

BISON OIL & GAS II, LLC

WELD COUNTY, COLORADO (NAD 83)

SW NE SEC. 17 T8N R60W 6th P.M.

HUNT FED 8-60 17B-20-4

ORIGINAL WELLBORE

31 July, 2018

Plan: PROPOSAL #2



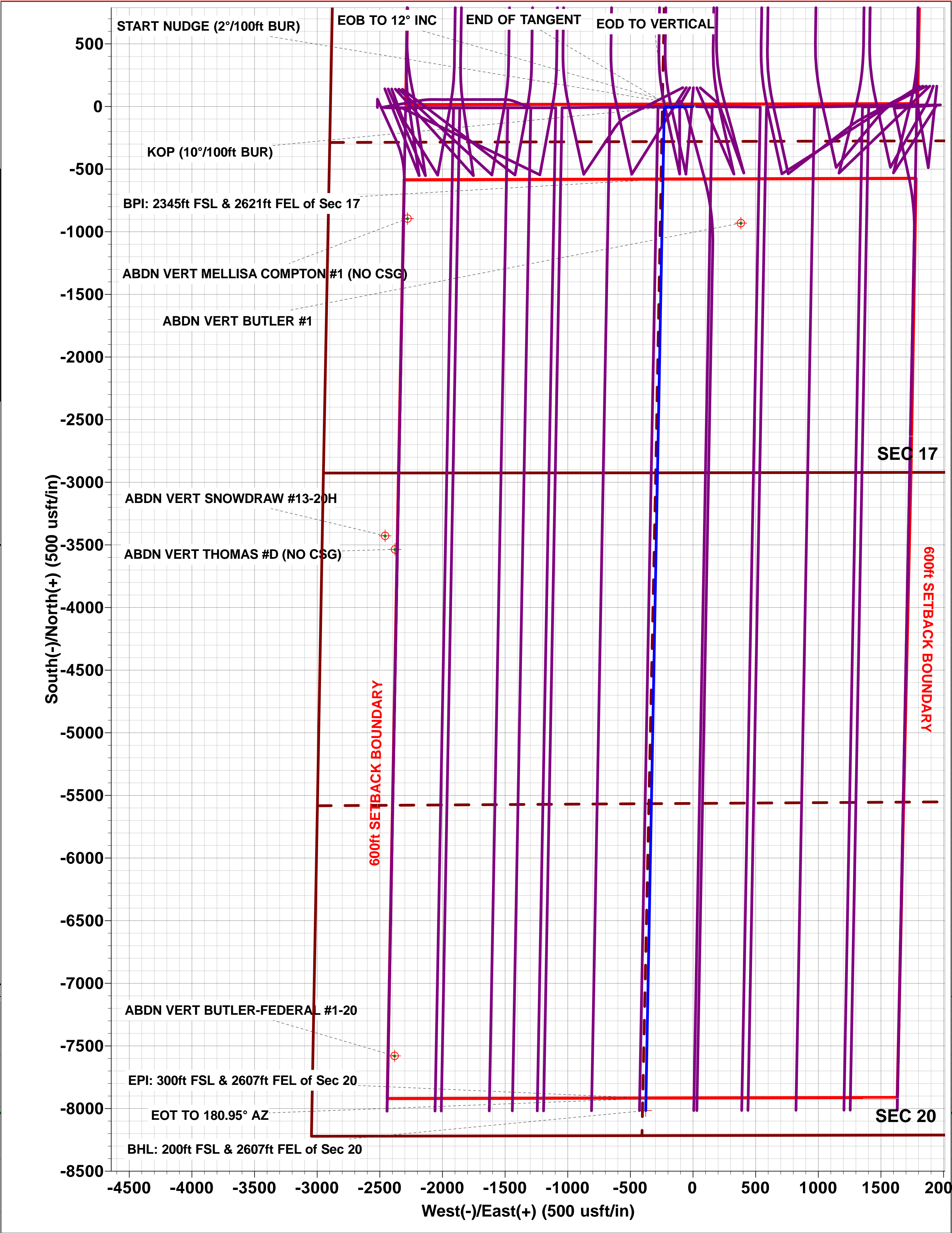
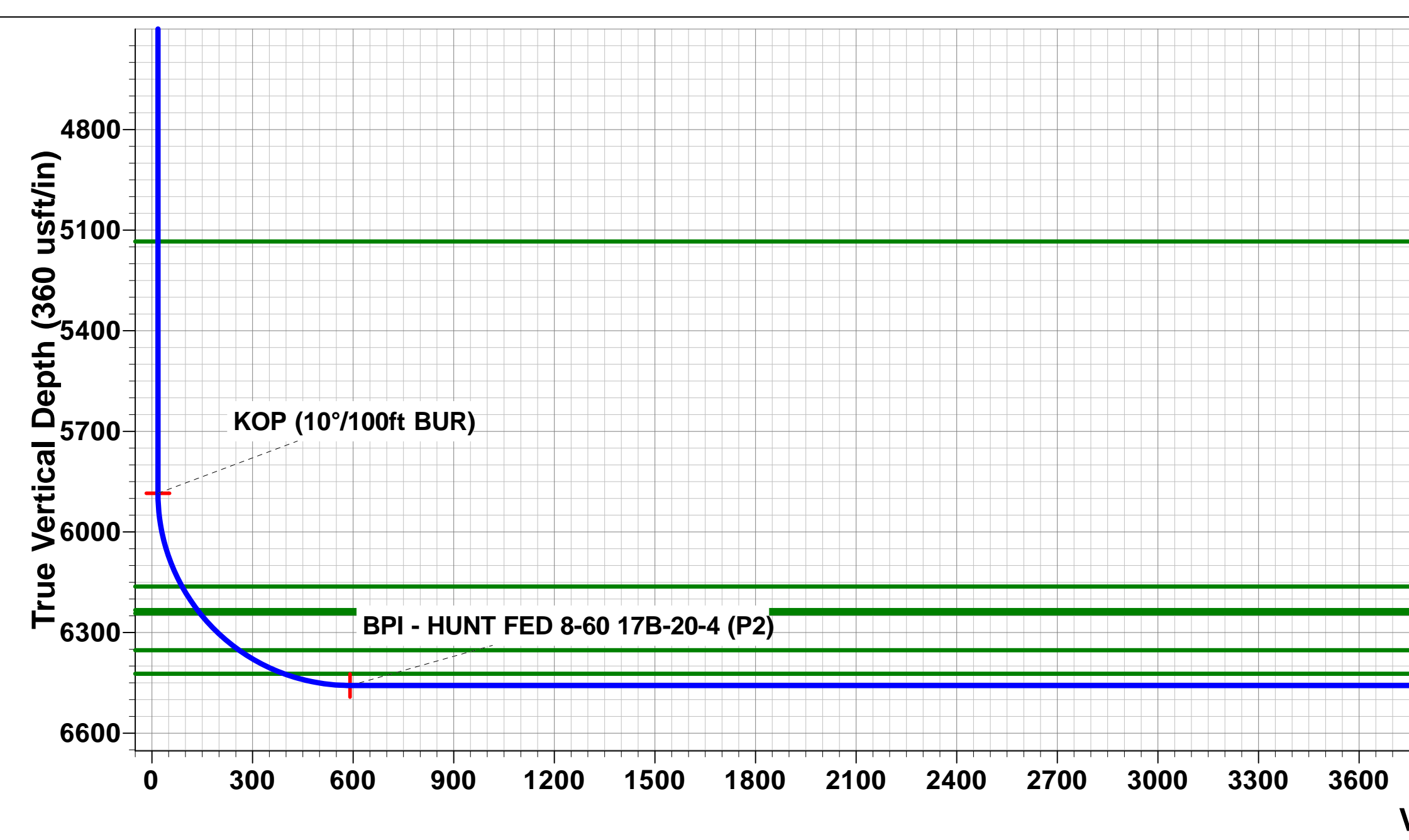
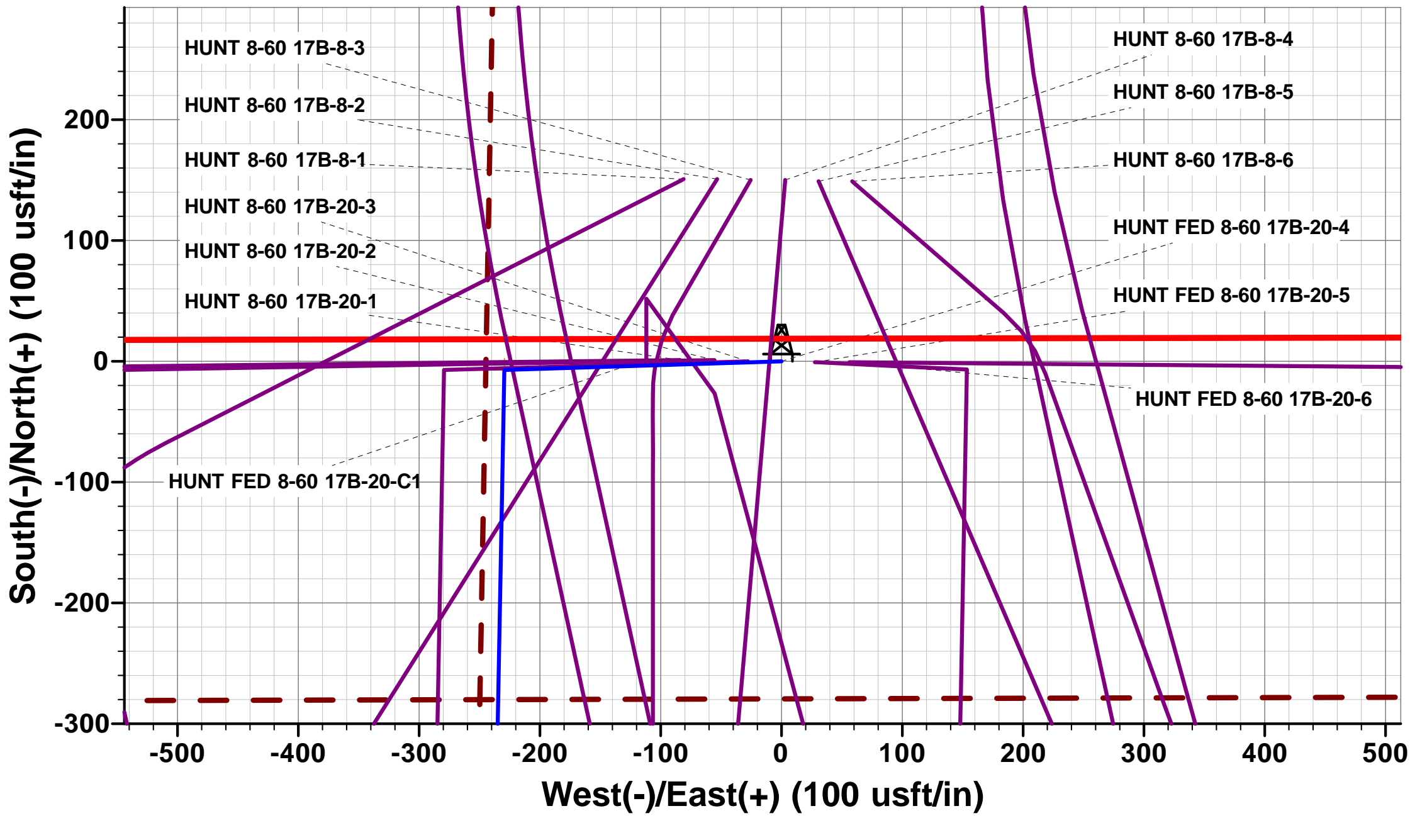
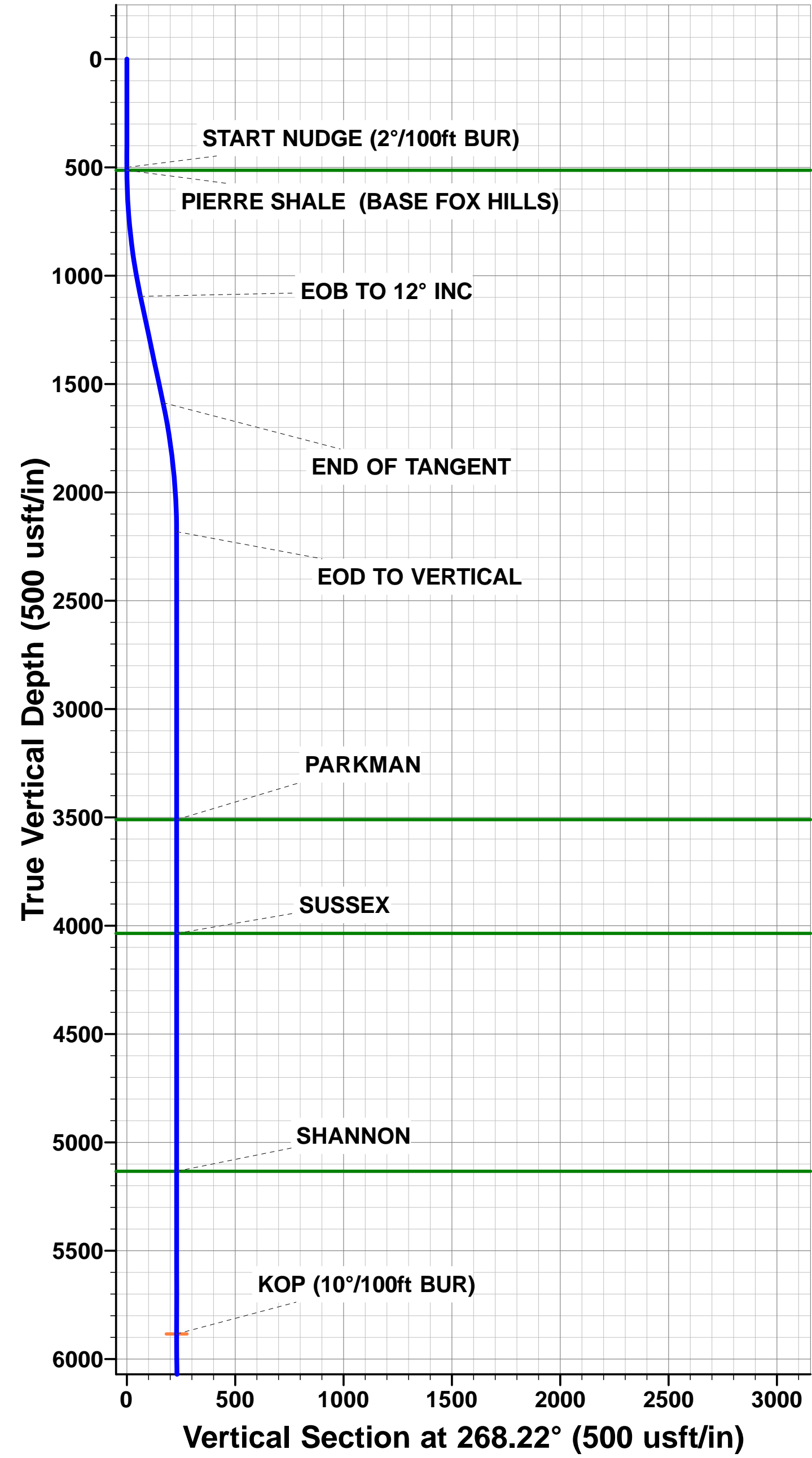


Project: WELD COUNTY, COLORADO (NAD 83)
Site: SW NE SEC. 17 T8N R60W 6th P.M.
Well: HUNT FED 8-60 17B-20-4
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 2365ft FNL & 2391ft FEL of Sec 17	
500.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)	
1095.62	1100.00	12.00	268.22	-1.94	-62.57	4.88	62.60	EOB TO 12° INC	
1586.29	1601.63	12.00	268.22	-5.18	-166.82	13.01	166.90	END OF TANGENT	
2181.91	2201.63	0.00	268.22	-7.12	-229.39	17.89	229.50	EOD TO VERTICAL	
5884.80	5904.52	0.00	0.00	-7.12	-229.39	17.89	229.50	KOP (10°/100ft BUR)	
6457.80	6804.54	90.00	181.06	-579.98	-239.99	590.62	802.46	BPI: 2345ft FSL & 2621ft FEL of Sec 17	
6457.80	14142.24	90.00	181.06	-7916.43	-375.49	7925.33	8140.16	EPI: 300ft FSL & 2607ft FEL of Sec 20	
6457.80	14145.64	90.00	180.95	-7919.83	-375.55	7928.73	8143.56	EOT TO 180.95° AZ	
6457.80	14242.08	90.00	180.95	-8016.25	-377.16	8025.12	8240.00	BHL: 200ft FSL & 2607ft FEL of Sec 20	

PROPOSED LOCAL COORDINATES:
SHL: 2365ft FNL & 2391ft FEL Sec 17
BPI: 2345ft FSL & 2621ft FEL Sec 17
EPI: 300ft FSL & 2607ft FEL Sec 20
BHL: 200ft FSL & 2607ft FEL of Sec 20

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - HUNT FED 8-60 17B-20-4 (P2)	5884.80	-7.12	-229.39	40.663049	-104.115177
BHL - HUNT FED 8-60 17B-20-4 (P2)	6457.80	-8016.26	-377.16	40.641066	-104.115709
BPI - HUNT FED 8-60 17B-20-4 (P2)	6457.80	-579.98	-239.99	40.661477	-104.115215
EPI - HUNT FED 8-60 17B-20-4 (P2)	6457.80	-7916.43	-375.49	40.641340	-104.115703



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 17B-20-4
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4963.80usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4963.80usft (Original Well Elev)
Site:	SW NE SEC. 17 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 17B-20-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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	SW NE SEC. 17 T8N R60W 6th P.M.		
Site Position:		Northing:	1,487,551.70 usft
From:	Lat/Long	Easting:	3,384,321.29 usft
Position Uncertainty:	0.00 usft	Slot Radius:	1.10000 ft
		Latitude:	40.663483
		Longitude:	-104.114642
		Grid Convergence:	0.90 °

Well	HUNT FED 8-60 17B-20-4		
Well Position	+N-S	-150.86 usft	Northing: 1,487,402.13 usft
	+E-W	81.01 usft	Easting: 3,384,404.64 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	40.663069
		Longitude:	-104.114350
		Ground Level:	4,938.80 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	05/08/2017	7.87	67.16	52,578

Design	PROPOSAL #2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.00	0.00	0.00	182.69

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
0.00	0.00	0.00	0.00	-4,963.80	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	-4,463.80	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	12.00	268.22	1,095.62	-3,868.18	-1.94	-62.57	2.00	2.00	0.00	268.22	
1,601.63	12.00	268.22	1,586.29	-3,377.51	-5.18	-166.82	0.00	0.00	0.00	0.00	
2,201.63	0.00	0.00	2,181.92	-2,781.88	-7.12	-229.39	2.00	-2.00	0.00	180.00	
5,904.52	0.00	0.00	5,884.80	921.00	-7.12	-229.39	0.00	0.00	0.00	0.00	KOP - HUNT FED 8
6,804.54	90.00	181.06	6,457.80	1,494.00	-579.98	-239.99	10.00	10.00	-19.88	181.06	BPI - HUNT FED 8-
14,142.24	90.00	181.06	6,457.80	1,494.00	-7,916.43	-375.49	0.00	0.00	0.00	-22.88	EPI - HUNT FED 8-
14,145.64	90.00	180.95	6,457.80	1,494.00	-7,919.83	-375.55	3.00	-0.11	-3.00	-92.12	
14,242.08	90.00	180.95	6,457.80	1,494.00	-8,016.26	-377.16	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 @ 4963.80usft (Original Well Elev)
Site:	SW NE SEC. 17 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 17B-20-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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: 2365ft FNL & 2391ft FEL of Sec 17										
0.00	0.00	0.00	0.00	4,963.80	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,863.80	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,763.80	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	4,663.80	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	4,563.80	0.00	0.00	0.00	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
500.00	0.00	0.00	500.00	4,463.80	0.00	0.00	0.00	0.00	0.00	0.00
PIERRE SHALE (BASE FOX HILLS)										
513.80	0.28	268.22	513.80	4,450.00	0.00	-0.03	0.00	2.00	2.00	0.00
600.00	2.00	268.22	599.98	4,363.82	-0.05	-1.74	0.14	2.00	2.00	0.00
700.00	4.00	268.22	699.84	4,263.96	-0.22	-6.98	0.54	2.00	2.00	0.00
800.00	6.00	268.22	799.45	4,164.35	-0.49	-15.69	1.22	2.00	2.00	0.00
900.00	8.00	268.22	898.70	4,065.10	-0.86	-27.87	2.17	2.00	2.00	0.00
1,000.00	10.00	268.22	997.47	3,966.33	-1.35	-43.50	3.39	2.00	2.00	0.00
EOB TO 12° INC										
1,100.00	12.00	268.22	1,095.62	3,868.18	-1.94	-62.57	4.88	2.00	2.00	0.00
1,200.00	12.00	268.22	1,193.44	3,770.36	-2.59	-83.35	6.50	0.00	0.00	0.00
1,300.00	12.00	268.22	1,291.25	3,672.55	-3.23	-104.13	8.12	0.00	0.00	0.00
1,400.00	12.00	268.22	1,389.07	3,574.73	-3.88	-124.92	9.74	0.00	0.00	0.00
1,500.00	12.00	268.22	1,486.88	3,476.92	-4.52	-145.70	11.36	0.00	0.00	0.00
1,600.00	12.00	268.22	1,584.70	3,379.10	-5.17	-166.48	12.99	0.00	0.00	0.00
END OF TANGENT										
1,601.63	12.00	268.22	1,586.29	3,377.51	-5.18	-166.82	13.01	0.00	0.00	0.00
1,700.00	10.03	268.22	1,682.84	3,280.96	-5.76	-185.60	14.48	2.00	-2.00	0.00
1,800.00	8.03	268.22	1,781.60	3,182.20	-6.25	-201.30	15.70	2.00	-2.00	0.00
1,900.00	6.03	268.22	1,880.84	3,082.96	-6.63	-213.53	16.66	2.00	-2.00	0.00
2,000.00	4.03	268.22	1,980.45	2,983.35	-6.90	-222.30	17.34	2.00	-2.00	0.00
2,100.00	2.03	268.22	2,080.31	2,883.49	-7.06	-227.59	17.75	2.00	-2.00	0.00
2,200.00	0.03	268.22	2,180.28	2,783.52	-7.12	-229.39	17.89	2.00	-2.00	0.00
EOD TO VERTICAL										
2,201.63	0.00	268.22	2,181.91	2,781.89	-7.12	-229.39	17.89	2.00	-2.00	0.00
2,300.00	0.00	0.00	2,280.28	2,683.52	-7.12	-229.39	17.89	0.00	0.00	0.00
2,400.00	0.00	0.00	2,380.28	2,583.52	-7.12	-229.39	17.89	0.00	0.00	0.00
2,500.00	0.00	0.00	2,480.28	2,483.52	-7.12	-229.39	17.89	0.00	0.00	0.00
2,600.00	0.00	0.00	2,580.28	2,383.52	-7.12	-229.39	17.89	0.00	0.00	0.00
2,700.00	0.00	0.00	2,680.28	2,283.52	-7.12	-229.39	17.89	0.00	0.00	0.00
2,800.00	0.00	0.00	2,780.28	2,183.52	-7.12	-229.39	17.89	0.00	0.00	0.00
2,900.00	0.00	0.00	2,880.28	2,083.52	-7.12	-229.39	17.89	0.00	0.00	0.00
3,000.00	0.00	0.00	2,980.28	1,983.52	-7.12	-229.39	17.89	0.00	0.00	0.00
3,100.00	0.00	0.00	3,080.28	1,883.52	-7.12	-229.39	17.89	0.00	0.00	0.00
3,200.00	0.00	0.00	3,180.28	1,783.52	-7.12	-229.39	17.89	0.00	0.00	0.00
3,300.00	0.00	0.00	3,280.28	1,683.52	-7.12	-229.39	17.89	0.00	0.00	0.00
3,400.00	0.00	0.00	3,380.28	1,583.52	-7.12	-229.39	17.89	0.00	0.00	0.00
3,500.00	0.00	0.00	3,480.28	1,483.52	-7.12	-229.39	17.89	0.00	0.00	0.00
PARKMAN										
3,530.52	0.00	0.00	3,510.80	1,453.00	-7.12	-229.39	17.89	0.00	0.00	0.00
3,600.00	0.00	0.00	3,580.28	1,383.52	-7.12	-229.39	17.89	0.00	0.00	0.00
3,700.00	0.00	0.00	3,680.28	1,283.52	-7.12	-229.39	17.89	0.00	0.00	0.00
3,800.00	0.00	0.00	3,780.28	1,183.52	-7.12	-229.39	17.89	0.00	0.00	0.00
3,900.00	0.00	0.00	3,880.28	1,083.52	-7.12	-229.39	17.89	0.00	0.00	0.00
4,000.00	0.00	0.00	3,980.28	983.52	-7.12	-229.39	17.89	0.00	0.00	0.00
SUSSEX										

Planning Report



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Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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)
4,055.52	0.00	0.00	4,035.80	928.00	-7.12	-229.39	17.89	0.00	0.00	0.00
4,100.00	0.00	0.00	4,080.28	883.52	-7.12	-229.39	17.89	0.00	0.00	0.00
4,200.00	0.00	0.00	4,180.28	783.52	-7.12	-229.39	17.89	0.00	0.00	0.00
4,300.00	0.00	0.00	4,280.28	683.52	-7.12	-229.39	17.89	0.00	0.00	0.00
4,400.00	0.00	0.00	4,380.28	583.52	-7.12	-229.39	17.89	0.00	0.00	0.00
4,500.00	0.00	0.00	4,480.28	483.52	-7.12	-229.39	17.89	0.00	0.00	0.00
4,600.00	0.00	0.00	4,580.28	383.52	-7.12	-229.39	17.89	0.00	0.00	0.00
4,700.00	0.00	0.00	4,680.28	283.52	-7.12	-229.39	17.89	0.00	0.00	0.00
4,800.00	0.00	0.00	4,780.28	183.52	-7.12	-229.39	17.89	0.00	0.00	0.00
4,900.00	0.00	0.00	4,880.28	83.52	-7.12	-229.39	17.89	0.00	0.00	0.00
5,000.00	0.00	0.00	4,980.28	-16.48	-7.12	-229.39	17.89	0.00	0.00	0.00
5,100.00	0.00	0.00	5,080.28	-116.48	-7.12	-229.39	17.89	0.00	0.00	0.00
SHANNON										
5,153.52	0.00	0.00	5,133.80	-170.00	-7.12	-229.39	17.89	0.00	0.00	0.00
5,200.00	0.00	0.00	5,180.28	-216.48	-7.12	-229.39	17.89	0.00	0.00	0.00
5,300.00	0.00	0.00	5,280.28	-316.48	-7.12	-229.39	17.89	0.00	0.00	0.00
5,400.00	0.00	0.00	5,380.28	-416.48	-7.12	-229.39	17.89	0.00	0.00	0.00
5,500.00	0.00	0.00	5,480.28	-516.48	-7.12	-229.39	17.89	0.00	0.00	0.00
5,600.00	0.00	0.00	5,580.28	-616.48	-7.12	-229.39	17.89	0.00	0.00	0.00
5,700.00	0.00	0.00	5,680.28	-716.48	-7.12	-229.39	17.89	0.00	0.00	0.00
5,800.00	0.00	0.00	5,780.28	-816.48	-7.12	-229.39	17.89	0.00	0.00	0.00
5,900.00	0.00	0.00	5,880.28	-916.48	-7.12	-229.39	17.89	0.00	0.00	0.00
KOP (10°/100ft BUR)										
5,904.52	0.00	0.00	5,884.80	-921.00	-7.12	-229.39	17.89	0.00	0.00	0.00
6,000.00	9.55	181.06	5,979.84	-1,016.04	-15.06	-229.54	25.83	10.00	10.00	0.00
6,100.00	19.55	181.06	6,076.51	-1,112.71	-40.14	-230.00	50.90	10.00	10.00	0.00
SHARON SPRINGS SHALE										
6,194.77	29.02	181.06	6,162.80	-1,199.00	-79.06	-230.72	89.82	10.00	10.00	0.00
6,200.00	29.55	181.06	6,167.36	-1,203.56	-81.62	-230.77	92.38	10.00	10.00	0.00
NIOBRARA FORMATION										
6,278.51	37.40	181.06	6,232.80	-1,269.00	-124.88	-231.57	135.63	10.00	10.00	0.00
NIOBRARA A CHALK										
6,291.21	38.67	181.06	6,242.80	-1,279.00	-132.70	-231.71	143.44	10.00	10.00	0.00
6,300.00	39.55	181.06	6,249.62	-1,285.82	-138.25	-231.82	148.99	10.00	10.00	0.00
6,400.00	49.54	181.06	6,320.80	-1,357.00	-208.29	-233.11	219.02	10.00	10.00	0.00
NIOBRARA B CHALK										
6,452.17	54.76	181.06	6,352.80	-1,389.00	-249.47	-233.87	260.18	10.00	10.00	0.00
6,500.00	59.54	181.06	6,378.74	-1,414.94	-289.63	-234.62	300.34	10.00	10.00	0.00
6,600.00	69.54	181.06	6,421.66	-1,457.86	-379.79	-236.28	390.48	10.00	10.00	0.00
NIOBRARA C CHALK										
6,603.27	69.87	181.06	6,422.80	-1,459.00	-382.86	-236.34	393.55	10.00	10.00	0.00
6,700.00	79.54	181.06	6,448.28	-1,484.48	-476.04	-238.06	486.70	10.00	10.00	0.00
6,800.00	89.54	181.06	6,457.78	-1,493.98	-575.44	-239.90	586.08	10.00	10.00	0.00
BPI: 2345ft FSL & 2621ft FEL of Sec 17										
6,804.54	90.00	181.06	6,457.80	-1,494.00	-579.98	-239.99	590.62	10.00	10.00	0.00
6,900.00	90.00	181.06	6,457.81	-1,494.01	-675.42	-241.75	686.04	0.00	0.00	0.00
7,000.00	90.00	181.06	6,457.81	-1,494.01	-775.41	-243.60	786.00	0.00	0.00	0.00
7,100.00	90.00	181.06	6,457.82	-1,494.02	-875.39	-245.45	885.96	0.00	0.00	0.00
7,200.00	90.00	181.06	6,457.82	-1,494.02	-975.37	-247.30	985.92	0.00	0.00	0.00
7,300.00	90.00	181.06	6,457.83	-1,494.03	-1,075.36	-249.15	1,085.88	0.00	0.00	0.00
7,400.00	90.00	181.06	6,457.84	-1,494.04	-1,175.34	-251.00	1,185.84	0.00	0.00	0.00
7,500.00	90.00	181.06	6,457.84	-1,494.04	-1,275.32	-252.85	1,285.79	0.00	0.00	0.00
7,600.00	90.00	181.06	6,457.85	-1,494.05	-1,375.30	-254.70	1,385.75	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 17B-20-4
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4963.80usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4963.80usft (Original Well Elev)
Site:	SW NE SEC. 17 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 17B-20-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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)
7,700.00	90.00	181.06	6,457.85	-1,494.05	-1,475.29	-256.54	1,485.71	0.00	0.00	0.00
7,800.00	90.00	181.06	6,457.86	-1,494.06	-1,575.27	-258.39	1,585.67	0.00	0.00	0.00
7,900.00	90.00	181.06	6,457.86	-1,494.06	-1,675.25	-260.24	1,685.63	0.00	0.00	0.00
8,000.00	90.00	181.06	6,457.86	-1,494.06	-1,775.24	-262.09	1,785.59	0.00	0.00	0.00
8,100.00	90.00	181.06	6,457.87	-1,494.07	-1,875.22	-263.94	1,885.55	0.00	0.00	0.00
8,200.00	90.00	181.06	6,457.87	-1,494.07	-1,975.20	-265.79	1,985.51	0.00	0.00	0.00
8,300.00	90.00	181.06	6,457.88	-1,494.08	-2,075.18	-267.64	2,085.47	0.00	0.00	0.00
8,400.00	90.00	181.06	6,457.88	-1,494.08	-2,175.17	-269.48	2,185.43	0.00	0.00	0.00
8,500.00	90.00	181.06	6,457.88	-1,494.08	-2,275.15	-271.33	2,285.39	0.00	0.00	0.00
8,600.00	90.00	181.06	6,457.89	-1,494.09	-2,375.13	-273.18	2,385.35	0.00	0.00	0.00
8,700.00	90.00	181.06	6,457.89	-1,494.09	-2,475.12	-275.03	2,485.31	0.00	0.00	0.00
8,800.00	90.00	181.06	6,457.89	-1,494.09	-2,575.10	-276.88	2,585.27	0.00	0.00	0.00
8,900.00	90.00	181.06	6,457.90	-1,494.10	-2,675.08	-278.72	2,685.23	0.00	0.00	0.00
9,000.00	90.00	181.06	6,457.90	-1,494.10	-2,775.06	-280.57	2,785.18	0.00	0.00	0.00
9,100.00	90.00	181.06	6,457.90	-1,494.10	-2,875.05	-282.42	2,885.14	0.00	0.00	0.00
9,200.00	90.00	181.06	6,457.90	-1,494.10	-2,975.03	-284.27	2,985.10	0.00	0.00	0.00
9,300.00	90.00	181.06	6,457.91	-1,494.11	-3,075.01	-286.11	3,085.06	0.00	0.00	0.00
9,400.00	90.00	181.06	6,457.91	-1,494.11	-3,175.00	-287.96	3,185.02	0.00	0.00	0.00
9,500.00	90.00	181.06	6,457.91	-1,494.11	-3,274.98	-289.81	3,284.98	0.00	0.00	0.00
9,600.00	90.00	181.06	6,457.91	-1,494.11	-3,374.96	-291.66	3,384.94	0.00	0.00	0.00
9,700.00	90.00	181.06	6,457.91	-1,494.11	-3,474.95	-293.50	3,484.90	0.00	0.00	0.00
9,800.00	90.00	181.06	6,457.91	-1,494.11	-3,574.93	-295.35	3,584.86	0.00	0.00	0.00
9,900.00	90.00	181.06	6,457.92	-1,494.12	-3,674.91	-297.20	3,684.82	0.00	0.00	0.00
10,000.00	90.00	181.06	6,457.92	-1,494.12	-3,774.89	-299.05	3,784.78	0.00	0.00	0.00
10,100.00	90.00	181.06	6,457.92	-1,494.12	-3,874.88	-300.89	3,884.74	0.00	0.00	0.00
10,200.00	90.00	181.06	6,457.92	-1,494.12	-3,974.86	-302.74	3,984.70	0.00	0.00	0.00
10,300.00	90.00	181.06	6,457.92	-1,494.12	-4,074.84	-304.59	4,084.66	0.00	0.00	0.00
10,400.00	90.00	181.06	6,457.92	-1,494.12	-4,174.83	-306.43	4,184.61	0.00	0.00	0.00
10,500.00	90.00	181.06	6,457.92	-1,494.12	-4,274.81	-308.28	4,284.57	0.00	0.00	0.00
10,600.00	90.00	181.06	6,457.92	-1,494.12	-4,374.79	-310.13	4,384.53	0.00	0.00	0.00
10,700.00	90.00	181.06	6,457.92	-1,494.12	-4,474.77	-311.97	4,484.49	0.00	0.00	0.00
10,800.00	90.00	181.06	6,457.92	-1,494.12	-4,574.76	-313.82	4,584.45	0.00	0.00	0.00
10,900.00	90.00	181.06	6,457.92	-1,494.12	-4,674.74	-315.67	4,684.41	0.00	0.00	0.00
11,000.00	90.00	181.06	6,457.92	-1,494.12	-4,774.72	-317.51	4,784.37	0.00	0.00	0.00
11,100.00	90.00	181.06	6,457.92	-1,494.12	-4,874.71	-319.36	4,884.33	0.00	0.00	0.00
11,200.00	90.00	181.06	6,457.91	-1,494.11	-4,974.69	-321.20	4,984.29	0.00	0.00	0.00
11,300.00	90.00	181.06	6,457.91	-1,494.11	-5,074.67	-323.05	5,084.25	0.00	0.00	0.00
11,400.00	90.00	181.06	6,457.91	-1,494.11	-5,174.66	-324.90	5,184.21	0.00	0.00	0.00
11,500.00	90.00	181.06	6,457.91	-1,494.11	-5,274.64	-326.74	5,284.17	0.00	0.00	0.00
11,600.00	90.00	181.06	6,457.91	-1,494.11	-5,374.62	-328.59	5,384.13	0.00	0.00	0.00
11,700.00	90.00	181.06	6,457.91	-1,494.11	-5,474.60	-330.43	5,484.08	0.00	0.00	0.00
11,800.00	90.00	181.06	6,457.90	-1,494.10	-5,574.59	-332.28	5,584.04	0.00	0.00	0.00
11,900.00	90.00	181.06	6,457.90	-1,494.10	-5,674.57	-334.13	5,684.00	0.00	0.00	0.00
12,000.00	90.00	181.06	6,457.90	-1,494.10	-5,774.55	-335.97	5,783.96	0.00	0.00	0.00
12,100.00	90.00	181.06	6,457.90	-1,494.10	-5,874.54	-337.82	5,883.92	0.00	0.00	0.00
12,200.00	90.00	181.06	6,457.89	-1,494.09	-5,974.52	-339.66	5,983.88	0.00	0.00	0.00
12,300.00	90.00	181.06	6,457.89	-1,494.09	-6,074.50	-341.51	6,083.84	0.00	0.00	0.00
12,400.00	90.00	181.06	6,457.89	-1,494.09	-6,174.49	-343.35	6,183.80	0.00	0.00	0.00
12,500.00	90.00	181.06	6,457.88	-1,494.08	-6,274.47	-345.20	6,283.76	0.00	0.00	0.00
12,600.00	90.00	181.06	6,457.88	-1,494.08	-6,374.45	-347.04	6,383.72	0.00	0.00	0.00
12,700.00	90.00	181.06	6,457.88	-1,494.08	-6,474.43	-348.89	6,483.68	0.00	0.00	0.00
12,800.00	90.00	181.06	6,457.87	-1,494.07	-6,574.42	-350.73	6,583.64	0.00	0.00	0.00
12,900.00	90.00	181.06	6,457.87	-1,494.07	-6,674.40	-352.58	6,683.60	0.00	0.00	0.00
13,000.00	90.00	181.06	6,457.86	-1,494.06	-6,774.38	-354.42	6,783.55	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well HUNT FED 8-60 17B-20-4
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4963.80usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4963.80usft (Original Well Elev)
Site:	SW NE SEC. 17 T8N R60W 6th P.M.	North Reference:	True
Well:	HUNT FED 8-60 17B-20-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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)
13,100.00	90.00	181.06	6,457.86	-1,494.06	-6,874.37	-356.27	6,883.51	0.00	0.00	0.00
13,200.00	90.00	181.06	6,457.85	-1,494.05	-6,974.35	-358.11	6,983.47	0.00	0.00	0.00
13,300.00	90.00	181.06	6,457.85	-1,494.05	-7,074.33	-359.96	7,083.43	0.00	0.00	0.00
13,400.00	90.00	181.06	6,457.84	-1,494.04	-7,174.32	-361.80	7,183.39	0.00	0.00	0.00
13,500.00	90.00	181.06	6,457.84	-1,494.04	-7,274.30	-363.65	7,283.35	0.00	0.00	0.00
13,600.00	90.00	181.06	6,457.83	-1,494.03	-7,374.28	-365.49	7,383.31	0.00	0.00	0.00
13,700.00	90.00	181.06	6,457.83	-1,494.03	-7,474.26	-367.33	7,483.27	0.00	0.00	0.00
13,800.00	90.00	181.06	6,457.82	-1,494.02	-7,574.25	-369.18	7,583.23	0.00	0.00	0.00
13,900.00	90.00	181.06	6,457.82	-1,494.02	-7,674.23	-371.02	7,683.19	0.00	0.00	0.00
14,000.00	90.00	181.06	6,457.81	-1,494.01	-7,774.21	-372.87	7,783.15	0.00	0.00	0.00
14,100.00	90.00	181.06	6,457.80	-1,494.00	-7,874.20	-374.71	7,883.11	0.00	0.00	0.00
EPI: 300ft FSL & 2607ft FEL of Sec 20										
14,142.24	90.00	181.06	6,457.80	-1,494.00	-7,916.43	-375.49	7,925.33	0.00	0.00	0.00
EOT TO 180.95° AZ										
14,145.64	90.00	180.95	6,457.80	-1,494.00	-7,919.83	-375.55	7,928.73	3.00	-0.11	-2.99
14,200.00	90.00	180.95	6,457.80	-1,494.00	-7,974.18	-376.45	7,983.06	0.00	0.00	0.00
BHL: 200ft FSL & 2607ft FEL of Sec 20										
14,242.08	90.00	180.95	6,457.80	-1,494.00	-8,016.25	-377.16	8,025.12	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
513.80	513.80	PIERRE SHALE (BASE FOX HILLS)				
3,530.52	3,510.80	PARKMAN				
4,055.52	4,035.80	SUSSEX				
5,153.52	5,133.80	SHANNON				
6,194.77	6,162.80	SHARON SPRINGS SHALE				
6,278.51	6,232.80	NIOBRARA FORMATION				
6,291.21	6,242.80	NIOBRARA A CHALK				
6,452.17	6,352.80	NIOBRARA B CHALK				
6,603.27	6,422.80	NIOBRARA C CHALK				

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.00	0.00	0.00	0.00	SHL: 2365ft FNL & 2391ft FEL of Sec 17
500.00	500.00	0.00	0.00	START NUDGE (2°/100ft BUR)
1,100.00	1,095.62	-1.94	-62.57	EOB TO 12° INC
1,601.63	1,586.29	-5.18	-166.82	END OF TANGENT
2,201.63	2,181.91	-7.12	-229.39	EOD TO VERTICAL
5,904.52	5,884.80	-7.12	-229.39	KOP (10°/100ft BUR)
6,804.54	6,457.80	-579.98	-239.99	BPI: 2345ft FSL & 2621ft FEL of Sec 17
14,142.24	6,457.80	-7,916.43	-375.49	EPI: 300ft FSL & 2607ft FEL of Sec 20
14,145.64	6,457.80	-7,919.83	-375.55	EOT TO 180.95° AZ
14,242.08	6,457.80	-8,016.25	-377.16	BHL: 200ft FSL & 2607ft FEL of Sec 20