

# **EXTRACTION OIL & GAS**

**Weld County**

**Sec 32-T6N-R67W**

**MILKSHAKE 31W-20-2N**

**ORIGINAL WELLBORE**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**09 November, 2017**



Project: Weld County  
Site: Sec 32-T6N-R67W  
Well: MILKSHAKE 31W-20-2N  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL 1



Azimuths to True North  
Magnetic North: 8.38°  
Magnetic Field  
Strength: 52482.1nT  
Dip Angle: 66.88°  
Date: 9/10/2016  
Model: IGRF2015

#### WELL DETAILS: MILKSHAKE 31W-20-2N

+N/-S	+E/-W	Northing	Ground Level: Easting	4948.00 Latitude	Longitude	Slot
0.00	0.00	1403337.39	3160245.84	40° 26' 20.886 N	104° 55' 27.466 W	

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1662.73	29.25	355.00	1600.00	364.00	-31.85	2.00	355.00	153.61	
4	1727.73	29.25	355.00	1656.71	395.64	-34.61	0.00	0.00	166.97	
5	1881.26	31.91	351.95	1788.88	473.20	-43.56	2.00	-31.61	201.74	
6	7617.74	31.91	351.95	6658.65	3475.29	-467.91	0.00	0.00	1620.77	
7	8474.95	90.00	270.07	7110.00	3754.20	-1038.92	10.00	-83.10	2252.57	MILKSHAKE 31W-2I
8	17861.14	90.00	270.07	7110.00	3765.80	-10425.11	0.00	0.00	11084.41	MILKSHAKE 31W-2I

#### ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	BUILD 2°/100'
1662.73	29.25	355.00	1600.00	364.00	-31.85	153.61	365.39	HOLD 29.25° INC
1727.73	29.25	355.00	1656.71	395.64	-34.61	166.97	397.15	DROP 2°/100'
1881.26	31.91	351.95	1788.88	473.20	-43.56	201.74	475.25	HOLD VERTICAL
7617.74	31.91	351.95	6658.65	3475.29	-467.91	1620.77	3507.18	KOP, BUILD 10°/100'
8474.95	90.00	270.07	7110.00	3754.20	-1038.92	2252.57	4224.88	LP @ 90° INC, 270.07° AZM HOLD
17861.14	90.00	270.07	7110.00	3765.80	-10425.11	11084.41	13611.08	TD at 17861.14' MD

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
MILKSHAKE 31W-2N LP	7110.00	3754.20	-1038.92	1407084.76	3159182.57	40° 26' 57.984 N	104° 55' 40.904 W	Point
- plan hits target center								
MILKSHAKE 31W-2N PBHL	7110.00	3765.80	-10425.11	1407035.43	3149796.51	40° 26' 58.078 N	104° 57' 42.318 W	Point
- plan hits target center								

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3590.00	4002.94	PARKMAN
4210.00	4733.29	SUSSEX
4675.00	5281.05	SHANNON
6945.00	7989.26	SHARON SPRINGS
6985.00	8055.44	NIOBRARA
7100.00	8358.73	NIO B

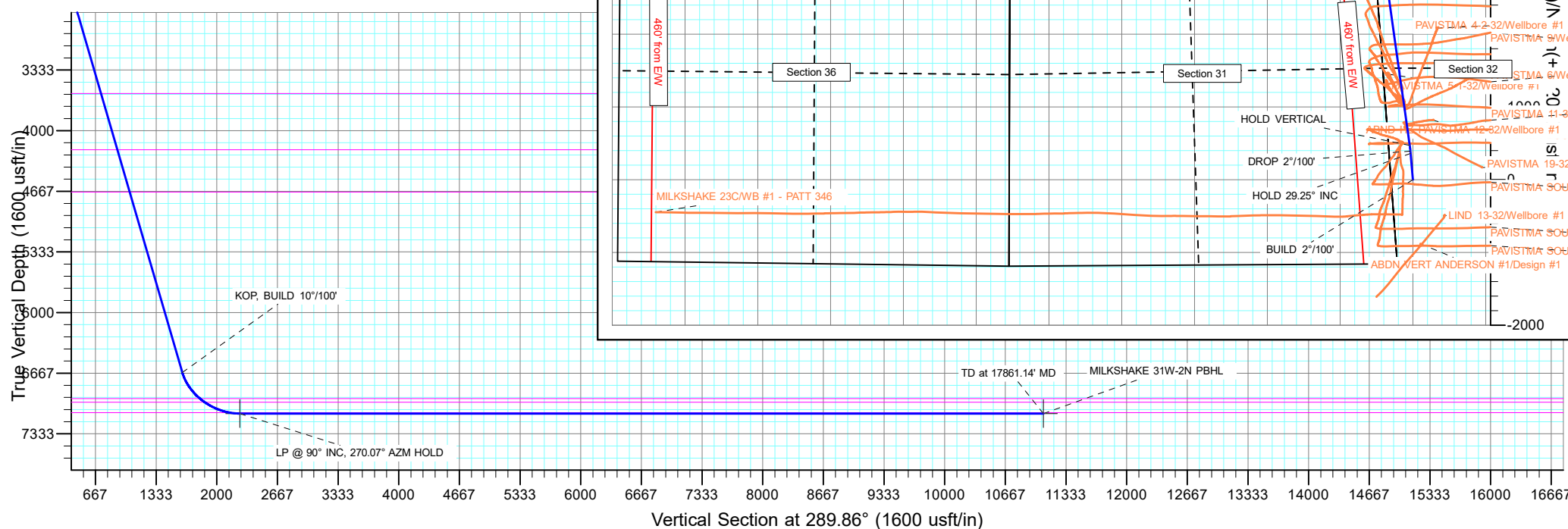
#### PROJECT DETAILS: Weld County

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

SHL:  
1154' FSL, 300' FWL  
Sec 32-T6N-R67W

LP:  
459' FNL, 460' FEL  
Sec 31-T6N-R67W

BHL:  
348' FNL, 460' FWL  
Sec 36-T6N-R67W



## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-2N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4973.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4973.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

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		

Site		Sec 32-T6N-R67W			
Site Position:		Northing:	1,403,778.12 usft	Latitude:	40° 26' 25.253 N
From:	Lat/Long	Easting:	3,160,062.89 usft	Longitude:	104° 55' 29.795 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.37 °

Well	MILKSHAKE 31W-20-2N					
Well Position	+N/-S	-441.90 usft	Northing:	1,403,337.39 usft	Latitude:	40° 26' 20.886 N
	+E/-W	180.09 usft	Easting:	3,160,245.84 usft	Longitude:	104° 55' 27.466 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,948.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/10/2016	8.38	66.88	52,482.14402704

Design	PROPOSAL 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	289.86

Plan Survey Tool Program			Date	11/9/2017	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,861.14	PROPOSAL 1 (ORIGINAL WELL	MWD OWSG	
			OWSG MWD - Standard		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,662.73	29.25	355.00	1,600.00	364.00	-31.85	2.00	2.00	0.00	355.00	
1,727.73	29.25	355.00	1,656.71	395.64	-34.61	0.00	0.00	0.00	0.00	
1,881.26	31.91	351.95	1,788.88	473.20	-43.56	2.00	1.73	-1.98	-31.61	
7,617.74	31.91	351.95	6,658.65	3,475.29	-467.91	0.00	0.00	0.00	0.00	
8,474.95	90.00	270.07	7,110.00	3,754.20	-1,038.92	10.00	6.78	-9.55	-83.10	MILKSHAKE 31W-2N
17,861.14	90.00	270.07	7,110.00	3,765.80	-10,425.11	0.00	0.00	0.00	0.00	MILKSHAKE 31W-2N

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-2N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4973.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4973.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

Planned 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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>BUILD 2°/100'</b>									
300.00	2.00	355.00	299.98	1.74	-0.15	0.73	2.00	2.00	0.00
400.00	4.00	355.00	399.84	6.95	-0.61	2.93	2.00	2.00	0.00
500.00	6.00	355.00	499.45	15.63	-1.37	6.60	2.00	2.00	0.00
600.00	8.00	355.00	598.70	27.77	-2.43	11.72	2.00	2.00	0.00
700.00	10.00	355.00	697.47	43.36	-3.79	18.30	2.00	2.00	0.00
800.00	12.00	355.00	795.62	62.36	-5.46	26.32	2.00	2.00	0.00
900.00	14.00	355.00	893.06	84.77	-7.42	35.78	2.00	2.00	0.00
1,000.00	16.00	355.00	989.64	110.55	-9.67	46.66	2.00	2.00	0.00
1,100.00	18.00	355.00	1,085.27	139.68	-12.22	58.95	2.00	2.00	0.00
1,200.00	20.00	355.00	1,179.82	172.11	-15.06	72.63	2.00	2.00	0.00
1,300.00	22.00	355.00	1,273.17	207.81	-18.18	87.70	2.00	2.00	0.00
1,400.00	24.00	355.00	1,365.21	246.73	-21.59	104.13	2.00	2.00	0.00
1,500.00	26.00	355.00	1,455.84	288.83	-25.27	121.89	2.00	2.00	0.00
1,600.00	28.00	355.00	1,544.94	334.05	-29.23	140.98	2.00	2.00	0.00
1,662.73	29.25	355.00	1,600.00	364.00	-31.85	153.61	2.00	2.00	0.00
<b>HOLD 29.25° INC</b>									
1,700.00	29.25	355.00	1,632.51	382.14	-33.43	161.27	0.00	0.00	0.00
1,727.73	29.25	355.00	1,656.71	395.64	-34.61	166.97	0.00	0.00	0.00
<b>DROP 2°/100'</b>									
1,800.00	30.49	353.51	1,719.37	431.45	-38.23	182.53	2.00	1.72	-2.07
1,881.26	31.91	351.95	1,788.88	473.20	-43.56	201.74	2.00	1.74	-1.91
<b>HOLD VERTICAL</b>									
1,900.00	31.91	351.95	1,804.79	483.01	-44.95	206.37	0.00	0.00	0.00
2,000.00	31.91	351.95	1,889.68	535.34	-52.35	231.11	0.00	0.00	0.00
2,100.00	31.91	351.95	1,974.57	587.68	-59.74	255.85	0.00	0.00	0.00
2,200.00	31.91	351.95	2,059.46	640.01	-67.14	280.58	0.00	0.00	0.00
2,300.00	31.91	351.95	2,144.35	692.34	-74.54	305.32	0.00	0.00	0.00
2,400.00	31.91	351.95	2,229.24	744.68	-81.94	330.06	0.00	0.00	0.00
2,500.00	31.91	351.95	2,314.14	797.01	-89.33	354.79	0.00	0.00	0.00
2,600.00	31.91	351.95	2,399.03	849.34	-96.73	379.53	0.00	0.00	0.00
2,700.00	31.91	351.95	2,483.92	901.68	-104.13	404.27	0.00	0.00	0.00
2,800.00	31.91	351.95	2,568.81	954.01	-111.53	429.01	0.00	0.00	0.00
2,900.00	31.91	351.95	2,653.70	1,006.34	-118.92	453.74	0.00	0.00	0.00
3,000.00	31.91	351.95	2,738.59	1,058.68	-126.32	478.48	0.00	0.00	0.00
3,100.00	31.91	351.95	2,823.48	1,111.01	-133.72	503.22	0.00	0.00	0.00
3,200.00	31.91	351.95	2,908.37	1,163.34	-141.11	527.95	0.00	0.00	0.00
3,300.00	31.91	351.95	2,993.26	1,215.68	-148.51	552.69	0.00	0.00	0.00
3,400.00	31.91	351.95	3,078.16	1,268.01	-155.91	577.43	0.00	0.00	0.00
3,500.00	31.91	351.95	3,163.05	1,320.34	-163.31	602.16	0.00	0.00	0.00
3,600.00	31.91	351.95	3,247.94	1,372.68	-170.70	626.90	0.00	0.00	0.00
3,700.00	31.91	351.95	3,332.83	1,425.01	-178.10	651.64	0.00	0.00	0.00
3,800.00	31.91	351.95	3,417.72	1,477.34	-185.50	676.37	0.00	0.00	0.00
3,900.00	31.91	351.95	3,502.61	1,529.68	-192.90	701.11	0.00	0.00	0.00
4,000.00	31.91	351.95	3,587.50	1,582.01	-200.29	725.85	0.00	0.00	0.00
4,002.94	31.91	351.95	3,590.00	1,583.55	-200.51	726.58	0.00	0.00	0.00
<b>PARKMAN</b>									
4,100.00	31.91	351.95	3,672.39	1,634.34	-207.69	750.59	0.00	0.00	0.00
4,200.00	31.91	351.95	3,757.28	1,686.68	-215.09	775.32	0.00	0.00	0.00
4,300.00	31.91	351.95	3,842.18	1,739.01	-222.48	800.06	0.00	0.00	0.00

# Planning Report

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<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4973.00usft
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<b>Well:</b>	MILKSHAKE 31W-20-2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

Planned 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)
4,400.00	31.91	351.95	3,927.07	1,791.34	-229.88	824.80	0.00	0.00	0.00
4,500.00	31.91	351.95	4,011.96	1,843.68	-237.28	849.53	0.00	0.00	0.00
4,600.00	31.91	351.95	4,096.85	1,896.01	-244.68	874.27	0.00	0.00	0.00
4,700.00	31.91	351.95	4,181.74	1,948.34	-252.07	899.01	0.00	0.00	0.00
4,733.29	31.91	351.95	4,210.00	1,965.76	-254.54	907.24	0.00	0.00	0.00
<b>SUSSEX</b>									
4,800.00	31.91	351.95	4,266.63	2,000.68	-259.47	923.74	0.00	0.00	0.00
4,900.00	31.91	351.95	4,351.52	2,053.01	-266.87	948.48	0.00	0.00	0.00
5,000.00	31.91	351.95	4,436.41	2,105.34	-274.26	973.22	0.00	0.00	0.00
5,100.00	31.91	351.95	4,521.30	2,157.68	-281.66	997.95	0.00	0.00	0.00
5,200.00	31.91	351.95	4,606.20	2,210.01	-289.06	1,022.69	0.00	0.00	0.00
5,281.05	31.91	351.95	4,675.00	2,252.42	-295.05	1,042.74	0.00	0.00	0.00
<b>SHANNON</b>									
5,300.00	31.91	351.95	4,691.09	2,262.34	-296.46	1,047.43	0.00	0.00	0.00
5,400.00	31.91	351.95	4,775.98	2,314.68	-303.85	1,072.16	0.00	0.00	0.00
5,500.00	31.91	351.95	4,860.87	2,367.01	-311.25	1,096.90	0.00	0.00	0.00
5,600.00	31.91	351.95	4,945.76	2,419.34	-318.65	1,121.64	0.00	0.00	0.00
5,700.00	31.91	351.95	5,030.65	2,471.68	-326.05	1,146.38	0.00	0.00	0.00
5,800.00	31.91	351.95	5,115.54	2,524.01	-333.44	1,171.11	0.00	0.00	0.00
5,900.00	31.91	351.95	5,200.43	2,576.34	-340.84	1,195.85	0.00	0.00	0.00
6,000.00	31.91	351.95	5,285.32	2,628.68	-348.24	1,220.59	0.00	0.00	0.00
6,100.00	31.91	351.95	5,370.22	2,681.01	-355.63	1,245.32	0.00	0.00	0.00
6,200.00	31.91	351.95	5,455.11	2,733.34	-363.03	1,270.06	0.00	0.00	0.00
6,300.00	31.91	351.95	5,540.00	2,785.68	-370.43	1,294.80	0.00	0.00	0.00
6,400.00	31.91	351.95	5,624.89	2,838.01	-377.83	1,319.53	0.00	0.00	0.00
6,500.00	31.91	351.95	5,709.78	2,890.34	-385.22	1,344.27	0.00	0.00	0.00
6,600.00	31.91	351.95	5,794.67	2,942.68	-392.62	1,369.01	0.00	0.00	0.00
6,700.00	31.91	351.95	5,879.56	2,995.01	-400.02	1,393.74	0.00	0.00	0.00
6,800.00	31.91	351.95	5,964.45	3,047.34	-407.42	1,418.48	0.00	0.00	0.00
6,900.00	31.91	351.95	6,049.35	3,099.68	-414.81	1,443.22	0.00	0.00	0.00
7,000.00	31.91	351.95	6,134.24	3,152.01	-422.21	1,467.95	0.00	0.00	0.00
7,100.00	31.91	351.95	6,219.13	3,204.34	-429.61	1,492.69	0.00	0.00	0.00
7,200.00	31.91	351.95	6,304.02	3,256.68	-437.00	1,517.43	0.00	0.00	0.00
7,300.00	31.91	351.95	6,388.91	3,309.01	-444.40	1,542.17	0.00	0.00	0.00
7,400.00	31.91	351.95	6,473.80	3,361.34	-451.80	1,566.90	0.00	0.00	0.00
7,500.00	31.91	351.95	6,558.69	3,413.67	-459.20	1,591.64	0.00	0.00	0.00
7,600.00	31.91	351.95	6,643.58	3,466.01	-466.59	1,616.38	0.00	0.00	0.00
7,617.74	31.91	351.95	6,658.65	3,475.29	-467.91	1,620.77	0.00	0.00	0.00
<b>KOP, BUILD 10°/100'</b>									
7,650.00	32.44	345.98	6,685.96	3,492.13	-471.20	1,629.58	10.00	1.64	-18.53
7,700.00	33.79	337.16	6,727.86	3,517.97	-479.85	1,646.50	10.00	2.71	-17.64
7,750.00	35.72	329.06	6,768.96	3,543.32	-492.76	1,667.25	10.00	3.87	-16.19
7,800.00	38.14	321.78	6,808.94	3,567.98	-509.83	1,691.68	10.00	4.85	-14.57
7,850.00	40.97	315.29	6,847.51	3,591.78	-530.93	1,719.61	10.00	5.65	-12.97
7,900.00	44.12	309.54	6,884.35	3,614.52	-555.89	1,750.82	10.00	6.29	-11.50
7,950.00	47.52	304.43	6,919.21	3,636.04	-584.54	1,785.07	10.00	6.81	-10.22
7,989.26	50.34	300.80	6,945.00	3,651.97	-609.47	1,813.93	10.00	7.18	-9.24
<b>SHARON SPRINGS</b>									
8,000.00	51.13	299.86	6,951.80	3,656.17	-616.65	1,822.11	10.00	7.35	-8.75
8,050.00	54.90	295.75	6,981.89	3,674.76	-651.97	1,861.65	10.00	7.54	-8.23
8,055.44	55.31	295.32	6,985.00	3,676.68	-656.00	1,866.09	10.00	7.69	-7.80
<b>NIORARA</b>									
8,100.00	58.79	292.00	7,009.23	3,691.66	-690.24	1,903.39	10.00	7.80	-7.46

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-2N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4973.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4973.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

Planned 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)
8,150.00	62.78	288.55	7,033.64	3,706.75	-731.17	1,947.01	10.00	7.99	-6.89
8,200.00	66.86	285.35	7,054.91	3,719.92	-774.45	1,992.18	10.00	8.15	-6.41
8,250.00	70.99	282.33	7,072.89	3,731.05	-819.74	2,038.56	10.00	8.27	-6.03
8,300.00	75.17	279.46	7,087.44	3,740.08	-866.70	2,085.79	10.00	8.36	-5.74
8,350.00	79.39	276.70	7,098.45	3,746.93	-914.97	2,133.52	10.00	8.43	-5.52
8,358.73	80.13	276.23	7,100.00	3,747.89	-923.50	2,141.88	10.00	8.46	-5.42
NIO B									
8,400.00	83.62	274.02	7,105.83	3,751.54	-964.19	2,181.38	10.00	8.48	-5.36
8,450.00	87.88	271.38	7,109.54	3,753.88	-1,013.98	2,229.01	10.00	8.50	-5.28
8,474.95	90.00	270.07	7,110.00	3,754.20	-1,038.92	2,252.57	10.00	8.51	-5.25
LP @ 90° INC, 270.07° AZM HOLD									
8,500.00	90.00	270.07	7,110.00	3,754.23	-1,063.97	2,276.14	0.00	0.00	0.00
8,600.00	90.00	270.07	7,110.00	3,754.35	-1,163.97	2,370.24	0.00	0.00	0.00
8,700.00	90.00	270.07	7,110.00	3,754.48	-1,263.97	2,464.33	0.00	0.00	0.00
8,800.00	90.00	270.07	7,110.00	3,754.60	-1,363.97	2,558.43	0.00	0.00	0.00
8,900.00	90.00	270.07	7,110.00	3,754.73	-1,463.97	2,652.52	0.00	0.00	0.00
9,000.00	90.00	270.07	7,110.00	3,754.85	-1,563.97	2,746.61	0.00	0.00	0.00
9,100.00	90.00	270.07	7,110.00	3,754.97	-1,663.97	2,840.71	0.00	0.00	0.00
9,200.00	90.00	270.07	7,110.00	3,755.10	-1,763.97	2,934.80	0.00	0.00	0.00
9,300.00	90.00	270.07	7,110.00	3,755.22	-1,863.97	3,028.89	0.00	0.00	0.00
9,400.00	90.00	270.07	7,110.00	3,755.34	-1,963.97	3,122.99	0.00	0.00	0.00
9,500.00	90.00	270.07	7,110.00	3,755.47	-2,063.97	3,217.08	0.00	0.00	0.00
9,600.00	90.00	270.07	7,110.00	3,755.59	-2,163.97	3,311.18	0.00	0.00	0.00
9,700.00	90.00	270.07	7,110.00	3,755.71	-2,263.97	3,405.27	0.00	0.00	0.00
9,800.00	90.00	270.07	7,110.00	3,755.84	-2,363.97	3,499.36	0.00	0.00	0.00
9,900.00	90.00	270.07	7,110.00	3,755.96	-2,463.97	3,593.46	0.00	0.00	0.00
10,000.00	90.00	270.07	7,110.00	3,756.08	-2,563.97	3,687.55	0.00	0.00	0.00
10,100.00	90.00	270.07	7,110.00	3,756.21	-2,663.97	3,781.65	0.00	0.00	0.00
10,200.00	90.00	270.07	7,110.00	3,756.33	-2,763.97	3,875.74	0.00	0.00	0.00
10,300.00	90.00	270.07	7,110.00	3,756.46	-2,863.97	3,969.83	0.00	0.00	0.00
10,400.00	90.00	270.07	7,110.00	3,756.58	-2,963.97	4,063.93	0.00	0.00	0.00
10,500.00	90.00	270.07	7,110.00	3,756.70	-3,063.97	4,158.02	0.00	0.00	0.00
10,600.00	90.00	270.07	7,110.00	3,756.83	-3,163.97	4,252.12	0.00	0.00	0.00
10,700.00	90.00	270.07	7,110.00	3,756.95	-3,263.97	4,346.21	0.00	0.00	0.00
10,800.00	90.00	270.07	7,110.00	3,757.07	-3,363.97	4,440.30	0.00	0.00	0.00
10,900.00	90.00	270.07	7,110.00	3,757.20	-3,463.97	4,534.40	0.00	0.00	0.00
11,000.00	90.00	270.07	7,110.00	3,757.32	-3,563.97	4,628.49	0.00	0.00	0.00
11,100.00	90.00	270.07	7,110.00	3,757.44	-3,663.97	4,722.59	0.00	0.00	0.00
11,200.00	90.00	270.07	7,110.00	3,757.57	-3,763.97	4,816.68	0.00	0.00	0.00
11,300.00	90.00	270.07	7,110.00	3,757.69	-3,863.97	4,910.77	0.00	0.00	0.00
11,400.00	90.00	270.07	7,110.00	3,757.81	-3,963.97	5,004.87	0.00	0.00	0.00
11,500.00	90.00	270.07	7,110.00	3,757.94	-4,063.97	5,098.96	0.00	0.00	0.00
11,600.00	90.00	270.07	7,110.00	3,758.06	-4,163.97	5,193.05	0.00	0.00	0.00
11,700.00	90.00	270.07	7,110.00	3,758.19	-4,263.97	5,287.15	0.00	0.00	0.00
11,800.00	90.00	270.07	7,110.00	3,758.31	-4,363.97	5,381.24	0.00	0.00	0.00
11,900.00	90.00	270.07	7,110.00	3,758.43	-4,463.97	5,475.34	0.00	0.00	0.00
12,000.00	90.00	270.07	7,110.00	3,758.56	-4,563.97	5,569.43	0.00	0.00	0.00
12,100.00	90.00	270.07	7,110.00	3,758.68	-4,663.97	5,663.52	0.00	0.00	0.00
12,200.00	90.00	270.07	7,110.00	3,758.80	-4,763.97	5,757.62	0.00	0.00	0.00
12,300.00	90.00	270.07	7,110.00	3,758.93	-4,863.97	5,851.71	0.00	0.00	0.00
12,400.00	90.00	270.07	7,110.00	3,759.05	-4,963.97	5,945.81	0.00	0.00	0.00
12,500.00	90.00	270.07	7,110.00	3,759.17	-5,063.97	6,039.90	0.00	0.00	0.00
12,600.00	90.00	270.07	7,110.00	3,759.30	-5,163.97	6,133.99	0.00	0.00	0.00
12,700.00	90.00	270.07	7,110.00	3,759.42	-5,263.97	6,228.09	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-2N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4973.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4973.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

Planned 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)
12,800.00	90.00	270.07	7,110.00	3,759.54	-5,363.97	6,322.18	0.00	0.00	0.00
12,900.00	90.00	270.07	7,110.00	3,759.67	-5,463.97	6,416.28	0.00	0.00	0.00
13,000.00	90.00	270.07	7,110.00	3,759.79	-5,563.97	6,510.37	0.00	0.00	0.00
13,100.00	90.00	270.07	7,110.00	3,759.92	-5,663.97	6,604.46	0.00	0.00	0.00
13,200.00	90.00	270.07	7,110.00	3,760.04	-5,763.97	6,698.56	0.00	0.00	0.00
13,300.00	90.00	270.07	7,110.00	3,760.16	-5,863.97	6,792.65	0.00	0.00	0.00
13,400.00	90.00	270.07	7,110.00	3,760.29	-5,963.97	6,886.75	0.00	0.00	0.00
13,500.00	90.00	270.07	7,110.00	3,760.41	-6,063.97	6,980.84	0.00	0.00	0.00
13,600.00	90.00	270.07	7,110.00	3,760.53	-6,163.97	7,074.93	0.00	0.00	0.00
13,700.00	90.00	270.07	7,110.00	3,760.66	-6,263.97	7,169.03	0.00	0.00	0.00
13,800.00	90.00	270.07	7,110.00	3,760.78	-6,363.97	7,263.12	0.00	0.00	0.00
13,900.00	90.00	270.07	7,110.00	3,760.90	-6,463.97	7,357.21	0.00	0.00	0.00
14,000.00	90.00	270.07	7,110.00	3,761.03	-6,563.97	7,451.31	0.00	0.00	0.00
14,100.00	90.00	270.07	7,110.00	3,761.15	-6,663.97	7,545.40	0.00	0.00	0.00
14,200.00	90.00	270.07	7,110.00	3,761.27	-6,763.97	7,639.50	0.00	0.00	0.00
14,300.00	90.00	270.07	7,110.00	3,761.40	-6,863.97	7,733.59	0.00	0.00	0.00
14,400.00	90.00	270.07	7,110.00	3,761.52	-6,963.97	7,827.68	0.00	0.00	0.00
14,500.00	90.00	270.07	7,110.00	3,761.65	-7,063.97	7,921.78	0.00	0.00	0.00
14,600.00	90.00	270.07	7,110.00	3,761.77	-7,163.97	8,015.87	0.00	0.00	0.00
14,700.00	90.00	270.07	7,110.00	3,761.89	-7,263.97	8,109.97	0.00	0.00	0.00
14,800.00	90.00	270.07	7,110.00	3,762.02	-7,363.97	8,204.06	0.00	0.00	0.00
14,900.00	90.00	270.07	7,110.00	3,762.14	-7,463.97	8,298.15	0.00	0.00	0.00
15,000.00	90.00	270.07	7,110.00	3,762.26	-7,563.97	8,392.25	0.00	0.00	0.00
15,100.00	90.00	270.07	7,110.00	3,762.39	-7,663.97	8,486.34	0.00	0.00	0.00
15,200.00	90.00	270.07	7,110.00	3,762.51	-7,763.97	8,580.44	0.00	0.00	0.00
15,300.00	90.00	270.07	7,110.00	3,762.63	-7,863.97	8,674.53	0.00	0.00	0.00
15,400.00	90.00	270.07	7,110.00	3,762.76	-7,963.97	8,768.62	0.00	0.00	0.00
15,500.00	90.00	270.07	7,110.00	3,762.88	-8,063.97	8,862.72	0.00	0.00	0.00
15,600.00	90.00	270.07	7,110.00	3,763.00	-8,163.97	8,956.81	0.00	0.00	0.00
15,700.00	90.00	270.07	7,110.00	3,763.13	-8,263.97	9,050.90	0.00	0.00	0.00
15,800.00	90.00	270.07	7,110.00	3,763.25	-8,363.97	9,145.00	0.00	0.00	0.00
15,900.00	90.00	270.07	7,110.00	3,763.38	-8,463.97	9,239.09	0.00	0.00	0.00
16,000.00	90.00	270.07	7,110.00	3,763.50	-8,563.97	9,333.19	0.00	0.00	0.00
16,100.00	90.00	270.07	7,110.00	3,763.62	-8,663.97	9,427.28	0.00	0.00	0.00
16,200.00	90.00	270.07	7,110.00	3,763.75	-8,763.97	9,521.37	0.00	0.00	0.00
16,300.00	90.00	270.07	7,110.00	3,763.87	-8,863.97	9,615.47	0.00	0.00	0.00
16,400.00	90.00	270.07	7,110.00	3,763.99	-8,963.97	9,709.56	0.00	0.00	0.00
16,500.00	90.00	270.07	7,110.00	3,764.12	-9,063.97	9,803.66	0.00	0.00	0.00
16,600.00	90.00	270.07	7,110.00	3,764.24	-9,163.97	9,897.75	0.00	0.00	0.00
16,700.00	90.00	270.07	7,110.00	3,764.36	-9,263.97	9,991.84	0.00	0.00	0.00
16,800.00	90.00	270.07	7,110.00	3,764.49	-9,363.97	10,085.94	0.00	0.00	0.00
16,900.00	90.00	270.07	7,110.00	3,764.61	-9,463.97	10,180.03	0.00	0.00	0.00
17,000.00	90.00	270.07	7,110.00	3,764.73	-9,563.97	10,274.13	0.00	0.00	0.00
17,100.00	90.00	270.07	7,110.00	3,764.86	-9,663.97	10,368.22	0.00	0.00	0.00
17,200.00	90.00	270.07	7,110.00	3,764.98	-9,763.97	10,462.31	0.00	0.00	0.00
17,300.00	90.00	270.07	7,110.00	3,765.11	-9,863.97	10,556.41	0.00	0.00	0.00
17,400.00	90.00	270.07	7,110.00	3,765.23	-9,963.97	10,650.50	0.00	0.00	0.00
17,500.00	90.00	270.07	7,110.00	3,765.35	-10,063.97	10,744.60	0.00	0.00	0.00
17,600.00	90.00	270.07	7,110.00	3,765.48	-10,163.97	10,838.69	0.00	0.00	0.00
17,700.00	90.00	270.07	7,110.00	3,765.60	-10,263.97	10,932.78	0.00	0.00	0.00
17,800.00	90.00	270.07	7,110.00	3,765.72	-10,363.97	11,026.88	0.00	0.00	0.00
17,861.14	90.00	270.07	7,110.00	3,765.80	-10,425.11	11,084.41	0.00	0.00	0.00
TD at 17861.14' MD									

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-2N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4973.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4973.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
MILKSHAKE 31W-2N LF - plan hits target center - Point	0.00	0.00	7,110.00	3,754.20	-1,038.92	1,407,084.77	3,159,182.57	40° 26' 57.984 N	104° 55' 40.904 W
MILKSHAKE 31W-2N PI - plan hits target center - Point	0.00	0.00	7,110.00	3,765.80	-10,425.11	1,407,035.43	3,149,796.51	40° 26' 58.078 N	104° 57' 42.318 W

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
4,002.94	3,590.00	PARKMAN				
4,733.29	4,210.00	SUSSEX				
5,281.05	4,675.00	SHANNON				
7,989.26	6,945.00	SHARON SPRINGS				
8,055.44	6,985.00	NIOBRARA				
8,358.73	7,100.00	NIO B				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
200.00	200.00	0.00	0.00	BUILD 2°/100'
1,662.73	1,600.00	364.00	-31.85	HOLD 29.25° INC
1,727.73	1,656.71	395.64	-34.61	DROP 2°/100'
1,881.26	1,788.88	473.20	-43.56	HOLD VERTICAL
7,617.74	6,658.65	3,475.29	-467.91	KOP, BUILD 10°/100'
8,474.95	7,110.00	3,754.20	-1,038.92	LP @ 90° INC, 270.07° AZM HOLD
17,861.14	7,110.00	3,765.80	-10,425.11	TD at 17861.14' MD