8	-92.37	354.7	-98.3	314.1	284.2	29.91	10.504	
6,300.0	6,225.3	6,302.0	6,233.1	16.6	14.6	-92.02	289.4	-99.2	314.1	284.7	29.46	10.663	
6,400.0	6,289.9	6,403.8	6,297.1	16.4	14.4	-91.59	210.3	-100.3	314.1	285.0	29.10	10.795	
6,407.9	6,294.4	6,411.9	6,301.5	16.3	14.4	-91.56	203.6	-100.4	314.1	285.0	29.08	10.800	
6,500.0	6,338.8	6,505.2	6,344.3	16.1	14.4	-91.11	120.8	-101.6	314.1	285.1	28.98	10.838	
6,600.0	6,370.5	6,605.8	6,374.4	16.0	14.5	-90.74	24.9	-103.0	314.2	284.9	29.25	10.742	
6,700.0	6,396.0	6,706.1	6,399.2	15.9	14.9	-90.59	-72.2	-104.4	314.2	284.3	29.96	10.490	
6,800.0	6,408.7	6,806.4	6,409.0	16.2	15.5	-90.05	-171.8	-105.8	314.3	283.2	31.07	10.117	
6,900.0	6,409.0	6,906.4	6,409.0	16.9	16.3	-90.00	-271.8	-107.2	314.4	281.8	32.58	9.649	
7,000.0	6,409.0	7,006.4	6,409.0	17.8	17.2	-90.00	-371.8	-108.6	314.5	280.0	34.45	9.127	
7,100.0	6,409.0	7,106.4	6,409.0	18.9	18.4	-90.00	-471.8	-110.0	314.5	277.9	36.63	8.587	
7,200.0	6,409.0	7,206.4	6,409.0	20.1	19.6	-90.00	-571.8	-111.5	314.6	275.6	39.06	8.054	
7,300.0	6,409.0	7,306.4	6,409.0	21.4	20.9	-90.00	-671.8	-112.9	314.7	273.0	41.71	7.545	
7,400.0	6,409.0	7,406.4	6,409.0	22.8	22.4	-90.00	-771.8	-114.3	314.8	270.2	44.52	7.070	
7,500.0	6,409.0	7,506.4	6,409.0	24.2	23.9	-90.00	-871.8	-115.7	314.9	267.4	47.48	6.631	
7,600.0	6,409.0	7,606.4	6,409.0	25.7	25.4	-90.00	-971.8	-117.2	314.9	264.4	50.56	6.229	
7,700.0	6,409.0	7,706.4	6,409.0	27.3	27.0	-90.00	-1,071.7	-118.6	315.0	261.3	53.74	5.862	
7,800.0	6,409.0	7,806.4	6,409.0	28.9	28.7	-90.00	-1,171.7	-120.0	315.1	258.1	56.99	5.529	
7,900.0	6,409.0	7,906.4	6,409.0	30.5	30.3	-90.00	-1,271.7	-121.4	315.2	254.9	60.31	5.226	
8,000.0	6,409.0	8,006.4	6,409.0	32.2	32.0	-90.00	-1,371.7	-122.9	315.3	251.6	63.69	4.949	
8,100.0	6,409.0	8,106.4	6,409.0	33.9	33.7	-90.00	-1,471.7	-124.3	315.3	248.2	67.12	4.698	
8,200.0	6,409.0	8,206.4	6,409.0	35.6	35.5	-90.00	-1,571.7	-125.7	315.4	244.8	70.59	4.468	
8,300.0	6,409.0	8,306.4	6,409.0	37.3	37.2	-90.00	-1,671.7	-127.1	315.5	241.4	74.10	4.258	
8,400.0	6,409.0	8,406.4	6,409.0	39.1	39.0	-90.00	-1,771.7	-128.5	315.6	237.9	77.64	4.065	
8,500.0	6,409.0	8,506.4	6,409.0	40.8	40.8	-90.00	-1,871.7	-130.0	315.7	234.5	81.20	3.887	
8,600.0	6,409.0	8,606.4	6,409.0	42.6	42.6	-90.00	-1,971.7	-131.4	315.7	230.9	84.79	3.724	
8,700.0	6,409.0	8,706.4	6,409.0	44.4	44.4	-90.00	-2,071.6	-132.8	315.8	227.4	88.40	3.573	
8,800.0	6,409.0	8,806.4	6,409.0	46.2	46.2	-90.00	-2,171.6	-134.2	315.9	223.9	92.02	3.433	
8,900.0	6,409.0	8,906.4	6,409.0	48.0	48.0	-90.00	-2,271.6	-135.7	316.0	220.3	95.67	3.303	
9,000.0	6,409.0	9,006.4	6,409.0	49.8	49.9	-90.00	-2,371.6	-137.1	316.1	216.7	99.32	3.182	
9,100.0	6,409.0	9,106.4	6,409.0	51.6	51.7	-90.00	-2,471.6	-138.5	316.1	213.1	102.99	3.070	
9,200.0	6,409.0	9,206.4	6,409.0	53.5	53.5	-90.00	-2,571.6	-139.9	316.2	209.5	106.67	2.964	
9,300.0	6,409.0	9,306.4	6,409.0	55.3	55.4	-90.00	-2,671.6	-141.4	316.3	205.9	110.36	2.866	
9,400.0	6,409.0	9,406.4	6,409.0	57.1	57.2	-90.00	-2,771.6	-142.8	316.4	202.3	114.06	2.774	
9,500.0	6,409.0	9,506.4	6,409.0	59.0	59.1	-90.00	-2,871.6	-144.2	316.5	198.7	117.77	2.687	
9,600.0	6,409.0	9,606.4	6,409.0	60.8	61.0	-90.00	-2,971.5	-145.6	316.5	195.0	121.49	2.605	
9,700.0	6,409.0	9,706.4	6,409.0	62.7	62.8	-90.00	-3,071.5	-147.0	316.6	191.4	125.21	2.529	
9,800.0	6,409.0	9,806.4	6,409.0	64.5	64.7	-90.00	-3,171.5	-148.5	316.7	187.8	128.94	2.456	
9,900.0	6,409.0	9,906.4	6,409.0	66.4	66.6	-90.00	-3,271.5	-149.9	316.8	184.1	132.68	2.388	
10,000.0	6,409.0	10,006.4	6,409.0	68.3	68.4	-90.00	-3,371.5	-151.3	316.9	180.4	136.42	2.323	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,100.0	6,409.0	10,106.4	6,409.0	70.1	70.3	-90.00	-3,471.5	-152.7	316.9	176.8	140.17	2.261	
10,200.0	6,409.0	10,206.4	6,409.0	72.0	72.2	-90.00	-3,571.5	-154.2	317.0	173.1	143.92	2.203	
10,300.0	6,409.0	10,306.4	6,409.0	73.9	74.1	-90.00	-3,671.5	-155.6	317.1	169.4	147.67	2.147	
10,400.0	6,409.0	10,406.4	6,409.0	75.7	75.9	-90.00	-3,771.5	-157.0	317.2	165.7	151.43	2.095	
10,500.0	6,409.0	10,506.4	6,409.0	77.6	77.8	-90.00	-3,871.5	-158.4	317.3	162.1	155.19	2.044	
10,600.0	6,409.0	10,606.4	6,409.0	79.5	79.7	-90.00	-3,971.4	-159.9	317.3	158.4	158.96	1.996	
10,700.0	6,409.0	10,706.4	6,409.0	81.4	81.6	-90.00	-4,071.4	-161.3	317.4	154.7	162.73	1.951	
10,800.0	6,409.0	10,806.4	6,409.0	83.2	83.5	-90.00	-4,171.4	-162.7	317.5	151.0	166.50	1.907	
10,900.0	6,409.0	10,906.4	6,409.0	85.1	85.3	-90.00	-4,271.4	-164.1	317.6	147.3	170.25	1.865	
10,909.0	6,409.0	10,915.4	6,409.0	85.3	85.5	-90.00	-4,280.4	-164.3	317.6	147.1	170.52	1.862	
10,928.3	6,409.0	10,927.0	6,409.0	85.6	85.7	-90.00	-4,292.1	-164.4	317.7	146.7	170.99	1.858	SF

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 U41-Y44-30HNB - Wellbore #1 - Plan #1 — **Offset Site Error:** 0.0 ft

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

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	40.1	0.0	40.1				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	40.1	0.0	40.1	39.8	0.22	178.293	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	40.1	0.0	40.1	39.4	0.67	59.431	CC
227.7	227.7	227.7	227.7	0.4	0.4	90.19	40.1	0.0	40.1	39.3	0.80	50.330	
300.0	300.0	300.0	300.0	0.6	0.6	92.49	40.1	0.0	40.1	39.0	1.11	36.015	ES
400.0	399.8	399.8	399.8	0.8	0.8	99.85	40.1	0.0	40.7	39.1	1.56	26.053	
500.0	499.5	499.5	499.5	1.0	1.0	110.77	40.1	0.0	42.9	40.9	2.03	21.117	
600.0	599.1	599.1	599.1	1.3	1.2	99.58	40.1	0.0	45.2	42.7	2.50	18.095	
700.0	698.6	697.0	697.0	1.5	1.5	94.17	41.1	1.3	47.9	44.9	2.95	16.213	
800.0	797.9	794.4	794.3	1.8	1.7	98.72	44.2	5.1	54.0	50.6	3.42	15.789	
900.0	897.2	891.3	890.8	2.1	1.9	108.34	49.4	11.5	65.3	61.4	3.90	16.730	
1,000.0	996.4	987.5	986.3	2.4	2.1	114.11	56.5	20.3	80.9	76.6	4.39	18.431	
1,100.0	1,095.6	1,084.9	1,082.7	2.7	2.4	117.43	65.3	31.2	99.4	94.5	4.89	20.304	
1,200.0	1,194.9	1,183.0	1,179.8	3.0	2.7	119.70	74.2	42.2	118.2	112.8	5.40	21.880	
1,300.0	1,294.1	1,281.2	1,276.9	3.3	3.0	121.35	83.1	53.2	137.1	131.2	5.92	23.169	
1,400.0	1,393.4	1,379.3	1,374.0	3.6	3.3	122.60	92.0	64.2	156.1	149.6	6.44	24.235	
1,500.0	1,492.6	1,477.4	1,471.1	3.9	3.6	123.57	100.9	75.2	175.1	168.2	6.97	25.126	
1,600.0	1,591.9	1,575.5	1,568.2	4.3	4.0	124.36	109.9	86.2	194.2	186.7	7.51	25.877	
1,700.0	1,691.1	1,673.7	1,665.3	4.6	4.3	125.00	118.8	97.2	213.4	205.3	8.05	26.521	
1,800.0	1,790.4	1,771.8	1,762.4	4.9	4.6	125.54	127.7	108.2	232.5	223.9	8.59	27.074	
1,900.0	1,889.6	1,869.9	1,859.5	5.2	4.9	125.99	136.6	119.2	251.7	242.5	9.13	27.556	
2,000.0	1,988.9	1,968.1	1,956.6	5.5	5.3	126.39	145.5	130.2	270.8	261.2	9.68	27.978	
2,100.0	2,088.1	2,066.2	2,053.7	5.8	5.6	126.73	154.4	141.2	290.0	279.8	10.23	28.350	
2,200.0	2,187.4	2,164.3	2,150.8	6.2	5.9	127.02	163.3	152.2	309.2	298.4	10.78	28.681	
2,300.0	2,286.6	2,262.4	2,247.9	6.5	6.3	127.29	172.2	163.2	328.4	317.1	11.33	28.977	
2,400.0	2,385.9	2,360.6	2,345.0	6.8	6.6	127.52	181.2	174.3	347.6	335.7	11.89	29.242	
2,500.0	2,485.1	2,458.7	2,442.1	7.1	7.0	127.73	190.1	185.3	366.8	354.4	12.44	29.482	
2,600.0	2,584.3	2,556.8	2,539.2	7.4	7.3	127.92	199.0	196.3	386.1	373.1	13.00	29.700	
2,700.0	2,683.6	2,655.0	2,636.3	7.7	7.6	128.09	207.9	207.3	405.3	391.7	13.56	29.898	
2,800.0	2,782.8	2,753.1	2,733.4	8.1	8.0	128.24	216.8	218.3	424.5	410.4	14.11	30.079	
2,900.0	2,882.1	2,851.2	2,830.5	8.4	8.3	128.39	225.7	229.3	443.7	429.1	14.67	30.245	
3,000.0	2,981.3	2,949.3	2,927.6	8.7	8.6	128.52	234.6	240.3	463.0	447.7	15.23	30.398	
3,100.0	3,080.6	3,047.5	3,024.7	9.0	9.0	128.64	243.5	251.3	482.2	466.4	15.79	30.540	
3,200.0	3,179.8	3,145.6	3,121.8	9.3	9.3	128.75	252.4	262.3	501.4	485.1	16.35	30.671	
3,300.0	3,279.1	3,243.7	3,218.9	9.7	9.7	128.85	261.4	273.3	520.6	503.7	16.91	30.792	
3,400.0	3,378.3	3,341.9	3,316.1	10.0	10.0	128.94	270.3	284.3	539.9	522.4	17.47	30.906	
3,500.0	3,477.6	3,440.0	3,413.2	10.3	10.3	129.03	279.2	295.3	559.1	541.1	18.03	31.011	
3,600.0	3,576.8	3,538.1	3,510.3	10.6	10.7	129.11	288.1	306.3	578.4	559.8	18.59	31.110	
3,700.0	3,676.1	3,636.2	3,607.4	10.9	11.0	129.19	297.0	317.3	597.6	578.4	19.15	31.203	
3,800.0	3,775.3	3,734.4	3,704.5	11.3	11.4	129.26	305.9	328.4	616.8	597.1	19.71	31.290	
3,900.0	3,874.6	3,832.5	3,801.6	11.6	11.7	129.33	314.8	339.4	636.1	615.8	20.28	31.372	
4,000.0	3,973.8	3,930.6	3,898.7	11.9	12.1	129.40	323.7	350.4	655.3	634.5	20.84	31.449	
4,100.0	4,073.0	4,028.8	3,995.8	12.2	12.4	129.46	332.6	361.4	674.6	653.2	21.40	31.521	
4,200.0	4,172.3	4,126.9	4,092.9	12.5	12.7	129.51	341.6	372.4	693.8	671.8	21.96	31.590	
4,300.0	4,271.5	4,225.0	4,190.0	12.8	13.1	129.57	350.5	383.4	713.0	690.5	22.53	31.655	
4,400.0	4,370.8	4,323.1	4,287.1	13.2	13.4	129.62	359.4	394.4	732.3	709.2	23.09	31.717	
4,500.0	4,470.0	4,421.3	4,384.2	13.5	13.8	129.67	368.3	405.4	751.5	727.9	23.65	31.775	
4,600.0	4,569.3	4,519.4	4,481.3	13.8	14.1	129.71	377.2	416.4	770.8	746.6	24.21	31.831	
4,700.0	4,668.5	4,617.5	4,578.4	14.1	14.4	129.76	386.1	427.4	790.0	765.3	24.78	31.884	
4,800.0	4,767.8	4,715.7	4,675.5	14.4	14.8	129.80	395.0	438.4	809.3	783.9	25.34	31.934	
4,900.0	4,867.0	4,813.8	4,772.6	14.8	15.1	129.84	403.9	449.4	828.5	802.6	25.91	31.982	
5,000.0	4,966.3	4,911.9	4,869.7	15.1	15.5	129.88	412.8	460.4	847.8	821.3	26.47	32.028	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 U41-Y44-30HNB - Wellbore #1 - Plan #1 — **Offset Site Error:** 0.0 ft

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

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,065.5	5,010.1	4,966.8	15.4	15.8	129.91	421.8	471.4	867.0	840.0	27.03	32.072	
5,200.0	5,164.8	5,108.2	5,063.9	15.7	16.2	129.99	430.7	482.4	886.2	858.6	27.60	32.109	
5,300.0	5,264.3	5,206.6	5,161.2	15.9	16.5	130.19	439.6	493.5	904.0	875.9	28.14	32.128	
5,400.0	5,364.0	5,305.3	5,258.9	16.1	16.8	130.19	448.6	504.6	919.6	891.0	28.64	32.110	
5,500.0	5,464.0	5,429.0	5,381.5	16.3	17.2	129.93	458.8	517.2	932.1	902.9	29.13	32.000	
5,600.0	5,564.0	5,563.7	5,515.7	16.4	17.5	88.01	466.2	526.4	939.2	909.7	29.54	31.797	
5,700.0	5,664.0	5,699.2	5,651.1	16.6	17.7	87.80	469.7	530.7	942.5	912.5	29.94	31.475	
5,800.0	5,764.0	5,812.1	5,764.0	16.8	17.9	87.79	470.0	531.0	942.7	912.4	30.30	31.109	
5,900.0	5,864.0	5,912.3	5,864.2	16.9	18.0	-93.07	470.0	531.0	942.7	912.0	30.67	30.736	
6,000.0	5,963.3	6,022.3	5,973.3	17.0	18.1	-93.01	458.0	530.9	942.7	911.9	30.82	30.590	
6,100.0	6,059.0	6,131.8	6,077.1	16.9	18.0	-92.82	423.6	530.4	942.6	912.0	30.66	30.743	
6,200.0	6,147.4	6,240.4	6,170.6	16.8	17.9	-92.52	368.9	529.8	942.6	912.3	30.30	31.109	
6,300.0	6,225.3	6,347.6	6,249.9	16.6	17.6	-92.13	297.0	528.9	942.5	912.7	29.87	31.558	
6,355.4	6,262.9	6,406.4	6,286.7	16.5	17.5	-91.87	251.1	528.4	942.5	912.8	29.67	31.770	
6,400.0	6,289.9	6,453.3	6,312.1	16.4	17.4	-91.65	211.7	527.9	942.5	913.0	29.53	31.918	
6,500.0	6,338.8	6,557.3	6,355.2	16.1	17.1	-91.12	117.3	526.8	942.6	913.1	29.45	32.011	
6,600.0	6,370.5	6,658.2	6,382.5	16.0	17.0	-90.79	20.2	525.6	942.8	913.0	29.75	31.695	
6,700.0	6,396.0	6,759.5	6,404.4	15.9	17.0	-90.55	-78.6	524.4	943.0	912.6	30.45	30.969	
6,800.0	6,408.7	6,859.8	6,409.0	16.2	17.4	-90.02	-178.7	523.2	943.3	911.7	31.59	29.865	
6,900.0	6,409.0	6,959.8	6,409.0	16.9	18.0	-90.00	-278.7	522.0	943.6	910.5	33.10	28.509	
7,000.0	6,409.0	7,059.8	6,409.0	17.8	18.9	-90.00	-378.7	520.8	943.9	908.9	34.96	27.002	
7,100.0	6,409.0	7,159.8	6,409.0	18.9	20.0	-90.00	-478.7	519.6	944.2	907.1	37.12	25.437	
7,200.0	6,409.0	7,259.8	6,409.0	20.1	21.2	-90.00	-578.7	518.4	944.5	905.0	39.54	23.889	
7,300.0	6,409.0	7,359.8	6,409.0	21.4	22.5	-90.00	-678.7	517.2	944.8	902.6	42.16	22.408	
7,400.0	6,409.0	7,459.8	6,409.0	22.8	23.8	-90.00	-778.7	516.0	945.1	900.1	44.97	21.018	
7,500.0	6,409.0	7,559.8	6,409.0	24.2	25.3	-90.00	-878.7	514.8	945.4	897.5	47.91	19.733	
7,600.0	6,409.0	7,659.8	6,409.0	25.7	26.8	-90.00	-978.7	513.6	945.7	894.7	50.97	18.553	
7,700.0	6,409.0	7,759.8	6,409.0	27.3	28.3	-90.00	-1,078.6	512.4	946.0	891.9	54.13	17.475	
7,800.0	6,409.0	7,859.8	6,409.0	28.9	29.9	-90.00	-1,178.6	511.2	946.3	888.9	57.38	16.492	
7,900.0	6,409.0	7,959.8	6,409.0	30.5	31.5	-90.00	-1,278.6	510.0	946.6	885.9	60.69	15.597	
8,000.0	6,409.0	8,059.8	6,409.0	32.2	33.2	-90.00	-1,378.6	508.8	946.9	882.8	64.06	14.781	
8,100.0	6,409.0	8,159.8	6,409.0	33.9	34.9	-90.00	-1,478.6	507.5	947.2	879.7	67.48	14.036	
8,200.0	6,409.0	8,259.8	6,409.0	35.6	36.6	-90.00	-1,578.6	506.3	947.5	876.5	70.94	13.356	
8,300.0	6,409.0	8,359.8	6,409.0	37.3	38.3	-90.00	-1,678.6	505.1	947.8	873.4	74.44	12.732	
8,400.0	6,409.0	8,459.8	6,409.0	39.1	40.0	-90.00	-1,778.6	503.9	948.1	870.1	77.97	12.159	
8,500.0	6,409.0	8,559.8	6,409.0	40.8	41.8	-90.00	-1,878.6	502.7	948.4	866.9	81.53	11.632	
8,600.0	6,409.0	8,659.8	6,409.0	42.6	43.6	-90.00	-1,978.6	501.5	948.7	863.6	85.11	11.146	
8,700.0	6,409.0	8,759.8	6,409.0	44.4	45.3	-90.00	-2,078.6	500.3	949.0	860.3	88.71	10.697	
8,800.0	6,409.0	8,859.8	6,409.0	46.2	47.1	-90.00	-2,178.6	499.1	949.3	857.0	92.34	10.281	
8,900.0	6,409.0	8,959.8	6,409.0	48.0	48.9	-90.00	-2,278.6	497.9	949.6	853.6	95.97	9.894	
9,000.0	6,409.0	9,059.8	6,409.0	49.8	50.7	-90.00	-2,378.5	496.7	949.9	850.3	99.63	9.535	
9,100.0	6,409.0	9,159.8	6,409.0	51.6	52.6	-90.00	-2,478.5	495.5	950.2	846.9	103.29	9.199	
9,200.0	6,409.0	9,259.8	6,409.0	53.5	54.4	-90.00	-2,578.5	494.3	950.5	843.5	106.97	8.886	
9,300.0	6,409.0	9,359.8	6,409.0	55.3	56.2	-90.00	-2,678.5	493.1	950.8	840.1	110.66	8.592	
9,400.0	6,409.0	9,459.8	6,409.0	57.1	58.0	-90.00	-2,778.5	491.9	951.1	836.7	114.35	8.317	
9,500.0	6,409.0	9,559.8	6,409.0	59.0	59.9	-90.00	-2,878.5	490.7	951.4	833.3	118.06	8.059	
9,600.0	6,409.0	9,659.8	6,409.0	60.8	61.7	-90.00	-2,978.5	489.5	951.7	829.9	121.77	7.815	
9,700.0	6,409.0	9,759.8	6,409.0	62.7	63.6	-90.00	-3,078.5	488.3	952.0	826.5	125.49	7.586	
9,800.0	6,409.0	9,859.8	6,409.0	64.5	65.4	-90.00	-3,178.5	487.1	952.3	823.1	129.22	7.369	
9,900.0	6,409.0	9,959.8	6,409.0	66.4	67.3	-90.00	-3,278.5	485.9	952.6	819.6	132.96	7.165	
10,000.0	6,409.0	10,059.8	6,409.0	68.3	69.1	-90.00	-3,378.5	484.7	952.9	816.2	136.69	6.971	
10,100.0	6,409.0	10,159.8	6,409.0	70.1	71.0	-90.00	-3,478.5	483.5	953.2	812.8	140.44	6.787	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 U41-Y44-30HNB - Wellbore #1 - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	6,409.0	10,259.8	6,409.0	72.0	72.9	-90.00	-3,578.5	482.3	953.5	809.3	144.19	6.613	
10,300.0	6,409.0	10,359.8	6,409.0	73.9	74.7	-90.00	-3,678.4	481.1	953.8	805.8	147.94	6.447	
10,400.0	6,409.0	10,459.8	6,409.0	75.7	76.6	-90.00	-3,778.4	479.9	954.1	802.4	151.70	6.289	
10,500.0	6,409.0	10,559.8	6,409.0	77.6	78.5	-90.00	-3,878.4	478.7	954.4	798.9	155.46	6.139	
10,600.0	6,409.0	10,659.8	6,409.0	79.5	80.4	-90.00	-3,978.4	477.5	954.7	795.5	159.22	5.996	
10,700.0	6,409.0	10,759.8	6,409.0	81.4	82.2	-90.00	-4,078.4	476.3	955.0	792.0	162.99	5.859	
10,800.0	6,409.0	10,859.8	6,409.0	83.2	84.1	-90.00	-4,178.4	475.1	955.3	788.5	166.76	5.728	
10,900.0	6,409.0	10,959.8	6,409.0	85.1	86.0	-90.00	-4,278.4	473.8	955.6	785.1	170.53	5.603	
10,928.3	6,409.0	10,969.3	6,409.0	85.6	86.2	-90.00	-4,287.9	473.7	955.9	784.7	171.15	5.585 SF	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	61.9	0.0	61.9				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	61.9	0.0	61.9	61.7	0.22	275.525	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	61.9	0.0	61.9	61.3	0.67	91.842	CC, ES
300.0	300.0	298.9	298.9	0.6	0.6	92.95	62.7	1.5	62.8	61.7	1.11	56.712	
400.0	399.8	397.2	397.0	0.8	0.8	101.16	65.0	6.1	66.3	64.8	1.56	42.555	
500.0	499.5	494.2	493.7	1.0	1.0	112.28	68.7	13.5	74.7	72.6	2.05	36.449	
600.0	599.1	590.1	588.9	1.3	1.3	100.49	73.8	23.7	87.0	84.4	2.53	34.376	
700.0	698.6	684.8	682.5	1.5	1.6	92.12	80.2	36.6	101.8	98.8	3.01	33.832	SF
800.0	797.9	780.1	776.2	1.8	1.9	92.11	88.0	52.0	119.5	116.0	3.51	34.066	
900.0	897.2	877.0	871.5	2.1	2.3	98.69	96.0	68.1	139.1	135.1	4.01	34.714	
1,000.0	996.4	974.0	966.7	2.4	2.7	103.63	104.0	84.1	160.1	155.6	4.51	35.493	
1,100.0	1,095.6	1,070.9	1,062.0	2.7	3.1	107.42	112.1	100.2	182.0	177.0	5.02	36.238	
1,200.0	1,194.9	1,167.9	1,157.3	3.0	3.5	110.39	120.1	116.3	204.5	199.0	5.54	36.906	
1,300.0	1,294.1	1,264.8	1,252.5	3.3	3.9	112.78	128.2	132.3	227.5	221.4	6.07	37.481	
1,400.0	1,393.4	1,361.7	1,347.8	3.6	4.3	114.72	136.2	148.4	250.7	244.1	6.60	37.984	
1,500.0	1,492.6	1,458.7	1,443.1	3.9	4.7	116.34	144.2	164.4	274.1	267.0	7.14	38.417	
1,600.0	1,591.9	1,555.6	1,538.3	4.3	5.1	117.70	152.3	180.5	297.8	290.1	7.68	38.791	
1,700.0	1,691.1	1,652.6	1,633.6	4.6	5.5	118.87	160.3	196.6	321.5	313.3	8.22	39.117	
1,800.0	1,790.4	1,749.5	1,728.8	4.9	5.9	119.87	168.4	212.6	345.4	336.6	8.77	39.402	
1,900.0	1,889.6	1,846.5	1,824.1	5.2	6.3	120.74	176.4	228.7	369.4	360.0	9.31	39.654	
2,000.0	1,988.9	1,943.4	1,919.4	5.5	6.7	121.51	184.4	244.7	393.4	383.5	9.87	39.876	
2,100.0	2,088.1	2,040.3	2,014.6	5.8	7.1	122.19	192.5	260.8	417.5	407.1	10.42	40.074	
2,200.0	2,187.4	2,137.3	2,109.9	6.2	7.5	122.80	200.5	276.9	441.6	430.6	10.97	40.252	
2,300.0	2,286.6	2,234.2	2,205.2	6.5	7.9	123.34	208.6	292.9	465.8	454.3	11.53	40.411	
2,400.0	2,385.9	2,331.2	2,300.4	6.8	8.3	123.83	216.6	309.0	490.0	477.9	12.08	40.556	
2,500.0	2,485.1	2,428.1	2,395.7	7.1	8.7	124.27	224.6	325.0	514.3	501.6	12.64	40.687	
2,600.0	2,584.3	2,525.1	2,491.0	7.4	9.1	124.67	232.7	341.1	538.5	525.3	13.20	40.806	
2,700.0	2,683.6	2,622.0	2,586.2	7.7	9.5	125.04	240.7	357.2	562.8	549.1	13.76	40.916	
2,800.0	2,782.8	2,718.9	2,681.5	8.1	9.9	125.38	248.8	373.2	587.2	572.8	14.32	41.016	
2,900.0	2,882.1	2,815.9	2,776.7	8.4	10.3	125.69	256.8	389.3	611.5	596.6	14.88	41.108	
3,000.0	2,981.3	2,912.8	2,872.0	8.7	10.7	125.98	264.8	405.4	635.8	620.4	15.44	41.194	
3,100.0	3,080.6	3,009.8	2,967.3	9.0	11.1	126.24	272.9	421.4	660.2	644.2	16.00	41.273	
3,200.0	3,179.8	3,106.7	3,062.5	9.3	11.5	126.49	280.9	437.5	684.6	668.0	16.56	41.346	
3,300.0	3,279.1	3,203.7	3,157.8	9.7	11.9	126.72	289.0	453.5	709.0	691.9	17.12	41.414	
3,400.0	3,378.3	3,300.6	3,253.1	10.0	12.3	126.94	297.0	469.6	733.4	715.7	17.68	41.478	
3,500.0	3,477.6	3,397.5	3,348.3	10.3	12.7	127.14	305.0	485.7	757.8	739.5	18.24	41.537	
3,600.0	3,576.8	3,494.5	3,443.6	10.6	13.1	127.33	313.1	501.7	782.2	763.4	18.81	41.593	
3,700.0	3,676.1	3,591.4	3,538.9	10.9	13.5	127.50	321.1	517.8	806.6	787.2	19.37	41.646	
3,800.0	3,775.3	3,688.4	3,634.1	11.3	13.9	127.67	329.2	533.8	831.0	811.1	19.93	41.695	
3,900.0	3,874.6	3,785.3	3,729.4	11.6	14.3	127.83	337.2	549.9	855.5	835.0	20.49	41.741	
4,000.0	3,973.8	3,882.2	3,824.7	11.9	14.7	127.98	345.2	566.0	879.9	858.9	21.06	41.785	
4,100.0	4,073.0	3,979.2	3,919.9	12.2	15.1	128.12	353.3	582.0	904.4	882.7	21.62	41.826	
4,200.0	4,172.3	4,076.1	4,015.2	12.5	15.5	128.25	361.3	598.1	928.8	906.6	22.19	41.865	
4,300.0	4,271.5	4,173.1	4,110.4	12.8	15.9	128.38	369.4	614.1	953.3	930.5	22.75	41.902	
4,400.0	4,370.8	4,270.0	4,205.7	13.2	16.3	128.50	377.4	630.2	977.7	954.4	23.31	41.937	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well State Antelope P-T-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 P-T-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 P-T-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 P-T-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 P-T-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')	Coordinates are relative to: State Antelope P-T-30HNB
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: 0.74°