

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

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

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

**HUNT FED 8-60 17B-20-5**

**ORIGINAL WELLBORE**

**31 July, 2018**

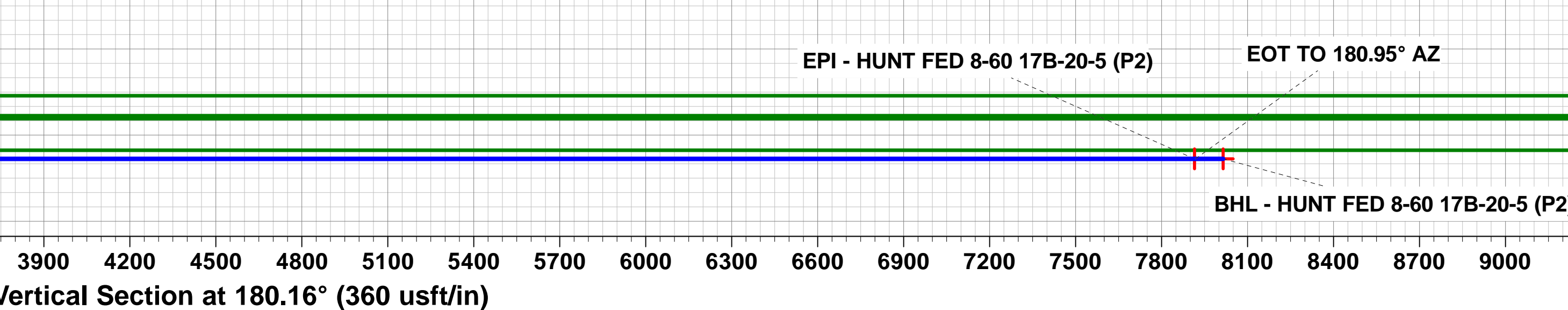
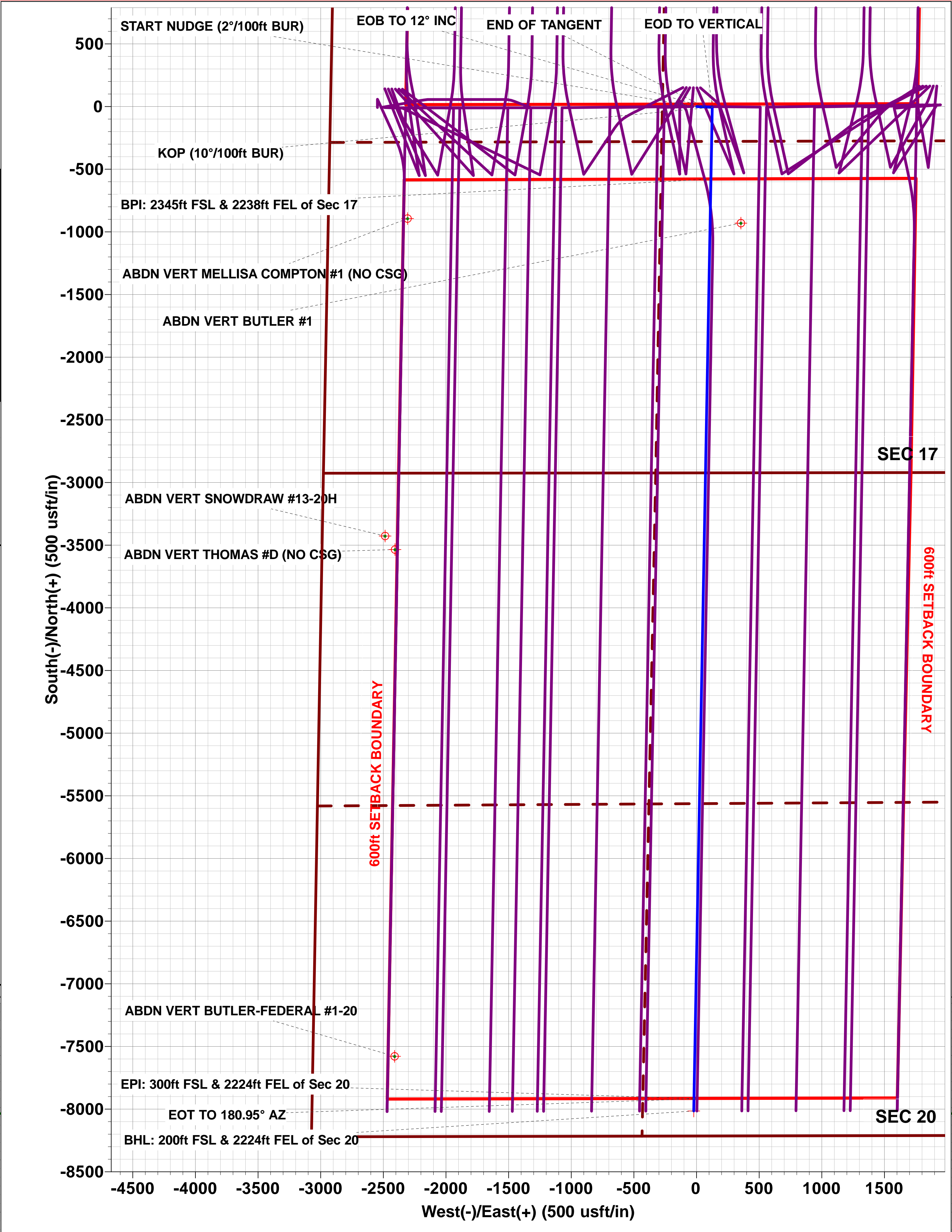
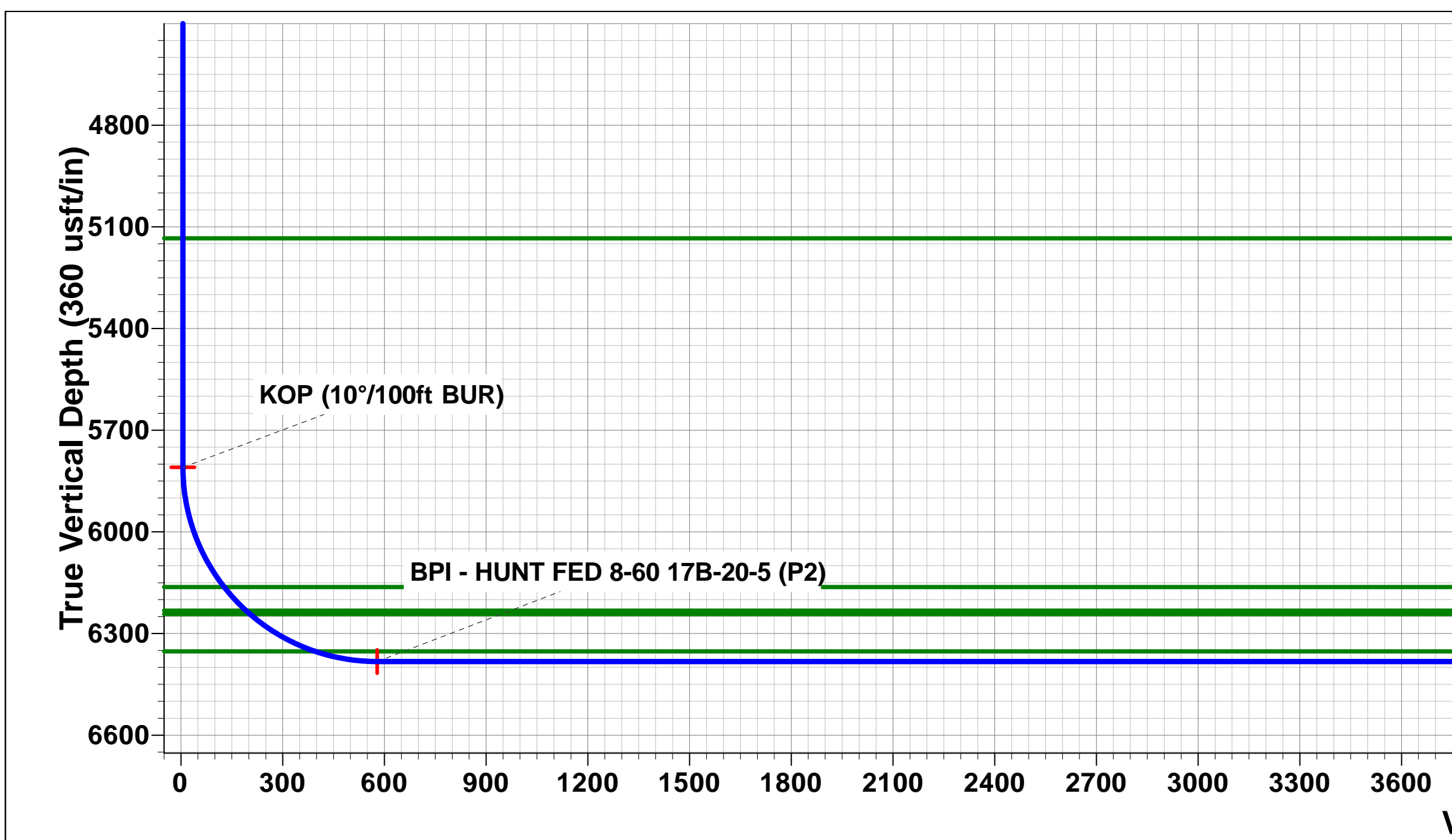
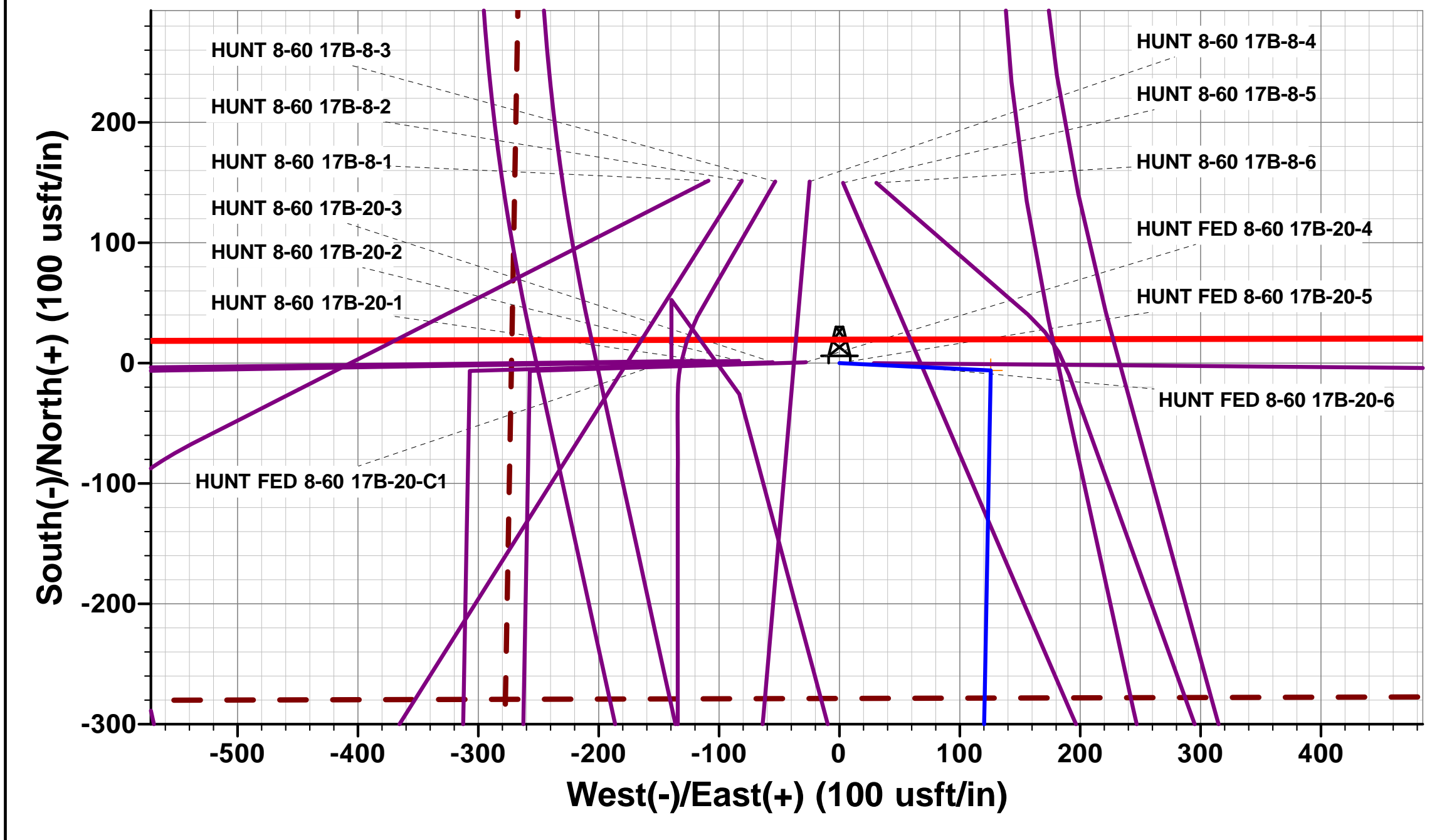
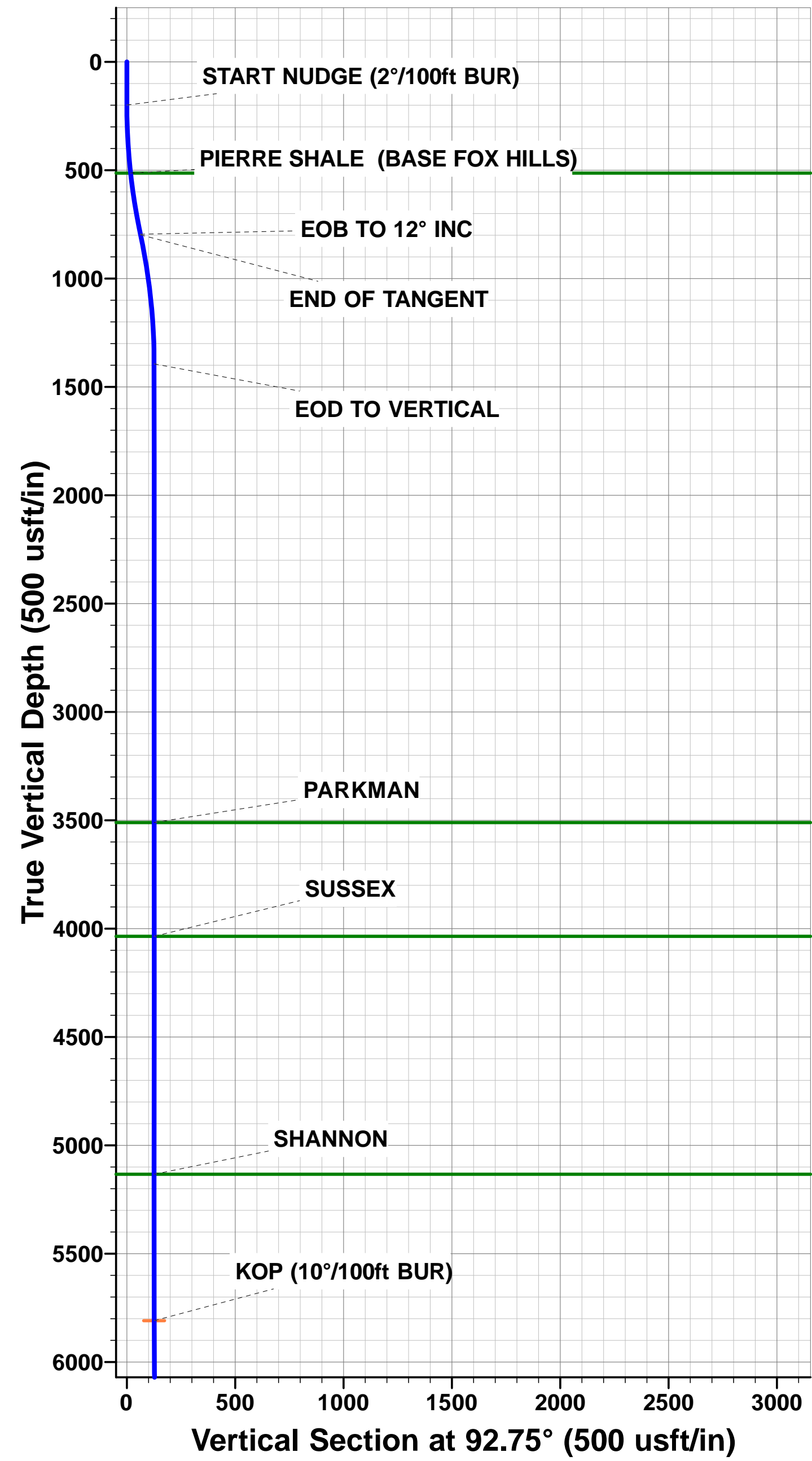
**Plan: PROPOSAL #2**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SW NE SEC. 17 T8N R60W 6th P.M.  
Well: HUNT FED 8-60 17B-20-5  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #2

ANNOTATIONS										PROPOSED LOCAL COORDINATES:  SHL: 2366ft FNL & 2363ft FEL of Sec 17  SHL: 2366ft FNL & 2363ft FEL Sec 17  BPI: 2345ft FSL & 2238ft FEL Sec 17  EPI: 300ft FSL & 2224ft FEL Sec 20  BHL: 200ft FSL & 2224ft FEL of Sec 20
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: 2366ft FNL & 2363ft FEL of Sec 17		
200.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)		
795.62	800.00	12.00	92.75	-3.01	62.53	2.84	62.60	EOB TO 12° INC		
798.82	803.27	12.00	92.75	-3.04	63.21	2.87	63.28	END OF TANGENT		
1394.44	1403.27	0.00	0.00	-6.05	125.74	5.71	125.89	EOD TO VERTICAL		
5809.60	5818.43	0.00	0.00	-6.05	125.74	5.71	125.89	KOP (10°/100ft BUR)		
6382.60	6718.45	90.00	181.06	-578.91	115.14	578.59	698.84	BPI: 2345ft FSL & 2238ft FEL of Sec 17		
6382.60	14055.42	90.00	181.05	-7914.63	-20.26	7914.66	8035.81	EPI: 300ft FSL & 2224ft FEL of Sec 20		
6382.60	14058.89	90.00	180.95	-7918.10	-20.32	7918.13	8039.28	EOT TO 180.95° AZ		
6382.60	14155.62	90.00	180.95	-8014.82	-21.92	8014.85	8136.01	BHL: 200ft FSL & 2224ft FEL of Sec 20		
WELLBORE TARGET DETAILS (LAT/LONG)										
Name					TVD	+N/-S	+E/-W	Latitude	Longitude	
KOP - HUNT FED 8-60 17B-20-5 (P2)					5809.60	-6.05	125.74	40.663050	-104.113797	
BHL - HUNT FED 8-60 17B-20-5 (P2)					6382.60	-8014.82	-21.92	40.641068	-104.114329	
BPI - HUNT FED 8-60 17B-20-5 (P2)					6382.60	-578.91	115.14	40.661478	-104.113835	
EPI - HUNT FED 8-60 17B-20-5 (P2)					6382.60	-7914.63	-20.26	40.641343	-104.114323	



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HUNT FED 8-60 17B-20-5
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Site:</b>	SW NE SEC. 17 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 17B-20-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

<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

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

Well	HUNT FED 8-60 17B-20-5					
Well Position	+N-S	-151.57 usft	Northing:	1,487,401.85 usft	Latitude:	40.663067
	+E-W	108.75 usft	Easting:	3,384,432.39 usft	Longitude:	-104.114250
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,938.60 usft

<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	05/08/2017	7.87	67.16	52,579

<b>Design</b>	PROPOSAL #2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	180.16

<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
0.00	0.00	0.00	0.00	-4,963.60	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	-4,763.60	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	12.00	92.75	795.62	-4,167.98	-3.01	62.53	2.00	2.00	0.00	92.75	
803.27	12.00	92.75	798.82	-4,164.78	-3.04	63.21	0.00	0.00	0.00	0.00	
1,403.27	0.00	0.00	1,394.45	-3,569.15	-6.05	125.74	2.00	-2.00	0.00	180.00	
5,818.43	0.00	0.00	5,809.60	846.00	-6.05	125.74	0.00	0.00	0.00	0.00	KOP - HUNT FED 8
6,718.45	90.00	181.06	6,382.60	1,419.00	-578.91	115.14	10.00	10.00	-19.88	181.06	BPI - HUNT FED 8-
14,055.42	90.00	181.05	6,382.60	1,419.00	-7,914.63	-20.26	0.00	0.00	0.00	-33.59	EPI - HUNT FED 8-
14,058.89	90.00	180.95	6,382.60	1,419.00	-7,918.10	-20.32	3.00	-0.13	-3.00	-92.41	
14,155.62	90.00	180.95	6,382.60	1,419.00	-8,014.82	-21.92	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 17B-20-5
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Site:</b>	SW NE SEC. 17 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 17B-20-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
<b>SHL: 2366ft FNL &amp; 2363ft FEL of Sec 17</b>										
0.00	0.00	0.00	0.00	4,963.60	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,863.60	0.00	0.00	0.00	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
200.00	0.00	0.00	200.00	4,763.60	0.00	0.00	0.00	0.00	0.00	0.00
300.00	2.00	92.75	299.98	4,663.62	-0.08	1.74	0.08	2.00	2.00	0.00
400.00	4.00	92.75	399.84	4,563.76	-0.34	6.97	0.32	2.00	2.00	0.00
500.00	6.00	92.75	499.45	4,464.15	-0.75	15.68	0.71	2.00	2.00	0.00
<b>PIERRE SHALE (BASE FOX HILLS)</b>										
514.23	6.28	92.75	513.60	4,450.00	-0.83	17.20	0.78	2.00	2.00	0.00
600.00	8.00	92.75	598.70	4,364.90	-1.34	27.85	1.26	2.00	2.00	0.00
700.00	10.00	92.75	697.47	4,266.13	-2.09	43.47	1.97	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
800.00	12.00	92.75	795.62	4,167.98	-3.01	62.53	2.84	2.00	2.00	0.00
<b>END OF TANGENT</b>										
803.27	12.00	92.75	798.82	4,164.78	-3.04	63.21	2.87	0.00	0.00	0.00
900.00	10.07	92.75	893.76	4,069.84	-3.93	81.70	3.71	2.00	-2.00	0.00
1,000.00	8.07	92.75	992.51	3,971.09	-4.69	97.44	4.42	2.00	-2.00	0.00
1,100.00	6.07	92.75	1,091.74	3,871.86	-5.28	109.72	4.98	2.00	-2.00	0.00
1,200.00	4.07	92.75	1,191.35	3,772.25	-5.70	118.54	5.38	2.00	-2.00	0.00
1,300.00	2.07	92.75	1,291.20	3,672.40	-5.96	123.88	5.62	2.00	-2.00	0.00
1,400.00	0.07	92.75	1,391.17	3,572.43	-6.05	125.74	5.71	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
1,403.27	0.00	0.00	1,394.44	3,569.16	-6.05	125.74	5.71	2.00	-2.00	-2,836.53
1,500.00	0.00	0.00	1,491.17	3,472.43	-6.05	125.74	5.71	0.00	0.00	0.00
1,600.00	0.00	0.00	1,591.17	3,372.43	-6.05	125.74	5.71	0.00	0.00	0.00
1,700.00	0.00	0.00	1,691.17	3,272.43	-6.05	125.74	5.71	0.00	0.00	0.00
1,800.00	0.00	0.00	1,791.17	3,172.43	-6.05	125.74	5.71	0.00	0.00	0.00
1,900.00	0.00	0.00	1,891.17	3,072.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,000.00	0.00	0.00	1,991.17	2,972.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,100.00	0.00	0.00	2,091.17	2,872.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,200.00	0.00	0.00	2,191.17	2,772.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,300.00	0.00	0.00	2,291.17	2,672.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,400.00	0.00	0.00	2,391.17	2,572.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,500.00	0.00	0.00	2,491.17	2,472.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,600.00	0.00	0.00	2,591.17	2,372.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,700.00	0.00	0.00	2,691.17	2,272.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,800.00	0.00	0.00	2,791.17	2,172.43	-6.05	125.74	5.71	0.00	0.00	0.00
2,900.00	0.00	0.00	2,891.17	2,072.43	-6.05	125.74	5.71	0.00	0.00	0.00
3,000.00	0.00	0.00	2,991.17	1,972.43	-6.05	125.74	5.71	0.00	0.00	0.00
3,100.00	0.00	0.00	3,091.17	1,872.43	-6.05	125.74	5.71	0.00	0.00	0.00
3,200.00	0.00	0.00	3,191.17	1,772.43	-6.05	125.74	5.71	0.00	0.00	0.00
3,300.00	0.00	0.00	3,291.17	1,672.43	-6.05	125.74	5.71	0.00	0.00	0.00
3,400.00	0.00	0.00	3,391.17	1,572.43	-6.05	125.74	5.71	0.00	0.00	0.00
3,500.00	0.00	0.00	3,491.17	1,472.43	-6.05	125.74	5.71	0.00	0.00	0.00
<b>PARKMAN</b>										
3,519.43	0.00	0.00	3,510.60	1,453.00	-6.05	125.74	5.71	0.00	0.00	0.00
3,600.00	0.00	0.00	3,591.17	1,372.43	-6.05	125.74	5.71	0.00	0.00	0.00
3,700.00	0.00	0.00	3,691.17	1,272.43	-6.05	125.74	5.71	0.00	0.00	0.00
3,800.00	0.00	0.00	3,791.17	1,172.43	-6.05	125.74	5.71	0.00	0.00	0.00
3,900.00	0.00	0.00	3,891.17	1,072.43	-6.05	125.74	5.71	0.00	0.00	0.00
4,000.00	0.00	0.00	3,991.17	972.43	-6.05	125.74	5.71	0.00	0.00	0.00
<b>SUSSEX</b>										



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HUNT FED 8-60 17B-20-5
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Site:</b>	SW NE SEC. 17 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 17B-20-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
<b>4,044.43</b>	<b>0.00</b>	<b>0.00</b>	<b>4,035.60</b>	<b>928.00</b>	<b>-6.05</b>	<b>125.74</b>	<b>5.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,100.00	0.00	0.00	4,091.17	872.43	-6.05	125.74	5.71	0.00	0.00	0.00
4,200.00	0.00	0.00	4,191.17	772.43	-6.05	125.74	5.71	0.00	0.00	0.00
4,300.00	0.00	0.00	4,291.17	672.43	-6.05	125.74	5.71	0.00	0.00	0.00
4,400.00	0.00	0.00	4,391.17	572.43	-6.05	125.74	5.71	0.00	0.00	0.00
4,500.00	0.00	0.00	4,491.17	472.43	-6.05	125.74	5.71	0.00	0.00	0.00
4,600.00	0.00	0.00	4,591.17	372.43	-6.05	125.74	5.71	0.00	0.00	0.00
4,700.00	0.00	0.00	4,691.17	272.43	-6.05	125.74	5.71	0.00	0.00	0.00
4,800.00	0.00	0.00	4,791.17	172.43	-6.05	125.74	5.71	0.00	0.00	0.00
4,900.00	0.00	0.00	4,891.17	72.43	-6.05	125.74	5.71	0.00	0.00	0.00
5,000.00	0.00	0.00	4,991.17	-27.57	-6.05	125.74	5.71	0.00	0.00	0.00
5,100.00	0.00	0.00	5,091.17	-127.57	-6.05	125.74	5.71	0.00	0.00	0.00
<b>SHANNON</b>										
<b>5,142.43</b>	<b>0.00</b>	<b>0.00</b>	<b>5,133.60</b>	<b>-170.00</b>	<b>-6.05</b>	<b>125.74</b>	<b>5.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,200.00	0.00	0.00	5,191.17	-227.57	-6.05	125.74	5.71	0.00	0.00	0.00
5,300.00	0.00	0.00	5,291.17	-327.57	-6.05	125.74	5.71	0.00	0.00	0.00
5,400.00	0.00	0.00	5,391.17	-427.57	-6.05	125.74	5.71	0.00	0.00	0.00
5,500.00	0.00	0.00	5,491.17	-527.57	-6.05	125.74	5.71	0.00	0.00	0.00
5,600.00	0.00	0.00	5,591.17	-627.57	-6.05	125.74	5.71	0.00	0.00	0.00
5,700.00	0.00	0.00	5,691.17	-727.57	-6.05	125.74	5.71	0.00	0.00	0.00
5,800.00	0.00	0.00	5,791.17	-827.57	-6.05	125.74	5.71	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>5,818.43</b>	<b>0.00</b>	<b>0.00</b>	<b>5,809.60</b>	<b>-846.00</b>	<b>-6.05</b>	<b>125.74</b>	<b>5.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,900.00	8.16	181.06	5,890.90	-927.30	-11.85	125.63	11.50	10.00	10.00	0.00
6,000.00	18.16	181.06	5,988.15	-1,024.55	-34.57	125.21	34.23	10.00	10.00	0.00
6,100.00	28.16	181.06	6,079.98	-1,116.38	-73.84	124.49	73.50	10.00	10.00	0.00
<b>SHARON SPRINGS SHALE</b>										
<b>6,198.74</b>	<b>38.03</b>	<b>181.06</b>	<b>6,162.60</b>	<b>-1,199.00</b>	<b>-127.68</b>	<b>123.49</b>	<b>127.34</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,200.00	38.15	181.06	6,163.59	-1,199.99	-128.45	123.47	128.11	10.00	10.00	0.00
<b>NIORARA FORMATION</b>										
<b>6,294.26</b>	<b>47.58</b>	<b>181.06</b>	<b>6,232.60</b>	<b>-1,269.00</b>	<b>-192.50</b>	<b>122.29</b>	<b>192.16</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,300.00	48.15	181.06	6,236.45	-1,272.85	-196.75	122.21	196.42	10.00	10.00	0.00
<b>NIORARA A CHALK</b>										
<b>6,309.30</b>	<b>49.08</b>	<b>181.06</b>	<b>6,242.60</b>	<b>-1,279.00</b>	<b>-203.73</b>	<b>122.08</b>	<b>203.39</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,400.00	58.15	181.06	6,296.34	-1,332.74	-276.66	120.73	276.33	10.00	10.00	0.00
6,500.00	68.15	181.06	6,341.45	-1,377.85	-365.75	119.08	365.43	10.00	10.00	0.00
<b>NIORARA B CHALK</b>										
<b>6,532.25</b>	<b>71.38</b>	<b>181.06</b>	<b>6,352.60</b>	<b>-1,389.00</b>	<b>-396.01</b>	<b>118.52</b>	<b>395.68</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,600.00	78.15	181.06	6,370.39	-1,406.79	-461.32	117.31	461.00	10.00	10.00	0.00
6,700.00	88.15	181.06	6,382.30	-1,418.70	-560.47	115.48	560.15	10.00	10.00	0.00
<b>BPI: 2345ft FSL &amp; 2238ft FEL of Sec 17</b>										
<b>6,718.45</b>	<b>90.00</b>	<b>181.06</b>	<b>6,382.60</b>	<b>-1,419.00</b>	<b>-578.91</b>	<b>115.14</b>	<b>578.59</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,800.00	90.00	181.06	6,382.61	-1,419.01	-660.45	113.63	660.13	0.00	0.00	0.00
6,900.00	90.00	181.06	6,382.61	-1,419.01	-760.43	111.78	760.12	0.00	0.00	0.00
7,000.00	90.00	181.06	6,382.62	-1,419.02	-860.41	109.93	860.11	0.00	0.00	0.00
7,100.00	90.00	181.06	6,382.63	-1,419.03	-960.40	108.08	960.10	0.00	0.00	0.00
7,200.00	90.00	181.06	6,382.63	-1,419.03	-1,060.38	106.23	1,060.08	0.00	0.00	0.00
7,300.00	90.00	181.06	6,382.64	-1,419.04	-1,160.36	104.38	1,160.07	0.00	0.00	0.00
7,400.00	90.00	181.06	6,382.65	-1,419.05	-1,260.34	102.53	1,260.06	0.00	0.00	0.00
7,500.00	90.00	181.06	6,382.65	-1,419.05	-1,360.33	100.68	1,360.05	0.00	0.00	0.00
7,600.00	90.00	181.06	6,382.66	-1,419.06	-1,460.31	98.83	1,460.03	0.00	0.00	0.00
7,700.00	90.00	181.06	6,382.66	-1,419.06	-1,560.29	96.98	1,560.02	0.00	0.00	0.00
7,800.00	90.00	181.06	6,382.67	-1,419.07	-1,660.28	95.13	1,660.01	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 17B-20-5
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Site:</b>	SW NE SEC. 17 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 17B-20-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
7,900.00	90.00	181.06	6,382.67	-1,419.07	-1,760.26	93.28	1,760.00	0.00	0.00	0.00
8,000.00	90.00	181.06	6,382.68	-1,419.08	-1,860.24	91.44	1,859.98	0.00	0.00	0.00
8,100.00	90.00	181.06	6,382.68	-1,419.08	-1,960.22	89.59	1,959.97	0.00	0.00	0.00
8,200.00	90.00	181.06	6,382.69	-1,419.09	-2,060.21	87.74	2,059.96	0.00	0.00	0.00
8,300.00	90.00	181.06	6,382.69	-1,419.09	-2,160.19	85.89	2,159.95	0.00	0.00	0.00
8,400.00	90.00	181.06	6,382.70	-1,419.10	-2,260.17	84.04	2,259.93	0.00	0.00	0.00
8,500.00	90.00	181.06	6,382.70	-1,419.10	-2,360.16	82.19	2,359.92	0.00	0.00	0.00
8,600.00	90.00	181.06	6,382.71	-1,419.11	-2,460.14	80.35	2,459.91	0.00	0.00	0.00
8,700.00	90.00	181.06	6,382.71	-1,419.11	-2,560.12	78.50	2,559.90	0.00	0.00	0.00
8,800.00	90.00	181.06	6,382.71	-1,419.11	-2,660.10	76.65	2,659.88	0.00	0.00	0.00
8,900.00	90.00	181.06	6,382.72	-1,419.12	-2,760.09	74.80	2,759.87	0.00	0.00	0.00
9,000.00	90.00	181.06	6,382.72	-1,419.12	-2,860.07	72.96	2,859.86	0.00	0.00	0.00
9,100.00	90.00	181.06	6,382.72	-1,419.12	-2,960.05	71.11	2,959.85	0.00	0.00	0.00
9,200.00	90.00	181.06	6,382.72	-1,419.12	-3,060.04	69.26	3,059.84	0.00	0.00	0.00
9,300.00	90.00	181.06	6,382.73	-1,419.13	-3,160.02	67.41	3,159.82	0.00	0.00	0.00
9,400.00	90.00	181.06	6,382.73	-1,419.13	-3,260.00	65.57	3,259.81	0.00	0.00	0.00
9,500.00	90.00	181.06	6,382.73	-1,419.13	-3,359.99	63.72	3,359.80	0.00	0.00	0.00
9,600.00	90.00	181.06	6,382.73	-1,419.13	-3,459.97	61.87	3,459.79	0.00	0.00	0.00
9,700.00	90.00	181.06	6,382.73	-1,419.13	-3,559.95	60.03	3,559.77	0.00	0.00	0.00
9,800.00	90.00	181.06	6,382.73	-1,419.13	-3,659.93	58.18	3,659.76	0.00	0.00	0.00
9,900.00	90.00	181.06	6,382.74	-1,419.14	-3,759.92	56.34	3,759.75	0.00	0.00	0.00
10,000.00	90.00	181.06	6,382.74	-1,419.14	-3,859.90	54.49	3,859.74	0.00	0.00	0.00
10,100.00	90.00	181.06	6,382.74	-1,419.14	-3,959.88	52.64	3,959.72	0.00	0.00	0.00
10,200.00	90.00	181.06	6,382.74	-1,419.14	-4,059.87	50.80	4,059.71	0.00	0.00	0.00
10,300.00	90.00	181.06	6,382.74	-1,419.14	-4,159.85	48.95	4,159.70	0.00	0.00	0.00
10,400.00	90.00	181.06	6,382.74	-1,419.14	-4,259.83	47.11	4,259.69	0.00	0.00	0.00
10,500.00	90.00	181.06	6,382.74	-1,419.14	-4,359.81	45.26	4,359.67	0.00	0.00	0.00
10,600.00	90.00	181.06	6,382.74	-1,419.14	-4,459.80	43.42	4,459.66	0.00	0.00	0.00
10,700.00	90.00	181.06	6,382.74	-1,419.14	-4,559.78	41.57	4,559.65	0.00	0.00	0.00
10,800.00	90.00	181.06	6,382.74	-1,419.14	-4,659.76	39.73	4,659.64	0.00	0.00	0.00
10,900.00	90.00	181.06	6,382.74	-1,419.14	-4,759.75	37.88	4,759.63	0.00	0.00	0.00
11,000.00	90.00	181.06	6,382.73	-1,419.13	-4,859.73	36.04	4,859.61	0.00	0.00	0.00
11,100.00	90.00	181.06	6,382.73	-1,419.13	-4,959.71	34.19	4,959.60	0.00	0.00	0.00
11,200.00	90.00	181.06	6,382.73	-1,419.13	-5,059.70	32.35	5,059.59	0.00	0.00	0.00
11,300.00	90.00	181.06	6,382.73	-1,419.13	-5,159.68	30.50	5,159.58	0.00	0.00	0.00
11,400.00	90.00	181.06	6,382.73	-1,419.13	-5,259.66	28.66	5,259.56	0.00	0.00	0.00
11,500.00	90.00	181.06	6,382.73	-1,419.13	-5,359.64	26.82	5,359.55	0.00	0.00	0.00
11,600.00	90.00	181.06	6,382.72	-1,419.12	-5,459.63	24.97	5,459.54	0.00	0.00	0.00
11,700.00	90.00	181.06	6,382.72	-1,419.12	-5,559.61	23.13	5,559.53	0.00	0.00	0.00
11,800.00	90.00	181.06	6,382.72	-1,419.12	-5,659.59	21.28	5,659.51	0.00	0.00	0.00
11,900.00	90.00	181.06	6,382.71	-1,419.11	-5,759.58	19.44	5,759.50	0.00	0.00	0.00
12,000.00	90.00	181.06	6,382.71	-1,419.11	-5,859.56	17.60	5,859.49	0.00	0.00	0.00
12,100.00	90.00	181.06	6,382.71	-1,419.11	-5,959.54	15.75	5,959.48	0.00	0.00	0.00
12,200.00	90.00	181.06	6,382.70	-1,419.10	-6,059.53	13.91	6,059.46	0.00	0.00	0.00
12,300.00	90.00	181.06	6,382.70	-1,419.10	-6,159.51	12.07	6,159.45	0.00	0.00	0.00
12,400.00	90.00	181.06	6,382.70	-1,419.10	-6,259.49	10.23	6,259.44	0.00	0.00	0.00
12,500.00	90.00	181.06	6,382.69	-1,419.09	-6,359.47	8.38	6,359.43	0.00	0.00	0.00
12,600.00	90.00	181.06	6,382.69	-1,419.09	-6,459.46	6.54	6,459.42	0.00	0.00	0.00
12,700.00	90.00	181.06	6,382.68	-1,419.08	-6,559.44	4.70	6,559.40	0.00	0.00	0.00
12,800.00	90.00	181.06	6,382.68	-1,419.08	-6,659.42	2.86	6,659.39	0.00	0.00	0.00
12,900.00	90.00	181.06	6,382.67	-1,419.07	-6,759.41	1.01	6,759.38	0.00	0.00	0.00
13,000.00	90.00	181.06	6,382.67	-1,419.07	-6,859.39	-0.83	6,859.37	0.00	0.00	0.00
13,100.00	90.00	181.06	6,382.66	-1,419.06	-6,959.37	-2.67	6,959.35	0.00	0.00	0.00
13,200.00	90.00	181.06	6,382.66	-1,419.06	-7,059.36	-4.51	7,059.34	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 17B-20-5
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4963.60usft (Original Well Elev)
<b>Site:</b>	SW NE SEC. 17 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	HUNT FED 8-60 17B-20-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
13,300.00	90.00	181.06	6,382.65	-1,419.05	-7,159.34	-6.35	7,159.33	0.00	0.00	0.00
13,400.00	90.00	181.06	6,382.64	-1,419.04	-7,259.32	-8.19	7,259.32	0.00	0.00	0.00
13,500.00	90.00	181.05	6,382.64	-1,419.04	-7,359.31	-10.04	7,359.30	0.00	0.00	0.00
13,600.00	90.00	181.05	6,382.63	-1,419.03	-7,459.29	-11.88	7,459.29	0.00	0.00	0.00
13,700.00	90.00	181.05	6,382.63	-1,419.03	-7,559.27	-13.72	7,559.28	0.00	0.00	0.00
13,800.00	90.00	181.05	6,382.62	-1,419.02	-7,659.25	-15.56	7,659.27	0.00	0.00	0.00
13,900.00	90.00	181.05	6,382.61	-1,419.01	-7,759.24	-17.40	7,759.26	0.00	0.00	0.00
14,000.00	90.00	181.05	6,382.60	-1,419.00	-7,859.22	-19.24	7,859.24	0.00	0.00	0.00
<b>EPI: 300ft FSL &amp; 2224ft FEL of Sec 20</b>										
<b>14,055.42</b>	<b>90.00</b>	<b>181.05</b>	<b>6,382.60</b>	<b>-1,419.00</b>	<b>-7,914.63</b>	<b>-20.26</b>	<b>7,914.66</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>EOT TO 180.95° AZ</b>										
<b>14,058.89</b>	<b>90.00</b>	<b>180.95</b>	<b>6,382.60</b>	<b>-1,419.00</b>	<b>-7,918.10</b>	<b>-20.32</b>	<b>7,918.13</b>	<b>3.00</b>	<b>-0.13</b>	<b>-3.00</b>
14,100.00	90.00	180.95	6,382.60	-1,419.00	-7,959.20	-21.00	7,959.23	0.00	0.00	0.00
<b>BHL: 200ft FSL &amp; 2224ft FEL of Sec 20</b>										
<b>14,155.62</b>	<b>90.00</b>	<b>180.95</b>	<b>6,382.60</b>	<b>-1,419.00</b>	<b>-8,014.82</b>	<b>-21.92</b>	<b>8,014.85</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
514.23	513.60	PIERRE SHALE (BASE FOX HILLS				
3,519.43	3,510.60	PARKMAN				
4,044.43	4,035.60	SUSSEX				
5,142.43	5,133.60	SHANNON				
6,198.74	6,162.60	SHARON SPRINGS SHALE				
6,294.26	6,232.60	NIOBRARA FORMATION				
6,309.30	6,242.60	NIOBRARA A CHALK				
6,532.25	6,352.60	NIOBRARA B 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: 2366ft FNL & 2363ft FEL of Sec 17	
200.00	200.00	0.00	0.00	START NUDGE (2°/100ft BUR)	
800.00	795.62	-3.01	62.53	EOB TO 12° INC	
803.27	798.82	-3.04	63.21	END OF TANGENT	
1,403.27	1,394.44	-6.05	125.74	EOD TO VERTICAL	
5,818.43	5,809.60	-6.05	125.74	KOP (10°/100ft BUR)	
6,718.45	6,382.60	-578.91	115.14	BPI: 2345ft FSL & 2238ft FEL of Sec 17	
14,055.42	6,382.60	-7,914.63	-20.26	EPI: 300ft FSL & 2224ft FEL of Sec 20	
14,058.89	6,382.60	-7,918.10	-20.32	EOT TO 180.95° AZ	
14,155.62	6,382.60	-8,014.82	-21.92	BHL: 200ft FSL & 2224ft FEL of Sec 20	