

# **BONANZA CREEK ENERGY**

**WELD COUNTY**

**SEC 2-T5N-R62W**

**STATE ANTELOPE 41-11-3HN**

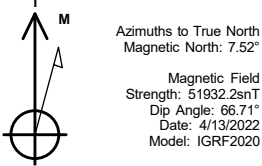
**OWB**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**19 April, 2022**

Project: WELD COUNTY  
Site: SEC 2-T5N-R62W  
Well: STATE ANTELOPE 41-11-3HN  
Wellbore: OWB  
Design: PROPOSAL 1



WELL DETAILS: STATE ANTELOPE 41-11-3HN						
4645.00						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1402529.93	3334366.72	40.432130°N	104.298840°W	

ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	Start Build 2.00	
675.39	11.51	25.00	671.53	52.20	24.34	-14.63	57.59	Start 4923.08 hold at 675.39 MD	
5598.47	11.51	25.00	5495.64	942.35	439.40	-264.05	1039.76	Start DLS 10.00 TFO -115.78	
6549.08	90.00	268.76	6109.00	1041.94	-133.62	317.54	1646.94	Start 5009.21 hold at 6549.08 MD	
11558.29	90.00	268.76	6109.00	933.18	-5141.65	5225.65	6656.15	TD at 11558.29	

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00
3	675.39	11.51	25.00	671.53	52.20	24.34	2.00	25.00	-14.63
4	5598.47	11.51	25.00	5495.64	942.35	439.40	0.00	0.00	-264.05
5	6549.08	90.00	268.76	6109.00	1041.94	-133.62	10.00	-115.78	317.54
6	11558.29	90.00	268.76	6109.00	933.18	-5141.65	0.00	0.00	5225.65

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
LP-STATE ANTELOPE 41-11-3HN	6109.00	1041.94	-133.62	1403569.93	3334219.01	40.434990°N	104.299320°W	Point	
- plan hits target center									
PBHL-STATE ANTELOPE 41-11-3HN	6109.00	933.18	-5141.65	1403393.35	3329213.10	40.434690°N	104.317310°W	Point	
- plan hits target center									

SHL:  
1668' FNL, 333' FWL  
Sec 2-T5N-R62W

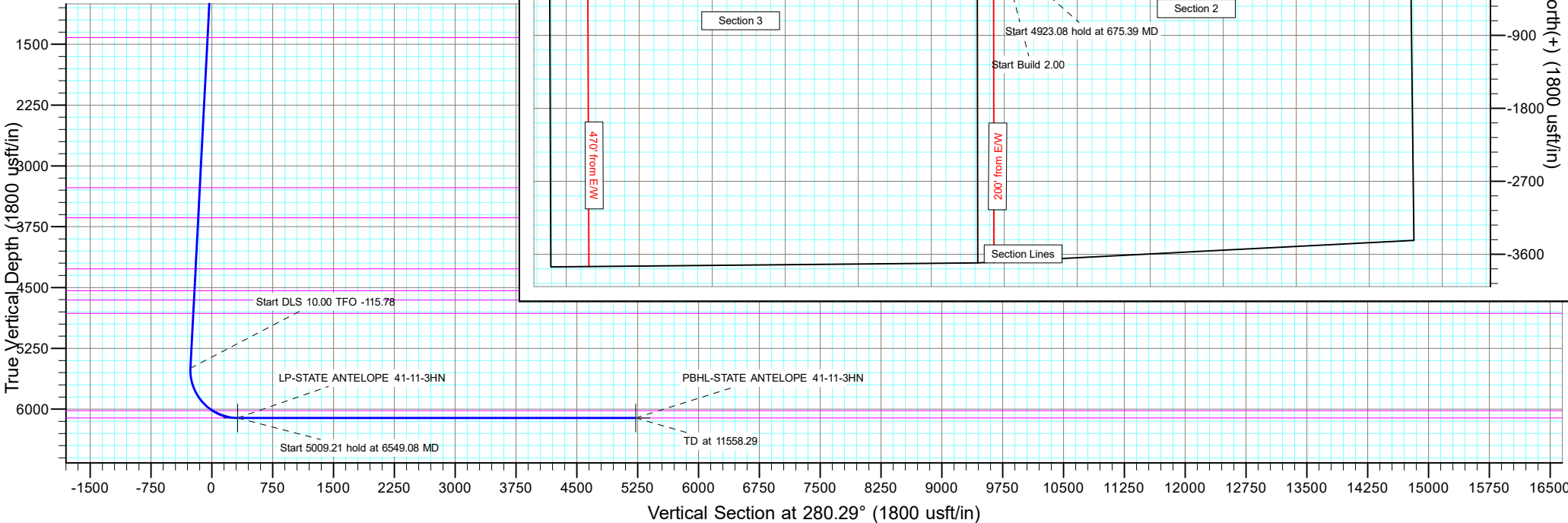
LP:  
640' FNL, 200' FWL  
Sec 2-T5N-R62W

BHL:  
677' FNL, 470' FWL  
Sec 3-T5N-R62W

PROJECT DETAILS: WELD COUNTY

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone

System Datum: Mean Sea Level



## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well STATE ANTELOPE 41-11-3HN
<b>Company:</b>	BONANZA CREEK ENERGY	<b>TVD Reference:</b>	KB 24' @ 4669.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 24' @ 4669.00usft
<b>Site:</b>	SEC 2-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	STATE ANTELOPE 41-11-3HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

<b>Project</b>	WELD COUNTY		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		SEC 2-T5N-R62W			
Site Position:		Northing:	1,404,201.39 usft	Latitude:	40.436731°N
From:	Lat/Long	Easting:	3,334,009.19 usft	Longitude:	104.300043°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.78 °

Well	STATE ANTELOPE 41-11-3HN					
Well Position	+N/-S	-1,676.21 usft	Northing:	1,402,529.93 usft	Latitude:	40.432130°N
	+E/-W	334.90 usft	Easting:	3,334,366.73 usft	Longitude:	104.298840°W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,645.00 usft

<b>Wellbore</b>	OWB				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	4/13/2022	7.52	66.71	51,932.19655598

<b>Design</b>	PROPOSAL 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	280.29

<b>Plan Survey Tool Program</b>	<b>Date</b>	4/19/2022		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	11,558.29	PROPOSAL 1 (OWB)	MWD OWSG
				OWSG MWD - Standard

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
675.39	11.51	25.00	671.53	52.20	24.34	2.00	2.00	0.00	25.00	
5,598.47	11.51	25.00	5,495.64	942.35	439.40	0.00	0.00	0.00	0.00	
6,549.08	90.00	268.76	6,109.00	1,041.94	-133.62	10.00	8.26	-12.23	-115.78	LP-STATE ANTELOP
11,558.29	90.00	268.76	6,109.00	933.18	-5,141.65	0.00	0.00	0.00	0.00	PBHL-STATE ANTELI

# Planning Report

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<b>Company:</b>	BONANZA CREEK ENERGY	<b>TVD Reference:</b>	KB 24' @ 4669.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 24' @ 4669.00usft
<b>Site:</b>	SEC 2-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	STATE ANTELOPE 41-11-3HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24.00	0.00	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00
Laramie-Fox Hills Formation									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
200.00	2.00	25.00	199.98	1.58	0.74	-0.44	2.00	2.00	0.00
249.07	2.98	25.00	249.00	3.51	1.64	-0.98	2.00	2.00	0.00
Pierre Formation									
300.00	4.00	25.00	299.84	6.32	2.95	-1.77	2.00	2.00	0.00
400.00	6.00	25.00	399.45	14.22	6.63	-3.99	2.00	2.00	0.00
459.95	7.20	25.00	459.00	20.47	9.54	-5.74	2.00	2.00	0.00
Upper Pierre aquifer									
500.00	8.00	25.00	498.70	25.27	11.78	-7.08	2.00	2.00	0.00
600.00	10.00	25.00	597.47	39.45	18.39	-11.05	2.00	2.00	0.00
675.39	11.51	25.00	671.53	52.20	24.34	-14.63	2.00	2.00	0.00
Start 4923.08 hold at 675.39 MD									
700.00	11.51	25.00	695.64	56.64	26.41	-15.87	0.00	0.00	0.00
800.00	11.51	25.00	793.63	74.73	34.84	-20.94	0.00	0.00	0.00
900.00	11.51	25.00	891.62	92.81	43.27	-26.01	0.00	0.00	0.00
1,000.00	11.51	25.00	989.61	110.89	51.70	-31.07	0.00	0.00	0.00
1,100.00	11.51	25.00	1,087.60	128.97	60.14	-36.14	0.00	0.00	0.00
1,200.00	11.51	25.00	1,185.59	147.05	68.57	-41.20	0.00	0.00	0.00
1,300.00	11.51	25.00	1,283.58	165.13	77.00	-46.27	0.00	0.00	0.00
1,400.00	11.51	25.00	1,381.57	183.21	85.43	-51.34	0.00	0.00	0.00
1,438.20	11.51	25.00	1,419.00	190.12	88.65	-53.27	0.00	0.00	0.00
Base of Upper Pierre aquifer									
1,500.00	11.51	25.00	1,479.56	201.29	93.86	-56.40	0.00	0.00	0.00
1,600.00	11.51	25.00	1,577.55	219.38	102.29	-61.47	0.00	0.00	0.00
1,700.00	11.51	25.00	1,675.54	237.46	110.72	-66.54	0.00	0.00	0.00
1,800.00	11.51	25.00	1,773.53	255.54	119.15	-71.60	0.00	0.00	0.00
1,900.00	11.51	25.00	1,871.52	273.62	127.58	-76.67	0.00	0.00	0.00
2,000.00	11.51	25.00	1,969.51	291.70	136.01	-81.74	0.00	0.00	0.00
2,100.00	11.51	25.00	2,067.50	309.78	144.45	-86.80	0.00	0.00	0.00
2,200.00	11.51	25.00	2,165.49	327.86	152.88	-91.87	0.00	0.00	0.00
2,300.00	11.51	25.00	2,263.48	345.95	161.31	-96.94	0.00	0.00	0.00
2,400.00	11.51	25.00	2,361.47	364.03	169.74	-102.00	0.00	0.00	0.00
2,500.00	11.51	25.00	2,459.46	382.11	178.17	-107.07	0.00	0.00	0.00
2,600.00	11.51	25.00	2,557.45	400.19	186.60	-112.14	0.00	0.00	0.00
2,700.00	11.51	25.00	2,655.44	418.27	195.03	-117.20	0.00	0.00	0.00
2,800.00	11.51	25.00	2,753.43	436.35	203.46	-122.27	0.00	0.00	0.00
2,900.00	11.51	25.00	2,851.42	454.43	211.89	-127.34	0.00	0.00	0.00
3,000.00	11.51	25.00	2,949.41	472.51	220.32	-132.40	0.00	0.00	0.00
3,100.00	11.51	25.00	3,047.40	490.60	228.75	-137.47	0.00	0.00	0.00
3,200.00	11.51	25.00	3,145.39	508.68	237.19	-142.53	0.00	0.00	0.00
3,300.00	11.51	25.00	3,243.38	526.76	245.62	-147.60	0.00	0.00	0.00
3,326.15	11.51	25.00	3,269.00	531.49	247.82	-148.93	0.00	0.00	0.00
Larimer ("Parkman") sandstone									
3,400.00	11.51	25.00	3,341.37	544.84	254.05	-152.67	0.00	0.00	0.00
3,500.00	11.51	25.00	3,439.36	562.92	262.48	-157.73	0.00	0.00	0.00
3,600.00	11.51	25.00	3,537.35	581.00	270.91	-162.80	0.00	0.00	0.00
3,700.00	11.51	25.00	3,635.34	599.08	279.34	-167.87	0.00	0.00	0.00
3,703.74	11.51	25.00	3,639.00	599.76	279.66	-168.06	0.00	0.00	0.00
Pierre Formation									

# Planning Report

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<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 24' @ 4669.00usft
<b>Site:</b>	SEC 2-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	STATE ANTELOPE 41-11-3HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
3,800.00	11.51	25.00	3,733.33	617.17	287.77	-172.93	0.00	0.00	0.00	
3,900.00	11.51	25.00	3,831.32	635.25	296.20	-178.00	0.00	0.00	0.00	
4,000.00	11.51	25.00	3,929.31	653.33	304.63	-183.07	0.00	0.00	0.00	
4,100.00	11.51	25.00	4,027.29	671.41	313.06	-188.13	0.00	0.00	0.00	
4,200.00	11.51	25.00	4,125.28	689.49	321.49	-193.20	0.00	0.00	0.00	
4,300.00	11.51	25.00	4,223.27	707.57	329.93	-198.27	0.00	0.00	0.00	
4,346.66	11.51	25.00	4,269.00	716.01	333.86	-200.63	0.00	0.00	0.00	
Terry ("Sussex") sandstone										
4,400.00	11.51	25.00	4,321.26	725.65	338.36	-203.33	0.00	0.00	0.00	
4,500.00	11.51	25.00	4,419.25	743.73	346.79	-208.40	0.00	0.00	0.00	
4,600.00	11.51	25.00	4,517.24	761.82	355.22	-213.47	0.00	0.00	0.00	
4,622.20	11.51	25.00	4,539.00	765.83	357.09	-214.59	0.00	0.00	0.00	
Pierre Formation										
4,700.00	11.51	25.00	4,615.23	779.90	363.65	-218.53	0.00	0.00	0.00	
4,739.56	11.51	25.00	4,654.00	787.05	366.99	-220.54	0.00	0.00	0.00	
Hygiene ("Shannon") sandstone										
4,800.00	11.51	25.00	4,713.22	797.98	372.08	-223.60	0.00	0.00	0.00	
4,900.00	11.51	25.00	4,811.21	816.06	380.51	-228.67	0.00	0.00	0.00	
4,907.95	11.51	25.00	4,819.00	817.50	381.18	-229.07	0.00	0.00	0.00	
Pierre Formation										
5,000.00	11.51	25.00	4,909.20	834.14	388.94	-233.73	0.00	0.00	0.00	
5,100.00	11.51	25.00	5,007.19	852.22	397.37	-238.80	0.00	0.00	0.00	
5,200.00	11.51	25.00	5,105.18	870.30	405.80	-243.86	0.00	0.00	0.00	
5,300.00	11.51	25.00	5,203.17	888.39	414.24	-248.93	0.00	0.00	0.00	
5,400.00	11.51	25.00	5,301.16	906.47	422.67	-254.00	0.00	0.00	0.00	
5,500.00	11.51	25.00	5,399.15	924.55	431.10	-259.06	0.00	0.00	0.00	
5,598.47	11.51	25.00	5,495.64	942.35	439.40	-264.05	0.00	0.00	0.00	
Start DLS 10.00 TFO -115.78										
5,600.00	11.44	24.30	5,497.14	942.63	439.53	-264.13	10.00	-4.30	-45.39	
5,650.00	10.35	358.24	5,546.27	951.64	441.43	-264.39	10.00	-2.19	-52.12	
5,700.00	11.52	332.37	5,595.39	960.56	438.98	-260.39	10.00	2.34	-51.74	
5,750.00	14.42	314.02	5,644.13	969.32	432.18	-252.14	10.00	5.79	-36.70	
5,800.00	18.23	302.43	5,692.12	977.84	421.10	-239.71	10.00	7.63	-23.19	
5,850.00	22.50	294.91	5,738.99	986.07	405.81	-223.19	10.00	8.54	-15.03	
5,900.00	27.01	289.74	5,784.39	993.94	386.43	-202.72	10.00	9.02	-10.33	
5,950.00	31.66	285.98	5,827.97	1,001.40	363.11	-178.45	10.00	9.30	-7.53	
6,000.00	36.40	283.10	5,869.39	1,008.38	336.03	-150.55	10.00	9.47	-5.76	
6,050.00	41.19	280.80	5,908.36	1,014.83	305.39	-119.26	10.00	9.58	-4.59	
6,100.00	46.01	278.91	5,944.55	1,020.70	271.43	-84.79	10.00	9.65	-3.79	
6,150.00	50.87	277.30	5,977.72	1,025.95	234.40	-47.42	10.00	9.71	-3.22	
6,200.00	55.74	275.90	6,007.59	1,030.55	194.58	-7.42	10.00	9.75	-2.80	
6,220.82	57.77	275.37	6,019.00	1,032.25	177.25	9.93	10.00	9.77	-2.57	
Sharon Springs Member										
6,250.00	60.63	274.66	6,033.94	1,034.44	152.29	34.89	10.00	9.78	-2.44	
6,300.00	65.52	273.52	6,056.57	1,037.61	107.84	79.19	10.00	9.79	-2.26	
6,350.00	70.43	272.48	6,075.32	1,040.03	61.56	125.15	10.00	9.81	-2.09	
6,400.00	75.34	271.49	6,090.03	1,041.68	13.82	172.42	10.00	9.82	-1.97	
6,450.00	80.25	270.55	6,100.59	1,042.55	-35.03	220.64	10.00	9.83	-1.88	
6,500.00	85.17	269.64	6,106.93	1,042.63	-84.61	269.44	10.00	9.83	-1.83	
6,549.08	90.00	268.76	6,109.00	1,041.94	-133.62	317.54	10.00	9.84	-1.80	
Start 5009.21 hold at 6549.08 MD - Niobrara Formation										
6,600.00	90.00	268.76	6,109.00	1,040.84	-184.53	367.43	0.00	0.00	0.00	
6,700.00	90.00	268.76	6,109.00	1,038.66	-284.51	465.42	0.00	0.00	0.00	

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well STATE ANTELOPE 41-11-3HN
<b>Company:</b>	BONANZA CREEK ENERGY	<b>TVD Reference:</b>	KB 24' @ 4669.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 24' @ 4669.00usft
<b>Site:</b>	SEC 2-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	STATE ANTELOPE 41-11-3HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,800.00	90.00	268.76	6,109.00	1,036.49	-384.48	563.40	0.00	0.00	0.00
6,900.00	90.00	268.76	6,109.00	1,034.32	-484.46	661.38	0.00	0.00	0.00
7,000.00	90.00	268.76	6,109.00	1,032.15	-584.44	759.36	0.00	0.00	0.00
7,100.00	90.00	268.76	6,109.00	1,029.98	-684.41	857.34	0.00	0.00	0.00
7,200.00	90.00	268.76	6,109.00	1,027.81	-784.39	955.32	0.00	0.00	0.00
7,300.00	90.00	268.76	6,109.00	1,025.64	-884.37	1,053.31	0.00	0.00	0.00
7,400.00	90.00	268.76	6,109.00	1,023.47	-984.34	1,151.29	0.00	0.00	0.00
7,500.00	90.00	268.76	6,109.00	1,021.29	-1,084.32	1,249.27	0.00	0.00	0.00
7,600.00	90.00	268.76	6,109.00	1,019.12	-1,184.29	1,347.25	0.00	0.00	0.00
7,700.00	90.00	268.76	6,109.00	1,016.95	-1,284.27	1,445.23	0.00	0.00	0.00
7,800.00	90.00	268.76	6,109.00	1,014.78	-1,384.25	1,543.21	0.00	0.00	0.00
7,900.00	90.00	268.76	6,109.00	1,012.61	-1,484.22	1,641.20	0.00	0.00	0.00
8,000.00	90.00	268.76	6,109.00	1,010.44	-1,584.20	1,739.18	0.00	0.00	0.00
8,100.00	90.00	268.76	6,109.00	1,008.27	-1,684.18	1,837.16	0.00	0.00	0.00
8,200.00	90.00	268.76	6,109.00	1,006.10	-1,784.15	1,935.14	0.00	0.00	0.00
8,300.00	90.00	268.76	6,109.00	1,003.93	-1,884.13	2,033.12	0.00	0.00	0.00
8,400.00	90.00	268.76	6,109.00	1,001.75	-1,984.11	2,131.10	0.00	0.00	0.00
8,500.00	90.00	268.76	6,109.00	999.58	-2,084.08	2,229.09	0.00	0.00	0.00
8,600.00	90.00	268.76	6,109.00	997.41	-2,184.06	2,327.07	0.00	0.00	0.00
8,700.00	90.00	268.76	6,109.00	995.24	-2,284.04	2,425.05	0.00	0.00	0.00
8,800.00	90.00	268.76	6,109.00	993.07	-2,384.01	2,523.03	0.00	0.00	0.00
8,900.00	90.00	268.76	6,109.00	990.90	-2,483.99	2,621.01	0.00	0.00	0.00
9,000.00	90.00	268.76	6,109.00	988.73	-2,583.96	2,718.99	0.00	0.00	0.00
9,100.00	90.00	268.76	6,109.00	986.56	-2,683.94	2,816.98	0.00	0.00	0.00
9,200.00	90.00	268.76	6,109.00	984.38	-2,783.92	2,914.96	0.00	0.00	0.00
9,300.00	90.00	268.76	6,109.00	982.21	-2,883.89	3,012.94	0.00	0.00	0.00
9,400.00	90.00	268.76	6,109.00	980.04	-2,983.87	3,110.92	0.00	0.00	0.00
9,500.00	90.00	268.76	6,109.00	977.87	-3,083.85	3,208.90	0.00	0.00	0.00
9,600.00	90.00	268.76	6,109.00	975.70	-3,183.82	3,306.88	0.00	0.00	0.00
9,700.00	90.00	268.76	6,109.00	973.53	-3,283.80	3,404.87	0.00	0.00	0.00
9,800.00	90.00	268.76	6,109.00	971.36	-3,383.78	3,502.85	0.00	0.00	0.00
9,900.00	90.00	268.76	6,109.00	969.19	-3,483.75	3,600.83	0.00	0.00	0.00
10,000.00	90.00	268.76	6,109.00	967.02	-3,583.73	3,698.81	0.00	0.00	0.00
10,100.00	90.00	268.76	6,109.00	964.84	-3,683.71	3,796.79	0.00	0.00	0.00
10,200.00	90.00	268.76	6,109.00	962.67	-3,783.68	3,894.77	0.00	0.00	0.00
10,300.00	90.00	268.76	6,109.00	960.50	-3,883.66	3,992.76	0.00	0.00	0.00
10,400.00	90.00	268.76	6,109.00	958.33	-3,983.63	4,090.74	0.00	0.00	0.00
10,500.00	90.00	268.76	6,109.00	956.16	-4,083.61	4,188.72	0.00	0.00	0.00
10,600.00	90.00	268.76	6,109.00	953.99	-4,183.59	4,286.70	0.00	0.00	0.00
10,700.00	90.00	268.76	6,109.00	951.82	-4,283.56	4,384.68	0.00	0.00	0.00
10,800.00	90.00	268.76	6,109.00	949.65	-4,383.54	4,482.66	0.00	0.00	0.00
10,900.00	90.00	268.76	6,109.00	947.47	-4,483.52	4,580.65	0.00	0.00	0.00
11,000.00	90.00	268.76	6,109.00	945.30	-4,583.49	4,678.63	0.00	0.00	0.00
11,100.00	90.00	268.76	6,109.00	943.13	-4,683.47	4,776.61	0.00	0.00	0.00
11,200.00	90.00	268.76	6,109.00	940.96	-4,783.45	4,874.59	0.00	0.00	0.00
11,300.00	90.00	268.76	6,109.00	938.79	-4,883.42	4,972.57	0.00	0.00	0.00
11,400.00	90.00	268.76	6,109.00	936.62	-4,983.40	5,070.55	0.00	0.00	0.00
11,500.00	90.00	268.76	6,109.00	934.45	-5,083.38	5,168.54	0.00	0.00	0.00
11,558.29	90.00	268.76	6,109.00	933.18	-5,141.65	5,225.65	0.00	0.00	0.00
TD at 11558.29									

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well STATE ANTELOPE 41-11-3HN
<b>Company:</b>	BONANZA CREEK ENERGY	<b>TVD Reference:</b>	KB 24' @ 4669.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 24' @ 4669.00usft
<b>Site:</b>	SEC 2-T5N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	STATE ANTELOPE 41-11-3HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LP-STATE ANTELOPE 4 - plan hits target center - Point	0.00	0.00	6,109.00	1,041.94	-133.62	1,403,569.93	3,334,219.01	40.434990°N	104.299320°W
PBHL-STATE ANTELOP - plan hits target center - Point	0.00	0.00	6,109.00	933.18	-5,141.65	1,403,393.35	3,329,213.11	40.434690°N	104.317310°W

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
24.00	24.00	Laramie-Fox Hills Formation			
249.07	249.00	Pierre Formation			
459.95	459.00	Upper Pierre aquifer			
1,438.20	1,419.00	Base of Upper Pierre aquifer			
3,326.15	3,269.00	Larimer ("Parkman") sandstone			
3,703.74	3,639.00	Pierre Formation			
4,346.66	4,269.00	Terry ("Sussex") sandstone			
4,622.20	4,539.00	Pierre Formation			
4,739.56	4,654.00	Hygiene ("Shannon") sandstone			
4,907.95	4,819.00	Pierre Formation			
6,220.82	6,019.00	Sharon Springs Member			
6,549.08	6,109.00	Niobrara Formation			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.00	100.00	0.00	0.00	Start Build 2.00
675.39	671.53	52.20	24.34	Start 4923.08 hold at 675.39 MD
5,598.47	5,495.64	942.35	439.40	Start DLS 10.00 TFO -115.78
6,549.08	6,109.00	1,041.94	-133.62	Start 5009.21 hold at 6549.08 MD
11,558.29	6,109.00	933.18	-5,141.65	TD at 11558.29