

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

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

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

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

**ORIGINAL WELLBORE**

**20 September, 2017**

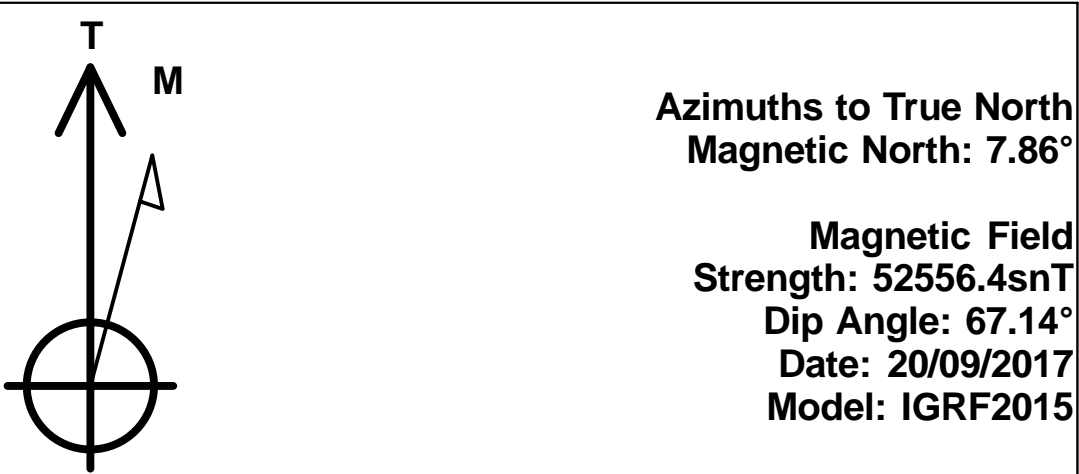
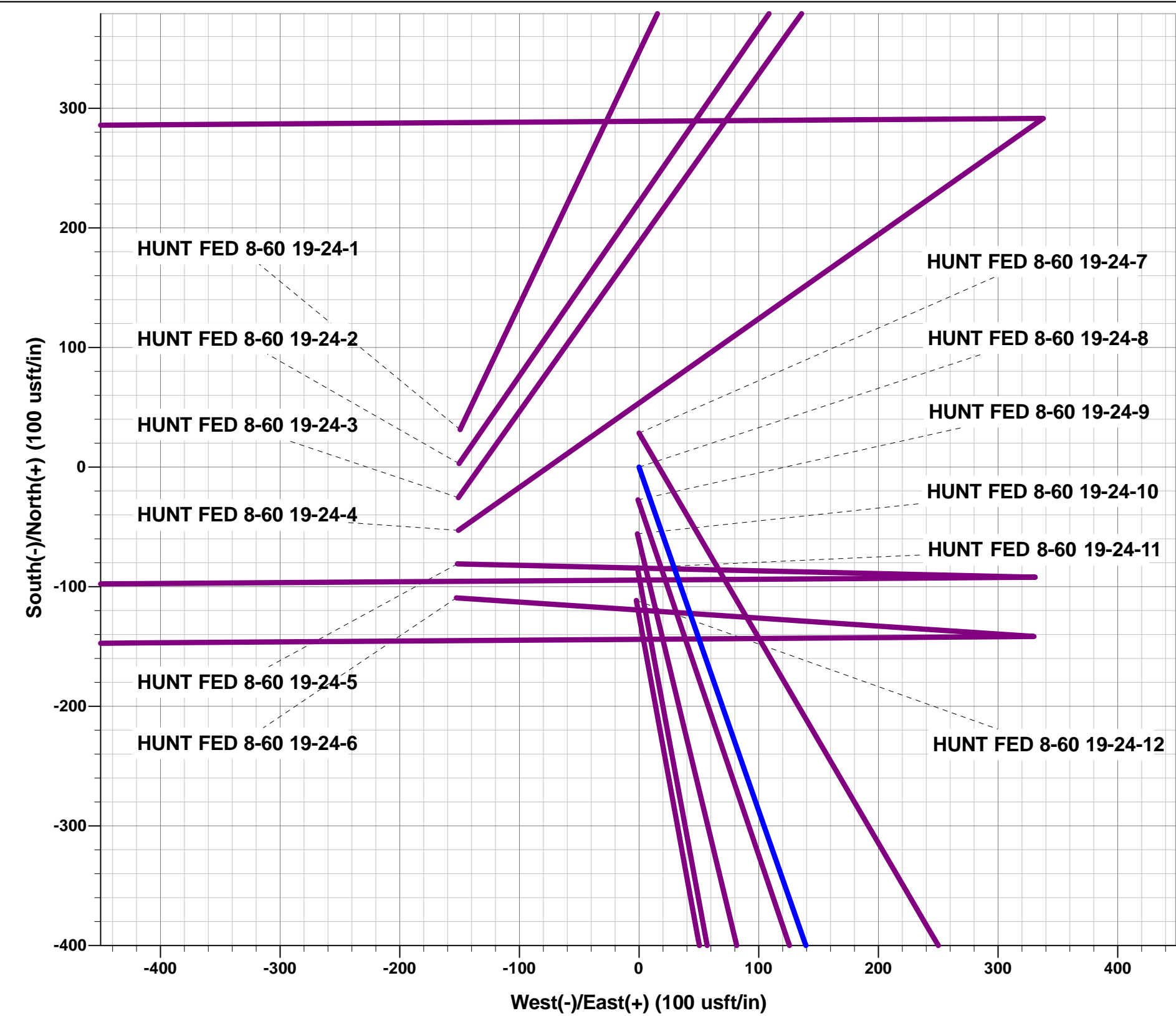
**Plan: PROPOSAL #1**



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

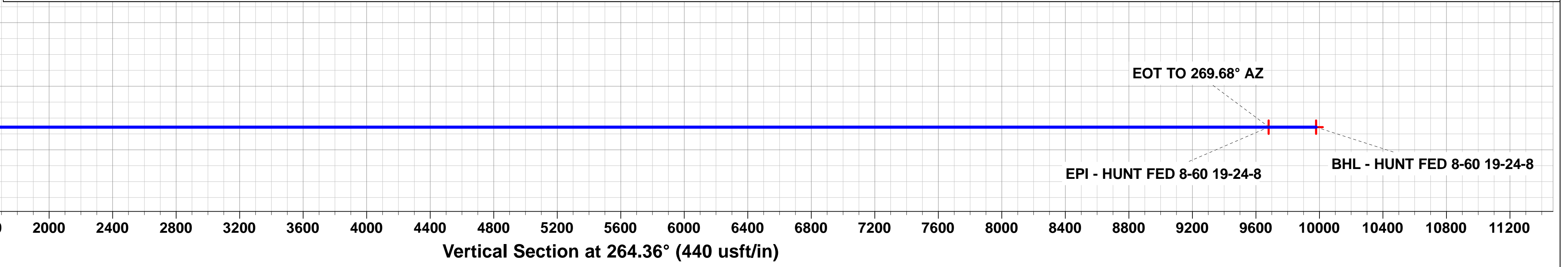
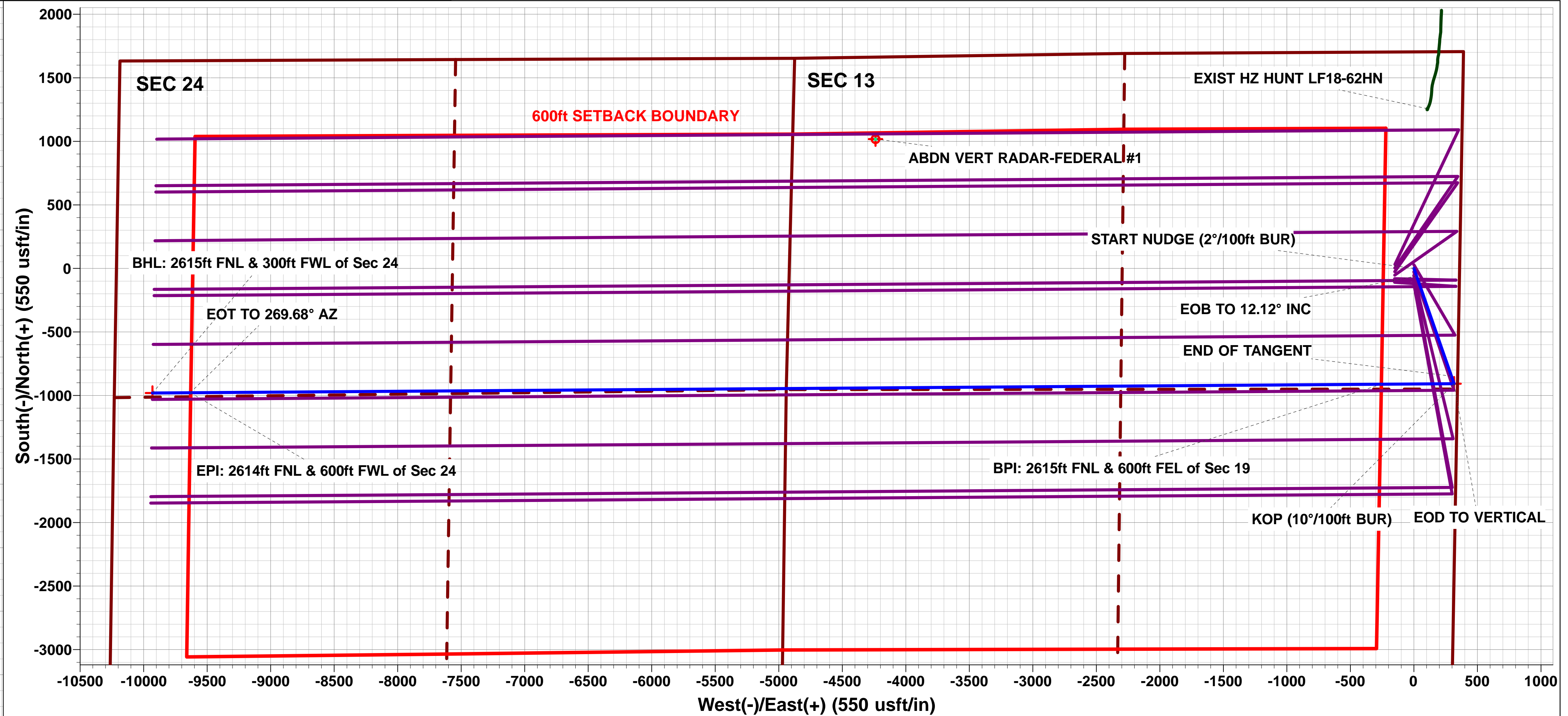
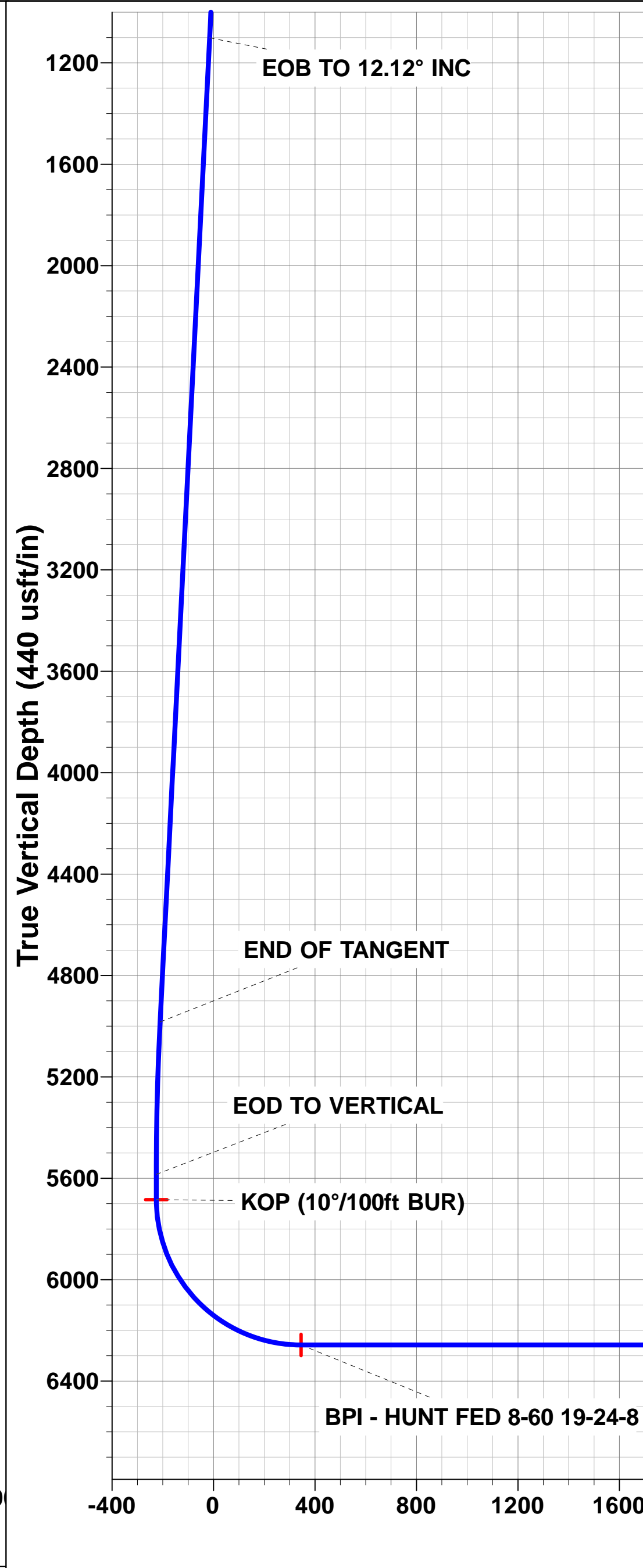
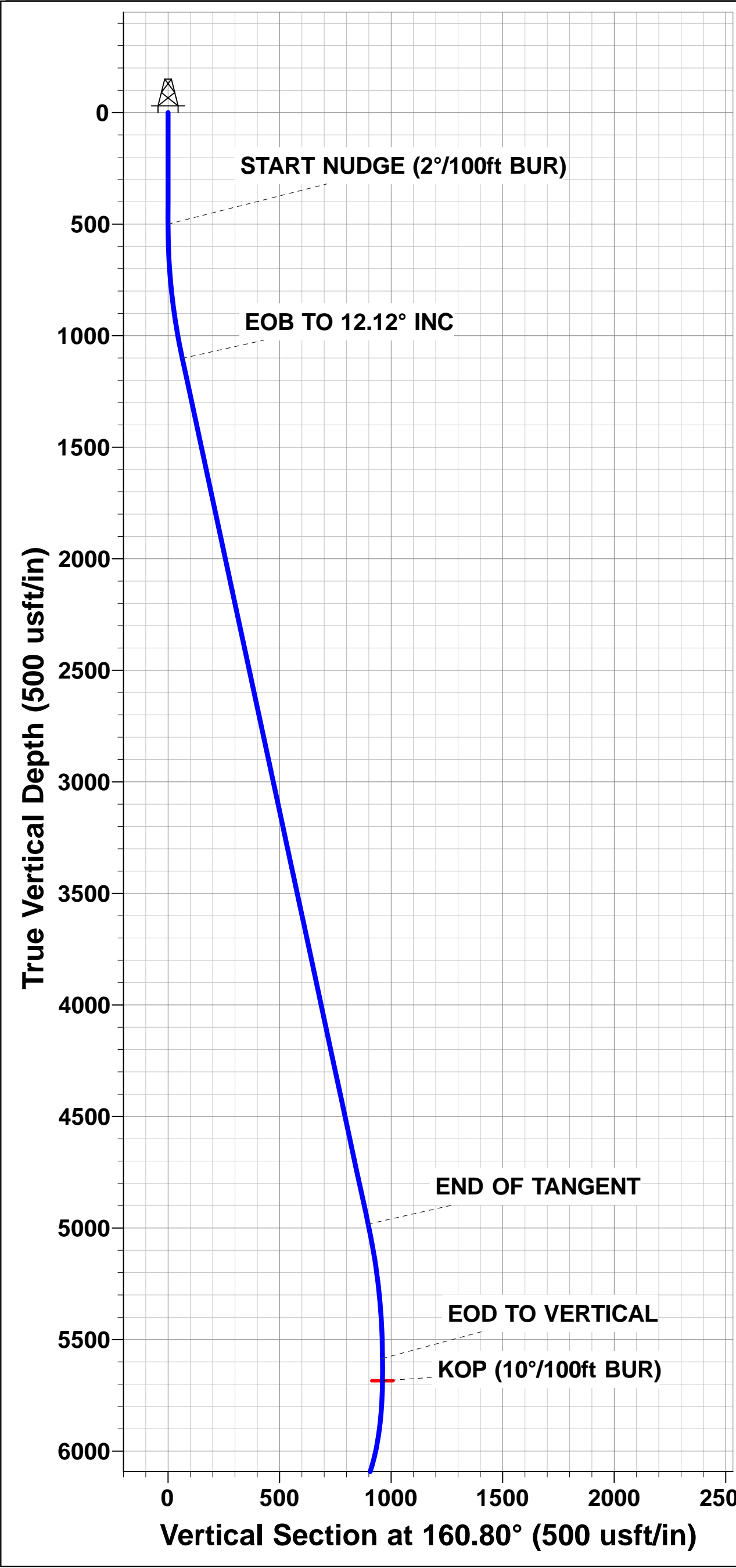
ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 1704ft FNL & 360ft FEL of Sec 19	
500.0	500.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1101.5	1106.0	12.12	160.80	-60.3	21.0	-15.0	63.9	EOB TO 12.12° INC	
4983.0	5076.0	12.12	160.80	-847.5	295.2	-210.5	897.4	END OF TANGENT	
5584.5	5682.0	0.00	0.00	-907.8	316.2	-225.5	961.3	EOD TO VERTICAL	
5684.5	5782.0	0.00	0.00	-907.8	316.2	-225.5	961.3	KOP (10°/100ft BUR)	
6257.4	6681.9	90.00	269.59	-911.9	-256.7	345.1	1534.2	BPI: 2615ft FNL & 600ft FEL of Sec 19	
6257.4	16056.1	90.00	269.59	-978.9	-9630.6	9680.2	10908.3	EPI: 2614ft FNL & 600ft FWL of Sec 24	
6257.4	16058.8	90.00	269.68	-978.9	-9633.4	9682.9	10911.1	EOT TO 269.68° AZ	
6257.4	16356.0	90.00	269.68	-980.6	-9930.5	9978.8	11208.3	BHL: 2615ft FNL & 300ft FWL of Sec 24	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - HUNT FED 8-60 19-24-8	5684.5	-907.8	316.2	40.647861	-104.125250
BPI - HUNT FED 8-60 19-24-8	6257.4	-911.9	-256.7	40.647850	-104.127314
EPI - HUNT FED 8-60 19-24-8	6257.4	-978.9	-9630.6	40.647661	-104.161094
BHL - HUNT FED 8-60 19-24-8	6257.4	-980.6	-9930.5	40.647656	-104.162175



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
490.5	490.4	PIERRE SH (BASE FOX HILLS)
3505.5	3564.7	PARKMAN
4030.5	4101.7	SUSSEX
5128.5	5224.0	SHANNON
6157.5	6338.3	SHARON SPRINGS SHALE
6227.5	6495.7	NIORARA FORMATION
6237.5	6530.1	NIORARA A CHALK

PROPOSED LOCAL COORDINATES:  
SHL:1704ft FNL & 360ft FEL of Sec 19  
BEGIN PROD INT: 2615ft FNL & 600ft FEL of Sec 19  
END PROD INTERVAL: 2614ft FNL & 600ft FWL of Sec 24  
BHL: 2615ft FNL & 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 19-24-8
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4957.4usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4957.4usft (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 19-24-8	<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 19-24-8		
<b>Well Position</b>	<b>+N/-S</b>	-31.3 usft	<b>Northing:</b>
	<b>+E/-W</b>	149.6 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>
	6,257.4	0.0	0.0	264.36

<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	-4,957.4	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	-4,457.4	0.0	0.0	0.00	0.00	0.00	0.00	
1,106.0	12.12	160.80	1,101.5	-3,855.9	-60.3	21.0	2.00	2.00	0.00	160.80	
5,076.0	12.12	160.80	4,983.0	25.6	-847.5	295.2	0.00	0.00	0.00	0.00	
5,682.0	0.00	0.00	5,584.5	627.1	-907.8	316.2	2.00	-2.00	0.00	180.00	
5,782.0	0.00	0.00	5,684.5	727.1	-907.8	316.2	0.00	0.00	0.00	0.00	KOP - HUNT FED 8
6,681.9	90.00	269.59	6,257.4	1,300.0	-911.9	-256.7	10.00	10.00	-10.05	269.59	BPI - HUNT FED 8-
16,056.1	90.00	269.59	6,257.4	1,300.0	-978.9	-9,630.6	0.00	0.00	0.00	88.02	EPI - HUNT FED 8-
16,058.8	90.00	269.68	6,257.4	1,300.0	-978.9	-9,633.4	3.00	0.00	3.00	90.02	
16,356.0	90.00	269.68	6,257.4	1,300.0	-980.6	-9,930.5	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 19-24-8
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4957.4usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4957.4usft (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 19-24-8	<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: 1704ft FNL &amp; 360ft FEL of Sec 19</b>										
0.0	0.00	0.00	0.0	4,957.40	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,857.40	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,757.40	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,657.40	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,557.40	0.0	0.0	0.0	0.00	0.00	0.00
<b>PIERRE SHALE (BASE FOX HILLS)</b>										
490.4	0.00	0.00	490.4	4,467.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
500.0	0.00	0.00	500.0	4,457.40	0.0	0.0	0.0	0.00	0.00	0.00
600.0	2.00	160.80	600.0	4,357.42	-1.6	0.6	-0.4	2.00	2.00	0.00
700.0	4.00	160.80	699.8	4,257.56	-6.6	2.3	-1.6	2.00	2.00	0.00
800.0	6.00	160.80	799.5	4,157.95	-14.8	5.2	-3.7	2.00	2.00	0.00
900.0	8.00	160.80	898.7	4,058.70	-26.3	9.2	-6.5	2.00	2.00	0.00
1,000.0	10.00	160.80	997.5	3,959.93	-41.1	14.3	-10.2	2.00	2.00	0.00
1,100.0	12.00	160.80	1,095.6	3,861.78	-59.1	20.6	-14.7	2.00	2.00	0.00
<b>EOB TO 12.12° INC</b>										
1,106.0	12.12	160.80	1,101.5	3,855.88	-60.3	21.0	-15.0	2.00	2.00	0.00
1,200.0	12.12	160.80	1,193.4	3,764.00	-78.9	27.5	-19.6	0.00	0.00	0.00
1,300.0	12.12	160.80	1,291.2	3,666.23	-98.8	34.4	-24.5	0.00	0.00	0.00
1,400.0	12.12	160.80	1,388.9	3,568.46	-118.6	41.3	-29.5	0.00	0.00	0.00
1,500.0	12.12	160.80	1,486.7	3,470.69	-138.4	48.2	-34.4	0.00	0.00	0.00
1,600.0	12.12	160.80	1,584.5	3,372.92	-158.3	55.1	-39.3	0.00	0.00	0.00
1,700.0	12.12	160.80	1,682.2	3,275.15	-178.1	62.0	-44.2	0.00	0.00	0.00
1,800.0	12.12	160.80	1,780.0	3,177.38	-197.9	68.9	-49.2	0.00	0.00	0.00
1,900.0	12.12	160.80	1,877.8	3,079.61	-217.7	75.8	-54.1	0.00	0.00	0.00
2,000.0	12.12	160.80	1,975.6	2,981.84	-237.6	82.7	-59.0	0.00	0.00	0.00
2,100.0	12.12	160.80	2,073.3	2,884.07	-257.4	89.7	-63.9	0.00	0.00	0.00
2,200.0	12.12	160.80	2,171.1	2,786.30	-277.2	96.6	-68.9	0.00	0.00	0.00
2,300.0	12.12	160.80	2,268.9	2,688.53	-297.1	103.5	-73.8	0.00	0.00	0.00
2,400.0	12.12	160.80	2,366.6	2,590.76	-316.9	110.4	-78.7	0.00	0.00	0.00
2,500.0	12.12	160.80	2,464.4	2,492.98	-336.7	117.3	-83.6	0.00	0.00	0.00
2,600.0	12.12	160.80	2,562.2	2,395.21	-356.5	124.2	-88.6	0.00	0.00	0.00
2,700.0	12.12	160.80	2,660.0	2,297.44	-376.4	131.1	-93.5	0.00	0.00	0.00
2,800.0	12.12	160.80	2,757.7	2,199.67	-396.2	138.0	-98.4	0.00	0.00	0.00
2,900.0	12.12	160.80	2,855.5	2,101.90	-416.0	144.9	-103.3	0.00	0.00	0.00
3,000.0	12.12	160.80	2,953.3	2,004.13	-435.9	151.8	-108.3	0.00	0.00	0.00
3,100.0	12.12	160.80	3,051.0	1,906.36	-455.7	158.7	-113.2	0.00	0.00	0.00
3,200.0	12.12	160.80	3,148.8	1,808.59	-475.5	165.6	-118.1	0.00	0.00	0.00
3,300.0	12.12	160.80	3,246.6	1,710.82	-495.3	172.5	-123.0	0.00	0.00	0.00
3,400.0	12.12	160.80	3,344.4	1,613.05	-515.2	179.4	-127.9	0.00	0.00	0.00
3,500.0	12.12	160.80	3,442.1	1,515.28	-535.0	186.3	-132.9	0.00	0.00	0.00
<b>PARKMAN</b>										
3,564.7	12.12	160.80	3,505.4	1,452.00	-547.8	190.8	-136.1	0.00	0.00	0.00
3,600.0	12.12	160.80	3,539.9	1,417.51	-554.8	193.3	-137.8	0.00	0.00	0.00
3,700.0	12.12	160.80	3,637.7	1,319.73	-574.7	200.2	-142.7	0.00	0.00	0.00
3,800.0	12.12	160.80	3,735.4	1,221.96	-594.5	207.1	-147.6	0.00	0.00	0.00
3,900.0	12.12	160.80	3,833.2	1,124.19	-614.3	214.0	-152.6	0.00	0.00	0.00
4,000.0	12.12	160.80	3,931.0	1,026.42	-634.1	220.9	-157.5	0.00	0.00	0.00
4,100.0	12.12	160.80	4,028.7	928.65	-654.0	227.8	-162.4	0.00	0.00	0.00
<b>SUSSEX</b>										
4,101.7	12.12	160.80	4,030.4	927.00	-654.3	227.9	-162.5	0.00	0.00	0.00
4,200.0	12.12	160.80	4,126.5	830.88	-673.8	234.7	-167.3	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 @ 4957.4usft (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 19-24-8	<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	12.12	160.80	4,224.3	733.11	-693.6	241.6	-172.3	0.00	0.00	0.00
4,400.0	12.12	160.80	4,322.1	635.34	-713.5	248.5	-177.2	0.00	0.00	0.00
4,500.0	12.12	160.80	4,419.8	537.57	-733.3	255.4	-182.1	0.00	0.00	0.00
4,600.0	12.12	160.80	4,517.6	439.80	-753.1	262.3	-187.0	0.00	0.00	0.00
4,700.0	12.12	160.80	4,615.4	342.03	-772.9	269.2	-192.0	0.00	0.00	0.00
4,800.0	12.12	160.80	4,713.1	244.26	-792.8	276.1	-196.9	0.00	0.00	0.00
4,900.0	12.12	160.80	4,810.9	146.48	-812.6	283.0	-201.8	0.00	0.00	0.00
5,000.0	12.12	160.80	4,908.7	48.71	-832.4	289.9	-206.7	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>5,076.0</b>	<b>12.12</b>	<b>160.80</b>	<b>4,983.0</b>	<b>-25.58</b>	<b>-847.5</b>	<b>295.2</b>	<b>-210.5</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,100.0	11.64	160.80	5,006.5	-49.08	-852.2	296.8	-211.6	2.00	-2.00	0.00
5,200.0	9.64	160.80	5,104.8	-147.35	-869.6	302.9	-216.0	2.00	-2.00	0.00
<b>SHANNON</b>										
<b>5,224.0</b>	<b>9.16</b>	<b>160.80</b>	<b>5,128.4</b>	<b>-171.00</b>	<b>-873.3</b>	<b>304.2</b>	<b>-216.9</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,300.0	7.64	160.80	5,203.6	-246.21	-883.8	307.8	-219.5	2.00	-2.00	0.00
5,400.0	5.64	160.80	5,302.9	-345.54	-894.7	311.6	-222.2	2.00	-2.00	0.00
5,500.0	3.64	160.80	5,402.6	-445.20	-902.3	314.3	-224.1	2.00	-2.00	0.00
5,600.0	1.64	160.80	5,502.5	-545.09	-906.7	315.8	-225.2	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>5,682.0</b>	<b>0.00</b>	<b>0.00</b>	<b>5,584.5</b>	<b>-627.10</b>	<b>-907.8</b>	<b>316.2</b>	<b>-225.5</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,700.0	0.00	0.00	5,602.5	-645.08	-907.8	316.2	-225.5	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>5,782.0</b>	<b>0.00</b>	<b>0.00</b>	<b>5,684.5</b>	<b>-727.10</b>	<b>-907.8</b>	<b>316.2</b>	<b>-225.5</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,800.0	1.80	269.59	5,702.5	-745.08	-907.8	315.9	-225.2	10.00	10.00	0.00
5,900.0	11.80	269.59	5,801.6	-844.25	-907.9	304.1	-213.4	10.00	10.00	0.00
6,000.0	21.80	269.59	5,897.3	-939.86	-908.1	275.2	-184.7	10.00	10.00	0.00
6,100.0	31.80	269.59	5,986.4	-1,029.00	-908.4	230.2	-139.8	10.00	10.00	0.00
6,200.0	41.80	269.59	6,066.4	-1,108.97	-908.8	170.4	-80.2	10.00	10.00	0.00
6,300.0	51.80	269.59	6,134.7	-1,177.34	-909.4	97.6	-7.7	10.00	10.00	0.00
<b>SHARON SPRINGS SHALE</b>										
<b>6,338.3</b>	<b>55.63</b>	<b>269.59</b>	<b>6,157.4</b>	<b>-1,200.00</b>	<b>-909.6</b>	<b>66.7</b>	<b>23.0</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,400.0	61.80	269.59	6,189.4	-1,232.02	-910.0	14.0	75.5	10.00	10.00	0.00
<b>NIOBARRA FORMATION</b>										
<b>6,495.7</b>	<b>71.38</b>	<b>269.59</b>	<b>6,227.4</b>	<b>-1,270.00</b>	<b>-910.6</b>	<b>-73.7</b>	<b>162.9</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,500.0	71.81	269.59	6,228.8	-1,271.36	-910.6	-77.8	166.9	10.00	10.00	0.00
<b>NIOBARRA A CHALK</b>										
<b>6,530.1</b>	<b>74.82</b>	<b>269.59</b>	<b>6,237.4</b>	<b>-1,280.00</b>	<b>-910.8</b>	<b>-106.6</b>	<b>195.6</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,600.0	81.81	269.59	6,251.6	-1,294.15	-911.3	-175.0	263.7	10.00	10.00	0.00
<b>BPI: 2615ft FNL &amp; 600ft FEL of Sec 19</b>										
<b>6,681.9</b>	<b>90.00</b>	<b>269.59</b>	<b>6,257.4</b>	<b>-1,300.00</b>	<b>-911.9</b>	<b>-256.7</b>	<b>345.1</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,700.0	90.00	269.59	6,257.4	-1,300.00	-912.0	-274.8	363.0	0.00	0.00	0.00
6,800.0	90.00	269.59	6,257.4	-1,300.00	-912.7	-374.8	462.6	0.00	0.00	0.00
6,900.0	90.00	269.59	6,257.4	-1,300.00	-913.5	-474.8	562.2	0.00	0.00	0.00
7,000.0	90.00	269.59	6,257.4	-1,300.00	-914.2	-574.7	661.8	0.00	0.00	0.00
7,100.0	90.00	269.59	6,257.4	-1,300.00	-914.9	-674.7	761.4	0.00	0.00	0.00
7,200.0	90.00	269.59	6,257.4	-1,300.00	-915.6	-774.7	861.0	0.00	0.00	0.00
7,300.0	90.00	269.59	6,257.4	-1,300.00	-916.3	-874.7	960.6	0.00	0.00	0.00
7,400.0	90.00	269.59	6,257.4	-1,300.00	-917.0	-974.7	1,060.1	0.00	0.00	0.00
7,500.0	90.00	269.59	6,257.4	-1,300.00	-917.8	-1,074.7	1,159.7	0.00	0.00	0.00
7,600.0	90.00	269.59	6,257.4	-1,300.00	-918.5	-1,174.7	1,259.3	0.00	0.00	0.00
7,700.0	90.00	269.59	6,257.4	-1,300.00	-919.2	-1,274.7	1,358.9	0.00	0.00	0.00
7,800.0	90.00	269.59	6,257.4	-1,300.00	-919.9	-1,374.7	1,458.5	0.00	0.00	0.00
7,900.0	90.00	269.59	6,257.4	-1,300.00	-920.6	-1,474.7	1,558.1	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 19-24-8
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4957.4usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4957.4usft (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 19-24-8	<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)
8,000.0	90.00	269.59	6,257.4	-1,300.00	-921.3	-1,574.7	1,657.6	0.00	0.00	0.00
8,100.0	90.00	269.59	6,257.4	-1,300.00	-922.1	-1,674.7	1,757.2	0.00	0.00	0.00
8,200.0	90.00	269.59	6,257.4	-1,300.00	-922.8	-1,774.7	1,856.8	0.00	0.00	0.00
8,300.0	90.00	269.59	6,257.4	-1,300.00	-923.5	-1,874.7	1,956.4	0.00	0.00	0.00
8,400.0	90.00	269.59	6,257.4	-1,300.00	-924.2	-1,974.7	2,056.0	0.00	0.00	0.00
8,500.0	90.00	269.59	6,257.4	-1,300.00	-924.9	-2,074.7	2,155.6	0.00	0.00	0.00
8,600.0	90.00	269.59	6,257.4	-1,300.00	-925.6	-2,174.7	2,255.1	0.00	0.00	0.00
8,700.0	90.00	269.59	6,257.4	-1,300.00	-926.3	-2,274.7	2,354.7	0.00	0.00	0.00
8,800.0	90.00	269.59	6,257.4	-1,300.00	-927.1	-2,374.7	2,454.3	0.00	0.00	0.00
8,900.0	90.00	269.59	6,257.4	-1,300.00	-927.8	-2,474.7	2,553.9	0.00	0.00	0.00
9,000.0	90.00	269.59	6,257.4	-1,300.00	-928.5	-2,574.7	2,653.5	0.00	0.00	0.00
9,100.0	90.00	269.59	6,257.4	-1,300.00	-929.2	-2,674.7	2,753.1	0.00	0.00	0.00
9,200.0	90.00	269.59	6,257.4	-1,300.00	-929.9	-2,774.7	2,852.6	0.00	0.00	0.00
9,300.0	90.00	269.59	6,257.4	-1,300.00	-930.6	-2,874.7	2,952.2	0.00	0.00	0.00
9,400.0	90.00	269.59	6,257.4	-1,300.00	-931.3	-2,974.7	3,051.8	0.00	0.00	0.00
9,500.0	90.00	269.59	6,257.4	-1,300.00	-932.1	-3,074.7	3,151.4	0.00	0.00	0.00
9,600.0	90.00	269.59	6,257.4	-1,300.00	-932.8	-3,174.7	3,251.0	0.00	0.00	0.00
9,700.0	90.00	269.59	6,257.4	-1,300.00	-933.5	-3,274.7	3,350.6	0.00	0.00	0.00
9,800.0	90.00	269.59	6,257.4	-1,300.00	-934.2	-3,374.7	3,450.1	0.00	0.00	0.00
9,900.0	90.00	269.59	6,257.4	-1,300.00	-934.9	-3,474.7	3,549.7	0.00	0.00	0.00
10,000.0	90.00	269.59	6,257.4	-1,300.00	-935.6	-3,574.7	3,649.3	0.00	0.00	0.00
10,100.0	90.00	269.59	6,257.4	-1,300.00	-936.4	-3,674.7	3,748.9	0.00	0.00	0.00
10,200.0	90.00	269.59	6,257.4	-1,300.00	-937.1	-3,774.7	3,848.5	0.00	0.00	0.00
10,300.0	90.00	269.59	6,257.4	-1,300.00	-937.8	-3,874.7	3,948.1	0.00	0.00	0.00
10,400.0	90.00	269.59	6,257.4	-1,300.00	-938.5	-3,974.7	4,047.6	0.00	0.00	0.00
10,500.0	90.00	269.59	6,257.4	-1,300.00	-939.2	-4,074.7	4,147.2	0.00	0.00	0.00
10,600.0	90.00	269.59	6,257.4	-1,300.00	-939.9	-4,174.7	4,246.8	0.00	0.00	0.00
10,700.0	90.00	269.59	6,257.4	-1,300.00	-940.6	-4,274.7	4,346.4	0.00	0.00	0.00
10,800.0	90.00	269.59	6,257.4	-1,300.00	-941.4	-4,374.7	4,446.0	0.00	0.00	0.00
10,900.0	90.00	269.59	6,257.4	-1,300.00	-942.1	-4,474.7	4,545.6	0.00	0.00	0.00
11,000.0	90.00	269.59	6,257.4	-1,300.00	-942.8	-4,574.6	4,645.2	0.00	0.00	0.00
11,100.0	90.00	269.59	6,257.4	-1,300.00	-943.5	-4,674.6	4,744.7	0.00	0.00	0.00
11,200.0	90.00	269.59	6,257.4	-1,300.00	-944.2	-4,774.6	4,844.3	0.00	0.00	0.00
11,300.0	90.00	269.59	6,257.4	-1,300.00	-944.9	-4,874.6	4,943.9	0.00	0.00	0.00
11,400.0	90.00	269.59	6,257.4	-1,300.00	-945.6	-4,974.6	5,043.5	0.00	0.00	0.00
11,500.0	90.00	269.59	6,257.4	-1,300.00	-946.4	-5,074.6	5,143.1	0.00	0.00	0.00
11,600.0	90.00	269.59	6,257.4	-1,300.00	-947.1	-5,174.6	5,242.7	0.00	0.00	0.00
11,700.0	90.00	269.59	6,257.4	-1,300.00	-947.8	-5,274.6	5,342.2	0.00	0.00	0.00
11,800.0	90.00	269.59	6,257.4	-1,300.00	-948.5	-5,374.6	5,441.8	0.00	0.00	0.00
11,900.0	90.00	269.59	6,257.4	-1,300.00	-949.2	-5,474.6	5,541.4	0.00	0.00	0.00
12,000.0	90.00	269.59	6,257.4	-1,300.00	-949.9	-5,574.6	5,641.0	0.00	0.00	0.00
12,100.0	90.00	269.59	6,257.4	-1,300.00	-950.6	-5,674.6	5,740.6	0.00	0.00	0.00
12,200.0	90.00	269.59	6,257.4	-1,300.00	-951.4	-5,774.6	5,840.2	0.00	0.00	0.00
12,300.0	90.00	269.59	6,257.4	-1,300.00	-952.1	-5,874.6	5,939.7	0.00	0.00	0.00
12,400.0	90.00	269.59	6,257.4	-1,300.00	-952.8	-5,974.6	6,039.3	0.00	0.00	0.00
12,500.0	90.00	269.59	6,257.4	-1,300.00	-953.5	-6,074.6	6,138.9	0.00	0.00	0.00
12,600.0	90.00	269.59	6,257.4	-1,300.00	-954.2	-6,174.6	6,238.5	0.00	0.00	0.00
12,700.0	90.00	269.59	6,257.4	-1,300.00	-954.9	-6,274.6	6,338.1	0.00	0.00	0.00
12,800.0	90.00	269.59	6,257.4	-1,300.00	-955.6	-6,374.6	6,437.7	0.00	0.00	0.00
12,900.0	90.00	269.59	6,257.4	-1,300.00	-956.4	-6,474.6	6,537.2	0.00	0.00	0.00
13,000.0	90.00	269.59	6,257.4	-1,300.00	-957.1	-6,574.6	6,636.8	0.00	0.00	0.00
13,100.0	90.00	269.59	6,257.4	-1,300.00	-957.8	-6,674.6	6,736.4	0.00	0.00	0.00
13,200.0	90.00	269.59	6,257.4	-1,300.00	-958.5	-6,774.6	6,836.0	0.00	0.00	0.00
13,300.0	90.00	269.59	6,257.4	-1,300.00	-959.2	-6,874.6	6,935.6	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 19-24-8
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4957.4usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4957.4usft (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 19-24-8	<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)
13,400.0	90.00	269.59	6,257.4	-1,300.00	-959.9	-6,974.6	7,035.2	0.00	0.00	0.00
13,500.0	90.00	269.59	6,257.4	-1,300.00	-960.6	-7,074.6	7,134.7	0.00	0.00	0.00
13,600.0	90.00	269.59	6,257.4	-1,300.00	-961.4	-7,174.6	7,234.3	0.00	0.00	0.00
13,700.0	90.00	269.59	6,257.4	-1,300.00	-962.1	-7,274.6	7,333.9	0.00	0.00	0.00
13,800.0	90.00	269.59	6,257.4	-1,300.00	-962.8	-7,374.6	7,433.5	0.00	0.00	0.00
13,900.0	90.00	269.59	6,257.4	-1,300.00	-963.5	-7,474.6	7,533.1	0.00	0.00	0.00
14,000.0	90.00	269.59	6,257.4	-1,300.00	-964.2	-7,574.6	7,632.7	0.00	0.00	0.00
14,100.0	90.00	269.59	6,257.4	-1,300.00	-964.9	-7,674.6	7,732.2	0.00	0.00	0.00
14,200.0	90.00	269.59	6,257.4	-1,300.00	-965.6	-7,774.6	7,831.8	0.00	0.00	0.00
14,300.0	90.00	269.59	6,257.4	-1,300.00	-966.3	-7,874.6	7,931.4	0.00	0.00	0.00
14,400.0	90.00	269.59	6,257.4	-1,300.00	-967.1	-7,974.6	8,031.0	0.00	0.00	0.00
14,500.0	90.00	269.59	6,257.4	-1,300.00	-967.8	-8,074.6	8,130.6	0.00	0.00	0.00
14,600.0	90.00	269.59	6,257.4	-1,300.00	-968.5	-8,174.6	8,230.2	0.00	0.00	0.00
14,700.0	90.00	269.59	6,257.4	-1,300.00	-969.2	-8,274.6	8,329.7	0.00	0.00	0.00
14,800.0	90.00	269.59	6,257.4	-1,300.00	-969.9	-8,374.6	8,429.3	0.00	0.00	0.00
14,900.0	90.00	269.59	6,257.4	-1,300.00	-970.6	-8,474.5	8,528.9	0.00	0.00	0.00
15,000.0	90.00	269.59	6,257.4	-1,300.00	-971.3	-8,574.5	8,628.5	0.00	0.00	0.00
15,100.0	90.00	269.59	6,257.4	-1,300.00	-972.1	-8,674.5	8,728.1	0.00	0.00	0.00
15,200.0	90.00	269.59	6,257.4	-1,300.00	-972.8	-8,774.5	8,827.7	0.00	0.00	0.00
15,300.0	90.00	269.59	6,257.4	-1,300.00	-973.5	-8,874.5	8,927.2	0.00	0.00	0.00
15,400.0	90.00	269.59	6,257.4	-1,300.00	-974.2	-8,974.5	9,026.8	0.00	0.00	0.00
15,500.0	90.00	269.59	6,257.4	-1,300.00	-974.9	-9,074.5	9,126.4	0.00	0.00	0.00
15,600.0	90.00	269.59	6,257.4	-1,300.00	-975.6	-9,174.5	9,226.0	0.00	0.00	0.00
15,700.0	90.00	269.59	6,257.4	-1,300.00	-976.3	-9,274.5	9,325.6	0.00	0.00	0.00
15,800.0	90.00	269.59	6,257.4	-1,300.00	-977.1	-9,374.5	9,425.2	0.00	0.00	0.00
15,900.0	90.00	269.59	6,257.4	-1,300.00	-977.8	-9,474.5	9,524.7	0.00	0.00	0.00
16,000.0	90.00	269.59	6,257.4	-1,300.00	-978.5	-9,574.5	9,624.3	0.00	0.00	0.00
<b>EPI: 2614ft FNL &amp; 600ft FWL of Sec 24</b>										
<b>16,056.1</b>	<b>90.00</b>	<b>269.59</b>	<b>6,257.4</b>	<b>-1,300.00</b>	<b>-978.9</b>	<b>-9,630.6</b>	<b>9,680.2</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>EOT TO 269.68° AZ</b>										
<b>16,058.8</b>	<b>90.00</b>	<b>269.68</b>	<b>6,257.4</b>	<b>-1,300.00</b>	<b>-978.9</b>	<b>-9,633.4</b>	<b>9,682.9</b>	<b>3.00</b>	<b>0.00</b>	<b>3.00</b>
16,100.0	90.00	269.68	6,257.4	-1,300.00	-979.1	-9,674.5	9,723.9	0.00	0.00	0.00
16,200.0	90.00	269.68	6,257.4	-1,300.00	-979.7	-9,774.5	9,823.5	0.00	0.00	0.00
16,300.0	90.00	269.68	6,257.4	-1,300.00	-980.3	-9,874.5	9,923.1	0.00	0.00	0.00
<b>BHL: 2615ft FNL &amp; 300ft FWL of Sec 24</b>										
<b>16,356.0</b>	<b>90.00</b>	<b>269.68</b>	<b>6,257.4</b>	<b>-1,300.00</b>	<b>-980.6</b>	<b>-9,930.5</b>	<b>9,978.8</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
490.4	490.4	PIERRE SHALE (BASE FOX HILLS				
3,564.7	3,505.4	PARKMAN				
4,101.7	4,030.4	SUSSEX				
5,224.0	5,128.4	SHANNON				
6,338.3	6,157.4	SHARON SPRINGS SHALE				
6,495.7	6,227.4	NIOBRARA FORMATION				
6,530.1	6,237.4	NIOBRARA A CHALK				

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HUNT FED 8-60 19-24-8
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4957.4usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4957.4usft (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 19-24-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 1704ft FNL & 360ft FEL of Sec 19
500.0	500.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,106.0	1,101.5	-60.3	21.0	EOB TO 12.12° INC
5,076.0	4,983.0	-847.5	295.2	END OF TANGENT
5,682.0	5,584.5	-907.8	316.2	EOD TO VERTICAL
5,782.0	5,684.5	-907.8	316.2	KOP (10°/100ft BUR)
6,681.9	6,257.4	-911.9	-256.7	BPI: 2615ft FNL & 600ft FEL of Sec 19
16,056.1	6,257.4	-978.9	-9,630.6	EPI: 2614ft FNL & 600ft FWL of Sec 24
16,058.8	6,257.4	-978.9	-9,633.4	EOT TO 269.68° AZ
16,356.0	6,257.4	-980.6	-9,930.5	BHL: 2615ft FNL & 300ft FWL of Sec 24