

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

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

**SW SW SEC. 20 T8N R59W 6th P.M.**

**WADE 8-59 20A-10**

**ORIGINAL WELLBORE**

**10 December, 2017**

**Plan: PROPOSAL #1**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SW SW SEC. 20 T8N R59W 6th P.M.  
Well: WADE 8-59 20A-10  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

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: 460ft FSL & 675ft FWL of Sec 20		
100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)		
1414.50	1465.64	27.31	103.71	-75.70	310.28	55.64	319.38	EOB TO 27.31° INC		
4033.04	4412.73	27.31	103.71	-396.22	1624.01	291.22	1671.65	END OF TANGENT		
5347.54	5778.37	0.00	0.00	-471.92	1934.29	346.87	1991.03	EOD TO VERTICAL		
5447.54	5878.37	0.00	0.00	-471.92	1934.29	346.87	1991.03	KOP (10°/100ft BUR)		
6020.50	6778.38	90.00	0.67	101.00	1940.99	873.99	2563.99	BPI: 600ft FSL & 2615ft FWL of Sec 20		
6020.50	10906.85	90.00	0.66	4229.20	1988.94	4672.06	6692.46	EPI: 600ft FNL & 2614ft FWL of Sec 20		
6020.50	11206.71	90.00	0.60	4529.04	1992.25	4947.85	6992.32	BHL: 300ft FNL & 2615ft FWL of Sec 20		

PROPOSED LOCAL COORDINATES:

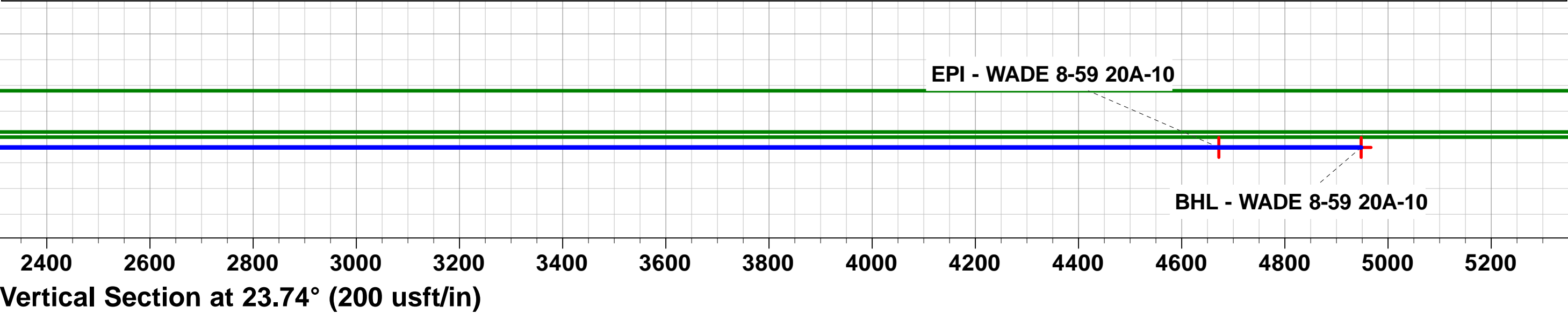
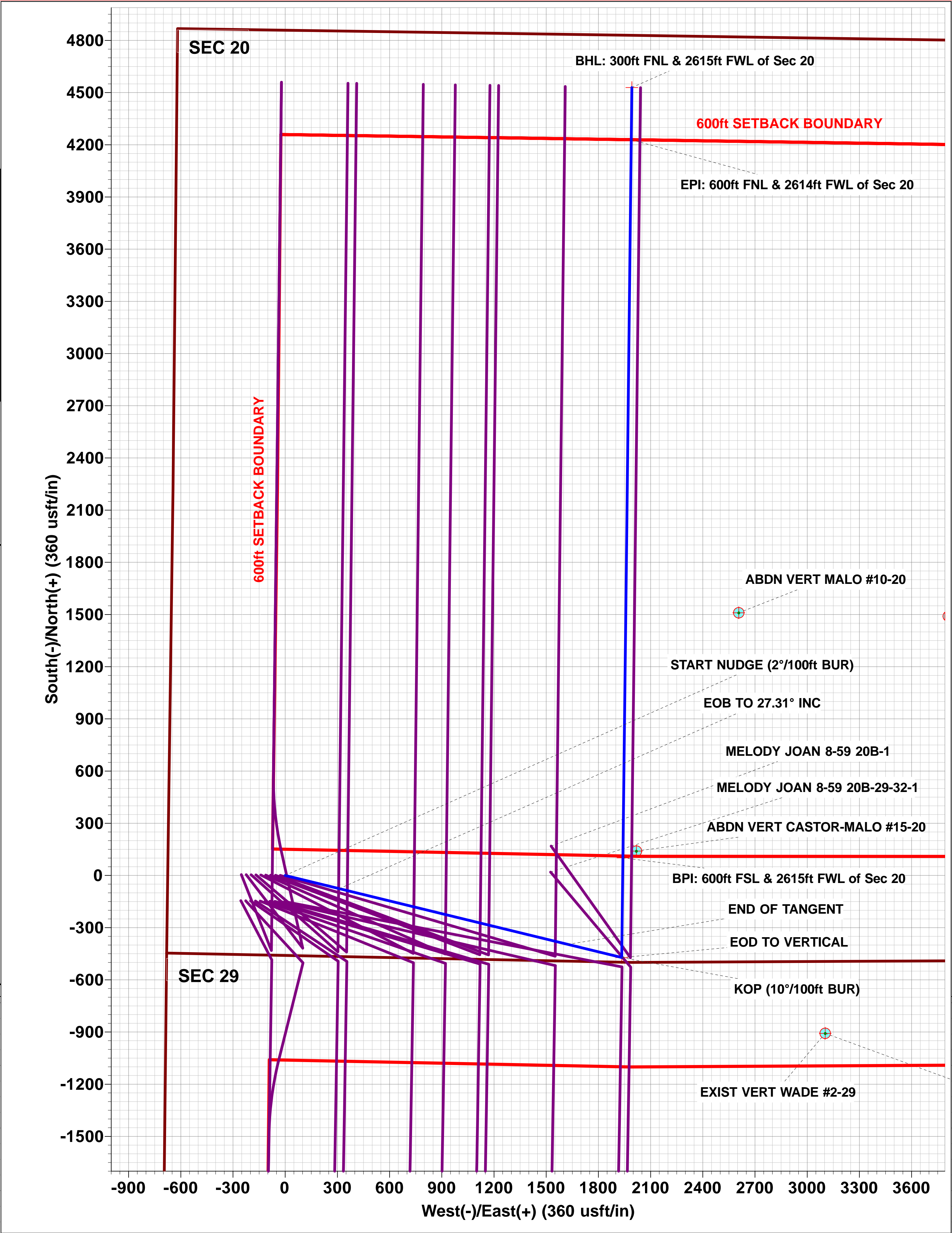
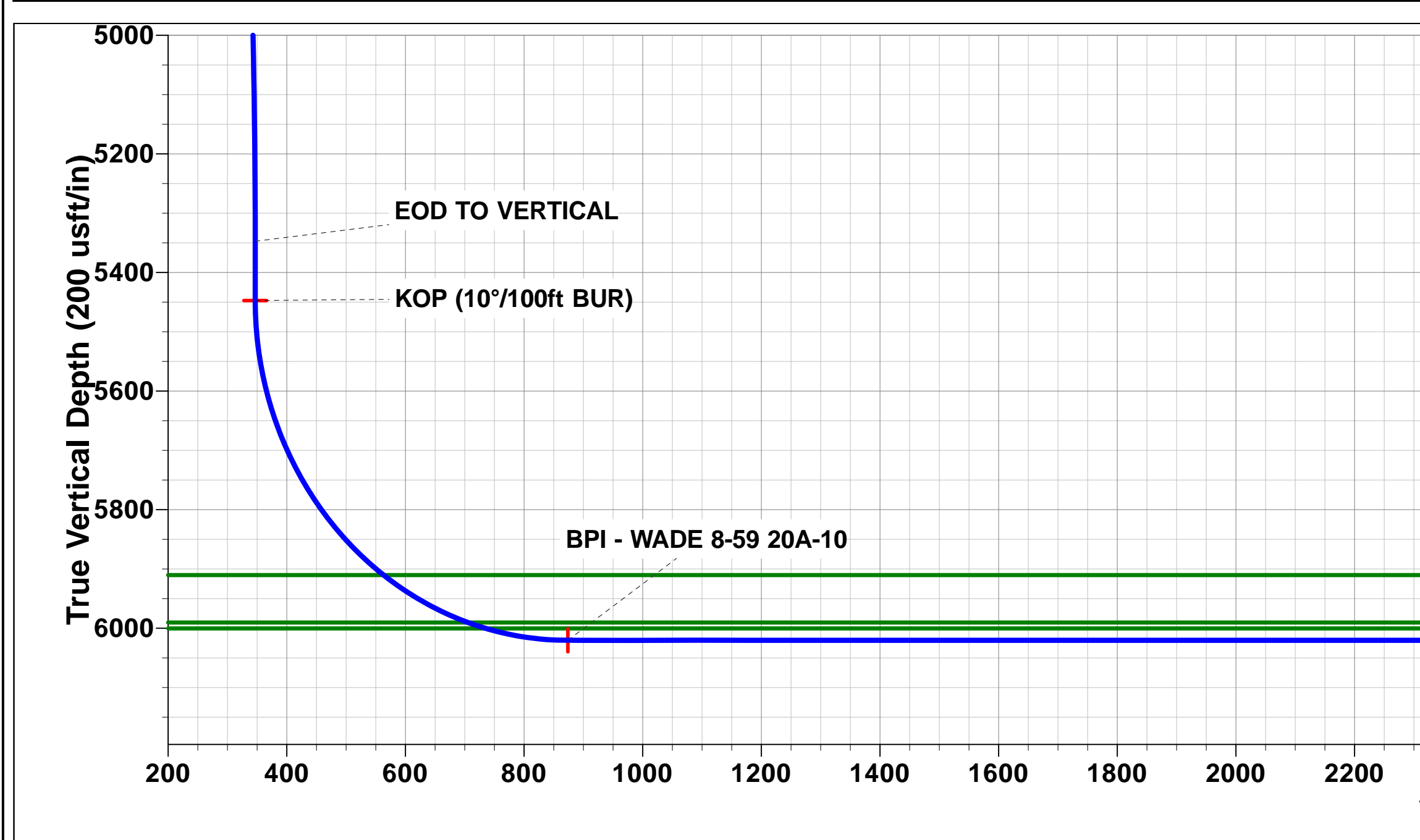
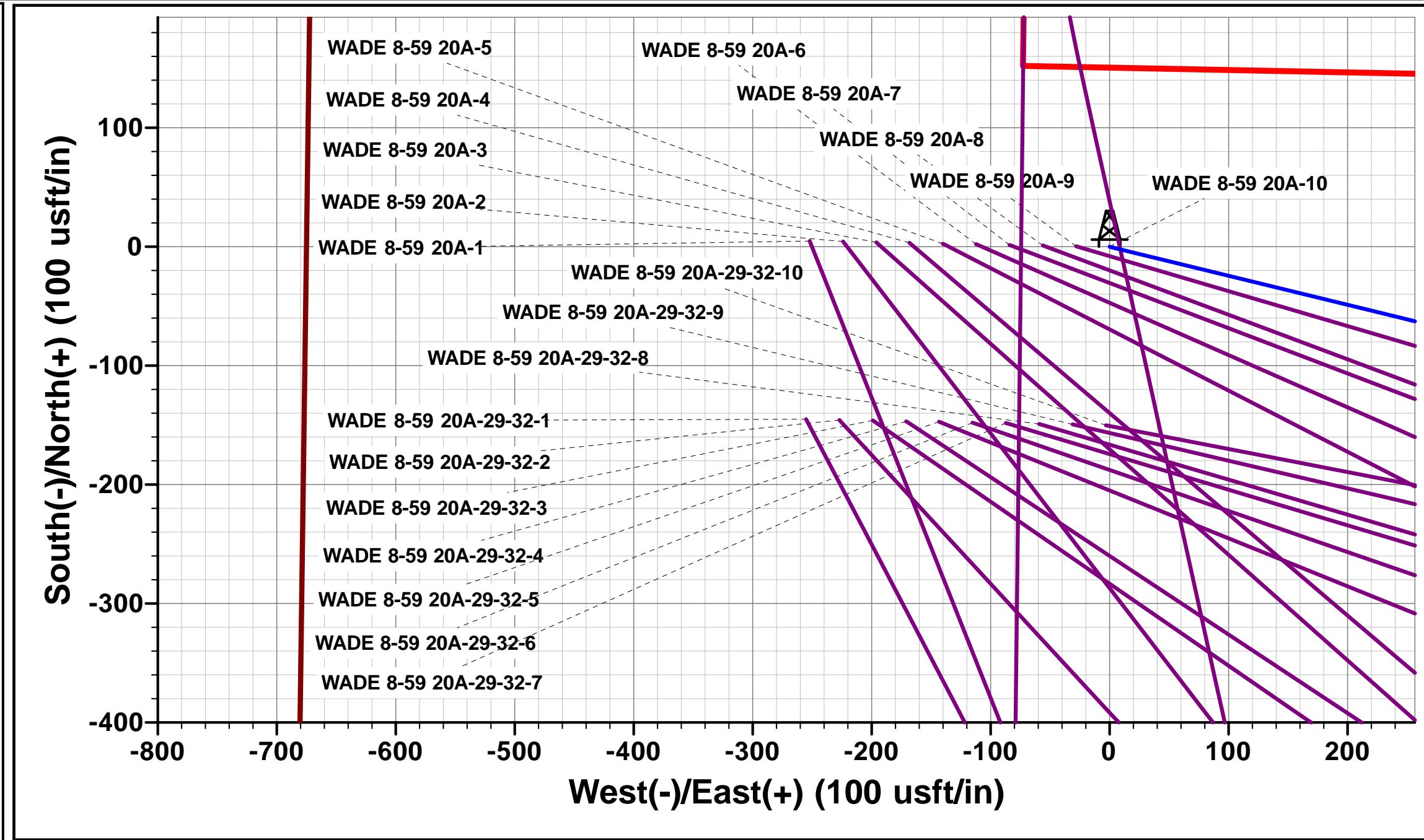
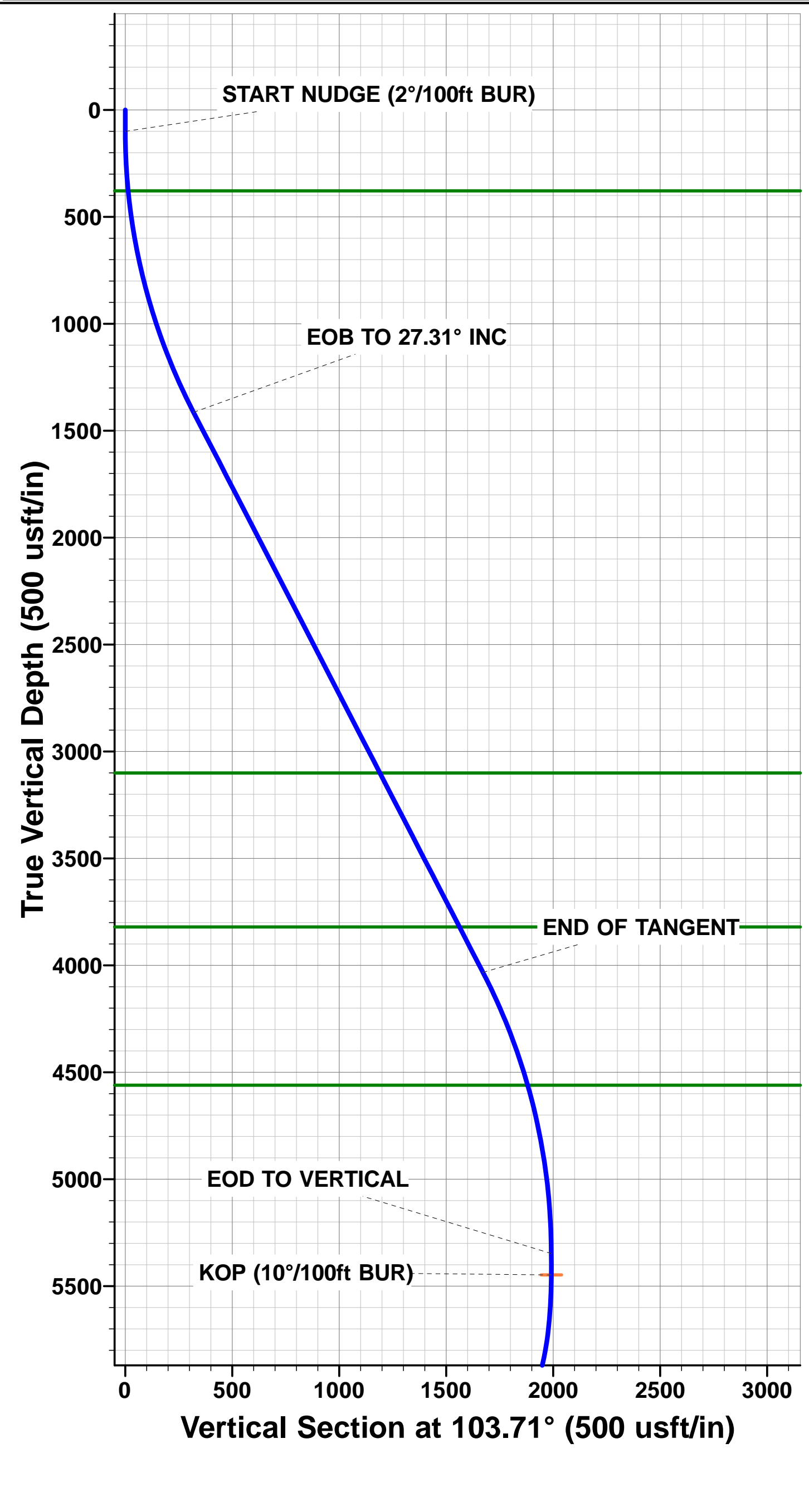
SHL: 460ft FSL & 675ft FWL Sec 20

BPI: 600ft FSL & 2615ft FWL Sec 20

EPI: 600ft FNL & 2614ft FWL Sec 20

BHL: 300ft FNL & 2615ft FWL of Sec 20

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - WADE 8-59 20A-10	5447.54	-471.92	1934.29	40.640415	-104.001162
BPI - WADE 8-59 20A-10	6020.50	101.00	1940.99	40.641988	-104.001138
EPI - WADE 8-59 20A-10	6020.50	4229.20	1988.94	40.653319	-104.000964
BHL - WADE 8-59 20A-10	6020.50	4529.04	1992.25	40.654142	-104.000952



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WADE 8-59 20A-10
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 20 T8N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WADE 8-59 20A-10	<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>	SW SW SEC. 20 T8N R59W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,480,100.70 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,413,747.65 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	1.10000 ft
		<b>Latitude:</b>	40.641724
		<b>Longitude:</b>	-104.009040
		<b>Grid Convergence:</b>	0.96 °

Well	WADE 8-59 20A-10					
Well Position	+N/-S	-4.74 usft	Northing:	1,480,100.19 usft	Latitude:	40.641711
	+E/-W	251.99 usft	Easting:	3,413,999.68 usft	Longitude:	-104.008132
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,865.50 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	10/12/2017	7.77	67.15	52,539

<b>Design</b>	PROPOSAL #1				
<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>	
	6,020.50	0.00	0.00	23.74	

<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	-4,890.50	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	-4,790.50	0.00	0.00	0.00	0.00	0.00	0.00	
1,465.64	27.31	103.71	1,414.50	-3,476.00	-75.70	310.28	2.00	2.00	0.00	103.71	
4,412.73	27.31	103.71	4,033.04	-857.46	-396.22	1,624.01	0.00	0.00	0.00	0.00	
5,778.37	0.00	0.00	5,347.54	457.04	-471.92	1,934.29	2.00	-2.00	0.00	180.00	
5,878.37	0.00	0.00	5,447.54	557.04	-471.92	1,934.29	0.00	0.00	0.00	0.00	KOP - WADE 8-59 2
6,778.38	90.00	0.67	6,020.50	1,130.00	101.00	1,940.99	10.00	10.00	0.07	0.67	BPI - WADE 8-59 2
10,906.85	90.00	0.66	6,020.50	1,130.00	4,229.20	1,988.94	0.00	0.00	0.00	-93.01	EPI - WADE 8-59 2
11,206.71	90.00	0.60	6,020.50	1,130.00	4,529.04	1,992.25	0.02	0.00	-0.02	-89.58	BHL - WADE 8-59 2

## Planning Report



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<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 20 T8N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WADE 8-59 20A-10	<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: 460ft FSL &amp; 675ft FWL of Sec 20</b>										
0.00	0.00	0.00	0.00	4,890.50	0.00	0.00	0.00	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
100.00	0.00	0.00	100.00	4,790.50	0.00	0.00	0.00	0.00	0.00	0.00
200.00	2.00	103.71	199.98	4,690.52	-0.41	1.70	0.30	2.00	2.00	0.00
300.00	4.00	103.71	299.84	4,590.66	-1.65	6.78	1.22	2.00	2.00	0.00
<b>PIERRE SHALE (BASE OF FOX HILLS)</b>										
378.94	5.58	103.71	378.50	4,512.00	-3.22	13.18	2.36	2.00	2.00	0.00
400.00	6.00	103.71	399.45	4,491.05	-3.72	15.25	2.73	2.00	2.00	0.00
500.00	8.00	103.71	498.70	4,391.80	-6.61	27.09	4.86	2.00	2.00	0.00
600.00	10.00	103.71	597.47	4,293.03	-10.32	42.28	7.58	2.00	2.00	0.00
700.00	12.00	103.71	695.62	4,194.88	-14.84	60.82	10.91	2.00	2.00	0.00
800.00	14.00	103.71	793.06	4,097.44	-20.17	82.67	14.83	2.00	2.00	0.00
900.00	16.00	103.71	889.64	4,000.86	-26.30	107.81	19.33	2.00	2.00	0.00
1,000.00	18.00	103.71	985.27	3,905.23	-33.23	136.22	24.43	2.00	2.00	0.00
1,100.00	20.00	103.71	1,079.82	3,810.68	-40.95	167.84	30.10	2.00	2.00	0.00
1,200.00	22.00	103.71	1,173.17	3,717.33	-49.44	202.66	36.34	2.00	2.00	0.00
1,300.00	24.00	103.71	1,265.21	3,625.29	-58.70	240.62	43.15	2.00	2.00	0.00
1,400.00	26.00	103.71	1,355.84	3,534.66	-68.72	281.67	50.51	2.00	2.00	0.00
<b>EOB TO 27.31° INC</b>										
1,465.64	27.31	103.71	1,414.50	3,476.00	-75.70	310.28	55.64	2.00	2.00	0.00
1,500.00	27.31	103.71	1,445.03	3,445.47	-79.44	325.60	58.39	0.00	0.00	0.00
1,600.00	27.31	103.71	1,533.88	3,356.62	-90.31	370.17	66.38	0.00	0.00	0.00
1,700.00	27.31	103.71	1,622.74	3,267.76	-101.19	414.75	74.38	0.00	0.00	0.00
1,800.00	27.31	103.71	1,711.59	3,178.91	-112.07	459.33	82.37	0.00	0.00	0.00
1,900.00	27.31	103.71	1,800.44	3,090.06	-122.94	503.91	90.36	0.00	0.00	0.00
2,000.00	27.31	103.71	1,889.29	3,001.21	-133.82	548.48	98.36	0.00	0.00	0.00
2,100.00	27.31	103.71	1,978.14	2,912.36	-144.69	593.06	106.35	0.00	0.00	0.00
2,200.00	27.31	103.71	2,066.99	2,823.51	-155.57	637.64	114.34	0.00	0.00	0.00
2,300.00	27.31	103.71	2,155.84	2,734.66	-166.44	682.21	122.34	0.00	0.00	0.00
2,400.00	27.31	103.71	2,244.70	2,645.80	-177.32	726.79	130.33	0.00	0.00	0.00
2,500.00	27.31	103.71	2,333.55	2,556.95	-188.20	771.37	138.33	0.00	0.00	0.00
2,600.00	27.31	103.71	2,422.40	2,468.10	-199.07	815.95	146.32	0.00	0.00	0.00
2,700.00	27.31	103.71	2,511.25	2,379.25	-209.95	860.52	154.31	0.00	0.00	0.00
2,800.00	27.31	103.71	2,600.10	2,290.40	-220.82	905.10	162.31	0.00	0.00	0.00
2,900.00	27.31	103.71	2,688.95	2,201.55	-231.70	949.68	170.30	0.00	0.00	0.00
3,000.00	27.31	103.71	2,777.81	2,112.69	-242.57	994.25	178.29	0.00	0.00	0.00
3,100.00	27.31	103.71	2,866.66	2,023.84	-253.45	1,038.83	186.29	0.00	0.00	0.00
3,200.00	27.31	103.71	2,955.51	1,934.99	-264.33	1,083.41	194.28	0.00	0.00	0.00
3,300.00	27.31	103.71	3,044.36	1,846.14	-275.20	1,127.99	202.28	0.00	0.00	0.00
<b>PARKMAN</b>										
3,363.18	27.31	103.71	3,100.50	1,790.00	-282.07	1,156.15	207.33	0.00	0.00	0.00
3,400.00	27.31	103.71	3,133.21	1,757.29	-286.08	1,172.56	210.27	0.00	0.00	0.00
3,500.00	27.31	103.71	3,222.06	1,668.44	-296.95	1,217.14	218.26	0.00	0.00	0.00
3,600.00	27.31	103.71	3,310.91	1,579.59	-307.83	1,261.72	226.26	0.00	0.00	0.00
3,700.00	27.31	103.71	3,399.77	1,490.73	-318.70	1,306.29	234.25	0.00	0.00	0.00
3,800.00	27.31	103.71	3,488.62	1,401.88	-329.58	1,350.87	242.24	0.00	0.00	0.00
3,900.00	27.31	103.71	3,577.47	1,313.03	-340.46	1,395.45	250.24	0.00	0.00	0.00
4,000.00	27.31	103.71	3,666.32	1,224.18	-351.33	1,440.03	258.23	0.00	0.00	0.00
4,100.00	27.31	103.71	3,755.17	1,135.33	-362.21	1,484.60	266.23	0.00	0.00	0.00
<b>SUSSEX</b>										
4,173.52	27.31	103.71	3,820.50	1,070.00	-370.20	1,517.38	272.10	0.00	0.00	0.00
4,200.00	27.31	103.71	3,844.02	1,046.48	-373.08	1,529.18	274.22	0.00	0.00	0.00



# Planning Report



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<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 20 T8N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WADE 8-59 20A-10	<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)
4,300.00	27.31	103.71	3,932.88	957.62	-383.96	1,573.76	282.21	0.00	0.00	0.00
4,400.00	27.31	103.71	4,021.73	868.77	-394.83	1,618.33	290.21	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>4,412.73</b>	<b>27.31</b>	<b>103.71</b>	<b>4,033.04</b>	<b>857.46</b>	<b>-396.22</b>	<b>1,624.01</b>	<b>291.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,500.00	25.57	103.71	4,111.18	779.32	-405.43	1,661.76	297.99	2.00	-2.00	0.00
4,600.00	23.57	103.71	4,202.12	688.38	-415.28	1,702.15	305.24	2.00	-2.00	0.00
4,700.00	21.57	103.71	4,294.46	596.04	-424.38	1,739.43	311.92	2.00	-2.00	0.00
4,800.00	19.57	103.71	4,388.08	502.42	-432.71	1,773.56	318.04	2.00	-2.00	0.00
4,900.00	17.57	103.71	4,482.87	407.63	-440.25	1,804.49	323.59	2.00	-2.00	0.00
<b>SHANNON</b>										
<b>4,981.08</b>	<b>15.95</b>	<b>103.71</b>	<b>4,560.50</b>	<b>330.00</b>	<b>-445.79</b>	<b>1,827.20</b>	<b>327.66</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,000.00	15.57	103.71	4,578.71	311.79	-447.01	1,832.19	328.56	2.00	-2.00	0.00
5,100.00	13.57	103.71	4,675.49	215.01	-452.97	1,856.63	332.94	2.00	-2.00	0.00
5,200.00	11.57	103.71	4,773.09	117.41	-458.13	1,877.76	336.73	2.00	-2.00	0.00
5,300.00	9.57	103.71	4,871.39	19.11	-462.48	1,895.58	339.92	2.00	-2.00	0.00
5,400.00	7.57	103.71	4,970.27	-79.77	-466.01	1,910.05	342.52	2.00	-2.00	0.00
5,500.00	5.57	103.71	5,069.61	-179.11	-468.72	1,921.16	344.51	2.00	-2.00	0.00
5,600.00	3.57	103.71	5,169.29	-278.79	-470.60	1,928.90	345.90	2.00	-2.00	0.00
5,700.00	1.57	103.71	5,269.18	-378.68	-471.67	1,933.25	346.68	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>5,778.37</b>	<b>0.00</b>	<b>0.00</b>	<b>5,347.54</b>	<b>-457.04</b>	<b>-471.92</b>	<b>1,934.29</b>	<b>346.87</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,800.00	0.00	0.00	5,369.17	-478.67	-471.92	1,934.29	346.87	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>5,878.37</b>	<b>0.00</b>	<b>0.00</b>	<b>5,447.54</b>	<b>-557.04</b>	<b>-471.92</b>	<b>1,934.29</b>	<b>346.87</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,900.00	2.16	0.67	5,469.17	-578.67	-471.51	1,934.29	347.24	10.00	10.00	0.00
6,000.00	12.16	0.67	5,568.26	-677.76	-459.06	1,934.44	358.70	10.00	10.00	0.00
6,100.00	22.16	0.67	5,663.68	-773.18	-429.59	1,934.78	385.81	10.00	10.00	0.00
6,200.00	32.16	0.67	5,752.54	-862.04	-384.00	1,935.32	427.76	10.00	10.00	0.00
6,300.00	42.16	0.67	5,832.13	-941.63	-323.67	1,936.02	483.26	10.00	10.00	0.00
6,400.00	52.16	0.67	5,900.04	-1,009.54	-250.44	1,936.88	550.64	10.00	10.00	0.00
<b>SHARON SPRINGS SHALE</b>										
<b>6,417.40</b>	<b>53.90</b>	<b>0.67</b>	<b>5,910.50</b>	<b>-1,020.00</b>	<b>-236.54</b>	<b>1,937.04</b>	<b>563.43</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,500.00	62.16	0.67	5,954.20	-1,063.70	-166.53	1,937.86	627.84	10.00	10.00	0.00
<b>NIORARA FORMATION</b>										
<b>6,592.14</b>	<b>71.38</b>	<b>0.67</b>	<b>5,990.50</b>	<b>-1,100.00</b>	<b>-81.96</b>	<b>1,938.85</b>	<b>705.66</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,600.00	72.16	0.67	5,992.96	-1,102.46	-74.49	1,938.94	712.52	10.00	10.00	0.00
<b>NIORARA A CHALK</b>										
<b>6,626.54</b>	<b>74.82</b>	<b>0.67</b>	<b>6,000.50</b>	<b>-1,110.00</b>	<b>-49.05</b>	<b>1,939.23</b>	<b>735.93</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,700.00	82.16	0.67	6,015.15	-1,124.65	22.88	1,940.07	802.11	10.00	10.00	0.00
<b>BPI: 600ft FSL &amp; 2615ft FWL of Sec 20</b>										
<b>6,778.38</b>	<b>90.00</b>	<b>0.67</b>	<b>6,020.50</b>	<b>-1,130.00</b>	<b>101.00</b>	<b>1,940.99</b>	<b>873.99</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,800.00	90.00	0.67	6,020.50	-1,130.00	122.63	1,941.24	893.88	0.00	0.00	0.00
6,900.00	90.00	0.67	6,020.50	-1,130.00	222.62	1,942.41	985.88	0.00	0.00	0.00
7,000.00	90.00	0.67	6,020.50	-1,130.00	322.61	1,943.58	1,077.88	0.00	0.00	0.00
7,100.00	90.00	0.67	6,020.50	-1,130.00	422.61	1,944.74	1,169.88	0.00	0.00	0.00
7,200.00	90.00	0.67	6,020.50	-1,130.00	522.60	1,945.91	1,261.88	0.00	0.00	0.00
7,300.00	90.00	0.67	6,020.50	-1,130.00	622.59	1,947.08	1,353.88	0.00	0.00	0.00
7,400.00	90.00	0.67	6,020.50	-1,130.00	722.59	1,948.25	1,445.88	0.00	0.00	0.00
7,500.00	90.00	0.67	6,020.50	-1,130.00	822.58	1,949.41	1,537.88	0.00	0.00	0.00
7,600.00	90.00	0.67	6,020.50	-1,130.00	922.57	1,950.58	1,629.88	0.00	0.00	0.00
7,700.00	90.00	0.67	6,020.50	-1,130.00	1,022.57	1,951.74	1,721.88	0.00	0.00	0.00
7,800.00	90.00	0.67	6,020.50	-1,130.00	1,122.56	1,952.91	1,813.88	0.00	0.00	0.00
7,900.00	90.00	0.67	6,020.50	-1,130.00	1,222.55	1,954.07	1,905.87	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WADE 8-59 20A-10
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 20 T8N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WADE 8-59 20A-10	<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)
8,000.00	90.00	0.67	6,020.50	-1,130.00	1,322.54	1,955.24	1,997.87	0.00	0.00	0.00
8,100.00	90.00	0.67	6,020.50	-1,130.00	1,422.54	1,956.40	2,089.87	0.00	0.00	0.00
8,200.00	90.00	0.67	6,020.50	-1,130.00	1,522.53	1,957.57	2,181.87	0.00	0.00	0.00
8,300.00	90.00	0.67	6,020.50	-1,130.00	1,622.52	1,958.73	2,273.87	0.00	0.00	0.00
8,400.00	90.00	0.67	6,020.50	-1,130.00	1,722.52	1,959.89	2,365.86	0.00	0.00	0.00
8,500.00	90.00	0.67	6,020.50	-1,130.00	1,822.51	1,961.06	2,457.86	0.00	0.00	0.00
8,600.00	90.00	0.67	6,020.50	-1,130.00	1,922.50	1,962.22	2,549.86	0.00	0.00	0.00
8,700.00	90.00	0.67	6,020.50	-1,130.00	2,022.50	1,963.38	2,641.86	0.00	0.00	0.00
8,800.00	90.00	0.67	6,020.50	-1,130.00	2,122.49	1,964.54	2,733.85	0.00	0.00	0.00
8,900.00	90.00	0.67	6,020.50	-1,130.00	2,222.48	1,965.71	2,825.85	0.00	0.00	0.00
9,000.00	90.00	0.67	6,020.50	-1,130.00	2,322.48	1,966.87	2,917.85	0.00	0.00	0.00
9,100.00	90.00	0.67	6,020.50	-1,130.00	2,422.47	1,968.03	3,009.84	0.00	0.00	0.00
9,200.00	90.00	0.66	6,020.50	-1,130.00	2,522.46	1,969.19	3,101.84	0.00	0.00	0.00
9,300.00	90.00	0.66	6,020.50	-1,130.00	2,622.46	1,970.35	3,193.84	0.00	0.00	0.00
9,400.00	90.00	0.66	6,020.50	-1,130.00	2,722.45	1,971.51	3,285.83	0.00	0.00	0.00
9,500.00	90.00	0.66	6,020.50	-1,130.00	2,822.44	1,972.67	3,377.83	0.00	0.00	0.00
9,600.00	90.00	0.66	6,020.50	-1,130.00	2,922.44	1,973.83	3,469.82	0.00	0.00	0.00
9,700.00	90.00	0.66	6,020.50	-1,130.00	3,022.43	1,974.99	3,561.82	0.00	0.00	0.00
9,800.00	90.00	0.66	6,020.50	-1,130.00	3,122.42	1,976.14	3,653.82	0.00	0.00	0.00
9,900.00	90.00	0.66	6,020.50	-1,130.00	3,222.42	1,977.30	3,745.81	0.00	0.00	0.00
10,000.00	90.00	0.66	6,020.50	-1,130.00	3,322.41	1,978.46	3,837.81	0.00	0.00	0.00
10,100.00	90.00	0.66	6,020.50	-1,130.00	3,422.40	1,979.62	3,929.80	0.00	0.00	0.00
10,200.00	90.00	0.66	6,020.50	-1,130.00	3,522.40	1,980.77	4,021.80	0.00	0.00	0.00
10,300.00	90.00	0.66	6,020.50	-1,130.00	3,622.39	1,981.93	4,113.79	0.00	0.00	0.00
10,400.00	90.00	0.66	6,020.50	-1,130.00	3,722.38	1,983.09	4,205.79	0.00	0.00	0.00
10,500.00	90.00	0.66	6,020.50	-1,130.00	3,822.38	1,984.24	4,297.78	0.00	0.00	0.00
10,600.00	90.00	0.66	6,020.50	-1,130.00	3,922.37	1,985.40	4,389.78	0.00	0.00	0.00
10,700.00	90.00	0.66	6,020.50	-1,130.00	4,022.36	1,986.55	4,481.77	0.00	0.00	0.00
10,800.00	90.00	0.66	6,020.50	-1,130.00	4,122.36	1,987.71	4,573.77	0.00	0.00	0.00
10,900.00	90.00	0.66	6,020.50	-1,130.00	4,222.35	1,988.86	4,665.76	0.00	0.00	0.00
<b>EPI: 600ft FNL &amp; 2614ft FWL of Sec 20</b>										
10,906.85	90.00	0.66	6,020.50	-1,130.00	4,229.20	1,988.94	4,672.06	0.00	0.00	0.00
11,000.00	90.00	0.64	6,020.50	-1,130.00	4,322.34	1,990.00	4,757.75	0.02	0.00	-0.02
11,100.00	90.00	0.62	6,020.50	-1,130.00	4,422.34	1,991.11	4,849.72	0.02	0.00	-0.02
11,200.00	90.00	0.60	6,020.50	-1,130.00	4,522.33	1,992.18	4,941.68	0.02	0.00	-0.02
<b>BHL: 300ft FNL &amp; 2615ft FWL of Sec 20</b>										
11,206.71	90.00	0.60	6,020.50	-1,130.00	4,529.04	1,992.25	4,947.85	0.02	0.00	-0.02

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
378.94	378.50	PIERRE SHALE (BASE OF FOX HI				
3,363.18	3,100.50	PARKMAN				
4,173.52	3,820.50	SUSSEX				
4,981.08	4,560.50	SHANNON				
6,417.40	5,910.50	SHARON SPRINGS SHALE				
6,592.14	5,990.50	NIOBRARA FORMATION				
6,626.54	6,000.50	NIOBRARA A CHALK				

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WADE 8-59 20A-10
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4890.50usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 20 T8N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WADE 8-59 20A-10	<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)	
0.00	0.00	0.00	0.00	SHL: 460ft FSL & 675ft FWL of Sec 20
100.00	100.00	0.00	0.00	START NUDGE (2°/100ft BUR)
1,465.64	1,414.50	-75.70	310.28	EOB TO 27.31° INC
4,412.73	4,033.04	-396.22	1,624.01	END OF TANGENT
5,778.37	5,347.54	-471.92	1,934.29	EOD TO VERTICAL
5,878.37	5,447.54	-471.92	1,934.29	KOP (10°/100ft BUR)
6,778.38	6,020.50	101.00	1,940.99	BPI: 600ft FSL & 2615ft FWL of Sec 20
10,906.85	6,020.50	4,229.20	1,988.94	EPI: 600ft FNL & 2614ft FWL of Sec 20
11,206.71	6,020.50	4,529.04	1,992.25	BHL: 300ft FNL & 2615ft FWL of Sec 20