

BISON OIL & GAS II

**WELD COUNTY
SEC 18-T8N-R60W
ROSS 8-60 18-7-7**

OWB

Design: FINAL SURVEY

Standard Survey Report

02 June, 2022

Project: WELD COUNTY
Site: SEC 18-T8N-R60W
Well: ROSS 8-60 18-7-7
Wellbore: OWB
Design: FINAL SURVEY

PROJECT DETAILS: WELD COUNTY
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level



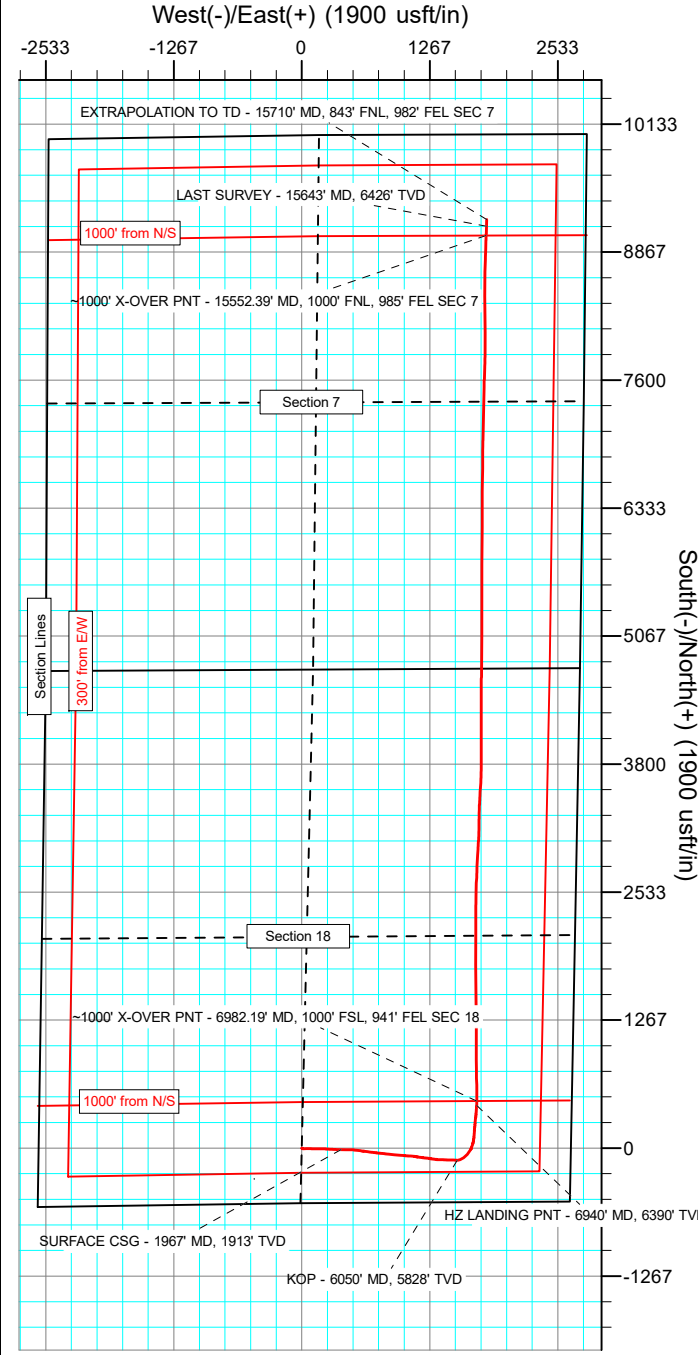
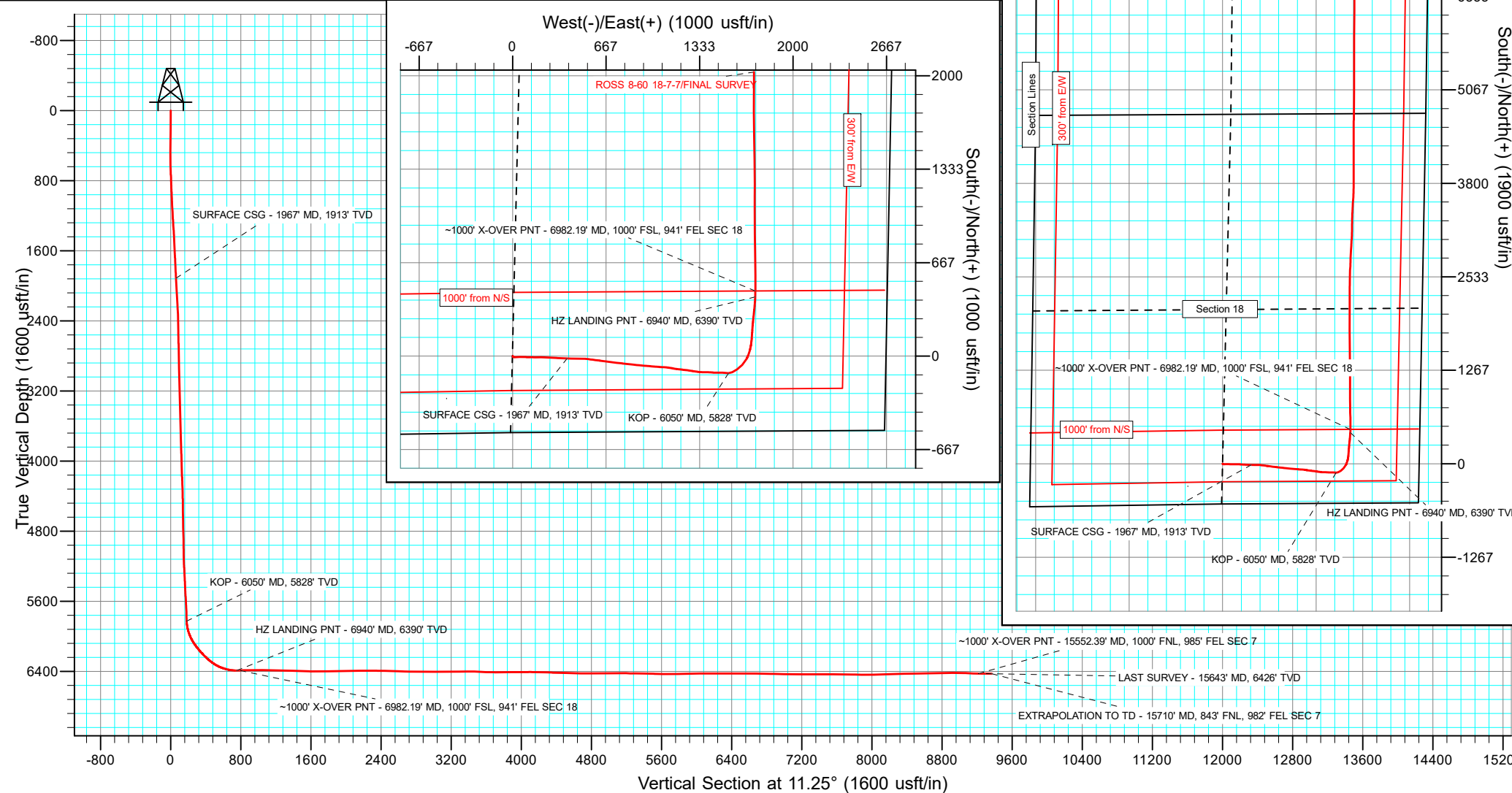
Azimuths to True North
Magnetic North: 7.44°
Magnetic Field
Strength: 52056.4snT
Dip Angle: 66.91°
Date: 5/4/2022
Model: IGRF2020

WELL DETAILS: ROSS 8-60 18-7-7

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1484918.66	3378840.09	40.656490°N	104.134543°W	

ANNOTATIONS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation		
1967.00	17.28	91.83	1912.95	-16.29	388.25	59.80	391.00	SURFACE CSG - 1967' MD, 1913' TVD		
6050.00	15.00	91.18	5827.92	-121.33	1539.33	181.43	1548.51	KOP - 6050' MD, 5828' TVD		
6940.00	90.03	1.93	6390.35	422.42	1729.73	751.89	2168.09	HZ LANDING PNT - 6940' MD, 6390' TVD		
6982.19	90.82	1.27	6389.91	464.59	1730.87	793.47	2210.26	~1000' X-OVER PNT - 6982.19' MD, 1000' FSL, 941' FEL SEC 18		
15552.39	88.98	1.69	6425.29	9031.06	1824.25	9213.42	10778.87	~1000' X-OVER PNT - 15552.39' MD, 1000' FNL, 985' FEL SEC 7		
15643.00	89.40	1.56	6426.11	9121.63	1826.68	9302.73	10869.47	LAST SURVEY - 15643' MD, 6426' TVD		
15710.00	89.40	1.56	6426.81	9188.60	1828.50	9368.77	10936.47	EXTRAPOLATION TO TD - 15710' MD, 843' FNL, 982' FEL SEC 7		

SHL:
545' FSL, 2663' FEL
Sec 18-T8N-R60W
~1000' X-OVER PNT:
1000' FSL, 941' FEL
Sec 18-T8N-R60W
~1000' X-OVER PNT:
1000' FNL, 985' FEL
Sec 7-T8N-R60W
BHL:
843' FNL, 982' FEL
Sec 7-T8N-R60W



Survey Report

Company:	BISON OIL & GAS II	Local Co-ordinate Reference:	Well ROSS 8-60 18-7-7
Project:	WELD COUNTY	TVD Reference:	KB 24' @ 4976.00usft
Site:	SEC 18-T8N-R60W	MD Reference:	KB 24' @ 4976.00usft
Well:	ROSS 8-60 18-7-7	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

Project	WELD COUNTY		
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		SEC 18-T8N-R60W					
Site Position:		Northing:	1,484,295.38	usft	Latitude:	40.654889°N	
From:	Lat/Long	Easting:	3,376,236.78	usft	Longitude:	104.143959°W	
Position Uncertainty:	0.00	usft	Slot Radius:	13.200	in	Grid Convergence:	0.88 °

Well	ROSS 8-60 18-7-7					
Well Position	+N/-S	0.00 usft	Northing:	1,484,918.67 usft	Latitude:	40.656490°N
	+E/-W	0.00 usft	Easting:	3,378,840.08 usft	Longitude:	104.134543°W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,952.00 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/4/2022	7.44	66.91	52,056.43492419

Design	FINAL SURVEY				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	11.25	

Survey Program	Date	6/2/2022			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
157.00	1,909.00	SURFACE SURVEY (OWB)	MWD	OWSG MWD - Standard	
2,021.00	15,710.00	FINAL SURVEY (OWB)	MWD	OWSG MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
157.00	1.15	124.74	156.99	-0.90	1.29	-0.63	0.73	0.73	0.00	
246.00	1.41	143.16	245.97	-2.28	2.69	-1.72	0.54	0.29	20.70	
335.00	2.47	125.93	334.92	-4.28	4.89	-3.25	1.35	1.19	-19.36	
424.00	3.45	113.32	423.80	-6.47	8.91	-4.61	1.32	1.10	-14.17	
513.00	4.37	89.84	512.59	-7.52	14.76	-4.50	2.05	1.03	-26.38	
602.00	4.37	87.72	601.34	-7.38	21.54	-3.03	0.18	0.00	-2.38	
691.00	7.07	85.30	689.88	-6.79	30.38	-0.73	3.05	3.03	-2.72	
781.00	10.21	88.25	778.85	-6.10	43.88	2.59	3.52	3.49	3.28	
869.00	13.48	90.85	864.97	-6.01	61.94	6.19	3.76	3.72	2.95	

Survey Report

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Site:	SEC 18-T8N-R60W	MD Reference:	KB 24' @ 4976.00usft
Well:	ROSS 8-60 18-7-7	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
958.00	15.02	91.99	951.23	-6.56	83.84	9.92	1.76	1.73	1.28
1,047.00	15.78	91.73	1,037.03	-7.33	107.46	13.78	0.86	0.85	-0.29
1,136.00	16.53	90.06	1,122.52	-7.71	132.22	18.24	0.99	0.84	-1.88
1,225.00	16.84	91.38	1,207.77	-8.03	157.76	22.91	0.55	0.35	1.48
1,315.00	18.07	89.53	1,293.62	-8.23	184.76	27.99	1.50	1.37	-2.06
1,404.00	18.82	89.70	1,378.05	-8.04	212.91	33.67	0.84	0.84	0.19
1,493.00	18.07	94.33	1,462.48	-9.01	241.04	38.21	1.85	-0.84	5.20
1,582.00	18.78	93.36	1,546.92	-10.89	269.10	41.84	0.87	0.80	-1.09
1,671.00	19.13	91.82	1,631.09	-12.19	297.98	46.20	0.69	0.39	-1.73
1,760.00	17.72	94.02	1,715.53	-13.61	326.07	50.29	1.77	-1.58	2.47
1,909.00	17.41	91.51	1,857.59	-15.78	370.97	56.92	0.55	-0.21	-1.68
1,967.00	17.28	91.83	1,912.95	-16.29	388.25	59.80	0.28	-0.23	0.55
SURFACE CSG - 1967' MD, 1913' TVD									
2,021.00	17.15	92.13	1,964.53	-16.84	404.22	62.38	0.28	-0.23	0.56
2,110.00	17.01	90.58	2,049.61	-17.46	430.35	66.87	0.54	-0.16	-1.74
2,199.00	16.48	90.06	2,134.83	-17.60	455.99	71.73	0.62	-0.60	-0.58
2,288.00	15.82	90.67	2,220.32	-17.76	480.75	76.41	0.77	-0.74	0.69
2,377.00	15.29	90.54	2,306.06	-18.01	504.61	80.82	0.60	-0.60	-0.15
2,466.00	16.39	97.59	2,391.69	-19.78	528.80	83.80	2.49	1.24	7.92
2,555.00	16.08	98.03	2,477.14	-23.16	553.45	85.30	0.37	-0.35	0.49
2,644.00	15.82	97.19	2,562.71	-26.40	577.69	86.85	0.39	-0.29	-0.94
2,733.00	15.47	96.97	2,648.41	-29.36	601.51	88.60	0.40	-0.39	-0.25
2,822.00	18.82	97.68	2,733.45	-32.72	627.52	90.38	3.77	3.76	0.80
2,911.00	18.52	98.12	2,817.76	-36.64	655.74	92.05	0.37	-0.34	0.49
3,000.00	18.21	97.42	2,902.23	-40.43	683.53	93.75	0.43	-0.35	-0.79
3,090.00	17.81	96.71	2,987.82	-43.85	711.14	95.78	0.51	-0.44	-0.79
3,179.00	17.01	97.06	3,072.74	-47.04	737.58	97.82	0.91	-0.90	0.39
3,268.00	16.35	96.05	3,158.00	-49.96	762.95	99.90	0.81	-0.74	-1.13
3,357.00	15.29	96.67	3,243.63	-52.65	787.07	101.98	1.21	-1.19	0.70
3,446.00	16.31	96.14	3,329.26	-55.35	811.15	104.03	1.16	1.15	-0.60
3,535.00	15.82	96.58	3,414.79	-58.07	835.63	106.13	0.57	-0.55	0.49
3,624.00	15.95	95.83	3,500.39	-60.70	859.84	108.28	0.27	0.15	-0.84
3,713.00	15.86	95.78	3,585.98	-63.17	884.11	110.59	0.10	-0.10	-0.06
3,802.00	15.95	95.52	3,671.57	-65.57	908.38	112.98	0.13	0.10	-0.29
3,891.00	15.69	94.73	3,757.20	-67.74	932.54	115.57	0.38	-0.29	-0.89
3,981.00	15.69	94.82	3,843.85	-69.77	956.80	118.31	0.03	0.00	0.10
4,069.00	15.33	94.64	3,928.64	-71.71	980.25	120.99	0.41	-0.41	-0.20
4,159.00	14.27	95.92	4,015.66	-73.81	1,003.14	123.39	1.23	-1.18	1.42
4,247.00	16.08	93.76	4,100.59	-75.73	1,026.09	125.99	2.15	2.06	-2.45
4,337.00	14.23	93.93	4,187.45	-77.31	1,049.57	129.02	2.06	-2.06	0.19
4,426.00	16.57	91.99	4,273.25	-78.50	1,073.17	132.46	2.69	2.63	-2.18
4,515.00	17.19	96.89	4,358.42	-80.52	1,098.91	135.50	1.74	0.70	5.51
4,604.00	15.42	98.74	4,443.84	-83.89	1,123.66	137.02	2.07	-1.99	2.08

Survey Report

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Project:	WELD COUNTY	TVD Reference:	KB 24' @ 4976.00usft
Site:	SEC 18-T8N-R60W	MD Reference:	KB 24' @ 4976.00usft
Well:	ROSS 8-60 18-7-7	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,693.00	17.50	102.26	4,529.19	-88.53	1,148.44	137.31	2.59	2.34	3.96	
4,782.00	17.59	94.73	4,614.06	-92.48	1,174.92	138.60	2.55	0.10	-8.46	
4,872.00	15.55	98.21	4,700.32	-95.33	1,200.42	140.79	2.52	-2.27	3.87	
4,983.00	17.50	95.43	4,806.73	-99.03	1,231.76	143.27	1.90	1.76	-2.50	
5,072.00	17.59	99.22	4,891.59	-102.45	1,258.36	145.11	1.29	0.10	4.26	
5,161.00	15.47	98.78	4,976.91	-106.42	1,283.36	146.10	2.39	-2.38	-0.49	
5,250.00	17.81	98.61	5,062.18	-110.27	1,308.55	147.24	2.63	2.63	-0.19	
5,339.00	18.34	94.07	5,146.79	-113.30	1,335.98	149.62	1.69	0.60	-5.10	
5,429.00	15.91	90.19	5,232.80	-114.35	1,362.44	153.76	2.98	-2.70	-4.31	
5,518.00	16.26	91.03	5,318.31	-114.61	1,387.10	158.31	0.47	0.39	0.94	
5,607.00	17.23	94.37	5,403.54	-115.84	1,412.70	162.10	1.53	1.09	3.75	
5,696.00	18.52	92.83	5,488.24	-117.54	1,439.97	165.75	1.54	1.45	-1.73	
5,785.00	16.57	87.15	5,573.10	-117.61	1,466.76	170.92	2.91	-2.19	-6.38	
5,874.00	15.91	92.35	5,658.56	-117.48	1,491.63	175.90	1.79	-0.74	5.84	
5,963.00	16.13	97.33	5,744.10	-119.56	1,516.08	178.63	1.56	0.25	5.60	
6,050.00	15.00	91.18	5,827.92	-121.33	1,539.33	181.43	2.29	-1.29	-7.07	
KOP - 6050' MD, 5828' TVD										
6,052.00	14.98	91.03	5,829.85	-121.34	1,539.84	181.52	2.29	-1.19	-7.58	
6,141.00	22.09	65.91	5,914.31	-114.70	1,566.70	193.28	11.85	7.99	-28.22	
6,230.00	30.36	55.11	5,994.12	-94.96	1,600.50	219.24	10.69	9.29	-12.13	
6,319.00	36.59	43.56	6,068.40	-62.81	1,637.30	257.95	9.99	7.00	-12.98	
6,409.00	40.30	27.22	6,139.06	-17.35	1,669.20	308.76	11.98	4.12	-18.16	
6,498.00	43.70	15.41	6,205.29	37.99	1,690.57	367.20	9.65	3.82	-13.27	
6,587.00	49.23	6.31	6,266.64	101.24	1,702.47	431.56	9.66	6.21	-10.22	
6,676.00	57.67	3.27	6,319.60	172.42	1,708.33	502.52	9.87	9.48	-3.42	
6,765.00	70.08	5.87	6,358.72	251.90	1,714.78	581.73	14.19	13.94	2.92	
6,854.00	79.19	6.14	6,382.28	337.16	1,723.75	667.10	10.24	10.24	0.30	
6,940.00	90.03	1.93	6,390.35	422.42	1,729.73	751.89	13.51	12.61	-4.90	
HZ LANDING PNT - 6940' MD, 6390' TVD										
6,943.00	90.41	1.78	6,390.34	425.42	1,729.83	754.85	13.51	12.62	-4.84	
6,982.19	90.82	1.27	6,389.92	464.59	1,730.87	793.47	1.66	1.05	-1.29	
~1000' X-OVER PNT - 6982.19' MD, 1000' FSL, 941' FEL SEC 18										
7,032.00	91.34	0.63	6,388.98	514.38	1,731.70	842.47	1.66	1.04	-1.29	
7,121.00	90.54	358.73	6,387.52	603.37	1,731.20	929.64	2.32	-0.90	-2.13	
7,210.00	91.25	358.82	6,386.13	692.34	1,729.30	1,016.53	0.80	0.80	0.10	
7,299.00	88.47	359.70	6,386.34	781.32	1,728.15	1,103.58	3.28	-3.12	0.99	
7,388.00	88.56	359.44	6,388.65	870.29	1,727.48	1,190.70	0.31	0.10	-0.29	
7,566.00	88.60	0.14	6,393.06	1,048.23	1,726.83	1,365.10	0.39	0.02	0.39	
7,655.00	88.33	0.06	6,395.45	1,137.20	1,726.99	1,452.38	0.32	-0.30	-0.09	
7,744.00	88.42	359.57	6,397.97	1,226.16	1,726.70	1,539.58	0.56	0.10	-0.55	
7,833.00	88.64	359.22	6,400.25	1,315.13	1,725.76	1,626.65	0.46	0.25	-0.39	
7,922.00	90.90	359.84	6,400.61	1,404.12	1,725.03	1,713.79	2.63	2.54	0.70	
8,011.00	91.16	359.40	6,399.01	1,493.10	1,724.44	1,800.94	0.57	0.29	-0.49	
8,100.00	90.68	358.43	6,397.58	1,582.07	1,722.75	1,887.88	1.22	-0.54	-1.09	

Survey Report

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Project:	WELD COUNTY	TVD Reference:	KB 24' @ 4976.00usft
Site:	SEC 18-T8N-R60W	MD Reference:	KB 24' @ 4976.00usft
Well:	ROSS 8-60 18-7-7	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,189.00	90.59	358.38	6,396.59	1,671.03	1,720.28	1,974.64	0.12	-0.10	-0.06
8,278.00	91.16	0.81	6,395.23	1,760.01	1,719.65	2,061.79	2.80	0.64	2.73
8,367.00	91.60	0.63	6,393.09	1,848.98	1,720.77	2,149.26	0.53	0.49	-0.20
8,456.00	89.75	0.59	6,392.04	1,937.96	1,721.71	2,236.72	2.08	-2.08	-0.04
8,545.00	89.62	359.09	6,392.53	2,026.96	1,721.47	2,323.96	1.69	-0.15	-1.69
8,635.00	88.95	0.81	6,393.66	2,116.95	1,721.39	2,412.20	2.05	-0.74	1.91
8,724.00	88.47	359.84	6,395.66	2,205.92	1,721.89	2,499.56	1.22	-0.54	-1.09
8,813.00	88.25	0.14	6,398.21	2,294.88	1,721.88	2,586.81	0.42	-0.25	0.34
8,902.00	87.72	359.92	6,401.34	2,383.83	1,721.92	2,674.05	0.64	-0.60	-0.25
8,991.00	89.62	1.56	6,403.40	2,472.79	1,723.07	2,761.53	2.82	2.13	1.84
9,080.00	89.70	1.91	6,403.93	2,561.75	1,725.77	2,849.30	0.40	0.09	0.39
9,169.00	89.84	1.91	6,404.29	2,650.70	1,728.73	2,937.12	0.16	0.16	0.00
9,258.00	90.23	2.48	6,404.23	2,739.63	1,732.14	3,025.01	0.78	0.44	0.64
9,347.00	90.01	2.44	6,404.05	2,828.55	1,735.96	3,112.96	0.25	-0.25	-0.04
9,436.00	90.37	3.45	6,403.75	2,917.43	1,740.53	3,201.03	1.20	0.40	1.13
9,525.00	90.90	4.07	6,402.76	3,006.23	1,746.37	3,289.26	0.92	0.60	0.70
9,614.00	90.77	2.08	6,401.47	3,095.09	1,751.14	3,377.34	2.24	-0.15	-2.24
9,704.00	88.11	0.67	6,402.35	3,185.05	1,753.30	3,465.99	3.35	-2.96	-1.57
9,793.00	86.96	0.98	6,406.17	3,273.96	1,754.58	3,553.44	1.34	-1.29	0.35
9,882.00	88.64	1.91	6,409.59	3,362.86	1,756.83	3,641.07	2.16	1.89	1.04
9,971.00	90.23	3.14	6,410.47	3,451.76	1,760.75	3,729.03	2.26	1.79	1.38
10,060.00	90.63	3.49	6,409.80	3,540.61	1,765.89	3,817.17	0.60	0.45	0.39
10,149.00	90.94	3.67	6,408.58	3,629.43	1,771.45	3,905.37	0.40	0.35	0.20
10,238.00	90.23	0.94	6,407.67	3,718.34	1,775.03	3,993.27	3.17	-0.80	-3.07
10,327.00	90.37	0.50	6,407.21	3,807.34	1,776.15	4,080.77	0.52	0.16	-0.49
10,416.00	88.51	0.19	6,408.08	3,896.33	1,776.68	4,168.15	2.12	-2.09	-0.35
10,506.00	88.33	0.01	6,410.56	3,986.29	1,776.84	4,256.42	0.28	-0.20	-0.20
10,594.00	88.07	359.84	6,413.32	4,074.25	1,776.73	4,342.66	0.35	-0.30	-0.19
10,683.00	88.51	0.10	6,415.98	4,163.21	1,776.68	4,429.90	0.57	0.49	0.29
10,772.00	87.98	359.57	6,418.70	4,252.17	1,776.42	4,517.10	0.84	-0.60	-0.60
10,861.00	88.95	359.62	6,421.09	4,341.13	1,775.79	4,604.23	1.09	1.09	0.06
10,951.00	89.97	359.79	6,421.94	4,431.12	1,775.33	4,692.40	1.15	1.13	0.19
11,040.00	89.84	0.45	6,422.08	4,520.12	1,775.52	4,779.73	0.76	-0.15	0.74
11,129.00	90.06	0.81	6,422.16	4,609.12	1,776.50	4,867.20	0.47	0.25	0.40
11,218.00	90.32	1.16	6,421.87	4,698.10	1,778.03	4,954.77	0.49	0.29	0.39
11,307.00	90.94	1.25	6,420.89	4,787.08	1,779.90	5,042.40	0.70	0.70	0.10
11,396.00	89.75	0.59	6,420.35	4,876.06	1,781.33	5,129.95	1.53	-1.34	-0.74
11,485.00	88.60	0.50	6,421.63	4,965.05	1,782.17	5,217.39	1.30	-1.29	-0.10
11,574.00	89.62	359.57	6,423.02	5,054.04	1,782.23	5,304.68	1.55	1.15	-1.04
11,663.00	89.13	359.35	6,423.99	5,143.03	1,781.39	5,391.80	0.60	-0.55	-0.25
11,752.00	87.45	359.04	6,426.64	5,231.97	1,780.14	5,478.79	1.92	-1.89	-0.35
11,841.00	89.35	359.62	6,429.13	5,320.93	1,779.10	5,565.83	2.23	2.13	0.65
11,930.00	89.00	359.09	6,430.41	5,409.91	1,778.10	5,652.91	0.71	-0.39	-0.60

Survey Report

Company:	BISON OIL & GAS II	Local Co-ordinate Reference:	Well ROSS 8-60 18-7-7
Project:	WELD COUNTY	TVD Reference:	KB 24' @ 4976.00usft
Site:	SEC 18-T8N-R60W	MD Reference:	KB 24' @ 4976.00usft
Well:	ROSS 8-60 18-7-7	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
12,019.00	90.90	0.72	6,430.49	5,498.91	1,777.95	5,740.16	2.81	2.13	1.83	
12,108.00	91.60	1.33	6,428.54	5,587.87	1,779.54	5,827.72	1.04	0.79	0.69	
12,197.00	91.78	1.47	6,425.92	5,676.80	1,781.71	5,915.37	0.26	0.20	0.16	
12,286.00	90.63	0.72	6,424.05	5,765.77	1,783.41	6,002.96	1.54	-1.29	-0.84	
12,375.00	89.84	359.97	6,423.68	5,854.76	1,783.95	6,090.35	1.22	-0.89	-0.84	
12,464.00	89.22	359.66	6,424.41	5,943.76	1,783.66	6,177.57	0.78	-0.70	-0.35	
12,554.00	90.32	0.76	6,424.77	6,033.75	1,783.99	6,265.90	1.73	1.22	1.22	
12,643.00	90.19	0.76	6,424.38	6,122.75	1,785.17	6,353.41	0.15	-0.15	0.00	
12,732.00	89.79	0.01	6,424.39	6,211.74	1,785.77	6,440.82	0.96	-0.45	-0.84	
12,821.00	90.01	359.79	6,424.55	6,300.74	1,785.62	6,528.07	0.35	0.25	-0.25	
12,910.00	89.93	359.79	6,424.60	6,389.74	1,785.29	6,615.30	0.09	-0.09	0.00	
12,999.00	89.00	0.63	6,425.43	6,478.74	1,785.62	6,702.64	1.41	-1.04	0.94	
13,088.00	88.56	0.41	6,427.32	6,567.71	1,786.42	6,790.07	0.55	-0.49	-0.25	
13,177.00	89.26	1.16	6,429.02	6,656.69	1,787.64	6,877.57	1.15	0.79	0.84	
13,266.00	89.53	0.89	6,429.95	6,745.67	1,789.23	6,965.15	0.43	0.30	-0.30	
13,355.00	88.16	359.53	6,431.75	6,834.64	1,789.56	7,052.48	2.17	-1.54	-1.53	
13,444.00	88.82	1.29	6,434.09	6,923.61	1,790.20	7,139.85	2.11	0.74	1.98	
13,533.00	90.85	1.82	6,434.35	7,012.57	1,792.61	7,227.58	2.36	2.28	0.60	
13,622.00	90.50	1.25	6,433.30	7,101.53	1,795.00	7,315.29	0.75	-0.39	-0.64	
13,711.00	90.15	0.67	6,432.80	7,190.52	1,796.49	7,402.86	0.76	-0.39	-0.65	
13,800.00	89.88	1.33	6,432.77	7,279.50	1,798.04	7,490.44	0.80	-0.30	0.74	
13,890.00	89.22	1.51	6,433.48	7,369.47	1,800.27	7,579.11	0.76	-0.73	0.20	
13,979.00	89.13	1.11	6,434.76	7,458.44	1,802.31	7,666.76	0.46	-0.10	-0.45	
14,068.00	88.73	1.25	6,436.42	7,547.40	1,804.14	7,754.38	0.48	-0.45	0.16	
14,157.00	89.75	2.17	6,437.60	7,636.35	1,806.79	7,842.13	1.54	1.15	1.03	
14,246.00	89.57	2.48	6,438.13	7,725.28	1,810.40	7,930.05	0.40	-0.20	0.35	
14,335.00	91.43	0.85	6,437.36	7,814.23	1,812.99	8,017.80	2.78	2.09	-1.83	
14,424.00	91.74	0.45	6,434.89	7,903.19	1,814.00	8,105.25	0.57	0.35	-0.45	
14,513.00	91.47	0.23	6,432.40	7,992.15	1,814.53	8,192.60	0.39	-0.30	-0.25	
14,602.00	91.65	359.75	6,429.98	8,081.12	1,814.51	8,279.85	0.58	0.20	-0.54	
14,691.00	91.25	359.48	6,427.73	8,170.09	1,813.91	8,367.00	0.54	-0.45	-0.30	
14,780.00	91.25	359.40	6,425.79	8,259.06	1,813.04	8,454.09	0.09	0.00	-0.09	
14,869.00	91.30	0.28	6,423.80	8,348.04	1,812.80	8,541.31	0.99	0.06	0.99	
14,958.00	91.03	359.79	6,422.00	8,437.02	1,812.85	8,628.59	0.63	-0.30	-0.55	
15,047.00	90.85	359.75	6,420.54	8,526.01	1,812.49	8,715.79	0.21	-0.20	-0.04	
15,136.00	90.81	359.66	6,419.25	8,615.00	1,812.03	8,802.98	0.11	-0.04	-0.10	
15,225.00	90.72	1.82	6,418.06	8,703.98	1,813.18	8,890.48	2.43	-0.10	2.43	
15,314.00	89.31	1.82	6,418.03	8,792.93	1,816.01	8,978.27	1.58	-1.58	0.00	
15,403.00	88.16	2.00	6,420.00	8,881.86	1,818.98	9,066.06	1.31	-1.29	0.20	
15,492.00	87.45	2.17	6,423.41	8,970.73	1,822.21	9,153.86	0.82	-0.80	0.19	
15,552.39	88.98	1.69	6,425.29	9,031.06	1,824.25	9,213.42	2.65	2.53	-0.79	
~1000' X-OVER PNT - 15552.39' MD, 1000' FNL, 985' FEL SEC 7										
15,581.00	89.70	1.47	6,425.62	9,059.66	1,825.04	9,241.63	2.65	2.53	-0.79	
15,643.00	89.40	1.56	6,426.11	9,121.63	1,826.68	9,302.73	0.51	-0.48	0.15	

Survey Report

Company:	BISON OIL & GAS II	Local Co-ordinate Reference:	Well ROSS 8-60 18-7-7
Project:	WELD COUNTY	TVD Reference:	KB 24' @ 4976.00usft
Site:	SEC 18-T8N-R60W	MD Reference:	KB 24' @ 4976.00usft
Well:	ROSS 8-60 18-7-7	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
LAST SURVEY - 15643' MD, 6426' TVD									
15,710.00	89.40	1.56	6,426.81	9,188.60	1,828.50	9,368.77	0.00	0.00	0.00
EXTRAPOLATION TO TD - 15710' MD, 843' FNL, 982' FEL SEC 7									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL-ROSS 8-60 7	0.00	0.00	6,393.00	9,181.16	1,798.67	1,494,126.27	3,380,497.14	40.681690°N	104.128058°W
- actual wellpath misses target center by 44.88usft at 15701.40usft MD (6426.72 TVD, 9180.00 N, 1828.27 E)									
- Point									
LP-ROSS 8-60 7	0.00	0.00	6,393.00	464.59	1,712.46	1,485,409.56	3,380,545.16	40.657765°N	104.128371°W
- actual wellpath misses target center by 18.66usft at 6981.66usft MD (6389.92 TVD, 464.06 N, 1730.86 E)									
- Point									
EPI-ROSS 8-60 7	0.00	0.00	6,393.00	9,031.06	1,798.12	1,493,976.18	3,380,498.91	40.681278°N	104.128060°W
- actual wellpath misses target center by 41.52usft at 15550.50usft MD (6425.26 TVD, 9029.17 N, 1824.19 E)									
- Point									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,967.00	1,912.95	-16.29	388.25	SURFACE CSG - 1967' MD, 1913' TVD	
6,050.00	5,827.92	-121.33	1,539.33	KOP - 6050' MD, 5828' TVD	
6,940.00	6,390.35	422.42	1,729.73	HZ LANDING PNT - 6940' MD, 6390' TVD	
6,982.19	6,389.92	464.59	1,730.87	~1000' X-OVER PNT - 6982.19' MD, 1000' FSL, 941' FEL SEC 18	
15,552.39	6,425.29	9,031.06	1,824.25	~1000' X-OVER PNT - 15552.39' MD, 1000' FNL, 985' FEL SEC 7	
15,643.00	6,426.11	9,121.63	1,826.68	LAST SURVEY - 15643' MD, 6426' TVD	
15,710.00	6,426.81	9,188.60	1,828.50	EXTRAPOLATION TO TD - 15710' MD, 843' FNL, 982' FEL SEC 7	

Checked By: _____ Approved By: _____ Date: _____