

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

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

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

**WADE 8-59 20A-29-32-1**

**ORIGINAL WELLBORE**

**10 December, 2017**

**Plan: PROPOSAL #1**



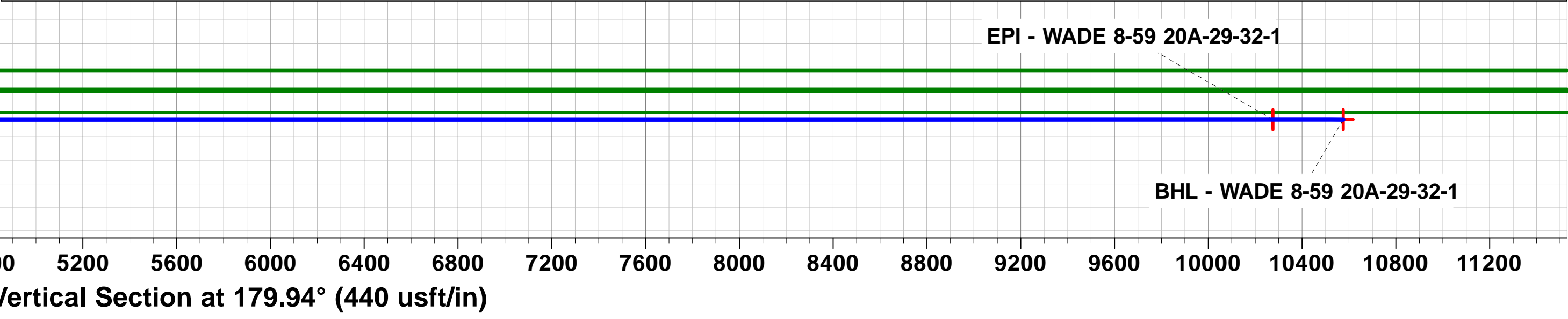
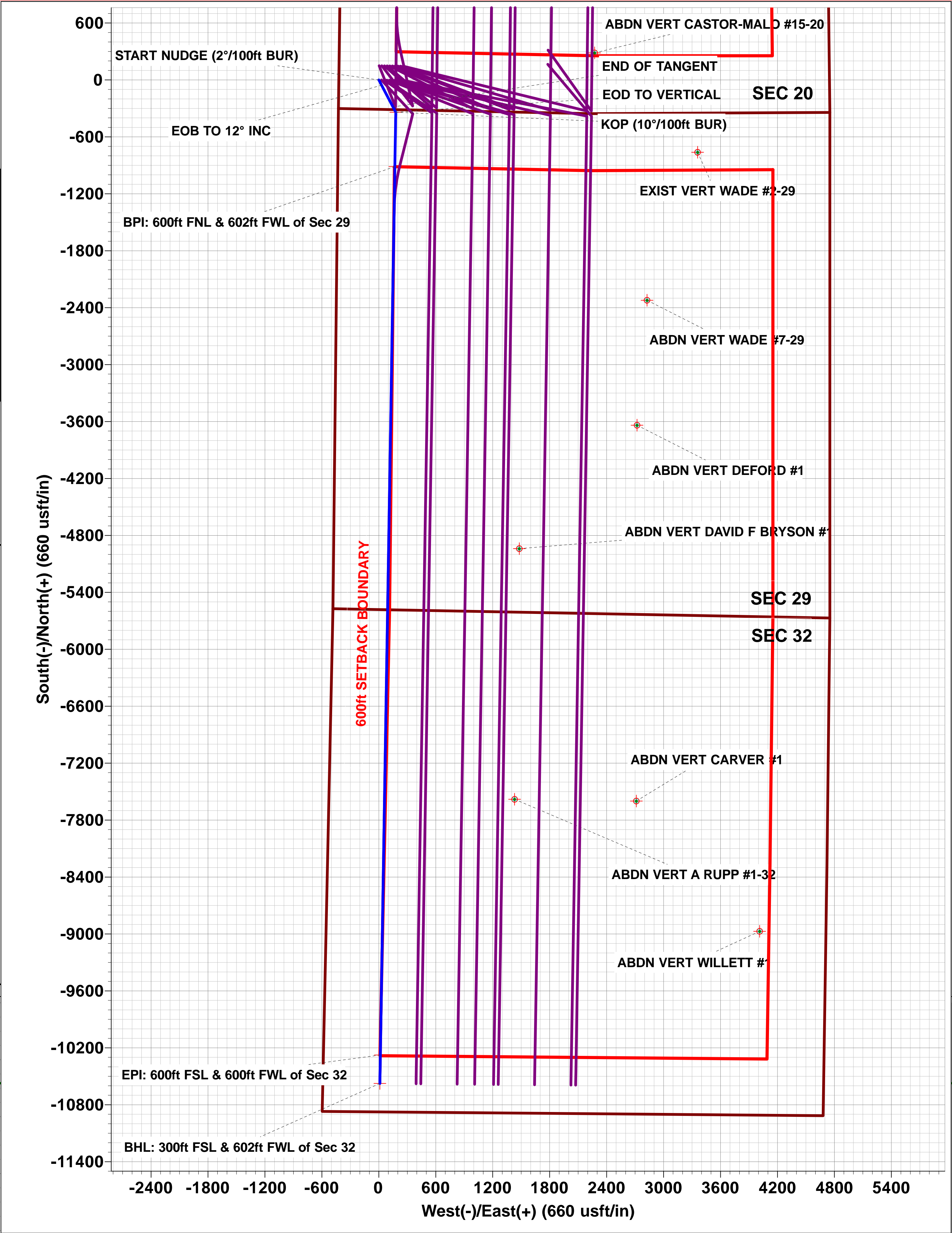
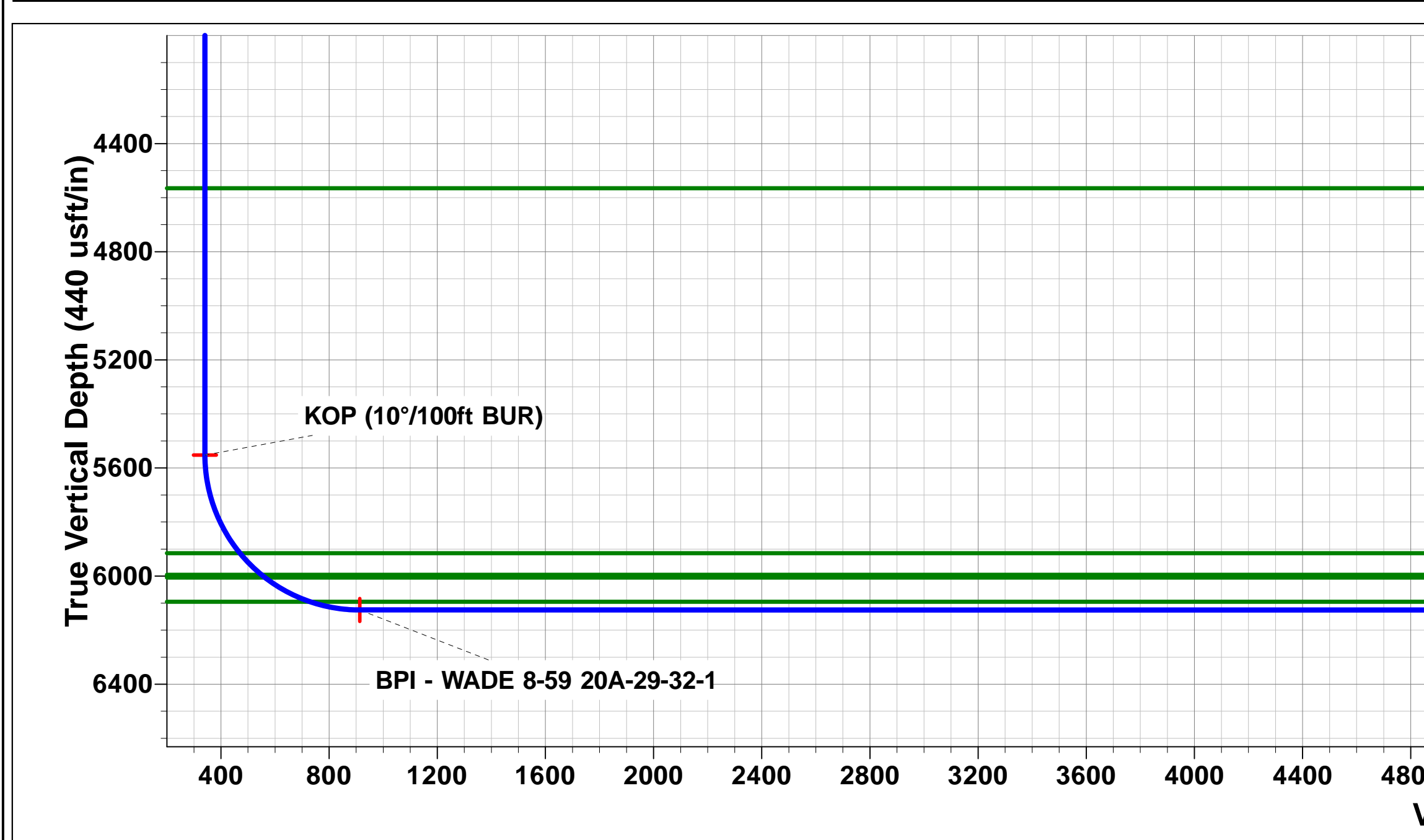
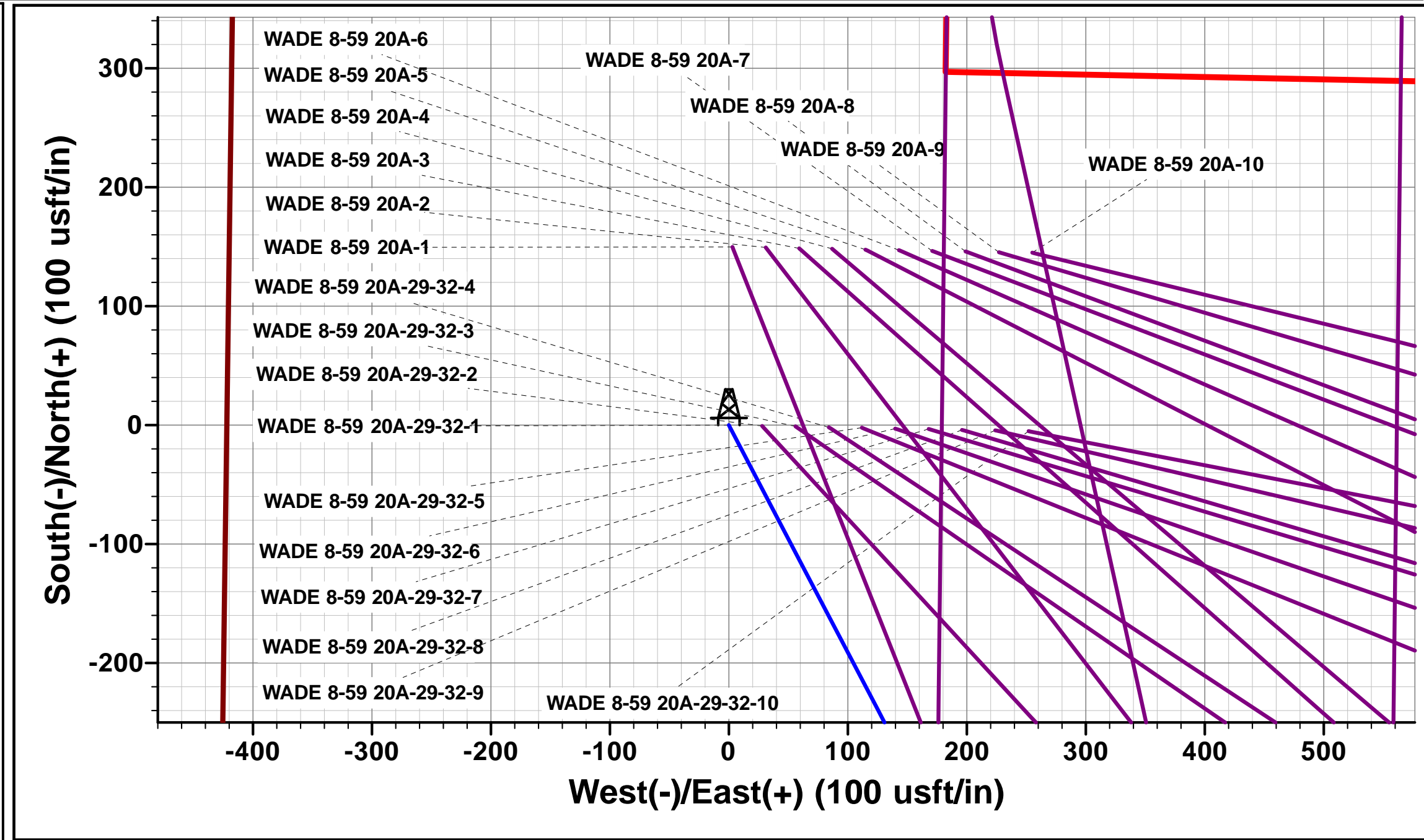
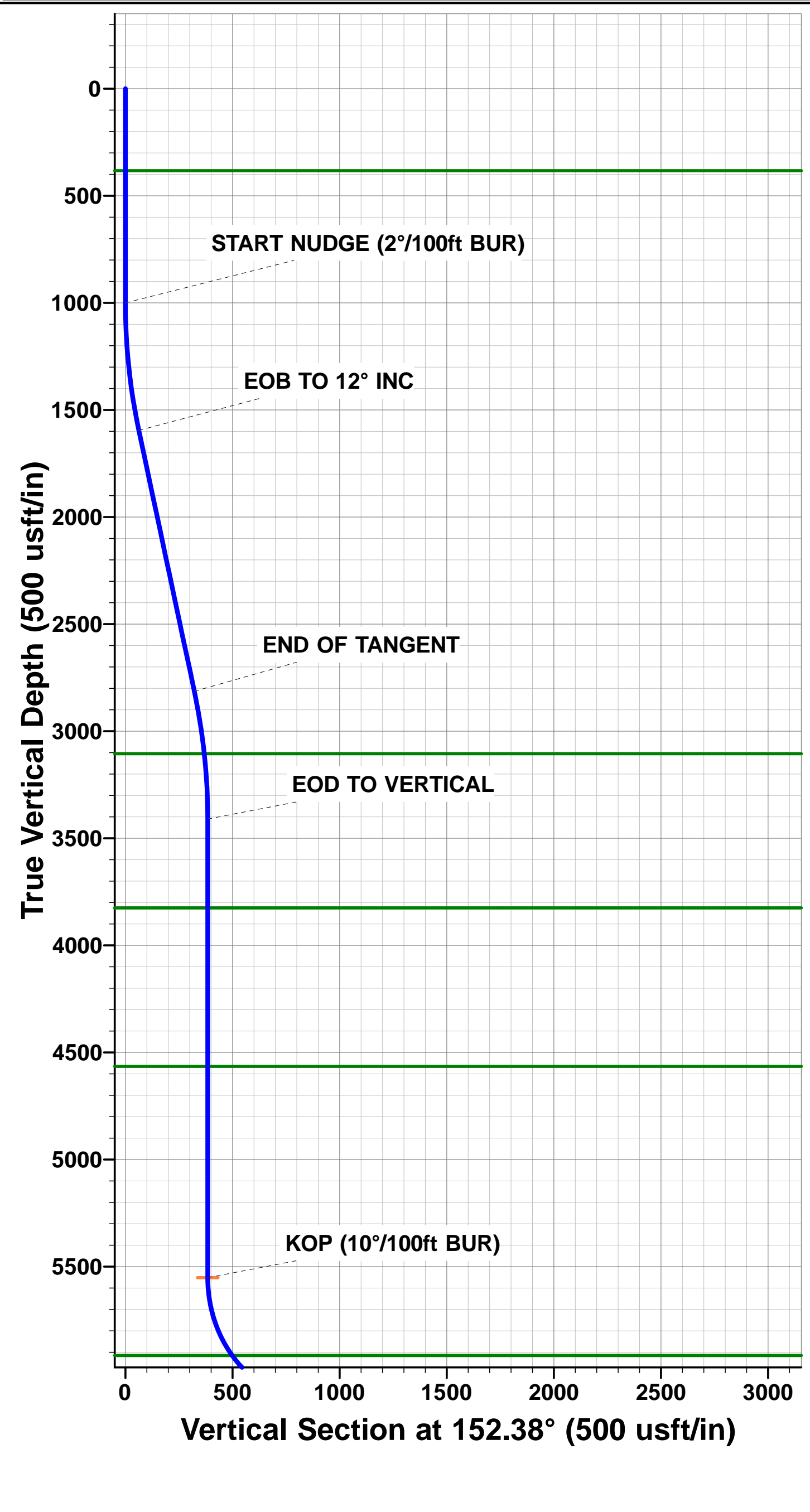


Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SW SW SEC. 20 T8N R59W 6th P.M.  
Well: WADE 8-59 20A-29-32-1  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 310ft FSL & 422ft FWL of Sec 20		
1000.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)		
1595.62	1600.00	12.00	152.38	-55.47	29.02	55.50	62.60	EOB TO 12° INC		
2814.41	2846.02	12.00	152.38	-285.01	149.12	285.16	321.66	END OF TANGENT		
3410.03	3446.02	0.00	0.00	-340.48	178.14	340.66	384.26	EOD TO VERTICAL		
5552.24	5588.22	0.00	0.00	-340.48	178.14	340.66	384.26	KOP (10°/100ft BUR)		
6125.20	6488.22	90.00	180.94	-913.35	168.74	913.53	957.22	BPI: 600ft FNL & 602ft FWL of Sec 29		
6125.20	15851.53	90.00	180.93	-10275.41	15.83	10275.43	10320.53	EPI: 600ft FSL & 600ft FWL of Sec 32		
6125.20	16151.41	90.00	180.98	-10575.25	10.83	10575.26	10620.41	BHL: 300ft FSL & 602ft FWL of Sec 32		

PROPOSED LOCAL COORDINATES:  
  
SHL: 310ft FSL & 422ft FWL Sec 20  
  
BPI: 600ft FNL & 602ft FWL Sec 29  
  
EPI: 600ft FSL & 600ft FWL Sec 32  
  
BHL: 300ft FSL & 602ft FWL of Sec 32

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - WADE 8-59 20A-29-32-1	5552.24	-340.48	178.14	40.640378	-104.008409
BPI - WADE 8-59 20A-29-32-1	6125.20	-913.35	168.74	40.638806	-104.008443
EPI - WADE 8-59 20A-29-32-1	6125.20	-10275.41	15.83	40.613109	-104.008994
BHL - WADE 8-59 20A-29-32-1	6125.20	-10575.25	10.83	40.612286	-104.009012



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WADE 8-59 20A-29-32-1
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4895.20usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4895.20usft (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-29-32-1	<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 °

<b>Well</b>	WADE 8-59 20A-29-32-1		
<b>Well Position</b>	<b>+N/-S</b>	-149.75 usft	<b>Northing:</b>
	<b>+E/-W</b>	-3.05 usft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<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	52,538

<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>
	6,125.20	0.00	0.00	179.94

<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	-4,895.20	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	-3,895.20	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	12.00	152.38	1,595.62	-3,299.58	-55.47	29.02	2.00	2.00	0.00	152.38	
2,846.02	12.00	152.38	2,814.41	-2,080.79	-285.01	149.12	0.00	0.00	0.00	0.00	
3,446.02	0.00	0.00	3,410.03	-1,485.17	-340.48	178.14	2.00	-2.00	0.00	180.00	
5,588.22	0.00	0.00	5,552.24	657.04	-340.48	178.14	0.00	0.00	0.00	0.00	KOP - WADE 8-59
6,488.22	90.00	180.94	6,125.20	1,230.00	-913.36	168.74	10.00	10.00	-19.90	180.94	BPI - WADE 8-59 2
15,851.53	90.00	180.93	6,125.20	1,230.00	-10,275.42	15.83	0.00	0.00	0.00	-83.24	EPI - WADE 8-59 2
16,151.41	90.00	180.98	6,125.20	1,230.00	-10,575.26	10.83	0.02	0.00	0.02	91.22	BHL - WADE 8-59 2

# Planning Report



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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4895.20usft (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-29-32-1	<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: 310ft FSL &amp; 422ft FWL of Sec 20</b>										
0.00	0.00	0.00	0.00	4,895.20	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,795.20	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,695.20	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	4,595.20	0.00	0.00	0.00	0.00	0.00	0.00
<b>PIERRE SHALE (BASE OF FOX HILLS)</b>										
383.20	0.00	0.00	383.20	4,512.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	4,495.20	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	4,395.20	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	4,295.20	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	4,195.20	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	4,095.20	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	3,995.20	0.00	0.00	0.00	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,000.00	0.00	0.00	1,000.00	3,895.20	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	2.00	152.38	1,099.98	3,795.22	-1.55	0.81	1.55	2.00	2.00	0.00
1,200.00	4.00	152.38	1,199.84	3,695.36	-6.18	3.24	6.19	2.00	2.00	0.00
1,300.00	6.00	152.38	1,299.45	3,595.75	-13.91	7.28	13.91	2.00	2.00	0.00
1,400.00	8.00	152.38	1,398.70	3,496.50	-24.70	12.92	24.72	2.00	2.00	0.00
1,500.00	10.00	152.38	1,497.47	3,397.73	-38.56	20.18	38.58	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
1,600.00	12.00	152.38	1,595.62	3,299.58	-55.47	29.02	55.50	2.00	2.00	0.00
1,700.00	12.00	152.38	1,693.44	3,201.76	-73.89	38.66	73.93	0.00	0.00	0.00
1,800.00	12.00	152.38	1,791.25	3,103.95	-92.31	48.30	92.36	0.00	0.00	0.00
1,900.00	12.00	152.38	1,889.07	3,006.13	-110.74	57.94	110.79	0.00	0.00	0.00
2,000.00	12.00	152.38	1,986.88	2,908.32	-129.16	67.58	129.23	0.00	0.00	0.00
2,100.00	12.00	152.38	2,084.70	2,810.50	-147.58	77.21	147.66	0.00	0.00	0.00
2,200.00	12.00	152.38	2,182.51	2,712.69	-166.00	86.85	166.09	0.00	0.00	0.00
2,300.00	12.00	152.38	2,280.33	2,614.87	-184.42	96.49	184.52	0.00	0.00	0.00
2,400.00	12.00	152.38	2,378.14	2,517.06	-202.85	106.13	202.95	0.00	0.00	0.00
2,500.00	12.00	152.38	2,475.96	2,419.24	-221.27	115.77	221.39	0.00	0.00	0.00
2,600.00	12.00	152.38	2,573.77	2,321.43	-239.69	125.41	239.82	0.00	0.00	0.00
2,700.00	12.00	152.38	2,671.59	2,223.61	-258.11	135.04	258.25	0.00	0.00	0.00
2,800.00	12.00	152.38	2,769.40	2,125.80	-276.53	144.68	276.68	0.00	0.00	0.00
<b>END OF TANGENT</b>										
2,846.02	12.00	152.38	2,814.41	2,080.79	-285.01	149.12	285.16	0.00	0.00	0.00
2,900.00	10.92	152.38	2,867.32	2,027.88	-294.51	154.09	294.67	2.00	-2.00	0.00
3,000.00	8.92	152.38	2,965.82	1,929.38	-309.78	162.08	309.94	2.00	-2.00	0.00
3,100.00	6.92	152.38	3,064.86	1,830.34	-321.99	168.46	322.16	2.00	-2.00	0.00
<b>PARKMAN</b>										
3,140.60	6.11	152.38	3,105.20	1,790.00	-326.07	170.60	326.24	2.00	-2.00	0.00
3,200.00	4.92	152.38	3,164.32	1,730.88	-331.13	173.25	331.30	2.00	-2.00	0.00
3,300.00	2.92	152.38	3,264.08	1,631.12	-337.18	176.42	337.36	2.00	-2.00	0.00
3,400.00	0.92	152.38	3,364.02	1,531.18	-340.15	177.97	340.33	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
3,446.02	0.00	0.00	3,410.03	1,485.17	-340.48	178.14	340.66	2.00	-2.00	0.00
3,500.00	0.00	0.00	3,464.02	1,431.18	-340.48	178.14	340.66	0.00	0.00	0.00
3,600.00	0.00	0.00	3,564.02	1,331.18	-340.48	178.14	340.66	0.00	0.00	0.00
3,700.00	0.00	0.00	3,664.02	1,231.18	-340.48	178.14	340.66	0.00	0.00	0.00
3,800.00	0.00	0.00	3,764.02	1,131.18	-340.48	178.14	340.66	0.00	0.00	0.00
<b>SUSSEX</b>										
3,861.18	0.00	0.00	3,825.20	1,070.00	-340.48	178.14	340.66	0.00	0.00	0.00
3,900.00	0.00	0.00	3,864.02	1,031.18	-340.48	178.14	340.66	0.00	0.00	0.00



# Planning Report



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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4895.20usft (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-29-32-1	<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)
4,000.00	0.00	0.00	3,964.02	931.18	-340.48	178.14	340.66	0.00	0.00	0.00
4,100.00	0.00	0.00	4,064.02	831.18	-340.48	178.14	340.66	0.00	0.00	0.00
4,200.00	0.00	0.00	4,164.02	731.18	-340.48	178.14	340.66	0.00	0.00	0.00
4,300.00	0.00	0.00	4,264.02	631.18	-340.48	178.14	340.66	0.00	0.00	0.00
4,400.00	0.00	0.00	4,364.02	531.18	-340.48	178.14	340.66	0.00	0.00	0.00
4,500.00	0.00	0.00	4,464.02	431.18	-340.48	178.14	340.66	0.00	0.00	0.00
4,600.00	0.00	0.00	4,564.02	331.18	-340.48	178.14	340.66	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,601.18</b>	<b>0.00</b>	<b>0.00</b>	<b>4,565.20</b>	<b>330.00</b>	<b>-340.48</b>	<b>178.14</b>	<b>340.66</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,700.00	0.00	0.00	4,664.02	231.18	-340.48	178.14	340.66	0.00	0.00	0.00
4,800.00	0.00	0.00	4,764.02	131.18	-340.48	178.14	340.66	0.00	0.00	0.00
4,900.00	0.00	0.00	4,864.02	31.18	-340.48	178.14	340.66	0.00	0.00	0.00
5,000.00	0.00	0.00	4,964.02	-68.82	-340.48	178.14	340.66	0.00	0.00	0.00
5,100.00	0.00	0.00	5,064.02	-168.82	-340.48	178.14	340.66	0.00	0.00	0.00
5,200.00	0.00	0.00	5,164.02	-268.82	-340.48	178.14	340.66	0.00	0.00	0.00
5,300.00	0.00	0.00	5,264.02	-368.82	-340.48	178.14	340.66	0.00	0.00	0.00
5,400.00	0.00	0.00	5,364.02	-468.82	-340.48	178.14	340.66	0.00	0.00	0.00
5,500.00	0.00	0.00	5,464.02	-568.82	-340.48	178.14	340.66	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>5,588.22</b>	<b>0.00</b>	<b>0.00</b>	<b>5,552.24</b>	<b>-657.04</b>	<b>-340.48</b>	<b>178.14</b>	<b>340.66</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,600.00	1.18	180.94	5,564.02	-668.82	-340.60	178.14	340.78	10.00	10.00	0.00
5,700.00	11.18	180.94	5,663.31	-768.11	-351.35	177.96	351.53	10.00	10.00	0.00
5,800.00	21.18	180.94	5,759.23	-864.03	-379.17	177.51	379.35	10.00	10.00	0.00
5,900.00	31.18	180.94	5,848.86	-953.66	-423.22	176.78	423.40	10.00	10.00	0.00
<b>SHARON SPRINGS SHALE</b>										
<b>5,981.30</b>	<b>39.31</b>	<b>180.94</b>	<b>5,915.20</b>	<b>-1,020.00</b>	<b>-470.09</b>	<b>176.01</b>	<b>470.27</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,000.00	41.18	180.94	5,929.47	-1,034.27	-482.17	175.82	482.35	10.00	10.00	0.00
<b>NIOBRARA FORMATION</b>										
<b>6,094.56</b>	<b>50.63</b>	<b>180.94</b>	<b>5,995.20</b>	<b>-1,100.00</b>	<b>-550.00</b>	<b>174.70</b>	<b>550.18</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,100.00	51.18	180.94	5,998.63	-1,103.43	-554.22	174.63	554.40	10.00	10.00	0.00
<b>NIOBRARA A CHALK</b>										
<b>6,110.60</b>	<b>52.24</b>	<b>180.94</b>	<b>6,005.20</b>	<b>-1,110.00</b>	<b>-562.54</b>	<b>174.50</b>	<b>562.72</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,200.00	61.18	180.94	6,054.22	-1,159.02	-637.18	173.27	637.35	10.00	10.00	0.00
6,300.00	71.18	180.94	6,094.56	-1,199.36	-728.53	171.77	728.71	10.00	10.00	0.00
<b>NIOBRARA B CHALK</b>										
<b>6,301.99</b>	<b>71.38</b>	<b>180.94</b>	<b>6,095.20</b>	<b>-1,200.00</b>	<b>-730.42</b>	<b>171.74</b>	<b>730.59</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,400.00	81.18	180.94	6,118.42	-1,223.22	-825.50	170.18	825.67	10.00	10.00	0.00
<b>BPI: 600ft FNL &amp; 602ft FWL of Sec 29</b>										
<b>6,488.22</b>	<b>90.00</b>	<b>180.94</b>	<b>6,125.20</b>	<b>-1,230.00</b>	<b>-913.36</b>	<b>168.74</b>	<b>913.53</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,500.00	90.00	180.94	6,125.20	-1,230.00	-925.14	168.55	925.31	0.00	0.00	0.00
6,600.00	90.00	180.94	6,125.20	-1,230.00	-1,025.12	166.91	1,025.29	0.00	0.00	0.00
6,700.00	90.00	180.94	6,125.20	-1,230.00	-1,125.11	165.27	1,125.28	0.00	0.00	0.00
6,800.00	90.00	180.94	6,125.20	-1,230.00	-1,225.10	163.63	1,225.26	0.00	0.00	0.00
6,900.00	90.00	180.94	6,125.20	-1,230.00	-1,325.08	161.99	1,325.25	0.00	0.00	0.00
7,000.00	90.00	180.94	6,125.20	-1,230.00	-1,425.07	160.35	1,425.23	0.00	0.00	0.00
7,100.00	90.00	180.94	6,125.20	-1,230.00	-1,525.05	158.71	1,525.22	0.00	0.00	0.00
7,200.00	90.00	180.94	6,125.21	-1,230.01	-1,625.04	157.07	1,625.20	0.00	0.00	0.00
7,300.00	90.00	180.94	6,125.21	-1,230.01	-1,725.03	155.43	1,725.19	0.00	0.00	0.00
7,400.00	90.00	180.94	6,125.21	-1,230.01	-1,825.01	153.79	1,825.17	0.00	0.00	0.00
7,500.00	90.00	180.94	6,125.21	-1,230.01	-1,925.00	152.15	1,925.16	0.00	0.00	0.00
7,600.00	90.00	180.94	6,125.21	-1,230.01	-2,024.99	150.51	2,025.14	0.00	0.00	0.00
7,700.00	90.00	180.94	6,125.21	-1,230.01	-2,124.97	148.87	2,125.13	0.00	0.00	0.00
7,800.00	90.00	180.94	6,125.21	-1,230.01	-2,224.96	147.24	2,225.11	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-29-32-1
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4895.20usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4895.20usft (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-29-32-1	<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)
7,900.00	90.00	180.94	6,125.21	-1,230.01	-2,324.95	145.60	2,325.10	0.00	0.00	0.00
8,000.00	90.00	180.94	6,125.21	-1,230.01	-2,424.93	143.96	2,425.08	0.00	0.00	0.00
8,100.00	90.00	180.94	6,125.21	-1,230.01	-2,524.92	142.32	2,525.07	0.00	0.00	0.00
8,200.00	90.00	180.94	6,125.21	-1,230.01	-2,624.91	140.68	2,625.05	0.00	0.00	0.00
8,300.00	90.00	180.94	6,125.21	-1,230.01	-2,724.89	139.05	2,725.03	0.00	0.00	0.00
8,400.00	90.00	180.94	6,125.21	-1,230.01	-2,824.88	137.41	2,825.02	0.00	0.00	0.00
8,500.00	90.00	180.94	6,125.21	-1,230.01	-2,924.87	135.77	2,925.00	0.00	0.00	0.00
8,600.00	90.00	180.94	6,125.21	-1,230.01	-3,024.85	134.13	3,024.99	0.00	0.00	0.00
8,700.00	90.00	180.94	6,125.21	-1,230.01	-3,124.84	132.50	3,124.97	0.00	0.00	0.00
8,800.00	90.00	180.94	6,125.22	-1,230.02	-3,224.83	130.86	3,224.96	0.00	0.00	0.00
8,900.00	90.00	180.94	6,125.22	-1,230.02	-3,324.81	129.22	3,324.94	0.00	0.00	0.00
9,000.00	90.00	180.94	6,125.22	-1,230.02	-3,424.80	127.59	3,424.93	0.00	0.00	0.00
9,100.00	90.00	180.94	6,125.22	-1,230.02	-3,524.79	125.95	3,524.91	0.00	0.00	0.00
9,200.00	90.00	180.94	6,125.22	-1,230.02	-3,624.77	124.31	3,624.90	0.00	0.00	0.00
9,300.00	90.00	180.94	6,125.22	-1,230.02	-3,724.76	122.68	3,724.88	0.00	0.00	0.00
9,400.00	90.00	180.94	6,125.22	-1,230.02	-3,824.75	121.04	3,824.87	0.00	0.00	0.00
9,500.00	90.00	180.94	6,125.22	-1,230.02	-3,924.73	119.41	3,924.85	0.00	0.00	0.00
9,600.00	90.00	180.94	6,125.22	-1,230.02	-4,024.72	117.77	4,024.84	0.00	0.00	0.00
9,700.00	90.00	180.94	6,125.22	-1,230.02	-4,124.71	116.13	4,124.82	0.00	0.00	0.00
9,800.00	90.00	180.94	6,125.22	-1,230.02	-4,224.69	114.50	4,224.81	0.00	0.00	0.00
9,900.00	90.00	180.94	6,125.22	-1,230.02	-4,324.68	112.86	4,324.79	0.00	0.00	0.00
10,000.00	90.00	180.94	6,125.22	-1,230.02	-4,424.67	111.23	4,424.78	0.00	0.00	0.00
10,100.00	90.00	180.94	6,125.22	-1,230.02	-4,524.65	109.59	4,524.76	0.00	0.00	0.00
10,200.00	90.00	180.94	6,125.22	-1,230.02	-4,624.64	107.96	4,624.75	0.00	0.00	0.00
10,300.00	90.00	180.94	6,125.22	-1,230.02	-4,724.63	106.33	4,724.73	0.00	0.00	0.00
10,400.00	90.00	180.94	6,125.22	-1,230.02	-4,824.61	104.69	4,824.72	0.00	0.00	0.00
10,500.00	90.00	180.94	6,125.22	-1,230.02	-4,924.60	103.06	4,924.70	0.00	0.00	0.00
10,600.00	90.00	180.94	6,125.22	-1,230.02	-5,024.59	101.42	5,024.69	0.00	0.00	0.00
10,700.00	90.00	180.94	6,125.22	-1,230.02	-5,124.57	99.79	5,124.67	0.00	0.00	0.00
10,800.00	90.00	180.94	6,125.22	-1,230.02	-5,224.56	98.15	5,224.66	0.00	0.00	0.00
10,900.00	90.00	180.94	6,125.22	-1,230.02	-5,324.55	96.52	5,324.64	0.00	0.00	0.00
11,000.00	90.00	180.94	6,125.22	-1,230.02	-5,424.53	94.89	5,424.63	0.00	0.00	0.00
11,100.00	90.00	180.94	6,125.22	-1,230.02	-5,524.52	93.25	5,524.61	0.00	0.00	0.00
11,200.00	90.00	180.94	6,125.22	-1,230.02	-5,624.51	91.62	5,624.60	0.00	0.00	0.00
11,300.00	90.00	180.94	6,125.22	-1,230.02	-5,724.49	89.99	5,724.58	0.00	0.00	0.00
11,400.00	90.00	180.94	6,125.22	-1,230.02	-5,824.48	88.36	5,824.57	0.00	0.00	0.00
11,500.00	90.00	180.94	6,125.22	-1,230.02	-5,924.47	86.72	5,924.55	0.00	0.00	0.00
11,600.00	90.00	180.94	6,125.22	-1,230.02	-6,024.45	85.09	6,024.54	0.00	0.00	0.00
11,700.00	90.00	180.94	6,125.22	-1,230.02	-6,124.44	83.46	6,124.52	0.00	0.00	0.00
11,800.00	90.00	180.94	6,125.22	-1,230.02	-6,224.43	81.83	6,224.51	0.00	0.00	0.00
11,900.00	90.00	180.94	6,125.22	-1,230.02	-6,324.41	80.19	6,324.49	0.00	0.00	0.00
12,000.00	90.00	180.94	6,125.22	-1,230.02	-6,424.40	78.56	6,424.48	0.00	0.00	0.00
12,100.00	90.00	180.93	6,125.22	-1,230.02	-6,524.39	76.93	6,524.46	0.00	0.00	0.00
12,200.00	90.00	180.93	6,125.22	-1,230.02	-6,624.37	75.30	6,624.45	0.00	0.00	0.00
12,300.00	90.00	180.93	6,125.22	-1,230.02	-6,724.36	73.67	6,724.43	0.00	0.00	0.00
12,400.00	90.00	180.93	6,125.22	-1,230.02	-6,824.35	72.04	6,824.42	0.00	0.00	0.00
12,500.00	90.00	180.93	6,125.22	-1,230.02	-6,924.33	70.40	6,924.40	0.00	0.00	0.00
12,600.00	90.00	180.93	6,125.22	-1,230.02	-7,024.32	68.77	7,024.39	0.00	0.00	0.00
12,700.00	90.00	180.93	6,125.22	-1,230.02	-7,124.31	67.14	7,124.37	0.00	0.00	0.00
12,800.00	90.00	180.93	6,125.22	-1,230.02	-7,224.29	65.51	7,224.36	0.00	0.00	0.00
12,900.00	90.00	180.93	6,125.22	-1,230.02	-7,324.28	63.88	7,324.34	0.00	0.00	0.00
13,000.00	90.00	180.93	6,125.22	-1,230.02	-7,424.27	62.25	7,424.33	0.00	0.00	0.00
13,100.00	90.00	180.93	6,125.22	-1,230.02	-7,524.25	60.62	7,524.31	0.00	0.00	0.00
13,200.00	90.00	180.93	6,125.22	-1,230.02	-7,624.24	58.99	7,624.30	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-29-32-1
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4895.20usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4895.20usft (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-29-32-1	<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)
13,300.00	90.00	180.93	6,125.22	-1,230.02	-7,724.23	57.36	7,724.28	0.00	0.00	0.00
13,400.00	90.00	180.93	6,125.22	-1,230.02	-7,824.21	55.73	7,824.27	0.00	0.00	0.00
13,500.00	90.00	180.93	6,125.22	-1,230.02	-7,924.20	54.10	7,924.25	0.00	0.00	0.00
13,600.00	90.00	180.93	6,125.21	-1,230.01	-8,024.19	52.47	8,024.24	0.00	0.00	0.00
13,700.00	90.00	180.93	6,125.21	-1,230.01	-8,124.17	50.84	8,124.22	0.00	0.00	0.00
13,800.00	90.00	180.93	6,125.21	-1,230.01	-8,224.16	49.21	8,224.21	0.00	0.00	0.00
13,900.00	90.00	180.93	6,125.21	-1,230.01	-8,324.15	47.58	8,324.19	0.00	0.00	0.00
14,000.00	90.00	180.93	6,125.21	-1,230.01	-8,424.13	45.96	8,424.18	0.00	0.00	0.00
14,100.00	90.00	180.93	6,125.21	-1,230.01	-8,524.12	44.33	8,524.16	0.00	0.00	0.00
14,200.00	90.00	180.93	6,125.21	-1,230.01	-8,624.11	42.70	8,624.15	0.00	0.00	0.00
14,300.00	90.00	180.93	6,125.21	-1,230.01	-8,724.09	41.07	8,724.13	0.00	0.00	0.00
14,400.00	90.00	180.93	6,125.21	-1,230.01	-8,824.08	39.44	8,824.12	0.00	0.00	0.00
14,500.00	90.00	180.93	6,125.21	-1,230.01	-8,924.07	37.81	8,924.10	0.00	0.00	0.00
14,600.00	90.00	180.93	6,125.21	-1,230.01	-9,024.05	36.19	9,024.09	0.00	0.00	0.00
14,700.00	90.00	180.93	6,125.21	-1,230.01	-9,124.04	34.56	9,124.07	0.00	0.00	0.00
14,800.00	90.00	180.93	6,125.21	-1,230.01	-9,224.03	32.93	9,224.06	0.00	0.00	0.00
14,900.00	90.00	180.93	6,125.21	-1,230.01	-9,324.01	31.30	9,324.04	0.00	0.00	0.00
15,000.00	90.00	180.93	6,125.21	-1,230.01	-9,424.00	29.68	9,424.03	0.00	0.00	0.00
15,100.00	90.00	180.93	6,125.21	-1,230.01	-9,523.99	28.05	9,524.01	0.00	0.00	0.00
15,200.00	90.00	180.93	6,125.21	-1,230.01	-9,623.97	26.42	9,624.00	0.00	0.00	0.00
15,300.00	90.00	180.93	6,125.20	-1,230.00	-9,723.96	24.79	9,723.98	0.00	0.00	0.00
15,400.00	90.00	180.93	6,125.20	-1,230.00	-9,823.95	23.17	9,823.97	0.00	0.00	0.00
15,500.00	90.00	180.93	6,125.20	-1,230.00	-9,923.93	21.54	9,923.95	0.00	0.00	0.00
15,600.00	90.00	180.93	6,125.20	-1,230.00	-10,023.92	19.92	10,023.94	0.00	0.00	0.00
15,700.00	90.00	180.93	6,125.20	-1,230.00	-10,123.91	18.29	10,123.92	0.00	0.00	0.00
15,800.00	90.00	180.93	6,125.20	-1,230.00	-10,223.90	16.66	10,223.91	0.00	0.00	0.00
<b>EPI: 600ft FSL &amp; 600ft FWL of Sec 32</b>										
<b>15,851.53</b>	<b>90.00</b>	<b>180.93</b>	<b>6,125.20</b>	<b>-1,230.00</b>	<b>-10,275.42</b>	<b>15.83</b>	<b>10,275.43</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
15,900.00	90.00	180.94	6,125.20	-1,230.00	-10,323.88	15.03	10,323.89	0.02	0.00	0.02
16,000.00	90.00	180.95	6,125.20	-1,230.00	-10,423.87	13.38	10,423.88	0.02	0.00	0.02
16,100.00	90.00	180.97	6,125.20	-1,230.00	-10,523.85	11.70	10,523.86	0.02	0.00	0.02
<b>BHL: 300ft FSL &amp; 602ft FWL of Sec 32</b>										
<b>16,151.41</b>	<b>90.00</b>	<b>180.98</b>	<b>6,125.20</b>	<b>-1,230.00</b>	<b>-10,575.26</b>	<b>10.83</b>	<b>10,575.26</b>	<b>0.02</b>	<b>0.00</b>	<b>0.02</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
383.20	383.20	PIERRE SHALE (BASE OF FOX HI				
3,140.60	3,105.20	PARKMAN				
3,861.18	3,825.20	SUSSEX				
4,601.18	4,565.20	SHANNON				
5,981.30	5,915.20	SHARON SPRINGS SHALE				
6,094.56	5,995.20	NIOBRARA FORMATION				
6,110.60	6,005.20	NIOBRARA A CHALK				
6,301.99	6,095.20	NIOBRARA B CHALK				

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WADE 8-59 20A-29-32-1
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4895.20usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4895.20usft (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-29-32-1	<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: 310ft FSL & 422ft FWL of Sec 20
1,000.00	1,000.00	0.00	0.00	START NUDGE (2°/100ft BUR)
1,600.00	1,595.62	-55.47	29.02	EOB TO 12° INC
2,846.02	2,814.41	-285.01	149.12	END OF TANGENT
3,446.02	3,410.03	-340.48	178.14	EOD TO VERTICAL
5,588.22	5,552.24	-340.48	178.14	KOP (10°/100ft BUR)
6,488.22	6,125.20	-913.36	168.74	BPI: 600ft FNL & 602ft FWL of Sec 29
15,851.53	6,125.20	-10,275.42	15.83	EPI: 600ft FSL & 600ft FWL of Sec 32
16,151.41	6,125.20	-10,575.26	10.83	BHL: 300ft FSL & 602ft FWL of Sec 32