

BISON OIL & GAS II, LLC

WELD COUNTY, COLORADO (NAD 83)

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

HUNT FED 8-60 19-24-4

ORIGINAL WELLBORE

20 September, 2017

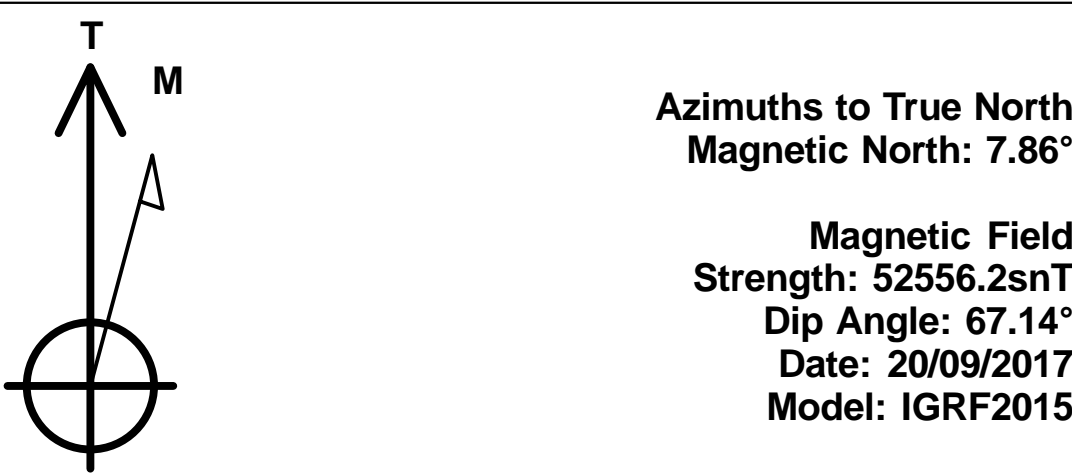
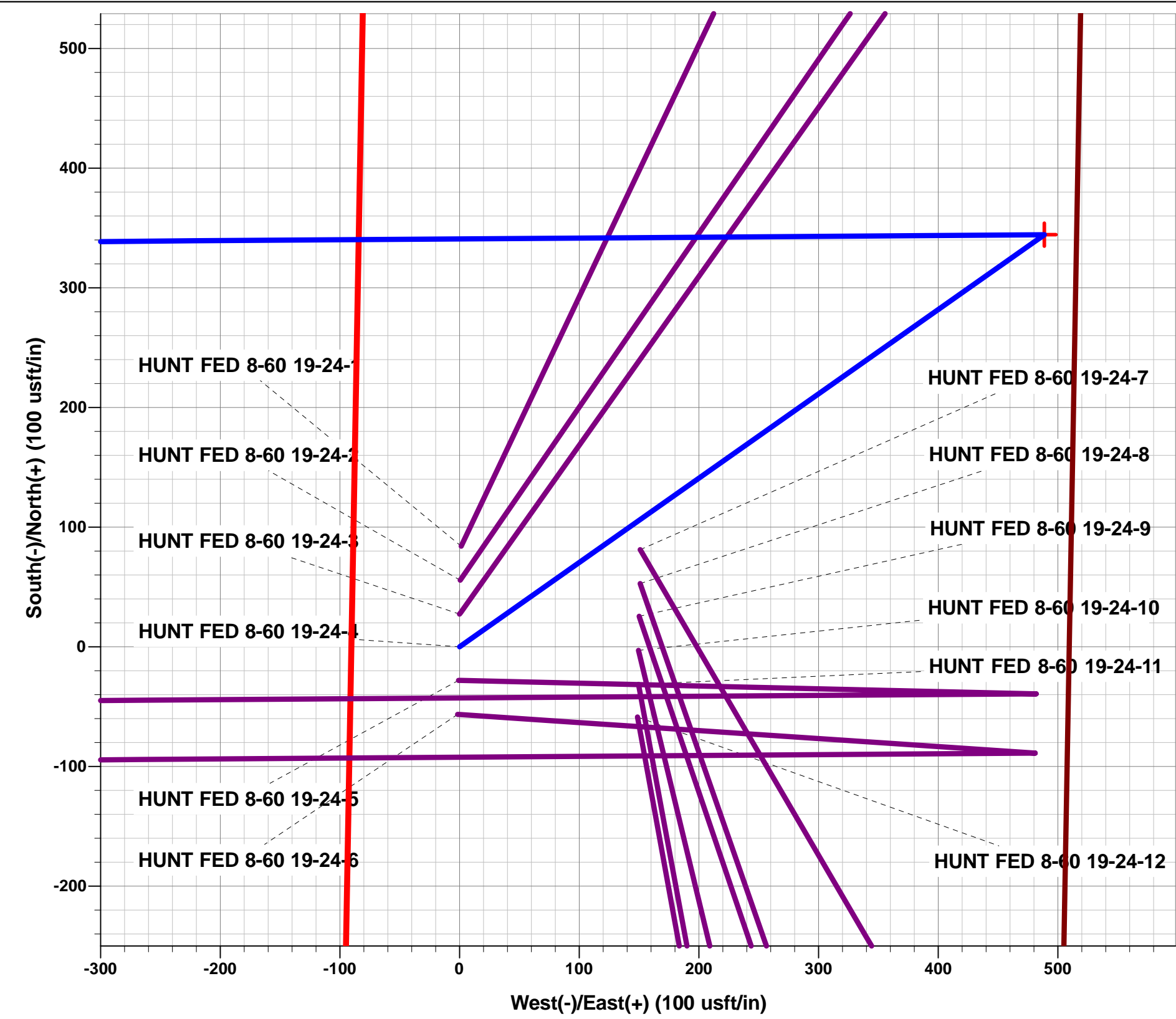
Plan: PROPOSAL #1



Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE NE SEC. 19 T8N R60W 6th P.M.
Well: HUNT FED 8-60 19-24-4
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

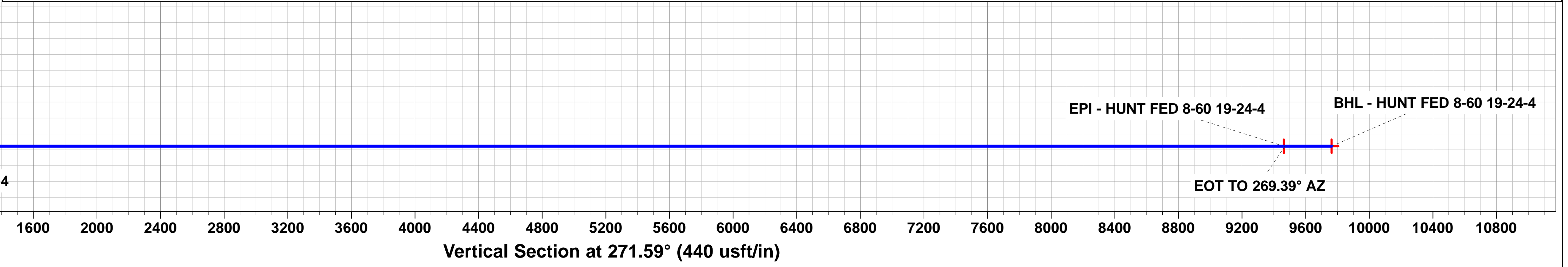
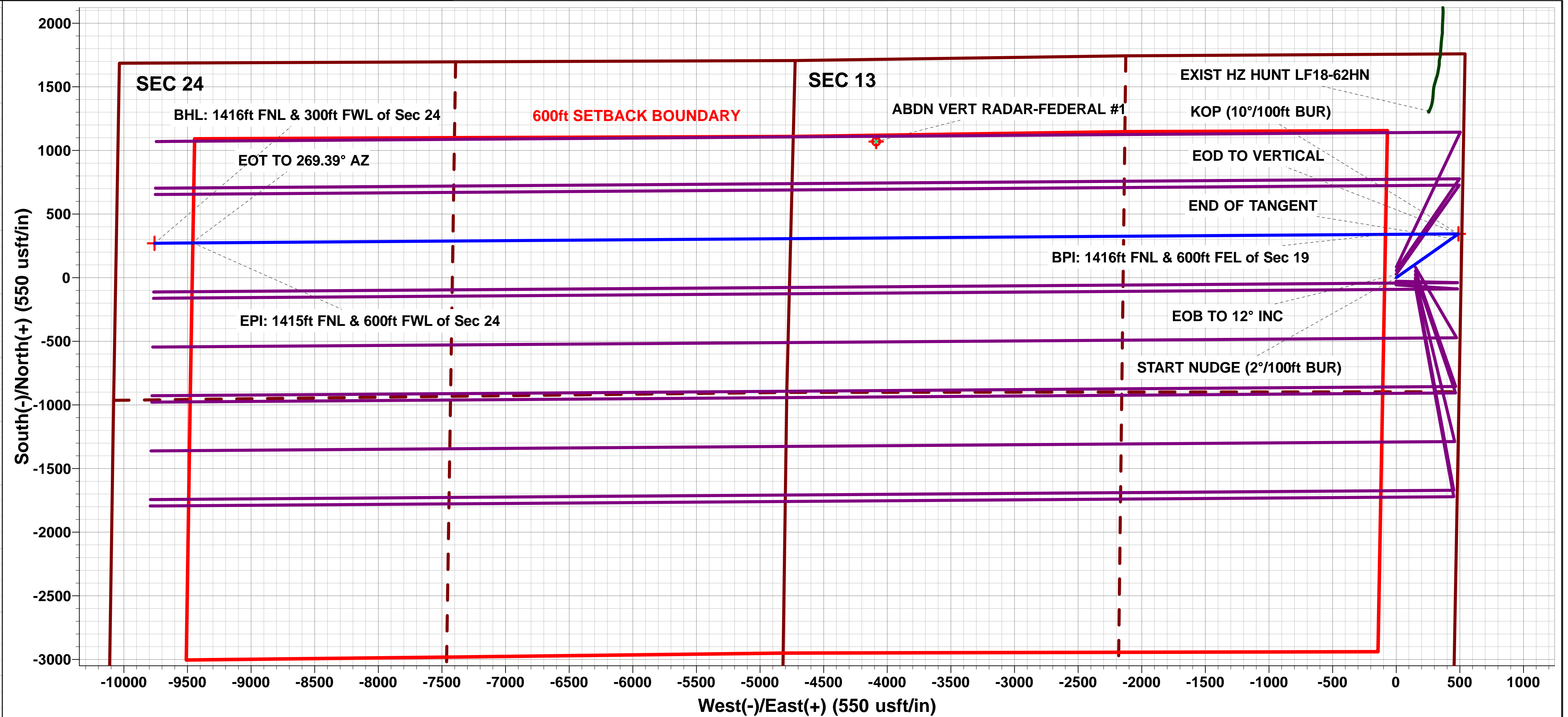
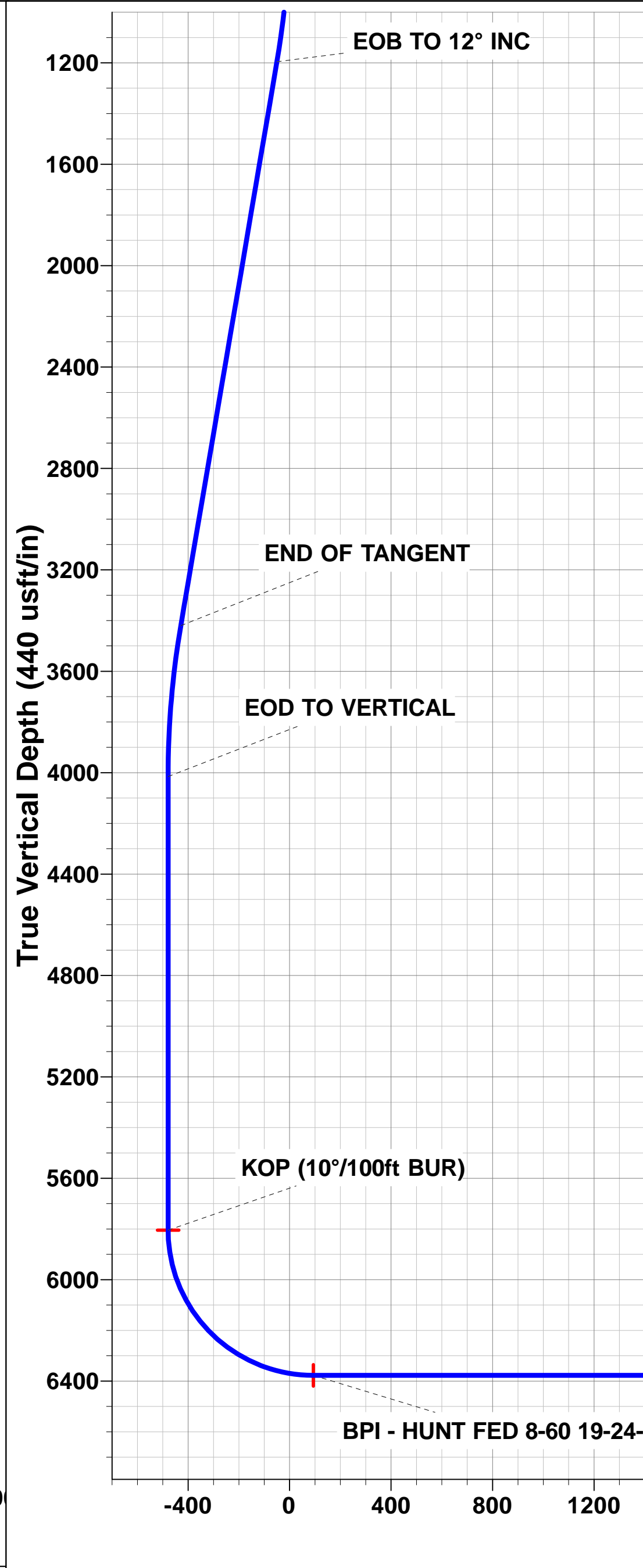
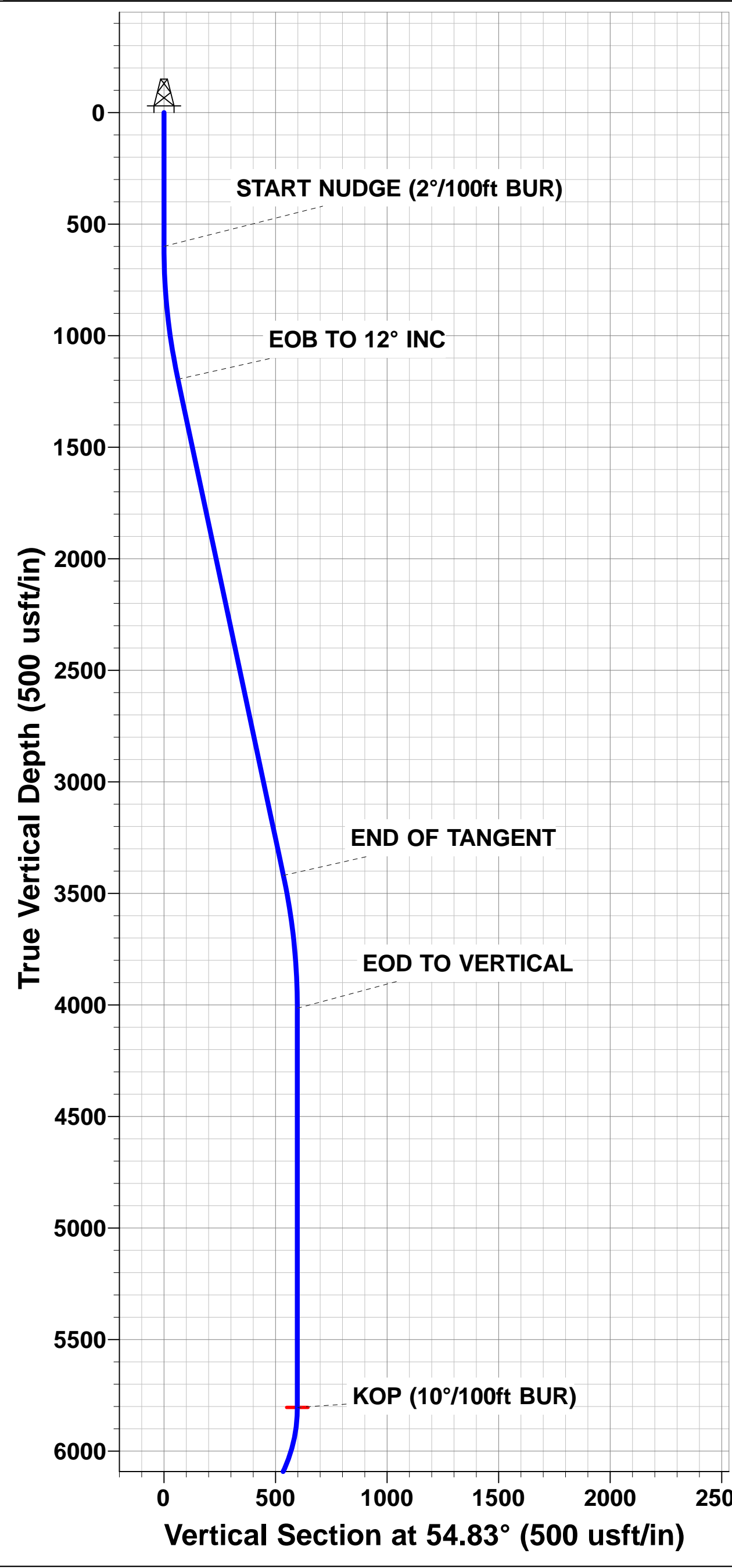
ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 1756ft FNL & 510ft FEL of Sec 19	
600.0	600.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1195.6	1200.0	12.00	54.83	36.1	51.2	-50.2	62.6	EOB TO 12° INC	
3419.7	3473.7	12.00	54.83	308.3	437.6	-428.9	535.3	END OF TANGENT	
4015.3	4073.7	0.00	0.00	344.4	488.8	-479.1	597.9	EOD TO VERTICAL	
5804.4	5862.8	0.00	0.00	344.4	488.8	-479.1	597.9	KOP (10°/100ft BUR)	
6377.3	6762.7	90.00	269.59	340.3	-84.1	93.5	1170.8	BPI: 1416ft FNL & 600ft FEL of Sec 19	
6377.3	16138.1	90.00	269.59	273.2	-9459.2	9463.1	10546.2	EPI: 1415ft FNL & 600ft FWL of Sec 24	
6377.3	16144.7	90.00	269.39	273.2	-9465.8	9469.7	10552.8	EOT TO 269.39° AZ	
6377.3	16438.1	90.00	269.39	270.1	-9759.1	9762.9	10846.1	BHL: 1416ft FNL & 300ft FWL of Sec 24	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - HUNT FED 8-60 19-2-4	5804.4	344.4	488.8	40.651153	-104.125171
BPI - HUNT FED 8-60 19-24-4	6377.3	340.3	-84.1	40.651142	-104.127236
EPI - HUNT FED 8-60 19-24-4	6377.3	273.2	-9459.2	40.650953	-104.161022
BHL - HUNT FED 8-60 19-24-4	6377.3	270.1	-9759.1	40.650944	-104.162103



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
490.4	490.3	PIERRE SH (BASE FOX HILLS)
3505.4	3561.0	PARKMAN
4030.4	4088.7	SUSSEX
5128.4	5186.7	SHANNON
6157.4	6243.0	SHARON SPRINGS SHALE
6227.4	6338.6	NIOBRARA FORMATION
6237.4	6353.6	NIOBRARA A CHALK
6347.4	6576.5	NIOBRARA B CHALK

PROPOSED LOCAL COORDINATES:
SHL:1756ft FNL & 510ft FEL of Sec 19
BEGIN PROD INT: 1416ft FNL & 600ft FEL of Sec 19
END PROD INTERVAL: 1415ft FNL & 600ft FWL of Sec 24
BHL: 1416ft FNL & 300ft FWL of Sec 24



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 19-24-4
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4957.3usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4957.3usft (Original Well Elev)
Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project	WELD COUNTY, COLORADO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	SE NE SEC. 19 T8N R60W 6th P.M.		
Site Position:		Northing:	1,482,747.06 usft
From:	Lat/Long	Easting:	3,380,986.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000 ft
		Latitude:	40.650439
		Longitude:	-104.126928
		Grid Convergence:	0.89 °

Well	HUNT FED 8-60 19-24-4		
Well Position	+N/-S	-84.2 usft	Northing:
	+E/-W	-1.4 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	20/09/2017	7.86	67.14	52,556

Design	PROPOSAL #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	6,377.3	0.0	0.0	271.59

Plan Sections											
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	-4,957.3	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	-4,357.3	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	12.00	54.83	1,195.6	-3,761.7	36.1	51.2	2.00	2.00	0.00	54.83	
3,473.7	12.00	54.83	3,419.7	-1,537.6	308.3	437.6	0.00	0.00	0.00	0.00	
4,073.7	0.00	0.00	4,015.3	-942.0	344.4	488.8	2.00	-2.00	0.00	180.00	
5,862.8	0.00	0.00	5,804.4	847.1	344.4	488.8	0.00	0.00	0.00	0.00	KOP - HUNT FED 8
6,762.7	90.00	269.59	6,377.3	1,420.0	340.3	-84.1	10.00	10.00	-10.05	269.59	BPI - HUNT FED 8-
16,138.1	90.00	269.59	6,377.3	1,420.0	273.2	-9,459.2	0.00	0.00	0.00	60.69	EPI - HUNT FED 8-
16,144.7	90.00	269.39	6,377.3	1,420.0	273.2	-9,465.8	3.00	-0.01	-3.00	-90.22	
16,438.1	90.00	269.39	6,377.3	1,420.0	270.1	-9,759.1	0.00	0.00	0.00	0.00	BHL - HUNT FED 8

Planning Report



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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4957.3usft (Original Well Elev)
Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
SHL: 1756ft FNL & 510ft FEL of Sec 19										
0.0	0.00	0.00	0.0	4,957.30	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,857.30	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,757.30	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,657.30	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,557.30	0.0	0.0	0.0	0.00	0.00	0.00
PIERRE SHALE (BASE FOX HILLS)										
490.3	0.00	0.00	490.3	4,467.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,457.30	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
600.0	0.00	0.00	600.0	4,357.30	0.0	0.0	0.0	0.00	0.00	0.00
700.0	2.00	54.83	700.0	4,257.32	1.0	1.4	-1.4	2.00	2.00	0.00
800.0	4.00	54.83	799.8	4,157.46	4.0	5.7	-5.6	2.00	2.00	0.00
900.0	6.00	54.83	899.5	4,057.85	9.0	12.8	-12.6	2.00	2.00	0.00
1,000.0	8.00	54.83	998.7	3,958.60	16.1	22.8	-22.3	2.00	2.00	0.00
1,100.0	10.00	54.83	1,097.5	3,859.83	25.1	35.6	-34.9	2.00	2.00	0.00
EOB TO 12° INC										
1,200.0	12.00	54.83	1,195.6	3,761.68	36.1	51.2	-50.2	2.00	2.00	0.00
1,300.0	12.00	54.83	1,293.4	3,663.86	48.0	68.2	-66.8	0.00	0.00	0.00
1,400.0	12.00	54.83	1,391.3	3,566.05	60.0	85.2	-83.5	0.00	0.00	0.00
1,500.0	12.00	54.83	1,489.1	3,468.23	72.0	102.2	-100.1	0.00	0.00	0.00
1,600.0	12.00	54.83	1,586.9	3,370.42	84.0	119.2	-116.8	0.00	0.00	0.00
1,700.0	12.00	54.83	1,684.7	3,272.60	95.9	136.2	-133.5	0.00	0.00	0.00
1,800.0	12.00	54.83	1,782.5	3,174.79	107.9	153.2	-150.1	0.00	0.00	0.00
1,900.0	12.00	54.83	1,880.3	3,076.97	119.9	170.1	-166.8	0.00	0.00	0.00
2,000.0	12.00	54.83	1,978.1	2,979.16	131.9	187.1	-183.4	0.00	0.00	0.00
2,100.0	12.00	54.83	2,076.0	2,881.34	143.8	204.1	-200.1	0.00	0.00	0.00
2,200.0	12.00	54.83	2,173.8	2,783.53	155.8	221.1	-216.7	0.00	0.00	0.00
2,300.0	12.00	54.83	2,271.6	2,685.71	167.8	238.1	-233.4	0.00	0.00	0.00
2,400.0	12.00	54.83	2,369.4	2,587.90	179.8	255.1	-250.1	0.00	0.00	0.00
2,500.0	12.00	54.83	2,467.2	2,490.08	191.7	272.1	-266.7	0.00	0.00	0.00
2,600.0	12.00	54.83	2,565.0	2,392.27	203.7	289.1	-283.4	0.00	0.00	0.00
2,700.0	12.00	54.83	2,662.8	2,294.46	215.7	306.1	-300.0	0.00	0.00	0.00
2,800.0	12.00	54.83	2,760.7	2,196.64	227.7	323.1	-316.7	0.00	0.00	0.00
2,900.0	12.00	54.83	2,858.5	2,098.83	239.6	340.1	-333.3	0.00	0.00	0.00
3,000.0	12.00	54.83	2,956.3	2,001.01	251.6	357.1	-350.0	0.00	0.00	0.00
3,100.0	12.00	54.83	3,054.1	1,903.20	263.6	374.1	-366.7	0.00	0.00	0.00
3,200.0	12.00	54.83	3,151.9	1,805.38	275.6	391.1	-383.3	0.00	0.00	0.00
3,300.0	12.00	54.83	3,249.7	1,707.57	287.5	408.1	-400.0	0.00	0.00	0.00
3,400.0	12.00	54.83	3,347.5	1,609.75	299.5	425.1	-416.6	0.00	0.00	0.00
END OF TANGENT										
3,473.7	12.00	54.83	3,419.7	1,537.62	308.3	437.6	-428.9	0.00	0.00	0.00
3,500.0	11.47	54.83	3,445.4	1,511.91	311.4	442.0	-433.2	2.00	-2.00	0.00
PARKMAN										
3,561.0	10.25	54.83	3,505.3	1,452.00	318.0	451.4	-442.4	2.00	-2.00	0.00
3,600.0	9.47	54.83	3,543.7	1,413.58	321.9	456.9	-447.8	2.00	-2.00	0.00
3,700.0	7.47	54.83	3,642.6	1,314.68	330.4	468.9	-459.6	2.00	-2.00	0.00
3,800.0	5.47	54.83	3,742.0	1,215.32	336.9	478.1	-468.6	2.00	-2.00	0.00
3,900.0	3.47	54.83	3,841.7	1,115.63	341.4	484.5	-474.9	2.00	-2.00	0.00
4,000.0	1.47	54.83	3,941.6	1,015.73	343.9	488.0	-478.3	2.00	-2.00	0.00
EOD TO VERTICAL										
4,073.7	0.00	0.00	4,015.3	941.99	344.4	488.8	-479.1	2.00	-2.00	0.00
SUSSEX										

Planning Report



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Well:	HUNT FED 8-60 19-24-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
4,088.7	0.00	0.00	4,030.3	927.00	344.4	488.8	-479.1	0.00	0.00	0.00
4,100.0	0.00	0.00	4,041.6	915.74	344.4	488.8	-479.1	0.00	0.00	0.00
4,200.0	0.00	0.00	4,141.6	815.74	344.4	488.8	-479.1	0.00	0.00	0.00
4,300.0	0.00	0.00	4,241.6	715.74	344.4	488.8	-479.1	0.00	0.00	0.00
4,400.0	0.00	0.00	4,341.6	615.74	344.4	488.8	-479.1	0.00	0.00	0.00
4,500.0	0.00	0.00	4,441.6	515.74	344.4	488.8	-479.1	0.00	0.00	0.00
4,600.0	0.00	0.00	4,541.6	415.74	344.4	488.8	-479.1	0.00	0.00	0.00
4,700.0	0.00	0.00	4,641.6	315.74	344.4	488.8	-479.1	0.00	0.00	0.00
4,800.0	0.00	0.00	4,741.6	215.74	344.4	488.8	-479.1	0.00	0.00	0.00
4,900.0	0.00	0.00	4,841.6	115.74	344.4	488.8	-479.1	0.00	0.00	0.00
5,000.0	0.00	0.00	4,941.6	15.74	344.4	488.8	-479.1	0.00	0.00	0.00
5,100.0	0.00	0.00	5,041.6	-84.26	344.4	488.8	-479.1	0.00	0.00	0.00
SHANNON										
5,186.7	0.00	0.00	5,128.3	-171.00	344.4	488.8	-479.1	0.00	0.00	0.00
5,200.0	0.00	0.00	5,141.6	-184.26	344.4	488.8	-479.1	0.00	0.00	0.00
5,300.0	0.00	0.00	5,241.6	-284.26	344.4	488.8	-479.1	0.00	0.00	0.00
5,400.0	0.00	0.00	5,341.6	-384.26	344.4	488.8	-479.1	0.00	0.00	0.00
5,500.0	0.00	0.00	5,441.6	-484.26	344.4	488.8	-479.1	0.00	0.00	0.00
5,600.0	0.00	0.00	5,541.6	-584.26	344.4	488.8	-479.1	0.00	0.00	0.00
5,700.0	0.00	0.00	5,641.6	-684.26	344.4	488.8	-479.1	0.00	0.00	0.00
5,800.0	0.00	0.00	5,741.6	-784.26	344.4	488.8	-479.1	0.00	0.00	0.00
KOP (10°/100ft BUR)										
5,862.8	0.00	0.00	5,804.4	-847.10	344.4	488.8	-479.1	0.00	0.00	0.00
5,900.0	3.72	269.59	5,841.5	-884.23	344.4	487.6	-477.9	10.00	10.00	0.00
6,000.0	13.72	269.59	5,940.3	-982.95	344.3	472.5	-462.8	10.00	10.00	0.00
6,100.0	23.72	269.59	6,034.8	-1,077.54	344.1	440.4	-430.7	10.00	10.00	0.00
6,200.0	33.72	269.59	6,122.4	-1,165.13	343.7	392.4	-382.8	10.00	10.00	0.00
SHARON SPRINGS SHALE										
6,243.0	38.02	269.59	6,157.3	-1,200.00	343.5	367.2	-357.6	10.00	10.00	0.00
6,300.0	43.72	269.59	6,200.4	-1,243.05	343.3	330.0	-320.3	10.00	10.00	0.00
NIORARA FORMATION										
6,338.6	47.58	269.59	6,227.3	-1,270.00	343.1	302.4	-292.8	10.00	10.00	0.00
NIORARA A CHALK										
6,353.6	49.08	269.59	6,237.3	-1,280.00	343.0	291.2	-281.6	10.00	10.00	0.00
6,400.0	53.72	269.59	6,266.2	-1,308.94	342.7	254.9	-245.3	10.00	10.00	0.00
6,500.0	63.72	269.59	6,318.1	-1,360.80	342.1	169.5	-160.0	10.00	10.00	0.00
NIORARA B CHALK										
6,576.5	71.38	269.59	6,347.3	-1,390.00	341.6	98.9	-89.4	10.00	10.00	0.00
6,600.0	73.72	269.59	6,354.3	-1,397.04	341.4	76.5	-67.0	10.00	10.00	0.00
6,700.0	83.72	269.59	6,373.9	-1,416.57	340.7	-21.5	30.9	10.00	10.00	0.00
BPI: 1416ft FNL & 600ft FEL of Sec 19										
6,762.7	90.00	269.59	6,377.3	-1,420.00	340.3	-84.1	93.5	10.00	10.00	0.00
6,800.0	90.00	269.59	6,377.3	-1,420.00	340.0	-121.3	130.7	0.00	0.00	0.00
6,900.0	90.00	269.59	6,377.3	-1,420.00	339.3	-221.3	230.6	0.00	0.00	0.00
7,000.0	90.00	269.59	6,377.3	-1,420.00	338.6	-321.3	330.6	0.00	0.00	0.00
7,100.0	90.00	269.59	6,377.3	-1,420.00	337.9	-421.3	430.5	0.00	0.00	0.00
7,200.0	90.00	269.59	6,377.3	-1,420.01	337.2	-521.3	530.5	0.00	0.00	0.00
7,300.0	90.00	269.59	6,377.3	-1,420.01	336.4	-621.3	630.4	0.00	0.00	0.00
7,400.0	90.00	269.59	6,377.3	-1,420.01	335.7	-721.3	730.3	0.00	0.00	0.00
7,500.0	90.00	269.59	6,377.3	-1,420.01	335.0	-821.3	830.3	0.00	0.00	0.00
7,600.0	90.00	269.59	6,377.3	-1,420.01	334.3	-921.3	930.2	0.00	0.00	0.00
7,700.0	90.00	269.59	6,377.3	-1,420.01	333.6	-1,021.3	1,030.1	0.00	0.00	0.00
7,800.0	90.00	269.59	6,377.3	-1,420.01	332.9	-1,121.3	1,130.1	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 19-24-4
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4957.3usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4957.3usft (Original Well Elev)
Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
7,900.0	90.00	269.59	6,377.3	-1,420.01	332.1	-1,221.3	1,230.0	0.00	0.00	0.00
8,000.0	90.00	269.59	6,377.3	-1,420.01	331.4	-1,321.3	1,330.0	0.00	0.00	0.00
8,100.0	90.00	269.59	6,377.3	-1,420.02	330.7	-1,421.3	1,429.9	0.00	0.00	0.00
8,200.0	90.00	269.59	6,377.3	-1,420.02	330.0	-1,521.3	1,529.8	0.00	0.00	0.00
8,300.0	90.00	269.59	6,377.3	-1,420.02	329.3	-1,621.3	1,629.8	0.00	0.00	0.00
8,400.0	90.00	269.59	6,377.3	-1,420.02	328.6	-1,721.3	1,729.7	0.00	0.00	0.00
8,500.0	90.00	269.59	6,377.3	-1,420.02	327.8	-1,821.3	1,829.7	0.00	0.00	0.00
8,600.0	90.00	269.59	6,377.3	-1,420.02	327.1	-1,921.3	1,929.6	0.00	0.00	0.00
8,700.0	90.00	269.59	6,377.3	-1,420.02	326.4	-2,021.3	2,029.5	0.00	0.00	0.00
8,800.0	90.00	269.59	6,377.3	-1,420.02	325.7	-2,121.3	2,129.5	0.00	0.00	0.00
8,900.0	90.00	269.59	6,377.3	-1,420.02	325.0	-2,221.3	2,229.4	0.00	0.00	0.00
9,000.0	90.00	269.59	6,377.3	-1,420.02	324.3	-2,321.3	2,329.4	0.00	0.00	0.00
9,100.0	90.00	269.59	6,377.3	-1,420.02	323.5	-2,421.3	2,429.3	0.00	0.00	0.00
9,200.0	90.00	269.59	6,377.3	-1,420.02	322.8	-2,521.3	2,529.2	0.00	0.00	0.00
9,300.0	90.00	269.59	6,377.3	-1,420.02	322.1	-2,621.3	2,629.2	0.00	0.00	0.00
9,400.0	90.00	269.59	6,377.3	-1,420.03	321.4	-2,721.3	2,729.1	0.00	0.00	0.00
9,500.0	90.00	269.59	6,377.3	-1,420.03	320.7	-2,821.3	2,829.1	0.00	0.00	0.00
9,600.0	90.00	269.59	6,377.3	-1,420.03	320.0	-2,921.3	2,929.0	0.00	0.00	0.00
9,700.0	90.00	269.59	6,377.3	-1,420.03	319.2	-3,021.3	3,028.9	0.00	0.00	0.00
9,800.0	90.00	269.59	6,377.3	-1,420.03	318.5	-3,121.3	3,128.9	0.00	0.00	0.00
9,900.0	90.00	269.59	6,377.3	-1,420.03	317.8	-3,221.3	3,228.8	0.00	0.00	0.00
10,000.0	90.00	269.59	6,377.3	-1,420.03	317.1	-3,321.3	3,328.8	0.00	0.00	0.00
10,100.0	90.00	269.59	6,377.3	-1,420.03	316.4	-3,421.2	3,428.7	0.00	0.00	0.00
10,200.0	90.00	269.59	6,377.3	-1,420.03	315.7	-3,521.2	3,528.6	0.00	0.00	0.00
10,300.0	90.00	269.59	6,377.3	-1,420.03	314.9	-3,621.2	3,628.6	0.00	0.00	0.00
10,400.0	90.00	269.59	6,377.3	-1,420.03	314.2	-3,721.2	3,728.5	0.00	0.00	0.00
10,500.0	90.00	269.59	6,377.3	-1,420.03	313.5	-3,821.2	3,828.5	0.00	0.00	0.00
10,600.0	90.00	269.59	6,377.3	-1,420.03	312.8	-3,921.2	3,928.4	0.00	0.00	0.00
10,700.0	90.00	269.59	6,377.3	-1,420.03	312.1	-4,021.2	4,028.3	0.00	0.00	0.00
10,800.0	90.00	269.59	6,377.3	-1,420.03	311.4	-4,121.2	4,128.3	0.00	0.00	0.00
10,900.0	90.00	269.59	6,377.3	-1,420.03	310.7	-4,221.2	4,228.2	0.00	0.00	0.00
11,000.0	90.00	269.59	6,377.3	-1,420.03	309.9	-4,321.2	4,328.1	0.00	0.00	0.00
11,100.0	90.00	269.59	6,377.3	-1,420.03	309.2	-4,421.2	4,428.1	0.00	0.00	0.00
11,200.0	90.00	269.59	6,377.3	-1,420.03	308.5	-4,521.2	4,528.0	0.00	0.00	0.00
11,300.0	90.00	269.59	6,377.3	-1,420.03	307.8	-4,621.2	4,628.0	0.00	0.00	0.00
11,400.0	90.00	269.59	6,377.3	-1,420.03	307.1	-4,721.2	4,727.9	0.00	0.00	0.00
11,500.0	90.00	269.59	6,377.3	-1,420.03	306.4	-4,821.2	4,827.8	0.00	0.00	0.00
11,600.0	90.00	269.59	6,377.3	-1,420.03	305.6	-4,921.2	4,927.8	0.00	0.00	0.00
11,700.0	90.00	269.59	6,377.3	-1,420.03	304.9	-5,021.2	5,027.7	0.00	0.00	0.00
11,800.0	90.00	269.59	6,377.3	-1,420.03	304.2	-5,121.2	5,127.7	0.00	0.00	0.00
11,900.0	90.00	269.59	6,377.3	-1,420.03	303.5	-5,221.2	5,227.6	0.00	0.00	0.00
12,000.0	90.00	269.59	6,377.3	-1,420.03	302.8	-5,321.2	5,327.5	0.00	0.00	0.00
12,100.0	90.00	269.59	6,377.3	-1,420.03	302.1	-5,421.2	5,427.5	0.00	0.00	0.00
12,200.0	90.00	269.59	6,377.3	-1,420.03	301.4	-5,521.2	5,527.4	0.00	0.00	0.00
12,300.0	90.00	269.59	6,377.3	-1,420.03	300.6	-5,621.2	5,627.4	0.00	0.00	0.00
12,400.0	90.00	269.59	6,377.3	-1,420.03	299.9	-5,721.2	5,727.3	0.00	0.00	0.00
12,500.0	90.00	269.59	6,377.3	-1,420.03	299.2	-5,821.2	5,827.2	0.00	0.00	0.00
12,600.0	90.00	269.59	6,377.3	-1,420.03	298.5	-5,921.2	5,927.2	0.00	0.00	0.00
12,700.0	90.00	269.59	6,377.3	-1,420.03	297.8	-6,021.2	6,027.1	0.00	0.00	0.00
12,800.0	90.00	269.59	6,377.3	-1,420.03	297.1	-6,121.2	6,127.1	0.00	0.00	0.00
12,900.0	90.00	269.59	6,377.3	-1,420.03	296.4	-6,221.2	6,227.0	0.00	0.00	0.00
13,000.0	90.00	269.59	6,377.3	-1,420.03	295.6	-6,321.2	6,326.9	0.00	0.00	0.00
13,100.0	90.00	269.59	6,377.3	-1,420.03	294.9	-6,421.2	6,426.9	0.00	0.00	0.00
13,200.0	90.00	269.59	6,377.3	-1,420.03	294.2	-6,521.2	6,526.8	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 19-24-4
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4957.3usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4957.3usft (Original Well Elev)
Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
13,300.0	90.00	269.59	6,377.3	-1,420.03	293.5	-6,621.2	6,626.8	0.00	0.00	0.00
13,400.0	90.00	269.59	6,377.3	-1,420.03	292.8	-6,721.2	6,726.7	0.00	0.00	0.00
13,500.0	90.00	269.59	6,377.3	-1,420.03	292.1	-6,821.2	6,826.6	0.00	0.00	0.00
13,600.0	90.00	269.59	6,377.3	-1,420.02	291.4	-6,921.2	6,926.6	0.00	0.00	0.00
13,700.0	90.00	269.59	6,377.3	-1,420.02	290.6	-7,021.2	7,026.5	0.00	0.00	0.00
13,800.0	90.00	269.59	6,377.3	-1,420.02	289.9	-7,121.2	7,126.5	0.00	0.00	0.00
13,900.0	90.00	269.59	6,377.3	-1,420.02	289.2	-7,221.2	7,226.4	0.00	0.00	0.00
14,000.0	90.00	269.59	6,377.3	-1,420.02	288.5	-7,321.2	7,326.3	0.00	0.00	0.00
14,100.0	90.00	269.59	6,377.3	-1,420.02	287.8	-7,421.1	7,426.3	0.00	0.00	0.00
14,200.0	90.00	269.59	6,377.3	-1,420.02	287.1	-7,521.1	7,526.2	0.00	0.00	0.00
14,300.0	90.00	269.59	6,377.3	-1,420.02	286.4	-7,621.1	7,626.1	0.00	0.00	0.00
14,400.0	90.00	269.59	6,377.3	-1,420.02	285.6	-7,721.1	7,726.1	0.00	0.00	0.00
14,500.0	90.00	269.59	6,377.3	-1,420.02	284.9	-7,821.1	7,826.0	0.00	0.00	0.00
14,600.0	90.00	269.59	6,377.3	-1,420.02	284.2	-7,921.1	7,926.0	0.00	0.00	0.00
14,700.0	90.00	269.59	6,377.3	-1,420.02	283.5	-8,021.1	8,025.9	0.00	0.00	0.00
14,800.0	90.00	269.59	6,377.3	-1,420.02	282.8	-8,121.1	8,125.8	0.00	0.00	0.00
14,900.0	90.00	269.59	6,377.3	-1,420.01	282.1	-8,221.1	8,225.8	0.00	0.00	0.00
15,000.0	90.00	269.59	6,377.3	-1,420.01	281.4	-8,321.1	8,325.7	0.00	0.00	0.00
15,100.0	90.00	269.59	6,377.3	-1,420.01	280.7	-8,421.1	8,425.7	0.00	0.00	0.00
15,200.0	90.00	269.59	6,377.3	-1,420.01	279.9	-8,521.1	8,525.6	0.00	0.00	0.00
15,300.0	90.00	269.59	6,377.3	-1,420.01	279.2	-8,621.1	8,625.5	0.00	0.00	0.00
15,400.0	90.00	269.59	6,377.3	-1,420.01	278.5	-8,721.1	8,725.5	0.00	0.00	0.00
15,500.0	90.00	269.59	6,377.3	-1,420.01	277.8	-8,821.1	8,825.4	0.00	0.00	0.00
15,600.0	90.00	269.59	6,377.3	-1,420.01	277.1	-8,921.1	8,925.4	0.00	0.00	0.00
15,700.0	90.00	269.59	6,377.3	-1,420.01	276.4	-9,021.1	9,025.3	0.00	0.00	0.00
15,800.0	90.00	269.59	6,377.3	-1,420.00	275.7	-9,121.1	9,125.2	0.00	0.00	0.00
15,900.0	90.00	269.59	6,377.3	-1,420.00	274.9	-9,221.1	9,225.2	0.00	0.00	0.00
16,000.0	90.00	269.59	6,377.3	-1,420.00	274.2	-9,321.1	9,325.1	0.00	0.00	0.00
16,100.0	90.00	269.59	6,377.3	-1,420.00	273.5	-9,421.1	9,425.1	0.00	0.00	0.00
EPI: 1415ft FNL & 600ft FWL of Sec 24										
16,138.1	90.00	269.59	6,377.3	-1,420.00	273.2	-9,459.2	9,463.1	0.00	0.00	0.00
EOT TO 269.39° AZ										
16,144.7	90.00	269.39	6,377.3	-1,420.00	273.2	-9,465.8	9,469.7	3.00	-0.01	-3.00
16,200.0	90.00	269.39	6,377.3	-1,420.00	272.6	-9,521.1	9,525.0	0.00	0.00	0.00
16,300.0	90.00	269.39	6,377.3	-1,420.00	271.5	-9,621.1	9,624.9	0.00	0.00	0.00
16,400.0	90.00	269.39	6,377.3	-1,420.00	270.5	-9,721.1	9,724.8	0.00	0.00	0.00
BHL: 1416ft FNL & 300ft FWL of Sec 24										
16,438.1	90.00	269.39	6,377.3	-1,420.00	270.1	-9,759.1	9,762.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 19-24-4
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4957.3usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4957.3usft (Original Well Elev)
Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
490.3	490.3	PIERRE SHALE (BASE FOX HILLS			
3,561.0	3,505.3	PARKMAN			
4,088.7	4,030.3	SUSSEX			
5,186.7	5,128.3	SHANNON			
6,243.0	6,157.3	SHARON SPRINGS SHALE			
6,338.6	6,227.3	NIOBRARA FORMATION			
6,353.6	6,237.3	NIOBRARA A CHALK			
6,576.5	6,347.3	NIOBRARA B 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: 1756ft FNL & 510ft FEL of Sec 19
600.0	600.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,200.0	1,195.6	36.1	51.2	EOB TO 12° INC
3,473.7	3,419.7	308.3	437.6	END OF TANGENT
4,073.7	4,015.3	344.4	488.8	EOD TO VERTICAL
5,862.8	5,804.4	344.4	488.8	KOP (10°/100ft BUR)
6,762.7	6,377.3	340.3	-84.1	BPI: 1416ft FNL & 600ft FEL of Sec 19
16,138.1	6,377.3	273.2	-9,459.2	EPI: 1415ft FNL & 600ft FWL of Sec 24
16,144.7	6,377.3	273.2	-9,465.8	EOT TO 269.39° AZ
16,438.1	6,377.3	270.1	-9,759.1	BHL: 1416ft FNL & 300ft FWL of Sec 24