

BISON OIL & GAS II, LLC

WELD COUNTY, COLORADO (NAD 83)

NW NE SEC. 13 T8N R62W 6th P.M.

FREEMAN 8-62 13-24-12

ORIGINAL WELLBORE

29 August, 2018

Plan: PROPOSAL #1





Project: WELD COUNTY, COLORADO (NAD 83)
 Site: NW NE SEC. 13 T8N R62W 6th P.M.
 Well: FREEMAN 8-62 13-24-12
 Wellbore: ORIGINAL WELLBORE
 Design: PROPOSAL #1

ANNOTATIONS

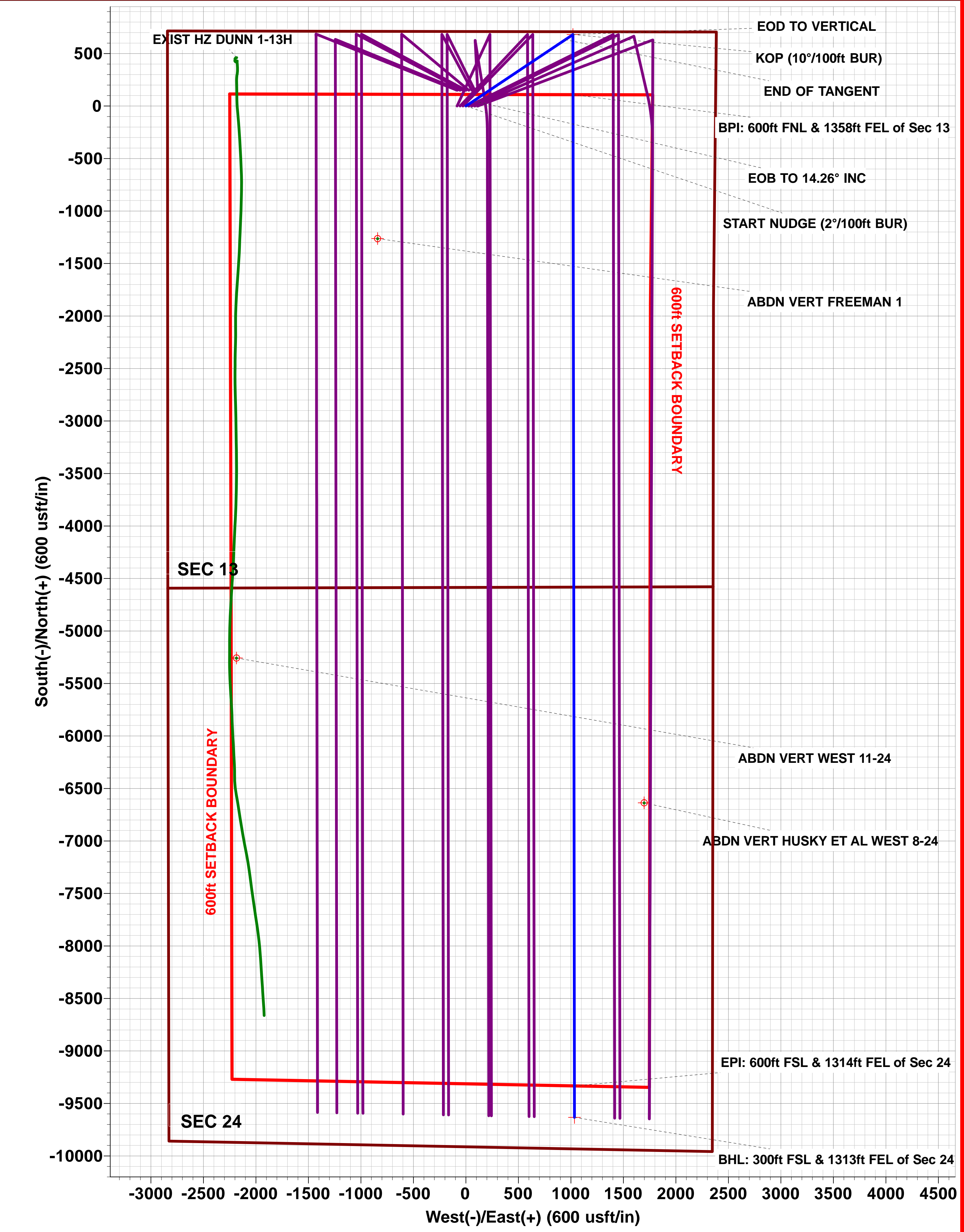
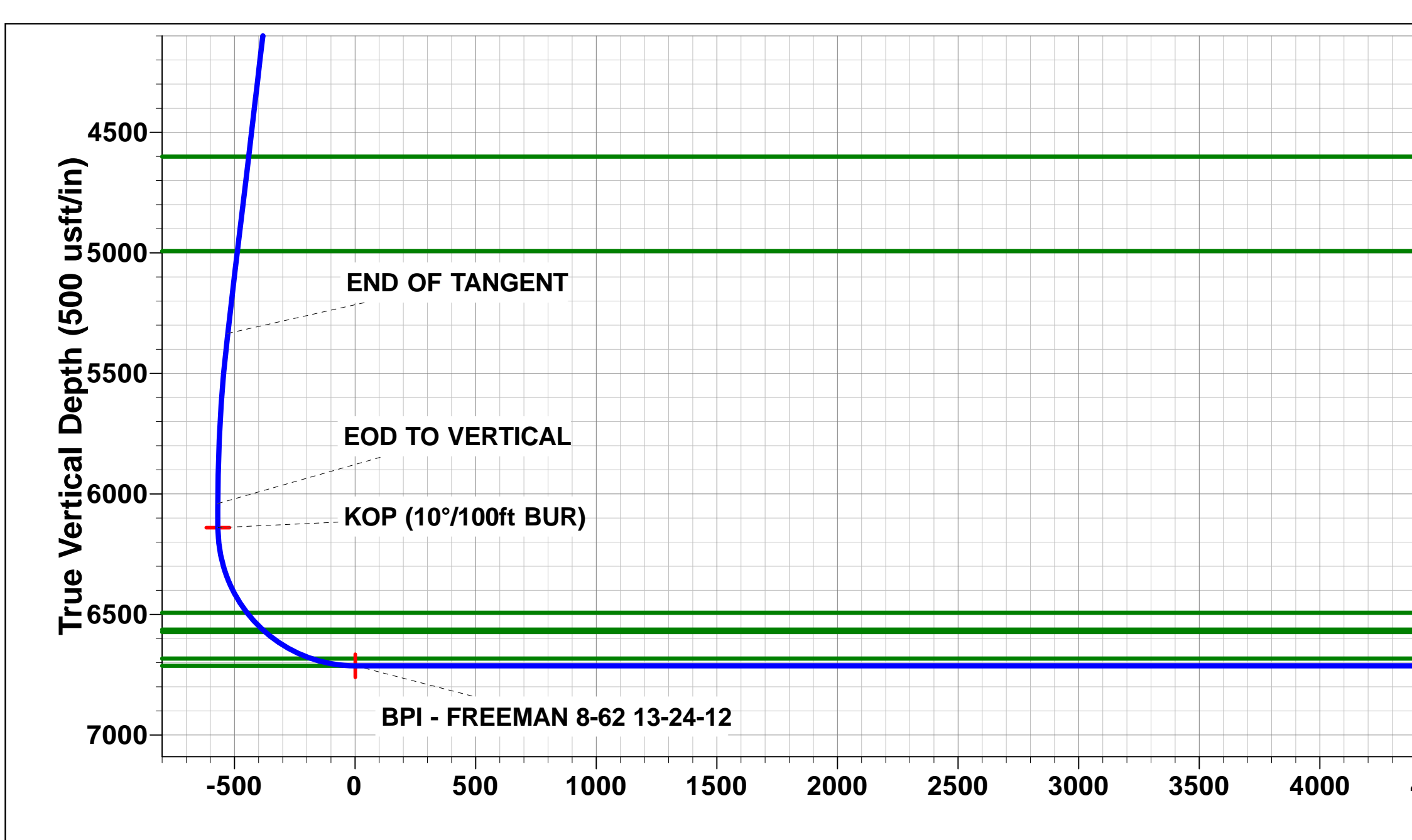
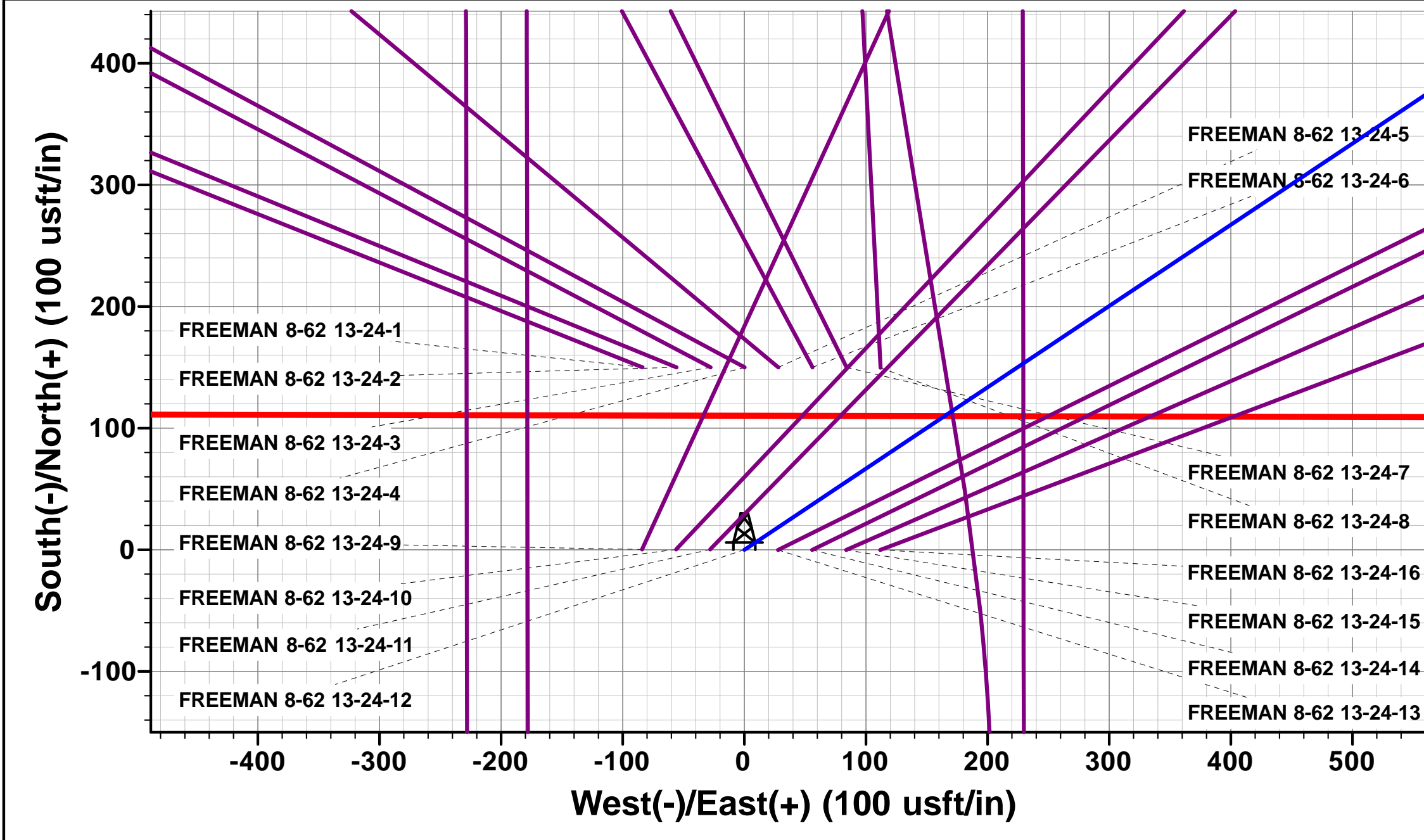
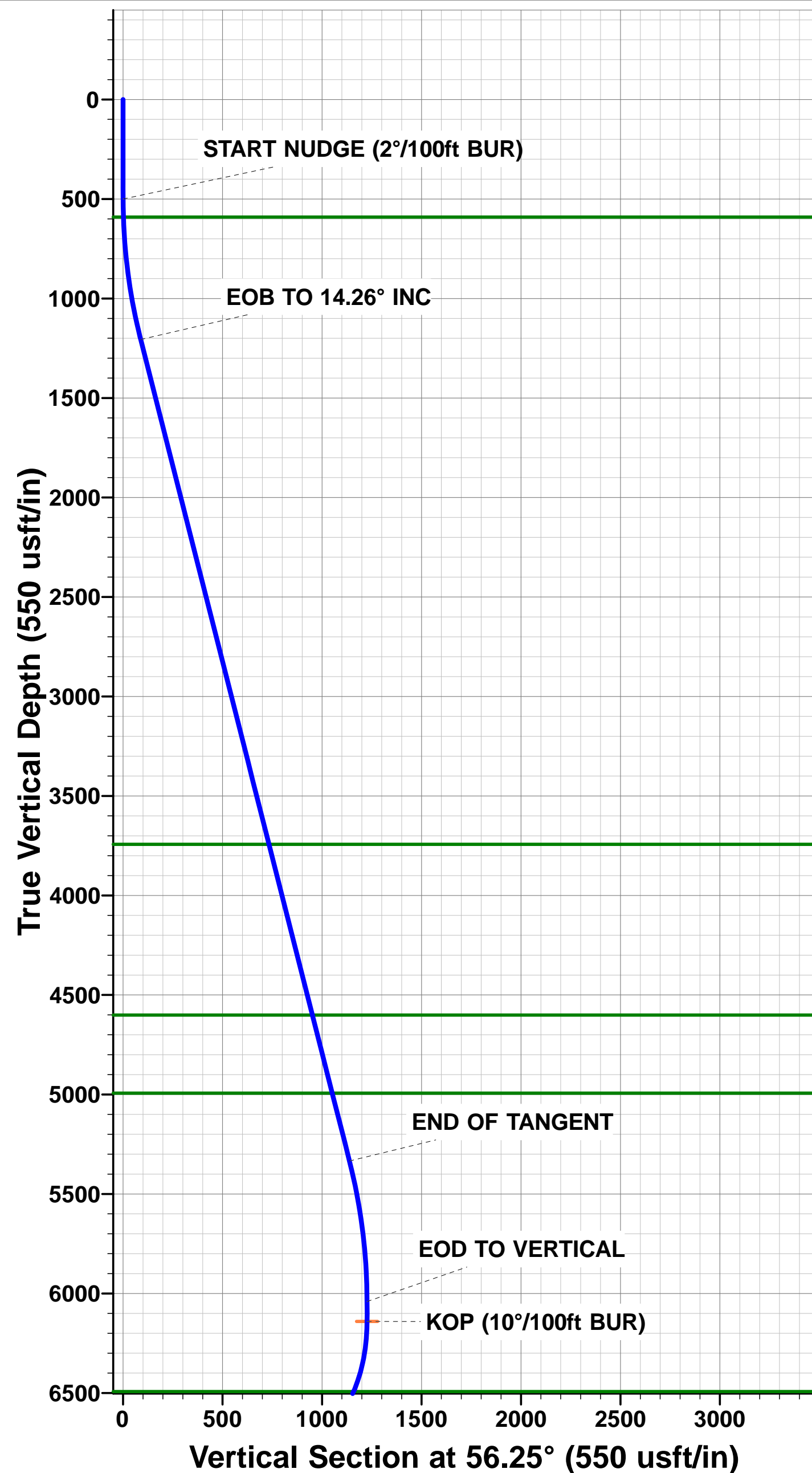
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 710ft FNL & 2378ft FEL of Sec 13
500.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDDGE (2°/100ft BUR)
1205.83	1213.18	14.26	56.25	49.06	73.43	-40.95	88.31	EOB TO 14.26° INC
5334.31	5472.97	14.26	56.25	632.13	946.11	-527.56	1137.85	END OF TANGENT
6040.14	6186.15	0.00	0.00	681.19	1019.54	-568.51	1226.17	EOD TO VERTICAL
6140.14	6286.15	0.00	0.00	681.19	1019.54	-568.51	1226.17	KOP (10°/100ft BUR)
6713.10	7186.14	90.00	179.92	108.23	1020.34	1.26	1799.12	BPI: 600ft FNL & 1358ft FEL of Sec 13
6713.10	16627.32	90.00	179.92	-9332.93	1033.22	9389.90	11240.30	EPI: 600ft FSL & 1314ft FEL of Sec 24
6713.10	16927.16	90.00	179.86	-9632.77	1033.79	9688.09	11540.14	BHL: 300ft FSL & 1313ft FEL of Sec 24

PROPOSED LOCAL COORDINATES:

SHL: 710ft FNL & 2378ft FEL Sec 13
 BPI: 600ft FNL & 1358ft FEL Sec 13
 EPI: 600ft FSL & 1314ft FEL Sec 24
 BHL: 300ft FSL & 1313ft FEL of Sec 24

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - FREEMAN 8-62 13-24-12	6140.14	681.19	1019.54	40.668749	-104.263210
BPI - FREEMAN 8-62 13-24-12	6713.10	108.23	1020.34	40.667176	-104.263207
EPI - FREEMAN 8-62 13-24-12	6713.10	-9332.93	1033.22	40.641262	-104.263162
BHL - FREEMAN 8-62 13-24-12	6713.10	-9632.77	1033.79	40.640439	-104.263160



EPI - FREEMAN 8-62 13-24-12
 BHL - FREEMAN 8-62 13-24-12

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FREEMAN 8-62 13-24-12
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Site:	NW NE SEC. 13 T8N R62W 6th P.M.	North Reference:	True
Well:	FREEMAN 8-62 13-24-12	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 NW NE SEC. 13 T8N R62W 6th P.M.			
Site Position:		Northing:	1,488,314.17 usft
From:	Lat/Long	Easting:	3,341,986.38 usft
Position Uncertainty:	0.00 usft	Slot Radius:	1.10000ft
		Latitude:	40.667291
		Longitude:	-104.267187
		Grid Convergence:	0.80 °

Well FREEMAN 8-62 13-24-12			
Well Position	+N-S	-150.11 usft	Northing: 1,488,165.24 usft
	+E-W	83.78 usft	Easting: 3,342,072.24 usft
Position Uncertainty		0.00 usft	Wellhead Elevation: usft
			Latitude: 40.666879
			Longitude: -104.266885
			Ground Level: 4,998.10 usft

Wellbore ORIGINAL WELLBORE					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	29/08/2018	7.84	67.11	52,442

Design PROPOSAL #1				
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	6,713.10	0.00	0.00	173.87

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
0.00	0.00	0.00	0.00	-5,023.10	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	-4,523.10	0.00	0.00	0.00	0.00	0.00	0.00	
1,213.18	14.26	56.25	1,205.83	-3,817.27	49.06	73.43	2.00	2.00	0.00	56.25	
5,472.97	14.26	56.25	5,334.31	311.21	632.13	946.11	0.00	0.00	0.00	0.00	
6,186.15	0.00	0.00	6,040.14	1,017.04	681.19	1,019.54	2.00	-2.00	0.00	180.00	
6,286.15	0.00	0.00	6,140.14	1,117.04	681.19	1,019.54	0.00	0.00	0.00	0.00	KOP - FREEMAN 8
7,186.14	90.00	179.92	6,713.10	1,690.00	108.23	1,020.34	10.00	10.00	19.99	179.92	BPI - FREEMAN 8-
16,627.32	90.00	179.92	6,713.10	1,690.00	-9,332.93	1,033.22	0.00	0.00	0.00	78.11	EPI - FREEMAN 8-
16,927.16	90.00	179.86	6,713.10	1,690.00	-9,632.77	1,033.79	0.02	0.00	-0.02	-90.73	BHL - FREEMAN 8

Planning Report



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Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Site:	NW NE SEC. 13 T8N R62W 6th P.M.	North Reference:	True
Well:	FREEMAN 8-62 13-24-12	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: 710ft FNL & 2378ft FEL of Sec 13										
0.00	0.00	0.00	0.00	5,023.10	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,923.10	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,823.10	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	4,723.10	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	4,623.10	0.00	0.00	0.00	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
500.00	0.00	0.00	500.00	4,523.10	0.00	0.00	0.00	0.00	0.00	0.00
PIERRE SHALE (BASE OF FOX HILLS)										
591.12	1.82	56.25	591.10	4,432.00	0.80	1.20	-0.67	2.00	2.00	0.00
600.00	2.00	56.25	599.98	4,423.12	0.97	1.45	-0.81	2.00	2.00	0.00
700.00	4.00	56.25	699.84	4,323.26	3.88	5.80	-3.24	2.00	2.00	0.00
800.00	6.00	56.25	799.45	4,223.65	8.72	13.05	-7.28	2.00	2.00	0.00
900.00	8.00	56.25	898.70	4,124.40	15.49	23.18	-12.93	2.00	2.00	0.00
1,000.00	10.00	56.25	997.47	4,025.63	24.18	36.19	-20.18	2.00	2.00	0.00
1,100.00	12.00	56.25	1,095.62	3,927.48	34.78	52.05	-29.03	2.00	2.00	0.00
1,200.00	14.00	56.25	1,193.06	3,830.04	47.27	70.76	-39.45	2.00	2.00	0.00
EOB TO 14.26° INC										
1,213.18	14.26	56.25	1,205.83	3,817.27	49.06	73.43	-40.95	2.00	2.00	0.00
1,300.00	14.26	56.25	1,289.98	3,733.12	60.95	91.22	-50.86	0.00	0.00	0.00
1,400.00	14.26	56.25	1,386.90	3,636.20	74.63	111.70	-62.29	0.00	0.00	0.00
1,500.00	14.26	56.25	1,483.81	3,539.29	88.32	132.19	-73.71	0.00	0.00	0.00
1,600.00	14.26	56.25	1,580.73	3,442.37	102.01	152.68	-85.13	0.00	0.00	0.00
1,700.00	14.26	56.25	1,677.65	3,345.45	115.70	173.16	-96.56	0.00	0.00	0.00
1,800.00	14.26	56.25	1,774.57	3,248.53	129.38	193.65	-107.98	0.00	0.00	0.00
1,900.00	14.26	56.25	1,871.48	3,151.62	143.07	214.14	-119.41	0.00	0.00	0.00
2,000.00	14.26	56.25	1,968.40	3,054.70	156.76	234.62	-130.83	0.00	0.00	0.00
2,100.00	14.26	56.25	2,065.32	2,957.78	170.45	255.11	-142.25	0.00	0.00	0.00
2,200.00	14.26	56.25	2,162.24	2,860.86	184.14	275.60	-153.68	0.00	0.00	0.00
2,300.00	14.26	56.25	2,259.15	2,763.95	197.82	296.08	-165.10	0.00	0.00	0.00
2,400.00	14.26	56.25	2,356.07	2,667.03	211.51	316.57	-176.52	0.00	0.00	0.00
2,500.00	14.26	56.25	2,452.99	2,570.11	225.20	337.05	-187.95	0.00	0.00	0.00
2,600.00	14.26	56.25	2,549.90	2,473.20	238.89	357.54	-199.37	0.00	0.00	0.00
2,700.00	14.26	56.25	2,646.82	2,376.28	252.57	378.03	-210.79	0.00	0.00	0.00
2,800.00	14.26	56.25	2,743.74	2,279.36	266.26	398.51	-222.22	0.00	0.00	0.00
2,900.00	14.26	56.25	2,840.66	2,182.44	279.95	419.00	-233.64	0.00	0.00	0.00
3,000.00	14.26	56.25	2,937.57	2,085.53	293.64	439.49	-245.06	0.00	0.00	0.00
3,100.00	14.26	56.25	3,034.49	1,988.61	307.32	459.97	-256.49	0.00	0.00	0.00
3,200.00	14.26	56.25	3,131.41	1,891.69	321.01	480.46	-267.91	0.00	0.00	0.00
3,300.00	14.26	56.25	3,228.33	1,794.77	334.70	500.95	-279.33	0.00	0.00	0.00
3,400.00	14.26	56.25	3,325.24	1,697.86	348.39	521.43	-290.76	0.00	0.00	0.00
3,500.00	14.26	56.25	3,422.16	1,600.94	362.07	541.92	-302.18	0.00	0.00	0.00
3,600.00	14.26	56.25	3,519.08	1,504.02	375.76	562.41	-313.60	0.00	0.00	0.00
3,700.00	14.26	56.25	3,615.99	1,407.11	389.45	582.89	-325.03	0.00	0.00	0.00
3,800.00	14.26	56.25	3,712.91	1,310.19	403.14	603.38	-336.45	0.00	0.00	0.00
PARKMAN										
3,831.15	14.26	56.25	3,743.10	1,280.00	407.40	609.76	-340.01	0.00	0.00	0.00
3,900.00	14.26	56.25	3,809.83	1,213.27	416.83	623.86	-347.87	0.00	0.00	0.00
4,000.00	14.26	56.25	3,906.75	1,116.35	430.51	644.35	-359.30	0.00	0.00	0.00
4,100.00	14.26	56.25	4,003.66	1,019.44	444.20	664.84	-370.72	0.00	0.00	0.00
4,200.00	14.26	56.25	4,100.58	922.52	457.89	685.32	-382.14	0.00	0.00	0.00
4,300.00	14.26	56.25	4,197.50	825.60	471.58	705.81	-393.57	0.00	0.00	0.00
4,400.00	14.26	56.25	4,294.42	728.68	485.26	726.30	-404.99	0.00	0.00	0.00
4,500.00	14.26	56.25	4,391.33	631.77	498.95	746.78	-416.42	0.00	0.00	0.00

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Site:	NW NE SEC. 13 T8N R62W 6th P.M.	North Reference:	True
Well:	FREEMAN 8-62 13-24-12	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)
4,600.00	14.26	56.25	4,488.25	534.85	512.64	767.27	-427.84	0.00	0.00	0.00
4,700.00	14.26	56.25	4,585.17	437.93	526.33	787.76	-439.26	0.00	0.00	0.00
SUSSEX										
4,716.44	14.26	56.25	4,601.10	422.00	528.58	791.12	-441.14	0.00	0.00	0.00
4,800.00	14.26	56.25	4,682.08	341.02	540.01	808.24	-450.69	0.00	0.00	0.00
4,900.00	14.26	56.25	4,779.00	244.10	553.70	828.73	-462.11	0.00	0.00	0.00
5,000.00	14.26	56.25	4,875.92	147.18	567.39	849.21	-473.53	0.00	0.00	0.00
5,100.00	14.26	56.25	4,972.84	50.26	581.08	869.70	-484.96	0.00	0.00	0.00
SHANNON										
5,120.91	14.26	56.25	4,993.10	30.00	583.94	873.98	-487.34	0.00	0.00	0.00
5,200.00	14.26	56.25	5,069.75	-46.65	594.76	890.19	-496.38	0.00	0.00	0.00
5,300.00	14.26	56.25	5,166.67	-143.57	608.45	910.67	-507.80	0.00	0.00	0.00
5,400.00	14.26	56.25	5,263.59	-240.49	622.14	931.16	-519.23	0.00	0.00	0.00
END OF TANGENT										
5,472.97	14.26	56.25	5,334.31	-311.21	632.13	946.11	-527.56	0.00	0.00	0.00
5,500.00	13.72	56.25	5,360.54	-337.44	635.76	951.54	-530.59	2.00	-2.00	0.00
5,600.00	11.72	56.25	5,458.08	-434.98	647.99	969.85	-540.80	2.00	-2.00	0.00
5,700.00	9.72	56.25	5,556.32	-533.22	658.33	985.32	-549.43	2.00	-2.00	0.00
5,800.00	7.72	56.25	5,655.16	-632.06	666.75	997.93	-556.46	2.00	-2.00	0.00
5,900.00	5.72	56.25	5,754.47	-731.37	673.26	1,007.67	-561.89	2.00	-2.00	0.00
6,000.00	3.72	56.25	5,854.13	-831.03	677.83	1,014.51	-565.71	2.00	-2.00	0.00
6,100.00	1.72	56.25	5,954.01	-930.91	680.47	1,018.46	-567.91	2.00	-2.00	0.00
EOD TO VERTICAL										
6,186.15	0.00	0.00	6,040.14	-1,017.04	681.19	1,019.54	-568.51	2.00	-2.00	0.00
6,200.00	0.00	0.00	6,053.99	-1,030.89	681.19	1,019.54	-568.51	0.00	0.00	0.00
KOP (10°/100ft BUR)										
6,286.15	0.00	0.00	6,140.14	-1,117.04	681.19	1,019.54	-568.51	0.00	0.00	0.00
6,300.00	1.39	179.92	6,153.99	-1,130.89	681.02	1,019.54	-568.34	10.00	10.00	0.00
6,400.00	11.39	179.92	6,253.25	-1,230.15	669.91	1,019.56	-557.30	10.00	10.00	0.00
6,500.00	21.39	179.92	6,349.06	-1,325.96	641.74	1,019.60	-529.28	10.00	10.00	0.00
6,600.00	31.39	179.92	6,438.53	-1,415.43	597.36	1,019.66	-485.14	10.00	10.00	0.00
SHARON SPRINGS SHALE										
6,666.41	38.03	179.92	6,493.10	-1,470.00	559.56	1,019.71	-447.56	10.00	10.00	0.00
6,700.00	41.39	179.92	6,518.94	-1,495.84	538.11	1,019.74	-426.22	10.00	10.00	0.00
NIOBRARA FORMATION										
6,761.93	47.58	179.92	6,563.10	-1,540.00	494.74	1,019.80	-383.09	10.00	10.00	0.00
NIOBRARA A CHALK										
6,776.97	49.08	179.92	6,573.10	-1,550.00	483.50	1,019.82	-371.92	10.00	10.00	0.00
6,800.00	51.39	179.92	6,587.83	-1,564.73	465.80	1,019.84	-354.32	10.00	10.00	0.00
6,900.00	61.39	179.92	6,643.12	-1,620.02	382.63	1,019.96	-271.61	10.00	10.00	0.00
NIOBRARA B CHALK										
6,999.92	71.38	179.92	6,683.10	-1,660.00	291.20	1,020.09	-180.69	10.00	10.00	0.00
7,000.00	71.39	179.92	6,683.13	-1,660.03	291.12	1,020.09	-180.61	10.00	10.00	0.00
7,100.00	81.39	179.92	6,706.64	-1,683.54	194.05	1,020.22	-84.08	10.00	10.00	0.00
BPI: 600ft FNL & 1358ft FEL of Sec 13 - NIOBRARA B LP										
7,186.14	90.00	179.92	6,713.10	-1,690.00	108.23	1,020.34	1.26	10.00	10.00	0.00
7,200.00	90.00	179.92	6,713.10	-1,690.00	94.38	1,020.36	15.04	0.00	0.00	0.00
7,300.00	90.00	179.92	6,713.10	-1,690.00	-5.62	1,020.50	114.48	0.00	0.00	0.00
7,400.00	90.00	179.92	6,713.10	-1,690.00	-105.62	1,020.64	213.93	0.00	0.00	0.00
7,500.00	90.00	179.92	6,713.10	-1,690.00	-205.62	1,020.78	313.37	0.00	0.00	0.00
7,600.00	90.00	179.92	6,713.10	-1,690.00	-305.62	1,020.92	412.81	0.00	0.00	0.00
7,700.00	90.00	179.92	6,713.10	-1,690.00	-405.62	1,021.06	512.26	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FREEMAN 8-62 13-24-12
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Site:	NW NE SEC. 13 T8N R62W 6th P.M.	North Reference:	True
Well:	FREEMAN 8-62 13-24-12	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)
7,800.00	90.00	179.92	6,713.10	-1,690.00	-505.62	1,021.20	611.70	0.00	0.00	0.00
7,900.00	90.00	179.92	6,713.10	-1,690.00	-605.62	1,021.34	711.15	0.00	0.00	0.00
8,000.00	90.00	179.92	6,713.11	-1,690.01	-705.62	1,021.48	810.59	0.00	0.00	0.00
8,100.00	90.00	179.92	6,713.11	-1,690.01	-805.62	1,021.62	910.03	0.00	0.00	0.00
8,200.00	90.00	179.92	6,713.11	-1,690.01	-905.62	1,021.75	1,009.48	0.00	0.00	0.00
8,300.00	90.00	179.92	6,713.11	-1,690.01	-1,005.62	1,021.89	1,108.92	0.00	0.00	0.00
8,400.00	90.00	179.92	6,713.11	-1,690.01	-1,105.62	1,022.03	1,208.37	0.00	0.00	0.00
8,500.00	90.00	179.92	6,713.11	-1,690.01	-1,205.62	1,022.17	1,307.81	0.00	0.00	0.00
8,600.00	90.00	179.92	6,713.11	-1,690.01	-1,305.62	1,022.31	1,407.25	0.00	0.00	0.00
8,700.00	90.00	179.92	6,713.11	-1,690.01	-1,405.62	1,022.45	1,506.70	0.00	0.00	0.00
8,800.00	90.00	179.92	6,713.11	-1,690.01	-1,505.62	1,022.59	1,606.14	0.00	0.00	0.00
8,900.00	90.00	179.92	6,713.11	-1,690.01	-1,605.62	1,022.73	1,705.58	0.00	0.00	0.00
9,000.00	90.00	179.92	6,713.11	-1,690.01	-1,705.62	1,022.87	1,805.03	0.00	0.00	0.00
9,100.00	90.00	179.92	6,713.11	-1,690.01	-1,805.62	1,023.00	1,904.47	0.00	0.00	0.00
9,200.00	90.00	179.92	6,713.11	-1,690.01	-1,905.62	1,023.14	2,003.92	0.00	0.00	0.00
9,300.00	90.00	179.92	6,713.11	-1,690.01	-2,005.62	1,023.28	2,103.36	0.00	0.00	0.00
9,400.00	90.00	179.92	6,713.11	-1,690.01	-2,105.62	1,023.42	2,202.80	0.00	0.00	0.00
9,500.00	90.00	179.92	6,713.11	-1,690.01	-2,205.62	1,023.56	2,302.25	0.00	0.00	0.00
9,600.00	90.00	179.92	6,713.11	-1,690.01	-2,305.62	1,023.70	2,401.69	0.00	0.00	0.00
9,700.00	90.00	179.92	6,713.11	-1,690.01	-2,405.62	1,023.83	2,501.13	0.00	0.00	0.00
9,800.00	90.00	179.92	6,713.11	-1,690.01	-2,505.62	1,023.97	2,600.58	0.00	0.00	0.00
9,900.00	90.00	179.92	6,713.11	-1,690.01	-2,605.62	1,024.11	2,700.02	0.00	0.00	0.00
10,000.00	90.00	179.92	6,713.11	-1,690.01	-2,705.62	1,024.25	2,799.46	0.00	0.00	0.00
10,100.00	90.00	179.92	6,713.11	-1,690.01	-2,805.62	1,024.38	2,898.91	0.00	0.00	0.00
10,200.00	90.00	179.92	6,713.11	-1,690.01	-2,905.62	1,024.52	2,998.35	0.00	0.00	0.00
10,300.00	90.00	179.92	6,713.11	-1,690.01	-3,005.62	1,024.66	3,097.80	0.00	0.00	0.00
10,400.00	90.00	179.92	6,713.12	-1,690.02	-3,105.62	1,024.80	3,197.24	0.00	0.00	0.00
10,500.00	90.00	179.92	6,713.12	-1,690.02	-3,205.62	1,024.93	3,296.68	0.00	0.00	0.00
10,600.00	90.00	179.92	6,713.12	-1,690.02	-3,305.62	1,025.07	3,396.13	0.00	0.00	0.00
10,700.00	90.00	179.92	6,713.12	-1,690.02	-3,405.62	1,025.21	3,495.57	0.00	0.00	0.00
10,800.00	90.00	179.92	6,713.12	-1,690.02	-3,505.62	1,025.35	3,595.01	0.00	0.00	0.00
10,900.00	90.00	179.92	6,713.12	-1,690.02	-3,605.62	1,025.48	3,694.46	0.00	0.00	0.00
11,000.00	90.00	179.92	6,713.12	-1,690.02	-3,705.62	1,025.62	3,793.90	0.00	0.00	0.00
11,100.00	90.00	179.92	6,713.12	-1,690.02	-3,805.62	1,025.76	3,893.34	0.00	0.00	0.00
11,200.00	90.00	179.92	6,713.12	-1,690.02	-3,905.62	1,025.90	3,992.79	0.00	0.00	0.00
11,300.00	90.00	179.92	6,713.12	-1,690.02	-4,005.62	1,026.03	4,092.23	0.00	0.00	0.00
11,400.00	90.00	179.92	6,713.12	-1,690.02	-4,105.62	1,026.17	4,191.68	0.00	0.00	0.00
11,500.00	90.00	179.92	6,713.12	-1,690.02	-4,205.62	1,026.31	4,291.12	0.00	0.00	0.00
11,600.00	90.00	179.92	6,713.12	-1,690.02	-4,305.62	1,026.44	4,390.56	0.00	0.00	0.00
11,700.00	90.00	179.92	6,713.12	-1,690.02	-4,405.62	1,026.58	4,490.01	0.00	0.00	0.00
11,800.00	90.00	179.92	6,713.12	-1,690.02	-4,505.62	1,026.72	4,589.45	0.00	0.00	0.00
11,900.00	90.00	179.92	6,713.12	-1,690.02	-4,605.62	1,026.85	4,688.89	0.00	0.00	0.00
12,000.00	90.00	179.92	6,713.12	-1,690.02	-4,705.62	1,026.99	4,788.34	0.00	0.00	0.00
12,100.00	90.00	179.92	6,713.12	-1,690.02	-4,805.62	1,027.12	4,887.78	0.00	0.00	0.00
12,200.00	90.00	179.92	6,713.12	-1,690.02	-4,905.62	1,027.26	4,987.22	0.00	0.00	0.00
12,300.00	90.00	179.92	6,713.12	-1,690.02	-5,005.62	1,027.40	5,086.67	0.00	0.00	0.00
12,400.00	90.00	179.92	6,713.12	-1,690.02	-5,105.62	1,027.53	5,186.11	0.00	0.00	0.00
12,500.00	90.00	179.92	6,713.12	-1,690.02	-5,205.62	1,027.67	5,285.55	0.00	0.00	0.00
12,600.00	90.00	179.92	6,713.12	-1,690.02	-5,305.62	1,027.81	5,385.00	0.00	0.00	0.00
12,700.00	90.00	179.92	6,713.12	-1,690.02	-5,405.62	1,027.94	5,484.44	0.00	0.00	0.00
12,800.00	90.00	179.92	6,713.12	-1,690.02	-5,505.62	1,028.08	5,583.88	0.00	0.00	0.00
12,900.00	90.00	179.92	6,713.12	-1,690.02	-5,605.62	1,028.21	5,683.33	0.00	0.00	0.00
13,000.00	90.00	179.92	6,713.12	-1,690.02	-5,705.62	1,028.35	5,782.77	0.00	0.00	0.00
13,100.00	90.00	179.92	6,713.12	-1,690.02	-5,805.62	1,028.48	5,882.21	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FREEMAN 8-62 13-24-12
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Site:	NW NE SEC. 13 T8N R62W 6th P.M.	North Reference:	True
Well:	FREEMAN 8-62 13-24-12	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)
13,200.00	90.00	179.92	6,713.12	-1,690.02	-5,905.62	1,028.62	5,981.66	0.00	0.00	0.00
13,300.00	90.00	179.92	6,713.12	-1,690.02	-6,005.61	1,028.75	6,081.10	0.00	0.00	0.00
13,400.00	90.00	179.92	6,713.12	-1,690.02	-6,105.61	1,028.89	6,180.54	0.00	0.00	0.00
13,500.00	90.00	179.92	6,713.11	-1,690.01	-6,205.61	1,029.03	6,279.99	0.00	0.00	0.00
13,600.00	90.00	179.92	6,713.11	-1,690.01	-6,305.61	1,029.16	6,379.43	0.00	0.00	0.00
13,700.00	90.00	179.92	6,713.11	-1,690.01	-6,405.61	1,029.30	6,478.87	0.00	0.00	0.00
13,800.00	90.00	179.92	6,713.11	-1,690.01	-6,505.61	1,029.43	6,578.32	0.00	0.00	0.00
13,900.00	90.00	179.92	6,713.11	-1,690.01	-6,605.61	1,029.57	6,677.76	0.00	0.00	0.00
14,000.00	90.00	179.92	6,713.11	-1,690.01	-6,705.61	1,029.70	6,777.21	0.00	0.00	0.00
14,100.00	90.00	179.92	6,713.11	-1,690.01	-6,805.61	1,029.84	6,876.65	0.00	0.00	0.00
14,200.00	90.00	179.92	6,713.11	-1,690.01	-6,905.61	1,029.97	6,976.09	0.00	0.00	0.00
14,300.00	90.00	179.92	6,713.11	-1,690.01	-7,005.61	1,030.11	7,075.54	0.00	0.00	0.00
14,400.00	90.00	179.92	6,713.11	-1,690.01	-7,105.61	1,030.24	7,174.98	0.00	0.00	0.00
14,500.00	90.00	179.92	6,713.11	-1,690.01	-7,205.61	1,030.37	7,274.42	0.00	0.00	0.00
14,600.00	90.00	179.92	6,713.11	-1,690.01	-7,305.61	1,030.51	7,373.87	0.00	0.00	0.00
14,700.00	90.00	179.92	6,713.11	-1,690.01	-7,405.61	1,030.64	7,473.31	0.00	0.00	0.00
14,800.00	90.00	179.92	6,713.11	-1,690.01	-7,505.61	1,030.78	7,572.75	0.00	0.00	0.00
14,900.00	90.00	179.92	6,713.11	-1,690.01	-7,605.61	1,030.91	7,672.19	0.00	0.00	0.00
15,000.00	90.00	179.92	6,713.11	-1,690.01	-7,705.61	1,031.05	7,771.64	0.00	0.00	0.00
15,100.00	90.00	179.92	6,713.11	-1,690.01	-7,805.61	1,031.18	7,871.08	0.00	0.00	0.00
15,200.00	90.00	179.92	6,713.11	-1,690.01	-7,905.61	1,031.32	7,970.52	0.00	0.00	0.00
15,300.00	90.00	179.92	6,713.11	-1,690.01	-8,005.61	1,031.45	8,069.97	0.00	0.00	0.00
15,400.00	90.00	179.92	6,713.11	-1,690.01	-8,105.61	1,031.58	8,169.41	0.00	0.00	0.00
15,500.00	90.00	179.92	6,713.11	-1,690.01	-8,205.61	1,031.72	8,268.85	0.00	0.00	0.00
15,600.00	90.00	179.92	6,713.11	-1,690.01	-8,305.61	1,031.85	8,368.30	0.00	0.00	0.00
15,700.00	90.00	179.92	6,713.11	-1,690.01	-8,405.61	1,031.98	8,467.74	0.00	0.00	0.00
15,800.00	90.00	179.92	6,713.11	-1,690.01	-8,505.61	1,032.12	8,567.18	0.00	0.00	0.00
15,900.00	90.00	179.92	6,713.10	-1,690.00	-8,605.61	1,032.25	8,666.63	0.00	0.00	0.00
16,000.00	90.00	179.92	6,713.10	-1,690.00	-8,705.61	1,032.39	8,766.07	0.00	0.00	0.00
16,100.00	90.00	179.92	6,713.10	-1,690.00	-8,805.61	1,032.52	8,865.51	0.00	0.00	0.00
16,200.00	90.00	179.92	6,713.10	-1,690.00	-8,905.61	1,032.65	8,964.96	0.00	0.00	0.00
16,300.00	90.00	179.92	6,713.10	-1,690.00	-9,005.61	1,032.79	9,064.40	0.00	0.00	0.00
16,400.00	90.00	179.92	6,713.10	-1,690.00	-9,105.61	1,032.92	9,163.84	0.00	0.00	0.00
16,500.00	90.00	179.92	6,713.10	-1,690.00	-9,205.61	1,033.05	9,263.29	0.00	0.00	0.00
16,600.00	90.00	179.92	6,713.10	-1,690.00	-9,305.61	1,033.18	9,362.73	0.00	0.00	0.00
EPI: 600ft FSL & 1314ft FEL of Sec 24										
16,627.32	90.00	179.92	6,713.10	-1,690.00	-9,332.93	1,033.22	9,389.90	0.00	0.00	0.00
16,700.00	90.00	179.91	6,713.10	-1,690.00	-9,405.61	1,033.33	9,462.17	0.02	0.00	-0.02
16,800.00	90.00	179.89	6,713.10	-1,690.00	-9,505.61	1,033.51	9,561.62	0.02	0.00	-0.02
16,900.00	90.00	179.87	6,713.10	-1,690.00	-9,605.61	1,033.72	9,661.07	0.02	0.00	-0.02
BHL: 300ft FSL & 1313ft FEL of Sec 24										
16,927.16	90.00	179.86	6,713.10	-1,690.00	-9,632.77	1,033.79	9,688.09	0.02	0.00	-0.02

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FREEMAN 8-62 13-24-12
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5023.10usft (Original Well Elev)
Site:	NW NE SEC. 13 T8N R62W 6th P.M.	North Reference:	True
Well:	FREEMAN 8-62 13-24-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
591.12	591.10	PIERRE SHALE (BASE OF FOX HI				
3,831.15	3,743.10	PARKMAN				
4,716.44	4,601.10	SUSSEX				
5,120.91	4,993.10	SHANNON				
6,666.41	6,493.10	SHARON SPRINGS SHALE				
6,761.93	6,563.10	NIOBRARA FORMATION				
6,776.97	6,573.10	NIOBRARA A CHALK				
6,999.92	6,683.10	NIOBRARA B CHALK				
7,186.14	6,713.10	NIOBRARA B LP				

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
0.00	0.00	0.00	0.00	SHL: 710ft FNL & 2378ft FEL of Sec 13
500.00	500.00	0.00	0.00	START NUDGE (2°/100ft BUR)
1,213.18	1,205.83	49.06	73.43	EOB TO 14.26° INC
5,472.97	5,334.31	632.13	946.11	END OF TANGENT
6,186.15	6,040.14	681.19	1,019.54	EOD TO VERTICAL
6,286.15	6,140.14	681.19	1,019.54	KOP (10°/100ft BUR)
7,186.14	6,713.10	108.23	1,020.34	BPI: 600ft FNL & 1358ft FEL of Sec 13
16,627.32	6,713.10	-9,332.93	1,033.22	EPI: 600ft FSL & 1314ft FEL of Sec 24
16,927.16	6,713.10	-9,632.77	1,033.79	BHL: 300ft FSL & 1313ft FEL of Sec 24