

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

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

**SW NW SEC. 8 T9N R59W 6th P.M.**

**TIMBRO 9-59 8A-9-6**

**ORIGINAL WELLBORE**

**07 February, 2018**

**Plan: PROPOSAL #1**





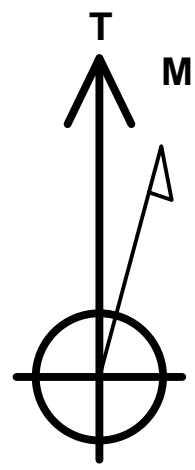
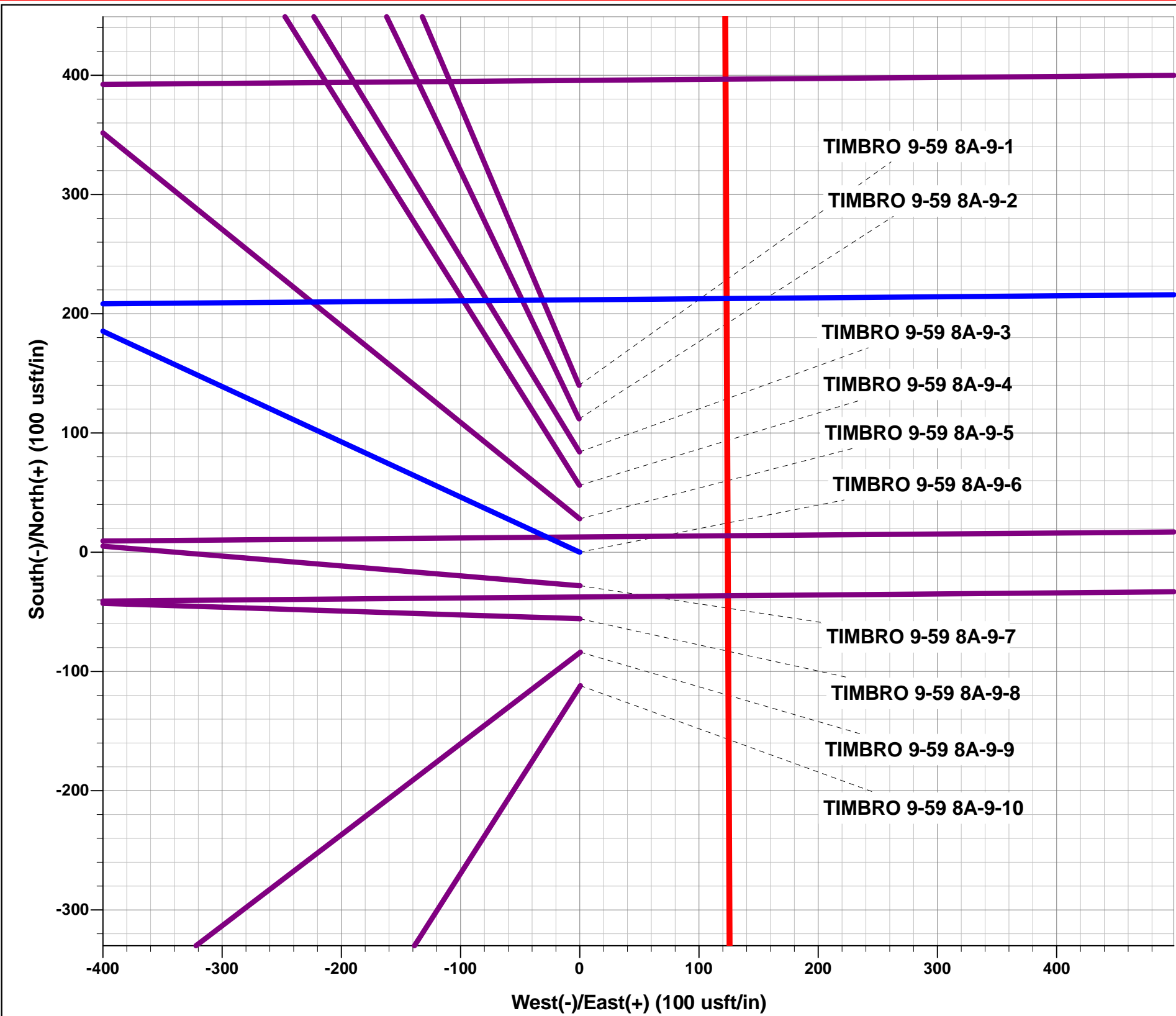
Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SW NW SEC. 8 T9N R59W 6th P.M.  
Well: TIMBRO 9-59 8A-9-6  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

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: 1812ft FNL & 475ft FWL of Sec 8
600.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)
1195.62	1200.00	12.00	294.86	26.32	-56.80	-55.98	62.60	EOB TO 12° INC
2933.89	2977.10	12.00	294.86	181.66	-392.04	-386.36	432.08	END OF TANGENT
3529.51	3577.10	0.00	0.00	207.98	-448.84	-442.34	494.68	EOD TO VERTICAL
5942.84	5990.43	0.00	0.00	207.98	-448.84	-442.34	494.68	KOP (10°/100ft BUR)
6515.80	6890.43	90.00	89.52	212.78	124.10	130.48	1067.64	BPI: 1600ft FNL & 600ft FWL of Sec 8
6515.80	16171.60	90.00	89.51	291.09	9404.94	9409.44	10348.81	EPI: 1602ft FNL & 600ft FEL of Sec 9
6515.80	16172.37	90.00	89.49	291.10	9405.71	9410.21	10349.58	EOT TO 89.49° AZ
6515.80	16471.60	90.00	89.49	293.76	9704.93	9709.37	10648.81	BHL: 1600ft FNL & 300ft FEL of Sec 9

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - TIMBRO 9-59 8A-9-6	5942.84	207.98	-448.84	40.767890	-104.011639
BPI - TIMBRO 9-59 8A-9-6	6515.80	212.78	124.10	40.767903	-104.009571
EPI - TIMBRO 9-59 8A-9-6	6515.80	291.09	9404.94	40.768113	-103.976066
BHL - TIMBRO 9-59 8A-9-6	6515.80	293.76	9704.93	40.768120	-103.974983



Azimuths to True North  
Magnetic North: 7.76°

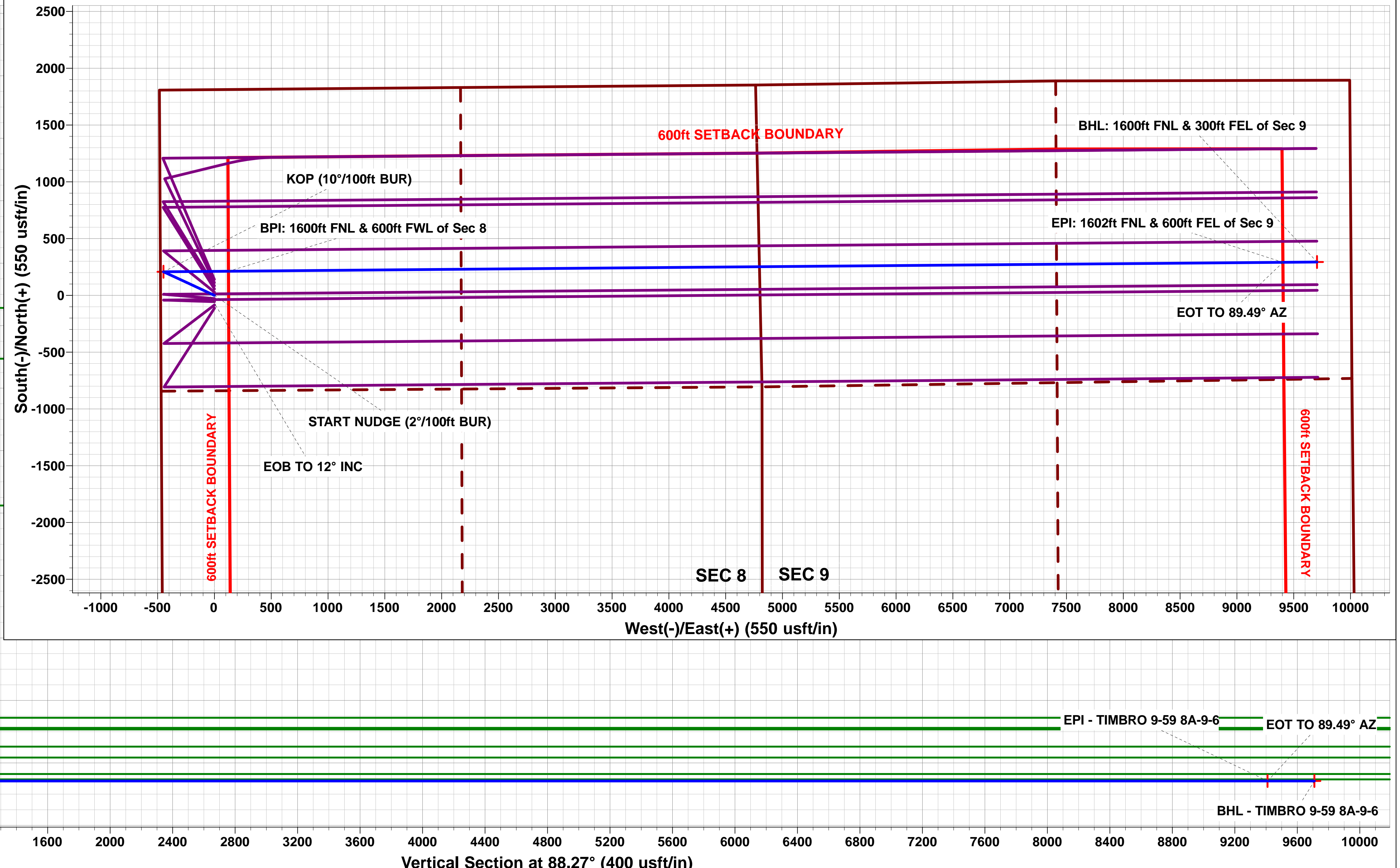
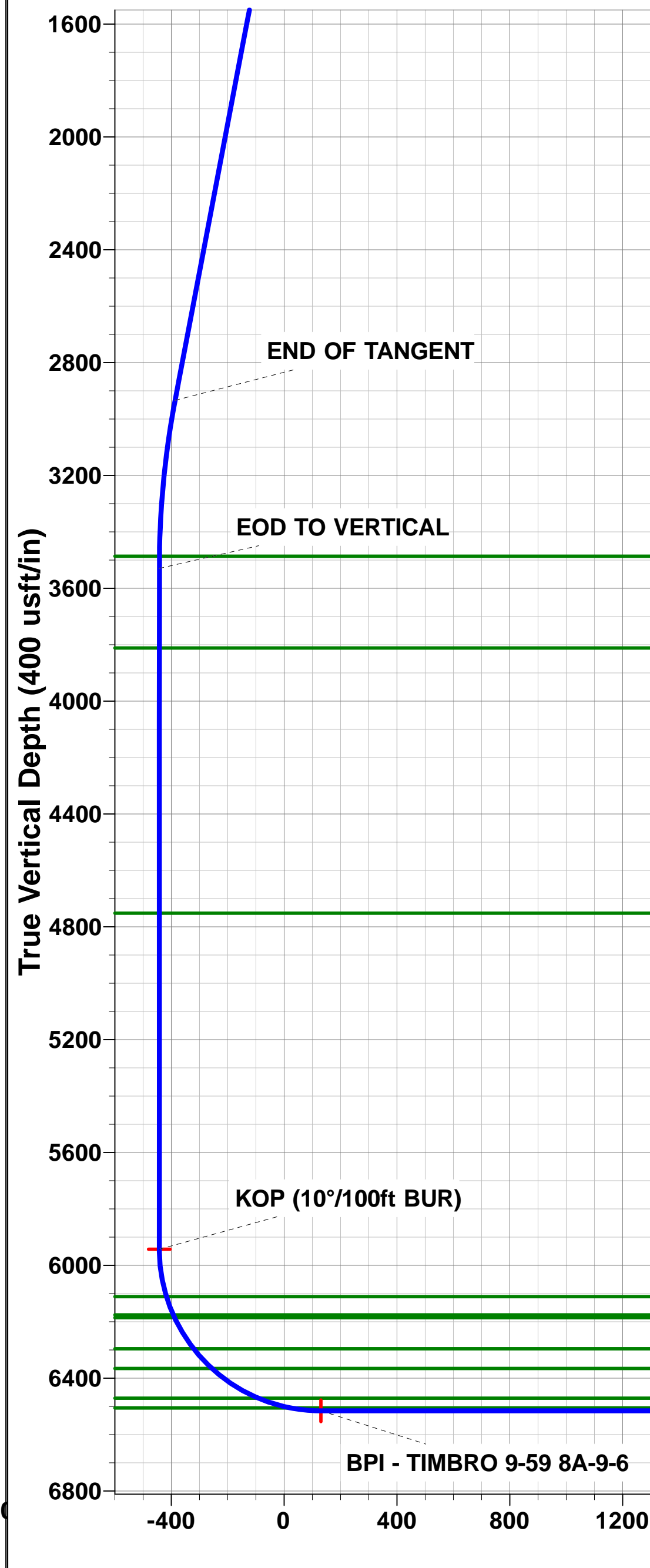
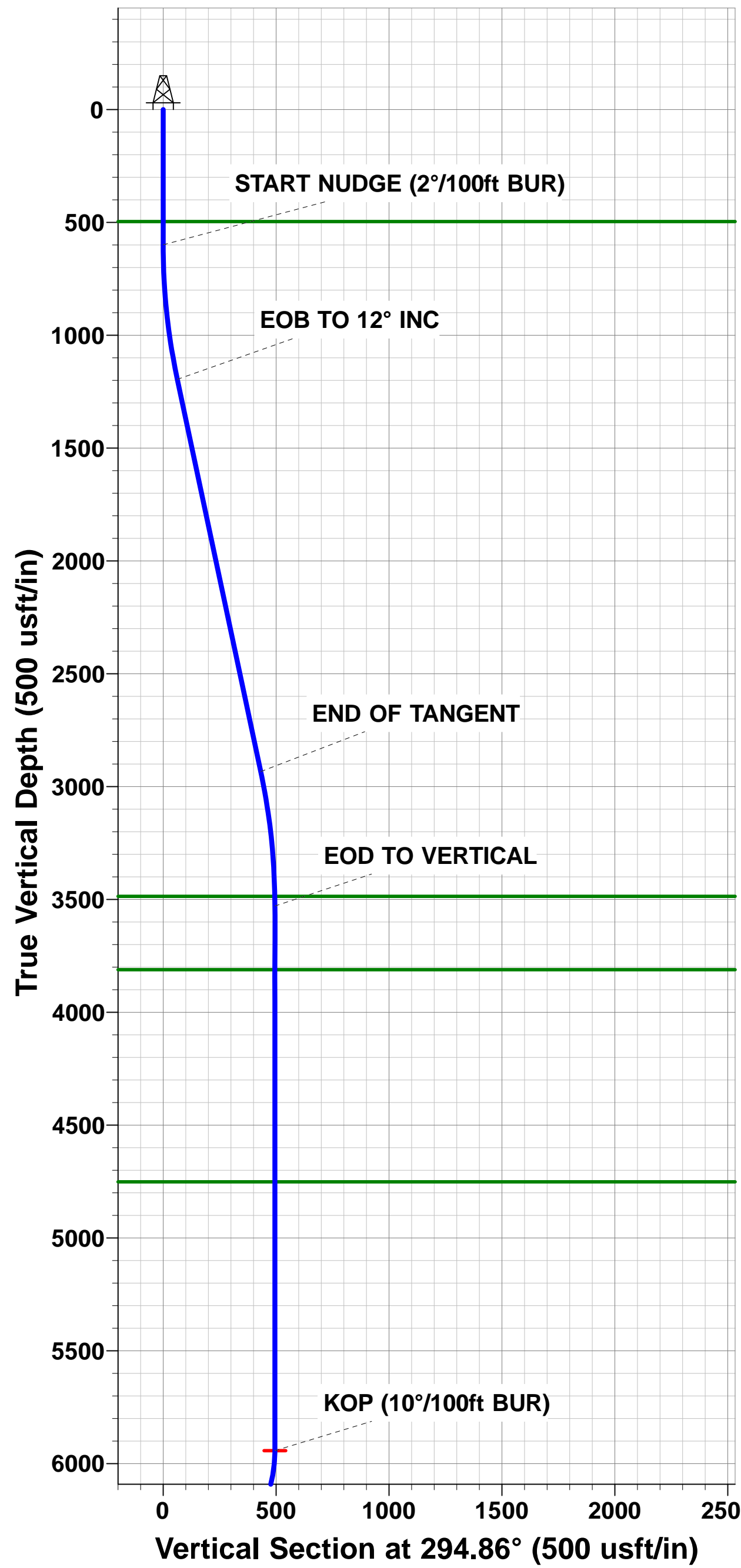
Magnetic Field  
Strength: 52582.7snT  
Dip Angle: 67.24°  
Date: 07/02/2018  
Model: IGRF2015

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
496.80	496.80	PIERRE SHALE
3486.80	3534.39	PARKMAN
3811.80	3859.39	SUSSEX
4751.80	4799.39	SHANNON
6110.80	6160.89	SHARON SPRINGS SHALE
6175.80	6230.34	NIOBRARA FORMATION
6185.80	6241.33	NIOBRARA A CHALK
6295.80	6370.70	NIOBRARA B CHALK
6365.80	6466.21	NIOBRARA C CHALK
6470.80	6661.84	FT HAYS
6505.80	6783.23	CODELL

PROPOSED LOCAL COORDINATES:

SHL: 1812ft FNL & 475ft FWL of Sec 8  
BEGIN PROD INT: 1600ft FNL & 600ft FWL of Sec 8  
END PROD INTERVAL: 1602ft FNL & 600ft FEL of Sec 9  
BHL: 1600ft FNL & 300ft FEL of Sec 9



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8A-9-6
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Site:</b>	SW NW SEC. 8 T9N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8A-9-6	<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 NW SEC. 8 T9N R59W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,525,987.12 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,412,704.28 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.767703
		<b>Longitude:</b>	-104.010021
		<b>Grid Convergence:</b>	0.96 °

<b>Well</b>	TIMBRO 9-59 8A-9-6		
<b>Well Position</b>	<b>+N/-S</b>	-139.91 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.55 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	07/02/2018	7.76	67.24	52,583

<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>
	6,400.80	0.00	0.00	88.27

<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	-5,101.80	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	-4,501.80	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	12.00	294.86	1,195.62	-3,906.18	26.32	-56.80	2.00	2.00	0.00	294.86	
2,977.10	12.00	294.86	2,933.89	-2,167.91	181.66	-392.04	0.00	0.00	0.00	0.00	
3,577.10	0.00	0.00	3,529.51	-1,572.29	207.98	-448.84	2.00	-2.00	0.00	180.00	
5,990.43	0.00	0.00	5,942.84	841.04	207.98	-448.84	0.00	0.00	0.00	0.00	KOP - TIMBRO 9-5
6,890.43	90.00	89.52	6,515.80	1,414.00	212.78	124.10	10.00	10.00	9.95	89.52	BPI - TIMBRO 9-59
16,171.60	90.00	89.51	6,515.80	1,414.00	291.09	9,404.94	0.00	0.00	0.00	-83.27	EPI - TIMBRO 9-59
16,172.37	90.00	89.49	6,515.80	1,414.00	291.10	9,405.71	3.00	0.00	-3.00	-90.00	
16,471.60	90.00	89.49	6,515.80	1,414.00	293.76	9,704.93	0.00	0.00	0.00	0.00	BHL - TIMBRO 9-59

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8A-9-6
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Site:</b>	SW NW SEC. 8 T9N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8A-9-6	<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: 1812ft FNL &amp; 475ft FWL of Sec 8</b>										
0.00	0.00	0.00	0.00	5,101.80	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	5,001.80	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,901.80	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	4,801.80	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	4,701.80	0.00	0.00	0.00	0.00	0.00	0.00
<b>PIERRE SHALE (BASE OF FOX HILLS)</b>										
496.80	0.00	0.00	496.80	4,605.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	4,601.80	0.00	0.00	0.00	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
600.00	0.00	0.00	600.00	4,501.80	0.00	0.00	0.00	0.00	0.00	0.00
700.00	2.00	294.86	699.98	4,401.82	0.73	-1.58	-1.56	2.00	2.00	0.00
800.00	4.00	294.86	799.84	4,301.96	2.93	-6.33	-6.24	2.00	2.00	0.00
900.00	6.00	294.86	899.45	4,202.35	6.60	-14.24	-14.03	2.00	2.00	0.00
1,000.00	8.00	294.86	998.70	4,103.10	11.72	-25.30	-24.93	2.00	2.00	0.00
1,100.00	10.00	294.86	1,097.47	4,004.33	18.30	-39.49	-38.92	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
1,200.00	12.00	294.86	1,195.62	3,906.18	26.32	-56.80	-55.98	2.00	2.00	0.00
1,300.00	12.00	294.86	1,293.44	3,808.36	35.06	-75.67	-74.57	0.00	0.00	0.00
1,400.00	12.00	294.86	1,391.25	3,710.55	43.80	-94.53	-93.16	0.00	0.00	0.00
1,500.00	12.00	294.86	1,489.07	3,612.73	52.54	-113.39	-111.75	0.00	0.00	0.00
1,600.00	12.00	294.86	1,586.88	3,514.92	61.28	-132.26	-130.34	0.00	0.00	0.00
1,700.00	12.00	294.86	1,684.70	3,417.10	70.03	-151.12	-148.93	0.00	0.00	0.00
1,800.00	12.00	294.86	1,782.51	3,319.29	78.77	-169.99	-167.53	0.00	0.00	0.00
1,900.00	12.00	294.86	1,880.33	3,221.47	87.51	-188.85	-186.12	0.00	0.00	0.00
2,000.00	12.00	294.86	1,978.14	3,123.66	96.25	-207.72	-204.71	0.00	0.00	0.00
2,100.00	12.00	294.86	2,075.96	3,025.84	104.99	-226.58	-223.30	0.00	0.00	0.00
2,200.00	12.00	294.86	2,173.77	2,928.03	113.73	-245.44	-241.89	0.00	0.00	0.00
2,300.00	12.00	294.86	2,271.59	2,830.21	122.47	-264.31	-260.48	0.00	0.00	0.00
2,400.00	12.00	294.86	2,369.40	2,732.40	131.21	-283.17	-279.07	0.00	0.00	0.00
2,500.00	12.00	294.86	2,467.22	2,634.58	139.96	-302.04	-297.66	0.00	0.00	0.00
2,600.00	12.00	294.86	2,565.03	2,536.77	148.70	-320.90	-316.26	0.00	0.00	0.00
2,700.00	12.00	294.86	2,662.84	2,438.96	157.44	-339.77	-334.85	0.00	0.00	0.00
2,800.00	12.00	294.86	2,760.66	2,341.14	166.18	-358.63	-353.44	0.00	0.00	0.00
2,900.00	12.00	294.86	2,858.47	2,243.33	174.92	-377.49	-372.03	0.00	0.00	0.00
<b>END OF TANGENT</b>										
2,977.10	12.00	294.86	2,933.89	2,167.91	181.66	-392.04	-386.36	0.00	0.00	0.00
3,000.00	11.54	294.86	2,956.31	2,145.49	183.62	-396.28	-390.54	2.00	-2.00	0.00
3,100.00	9.54	294.86	3,054.61	2,047.19	191.32	-412.88	-406.90	2.00	-2.00	0.00
3,200.00	7.54	294.86	3,153.50	1,948.30	197.56	-426.35	-420.18	2.00	-2.00	0.00
3,300.00	5.54	294.86	3,252.84	1,848.96	202.35	-436.69	-430.37	2.00	-2.00	0.00
3,400.00	3.54	294.86	3,352.53	1,749.27	205.68	-443.87	-437.45	2.00	-2.00	0.00
3,500.00	1.54	294.86	3,452.42	1,649.38	207.54	-447.90	-441.41	2.00	-2.00	0.00
<b>PARKMAN</b>										
3,534.39	0.85	294.86	3,486.80	1,615.00	207.85	-448.55	-442.06	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
3,577.10	0.00	0.00	3,529.51	1,572.29	207.98	-448.84	-442.34	2.00	-2.00	0.00
3,600.00	0.00	0.00	3,552.41	1,549.39	207.98	-448.84	-442.34	0.00	0.00	0.00
3,700.00	0.00	0.00	3,652.41	1,449.39	207.98	-448.84	-442.34	0.00	0.00	0.00
3,800.00	0.00	0.00	3,752.41	1,349.39	207.98	-448.84	-442.34	0.00	0.00	0.00
<b>SUSSEX</b>										
3,859.39	0.00	0.00	3,811.80	1,290.00	207.98	-448.84	-442.34	0.00	0.00	0.00
3,900.00	0.00	0.00	3,852.41	1,249.39	207.98	-448.84	-442.34	0.00	0.00	0.00



# Planning Report



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<b>Well:</b>	TIMBRO 9-59 8A-9-6	<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	3,952.41	1,149.39	207.98	-448.84	-442.34	0.00	0.00	0.00
4,100.00	0.00	0.00	4,052.41	1,049.39	207.98	-448.84	-442.34	0.00	0.00	0.00
4,200.00	0.00	0.00	4,152.41	949.39	207.98	-448.84	-442.34	0.00	0.00	0.00
4,300.00	0.00	0.00	4,252.41	849.39	207.98	-448.84	-442.34	0.00	0.00	0.00
4,400.00	0.00	0.00	4,352.41	749.39	207.98	-448.84	-442.34	0.00	0.00	0.00
4,500.00	0.00	0.00	4,452.41	649.39	207.98	-448.84	-442.34	0.00	0.00	0.00
4,600.00	0.00	0.00	4,552.41	549.39	207.98	-448.84	-442.34	0.00	0.00	0.00
4,700.00	0.00	0.00	4,652.41	449.39	207.98	-448.84	-442.34	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,799.39</b>	<b>0.00</b>	<b>0.00</b>	<b>4,751.80</b>	<b>350.00</b>	<b>207.98</b>	<b>-448.84</b>	<b>-442.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,800.00	0.00	0.00	4,752.41	349.39	207.98	-448.84	-442.34	0.00	0.00	0.00
4,900.00	0.00	0.00	4,852.41	249.39	207.98	-448.84	-442.34	0.00	0.00	0.00
5,000.00	0.00	0.00	4,952.41	149.39	207.98	-448.84	-442.34	0.00	0.00	0.00
5,100.00	0.00	0.00	5,052.41	49.39	207.98	-448.84	-442.34	0.00	0.00	0.00
5,200.00	0.00	0.00	5,152.41	-50.61	207.98	-448.84	-442.34	0.00	0.00	0.00
5,300.00	0.00	0.00	5,252.41	-150.61	207.98	-448.84	-442.34	0.00	0.00	0.00
5,400.00	0.00	0.00	5,352.41	-250.61	207.98	-448.84	-442.34	0.00	0.00	0.00
5,500.00	0.00	0.00	5,452.41	-350.61	207.98	-448.84	-442.34	0.00	0.00	0.00
5,600.00	0.00	0.00	5,552.41	-450.61	207.98	-448.84	-442.34	0.00	0.00	0.00
5,700.00	0.00	0.00	5,652.41	-550.61	207.98	-448.84	-442.34	0.00	0.00	0.00
5,800.00	0.00	0.00	5,752.41	-650.61	207.98	-448.84	-442.34	0.00	0.00	0.00
5,900.00	0.00	0.00	5,852.41	-750.61	207.98	-448.84	-442.34	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>5,990.43</b>	<b>0.00</b>	<b>0.00</b>	<b>5,942.84</b>	<b>-841.04</b>	<b>207.98</b>	<b>-448.84</b>	<b>-442.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,000.00	0.96	89.52	5,952.41	-850.61	207.98	-448.76	-442.26	10.00	10.00	0.00
6,100.00	10.96	89.52	6,051.75	-949.95	208.07	-438.40	-431.90	10.00	10.00	0.00
<b>SHARON SPRINGS SHALE</b>										
<b>6,160.89</b>	<b>17.05</b>	<b>89.52</b>	<b>6,110.80</b>	<b>-1,009.00</b>	<b>208.19</b>	<b>-423.67</b>	<b>-417.18</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,200.00	20.96	89.52	6,147.77	-1,045.97	208.30	-410.94	-404.45	10.00	10.00	0.00
<b>NIORARA FORMATION</b>										
<b>6,230.34</b>	<b>23.99</b>	<b>89.52</b>	<b>6,175.80</b>	<b>-1,074.00</b>	<b>208.39</b>	<b>-399.34</b>	<b>-392.86</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>NIORARA A CHALK</b>										
<b>6,241.33</b>	<b>25.09</b>	<b>89.52</b>	<b>6,185.80</b>	<b>-1,084.00</b>	<b>208.43</b>	<b>-394.78</b>	<b>-388.29</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,300.00	30.96	89.52	6,237.57	-1,135.77	208.66	-367.23	-360.74	10.00	10.00	0.00
<b>NIORARA B CHALK</b>										
<b>6,370.70</b>	<b>38.03</b>	<b>89.52</b>	<b>6,295.80</b>	<b>-1,194.00</b>	<b>209.00</b>	<b>-327.22</b>	<b>-320.75</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,400.00	40.96	89.52	6,318.41	-1,216.61	209.15	-308.58	-302.12	10.00	10.00	0.00
<b>NIORARA C CHALK</b>										
<b>6,466.21</b>	<b>47.58</b>	<b>89.52</b>	<b>6,365.80</b>	<b>-1,264.00</b>	<b>209.54</b>	<b>-262.39</b>	<b>-255.93</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,500.00	50.96	89.52	6,387.84	-1,286.04	209.76	-236.80	-230.34	10.00	10.00	0.00
6,600.00	60.96	89.52	6,443.75	-1,341.95	210.45	-154.04	-147.61	10.00	10.00	0.00
<b>FT HAYS</b>										
<b>6,661.84</b>	<b>67.14</b>	<b>89.52</b>	<b>6,470.80</b>	<b>-1,369.00</b>	<b>210.92</b>	<b>-98.47</b>	<b>-92.04</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,700.00	70.96	89.52	6,484.44	-1,382.64	211.21	-62.84	-56.42	10.00	10.00	0.00
<b>CODELL</b>										
<b>6,783.23</b>	<b>79.28</b>	<b>89.52</b>	<b>6,505.80</b>	<b>-1,404.00</b>	<b>211.89</b>	<b>17.52</b>	<b>23.93</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,800.00	80.96	89.52	6,508.68	-1,406.88	212.03	34.05	40.45	10.00	10.00	0.00
<b>BPI: 1600ft FNL &amp; 600ft FWL of Sec 8</b>										
<b>6,890.43</b>	<b>90.00</b>	<b>89.52</b>	<b>6,515.80</b>	<b>-1,414.00</b>	<b>212.78</b>	<b>124.10</b>	<b>130.48</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,900.00	90.00	89.52	6,515.80	-1,414.00	212.86	133.67	140.05	0.00	0.00	0.00
7,000.00	90.00	89.52	6,515.80	-1,414.00	213.70	233.66	240.02	0.00	0.00	0.00
7,100.00	90.00	89.52	6,515.80	-1,414.00	214.54	333.66	340.00	0.00	0.00	0.00
7,200.00	90.00	89.52	6,515.80	-1,414.00	215.37	433.66	439.98	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8A-9-6
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Site:</b>	SW NW SEC. 8 T9N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8A-9-6	<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)
7,300.00	90.00	89.52	6,515.80	-1,414.00	216.21	533.65	539.95	0.00	0.00	0.00
7,400.00	90.00	89.52	6,515.80	-1,414.00	217.05	633.65	639.93	0.00	0.00	0.00
7,500.00	90.00	89.52	6,515.80	-1,414.00	217.89	733.65	739.90	0.00	0.00	0.00
7,600.00	90.00	89.52	6,515.80	-1,414.00	218.73	833.64	839.88	0.00	0.00	0.00
7,700.00	90.00	89.52	6,515.81	-1,414.01	219.57	933.64	939.86	0.00	0.00	0.00
7,800.00	90.00	89.52	6,515.81	-1,414.01	220.40	1,033.64	1,039.83	0.00	0.00	0.00
7,900.00	90.00	89.52	6,515.81	-1,414.01	221.24	1,133.63	1,139.81	0.00	0.00	0.00
8,000.00	90.00	89.52	6,515.81	-1,414.01	222.08	1,233.63	1,239.78	0.00	0.00	0.00
8,100.00	90.00	89.52	6,515.81	-1,414.01	222.92	1,333.63	1,339.76	0.00	0.00	0.00
8,200.00	90.00	89.52	6,515.81	-1,414.01	223.76	1,433.62	1,439.74	0.00	0.00	0.00
8,300.00	90.00	89.52	6,515.81	-1,414.01	224.60	1,533.62	1,539.71	0.00	0.00	0.00
8,400.00	90.00	89.52	6,515.81	-1,414.01	225.44	1,633.62	1,639.69	0.00	0.00	0.00
8,500.00	90.00	89.52	6,515.81	-1,414.01	226.28	1,733.61	1,739.66	0.00	0.00	0.00
8,600.00	90.00	89.52	6,515.81	-1,414.01	227.12	1,833.61	1,839.64	0.00	0.00	0.00
8,700.00	90.00	89.52	6,515.81	-1,414.01	227.96	1,933.61	1,939.62	0.00	0.00	0.00
8,800.00	90.00	89.52	6,515.81	-1,414.01	228.80	2,033.60	2,039.59	0.00	0.00	0.00
8,900.00	90.00	89.52	6,515.81	-1,414.01	229.64	2,133.60	2,139.57	0.00	0.00	0.00
9,000.00	90.00	89.52	6,515.81	-1,414.01	230.48	2,233.59	2,239.55	0.00	0.00	0.00
9,100.00	90.00	89.52	6,515.81	-1,414.01	231.32	2,333.59	2,339.52	0.00	0.00	0.00
9,200.00	90.00	89.52	6,515.81	-1,414.01	232.16	2,433.59	2,439.50	0.00	0.00	0.00
9,300.00	90.00	89.52	6,515.81	-1,414.01	233.00	2,533.58	2,539.47	0.00	0.00	0.00
9,400.00	90.00	89.52	6,515.81	-1,414.01	233.84	2,633.58	2,639.45	0.00	0.00	0.00
9,500.00	90.00	89.52	6,515.81	-1,414.01	234.68	2,733.58	2,739.43	0.00	0.00	0.00
9,600.00	90.00	89.52	6,515.81	-1,414.01	235.53	2,833.57	2,839.40	0.00	0.00	0.00
9,700.00	90.00	89.52	6,515.81	-1,414.01	236.37	2,933.57	2,939.38	0.00	0.00	0.00
9,800.00	90.00	89.52	6,515.81	-1,414.01	237.21	3,033.57	3,039.35	0.00	0.00	0.00
9,900.00	90.00	89.52	6,515.81	-1,414.01	238.05	3,133.56	3,139.33	0.00	0.00	0.00
10,000.00	90.00	89.52	6,515.81	-1,414.01	238.89	3,233.56	3,239.31	0.00	0.00	0.00
10,100.00	90.00	89.52	6,515.81	-1,414.01	239.73	3,333.56	3,339.28	0.00	0.00	0.00
10,200.00	90.00	89.52	6,515.82	-1,414.02	240.58	3,433.55	3,439.26	0.00	0.00	0.00
10,300.00	90.00	89.52	6,515.82	-1,414.02	241.42	3,533.55	3,539.23	0.00	0.00	0.00
10,400.00	90.00	89.52	6,515.82	-1,414.02	242.26	3,633.54	3,639.21	0.00	0.00	0.00
10,500.00	90.00	89.52	6,515.82	-1,414.02	243.10	3,733.54	3,739.19	0.00	0.00	0.00
10,600.00	90.00	89.52	6,515.82	-1,414.02	243.94	3,833.54	3,839.16	0.00	0.00	0.00
10,700.00	90.00	89.52	6,515.82	-1,414.02	244.79	3,933.53	3,939.14	0.00	0.00	0.00
10,800.00	90.00	89.52	6,515.82	-1,414.02	245.63	4,033.53	4,039.12	0.00	0.00	0.00
10,900.00	90.00	89.52	6,515.82	-1,414.02	246.47	4,133.53	4,139.09	0.00	0.00	0.00
11,000.00	90.00	89.52	6,515.82	-1,414.02	247.32	4,233.52	4,239.07	0.00	0.00	0.00
11,100.00	90.00	89.52	6,515.82	-1,414.02	248.16	4,333.52	4,339.04	0.00	0.00	0.00
11,200.00	90.00	89.52	6,515.82	-1,414.02	249.00	4,433.52	4,439.02	0.00	0.00	0.00
11,300.00	90.00	89.52	6,515.82	-1,414.02	249.85	4,533.51	4,539.00	0.00	0.00	0.00
11,400.00	90.00	89.52	6,515.82	-1,414.02	250.69	4,633.51	4,638.97	0.00	0.00	0.00
11,500.00	90.00	89.52	6,515.82	-1,414.02	251.53	4,733.51	4,738.95	0.00	0.00	0.00
11,600.00	90.00	89.52	6,515.82	-1,414.02	252.38	4,833.50	4,838.93	0.00	0.00	0.00
11,700.00	90.00	89.52	6,515.82	-1,414.02	253.22	4,933.50	4,938.90	0.00	0.00	0.00
11,800.00	90.00	89.52	6,515.82	-1,414.02	254.06	5,033.50	5,038.88	0.00	0.00	0.00
11,900.00	90.00	89.52	6,515.82	-1,414.02	254.91	5,133.49	5,138.85	0.00	0.00	0.00
12,000.00	90.00	89.52	6,515.82	-1,414.02	255.75	5,233.49	5,238.83	0.00	0.00	0.00
12,100.00	90.00	89.52	6,515.82	-1,414.02	256.60	5,333.48	5,338.81	0.00	0.00	0.00
12,200.00	90.00	89.52	6,515.82	-1,414.02	257.44	5,433.48	5,438.78	0.00	0.00	0.00
12,300.00	90.00	89.52	6,515.82	-1,414.02	258.29	5,533.48	5,538.76	0.00	0.00	0.00
12,400.00	90.00	89.52	6,515.82	-1,414.02	259.13	5,633.47	5,638.73	0.00	0.00	0.00
12,500.00	90.00	89.52	6,515.82	-1,414.02	259.98	5,733.47	5,738.71	0.00	0.00	0.00
12,600.00	90.00	89.52	6,515.82	-1,414.02	260.82	5,833.47	5,838.69	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8A-9-6
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Site:</b>	SW NW SEC. 8 T9N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8A-9-6	<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)
12,700.00	90.00	89.52	6,515.82	-1,414.02	261.67	5,933.46	5,938.66	0.00	0.00	0.00
12,800.00	90.00	89.52	6,515.82	-1,414.02	262.51	6,033.46	6,038.64	0.00	0.00	0.00
12,900.00	90.00	89.52	6,515.82	-1,414.02	263.36	6,133.46	6,138.62	0.00	0.00	0.00
13,000.00	90.00	89.52	6,515.81	-1,414.01	264.20	6,233.45	6,238.59	0.00	0.00	0.00
13,100.00	90.00	89.52	6,515.81	-1,414.01	265.05	6,333.45	6,338.57	0.00	0.00	0.00
13,200.00	90.00	89.52	6,515.81	-1,414.01	265.89	6,433.45	6,438.54	0.00	0.00	0.00
13,300.00	90.00	89.52	6,515.81	-1,414.01	266.74	6,533.44	6,538.52	0.00	0.00	0.00
13,400.00	90.00	89.52	6,515.81	-1,414.01	267.59	6,633.44	6,638.50	0.00	0.00	0.00
13,500.00	90.00	89.52	6,515.81	-1,414.01	268.43	6,733.43	6,738.47	0.00	0.00	0.00
13,600.00	90.00	89.52	6,515.81	-1,414.01	269.28	6,833.43	6,838.45	0.00	0.00	0.00
13,700.00	90.00	89.51	6,515.81	-1,414.01	270.13	6,933.43	6,938.43	0.00	0.00	0.00
13,800.00	90.00	89.51	6,515.81	-1,414.01	270.97	7,033.42	7,038.40	0.00	0.00	0.00
13,900.00	90.00	89.51	6,515.81	-1,414.01	271.82	7,133.42	7,138.38	0.00	0.00	0.00
14,000.00	90.00	89.51	6,515.81	-1,414.01	272.67	7,233.42	7,238.35	0.00	0.00	0.00
14,100.00	90.00	89.51	6,515.81	-1,414.01	273.51	7,333.41	7,338.33	0.00	0.00	0.00
14,200.00	90.00	89.51	6,515.81	-1,414.01	274.36	7,433.41	7,438.31	0.00	0.00	0.00
14,300.00	90.00	89.51	6,515.81	-1,414.01	275.21	7,533.41	7,538.28	0.00	0.00	0.00
14,400.00	90.00	89.51	6,515.81	-1,414.01	276.06	7,633.40	7,638.26	0.00	0.00	0.00
14,500.00	90.00	89.51	6,515.81	-1,414.01	276.90	7,733.40	7,738.24	0.00	0.00	0.00
14,600.00	90.00	89.51	6,515.81	-1,414.01	277.75	7,833.40	7,838.21	0.00	0.00	0.00
14,700.00	90.00	89.51	6,515.81	-1,414.01	278.60	7,933.39	7,938.19	0.00	0.00	0.00
14,800.00	90.00	89.51	6,515.81	-1,414.01	279.45	8,033.39	8,038.16	0.00	0.00	0.00
14,900.00	90.00	89.51	6,515.81	-1,414.01	280.29	8,133.38	8,138.14	0.00	0.00	0.00
15,000.00	90.00	89.51	6,515.81	-1,414.01	281.14	8,233.38	8,238.12	0.00	0.00	0.00
15,100.00	90.00	89.51	6,515.81	-1,414.01	281.99	8,333.38	8,338.09	0.00	0.00	0.00
15,200.00	90.00	89.51	6,515.81	-1,414.01	282.84	8,433.37	8,438.07	0.00	0.00	0.00
15,300.00	90.00	89.51	6,515.81	-1,414.01	283.69	8,533.37	8,538.05	0.00	0.00	0.00
15,400.00	90.00	89.51	6,515.81	-1,414.01	284.54	8,633.37	8,638.02	0.00	0.00	0.00
15,500.00	90.00	89.51	6,515.80	-1,414.00	285.39	8,733.36	8,738.00	0.00	0.00	0.00
15,600.00	90.00	89.51	6,515.80	-1,414.00	286.23	8,833.36	8,837.98	0.00	0.00	0.00
15,700.00	90.00	89.51	6,515.80	-1,414.00	287.08	8,933.36	8,937.95	0.00	0.00	0.00
15,800.00	90.00	89.51	6,515.80	-1,414.00	287.93	9,033.35	9,037.93	0.00	0.00	0.00
15,900.00	90.00	89.51	6,515.80	-1,414.00	288.78	9,133.35	9,137.90	0.00	0.00	0.00
16,000.00	90.00	89.51	6,515.80	-1,414.00	289.63	9,233.34	9,237.88	0.00	0.00	0.00
16,100.00	90.00	89.51	6,515.80	-1,414.00	290.48	9,333.34	9,337.86	0.00	0.00	0.00
<b>EPI: 1602ft FNL &amp; 600ft FEL of Sec 9</b>										
<b>16,171.60</b>	<b>90.00</b>	<b>89.51</b>	<b>6,515.80</b>	<b>-1,414.00</b>	<b>291.09</b>	<b>9,404.94</b>	<b>9,409.44</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>EOT TO 89.49° AZ</b>										
<b>16,172.37</b>	<b>90.00</b>	<b>89.49</b>	<b>6,515.80</b>	<b>-1,414.00</b>	<b>291.10</b>	<b>9,405.71</b>	<b>9,410.21</b>	<b>3.00</b>	<b>0.00</b>	<b>-3.00</b>
16,200.00	90.00	89.49	6,515.80	-1,414.00	291.34	9,433.34	9,437.83	0.00	0.00	0.00
16,300.00	90.00	89.49	6,515.80	-1,414.00	292.23	9,533.33	9,537.81	0.00	0.00	0.00
16,400.00	90.00	89.49	6,515.80	-1,414.00	293.12	9,633.33	9,637.79	0.00	0.00	0.00
<b>BHL: 1600ft FNL &amp; 300ft FEL of Sec 9</b>										
<b>16,471.60</b>	<b>90.00</b>	<b>89.49</b>	<b>6,515.80</b>	<b>-1,414.00</b>	<b>293.76</b>	<b>9,704.93</b>	<b>9,709.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8A-9-6
<b>Company:</b>	BISON OIL & GAS II, LLC	<b>TVD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 5101.80usft (Original Well Elev)
<b>Site:</b>	SW NW SEC. 8 T9N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8A-9-6	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
496.80	496.80	PIERRE SHALE (BASE OF FOX HI			
3,534.39	3,486.80	PARKMAN			
3,859.39	3,811.80	SUSSEX			
4,799.39	4,751.80	SHANNON			
6,160.89	6,110.80	SHARON SPRINGS SHALE			
6,230.34	6,175.80	NIOBRARA FORMATION			
6,241.33	6,185.80	NIOBRARA A CHALK			
6,370.70	6,295.80	NIOBRARA B CHALK			
6,466.21	6,365.80	NIOBRARA C CHALK			
6,661.84	6,470.80	FT HAYS			
6,783.23	6,505.80	CODELL			

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.00	0.00	0.00	0.00	SHL: 1812ft FNL & 475ft FWL of Sec 8
600.00	600.00	0.00	0.00	START NUDGE (2°/100ft BUR)
1,200.00	1,195.62	26.32	-56.80	EOB TO 12° INC
2,977.10	2,933.89	181.66	-392.04	END OF TANGENT
3,577.10	3,529.51	207.98	-448.84	EOD TO VERTICAL
5,990.43	5,942.84	207.98	-448.84	KOP (10°/100ft BUR)
6,890.43	6,515.80	212.78	124.10	BPI: 1600ft FNL & 600ft FWL of Sec 8
16,171.60	6,515.80	291.09	9,404.94	EPI: 1602ft FNL & 600ft FEL of Sec 9
16,172.37	6,515.80	291.10	9,405.71	EOT TO 89.49° AZ
16,471.60	6,515.80	293.76	9,704.93	BHL: 1600ft FNL & 300ft FEL of Sec 9