

BISON OIL & GAS II, LLC

WELD COUNTY, COLORADO (NAD 83)

SE SE SEC. 14 T8N R60W 6th P.M.

BOOMSLANG FED 8-60 14B-13-18-3

ORIGINAL WELLBORE

21 July, 2019

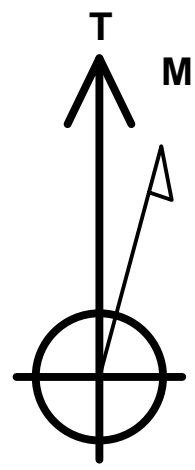
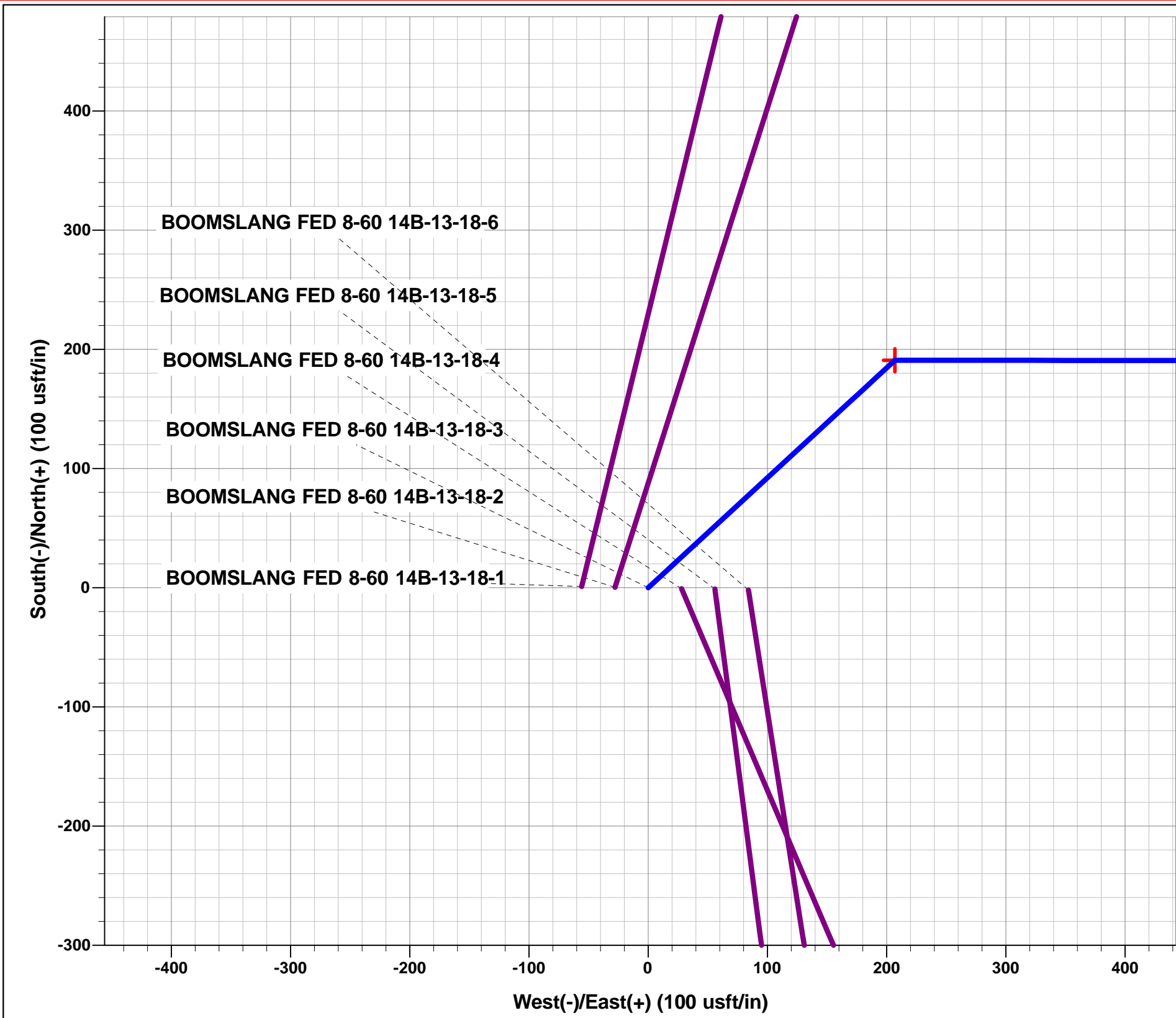
Plan: PROPOSAL #4



Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE SE SEC. 14 T8N R60W 6th P.M.
Well: BOOMSLANG FED 8-60 14B-13-18-3
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #4

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: 1313ft FSL & 476ft FEL of Sec 14		
400.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)		
995.62	1000.00	12.00	47.32	42.44	46.02	46.95	62.60	EOB TO 12° INC		
1731.07	1751.88	12.00	47.32	148.42	160.94	164.20	218.93	END OF TANGENT		
2326.70	2351.88	0.00	0.00	190.86	206.95	211.15	281.53	EOD TO VERTICAL		
5809.84	5835.02	0.00	0.00	190.86	206.95	211.15	281.53	KOP (10°/100ft BUR)		
6382.80	6735.02	90.00	90.03	190.56	779.91	783.95	854.48	BPI: 1499ft FSL & 300ft FWL of Sec 13		
6382.81	9074.96	90.00	90.03	189.37	3119.85	3123.29	3194.42	ENTER COC 77278		
6382.81	11749.46	90.00	90.03	188.05	5794.35	5797.10	5868.92	EXIT COC 77278		
6382.80	14280.82	90.00	90.03	186.86	8325.71	8327.80	8400.28	EPI: 1519ft FSL & 2557ft FWL of Sec 18		
6382.80	14292.46	90.00	90.38	186.82	8337.35	8339.44	8411.92	EOT TO 90.38° AZ		
6382.80	14338.81	90.00	90.38	186.51	8383.70	8385.77	8458.27	BHL: 1520ft FSL & 2615ft FWL of Sec 18		

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - BOOMSLANG FED 8-60 14B-13-18-3 (P4)	5809.84	190.86	206.95	40.659393	-104.049517
BPI - BOOMSLANG FED 8-60 14B-13-18-3 (P4)	6382.80	190.56	779.91	40.659392	-104.047452
EPI - BOOMSLANG FED 8-60 14B-13-18-3 (P4)	6382.80	186.86	8325.71	40.659378	-104.020255
BHL - BOOMSLANG FED 8-60 14B-13-18-3 (P4)	6382.80	186.51	8383.70	40.659377	-104.020046



Azimuths to True North
Magnetic North: 7.63°

Magnetic Field
Strength: 52371.0snT
Dip Angle: 67.11°
Date: 11/06/2019
Model: IGRF2015

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
-4450.00	467.81	PIERRE SH (BASE FOX HILLS)
-1720.00	3222.98	PARKMAN
-1000.00	3942.98	SUSSEX
-260.00	4682.98	SHANNON
1095.00	6042.49	SHARON SPRINGS SHALE
1155.00	6108.22	NIOBRARA FORMATION
1165.00	6119.53	NIOBRARA A CHALK
1255.00	6228.10	NIOBRARA B CHALK
1335.00	6341.36	NIOBRARA C CHALK
1425.00	6519.67	FT HAYS
1455.00	6627.82	CODELL
1465.00	6735.02	CODELL LP

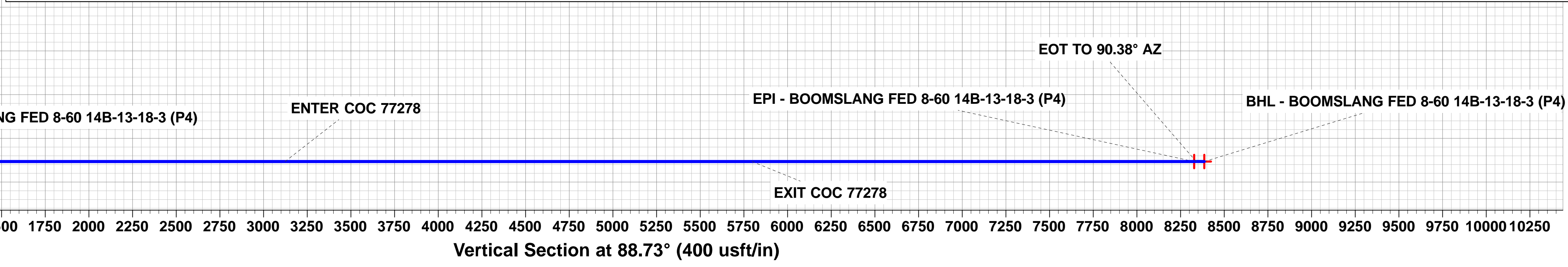
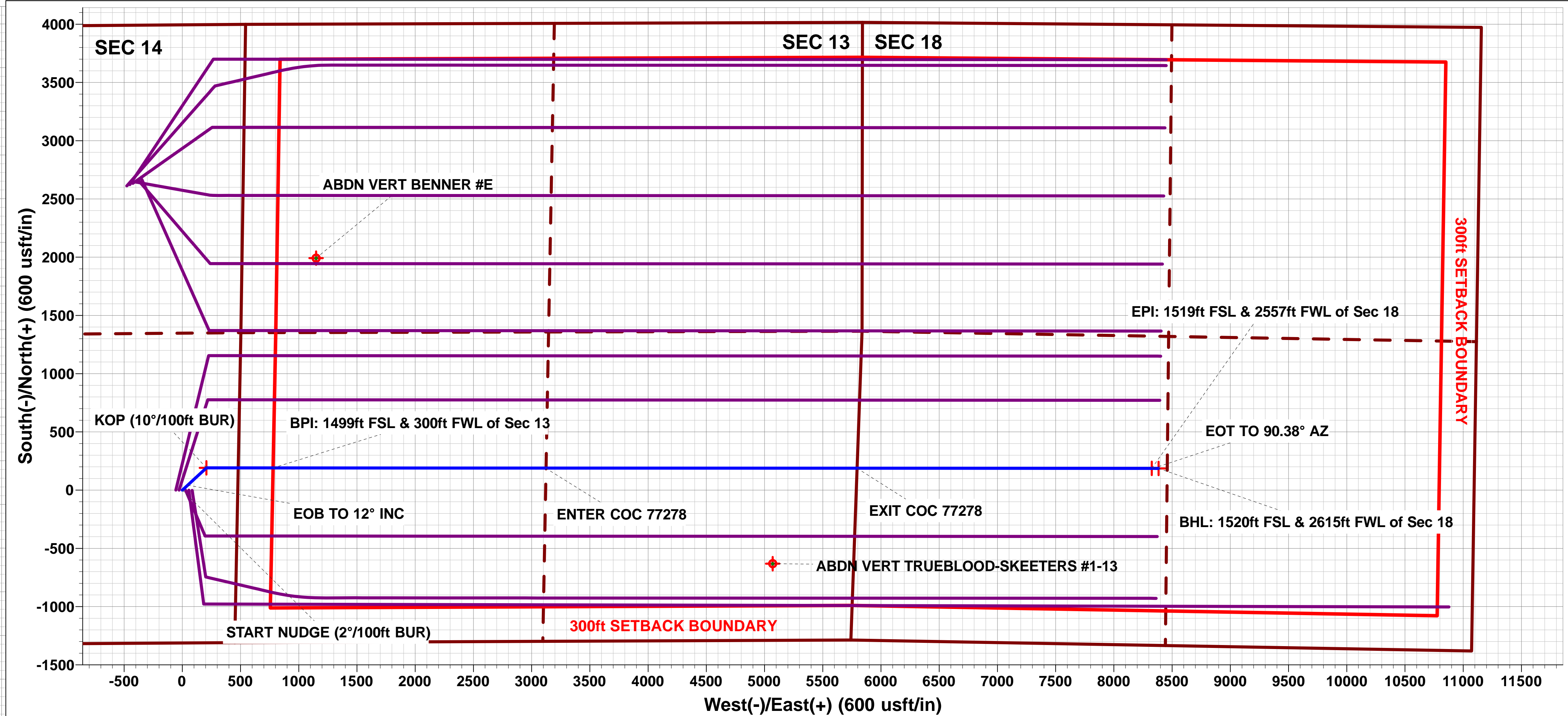
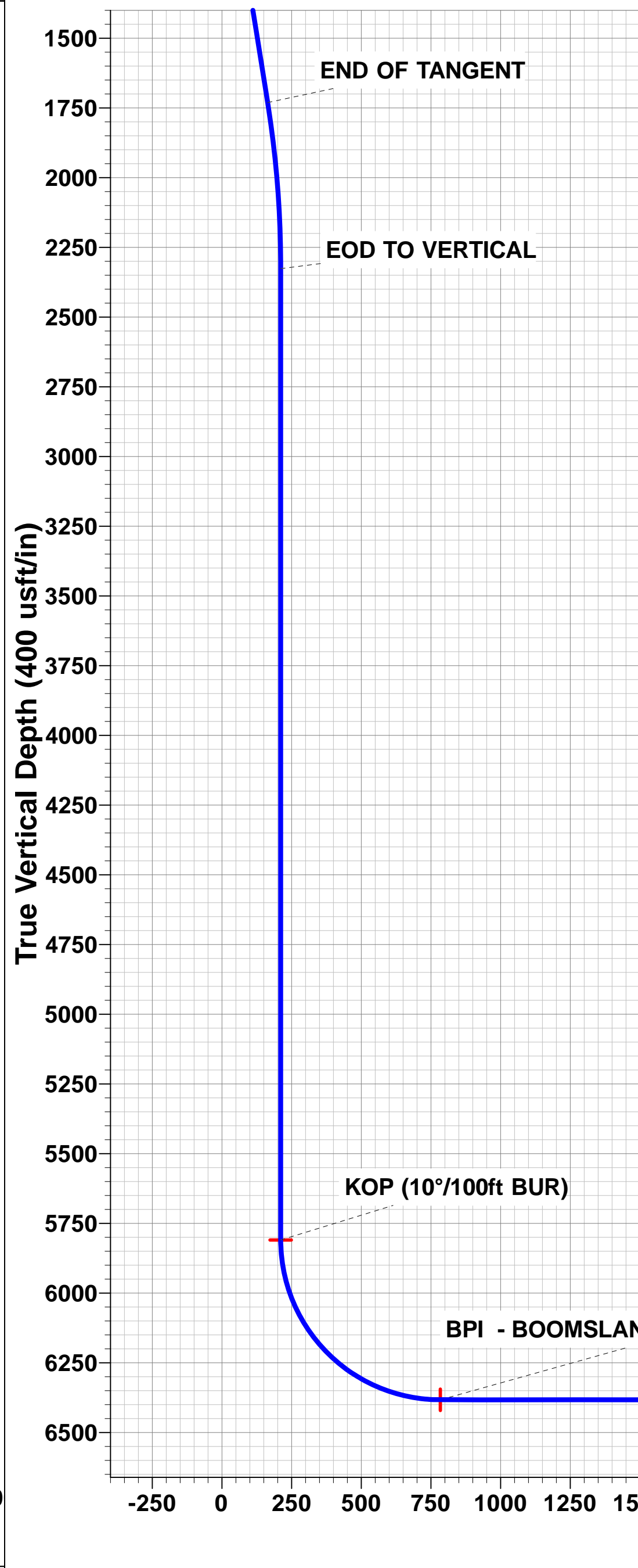
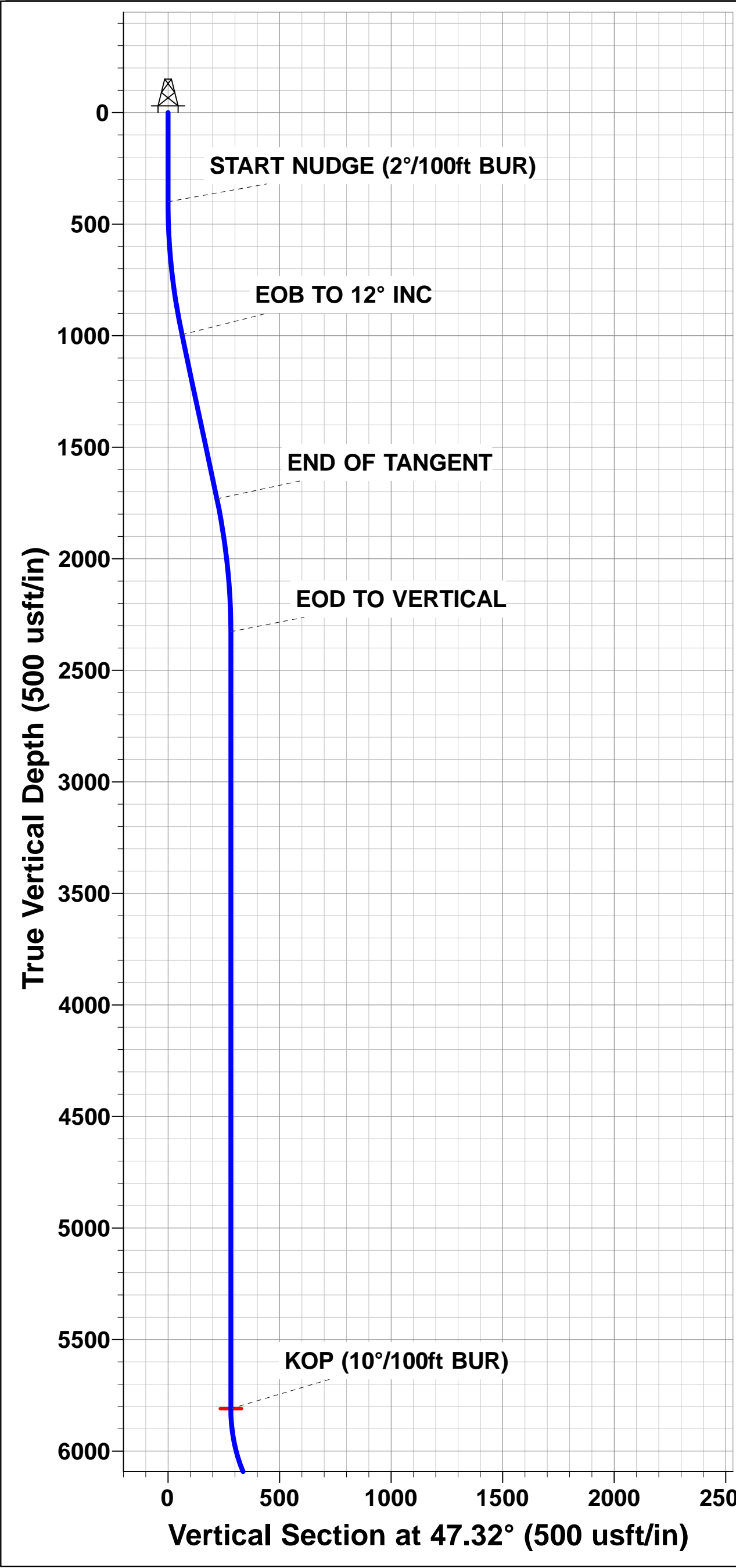
PROPOSED LOCAL COORDINATES:

SHL:1313ft FSL & 476ft FEL of Sec 14

BEGIN PROD INT: 1499ft FSL & 300ft FWL of Sec 13

END PROD INTERVAL: 1519ft FSL & 2557ft FWL of Sec 18

BHL: 1520ft FSL & 2615ft FWL of Sec 18



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BOOMSLANG FED 8-60 14B-13-18-3
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB 25' @ 4917.80usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB 25' @ 4917.80usft
Site:	SE SE SEC. 14 T8N R60W 6th P.M.	North Reference:	True
Well:	BOOMSLANG FED 8-60 14B-13-18-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

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	SE SE SEC. 14 T8N R60W 6th P.M.				
Site Position:		Northing:	1,486,231.70 usft	Latitude:	40.659078
From:	Lat/Long	Easting:	3,402,151.68 usft	Longitude:	-104.050458
Position Uncertainty:	0.00 usft	Slot Radius:	1.10000ft	Grid Convergence:	0.94 °

Well	BOOMSLANG FED 8-60 14B-13-18-3					
Well Position	+N/-S	-76.15 usft	Northing:	1,486,156.44 usft	Latitude:	40.658869
	+E/-W	54.10 usft	Easting:	3,402,207.01 usft	Longitude:	-104.050263
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,892.80 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/06/2019	7.63	67.11	52,371

Design	PROPOSAL #4			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	6,382.80	0.00	0.00	88.73

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	-4,917.80	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	-4,517.80	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	12.00	47.32	995.62	-3,922.18	42.44	46.02	2.00	2.00	0.00	47.32	
1,751.88	12.00	47.32	1,731.07	-3,186.73	148.42	160.93	0.00	0.00	0.00	0.00	
2,351.88	0.00	0.00	2,326.69	-2,591.11	190.86	206.95	2.00	-2.00	0.00	180.00	
5,835.02	0.00	0.00	5,809.84	892.04	190.86	206.95	0.00	0.00	0.00	0.00	KOP - BOOMSLANG
6,735.02	90.00	90.03	6,382.80	1,465.00	190.56	779.91	10.00	10.00	10.00	90.03	BPI - BOOMSLANG
14,280.82	90.00	90.03	6,382.80	1,465.00	186.86	8,325.71	0.00	0.00	0.00	-77.26	EPI - BOOMSLANG
14,292.46	90.00	90.38	6,382.80	1,465.00	186.82	8,337.35	3.00	0.00	3.00	90.07	
14,338.81	90.00	90.38	6,382.80	1,465.00	186.51	8,383.70	0.00	0.00	0.00	0.00	BHL - BOOMSLANG

Planning Report



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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB 25' @ 4917.80usft
Site:	SE SE SEC. 14 T8N R60W 6th P.M.	North Reference:	True
Well:	BOOMSLANG FED 8-60 14B-13-18-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

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: 1313ft FSL & 476ft FEL of Sec 14										
0.00	0.00	0.00	0.00	4,917.80	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,817.80	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,717.80	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	4,617.80	0.00	0.00	0.00	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
400.00	0.00	0.00	400.00	4,517.80	0.00	0.00	0.00	0.00	0.00	0.00
PIERRE SHALE (BASE FOX HILLS)										
467.81	1.36	47.32	467.80	4,450.00	0.54	0.59	0.60	2.00	2.00	0.00
500.00	2.00	47.32	499.98	4,417.82	1.18	1.28	1.31	2.00	2.00	0.00
600.00	4.00	47.32	599.84	4,317.96	4.73	5.13	5.23	2.00	2.00	0.00
700.00	6.00	47.32	699.45	4,218.35	10.64	11.54	11.77	2.00	2.00	0.00
800.00	8.00	47.32	798.70	4,119.10	18.90	20.49	20.91	2.00	2.00	0.00
900.00	10.00	47.32	897.47	4,020.33	29.51	31.99	32.64	2.00	2.00	0.00
EOB TO 12° INC										
1,000.00	12.00	47.32	995.62	3,922.18	42.44	46.02	46.95	2.00	2.00	0.00
1,100.00	12.00	47.32	1,093.44	3,824.36	56.54	61.30	62.55	0.00	0.00	0.00
1,200.00	12.00	47.32	1,191.25	3,726.55	70.63	76.59	78.14	0.00	0.00	0.00
1,300.00	12.00	47.32	1,289.07	3,628.73	84.73	91.87	93.73	0.00	0.00	0.00
1,400.00	12.00	47.32	1,386.88	3,530.92	98.82	107.16	109.33	0.00	0.00	0.00
1,500.00	12.00	47.32	1,484.70	3,433.10	112.92	122.44	124.92	0.00	0.00	0.00
1,600.00	12.00	47.32	1,582.51	3,335.29	127.01	137.72	140.51	0.00	0.00	0.00
1,700.00	12.00	47.32	1,680.33	3,237.47	141.11	153.01	156.11	0.00	0.00	0.00
END OF TANGENT										
1,751.88	12.00	47.32	1,731.07	3,186.73	148.42	160.94	164.20	0.00	0.00	0.00
1,800.00	11.04	47.32	1,778.22	3,139.58	154.94	168.00	171.40	2.00	-2.00	0.00
1,900.00	9.04	47.32	1,876.69	3,041.11	166.75	180.81	184.48	2.00	-2.00	0.00
2,000.00	7.04	47.32	1,975.70	2,942.10	176.23	191.09	194.96	2.00	-2.00	0.00
2,100.00	5.04	47.32	2,075.14	2,842.66	183.36	198.82	202.85	2.00	-2.00	0.00
2,200.00	3.04	47.32	2,174.89	2,742.91	188.13	204.00	208.13	2.00	-2.00	0.00
2,300.00	1.04	47.32	2,274.82	2,642.98	190.54	206.61	210.80	2.00	-2.00	0.00
EOD TO VERTICAL										
2,351.88	0.00	0.00	2,326.70	2,591.10	190.86	206.95	211.15	2.00	-2.00	0.00
2,400.00	0.00	0.00	2,374.82	2,542.98	190.86	206.95	211.15	0.00	0.00	0.00
2,500.00	0.00	0.00	2,474.82	2,442.98	190.86	206.95	211.15	0.00	0.00	0.00
2,600.00	0.00	0.00	2,574.82	2,342.98	190.86	206.95	211.15	0.00	0.00	0.00
2,700.00	0.00	0.00	2,674.82	2,242.98	190.86	206.95	211.15	0.00	0.00	0.00
2,800.00	0.00	0.00	2,774.82	2,142.98	190.86	206.95	211.15	0.00	0.00	0.00
2,900.00	0.00	0.00	2,874.82	2,042.98	190.86	206.95	211.15	0.00	0.00	0.00
3,000.00	0.00	0.00	2,974.82	1,942.98	190.86	206.95	211.15	0.00	0.00	0.00
3,100.00	0.00	0.00	3,074.82	1,842.98	190.86	206.95	211.15	0.00	0.00	0.00
3,200.00	0.00	0.00	3,174.82	1,742.98	190.86	206.95	211.15	0.00	0.00	0.00
PARKMAN										
3,222.98	0.00	0.00	3,197.80	1,720.00	190.86	206.95	211.15	0.00	0.00	0.00
3,300.00	0.00	0.00	3,274.82	1,642.98	190.86	206.95	211.15	0.00	0.00	0.00
3,400.00	0.00	0.00	3,374.82	1,542.98	190.86	206.95	211.15	0.00	0.00	0.00
3,500.00	0.00	0.00	3,474.82	1,442.98	190.86	206.95	211.15	0.00	0.00	0.00
3,600.00	0.00	0.00	3,574.82	1,342.98	190.86	206.95	211.15	0.00	0.00	0.00
3,700.00	0.00	0.00	3,674.82	1,242.98	190.86	206.95	211.15	0.00	0.00	0.00
3,800.00	0.00	0.00	3,774.82	1,142.98	190.86	206.95	211.15	0.00	0.00	0.00
3,900.00	0.00	0.00	3,874.82	1,042.98	190.86	206.95	211.15	0.00	0.00	0.00
SUSSEX										
3,942.98	0.00	0.00	3,917.80	1,000.00	190.86	206.95	211.15	0.00	0.00	0.00

Planning Report



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Well:	BOOMSLANG FED 8-60 14B-13-18-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

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	3,974.82	942.98	190.86	206.95	211.15	0.00	0.00	0.00
4,100.00	0.00	0.00	4,074.82	842.98	190.86	206.95	211.15	0.00	0.00	0.00
4,200.00	0.00	0.00	4,174.82	742.98	190.86	206.95	211.15	0.00	0.00	0.00
4,300.00	0.00	0.00	4,274.82	642.98	190.86	206.95	211.15	0.00	0.00	0.00
4,400.00	0.00	0.00	4,374.82	542.98	190.86	206.95	211.15	0.00	0.00	0.00
4,500.00	0.00	0.00	4,474.82	442.98	190.86	206.95	211.15	0.00	0.00	0.00
4,600.00	0.00	0.00	4,574.82	342.98	190.86	206.95	211.15	0.00	0.00	0.00
SHANNON										
4,682.98	0.00	0.00	4,657.80	260.00	190.86	206.95	211.15	0.00	0.00	0.00
4,700.00	0.00	0.00	4,674.82	242.98	190.86	206.95	211.15	0.00	0.00	0.00
4,800.00	0.00	0.00	4,774.82	142.98	190.86	206.95	211.15	0.00	0.00	0.00
4,900.00	0.00	0.00	4,874.82	42.98	190.86	206.95	211.15	0.00	0.00	0.00
5,000.00	0.00	0.00	4,974.82	-57.02	190.86	206.95	211.15	0.00	0.00	0.00
5,100.00	0.00	0.00	5,074.82	-157.02	190.86	206.95	211.15	0.00	0.00	0.00
5,200.00	0.00	0.00	5,174.82	-257.02	190.86	206.95	211.15	0.00	0.00	0.00
5,300.00	0.00	0.00	5,274.82	-357.02	190.86	206.95	211.15	0.00	0.00	0.00
5,400.00	0.00	0.00	5,374.82	-457.02	190.86	206.95	211.15	0.00	0.00	0.00
5,500.00	0.00	0.00	5,474.82	-557.02	190.86	206.95	211.15	0.00	0.00	0.00
5,600.00	0.00	0.00	5,574.82	-657.02	190.86	206.95	211.15	0.00	0.00	0.00
5,700.00	0.00	0.00	5,674.82	-757.02	190.86	206.95	211.15	0.00	0.00	0.00
5,800.00	0.00	0.00	5,774.82	-857.02	190.86	206.95	211.15	0.00	0.00	0.00
KOP (10°/100ft BUR)										
5,835.02	0.00	0.00	5,809.84	-892.04	190.86	206.95	211.15	0.00	0.00	0.00
5,900.00	6.50	90.03	5,874.68	-956.88	190.86	210.64	214.83	10.00	10.00	0.00
6,000.00	16.50	90.03	5,972.55	-1,054.75	190.85	230.54	234.73	10.00	10.00	0.00
SHARON SPRINGS SHALE										
6,042.49	20.75	90.03	6,012.80	-1,095.00	190.84	244.11	248.29	10.00	10.00	0.00
6,100.00	26.50	90.03	6,065.47	-1,147.67	190.83	267.14	271.32	10.00	10.00	0.00
NIOBRARA FORMATION										
6,108.22	27.32	90.03	6,072.80	-1,155.00	190.83	270.86	275.04	10.00	10.00	0.00
NIOBRARA A CHALK										
6,119.53	28.45	90.03	6,082.80	-1,165.00	190.83	276.15	280.33	10.00	10.00	0.00
6,200.00	36.50	90.03	6,150.63	-1,232.83	190.80	319.32	323.49	10.00	10.00	0.00
NIOBRARA B CHALK										
6,228.10	39.31	90.03	6,172.80	-1,255.00	190.79	336.58	340.74	10.00	10.00	0.00
6,300.00	46.50	90.03	6,225.43	-1,307.63	190.77	385.50	389.64	10.00	10.00	0.00
NIOBRARA C CHALK										
6,341.36	50.63	90.03	6,252.80	-1,335.00	190.75	416.50	420.64	10.00	10.00	0.00
6,400.00	56.50	90.03	6,287.61	-1,369.81	190.73	463.65	467.78	10.00	10.00	0.00
6,500.00	66.50	90.03	6,335.27	-1,417.47	190.68	551.42	555.53	10.00	10.00	0.00
FT HAYS										
6,519.67	68.46	90.03	6,342.80	-1,425.00	190.67	569.59	573.69	10.00	10.00	0.00
6,600.00	76.50	90.03	6,366.96	-1,449.16	190.63	646.13	650.21	10.00	10.00	0.00
CODELL										
6,627.82	79.28	90.03	6,372.80	-1,455.00	190.62	673.34	677.41	10.00	10.00	0.00
6,700.00	86.50	90.03	6,381.73	-1,463.93	190.58	744.91	748.96	10.00	10.00	0.00
BPI: 1499ft FSL & 300ft FWL of Sec 13 - CODELL LP										
6,735.02	90.00	90.03	6,382.80	-1,465.00	190.56	779.91	783.96	10.00	10.00	0.00
6,800.00	90.00	90.03	6,382.80	-1,465.00	190.53	844.89	848.92	0.00	0.00	0.00
6,900.00	90.00	90.03	6,382.80	-1,465.00	190.48	944.89	948.89	0.00	0.00	0.00
7,000.00	90.00	90.03	6,382.80	-1,465.00	190.43	1,044.89	1,048.86	0.00	0.00	0.00
7,100.00	90.00	90.03	6,382.80	-1,465.00	190.37	1,144.89	1,148.84	0.00	0.00	0.00
7,200.00	90.00	90.03	6,382.80	-1,465.00	190.32	1,244.89	1,248.81	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BOOMSLANG FED 8-60 14B-13-18-3
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB 25' @ 4917.80usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB 25' @ 4917.80usft
Site:	SE SE SEC. 14 T8N R60W 6th P.M.	North Reference:	True
Well:	BOOMSLANG FED 8-60 14B-13-18-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

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	90.03	6,382.80	-1,465.00	190.27	1,344.89	1,348.79	0.00	0.00	0.00
7,400.00	90.00	90.03	6,382.80	-1,465.00	190.22	1,444.89	1,448.76	0.00	0.00	0.00
7,500.00	90.00	90.03	6,382.80	-1,465.00	190.17	1,544.89	1,548.73	0.00	0.00	0.00
7,600.00	90.00	90.03	6,382.80	-1,465.00	190.12	1,644.89	1,648.71	0.00	0.00	0.00
7,700.00	90.00	90.03	6,382.81	-1,465.01	190.07	1,744.89	1,748.68	0.00	0.00	0.00
7,800.00	90.00	90.03	6,382.81	-1,465.01	190.01	1,844.89	1,848.66	0.00	0.00	0.00
7,900.00	90.00	90.03	6,382.81	-1,465.01	189.96	1,944.89	1,948.63	0.00	0.00	0.00
8,000.00	90.00	90.03	6,382.81	-1,465.01	189.91	2,044.89	2,048.61	0.00	0.00	0.00
8,100.00	90.00	90.03	6,382.81	-1,465.01	189.86	2,144.89	2,148.58	0.00	0.00	0.00
8,200.00	90.00	90.03	6,382.81	-1,465.01	189.81	2,244.89	2,248.55	0.00	0.00	0.00
8,300.00	90.00	90.03	6,382.81	-1,465.01	189.76	2,344.89	2,348.53	0.00	0.00	0.00
8,400.00	90.00	90.03	6,382.81	-1,465.01	189.71	2,444.89	2,448.50	0.00	0.00	0.00
8,500.00	90.00	90.03	6,382.81	-1,465.01	189.66	2,544.89	2,548.48	0.00	0.00	0.00
8,600.00	90.00	90.03	6,382.81	-1,465.01	189.61	2,644.89	2,648.45	0.00	0.00	0.00
8,700.00	90.00	90.03	6,382.81	-1,465.01	189.56	2,744.89	2,748.42	0.00	0.00	0.00
8,800.00	90.00	90.03	6,382.81	-1,465.01	189.51	2,844.89	2,848.40	0.00	0.00	0.00
8,900.00	90.00	90.03	6,382.81	-1,465.01	189.46	2,944.89	2,948.37	0.00	0.00	0.00
9,000.00	90.00	90.03	6,382.81	-1,465.01	189.41	3,044.89	3,048.35	0.00	0.00	0.00
ENTER COC 77278										
9,074.96	90.00	90.03	6,382.81	-1,465.01	189.37	3,119.85	3,123.29	0.00	0.00	0.00
9,100.00	90.00	90.03	6,382.81	-1,465.01	189.36	3,144.89	3,148.32	0.00	0.00	0.00
9,200.00	90.00	90.03	6,382.81	-1,465.01	189.31	3,244.89	3,248.29	0.00	0.00	0.00
9,300.00	90.00	90.03	6,382.81	-1,465.01	189.26	3,344.89	3,348.27	0.00	0.00	0.00
9,400.00	90.00	90.03	6,382.81	-1,465.01	189.21	3,444.89	3,448.24	0.00	0.00	0.00
9,500.00	90.00	90.03	6,382.81	-1,465.01	189.16	3,544.89	3,548.22	0.00	0.00	0.00
9,600.00	90.00	90.03	6,382.81	-1,465.01	189.11	3,644.89	3,648.19	0.00	0.00	0.00
9,700.00	90.00	90.03	6,382.81	-1,465.01	189.06	3,744.89	3,748.17	0.00	0.00	0.00
9,800.00	90.00	90.03	6,382.81	-1,465.01	189.01	3,844.89	3,848.14	0.00	0.00	0.00
9,900.00	90.00	90.03	6,382.81	-1,465.01	188.96	3,944.89	3,948.11	0.00	0.00	0.00
10,000.00	90.00	90.03	6,382.81	-1,465.01	188.91	4,044.89	4,048.09	0.00	0.00	0.00
10,100.00	90.00	90.03	6,382.81	-1,465.01	188.86	4,144.89	4,148.06	0.00	0.00	0.00
10,200.00	90.00	90.03	6,382.81	-1,465.01	188.81	4,244.89	4,248.04	0.00	0.00	0.00
10,300.00	90.00	90.03	6,382.81	-1,465.01	188.76	4,344.89	4,348.01	0.00	0.00	0.00
10,400.00	90.00	90.03	6,382.81	-1,465.01	188.71	4,444.89	4,447.98	0.00	0.00	0.00
10,500.00	90.00	90.03	6,382.81	-1,465.01	188.66	4,544.89	4,547.96	0.00	0.00	0.00
10,600.00	90.00	90.03	6,382.81	-1,465.01	188.61	4,644.89	4,647.93	0.00	0.00	0.00
10,700.00	90.00	90.03	6,382.81	-1,465.01	188.56	4,744.89	4,747.91	0.00	0.00	0.00
10,800.00	90.00	90.03	6,382.81	-1,465.01	188.51	4,844.89	4,847.88	0.00	0.00	0.00
10,900.00	90.00	90.03	6,382.81	-1,465.01	188.47	4,944.89	4,947.86	0.00	0.00	0.00
11,000.00	90.00	90.03	6,382.81	-1,465.01	188.42	5,044.89	5,047.83	0.00	0.00	0.00
11,100.00	90.00	90.03	6,382.81	-1,465.01	188.37	5,144.89	5,147.80	0.00	0.00	0.00
11,200.00	90.00	90.03	6,382.81	-1,465.01	188.32	5,244.89	5,247.78	0.00	0.00	0.00
11,300.00	90.00	90.03	6,382.81	-1,465.01	188.27	5,344.89	5,347.75	0.00	0.00	0.00
11,400.00	90.00	90.03	6,382.81	-1,465.01	188.22	5,444.89	5,447.73	0.00	0.00	0.00
11,500.00	90.00	90.03	6,382.81	-1,465.01	188.17	5,544.89	5,547.70	0.00	0.00	0.00
11,600.00	90.00	90.03	6,382.81	-1,465.01	188.13	5,644.89	5,647.67	0.00	0.00	0.00
11,700.00	90.00	90.03	6,382.81	-1,465.01	188.08	5,744.89	5,747.65	0.00	0.00	0.00
EXIT COC 77278										
11,749.46	90.00	90.03	6,382.81	-1,465.01	188.05	5,794.35	5,797.10	0.00	0.00	0.00
11,800.00	90.00	90.03	6,382.81	-1,465.01	188.03	5,844.89	5,847.62	0.00	0.00	0.00
11,900.00	90.00	90.03	6,382.81	-1,465.01	187.98	5,944.89	5,947.60	0.00	0.00	0.00
12,000.00	90.00	90.03	6,382.81	-1,465.01	187.93	6,044.89	6,047.57	0.00	0.00	0.00
12,100.00	90.00	90.03	6,382.81	-1,465.01	187.89	6,144.89	6,147.55	0.00	0.00	0.00
12,200.00	90.00	90.03	6,382.81	-1,465.01	187.84	6,244.89	6,247.52	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BOOMSLANG FED 8-60 14B-13-18-3
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB 25' @ 4917.80usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB 25' @ 4917.80usft
Site:	SE SE SEC. 14 T8N R60W 6th P.M.	North Reference:	True
Well:	BOOMSLANG FED 8-60 14B-13-18-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

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)
12,300.00	90.00	90.03	6,382.81	-1,465.01	187.79	6,344.89	6,347.49	0.00	0.00	0.00
12,400.00	90.00	90.03	6,382.81	-1,465.01	187.74	6,444.89	6,447.47	0.00	0.00	0.00
12,500.00	90.00	90.03	6,382.81	-1,465.01	187.69	6,544.89	6,547.44	0.00	0.00	0.00
12,600.00	90.00	90.03	6,382.81	-1,465.01	187.65	6,644.89	6,647.42	0.00	0.00	0.00
12,700.00	90.00	90.03	6,382.81	-1,465.01	187.60	6,744.89	6,747.39	0.00	0.00	0.00
12,800.00	90.00	90.03	6,382.81	-1,465.01	187.55	6,844.89	6,847.36	0.00	0.00	0.00
12,900.00	90.00	90.03	6,382.81	-1,465.01	187.50	6,944.89	6,947.34	0.00	0.00	0.00
13,000.00	90.00	90.03	6,382.81	-1,465.01	187.46	7,044.89	7,047.31	0.00	0.00	0.00
13,100.00	90.00	90.03	6,382.81	-1,465.01	187.41	7,144.89	7,147.29	0.00	0.00	0.00
13,200.00	90.00	90.03	6,382.81	-1,465.01	187.36	7,244.89	7,247.26	0.00	0.00	0.00
13,300.00	90.00	90.03	6,382.81	-1,465.01	187.32	7,344.89	7,347.24	0.00	0.00	0.00
13,400.00	90.00	90.03	6,382.81	-1,465.01	187.27	7,444.89	7,447.21	0.00	0.00	0.00
13,500.00	90.00	90.03	6,382.80	-1,465.00	187.22	7,544.89	7,547.18	0.00	0.00	0.00
13,600.00	90.00	90.03	6,382.80	-1,465.00	187.18	7,644.89	7,647.16	0.00	0.00	0.00
13,700.00	90.00	90.03	6,382.80	-1,465.00	187.13	7,744.89	7,747.13	0.00	0.00	0.00
13,800.00	90.00	90.03	6,382.80	-1,465.00	187.08	7,844.89	7,847.11	0.00	0.00	0.00
13,900.00	90.00	90.03	6,382.80	-1,465.00	187.04	7,944.89	7,947.08	0.00	0.00	0.00
14,000.00	90.00	90.03	6,382.80	-1,465.00	186.99	8,044.89	8,047.06	0.00	0.00	0.00
14,100.00	90.00	90.03	6,382.80	-1,465.00	186.94	8,144.89	8,147.03	0.00	0.00	0.00
14,200.00	90.00	90.03	6,382.80	-1,465.00	186.90	8,244.89	8,247.00	0.00	0.00	0.00
EPI: 1519ft FSL & 2557ft FWL of Sec 18										
14,280.82	90.00	90.03	6,382.80	-1,465.00	186.86	8,325.71	8,327.80	0.00	0.00	0.00
EOT TO 90.38° AZ										
14,292.46	90.00	90.38	6,382.80	-1,465.00	186.82	8,337.35	8,339.44	3.00	0.00	3.00
14,300.00	90.00	90.38	6,382.80	-1,465.00	186.77	8,344.89	8,346.98	0.00	0.00	0.00
BHL: 1520ft FSL & 2615ft FWL of Sec 18										
14,338.81	90.00	90.38	6,382.80	-1,465.00	186.51	8,383.70	8,385.77	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
467.81	467.80	PIERRE SHALE (BASE FOX HILLS				
3,222.98	3,197.80	PARKMAN				
3,942.98	3,917.80	SUSSEX				
4,682.98	4,657.80	SHANNON				
6,042.49	6,012.80	SHARON SPRINGS SHALE				
6,108.22	6,072.80	NIOBRARA FORMATION				
6,119.53	6,082.80	NIOBRARA A CHALK				
6,228.10	6,172.80	NIOBRARA B CHALK				
6,341.36	6,252.80	NIOBRARA C CHALK		0.00		
6,519.67	6,342.80	FT HAYS		0.00		
6,627.82	6,372.80	CODELL		0.00		
6,735.02	6,382.80	CODELL LP		0.00		

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BOOMSLANG FED 8-60 14B-13-18-3
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB 25' @ 4917.80usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB 25' @ 4917.80usft
Site:	SE SE SEC. 14 T8N R60W 6th P.M.	North Reference:	True
Well:	BOOMSLANG FED 8-60 14B-13-18-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.00	0.00	0.00	0.00	SHL: 1313ft FSL & 476ft FEL of Sec 14
400.00	400.00	0.00	0.00	START NUDGE (2°/100ft BUR)
1,000.00	995.62	42.44	46.02	EOB TO 12° INC
1,751.88	1,731.07	148.42	160.94	END OF TANGENT
2,351.88	2,326.70	190.86	206.95	EOD TO VERTICAL
5,835.02	5,809.84	190.86	206.95	KOP (10°/100ft BUR)
6,735.02	6,382.80	190.56	779.91	BPI: 1499ft FSL & 300ft FWL of Sec 13
9,074.96	6,382.81	189.37	3,119.85	ENTER COC 77278
11,749.46	6,382.81	188.05	5,794.35	EXIT COC 77278
14,280.82	6,382.80	186.86	8,325.71	EPI: 1519ft FSL & 2557ft FWL of Sec 18
14,292.46	6,382.80	186.82	8,337.35	EOT TO 90.38° AZ
14,338.81	6,382.80	186.51	8,383.70	BHL: 1520ft FSL & 2615ft FWL of Sec 18