

# **Bison Oil & Gas II, LLC**

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

**ROSS 8-60 18 SESW & SWSE SEC 18 T8N R60W 6th P.M.**

**ROSS 8-60 18-7-3**

**Wellbore #1**

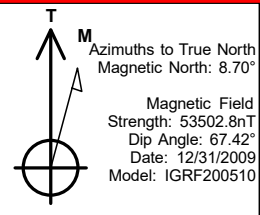
**Plan: Design #1**

## **Standard Survey Report**

**12 April, 2021**



Project: WELD COUNTY, COLORADO (NAD 83)  
Site: ROSS 8-60 18 SESW & SWSE SEC 18 T8N R60W 6th P.M.  
Well: ROSS 8-60 18-7-3  
Wellbore: Wellbore #1  
Design: Design #1



#### ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.0	Start Build 1.50
1562.9	11.44	249.81	1557.8	-26.2	-71.3	-20.5	75.9	Start 3615.2 hold at 1562.9 MD
5178.1	11.44	249.81	5101.1	-273.8	-744.5	-214.2	793.2	Start Drop -1.50
5941.0	0.00	0.00	5859.0	-300.0	-815.7	-234.7	869.1	Start Build 10.00
6841.0	90.00	360.00	6432.0	273.0	-815.7	336.5	1442.1	Start Drop -0.01
7010.0	89.98	360.00	6432.0	442.0	-815.7	505.0	1611.1	Start DLS 0.01 TFO 87.94
15590.5	90.02	1.15	6432.0	9021.9	-729.5	9051.3	10191.6	Start 150.3 hold at 15590.5 MD
15740.8	90.02	1.15	6431.9	9172.2	-726.4	9200.9	10341.9	TD at 15740.8

#### PROPOSED LOCAL COORDINATES:

SHL: 546 ft FSL & 2492 ft FWL Sec 18

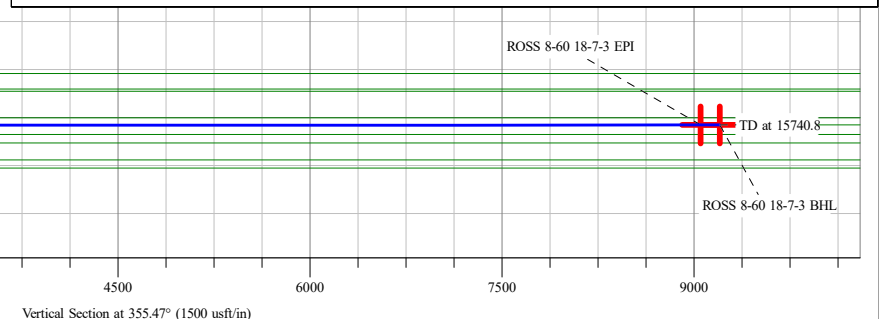
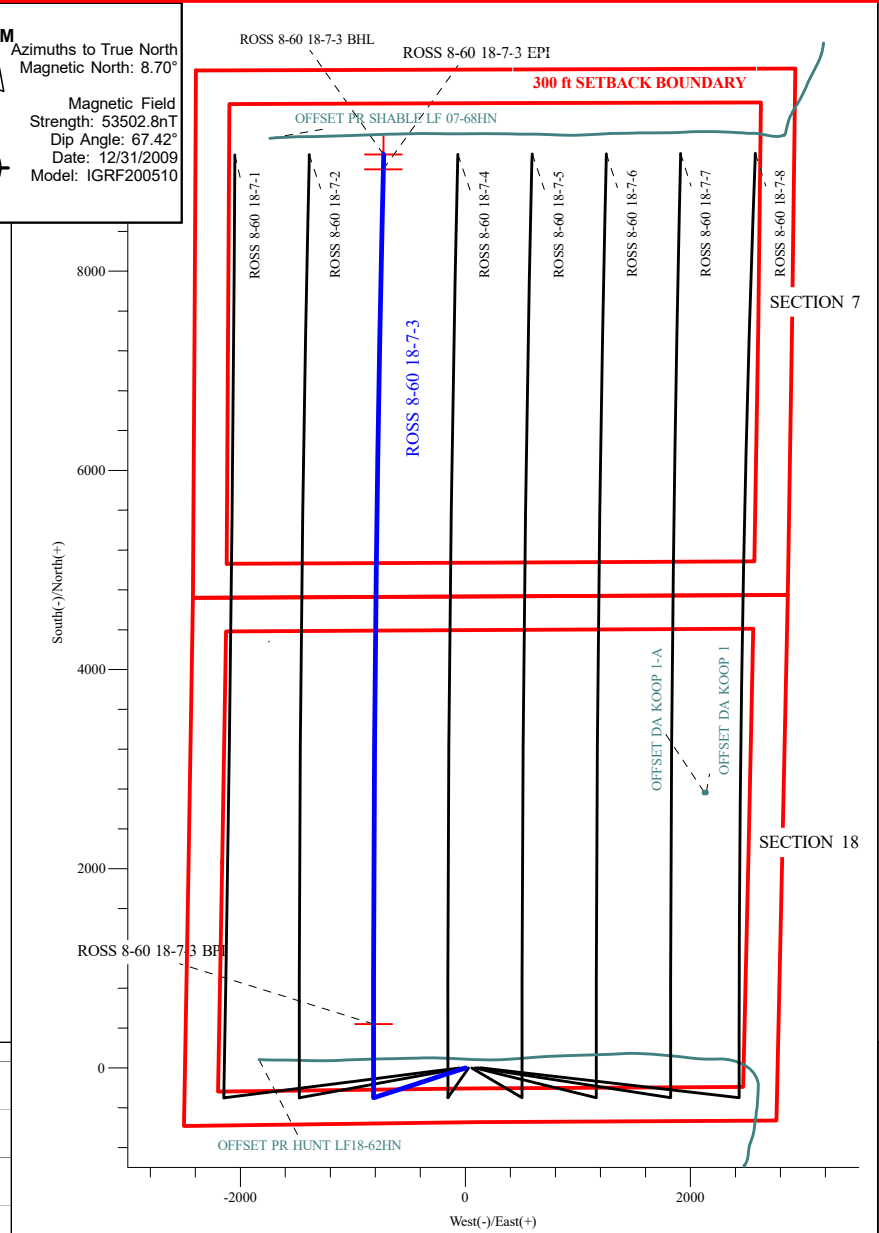
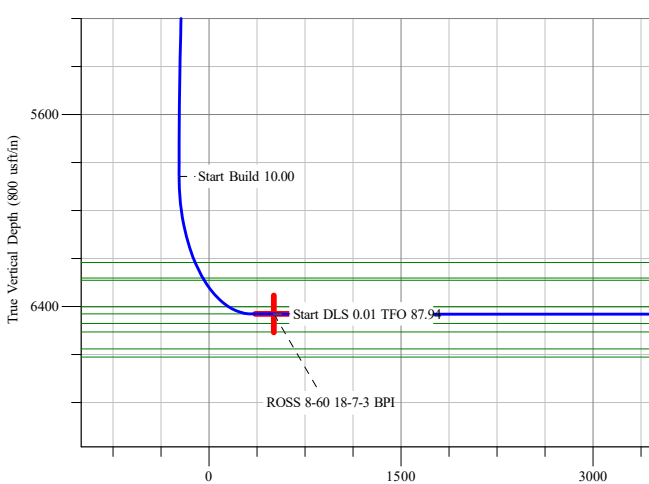
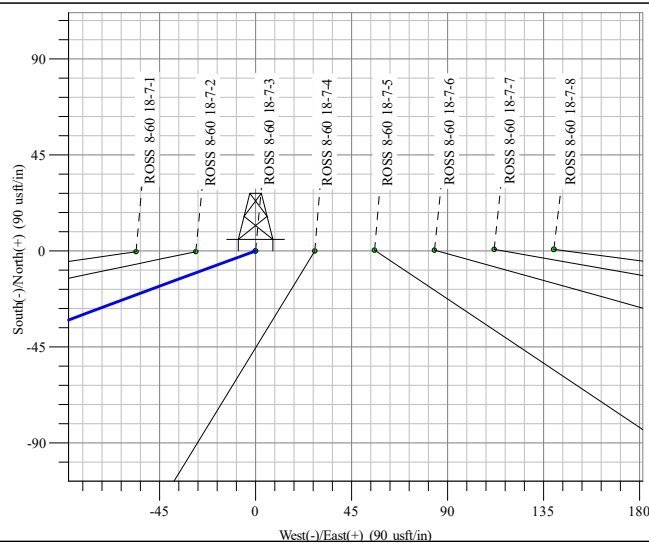
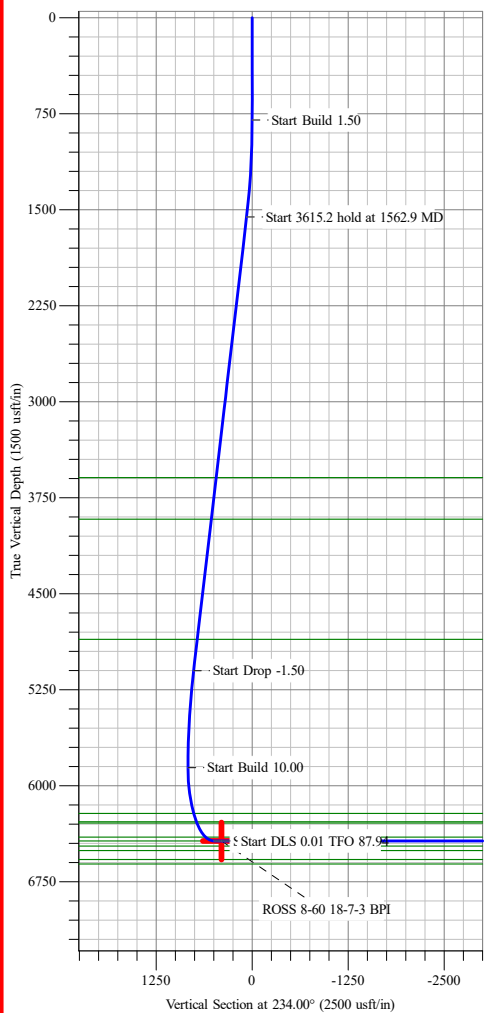
BPI: 1000 ft FSL & 1670 ft FWL Sec 18

EPI: 1000 ft FNL & 1670 ft FWL Sec 7

BHL: 850 ft FNL & 1670 ft FWL Sec 7

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
ROSS 8-60 18-7-3 BHL	6432.0	9172.0	-728.6	1494075.75	3377858.59	40° 40' 53.987 N 104° 8' 15.263 W	
ROSS 8-60 18-7-3 BPI	6432.0	442.0	-815.7	1485345.55	3377905.88	40° 39' 27.724 N 104° 8' 16.390 W	
ROSS 8-60 18-7-3 EPI	6432.0	9021.9	-729.5	1493925.65	3377860.07	40° 40' 52.504 N 104° 8' 15.274 W	Point



## Survey Report

<b>Company:</b>	Bison Oil & Gas II, LLC	<b>Local Co-ordinate Reference:</b>	Well ROSS 8-60 18-7-3
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	WELL @ 4953.0usft (Original Well Elev)
<b>Site:</b>	ROSS 8-60 18 SESW & SWSE SEC 18 T8N R60W 6th P.M.	<b>MD Reference:</b>	WELL @ 4953.0usft (Original Well Elev)
<b>Well:</b>	ROSS 8-60 18-7-3	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDM 5000.16 Single User Db

<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>	ROSS 8-60 18 SESW & SWSE SEC 18 T8N R60W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,484,919.11 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,378,868.10 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	40° 39' 23.364 N
		<b>Longitude:</b>	104° 8' 3.991 W

<b>Well</b>	ROSS 8-60 18-7-3		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 1,484,916.22 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 3,378,728.29 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>	0.88 °	<b>Ground Level:</b>	4,949.7 usft

<b>Wellbore</b>	Wellbore #1		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	8.70	67.42	53,502.77546423

<b>Design</b>	Design #1		
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<b>Audit Notes:</b>			
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b> 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	355.47

Survey Tool Program		Date	4/12/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	15,740.8	Design #1 (Wellbore #1)	MWD	Fixed:v2:standard declination	

<b>Planned Survey</b>									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00

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<b>Site:</b>	ROSS 8-60 18 SESW & SWSE SEC 18 T8N R60W 6th P.M.	<b>MD Reference:</b>	WELL @ 4953.0usft (Original Well Elev)
<b>Well:</b>	ROSS 8-60 18-7-3	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDM 5000.16 Single User Db

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>Start Build 1.50</b>									
900.0	1.50	249.81	900.0	-0.5	-1.2	-0.4	1.50	1.50	0.00
1,000.0	3.00	249.81	999.9	-1.8	-4.9	-1.4	1.50	1.50	0.00
1,100.0	4.50	249.81	1,099.7	-4.1	-11.1	-3.2	1.50	1.50	0.00
1,200.0	6.00	249.81	1,199.3	-7.2	-19.6	-5.6	1.50	1.50	0.00
1,300.0	7.50	249.81	1,298.6	-11.3	-30.7	-8.8	1.50	1.50	0.00
1,400.0	9.00	249.81	1,397.5	-16.2	-44.1	-12.7	1.50	1.50	0.00
1,500.0	10.50	249.81	1,496.1	-22.1	-60.0	-17.3	1.50	1.50	0.00
1,562.9	11.44	249.81	1,557.8	-26.2	-71.3	-20.5	1.50	1.50	0.00
<b>Start 3615.2 hold at 1562.9 MD</b>									
1,600.0	11.44	249.81	1,594.2	-28.8	-78.2	-22.5	0.00	0.00	0.00
1,700.0	11.44	249.81	1,692.2	-35.6	-96.8	-27.8	0.00	0.00	0.00
1,800.0	11.44	249.81	1,790.2	-42.4	-115.4	-33.2	0.00	0.00	0.00
1,900.0	11.44	249.81	1,888.2	-49.3	-134.0	-38.6	0.00	0.00	0.00
2,000.0	11.44	249.81	1,986.2	-56.1	-152.7	-43.9	0.00	0.00	0.00
2,100.0	11.44	249.81	2,084.3	-63.0	-171.3	-49.3	0.00	0.00	0.00
2,200.0	11.44	249.81	2,182.3	-69.8	-189.9	-54.6	0.00	0.00	0.00
2,300.0	11.44	249.81	2,280.3	-76.7	-208.5	-60.0	0.00	0.00	0.00
2,400.0	11.44	249.81	2,378.3	-83.5	-227.1	-65.3	0.00	0.00	0.00
2,500.0	11.44	249.81	2,476.3	-90.4	-245.8	-70.7	0.00	0.00	0.00
2,600.0	11.44	249.81	2,574.3	-97.2	-264.4	-76.1	0.00	0.00	0.00
2,700.0	11.44	249.81	2,672.3	-104.1	-283.0	-81.4	0.00	0.00	0.00
2,800.0	11.44	249.81	2,770.3	-110.9	-301.6	-86.8	0.00	0.00	0.00
2,900.0	11.44	249.81	2,868.4	-117.8	-320.2	-92.1	0.00	0.00	0.00
3,000.0	11.44	249.81	2,966.4	-124.6	-338.9	-97.5	0.00	0.00	0.00
3,100.0	11.44	249.81	3,064.4	-131.5	-357.5	-102.8	0.00	0.00	0.00
3,200.0	11.44	249.81	3,162.4	-138.3	-376.1	-108.2	0.00	0.00	0.00
3,300.0	11.44	249.81	3,260.4	-145.2	-394.7	-113.6	0.00	0.00	0.00
3,400.0	11.44	249.81	3,358.4	-152.0	-413.4	-118.9	0.00	0.00	0.00
3,500.0	11.44	249.81	3,456.4	-158.9	-432.0	-124.3	0.00	0.00	0.00
3,600.0	11.44	249.81	3,554.4	-165.7	-450.6	-129.6	0.00	0.00	0.00
3,700.0	11.44	249.81	3,652.4	-172.6	-469.2	-135.0	0.00	0.00	0.00
3,800.0	11.44	249.81	3,750.5	-179.4	-487.8	-140.3	0.00	0.00	0.00
3,900.0	11.44	249.81	3,848.5	-186.3	-506.5	-145.7	0.00	0.00	0.00
4,000.0	11.44	249.81	3,946.5	-193.1	-525.1	-151.1	0.00	0.00	0.00
4,100.0	11.44	249.81	4,044.5	-200.0	-543.7	-156.4	0.00	0.00	0.00
4,200.0	11.44	249.81	4,142.5	-206.8	-562.3	-161.8	0.00	0.00	0.00
4,300.0	11.44	249.81	4,240.5	-213.7	-580.9	-167.1	0.00	0.00	0.00
4,400.0	11.44	249.81	4,338.5	-220.5	-599.6	-172.5	0.00	0.00	0.00
4,500.0	11.44	249.81	4,436.5	-227.4	-618.2	-177.8	0.00	0.00	0.00
4,600.0	11.44	249.81	4,534.6	-234.2	-636.8	-183.2	0.00	0.00	0.00
4,700.0	11.44	249.81	4,632.6	-241.0	-655.4	-188.5	0.00	0.00	0.00
4,800.0	11.44	249.81	4,730.6	-247.9	-674.0	-193.9	0.00	0.00	0.00

## Survey Report

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<b>Well:</b>	ROSS 8-60 18-7-3	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDM 5000.16 Single User Db

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.0	11.44	249.81	4,828.6	-254.7	-692.7	-199.3	0.00	0.00	0.00
5,000.0	11.44	249.81	4,926.6	-261.6	-711.3	-204.6	0.00	0.00	0.00
5,100.0	11.44	249.81	5,024.6	-268.4	-729.9	-210.0	0.00	0.00	0.00
5,178.1	11.44	249.81	5,101.1	-273.8	-744.5	-214.2	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
5,200.0	11.12	249.81	5,122.6	-275.3	-748.5	-215.3	1.50	-1.50	0.00
5,300.0	9.62	249.81	5,221.0	-281.5	-765.4	-220.2	1.50	-1.50	0.00
5,400.0	8.12	249.81	5,319.8	-286.8	-779.8	-224.3	1.50	-1.50	0.00
5,500.0	6.62	249.81	5,419.0	-291.2	-791.9	-227.8	1.50	-1.50	0.00
5,600.0	5.12	249.81	5,518.4	-294.7	-801.4	-230.6	1.50	-1.50	0.00
5,700.0	3.62	249.81	5,618.2	-297.4	-808.6	-232.6	1.50	-1.50	0.00
5,800.0	2.12	249.81	5,718.0	-299.1	-813.3	-234.0	1.50	-1.50	0.00
5,900.0	0.62	249.81	5,818.0	-299.9	-815.5	-234.6	1.50	-1.50	0.00
5,941.0	0.00	0.00	5,859.0	-300.0	-815.7	-234.7	1.50	-1.50	268.72
<b>Start Build 10.00</b>									
6,000.0	5.90	360.00	5,917.9	-297.0	-815.7	-231.6	10.00	10.00	0.00
6,100.0	15.90	360.00	6,016.0	-278.1	-815.7	-212.8	10.00	10.00	0.00
6,200.0	25.90	360.00	6,109.3	-242.5	-815.7	-177.3	10.00	10.00	0.00
6,300.0	35.90	360.00	6,195.0	-191.2	-815.7	-126.2	10.00	10.00	0.00
6,400.0	45.90	360.00	6,270.5	-125.8	-815.7	-61.0	10.00	10.00	0.00
6,500.0	55.90	360.00	6,333.4	-48.3	-815.7	16.3	10.00	10.00	0.00
6,600.0	65.90	360.00	6,382.0	39.0	-815.7	103.3	10.00	10.00	0.00
6,700.0	75.90	360.00	6,414.7	133.4	-815.7	197.4	10.00	10.00	0.00
6,800.0	85.90	360.00	6,430.5	232.0	-815.7	295.7	10.00	10.00	0.00
6,841.0	90.00	360.00	6,432.0	273.0	-815.7	336.5	10.00	10.00	0.00
<b>Start Drop -0.01</b>									
6,900.0	89.99	360.00	6,432.0	332.0	-815.7	395.3	0.01	-0.01	0.00
7,000.0	89.98	360.00	6,432.0	432.0	-815.7	495.0	0.01	-0.01	0.00
7,010.0	89.98	360.00	6,432.0	442.0	-815.7	505.0	0.01	-0.01	0.00
<b>Start DLS 0.01 TFO 87.94</b>									
7,100.0	89.98	0.01	6,432.0	532.0	-815.7	594.7	0.01	0.00	0.01
7,200.0	89.98	0.03	6,432.1	632.0	-815.7	694.4	0.01	0.00	0.01
7,300.0	89.98	0.04	6,432.1	731.9	-815.6	794.1	0.01	0.00	0.01
7,400.0	89.98	0.05	6,432.1	831.9	-815.5	893.7	0.01	0.00	0.01
7,500.0	89.98	0.07	6,432.2	931.9	-815.4	993.4	0.01	0.00	0.01
7,600.0	89.98	0.08	6,432.2	1,031.9	-815.3	1,093.1	0.01	0.00	0.01
7,700.0	89.98	0.09	6,432.2	1,131.9	-815.2	1,192.8	0.01	0.00	0.01
7,800.0	89.98	0.11	6,432.2	1,231.9	-815.0	1,292.4	0.01	0.00	0.01
7,900.0	89.98	0.12	6,432.3	1,331.9	-814.8	1,392.1	0.01	0.00	0.01
8,000.0	89.98	0.13	6,432.3	1,431.9	-814.6	1,491.8	0.01	0.00	0.01
8,100.0	89.98	0.15	6,432.3	1,531.9	-814.3	1,591.5	0.01	0.00	0.01
8,200.0	89.99	0.16	6,432.4	1,631.9	-814.1	1,691.1	0.01	0.00	0.01
8,300.0	89.99	0.17	6,432.4	1,731.9	-813.8	1,790.8	0.01	0.00	0.01

## Survey Report

<b>Company:</b>	Bison Oil & Gas II, LLC	<b>Local Co-ordinate Reference:</b>	Well ROSS 8-60 18-7-3
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	WELL @ 4953.0usft (Original Well Elev)
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<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDM 5000.16 Single User Db

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,400.0	89.99	0.19	6,432.4	1,831.9	-813.5	1,890.5	0.01	0.00	0.01
8,500.0	89.99	0.20	6,432.4	1,931.9	-813.1	1,990.1	0.01	0.00	0.01
8,600.0	89.99	0.21	6,432.5	2,031.9	-812.8	2,089.8	0.01	0.00	0.01
8,700.0	89.99	0.23	6,432.5	2,131.9	-812.4	2,189.4	0.01	0.00	0.01
8,800.0	89.99	0.24	6,432.5	2,231.9	-812.0	2,289.1	0.01	0.00	0.01
8,900.0	89.99	0.25	6,432.5	2,331.9	-811.5	2,388.7	0.01	0.00	0.01
9,000.0	89.99	0.27	6,432.5	2,431.9	-811.1	2,488.4	0.01	0.00	0.01
9,100.0	89.99	0.28	6,432.6	2,531.9	-810.6	2,588.0	0.01	0.00	0.01
9,200.0	89.99	0.29	6,432.6	2,631.9	-810.1	2,687.7	0.01	0.00	0.01
9,300.0	89.99	0.31	6,432.6	2,731.9	-809.6	2,787.3	0.01	0.00	0.01
9,400.0	89.99	0.32	6,432.6	2,831.9	-809.0	2,887.0	0.01	0.00	0.01
9,500.0	89.99	0.33	6,432.6	2,931.9	-808.5	2,986.6	0.01	0.00	0.01
9,600.0	89.99	0.35	6,432.6	3,031.9	-807.9	3,086.2	0.01	0.00	0.01
9,700.0	89.99	0.36	6,432.7	3,131.9	-807.2	3,185.9	0.01	0.00	0.01
9,800.0	89.99	0.37	6,432.7	3,231.9	-806.6	3,285.5	0.01	0.00	0.01
9,900.0	89.99	0.39	6,432.7	3,331.9	-805.9	3,385.2	0.01	0.00	0.01
10,000.0	89.99	0.40	6,432.7	3,431.9	-805.2	3,484.8	0.01	0.00	0.01
10,100.0	89.99	0.41	6,432.7	3,531.9	-804.5	3,584.4	0.01	0.00	0.01
10,200.0	89.99	0.43	6,432.7	3,631.9	-803.8	3,684.0	0.01	0.00	0.01
10,300.0	90.00	0.44	6,432.7	3,731.9	-803.0	3,783.7	0.01	0.00	0.01
10,400.0	90.00	0.46	6,432.7	3,831.9	-802.3	3,883.3	0.01	0.00	0.01
10,500.0	90.00	0.47	6,432.7	3,931.9	-801.5	3,982.9	0.01	0.00	0.01
10,600.0	90.00	0.48	6,432.7	4,031.9	-800.6	4,082.5	0.01	0.00	0.01
10,700.0	90.00	0.50	6,432.7	4,131.9	-799.8	4,182.1	0.01	0.00	0.01
10,800.0	90.00	0.51	6,432.8	4,231.9	-798.9	4,281.8	0.01	0.00	0.01
10,900.0	90.00	0.52	6,432.8	4,331.9	-798.0	4,381.4	0.01	0.00	0.01
11,000.0	90.00	0.54	6,432.8	4,431.9	-797.1	4,481.0	0.01	0.00	0.01
11,100.0	90.00	0.55	6,432.8	4,531.9	-796.1	4,580.6	0.01	0.00	0.01
11,200.0	90.00	0.56	6,432.8	4,631.9	-795.2	4,680.2	0.01	0.00	0.01
11,300.0	90.00	0.58	6,432.8	4,731.9	-794.2	4,779.8	0.01	0.00	0.01
11,400.0	90.00	0.59	6,432.8	4,831.9	-793.1	4,879.4	0.01	0.00	0.01
11,500.0	90.00	0.60	6,432.8	4,931.9	-792.1	4,979.0	0.01	0.00	0.01
11,600.0	90.00	0.62	6,432.8	5,031.9	-791.0	5,078.6	0.01	0.00	0.01
11,700.0	90.00	0.63	6,432.8	5,131.8	-789.9	5,178.2	0.01	0.00	0.01
11,800.0	90.00	0.64	6,432.8	5,231.8	-788.8	5,277.8	0.01	0.00	0.01
11,900.0	90.00	0.66	6,432.7	5,331.8	-787.7	5,377.4	0.01	0.00	0.01
12,000.0	90.00	0.67	6,432.7	5,431.8	-786.5	5,477.0	0.01	0.00	0.01
12,100.0	90.00	0.68	6,432.7	5,531.8	-785.4	5,576.6	0.01	0.00	0.01
12,200.0	90.00	0.70	6,432.7	5,631.8	-784.2	5,676.1	0.01	0.00	0.01
12,300.0	90.00	0.71	6,432.7	5,731.8	-782.9	5,775.7	0.01	0.00	0.01
12,400.0	90.01	0.72	6,432.7	5,831.8	-781.7	5,875.3	0.01	0.00	0.01
12,500.0	90.01	0.74	6,432.7	5,931.8	-780.4	5,974.9	0.01	0.00	0.01

## Survey Report

<b>Company:</b>	Bison Oil & Gas II, LLC	<b>Local Co-ordinate Reference:</b>	Well ROSS 8-60 18-7-3
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	WELL @ 4953.0usft (Original Well Elev)
<b>Site:</b>	ROSS 8-60 18 SESW & SWSE SEC 18 T8N R60W 6th P.M.	<b>MD Reference:</b>	WELL @ 4953.0usft (Original Well Elev)
<b>Well:</b>	ROSS 8-60 18-7-3	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDM 5000.16 Single User Db

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,600.0	90.01	0.75	6,432.7	6,031.8	-779.1	6,074.5	0.01	0.00	0.01
12,700.0	90.01	0.76	6,432.7	6,131.8	-777.8	6,174.0	0.01	0.00	0.01
12,800.0	90.01	0.78	6,432.7	6,231.8	-776.4	6,273.6	0.01	0.00	0.01
12,900.0	90.01	0.79	6,432.7	6,331.8	-775.1	6,373.2	0.01	0.00	0.01
13,000.0	90.01	0.80	6,432.6	6,431.7	-773.7	6,472.7	0.01	0.00	0.01
13,100.0	90.01	0.82	6,432.6	6,531.7	-772.3	6,572.3	0.01	0.00	0.01
13,200.0	90.01	0.83	6,432.6	6,631.7	-770.8	6,671.9	0.01	0.00	0.01
13,300.0	90.01	0.84	6,432.6	6,731.7	-769.4	6,771.4	0.01	0.00	0.01
13,400.0	90.01	0.86	6,432.6	6,831.7	-767.9	6,871.0	0.01	0.00	0.01
13,500.0	90.01	0.87	6,432.6	6,931.7	-766.4	6,970.6	0.01	0.00	0.01
13,600.0	90.01	0.88	6,432.5	7,031.7	-764.8	7,070.1	0.01	0.00	0.01
13,700.0	90.01	0.90	6,432.5	7,131.7	-763.3	7,169.7	0.01	0.00	0.01
13,800.0	90.01	0.91	6,432.5	7,231.7	-761.7	7,269.2	0.01	0.00	0.01
13,900.0	90.01	0.93	6,432.5	7,331.6	-760.1	7,368.8	0.01	0.00	0.01
14,000.0	90.01	0.94	6,432.5	7,431.6	-758.5	7,468.3	0.01	0.00	0.01
14,100.0	90.01	0.95	6,432.4	7,531.6	-756.8	7,567.9	0.01	0.00	0.01
14,200.0	90.01	0.97	6,432.4	7,631.6	-755.2	7,667.4	0.01	0.00	0.01
14,300.0	90.01	0.98	6,432.4	7,731.6	-753.5	7,766.9	0.01	0.00	0.01
14,400.0	90.01	0.99	6,432.4	7,831.6	-751.7	7,866.5	0.01	0.00	0.01
14,500.0	90.02	1.01	6,432.3	7,931.6	-750.0	7,966.0	0.01	0.00	0.01
14,600.0	90.02	1.02	6,432.3	8,031.5	-748.2	8,065.5	0.01	0.00	0.01
14,700.0	90.02	1.03	6,432.3	8,131.5	-746.4	8,165.1	0.01	0.00	0.01
14,800.0	90.02	1.05	6,432.2	8,231.5	-744.6	8,264.6	0.01	0.00	0.01
14,900.0	90.02	1.06	6,432.2	8,331.5	-742.8	8,364.1	0.01	0.00	0.01
15,000.0	90.02	1.07	6,432.2	8,431.5	-740.9	8,463.6	0.01	0.00	0.01
15,100.0	90.02	1.09	6,432.2	8,531.4	-739.0	8,563.2	0.01	0.00	0.01
15,200.0	90.02	1.10	6,432.1	8,631.4	-737.1	8,662.7	0.01	0.00	0.01
15,300.0	90.02	1.11	6,432.1	8,731.4	-735.2	8,762.2	0.01	0.00	0.01
15,400.0	90.02	1.13	6,432.1	8,831.4	-733.2	8,861.7	0.01	0.00	0.01
15,500.0	90.02	1.14	6,432.0	8,931.4	-731.3	8,961.2	0.01	0.00	0.01
15,590.5	90.02	1.15	6,432.0	9,021.9	-729.5	9,051.3	0.01	0.00	0.01
<b>Start 150.3 hold at 15590.5 MD</b>									
15,600.0	90.02	1.15	6,432.0	9,031.4	-729.3	9,060.7	0.00	0.00	0.00
15,700.0	90.02	1.15	6,431.9	9,131.3	-727.3	9,160.2	0.00	0.00	0.00
15,740.8	90.02	1.15	6,431.9	9,172.2	-726.4	9,200.9	0.00	0.00	0.00
<b>TD at 15740.8</b>									

## Survey Report

<b>Company:</b>	Bison Oil & Gas II, LLC	<b>Local Co-ordinate Reference:</b>	Well ROSS 8-60 18-7-3
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	WELL @ 4953.0usft (Original Well Elev)
<b>Site:</b>	ROSS 8-60 18 SESW & SWSE SEC 18 T8N R60W 6th P.M.	<b>MD Reference:</b>	WELL @ 4953.0usft (Original Well Elev)
<b>Well:</b>	ROSS 8-60 18-7-3	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDM 5000.16 Single User Db

### Design Targets

#### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
ROSS 8-60 18-7-3 EF - plan hits target center - Point	0.00	0.88	6,432.0	9,021.9	-729.5	1,493,925.65	3,377,860.06	40° 40' 52.504 N	104° 8' 15.274 W
ROSS 8-60 18-7-3 BF - plan misses target center by 2.2usft at 15740.6usft MD (6431.9 TVD, 9172.0 N, -726.4 E) - Point	0.00	0.88	6,432.0	9,172.0	-728.6	1,494,075.75	3,377,858.59	40° 40' 53.987 N	104° 8' 15.263 W
ROSS 8-60 18-7-3 BF - plan hits target center - Point	0.00	0.88	6,432.0	442.0	-815.7	1,485,345.55	3,377,905.88	40° 39' 27.724 N	104° 8' 16.390 W

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
800	800	0	0	Start Build 1.50
1563	1558	-26	-71	Start 3615.2 hold at 1562.9 MD
5178	5101	-274	-744	Start Drop -1.50
5941	5859	-300	-816	Start Build 10.00
6841	6432	273	-816	Start Drop -0.01
7010	6432	442	-816	Start DLS 0.01 TFO 87.94
15,591	6432	9022	-729	Start 150.3 hold at 15590.5 MD
15,741	6432	9172	-726	TD at 15740.8