

BISON OIL & GAS II, LLC

WELD COUNTY, COLORADO (NAD 83)

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

HUNT FED 8-60 19-24-11

ORIGINAL WELLBORE

20 September, 2017

Plan: PROPOSAL #1



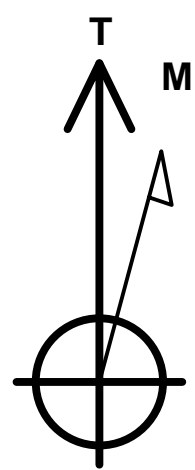
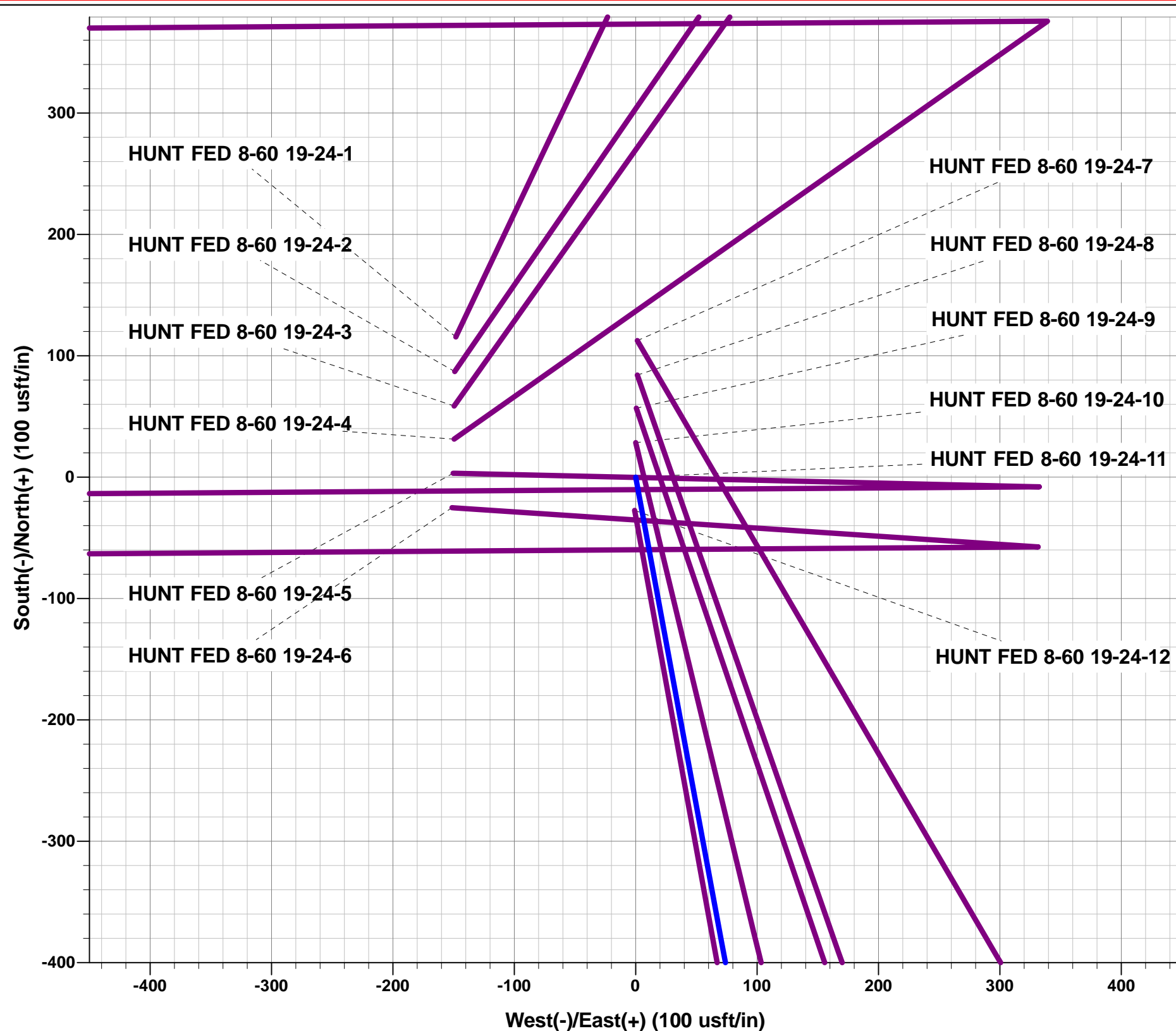
Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE NE SEC. 19 T8N R60W 6th P.M.
Well: HUNT FED 8-60 19-24-11
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

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: 1788ft FNL & 360ft FEL of Sec 19
200.0	200.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1231.7	1255.4	21.11	169.53	-189.0	34.9	-2.3	192.2	EOB TO 21.11° INC
4554.5	4817.2	21.11	169.53	-1450.4	268.0	-17.9	1474.9	END OF TANGENT
5586.2	5872.6	0.00	0.00	-1639.4	302.9	-20.3	1667.1	EOD TO VERTICAL
5686.2	5972.6	0.00	0.00	-1639.4	302.9	-20.3	1667.1	KOP (10°/100ft BUR)
6259.1	6872.5	90.00	269.59	-1643.5	-270.0	545.0	2240.1	BPI: 1863ft FSL & 600ft FEL of Sec 19
6259.1	16244.8	90.00	269.59	-1710.4	-9642.0	9792.4	11612.3	EPI: 1862ft FSL & 600ft FWL of Sec 24
6259.1	16247.7	90.00	269.67	-1710.5	-9644.9	9795.3	11615.2	EOT TO 269.67° AZ
6259.1	16544.5	90.00	269.67	-1712.1	-9941.7	10088.1	11912.0	BHL: 1864ft FSL & 300ft FWL of Sec 24

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - HUNT FED 8-60 19-24-11	5686.2	-1639.4	302.9	40.645622	-104.125302
BPI - HUNT FED 8-60 19-24-11	6259.1	-1643.5	-270.0	40.645611	-104.127367
EPI - HUNT FED 8-60 19-24-11	6259.1	-1710.4	-9642.0	40.645422	-104.161139
BHL - HUNT FED 8-60 19-24-11	6259.1	-1712.1	-9941.7	40.645417	-104.162219



Azimuths to True North
Magnetic North: 7.86°

Magnetic Field
Strength: 52556.2snT
Dip Angle: 67.14°
Date: 20/09/2017
Model: IGRF2015

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
493.3	492.6	PIERRE SH (BASE FOX HILLS)
3508.3	3694.5	PARKMAN
4033.3	4257.2	SUSSEX
5131.3	5414.6	SHANNON
6160.3	6528.9	SHARON SPRINGS SHALE
6230.3	6686.3	NIORARA FORMATION
6240.3	6720.7	NIORARA A CHALK

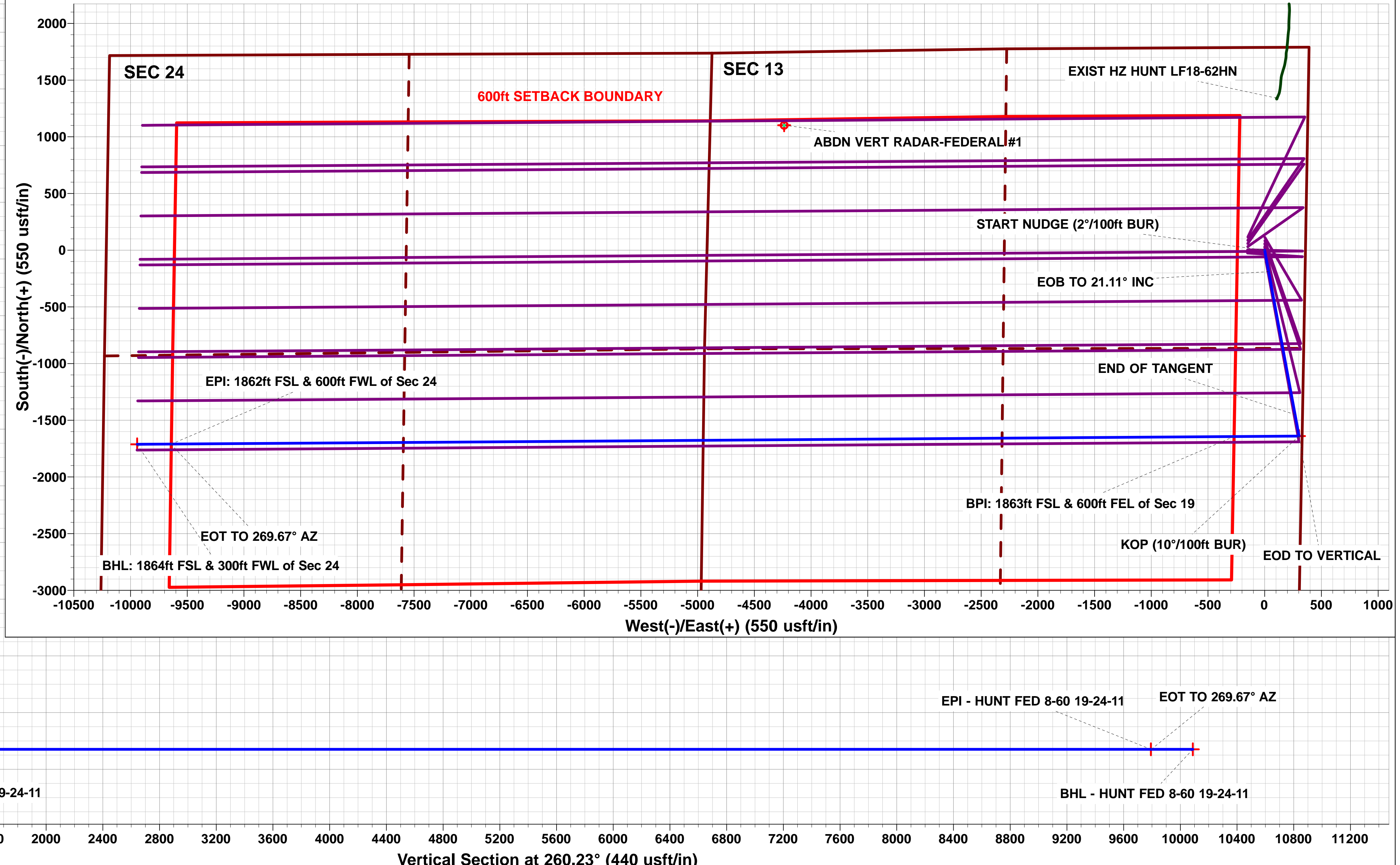
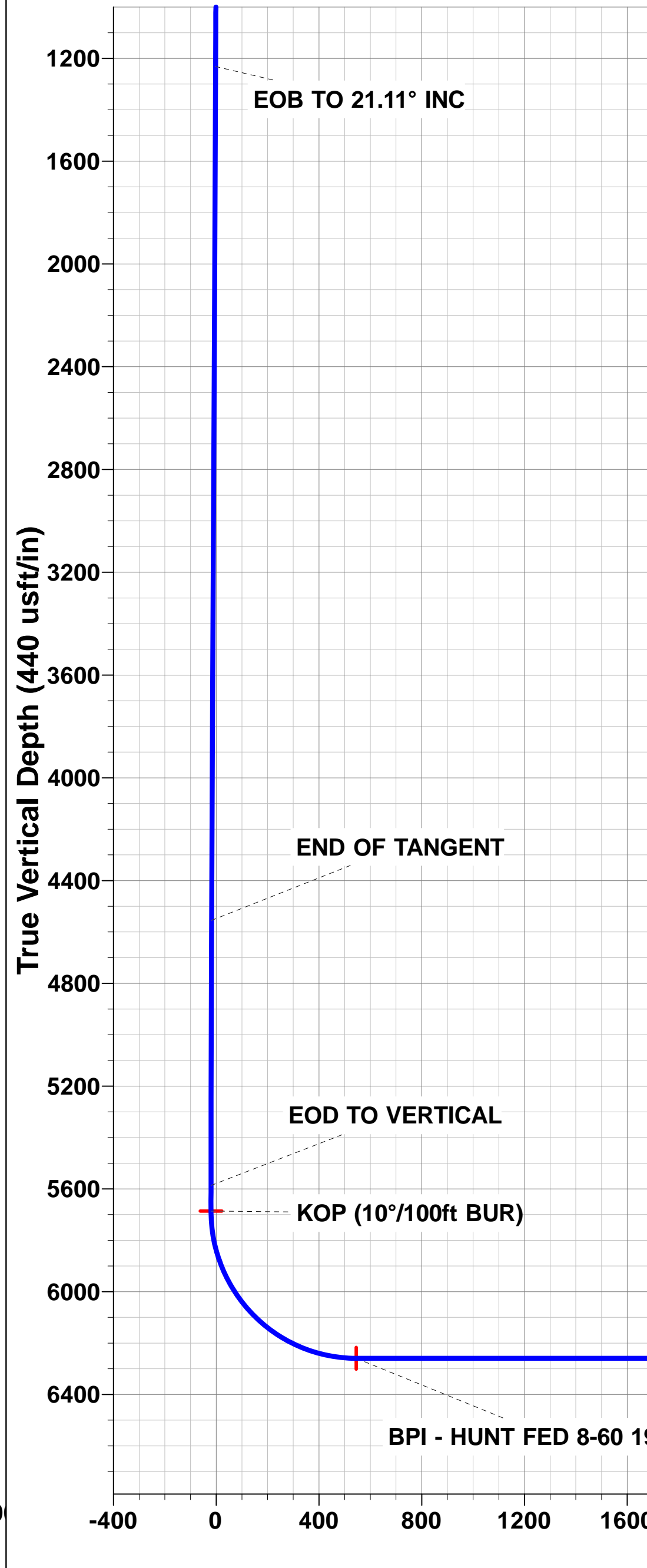
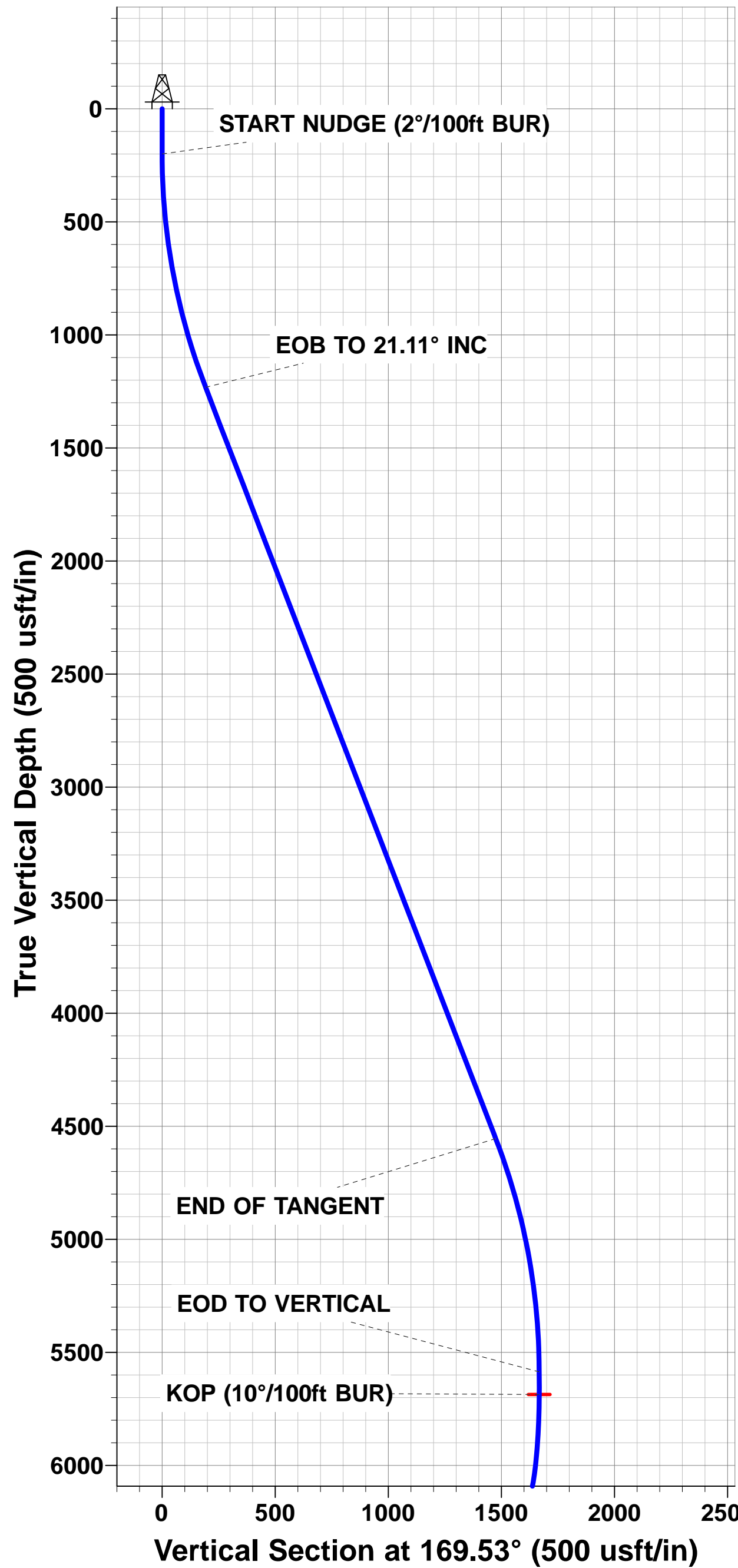
PROPOSED LOCAL COORDINATES:

SHL:1788ft FNL & 360ft FEL of Sec 19

BEGIN PROD INT: 1863ft FSL & 600ft FEL of Sec 19

END PROD INTERVAL: 1862ft FSL & 600ft FWL of Sec 24

BHL: 1864ft FSL & 300ft FWL of Sec 24



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 19-24-11
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4959.1usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4959.1usft (Original Well Elev)
Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-11	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:	1.10000ft
		Latitude:	40.650439
		Longitude:	-104.126928
		Grid Convergence:	0.89 °

Well	HUNT FED 8-60 19-24-11		
Well Position	+N/-S	-115.5 usft	Northing:
	+E/-W	148.2 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 (°)	
	6,259.1	0.0	0.0	260.23	

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	-4,959.1	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	-4,759.1	0.0	0.0	0.00	0.00	0.00	0.00	
1,255.4	21.11	169.53	1,231.7	-3,727.4	-189.0	34.9	2.00	2.00	0.00	169.53	
4,817.2	21.11	169.53	4,554.5	-404.6	-1,450.4	268.0	0.00	0.00	0.00	0.00	
5,872.6	0.00	0.00	5,586.2	627.1	-1,639.4	302.9	2.00	-2.00	0.00	180.00	
5,972.6	0.00	0.00	5,686.2	727.1	-1,639.4	302.9	0.00	0.00	0.00	0.00	KOP - HUNT FED 8
6,872.5	90.00	269.59	6,259.1	1,300.0	-1,643.5	-270.0	10.00	10.00	-10.05	269.59	BPI - HUNT FED 8-
16,244.8	90.00	269.59	6,259.1	1,300.0	-1,710.4	-9,642.0	0.00	0.00	0.00	-139.11	EPI - HUNT FED 8-
16,247.7	90.00	269.67	6,259.1	1,300.0	-1,710.5	-9,644.9	3.00	0.10	3.00	88.12	
16,544.5	90.00	269.67	6,259.1	1,300.0	-1,712.1	-9,941.7	0.00	0.00	0.00	0.00	BHL - HUNT FED 8

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Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-11	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: 1788ft FNL & 360ft FEL of Sec 19										
0.0	0.00	0.00	0.0	4,959.10	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,859.10	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
200.0	0.00	0.00	200.0	4,759.10	0.0	0.0	0.0	0.00	0.00	0.00
300.0	2.00	169.53	300.0	4,659.12	-1.7	0.3	0.0	2.00	2.00	0.00
400.0	4.00	169.53	399.8	4,559.26	-6.9	1.3	-0.1	2.00	2.00	0.00
PIERRE SHALE (BASE FOX HILLS)										
492.6	5.85	169.53	492.1	4,467.00	-14.7	2.7	-0.2	2.00	2.00	0.00
500.0	6.00	169.53	499.5	4,459.65	-15.4	2.9	-0.2	2.00	2.00	0.00
600.0	8.00	169.53	598.7	4,360.40	-27.4	5.1	-0.3	2.00	2.00	0.00
700.0	10.00	169.53	697.5	4,261.63	-42.8	7.9	-0.5	2.00	2.00	0.00
800.0	12.00	169.53	795.6	4,163.48	-61.6	11.4	-0.8	2.00	2.00	0.00
900.0	14.00	169.53	893.1	4,066.04	-83.7	15.5	-1.0	2.00	2.00	0.00
1,000.0	16.00	169.53	989.6	3,969.46	-109.1	20.2	-1.3	2.00	2.00	0.00
1,100.0	18.00	169.53	1,085.3	3,873.83	-137.9	25.5	-1.7	2.00	2.00	0.00
1,200.0	20.00	169.53	1,179.8	3,779.28	-169.9	31.4	-2.1	2.00	2.00	0.00
EOB TO 21.11° INC										
1,255.4	21.11	169.53	1,231.7	3,727.41	-189.0	34.9	-2.3	2.00	2.00	0.00
1,300.0	21.11	169.53	1,273.3	3,685.80	-204.8	37.8	-2.5	0.00	0.00	0.00
1,400.0	21.11	169.53	1,366.6	3,592.51	-240.2	44.4	-3.0	0.00	0.00	0.00
1,500.0	21.11	169.53	1,459.9	3,499.22	-275.6	50.9	-3.4	0.00	0.00	0.00
1,600.0	21.11	169.53	1,553.2	3,405.93	-311.1	57.5	-3.8	0.00	0.00	0.00
1,700.0	21.11	169.53	1,646.5	3,312.64	-346.5	64.0	-4.3	0.00	0.00	0.00
1,800.0	21.11	169.53	1,739.7	3,219.35	-381.9	70.6	-4.7	0.00	0.00	0.00
1,900.0	21.11	169.53	1,833.0	3,126.06	-417.3	77.1	-5.2	0.00	0.00	0.00
2,000.0	21.11	169.53	1,926.3	3,032.77	-452.7	83.6	-5.6	0.00	0.00	0.00
2,100.0	21.11	169.53	2,019.6	2,939.48	-488.1	90.2	-6.0	0.00	0.00	0.00
2,200.0	21.11	169.53	2,112.9	2,846.19	-523.5	96.7	-6.5	0.00	0.00	0.00
2,300.0	21.11	169.53	2,206.2	2,752.90	-558.9	103.3	-6.9	0.00	0.00	0.00
2,400.0	21.11	169.53	2,299.5	2,659.61	-594.4	109.8	-7.3	0.00	0.00	0.00
2,500.0	21.11	169.53	2,392.8	2,566.32	-629.8	116.4	-7.8	0.00	0.00	0.00
2,600.0	21.11	169.53	2,486.1	2,473.03	-665.2	122.9	-8.2	0.00	0.00	0.00
2,700.0	21.11	169.53	2,579.4	2,379.74	-700.6	129.4	-8.7	0.00	0.00	0.00
2,800.0	21.11	169.53	2,672.6	2,286.45	-736.0	136.0	-9.1	0.00	0.00	0.00
2,900.0	21.11	169.53	2,765.9	2,193.16	-771.4	142.5	-9.5	0.00	0.00	0.00
3,000.0	21.11	169.53	2,859.2	2,099.87	-806.8	149.1	-10.0	0.00	0.00	0.00
3,100.0	21.11	169.53	2,952.5	2,006.58	-842.3	155.6	-10.4	0.00	0.00	0.00
3,200.0	21.11	169.53	3,045.8	1,913.29	-877.7	162.2	-10.9	0.00	0.00	0.00
3,300.0	21.11	169.53	3,139.1	1,820.00	-913.1	168.7	-11.3	0.00	0.00	0.00
3,400.0	21.11	169.53	3,232.4	1,726.71	-948.5	175.2	-11.7	0.00	0.00	0.00
3,500.0	21.11	169.53	3,325.7	1,633.42	-983.9	181.8	-12.2	0.00	0.00	0.00
3,600.0	21.11	169.53	3,419.0	1,540.13	-1,019.3	188.3	-12.6	0.00	0.00	0.00
PARKMAN										
3,694.5	21.11	169.53	3,507.1	1,452.00	-1,052.8	194.5	-13.0	0.00	0.00	0.00
3,700.0	21.11	169.53	3,512.3	1,446.84	-1,054.7	194.9	-13.0	0.00	0.00	0.00
3,800.0	21.11	169.53	3,605.6	1,353.55	-1,090.2	201.4	-13.5	0.00	0.00	0.00
3,900.0	21.11	169.53	3,698.8	1,260.26	-1,125.6	208.0	-13.9	0.00	0.00	0.00
4,000.0	21.11	169.53	3,792.1	1,166.97	-1,161.0	214.5	-14.4	0.00	0.00	0.00
4,100.0	21.11	169.53	3,885.4	1,073.68	-1,196.4	221.0	-14.8	0.00	0.00	0.00
4,200.0	21.11	169.53	3,978.7	980.39	-1,231.8	227.6	-15.2	0.00	0.00	0.00
SUSSEX										
4,257.2	21.11	169.53	4,032.1	927.00	-1,252.1	231.3	-15.5	0.00	0.00	0.00

Planning Report



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Well:	HUNT FED 8-60 19-24-11	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)
4,300.0	21.11	169.53	4,072.0	887.10	-1,267.2	234.1	-15.7	0.00	0.00	0.00
4,400.0	21.11	169.53	4,165.3	793.81	-1,302.6	240.7	-16.1	0.00	0.00	0.00
4,500.0	21.11	169.53	4,258.6	700.52	-1,338.0	247.2	-16.5	0.00	0.00	0.00
4,600.0	21.11	169.53	4,351.9	607.23	-1,373.5	253.8	-17.0	0.00	0.00	0.00
4,700.0	21.11	169.53	4,445.2	513.94	-1,408.9	260.3	-17.4	0.00	0.00	0.00
4,800.0	21.11	169.53	4,538.5	420.65	-1,444.3	266.9	-17.9	0.00	0.00	0.00
END OF TANGENT										
4,817.2	21.11	169.53	4,554.5	404.59	-1,450.4	268.0	-17.9	0.00	0.00	0.00
4,900.0	19.45	169.53	4,632.2	326.94	-1,478.6	273.2	-18.3	2.00	-2.00	0.00
5,000.0	17.45	169.53	4,727.0	232.08	-1,509.7	278.9	-18.7	2.00	-2.00	0.00
5,100.0	15.45	169.53	4,822.9	136.18	-1,537.6	284.1	-19.0	2.00	-2.00	0.00
5,200.0	13.45	169.53	4,919.8	39.35	-1,562.1	288.6	-19.3	2.00	-2.00	0.00
5,300.0	11.45	169.53	5,017.4	-58.29	-1,583.3	292.5	-19.6	2.00	-2.00	0.00
5,400.0	9.45	169.53	5,115.7	-156.63	-1,601.2	295.8	-19.8	2.00	-2.00	0.00
SHANNON										
5,414.6	9.16	169.53	5,130.1	-171.00	-1,603.5	296.3	-19.8	2.00	-2.00	0.00
5,500.0	7.45	169.53	5,214.6	-255.54	-1,615.6	298.5	-20.0	2.00	-2.00	0.00
5,600.0	5.45	169.53	5,314.0	-354.90	-1,626.7	300.5	-20.1	2.00	-2.00	0.00
5,700.0	3.45	169.53	5,413.7	-454.59	-1,634.3	302.0	-20.2	2.00	-2.00	0.00
5,800.0	1.45	169.53	5,513.6	-554.50	-1,638.5	302.7	-20.3	2.00	-2.00	0.00
EOD TO VERTICAL										
5,872.6	0.00	0.00	5,586.2	-627.10	-1,639.4	302.9	-20.3	2.00	-2.00	0.00
5,900.0	0.00	0.00	5,613.6	-654.49	-1,639.4	302.9	-20.3	0.00	0.00	0.00
KOP (10°/100ft BUR)										
5,972.6	0.00	0.00	5,686.2	-727.10	-1,639.4	302.9	-20.3	0.00	0.00	0.00
6,000.0	2.74	269.59	5,713.6	-754.48	-1,639.4	302.2	-19.6	10.00	10.00	0.00
6,100.0	12.74	269.59	5,812.5	-853.44	-1,639.5	288.8	-6.4	10.00	10.00	0.00
6,200.0	22.74	269.59	5,907.7	-948.56	-1,639.7	258.4	23.7	10.00	10.00	0.00
6,300.0	32.74	269.59	5,996.1	-1,036.96	-1,640.0	211.9	69.5	10.00	10.00	0.00
6,400.0	42.74	269.59	6,075.0	-1,115.93	-1,640.5	150.7	129.9	10.00	10.00	0.00
6,500.0	52.74	269.59	6,142.2	-1,183.09	-1,641.0	76.8	202.8	10.00	10.00	0.00
SHARON SPRINGS SHALE										
6,528.9	55.63	269.59	6,159.1	-1,200.00	-1,641.2	53.4	225.9	10.00	10.00	0.00
6,600.0	62.75	269.59	6,195.5	-1,236.40	-1,641.6	-7.6	286.1	10.00	10.00	0.00
NIORARA FORMATION										
6,686.3	71.38	269.59	6,229.1	-1,270.00	-1,642.2	-87.0	364.5	10.00	10.00	0.00
6,700.0	72.75	269.59	6,233.3	-1,274.22	-1,642.3	-100.1	377.3	10.00	10.00	0.00
NIORARA A CHALK										
6,720.7	74.82	269.59	6,239.1	-1,280.00	-1,642.4	-119.9	396.9	10.00	10.00	0.00
6,800.0	82.75	269.59	6,254.5	-1,295.42	-1,643.0	-197.7	473.6	10.00	10.00	0.00
BPI: 1863ft FSL & 600ft FEL of Sec 19										
6,872.5	90.00	269.59	6,259.1	-1,300.00	-1,643.5	-270.0	545.0	10.00	10.00	0.00
6,900.0	90.00	269.59	6,259.1	-1,300.00	-1,643.7	-297.5	572.1	0.00	0.00	0.00
7,000.0	90.00	269.59	6,259.1	-1,299.99	-1,644.4	-397.5	670.8	0.00	0.00	0.00
7,100.0	90.00	269.59	6,259.1	-1,299.99	-1,645.1	-497.5	769.4	0.00	0.00	0.00
7,200.0	90.00	269.59	6,259.1	-1,299.98	-1,645.8	-597.5	868.1	0.00	0.00	0.00
7,300.0	90.00	269.59	6,259.1	-1,299.98	-1,646.5	-697.5	966.8	0.00	0.00	0.00
7,400.0	90.00	269.59	6,259.1	-1,299.98	-1,647.2	-797.5	1,065.4	0.00	0.00	0.00
7,500.0	90.00	269.59	6,259.1	-1,299.97	-1,647.9	-897.4	1,164.1	0.00	0.00	0.00
7,600.0	90.00	269.59	6,259.1	-1,299.97	-1,648.6	-997.4	1,262.8	0.00	0.00	0.00
7,700.0	90.00	269.59	6,259.1	-1,299.96	-1,649.3	-1,097.4	1,361.4	0.00	0.00	0.00
7,800.0	90.00	269.59	6,259.1	-1,299.96	-1,650.1	-1,197.4	1,460.1	0.00	0.00	0.00
7,900.0	90.00	269.59	6,259.1	-1,299.95	-1,650.8	-1,297.4	1,558.8	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 19-24-11
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4959.1usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4959.1usft (Original Well Elev)
Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-11	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)
8,000.0	90.00	269.59	6,259.1	-1,299.95	-1,651.5	-1,397.4	1,657.5	0.00	0.00	0.00
8,100.0	90.00	269.59	6,259.0	-1,299.95	-1,652.2	-1,497.4	1,756.1	0.00	0.00	0.00
8,200.0	90.00	269.59	6,259.0	-1,299.94	-1,652.9	-1,597.4	1,854.8	0.00	0.00	0.00
8,300.0	90.00	269.59	6,259.0	-1,299.94	-1,653.6	-1,697.4	1,953.5	0.00	0.00	0.00
8,400.0	90.00	269.59	6,259.0	-1,299.94	-1,654.3	-1,797.4	2,052.1	0.00	0.00	0.00
8,500.0	90.00	269.59	6,259.0	-1,299.93	-1,655.0	-1,897.4	2,150.8	0.00	0.00	0.00
8,600.0	90.00	269.59	6,259.0	-1,299.93	-1,655.8	-1,997.4	2,249.5	0.00	0.00	0.00
8,700.0	90.00	269.59	6,259.0	-1,299.93	-1,656.5	-2,097.4	2,348.1	0.00	0.00	0.00
8,800.0	90.00	269.59	6,259.0	-1,299.92	-1,657.2	-2,197.4	2,446.8	0.00	0.00	0.00
8,900.0	90.00	269.59	6,259.0	-1,299.92	-1,657.9	-2,297.4	2,545.5	0.00	0.00	0.00
9,000.0	90.00	269.59	6,259.0	-1,299.92	-1,658.6	-2,397.4	2,644.1	0.00	0.00	0.00
9,100.0	90.00	269.59	6,259.0	-1,299.92	-1,659.3	-2,497.4	2,742.8	0.00	0.00	0.00
9,200.0	90.00	269.59	6,259.0	-1,299.91	-1,660.0	-2,597.4	2,841.5	0.00	0.00	0.00
9,300.0	90.00	269.59	6,259.0	-1,299.91	-1,660.7	-2,697.4	2,940.1	0.00	0.00	0.00
9,400.0	90.00	269.59	6,259.0	-1,299.91	-1,661.5	-2,797.4	3,038.8	0.00	0.00	0.00
9,500.0	90.00	269.59	6,259.0	-1,299.91	-1,662.2	-2,897.4	3,137.5	0.00	0.00	0.00
9,600.0	90.00	269.59	6,259.0	-1,299.90	-1,662.9	-2,997.4	3,236.1	0.00	0.00	0.00
9,700.0	90.00	269.59	6,259.0	-1,299.90	-1,663.6	-3,097.4	3,334.8	0.00	0.00	0.00
9,800.0	90.00	269.59	6,259.0	-1,299.90	-1,664.3	-3,197.4	3,433.5	0.00	0.00	0.00
9,900.0	90.00	269.59	6,259.0	-1,299.90	-1,665.0	-3,297.4	3,532.1	0.00	0.00	0.00
10,000.0	90.00	269.59	6,259.0	-1,299.90	-1,665.7	-3,397.4	3,630.8	0.00	0.00	0.00
10,100.0	90.00	269.59	6,259.0	-1,299.90	-1,666.4	-3,497.4	3,729.5	0.00	0.00	0.00
10,200.0	90.00	269.59	6,259.0	-1,299.89	-1,667.2	-3,597.4	3,828.1	0.00	0.00	0.00
10,300.0	90.00	269.59	6,259.0	-1,299.89	-1,667.9	-3,697.4	3,926.8	0.00	0.00	0.00
10,400.0	90.00	269.59	6,259.0	-1,299.89	-1,668.6	-3,797.4	4,025.5	0.00	0.00	0.00
10,500.0	90.00	269.59	6,259.0	-1,299.89	-1,669.3	-3,897.4	4,124.1	0.00	0.00	0.00
10,600.0	90.00	269.59	6,259.0	-1,299.89	-1,670.0	-3,997.4	4,222.8	0.00	0.00	0.00
10,700.0	90.00	269.59	6,259.0	-1,299.89	-1,670.7	-4,097.4	4,321.5	0.00	0.00	0.00
10,800.0	90.00	269.59	6,259.0	-1,299.89	-1,671.4	-4,197.4	4,420.1	0.00	0.00	0.00
10,900.0	90.00	269.59	6,259.0	-1,299.89	-1,672.1	-4,297.4	4,518.8	0.00	0.00	0.00
11,000.0	90.00	269.59	6,259.0	-1,299.89	-1,672.9	-4,397.4	4,617.5	0.00	0.00	0.00
11,100.0	90.00	269.59	6,259.0	-1,299.89	-1,673.6	-4,497.4	4,716.1	0.00	0.00	0.00
11,200.0	90.00	269.59	6,259.0	-1,299.88	-1,674.3	-4,597.4	4,814.8	0.00	0.00	0.00
11,300.0	90.00	269.59	6,259.0	-1,299.88	-1,675.0	-4,697.4	4,913.5	0.00	0.00	0.00
11,400.0	90.00	269.59	6,259.0	-1,299.88	-1,675.7	-4,797.3	5,012.2	0.00	0.00	0.00
11,500.0	90.00	269.59	6,259.0	-1,299.88	-1,676.4	-4,897.3	5,110.8	0.00	0.00	0.00
11,600.0	90.00	269.59	6,259.0	-1,299.88	-1,677.1	-4,997.3	5,209.5	0.00	0.00	0.00
11,700.0	90.00	269.59	6,259.0	-1,299.88	-1,677.9	-5,097.3	5,308.2	0.00	0.00	0.00
11,800.0	90.00	269.59	6,259.0	-1,299.88	-1,678.6	-5,197.3	5,406.8	0.00	0.00	0.00
11,900.0	90.00	269.59	6,259.0	-1,299.88	-1,679.3	-5,297.3	5,505.5	0.00	0.00	0.00
12,000.0	90.00	269.59	6,259.0	-1,299.89	-1,680.0	-5,397.3	5,604.2	0.00	0.00	0.00
12,100.0	90.00	269.59	6,259.0	-1,299.89	-1,680.7	-5,497.3	5,702.8	0.00	0.00	0.00
12,200.0	90.00	269.59	6,259.0	-1,299.89	-1,681.4	-5,597.3	5,801.5	0.00	0.00	0.00
12,300.0	90.00	269.59	6,259.0	-1,299.89	-1,682.2	-5,697.3	5,900.2	0.00	0.00	0.00
12,400.0	90.00	269.59	6,259.0	-1,299.89	-1,682.9	-5,797.3	5,998.8	0.00	0.00	0.00
12,500.0	90.00	269.59	6,259.0	-1,299.89	-1,683.6	-5,897.3	6,097.5	0.00	0.00	0.00
12,600.0	90.00	269.59	6,259.0	-1,299.89	-1,684.3	-5,997.3	6,196.2	0.00	0.00	0.00
12,700.0	90.00	269.59	6,259.0	-1,299.89	-1,685.0	-6,097.3	6,294.8	0.00	0.00	0.00
12,800.0	90.00	269.59	6,259.0	-1,299.89	-1,685.7	-6,197.3	6,393.5	0.00	0.00	0.00
12,900.0	90.00	269.59	6,259.0	-1,299.89	-1,686.4	-6,297.3	6,492.2	0.00	0.00	0.00
13,000.0	90.00	269.59	6,259.0	-1,299.90	-1,687.2	-6,397.3	6,590.8	0.00	0.00	0.00
13,100.0	90.00	269.59	6,259.0	-1,299.90	-1,687.9	-6,497.3	6,689.5	0.00	0.00	0.00
13,200.0	90.00	269.59	6,259.0	-1,299.90	-1,688.6	-6,597.3	6,788.2	0.00	0.00	0.00
13,300.0	90.00	269.59	6,259.0	-1,299.90	-1,689.3	-6,697.3	6,886.8	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 19-24-11
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4959.1usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4959.1usft (Original Well Elev)
Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-11	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)
13,400.0	90.00	269.59	6,259.0	-1,299.90	-1,690.0	-6,797.3	6,985.5	0.00	0.00	0.00
13,500.0	90.00	269.59	6,259.0	-1,299.90	-1,690.7	-6,897.3	7,084.2	0.00	0.00	0.00
13,600.0	90.00	269.59	6,259.0	-1,299.91	-1,691.5	-6,997.3	7,182.9	0.00	0.00	0.00
13,700.0	90.00	269.59	6,259.0	-1,299.91	-1,692.2	-7,097.3	7,281.5	0.00	0.00	0.00
13,800.0	90.00	269.59	6,259.0	-1,299.91	-1,692.9	-7,197.3	7,380.2	0.00	0.00	0.00
13,900.0	90.00	269.59	6,259.0	-1,299.91	-1,693.6	-7,297.3	7,478.9	0.00	0.00	0.00
14,000.0	90.00	269.59	6,259.0	-1,299.92	-1,694.3	-7,397.3	7,577.5	0.00	0.00	0.00
14,100.0	90.00	269.59	6,259.0	-1,299.92	-1,695.0	-7,497.3	7,676.2	0.00	0.00	0.00
14,200.0	90.00	269.59	6,259.0	-1,299.92	-1,695.8	-7,597.3	7,774.9	0.00	0.00	0.00
14,300.0	90.00	269.59	6,259.0	-1,299.92	-1,696.5	-7,697.3	7,873.5	0.00	0.00	0.00
14,400.0	90.00	269.59	6,259.0	-1,299.93	-1,697.2	-7,797.3	7,972.2	0.00	0.00	0.00
14,500.0	90.00	269.59	6,259.0	-1,299.93	-1,697.9	-7,897.3	8,070.9	0.00	0.00	0.00
14,600.0	90.00	269.59	6,259.0	-1,299.93	-1,698.6	-7,997.3	8,169.5	0.00	0.00	0.00
14,700.0	90.00	269.59	6,259.0	-1,299.94	-1,699.3	-8,097.3	8,268.2	0.00	0.00	0.00
14,800.0	90.00	269.59	6,259.0	-1,299.94	-1,700.1	-8,197.3	8,366.9	0.00	0.00	0.00
14,900.0	90.00	269.59	6,259.0	-1,299.94	-1,700.8	-8,297.3	8,465.5	0.00	0.00	0.00
15,000.0	90.00	269.59	6,259.0	-1,299.95	-1,701.5	-8,397.3	8,564.2	0.00	0.00	0.00
15,100.0	90.00	269.59	6,259.1	-1,299.95	-1,702.2	-8,497.3	8,662.9	0.00	0.00	0.00
15,200.0	90.00	269.59	6,259.1	-1,299.95	-1,702.9	-8,597.3	8,761.5	0.00	0.00	0.00
15,300.0	90.00	269.59	6,259.1	-1,299.96	-1,703.7	-8,697.2	8,860.2	0.00	0.00	0.00
15,400.0	90.00	269.59	6,259.1	-1,299.96	-1,704.4	-8,797.2	8,958.9	0.00	0.00	0.00
15,500.0	90.00	269.59	6,259.1	-1,299.97	-1,705.1	-8,897.2	9,057.6	0.00	0.00	0.00
15,600.0	90.00	269.59	6,259.1	-1,299.97	-1,705.8	-8,997.2	9,156.2	0.00	0.00	0.00
15,700.0	90.00	269.59	6,259.1	-1,299.97	-1,706.5	-9,097.2	9,254.9	0.00	0.00	0.00
15,800.0	90.00	269.59	6,259.1	-1,299.98	-1,707.2	-9,197.2	9,353.6	0.00	0.00	0.00
15,900.0	90.00	269.59	6,259.1	-1,299.98	-1,708.0	-9,297.2	9,452.2	0.00	0.00	0.00
16,000.0	90.00	269.59	6,259.1	-1,299.99	-1,708.7	-9,397.2	9,550.9	0.00	0.00	0.00
16,100.0	90.00	269.59	6,259.1	-1,299.99	-1,709.4	-9,497.2	9,649.6	0.00	0.00	0.00
16,200.0	90.00	269.59	6,259.1	-1,300.00	-1,710.1	-9,597.2	9,748.2	0.00	0.00	0.00
EPI: 1862ft FSL & 600ft FWL of Sec 24										
16,244.8	90.00	269.59	6,259.1	-1,300.00	-1,710.4	-9,642.0	9,792.4	0.00	0.00	0.00
EOT TO 269.67° AZ										
16,247.7	90.00	269.67	6,259.1	-1,300.00	-1,710.5	-9,644.9	9,795.3	3.00	0.10	3.00
16,300.0	90.00	269.67	6,259.1	-1,300.00	-1,710.8	-9,697.2	9,846.9	0.00	0.00	0.00
16,400.0	90.00	269.67	6,259.1	-1,300.00	-1,711.3	-9,797.2	9,945.5	0.00	0.00	0.00
16,500.0	90.00	269.67	6,259.1	-1,300.00	-1,711.9	-9,897.2	10,044.2	0.00	0.00	0.00
BHL: 1864ft FSL & 300ft FWL of Sec 24										
16,544.5	90.00	269.67	6,259.1	-1,300.00	-1,712.1	-9,941.7	10,088.1	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
492.6	492.1	PIERRE SHALE (BASE FOX HILLS				
3,694.5	3,507.1	PARKMAN				
4,257.2	4,032.1	SUSSEX				
5,414.6	5,130.1	SHANNON				
6,528.9	6,159.1	SHARON SPRINGS SHALE				
6,686.3	6,229.1	NIOBRARA FORMATION				
6,720.7	6,239.1	NIOBRARA A CHALK				

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 19-24-11
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4959.1usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4959.1usft (Original Well Elev)
Site:	SE NE SEC. 19 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 19-24-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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: 1788ft FNL & 360ft FEL of Sec 19
200.0	200.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,255.4	1,231.7	-189.0	34.9	EOB TO 21.11° INC
4,817.2	4,554.5	-1,450.4	268.0	END OF TANGENT
5,872.6	5,586.2	-1,639.4	302.9	EOD TO VERTICAL
5,972.6	5,686.2	-1,639.4	302.9	KOP (10°/100ft BUR)
6,872.5	6,259.1	-1,643.5	-270.0	BPI: 1863ft FSL & 600ft FEL of Sec 19
16,244.8	6,259.1	-1,710.4	-9,642.0	EPI: 1862ft FSL & 600ft FWL of Sec 24
16,247.7	6,259.1	-1,710.5	-9,644.9	EOT TO 269.67° AZ
16,544.5	6,259.1	-1,712.1	-9,941.7	BHL: 1864ft FSL & 300ft FWL of Sec 24