

BONANZA CREEK ENERGY OPERATING

Well Name: **State Antelope E-12-1MRLNC**

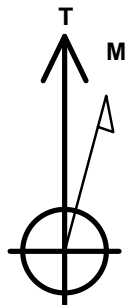
Surface Location: State Antelope J-12 Pad Sec.12-T5N-R62W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4575.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1394185.12	3340910.31	40.408980	-104.275750	
RKB - 13' WELL @ 4588.0ft (RKB - 13')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 330'FSL & 1390'FWL, Sec.12	1.0	0.0	0.0	Point
BHL 2604'FSL & 10'FWL, Sec.1	6199.0	7606.9	-1397.6	Point
T1 531'FSL & 10'FWL, Sec.12	6199.0	149.4	-1381.3	Point



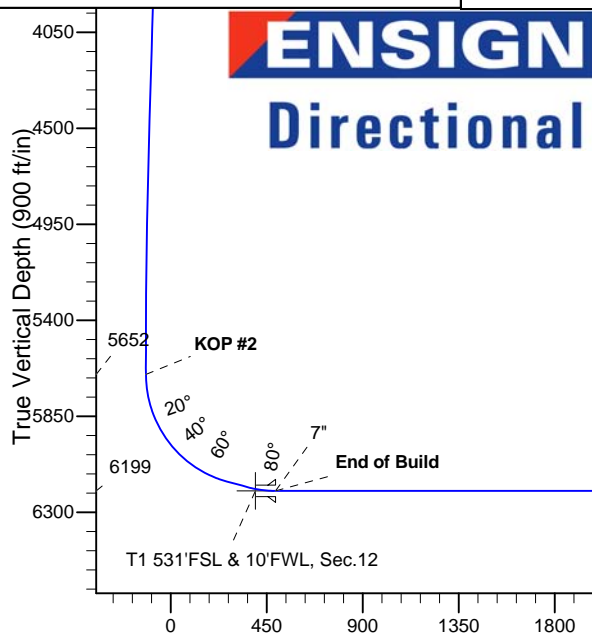
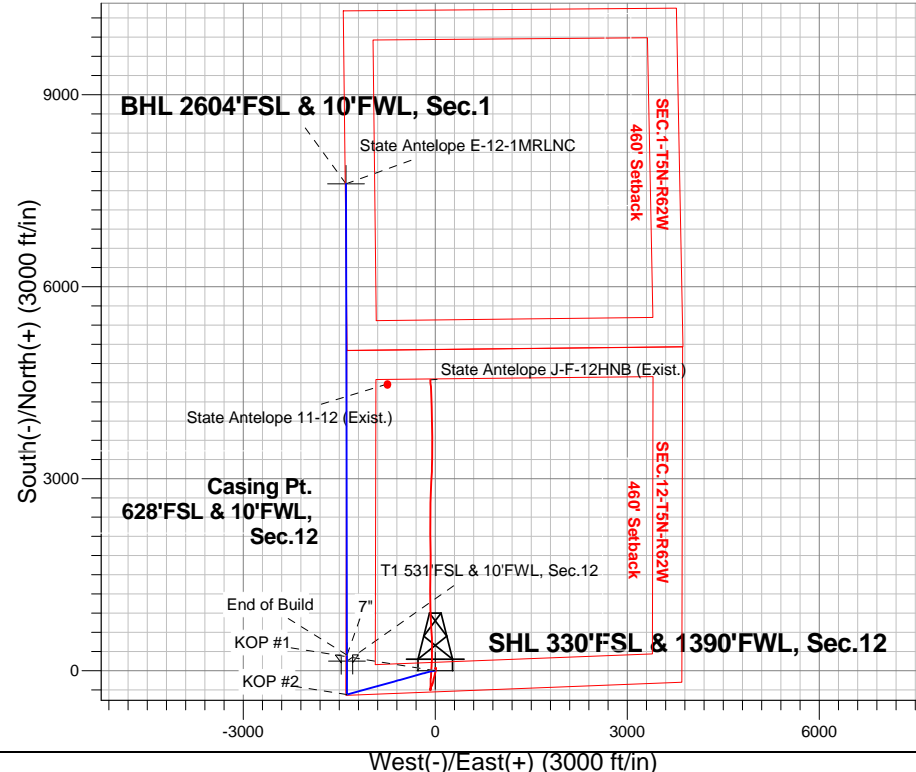
Azimuths to True North
Magnetic North: 8.27°

Magnetic Field
Strength: 52932.7snT
Dip Angle: 67.05°
Date: 11/19/2013
Model: IGRF2010

State Antelope J-12 Pad Sec.12-T5N-R62W
State Antelope E-12-1MRLNC
Plan #1 (11-19-13)
10:23, November 22 2013

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP #1
5652.3	5864.4	KOP #2
6199.0	6782.6	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	450.0	5.00	270.00	449.7	0.0	-10.9	2.00	270.00	2.0	
4	1115.9	18.07	254.50	1100.8	-27.7	-140.0	2.00	-21.09	-2.0	
5	4808.6	18.07	254.50	4611.3	-333.8	-1243.8	0.00	0.00	-103.6	
6	5712.1	0.00	0.00	5500.0	-371.6	-1380.0	2.00	180.00	-116.1	
7	5864.4	0.00	0.00	5652.2	-371.6	-1380.0	0.00	0.00	-116.1	
8	6546.2	75.00	359.87	6155.4	14.5	-1380.8	11.00	359.87	263.7	
9	6646.2	75.00	359.87	6181.3	111.1	-1381.1	0.00	0.00	358.8	
10	6782.6	90.00	359.87	6199.0	245.9	-1381.4	11.00	0.00	491.4	
11	14143.6	90.00	359.87	6199.0	7606.9	-1397.6	0.00	0.00	7734.2	BHL 2604'FSL & 10'FWL, Sec.1

BHL 2604'FSL & 10'FWL, Sec.1

Vertical Section at 349.59° (900 ft/in)



BONANZA CREEK ENERGY OPERATING

SEC.12-T5N-R62W

State Antelope J-12 Pad Sec.12-T5N-R62W

State Antelope E-12-1MRLNC

Wellbore #1

Plan: Plan #1 (11-19-13)

Standard Planning Report

22 November, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope E-12-1MRLNC
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4588.0ft (RKB - 13')
Project:	SEC.12-T5N-R62W	MD Reference:	WELL @ 4588.0ft (RKB - 13')
Site:	State Antelope J-12 Pad Sec.12-T5N-R62W	North Reference:	True
Well:	State Antelope E-12-1MRLNC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-19-13)		

Project	SEC.12-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 J-12 Pad Sec.12-T5N-R62W											
Site Position:						Northing:			1,394,225.16 ft			Latitude:			40.409090		
From:			Lat/Long			Easting:			3,340,906.97 ft			Longitude:			-104.275760		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.79 °		

Well	State Antelope E-12-1MRLNC					
Well Position	+N/-S	-40.1 ft	Northing:	1,394,185.12 ft	Latitude:	40.408980
	+E/-W	2.8 ft	Easting:	3,340,910.31 ft	Longitude:	-104.275750
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,575.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/19/2013	8.27	67.05	52,933

Design	Plan #1 (11-19-13)				
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	349.59	

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	
1,115.9	18.07	254.50	1,100.8	-27.7	-140.0	2.00	1.96	-2.33	-21.09	
4,808.6	18.07	254.50	4,611.3	-333.8	-1,243.8	0.00	0.00	0.00	0.00	
5,712.1	0.00	0.00	5,500.0	-371.6	-1,380.0	2.00	-2.00	0.00	180.00	
5,864.4	0.00	0.00	5,652.2	-371.6	-1,380.0	0.00	0.00	0.00	0.00	
6,546.2	75.00	359.87	6,155.4	14.5	-1,380.8	11.00	11.00	0.00	359.87	
6,646.2	75.00	359.87	6,181.3	111.1	-1,381.1	0.00	0.00	0.00	0.00	
6,782.6	90.00	359.87	6,199.0	245.9	-1,381.4	11.00	11.00	0.00	0.00	
14,143.6	90.00	359.87	6,199.0	7,606.9	-1,397.6	0.00	0.00	0.00	0.00	BHL 2604'FSL & 1C

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope E-12-1MRLNC
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4588.0ft (RKB - 13')
Project:	SEC.12-T5N-R62W	MD Reference:	WELL @ 4588.0ft (RKB - 13')
Site:	State Antelope J-12 Pad Sec.12-T5N-R62W	North Reference:	True
Well:	State Antelope E-12-1MRLNC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-19-13)		

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 330'FSL & 1390'FWL, Sec.12									
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	0.3	2.00	2.00	0.00
400.0	4.00	270.00	399.8	0.0	-7.0	1.3	2.00	2.00	0.00
450.0	5.00	270.00	449.7	0.0	-10.9	2.0	2.00	2.00	0.00
500.0	5.94	266.52	499.5	-0.2	-15.7	2.7	2.00	1.89	-6.95
600.0	7.87	262.10	598.7	-1.4	-27.6	3.6	2.00	1.93	-4.43
700.0	9.83	259.41	697.5	-3.9	-42.8	3.9	2.00	1.96	-2.68
800.0	11.80	257.62	795.7	-7.7	-61.2	3.5	2.00	1.97	-1.80
900.0	13.78	256.33	893.3	-12.7	-82.7	2.5	2.00	1.98	-1.29
1,000.0	15.77	255.36	990.0	-18.9	-107.5	0.8	2.00	1.98	-0.97
1,100.0	17.75	254.61	1,085.7	-26.4	-135.3	-1.5	2.00	1.99	-0.76
1,115.9	18.07	254.50	1,100.8	-27.7	-140.0	-2.0	2.00	1.99	-0.66
1,200.0	18.07	254.50	1,180.8	-34.7	-165.2	-4.3	0.00	0.00	0.00
1,300.0	18.07	254.50	1,275.8	-43.0	-195.1	-7.0	0.00	0.00	0.00
1,400.0	18.07	254.50	1,370.9	-51.3	-224.9	-9.8	0.00	0.00	0.00
1,500.0	18.07	254.50	1,466.0	-59.6	-254.8	-12.5	0.00	0.00	0.00
1,600.0	18.07	254.50	1,561.0	-67.9	-284.7	-15.3	0.00	0.00	0.00
1,700.0	18.07	254.50	1,656.1	-76.1	-314.6	-18.0	0.00	0.00	0.00
1,800.0	18.07	254.50	1,751.2	-84.4	-344.5	-20.8	0.00	0.00	0.00
1,900.0	18.07	254.50	1,846.2	-92.7	-374.4	-23.5	0.00	0.00	0.00
2,000.0	18.07	254.50	1,941.3	-101.0	-404.3	-26.3	0.00	0.00	0.00
2,100.0	18.07	254.50	2,036.4	-109.3	-434.2	-29.0	0.00	0.00	0.00
2,200.0	18.07	254.50	2,131.5	-117.6	-464.1	-31.8	0.00	0.00	0.00
2,300.0	18.07	254.50	2,226.5	-125.9	-494.0	-34.6	0.00	0.00	0.00
2,400.0	18.07	254.50	2,321.6	-134.2	-523.9	-37.3	0.00	0.00	0.00
2,500.0	18.07	254.50	2,416.7	-142.5	-553.8	-40.1	0.00	0.00	0.00
2,600.0	18.07	254.50	2,511.7	-150.8	-583.6	-42.8	0.00	0.00	0.00
2,700.0	18.07	254.50	2,606.8	-159.0	-613.5	-45.6	0.00	0.00	0.00
2,800.0	18.07	254.50	2,701.9	-167.3	-643.4	-48.3	0.00	0.00	0.00
2,900.0	18.07	254.50	2,796.9	-175.6	-673.3	-51.1	0.00	0.00	0.00
3,000.0	18.07	254.50	2,892.0	-183.9	-703.2	-53.8	0.00	0.00	0.00
3,100.0	18.07	254.50	2,987.1	-192.2	-733.1	-56.6	0.00	0.00	0.00
3,200.0	18.07	254.50	3,082.1	-200.5	-763.0	-59.3	0.00	0.00	0.00
3,300.0	18.07	254.50	3,177.2	-208.8	-792.9	-62.1	0.00	0.00	0.00
3,400.0	18.07	254.50	3,272.3	-217.1	-822.8	-64.8	0.00	0.00	0.00
3,500.0	18.07	254.50	3,367.3	-225.4	-852.7	-67.6	0.00	0.00	0.00
3,600.0	18.07	254.50	3,462.4	-233.6	-882.6	-70.3	0.00	0.00	0.00
3,700.0	18.07	254.50	3,557.5	-241.9	-912.5	-73.1	0.00	0.00	0.00
3,800.0	18.07	254.50	3,652.5	-250.2	-942.3	-75.8	0.00	0.00	0.00
3,900.0	18.07	254.50	3,747.6	-258.5	-972.2	-78.6	0.00	0.00	0.00
4,000.0	18.07	254.50	3,842.7	-266.8	-1,002.1	-81.3	0.00	0.00	0.00
4,100.0	18.07	254.50	3,937.7	-275.1	-1,032.0	-84.1	0.00	0.00	0.00
4,200.0	18.07	254.50	4,032.8	-283.4	-1,061.9	-86.8	0.00	0.00	0.00
4,300.0	18.07	254.50	4,127.9	-291.7	-1,091.8	-89.6	0.00	0.00	0.00
4,400.0	18.07	254.50	4,222.9	-300.0	-1,121.7	-92.3	0.00	0.00	0.00
4,500.0	18.07	254.50	4,318.0	-308.3	-1,151.6	-95.1	0.00	0.00	0.00
4,600.0	18.07	254.50	4,413.1	-316.5	-1,181.5	-97.8	0.00	0.00	0.00
4,700.0	18.07	254.50	4,508.1	-324.8	-1,211.4	-100.6	0.00	0.00	0.00
4,800.0	18.07	254.50	4,603.2	-333.1	-1,241.3	-103.3	0.00	0.00	0.00

Database: Landmark
Company: BONANZA CREEK ENERGY OPERATING
Project: SEC.12-T5N-R62W
Site: State Antelope J-12 Pad Sec.12-T5N-R62W
Well: State Antelope E-12-1MRLNC
Wellbore: Wellbore #1
Design: Plan #1 (11-19-13)

Local Co-ordinate Reference: Well State Antelope E-12-1MRLNC
TVD Reference: WELL @ 4588.0ft (RKB - 13')
MD Reference: WELL @ 4588.0ft (RKB - 13')
North Reference: True
Survey Calculation Method: Minimum Curvature

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)
4,808.6	18.07	254.50	4,611.3	-333.8	-1,243.8	-103.6	0.00	0.00	0.00
4,900.0	16.24	254.50	4,698.7	-341.0	-1,269.8	-106.0	2.00	-2.00	0.00
5,000.0	14.24	254.50	4,795.2	-348.1	-1,295.1	-108.3	2.00	-2.00	0.00
5,100.0	12.24	254.50	4,892.5	-354.2	-1,317.2	-110.3	2.00	-2.00	0.00
5,200.0	10.24	254.50	4,990.6	-359.4	-1,336.0	-112.1	2.00	-2.00	0.00
5,300.0	8.24	254.50	5,089.3	-363.7	-1,351.5	-113.5	2.00	-2.00	0.00
5,400.0	6.24	254.50	5,188.5	-367.1	-1,363.6	-114.6	2.00	-2.00	0.00
5,500.0	4.24	254.50	5,288.1	-369.5	-1,372.4	-115.4	2.00	-2.00	0.00
5,600.0	2.24	254.50	5,387.9	-371.0	-1,377.9	-115.9	2.00	-2.00	0.00
5,700.0	0.24	254.50	5,487.9	-371.6	-1,380.0	-116.1	2.00	-2.00	0.00
5,712.1	0.00	0.00	5,500.0	-371.6	-1,380.0	-116.1	2.00	-2.00	0.00
5,800.0	0.00	0.00	5,587.9	-371.6	-1,380.0	-116.1	0.00	0.00	0.00
5,864.4	0.00	0.00	5,652.3	-371.6	-1,380.0	-116.1	0.00	0.00	0.00
KOP #2									
5,900.0	3.92	359.87	5,687.8	-370.4	-1,380.0	-114.9	11.01	11.01	0.00
6,000.0	14.92	359.87	5,786.3	-354.0	-1,380.0	-98.8	11.00	11.00	0.00
6,100.0	25.92	359.87	5,879.9	-319.2	-1,380.1	-64.6	11.00	11.00	0.00
6,200.0	36.92	359.87	5,965.1	-267.2	-1,380.2	-13.4	11.00	11.00	0.00
6,300.0	47.92	359.87	6,038.8	-199.8	-1,380.4	52.9	11.00	11.00	0.00
6,400.0	58.92	359.87	6,098.3	-119.6	-1,380.6	131.8	11.00	11.00	0.00
6,500.0	69.92	359.87	6,141.5	-29.6	-1,380.8	220.4	11.00	11.00	0.00
6,546.2	75.00	359.87	6,155.4	14.5	-1,380.8	263.7	11.00	11.00	0.00
6,600.0	75.00	359.87	6,169.3	66.4	-1,381.0	314.9	0.00	0.00	0.00
6,646.2	75.00	359.87	6,181.3	111.1	-1,381.1	358.8	0.00	0.00	0.00
6,687.4	79.54	359.87	6,190.3	151.3	-1,381.2	398.4	11.00	11.00	0.00
T1 531'FSL & 10'FWL, Sec.12									
6,700.0	80.92	359.87	6,192.5	163.6	-1,381.2	410.5	11.00	11.00	0.00
6,782.6	90.00	359.87	6,199.0	245.9	-1,381.4	491.5	10.99	10.99	0.00
End of Build - 7"									
6,800.0	90.00	359.87	6,199.0	263.3	-1,381.4	508.6	0.00	0.00	0.00
6,900.0	90.00	359.87	6,199.0	363.3	-1,381.6	607.0	0.00	0.00	0.00
7,000.0	90.00	359.87	6,199.0	463.3	-1,381.8	705.4	0.00	0.00	0.00
7,100.0	90.00	359.87	6,199.0	563.3	-1,382.1	803.8	0.00	0.00	0.00
7,200.0	90.00	359.87	6,199.0	663.3	-1,382.3	902.2	0.00	0.00	0.00
7,300.0	90.00	359.87	6,199.0	763.3	-1,382.5	1,000.6	0.00	0.00	0.00
7,400.0	90.00	359.87	6,199.0	863.3	-1,382.7	1,098.9	0.00	0.00	0.00
7,500.0	90.00	359.87	6,199.0	963.3	-1,382.9	1,197.3	0.00	0.00	0.00
7,600.0	90.00	359.87	6,199.0	1,063.3	-1,383.2	1,295.7	0.00	0.00	0.00
7,700.0	90.00	359.87	6,199.0	1,163.3	-1,383.4	1,394.1	0.00	0.00	0.00
7,800.0	90.00	359.87	6,199.0	1,263.3	-1,383.6	1,492.5	0.00	0.00	0.00
7,900.0	90.00	359.87	6,199.0	1,363.3	-1,383.8	1,590.9	0.00	0.00	0.00
8,000.0	90.00	359.87	6,199.0	1,463.3	-1,384.0	1,689.3	0.00	0.00	0.00
8,100.0	90.00	359.87	6,199.0	1,563.3	-1,384.3	1,787.7	0.00	0.00	0.00
8,200.0	90.00	359.87	6,199.0	1,663.3	-1,384.5	1,886.1	0.00	0.00	0.00
8,300.0	90.00	359.87	6,199.0	1,763.3	-1,384.7	1,984.5	0.00	0.00	0.00
8,400.0	90.00	359.87	6,199.0	1,863.3	-1,384.9	2,082.9	0.00	0.00	0.00
8,500.0	90.00	359.87	6,199.0	1,963.3	-1,385.1	2,181.3	0.00	0.00	0.00
8,600.0	90.00	359.87	6,199.0	2,063.3	-1,385.4	2,279.7	0.00	0.00	0.00
8,700.0	90.00	359.87	6,199.0	2,163.3	-1,385.6	2,378.1	0.00	0.00	0.00
8,800.0	90.00	359.87	6,199.0	2,263.3	-1,385.8	2,476.5	0.00	0.00	0.00
8,900.0	90.00	359.87	6,199.0	2,363.3	-1,386.0	2,574.8	0.00	0.00	0.00
9,000.0	90.00	359.87	6,199.0	2,463.3	-1,386.2	2,673.2	0.00	0.00	0.00
9,100.0	90.00	359.87	6,199.0	2,563.3	-1,386.5	2,771.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope E-12-1MRLNC
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4588.0ft (RKB - 13')
Project:	SEC.12-T5N-R62W	MD Reference:	WELL @ 4588.0ft (RKB - 13')
Site:	State Antelope J-12 Pad Sec.12-T5N-R62W	North Reference:	True
Well:	State Antelope E-12-1MRLNC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-19-13)		

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	359.87	6,199.0	2,663.3	-1,386.7	2,870.0	0.00	0.00	0.00	
9,300.0	90.00	359.87	6,199.0	2,763.3	-1,386.9	2,968.4	0.00	0.00	0.00	
9,400.0	90.00	359.87	6,199.0	2,863.3	-1,387.1	3,066.8	0.00	0.00	0.00	
9,500.0	90.00	359.87	6,199.0	2,963.3	-1,387.3	3,165.2	0.00	0.00	0.00	
9,600.0	90.00	359.87	6,199.0	3,063.3	-1,387.6	3,263.6	0.00	0.00	0.00	
9,700.0	90.00	359.87	6,199.0	3,163.3	-1,387.8	3,362.0	0.00	0.00	0.00	
9,800.0	90.00	359.87	6,199.0	3,263.3	-1,388.0	3,460.4	0.00	0.00	0.00	
9,900.0	90.00	359.87	6,199.0	3,363.3	-1,388.2	3,558.8	0.00	0.00	0.00	
10,000.0	90.00	359.87	6,199.0	3,463.3	-1,388.4	3,657.2	0.00	0.00	0.00	
10,100.0	90.00	359.87	6,199.0	3,563.3	-1,388.7	3,755.6	0.00	0.00	0.00	
10,200.0	90.00	359.87	6,199.0	3,663.3	-1,388.9	3,854.0	0.00	0.00	0.00	
10,300.0	90.00	359.87	6,199.0	3,763.3	-1,389.1	3,952.4	0.00	0.00	0.00	
10,400.0	90.00	359.87	6,199.0	3,863.3	-1,389.3	4,050.7	0.00	0.00	0.00	
10,500.0	90.00	359.87	6,199.0	3,963.3	-1,389.5	4,149.1	0.00	0.00	0.00	
10,600.0	90.00	359.87	6,199.0	4,063.3	-1,389.8	4,247.5	0.00	0.00	0.00	
10,700.0	90.00	359.87	6,199.0	4,163.3	-1,390.0	4,345.9	0.00	0.00	0.00	
10,800.0	90.00	359.87	6,199.0	4,263.3	-1,390.2	4,444.3	0.00	0.00	0.00	
10,900.0	90.00	359.87	6,199.0	4,363.3	-1,390.4	4,542.7	0.00	0.00	0.00	
11,000.0	90.00	359.87	6,199.0	4,463.3	-1,390.6	4,641.1	0.00	0.00	0.00	
11,100.0	90.00	359.87	6,199.0	4,563.3	-1,390.9	4,739.5	0.00	0.00	0.00	
11,200.0	90.00	359.87	6,199.0	4,663.3	-1,391.1	4,837.9	0.00	0.00	0.00	
11,300.0	90.00	359.87	6,199.0	4,763.3	-1,391.3	4,936.3	0.00	0.00	0.00	
11,400.0	90.00	359.87	6,199.0	4,863.3	-1,391.5	5,034.7	0.00	0.00	0.00	
11,500.0	90.00	359.87	6,199.0	4,963.3	-1,391.7	5,133.1	0.00	0.00	0.00	
11,600.0	90.00	359.87	6,199.0	5,063.3	-1,392.0	5,231.5	0.00	0.00	0.00	
11,700.0	90.00	359.87	6,199.0	5,163.3	-1,392.2	5,329.9	0.00	0.00	0.00	
11,800.0	90.00	359.87	6,199.0	5,263.3	-1,392.4	5,428.3	0.00	0.00	0.00	
11,900.0	90.00	359.87	6,199.0	5,363.3	-1,392.6	5,526.6	0.00	0.00	0.00	
12,000.0	90.00	359.87	6,199.0	5,463.3	-1,392.8	5,625.0	0.00	0.00	0.00	
12,100.0	90.00	359.87	6,199.0	5,563.3	-1,393.1	5,723.4	0.00	0.00	0.00	
12,200.0	90.00	359.87	6,199.0	5,663.3	-1,393.3	5,821.8	0.00	0.00	0.00	
12,300.0	90.00	359.87	6,199.0	5,763.3	-1,393.5	5,920.2	0.00	0.00	0.00	
12,400.0	90.00	359.87	6,199.0	5,863.3	-1,393.7	6,018.6	0.00	0.00	0.00	
12,500.0	90.00	359.87	6,199.0	5,963.3	-1,393.9	6,117.0	0.00	0.00	0.00	
12,600.0	90.00	359.87	6,199.0	6,063.3	-1,394.2	6,215.4	0.00	0.00	0.00	
12,700.0	90.00	359.87	6,199.0	6,163.3	-1,394.4	6,313.8	0.00	0.00	0.00	
12,800.0	90.00	359.87	6,199.0	6,263.3	-1,394.6	6,412.2	0.00	0.00	0.00	
12,900.0	90.00	359.87	6,199.0	6,363.3	-1,394.8	6,510.6	0.00	0.00	0.00	
13,000.0	90.00	359.87	6,199.0	6,463.3	-1,395.0	6,609.0	0.00	0.00	0.00	
13,100.0	90.00	359.87	6,199.0	6,563.3	-1,395.3	6,707.4	0.00	0.00	0.00	
13,200.0	90.00	359.87	6,199.0	6,663.3	-1,395.5	6,805.8	0.00	0.00	0.00	
13,300.0	90.00	359.87	6,199.0	6,763.3	-1,395.7	6,904.2	0.00	0.00	0.00	
13,400.0	90.00	359.87	6,199.0	6,863.3	-1,395.9	7,002.5	0.00	0.00	0.00	
13,500.0	90.00	359.87	6,199.0	6,963.3	-1,396.1	7,100.9	0.00	0.00	0.00	
13,600.0	90.00	359.87	6,199.0	7,063.3	-1,396.4	7,199.3	0.00	0.00	0.00	
13,700.0	90.00	359.87	6,199.0	7,163.3	-1,396.6	7,297.7	0.00	0.00	0.00	
13,800.0	90.00	359.87	6,199.0	7,263.3	-1,396.8	7,396.1	0.00	0.00	0.00	
13,900.0	90.00	359.87	6,199.0	7,363.3	-1,397.0	7,494.5	0.00	0.00	0.00	
14,000.0	90.00	359.87	6,199.0	7,463.3	-1,397.2	7,592.9	0.00	0.00	0.00	
14,100.0	90.00	359.87	6,199.0	7,563.3	-1,397.5	7,691.3	0.00	0.00	0.00	
14,143.6	90.00	359.87	6,199.0	7,606.9	-1,397.6	7,734.2	0.00	0.00	0.00	
BHL 2604'FSL & 10'FWL, Sec.1										

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope E-12-1MRLNC
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4588.0ft (RKB - 13')
Project:	SEC.12-T5N-R62W	MD Reference:	WELL @ 4588.0ft (RKB - 13')
Site:	State Antelope J-12 Pad Sec.12-T5N-R62W	North Reference:	True
Well:	State Antelope E-12-1MRLNC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-19-13)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (")	Hole Diameter (")
6,782.6	6,199.0	7"		7	7-1/2

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	
5,864.4	5,652.3	-371.6	-1,380.0	KOP #2	
6,782.6	6,199.0	245.9	-1,381.4	End of Build	



BONANZA CREEK ENERGY OPERATING

SEC.12-T5N-R62W

State Antelope J-12 Pad Sec.12-T5N-R62W

State Antelope E-12-1MRLNC

Wellbore #1

Plan #1 (11-19-13)

Anticollision Report

22 November, 2013

Offset Design		State Antelope J-12 Pad Sec.12-T5N-R62W - State Antelope 24-21-12HNC - Wellbore #1 - Plan #1 (11											Offset Site Error:	0.0 ft		
Survey Program: 0-MWD															Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	-7.26	21.9	-2.8	22.0							
100.0	100.0	100.0	100.0	0.1	0.1	-7.26	21.9	-2.8	22.0	21.8	0.22	98.055				
200.0	200.0	200.0	200.0	0.3	0.3	-7.26	21.9	-2.8	22.0	21.4	0.67	32.685				
289.3	289.3	289.3	289.3	0.5	0.5	90.00	21.9	-1.4	21.9	20.8	1.06	20.666 CC				
300.0	300.0	300.0	300.0	0.6	0.6	91.84	21.9	-1.0	21.9	20.8	1.10	19.819 ES				
400.0	399.8	399.2	399.1	0.8	0.8	116.79	21.9	4.1	24.5	23.0	1.55	15.784 SF				
500.0	499.5	497.6	497.1	1.0	1.0	145.48	21.5	12.5	35.6	33.5	2.05	17.382				
600.0	598.7	595.0	593.9	1.3	1.3	165.77	18.7	22.6	54.3	51.8	2.51	21.666				
700.0	697.5	690.6	688.7	1.6	1.6	177.98	13.2	34.2	79.4	76.4	2.97	26.705				
800.0	795.7	785.5	782.5	2.0	1.9	-174.68	6.1	46.7	109.6	106.1	3.45	31.760				
900.0	893.3	879.4	875.3	2.5	2.2	-170.56	-0.8	59.0	143.4	139.5	3.93	36.456				
1,000.0	990.0	972.2	967.0	3.0	2.5	-168.10	-7.8	71.2	180.5	176.1	4.43	40.765				
1,100.0	1,085.7	1,063.8	1,057.5	3.6	2.8	-166.57	-14.6	83.3	220.7	215.8	4.93	44.733				
1,200.0	1,180.8	1,154.5	1,147.2	4.2	3.2	-166.24	-21.3	95.2	262.8	257.4	5.46	48.136				
1,300.0	1,275.8	1,245.1	1,236.8	4.8	3.5	-166.11	-28.1	107.1	305.0	299.0	6.00	50.798				
1,400.0	1,370.9	1,335.8	1,326.5	5.5	3.8	-166.02	-34.8	119.0	347.2	340.6	6.55	52.976				
1,500.0	1,466.0	1,426.5	1,416.1	6.1	4.1	-165.94	-41.6	130.9	389.4	382.3	7.11	54.763				
1,600.0	1,561.0	1,517.1	1,505.7	6.8	4.5	-165.88	-48.3	142.8	431.5	423.9	7.67	56.249				
1,700.0	1,656.1	1,607.8	1,595.3	7.4	4.8	-165.83	-55.1	154.7	473.7	465.5	8.24	57.503				
1,800.0	1,751.2	1,698.5	1,685.0	8.1	5.1	-165.79	-61.8	166.6	515.9	507.1	8.81	58.572				
1,900.0	1,846.2	1,789.2	1,774.6	8.7	5.5	-165.76	-68.6	178.5	558.1	548.7	9.38	59.493				
2,000.0	1,941.3	1,879.8	1,864.2	9.4	5.8	-165.73	-75.3	190.4	600.3	590.3	9.96	60.295				
2,100.0	2,036.4	1,970.5	1,953.9	10.1	6.1	-165.70	-82.1	202.4	642.4	631.9	10.53	60.997				
2,200.0	2,131.5	2,061.2	2,043.5	10.7	6.5	-165.68	-88.8	214.3	684.6	673.5	11.11	61.617				
2,300.0	2,226.5	2,151.8	2,133.1	11.4	6.8	-165.66	-95.6	226.2	726.8	715.1	11.69	62.169				
2,400.0	2,321.6	2,242.5	2,222.7	12.0	7.1	-165.64	-102.3	238.1	769.0	756.7	12.27	62.662				
2,500.0	2,416.7	2,333.2	2,312.4	12.7	7.5	-165.62	-109.1	250.0	811.2	798.3	12.85	63.105				
2,600.0	2,511.7	2,423.8	2,402.0	13.4	7.8	-165.61	-115.8	261.9	853.4	839.9	13.44	63.505				
2,700.0	2,606.8	2,514.5	2,491.6	14.0	8.1	-165.59	-122.6	273.8	895.5	881.5	14.02	63.868				
2,800.0	2,701.9	2,605.2	2,581.3	14.7	8.5	-165.58	-129.3	285.7	937.7	923.1	14.61	64.198				
2,900.0	2,796.9	2,695.8	2,670.9	15.4	8.8	-165.57	-136.1	297.6	979.9	964.7	15.19	64.500				

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope E-12-1MRLNC
Project:	SEC.12-T5N-R62W	TVD Reference:	WELL @ 4588.0ft (RKB - 13')
Reference Site:	State Antelope J-12 Pad Sec.12-T5N-R62W	MD Reference:	WELL @ 4588.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope E-12-1MRLNC	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 (11-19-13)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 490-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	3.0	3.0	0.0	0.0	-3.98	40.1	-2.8	40.2	40.2	0.00	N/A CC		
100.0	100.0	102.9	102.9	0.1	0.1	-3.64	40.2	-2.6	40.3	40.1	0.23	176.181 ES		
200.0	200.0	202.8	202.8	0.3	0.2	-2.69	40.6	-1.9	40.6	40.1	0.57	71.796		
300.0	300.0	302.7	302.6	0.6	0.3	91.25	41.3	-0.8	41.3	40.4	0.90	45.993		
400.0	399.8	402.3	402.3	0.8	0.5	100.19	42.2	0.7	42.9	41.6	1.23	34.730		
500.0	499.5	501.6	501.6	1.0	0.6	116.00	43.3	2.6	47.2	45.6	1.61	29.277		
600.0	598.7	601.0	600.9	1.3	0.8	132.75	44.2	4.5	55.8	53.7	2.09	26.740 SF		
700.0	697.5	700.3	700.2	1.6	1.0	145.77	44.1	6.2	68.6	66.1	2.55	26.953		
800.0	795.7	799.1	799.0	2.0	1.2	155.62	42.7	7.4	85.2	82.2	3.00	28.428		
900.0	893.3	897.0	896.9	2.5	1.4	163.01	40.3	8.3	105.4	101.9	3.44	30.609		
1,000.0	990.0	993.4	993.2	3.0	1.6	168.38	37.6	9.4	129.8	125.9	3.89	33.344		
1,100.0	1,085.7	1,090.8	1,090.6	3.6	1.8	172.29	34.6	10.0	157.6	153.3	4.35	36.266		
1,200.0	1,180.8	1,187.0	1,186.7	4.2	2.0	174.66	31.1	9.9	187.0	182.2	4.80	38.928		
1,300.0	1,275.8	1,282.6	1,282.3	4.8	2.2	176.38	27.3	9.6	216.4	211.1	5.28	41.009		
1,400.0	1,370.9	1,378.5	1,378.0	5.5	2.4	177.74	23.3	9.4	246.0	240.2	5.76	42.679		
1,500.0	1,466.0	1,477.3	1,476.8	6.1	2.7	178.85	19.0	8.4	274.8	268.6	6.26	43.920		
1,600.0	1,561.0	1,571.6	1,570.9	6.8	2.9	179.65	14.9	7.1	303.4	296.7	6.74	45.011		
1,700.0	1,656.1	1,667.5	1,666.8	7.4	3.1	-179.72	11.2	5.9	332.3	325.1	7.24	45.922		
1,800.0	1,751.2	1,764.1	1,763.2	8.1	3.3	-179.06	6.5	4.7	361.0	353.3	7.75	46.605		
1,900.0	1,846.2	1,860.2	1,859.2	8.7	3.5	-178.37	1.1	3.7	389.7	381.4	8.27	47.133		
2,000.0	1,941.3	1,959.8	1,958.5	9.4	3.7	-177.61	-5.6	2.2	417.8	409.0	8.80	47.452		
2,100.0	2,036.4	2,053.6	2,052.0	10.1	4.0	-176.89	-12.7	0.8	445.7	436.4	9.34	47.737		
2,200.0	2,131.5	2,148.2	2,146.4	10.7	4.2	-176.17	-20.4	-0.1	474.2	464.4	9.88	47.987		
2,300.0	2,226.5	2,246.0	2,243.7	11.4	4.4	-175.43	-29.0	-0.9	502.7	492.3	10.45	48.129		
2,400.0	2,321.6	2,348.1	2,345.3	12.0	4.7	-174.66	-38.9	-2.5	530.4	519.4	11.03	48.090		
2,500.0	2,416.7	2,447.2	2,443.9	12.7	5.0	-173.96	-48.9	-4.9	557.3	545.7	11.61	48.022		
2,600.0	2,511.7	2,544.9	2,541.1	13.4	5.2	-173.32	-58.9	-7.6	583.9	571.7	12.19	47.894		
2,700.0	2,606.8	2,645.2	2,640.8	14.0	5.5	-172.69	-69.7	-10.7	610.2	597.4	12.80	47.684		
2,800.0	2,701.9	2,742.8	2,737.7	14.7	5.8	-172.11	-80.4	-14.5	635.8	622.4	13.40	47.462		
2,900.0	2,796.9	2,829.7	2,824.1	15.4	6.0	-171.70	-89.1	-17.1	662.3	648.4	13.95	47.474		
3,000.0	2,892.0	2,921.1	2,915.1	16.0	6.2	-171.40	-97.0	-19.1	689.9	675.4	14.50	47.591		
3,100.0	2,987.1	3,016.1	3,009.9	16.7	6.4	-171.20	-104.1	-20.8	718.0	703.0	15.04	47.730		
3,200.0	3,082.1	3,113.6	3,107.2	17.3	6.6	-171.08	-110.5	-22.8	745.9	730.3	15.59	47.848		
3,300.0	3,177.2	3,208.2	3,201.5	18.0	6.9	-170.96	-116.9	-24.8	773.9	757.7	16.14	47.945		
3,400.0	3,272.3	3,307.3	3,300.2	18.7	7.1	-170.75	-124.9	-26.7	801.8	785.0	16.73	47.917		
3,500.0	3,367.3	3,405.3	3,397.7	19.3	7.4	-170.41	-134.7	-28.8	829.3	811.9	17.35	47.799		
3,600.0	3,462.4	3,501.6	3,493.4	20.0	7.7	-169.97	-146.3	-30.8	856.7	838.7	17.99	47.629		
3,700.0	3,557.5	3,597.0	3,587.9	20.7	8.0	-169.51	-158.5	-32.6	884.2	865.6	18.64	47.442		
3,800.0	3,652.5	3,701.7	3,691.8	21.3	8.3	-169.06	-171.6	-35.1	911.4	892.1	19.31	47.209		
3,900.0	3,747.6	3,801.9	3,791.2	22.0	8.5	-168.72	-183.2	-38.3	937.8	917.9	19.93	47.047		
4,000.0	3,842.7	3,895.3	3,884.0	22.7	8.8	-168.48	-193.0	-41.6	964.2	943.6	20.53	46.963		
4,100.0	3,937.7	3,984.0	3,972.2	23.3	9.0	-168.27	-202.2	-43.9	991.3	970.2	21.12	46.942		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope E-12-1MRLNC
Project:	SEC.12-T5N-R62W	TVD Reference:	WELL @ 4588.0ft (RKB - 13')
Reference Site:	State Antelope J-12 Pad Sec.12-T5N-R62W	MD Reference:	WELL @ 4588.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope E-12-1MRLNC	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 (11-19-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4588.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: State Antelope E-12-1MRLNC
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 E-12-1MRLNC
Project:	SEC.12-T5N-R62W	TVD Reference:	WELL @ 4588.0ft (RKB - 13')
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