

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

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

**SW SW SEC. 3 T8N R61W 6th P.M.**

**SIEVERS 8-61 3B-2-3**

**ORIGINAL WELLBORE**

**24 August, 2017**

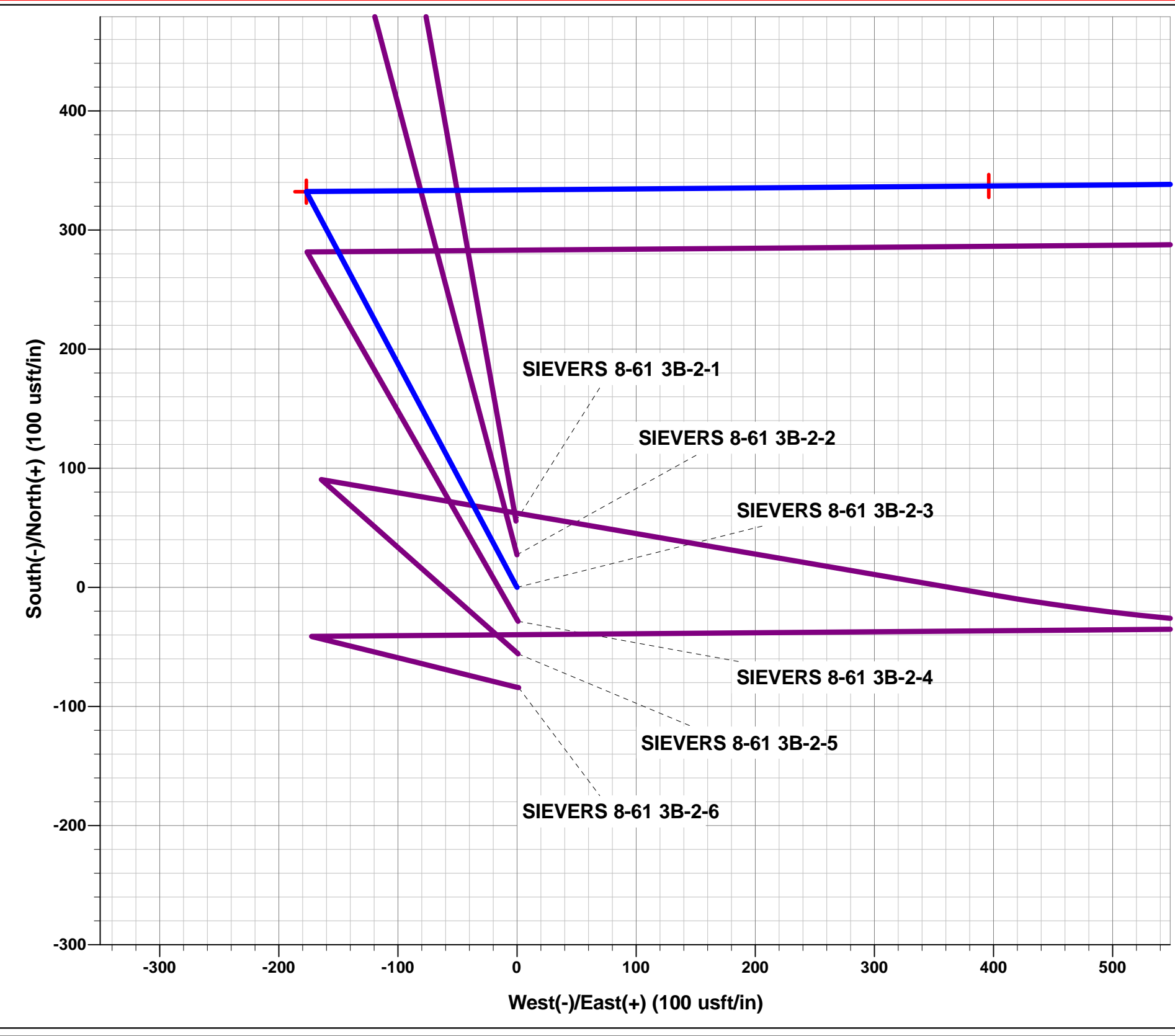
**Plan: PROPOSAL #1**



Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SW SW SEC. 3 T8N R61W 6th P.M.  
Well: SIEVERS 8-61 3B-2-3  
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: 654ft FSL & 200ft FWL of Sec 3		
300.0	300.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)		
895.5	899.8	12.00	331.97	55.2	-29.4	-27.1	62.6	EOB TO 12° INC		
2078.1	2108.9	12.00	331.97	277.1	-147.5	-135.9	313.9	END OF TANGENT		
2673.6	2708.8	0.00	0.00	332.3	-176.9	-163.0	376.5	EOD TO VERTICAL		
5847.6	5882.8	0.00	0.00	332.3	-176.9	-163.0	376.5	KOP (10°/ 100ft BUR)		
6420.6	6782.8	90.00	89.53	337.0	396.0	409.6	949.4	BPI: 990ft FSL & 600ft FWL of Sec 3		
6420.6	16154.0	90.00	89.54	412.9	9767.0	9775.7	10320.7	EPI: 985ft FSL & 600 ft FEL of Sec 2		
6420.6	16158.1	90.00	89.42	412.9	9771.1	9779.8	10324.8	EOT TO 89.42° AZ		
6420.6	16453.6	90.00	89.42	415.9	10066.5	10075.1	10620.2	BHL: 984ft FSL & 300ft FEL of Sec 2		

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
KOP: SIEVERS 8-61 3B-2-3	5847.6	332.3	-176.9	40.686362	-104.200624	
BPI: SIEVERS 8-61 3B-2-3	6420.6	337.0	396.0	40.686375	-104.198558	
EPI: SIEVERS 8-61 3B-2-3	6420.6	412.9	9767.0	40.686578	-104.164769	
BHL: SIEVERS 8-61 3B-2-3	6420.6	415.9	10066.5	40.686586	-104.163689	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
570.3	571.0	PIERRE SH (BASE FOX HILLS)
3515.3	3550.8	PARKMAN
4585.3	4620.8	SUSSEX
5525.3	5560.8	SHANNON
6320.3	6439.2	SHARON SPRINGS SHALE
6390.3	6596.6	NIOBRARA FORMATION
6400.3	6631.0	NIOBRARA A CHALK

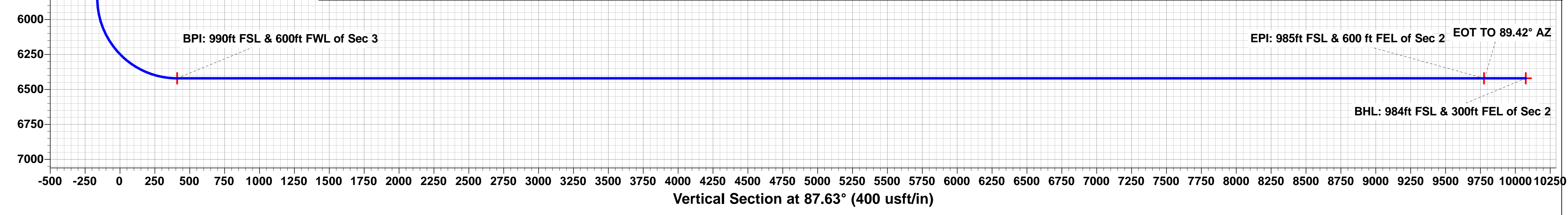
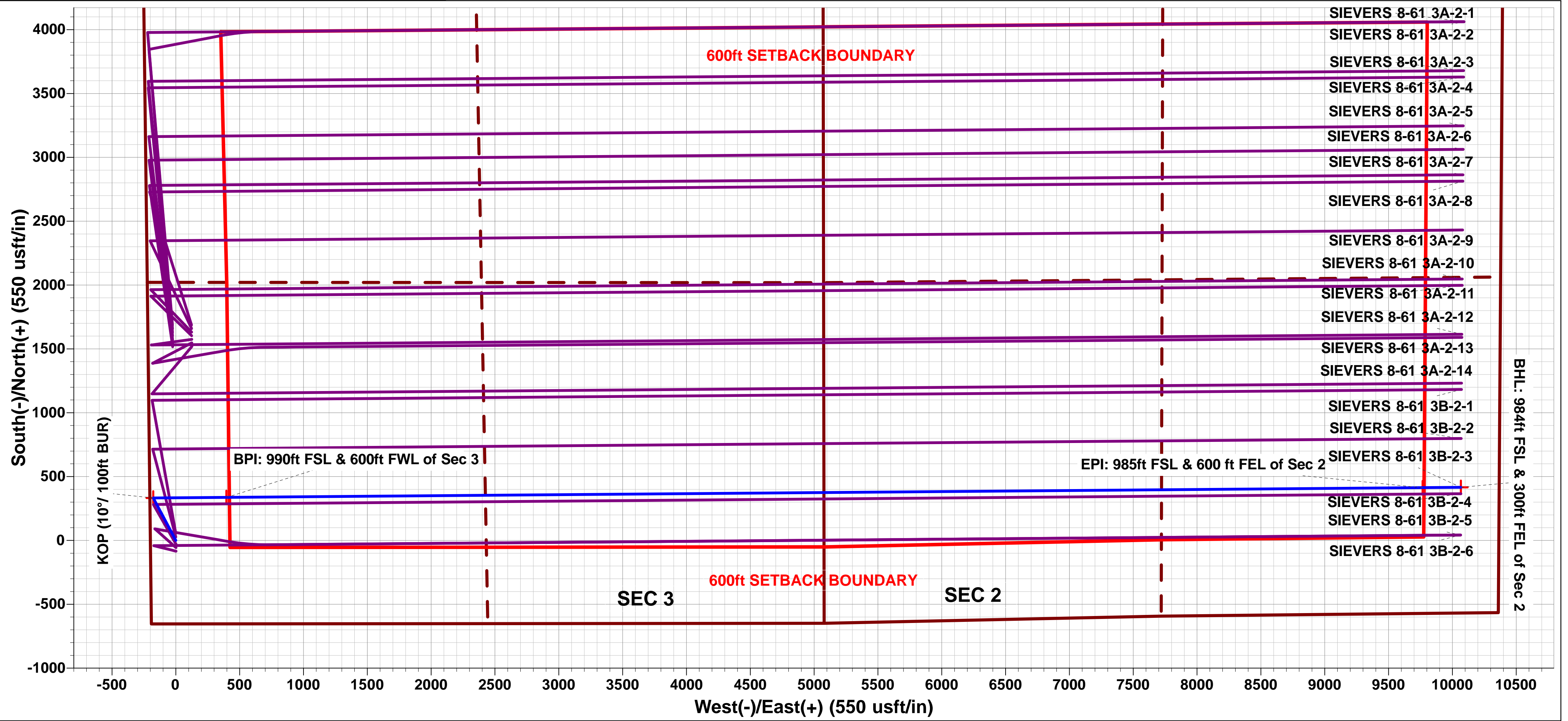
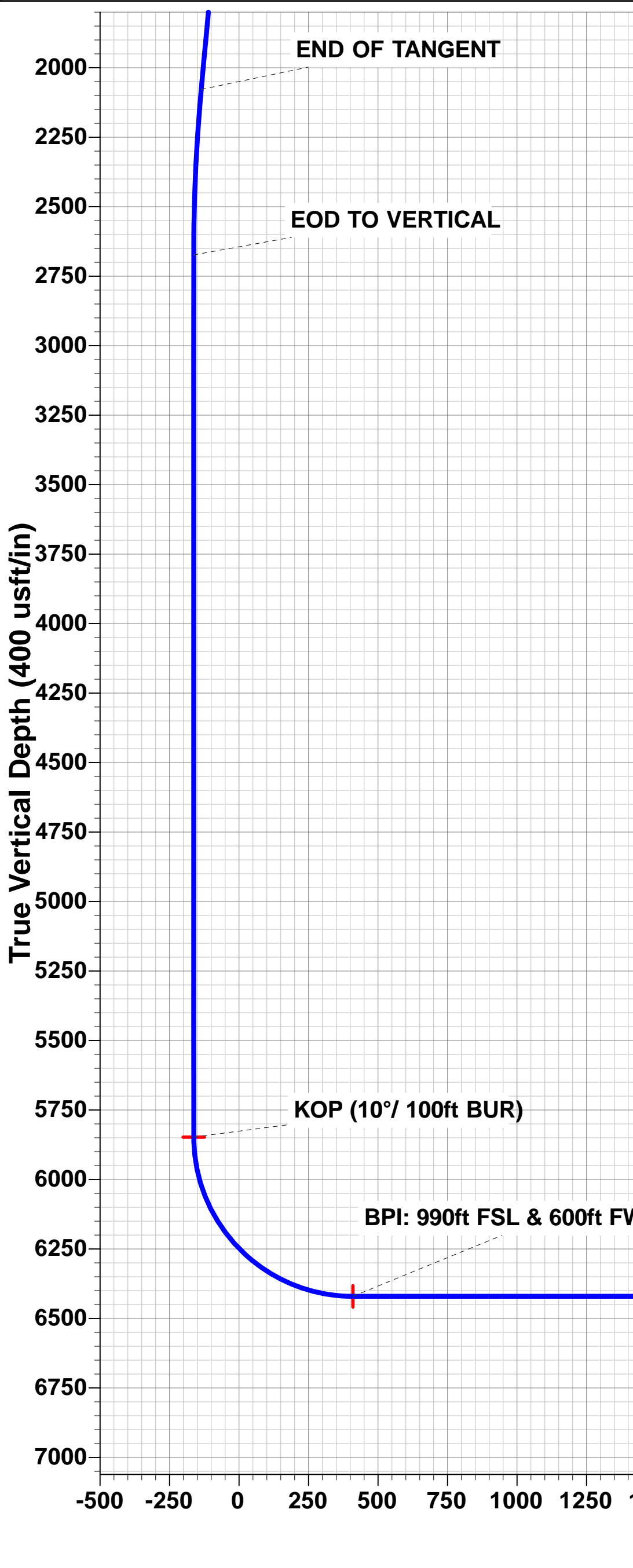
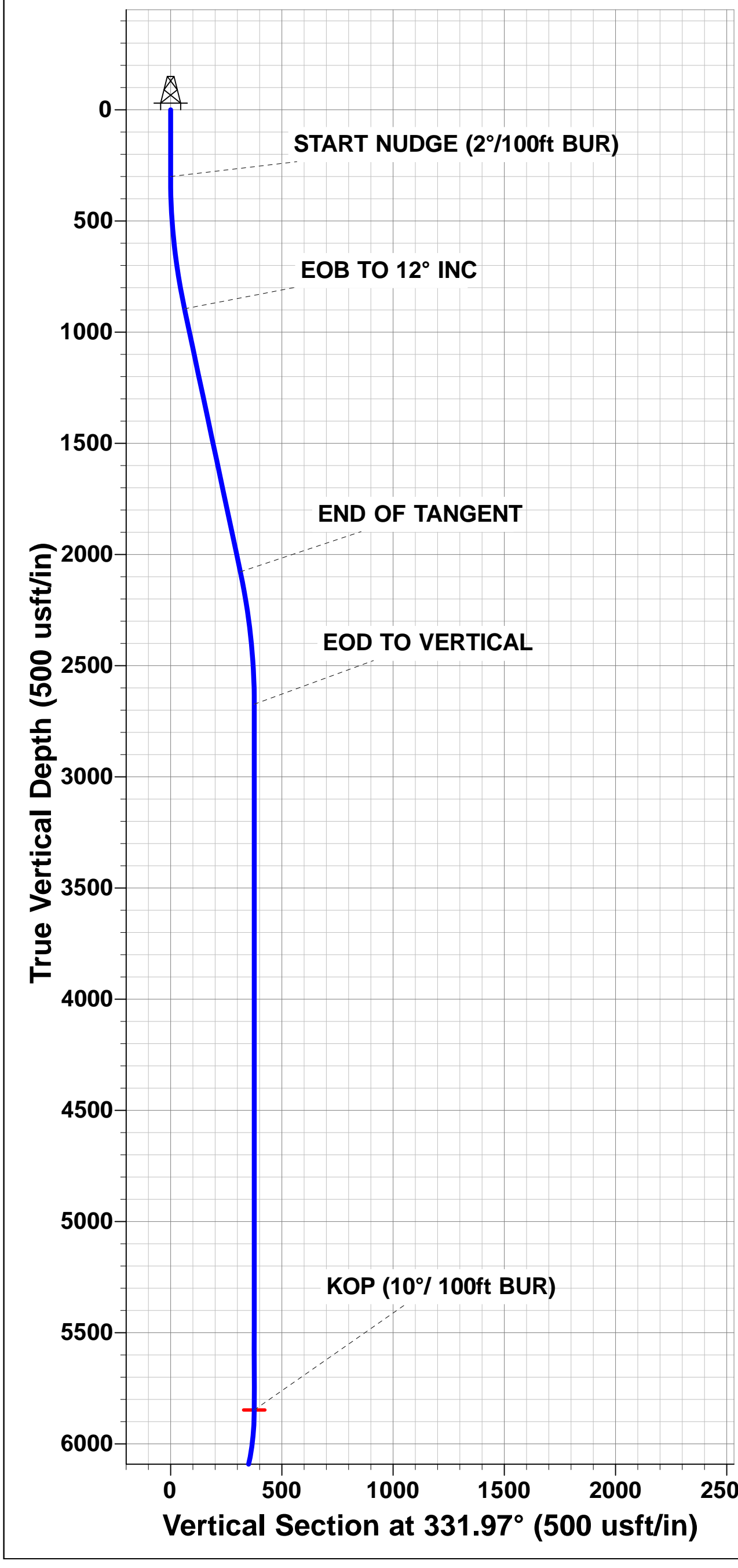
PROPOSED LOCAL COORDINATES:

SHL: 654ft FSL & 200ft FWL of Sec 3

BEGIN PROD INT: 990ft FSL & 600ft FWL of Sec 3

END PROD INTERVAL: 985ft FSL & 600 ft FEL of Sec 2

BHL: 984ft FSL & 300ft FEL of Sec 2



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SIEVERS 8-61 3B-2-3
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 3 T8N R61W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SIEVERS 8-61 3B-2-3	<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

Site		SW SW SEC. 3 T8N R61W 6th P.M.			
Site Position:		Northing:	1,495,251.12 usft	Latitude:	40.685603
From:	Lat/Long	Easting:	3,360,528.22 usft	Longitude:	-104.199989
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000 ft	Grid Convergence:	0.84 °

Well	SIEVERS 8-61 3B-2-3					
Well Position	+N/-S	-55.7 usft	Northing:	1,495,195.42 usft	Latitude:	40.685450
	+E/-W	0.8 usft	Easting:	3,360,529.87 usft	Longitude:	-104.199986
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,950.6 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	24/08/2017	7.91	67.16	52,575

<b>Design</b>	PROPOSAL #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	87.63

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,975.6	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	-4,675.6	0.0	0.0	0.00	0.00	0.00	0.00	
899.8	12.00	331.97	895.5	-4,080.1	55.2	-29.4	2.00	2.00	0.00	331.97	
2,108.9	12.00	331.97	2,078.1	-2,897.5	277.1	-147.5	0.00	0.00	0.00	0.00	
2,708.8	0.00	0.00	2,673.6	-2,302.0	332.3	-176.9	2.00	-2.00	0.00	180.00	
5,882.8	0.00	0.00	5,847.6	872.0	332.3	-176.9	0.00	0.00	0.00	0.00	KOP: SIEVERS 8-61
6,782.8	90.00	89.53	6,420.6	1,445.0	337.0	396.0	10.00	10.00	9.95	89.53	BPI: SIEVERS 8-61 3
16,154.0	90.00	89.54	6,420.6	1,445.0	412.9	9,767.0	0.00	0.00	0.00	60.87	EPI: SIEVERS 8-61 3
16,158.1	90.00	89.42	6,420.6	1,445.0	412.9	9,771.1	3.00	0.00	-3.00	-90.00	
16,453.6	90.00	89.42	6,420.6	1,445.0	415.9	10,066.5	0.00	0.00	0.00	-160.73	BHL: SIEVERS 8-61 ;

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SIEVERS 8-61 3B-2-3
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 3 T8N R61W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SIEVERS 8-61 3B-2-3	<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: 654ft FSL &amp; 200ft FWL of Sec 3</b>										
0.0	0.00	0.00	0.0	4,975.60	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,875.60	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,775.60	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
300.0	0.00	0.00	300.0	4,675.60	0.0	0.0	0.0	0.00	0.00	0.00
400.0	2.00	331.97	400.0	4,575.62	1.5	-0.8	-0.8	2.00	2.00	0.00
500.0	4.00	331.97	499.8	4,475.76	6.2	-3.3	-3.0	2.00	2.00	0.00
<b>PIERRE SHALE (BASE FOX HILLS)</b>										
571.0	5.42	331.97	570.6	4,405.00	11.3	-6.0	-5.5	2.00	2.00	0.00
600.0	6.00	331.97	599.5	4,376.15	13.9	-7.4	-6.8	2.00	2.00	0.00
700.0	8.00	331.97	698.7	4,276.90	24.6	-13.1	-12.1	2.00	2.00	0.00
800.0	10.00	331.97	797.5	4,178.13	38.4	-20.5	-18.8	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
899.8	12.00	331.97	895.5	4,080.13	55.2	-29.4	-27.1	2.00	2.00	0.00
900.0	12.00	331.97	895.6	4,079.98	55.3	-29.4	-27.1	0.00	0.00	0.00
1,000.0	12.00	331.97	993.4	3,982.16	73.6	-39.2	-36.1	0.00	0.00	0.00
1,100.0	12.00	331.97	1,091.3	3,884.35	92.0	-49.0	-45.1	0.00	0.00	0.00
1,200.0	12.00	331.97	1,189.1	3,786.53	110.3	-58.7	-54.1	0.00	0.00	0.00
1,300.0	12.00	331.97	1,286.9	3,688.71	128.7	-68.5	-63.1	0.00	0.00	0.00
1,400.0	12.00	331.97	1,384.7	3,590.90	147.0	-78.3	-72.1	0.00	0.00	0.00
1,500.0	12.00	331.97	1,482.5	3,493.08	165.3	-88.0	-81.1	0.00	0.00	0.00
1,600.0	12.00	331.97	1,580.3	3,395.27	183.7	-97.8	-90.1	0.00	0.00	0.00
1,700.0	12.00	331.97	1,678.2	3,297.45	202.0	-107.6	-99.1	0.00	0.00	0.00
1,800.0	12.00	331.97	1,776.0	3,199.63	220.4	-117.3	-108.1	0.00	0.00	0.00
1,900.0	12.00	331.97	1,873.8	3,101.82	238.7	-127.1	-117.1	0.00	0.00	0.00
2,000.0	12.00	331.97	1,971.6	3,004.00	257.1	-136.9	-126.1	0.00	0.00	0.00
2,100.0	12.00	331.97	2,069.4	2,906.19	275.4	-146.6	-135.1	0.00	0.00	0.00
<b>END OF TANGENT</b>										
2,108.9	12.00	331.97	2,078.1	2,897.47	277.1	-147.5	-135.9	0.00	0.00	0.00
2,200.0	10.18	331.97	2,167.5	2,808.08	292.5	-155.7	-143.5	2.00	-2.00	0.00
2,300.0	8.18	331.97	2,266.2	2,709.37	306.6	-163.2	-150.4	2.00	-2.00	0.00
2,400.0	6.18	331.97	2,365.4	2,610.16	317.6	-169.1	-155.8	2.00	-2.00	0.00
2,500.0	4.18	331.97	2,465.0	2,510.57	325.6	-173.3	-159.7	2.00	-2.00	0.00
2,600.0	2.18	331.97	2,564.9	2,410.73	330.5	-175.9	-162.1	2.00	-2.00	0.00
2,700.0	0.18	331.97	2,664.8	2,310.75	332.3	-176.9	-163.0	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
2,708.8	0.00	0.00	2,673.6	2,302.00	332.3	-176.9	-163.0	2.00	-2.00	0.00
2,800.0	0.00	0.00	2,764.8	2,210.75	332.3	-176.9	-163.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,864.8	2,110.75	332.3	-176.9	-163.0	0.00	0.00	0.00
3,000.0	0.00	0.00	2,964.8	2,010.75	332.3	-176.9	-163.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,064.8	1,910.75	332.3	-176.9	-163.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,164.8	1,810.75	332.3	-176.9	-163.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,264.8	1,710.75	332.3	-176.9	-163.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,364.8	1,610.75	332.3	-176.9	-163.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,464.8	1,510.75	332.3	-176.9	-163.0	0.00	0.00	0.00
<b>PARKMAN</b>										
3,550.8	0.00	0.00	3,515.6	1,460.00	332.3	-176.9	-163.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,564.8	1,410.75	332.3	-176.9	-163.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,664.8	1,310.75	332.3	-176.9	-163.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,764.8	1,210.75	332.3	-176.9	-163.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,864.8	1,110.75	332.3	-176.9	-163.0	0.00	0.00	0.00
4,000.0	0.00	0.00	3,964.8	1,010.75	332.3	-176.9	-163.0	0.00	0.00	0.00

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SIEVERS 8-61 3B-2-3
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 3 T8N R61W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SIEVERS 8-61 3B-2-3	<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)
4,100.0	0.00	0.00	4,064.8	910.75	332.3	-176.9	-163.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,164.8	810.75	332.3	-176.9	-163.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,264.8	710.75	332.3	-176.9	-163.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,364.8	610.75	332.3	-176.9	-163.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,464.8	510.75	332.3	-176.9	-163.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,564.8	410.75	332.3	-176.9	-163.0	0.00	0.00	0.00
<b>SUSSEX</b>										
4,620.8	0.00	0.00	4,585.6	390.00	332.3	-176.9	-163.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,664.8	310.75	332.3	-176.9	-163.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,764.8	210.75	332.3	-176.9	-163.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,864.8	110.75	332.3	-176.9	-163.0	0.00	0.00	0.00
5,000.0	0.00	0.00	4,964.8	10.75	332.3	-176.9	-163.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,064.8	-89.25	332.3	-176.9	-163.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,164.8	-189.25	332.3	-176.9	-163.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,264.8	-289.25	332.3	-176.9	-163.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,364.8	-389.25	332.3	-176.9	-163.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,464.8	-489.25	332.3	-176.9	-163.0	0.00	0.00	0.00
<b>SHANNON</b>										
5,560.8	0.00	0.00	5,525.6	-550.00	332.3	-176.9	-163.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,564.8	-589.25	332.3	-176.9	-163.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,664.8	-689.25	332.3	-176.9	-163.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,764.8	-789.25	332.3	-176.9	-163.0	0.00	0.00	0.00
<b>KOP (10°/ 100ft BUR)</b>										
5,882.8	0.00	0.00	5,847.6	-872.00	332.3	-176.9	-163.0	0.00	0.00	0.00
5,900.0	1.72	89.53	5,864.8	-889.24	332.3	-176.6	-162.8	10.00	10.00	0.00
6,000.0	11.72	89.53	5,964.0	-988.43	332.4	-164.9	-151.1	10.00	10.00	0.00
6,100.0	21.72	89.53	6,059.7	-1,084.08	332.6	-136.2	-122.4	10.00	10.00	0.00
6,200.0	31.72	89.53	6,148.9	-1,173.28	333.0	-91.3	-77.5	10.00	10.00	0.00
6,300.0	41.72	89.53	6,228.9	-1,253.34	333.5	-31.6	-17.8	10.00	10.00	0.00
6,400.0	51.72	89.53	6,297.4	-1,321.81	334.1	41.1	54.9	10.00	10.00	0.00
<b>SHARON SPRINGS SHALE</b>										
6,439.2	55.64	89.53	6,320.6	-1,345.00	334.4	72.7	86.4	10.00	10.00	0.00
6,500.0	61.72	89.53	6,352.2	-1,376.61	334.8	124.6	138.3	10.00	10.00	0.00
<b>NIORARA FORMATION</b>										
6,596.6	71.38	89.53	6,390.6	-1,415.00	335.5	213.1	226.8	10.00	10.00	0.00
6,600.0	71.72	89.53	6,391.7	-1,416.08	335.5	216.4	230.0	10.00	10.00	0.00
<b>NIORARA A CHALK</b>										
6,631.0	74.82	89.53	6,400.6	-1,425.00	335.8	246.0	259.7	10.00	10.00	0.00
6,700.0	81.72	89.53	6,414.6	-1,439.03	336.3	313.6	327.2	10.00	10.00	0.00
<b>BPI: 990ft FSL &amp; 600ft FWL of Sec 3</b>										
6,782.8	90.00	89.53	6,420.6	-1,445.00	337.0	396.0	409.6	10.00	10.00	0.00
6,800.0	90.00	89.53	6,420.6	-1,445.00	337.2	413.3	426.8	0.00	0.00	0.00
6,900.0	90.00	89.53	6,420.6	-1,445.01	338.0	513.3	526.8	0.00	0.00	0.00
7,000.0	90.00	89.53	6,420.6	-1,445.02	338.8	613.3	626.7	0.00	0.00	0.00
7,100.0	90.00	89.53	6,420.6	-1,445.02	339.6	713.2	726.7	0.00	0.00	0.00
7,200.0	90.00	89.53	6,420.6	-1,445.03	340.4	813.2	826.6	0.00	0.00	0.00
7,300.0	90.00	89.53	6,420.6	-1,445.04	341.3	913.2	926.6	0.00	0.00	0.00
7,400.0	90.00	89.53	6,420.6	-1,445.04	342.1	1,013.2	1,026.5	0.00	0.00	0.00
7,500.0	90.00	89.53	6,420.6	-1,445.05	342.9	1,113.2	1,126.4	0.00	0.00	0.00
7,600.0	90.00	89.53	6,420.7	-1,445.05	343.7	1,213.2	1,226.4	0.00	0.00	0.00
7,700.0	90.00	89.53	6,420.7	-1,445.06	344.6	1,313.2	1,326.3	0.00	0.00	0.00
7,800.0	90.00	89.53	6,420.7	-1,445.07	345.4	1,413.2	1,426.3	0.00	0.00	0.00
7,900.0	90.00	89.53	6,420.7	-1,445.07	346.2	1,513.2	1,526.2	0.00	0.00	0.00



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SIEVERS 8-61 3B-2-3
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 3 T8N R61W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SIEVERS 8-61 3B-2-3	<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)
8,000.0	90.00	89.53	6,420.7	-1,445.08	347.0	1,613.2	1,626.2	0.00	0.00	0.00
8,100.0	90.00	89.53	6,420.7	-1,445.08	347.8	1,713.2	1,726.1	0.00	0.00	0.00
8,200.0	90.00	89.53	6,420.7	-1,445.09	348.7	1,813.2	1,826.1	0.00	0.00	0.00
8,300.0	90.00	89.53	6,420.7	-1,445.09	349.5	1,913.2	1,926.0	0.00	0.00	0.00
8,400.0	90.00	89.53	6,420.7	-1,445.10	350.3	2,013.2	2,026.0	0.00	0.00	0.00
8,500.0	90.00	89.53	6,420.7	-1,445.10	351.1	2,113.2	2,125.9	0.00	0.00	0.00
8,600.0	90.00	89.53	6,420.7	-1,445.11	351.9	2,213.2	2,225.8	0.00	0.00	0.00
8,700.0	90.00	89.53	6,420.7	-1,445.11	352.7	2,313.2	2,325.8	0.00	0.00	0.00
8,800.0	90.00	89.53	6,420.7	-1,445.12	353.6	2,413.2	2,425.7	0.00	0.00	0.00
8,900.0	90.00	89.53	6,420.7	-1,445.12	354.4	2,513.2	2,525.7	0.00	0.00	0.00
9,000.0	90.00	89.53	6,420.7	-1,445.12	355.2	2,613.2	2,625.6	0.00	0.00	0.00
9,100.0	90.00	89.53	6,420.7	-1,445.13	356.0	2,713.2	2,725.6	0.00	0.00	0.00
9,200.0	90.00	89.53	6,420.7	-1,445.13	356.8	2,813.2	2,825.5	0.00	0.00	0.00
9,300.0	90.00	89.53	6,420.7	-1,445.14	357.6	2,913.2	2,925.5	0.00	0.00	0.00
9,400.0	90.00	89.53	6,420.7	-1,445.14	358.5	3,013.2	3,025.4	0.00	0.00	0.00
9,500.0	90.00	89.53	6,420.7	-1,445.14	359.3	3,113.2	3,125.3	0.00	0.00	0.00
9,600.0	90.00	89.53	6,420.7	-1,445.15	360.1	3,213.2	3,225.3	0.00	0.00	0.00
9,700.0	90.00	89.53	6,420.7	-1,445.15	360.9	3,313.2	3,325.2	0.00	0.00	0.00
9,800.0	90.00	89.53	6,420.8	-1,445.15	361.7	3,413.2	3,425.2	0.00	0.00	0.00
9,900.0	90.00	89.53	6,420.8	-1,445.15	362.5	3,513.2	3,525.1	0.00	0.00	0.00
10,000.0	90.00	89.53	6,420.8	-1,445.16	363.4	3,613.2	3,625.1	0.00	0.00	0.00
10,100.0	90.00	89.53	6,420.8	-1,445.16	364.2	3,713.1	3,725.0	0.00	0.00	0.00
10,200.0	90.00	89.53	6,420.8	-1,445.16	365.0	3,813.1	3,825.0	0.00	0.00	0.00
10,300.0	90.00	89.53	6,420.8	-1,445.16	365.8	3,913.1	3,924.9	0.00	0.00	0.00
10,400.0	90.00	89.53	6,420.8	-1,445.16	366.6	4,013.1	4,024.9	0.00	0.00	0.00
10,500.0	90.00	89.53	6,420.8	-1,445.17	367.4	4,113.1	4,124.8	0.00	0.00	0.00
10,600.0	90.00	89.53	6,420.8	-1,445.17	368.2	4,213.1	4,224.7	0.00	0.00	0.00
10,700.0	90.00	89.53	6,420.8	-1,445.17	369.0	4,313.1	4,324.7	0.00	0.00	0.00
10,800.0	90.00	89.53	6,420.8	-1,445.17	369.9	4,413.1	4,424.6	0.00	0.00	0.00
10,900.0	90.00	89.54	6,420.8	-1,445.17	370.7	4,513.1	4,524.6	0.00	0.00	0.00
11,000.0	90.00	89.54	6,420.8	-1,445.17	371.5	4,613.1	4,624.5	0.00	0.00	0.00
11,100.0	90.00	89.54	6,420.8	-1,445.17	372.3	4,713.1	4,724.5	0.00	0.00	0.00
11,200.0	90.00	89.54	6,420.8	-1,445.17	373.1	4,813.1	4,824.4	0.00	0.00	0.00
11,300.0	90.00	89.54	6,420.8	-1,445.17	373.9	4,913.1	4,924.4	0.00	0.00	0.00
11,400.0	90.00	89.54	6,420.8	-1,445.17	374.7	5,013.1	5,024.3	0.00	0.00	0.00
11,500.0	90.00	89.54	6,420.8	-1,445.17	375.5	5,113.1	5,124.2	0.00	0.00	0.00
11,600.0	90.00	89.54	6,420.8	-1,445.17	376.3	5,213.1	5,224.2	0.00	0.00	0.00
11,700.0	90.00	89.54	6,420.8	-1,445.17	377.1	5,313.1	5,324.1	0.00	0.00	0.00
11,800.0	90.00	89.54	6,420.8	-1,445.17	378.0	5,413.1	5,424.1	0.00	0.00	0.00
11,900.0	90.00	89.54	6,420.8	-1,445.17	378.8	5,513.1	5,524.0	0.00	0.00	0.00
12,000.0	90.00	89.54	6,420.8	-1,445.17	379.6	5,613.1	5,624.0	0.00	0.00	0.00
12,100.0	90.00	89.54	6,420.8	-1,445.17	380.4	5,713.1	5,723.9	0.00	0.00	0.00
12,200.0	90.00	89.54	6,420.8	-1,445.17	381.2	5,813.1	5,823.9	0.00	0.00	0.00
12,300.0	90.00	89.54	6,420.8	-1,445.17	382.0	5,913.1	5,923.8	0.00	0.00	0.00
12,400.0	90.00	89.54	6,420.8	-1,445.17	382.8	6,013.1	6,023.8	0.00	0.00	0.00
12,500.0	90.00	89.54	6,420.8	-1,445.16	383.6	6,113.1	6,123.7	0.00	0.00	0.00
12,600.0	90.00	89.54	6,420.8	-1,445.16	384.4	6,213.1	6,223.6	0.00	0.00	0.00
12,700.0	90.00	89.54	6,420.8	-1,445.16	385.2	6,313.1	6,323.6	0.00	0.00	0.00
12,800.0	90.00	89.54	6,420.8	-1,445.16	386.0	6,413.1	6,423.5	0.00	0.00	0.00
12,900.0	90.00	89.54	6,420.8	-1,445.16	386.8	6,513.1	6,523.5	0.00	0.00	0.00
13,000.0	90.00	89.54	6,420.8	-1,445.15	387.6	6,613.1	6,623.4	0.00	0.00	0.00
13,100.0	90.00	89.54	6,420.8	-1,445.15	388.4	6,713.1	6,723.4	0.00	0.00	0.00
13,200.0	90.00	89.54	6,420.7	-1,445.15	389.3	6,813.0	6,823.3	0.00	0.00	0.00
13,300.0	90.00	89.54	6,420.7	-1,445.15	390.1	6,913.0	6,923.3	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SIEVERS 8-61 3B-2-3
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 3 T8N R61W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SIEVERS 8-61 3B-2-3	<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)
13,400.0	90.00	89.54	6,420.7	-1,445.14	390.9	7,013.0	7,023.2	0.00	0.00	0.00
13,500.0	90.00	89.54	6,420.7	-1,445.14	391.7	7,113.0	7,123.1	0.00	0.00	0.00
13,600.0	90.00	89.54	6,420.7	-1,445.14	392.5	7,213.0	7,223.1	0.00	0.00	0.00
13,700.0	90.00	89.54	6,420.7	-1,445.13	393.3	7,313.0	7,323.0	0.00	0.00	0.00
13,800.0	90.00	89.54	6,420.7	-1,445.13	394.1	7,413.0	7,423.0	0.00	0.00	0.00
13,900.0	90.00	89.54	6,420.7	-1,445.13	394.9	7,513.0	7,522.9	0.00	0.00	0.00
14,000.0	90.00	89.54	6,420.7	-1,445.12	395.7	7,613.0	7,622.9	0.00	0.00	0.00
14,100.0	90.00	89.54	6,420.7	-1,445.12	396.5	7,713.0	7,722.8	0.00	0.00	0.00
14,200.0	90.00	89.54	6,420.7	-1,445.11	397.3	7,813.0	7,822.8	0.00	0.00	0.00
14,300.0	90.00	89.54	6,420.7	-1,445.11	398.1	7,913.0	7,922.7	0.00	0.00	0.00
14,400.0	90.00	89.54	6,420.7	-1,445.10	398.9	8,013.0	8,022.6	0.00	0.00	0.00
14,500.0	90.00	89.54	6,420.7	-1,445.10	399.7	8,113.0	8,122.6	0.00	0.00	0.00
14,600.0	90.00	89.54	6,420.7	-1,445.10	400.5	8,213.0	8,222.5	0.00	0.00	0.00
14,700.0	90.00	89.54	6,420.7	-1,445.09	401.3	8,313.0	8,322.5	0.00	0.00	0.00
14,800.0	90.00	89.54	6,420.7	-1,445.09	402.1	8,413.0	8,422.4	0.00	0.00	0.00
14,900.0	90.00	89.54	6,420.7	-1,445.08	402.9	8,513.0	8,522.4	0.00	0.00	0.00
15,000.0	90.00	89.54	6,420.7	-1,445.07	403.7	8,613.0	8,622.3	0.00	0.00	0.00
15,100.0	90.00	89.54	6,420.7	-1,445.07	404.5	8,713.0	8,722.3	0.00	0.00	0.00
15,200.0	90.00	89.54	6,420.7	-1,445.06	405.3	8,813.0	8,822.2	0.00	0.00	0.00
15,300.0	90.00	89.54	6,420.7	-1,445.06	406.1	8,913.0	8,922.1	0.00	0.00	0.00
15,400.0	90.00	89.54	6,420.7	-1,445.05	406.9	9,013.0	9,022.1	0.00	0.00	0.00
15,500.0	90.00	89.54	6,420.6	-1,445.04	407.7	9,113.0	9,122.0	0.00	0.00	0.00
15,600.0	90.00	89.54	6,420.6	-1,445.04	408.5	9,213.0	9,222.0	0.00	0.00	0.00
15,700.0	90.00	89.54	6,420.6	-1,445.03	409.3	9,313.0	9,321.9	0.00	0.00	0.00
15,800.0	90.00	89.54	6,420.6	-1,445.03	410.1	9,413.0	9,421.9	0.00	0.00	0.00
15,900.0	90.00	89.54	6,420.6	-1,445.02	410.9	9,513.0	9,521.8	0.00	0.00	0.00
16,000.0	90.00	89.54	6,420.6	-1,445.01	411.7	9,613.0	9,621.8	0.00	0.00	0.00
16,100.0	90.00	89.54	6,420.6	-1,445.00	412.5	9,713.0	9,721.7	0.00	0.00	0.00
EPI: 985ft FSL & 600 ft FEL of Sec 2										
16,154.0	90.00	89.54	6,420.6	-1,445.00	412.9	9,767.0	9,775.7	0.00	0.00	0.00
EOT TO 89.42° AZ										
16,158.1	90.00	89.42	6,420.6	-1,445.00	412.9	9,771.1	9,779.8	3.00	0.00	-3.00
16,200.0	90.00	89.42	6,420.6	-1,445.00	413.4	9,813.0	9,821.7	0.00	0.00	0.00
16,300.0	90.00	89.42	6,420.6	-1,444.99	414.4	9,912.9	9,921.6	0.00	0.00	0.00
16,400.0	90.00	89.42	6,420.6	-1,445.00	415.4	10,012.9	10,021.6	0.00	0.00	0.00
BHL: 984ft FSL & 300ft FEL of Sec 2										
16,453.6	90.00	89.42	6,420.6	-1,445.00	415.9	10,066.5	10,075.1	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
571.0	570.6	PIERRE SHALE (BASE FOX HILLS)				
3,550.8	3,515.6	PARKMAN				
4,620.8	4,585.6	SUSSEX				
5,560.8	5,525.6	SHANNON				
6,439.2	6,320.6	SHARON SPRINGS SHALE				
6,596.6	6,390.6	NIORARA FORMATION				
6,631.0	6,400.6	NIORARA A CHALK				

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SIEVERS 8-61 3B-2-3
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4975.6usft (Original Well Elev)
<b>Site:</b>	SW SW SEC. 3 T8N R61W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SIEVERS 8-61 3B-2-3	<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)	
0.0	0.0	0.0	0.0	SHL: 654ft FSL & 200ft FWL of Sec 3
300.0	300.0	0.0	0.0	START NUDGE (2"/100ft BUR)
899.8	895.5	55.2	-29.4	EOB TO 12° INC
2,108.9	2,078.1	277.1	-147.5	END OF TANGENT
2,708.8	2,673.6	332.3	-176.9	EOD TO VERTICAL
5,882.8	5,847.6	332.3	-176.9	KOP (10°/ 100ft BUR)
6,782.8	6,420.6	337.0	396.0	BPI: 990ft FSL & 600ft FWL of Sec 3
16,154.0	6,420.6	412.9	9,767.0	EPI: 985ft FSL & 600 ft FEL of Sec 2
16,158.1	6,420.6	412.9	9,771.1	EOT TO 89.42° AZ
16,453.6	6,420.6	415.9	10,066.5	BHL: 984ft FSL & 300ft FEL of Sec 2