

# **BISON OIL & GAS II, LLC**

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

**SE NE SEC. 19 T8N R60W 6th P.M.**

**HUNT FED 8-60 19-24-12**

**ORIGINAL WELLBORE**

**20 September, 2017**

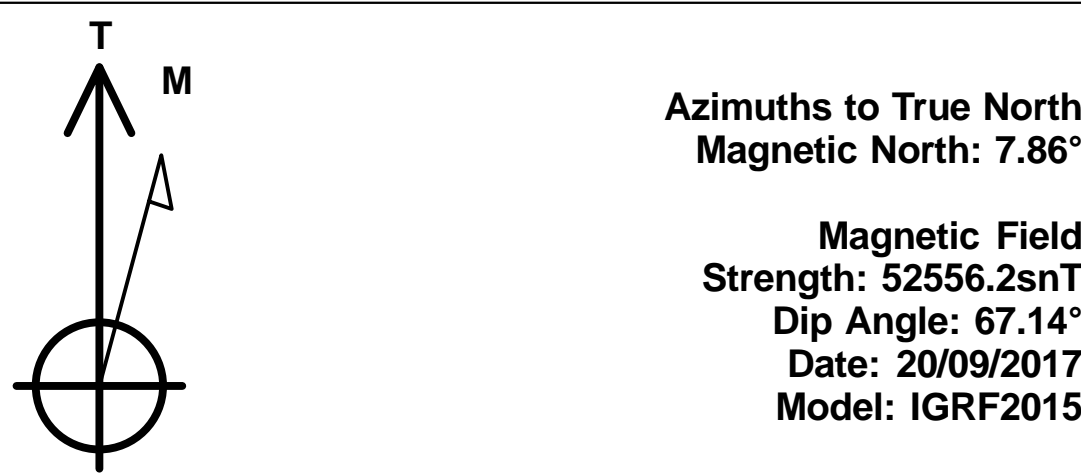
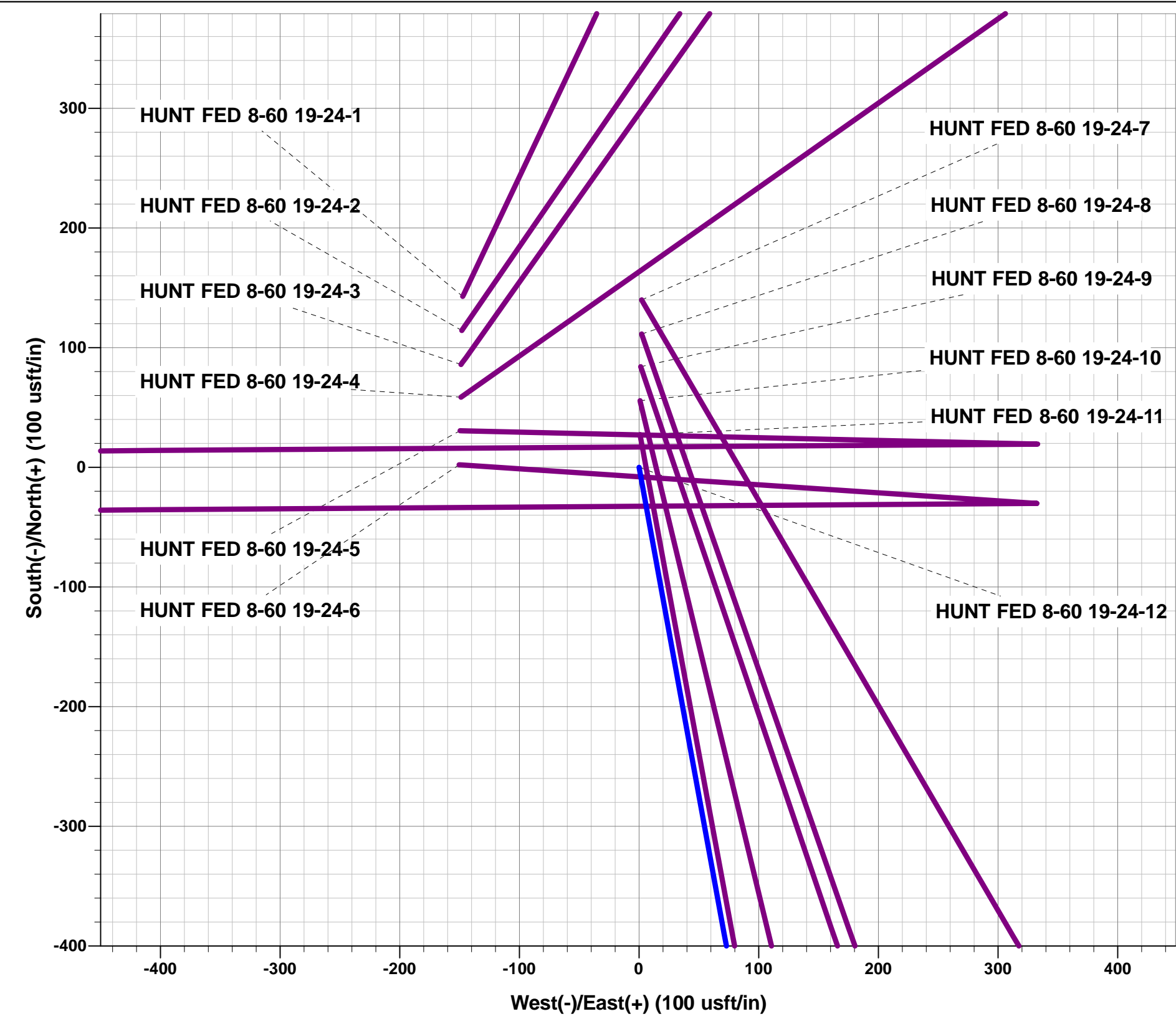
**Plan: PROPOSAL #1**



Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SE NE SEC. 19 T8N R60W 6th P.M.  
Well: HUNT FED 8-60 19-24-12  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

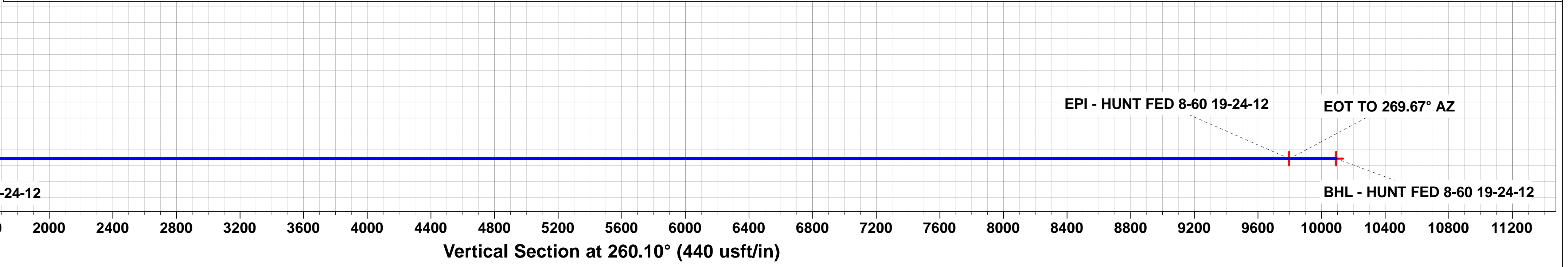
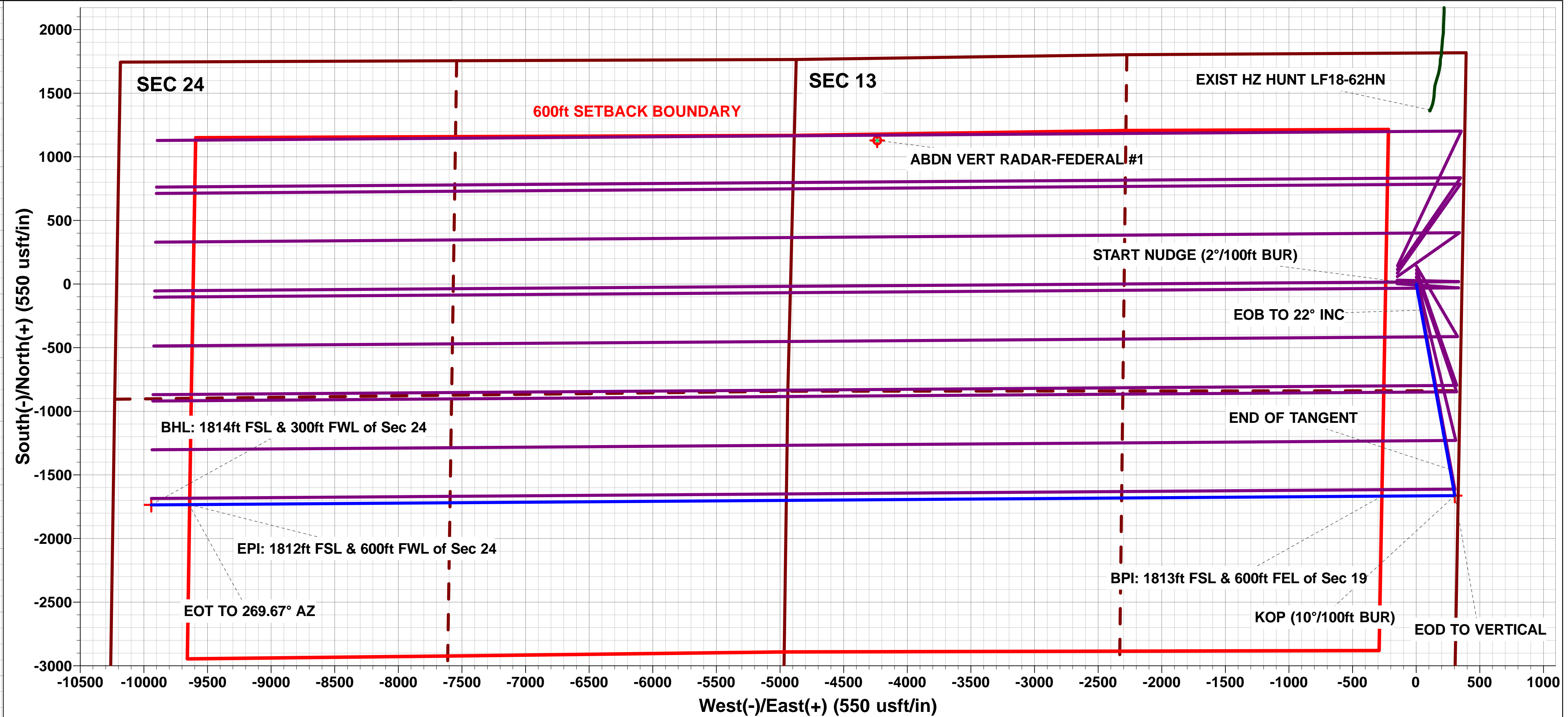
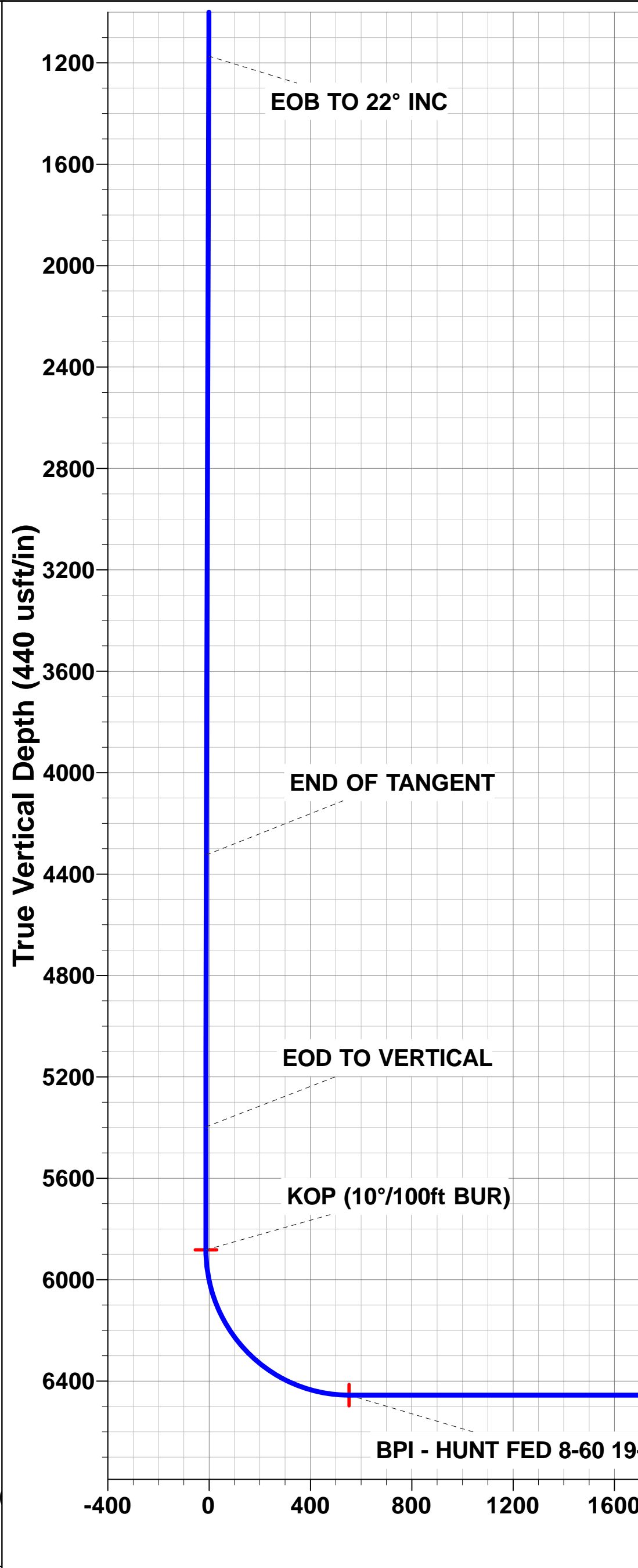
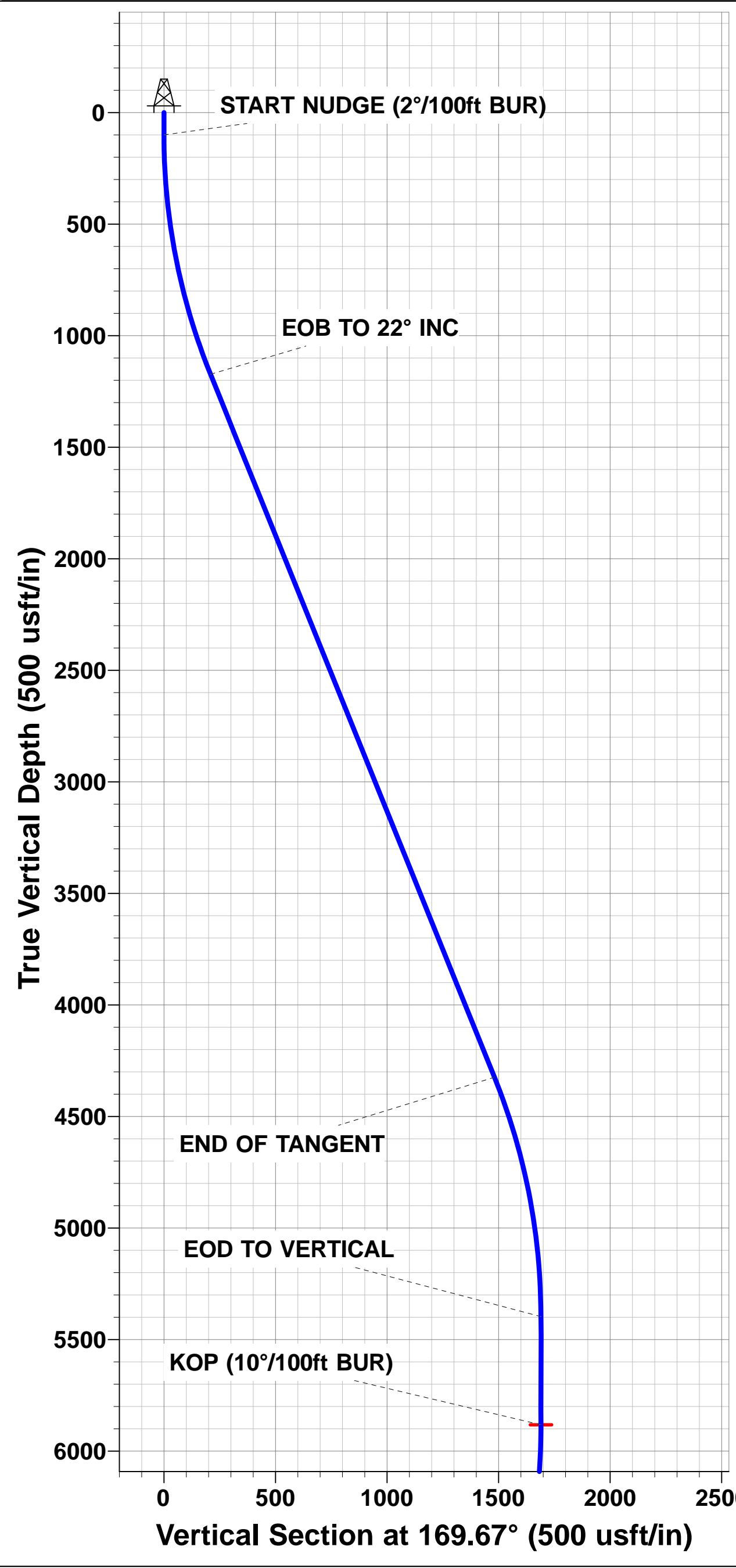
ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 1816ft FNL & 360ft FEL of Sec 19	
100.0	100.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1173.1	1199.9	22.00	169.67	-205.2	37.4	-1.6	208.6	EOB TO 22° INC	
4324.2	4598.5	22.00	169.67	-1457.5	265.8	-11.2	1481.6	END OF TANGENT	
5397.3	5698.4	0.00	0.00	-1662.7	303.2	-12.8	1690.1	EOD TO VERTICAL	
5882.3	6183.4	0.00	0.00	-1662.7	303.2	-12.8	1690.1	KOP (10°/100ft BUR)	
6455.3	7083.4	90.00	269.59	-1666.8	-269.7	552.3	2263.1	BPI: 1813ft FSL & 600ft FEL of Sec 19	
6455.3	16455.9	90.00	269.59	-1733.8	-9642.0	9796.5	11635.6	EPI: 1812ft FSL & 600ft FWL of Sec 24	
6455.3	16458.7	90.00	269.67	-1733.8	-9644.9	9799.3	11638.4	EOT TO 269.67° AZ	
6455.3	16755.6	90.00	269.67	-1735.5	-9941.7	10092.1	11935.3	BHL: 1814ft FSL & 300ft FWL of Sec 24	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - HUNT FED 8-60 19-24-12	5882.3	-1662.7	303.2	40.645483	-104.125304
BPI - HUNT FED 8-60 19-24-12	6455.3	-1666.8	-269.7	40.645472	-104.127369
EPI - HUNT FED 8-60 19-24-12	6455.3	-1733.8	-9642.0	40.645283	-104.161142
BHL - HUNT FED 8-60 19-24-12	6455.3	-1735.5	-9941.7	40.645278	-104.162222



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
493.3	494.5	PIERRE SH (BASE FOX HILLS)
3508.3	3718.5	PARKMAN
4033.3	4284.7	SUSSEX
5131.3	5432.0	SHANNON
6160.3	6473.6	SHARON SPRINGS SHALE
6230.3	6557.4	NIORARA FORMATION
6240.3	6570.1	NIORARA A CHALK
6350.3	6731.0	NIORARA B CHALK
6420.3	6882.1	NIORARA C CHALK

PROPOSED LOCAL COORDINATES:  
SHL:1816ft FNL & 360ft FEL of Sec 19  
BEGIN PROD INT: 1813ft FSL & 600ft FEL of Sec 19  
END PROD INTERVAL: 1812ft FSL & 600ft FWL of Sec 24  
BHL: 1814ft FSL & 300ft FWL of Sec 24



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HUNT FED 8-60 19-24-12
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 19 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 19-24-12	<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>	SE NE SEC. 19 T8N R60W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,482,747.06 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,380,986.80 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.650439
		<b>Longitude:</b>	-104.126928
		<b>Grid Convergence:</b>	0.89 °

<b>Well</b>	HUNT FED 8-60 19-24-12		
<b>Well Position</b>	<b>+N/-S</b>	-142.8 usft	<b>Northing:</b>
	<b>+E/-W</b>	147.3 usft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<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	20/09/2017	7.86	67.14	52,556

<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>
	6,455.3	0.0	0.0	260.10

<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	-4,960.3	0.0	0.0	0.00	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	-4,860.3	0.0	0.0	0.00	0.00	0.00	0.00	
1,199.9	22.00	169.67	1,173.1	-3,787.2	-205.2	37.4	2.00	2.00	0.00	169.67	
4,598.5	22.00	169.67	4,324.2	-636.1	-1,457.5	265.8	0.00	0.00	0.00	0.00	
5,698.4	0.00	0.00	5,397.3	437.0	-1,662.7	303.2	2.00	-2.00	0.00	180.00	
6,183.4	0.00	0.00	5,882.3	922.0	-1,662.7	303.2	0.00	0.00	0.00	0.00	KOP - HUNT FED 8
7,083.4	90.00	269.59	6,455.3	1,495.0	-1,666.8	-269.7	10.00	10.00	-10.05	269.59	BPI - HUNT FED 8-
16,455.9	90.00	269.59	6,455.3	1,495.0	-1,733.8	-9,642.0	0.00	0.00	0.00	-8.98	EPI - HUNT FED 8-
16,458.7	90.00	269.67	6,455.3	1,495.0	-1,733.8	-9,644.9	3.00	-0.17	3.00	93.28	
16,755.6	90.00	269.67	6,455.3	1,495.0	-1,735.5	-9,941.7	0.00	0.00	0.00	0.00	BHL - HUNT FED 8

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HUNT FED 8-60 19-24-12
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 19 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 19-24-12	<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: 1816ft FNL &amp; 360ft FEL of Sec 19</b>										
0.0	0.00	0.00	0.0	4,960.30	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
100.0	0.00	0.00	100.0	4,860.30	0.0	0.0	0.0	0.00	0.00	0.00
200.0	2.00	169.67	200.0	4,760.32	-1.7	0.3	0.0	2.00	2.00	0.00
300.0	4.00	169.67	299.8	4,660.46	-6.9	1.3	-0.1	2.00	2.00	0.00
400.0	6.00	169.67	399.5	4,560.85	-15.4	2.8	-0.1	2.00	2.00	0.00
<b>PIERRE SHALE (BASE FOX HILLS)</b>										
494.5	7.89	169.67	493.3	4,467.00	-26.7	4.9	-0.2	2.00	2.00	0.00
500.0	8.00	169.67	498.7	4,461.60	-27.4	5.0	-0.2	2.00	2.00	0.00
600.0	10.00	169.67	597.5	4,362.83	-42.8	7.8	-0.3	2.00	2.00	0.00
700.0	12.00	169.67	695.6	4,264.68	-61.6	11.2	-0.5	2.00	2.00	0.00
800.0	14.00	169.67	793.1	4,167.24	-83.7	15.3	-0.6	2.00	2.00	0.00
900.0	16.00	169.67	889.6	4,070.66	-109.2	19.9	-0.8	2.00	2.00	0.00
1,000.0	18.00	169.67	985.3	3,975.03	-137.9	25.2	-1.1	2.00	2.00	0.00
1,100.0	20.00	169.67	1,079.8	3,880.48	-170.0	31.0	-1.3	2.00	2.00	0.00
<b>EOB TO 22° INC</b>										
1,199.9	22.00	169.67	1,173.1	3,787.25	-205.2	37.4	-1.6	2.00	2.00	0.00
1,200.0	22.00	169.67	1,173.2	3,787.13	-205.2	37.4	-1.6	0.00	0.00	0.00
1,300.0	22.00	169.67	1,265.9	3,694.41	-242.1	44.1	-1.9	0.00	0.00	0.00
1,400.0	22.00	169.67	1,358.6	3,601.69	-278.9	50.9	-2.1	0.00	0.00	0.00
1,500.0	22.00	169.67	1,451.3	3,508.97	-315.8	57.6	-2.4	0.00	0.00	0.00
1,600.0	22.00	169.67	1,544.0	3,416.25	-352.6	64.3	-2.7	0.00	0.00	0.00
1,700.0	22.00	169.67	1,636.8	3,323.53	-389.5	71.0	-3.0	0.00	0.00	0.00
1,800.0	22.00	169.67	1,729.5	3,230.81	-426.3	77.7	-3.3	0.00	0.00	0.00
1,900.0	22.00	169.67	1,822.2	3,138.09	-463.2	84.5	-3.6	0.00	0.00	0.00
2,000.0	22.00	169.67	1,914.9	3,045.37	-500.0	91.2	-3.8	0.00	0.00	0.00
2,100.0	22.00	169.67	2,007.6	2,952.65	-536.9	97.9	-4.1	0.00	0.00	0.00
2,200.0	22.00	169.67	2,100.4	2,859.93	-573.7	104.6	-4.4	0.00	0.00	0.00
2,300.0	22.00	169.67	2,193.1	2,767.21	-610.6	111.3	-4.7	0.00	0.00	0.00
2,400.0	22.00	169.67	2,285.8	2,674.49	-647.4	118.1	-5.0	0.00	0.00	0.00
2,500.0	22.00	169.67	2,378.5	2,581.77	-684.3	124.8	-5.3	0.00	0.00	0.00
2,600.0	22.00	169.67	2,471.2	2,489.05	-721.1	131.5	-5.5	0.00	0.00	0.00
2,700.0	22.00	169.67	2,564.0	2,396.33	-758.0	138.2	-5.8	0.00	0.00	0.00
2,800.0	22.00	169.67	2,656.7	2,303.61	-794.8	144.9	-6.1	0.00	0.00	0.00
2,900.0	22.00	169.67	2,749.4	2,210.89	-831.7	151.7	-6.4	0.00	0.00	0.00
3,000.0	22.00	169.67	2,842.1	2,118.17	-868.5	158.4	-6.7	0.00	0.00	0.00
3,100.0	22.00	169.67	2,934.8	2,025.45	-905.3	165.1	-6.9	0.00	0.00	0.00
3,200.0	22.00	169.67	3,027.6	1,932.73	-942.2	171.8	-7.2	0.00	0.00	0.00
3,300.0	22.00	169.67	3,120.3	1,840.01	-979.0	178.5	-7.5	0.00	0.00	0.00
3,400.0	22.00	169.67	3,213.0	1,747.29	-1,015.9	185.3	-7.8	0.00	0.00	0.00
3,500.0	22.00	169.67	3,305.7	1,654.57	-1,052.7	192.0	-8.1	0.00	0.00	0.00
3,600.0	22.00	169.67	3,398.4	1,561.85	-1,089.6	198.7	-8.4	0.00	0.00	0.00
3,700.0	22.00	169.67	3,491.2	1,469.13	-1,126.4	205.4	-8.6	0.00	0.00	0.00
<b>PARKMAN</b>										
3,718.5	22.00	169.67	3,508.3	1,452.00	-1,133.3	206.7	-8.7	0.00	0.00	0.00
3,800.0	22.00	169.67	3,583.9	1,376.41	-1,163.3	212.1	-8.9	0.00	0.00	0.00
3,900.0	22.00	169.67	3,676.6	1,283.69	-1,200.1	218.9	-9.2	0.00	0.00	0.00
4,000.0	22.00	169.67	3,769.3	1,190.97	-1,237.0	225.6	-9.5	0.00	0.00	0.00
4,100.0	22.00	169.67	3,862.0	1,098.25	-1,273.8	232.3	-9.8	0.00	0.00	0.00
4,200.0	22.00	169.67	3,954.8	1,005.53	-1,310.7	239.0	-10.1	0.00	0.00	0.00
<b>SUSSEX</b>										
4,284.7	22.00	169.67	4,033.3	927.00	-1,341.9	244.7	-10.3	0.00	0.00	0.00



# Planning Report



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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 19 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 19-24-12	<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)
4,300.0	22.00	169.67	4,047.5	912.81	-1,347.5	245.7	-10.3	0.00	0.00	0.00
4,400.0	22.00	169.67	4,140.2	820.09	-1,384.4	252.4	-10.6	0.00	0.00	0.00
4,500.0	22.00	169.67	4,232.9	727.37	-1,421.2	259.2	-10.9	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>4,598.5</b>	<b>22.00</b>	<b>169.67</b>	<b>4,324.2</b>	<b>636.05</b>	<b>-1,457.5</b>	<b>265.8</b>	<b>-11.2</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,600.0	21.97	169.67	4,325.6	634.65	-1,458.1	265.9	-11.2	2.00	-2.00	0.00
4,700.0	19.97	169.67	4,419.0	541.28	-1,493.3	272.3	-11.5	2.00	-2.00	0.00
4,800.0	17.97	169.67	4,513.6	446.71	-1,525.3	278.1	-11.7	2.00	-2.00	0.00
4,900.0	15.97	169.67	4,609.2	351.07	-1,554.0	283.4	-11.9	2.00	-2.00	0.00
5,000.0	13.97	169.67	4,705.8	254.47	-1,579.4	288.0	-12.1	2.00	-2.00	0.00
5,100.0	11.97	169.67	4,803.3	157.02	-1,601.4	292.0	-12.3	2.00	-2.00	0.00
5,200.0	9.97	169.67	4,901.4	58.85	-1,620.2	295.4	-12.4	2.00	-2.00	0.00
5,300.0	7.97	169.67	5,000.2	-39.92	-1,635.5	298.2	-12.6	2.00	-2.00	0.00
5,400.0	5.97	169.67	5,099.5	-139.18	-1,647.4	300.4	-12.6	2.00	-2.00	0.00
<b>SHANNON</b>										
<b>5,432.0</b>	<b>5.33</b>	<b>169.67</b>	<b>5,131.3</b>	<b>-171.00</b>	<b>-1,650.5</b>	<b>301.0</b>	<b>-12.7</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,500.0	3.97	169.67	5,199.1	-238.80	-1,655.9	302.0	-12.7	2.00	-2.00	0.00
5,600.0	1.97	169.67	5,299.0	-338.66	-1,661.0	302.9	-12.7	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>5,698.4</b>	<b>0.00</b>	<b>0.00</b>	<b>5,397.3</b>	<b>-437.00</b>	<b>-1,662.7</b>	<b>303.2</b>	<b>-12.8</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,700.0	0.00	0.00	5,398.9	-438.64	-1,662.7	303.2	-12.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,498.9	-538.64	-1,662.7	303.2	-12.8	0.00	0.00	0.00
5,900.0	0.00	0.00	5,598.9	-638.64	-1,662.7	303.2	-12.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,698.9	-738.64	-1,662.7	303.2	-12.8	0.00	0.00	0.00
6,100.0	0.00	0.00	5,798.9	-838.64	-1,662.7	303.2	-12.8	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>6,183.4</b>	<b>0.00</b>	<b>0.00</b>	<b>5,882.3</b>	<b>-922.00</b>	<b>-1,662.7</b>	<b>303.2</b>	<b>-12.8</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,200.0	1.66	269.59	5,898.9	-938.63	-1,662.7	303.0	-12.5	10.00	10.00	0.00
6,300.0	11.66	269.59	5,998.1	-1,037.83	-1,662.8	291.4	-1.1	10.00	10.00	0.00
6,400.0	21.66	269.59	6,093.8	-1,133.51	-1,663.0	262.7	27.2	10.00	10.00	0.00
<b>SHARON SPRINGS SHALE</b>										
<b>6,473.6</b>	<b>29.02</b>	<b>269.59</b>	<b>6,160.3</b>	<b>-1,200.00</b>	<b>-1,663.2</b>	<b>231.2</b>	<b>58.2</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,500.0	31.66	269.59	6,183.1	-1,222.77	-1,663.3	217.9	71.4	10.00	10.00	0.00
<b>NIOBRARA FORMATION</b>										
<b>6,557.4</b>	<b>37.40</b>	<b>269.59</b>	<b>6,230.3</b>	<b>-1,270.00</b>	<b>-1,663.5</b>	<b>185.4</b>	<b>103.4</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>NIOBRARA A CHALK</b>										
<b>6,570.1</b>	<b>38.67</b>	<b>269.59</b>	<b>6,240.3</b>	<b>-1,280.00</b>	<b>-1,663.6</b>	<b>177.6</b>	<b>111.1</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,600.0	41.66	269.59	6,263.2	-1,302.88	-1,663.7	158.3	130.2	10.00	10.00	0.00
6,700.0	51.66	269.59	6,331.7	-1,371.43	-1,664.3	85.7	201.8	10.00	10.00	0.00
<b>NIOBRARA B CHALK</b>										
<b>6,731.0</b>	<b>54.76</b>	<b>269.59</b>	<b>6,350.3</b>	<b>-1,390.00</b>	<b>-1,664.4</b>	<b>60.8</b>	<b>226.3</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,800.0	61.66	269.59	6,386.6	-1,426.32	-1,664.8	2.2	284.1	10.00	10.00	0.00
<b>NIOBRARA C CHALK</b>										
<b>6,882.1</b>	<b>69.87</b>	<b>269.59</b>	<b>6,420.3</b>	<b>-1,460.00</b>	<b>-1,665.4</b>	<b>-72.6</b>	<b>357.9</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,900.0	71.66	269.59	6,426.2	-1,465.89	-1,665.5	-89.5	374.5	10.00	10.00	0.00
7,000.0	81.66	269.59	6,449.2	-1,488.94	-1,666.2	-186.7	470.4	10.00	10.00	0.00
<b>BPI: 1813ft FSL &amp; 600ft FEL of Sec 19</b>										
<b>7,083.4</b>	<b>90.00</b>	<b>269.59</b>	<b>6,455.3</b>	<b>-1,495.00</b>	<b>-1,666.8</b>	<b>-269.7</b>	<b>552.3</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,100.0	90.00	269.59	6,455.3	-1,495.00	-1,666.9	-286.4	568.7	0.00	0.00	0.00
7,200.0	90.00	269.59	6,455.3	-1,495.01	-1,667.6	-386.4	667.4	0.00	0.00	0.00
7,300.0	90.00	269.59	6,455.3	-1,495.02	-1,668.3	-486.4	766.0	0.00	0.00	0.00
7,400.0	90.00	269.59	6,455.3	-1,495.03	-1,669.0	-586.3	864.6	0.00	0.00	0.00
7,500.0	90.00	269.59	6,455.3	-1,495.03	-1,669.8	-686.3	963.3	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HUNT FED 8-60 19-24-12
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 19 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 19-24-12	<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)
7,600.0	90.00	269.59	6,455.3	-1,495.04	-1,670.5	-786.3	1,061.9	0.00	0.00	0.00
7,700.0	90.00	269.59	6,455.3	-1,495.05	-1,671.2	-886.3	1,160.5	0.00	0.00	0.00
7,800.0	90.00	269.59	6,455.4	-1,495.06	-1,671.9	-986.3	1,259.1	0.00	0.00	0.00
7,900.0	90.00	269.59	6,455.4	-1,495.06	-1,672.6	-1,086.3	1,357.8	0.00	0.00	0.00
8,000.0	90.00	269.59	6,455.4	-1,495.07	-1,673.3	-1,186.3	1,456.4	0.00	0.00	0.00
8,100.0	90.00	269.59	6,455.4	-1,495.08	-1,674.0	-1,286.3	1,555.0	0.00	0.00	0.00
8,200.0	90.00	269.59	6,455.4	-1,495.08	-1,674.8	-1,386.3	1,653.7	0.00	0.00	0.00
8,300.0	90.00	269.59	6,455.4	-1,495.09	-1,675.5	-1,486.3	1,752.3	0.00	0.00	0.00
8,400.0	90.00	269.59	6,455.4	-1,495.10	-1,676.2	-1,586.3	1,850.9	0.00	0.00	0.00
8,500.0	90.00	269.59	6,455.4	-1,495.10	-1,676.9	-1,686.3	1,949.6	0.00	0.00	0.00
8,600.0	90.00	269.59	6,455.4	-1,495.11	-1,677.6	-1,786.3	2,048.2	0.00	0.00	0.00
8,700.0	90.00	269.59	6,455.4	-1,495.11	-1,678.3	-1,886.3	2,146.8	0.00	0.00	0.00
8,800.0	90.00	269.59	6,455.4	-1,495.12	-1,679.0	-1,986.3	2,245.5	0.00	0.00	0.00
8,900.0	90.00	269.59	6,455.4	-1,495.12	-1,679.7	-2,086.3	2,344.1	0.00	0.00	0.00
9,000.0	90.00	269.59	6,455.4	-1,495.13	-1,680.5	-2,186.3	2,442.7	0.00	0.00	0.00
9,100.0	90.00	269.59	6,455.4	-1,495.13	-1,681.2	-2,286.3	2,541.3	0.00	0.00	0.00
9,200.0	90.00	269.59	6,455.4	-1,495.14	-1,681.9	-2,386.3	2,640.0	0.00	0.00	0.00
9,300.0	90.00	269.59	6,455.4	-1,495.14	-1,682.6	-2,486.3	2,738.6	0.00	0.00	0.00
9,400.0	90.00	269.59	6,455.4	-1,495.15	-1,683.3	-2,586.3	2,837.2	0.00	0.00	0.00
9,500.0	90.00	269.59	6,455.5	-1,495.15	-1,684.0	-2,686.3	2,935.9	0.00	0.00	0.00
9,600.0	90.00	269.59	6,455.5	-1,495.16	-1,684.7	-2,786.3	3,034.5	0.00	0.00	0.00
9,700.0	90.00	269.59	6,455.5	-1,495.16	-1,685.5	-2,886.3	3,133.1	0.00	0.00	0.00
9,800.0	90.00	269.59	6,455.5	-1,495.16	-1,686.2	-2,986.3	3,231.8	0.00	0.00	0.00
9,900.0	90.00	269.59	6,455.5	-1,495.17	-1,686.9	-3,086.3	3,330.4	0.00	0.00	0.00
10,000.0	90.00	269.59	6,455.5	-1,495.17	-1,687.6	-3,186.3	3,429.0	0.00	0.00	0.00
10,100.0	90.00	269.59	6,455.5	-1,495.17	-1,688.3	-3,286.3	3,527.7	0.00	0.00	0.00
10,200.0	90.00	269.59	6,455.5	-1,495.18	-1,689.0	-3,386.3	3,626.3	0.00	0.00	0.00
10,300.0	90.00	269.59	6,455.5	-1,495.18	-1,689.7	-3,486.3	3,724.9	0.00	0.00	0.00
10,400.0	90.00	269.59	6,455.5	-1,495.18	-1,690.5	-3,586.3	3,823.5	0.00	0.00	0.00
10,500.0	90.00	269.59	6,455.5	-1,495.18	-1,691.2	-3,686.3	3,922.2	0.00	0.00	0.00
10,600.0	90.00	269.59	6,455.5	-1,495.19	-1,691.9	-3,786.3	4,020.8	0.00	0.00	0.00
10,700.0	90.00	269.59	6,455.5	-1,495.19	-1,692.6	-3,886.3	4,119.4	0.00	0.00	0.00
10,800.0	90.00	269.59	6,455.5	-1,495.19	-1,693.3	-3,986.3	4,218.1	0.00	0.00	0.00
10,900.0	90.00	269.59	6,455.5	-1,495.19	-1,694.0	-4,086.3	4,316.7	0.00	0.00	0.00
11,000.0	90.00	269.59	6,455.5	-1,495.19	-1,694.7	-4,186.3	4,415.3	0.00	0.00	0.00
11,100.0	90.00	269.59	6,455.5	-1,495.19	-1,695.5	-4,286.3	4,514.0	0.00	0.00	0.00
11,200.0	90.00	269.59	6,455.5	-1,495.20	-1,696.2	-4,386.3	4,612.6	0.00	0.00	0.00
11,300.0	90.00	269.59	6,455.5	-1,495.20	-1,696.9	-4,486.2	4,711.2	0.00	0.00	0.00
11,400.0	90.00	269.59	6,455.5	-1,495.20	-1,697.6	-4,586.2	4,809.9	0.00	0.00	0.00
11,500.0	90.00	269.59	6,455.5	-1,495.20	-1,698.3	-4,686.2	4,908.5	0.00	0.00	0.00
11,600.0	90.00	269.59	6,455.5	-1,495.20	-1,699.0	-4,786.2	5,007.1	0.00	0.00	0.00
11,700.0	90.00	269.59	6,455.5	-1,495.20	-1,699.7	-4,886.2	5,105.7	0.00	0.00	0.00
11,800.0	90.00	269.59	6,455.5	-1,495.20	-1,700.5	-4,986.2	5,204.4	0.00	0.00	0.00
11,900.0	90.00	269.59	6,455.5	-1,495.20	-1,701.2	-5,086.2	5,303.0	0.00	0.00	0.00
12,000.0	90.00	269.59	6,455.5	-1,495.20	-1,701.9	-5,186.2	5,401.6	0.00	0.00	0.00
12,100.0	90.00	269.59	6,455.5	-1,495.20	-1,702.6	-5,286.2	5,500.3	0.00	0.00	0.00
12,200.0	90.00	269.59	6,455.5	-1,495.20	-1,703.3	-5,386.2	5,598.9	0.00	0.00	0.00
12,300.0	90.00	269.59	6,455.5	-1,495.20	-1,704.0	-5,486.2	5,697.5	0.00	0.00	0.00
12,400.0	90.00	269.59	6,455.5	-1,495.19	-1,704.7	-5,586.2	5,796.2	0.00	0.00	0.00
12,500.0	90.00	269.59	6,455.5	-1,495.19	-1,705.5	-5,686.2	5,894.8	0.00	0.00	0.00
12,600.0	90.00	269.59	6,455.5	-1,495.19	-1,706.2	-5,786.2	5,993.4	0.00	0.00	0.00
12,700.0	90.00	269.59	6,455.5	-1,495.19	-1,706.9	-5,886.2	6,092.1	0.00	0.00	0.00
12,800.0	90.00	269.59	6,455.5	-1,495.19	-1,707.6	-5,986.2	6,190.7	0.00	0.00	0.00
12,900.0	90.00	269.59	6,455.5	-1,495.19	-1,708.3	-6,086.2	6,289.3	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HUNT FED 8-60 19-24-12
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 19 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 19-24-12	<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)
13,000.0	90.00	269.59	6,455.5	-1,495.18	-1,709.0	-6,186.2	6,387.9	0.00	0.00	0.00
13,100.0	90.00	269.59	6,455.5	-1,495.18	-1,709.7	-6,286.2	6,486.6	0.00	0.00	0.00
13,200.0	90.00	269.59	6,455.5	-1,495.18	-1,710.5	-6,386.2	6,585.2	0.00	0.00	0.00
13,300.0	90.00	269.59	6,455.5	-1,495.18	-1,711.2	-6,486.2	6,683.8	0.00	0.00	0.00
13,400.0	90.00	269.59	6,455.5	-1,495.17	-1,711.9	-6,586.2	6,782.5	0.00	0.00	0.00
13,500.0	90.00	269.59	6,455.5	-1,495.17	-1,712.6	-6,686.2	6,881.1	0.00	0.00	0.00
13,600.0	90.00	269.59	6,455.5	-1,495.17	-1,713.3	-6,786.2	6,979.7	0.00	0.00	0.00
13,700.0	90.00	269.59	6,455.5	-1,495.16	-1,714.0	-6,886.2	7,078.4	0.00	0.00	0.00
13,800.0	90.00	269.59	6,455.5	-1,495.16	-1,714.8	-6,986.2	7,177.0	0.00	0.00	0.00
13,900.0	90.00	269.59	6,455.5	-1,495.16	-1,715.5	-7,086.2	7,275.6	0.00	0.00	0.00
14,000.0	90.00	269.59	6,455.5	-1,495.15	-1,716.2	-7,186.2	7,374.3	0.00	0.00	0.00
14,100.0	90.00	269.59	6,455.4	-1,495.15	-1,716.9	-7,286.2	7,472.9	0.00	0.00	0.00
14,200.0	90.00	269.59	6,455.4	-1,495.15	-1,717.6	-7,386.2	7,571.5	0.00	0.00	0.00
14,300.0	90.00	269.59	6,455.4	-1,495.14	-1,718.3	-7,486.2	7,670.1	0.00	0.00	0.00
14,400.0	90.00	269.59	6,455.4	-1,495.14	-1,719.0	-7,586.2	7,768.8	0.00	0.00	0.00
14,500.0	90.00	269.59	6,455.4	-1,495.13	-1,719.8	-7,686.2	7,867.4	0.00	0.00	0.00
14,600.0	90.00	269.59	6,455.4	-1,495.13	-1,720.5	-7,786.2	7,966.0	0.00	0.00	0.00
14,700.0	90.00	269.59	6,455.4	-1,495.12	-1,721.2	-7,886.2	8,064.7	0.00	0.00	0.00
14,800.0	90.00	269.59	6,455.4	-1,495.12	-1,721.9	-7,986.2	8,163.3	0.00	0.00	0.00
14,900.0	90.00	269.59	6,455.4	-1,495.11	-1,722.6	-8,086.2	8,261.9	0.00	0.00	0.00
15,000.0	90.00	269.59	6,455.4	-1,495.10	-1,723.3	-8,186.2	8,360.6	0.00	0.00	0.00
15,100.0	90.00	269.59	6,455.4	-1,495.10	-1,724.1	-8,286.2	8,459.2	0.00	0.00	0.00
15,200.0	90.00	269.59	6,455.4	-1,495.09	-1,724.8	-8,386.1	8,557.8	0.00	0.00	0.00
15,300.0	90.00	269.59	6,455.4	-1,495.09	-1,725.5	-8,486.1	8,656.5	0.00	0.00	0.00
15,400.0	90.00	269.59	6,455.4	-1,495.08	-1,726.2	-8,586.1	8,755.1	0.00	0.00	0.00
15,500.0	90.00	269.59	6,455.4	-1,495.07	-1,726.9	-8,686.1	8,853.7	0.00	0.00	0.00
15,600.0	90.00	269.59	6,455.4	-1,495.07	-1,727.6	-8,786.1	8,952.3	0.00	0.00	0.00
15,700.0	90.00	269.59	6,455.4	-1,495.06	-1,728.3	-8,886.1	9,051.0	0.00	0.00	0.00
15,800.0	90.00	269.59	6,455.4	-1,495.05	-1,729.1	-8,986.1	9,149.6	0.00	0.00	0.00
15,900.0	90.00	269.59	6,455.3	-1,495.04	-1,729.8	-9,086.1	9,248.2	0.00	0.00	0.00
16,000.0	90.00	269.59	6,455.3	-1,495.04	-1,730.5	-9,186.1	9,346.9	0.00	0.00	0.00
16,100.0	90.00	269.59	6,455.3	-1,495.03	-1,731.2	-9,286.1	9,445.5	0.00	0.00	0.00
16,200.0	90.00	269.59	6,455.3	-1,495.02	-1,731.9	-9,386.1	9,544.1	0.00	0.00	0.00
16,300.0	90.00	269.59	6,455.3	-1,495.01	-1,732.6	-9,486.1	9,642.8	0.00	0.00	0.00
16,400.0	90.00	269.59	6,455.3	-1,495.00	-1,733.4	-9,586.1	9,741.4	0.00	0.00	0.00
<b>EPI: 1812ft FSL &amp; 600ft FWL of Sec 24</b>										
<b>16,455.9</b>	<b>90.00</b>	<b>269.59</b>	<b>6,455.3</b>	<b>-1,495.00</b>	<b>-1,733.8</b>	<b>-9,642.0</b>	<b>9,796.5</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>EOT TO 269.67° AZ</b>										
<b>16,458.7</b>	<b>90.00</b>	<b>269.67</b>	<b>6,455.3</b>	<b>-1,495.00</b>	<b>-1,733.8</b>	<b>-9,644.9</b>	<b>9,799.3</b>	<b>3.00</b>	<b>-0.17</b>	<b>3.00</b>
16,500.0	90.00	269.67	6,455.3	-1,495.00	-1,734.0	-9,686.1	9,840.0	0.00	0.00	0.00
16,600.0	90.00	269.67	6,455.3	-1,495.00	-1,734.6	-9,786.1	9,938.6	0.00	0.00	0.00
16,700.0	90.00	269.67	6,455.3	-1,495.00	-1,735.1	-9,886.1	10,037.2	0.00	0.00	0.00
<b>BHL: 1814ft FSL &amp; 300ft FWL of Sec 24</b>										
<b>16,755.6</b>	<b>90.00</b>	<b>269.67</b>	<b>6,455.3</b>	<b>-1,495.00</b>	<b>-1,735.5</b>	<b>-9,941.7</b>	<b>10,092.1</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HUNT FED 8-60 19-24-12
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4960.3usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 19 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 19-24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
494.5	493.3	PIERRE SHALE (BASE FOX HILLS			
3,718.5	3,508.3	PARKMAN			
4,284.7	4,033.3	SUSSEX			
5,432.0	5,131.3	SHANNON			
6,473.6	6,160.3	SHARON SPRINGS SHALE			
6,557.4	6,230.3	NIOBRARA FORMATION			
6,570.1	6,240.3	NIOBRARA A CHALK			
6,731.0	6,350.3	NIOBRARA B CHALK			
6,882.1	6,420.3	NIOBRARA C CHALK			

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 1816ft FNL & 360ft FEL of Sec 19
100.0	100.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,199.9	1,173.1	-205.2	37.4	EOB TO 22° INC
4,598.5	4,324.2	-1,457.5	265.8	END OF TANGENT
5,698.4	5,397.3	-1,662.7	303.2	EOD TO VERTICAL
6,183.4	5,882.3	-1,662.7	303.2	KOP (10°/100ft BUR)
7,083.4	6,455.3	-1,666.8	-269.7	BPI: 1813ft FSL & 600ft FEL of Sec 19
16,455.9	6,455.3	-1,733.8	-9,642.0	EPI: 1812ft FSL & 600ft FWL of Sec 24
16,458.7	6,455.3	-1,733.8	-9,644.9	EOT TO 269.67° AZ
16,755.6	6,455.3	-1,735.5	-9,941.7	BHL: 1814ft FSL & 300ft FWL of Sec 24