

BISON OIL & GAS II, LLC

WELD COUNTY, COLORADO (NAD 83)

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

SIEVERS 8-61 15A-7

ORIGINAL WELLBORE

27 September, 2017

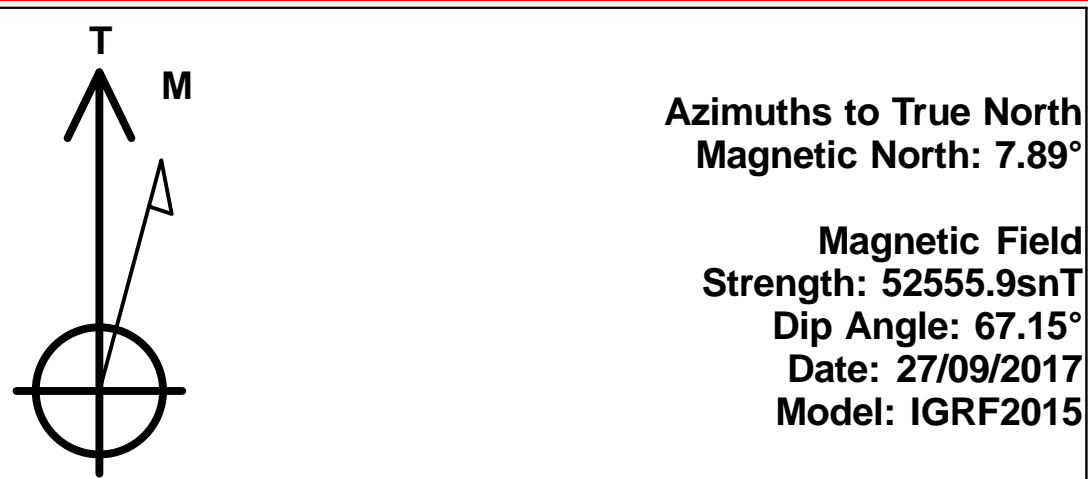
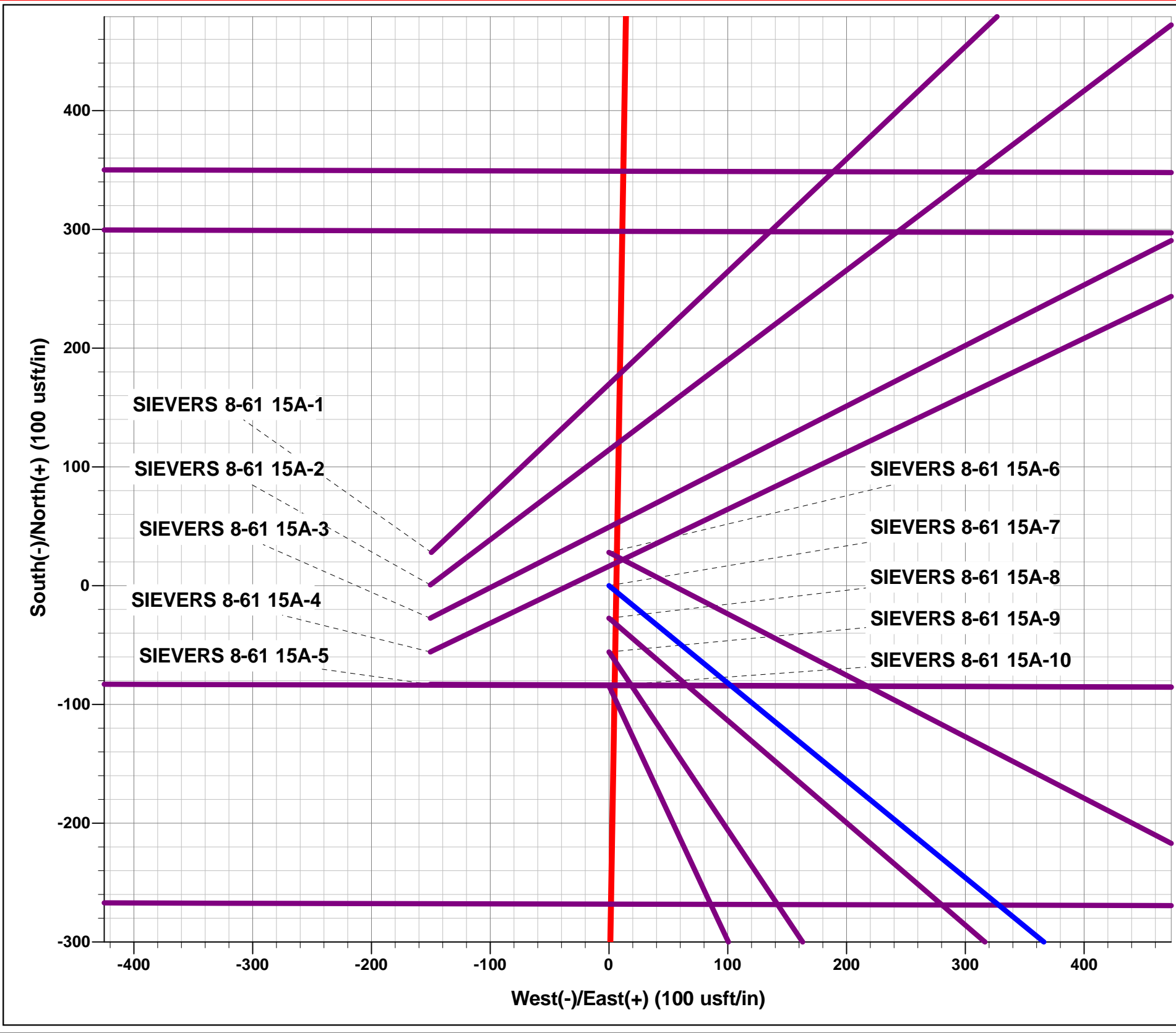
Plan: PROPOSAL #1



Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE NE SEC. 15 T8N R61W 6th P.M.
Well: SIEVERS 8-61 15A-7
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation		
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 1332ft FNL & 606ft FEL of Sec 15		
400.0	400.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)		
995.6	1000.0	12.00	129.34	-39.7	48.4	-44.1	62.6	EOB TO 12° INC		
3881.6	3950.5	12.00	129.34	-428.5	522.9	-475.7	676.0	END OF TANGENT		
4477.2	4550.5	0.00	0.00	-468.2	571.3	-519.8	738.6	EOD TO VERTICAL		
5825.8	5899.0	0.00	0.00	-468.2	571.3	-519.8	738.6	KOP (10°/100ft BUR)		
6398.8	6799.1	90.00	270.15	-466.7	-1.7	49.9	1311.6	BPI: 1799ft FNL & 600ft FEL of Sec 15		
6398.8	10881.7	90.00	270.15	-456.2	-4084.3	4109.6	5394.3	EPI: 1799ft FNL & 600ft FWL of Sec 15		
6398.8	10886.3	90.00	270.01	-456.1	-4088.9	4114.1	5398.8	EOT TO 270.01° AZ		
6398.8	11182.5	90.00	270.01	-456.1	-4385.1	4408.7	5695.0	BHL: 1799ft FNL & 300ft FWL of Sec 15		

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - SIEVERS 8-61 15A-7	5825.8	-468.2	571.3	40.664207	-104.182052
BPI - SIEVERS 8-61 15A-7	6398.8	-466.7	-1.7	40.664211	-104.184117
EPI - SIEVERS 8-61 15A-7	6398.8	-456.2	-4084.3	40.664239	-104.198833
BHL - SIEVERS 8-61 15A-7	6398.8	-456.1	-4385.1	40.664239	-104.199917



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
532.8	532.8	PIERRE SH (BASE FOX HILLS)
3493.8	3554.0	PARKMAN
4563.8	4637.0	SUSSEX
5503.8	5577.0	SHANNON
6298.8	6455.4	SHARON SPRINGS SHALE
6368.8	6612.9	NIOBRARA FORMATION
6378.8	6647.3	NIOBRARA A CHALK

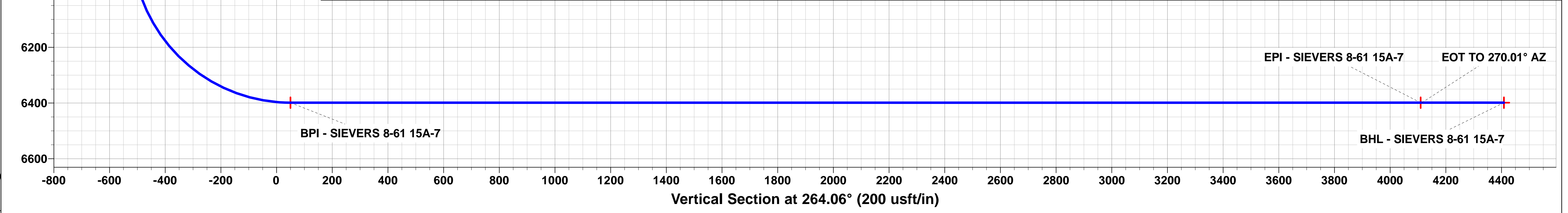
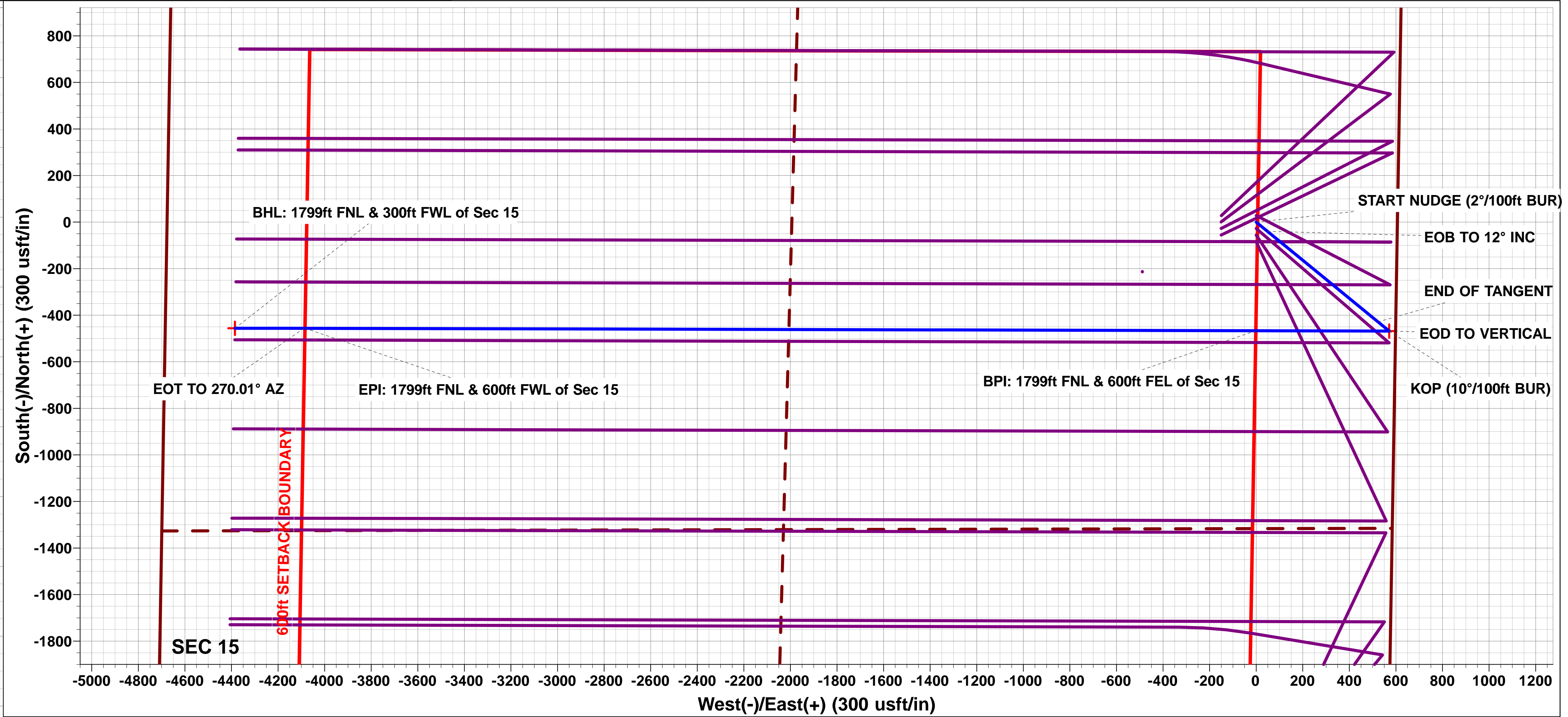
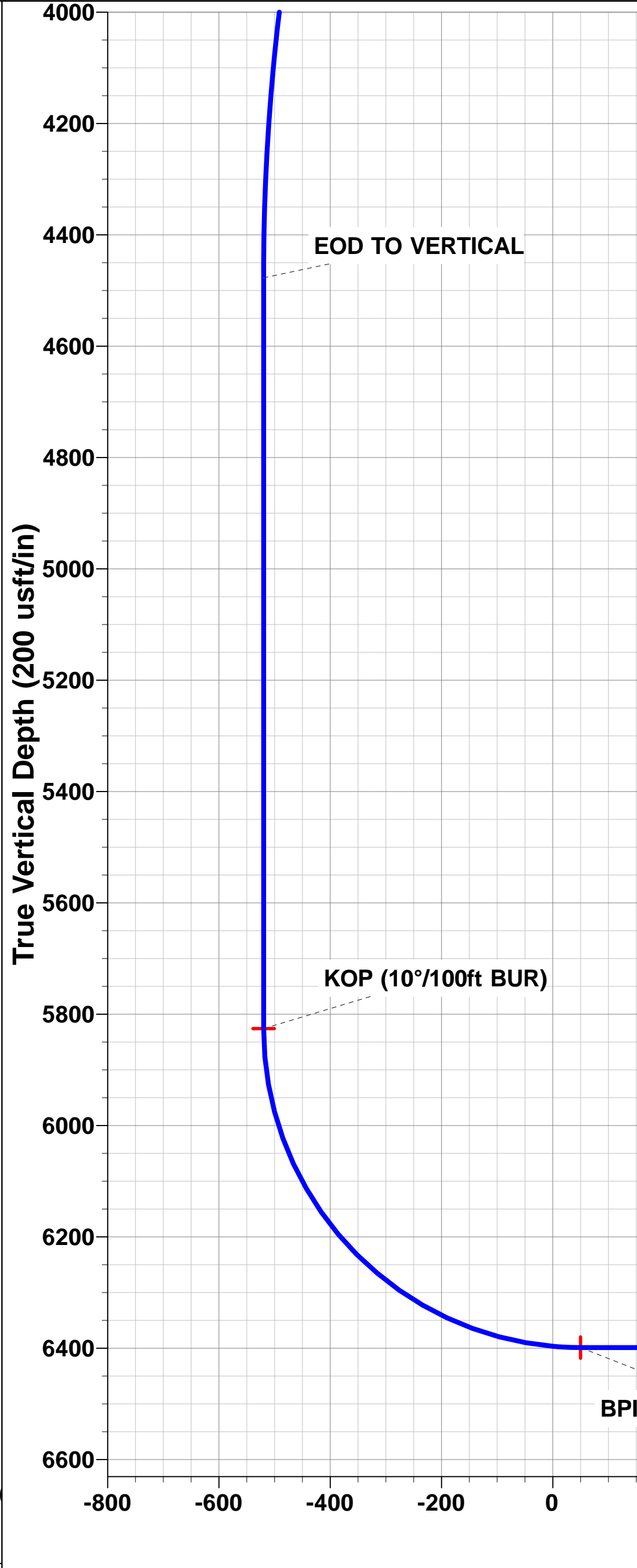
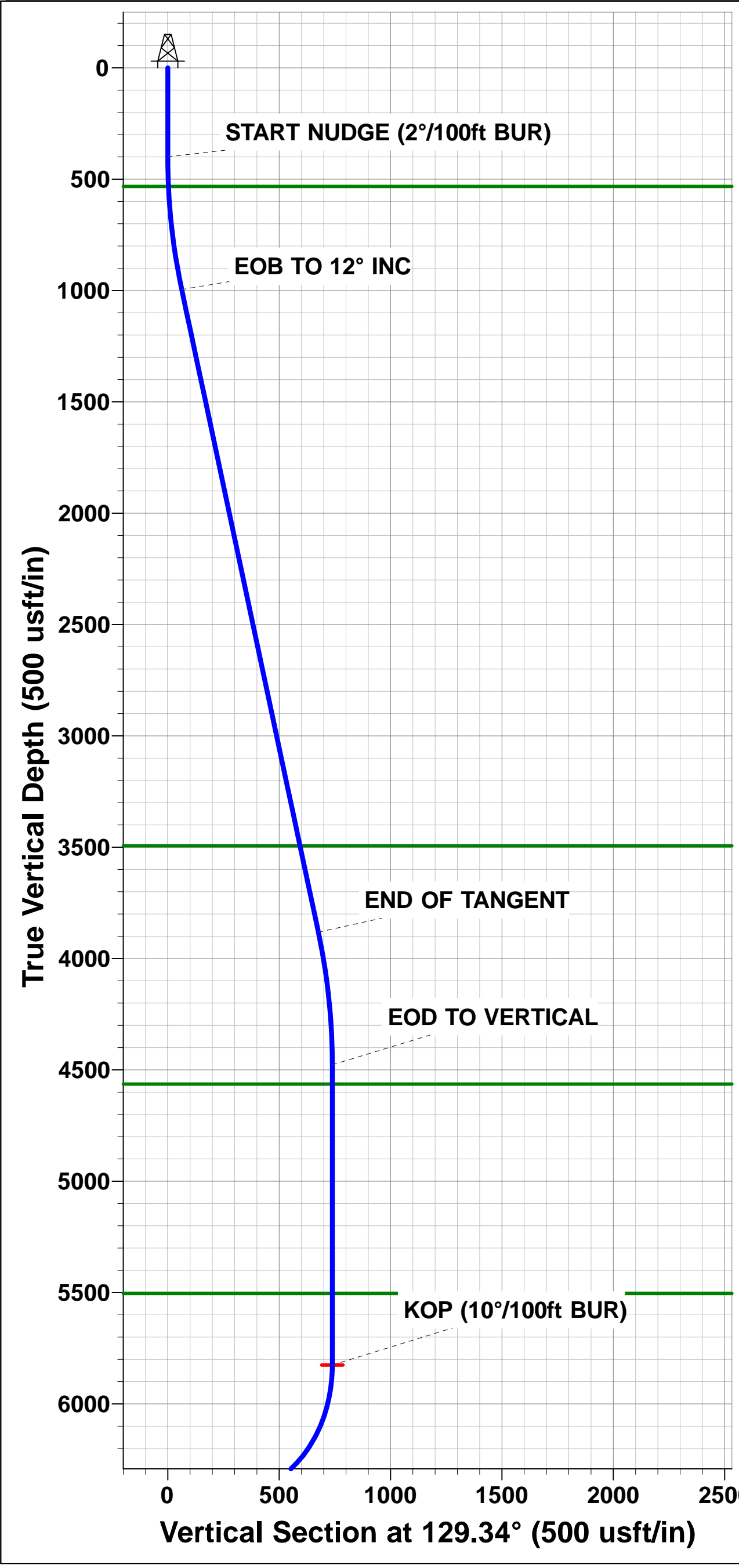
PROPOSED LOCAL COORDINATES:

SHL:1332ft FNL & 606ft FEL of Sec 15

BEGIN PROD INT: 1799ft FNL & 600ft FEL of Sec 15

END PROD INTERVAL: 1799ft FNL & 600ft FWL of Sec 15

BHL: 1799ft FNL & 300ft FWL of Sec 15



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SIEVERS 8-61 15A-7
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4988.8usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4988.8usft (Original Well Elev)
Site:	NE NE SEC. 15 T8N R61W 6th P.M.	North Reference:	True
Well:	SIEVERS 8-61 15A-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

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

Site		NE NE SEC. 15 T8N R61W 6th P.M.			
Site Position:		Northing:	1,488,015.84 usft	Latitude:	40.665569
From:	Lat/Long	Easting:	3,364,890.10 usft	Longitude:	-104.184650
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000 ft	Grid Convergence:	0.85 °

Well	SIEVERS 8-61 15A-7					
Well Position	+N-S	-28.1 usft	Northing:	1,487,990.00 usft	Latitude:	40.665492
	+E-W	149.5 usft	Easting:	3,365,040.03 usft	Longitude:	-104.184111
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,963.8 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	27/09/2017	7.89	67.15	52,556

Design	PROPOSAL #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	6,398.8	0.0	0.0	264.06

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,988.8	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	-4,588.8	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	12.00	129.34	995.6	-3,993.2	-39.7	48.4	2.00	2.00	0.00	129.34	
3,950.5	12.00	129.34	3,881.6	-1,107.2	-428.5	522.9	0.00	0.00	0.00	0.00	
4,550.5	0.00	0.00	4,477.2	-511.6	-468.2	571.3	2.00	-2.00	0.00	180.00	
5,899.0	0.00	0.00	5,825.8	837.0	-468.2	571.3	0.00	0.00	0.00	0.00	KOP - SIEVERS 8-61
6,799.1	90.00	270.15	6,398.8	1,410.0	-466.7	-1.7	10.00	10.00	-9.98	270.15	BPI - SIEVERS 8-61
10,881.7	90.00	270.15	6,398.8	1,410.0	-456.2	-4,084.3	0.00	0.00	0.00	-36.19	EPI - SIEVERS 8-61
10,886.3	90.00	270.01	6,398.8	1,410.0	-456.1	-4,088.9	3.00	-0.07	-3.00	-91.41	
11,182.5	90.00	270.01	6,398.8	1,410.0	-456.1	-4,385.1	0.00	0.00	0.00	0.00	BHL - SIEVERS 8-61

Planning Report



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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4988.8usft (Original Well Elev)
Site:	NE NE SEC. 15 T8N R61W 6th P.M.	North Reference:	True
Well:	SIEVERS 8-61 15A-7	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: 1332ft FNL & 606ft FEL of Sec 15										
0.0	0.00	0.00	0.0	4,988.80	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,888.80	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,788.80	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,688.80	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
400.0	0.00	0.00	400.0	4,588.80	0.0	0.0	0.0	0.00	0.00	0.00
500.0	2.00	129.34	500.0	4,488.82	-1.1	1.3	-1.2	2.00	2.00	0.00
PIERRE SHALE (BASE FOX HILLS)										
532.8	2.66	129.34	532.8	4,456.00	-2.0	2.4	-2.2	2.00	2.00	0.00
600.0	4.00	129.34	599.8	4,388.96	-4.4	5.4	-4.9	2.00	2.00	0.00
700.0	6.00	129.34	699.5	4,289.35	-9.9	12.1	-11.0	2.00	2.00	0.00
800.0	8.00	129.34	798.7	4,190.10	-17.7	21.6	-19.6	2.00	2.00	0.00
900.0	10.00	129.34	897.5	4,091.33	-27.6	33.7	-30.6	2.00	2.00	0.00
EOB TO 12° INC										
1,000.0	12.00	129.34	995.6	3,993.18	-39.7	48.4	-44.1	2.00	2.00	0.00
1,100.0	12.00	129.34	1,093.4	3,895.36	-52.9	64.5	-58.7	0.00	0.00	0.00
1,200.0	12.00	129.34	1,191.3	3,797.55	-66.0	80.6	-73.3	0.00	0.00	0.00
1,300.0	12.00	129.34	1,289.1	3,699.73	-79.2	96.7	-87.9	0.00	0.00	0.00
1,400.0	12.00	129.34	1,386.9	3,601.92	-92.4	112.7	-102.6	0.00	0.00	0.00
1,500.0	12.00	129.34	1,484.7	3,504.10	-105.6	128.8	-117.2	0.00	0.00	0.00
1,600.0	12.00	129.34	1,582.5	3,406.29	-118.8	144.9	-131.8	0.00	0.00	0.00
1,700.0	12.00	129.34	1,680.3	3,308.47	-131.9	161.0	-146.5	0.00	0.00	0.00
1,800.0	12.00	129.34	1,778.1	3,210.66	-145.1	177.1	-161.1	0.00	0.00	0.00
1,900.0	12.00	129.34	1,876.0	3,112.84	-158.3	193.1	-175.7	0.00	0.00	0.00
2,000.0	12.00	129.34	1,973.8	3,015.03	-171.5	209.2	-190.4	0.00	0.00	0.00
2,100.0	12.00	129.34	2,071.6	2,917.21	-184.6	225.3	-205.0	0.00	0.00	0.00
2,200.0	12.00	129.34	2,169.4	2,819.40	-197.8	241.4	-219.6	0.00	0.00	0.00
2,300.0	12.00	129.34	2,267.2	2,721.58	-211.0	257.5	-234.3	0.00	0.00	0.00
2,400.0	12.00	129.34	2,365.0	2,623.77	-224.2	273.6	-248.9	0.00	0.00	0.00
2,500.0	12.00	129.34	2,462.8	2,525.96	-237.4	289.6	-263.5	0.00	0.00	0.00
2,600.0	12.00	129.34	2,560.7	2,428.14	-250.5	305.7	-278.2	0.00	0.00	0.00
2,700.0	12.00	129.34	2,658.5	2,330.33	-263.7	321.8	-292.8	0.00	0.00	0.00
2,800.0	12.00	129.34	2,756.3	2,232.51	-276.9	337.9	-307.4	0.00	0.00	0.00
2,900.0	12.00	129.34	2,854.1	2,134.70	-290.1	354.0	-322.0	0.00	0.00	0.00
3,000.0	12.00	129.34	2,951.9	2,036.88	-303.3	370.0	-336.7	0.00	0.00	0.00
3,100.0	12.00	129.34	3,049.7	1,939.07	-316.4	386.1	-351.3	0.00	0.00	0.00
3,200.0	12.00	129.34	3,147.5	1,841.25	-329.6	402.2	-365.9	0.00	0.00	0.00
3,300.0	12.00	129.34	3,245.4	1,743.44	-342.8	418.3	-380.6	0.00	0.00	0.00
3,400.0	12.00	129.34	3,343.2	1,645.62	-356.0	434.4	-395.2	0.00	0.00	0.00
3,500.0	12.00	129.34	3,441.0	1,547.81	-369.2	450.4	-409.8	0.00	0.00	0.00
PARKMAN										
3,554.0	12.00	129.34	3,493.8	1,495.00	-376.3	459.1	-417.7	0.00	0.00	0.00
3,600.0	12.00	129.34	3,538.8	1,449.99	-382.3	466.5	-424.5	0.00	0.00	0.00
3,700.0	12.00	129.34	3,636.6	1,352.18	-395.5	482.6	-439.1	0.00	0.00	0.00
3,800.0	12.00	129.34	3,734.4	1,254.36	-408.7	498.7	-453.7	0.00	0.00	0.00
3,900.0	12.00	129.34	3,832.3	1,156.55	-421.9	514.8	-468.4	0.00	0.00	0.00
END OF TANGENT										
3,950.5	12.00	129.34	3,881.6	1,107.17	-428.5	522.9	-475.7	0.00	0.00	0.00
4,000.0	11.01	129.34	3,930.2	1,058.65	-434.8	530.5	-482.7	2.00	-2.00	0.00
4,100.0	9.01	129.34	4,028.6	960.17	-445.8	544.0	-494.9	2.00	-2.00	0.00
4,200.0	7.01	129.34	4,127.6	861.16	-454.6	554.7	-504.7	2.00	-2.00	0.00
4,300.0	5.01	129.34	4,227.1	761.71	-461.3	562.8	-512.1	2.00	-2.00	0.00

Planning Report



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Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,400.0	3.01	129.34	4,326.8	661.96	-465.7	568.2	-517.0	2.00	-2.00	0.00
4,500.0	1.01	129.34	4,426.8	562.03	-467.9	571.0	-519.5	2.00	-2.00	0.00
EOD TO VERTICAL										
4,550.5	0.00	0.00	4,477.2	511.55	-468.2	571.3	-519.8	2.00	-2.00	0.00
4,600.0	0.00	0.00	4,526.8	462.03	-468.2	571.3	-519.8	0.00	0.00	0.00
SUSSEX										
4,637.0	0.00	0.00	4,563.8	425.00	-468.2	571.3	-519.8	0.00	0.00	0.00
4,700.0	0.00	0.00	4,626.8	362.03	-468.2	571.3	-519.8	0.00	0.00	0.00
4,800.0	0.00	0.00	4,726.8	262.03	-468.2	571.3	-519.8	0.00	0.00	0.00
4,900.0	0.00	0.00	4,826.8	162.03	-468.2	571.3	-519.8	0.00	0.00	0.00
5,000.0	0.00	0.00	4,926.8	62.03	-468.2	571.3	-519.8	0.00	0.00	0.00
5,100.0	0.00	0.00	5,026.8	-37.97	-468.2	571.3	-519.8	0.00	0.00	0.00
5,200.0	0.00	0.00	5,126.8	-137.97	-468.2	571.3	-519.8	0.00	0.00	0.00
5,300.0	0.00	0.00	5,226.8	-237.97	-468.2	571.3	-519.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,326.8	-337.97	-468.2	571.3	-519.8	0.00	0.00	0.00
5,500.0	0.00	0.00	5,426.8	-437.97	-468.2	571.3	-519.8	0.00	0.00	0.00
SHANNON										
5,577.0	0.00	0.00	5,503.8	-515.00	-468.2	571.3	-519.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,526.8	-537.97	-468.2	571.3	-519.8	0.00	0.00	0.00
5,700.0	0.00	0.00	5,626.8	-637.97	-468.2	571.3	-519.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,726.8	-737.97	-468.2	571.3	-519.8	0.00	0.00	0.00
KOP (10°/100ft BUR)										
5,899.0	0.00	0.00	5,825.8	-837.00	-468.2	571.3	-519.8	0.00	0.00	0.00
5,900.0	0.10	270.15	5,826.8	-837.97	-468.2	571.3	-519.8	10.00	10.00	0.00
6,000.0	10.10	270.15	5,926.2	-937.45	-468.2	562.4	-511.0	10.00	10.00	0.00
6,100.0	20.10	270.15	6,022.7	-1,033.88	-468.1	536.4	-485.1	10.00	10.00	0.00
6,200.0	30.09	270.15	6,113.1	-1,124.32	-468.0	494.1	-443.0	10.00	10.00	0.00
6,300.0	40.09	270.15	6,194.8	-1,206.04	-467.8	436.6	-385.9	10.00	10.00	0.00
6,400.0	50.09	270.15	6,265.3	-1,276.54	-467.7	365.9	-315.6	10.00	10.00	0.00
SHARON SPRINGS SHALE										
6,455.4	55.64	270.15	6,298.8	-1,310.00	-467.5	321.7	-271.6	10.00	10.00	0.00
6,500.0	60.09	270.15	6,322.5	-1,333.70	-467.4	284.0	-234.1	10.00	10.00	0.00
6,600.0	70.09	270.15	6,364.6	-1,375.76	-467.2	193.4	-144.0	10.00	10.00	0.00
NIOBRARA FORMATION										
6,612.9	71.38	270.15	6,368.8	-1,380.00	-467.2	181.3	-132.0	10.00	10.00	0.00
NIOBRARA A CHALK										
6,647.3	74.82	270.15	6,378.8	-1,390.00	-467.1	148.4	-99.2	10.00	10.00	0.00
6,700.0	80.09	270.15	6,390.3	-1,401.45	-467.0	96.9	-48.1	10.00	10.00	0.00
BPI: 1799ft FNL & 600ft FEL of Sec 15										
6,799.1	90.00	270.15	6,398.8	-1,410.00	-466.7	-1.7	49.9	10.00	10.00	0.00
6,800.0	90.00	270.15	6,398.8	-1,410.00	-466.7	-2.6	50.9	0.00	0.00	0.00
6,900.0	90.00	270.15	6,398.8	-1,410.01	-466.4	-102.6	150.3	0.00	0.00	0.00
7,000.0	90.00	270.15	6,398.8	-1,410.01	-466.2	-202.6	249.7	0.00	0.00	0.00
7,100.0	90.00	270.15	6,398.8	-1,410.02	-465.9	-302.6	349.2	0.00	0.00	0.00
7,200.0	90.00	270.15	6,398.8	-1,410.02	-465.6	-402.6	448.6	0.00	0.00	0.00
7,300.0	90.00	270.15	6,398.8	-1,410.03	-465.4	-502.6	548.1	0.00	0.00	0.00
7,400.0	90.00	270.15	6,398.8	-1,410.03	-465.1	-602.6	647.5	0.00	0.00	0.00
7,500.0	90.00	270.15	6,398.8	-1,410.03	-464.9	-702.6	746.9	0.00	0.00	0.00
7,600.0	90.00	270.15	6,398.8	-1,410.04	-464.6	-802.6	846.4	0.00	0.00	0.00
7,700.0	90.00	270.15	6,398.8	-1,410.04	-464.3	-902.6	945.8	0.00	0.00	0.00
7,800.0	90.00	270.15	6,398.8	-1,410.04	-464.1	-1,002.6	1,045.2	0.00	0.00	0.00
7,900.0	90.00	270.15	6,398.8	-1,410.05	-463.8	-1,102.6	1,144.7	0.00	0.00	0.00
8,000.0	90.00	270.15	6,398.8	-1,410.05	-463.6	-1,202.6	1,244.1	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SIEVERS 8-61 15A-7
Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4988.8usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4988.8usft (Original Well Elev)
Site:	NE NE SEC. 15 T8N R61W 6th P.M.	North Reference:	True
Well:	SIEVERS 8-61 15A-7	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)
8,100.0	90.00	270.15	6,398.9	-1,410.05	-463.3	-1,302.6	1,343.5	0.00	0.00	0.00
8,200.0	90.00	270.15	6,398.9	-1,410.05	-463.0	-1,402.6	1,443.0	0.00	0.00	0.00
8,300.0	90.00	270.15	6,398.9	-1,410.06	-462.8	-1,502.6	1,542.4	0.00	0.00	0.00
8,400.0	90.00	270.15	6,398.9	-1,410.06	-462.5	-1,602.6	1,641.8	0.00	0.00	0.00
8,500.0	90.00	270.15	6,398.9	-1,410.06	-462.3	-1,702.6	1,741.3	0.00	0.00	0.00
8,600.0	90.00	270.15	6,398.9	-1,410.06	-462.0	-1,802.6	1,840.7	0.00	0.00	0.00
8,700.0	90.00	270.15	6,398.9	-1,410.06	-461.7	-1,902.6	1,940.2	0.00	0.00	0.00
8,800.0	90.00	270.15	6,398.9	-1,410.06	-461.5	-2,002.6	2,039.6	0.00	0.00	0.00
8,900.0	90.00	270.15	6,398.9	-1,410.06	-461.2	-2,102.6	2,139.0	0.00	0.00	0.00
9,000.0	90.00	270.15	6,398.9	-1,410.06	-461.0	-2,202.6	2,238.5	0.00	0.00	0.00
9,100.0	90.00	270.15	6,398.9	-1,410.06	-460.7	-2,302.6	2,337.9	0.00	0.00	0.00
9,200.0	90.00	270.15	6,398.9	-1,410.06	-460.5	-2,402.6	2,437.3	0.00	0.00	0.00
9,300.0	90.00	270.15	6,398.9	-1,410.06	-460.2	-2,502.6	2,536.8	0.00	0.00	0.00
9,400.0	90.00	270.15	6,398.9	-1,410.06	-459.9	-2,602.6	2,636.2	0.00	0.00	0.00
9,500.0	90.00	270.15	6,398.9	-1,410.05	-459.7	-2,702.6	2,735.6	0.00	0.00	0.00
9,600.0	90.00	270.15	6,398.9	-1,410.05	-459.4	-2,802.6	2,835.1	0.00	0.00	0.00
9,700.0	90.00	270.15	6,398.8	-1,410.05	-459.2	-2,902.6	2,934.5	0.00	0.00	0.00
9,800.0	90.00	270.15	6,398.8	-1,410.05	-458.9	-3,002.6	3,034.0	0.00	0.00	0.00
9,900.0	90.00	270.15	6,398.8	-1,410.04	-458.7	-3,102.6	3,133.4	0.00	0.00	0.00
10,000.0	90.00	270.15	6,398.8	-1,410.04	-458.4	-3,202.6	3,232.8	0.00	0.00	0.00
10,100.0	90.00	270.15	6,398.8	-1,410.04	-458.1	-3,302.6	3,332.3	0.00	0.00	0.00
10,200.0	90.00	270.15	6,398.8	-1,410.03	-457.9	-3,402.6	3,431.7	0.00	0.00	0.00
10,300.0	90.00	270.15	6,398.8	-1,410.03	-457.6	-3,502.6	3,531.1	0.00	0.00	0.00
10,400.0	90.00	270.15	6,398.8	-1,410.02	-457.4	-3,602.6	3,630.6	0.00	0.00	0.00
10,500.0	90.00	270.15	6,398.8	-1,410.02	-457.1	-3,702.6	3,730.0	0.00	0.00	0.00
10,600.0	90.00	270.15	6,398.8	-1,410.02	-456.9	-3,802.6	3,829.5	0.00	0.00	0.00
10,700.0	90.00	270.15	6,398.8	-1,410.01	-456.6	-3,902.6	3,928.9	0.00	0.00	0.00
10,800.0	90.00	270.15	6,398.8	-1,410.00	-456.4	-4,002.6	4,028.3	0.00	0.00	0.00
EPI: 1799ft FNL & 600ft FWL of Sec 15										
10,881.7	90.00	270.15	6,398.8	-1,410.00	-456.2	-4,084.3	4,109.6	0.00	0.00	0.00
EOT TO 270.01° AZ										
10,886.3	90.00	270.01	6,398.8	-1,410.00	-456.1	-4,088.9	4,114.1	3.00	-0.07	-3.00
10,900.0	90.00	270.01	6,398.8	-1,410.00	-456.1	-4,102.6	4,127.8	0.00	0.00	0.00
11,000.0	90.00	270.01	6,398.8	-1,410.00	-456.1	-4,202.6	4,227.2	0.00	0.00	0.00
11,100.0	90.00	270.01	6,398.8	-1,410.00	-456.1	-4,302.6	4,326.7	0.00	0.00	0.00
BHL: 1799ft FNL & 300ft FWL of Sec 15										
11,182.5	90.00	270.01	6,398.8	-1,410.00	-456.1	-4,385.1	4,408.7	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
532.8	532.8	PIERRE SHALE (BASE FOX HILLS				
3,554.0	3,493.8	PARKMAN				
4,637.0	4,563.8	SUSSEX				
5,577.0	5,503.8	SHANNON				
6,455.4	6,298.8	SHARON SPRINGS SHALE				
6,612.9	6,368.8	NIOBRARA FORMATION				
6,647.3	6,378.8	NIOBRARA A CHALK				

Planning Report



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Company:	BISON OIL & GAS II, LLC	TVD Reference:	KB-EST @ 4988.8usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4988.8usft (Original Well Elev)
Site:	NE NE SEC. 15 T8N R61W 6th P.M.	North Reference:	True
Well:	SIEVERS 8-61 15A-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 1332ft FNL & 606ft FEL of Sec 15
400.0	400.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,000.0	995.6	-39.7	48.4	EOB TO 12° INC
3,950.5	3,881.6	-428.5	522.9	END OF TANGENT
4,550.5	4,477.2	-468.2	571.3	EOD TO VERTICAL
5,899.0	5,825.8	-468.2	571.3	KOP (10°/100ft BUR)
6,799.1	6,398.8	-466.7	-1.7	BPI: 1799ft FNL & 600ft FEL of Sec 15
10,881.7	6,398.8	-456.2	-4,084.3	EPI: 1799ft FNL & 600ft FWL of Sec 15
10,886.3	6,398.8	-456.1	-4,088.9	EOT TO 270.01° AZ
11,182.5	6,398.8	-456.1	-4,385.1	BHL: 1799ft FNL & 300ft FWL of Sec 15