

BONANZA CREEK ENERGY OPERATING

Well Name: **State Antelope J14-F11-24HNB**

Surface Location: State Antelope 14-24 Pad Sec.24-T5N-R62W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

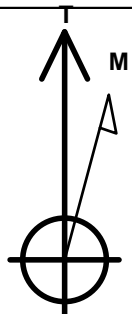
Ground Elevation: 4562.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1383320.02	3340856.93	40.379160	-104.276480	

RKB - 15' WELL @ 4577.0ft (RKB - 15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 470'FNL & 994'FWL	6100.0	4655.9	-211.7	Point
T1 470'FSL & 1008'FWL	6100.0	280.5	-236.8	Point



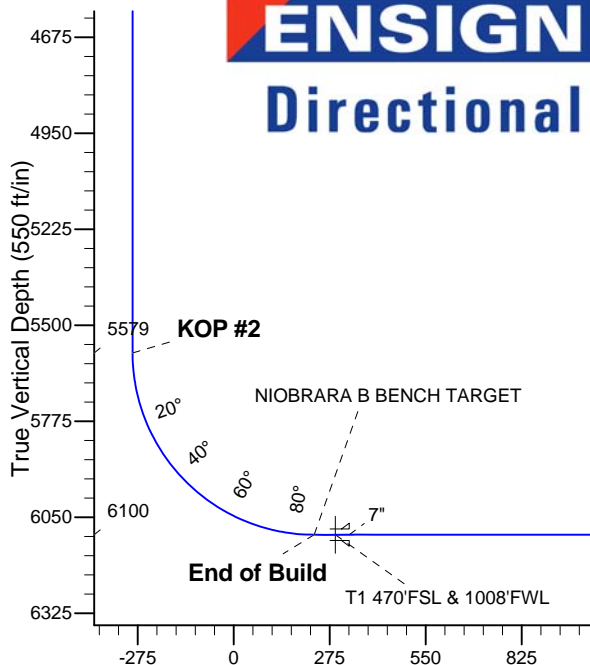
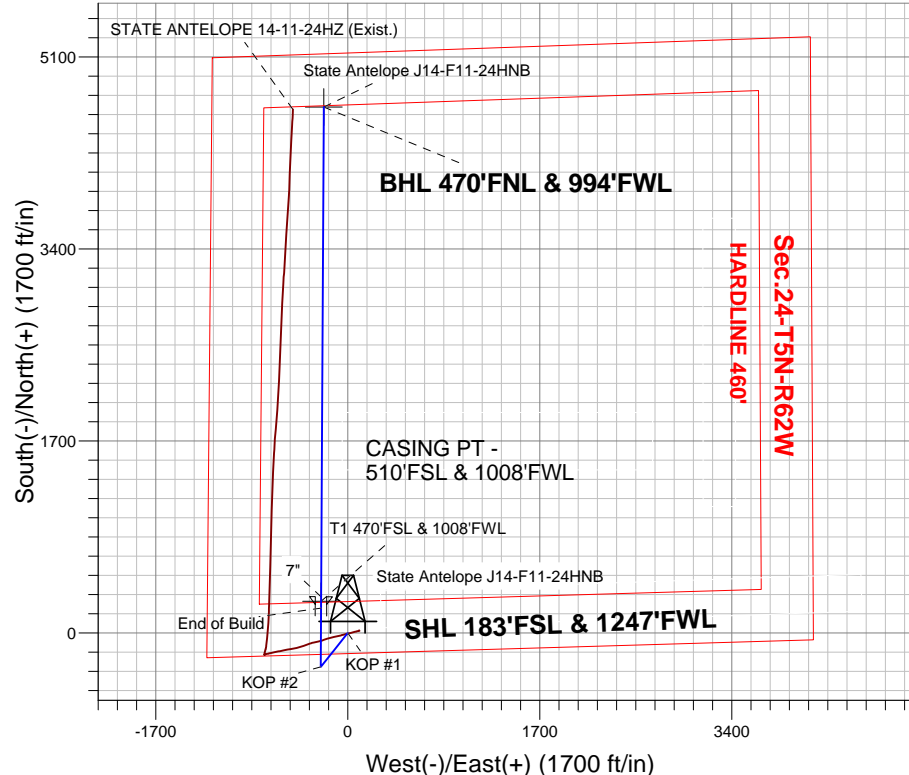
Azimuths to True North
Magnetic North: 8.41°

Magnetic Field
Strength: 53024.2srT
Dip Angle: 67.06°
Date: 11/15/2012
Model: IGRF2010

State Antelope 14-24 Pad Sec.24-T5N-R62W
State Antelope J14-F11-24HNB
Plan #1 (11-15-12)
14:30, November 15 2012

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP #1
5579.1	5606.2	KOP #2
6100.0	6424.4	End of Build



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	625.3	8.51	218.57	623.8	-24.6	-19.6	2.00	218.57	-23.7	
4	2801.7	8.51	218.57	2776.2	-276.4	-220.4	0.00	0.00	-266.1	
5	3227.1	0.00	0.00	3200.0	-301.0	-240.0	2.00	180.00	-289.8	
6	5606.2	0.00	0.00	5579.1	-301.0	-240.0	0.00	0.00	-289.8	
7	6424.4	90.00	0.30	6100.0	219.9	-237.3	11.00	0.30	230.4	
8	6525.0	90.00	0.30	6100.0	320.5	-236.8	0.00	0.00	330.9	
9	6528.7	90.00	0.33	6100.0	324.2	-236.8	1.00	90.00	334.6	
10	10860.5	90.00	0.33	6100.0	4655.9	-211.7	0.00	0.00	4660.7	BHL 470'FNL & 994'FWL

BHL 470'FNL & 994'FWL

Vertical Section at 357.40° (550 ft/in)



BONANZA CREEK ENERGY OPERATING

SEC.24-T5N-R62W

State Antelope 14-24 Pad Sec.24-T5N-R62W

State Antelope J14-F11-24HNB

Wellbore #1

Plan: Plan #1 (11-15-12)

Standard Planning Report

15 November, 2012

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope J14-F11-24HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4577.0ft (RKB - 15')
Project:	SEC.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	North Reference:	True
Well:	State Antelope J14-F11-24HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-15-12)		

Project	SEC.24-T5N-R62W		
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 14-24 Pad Sec.24-T5N-R62W											
Site Position:						Northing:			1,383,343.32 ft			Latitude:			40.379220		
From:			Lat/Long			Easting:			3,340,959.70 ft			Longitude:			-104.276110		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.79 °		

Well	State Antelope J14-F11-24HNB					
Well Position	+N-S	-21.9 ft	Northing:	1,383,320.02 ft	Latitude:	40.379160
	+E-W	-103.1 ft	Easting:	3,340,856.93 ft	Longitude:	-104.276480
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,562.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/15/2012	8.41	67.06	53,024

Design	Plan #1 (11-15-12)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	357.40

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	
625.3	8.51	218.57	623.8	-24.6	-19.6	2.00	2.00	0.00	218.57	
2,801.7	8.51	218.57	2,776.2	-276.4	-220.4	0.00	0.00	0.00	0.00	
3,227.1	0.00	0.00	3,200.0	-301.0	-240.0	2.00	-2.00	0.00	180.00	
5,606.2	0.00	0.00	5,579.1	-301.0	-240.0	0.00	0.00	0.00	0.00	
6,424.4	90.00	0.30	6,100.0	219.9	-237.3	11.00	11.00	0.00	0.30	
6,525.0	90.00	0.30	6,100.0	320.5	-236.8	0.00	0.00	0.00	0.00	
6,528.7	90.00	0.33	6,100.0	324.2	-236.8	1.00	0.00	1.00	90.00	
10,860.5	90.00	0.33	6,100.0	4,655.9	-211.7	0.00	0.00	0.00	0.00	BHL 470'FNL & 99°

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Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4577.0ft (RKB - 15')
Project:	SEC.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	North Reference:	True
Well:	State Antelope J14-F11-24HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-15-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
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	218.57	300.0	-1.4	-1.1	-1.3	2.00	2.00	0.00
400.0	4.00	218.57	399.8	-5.5	-4.4	-5.3	2.00	2.00	0.00
500.0	6.00	218.57	499.5	-12.3	-9.8	-11.8	2.00	2.00	0.00
600.0	8.00	218.57	598.7	-21.8	-17.4	-21.0	2.00	2.00	0.00
625.3	8.51	218.57	623.8	-24.6	-19.6	-23.7	2.00	2.00	0.00
700.0	8.51	218.57	697.6	-33.3	-26.5	-32.0	0.00	0.00	0.00
800.0	8.51	218.57	796.5	-44.8	-35.8	-43.2	0.00	0.00	0.00
900.0	8.51	218.57	895.4	-56.4	-45.0	-54.3	0.00	0.00	0.00
1,000.0	8.51	218.57	994.3	-68.0	-54.2	-65.4	0.00	0.00	0.00
1,100.0	8.51	218.57	1,093.2	-79.5	-63.4	-76.6	0.00	0.00	0.00
1,200.0	8.51	218.57	1,192.1	-91.1	-72.6	-87.7	0.00	0.00	0.00
1,300.0	8.51	218.57	1,291.0	-102.7	-81.9	-98.8	0.00	0.00	0.00
1,400.0	8.51	218.57	1,389.9	-114.2	-91.1	-110.0	0.00	0.00	0.00
1,500.0	8.51	218.57	1,488.8	-125.8	-100.3	-121.1	0.00	0.00	0.00
1,600.0	8.51	218.57	1,587.7	-137.4	-109.5	-132.3	0.00	0.00	0.00
1,700.0	8.51	218.57	1,686.6	-148.9	-118.8	-143.4	0.00	0.00	0.00
1,800.0	8.51	218.57	1,785.5	-160.5	-128.0	-154.5	0.00	0.00	0.00
1,900.0	8.51	218.57	1,884.4	-172.1	-137.2	-165.7	0.00	0.00	0.00
2,000.0	8.51	218.57	1,983.3	-183.6	-146.4	-176.8	0.00	0.00	0.00
2,100.0	8.51	218.57	2,082.2	-195.2	-155.6	-187.9	0.00	0.00	0.00
2,200.0	8.51	218.57	2,181.1	-206.8	-164.9	-199.1	0.00	0.00	0.00
2,300.0	8.51	218.57	2,280.0	-218.3	-174.1	-210.2	0.00	0.00	0.00
2,400.0	8.51	218.57	2,378.9	-229.9	-183.3	-221.3	0.00	0.00	0.00
2,500.0	8.51	218.57	2,477.8	-241.5	-192.5	-232.5	0.00	0.00	0.00
2,600.0	8.51	218.57	2,576.7	-253.0	-201.7	-243.6	0.00	0.00	0.00
2,700.0	8.51	218.57	2,675.6	-264.6	-211.0	-254.7	0.00	0.00	0.00
2,800.0	8.51	218.57	2,774.5	-276.2	-220.2	-265.9	0.00	0.00	0.00
2,801.7	8.51	218.57	2,776.2	-276.4	-220.4	-266.1	0.00	0.00	0.00
2,900.0	6.54	218.57	2,873.6	-286.4	-228.4	-275.7	2.00	-2.00	0.00
3,000.0	4.54	218.57	2,973.2	-294.0	-234.4	-283.0	2.00	-2.00	0.00
3,100.0	2.54	218.57	3,073.0	-298.8	-238.2	-287.7	2.00	-2.00	0.00
3,200.0	0.54	218.57	3,172.9	-300.9	-239.9	-289.7	2.00	-2.00	0.00
3,227.1	0.00	0.00	3,200.0	-301.0	-240.0	-289.8	2.00	-2.00	0.00
3,300.0	0.00	0.00	3,272.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
3,400.0	0.00	0.00	3,372.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
3,500.0	0.00	0.00	3,472.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
3,600.0	0.00	0.00	3,572.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
3,700.0	0.00	0.00	3,672.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
3,800.0	0.00	0.00	3,772.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
3,900.0	0.00	0.00	3,872.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,000.0	0.00	0.00	3,972.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,100.0	0.00	0.00	4,072.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,200.0	0.00	0.00	4,172.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,300.0	0.00	0.00	4,272.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,400.0	0.00	0.00	4,372.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,500.0	0.00	0.00	4,472.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,600.0	0.00	0.00	4,572.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,700.0	0.00	0.00	4,672.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,800.0	0.00	0.00	4,772.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
4,900.0	0.00	0.00	4,872.9	-301.0	-240.0	-289.8	0.00	0.00	0.00

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Well:	State Antelope J14-F11-24HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-15-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,000.0	0.00	0.00	4,972.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
5,100.0	0.00	0.00	5,072.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
5,200.0	0.00	0.00	5,172.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
5,300.0	0.00	0.00	5,272.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,372.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
5,500.0	0.00	0.00	5,472.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,572.9	-301.0	-240.0	-289.8	0.00	0.00	0.00
5,606.2	0.00	0.00	5,579.1	-301.0	-240.0	-289.8	0.00	0.00	0.00
KOP #2									
5,700.0	10.32	0.30	5,672.4	-292.6	-240.0	-281.4	11.00	11.00	0.00
5,800.0	21.32	0.30	5,768.5	-265.4	-239.8	-254.2	11.00	11.00	0.00
5,900.0	32.32	0.30	5,857.6	-220.3	-239.6	-209.2	11.00	11.00	0.00
6,000.0	43.32	0.30	5,936.5	-159.1	-239.3	-148.1	11.00	11.00	0.00
6,100.0	54.32	0.30	6,002.2	-83.9	-238.9	-73.0	11.00	11.00	0.00
6,200.0	65.32	0.30	6,052.4	2.4	-238.4	13.2	11.00	11.00	0.00
6,300.0	76.32	0.30	6,085.2	96.7	-238.0	107.4	11.00	11.00	0.00
6,400.0	87.32	0.30	6,099.4	195.5	-237.4	206.1	11.00	11.00	0.00
6,424.4	90.00	0.30	6,100.0	219.9	-237.3	230.4	11.00	11.00	0.00
End of Build - NIOBRARA B BENCH TARGET									
6,485.0	90.00	0.30	6,100.0	280.5	-237.0	291.0	0.00	0.00	0.00
T1 470'FSL & 1008'FWL									
6,500.0	90.00	0.30	6,100.0	295.5	-236.9	305.9	0.00	0.00	0.00
6,525.0	90.00	0.30	6,100.0	320.5	-236.8	330.9	0.00	0.00	0.00
7"									
6,528.7	90.00	0.33	6,100.0	324.2	-236.8	334.6	1.00	0.00	1.00
6,600.0	90.00	0.33	6,100.0	395.5	-236.4	405.8	0.00	0.00	0.00
6,700.0	90.00	0.33	6,100.0	495.5	-235.8	505.7	0.00	0.00	0.00
6,800.0	90.00	0.33	6,100.0	595.5	-235.2	605.6	0.00	0.00	0.00
6,900.0	90.00	0.33	6,100.0	695.5	-234.6	705.4	0.00	0.00	0.00
7,000.0	90.00	0.33	6,100.0	795.5	-234.1	805.3	0.00	0.00	0.00
7,100.0	90.00	0.33	6,100.0	895.5	-233.5	905.2	0.00	0.00	0.00
7,200.0	90.00	0.33	6,100.0	995.5	-232.9	1,005.0	0.00	0.00	0.00
7,300.0	90.00	0.33	6,100.0	1,095.5	-232.3	1,104.9	0.00	0.00	0.00
7,400.0	90.00	0.33	6,100.0	1,195.5	-231.7	1,204.8	0.00	0.00	0.00
7,500.0	90.00	0.33	6,100.0	1,295.5	-231.2	1,304.6	0.00	0.00	0.00
7,600.0	90.00	0.33	6,100.0	1,395.5	-230.6	1,404.5	0.00	0.00	0.00
7,700.0	90.00	0.33	6,100.0	1,495.5	-230.0	1,504.4	0.00	0.00	0.00
7,800.0	90.00	0.33	6,100.0	1,595.5	-229.4	1,604.2	0.00	0.00	0.00
7,900.0	90.00	0.33	6,100.0	1,695.5	-228.8	1,704.1	0.00	0.00	0.00
8,000.0	90.00	0.33	6,100.0	1,795.5	-228.3	1,804.0	0.00	0.00	0.00
8,100.0	90.00	0.33	6,100.0	1,895.5	-227.7	1,903.8	0.00	0.00	0.00
8,200.0	90.00	0.33	6,100.0	1,995.5	-227.1	2,003.7	0.00	0.00	0.00
8,300.0	90.00	0.33	6,100.0	2,095.5	-226.5	2,103.6	0.00	0.00	0.00
8,400.0	90.00	0.33	6,100.0	2,195.5	-225.9	2,203.5	0.00	0.00	0.00
8,500.0	90.00	0.33	6,100.0	2,295.5	-225.4	2,303.3	0.00	0.00	0.00
8,600.0	90.00	0.33	6,100.0	2,395.5	-224.8	2,403.2	0.00	0.00	0.00
8,700.0	90.00	0.33	6,100.0	2,495.5	-224.2	2,503.1	0.00	0.00	0.00
8,800.0	90.00	0.33	6,100.0	2,595.4	-223.6	2,602.9	0.00	0.00	0.00
8,900.0	90.00	0.33	6,100.0	2,695.4	-223.1	2,702.8	0.00	0.00	0.00
9,000.0	90.00	0.33	6,100.0	2,795.4	-222.5	2,802.7	0.00	0.00	0.00
9,100.0	90.00	0.33	6,100.0	2,895.4	-221.9	2,902.5	0.00	0.00	0.00
9,200.0	90.00	0.33	6,100.0	2,995.4	-221.3	3,002.4	0.00	0.00	0.00
9,300.0	90.00	0.33	6,100.0	3,095.4	-220.7	3,102.3	0.00	0.00	0.00

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Project:	SEC.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	North Reference:	True
Well:	State Antelope J14-F11-24HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-15-12)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,400.0	90.00	0.33	6,100.0	3,195.4	-220.2	3,202.1	0.00	0.00	0.00	
9,500.0	90.00	0.33	6,100.0	3,295.4	-219.6	3,302.0	0.00	0.00	0.00	
9,600.0	90.00	0.33	6,100.0	3,395.4	-219.0	3,401.9	0.00	0.00	0.00	
9,700.0	90.00	0.33	6,100.0	3,495.4	-218.4	3,501.7	0.00	0.00	0.00	
9,800.0	90.00	0.33	6,100.0	3,595.4	-217.8	3,601.6	0.00	0.00	0.00	
9,900.0	90.00	0.33	6,100.0	3,695.4	-217.3	3,701.5	0.00	0.00	0.00	
10,000.0	90.00	0.33	6,100.0	3,795.4	-216.7	3,801.4	0.00	0.00	0.00	
10,100.0	90.00	0.33	6,100.0	3,895.4	-216.1	3,901.2	0.00	0.00	0.00	
10,200.0	90.00	0.33	6,100.0	3,995.4	-215.5	4,001.1	0.00	0.00	0.00	
10,300.0	90.00	0.33	6,100.0	4,095.4	-214.9	4,101.0	0.00	0.00	0.00	
10,400.0	90.00	0.33	6,100.0	4,195.4	-214.4	4,200.8	0.00	0.00	0.00	
10,500.0	90.00	0.33	6,100.0	4,295.4	-213.8	4,300.7	0.00	0.00	0.00	
10,600.0	90.00	0.33	6,100.0	4,395.4	-213.2	4,400.6	0.00	0.00	0.00	
10,700.0	90.00	0.33	6,100.0	4,495.4	-212.6	4,500.4	0.00	0.00	0.00	
10,800.0	90.00	0.33	6,100.0	4,595.4	-212.1	4,600.3	0.00	0.00	0.00	
10,860.5	90.00	0.33	6,100.0	4,655.9	-211.7	4,660.7	0.00	0.00	0.00	
BHL 470'FNL & 994'FWL										

Targets										
Target Name										
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
T1 470'FSL & 1008'FV	0.00	0.00	6,100.0	280.5	-236.8	1,383,597.26	3,340,616.28	40.379930	-104.277330	
- plan misses target center by 0.2ft at 6485.0ft MD (6100.0 TVD, 280.5 N, -237.0 E)										
- Point										
BHL 470'FNL & 994'F	0.00	0.00	6,100.0	4,655.9	-211.7	1,387,972.38	3,340,581.02	40.391940	-104.277240	
- plan hits target center										
- Point										

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
6,525.0	6,100.0	7"	7	7-1/2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,424.4	6,100.0	NIORARA B BENCH TARGET		0.00		

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope J14-F11-24HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4577.0ft (RKB - 15')
Project:	SEC.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	North Reference:	True
Well:	State Antelope J14-F11-24HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-15-12)		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
200.0	200.0	0.0	0.0	KOP #1	
5,606.2	5,579.1	-301.0	-240.0	KOP #2	
6,424.4	6,100.0	219.9	-237.3	End of Build	



BONANZA CREEK ENERGY OPERATING

SEC.24-T5N-R62W

State Antelope 14-24 Pad Sec.24-T5N-R62W

State Antelope J14-F11-24HNB

Wellbore #1

Plan #1 (11-15-12)

Anticollision Report

15 November, 2012

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope J14-F11-24HNB
Project:	SEC.24-T5N-R62W	TVD Reference:	WELL @ 4577.0ft (RKB - 15')
Reference Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope J14-F11-24HNB	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 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 486-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		
2,100.0	2,082.2	2,125.8	2,105.0	6.6	5.5	160.03	-30.3	-100.7	175.3	165.1	10.19	17.210		
2,200.0	2,181.1	2,224.9	2,200.8	7.0	6.0	154.65	-35.5	-125.2	176.9	165.8	11.11	15.926		
2,300.0	2,280.0	2,326.1	2,298.7	7.4	6.5	149.24	-41.7	-150.4	179.2	167.1	12.12	14.790		
2,400.0	2,378.9	2,425.9	2,395.1	7.7	7.0	144.15	-48.9	-175.2	181.9	168.8	13.14	13.839		
2,500.0	2,477.8	2,525.6	2,491.4	8.1	7.5	139.29	-56.6	-199.7	185.5	171.3	14.18	13.081		
2,600.0	2,576.7	2,624.0	2,586.6	8.5	7.9	134.99	-64.6	-223.0	189.9	174.7	15.17	12.516		
2,700.0	2,675.6	2,720.6	2,680.4	8.8	8.4	131.28	-71.4	-245.0	196.2	180.1	16.10	12.187		
2,801.7	2,776.2	2,819.5	2,776.9	9.2	8.8	128.17	-77.1	-266.3	204.5	187.5	17.00	12.034		
2,900.0	2,873.6	2,915.9	2,871.3	9.5	9.2	125.73	-81.4	-285.1	212.7	195.0	17.76	11.976		
3,000.0	2,973.2	3,015.8	2,969.7	9.7	9.5	123.29	-85.0	-302.3	219.7	201.3	18.44	11.918		
3,100.0	3,073.0	3,117.3	3,070.0	9.9	9.9	120.78	-88.6	-317.2	224.5	205.5	19.04	11.793		
3,200.0	3,172.9	3,218.7	3,170.6	10.0	10.2	118.25	-92.3	-329.2	226.9	207.3	19.57	11.593		
3,227.1	3,200.0	3,244.8	3,196.5	10.1	10.3	-23.94	-93.3	-332.2	227.3	207.6	19.71	11.531		
3,300.0	3,272.9	3,314.9	3,266.0	10.2	10.5	-26.25	-95.7	-341.2	229.0	208.9	20.07	11.407		
3,400.0	3,372.9	3,414.1	3,363.7	10.3	10.9	-30.30	-100.5	-357.2	232.4	211.8	20.61	11.277		
3,500.0	3,472.9	3,512.5	3,459.8	10.4	11.3	-35.39	-107.9	-377.2	237.2	216.1	21.13	11.223		
3,600.0	3,572.9	3,610.0	3,554.8	10.5	11.7	-40.44	-116.1	-397.5	243.6	222.0	21.59	11.283		
3,700.0	3,672.9	3,705.8	3,648.2	10.7	12.1	-45.00	-123.6	-417.5	252.2	230.2	21.95	11.486		
3,800.0	3,772.9	3,798.3	3,738.4	10.8	12.5	-48.97	-129.4	-437.2	263.7	241.4	22.26	11.847		
3,900.0	3,872.9	3,890.8	3,828.4	11.0	13.0	-52.50	-133.8	-457.9	278.3	255.7	22.53	12.349		
4,000.0	3,972.9	3,984.2	3,919.2	11.1	13.4	-55.68	-137.2	-480.0	295.5	272.7	22.80	12.961		
4,100.0	4,072.9	4,079.2	4,011.1	11.3	13.9	-58.73	-141.0	-503.5	314.4	291.4	23.05	13.640		
4,200.0	4,172.9	4,171.6	4,100.1	11.4	14.4	-61.65	-145.7	-527.9	335.1	311.8	23.30	14.381		
4,300.0	4,272.9	4,269.2	4,193.8	11.6	14.9	-64.56	-151.3	-554.7	357.3	333.8	23.54	15.182		
4,400.0	4,372.9	4,370.8	4,291.8	11.7	15.4	-67.05	-156.6	-581.1	379.1	355.4	23.78	15.941		
4,500.0	4,472.9	4,471.3	4,389.2	11.9	15.9	-69.07	-161.3	-605.4	400.1	376.0	24.05	16.638		
4,600.0	4,572.9	4,562.2	4,477.1	12.1	16.4	-70.79	-165.8	-628.0	421.9	397.6	24.31	17.355		
4,700.0	4,672.9	4,659.7	4,571.1	12.2	16.9	-72.54	-171.1	-653.1	444.8	420.3	24.59	18.093		
4,800.0	4,772.9	4,776.2	4,684.1	12.4	17.5	-74.30	-177.0	-681.0	466.6	441.7	24.89	18.744		
4,900.0	4,872.9	4,903.9	4,809.6	12.5	17.9	-75.68	-182.7	-703.5	482.5	457.3	25.23	19.127		
5,000.0	4,972.9	5,020.1	4,924.9	12.7	18.3	-76.40	-185.5	-717.5	493.6	468.0	25.58	19.297		
5,100.0	5,072.9	5,137.0	5,041.3	12.9	18.6	-76.99	-188.3	-728.0	501.9	476.0	25.92	19.361		
5,200.0	5,172.9	5,253.9	5,158.0	13.1	18.8	-77.44	-191.0	-733.9	506.2	479.9	26.27	19.269		
5,300.0	5,272.9	5,361.7	5,265.8	13.2	19.0	-77.64	-192.3	-736.4	508.2	481.6	26.61	19.096		
5,400.0	5,372.9	5,466.0	5,370.1	13.4	19.1	-77.70	-192.5	-737.6	509.3	482.3	26.96	18.891		
5,500.0	5,472.9	5,563.9	5,468.0	13.6	19.2	-77.70	-192.5	-738.0	509.7	482.4	27.30	18.675		
5,606.2	5,579.1	5,663.6	5,566.9	13.8	19.3	-76.45	-181.1	-737.6	512.0	484.3	27.72	18.470		
5,650.0	5,622.9	5,723.6	5,625.0	13.8	19.3	-75.35	-166.6	-734.3	511.7	483.7	28.01	18.273		
5,700.0	5,672.4	5,768.3	5,667.4	13.9	19.3	-74.56	-153.0	-730.6	510.2	482.0	28.11	18.150		
5,750.0	5,721.1	5,812.9	5,708.6	13.9	19.2	-73.94	-136.5	-726.3	507.7	479.6	28.10	18.064		
5,800.0	5,768.5	5,844.4	5,736.8	13.9	19.2	-73.67	-122.9	-723.5	505.2	477.2	28.01	18.038		
5,850.0	5,814.1	5,875.0	5,763.5	13.9	19.2	-73.50	-107.9	-721.5	503.4	475.6	27.85	18.076		
5,900.0	5,857.6	5,912.9	5,795.2	13.9	19.1	-73.35	-87.3	-719.5	501.9	474.3	27.64	18.161		
5,950.0	5,898.5	5,961.0	5,833.4	13.8	19.1	-73.30	-58.3	-716.4	499.5	472.1	27.38	18.241		
6,000.0	5,936.5	5,998.1	5,861.2	13.8	19.1	-73.47	-33.8	-713.9	496.6	469.5	27.15	18.294		
6,050.0	5,971.2	6,036.3	5,888.0	13.7	19.0	-73.77	-6.7	-711.4	493.5	466.6	26.94	18.317		
6,100.0	6,002.2	6,079.2	5,915.4	13.7	19.0	-74.17	26.1	-708.5	490.1	463.3	26.80	18.288		
6,150.0	6,029.4	6,117.2	5,937.3	13.7	19.0	-74.67	57.1	-705.7	486.2	459.5	26.78	18.154		
6,200.0	6,052.4	6,151.6	5,955.0	13.6	19.0	-75.24	86.4	-703.6	482.6	455.7	26.86	17.970		
6,250.0	6,071.1	6,189.8	5,972.7	13.6	19.0	-76.01	120.2	-701.7	479.2	452.1	27.07	17.703		
6,300.0	6,085.2	6,230.0	5,989.4	13.6	19.1	-77.00	156.8	-700.1	475.8	448.4	27.43	17.346		
6,350.0	6,094.7	6,271.2	6,004.8	13.9	19.2	-78.29	194.9	-698.8	472.4	444.4	27.94	16.906		

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 J14-F11-24HNB
Project:	SEC.24-T5N-R62W	TVD Reference:	WELL @ 4577.0ft (RKB - 15')
Reference Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope J14-F11-24HNB	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 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 486-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	6,099.4	6,317.3	6,021.2	14.3	19.3	-80.14	238.1	-697.6	468.7	440.1	28.60	16.390		
6,424.4	6,100.0	6,340.4	6,029.0	14.5	19.4	-81.23	259.8	-696.9	466.8	437.8	28.95	16.121		
6,500.0	6,100.0	6,414.3	6,052.9	15.1	19.7	-84.12	329.7	-694.3	461.0	431.0	30.07	15.330		
6,525.0	6,100.0	6,435.4	6,058.6	15.3	19.8	-84.82	349.9	-693.4	459.4	429.0	30.46	15.082		
6,528.7	6,100.0	6,438.4	6,059.4	15.4	19.8	-84.92	352.9	-693.3	459.2	428.7	30.51	15.050		
6,600.0	6,100.0	6,497.9	6,071.4	16.0	20.1	-86.40	411.0	-691.4	456.2	424.5	31.64	14.418		
6,700.0	6,100.0	6,595.7	6,081.5	17.2	20.9	-87.67	508.3	-689.2	454.0	420.3	33.73	13.458		
6,800.0	6,100.0	6,697.4	6,085.1	18.5	21.7	-88.11	609.8	-686.4	451.7	415.6	36.09	12.514		
6,900.0	6,100.0	6,798.6	6,088.1	19.8	22.7	-88.48	710.9	-683.5	449.3	410.8	38.56	11.653		
7,000.0	6,100.0	6,887.8	6,089.1	21.3	23.7	-88.61	800.1	-681.2	447.3	406.1	41.16	10.867		
7,100.0	6,100.0	6,996.8	6,087.0	22.8	25.0	-88.33	909.1	-678.9	445.8	401.5	44.24	10.077		
7,200.0	6,100.0	7,091.5	6,083.2	24.4	26.1	-87.83	1,003.7	-676.3	443.8	396.6	47.12	9.417		
7,300.0	6,100.0	7,191.2	6,081.7	26.0	27.4	-87.62	1,103.3	-673.6	441.8	391.7	50.11	8.816		
7,400.0	6,100.0	7,301.5	6,081.8	27.7	28.8	-87.63	1,213.5	-670.8	439.9	386.5	53.34	8.247		
7,500.0	6,100.0	7,402.0	6,081.8	29.4	30.1	-87.61	1,313.9	-666.6	436.2	379.7	56.51	7.718		
7,600.0	6,100.0	7,504.4	6,080.8	31.1	31.6	-87.45	1,416.2	-660.8	431.1	371.3	59.83	7.205		
7,700.0	6,100.0	7,601.6	6,080.7	32.8	32.8	-87.41	1,513.2	-656.5	427.3	364.3	62.96	6.787		
7,800.0	6,100.0	7,707.9	6,081.5	34.6	34.4	-87.49	1,619.4	-651.7	423.3	357.0	66.35	6.380		
7,900.0	6,100.0	7,813.7	6,082.9	36.3	35.9	-87.65	1,725.0	-644.7	417.2	347.4	69.77	5.980		
8,000.0	6,100.0	7,923.0	6,082.8	38.1	37.5	-87.58	1,833.8	-634.9	408.8	335.4	73.37	5.571		
8,100.0	6,100.0	8,015.5	6,081.8	39.9	38.9	-87.40	1,926.0	-627.7	401.6	324.9	76.70	5.236		
8,200.0	6,100.0	8,113.0	6,078.5	41.7	40.4	-86.87	2,023.2	-620.2	394.6	314.5	80.15	4.924		
8,300.0	6,100.0	8,202.4	6,075.5	43.6	41.8	-86.39	2,112.4	-614.6	389.2	305.8	83.46	4.663		
8,400.0	6,100.0	8,297.5	6,075.7	45.4	43.3	-86.38	2,207.5	-611.0	386.0	299.2	86.78	4.448		
8,500.0	6,100.0	8,401.9	6,076.4	47.2	44.9	-86.46	2,311.7	-607.2	382.9	292.5	90.37	4.237		
8,600.0	6,100.0	8,505.5	6,076.8	49.1	46.6	-86.49	2,415.2	-602.6	379.0	285.1	93.94	4.034		
8,700.0	6,100.0	8,604.2	6,077.9	50.9	48.2	-86.61	2,513.8	-597.8	374.7	277.2	97.43	3.845		
8,800.0	6,100.0	8,703.1	6,077.2	52.8	49.8	-86.46	2,612.6	-592.9	370.3	269.4	100.98	3.667		
8,900.0	6,100.0	8,801.0	6,076.9	54.6	51.3	-86.39	2,710.4	-589.3	367.3	262.9	104.44	3.517		
9,000.0	6,100.0	8,897.2	6,077.3	56.5	52.9	-86.42	2,806.5	-585.6	364.0	256.1	107.92	3.373		
9,100.0	6,100.0	9,006.3	6,078.4	58.3	54.7	-86.56	2,915.6	-581.3	360.6	249.0	111.59	3.231		
9,200.0	6,100.0	9,106.0	6,080.6	60.2	56.3	-86.87	3,015.0	-575.8	355.6	240.4	115.12	3.088		
9,300.0	6,100.0	9,210.9	6,080.1	62.1	58.1	-86.74	3,119.7	-569.4	350.0	231.2	118.85	2.945		
9,400.0	6,100.0	9,307.0	6,079.2	64.0	59.6	-86.52	3,215.6	-562.7	343.8	221.4	122.33	2.810		
9,500.0	6,100.0	9,405.8	6,080.9	65.8	61.3	-86.76	3,314.3	-557.7	339.2	213.3	125.90	2.695		
9,600.0	6,100.0	9,507.8	6,081.7	67.7	63.0	-86.86	3,416.1	-551.6	333.8	204.2	129.55	2.576		
9,700.0	6,100.0	9,607.9	6,081.4	69.6	64.7	-86.74	3,516.0	-545.0	327.8	194.6	133.12	2.462		
9,800.0	6,100.0	9,710.0	6,080.3	71.5	66.4	-86.49	3,617.8	-538.3	321.8	185.0	136.79	2.353		
9,900.0	6,100.0	9,805.7	6,078.8	73.4	68.0	-86.14	3,713.3	-531.9	315.8	175.6	140.28	2.251		
10,000.0	6,100.0	9,908.2	6,078.6	75.3	69.7	-86.04	3,815.6	-525.7	310.4	166.5	143.92	2.157		
10,100.0	6,100.0	10,006.2	6,078.7	77.1	71.4	-85.99	3,913.4	-519.4	304.6	157.1	147.52	2.065		
10,200.0	6,100.0	10,096.3	6,080.0	79.0	72.9	-86.20	4,003.4	-516.1	301.3	150.3	150.99	1.996		
10,300.0	6,100.0	10,203.8	6,081.5	80.9	74.8	-86.45	4,110.8	-513.0	299.0	144.2	154.81	1.932		
10,400.0	6,100.0	10,302.4	6,080.4	82.8	76.5	-86.17	4,209.3	-507.7	294.3	135.9	158.40	1.858		
10,500.0	6,100.0	10,398.7	6,079.7	84.7	78.2	-85.99	4,305.5	-503.5	290.6	128.6	161.97	1.794		
10,600.0	6,100.0	10,507.7	6,079.8	86.6	80.1	-85.94	4,414.4	-497.8	286.0	120.2	165.74	1.725		
10,700.0	6,100.0	10,605.3	6,081.9	88.5	81.7	-86.29	4,511.7	-491.7	280.1	110.8	169.34	1.654		
10,800.0	6,100.0	10,702.3	6,083.2	90.4	83.4	-86.51	4,608.6	-486.6	275.4	102.4	172.97	1.592		
10,839.3	6,100.0	10,730.0	6,083.7	91.1	83.9	-86.58	4,636.2	-485.3	273.9	99.7	174.21	1.573 ES, SF		
10,860.5	6,100.0	10,730.0	6,083.7	91.5	83.9	-86.58	4,636.2	-485.3	274.8	100.2	174.61	1.574		

Offset Design		State Antelope 14-24 Pad Sec.24-T5N-R62W - State Antelope J-F-24HNB - Wellbore #1 - Plan #1 (11-1)										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	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	1.0	1.0	0.0	0.0	0.00	21.9	0.0	21.9	21.9	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	0.00	21.9	0.0	21.9	21.6	0.23	96.324		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.68	32.321 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.6	144.10	21.9	0.0	23.3	22.1	1.11	20.946		
400.0	399.8	401.7	401.7	0.8	0.8	152.24	20.1	0.5	26.1	24.6	1.52	17.147		
500.0	499.5	502.2	502.0	1.0	1.0	164.97	15.1	2.1	29.8	27.9	1.94	15.420		
600.0	598.7	602.4	601.9	1.3	1.2	179.31	6.6	4.7	36.1	33.7	2.39	15.127		
625.3	623.8	627.8	627.0	1.4	1.3	-177.19	4.0	5.6	38.2	35.7	2.51	15.216		
700.0	697.6	702.3	701.0	1.6	1.5	-167.48	-5.1	8.4	44.9	42.0	2.90	15.517		
800.0	796.5	801.4	799.1	2.0	1.8	-157.14	-18.4	12.5	55.1	51.6	3.48	15.816		
900.0	895.4	900.5	897.2	2.3	2.1	-150.15	-31.7	16.7	66.4	62.3	4.11	16.169		
1,000.0	994.3	999.5	995.3	2.7	2.4	-145.24	-45.1	20.8	78.4	73.7	4.75	16.508		
1,100.0	1,093.2	1,098.6	1,093.4	3.0	2.8	-141.64	-58.4	25.0	90.9	85.5	5.41	16.810		
1,200.0	1,192.1	1,197.7	1,191.4	3.4	3.1	-138.92	-71.8	29.1	103.6	97.5	6.07	17.075		
1,300.0	1,291.0	1,296.8	1,289.5	3.7	3.4	-136.80	-85.1	33.3	116.5	109.8	6.73	17.304		
1,400.0	1,389.9	1,395.9	1,387.6	4.1	3.8	-135.10	-98.4	37.4	129.5	122.1	7.40	17.504		
1,500.0	1,488.8	1,495.0	1,485.7	4.5	4.1	-133.71	-111.8	41.6	142.6	134.5	8.07	17.679		
1,600.0	1,587.7	1,594.0	1,583.8	4.8	4.5	-132.56	-125.1	45.7	155.8	147.1	8.74	17.832		
1,700.0	1,686.6	1,693.1	1,681.9	5.2	4.8	-131.59	-138.5	49.8	169.0	159.6	9.41	17.967		
1,800.0	1,785.5	1,792.2	1,780.0	5.5	5.2	-130.76	-151.8	54.0	182.3	172.2	10.08	18.087		
1,900.0	1,884.4	1,891.3	1,878.1	5.9	5.5	-130.04	-165.2	58.1	195.6	184.8	10.75	18.195		
2,000.0	1,983.3	1,990.4	1,976.2	6.3	5.9	-129.41	-178.5	62.3	208.9	197.5	11.42	18.291		
2,100.0	2,082.2	2,089.5	2,074.3	6.6	6.2	-128.86	-191.8	66.4	222.3	210.2	12.09	18.378		
2,200.0	2,181.1	2,188.5	2,172.4	7.0	6.6	-128.37	-205.2	70.6	235.7	222.9	12.77	18.457		
2,300.0	2,280.0	2,287.6	2,270.5	7.4	6.9	-127.93	-218.5	74.7	249.0	235.6	13.44	18.529		
2,400.0	2,378.9	2,386.7	2,368.6	7.7	7.3	-127.54	-231.9	78.9	262.4	248.3	14.11	18.595		
2,500.0	2,477.8	2,485.8	2,466.7	8.1	7.6	-127.18	-245.2	83.0	275.9	261.1	14.79	18.655		
2,600.0	2,576.7	2,584.9	2,564.7	8.5	8.0	-126.86	-258.5	87.2	289.3	273.8	15.46	18.710		
2,700.0	2,675.6	2,686.3	2,665.3	8.8	8.3	-126.72	-271.4	91.2	302.4	286.3	16.10	18.790		
2,801.7	2,776.2	2,790.9	2,769.3	9.2	8.5	-127.20	-281.2	94.2	314.7	298.1	16.65	18.908		
2,900.0	2,873.6	2,892.0	2,870.2	9.5	8.7	-128.15	-287.3	96.1	324.5	307.4	17.09	18.993		
3,000.0	2,973.2	2,995.1	2,973.3	9.7	8.8	-129.15	-290.0	97.0	331.4	314.0	17.43	19.014		
3,100.0	3,073.0	3,095.8	3,074.0	9.9	9.0	-130.02	-290.1	97.0	335.4	317.6	17.73	18.910		
3,200.0	3,172.9	3,195.7	3,173.9	10.0	9.1	-130.40	-290.1	97.0	337.1	319.1	18.01	18.718		
3,227.1	3,200.0	3,222.8	3,201.0	10.1	9.2	88.15	-290.1	97.0	337.2	319.1	18.08	18.652		
3,300.0	3,272.9	3,295.7	3,273.9	10.2	9.3	88.15	-290.1	97.0	337.2	318.9	18.29	18.435		
3,400.0	3,372.9	3,395.7	3,373.9	10.3	9.4	88.15	-290.1	97.0	337.2	318.6	18.57	18.154		
3,500.0	3,472.9	3,495.7	3,473.9	10.4	9.6	88.15	-290.1	97.0	337.2	318.3	18.86	17.876		
3,600.0	3,572.9	3,595.7	3,573.9	10.5	9.7	88.15	-290.1	97.0	337.2	318.0	19.16	17.600		
3,700.0	3,672.9	3,695.7	3,673.9	10.7	9.9	88.15	-290.1	97.0	337.2	317.7	19.46	17.327		
3,800.0	3,772.9	3,795.7	3,773.9	10.8	10.0	88.15	-290.1	97.0	337.2	317.4	19.77	17.058		
3,900.0	3,872.9	3,895.7	3,873.9	11.0	10.2	88.15	-290.1	97.0	337.2	317.1	20.08	16.793		
4,000.0	3,972.9	3,995.7	3,973.9	11.1	10.3	88.15	-290.1	97.0	337.2	316.8	20.40	16.532		
4,100.0	4,072.9	4,095.7	4,073.9	11.3	10.5	88.15	-290.1	97.0	337.2	316.5	20.72	16.274		
4,200.0	4,172.9	4,195.7	4,173.9	11.4	10.6	88.15	-290.1	97.0	337.2	316.1	21.05	16.022		
4,300.0	4,272.9	4,295.7	4,273.9	11.6	10.8	88.15	-290.1	97.0	337.2	315.8	21.38	15.773		
4,400.0	4,372.9	4,395.7	4,373.9	11.7	11.0	88.15	-290.1	97.0	337.2	315.5	21.71	15.529		
4,500.0	4,472.9	4,495.7	4,473.9	11.9	11.1	88.15	-290.1	97.0	337.2	315.1	22.05	15.290		
4,600.0	4,572.9	4,595.7	4,573.9	12.1	11.3	88.15	-290.1	97.0	337.2	314.8	22.40	15.055		
4,700.0	4,672.9	4,695.7	4,673.9	12.2	11.5	88.15	-290.1	97.0	337.2	314.4	22.74	14.825		
4,800.0	4,772.9	4,795.7	4,773.9	12.4	11.7	88.15	-290.1	97.0	337.2	314.1	23.09	14.600		
4,900.0	4,872.9	4,895.7	4,873.9	12.5	11.8	88.15	-290.1	97.0	337.2	313.7	23.45	14.380		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope J14-F11-24HNB
Project:	SEC.24-T5N-R62W	TVD Reference:	WELL @ 4577.0ft (RKB - 15')
Reference Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope J14-F11-24HNB	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 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design		State Antelope 14-24 Pad Sec.24-T5N-R62W - State Antelope J-F-24HNB - Wellbore #1 - Plan #1 (11-1										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			
5,000.0	4,972.9	4,995.7	4,973.9	12.7	12.0	88.15	-290.1	97.0	337.2	313.4	23.81	14.164			
5,100.0	5,072.9	5,095.7	5,073.9	12.9	12.2	88.15	-290.1	97.0	337.2	313.0	24.17	13.952			
5,200.0	5,172.9	5,195.7	5,173.9	13.1	12.4	88.15	-290.1	97.0	337.2	312.6	24.53	13.746			
5,300.0	5,272.9	5,295.7	5,273.9	13.2	12.6	88.15	-290.1	97.0	337.2	312.3	24.90	13.543			
5,400.0	5,372.9	5,395.7	5,373.9	13.4	12.7	88.15	-290.1	97.0	337.2	311.9	25.26	13.346			
5,500.0	5,472.9	5,495.7	5,473.9	13.6	12.9	88.15	-290.1	97.0	337.2	311.5	25.64	13.152			
5,569.4	5,542.3	5,565.1	5,543.3	13.7	13.1	88.15	-290.1	97.0	337.2	311.3	25.90	13.020			
5,606.2	5,579.1	5,601.8	5,580.0	13.8	13.1	88.15	-290.1	97.0	337.2	311.1	26.03	12.952			
5,650.0	5,622.9	5,644.6	5,622.7	13.8	13.2	87.81	-288.0	97.0	337.2	311.0	26.17	12.883			
5,700.0	5,672.4	5,693.4	5,671.0	13.9	13.2	87.77	-281.4	97.0	337.2	310.9	26.27	12.835			
5,750.0	5,721.1	5,742.1	5,718.5	13.9	13.3	87.75	-270.3	97.1	337.2	310.9	26.32	12.812			
5,800.0	5,768.5	5,790.9	5,764.7	13.9	13.3	87.76	-254.8	97.2	337.2	310.9	26.32	12.812			
5,850.0	5,814.1	5,839.6	5,809.3	13.9	13.3	87.78	-235.0	97.3	337.2	310.9	26.28	12.829			
5,900.0	5,857.6	5,888.4	5,851.8	13.9	13.2	87.82	-211.2	97.4	337.2	311.0	26.23	12.855			
5,950.0	5,898.5	5,937.2	5,891.9	13.8	13.2	87.89	-183.5	97.6	337.2	311.0	26.17	12.884			
6,000.0	5,936.5	5,986.1	5,929.3	13.8	13.2	87.97	-152.1	97.7	337.2	311.0	26.13	12.906			
6,050.0	5,971.2	6,035.0	5,963.7	13.7	13.2	88.07	-117.3	97.9	337.2	311.0	26.11	12.911			
6,100.0	6,002.2	6,083.9	5,994.6	13.7	13.2	88.19	-79.4	98.1	337.1	311.0	26.15	12.890			
6,150.0	6,029.4	6,133.0	6,021.9	13.7	13.2	88.32	-38.7	98.3	337.1	310.9	26.27	12.835			
6,200.0	6,052.4	6,182.1	6,045.3	13.6	13.2	88.47	4.5	98.6	337.1	310.6	26.46	12.738			
6,250.0	6,071.1	6,231.3	6,064.5	13.6	13.4	88.64	49.7	98.8	337.1	310.3	26.76	12.596			
6,300.0	6,085.2	6,280.5	6,079.5	13.6	13.5	88.81	96.7	99.1	337.1	309.9	27.16	12.408			
6,350.0	6,094.7	6,329.9	6,089.9	13.9	13.8	89.00	144.9	99.3	337.1	309.4	27.68	12.178			
6,400.0	6,099.4	6,379.4	6,095.7	14.3	14.1	89.20	194.0	99.6	337.1	308.8	28.30	11.911			
6,424.4	6,100.0	6,403.6	6,096.8	14.5	14.3	89.29	218.2	99.7	337.0	308.4	28.63	11.772			
6,430.0	6,100.0	6,409.1	6,097.0	14.5	14.3	89.31	223.7	99.7	337.0	308.3	28.72	11.737			
6,500.0	6,100.0	6,479.1	6,097.0	15.1	14.9	89.32	293.7	100.1	337.1	307.2	29.85	11.292			
6,525.0	6,100.0	6,504.1	6,097.0	15.3	15.1	89.32	318.7	100.2	337.1	306.8	30.29	11.129			
6,528.7	6,100.0	6,507.8	6,097.0	15.4	15.1	89.32	322.4	100.3	337.1	306.7	30.35	11.106			
6,600.0	6,100.0	6,579.4	6,097.0	16.0	15.8	89.32	394.0	100.6	337.0	305.3	31.64	10.652			
6,700.0	6,100.0	6,679.4	6,097.0	17.2	16.9	89.32	494.0	101.0	336.8	303.0	33.86	9.947			
6,800.0	6,100.0	6,779.4	6,097.0	18.5	18.1	89.32	594.0	101.5	336.7	300.3	36.38	9.256			
6,900.0	6,100.0	6,879.4	6,097.0	19.8	19.5	89.32	694.0	101.9	336.6	297.5	39.11	8.607			
7,000.0	6,100.0	6,979.4	6,097.0	21.3	20.9	89.32	794.0	102.4	336.5	294.4	42.01	8.009			
7,100.0	6,100.0	7,079.4	6,097.0	22.8	22.4	89.32	894.0	102.8	336.3	291.3	45.05	7.465			
7,200.0	6,100.0	7,179.4	6,097.0	24.4	24.0	89.32	994.0	103.3	336.2	288.0	48.21	6.974			
7,300.0	6,100.0	7,279.4	6,097.0	26.0	25.6	89.32	1,094.0	103.7	336.1	284.6	51.46	6.531			
7,400.0	6,100.0	7,379.4	6,097.0	27.7	27.3	89.32	1,194.0	104.2	335.9	281.2	54.79	6.132			
7,500.0	6,100.0	7,479.4	6,097.0	29.4	29.0	89.32	1,294.0	104.6	335.8	277.6	58.18	5.772			
7,600.0	6,100.0	7,579.4	6,097.0	31.1	30.7	89.32	1,394.0	105.1	335.7	274.1	61.62	5.448			
7,700.0	6,100.0	7,679.4	6,097.0	32.8	32.5	89.32	1,494.0	105.5	335.6	270.4	65.11	5.154			
7,800.0	6,100.0	7,779.4	6,097.0	34.6	34.2	89.32	1,594.0	106.0	335.4	266.8	68.63	4.887			
7,900.0	6,100.0	7,879.4	6,097.0	36.3	36.0	89.32	1,694.0	106.4	335.3	263.1	72.19	4.645			
8,000.0	6,100.0	7,979.4	6,097.0	38.1	37.8	89.32	1,794.0	106.9	335.2	259.4	75.77	4.423			
8,100.0	6,100.0	8,079.4	6,097.0	39.9	39.6	89.32	1,894.0	107.3	335.0	255.7	79.38	4.221			
8,200.0	6,100.0	8,179.3	6,097.0	41.7	41.4	89.32	1,994.0	107.8	334.9	251.9	83.01	4.035			
8,300.0	6,100.0	8,279.3	6,097.0	43.6	43.2	89.32	2,094.0	108.2	334.8	248.1	86.66	3.863			
8,400.0	6,100.0	8,379.3	6,097.0	45.4	45.1	89.32	2,194.0	108.7	334.6	244.3	90.32	3.705			
8,500.0	6,100.0	8,479.3	6,097.0	47.2	46.9	89.31	2,294.0	109.1	334.5	240.5	94.00	3.559			
8,600.0	6,100.0	8,579.3	6,097.0	49.1	48.7	89.31	2,394.0	109.6	334.4	236.7	97.69	3.423			
8,700.0	6,100.0	8,679.3	6,097.0	50.9	50.6	89.31	2,493.9	110.0	334.3	232.9	101.39	3.297			
8,800.0	6,100.0	8,779.3	6,097.0	52.8	52.4	89.31	2,593.9	110.5	334.1	229.0	105.10	3.179			

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

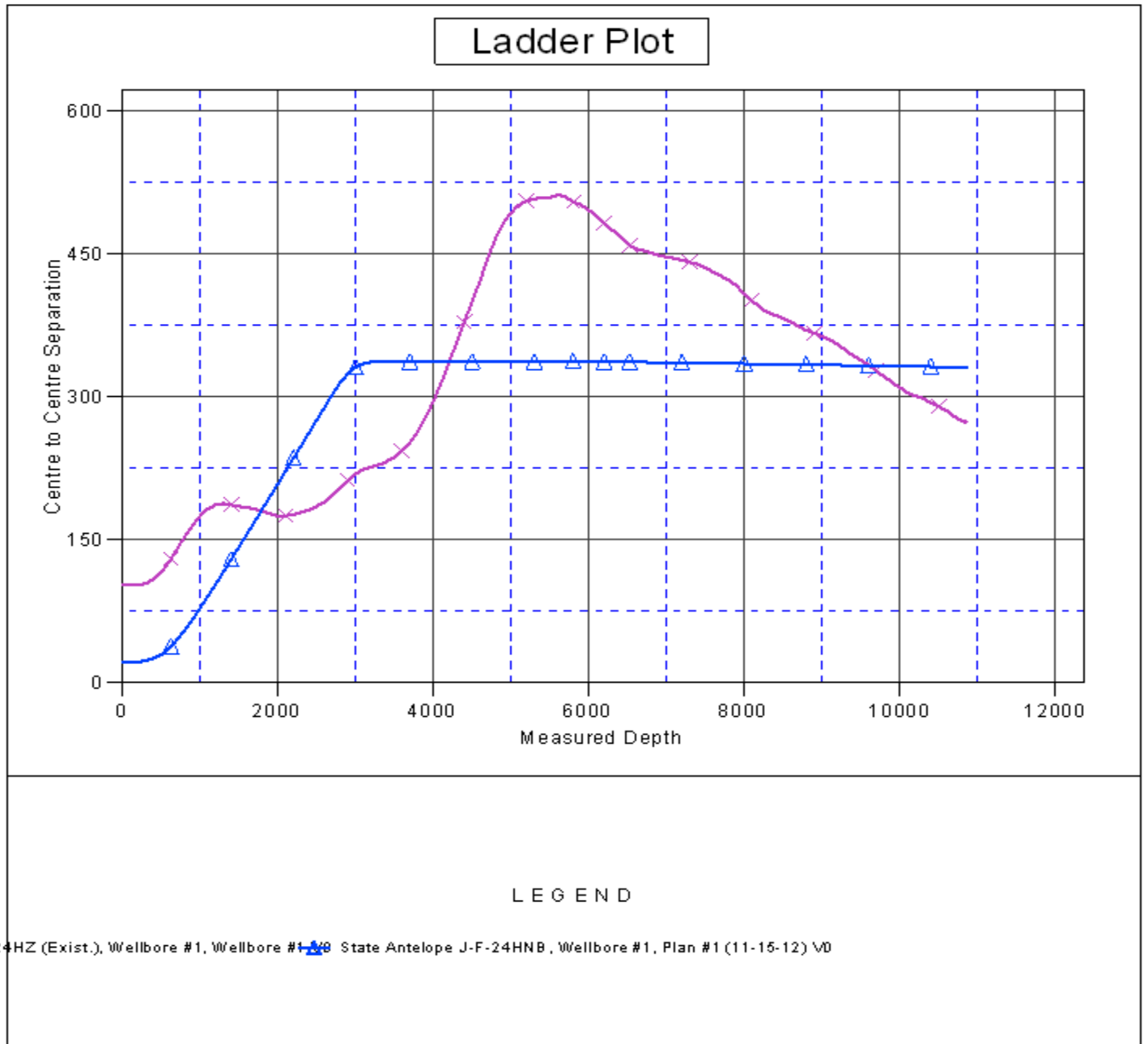
Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope J14-F11-24HNB
Project:	SEC.24-T5N-R62W	TVD Reference:	WELL @ 4577.0ft (RKB - 15')
Reference Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope J14-F11-24HNB	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 (11-15-12)	Offset TVD Reference:	Offset Datum

Offset Design State Antelope 14-24 Pad Sec.24-T5N-R62W - State Antelope J-F-24HNB - Wellbore #1 - Plan #1 (11-1													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	
8,900.0	6,100.0	8,879.3	6,097.0	54.6	54.3	89.31	2,693.9	110.9	334.0	225.2	108.82	3.069	
9,000.0	6,100.0	8,979.3	6,097.0	56.5	56.2	89.31	2,793.9	111.4	333.9	221.3	112.54	2.967	
9,100.0	6,100.0	9,079.3	6,097.0	58.3	58.0	89.31	2,893.9	111.8	333.7	217.5	116.28	2.870	
9,200.0	6,100.0	9,179.3	6,097.0	60.2	59.9	89.31	2,993.9	112.3	333.6	213.6	120.02	2.780	
9,300.0	6,100.0	9,279.3	6,097.0	62.1	61.8	89.31	3,093.9	112.7	333.5	209.7	123.77	2.694	
9,400.0	6,100.0	9,379.3	6,097.0	64.0	63.7	89.31	3,193.9	113.2	333.3	205.8	127.52	2.614	
9,500.0	6,100.0	9,479.3	6,097.0	65.8	65.5	89.31	3,293.9	113.6	333.2	201.9	131.28	2.538	
9,600.0	6,100.0	9,579.3	6,097.0	67.7	67.4	89.31	3,393.9	114.1	333.1	198.0	135.04	2.467	
9,700.0	6,100.0	9,679.3	6,097.0	69.6	69.3	89.31	3,493.9	114.5	333.0	194.1	138.81	2.399	
9,800.0	6,100.0	9,779.3	6,097.0	71.5	71.2	89.31	3,593.9	115.0	332.8	190.2	142.58	2.334	
9,900.0	6,100.0	9,879.3	6,097.0	73.4	73.1	89.31	3,693.9	115.4	332.7	186.3	146.35	2.273	
10,000.0	6,100.0	9,979.3	6,097.0	75.3	75.0	89.31	3,793.9	115.9	332.6	182.4	150.13	2.215	
10,100.0	6,100.0	10,079.3	6,097.0	77.1	76.9	89.31	3,893.9	116.3	332.4	178.5	153.91	2.160	
10,200.0	6,100.0	10,179.3	6,097.0	79.0	78.7	89.31	3,993.9	116.8	332.3	174.6	157.69	2.107	
10,300.0	6,100.0	10,279.3	6,097.0	80.9	80.6	89.31	4,093.9	117.2	332.2	170.7	161.48	2.057	
10,400.0	6,100.0	10,379.3	6,097.0	82.8	82.5	89.31	4,193.9	117.7	332.0	166.8	165.27	2.009	
10,500.0	6,100.0	10,479.3	6,097.0	84.7	84.4	89.31	4,293.9	118.1	331.9	162.9	169.06	1.963	
10,600.0	6,100.0	10,579.3	6,097.0	86.6	86.3	89.31	4,393.9	118.6	331.8	158.9	172.85	1.919	
10,700.0	6,100.0	10,679.3	6,097.0	88.5	88.2	89.31	4,493.9	119.0	331.7	155.0	176.65	1.878	
10,800.0	6,100.0	10,779.3	6,097.0	90.4	90.1	89.31	4,593.9	119.5	331.5	151.1	180.44	1.837	
10,860.5	6,100.0	10,839.8	6,097.0	91.5	91.1	89.31	4,654.4	119.7	331.5	148.9	182.60	1.815 SF	

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Reference Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope J14-F11-24HNB	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 (11-15-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4577.0ft (RKB - 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: State Antelope J14-F11-24HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.79°



Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope J14-F11-24HNB
Project:	SEC.24-T5N-R62W	TVD Reference:	WELL @ 4577.0ft (RKB - 15')
Reference Site:	State Antelope 14-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4577.0ft (RKB - 15')
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Well Error:	0.0ft	Output errors are at	2.00 sigma
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Reference Depths are relative to WELL @ 4577.0ft (RKB - 15')
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