

BISON OIL & GAS II, LLC

WELD COUNTY, COLORADO (NAD 83)

NE SE SEC. 15 T8N R61W 6th P.M.

SIEVERS 8-61 15B-3

ORIGINAL WELLBORE

27 September, 2017

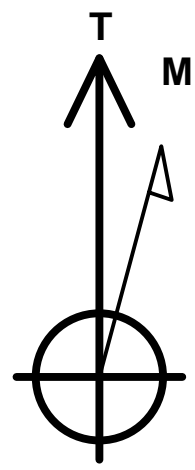
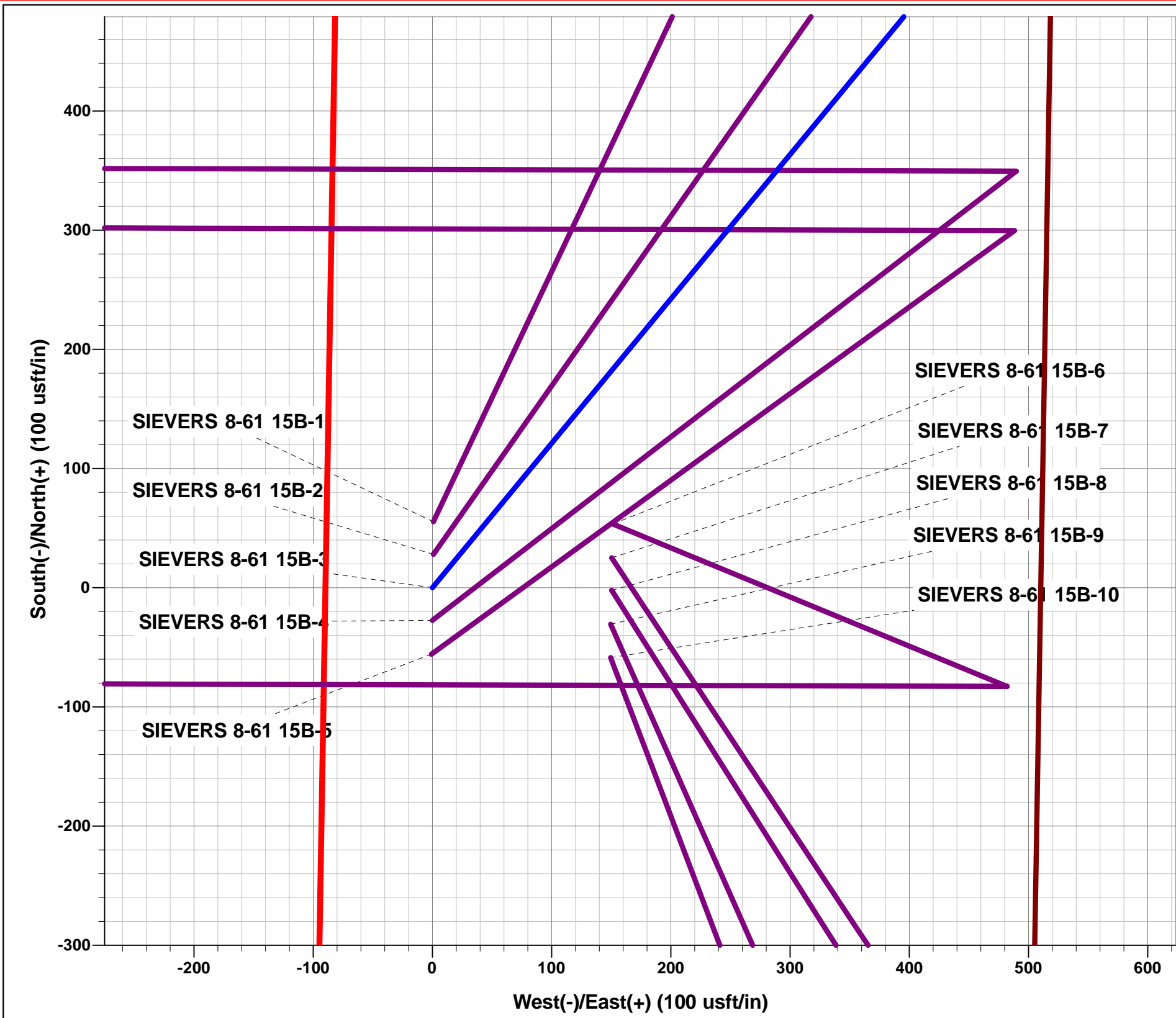
Plan: PROPOSAL #1



Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE SE SEC. 15 T8N R61W 6th P.M.
Well: SIEVERS 8-61 15B-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: 1518ft FSL & 510ft FEL of Sec 15	
300.0	300.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
895.6	900.0	12.00	39.53	48.3	39.8	-31.6	62.6	EOB TO 12° INC	
3910.5	3982.2	12.00	39.53	542.5	447.8	-355.5	703.4	END OF TANGENT	
4506.1	4582.2	0.00	0.00	590.8	487.6	-387.1	766.0	EOD TO VERTICAL	
6118.7	6194.8	0.00	0.00	590.8	487.6	-387.1	766.0	KOP (10°/100ft BUR)	
6691.7	7094.9	90.00	279.40	684.4	-77.7	185.8	1339.0	BPI *NEW*: 2203ft FSL & 600ft FEL of Sec 15	
6691.7	7403.3	90.00	270.15	710.0	-384.7	493.0	1647.4	EOT TO 270.15° AZ	
6691.7	11179.4	90.00	270.15	719.9	-4160.8	4222.4	5423.6	EPI: 2262ft FSL & 600ft FWL of Sec 15	
6691.7	11479.3	90.00	270.15	720.7	-4460.7	4518.6	5723.5	BHL: 2265ft FSL & 300ft FWL of Sec 15	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - SIEVERS 8-61 15B-3	6118.7	590.8	487.6	40.660389	-104.182157
BPI *NEW* - SIEVERS 8-61 15B-3	6691.7	684.4	-77.7	40.660645	-104.184194
EPI - SIEVERS 8-61 15B-3	6691.7	719.9	-4160.8	40.660742	-104.198911
BHL - SIEVERS 8-61 15B-3	6691.7	720.7	-4460.7	40.660744	-104.199992



Azimuths to True North
Magnetic North: 7.89°

Magnetic Field
Strength: 52552.4snT
Dip Angle: 67.14°
Date: 27/09/2017
Model: IGRF2015

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
545.7	546.0	PIERRE SH (BASE FOX HILLS)
3506.7	3569.4	PARKMAN
4576.7	4652.8	SUSSEX
5516.7	5592.8	SHANNON
6311.7	6391.7	SHARON SPRINGS SHALE
6381.7	6468.0	NIOBRARA FORMATION
6391.7	6479.4	NIOBRARA A CHALK
6491.7	6601.0	NIOBRARA B CHALK
6551.7	6685.7	NIOBRARA C CHALK
6641.7	6853.7	FT HAYS
6681.7	6987.7	CODELL

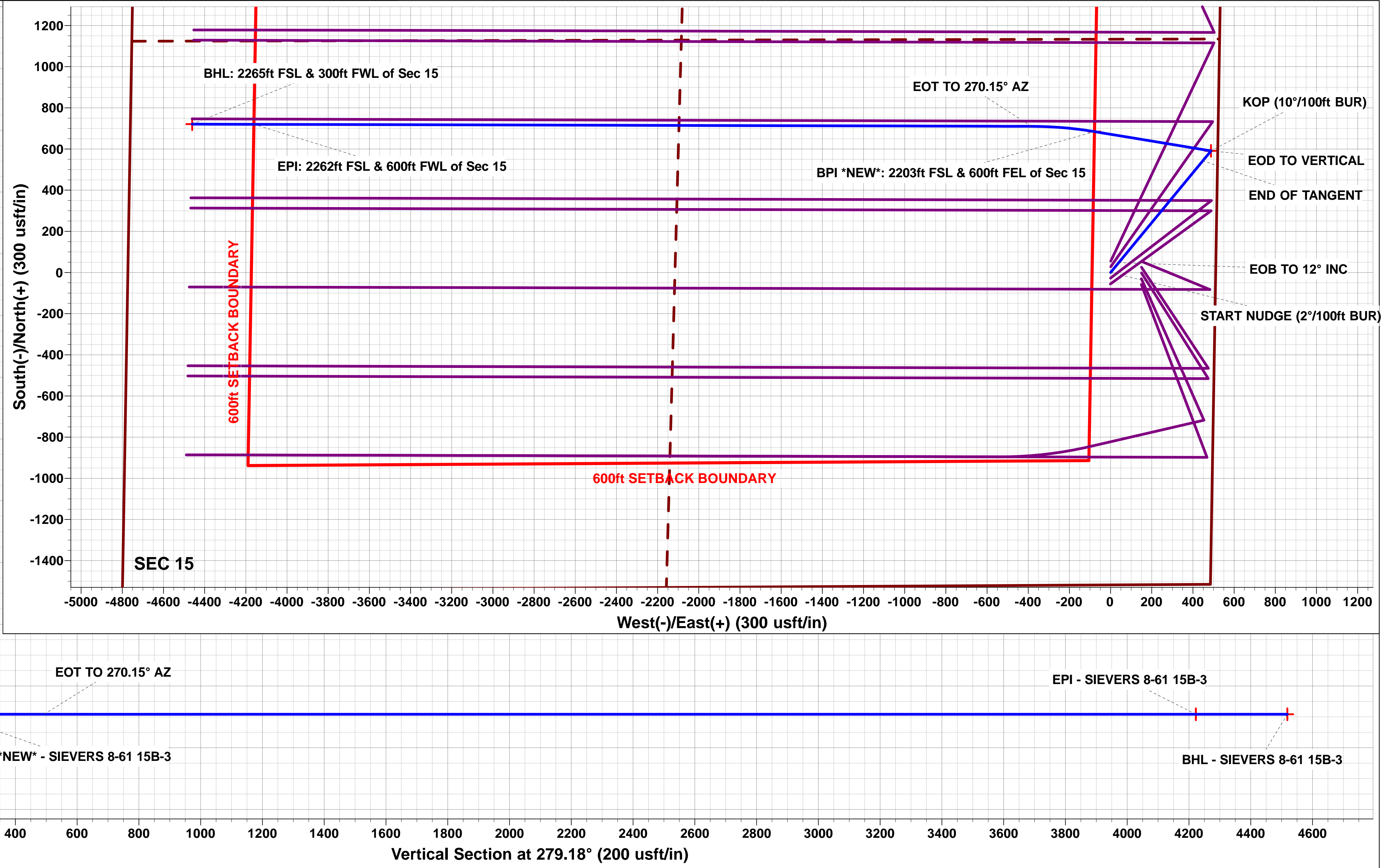
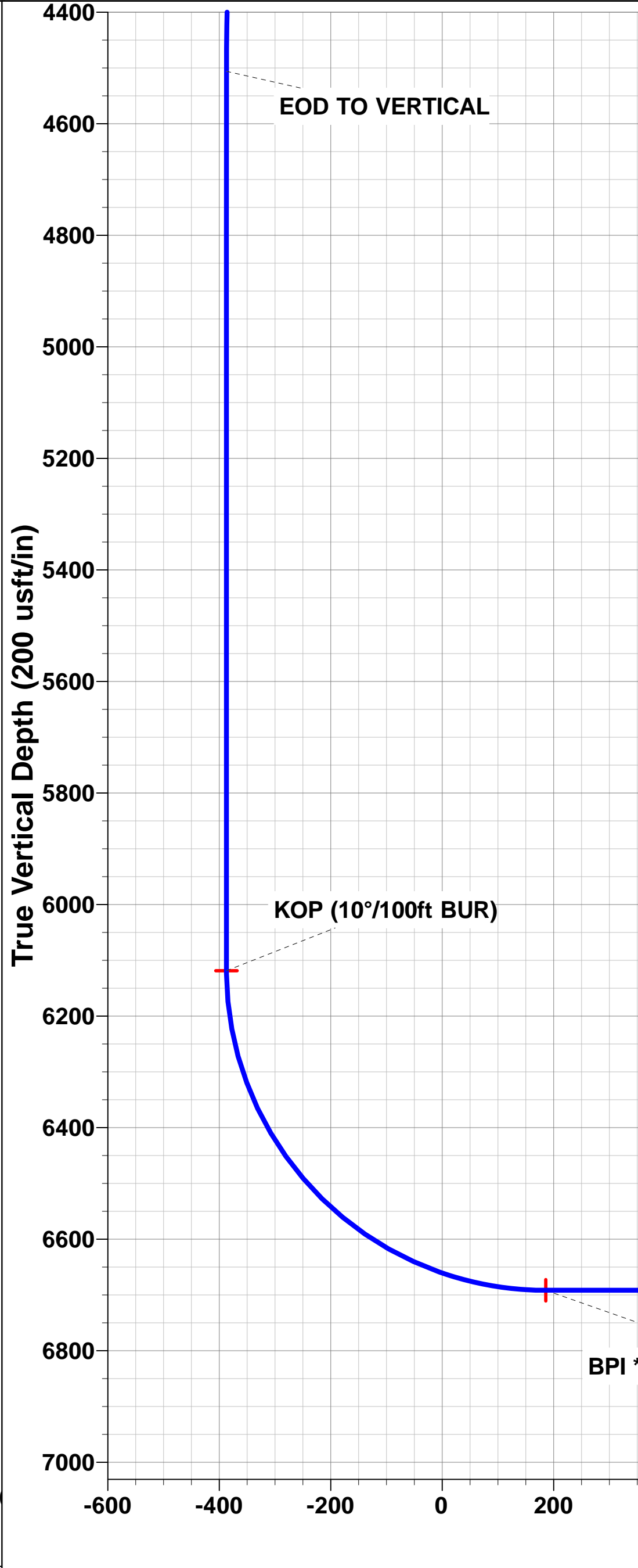
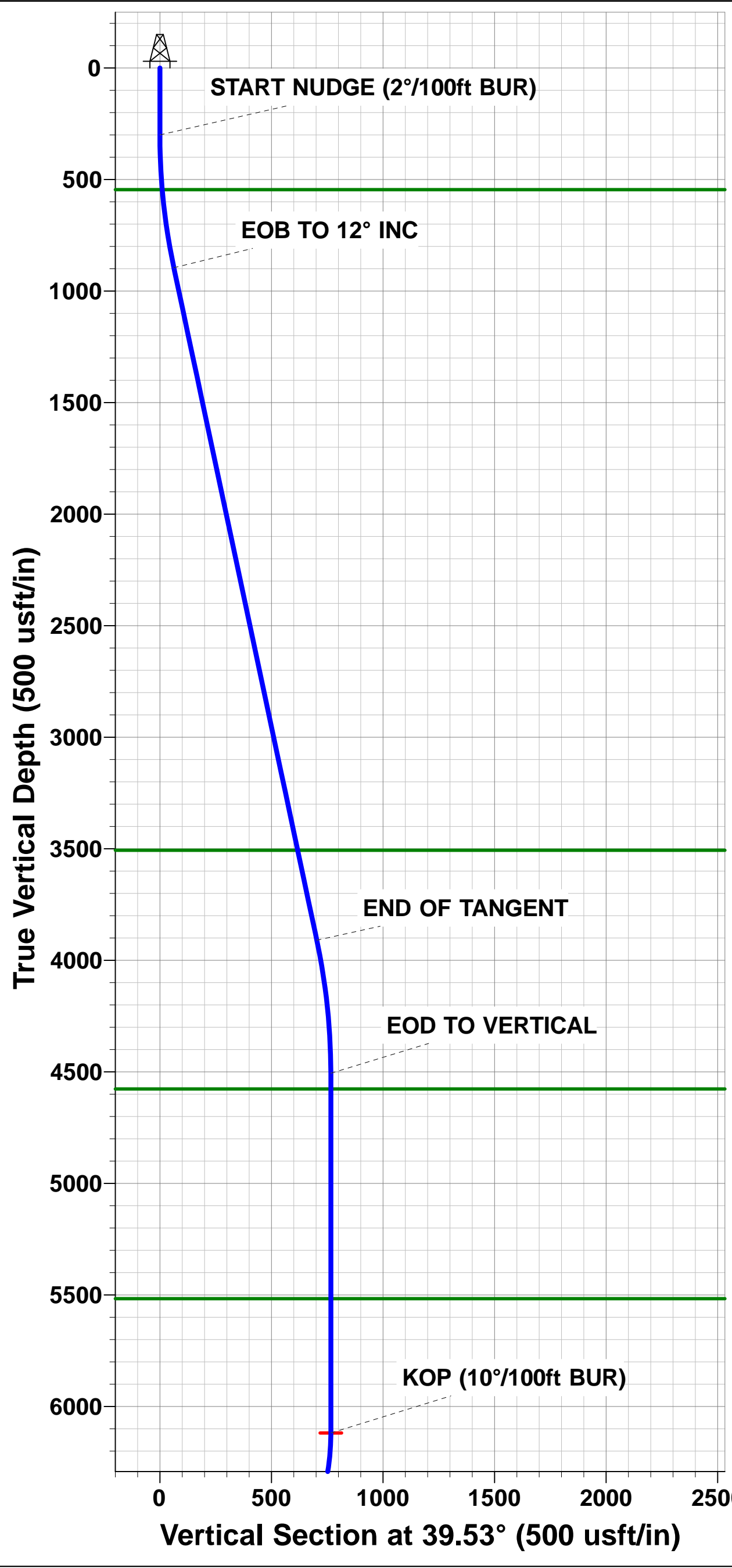
PROPOSED LOCAL COORDINATES:

SHL:1518ft FSL & 510ft FEL of Sec 15

BEGIN PROD INT: 2203ft FSL & 600ft FEL of Sec 15

END PROD INTERVAL: 2262ft FSL & 600ft FWL of Sec 15

BHL: 2265ft FSL & 300ft FWL of Sec 15



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SIEVERS 8-61 15B-3
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5001.7usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5001.7usft (Original Well Elev)
Site:	NE SE SEC. 15 T8N R61W 6th P.M.	North Reference:	True
Well:	SIEVERS 8-61 15B-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project	WELD COUNTY, COLORADO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	NE SE SEC. 15 T8N R61W 6th P.M.		
Site Position:		Northing:	1,485,596.41 usft
From:	Lat/Long	Easting:	3,365,131.04 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.658919
		Longitude:	-104.183911
		Grid Convergence:	0.85 °

Well	SIEVERS 8-61 15B-3		
Well Position	+N-S	-55.4 usft	Northing:
	+E-W	-0.8 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	27/09/2017	7.89	67.14	52,552

Design	PROPOSAL #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.0	0.0	0.0	279.18

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.0	0.00	0.00	0.0	-5,001.7	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	-4,701.7	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	12.00	39.53	895.6	-4,106.1	48.3	39.8	2.00	2.00	0.00	39.53	
3,982.2	12.00	39.53	3,910.5	-1,091.2	542.5	447.8	0.00	0.00	0.00	0.00	
4,582.2	0.00	0.00	4,506.1	-495.6	590.8	487.6	2.00	-2.00	0.00	180.00	
6,194.8	0.00	0.00	6,118.7	1,117.0	590.8	487.6	0.00	0.00	0.00	0.00	KOP - SIEVERS 8-61
7,094.9	90.00	279.40	6,691.7	1,690.0	684.4	-77.7	10.00	10.00	-8.95	279.40	BPI *NEW* - SIEVE
7,403.3	90.00	270.15	6,691.7	1,690.0	710.0	-384.7	3.00	0.00	-3.00	-89.99	
11,179.4	90.00	270.15	6,691.7	1,690.0	719.9	-4,160.8	0.00	0.00	0.00	0.00	EPI - SIEVERS 8-6
11,479.3	90.00	270.15	6,691.7	1,690.0	720.7	-4,460.7	0.00	0.00	0.00	0.00	BHL - SIEVERS 8-6

Planning Report



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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5001.7usft (Original Well Elev)
Site:	NE SE SEC. 15 T8N R61W 6th P.M.	North Reference:	True
Well:	SIEVERS 8-61 15B-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
SHL: 1518ft FSL & 510ft FEL of Sec 15										
0.0	0.00	0.00	0.0	5,001.70	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,901.70	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,801.70	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
300.0	0.00	0.00	300.0	4,701.70	0.0	0.0	0.0	0.00	0.00	0.00
400.0	2.00	39.53	400.0	4,601.72	1.3	1.1	-0.9	2.00	2.00	0.00
500.0	4.00	39.53	499.8	4,501.86	5.4	4.4	-3.5	2.00	2.00	0.00
PIERRE SHALE (BASE FOX HILLS)										
546.0	4.92	39.53	545.7	4,456.00	8.1	6.7	-5.3	2.00	2.00	0.00
600.0	6.00	39.53	599.5	4,402.25	12.1	10.0	-7.9	2.00	2.00	0.00
700.0	8.00	39.53	698.7	4,303.00	21.5	17.7	-14.1	2.00	2.00	0.00
800.0	10.00	39.53	797.5	4,204.23	33.6	27.7	-22.0	2.00	2.00	0.00
EOB TO 12° INC										
900.0	12.00	39.53	895.6	4,106.08	48.3	39.8	-31.6	2.00	2.00	0.00
1,000.0	12.00	39.53	993.4	4,008.26	64.3	53.1	-42.1	0.00	0.00	0.00
1,100.0	12.00	39.53	1,091.3	3,910.45	80.4	66.3	-52.7	0.00	0.00	0.00
1,200.0	12.00	39.53	1,189.1	3,812.63	96.4	79.6	-63.2	0.00	0.00	0.00
1,300.0	12.00	39.53	1,286.9	3,714.82	112.4	92.8	-73.7	0.00	0.00	0.00
1,400.0	12.00	39.53	1,384.7	3,617.00	128.5	106.0	-84.2	0.00	0.00	0.00
1,500.0	12.00	39.53	1,482.5	3,519.19	144.5	119.3	-94.7	0.00	0.00	0.00
1,600.0	12.00	39.53	1,580.3	3,421.37	160.5	132.5	-105.2	0.00	0.00	0.00
1,700.0	12.00	39.53	1,678.1	3,323.56	176.6	145.7	-115.7	0.00	0.00	0.00
1,800.0	12.00	39.53	1,776.0	3,225.74	192.6	159.0	-126.2	0.00	0.00	0.00
1,900.0	12.00	39.53	1,873.8	3,127.93	208.6	172.2	-136.7	0.00	0.00	0.00
2,000.0	12.00	39.53	1,971.6	3,030.11	224.7	185.4	-147.2	0.00	0.00	0.00
2,100.0	12.00	39.53	2,069.4	2,932.30	240.7	198.7	-157.7	0.00	0.00	0.00
2,200.0	12.00	39.53	2,167.2	2,834.48	256.7	211.9	-168.2	0.00	0.00	0.00
2,300.0	12.00	39.53	2,265.0	2,736.67	272.8	225.1	-178.7	0.00	0.00	0.00
2,400.0	12.00	39.53	2,362.8	2,638.86	288.8	238.4	-189.2	0.00	0.00	0.00
2,500.0	12.00	39.53	2,460.7	2,541.04	304.8	251.6	-199.8	0.00	0.00	0.00
2,600.0	12.00	39.53	2,558.5	2,443.23	320.9	264.8	-210.3	0.00	0.00	0.00
2,700.0	12.00	39.53	2,656.3	2,345.41	336.9	278.1	-220.8	0.00	0.00	0.00
2,800.0	12.00	39.53	2,754.1	2,247.60	353.0	291.3	-231.3	0.00	0.00	0.00
2,900.0	12.00	39.53	2,851.9	2,149.78	369.0	304.5	-241.8	0.00	0.00	0.00
3,000.0	12.00	39.53	2,949.7	2,051.97	385.0	317.8	-252.3	0.00	0.00	0.00
3,100.0	12.00	39.53	3,047.5	1,954.15	401.1	331.0	-262.8	0.00	0.00	0.00
3,200.0	12.00	39.53	3,145.4	1,856.34	417.1	344.2	-273.3	0.00	0.00	0.00
3,300.0	12.00	39.53	3,243.2	1,758.52	433.1	357.5	-283.8	0.00	0.00	0.00
3,400.0	12.00	39.53	3,341.0	1,660.71	449.2	370.7	-294.3	0.00	0.00	0.00
3,500.0	12.00	39.53	3,438.8	1,562.89	465.2	383.9	-304.8	0.00	0.00	0.00
PARKMAN										
3,569.4	12.00	39.53	3,506.7	1,495.00	476.3	393.1	-312.1	0.00	0.00	0.00
3,600.0	12.00	39.53	3,536.6	1,465.08	481.2	397.2	-315.3	0.00	0.00	0.00
3,700.0	12.00	39.53	3,634.4	1,367.26	497.3	410.4	-325.8	0.00	0.00	0.00
3,800.0	12.00	39.53	3,732.3	1,269.45	513.3	423.6	-336.3	0.00	0.00	0.00
3,900.0	12.00	39.53	3,830.1	1,171.63	529.3	436.9	-346.9	0.00	0.00	0.00
END OF TANGENT										
3,982.2	12.00	39.53	3,910.5	1,091.24	542.5	447.8	-355.5	0.00	0.00	0.00
4,000.0	11.64	39.53	3,927.9	1,073.81	545.3	450.1	-357.3	2.00	-2.00	0.00
4,100.0	9.64	39.53	4,026.2	975.53	559.6	461.8	-366.7	2.00	-2.00	0.00
4,200.0	7.64	39.53	4,125.0	876.67	571.2	471.4	-374.3	2.00	-2.00	0.00
4,300.0	5.64	39.53	4,224.3	777.35	580.1	478.8	-380.1	2.00	-2.00	0.00

Planning Report



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Well:	SIEVERS 8-61 15B-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
4,400.0	3.64	39.53	4,324.0	677.68	586.3	483.9	-384.2	2.00	-2.00	0.00
4,500.0	1.64	39.53	4,423.9	577.80	589.9	486.8	-386.5	2.00	-2.00	0.00
EOD TO VERTICAL										
4,582.2	0.00	0.00	4,506.1	495.62	590.8	487.6	-387.1	2.00	-2.00	-48.10
4,600.0	0.00	0.00	4,523.9	477.81	590.8	487.6	-387.1	0.00	0.00	0.00
SUSSEX										
4,652.8	0.00	0.00	4,576.7	425.00	590.8	487.6	-387.1	0.00	0.00	0.00
4,700.0	0.00	0.00	4,623.9	377.81	590.8	487.6	-387.1	0.00	0.00	0.00
4,800.0	0.00	0.00	4,723.9	277.81	590.8	487.6	-387.1	0.00	0.00	0.00
4,900.0	0.00	0.00	4,823.9	177.81	590.8	487.6	-387.1	0.00	0.00	0.00
5,000.0	0.00	0.00	4,923.9	77.81	590.8	487.6	-387.1	0.00	0.00	0.00
5,100.0	0.00	0.00	5,023.9	-22.19	590.8	487.6	-387.1	0.00	0.00	0.00
5,200.0	0.00	0.00	5,123.9	-122.19	590.8	487.6	-387.1	0.00	0.00	0.00
5,300.0	0.00	0.00	5,223.9	-222.19	590.8	487.6	-387.1	0.00	0.00	0.00
5,400.0	0.00	0.00	5,323.9	-322.19	590.8	487.6	-387.1	0.00	0.00	0.00
5,500.0	0.00	0.00	5,423.9	-422.19	590.8	487.6	-387.1	0.00	0.00	0.00
SHANNON										
5,592.8	0.00	0.00	5,516.7	-515.00	590.8	487.6	-387.1	0.00	0.00	0.00
5,600.0	0.00	0.00	5,523.9	-522.19	590.8	487.6	-387.1	0.00	0.00	0.00
5,700.0	0.00	0.00	5,623.9	-622.19	590.8	487.6	-387.1	0.00	0.00	0.00
5,800.0	0.00	0.00	5,723.9	-722.19	590.8	487.6	-387.1	0.00	0.00	0.00
5,900.0	0.00	0.00	5,823.9	-822.19	590.8	487.6	-387.1	0.00	0.00	0.00
6,000.0	0.00	0.00	5,923.9	-922.19	590.8	487.6	-387.1	0.00	0.00	0.00
6,100.0	0.00	0.00	6,023.9	-1,022.19	590.8	487.6	-387.1	0.00	0.00	0.00
KOP (10°/100ft BUR)										
6,194.8	0.00	0.00	6,118.7	-1,117.00	590.8	487.6	-387.1	0.00	0.00	0.00
6,200.0	0.52	279.40	6,123.9	-1,122.19	590.8	487.6	-387.1	10.00	10.00	0.00
6,300.0	10.52	279.40	6,223.3	-1,221.60	592.4	478.1	-377.5	10.00	10.00	0.00
SHARON SPRINGS SHALE										
6,391.7	19.68	279.40	6,311.7	-1,310.00	596.3	454.6	-353.6	10.00	10.00	0.00
6,400.0	20.52	279.40	6,319.5	-1,317.84	596.7	451.7	-350.8	10.00	10.00	0.00
NIOBRARA FORMATION										
6,468.0	27.32	279.40	6,381.7	-1,380.00	601.2	424.5	-323.2	10.00	10.00	0.00
NIOBRARA A CHALK										
6,479.4	28.45	279.40	6,391.7	-1,390.00	602.1	419.3	-317.9	10.00	10.00	0.00
6,500.0	30.52	279.40	6,409.7	-1,407.97	603.8	409.3	-307.8	10.00	10.00	0.00
6,600.0	40.52	279.40	6,491.0	-1,489.26	613.2	352.1	-249.7	10.00	10.00	0.00
NIOBRARA B CHALK										
6,601.0	40.61	279.40	6,491.7	-1,490.00	613.3	351.4	-249.1	10.00	10.00	0.00
NIOBRARA C CHALK										
6,685.7	49.08	279.40	6,551.7	-1,550.00	623.1	292.5	-189.4	10.00	10.00	0.00
6,700.0	50.52	279.40	6,560.9	-1,559.24	624.9	281.8	-178.5	10.00	10.00	0.00
6,800.0	60.51	279.40	6,617.5	-1,615.79	638.3	200.5	-96.2	10.00	10.00	0.00
FT HAYS										
6,853.7	65.89	279.40	6,641.7	-1,640.00	646.2	153.2	-48.2	10.00	10.00	0.00
6,900.0	70.51	279.40	6,658.9	-1,657.18	653.2	110.9	-5.3	10.00	10.00	0.00
CODELL										
6,987.7	79.28	279.40	6,681.7	-1,680.00	667.0	27.4	79.3	10.00	10.00	0.00
7,000.0	80.51	279.40	6,683.9	-1,682.16	669.0	15.5	91.4	10.00	10.00	0.00
BPI *NEW*: 2203ft FSL & 600ft FEL of Sec 15										
7,094.9	90.00	279.40	6,691.7	-1,690.00	684.4	-77.7	185.8	10.00	10.00	0.00
7,100.0	90.00	279.25	6,691.7	-1,690.00	685.2	-82.8	191.0	3.00	0.00	-3.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SIEVERS 8-61 15B-3
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5001.7usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5001.7usft (Original Well Elev)
Site:	NE SE SEC. 15 T8N R61W 6th P.M.	North Reference:	True
Well:	SIEVERS 8-61 15B-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
7,200.0	90.00	276.25	6,691.7	-1,690.00	698.7	-181.8	291.0	3.00	0.00	-3.00
7,300.0	90.00	273.25	6,691.7	-1,690.00	707.0	-281.5	390.6	3.00	0.00	-3.00
7,400.0	90.00	270.25	6,691.7	-1,690.00	710.0	-381.4	489.8	3.00	0.00	-3.00
EOT TO 270.15° AZ										
7,403.3	90.00	270.15	6,691.7	-1,690.00	710.0	-384.7	493.0	3.00	0.00	-3.00
7,500.0	90.00	270.15	6,691.7	-1,690.00	710.3	-481.4	588.6	0.00	0.00	0.00
7,600.0	90.00	270.15	6,691.7	-1,690.00	710.6	-581.4	687.3	0.00	0.00	0.00
7,700.0	90.00	270.15	6,691.7	-1,690.00	710.8	-681.4	786.1	0.00	0.00	0.00
7,800.0	90.00	270.15	6,691.7	-1,690.00	711.1	-781.4	884.8	0.00	0.00	0.00
7,900.0	90.00	270.15	6,691.7	-1,690.00	711.3	-881.4	983.6	0.00	0.00	0.00
8,000.0	90.00	270.15	6,691.7	-1,690.00	711.6	-981.4	1,082.4	0.00	0.00	0.00
8,100.0	90.00	270.15	6,691.7	-1,690.00	711.9	-1,081.4	1,181.1	0.00	0.00	0.00
8,200.0	90.00	270.15	6,691.7	-1,690.00	712.1	-1,181.4	1,279.9	0.00	0.00	0.00
8,300.0	90.00	270.15	6,691.7	-1,690.00	712.4	-1,281.4	1,378.6	0.00	0.00	0.00
8,400.0	90.00	270.15	6,691.7	-1,690.00	712.7	-1,381.4	1,477.4	0.00	0.00	0.00
8,500.0	90.00	270.15	6,691.7	-1,690.00	712.9	-1,481.4	1,576.2	0.00	0.00	0.00
8,600.0	90.00	270.15	6,691.7	-1,690.00	713.2	-1,581.4	1,674.9	0.00	0.00	0.00
8,700.0	90.00	270.15	6,691.7	-1,690.00	713.4	-1,681.4	1,773.7	0.00	0.00	0.00
8,800.0	90.00	270.15	6,691.7	-1,690.00	713.7	-1,781.4	1,872.4	0.00	0.00	0.00
8,900.0	90.00	270.15	6,691.7	-1,690.00	714.0	-1,881.4	1,971.2	0.00	0.00	0.00
9,000.0	90.00	270.15	6,691.7	-1,690.00	714.2	-1,981.4	2,070.0	0.00	0.00	0.00
9,100.0	90.00	270.15	6,691.7	-1,690.00	714.5	-2,081.4	2,168.7	0.00	0.00	0.00
9,200.0	90.00	270.15	6,691.7	-1,690.00	714.7	-2,181.4	2,267.5	0.00	0.00	0.00
9,300.0	90.00	270.15	6,691.7	-1,690.00	715.0	-2,281.4	2,366.3	0.00	0.00	0.00
9,400.0	90.00	270.15	6,691.7	-1,690.00	715.3	-2,381.4	2,465.0	0.00	0.00	0.00
9,500.0	90.00	270.15	6,691.7	-1,690.00	715.5	-2,481.4	2,563.8	0.00	0.00	0.00
9,600.0	90.00	270.15	6,691.7	-1,690.00	715.8	-2,581.4	2,662.5	0.00	0.00	0.00
9,700.0	90.00	270.15	6,691.7	-1,690.00	716.0	-2,681.4	2,761.3	0.00	0.00	0.00
9,800.0	90.00	270.15	6,691.7	-1,690.00	716.3	-2,781.4	2,860.1	0.00	0.00	0.00
9,900.0	90.00	270.15	6,691.7	-1,690.00	716.6	-2,881.4	2,958.8	0.00	0.00	0.00
10,000.0	90.00	270.15	6,691.7	-1,690.00	716.8	-2,981.4	3,057.6	0.00	0.00	0.00
10,100.0	90.00	270.15	6,691.7	-1,690.00	717.1	-3,081.4	3,156.3	0.00	0.00	0.00
10,200.0	90.00	270.15	6,691.7	-1,690.00	717.4	-3,181.4	3,255.1	0.00	0.00	0.00
10,300.0	90.00	270.15	6,691.7	-1,690.00	717.6	-3,281.4	3,353.9	0.00	0.00	0.00
10,400.0	90.00	270.15	6,691.7	-1,690.00	717.9	-3,381.4	3,452.6	0.00	0.00	0.00
10,500.0	90.00	270.15	6,691.7	-1,690.00	718.1	-3,481.4	3,551.4	0.00	0.00	0.00
10,600.0	90.00	270.15	6,691.7	-1,690.00	718.4	-3,581.4	3,650.1	0.00	0.00	0.00
10,700.0	90.00	270.15	6,691.7	-1,690.00	718.7	-3,681.4	3,748.9	0.00	0.00	0.00
10,800.0	90.00	270.15	6,691.7	-1,690.00	718.9	-3,781.4	3,847.7	0.00	0.00	0.00
10,900.0	90.00	270.15	6,691.7	-1,690.00	719.2	-3,881.4	3,946.4	0.00	0.00	0.00
11,000.0	90.00	270.15	6,691.7	-1,690.00	719.4	-3,981.4	4,045.2	0.00	0.00	0.00
11,100.0	90.00	270.15	6,691.7	-1,690.00	719.7	-4,081.4	4,144.0	0.00	0.00	0.00
EPI: 2262ft FSL & 600ft FWL of Sec 15										
11,179.4	90.00	270.15	6,691.7	-1,690.00	719.9	-4,160.8	4,222.4	0.00	0.00	0.00
11,200.0	90.00	270.15	6,691.7	-1,690.00	720.0	-4,181.4	4,242.7	0.00	0.00	0.00
11,300.0	90.00	270.15	6,691.7	-1,690.00	720.2	-4,281.4	4,341.5	0.00	0.00	0.00
11,400.0	90.00	270.15	6,691.7	-1,690.00	720.5	-4,381.4	4,440.2	0.00	0.00	0.00
BHL: 2265ft FSL & 300ft FWL of Sec 15										
11,479.3	90.00	270.15	6,691.7	-1,690.00	720.7	-4,460.7	4,518.6	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SIEVERS 8-61 15B-3
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5001.7usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5001.7usft (Original Well Elev)
Site:	NE SE SEC. 15 T8N R61W 6th P.M.	North Reference:	True
Well:	SIEVERS 8-61 15B-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
546.0	545.7	PIERRE SHALE (BASE FOX HILLS				
3,569.4	3,506.7	PARKMAN				
4,652.8	4,576.7	SUSSEX				
5,592.8	5,516.7	SHANNON				
6,391.7	6,311.7	SHARON SPRINGS SHALE				
6,468.0	6,381.7	NIOBRARA FORMATION				
6,479.4	6,391.7	NIOBRARA A CHALK				
6,601.0	6,491.7	NIOBRARA B CHALK				
6,685.7	6,551.7	NIOBRARA C CHALK				
6,853.7	6,641.7	FT HAYS				
6,987.7	6,681.7	CODELL				

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 1518ft FSL & 510ft FEL of Sec 15
300.0	300.0	0.0	0.0	START NUDGE (2°/100ft BUR)
900.0	895.6	48.3	39.8	EOB TO 12° INC
3,982.2	3,910.5	542.5	447.8	END OF TANGENT
4,582.2	4,506.1	590.8	487.6	EOD TO VERTICAL
6,194.8	6,118.7	590.8	487.6	KOP (10°/100ft BUR)
7,094.9	6,691.7	684.4	-77.7	BPI *NEW*: 2203ft FSL & 600ft FEL of Sec 15
7,403.3	6,691.7	710.0	-384.7	EOT TO 270.15° AZ
11,179.4	6,691.7	719.9	-4,160.8	EPI: 2262ft FSL & 600ft FWL of Sec 15
11,479.3	6,691.7	720.7	-4,460.7	BHL: 2265ft FSL & 300ft FWL of Sec 15