

# BONANZA CREEK ENERGY OPERATING

Well Name: **State Whitetail 34-31-36HNB**

Surface Location: State Whitetail O-36 Pad Sec.36-T6N-R62W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

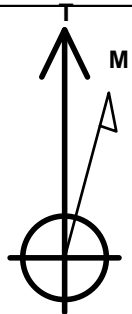
Ground Elevation: 4653.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1404834.89	3341985.36	40.438170	-104.271360	

RKB - 13' WELL @ 4666.0ft (RKB - 13')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 300'FSL & 2548'FEL	1.0	0.0	0.0	Point
BHL 470'FNL & 1991'FEL	6180.0	4430.1	612.3	Point
T1 531'FSL & 1952'FEL	6180.0	236.8	598.5	Point



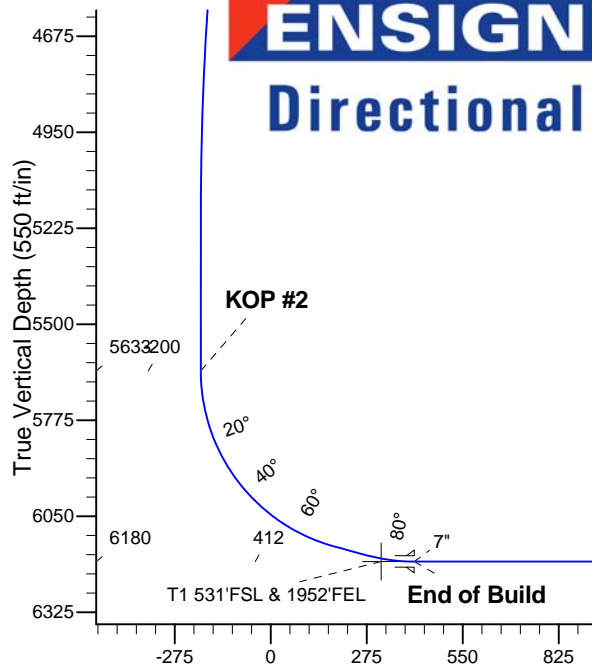
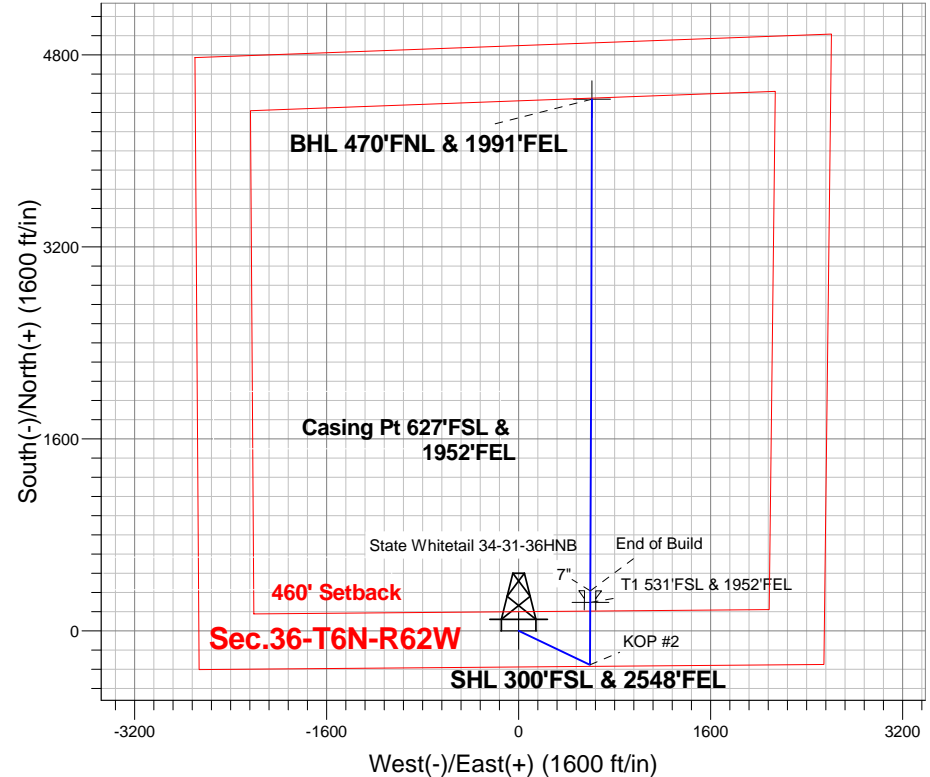
Azimuths to True North  
Magnetic North: 8.27°

Magnetic Field  
Strength: 52948.0nT  
Dip Angle: 67.08°  
Date: 11/18/2013  
Model: IGRF2010

State Whitetail O-36 Pad Sec.36-T6N-R62W  
State Whitetail 34-31-36HNB  
Plan #1 (11-18-13)  
11:45, November 18 2013

## ANNOTATIONS

TVD	MD	Annotation
1600.0	1600.0	KOP #1
5633.2	5700.7	KOP #2
6180.0	6618.9	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	1600.0	0.00	0.00	1600.0	0.0	0.0	0.00	0.00	0.0	
3	2226.6	12.53	115.51	2221.6	-29.4	61.6	2.00	115.51	-20.7	
4	4640.9	12.53	115.51	4578.4	-255.0	534.4	0.00	0.00	-179.4	
5	5267.5	0.00	0.00	5200.0	-284.4	596.0	2.00	180.00	-200.1	
6	5700.7	0.00	0.00	5633.2	-284.4	596.0	0.00	0.00	-200.1	
7	6382.6	75.00	0.20	6136.4	101.7	597.3	11.00	0.20	182.5	
8	6482.6	75.00	0.20	6162.3	198.2	597.7	0.00	0.00	278.2	
9	6618.9	90.00	0.20	6180.0	333.1	598.1	11.00	0.00	411.8	
10	10716.0	90.00	0.20	6180.0	4430.1	612.3	0.00	0.00	4472.2	BHL 470'FNL & 1991'FEL

BHL 470'FNL & 1991'FEL

Vertical Section at 7.87° (550 ft/in)



# **BONANZA CREEK ENERGY OPERATING**

**SEC.36-T6N-R62W**

**State Whitetail O-36 Pad Sec.36-T6N-R62W**

**State Whitetail 34-31-36HNB**

**Wellbore #1**

**Plan: Plan #1 (11-18-13)**

## **Standard Planning Report**

**18 November, 2013**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well State Whitetail 34-31-36HNB
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Project:</b>	SEC.36-T6N-R62W	<b>MD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Site:</b>	State Whitetail O-36 Pad Sec.36-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	State Whitetail 34-31-36HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-18-13)		

<b>Project</b>	SEC.36-T6N-R62W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						State Whitetail O-36 Pad Sec.36-T6N-R62W											
Site Position:						Northing:			1,404,853.11 ft			Latitude:			40.438220		
From:			Lat/Long			Easting:			3,341,985.10 ft			Longitude:			-104.271360		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.79 °		

Well	State Whitetail 34-31-36HNB					
Well Position	+N/-S	-18.2 ft	Northing:	1,404,834.89 ft	Latitude:	40.438170
	+E/-W	0.0 ft	Easting:	3,341,985.36 ft	Longitude:	-104.271360
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,653.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	11/18/2013	8.27	67.08	52,948

<b>Design</b>	Plan #1 (11-18-13)				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	7.87	

<b>Plan Sections</b>										
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	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,226.6	12.53	115.51	2,221.6	-29.4	61.6	2.00	2.00	0.00	115.51	
4,640.9	12.53	115.51	4,578.4	-255.0	534.4	0.00	0.00	0.00	0.00	
5,267.5	0.00	0.00	5,200.0	-284.4	596.0	2.00	-2.00	0.00	180.00	
5,700.7	0.00	0.00	5,633.2	-284.4	596.0	0.00	0.00	0.00	0.00	
6,382.6	75.00	0.20	6,136.4	101.7	597.3	11.00	11.00	0.00	0.20	
6,482.6	75.00	0.20	6,162.3	198.2	597.7	0.00	0.00	0.00	0.00	
6,618.9	90.00	0.20	6,180.0	333.1	598.1	11.00	11.00	0.00	0.00	
10,716.0	90.00	0.20	6,180.0	4,430.1	612.3	0.00	0.00	0.00	0.00	BHL 470'FNL & 199

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well State Whitetail 34-31-36HNB
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Project:</b>	SEC.36-T6N-R62W	<b>MD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Site:</b>	State Whitetail O-36 Pad Sec.36-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	State Whitetail 34-31-36HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-18-13)		

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
<b>SHL 300'FSL &amp; 2548'FEL</b>									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP #1</b>									
1,700.0	2.00	115.51	1,700.0	-0.8	1.6	-0.5	2.00	2.00	0.00
1,800.0	4.00	115.51	1,799.8	-3.0	6.3	-2.1	2.00	2.00	0.00
1,900.0	6.00	115.51	1,899.5	-6.8	14.2	-4.8	2.00	2.00	0.00
2,000.0	8.00	115.51	1,998.7	-12.0	25.2	-8.4	2.00	2.00	0.00
2,100.0	10.00	115.51	2,097.5	-18.7	39.3	-13.2	2.00	2.00	0.00
2,200.0	12.00	115.51	2,195.6	-27.0	56.5	-19.0	2.00	2.00	0.00
2,226.6	12.53	115.51	2,221.6	-29.4	61.6	-20.7	2.00	2.00	0.00
2,300.0	12.53	115.51	2,293.3	-36.3	76.0	-25.5	0.00	0.00	0.00
2,400.0	12.53	115.51	2,390.9	-45.6	95.6	-32.1	0.00	0.00	0.00
2,500.0	12.53	115.51	2,488.5	-54.9	115.1	-38.7	0.00	0.00	0.00
2,600.0	12.53	115.51	2,586.1	-64.3	134.7	-45.2	0.00	0.00	0.00
2,700.0	12.53	115.51	2,683.7	-73.6	154.3	-51.8	0.00	0.00	0.00
2,800.0	12.53	115.51	2,781.4	-83.0	173.9	-58.4	0.00	0.00	0.00
2,900.0	12.53	115.51	2,879.0	-92.3	193.5	-65.0	0.00	0.00	0.00
3,000.0	12.53	115.51	2,976.6	-101.7	213.1	-71.5	0.00	0.00	0.00
3,100.0	12.53	115.51	3,074.2	-111.0	232.6	-78.1	0.00	0.00	0.00
3,200.0	12.53	115.51	3,171.8	-120.4	252.2	-84.7	0.00	0.00	0.00
3,300.0	12.53	115.51	3,269.4	-129.7	271.8	-91.3	0.00	0.00	0.00
3,400.0	12.53	115.51	3,367.1	-139.0	291.4	-97.8	0.00	0.00	0.00
3,500.0	12.53	115.51	3,464.7	-148.4	311.0	-104.4	0.00	0.00	0.00
3,600.0	12.53	115.51	3,562.3	-157.7	330.6	-111.0	0.00	0.00	0.00
3,700.0	12.53	115.51	3,659.9	-167.1	350.1	-117.6	0.00	0.00	0.00
3,800.0	12.53	115.51	3,757.5	-176.4	369.7	-124.2	0.00	0.00	0.00
3,900.0	12.53	115.51	3,855.1	-185.8	389.3	-130.7	0.00	0.00	0.00
4,000.0	12.53	115.51	3,952.8	-195.1	408.9	-137.3	0.00	0.00	0.00
4,100.0	12.53	115.51	4,050.4	-204.5	428.5	-143.9	0.00	0.00	0.00
4,200.0	12.53	115.51	4,148.0	-213.8	448.1	-150.5	0.00	0.00	0.00
4,300.0	12.53	115.51	4,245.6	-223.2	467.6	-157.0	0.00	0.00	0.00
4,400.0	12.53	115.51	4,343.2	-232.5	487.2	-163.6	0.00	0.00	0.00
4,500.0	12.53	115.51	4,440.9	-241.8	506.8	-170.2	0.00	0.00	0.00
4,600.0	12.53	115.51	4,538.5	-251.2	526.4	-176.8	0.00	0.00	0.00
4,640.9	12.53	115.51	4,578.4	-255.0	534.4	-179.4	0.00	0.00	0.00
4,700.0	11.35	115.51	4,636.2	-260.3	545.4	-183.2	2.00	-2.00	0.00
4,800.0	9.35	115.51	4,734.6	-268.0	561.7	-188.6	2.00	-2.00	0.00

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<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Project:</b>	SEC.36-T6N-R62W	<b>MD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Site:</b>	State Whitetail O-36 Pad Sec.36-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	State Whitetail 34-31-36HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-18-13)		

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	7.35	115.51	4,833.5	-274.3	574.8	-193.0	2.00	-2.00	0.00
5,000.0	5.35	115.51	4,932.9	-279.0	584.7	-196.4	2.00	-2.00	0.00
5,100.0	3.35	115.51	5,032.6	-282.3	591.6	-198.6	2.00	-2.00	0.00
5,200.0	1.35	115.51	5,132.5	-284.1	595.3	-199.9	2.00	-2.00	0.00
5,267.5	0.00	0.00	5,200.0	-284.4	596.0	-200.1	2.00	-2.00	0.00
5,300.0	0.00	0.00	5,232.5	-284.4	596.0	-200.1	0.00	0.00	0.00
5,400.0	0.00	0.00	5,332.5	-284.4	596.0	-200.1	0.00	0.00	0.00
5,500.0	0.00	0.00	5,432.5	-284.4	596.0	-200.1	0.00	0.00	0.00
5,600.0	0.00	0.00	5,532.5	-284.4	596.0	-200.1	0.00	0.00	0.00
5,700.0	0.00	0.00	5,632.5	-284.4	596.0	-200.1	0.00	0.00	0.00
5,700.7	0.00	0.00	5,633.2	-284.4	596.0	-200.1	0.00	0.00	0.00
<b>KOP #2</b>									
5,800.0	10.92	0.20	5,731.9	-275.0	596.0	-190.8	11.00	11.00	0.00
5,900.0	21.92	0.20	5,827.7	-246.7	596.1	-162.8	11.00	11.00	0.00
6,000.0	32.92	0.20	5,916.3	-200.8	596.3	-117.2	11.00	11.00	0.00
6,100.0	43.92	0.20	5,994.5	-138.7	596.5	-55.8	11.00	11.00	0.00
6,200.0	54.92	0.20	6,059.5	-62.9	596.8	19.4	11.00	11.00	0.00
6,300.0	65.92	0.20	6,108.8	23.9	597.1	105.4	11.00	11.00	0.00
6,382.6	75.00	0.20	6,136.4	101.7	597.3	182.5	11.00	11.00	0.00
6,400.0	75.00	0.20	6,140.9	118.5	597.4	199.2	0.00	0.00	0.00
6,482.6	75.00	0.20	6,162.3	198.2	597.7	278.2	0.00	0.00	0.00
6,500.0	76.92	0.20	6,166.5	215.2	597.7	295.0	11.00	11.00	0.00
6,523.3	79.48	0.20	6,171.2	238.0	597.8	317.6	11.00	11.00	0.00
<b>T1 531'FSL &amp; 1952'FEL</b>									
6,600.0	87.92	0.20	6,179.7	314.1	598.1	393.1	11.00	11.00	0.00
6,618.9	90.00	0.20	6,180.0	333.0	598.1	411.8	11.00	11.00	0.00
<b>End of Build - 7"</b>									
6,700.0	90.00	0.20	6,180.0	414.1	598.4	492.2	0.00	0.00	0.00
6,800.0	90.00	0.20	6,180.0	514.1	598.8	591.3	0.00	0.00	0.00
6,900.0	90.00	0.20	6,180.0	614.1	599.1	690.4	0.00	0.00	0.00
7,000.0	90.00	0.20	6,180.0	714.1	599.5	789.5	0.00	0.00	0.00
7,100.0	90.00	0.20	6,180.0	814.1	599.8	888.6	0.00	0.00	0.00
7,200.0	90.00	0.20	6,180.0	914.1	600.1	987.7	0.00	0.00	0.00
7,300.0	90.00	0.20	6,180.0	1,014.1	600.5	1,086.8	0.00	0.00	0.00
7,400.0	90.00	0.20	6,180.0	1,114.1	600.8	1,185.9	0.00	0.00	0.00
7,500.0	90.00	0.20	6,180.0	1,214.1	601.2	1,285.0	0.00	0.00	0.00
7,600.0	90.00	0.20	6,180.0	1,314.1	601.5	1,384.1	0.00	0.00	0.00
7,700.0	90.00	0.20	6,180.0	1,414.1	601.9	1,483.2	0.00	0.00	0.00
7,800.0	90.00	0.20	6,180.0	1,514.1	602.2	1,582.3	0.00	0.00	0.00
7,900.0	90.00	0.20	6,180.0	1,614.1	602.6	1,681.4	0.00	0.00	0.00
8,000.0	90.00	0.20	6,180.0	1,714.1	602.9	1,780.5	0.00	0.00	0.00
8,100.0	90.00	0.20	6,180.0	1,814.1	603.3	1,879.6	0.00	0.00	0.00
8,200.0	90.00	0.20	6,180.0	1,914.1	603.6	1,978.7	0.00	0.00	0.00
8,300.0	90.00	0.20	6,180.0	2,014.1	603.9	2,077.8	0.00	0.00	0.00
8,400.0	90.00	0.20	6,180.0	2,114.1	604.3	2,177.0	0.00	0.00	0.00
8,500.0	90.00	0.20	6,180.0	2,214.1	604.6	2,276.1	0.00	0.00	0.00
8,600.0	90.00	0.20	6,180.0	2,314.1	605.0	2,375.2	0.00	0.00	0.00
8,700.0	90.00	0.20	6,180.0	2,414.1	605.3	2,474.3	0.00	0.00	0.00
8,800.0	90.00	0.20	6,180.0	2,514.1	605.7	2,573.4	0.00	0.00	0.00
8,900.0	90.00	0.20	6,180.0	2,614.1	606.0	2,672.5	0.00	0.00	0.00
9,000.0	90.00	0.20	6,180.0	2,714.1	606.4	2,771.6	0.00	0.00	0.00
9,100.0	90.00	0.20	6,180.0	2,814.1	606.7	2,870.7	0.00	0.00	0.00
9,200.0	90.00	0.20	6,180.0	2,914.1	607.1	2,969.8	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well State Whitetail 34-31-36HNB
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Project:</b>	SEC.36-T6N-R62W	<b>MD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Site:</b>	State Whitetail O-36 Pad Sec.36-T6N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	State Whitetail 34-31-36HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-18-13)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,300.0	90.00	0.20	6,180.0	3,014.1	607.4	3,068.9	0.00	0.00	0.00	
9,400.0	90.00	0.20	6,180.0	3,114.1	607.7	3,168.0	0.00	0.00	0.00	
9,500.0	90.00	0.20	6,180.0	3,214.1	608.1	3,267.1	0.00	0.00	0.00	
9,600.0	90.00	0.20	6,180.0	3,314.1	608.4	3,366.2	0.00	0.00	0.00	
9,700.0	90.00	0.20	6,180.0	3,414.1	608.8	3,465.3	0.00	0.00	0.00	
9,800.0	90.00	0.20	6,180.0	3,514.1	609.1	3,564.4	0.00	0.00	0.00	
9,900.0	90.00	0.20	6,180.0	3,614.1	609.5	3,663.5	0.00	0.00	0.00	
10,000.0	90.00	0.20	6,180.0	3,714.1	609.8	3,762.6	0.00	0.00	0.00	
10,100.0	90.00	0.20	6,180.0	3,814.1	610.2	3,861.7	0.00	0.00	0.00	
10,200.0	90.00	0.20	6,180.0	3,914.1	610.5	3,960.8	0.00	0.00	0.00	
10,300.0	90.00	0.20	6,180.0	4,014.1	610.9	4,060.0	0.00	0.00	0.00	
10,400.0	90.00	0.20	6,180.0	4,114.1	611.2	4,159.1	0.00	0.00	0.00	
10,500.0	90.00	0.20	6,180.0	4,214.1	611.5	4,258.2	0.00	0.00	0.00	
10,600.0	90.00	0.20	6,180.0	4,314.1	611.9	4,357.3	0.00	0.00	0.00	
10,700.0	90.00	0.20	6,180.0	4,414.1	612.2	4,456.4	0.00	0.00	0.00	
10,716.0	90.00	0.20	6,180.0	4,430.1	612.3	4,472.2	0.00	0.00	0.00	
BHL 470'FNL & 1991'FEL										

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
BHL 470'FNL & 1991'	0.00	0.00	6,180.0	4,430.1	612.3	1,409,272.86	3,342,536.19	40.450330	-104.269160	
- hit/miss target										
- Shape										
- Point										
SHL 300'FSL & 2548'I	0.00	0.00	1.0	0.0	0.0	1,404,834.90	3,341,985.36	40.438170	-104.271360	
- plan hits target center										
- Point										
T1 531'FSL & 1952'FE	0.00	0.00	6,180.0	236.8	598.5	1,405,079.97	3,342,580.47	40.438820	-104.269210	
- plan misses target center by 8.9ft at 6523.3ft MD (6171.2 TVD, 238.0 N, 597.8 E)										
- Point										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,618.9	6,180.0	7"	7	7-1/2	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
1,600.0	1,600.0	0.0	0.0	KOP #1	
5,700.7	5,633.2	-284.4	596.0	KOP #2	
6,618.9	6,180.0	333.0	598.1	End of Build	



# **BONANZA CREEK ENERGY OPERATING**

**SEC.36-T6N-R62W**

**State Whitetail O-36 Pad Sec.36-T6N-R62W**

**State Whitetail 34-31-36HNB**

**Wellbore #1**

**Plan #1 (11-18-13)**

## **Anticollision Report**

**18 November, 2013**

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Whitetail 34-31-36HNB
<b>Project:</b>	SEC.36-T6N-R62W	<b>TVD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Reference Site:</b>	State Whitetail O-36 Pad Sec.36-T6N-R62W	<b>MD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	State Whitetail 34-31-36HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (11-18-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (11-18-13)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 11/18/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	10,716.0	Plan #1 (11-18-13) (Wellbore #1)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
STATE WHITETAIL 14-11-36HZ PAD 36-6N-62W						
STATE WHITETAIL 14-11-36HZ - Wellbore #1 - Wellbor						Out of range
State Whitetail O-36 Pad Sec.36-T6N-R62W						
State Whitetail O-K-36HNB - Wellbore #1 - Plan #1 (11-1	1,600.0	1,600.0	18.2	11.2	2.614 CC, ES	
State Whitetail O-K-36HNB - Wellbore #1 - Plan #1 (11-1	1,700.0	1,700.0	19.0	11.6	2.573 SF	

<b>Offset Design</b>	State Whitetail O-36 Pad Sec.36-T6N-R62W - State Whitetail O-K-36HNB - Wellbore #1 - Plan #1 (11-1											<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b>	0-MWD											<b>Offset Well Error:</b>	0.0 ft
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>			<b>Distance</b>								<b>Warning</b>
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>	
0.0	0.0	0.0	0.0	0.0	0.0	0.00	18.2	0.0	18.2	18.2	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	0.00	18.2	0.0	18.2	18.0	0.22	81.043	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	18.2	0.0	18.2	17.5	0.67	27.014	
300.0	300.0	300.0	300.0	0.6	0.6	0.00	18.2	0.0	18.2	17.1	1.12	16.209	
400.0	400.0	400.0	400.0	0.8	0.8	0.00	18.2	0.0	18.2	16.6	1.57	11.578	
500.0	500.0	500.0	500.0	1.0	1.0	0.00	18.2	0.0	18.2	16.2	2.02	9.005	
600.0	600.0	600.0	600.0	1.2	1.2	0.00	18.2	0.0	18.2	15.7	2.47	7.368	
700.0	700.0	700.0	700.0	1.5	1.5	0.00	18.2	0.0	18.2	15.3	2.92	6.234	
800.0	800.0	800.0	800.0	1.7	1.7	0.00	18.2	0.0	18.2	14.8	3.37	5.403	
900.0	900.0	900.0	900.0	1.9	1.9	0.00	18.2	0.0	18.2	14.4	3.82	4.767	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.00	18.2	0.0	18.2	13.9	4.27	4.265	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	0.00	18.2	0.0	18.2	13.5	4.72	3.859	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.00	18.2	0.0	18.2	13.0	5.17	3.524	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	0.00	18.2	0.0	18.2	12.6	5.62	3.242	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	0.00	18.2	0.0	18.2	12.1	6.07	3.002	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	0.00	18.2	0.0	18.2	11.7	6.52	2.795	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	0.00	18.2	0.0	18.2	11.2	6.97	2.614 CC, ES	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-120.24	18.2	0.0	19.0	11.6	7.40	2.573 SF	
1,800.0	1,799.8	1,799.8	1,799.8	3.9	3.9	-131.97	18.2	0.0	22.1	14.3	7.81	2.836	
1,900.0	1,899.5	1,899.5	1,899.5	4.1	4.2	-144.92	18.2	0.0	28.7	20.5	8.21	3.497	
2,000.0	1,998.7	1,998.7	1,998.7	4.3	4.4	-155.08	18.2	0.0	39.3	30.7	8.60	4.571	
2,100.0	2,097.5	2,098.0	2,098.0	4.5	4.6	-162.78	17.4	-0.1	53.5	44.5	8.96	5.970	

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



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Whitetail 34-31-36HNB
<b>Project:</b>	SEC.36-T6N-R62W	<b>TVD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Reference Site:</b>	State Whitetail O-36 Pad Sec.36-T6N-R62W	<b>MD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	State Whitetail 34-31-36HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (11-18-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
2,200.0	2,195.6	2,196.7	2,196.7	4.8	4.7	-169.06	14.9	-0.6	70.8	61.5	9.28	7.629		
2,300.0	2,293.3	2,295.1	2,295.0	5.1	4.9	-174.09	10.7	-1.3	90.4	80.8	9.64	9.384		
2,400.0	2,390.9	2,393.5	2,393.2	5.5	5.1	-178.17	4.9	-2.3	110.1	100.1	10.02	10.985		
2,500.0	2,488.5	2,491.8	2,491.2	5.9	5.3	178.26	-2.6	-3.6	129.8	119.3	10.43	12.442		
2,600.0	2,586.1	2,590.1	2,589.0	6.2	5.5	175.00	-11.7	-5.1	149.4	138.6	10.85	13.767		
2,700.0	2,683.7	2,688.2	2,686.5	6.6	5.7	171.93	-22.5	-7.0	169.2	157.9	11.30	14.971		
2,800.0	2,781.4	2,785.9	2,783.5	7.0	5.9	169.09	-34.6	-9.0	189.2	177.4	11.77	16.069		
2,900.0	2,879.0	2,883.5	2,880.3	7.4	6.1	166.75	-46.8	-11.1	209.6	197.3	12.27	17.082		
3,000.0	2,976.6	2,981.1	2,977.1	7.9	6.4	164.83	-59.0	-13.2	230.2	217.5	12.78	18.014		
3,100.0	3,074.2	3,078.7	3,073.9	8.3	6.6	163.22	-71.3	-15.3	251.1	237.8	13.31	18.869		
3,200.0	3,171.8	3,176.3	3,170.7	8.7	6.8	161.86	-83.5	-17.4	272.1	258.3	13.85	19.651		
3,300.0	3,269.4	3,273.8	3,267.5	9.2	7.1	160.69	-95.7	-19.5	293.3	278.9	14.40	20.367		
3,400.0	3,367.1	3,371.4	3,364.2	9.6	7.4	159.68	-107.9	-21.5	314.5	299.5	14.96	21.024		
3,500.0	3,464.7	3,469.0	3,461.0	10.0	7.6	158.80	-120.2	-23.6	335.8	320.3	15.53	21.625		
3,600.0	3,562.3	3,566.6	3,557.8	10.5	7.9	158.03	-132.4	-25.7	357.2	341.1	16.11	22.177		
3,700.0	3,659.9	3,664.1	3,654.6	10.9	8.2	157.34	-144.6	-27.8	378.7	362.0	16.69	22.685		
3,800.0	3,757.5	3,761.7	3,751.4	11.4	8.5	156.72	-156.8	-29.9	400.2	382.9	17.28	23.152		
3,900.0	3,855.1	3,859.3	3,848.2	11.9	8.7	156.17	-169.1	-32.0	421.7	403.8	17.88	23.584		
4,000.0	3,952.8	3,956.9	3,945.0	12.3	9.0	155.67	-181.3	-34.1	443.3	424.8	18.48	23.982		
4,100.0	4,050.4	4,054.5	4,041.7	12.8	9.3	155.22	-193.5	-36.2	464.9	445.8	19.09	24.352		
4,200.0	4,148.0	4,152.0	4,138.5	13.2	9.6	154.81	-205.8	-38.3	486.5	466.8	19.70	24.694		
4,300.0	4,245.6	4,249.6	4,235.3	13.7	9.9	154.43	-218.0	-40.3	508.1	487.8	20.31	25.012		
4,400.0	4,343.2	4,347.2	4,332.1	14.2	10.2	154.08	-230.2	-42.4	529.8	508.8	20.93	25.309		
4,500.0	4,440.9	4,444.8	4,428.9	14.6	10.5	153.77	-242.4	-44.5	551.5	529.9	21.55	25.585		
4,600.0	4,538.5	4,542.3	4,525.7	15.1	10.8	153.47	-254.7	-46.6	573.2	551.0	22.18	25.843		
4,700.0	4,636.2	4,640.0	4,622.6	15.5	11.1	153.28	-266.9	-48.7	594.3	571.5	22.82	26.043		
4,800.0	4,734.6	4,741.7	4,723.6	15.8	11.3	153.14	-278.3	-50.6	612.5	589.1	23.40	26.179		
4,900.0	4,833.5	4,844.8	4,826.4	16.1	11.6	153.16	-286.3	-52.0	626.9	603.0	23.90	26.236		
5,000.0	4,932.9	4,948.6	4,930.0	16.4	11.8	153.34	-290.6	-52.8	637.6	613.3	24.33	26.206		
5,100.0	5,032.6	5,051.2	5,032.6	16.6	12.0	153.63	-291.5	-52.9	644.5	619.8	24.70	26.091		
5,200.0	5,132.5	5,151.1	5,132.5	16.7	12.2	153.83	-291.5	-52.9	648.2	623.2	25.04	25.889		
5,300.0	5,232.5	5,251.1	5,232.5	16.9	12.3	-90.63	-291.5	-52.9	648.9	623.6	25.38	25.567		
5,400.0	5,332.5	5,351.1	5,332.5	17.0	12.5	-90.63	-291.5	-52.9	648.9	623.2	25.74	25.213		
5,500.0	5,432.5	5,451.1	5,432.5	17.2	12.7	-90.63	-291.5	-52.9	648.9	622.8	26.10	24.867		
5,600.0	5,532.5	5,551.1	5,532.5	17.3	12.9	-90.63	-291.5	-52.9	648.9	622.5	26.46	24.527		
5,700.0	5,632.5	5,651.1	5,632.5	17.5	13.1	-90.63	-291.5	-52.9	648.9	622.1	26.82	24.193		
5,800.0	5,731.9	5,752.4	5,733.2	17.6	13.2	-90.81	-281.8	-52.9	649.0	621.9	27.06	23.982		
5,900.0	5,827.7	5,853.8	5,830.2	17.6	13.2	-90.76	-252.8	-52.9	649.1	622.0	27.10	23.952		
6,000.0	5,916.3	5,955.0	5,919.6	17.6	13.2	-90.69	-205.7	-52.9	649.2	622.2	27.01	24.038		
6,100.0	5,994.5	6,056.0	5,998.1	17.5	13.1	-90.59	-142.3	-52.9	649.4	622.5	26.92	24.123		
6,200.0	6,059.5	6,156.9	6,062.8	17.4	13.2	-90.47	-65.2	-52.9	649.7	622.7	26.99	24.068		
6,300.0	6,108.8	6,257.6	6,111.4	17.3	13.3	-90.33	22.8	-52.9	650.0	622.6	27.37	23.748		
6,400.0	6,140.9	6,357.9	6,142.7	17.3	13.7	-90.21	118.0	-52.9	650.3	622.1	28.16	23.095		
6,500.0	6,166.5	6,458.0	6,168.0	17.5	14.4	-90.18	214.8	-52.9	650.6	621.3	29.37	22.153		
6,600.0	6,179.7	6,558.2	6,179.9	17.8	15.2	-90.03	314.1	-52.9	651.0	620.0	30.98	21.013		
6,700.0	6,180.0	6,658.2	6,180.0	18.5	16.2	-90.00	414.1	-52.9	651.3	618.4	32.95	19.765		
6,800.0	6,180.0	6,758.2	6,180.0	19.4	17.4	-90.00	514.1	-52.9	651.7	616.4	35.22	18.504		
6,900.0	6,180.0	6,858.2	6,180.0	20.6	18.6	-90.00	614.1	-52.9	652.0	614.3	37.74	17.277		
7,000.0	6,180.0	6,958.2	6,180.0	21.8	20.0	-90.00	714.1	-52.9	652.3	611.9	40.47	16.121		
7,100.0	6,180.0	7,058.2	6,180.0	23.2	21.5	-90.00	814.1	-52.9	652.7	609.3	43.36	15.051		
7,200.0	6,180.0	7,158.2	6,180.0	24.6	23.0	-90.00	914.1	-52.9	653.0	606.6	46.40	14.074		
7,300.0	6,180.0	7,258.2	6,180.0	26.1	24.6	-90.00	1,014.1	-52.9	653.4	603.8	49.55	13.187		

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

Offset Design		State Whitetail O-36 Pad Sec.36-T6N-R62W - State Whitetail O-K-36HNB - 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
7,400.0	6,180.0	7,358.2	6,180.0	27.7	26.2	-90.00	1,114.1	-52.9	653.7	600.9	52.79	12.384			
7,500.0	6,180.0	7,458.2	6,180.0	29.3	27.9	-90.00	1,214.1	-52.9	654.1	598.0	56.10	11.658			
7,600.0	6,180.0	7,558.2	6,180.0	30.9	29.6	-90.00	1,314.1	-52.9	654.4	594.9	59.48	11.002			
7,700.0	6,180.0	7,658.2	6,180.0	32.5	31.3	-90.00	1,414.1	-52.9	654.8	591.8	62.92	10.407			
7,800.0	6,180.0	7,758.2	6,180.0	34.2	33.1	-90.00	1,514.1	-52.9	655.1	588.7	66.40	9.867			
7,900.0	6,180.0	7,858.2	6,180.0	35.9	34.9	-90.00	1,614.1	-52.9	655.5	585.5	69.91	9.376			
8,000.0	6,180.0	7,958.2	6,180.0	37.7	36.6	-90.00	1,714.1	-52.9	655.8	582.3	73.46	8.927			
8,100.0	6,180.0	8,058.1	6,180.0	39.4	38.4	-90.00	1,814.1	-52.9	656.1	579.1	77.04	8.517			
8,200.0	6,180.0	8,158.1	6,180.0	41.2	40.2	-90.00	1,914.1	-52.9	656.5	575.8	80.64	8.141			
8,300.0	6,180.0	8,258.1	6,180.0	43.0	42.1	-90.00	2,014.1	-52.9	656.8	572.6	84.26	7.795			
8,400.0	6,180.0	8,358.1	6,180.0	44.8	43.9	-90.00	2,114.1	-52.9	657.2	569.3	87.90	7.476			
8,500.0	6,180.0	8,458.1	6,180.0	46.6	45.7	-90.00	2,214.1	-52.9	657.5	566.0	91.56	7.181			
8,600.0	6,180.0	8,558.1	6,180.0	48.4	47.6	-90.00	2,314.1	-52.9	657.9	562.6	95.23	6.908			
8,700.0	6,180.0	8,658.1	6,180.0	50.2	49.4	-90.00	2,414.1	-52.9	658.2	559.3	98.92	6.654			
8,800.0	6,180.0	8,758.1	6,180.0	52.0	51.3	-90.00	2,514.1	-52.9	658.6	555.9	102.62	6.418			
8,900.0	6,180.0	8,858.1	6,180.0	53.8	53.1	-90.00	2,614.1	-52.9	658.9	552.6	106.32	6.197			
9,000.0	6,180.0	8,958.1	6,180.0	55.7	55.0	-90.00	2,714.1	-52.9	659.2	549.2	110.04	5.991			
9,100.0	6,180.0	9,058.1	6,180.0	57.5	56.8	-90.00	2,814.1	-52.9	659.6	545.8	113.76	5.798			
9,200.0	6,180.0	9,158.1	6,180.0	59.4	58.7	-90.00	2,914.1	-52.9	659.9	542.4	117.50	5.617			
9,300.0	6,180.0	9,258.1	6,180.0	61.2	60.6	-90.00	3,014.1	-52.9	660.3	539.0	121.24	5.446			
9,400.0	6,180.0	9,358.1	6,180.0	63.1	62.5	-90.00	3,114.1	-52.9	660.6	535.6	124.98	5.286			
9,500.0	6,180.0	9,458.1	6,180.0	64.9	64.3	-90.00	3,214.1	-52.9	661.0	532.2	128.73	5.134			
9,600.0	6,180.0	9,558.1	6,180.0	66.8	66.2	-90.00	3,314.1	-52.9	661.3	528.8	132.49	4.991			
9,700.0	6,180.0	9,658.1	6,180.0	68.7	68.1	-90.00	3,414.1	-52.9	661.7	525.4	136.25	4.856			
9,800.0	6,180.0	9,758.1	6,180.0	70.5	70.0	-90.00	3,514.1	-52.9	662.0	522.0	140.02	4.728			
9,900.0	6,180.0	9,858.1	6,180.0	72.4	71.9	-90.00	3,614.1	-52.9	662.4	518.6	143.79	4.606			
10,000.0	6,180.0	9,958.1	6,180.0	74.3	73.8	-90.00	3,714.1	-52.9	662.7	515.1	147.56	4.491			
10,100.0	6,180.0	10,058.1	6,180.0	76.1	75.7	-90.00	3,814.1	-52.9	663.0	511.7	151.34	4.381			
10,200.0	6,180.0	10,158.1	6,180.0	78.0	77.6	-90.00	3,914.1	-52.9	663.4	508.3	155.12	4.277			
10,300.0	6,180.0	10,258.1	6,180.0	79.9	79.4	-90.00	4,014.1	-52.9	663.7	504.8	158.90	4.177			
10,400.0	6,180.0	10,358.1	6,180.0	81.8	81.3	-90.00	4,114.1	-52.9	664.1	501.4	162.69	4.082			
10,500.0	6,180.0	10,458.1	6,180.0	83.7	83.2	-90.00	4,214.1	-52.9	664.4	497.9	166.48	3.991			
10,600.0	6,180.0	10,558.1	6,180.0	85.5	85.1	-90.00	4,314.1	-52.9	664.8	494.5	170.27	3.904			
10,700.0	6,180.0	10,648.6	6,180.0	87.4	86.7	-90.00	4,404.6	-52.9	665.2	491.5	173.70	3.829			
10,716.5	6,180.0	10,648.6	6,180.0	87.8	86.7	-90.00	4,404.6	-52.9	665.7	491.7	174.01	3.826			

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Whitetail 34-31-36HNB
<b>Project:</b>	SEC.36-T6N-R62W	<b>TVD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Reference Site:</b>	State Whitetail O-36 Pad Sec.36-T6N-R62W	<b>MD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	State Whitetail 34-31-36HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (11-18-13)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4666.0ft (RKB - 13')  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: State Whitetail 34-31-36HNB  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.79°



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Whitetail 34-31-36HNB
<b>Project:</b>	SEC.36-T6N-R62W	<b>TVD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Reference Site:</b>	State Whitetail O-36 Pad Sec.36-T6N-R62W	<b>MD Reference:</b>	WELL @ 4666.0ft (RKB - 13')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	State Whitetail 34-31-36HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (11-18-13)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4666.0ft (RKB - 13')  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: State Whitetail 34-31-36HNB  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.79°

