

# **BONANZA CREEK ENERGY INC.**

**WELD COUNTY, COLORADO (NAD 83)**

**SW SW SEC. 2 T5N R62W 6th P.M.**

**STATE ANTELOPE E-Y-2HNB**

**ORIGINAL WELLBORE**

**29 August, 2016**

**Plan: PROPOSAL #1**

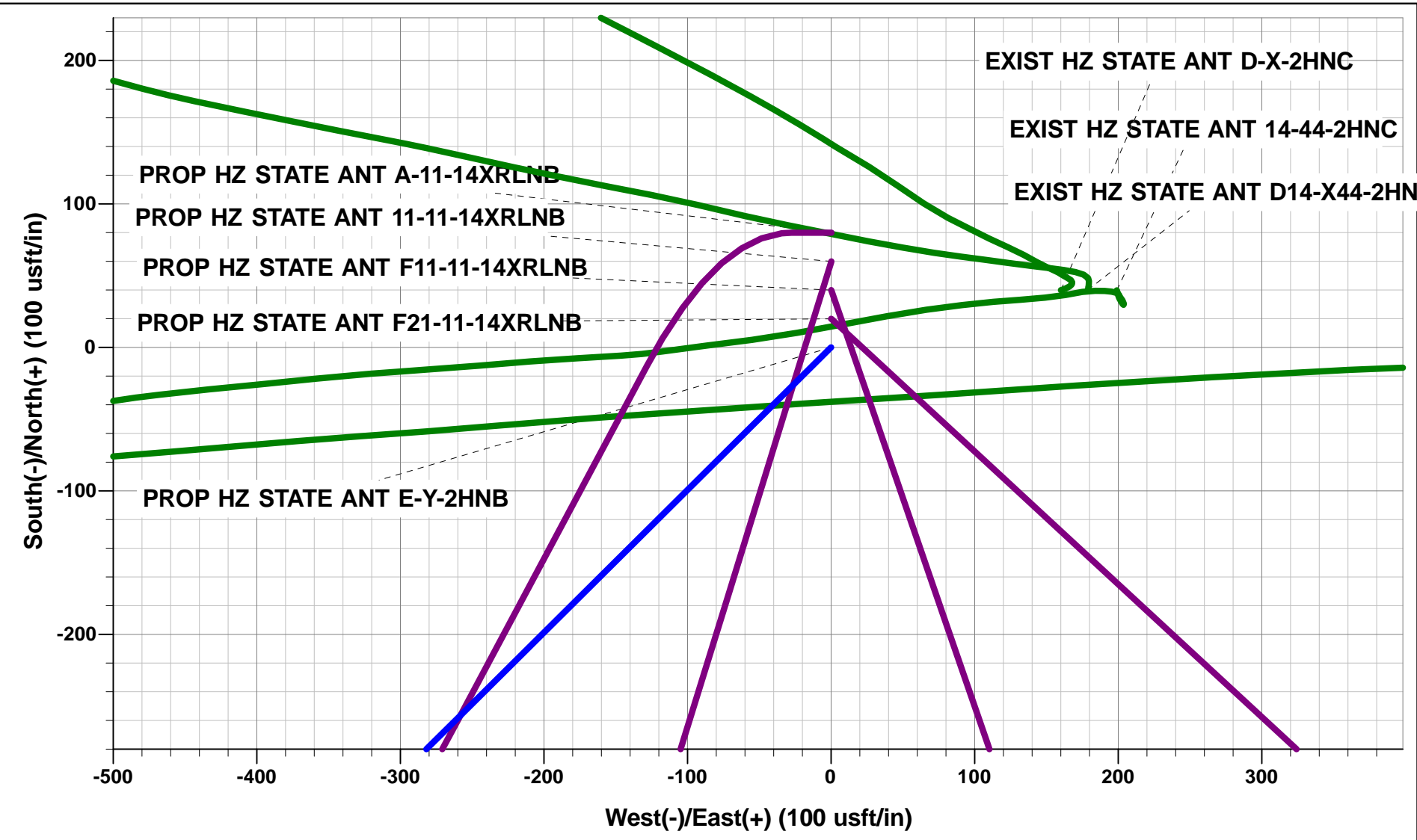




Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SW SW SEC. 2 T5N R62W 6th P.M.  
Well: STATE ANTELOPE E-Y-2HNB  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

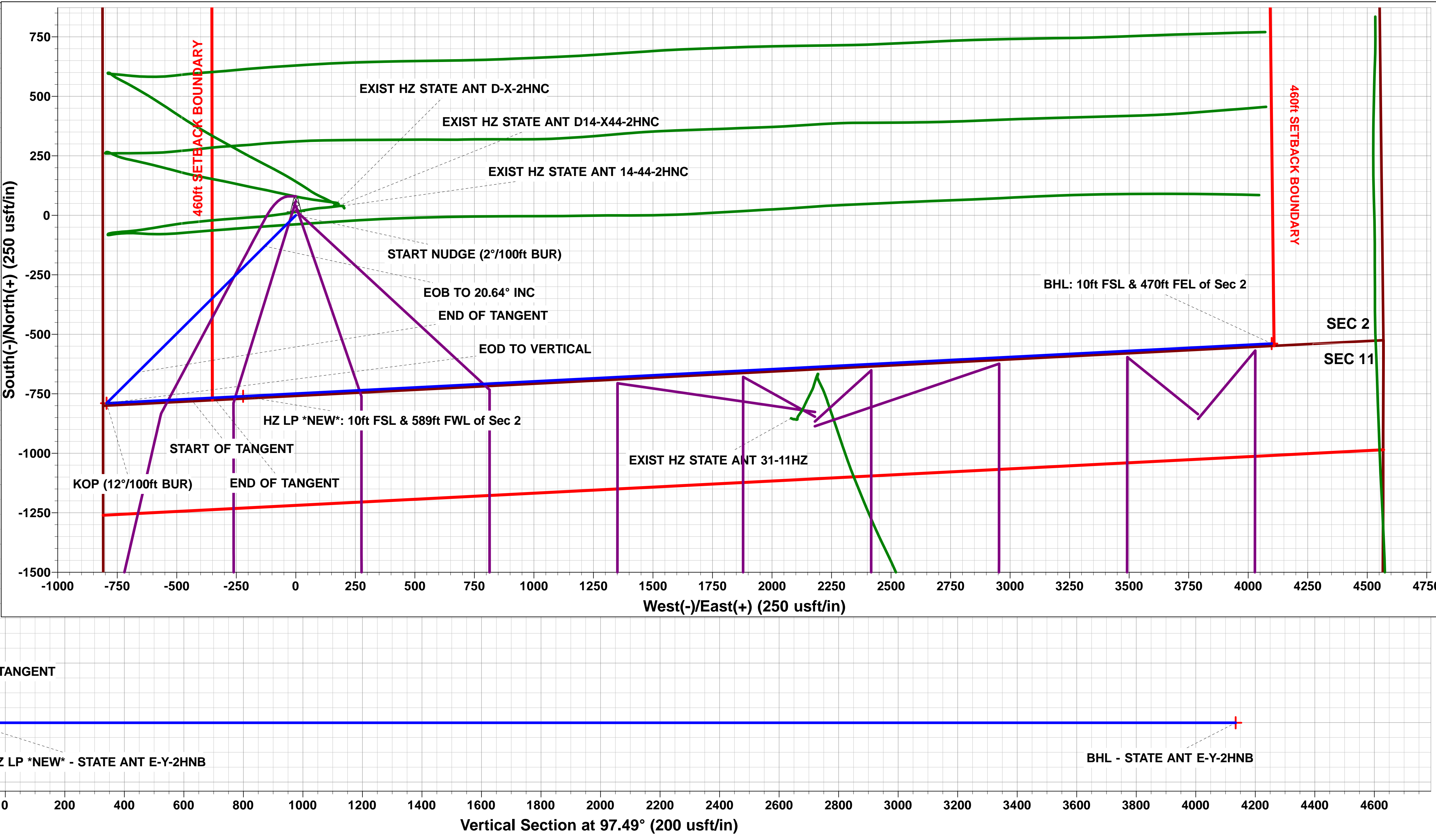
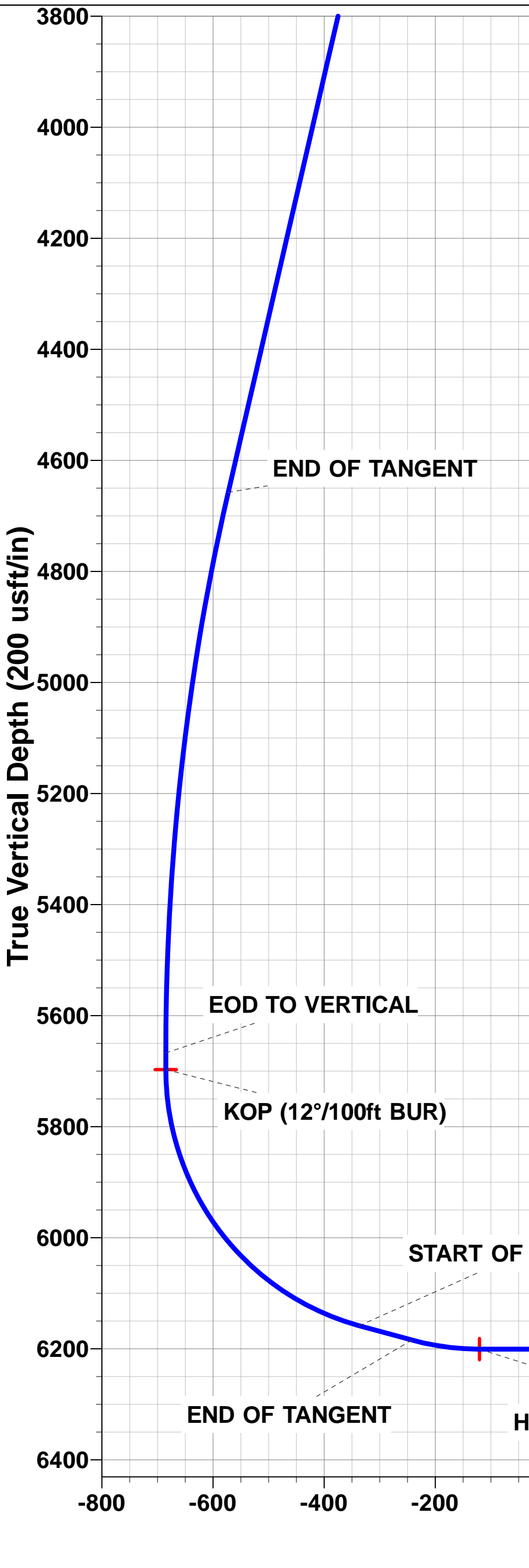
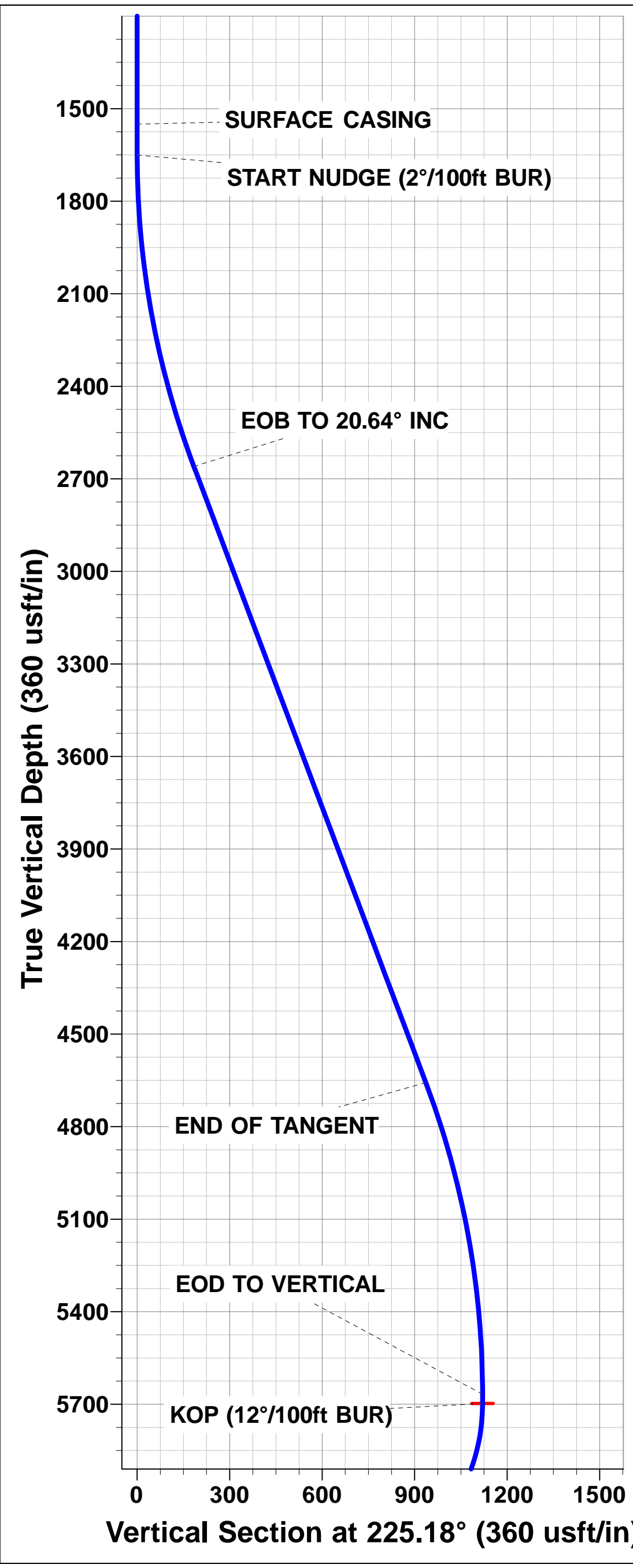
ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation	
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 758ft FSL & 811ft FWL of Sec 2	
1550.0	1550.0	0.00	0.00	0.0	0.0	0.0	0.0	SURFACE CASING	
1650.0	1650.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
2659.9	2682.1	20.64	225.18	-129.6	-130.4	-112.4	183.9	EOB TO 20.64° INC	
4657.4	4816.6	20.64	225.18	-660.1	-664.2	-572.4	936.4	END OF TANGENT	
5667.3	5848.7	0.00	0.00	-789.7	-794.6	-684.9	1120.3	EOD TO VERTICAL	
5697.3	5878.7	0.00	0.00	-789.7	-794.6	-684.9	1120.3	KOP (12°/100ft BUR)	
6158.5	6503.7	75.00	87.07	-771.6	-441.2	-336.8	1474.2	START OF TANGENT	
6184.4	6603.7	75.00	87.07	-766.7	-344.7	-241.8	1570.8	END OF TANGENT	
6200.6	6728.7	90.00	87.07	-760.4	-221.3	-120.3	1694.3	HZ LP *NEW*: 10ft FSL & 589ft FWL of Sec 2	
6200.6	11054.4	90.00	87.06	-539.0	4098.7	4134.0	6020.0	BHL: 10ft FSL & 470ft FEL of Sec 2	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - STATE ANT E-Y-2HNB	5697.3	-789.7	-794.6	40.421990	-104.299964
BHL - STATE ANT E-Y-2HNB	6200.6	-539.0	4098.7	40.422677	-104.282389
HZ LP *NEW* - STATE ANT E-Y-2HNB	6200.6	-760.4	-221.3	40.422070	-104.297905



PROPOSED LOCAL COORDINATES:  
  
SHL: 758ft FNL & 811ft FWL of Sec 2  
HZ LP \*NEW\*: 10ft FSL & 589ft FWL of Sec 2  
  
BHL: 10ft FSL & 470ft FEL of Sec 2

Azimuths to True North  
Magnetic North: 8.05°  
  
Magnetic Field  
Strength: 52546.9snT  
Dip Angle: 66.97°  
Date: 27/08/2016  
Model: IGRF2015



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well STATE ANTELOPE E-Y-2HNB
<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>TVD Reference:</b>	KB-EST @ 4640.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4640.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 2 T5N R62W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	STATE ANTELOPE E-Y-2HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<b>Project</b>	WELD COUNTY, COLORADO (NAD 83)		
<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

<b>Site</b>	SW SW SEC. 2 T5N R62W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,399,632.25 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,334,887.62 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.424157
		<b>Longitude:</b>	-104.297110
		<b>Grid Convergence:</b>	0.78 °

<b>Well</b>	STATE ANTELOPE E-Y-2HNB		
<b>Well Position</b>	<b>+N-S</b>	0.0 usft	<b>Northing:</b> 1,399,632.25 usft
	<b>+E-W</b>	0.0 usft	<b>Easting:</b> 3,334,887.62 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	40.424157
		<b>Longitude:</b>	-104.297110
		<b>Ground Level:</b>	4,623.6 usft

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	27/08/2016	8.05	66.97	52,547

<b>Design</b>	PROPOSAL #1			
<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) (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Direction (°)</b>
	6,200.6	0.0	0.0	97.49

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,640.6	0.0	0.0	0.00	0.00	0.00	0.00	
1,650.0	0.00	0.00	1,650.0	-2,990.6	0.0	0.0	0.00	0.00	0.00	0.00	
2,682.1	20.64	225.18	2,659.9	-1,980.7	-129.6	-130.4	2.00	2.00	0.00	225.18	
4,816.6	20.64	225.18	4,657.4	16.8	-660.1	-664.2	0.00	0.00	0.00	0.00	
5,848.7	0.00	0.00	5,667.3	1,026.7	-789.7	-794.6	2.00	-2.00	0.00	180.00	
5,878.7	0.00	0.00	5,697.3	1,056.7	-789.7	-794.6	0.00	0.00	0.00	0.00	KOP - STATE ANT
6,503.7	75.00	87.07	6,158.5	1,517.9	-771.6	-441.2	12.00	12.00	0.00	87.07	
6,603.7	75.00	87.07	6,184.4	1,543.8	-766.7	-344.7	0.00	0.00	0.00	0.00	
6,728.7	90.00	87.07	6,200.6	1,560.0	-760.4	-221.3	12.00	12.00	0.00	0.00	
11,054.4	90.00	87.06	6,200.6	1,560.0	-539.0	4,098.7	0.00	0.00	0.00	-79.68	BHL - STATE ANT

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well STATE ANTELOPE E-Y-2HNB
<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>TVD Reference:</b>	KB-EST @ 4640.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4640.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 2 T5N R62W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	STATE ANTELOPE E-Y-2HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>SHL: 758ft FSL &amp; 811ft FWL of Sec 2</b>										
0.0	0.00	0.00	0.0	4,640.60	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,540.60	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,440.60	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,340.60	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,240.60	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,140.60	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,040.60	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,940.60	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,840.60	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,740.60	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,640.60	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,540.60	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,440.60	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	3,340.60	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	3,240.60	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	3,140.60	0.0	0.0	0.0	0.00	0.00	0.00
<b>SURFACE CASING</b>										
1,550.0	0.00	0.00	1,550.0	3,090.60	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	3,040.60	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,650.0	0.00	0.00	1,650.0	2,990.60	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	1.00	225.18	1,700.0	2,940.60	-0.3	-0.3	-0.3	2.00	2.00	0.00
1,800.0	3.00	225.18	1,799.9	2,840.67	-2.8	-2.8	-2.4	2.00	2.00	0.00
1,900.0	5.00	225.18	1,899.7	2,740.92	-7.7	-7.7	-6.7	2.00	2.00	0.00
2,000.0	7.00	225.18	1,999.1	2,641.47	-15.1	-15.1	-13.1	2.00	2.00	0.00
2,100.0	9.00	225.18	2,098.2	2,542.45	-24.9	-25.0	-21.6	2.00	2.00	0.00
2,200.0	11.00	225.18	2,196.6	2,443.97	-37.1	-37.3	-32.2	2.00	2.00	0.00
2,300.0	13.00	225.18	2,294.4	2,346.16	-51.8	-52.1	-44.9	2.00	2.00	0.00
2,400.0	15.00	225.18	2,391.5	2,249.14	-68.8	-69.2	-59.7	2.00	2.00	0.00
2,500.0	17.00	225.18	2,487.6	2,153.02	-88.2	-88.8	-76.5	2.00	2.00	0.00
2,600.0	19.00	225.18	2,582.7	2,057.92	-110.0	-110.7	-95.4	2.00	2.00	0.00
<b>EOB TO 20.64° INC</b>										
2,682.1	20.64	225.18	2,659.9	1,980.71	-129.6	-130.4	-112.4	2.00	2.00	0.00
2,700.0	20.64	225.18	2,676.7	1,963.93	-134.1	-134.9	-116.3	0.00	0.00	0.00
2,800.0	20.64	225.18	2,770.2	1,870.35	-158.9	-159.9	-137.8	0.00	0.00	0.00
2,900.0	20.64	225.18	2,863.8	1,776.77	-183.8	-184.9	-159.4	0.00	0.00	0.00
3,000.0	20.64	225.18	2,957.4	1,683.19	-208.6	-209.9	-180.9	0.00	0.00	0.00
3,100.0	20.64	225.18	3,051.0	1,589.61	-233.5	-234.9	-202.5	0.00	0.00	0.00
3,200.0	20.64	225.18	3,144.6	1,496.03	-258.3	-259.9	-224.0	0.00	0.00	0.00
3,300.0	20.64	225.18	3,238.2	1,402.45	-283.2	-284.9	-245.6	0.00	0.00	0.00
3,400.0	20.64	225.18	3,331.7	1,308.87	-308.0	-310.0	-267.1	0.00	0.00	0.00
3,500.0	20.64	225.18	3,425.3	1,215.29	-332.9	-335.0	-288.7	0.00	0.00	0.00
3,600.0	20.64	225.18	3,518.9	1,121.71	-357.7	-360.0	-310.2	0.00	0.00	0.00
3,700.0	20.64	225.18	3,612.5	1,028.13	-382.6	-385.0	-331.8	0.00	0.00	0.00
3,800.0	20.64	225.18	3,706.1	934.55	-407.4	-410.0	-353.3	0.00	0.00	0.00
3,900.0	20.64	225.18	3,799.6	840.97	-432.3	-435.0	-374.9	0.00	0.00	0.00
4,000.0	20.64	225.18	3,893.2	747.38	-457.1	-460.0	-396.4	0.00	0.00	0.00
4,100.0	20.64	225.18	3,986.8	653.80	-482.0	-485.0	-418.0	0.00	0.00	0.00
4,200.0	20.64	225.18	4,080.4	560.22	-506.8	-510.0	-439.5	0.00	0.00	0.00
4,300.0	20.64	225.18	4,174.0	466.64	-531.7	-535.0	-461.1	0.00	0.00	0.00
4,400.0	20.64	225.18	4,267.5	373.06	-556.5	-560.0	-482.6	0.00	0.00	0.00
4,500.0	20.64	225.18	4,361.1	279.48	-581.4	-585.0	-504.2	0.00	0.00	0.00
4,600.0	20.64	225.18	4,454.7	185.90	-606.2	-610.0	-525.7	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well STATE ANTELOPE E-Y-2HNB
<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>TVD Reference:</b>	KB-EST @ 4640.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4640.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 2 T5N R62W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	STATE ANTELOPE E-Y-2HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.0	20.64	225.18	4,548.3	92.32	-631.1	-635.0	-547.3	0.00	0.00	0.00
4,800.0	20.64	225.18	4,641.9	-1.26	-655.9	-660.0	-568.8	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>4,816.6</b>	<b>20.64</b>	<b>225.18</b>	<b>4,657.4</b>	<b>-16.81</b>	<b>-660.1</b>	<b>-664.2</b>	<b>-572.4</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,900.0	18.97	225.18	4,735.9	-95.26	-680.0	-684.2	-589.7	2.00	-2.00	0.00
5,000.0	16.97	225.18	4,831.0	-190.37	-701.7	-706.1	-608.6	2.00	-2.00	0.00
5,100.0	14.97	225.18	4,927.1	-286.51	-721.1	-725.6	-625.4	2.00	-2.00	0.00
5,200.0	12.97	225.18	5,024.1	-383.54	-738.1	-742.7	-640.2	2.00	-2.00	0.00
5,300.0	10.97	225.18	5,122.0	-481.36	-752.8	-757.4	-652.8	2.00	-2.00	0.00
5,400.0	8.97	225.18	5,220.4	-579.84	-765.0	-769.7	-663.4	2.00	-2.00	0.00
5,500.0	6.97	225.18	5,319.5	-678.87	-774.8	-779.6	-671.9	2.00	-2.00	0.00
5,600.0	4.97	225.18	5,418.9	-778.32	-782.1	-786.9	-678.3	2.00	-2.00	0.00
5,700.0	2.97	225.18	5,518.7	-878.08	-787.0	-791.9	-682.5	2.00	-2.00	0.00
5,800.0	0.97	225.18	5,618.6	-978.01	-789.4	-794.3	-684.6	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>5,848.7</b>	<b>0.00</b>	<b>0.00</b>	<b>5,667.3</b>	<b>-1,026.70</b>	<b>-789.7</b>	<b>-794.6</b>	<b>-684.9</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
<b>KOP (12°/100ft BUR)</b>										
<b>5,878.7</b>	<b>0.00</b>	<b>0.00</b>	<b>5,697.3</b>	<b>-1,056.70</b>	<b>-789.7</b>	<b>-794.6</b>	<b>-684.9</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,900.0	2.56	87.07	5,718.6	-1,078.01	-789.7	-794.1	-684.4	12.00	12.00	0.00
6,000.0	14.56	87.07	5,817.3	-1,176.71	-788.9	-779.3	-669.8	12.00	12.00	0.00
6,100.0	26.56	87.07	5,910.8	-1,270.17	-787.1	-744.3	-635.3	12.00	12.00	0.00
6,200.0	38.56	87.07	5,994.9	-1,354.30	-784.4	-690.6	-582.5	12.00	12.00	0.00
6,300.0	50.56	87.07	6,066.0	-1,425.43	-780.8	-620.7	-513.6	12.00	12.00	0.00
6,400.0	62.56	87.07	6,121.0	-1,480.44	-776.5	-537.5	-431.7	12.00	12.00	0.00
6,500.0	74.56	87.07	6,157.5	-1,516.93	-771.8	-444.7	-340.3	12.00	12.00	0.00
<b>START OF TANGENT</b>										
<b>6,503.7</b>	<b>75.00</b>	<b>87.07</b>	<b>6,158.5</b>	<b>-1,517.90</b>	<b>-771.6</b>	<b>-441.2</b>	<b>-336.8</b>	<b>12.00</b>	<b>12.00</b>	<b>0.00</b>
6,600.0	75.00	87.07	6,183.4	-1,542.82	-766.9	-348.3	-245.3	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>6,603.7</b>	<b>75.00</b>	<b>87.07</b>	<b>6,184.4</b>	<b>-1,543.78</b>	<b>-766.7</b>	<b>-344.7</b>	<b>-241.8</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,700.0	86.56	87.07	6,199.8	-1,559.19	-761.8	-249.9	-148.5	12.00	12.00	0.00
<b>HZ LP *NEW*: 10ft FSL &amp; 589ft FWL of Sec 2</b>										
<b>6,728.7</b>	<b>90.00</b>	<b>87.07</b>	<b>6,200.6</b>	<b>-1,560.05</b>	<b>-760.4</b>	<b>-221.3</b>	<b>-120.3</b>	<b>12.00</b>	<b>12.00</b>	<b>0.00</b>
6,800.0	90.00	87.07	6,200.6	-1,560.05	-756.7	-150.1	-50.1	0.00	0.00	0.00
6,900.0	90.00	87.07	6,200.6	-1,560.05	-751.6	-50.2	48.2	0.00	0.00	0.00
7,000.0	90.00	87.07	6,200.6	-1,560.05	-746.5	49.7	146.6	0.00	0.00	0.00
7,100.0	90.00	87.07	6,200.6	-1,560.05	-741.4	149.5	244.9	0.00	0.00	0.00
7,200.0	90.00	87.07	6,200.6	-1,560.05	-736.3	249.4	343.3	0.00	0.00	0.00
7,300.0	90.00	87.07	6,200.6	-1,560.05	-731.1	349.3	441.6	0.00	0.00	0.00
7,400.0	90.00	87.07	6,200.6	-1,560.05	-726.0	449.1	540.0	0.00	0.00	0.00
7,500.0	90.00	87.07	6,200.6	-1,560.05	-720.9	549.0	638.3	0.00	0.00	0.00
7,600.0	90.00	87.07	6,200.6	-1,560.04	-715.8	648.9	736.7	0.00	0.00	0.00
7,700.0	90.00	87.07	6,200.6	-1,560.04	-710.7	748.7	835.0	0.00	0.00	0.00
7,800.0	90.00	87.07	6,200.6	-1,560.04	-705.6	848.6	933.4	0.00	0.00	0.00
7,900.0	90.00	87.07	6,200.6	-1,560.04	-700.5	948.5	1,031.7	0.00	0.00	0.00
8,000.0	90.00	87.07	6,200.6	-1,560.04	-695.4	1,048.4	1,130.1	0.00	0.00	0.00
8,100.0	90.00	87.07	6,200.6	-1,560.04	-690.2	1,148.2	1,228.4	0.00	0.00	0.00
8,200.0	90.00	87.07	6,200.6	-1,560.04	-685.1	1,248.1	1,326.8	0.00	0.00	0.00
8,300.0	90.00	87.07	6,200.6	-1,560.04	-680.0	1,348.0	1,425.1	0.00	0.00	0.00
8,400.0	90.00	87.07	6,200.6	-1,560.04	-674.9	1,447.8	1,523.5	0.00	0.00	0.00
8,500.0	90.00	87.07	6,200.6	-1,560.04	-669.8	1,547.7	1,621.8	0.00	0.00	0.00
8,600.0	90.00	87.07	6,200.6	-1,560.04	-664.7	1,647.6	1,720.2	0.00	0.00	0.00
8,700.0	90.00	87.07	6,200.6	-1,560.04	-659.5	1,747.4	1,818.5	0.00	0.00	0.00



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well STATE ANTELOPE E-Y-2HNB
<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>TVD Reference:</b>	KB-EST @ 4640.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4640.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 2 T5N R62W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	STATE ANTELOPE E-Y-2HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,800.0	90.00	87.07	6,200.6	-1,560.04	-654.4	1,847.3	1,916.9	0.00	0.00	0.00
8,900.0	90.00	87.07	6,200.6	-1,560.03	-649.3	1,947.2	2,015.2	0.00	0.00	0.00
9,000.0	90.00	87.07	6,200.6	-1,560.03	-644.2	2,047.0	2,113.6	0.00	0.00	0.00
9,100.0	90.00	87.07	6,200.6	-1,560.03	-639.1	2,146.9	2,211.9	0.00	0.00	0.00
9,200.0	90.00	87.07	6,200.6	-1,560.03	-633.9	2,246.8	2,310.3	0.00	0.00	0.00
9,300.0	90.00	87.07	6,200.6	-1,560.03	-628.8	2,346.7	2,408.6	0.00	0.00	0.00
9,400.0	90.00	87.07	6,200.6	-1,560.03	-623.7	2,446.5	2,507.0	0.00	0.00	0.00
9,500.0	90.00	87.07	6,200.6	-1,560.03	-618.6	2,546.4	2,605.3	0.00	0.00	0.00
9,600.0	90.00	87.07	6,200.6	-1,560.03	-613.5	2,646.3	2,703.7	0.00	0.00	0.00
9,700.0	90.00	87.07	6,200.6	-1,560.02	-608.4	2,746.1	2,802.0	0.00	0.00	0.00
9,800.0	90.00	87.07	6,200.6	-1,560.02	-603.2	2,846.0	2,900.4	0.00	0.00	0.00
9,900.0	90.00	87.07	6,200.6	-1,560.02	-598.1	2,945.9	2,998.7	0.00	0.00	0.00
10,000.0	90.00	87.06	6,200.6	-1,560.02	-593.0	3,045.7	3,097.1	0.00	0.00	0.00
10,100.0	90.00	87.06	6,200.6	-1,560.02	-587.9	3,145.6	3,195.4	0.00	0.00	0.00
10,200.0	90.00	87.06	6,200.6	-1,560.02	-582.8	3,245.5	3,293.7	0.00	0.00	0.00
10,300.0	90.00	87.06	6,200.6	-1,560.01	-577.6	3,345.3	3,392.1	0.00	0.00	0.00
10,400.0	90.00	87.06	6,200.6	-1,560.01	-572.5	3,445.2	3,490.4	0.00	0.00	0.00
10,500.0	90.00	87.06	6,200.6	-1,560.01	-567.4	3,545.1	3,588.8	0.00	0.00	0.00
10,600.0	90.00	87.06	6,200.6	-1,560.01	-562.3	3,644.9	3,687.1	0.00	0.00	0.00
10,700.0	90.00	87.06	6,200.6	-1,560.01	-557.1	3,744.8	3,785.5	0.00	0.00	0.00
10,800.0	90.00	87.06	6,200.6	-1,560.01	-552.0	3,844.7	3,883.8	0.00	0.00	0.00
10,900.0	90.00	87.06	6,200.6	-1,560.00	-546.9	3,944.6	3,982.2	0.00	0.00	0.00
11,000.0	90.00	87.06	6,200.6	-1,560.00	-541.8	4,044.4	4,080.5	0.00	0.00	0.00
<b>BHL: 10ft FSL &amp; 470ft FEL of Sec 2</b>										
<b>11,054.4</b>	<b>90.00</b>	<b>87.06</b>	<b>6,200.6</b>	<b>-1,560.00</b>	<b>-539.0</b>	<b>4,098.7</b>	<b>4,134.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 758ft FSL & 811ft FWL of Sec 2
1,550.0	1,550.0	0.0	0.0	SURFACE CASING
1,650.0	1,650.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,682.1	2,659.9	-129.6	-130.4	EOB TO 20.64° INC
4,816.6	4,657.4	-660.1	-664.2	END OF TANGENT
5,848.7	5,667.3	-789.7	-794.6	EOD TO VERTICAL
5,878.7	5,697.3	-789.7	-794.6	KOP (12°/100ft BUR)
6,503.7	6,158.5	-771.6	-441.2	START OF TANGENT
6,603.7	6,184.4	-766.7	-344.7	END OF TANGENT
6,728.7	6,200.6	-760.4	-221.3	HZ LP *NEW*: 10ft FSL & 589ft FWL of Sec 2
11,054.4	6,200.6	-539.0	4,098.7	BHL: 10ft FSL & 470ft FEL of Sec 2