

BISON OIL & GAS II, LLC

WELD COUNTY, COLORADO (NAD 83)

SW NE SEC. 13 T9N R60W 6th P.M.

ROHN FED 9-60 13-24-7

ORIGINAL WELLBORE

10 January, 2018

Plan: PROPOSAL #2





Project: WELD COUNTY, COLORADO (NAD 83)
 Site: SW NE SEC. 13 T9N R60W 6th P.M.
 Well: ROHN FED 9-60 13-24-7
 Wellbore: ORIGINAL WELLBORE
 Design: PROPOSAL #2

ANNOTATIONS

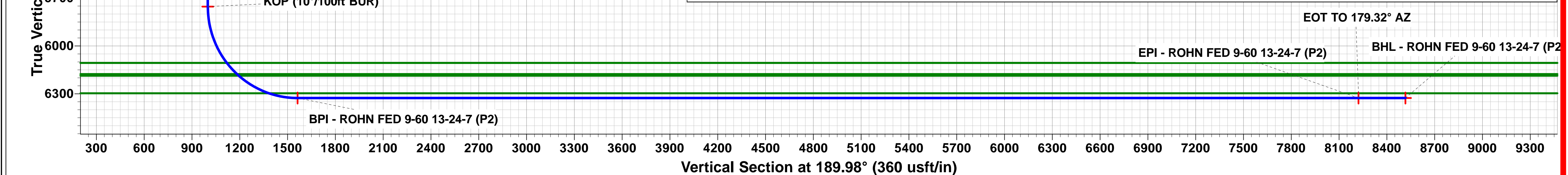
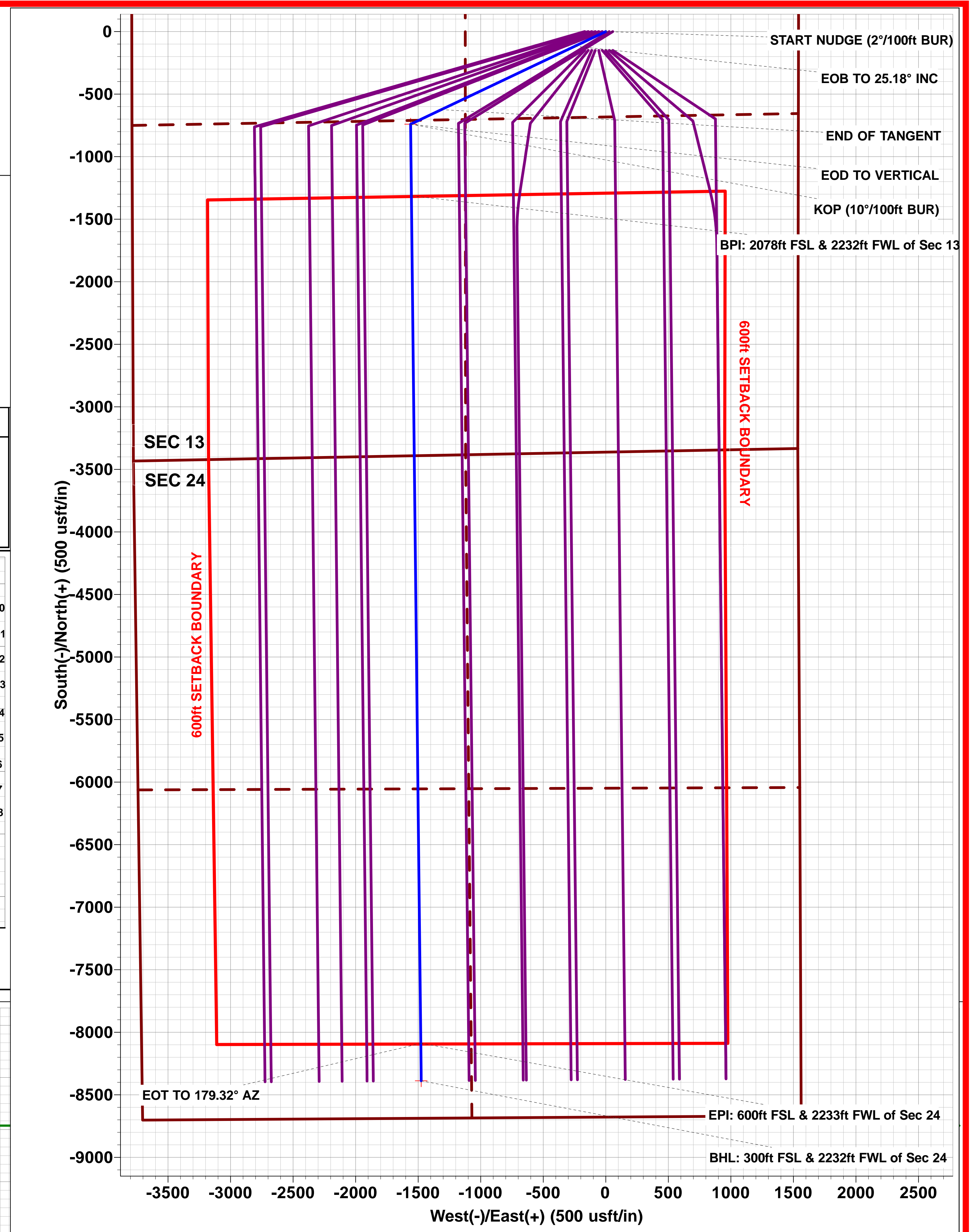
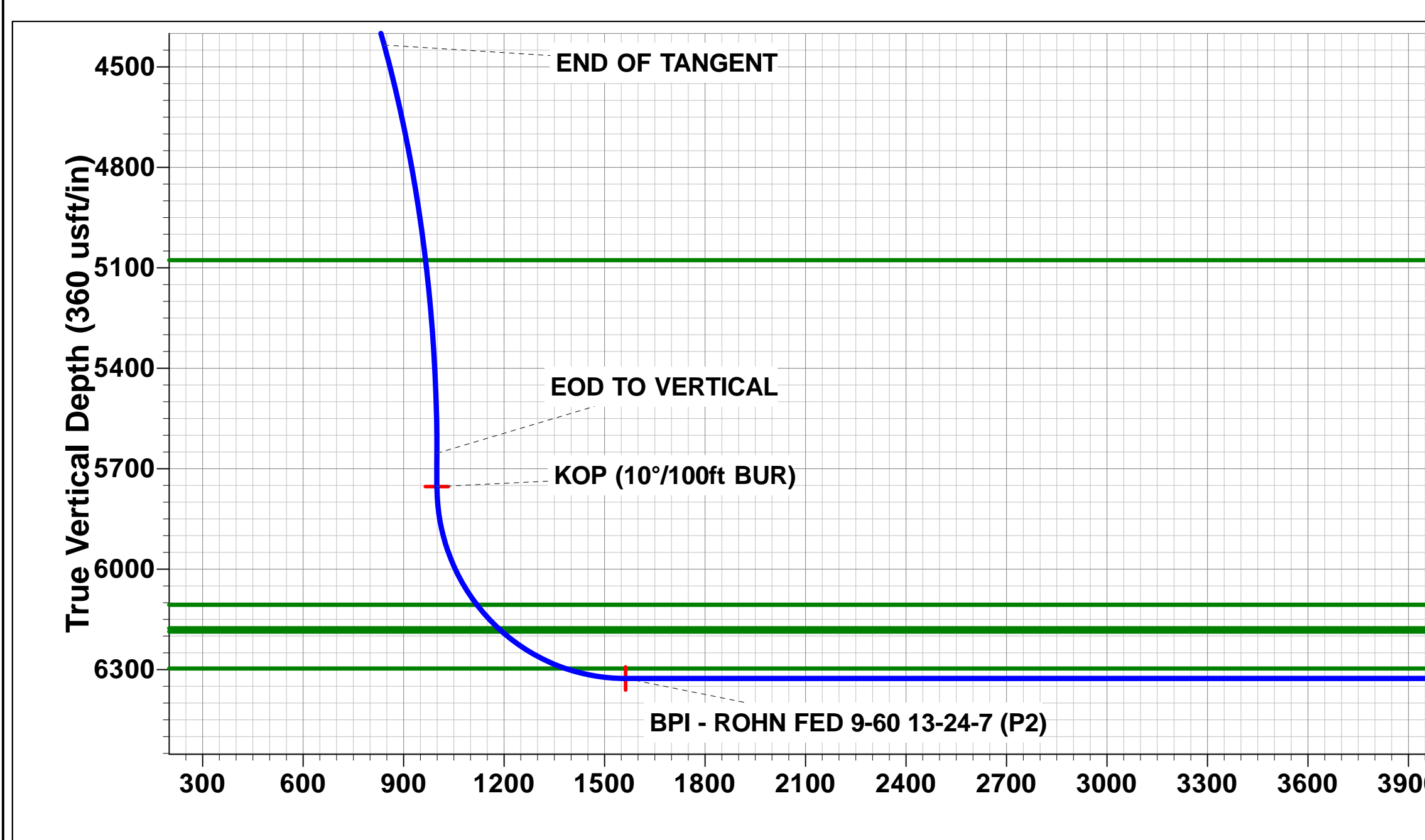
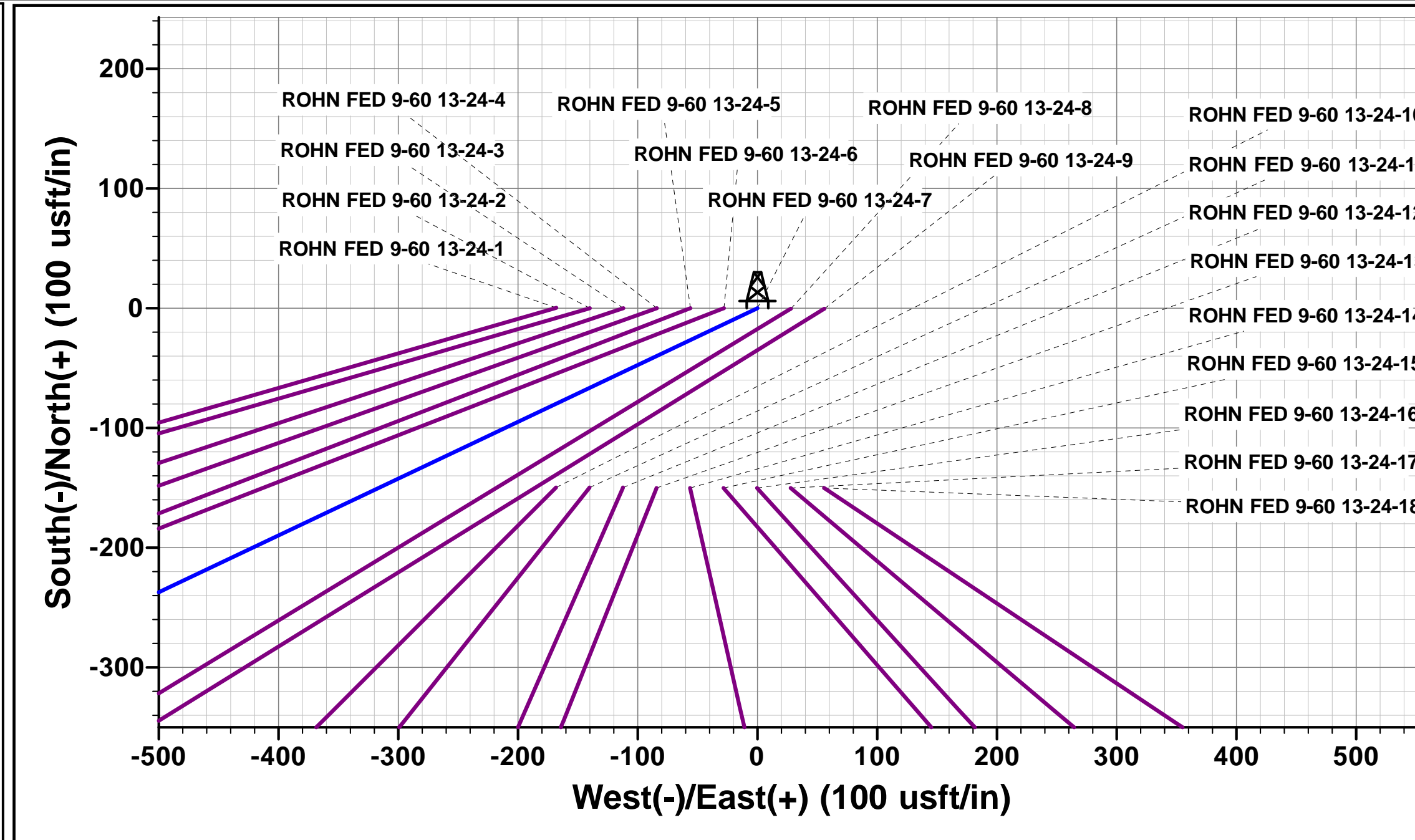
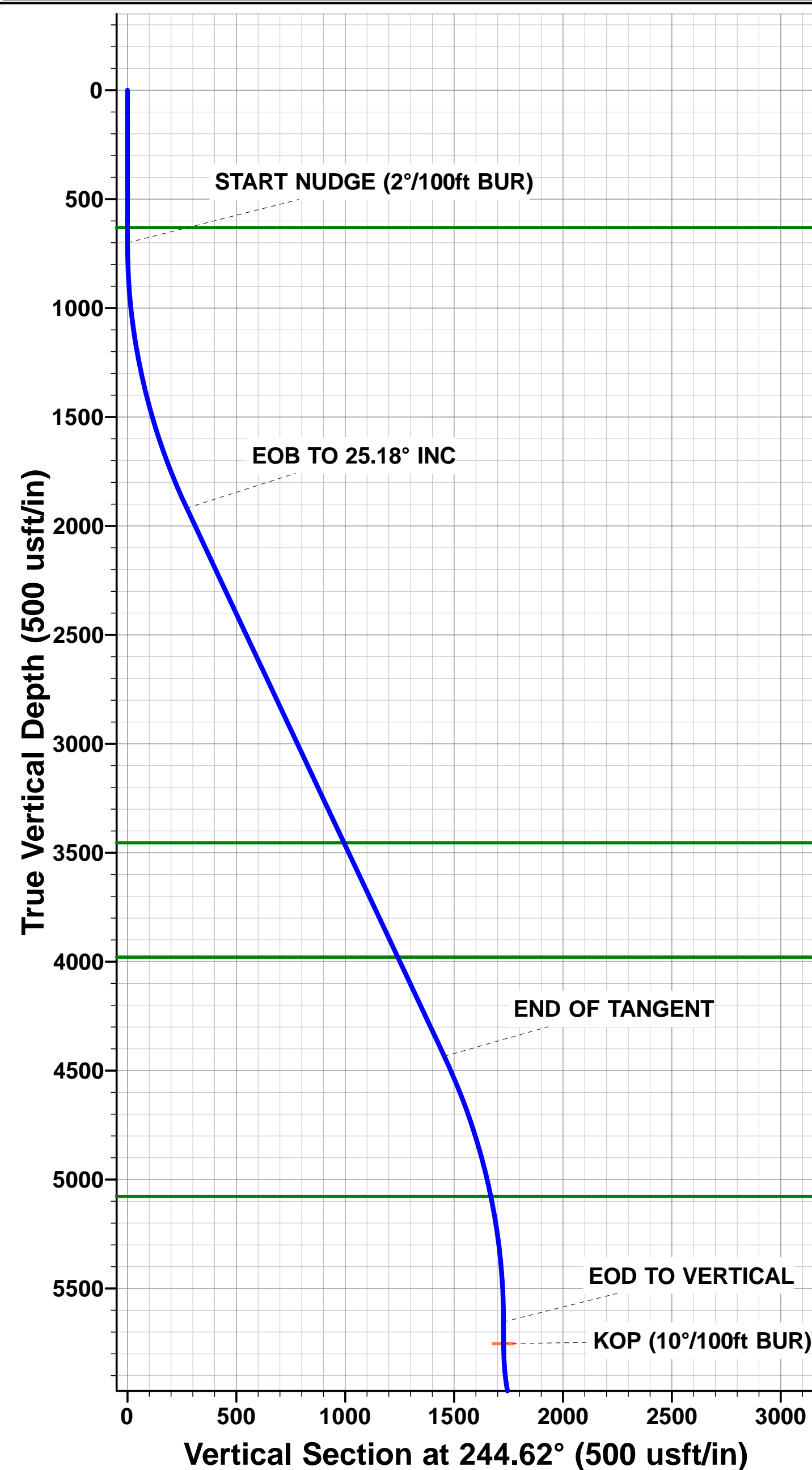
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 1996ft FNL & 1541ft FEL of Sec 13
700.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)
1918.80	1958.93	25.18	244.62	-116.68	-245.92	157.52	272.20	EOB TO 25.18° INC
4434.74	4739.02	25.18	244.62	-623.66	-1314.51	841.99	1454.96	END OF TANGENT
5653.54	5997.95	0.00	0.00	-740.34	-1560.43	999.51	1727.15	EOD TO VERTICAL
5753.54	6097.95	0.00	0.00	-740.34	-1560.43	999.51	1727.15	KOP (10°/100ft BUR)
6326.50	6997.94	90.00	179.37	-1313.26	-1554.13	1562.67	2300.10	BPI: 2078ft FSL & 2232ft FWL of Sec 13
6326.50	13772.86	90.00	179.36	-8087.76	-1479.18	8221.73	9075.02	EPI: 600ft FSL & 2233ft FWL of Sec 24
6326.50	13774.25	90.00	179.32	-8089.15	-1479.16	8223.09	9076.41	EOT TO 179.32° AZ
6326.50	14072.72	90.00	179.31	-8387.60	-1475.59	8516.41	9374.88	BHL: 300ft FSL & 2232ft FWL of Sec 24

PROPOSED LOCAL COORDINATES:

SHL: 1996ft FNL & 1541ft FEL Sec 13
 BPI: 2078ft FSL & 2232ft FWL Sec 13
 EPI: 600ft FSL & 2233ft FWL Sec 24
 BHL: 300ft FSL & 2232ft FWL of Sec 24

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - ROHN FED 9-60 13-24-7 (P2)	5753.54	-740.34	-1560.43	40.750428	-104.041591
BPI - ROHN FED 9-60 13-24-7 (P2)	6326.50	-1313.26	-1554.13	40.748855	-104.041568
EPI - ROHN FED 9-60 13-24-7 (P2)	6326.50	-8087.76	-1479.18	40.730261	-104.041296
BHL - ROHN FED 9-60 13-24-7 (P2)	6326.50	-8387.60	-1475.59	40.729438	-104.041283



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ROHN FED 9-60 13-24-7
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Site:	SW NE SEC. 13 T9N R60W 6th P.M.	North Reference:	True
Well:	ROHN FED 9-60 13-24-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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	SW NE SEC. 13 T9N R60W 6th P.M.				
Site Position:		Northing:	1,520,312.28 usft	Latitude:	40.752461
From:	Lat/Long	Easting:	3,405,444.26 usft	Longitude:	-104.036565
Position Uncertainty:	0.00 usft	Slot Radius:	1.10000ft	Grid Convergence:	0.95 °

Well	ROHN FED 9-60 13-24-7					
Well Position	+N-S	-0.38 usft	Northing:	1,520,314.67 usft	Latitude:	40.752460
	+E-W	167.90 usft	Easting:	3,405,612.14 usft	Longitude:	-104.035959
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,042.50 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	09/01/2018	7.78	67.23	52,582

Design	PROPOSAL #2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	6,326.50	0.00	0.00	189.98

Plan Sections											
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
0.00	0.00	0.00	0.00	-5,067.50	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	-4,367.50	0.00	0.00	0.00	0.00	0.00	0.00	
1,958.93	25.18	244.62	1,918.80	-3,148.70	-116.68	-245.92	2.00	2.00	0.00	244.62	
4,739.02	25.18	244.62	4,434.74	-632.76	-623.66	-1,314.51	0.00	0.00	0.00	0.00	
5,997.95	0.00	0.00	5,653.54	586.04	-740.34	-1,560.43	2.00	-2.00	0.00	180.00	
6,097.95	0.00	0.00	5,753.54	686.04	-740.34	-1,560.43	0.00	0.00	0.00	0.00	KOP - ROHN FED 9
6,997.94	90.00	179.37	6,326.50	1,259.00	-1,313.26	-1,554.13	10.00	10.00	19.93	179.37	BPI - ROHN FED 9
13,772.86	90.00	179.36	6,326.50	1,259.00	-8,087.76	-1,479.18	0.00	0.00	0.00	-82.67	EPI - ROHN FED 9
13,774.25	90.00	179.32	6,326.50	1,259.00	-8,089.15	-1,479.16	3.00	0.00	-3.00	-90.00	
14,072.72	90.00	179.31	6,326.50	1,259.00	-8,387.60	-1,475.59	0.00	0.00	0.00	-96.03	BHL - ROHN FED 9

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ROHN FED 9-60 13-24-7
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Site:	SW NE SEC. 13 T9N R60W 6th P.M.	North Reference:	True
Well:	ROHN FED 9-60 13-24-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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: 1996ft FNL & 1541ft FEL of Sec 13										
0.00	0.00	0.00	0.00	5,067.50	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,967.50	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,867.50	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	4,767.50	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	4,667.50	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	4,567.50	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	4,467.50	0.00	0.00	0.00	0.00	0.00	0.00
PIERRE SHALE (BASE OF FOX HILLS)										
630.50	0.00	0.00	630.50	4,437.00	0.00	0.00	0.00	0.00	0.00	0.00
START NUDDGE (2°/100ft BUR)										
700.00	0.00	0.00	700.00	4,367.50	0.00	0.00	0.00	0.00	0.00	0.00
800.00	2.00	244.62	799.98	4,267.52	-0.75	-1.58	1.01	2.00	2.00	0.00
900.00	4.00	244.62	899.84	4,167.66	-2.99	-6.30	4.04	2.00	2.00	0.00
1,000.00	6.00	244.62	999.45	4,068.05	-6.73	-14.18	9.08	2.00	2.00	0.00
1,100.00	8.00	244.62	1,098.70	3,968.80	-11.95	-25.19	16.13	2.00	2.00	0.00
1,200.00	10.00	244.62	1,197.47	3,870.03	-18.66	-39.32	25.19	2.00	2.00	0.00
1,300.00	12.00	244.62	1,295.62	3,771.88	-26.83	-56.56	36.23	2.00	2.00	0.00
1,400.00	14.00	244.62	1,393.06	3,674.44	-36.48	-76.88	49.25	2.00	2.00	0.00
1,500.00	16.00	244.62	1,489.64	3,577.86	-47.57	-100.26	64.22	2.00	2.00	0.00
1,600.00	18.00	244.62	1,585.27	3,482.23	-60.10	-126.68	81.14	2.00	2.00	0.00
1,700.00	20.00	244.62	1,679.82	3,387.68	-74.06	-156.09	99.98	2.00	2.00	0.00
1,800.00	22.00	244.62	1,773.17	3,294.33	-89.42	-188.47	120.72	2.00	2.00	0.00
1,900.00	24.00	244.62	1,865.21	3,202.29	-106.17	-223.77	143.33	2.00	2.00	0.00
EOB TO 25.18° INC										
1,958.93	25.18	244.62	1,918.80	3,148.70	-116.68	-245.92	157.52	2.00	2.00	0.00
2,000.00	25.18	244.62	1,955.97	3,111.53	-124.17	-261.71	167.63	0.00	0.00	0.00
2,100.00	25.18	244.62	2,046.47	3,021.03	-142.40	-300.14	192.25	0.00	0.00	0.00
2,200.00	25.18	244.62	2,136.96	2,930.54	-160.64	-338.58	216.87	0.00	0.00	0.00
2,300.00	25.18	244.62	2,227.46	2,840.04	-178.87	-377.02	241.49	0.00	0.00	0.00
2,400.00	25.18	244.62	2,317.96	2,749.54	-197.11	-415.46	266.11	0.00	0.00	0.00
2,500.00	25.18	244.62	2,408.46	2,659.04	-215.35	-453.89	290.73	0.00	0.00	0.00
2,600.00	25.18	244.62	2,498.96	2,568.54	-233.58	-492.33	315.35	0.00	0.00	0.00
2,700.00	25.18	244.62	2,589.46	2,478.04	-251.82	-530.77	339.97	0.00	0.00	0.00
2,800.00	25.18	244.62	2,679.96	2,387.54	-270.06	-569.20	364.60	0.00	0.00	0.00
2,900.00	25.18	244.62	2,770.46	2,297.04	-288.29	-607.64	389.22	0.00	0.00	0.00
3,000.00	25.18	244.62	2,860.95	2,206.55	-306.53	-646.08	413.84	0.00	0.00	0.00
3,100.00	25.18	244.62	2,951.45	2,116.05	-324.77	-684.52	438.46	0.00	0.00	0.00
3,200.00	25.18	244.62	3,041.95	2,025.55	-343.00	-722.95	463.08	0.00	0.00	0.00
3,300.00	25.18	244.62	3,132.45	1,935.05	-361.24	-761.39	487.70	0.00	0.00	0.00
3,400.00	25.18	244.62	3,222.95	1,844.55	-379.48	-799.83	512.32	0.00	0.00	0.00
3,500.00	25.18	244.62	3,313.45	1,754.05	-397.71	-838.27	536.94	0.00	0.00	0.00
3,600.00	25.18	244.62	3,403.95	1,663.55	-415.95	-876.70	561.56	0.00	0.00	0.00
PARKMAN										
3,655.86	25.18	244.62	3,454.50	1,613.00	-426.14	-898.17	575.31	0.00	0.00	0.00
3,700.00	25.18	244.62	3,494.44	1,573.06	-434.18	-915.14	586.18	0.00	0.00	0.00
3,800.00	25.18	244.62	3,584.94	1,482.56	-452.42	-953.58	610.80	0.00	0.00	0.00
3,900.00	25.18	244.62	3,675.44	1,392.06	-470.66	-992.01	635.42	0.00	0.00	0.00
4,000.00	25.18	244.62	3,765.94	1,301.56	-488.89	-1,030.45	660.04	0.00	0.00	0.00
4,100.00	25.18	244.62	3,856.44	1,211.06	-507.13	-1,068.89	684.66	0.00	0.00	0.00
4,200.00	25.18	244.62	3,946.94	1,120.56	-525.37	-1,107.33	709.28	0.00	0.00	0.00
SUSSEX										
4,235.98	25.18	244.62	3,979.50	1,088.00	-531.93	-1,121.16	718.14	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ROHN FED 9-60 13-24-7
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Site:	SW NE SEC. 13 T9N R60W 6th P.M.	North Reference:	True
Well:	ROHN FED 9-60 13-24-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.00	25.18	244.62	4,037.44	1,030.06	-543.60	-1,145.76	733.90	0.00	0.00	0.00
4,400.00	25.18	244.62	4,127.94	939.56	-561.84	-1,184.20	758.52	0.00	0.00	0.00
4,500.00	25.18	244.62	4,218.43	849.07	-580.08	-1,222.64	783.14	0.00	0.00	0.00
4,600.00	25.18	244.62	4,308.93	758.57	-598.31	-1,261.08	807.76	0.00	0.00	0.00
4,700.00	25.18	244.62	4,399.43	668.07	-616.55	-1,299.51	832.38	0.00	0.00	0.00
END OF TANGENT										
4,739.02	25.18	244.62	4,434.74	632.76	-623.66	-1,314.51	841.99	0.00	0.00	0.00
4,800.00	23.96	244.62	4,490.20	577.30	-634.53	-1,337.42	856.66	2.00	-2.00	0.00
4,900.00	21.96	244.62	4,582.28	485.22	-651.25	-1,372.66	879.23	2.00	-2.00	0.00
5,000.00	19.96	244.62	4,675.65	391.85	-666.58	-1,404.97	899.93	2.00	-2.00	0.00
5,100.00	17.96	244.62	4,770.23	297.27	-680.51	-1,434.32	918.73	2.00	-2.00	0.00
5,200.00	15.96	244.62	4,865.87	201.63	-693.01	-1,460.68	935.61	2.00	-2.00	0.00
5,300.00	13.96	244.62	4,962.48	105.02	-704.08	-1,484.00	950.55	2.00	-2.00	0.00
5,400.00	11.96	244.62	5,059.93	7.57	-713.69	-1,504.26	963.53	2.00	-2.00	0.00
SHANNON										
5,417.95	11.60	244.62	5,077.50	-10.00	-715.26	-1,507.57	965.65	2.00	-2.00	0.00
5,500.00	9.96	244.62	5,158.10	-90.60	-721.84	-1,521.43	974.53	2.00	-2.00	0.00
5,600.00	7.96	244.62	5,256.87	-189.37	-728.51	-1,535.50	983.54	2.00	-2.00	0.00
5,700.00	5.96	244.62	5,356.13	-288.63	-733.70	-1,546.44	990.55	2.00	-2.00	0.00
5,800.00	3.96	244.62	5,455.75	-388.25	-737.41	-1,554.25	995.55	2.00	-2.00	0.00
5,900.00	1.96	244.62	5,555.61	-488.11	-739.62	-1,558.92	998.54	2.00	-2.00	0.00
EOD TO VERTICAL										
5,997.95	0.00	0.00	5,653.54	-586.04	-740.34	-1,560.43	999.51	2.00	-2.00	0.00
6,000.00	0.00	0.00	5,655.59	-588.09	-740.34	-1,560.43	999.51	0.00	0.00	0.00
KOP (10°/100ft BUR)										
6,097.95	0.00	0.00	5,753.54	-686.04	-740.34	-1,560.43	999.51	0.00	0.00	0.00
6,100.00	0.21	179.37	5,755.59	-688.09	-740.34	-1,560.43	999.51	10.02	10.02	0.00
6,200.00	10.21	179.37	5,855.06	-787.56	-749.40	-1,560.33	1,008.42	10.00	10.00	0.00
6,300.00	20.21	179.37	5,951.43	-883.93	-775.60	-1,560.04	1,034.17	10.00	10.00	0.00
6,400.00	30.21	179.37	6,041.80	-974.30	-818.13	-1,559.58	1,075.97	10.00	10.00	0.00
SHARON SPRINGS SHALE										
6,478.21	38.03	179.37	6,106.50	-1,039.00	-861.96	-1,559.09	1,119.06	10.00	10.00	0.00
6,500.00	40.21	179.37	6,123.40	-1,055.90	-875.70	-1,558.94	1,132.57	10.00	10.00	0.00
NIORARA FORMATION										
6,573.73	47.58	179.37	6,176.50	-1,109.00	-926.78	-1,558.38	1,182.78	10.00	10.00	0.00
NIORARA A CHALK										
6,588.77	49.08	179.37	6,186.50	-1,119.00	-938.02	-1,558.26	1,193.82	10.00	10.00	0.00
6,600.00	50.21	179.37	6,193.77	-1,126.27	-946.57	-1,558.16	1,202.23	10.00	10.00	0.00
6,700.00	60.21	179.37	6,250.76	-1,183.26	-1,028.58	-1,557.26	1,282.84	10.00	10.00	0.00
6,800.00	70.21	179.37	6,292.64	-1,225.14	-1,119.24	-1,556.27	1,371.96	10.00	10.00	0.00
NIORARA B CHALK										
6,811.72	71.38	179.37	6,296.50	-1,229.00	-1,130.31	-1,556.14	1,382.84	10.00	10.00	0.00
6,900.00	80.21	179.37	6,318.15	-1,250.65	-1,215.80	-1,555.20	1,466.87	10.00	10.00	0.00
BPI: 2078ft FSL & 2232ft FWL of Sec 13										
6,997.94	90.00	179.37	6,326.50	-1,259.00	-1,313.26	-1,554.13	1,562.67	10.00	10.00	0.00
7,000.00	90.00	179.37	6,326.50	-1,259.00	-1,315.32	-1,554.11	1,564.69	0.02	0.02	0.00
7,100.00	90.00	179.37	6,326.50	-1,259.00	-1,415.31	-1,553.01	1,662.99	0.00	0.00	0.00
7,200.00	90.00	179.37	6,326.50	-1,259.00	-1,515.30	-1,551.91	1,761.28	0.00	0.00	0.00
7,300.00	90.00	179.37	6,326.50	-1,259.00	-1,615.30	-1,550.81	1,859.57	0.00	0.00	0.00
7,400.00	90.00	179.37	6,326.50	-1,259.00	-1,715.29	-1,549.71	1,957.86	0.00	0.00	0.00
7,500.00	90.00	179.37	6,326.50	-1,259.00	-1,815.29	-1,548.61	2,056.15	0.00	0.00	0.00
7,600.00	90.00	179.37	6,326.51	-1,259.01	-1,915.28	-1,547.51	2,154.44	0.00	0.00	0.00
7,700.00	90.00	179.37	6,326.51	-1,259.01	-2,015.27	-1,546.41	2,252.73	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ROHN FED 9-60 13-24-7
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Site:	SW NE SEC. 13 T9N R60W 6th P.M.	North Reference:	True
Well:	ROHN FED 9-60 13-24-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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)
7,800.00	90.00	179.37	6,326.51	-1,259.01	-2,115.27	-1,545.31	2,351.02	0.00	0.00	0.00
7,900.00	90.00	179.37	6,326.51	-1,259.01	-2,215.26	-1,544.21	2,449.31	0.00	0.00	0.00
8,000.00	90.00	179.37	6,326.51	-1,259.01	-2,315.26	-1,543.11	2,547.60	0.00	0.00	0.00
8,100.00	90.00	179.37	6,326.51	-1,259.01	-2,415.25	-1,542.01	2,645.89	0.00	0.00	0.00
8,200.00	90.00	179.37	6,326.51	-1,259.01	-2,515.24	-1,540.91	2,744.19	0.00	0.00	0.00
8,300.00	90.00	179.37	6,326.51	-1,259.01	-2,615.24	-1,539.80	2,842.48	0.00	0.00	0.00
8,400.00	90.00	179.37	6,326.51	-1,259.01	-2,715.23	-1,538.70	2,940.77	0.00	0.00	0.00
8,500.00	90.00	179.37	6,326.51	-1,259.01	-2,815.22	-1,537.60	3,039.06	0.00	0.00	0.00
8,600.00	90.00	179.37	6,326.51	-1,259.01	-2,915.22	-1,536.50	3,137.35	0.00	0.00	0.00
8,700.00	90.00	179.37	6,326.51	-1,259.01	-3,015.21	-1,535.39	3,235.64	0.00	0.00	0.00
8,800.00	90.00	179.37	6,326.51	-1,259.01	-3,115.21	-1,534.29	3,333.93	0.00	0.00	0.00
8,900.00	90.00	179.37	6,326.51	-1,259.01	-3,215.20	-1,533.19	3,432.22	0.00	0.00	0.00
9,000.00	90.00	179.37	6,326.51	-1,259.01	-3,315.19	-1,532.09	3,530.51	0.00	0.00	0.00
9,100.00	90.00	179.37	6,326.51	-1,259.01	-3,415.19	-1,530.98	3,628.80	0.00	0.00	0.00
9,200.00	90.00	179.37	6,326.51	-1,259.01	-3,515.18	-1,529.88	3,727.09	0.00	0.00	0.00
9,300.00	90.00	179.37	6,326.51	-1,259.01	-3,615.18	-1,528.77	3,825.38	0.00	0.00	0.00
9,400.00	90.00	179.37	6,326.51	-1,259.01	-3,715.17	-1,527.67	3,923.67	0.00	0.00	0.00
9,500.00	90.00	179.37	6,326.51	-1,259.01	-3,815.16	-1,526.57	4,021.96	0.00	0.00	0.00
9,600.00	90.00	179.37	6,326.52	-1,259.02	-3,915.16	-1,525.46	4,120.25	0.00	0.00	0.00
9,700.00	90.00	179.37	6,326.52	-1,259.02	-4,015.15	-1,524.36	4,218.54	0.00	0.00	0.00
9,800.00	90.00	179.37	6,326.52	-1,259.02	-4,115.15	-1,523.25	4,316.83	0.00	0.00	0.00
9,900.00	90.00	179.37	6,326.52	-1,259.02	-4,215.14	-1,522.15	4,415.12	0.00	0.00	0.00
10,000.00	90.00	179.37	6,326.52	-1,259.02	-4,315.13	-1,521.04	4,513.41	0.00	0.00	0.00
10,100.00	90.00	179.37	6,326.52	-1,259.02	-4,415.13	-1,519.93	4,611.70	0.00	0.00	0.00
10,200.00	90.00	179.37	6,326.52	-1,259.02	-4,515.12	-1,518.83	4,709.99	0.00	0.00	0.00
10,300.00	90.00	179.37	6,326.52	-1,259.02	-4,615.12	-1,517.72	4,808.28	0.00	0.00	0.00
10,400.00	90.00	179.37	6,326.52	-1,259.02	-4,715.11	-1,516.62	4,906.57	0.00	0.00	0.00
10,500.00	90.00	179.37	6,326.52	-1,259.02	-4,815.10	-1,515.51	5,004.86	0.00	0.00	0.00
10,600.00	90.00	179.37	6,326.52	-1,259.02	-4,915.10	-1,514.40	5,103.15	0.00	0.00	0.00
10,700.00	90.00	179.37	6,326.52	-1,259.02	-5,015.09	-1,513.30	5,201.44	0.00	0.00	0.00
10,800.00	90.00	179.37	6,326.52	-1,259.02	-5,115.08	-1,512.19	5,299.73	0.00	0.00	0.00
10,900.00	90.00	179.37	6,326.52	-1,259.02	-5,215.08	-1,511.08	5,398.02	0.00	0.00	0.00
11,000.00	90.00	179.37	6,326.52	-1,259.02	-5,315.07	-1,509.97	5,496.31	0.00	0.00	0.00
11,100.00	90.00	179.37	6,326.52	-1,259.02	-5,415.07	-1,508.87	5,594.60	0.00	0.00	0.00
11,200.00	90.00	179.37	6,326.52	-1,259.02	-5,515.06	-1,507.76	5,692.89	0.00	0.00	0.00
11,300.00	90.00	179.36	6,326.51	-1,259.01	-5,615.05	-1,506.65	5,791.18	0.00	0.00	0.00
11,400.00	90.00	179.36	6,326.51	-1,259.01	-5,715.05	-1,505.54	5,889.47	0.00	0.00	0.00
11,500.00	90.00	179.36	6,326.51	-1,259.01	-5,815.04	-1,504.43	5,987.76	0.00	0.00	0.00
11,600.00	90.00	179.36	6,326.51	-1,259.01	-5,915.04	-1,503.32	6,086.05	0.00	0.00	0.00
11,700.00	90.00	179.36	6,326.51	-1,259.01	-6,015.03	-1,502.21	6,184.33	0.00	0.00	0.00
11,800.00	90.00	179.36	6,326.51	-1,259.01	-6,115.02	-1,501.11	6,282.62	0.00	0.00	0.00
11,900.00	90.00	179.36	6,326.51	-1,259.01	-6,215.02	-1,500.00	6,380.91	0.00	0.00	0.00
12,000.00	90.00	179.36	6,326.51	-1,259.01	-6,315.01	-1,498.89	6,479.20	0.00	0.00	0.00
12,100.00	90.00	179.36	6,326.51	-1,259.01	-6,415.00	-1,497.78	6,577.49	0.00	0.00	0.00
12,200.00	90.00	179.36	6,326.51	-1,259.01	-6,515.00	-1,496.67	6,675.78	0.00	0.00	0.00
12,300.00	90.00	179.36	6,326.51	-1,259.01	-6,614.99	-1,495.56	6,774.07	0.00	0.00	0.00
12,400.00	90.00	179.36	6,326.51	-1,259.01	-6,714.99	-1,494.44	6,872.36	0.00	0.00	0.00
12,500.00	90.00	179.36	6,326.51	-1,259.01	-6,814.98	-1,493.33	6,970.65	0.00	0.00	0.00
12,600.00	90.00	179.36	6,326.51	-1,259.01	-6,914.97	-1,492.22	7,068.94	0.00	0.00	0.00
12,700.00	90.00	179.36	6,326.51	-1,259.01	-7,014.97	-1,491.11	7,167.23	0.00	0.00	0.00
12,800.00	90.00	179.36	6,326.51	-1,259.01	-7,114.96	-1,490.00	7,265.51	0.00	0.00	0.00
12,900.00	90.00	179.36	6,326.51	-1,259.01	-7,214.96	-1,488.89	7,363.80	0.00	0.00	0.00
13,000.00	90.00	179.36	6,326.51	-1,259.01	-7,314.95	-1,487.78	7,462.09	0.00	0.00	0.00
13,100.00	90.00	179.36	6,326.51	-1,259.01	-7,414.94	-1,486.66	7,560.38	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ROHN FED 9-60 13-24-7
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5067.50usft (Original Well Elev)
Site:	SW NE SEC. 13 T9N R60W 6th P.M.	North Reference:	True
Well:	ROHN FED 9-60 13-24-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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)
13,200.00	90.00	179.36	6,326.50	-1,259.00	-7,514.94	-1,485.55	7,658.67	0.00	0.00	0.00
13,300.00	90.00	179.36	6,326.50	-1,259.00	-7,614.93	-1,484.44	7,756.96	0.00	0.00	0.00
13,400.00	90.00	179.36	6,326.50	-1,259.00	-7,714.92	-1,483.33	7,855.25	0.00	0.00	0.00
13,500.00	90.00	179.36	6,326.50	-1,259.00	-7,814.92	-1,482.21	7,953.54	0.00	0.00	0.00
13,600.00	90.00	179.36	6,326.50	-1,259.00	-7,914.91	-1,481.10	8,051.82	0.00	0.00	0.00
13,700.00	90.00	179.36	6,326.50	-1,259.00	-8,014.91	-1,479.99	8,150.11	0.00	0.00	0.00
EPI: 600ft FSL & 2233ft FWL of Sec 24										
13,772.86	90.00	179.36	6,326.50	-1,259.00	-8,087.76	-1,479.18	8,221.73	0.00	0.00	0.00
EOT TO 179.32° AZ										
13,774.25	90.00	179.32	6,326.50	-1,259.00	-8,089.15	-1,479.16	8,223.09	3.01	0.00	-3.01
13,800.00	90.00	179.32	6,326.50	-1,259.00	-8,114.90	-1,478.85	8,248.40	0.00	0.00	0.00
13,900.00	90.00	179.32	6,326.50	-1,259.00	-8,214.89	-1,477.66	8,346.67	0.00	0.00	0.00
14,000.00	90.00	179.31	6,326.50	-1,259.00	-8,314.89	-1,476.46	8,444.94	0.00	0.00	0.00
BHL: 300ft FSL & 2232ft FWL of Sec 24										
14,072.72	90.00	179.31	6,326.50	-1,259.00	-8,387.60	-1,475.59	8,516.41	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
630.50	630.50	PIERRE SHALE (BASE OF FOX HI				
3,655.86	3,454.50	PARKMAN				
4,235.98	3,979.50	SUSSEX				
5,417.95	5,077.50	SHANNON				
6,478.21	6,106.50	SHARON SPRINGS SHALE				
6,573.73	6,176.50	NIOBRARA FORMATION				
6,588.77	6,186.50	NIOBRARA A CHALK				
6,811.72	6,296.50	NIOBRARA B CHALK				

Plan Annotations					
MD (usft)	TVD (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
0.00	0.00	0.00	0.00	SHL: 1996ft FNL & 1541ft FEL of Sec 13	
700.00	700.00	0.00	0.00	START NUDGE (2°/100ft BUR)	
1,958.93	1,918.80	-116.68	-245.92	EOB TO 25.18° INC	
4,739.02	4,434.74	-623.66	-1,314.51	END OF TANGENT	
5,997.95	5,653.54	-740.34	-1,560.43	EOD TO VERTICAL	
6,097.95	5,753.54	-740.34	-1,560.43	KOP (10°/100ft BUR)	
6,997.94	6,326.50	-1,313.26	-1,554.13	BPI: 2078ft FSL & 2232ft FWL of Sec 13	
13,772.86	6,326.50	-8,087.76	-1,479.18	EPI: 600ft FSL & 2233ft FWL of Sec 24	
13,774.25	6,326.50	-8,089.15	-1,479.16	EOT TO 179.32° AZ	
14,072.72	6,326.50	-8,387.60	-1,475.59	BHL: 300ft FSL & 2232ft FWL of Sec 24	