

BONANZA CREEK ENERGY OPERATING

Well Name: **State Whitetail O-K-36HNB**

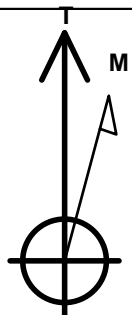
Surface Location: State Whitetail O-36 Pad Sec.36-T6N-R62W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4653.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1404853.11	3341985.10	40.438220	-104.271360	
RKB - 13' WELL @ 4666.0ft (RKB - 13')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 320'FSL & 2549'FEL	1.0	0.0	0.0	Point
BHL 470'FNL & 2655'FEL	6180.0	4386.4	-52.9	Point
T1 531'FSL & 2602'FEL	6180.0	211.3	-52.9	Point



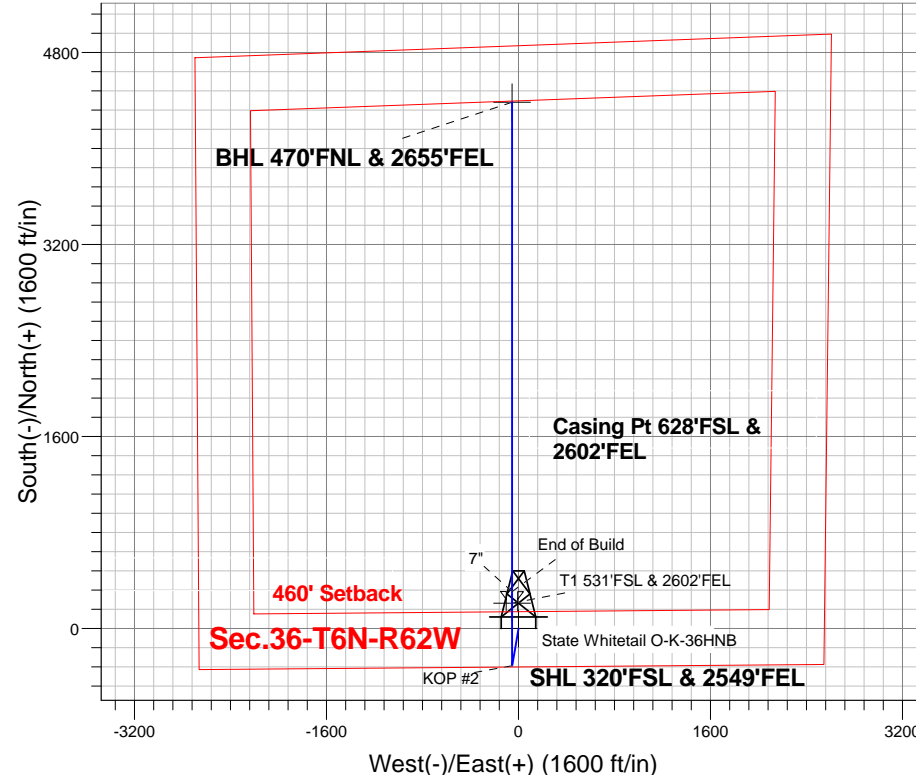
Azimuths to True North
Magnetic North: 8.27°

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

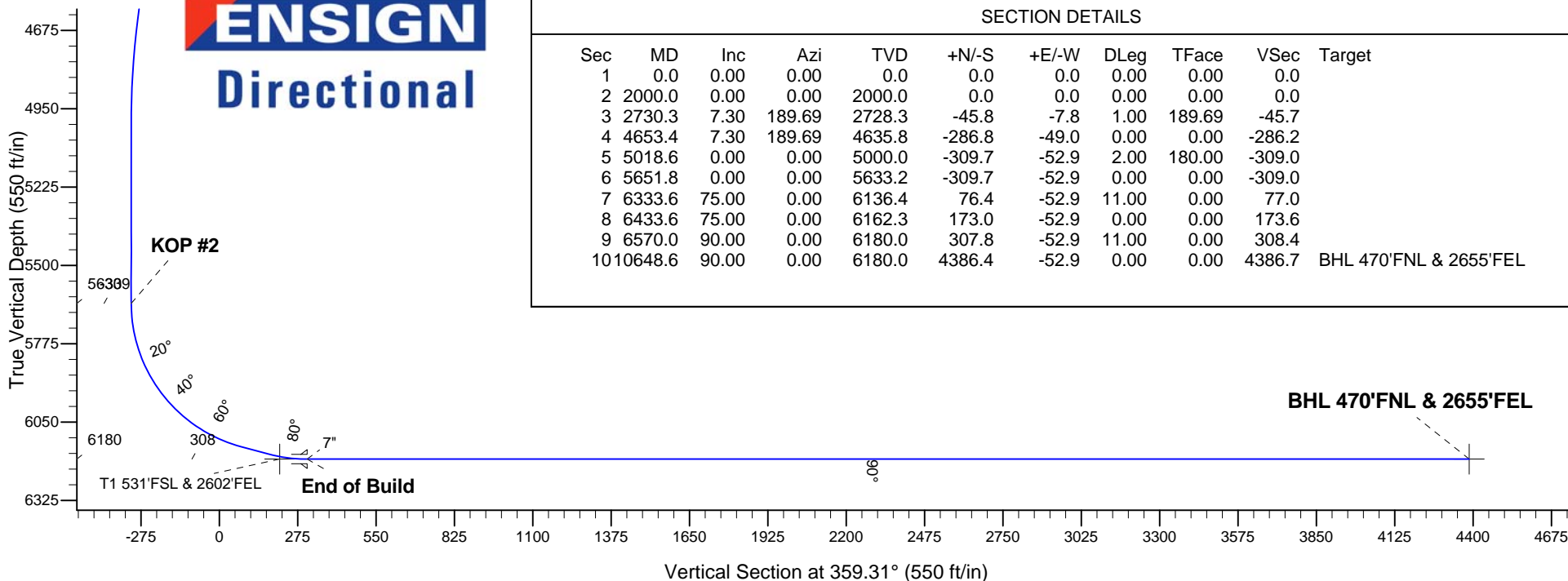
State Whitetail O-36 Pad Sec.36-T6N-R62W
State Whitetail O-K-36HNB
Plan #1 (11-18-13)
11:32, November 18 2013

ANNOTATIONS

TVD	MD	Annotation
2000.0	2000.0	KOP #1
5633.2	5651.8	KOP #2
6180.0	6570.0	End of Build



ENSIGN
Directional



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2730.3	7.30	189.69	2728.3	-45.8	-7.8	1.00	189.69	-45.7	
4	4653.4	7.30	189.69	4635.8	-286.8	-49.0	0.00	0.00	-286.2	
5	5018.6	0.00	0.00	5000.0	-309.7	-52.9	2.00	180.00	-309.0	
6	5651.8	0.00	0.00	5633.2	-309.7	-52.9	0.00	0.00	-309.0	
7	6333.6	75.00	0.00	6136.4	76.4	-52.9	11.00	0.00	77.0	
8	6433.6	75.00	0.00	6162.3	173.0	-52.9	0.00	0.00	173.6	
9	6570.0	90.00	0.00	6180.0	307.8	-52.9	11.00	0.00	308.4	
10	10648.6	90.00	0.00	6180.0	4386.4	-52.9	0.00	0.00	4386.7	BHL 470'FNL & 2655'FEL



BONANZA CREEK ENERGY OPERATING

SEC.36-T6N-R62W

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

State Whitetail O-K-36HNB

Wellbore #1

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

Standard Planning Report

18 November, 2013

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,730.3	7.30	189.69	2,728.3	-45.8	-7.8	1.00	1.00	0.00	189.69	
4,653.4	7.30	189.69	4,635.8	-286.8	-49.0	0.00	0.00	0.00	0.00	
5,018.6	0.00	0.00	5,000.0	-309.7	-52.9	2.00	-2.00	0.00	180.00	
5,651.8	0.00	0.00	5,633.2	-309.7	-52.9	0.00	0.00	0.00	0.00	
6,333.6	75.00	0.00	6,136.4	76.4	-52.9	11.00	11.00	0.00	0.00	
6,433.6	75.00	0.00	6,162.3	173.0	-52.9	0.00	0.00	0.00	0.00	
6,570.0	90.00	0.00	6,180.0	307.8	-52.9	11.00	11.00	0.00	0.00	
10,648.6	90.00	0.00	6,180.0	4,386.4	-52.9	0.00	0.00	0.00	0.00	BHL 470°FNL & 265°

Database:	Landmark	Local Co-ordinate Reference:	Well State Whitetail O-K-36HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4666.0ft (RKB - 13')
Project:	SEC.36-T6N-R62W	MD Reference:	WELL @ 4666.0ft (RKB - 13')
Site:	State Whitetail O-36 Pad Sec.36-T6N-R62W	North Reference:	True
Well:	State Whitetail O-K-36HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
SHL 320'FSL & 2549'FEL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
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
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
2,100.0	1.00	189.69	2,100.0	-0.9	-0.1	-0.9	1.00	1.00	0.00
2,200.0	2.00	189.69	2,200.0	-3.4	-0.6	-3.4	1.00	1.00	0.00
2,300.0	3.00	189.69	2,299.9	-7.7	-1.3	-7.7	1.00	1.00	0.00
2,400.0	4.00	189.69	2,399.7	-13.8	-2.3	-13.7	1.00	1.00	0.00
2,500.0	5.00	189.69	2,499.4	-21.5	-3.7	-21.4	1.00	1.00	0.00
2,600.0	6.00	189.69	2,598.9	-30.9	-5.3	-30.9	1.00	1.00	0.00
2,700.0	7.00	189.69	2,698.3	-42.1	-7.2	-42.0	1.00	1.00	0.00
2,730.3	7.30	189.69	2,728.3	-45.8	-7.8	-45.7	1.00	1.00	0.00
2,800.0	7.30	189.69	2,797.5	-54.5	-9.3	-54.4	0.00	0.00	0.00
2,900.0	7.30	189.69	2,896.6	-67.1	-11.5	-66.9	0.00	0.00	0.00
3,000.0	7.30	189.69	2,995.8	-79.6	-13.6	-79.4	0.00	0.00	0.00
3,100.0	7.30	189.69	3,095.0	-92.1	-15.7	-91.9	0.00	0.00	0.00
3,200.0	7.30	189.69	3,194.2	-104.7	-17.9	-104.4	0.00	0.00	0.00
3,300.0	7.30	189.69	3,293.4	-117.2	-20.0	-117.0	0.00	0.00	0.00
3,400.0	7.30	189.69	3,392.6	-129.7	-22.2	-129.5	0.00	0.00	0.00
3,500.0	7.30	189.69	3,491.8	-142.3	-24.3	-142.0	0.00	0.00	0.00
3,600.0	7.30	189.69	3,591.0	-154.8	-26.4	-154.5	0.00	0.00	0.00
3,700.0	7.30	189.69	3,690.2	-167.3	-28.6	-167.0	0.00	0.00	0.00
3,800.0	7.30	189.69	3,789.3	-179.9	-30.7	-179.5	0.00	0.00	0.00
3,900.0	7.30	189.69	3,888.5	-192.4	-32.9	-192.0	0.00	0.00	0.00
4,000.0	7.30	189.69	3,987.7	-204.9	-35.0	-204.5	0.00	0.00	0.00
4,100.0	7.30	189.69	4,086.9	-217.4	-37.1	-217.0	0.00	0.00	0.00
4,200.0	7.30	189.69	4,186.1	-230.0	-39.3	-229.5	0.00	0.00	0.00
4,300.0	7.30	189.69	4,285.3	-242.5	-41.4	-242.0	0.00	0.00	0.00
4,400.0	7.30	189.69	4,384.5	-255.0	-43.6	-254.5	0.00	0.00	0.00
4,500.0	7.30	189.69	4,483.7	-267.6	-45.7	-267.0	0.00	0.00	0.00
4,600.0	7.30	189.69	4,582.9	-280.1	-47.8	-279.5	0.00	0.00	0.00
4,653.4	7.30	189.69	4,635.8	-286.8	-49.0	-286.2	0.00	0.00	0.00
4,700.0	6.37	189.69	4,682.1	-292.3	-49.9	-291.6	2.00	-2.00	0.00
4,800.0	4.37	189.69	4,781.6	-301.5	-51.5	-300.8	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Whitetail O-K-36HNB
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Project:	SEC.36-T6N-R62W	MD Reference:	WELL @ 4666.0ft (RKB - 13')
Site:	State Whitetail O-36 Pad Sec.36-T6N-R62W	North Reference:	True
Well:	State Whitetail O-K-36HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	2.37	189.69	4,881.5	-307.3	-52.5	-306.6	2.00	-2.00	0.00
5,000.0	0.37	189.69	4,981.4	-309.6	-52.9	-309.0	2.00	-2.00	0.00
5,018.6	0.00	0.00	5,000.0	-309.7	-52.9	-309.0	2.00	-2.00	0.00
5,100.0	0.00	0.00	5,081.4	-309.7	-52.9	-309.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,181.4	-309.7	-52.9	-309.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,281.4	-309.7	-52.9	-309.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,381.4	-309.7	-52.9	-309.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,481.4	-309.7	-52.9	-309.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,581.4	-309.7	-52.9	-309.0	0.00	0.00	0.00
5,651.8	0.00	0.00	5,633.2	-309.7	-52.9	-309.0	0.00	0.00	0.00
KOP #2									
5,700.0	5.30	0.00	5,681.4	-307.5	-52.9	-306.8	11.00	11.00	0.00
5,800.0	16.30	0.00	5,779.4	-288.8	-52.9	-288.1	11.00	11.00	0.00
5,900.0	27.30	0.00	5,872.1	-251.7	-52.9	-251.0	11.00	11.00	0.00
6,000.0	38.30	0.00	5,956.1	-197.6	-52.9	-196.9	11.00	11.00	0.00
6,100.0	49.30	0.00	6,028.1	-128.5	-52.9	-127.8	11.00	11.00	0.00
6,200.0	60.30	0.00	6,085.7	-46.9	-52.9	-46.3	11.00	11.00	0.00
6,300.0	71.30	0.00	6,126.6	44.2	-52.9	44.8	11.00	11.00	0.00
6,333.6	75.00	0.00	6,136.4	76.4	-52.9	77.0	11.00	11.00	0.00
6,400.0	75.00	0.00	6,153.5	140.5	-52.9	141.1	0.00	0.00	0.00
6,433.6	75.00	0.00	6,162.3	173.0	-52.9	173.6	0.00	0.00	0.00
6,474.8	79.52	0.00	6,171.3	213.1	-52.9	213.7	11.00	11.00	0.00
T1 531'FSL & 2602'FEL									
6,500.0	82.30	0.00	6,175.3	238.0	-52.9	238.6	11.00	11.00	0.00
6,570.0	90.00	0.00	6,180.0	307.8	-52.9	308.4	11.00	11.00	0.00
End of Build - 7"									
6,600.0	90.00	0.00	6,180.0	337.8	-52.9	338.4	0.00	0.00	0.00
6,700.0	90.00	0.00	6,180.0	437.8	-52.9	438.4	0.00	0.00	0.00
6,800.0	90.00	0.00	6,180.0	537.8	-52.9	538.4	0.00	0.00	0.00
6,900.0	90.00	0.00	6,180.0	637.8	-52.9	638.4	0.00	0.00	0.00
7,000.0	90.00	0.00	6,180.0	737.8	-52.9	738.4	0.00	0.00	0.00
7,100.0	90.00	0.00	6,180.0	837.8	-52.9	838.3	0.00	0.00	0.00
7,200.0	90.00	0.00	6,180.0	937.8	-52.9	938.3	0.00	0.00	0.00
7,300.0	90.00	0.00	6,180.0	1,037.8	-52.9	1,038.3	0.00	0.00	0.00
7,400.0	90.00	0.00	6,180.0	1,137.8	-52.9	1,138.3	0.00	0.00	0.00
7,500.0	90.00	0.00	6,180.0	1,237.8	-52.9	1,238.3	0.00	0.00	0.00
7,600.0	90.00	0.00	6,180.0	1,337.8	-52.9	1,338.3	0.00	0.00	0.00
7,700.0	90.00	0.00	6,180.0	1,437.8	-52.9	1,438.3	0.00	0.00	0.00
7,800.0	90.00	0.00	6,180.0	1,537.8	-52.9	1,538.3	0.00	0.00	0.00
7,900.0	90.00	0.00	6,180.0	1,637.8	-52.9	1,638.3	0.00	0.00	0.00
8,000.0	90.00	0.00	6,180.0	1,737.8	-52.9	1,738.3	0.00	0.00	0.00
8,100.0	90.00	0.00	6,180.0	1,837.8	-52.9	1,838.3	0.00	0.00	0.00
8,200.0	90.00	0.00	6,180.0	1,937.8	-52.9	1,938.3	0.00	0.00	0.00
8,300.0	90.00	0.00	6,180.0	2,037.8	-52.9	2,038.3	0.00	0.00	0.00
8,400.0	90.00	0.00	6,180.0	2,137.8	-52.9	2,138.3	0.00	0.00	0.00
8,500.0	90.00	0.00	6,180.0	2,237.8	-52.9	2,238.2	0.00	0.00	0.00
8,600.0	90.00	0.00	6,180.0	2,337.8	-52.9	2,338.2	0.00	0.00	0.00
8,700.0	90.00	0.00	6,180.0	2,437.8	-52.9	2,438.2	0.00	0.00	0.00
8,800.0	90.00	0.00	6,180.0	2,537.8	-52.9	2,538.2	0.00	0.00	0.00
8,900.0	90.00	0.00	6,180.0	2,637.8	-52.9	2,638.2	0.00	0.00	0.00
9,000.0	90.00	0.00	6,180.0	2,737.8	-52.9	2,738.2	0.00	0.00	0.00
9,100.0	90.00	0.00	6,180.0	2,837.8	-52.9	2,838.2	0.00	0.00	0.00
9,200.0	90.00	0.00	6,180.0	2,937.8	-52.9	2,938.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Whitetail O-K-36HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4666.0ft (RKB - 13')
Project:	SEC.36-T6N-R62W	MD Reference:	WELL @ 4666.0ft (RKB - 13')
Site:	State Whitetail O-36 Pad Sec.36-T6N-R62W	North Reference:	True
Well:	State Whitetail O-K-36HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	0.00	6,180.0	3,037.8	-52.9	3,038.2	0.00	0.00	0.00	
9,400.0	90.00	0.00	6,180.0	3,137.8	-52.9	3,138.2	0.00	0.00	0.00	
9,500.0	90.00	0.00	6,180.0	3,237.8	-52.9	3,238.2	0.00	0.00	0.00	
9,600.0	90.00	0.00	6,180.0	3,337.8	-52.9	3,338.2	0.00	0.00	0.00	
9,700.0	90.00	0.00	6,180.0	3,437.8	-52.9	3,438.2	0.00	0.00	0.00	
9,800.0	90.00	0.00	6,180.0	3,537.8	-52.9	3,538.1	0.00	0.00	0.00	
9,900.0	90.00	0.00	6,180.0	3,637.8	-52.9	3,638.1	0.00	0.00	0.00	
10,000.0	90.00	0.00	6,180.0	3,737.8	-52.9	3,738.1	0.00	0.00	0.00	
10,100.0	90.00	0.00	6,180.0	3,837.8	-52.9	3,838.1	0.00	0.00	0.00	
10,200.0	90.00	0.00	6,180.0	3,937.8	-52.9	3,938.1	0.00	0.00	0.00	
10,300.0	90.00	0.00	6,180.0	4,037.8	-52.9	4,038.1	0.00	0.00	0.00	
10,400.0	90.00	0.00	6,180.0	4,137.8	-52.9	4,138.1	0.00	0.00	0.00	
10,500.0	90.00	0.00	6,180.0	4,237.8	-52.9	4,238.1	0.00	0.00	0.00	
10,600.0	90.00	0.00	6,180.0	4,337.8	-52.9	4,338.1	0.00	0.00	0.00	
10,648.6	90.00	0.00	6,180.0	4,386.4	-52.9	4,386.7	0.00	0.00	0.00	
BHL 470'FNL & 2655'FEL										

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
SHL 320'FSL & 2549'I - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,404,853.11	3,341,985.10	40.438220	-104.271360	
T1 531'FSL & 2602'FE - plan misses target center by 8.9ft at 6474.8ft MD (6171.3 TVD, 213.1 N, -52.9 E) - Point	0.00	0.00	6,180.0	211.3	-52.9	1,405,063.66	3,341,929.29	40.438800	-104.271550	
BHL 470'FNL & 2655' - plan hits target center - Point	0.00	0.00	6,180.0	4,386.4	-52.9	1,409,238.14	3,341,871.46	40.450260	-104.271550	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,570.0	6,180.0	7"	7	7-1/2	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
2,000.0	2,000.0	0.0	0.0	KOP #1	
5,651.8	5,633.2	-309.7	-52.9	KOP #2	
6,570.0	6,180.0	307.8	-52.9	End of Build	



BONANZA CREEK ENERGY OPERATING

SEC.36-T6N-R62W

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

State Whitetail O-K-36HNB

Wellbore #1

Plan #1 (11-18-13)

Anticollision Report

18 November, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Whitetail O-K-36HNB
Project:	SEC.36-T6N-R62W	TVD Reference:	WELL @ 4666.0ft (RKB - 13')
Reference Site:	State Whitetail O-36 Pad Sec.36-T6N-R62W	MD Reference:	WELL @ 4666.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Whitetail O-K-36HNB	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 (11-18-13)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
2,200.0	2,200.0	2,190.0	2,185.9	4.8	4.8	-62.94	-44.2	54.7	70.1	60.7	9.42	7.443		
2,300.0	2,299.9	2,286.9	2,280.4	4.9	5.1	-67.85	-53.1	73.5	89.7	79.9	9.80	9.151		
2,400.0	2,399.7	2,384.6	2,375.9	5.1	5.4	-71.85	-62.3	92.7	109.4	99.2	10.18	10.742		
2,500.0	2,499.4	2,482.4	2,471.3	5.3	5.8	-75.31	-71.4	112.0	129.1	118.5	10.58	12.196		
2,600.0	2,598.9	2,580.1	2,566.6	5.5	6.2	-78.46	-80.6	131.2	148.8	137.8	11.00	13.523		
2,700.0	2,698.3	2,677.7	2,661.9	5.7	6.5	-81.42	-89.7	150.4	168.6	157.2	11.44	14.735		
2,800.0	2,797.5	2,775.3	2,757.1	5.9	6.9	-84.25	-98.8	169.6	188.7	176.8	11.91	15.846		
2,900.0	2,896.6	2,872.9	2,852.3	6.2	7.3	-86.60	-107.9	188.8	209.2	196.8	12.39	16.876		
3,000.0	2,995.8	2,970.4	2,947.6	6.4	7.7	-88.54	-117.1	208.0	229.9	217.0	12.90	17.825		
3,100.0	3,095.0	3,068.0	3,042.8	6.6	8.2	-90.15	-126.2	227.2	250.8	237.4	13.42	18.697		
3,200.0	3,194.2	3,165.5	3,138.0	6.9	8.6	-91.52	-135.3	246.4	271.9	258.0	13.95	19.497		
3,300.0	3,293.4	3,263.1	3,233.2	7.2	9.0	-92.69	-144.4	265.6	293.2	278.7	14.49	20.231		
3,400.0	3,392.6	3,360.6	3,328.4	7.4	9.4	-93.70	-153.6	284.8	314.5	299.5	15.05	20.903		
3,500.0	3,491.8	3,458.2	3,423.6	7.7	9.9	-94.58	-162.7	304.0	335.9	320.3	15.61	21.520		
3,600.0	3,591.0	3,555.8	3,518.8	8.0	10.3	-95.36	-171.8	323.2	357.4	341.2	16.18	22.087		
3,700.0	3,690.2	3,653.3	3,614.0	8.3	10.8	-96.05	-180.9	342.4	379.0	362.2	16.76	22.608		
3,800.0	3,789.3	3,750.9	3,709.3	8.6	11.2	-96.66	-190.0	361.6	400.5	383.2	17.35	23.089		
3,900.0	3,888.5	3,848.4	3,804.5	8.9	11.6	-97.21	-199.2	380.8	422.2	404.2	17.94	23.532		
4,000.0	3,987.7	3,946.0	3,899.7	9.1	12.1	-97.71	-208.3	400.0	443.8	425.3	18.54	23.942		
4,100.0	4,086.9	4,043.5	3,994.9	9.4	12.5	-98.17	-217.4	419.2	465.5	446.4	19.14	24.322		
4,200.0	4,186.1	4,141.1	4,090.1	9.7	13.0	-98.58	-226.5	438.4	487.2	467.5	19.75	24.674		
4,300.0	4,285.3	4,238.6	4,185.3	10.0	13.4	-98.95	-235.7	457.6	509.0	488.6	20.36	25.002		
4,400.0	4,384.5	4,336.2	4,280.5	10.3	13.9	-99.30	-244.8	476.8	530.7	509.8	20.97	25.307		
4,500.0	4,483.7	4,433.8	4,375.8	10.6	14.4	-99.62	-253.9	496.0	552.5	530.9	21.59	25.591		
4,600.0	4,582.9	4,531.3	4,471.0	11.0	14.8	-99.91	-263.0	515.2	574.3	552.1	22.21	25.857		
4,700.0	4,682.1	4,628.9	4,566.2	11.2	15.3	-100.35	-272.2	534.4	596.0	573.2	22.84	26.101		
4,800.0	4,781.6	4,747.5	4,682.4	11.5	15.7	-100.76	-282.4	555.9	615.8	592.3	23.42	26.290		
4,900.0	4,881.5	4,870.1	4,803.4	11.7	16.1	-100.90	-290.8	573.6	631.1	607.2	23.94	26.365		
5,000.0	4,981.4	4,994.1	4,926.6	11.9	16.4	-100.79	-297.0	586.7	642.1	617.7	24.40	26.319		
5,100.0	5,081.4	5,119.1	5,051.2	12.1	16.6	89.23	-301.0	595.0	648.7	623.9	24.80	26.160		
5,200.0	5,181.4	5,244.6	5,176.7	12.3	16.8	89.37	-302.6	598.4	651.4	626.2	25.19	25.862		
5,300.0	5,281.4	5,349.4	5,281.4	12.4	17.0	89.38	-302.6	598.5	651.4	625.9	25.55	25.499		
5,400.0	5,381.4	5,449.4	5,381.4	12.6	17.1	89.38	-302.6	598.5	651.4	625.5	25.91	25.147		
5,500.0	5,481.4	5,549.4	5,481.4	12.8	17.3	89.38	-302.6	598.5	651.4	625.2	26.27	24.802		
5,600.0	5,581.4	5,649.4	5,581.4	13.0	17.4	89.38	-302.6	598.5	651.4	624.8	26.63	24.463		
5,640.6	5,622.1	5,690.0	5,622.1	13.1	17.5	89.44	-302.6	598.5	651.4	624.7	26.77	24.337		
5,700.0	5,681.4	5,748.6	5,680.6	13.2	17.5	89.38	-300.5	598.5	651.4	624.5	26.97	24.158		
5,800.0	5,779.4	5,846.9	5,777.1	13.2	17.6	89.40	-282.4	598.6	651.5	624.4	27.11	24.035		
5,900.0	5,872.1	5,945.4	5,868.5	13.2	17.6	89.44	-246.4	598.7	651.6	624.5	27.07	24.069		
6,000.0	5,956.1	6,043.9	5,951.7	13.2	17.6	89.51	-193.9	598.8	651.7	624.8	26.97	24.168		
6,100.0	6,028.1	6,142.7	6,023.7	13.1	17.5	89.59	-126.5	599.0	651.9	625.0	26.93	24.208		
6,200.0	6,085.7	6,241.7	6,081.8	13.2	17.4	89.69	-46.5	599.2	652.2	625.0	27.11	24.053		
6,300.0	6,126.6	6,340.9	6,123.8	13.5	17.4	89.79	43.3	599.5	652.4	624.8	27.64	23.600		
6,400.0	6,153.5	6,440.7	6,151.3	14.0	17.4	89.84	139.2	599.8	652.7	624.1	28.62	22.808		
6,500.0	6,175.3	6,540.5	6,174.0	14.7	17.6	89.91	236.3	600.1	653.0	623.0	29.99	21.776		
6,600.0	6,180.0	6,640.4	6,180.0	15.6	18.1	90.00	335.9	600.4	653.3	621.5	31.74	20.579		
6,700.0	6,180.0	6,740.4	6,180.0	16.7	18.9	90.00	435.9	600.7	653.6	619.7	33.84	19.314		
6,800.0	6,180.0	6,840.4	6,180.0	17.9	19.9	90.00	535.9	601.0	653.9	617.6	36.21	18.056		
6,900.0	6,180.0	6,940.4	6,180.0	19.2	21.1	90.00	635.9	601.2	654.1	615.3	38.82	16.850		
7,000.0	6,180.0	7,040.4	6,180.0	20.6	22.4	90.00	735.9	601.5	654.4	612.8	41.62	15.723		
7,100.0	6,180.0	7,140.4	6,180.0	22.1	23.7	90.00	835.9	601.8	654.7	610.1	44.58	14.687		
7,200.0	6,180.0	7,240.4	6,180.0	23.7	25.2	90.00	935.9	602.1	655.0	607.4	47.66	13.743		

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 Whitetail O-K-36HNB
Project:	SEC.36-T6N-R62W	TVD Reference:	WELL @ 4666.0ft (RKB - 13')
Reference Site:	State Whitetail O-36 Pad Sec.36-T6N-R62W	MD Reference:	WELL @ 4666.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Whitetail O-K-36HNB	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 (11-18-13)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,300.0	6,180.0	7,340.4	6,180.0	25.3	26.7	90.00	1,035.9	602.4	655.3	604.5	50.85	12.887		
7,400.0	6,180.0	7,440.4	6,180.0	26.9	28.3	90.00	1,135.9	602.7	655.6	601.5	54.12	12.114		
7,500.0	6,180.0	7,540.4	6,180.0	28.6	29.9	90.00	1,235.9	603.0	655.9	598.4	57.46	11.414		
7,600.0	6,180.0	7,640.4	6,180.0	30.3	31.6	90.00	1,335.8	603.3	656.2	595.3	60.87	10.781		
7,700.0	6,180.0	7,740.4	6,180.0	32.1	33.2	90.00	1,435.8	603.6	656.5	592.2	64.32	10.207		
7,800.0	6,180.0	7,840.4	6,180.0	33.8	34.9	90.00	1,535.8	603.9	656.8	589.0	67.81	9.685		
7,900.0	6,180.0	7,940.4	6,180.0	35.6	36.6	90.00	1,635.8	604.2	657.1	585.7	71.34	9.210		
8,000.0	6,180.0	8,040.4	6,180.0	37.4	38.4	90.00	1,735.8	604.5	657.4	582.5	74.90	8.776		
8,100.0	6,180.0	8,140.4	6,180.0	39.2	40.1	90.00	1,835.8	604.8	657.6	579.2	78.49	8.379		
8,200.0	6,180.0	8,240.4	6,180.0	41.0	41.9	90.00	1,935.8	605.0	657.9	575.8	82.10	8.014		
8,300.0	6,180.0	8,340.4	6,180.0	42.8	43.7	90.00	2,035.8	605.3	658.2	572.5	85.73	7.678		
8,400.0	6,180.0	8,440.4	6,180.0	44.6	45.5	90.00	2,135.8	605.6	658.5	569.1	89.38	7.368		
8,500.0	6,180.0	8,540.4	6,180.0	46.5	47.3	90.00	2,235.8	605.9	658.8	565.8	93.04	7.081		
8,600.0	6,180.0	8,640.4	6,180.0	48.3	49.1	90.00	2,335.8	606.2	659.1	562.4	96.72	6.815		
8,700.0	6,180.0	8,740.4	6,180.0	50.2	50.9	90.00	2,435.8	606.5	659.4	559.0	100.41	6.567		
8,800.0	6,180.0	8,840.4	6,180.0	52.0	52.7	90.00	2,535.8	606.8	659.7	555.6	104.11	6.336		
8,900.0	6,180.0	8,940.4	6,180.0	53.9	54.6	90.00	2,635.8	607.1	660.0	552.2	107.82	6.121		
9,000.0	6,180.0	9,040.4	6,180.0	55.8	56.4	90.00	2,735.8	607.4	660.3	548.7	111.54	5.919		
9,100.0	6,180.0	9,140.4	6,180.0	57.6	58.3	90.00	2,835.8	607.7	660.6	545.3	115.27	5.731		
9,200.0	6,180.0	9,240.4	6,180.0	59.5	60.1	90.00	2,935.8	608.0	660.9	541.9	119.01	5.553		
9,300.0	6,180.0	9,340.4	6,180.0	61.4	62.0	90.00	3,035.8	608.3	661.2	538.4	122.75	5.386		
9,400.0	6,180.0	9,440.4	6,180.0	63.2	63.8	90.00	3,135.8	608.6	661.4	534.9	126.50	5.229		
9,500.0	6,180.0	9,540.4	6,180.0	65.1	65.7	90.00	3,235.8	608.9	661.7	531.5	130.25	5.080		
9,600.0	6,180.0	9,640.4	6,180.0	67.0	67.5	90.00	3,335.8	609.1	662.0	528.0	134.01	4.940		
9,700.0	6,180.0	9,740.4	6,180.0	68.9	69.4	90.00	3,435.8	609.4	662.3	524.5	137.77	4.807		
9,800.0	6,180.0	9,840.4	6,180.0	70.8	71.3	90.00	3,535.8	609.7	662.6	521.1	141.54	4.681		
9,900.0	6,180.0	9,940.4	6,180.0	72.7	73.1	90.00	3,635.8	610.0	662.9	517.6	145.31	4.562		
10,000.0	6,180.0	10,040.4	6,180.0	74.6	75.0	90.00	3,735.8	610.3	663.2	514.1	149.09	4.448		
10,100.0	6,180.0	10,140.4	6,180.0	76.5	76.9	90.00	3,835.8	610.6	663.5	510.6	152.87	4.340		
10,200.0	6,180.0	10,240.4	6,180.0	78.3	78.8	90.00	3,935.8	610.9	663.8	507.1	156.65	4.237		
10,300.0	6,180.0	10,340.4	6,180.0	80.2	80.7	90.00	4,035.8	611.2	664.1	503.6	160.43	4.139		
10,400.0	6,180.0	10,440.4	6,180.0	82.1	82.5	90.00	4,135.8	611.5	664.4	500.1	164.22	4.046		
10,500.0	6,180.0	10,540.4	6,180.0	84.0	84.4	90.00	4,235.8	611.8	664.7	496.7	168.01	3.956		
10,600.0	6,180.0	10,640.4	6,180.0	85.9	86.3	90.00	4,335.8	612.1	665.0	493.2	171.80	3.870		
10,648.6	6,180.0	10,689.0	6,180.0	86.7	87.2	90.00	4,384.4	612.2	665.1	491.6	173.47	3.834		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Whitetail O-K-36HNB
Project:	SEC.36-T6N-R62W	TVD Reference:	WELL @ 4666.0ft (RKB - 13')
Reference Site:	State Whitetail O-36 Pad Sec.36-T6N-R62W	MD Reference:	WELL @ 4666.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Whitetail O-K-36HNB	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 (11-18-13)	Offset TVD Reference:	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 O-K-36HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.79°



Company: BONANZA CREEK ENERGY OPERATING
Project: SEC.36-T6N-R62W
Reference Site: State Whitetail O-36 Pad Sec.36-T6N-R62W
Site Error: 0.0ft
Reference Well: State Whitetail O-K-36HNB
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (11-18-13)

Local Co-ordinate Reference: Well State Whitetail O-K-36HNB
TVD Reference: WELL @ 4666.0ft (RKB - 13')
MD Reference: WELL @ 4666.0ft (RKB - 13')
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: 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 O-K-36HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.79°

