

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

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

**HALE 8-60 22 SWNW SEC 22 T8N R80W 6TH PM**

**HALE 8-60 22-23-5**

**Wellbore #1**

**Plan: Design #1**

## **Standard Survey Report**

**09 July, 2020**



Project: WELD COUNTY, COLORADO (NAD 83)  
Site: HALE 8-60 22 SWNW SEC 22 T8N R80W 6TH PM  
Well: HALE 8-60 22-23-5  
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 2.00
1229.9	8.60	252.66	1228.3	-9.6	-30.7	-30.7	32.2	Start 4418.1 hold at 1229.9 MD
5648.1	8.60	252.66	5596.8	-206.5	-661.3	-659.8	692.7	Start Drop -2.00
6078.0	0.00	0.00	6025.1	-216.1	-692.0	-690.5	724.9	Start Build 20.47
6517.6	90.00	90.00	6305.0	-216.1	-412.1	-410.6	1004.8	Start DLS 0.03 TFO -90.00
13871.9	90.00	87.47	6305.0	-54.0	6939.8	6940.0	8359.1	Start 100.0 hold at 13871.9 MD
13971.9	90.00	87.47	6305.0	-49.6	7039.7	7039.9	8459.1	TD at 13971.9

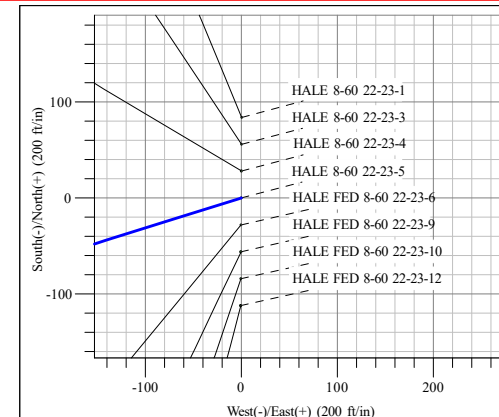
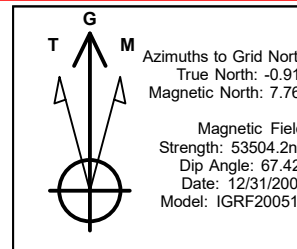
#### PROPOSED LOCAL COORDINATES:

SHL: 2108 ft FNL & 710 ft FWL Sec 22

BPI: 2315ft FNL & 300 ft FWL Sec 22

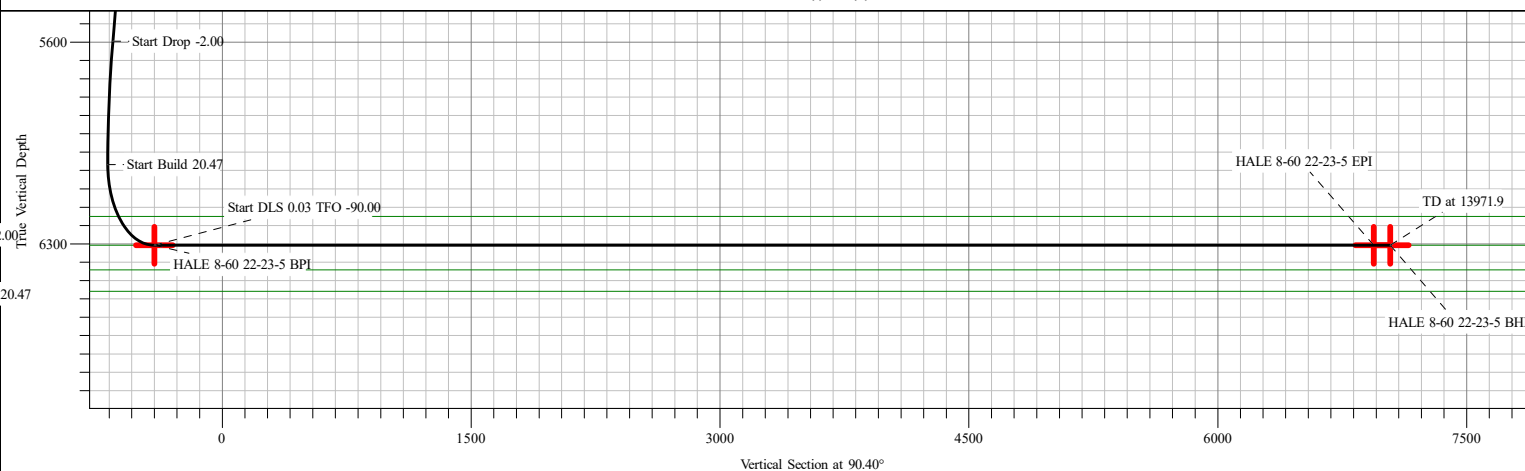
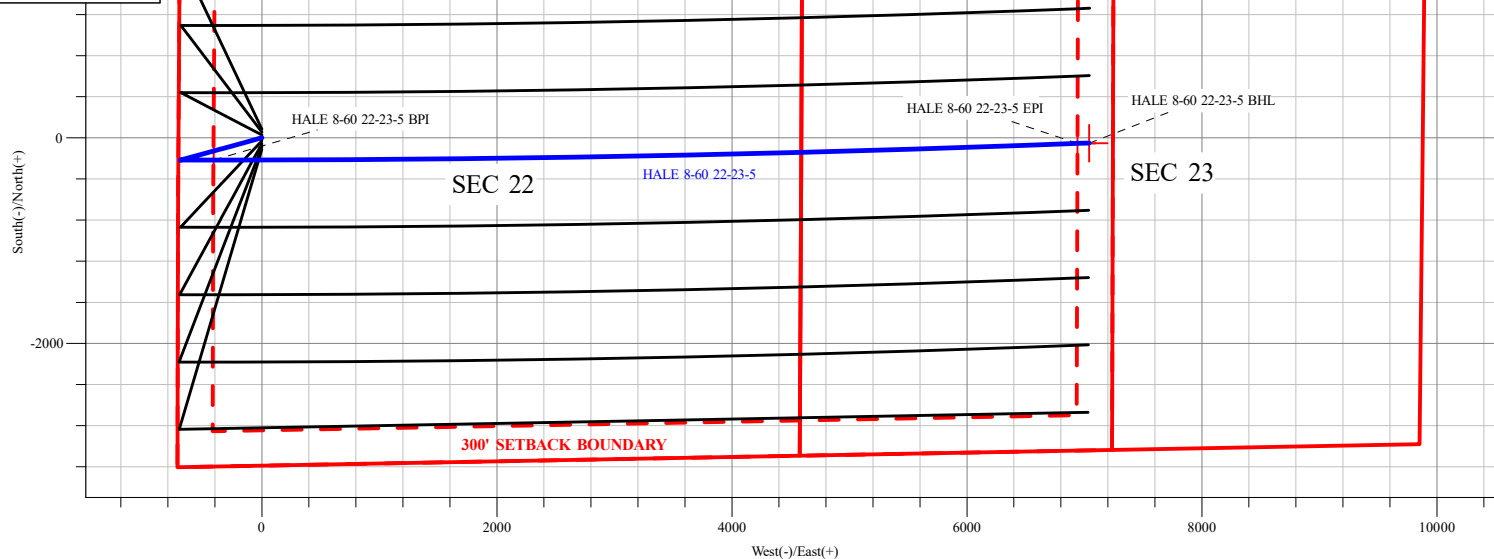
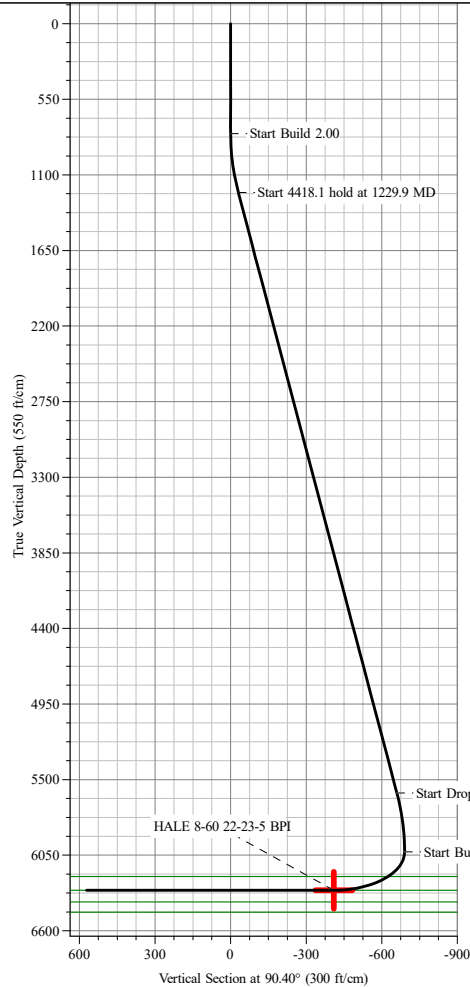
EPI: 2315 ft FNL & 2350 ft FWL Sec 23

BHL: 2315 ft FNL & 2450 ft FWL Sec 23



#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
HALE 8-60 22-23-5 BPI	6305.0	-216.1	-410.9	451809.04	1033995.94	40° 38' 55.496 N	104° 5' 9.388 W
HALE 8-60 22-23-5 EPI	6305.0	-54.0	6939.8	451858.43	1036236.43	40° 38' 55.928 N	104° 3' 34.002 W
HALE 8-60 22-23-5 BHL	6305.0	-49.6	7039.9	451859.15	1036266.87	40° 38' 55.936 N	104° 3' 32.706 W



## Survey Report

<b>Company:</b>	Bison Oil & Gas II, LLC	<b>Local Co-ordinate Reference:</b>	Well HALE 8-60 22-23-5
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB 25 @ 4956.0ft
<b>Site:</b>	HALE 8-60 22 SWNW SEC 22 T8N R80W 6TH PM	<b>MD Reference:</b>	KB 25 @ 4956.0ft
<b>Well:</b>	HALE 8-60 22-23-5	<b>North Reference:</b>	Grid
<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		

Site	HALE 8-60 22 SWNW SEC 22 T8N R80W 6TH PM				
Site Position:		Northing:	451,874.90 m	Latitude:	40° 38' 57.566 N
From:	Lat/Long	Easting:	1,034,121.18 m	Longitude:	104° 5' 4.013 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in		

Well	HALE 8-60 22-23-5					
Well Position	+N/-S	0.0 ft	Northing:	451,874.90 m	Latitude:	40° 38' 57.566 N
	+E/-W	0.0 ft	Easting:	1,034,121.18 m	Longitude:	104° 5' 4.013 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,931.0 ft
Grid Convergence:		0.91 °				

<b>Wellbore</b>	Wellbore #1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	8.67	67.42	53,504.17564203

<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) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	90.40

Survey Tool Program		Date	7/9/2020		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,971.9	Design #1 (Wellbore #1)	MWD	Fixed:v2:standard declination	

<b>Planned Survey</b>									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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

## Survey Report

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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB 25 @ 4956.0ft
<b>Site:</b>	HALE 8-60 22 SWNW SEC 22 T8N R80W 6TH PM	<b>MD Reference:</b>	KB 25 @ 4956.0ft
<b>Well:</b>	HALE 8-60 22-23-5	<b>North Reference:</b>	Grid
<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 (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
Start Build 2.00										
900.0	2.00	252.66	900.0	-0.5	-1.7	-1.7	2.00	2.00	0.00	
1,000.0	4.00	252.66	999.8	-2.1	-6.7	-6.6	2.00	2.00	0.00	
1,100.0	6.00	252.66	1,099.5	-4.7	-15.0	-14.9	2.00	2.00	0.00	
1,200.0	8.00	252.66	1,198.7	-8.3	-26.6	-26.6	2.00	2.00	0.00	
1,229.9	8.60	252.66	1,228.3	-9.6	-30.7	-30.7	2.00	2.00	0.00	
Start 4418.1 hold at 1229.9 MD										
1,300.0	8.60	252.66	1,297.6	-12.7	-40.7	-40.6	0.00	0.00	0.00	
1,400.0	8.60	252.66	1,396.5	-17.2	-55.0	-54.9	0.00	0.00	0.00	
1,500.0	8.60	252.66	1,495.4	-21.6	-69.3	-69.1	0.00	0.00	0.00	
1,600.0	8.60	252.66	1,594.2	-26.1	-83.6	-83.4	0.00	0.00	0.00	
1,700.0	8.60	252.66	1,693.1	-30.5	-97.8	-97.6	0.00	0.00	0.00	
1,800.0	8.60	252.66	1,792.0	-35.0	-112.1	-111.8	0.00	0.00	0.00	
1,900.0	8.60	252.66	1,890.9	-39.5	-126.4	-126.1	0.00	0.00	0.00	
2,000.0	8.60	252.66	1,989.7	-43.9	-140.6	-140.3	0.00	0.00	0.00	
2,100.0	8.60	252.66	2,088.6	-48.4	-154.9	-154.6	0.00	0.00	0.00	
2,200.0	8.60	252.66	2,187.5	-52.8	-169.2	-168.8	0.00	0.00	0.00	
2,300.0	8.60	252.66	2,286.4	-57.3	-183.5	-183.0	0.00	0.00	0.00	
2,400.0	8.60	252.66	2,385.2	-61.7	-197.7	-197.3	0.00	0.00	0.00	
2,500.0	8.60	252.66	2,484.1	-66.2	-212.0	-211.5	0.00	0.00	0.00	
2,600.0	8.60	252.66	2,583.0	-70.6	-226.3	-225.8	0.00	0.00	0.00	
2,700.0	8.60	252.66	2,681.9	-75.1	-240.5	-240.0	0.00	0.00	0.00	
2,800.0	8.60	252.66	2,780.7	-79.6	-254.8	-254.2	0.00	0.00	0.00	
2,900.0	8.60	252.66	2,879.6	-84.0	-269.1	-268.5	0.00	0.00	0.00	
3,000.0	8.60	252.66	2,978.5	-88.5	-283.4	-282.7	0.00	0.00	0.00	
3,100.0	8.60	252.66	3,077.4	-92.9	-297.6	-297.0	0.00	0.00	0.00	
3,200.0	8.60	252.66	3,176.2	-97.4	-311.9	-311.2	0.00	0.00	0.00	
3,300.0	8.60	252.66	3,275.1	-101.8	-326.2	-325.4	0.00	0.00	0.00	
3,400.0	8.60	252.66	3,374.0	-106.3	-340.4	-339.7	0.00	0.00	0.00	
3,500.0	8.60	252.66	3,472.9	-110.7	-354.7	-353.9	0.00	0.00	0.00	
3,600.0	8.60	252.66	3,571.7	-115.2	-369.0	-368.2	0.00	0.00	0.00	
3,700.0	8.60	252.66	3,670.6	-119.7	-383.2	-382.4	0.00	0.00	0.00	
3,800.0	8.60	252.66	3,769.5	-124.1	-397.5	-396.6	0.00	0.00	0.00	
3,900.0	8.60	252.66	3,868.4	-128.6	-411.8	-410.9	0.00	0.00	0.00	
4,000.0	8.60	252.66	3,967.3	-133.0	-426.1	-425.1	0.00	0.00	0.00	
4,100.0	8.60	252.66	4,066.1	-137.5	-440.3	-439.4	0.00	0.00	0.00	
4,200.0	8.60	252.66	4,165.0	-141.9	-454.6	-453.6	0.00	0.00	0.00	
4,300.0	8.60	252.66	4,263.9	-146.4	-468.9	-467.8	0.00	0.00	0.00	
4,400.0	8.60	252.66	4,362.8	-150.9	-483.1	-482.1	0.00	0.00	0.00	
4,500.0	8.60	252.66	4,461.6	-155.3	-497.4	-496.3	0.00	0.00	0.00	
4,600.0	8.60	252.66	4,560.5	-159.8	-511.7	-510.6	0.00	0.00	0.00	
4,700.0	8.60	252.66	4,659.4	-164.2	-526.0	-524.8	0.00	0.00	0.00	
4,800.0	8.60	252.66	4,758.3	-168.7	-540.2	-539.0	0.00	0.00	0.00	

## Survey Report

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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB 25 @ 4956.0ft
<b>Site:</b>	HALE 8-60 22 SWNW SEC 22 T8N R80W 6TH PM	<b>MD Reference:</b>	KB 25 @ 4956.0ft
<b>Well:</b>	HALE 8-60 22-23-5	<b>North Reference:</b>	Grid
<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 (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,900.0	8.60	252.66	4,857.1	-173.1	-554.5	-553.3	0.00	0.00	0.00
5,000.0	8.60	252.66	4,956.0	-177.6	-568.8	-567.5	0.00	0.00	0.00
5,100.0	8.60	252.66	5,054.9	-182.0	-583.0	-581.8	0.00	0.00	0.00
5,200.0	8.60	252.66	5,153.8	-186.5	-597.3	-596.0	0.00	0.00	0.00
5,300.0	8.60	252.66	5,252.6	-191.0	-611.6	-610.2	0.00	0.00	0.00
5,400.0	8.60	252.66	5,351.5	-195.4	-625.9	-624.5	0.00	0.00	0.00
5,500.0	8.60	252.66	5,450.4	-199.9	-640.1	-638.7	0.00	0.00	0.00
5,600.0	8.60	252.66	5,549.3	-204.3	-654.4	-652.9	0.00	0.00	0.00
5,648.1	8.60	252.66	5,596.8	-206.5	-661.3	-659.8	0.00	0.00	0.00
Start Drop -2.00									
5,700.0	7.56	252.66	5,648.2	-208.6	-668.2	-666.7	2.00	-2.00	0.00
5,800.0	5.56	252.66	5,747.6	-212.0	-679.1	-677.6	2.00	-2.00	0.00
5,900.0	3.56	252.66	5,847.2	-214.4	-686.7	-685.2	2.00	-2.00	0.00
6,000.0	1.56	252.66	5,947.1	-215.7	-691.0	-689.4	2.00	-2.00	0.00
6,078.0	0.00	0.00	6,025.1	-216.1	-692.0	-690.5	2.00	-2.00	0.00
Start Build 20.47									
6,100.0	4.51	90.00	6,047.1	-216.1	-691.1	-689.6	20.47	20.47	0.00
6,200.0	24.98	90.00	6,143.3	-216.1	-665.8	-664.3	20.47	20.47	0.00
6,300.0	45.45	90.00	6,224.6	-216.1	-608.5	-606.9	20.47	20.47	0.00
6,400.0	65.92	90.00	6,280.6	-216.1	-526.3	-524.8	20.47	20.47	0.00
6,500.0	86.39	90.00	6,304.4	-216.1	-429.7	-428.2	20.47	20.47	0.00
6,517.6	90.00	90.00	6,305.0	-216.1	-412.1	-410.6	20.47	20.47	0.00
Start DLS 0.03 TFO -90.00									
6,518.8	90.00	90.00	6,305.0	-216.1	-410.9	-409.4	0.00	0.00	0.00
22-23-5 BPI									
6,600.0	90.00	89.97	6,305.0	-216.0	-329.7	-328.2	0.03	0.00	-0.03
6,700.0	90.00	89.94	6,305.0	-216.0	-229.7	-228.2	0.03	0.00	-0.03
6,800.0	90.00	89.90	6,305.0	-215.8	-129.7	-128.2	0.03	0.00	-0.03
6,900.0	90.00	89.87	6,305.0	-215.6	-29.7	-28.2	0.03	0.00	-0.03
7,000.0	90.00	89.83	6,305.0	-215.4	70.3	71.8	0.03	0.00	-0.03
7,100.0	90.00	89.80	6,305.0	-215.0	170.3	171.8	0.03	0.00	-0.03
7,200.0	90.00	89.77	6,305.0	-214.7	270.3	271.8	0.03	0.00	-0.03
7,300.0	90.00	89.73	6,305.0	-214.2	370.3	371.8	0.03	0.00	-0.03
7,400.0	90.00	89.70	6,305.0	-213.7	470.3	471.7	0.03	0.00	-0.03
7,500.0	90.00	89.66	6,305.0	-213.2	570.3	571.7	0.03	0.00	-0.03
7,600.0	90.00	89.63	6,305.0	-212.5	670.3	671.7	0.03	0.00	-0.03
7,700.0	90.00	89.59	6,305.0	-211.9	770.2	771.7	0.03	0.00	-0.03
7,800.0	90.00	89.56	6,305.0	-211.1	870.2	871.7	0.03	0.00	-0.03
7,900.0	90.00	89.53	6,305.0	-210.3	970.2	971.7	0.03	0.00	-0.03
8,000.0	90.00	89.49	6,305.0	-209.5	1,070.2	1,071.7	0.03	0.00	-0.03
8,100.0	90.00	89.46	6,305.0	-208.6	1,170.2	1,171.7	0.03	0.00	-0.03
8,200.0	90.00	89.42	6,305.0	-207.6	1,270.2	1,271.7	0.03	0.00	-0.03
8,300.0	90.00	89.39	6,305.0	-206.5	1,370.2	1,371.6	0.03	0.00	-0.03

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<b>Site:</b>	HALE 8-60 22 SWNW SEC 22 T8N R80W 6TH PM	<b>MD Reference:</b>	KB 25 @ 4956.0ft
<b>Well:</b>	HALE 8-60 22-23-5	<b>North Reference:</b>	Grid
<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 (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,400.0	90.00	89.35	6,305.0	-205.4	1,470.2	1,471.6	0.03	0.00	-0.03
8,500.0	90.00	89.32	6,305.0	-204.3	1,570.2	1,571.6	0.03	0.00	-0.03
8,600.0	90.00	89.28	6,305.0	-203.1	1,670.2	1,671.6	0.03	0.00	-0.03
8,700.0	90.00	89.25	6,305.0	-201.8	1,770.2	1,771.6	0.03	0.00	-0.03
8,800.0	90.00	89.22	6,305.0	-200.4	1,870.2	1,871.6	0.03	0.00	-0.03
8,900.0	90.00	89.18	6,305.0	-199.1	1,970.2	1,971.5	0.03	0.00	-0.03
9,000.0	90.00	89.15	6,305.0	-197.6	2,070.2	2,071.5	0.03	0.00	-0.03
9,100.0	90.00	89.11	6,305.0	-196.1	2,170.2	2,171.5	0.03	0.00	-0.03
9,200.0	90.00	89.08	6,305.0	-194.5	2,270.1	2,271.5	0.03	0.00	-0.03
9,300.0	90.00	89.04	6,305.0	-192.9	2,370.1	2,371.4	0.03	0.00	-0.03
9,400.0	90.00	89.01	6,305.0	-191.2	2,470.1	2,471.4	0.03	0.00	-0.03
9,500.0	90.00	88.98	6,305.0	-189.4	2,570.1	2,571.4	0.03	0.00	-0.03
9,600.0	90.00	88.94	6,305.0	-187.6	2,670.1	2,671.3	0.03	0.00	-0.03
9,700.0	90.00	88.91	6,305.0	-185.7	2,770.1	2,771.3	0.03	0.00	-0.03
9,800.0	90.00	88.87	6,305.0	-183.8	2,870.0	2,871.3	0.03	0.00	-0.03
9,900.0	90.00	88.84	6,305.0	-181.8	2,970.0	2,971.2	0.03	0.00	-0.03
10,000.0	90.00	88.80	6,305.0	-179.7	3,070.0	3,071.2	0.03	0.00	-0.03
10,100.0	90.00	88.77	6,305.0	-177.6	3,170.0	3,171.2	0.03	0.00	-0.03
10,200.0	90.00	88.74	6,305.0	-175.4	3,270.0	3,271.1	0.03	0.00	-0.03
10,300.0	90.00	88.70	6,305.0	-173.2	3,369.9	3,371.1	0.03	0.00	-0.03
10,400.0	90.00	88.67	6,305.0	-170.9	3,469.9	3,471.0	0.03	0.00	-0.03
10,500.0	90.00	88.63	6,305.0	-168.5	3,569.9	3,571.0	0.03	0.00	-0.03
10,600.0	90.00	88.60	6,305.0	-166.1	3,669.9	3,670.9	0.03	0.00	-0.03
10,700.0	90.00	88.56	6,305.0	-163.6	3,769.8	3,770.9	0.03	0.00	-0.03
10,800.0	90.00	88.53	6,305.0	-161.1	3,869.8	3,870.8	0.03	0.00	-0.03
10,900.0	90.00	88.50	6,305.0	-158.5	3,969.8	3,970.8	0.03	0.00	-0.03
11,000.0	90.00	88.46	6,305.0	-155.9	4,069.7	4,070.7	0.03	0.00	-0.03
11,100.0	90.00	88.43	6,305.0	-153.1	4,169.7	4,170.7	0.03	0.00	-0.03
11,200.0	90.00	88.39	6,305.0	-150.4	4,269.6	4,270.6	0.03	0.00	-0.03
11,300.0	90.00	88.36	6,305.0	-147.5	4,369.6	4,370.5	0.03	0.00	-0.03
11,400.0	90.00	88.32	6,305.0	-144.6	4,469.6	4,470.5	0.03	0.00	-0.03
11,500.0	90.00	88.29	6,305.0	-141.7	4,569.5	4,570.4	0.03	0.00	-0.03
11,600.0	90.00	88.25	6,305.0	-138.7	4,669.5	4,670.3	0.03	0.00	-0.03
11,700.0	90.00	88.22	6,305.0	-135.6	4,769.4	4,770.3	0.03	0.00	-0.03
11,800.0	90.00	88.19	6,305.0	-132.4	4,869.4	4,870.2	0.03	0.00	-0.03
11,900.0	90.00	88.15	6,305.0	-129.3	4,969.3	4,970.1	0.03	0.00	-0.03
12,000.0	90.00	88.12	6,305.0	-126.0	5,069.3	5,070.0	0.03	0.00	-0.03
12,100.0	90.00	88.08	6,305.0	-122.7	5,169.2	5,170.0	0.03	0.00	-0.03
12,200.0	90.00	88.05	6,305.0	-119.3	5,269.2	5,269.9	0.03	0.00	-0.03
12,300.0	90.00	88.01	6,305.0	-115.9	5,369.1	5,369.8	0.03	0.00	-0.03
12,400.0	90.00	87.98	6,305.0	-112.4	5,469.0	5,469.7	0.03	0.00	-0.03
12,500.0	90.00	87.95	6,305.0	-108.8	5,569.0	5,569.6	0.03	0.00	-0.03

## Survey Report

<b>Company:</b>	Bison Oil & Gas II, LLC	<b>Local Co-ordinate Reference:</b>	Well HALE 8-60 22-23-5
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB 25 @ 4956.0ft
<b>Site:</b>	HALE 8-60 22 SWNW SEC 22 T8N R80W 6TH PM	<b>MD Reference:</b>	KB 25 @ 4956.0ft
<b>Well:</b>	HALE 8-60 22-23-5	<b>North Reference:</b>	Grid
<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 (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,600.0	90.00	87.91	6,305.0	-105.2	5,668.9	5,669.5	0.03	0.00	-0.03
12,700.0	90.00	87.88	6,305.0	-101.5	5,768.8	5,769.4	0.03	0.00	-0.03
12,800.0	90.00	87.84	6,305.0	-97.8	5,868.8	5,869.3	0.03	0.00	-0.03
12,900.0	90.00	87.81	6,305.0	-94.0	5,968.7	5,969.2	0.03	0.00	-0.03
13,000.0	90.00	87.77	6,305.0	-90.2	6,068.6	6,069.1	0.03	0.00	-0.03
13,100.0	90.00	87.74	6,305.0	-86.2	6,168.6	6,169.0	0.03	0.00	-0.03
13,200.0	90.00	87.71	6,305.0	-82.3	6,268.5	6,268.9	0.03	0.00	-0.03
13,300.0	90.00	87.67	6,305.0	-78.2	6,368.4	6,368.8	0.03	0.00	-0.03
13,400.0	90.00	87.64	6,305.0	-74.1	6,468.3	6,468.7	0.03	0.00	-0.03
13,500.0	90.00	87.60	6,305.0	-70.0	6,568.2	6,568.6	0.03	0.00	-0.03
13,600.0	90.00	87.57	6,305.0	-65.8	6,668.1	6,668.4	0.03	0.00	-0.03
13,700.0	90.00	87.53	6,305.0	-61.5	6,768.0	6,768.3	0.03	0.00	-0.03
13,800.0	90.00	87.50	6,305.0	-57.2	6,867.9	6,868.2	0.03	0.00	-0.03
13,871.9	90.00	87.47	6,305.0	-54.0	6,939.8	6,940.0	0.03	0.00	-0.03
<b>Start 100.0 hold at 13871.9 MD - 22-23-5 EPI</b>									
13,900.0	90.00	87.47	6,305.0	-52.8	6,967.9	6,968.1	0.00	0.00	0.00
13,971.8	90.00	87.47	6,305.0	-49.6	7,039.6	7,039.7	0.00	0.00	0.00
<b>22-23-5 BHL</b>									
13,971.9	90.00	87.47	6,305.0	-49.6	7,039.7	7,039.9	0.00	0.00	0.00
<b>TD at 13971.9</b>									

## Survey Report

<b>Company:</b>	Bison Oil & Gas II, LLC	<b>Local Co-ordinate Reference:</b>	Well HALE 8-60 22-23-5
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB 25 @ 4956.0ft
<b>Site:</b>	HALE 8-60 22 SWNW SEC 22 T8N R80W 6TH PM	<b>MD Reference:</b>	KB 25 @ 4956.0ft
<b>Well:</b>	HALE 8-60 22-23-5	<b>North Reference:</b>	Grid
<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

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
800	800	0	0	Start Build 2.00
1230	1228	-10	-31	Start 4418.1 hold at 1229.9 MD
5648	5597	-206	-661	Start Drop -2.00
6078	6025	-216	-692	Start Build 20.47
6518	6305	-216	-412	Start DLS 0.03 TFO -90.00
13,872	6305	-54	6940	Start 100.0 hold at 13871.9 MD
13,972	6305	-50	7040	TD at 13971.9