

# **EXTRACTION OIL & GAS**

**Weld County**

**Sec 32-T6N-R67W**

**MILKSHAKE 31W-20-9N**

**ORIGINAL WELLBORE**

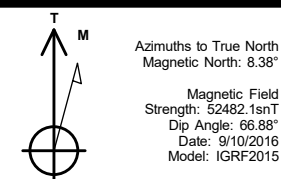
**Plan: PROPOSAL 1**

## **Standard Planning Report**

**07 September, 2017**



Project: Weld County  
Site: Sec 32-T6N-R67W  
Well: MILKSHAKE 31W-20-9N  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL 1



WELL DETAILS: MILKSHAKE 31W-20-9N

+N/-S	+E/-W	Northing	Ground Level: Easting	4947.00 Latitude	Longitude	Slot
0.00	0.00	1403349.28	3160169.49	40° 26' 21.008 N	104° 55' 28.452 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	
3	1607.16	14.14	348.55	1600.00	85.11	-17.24	2.00	348.55	30.67	
4	1672.16	14.14	348.55	1663.03	100.68	-20.39	0.00	0.00	36.28	
5	1774.51	16.07	351.21	1761.84	126.93	-25.04	2.00	21.09	45.08	
6	6791.46	16.07	351.21	6582.76	1499.35	-237.22	0.00	0.00	474.72	
7	7666.67	90.00	270.20	7110.00	1651.39	-809.11	10.00	-81.35	1063.59	MILKSHAKE 31W-9N
8	17224.87	90.00	270.20	7110.00	1685.25	-10367.25	0.00	0.00	10503.33	MILKSHAKE 31W-9N

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	BUILD 2°/100'
1607.16	14.14	348.55	1600.00	85.11	-17.24	30.67	86.84	HOLD 14.14° INC
1672.16	14.14	348.55	1663.03	100.68	-20.39	36.28	102.72	DROP 2°/100'
1774.51	16.07	351.21	1761.84	126.93	-25.04	45.08	129.39	HOLD VERTICAL
6791.46	16.07	351.21	6582.76	1499.35	-237.22	474.72	1518.12	KOP, BUILD 10°/100'
7666.67	90.00	270.20	7110.00	1651.39	-809.11	1063.59	2132.34	LP @ 90° INC, 270.20° AZM HOLD
17224.87	90.00	270.20	7110.00	1685.25	-10367.25	10503.33	11690.54	TD at 17224.87' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
MILKSHAKE 31W-9N LP - plan hits target center	7110.00	1651.39	-809.11	1404995.39	3159349.69	40° 26' 37.327 N	104° 55' 38.917 W	Point
MILKSHAKE 31W-9N PBHL - plan hits target center	7110.00	1685.25	-10367.25	1404967.22	3149791.52	40° 26' 37.640 N	104° 57' 42.545 W	Point

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3590.00	3677.01	PARKMAN
4210.00	4322.22	SUSSEX
4675.00	4806.13	SHANNON
6945.00	7211.41	SHARON SPRINGS
6985.00	7273.06	NIOBRARA
7100.00	7557.35	NIO B

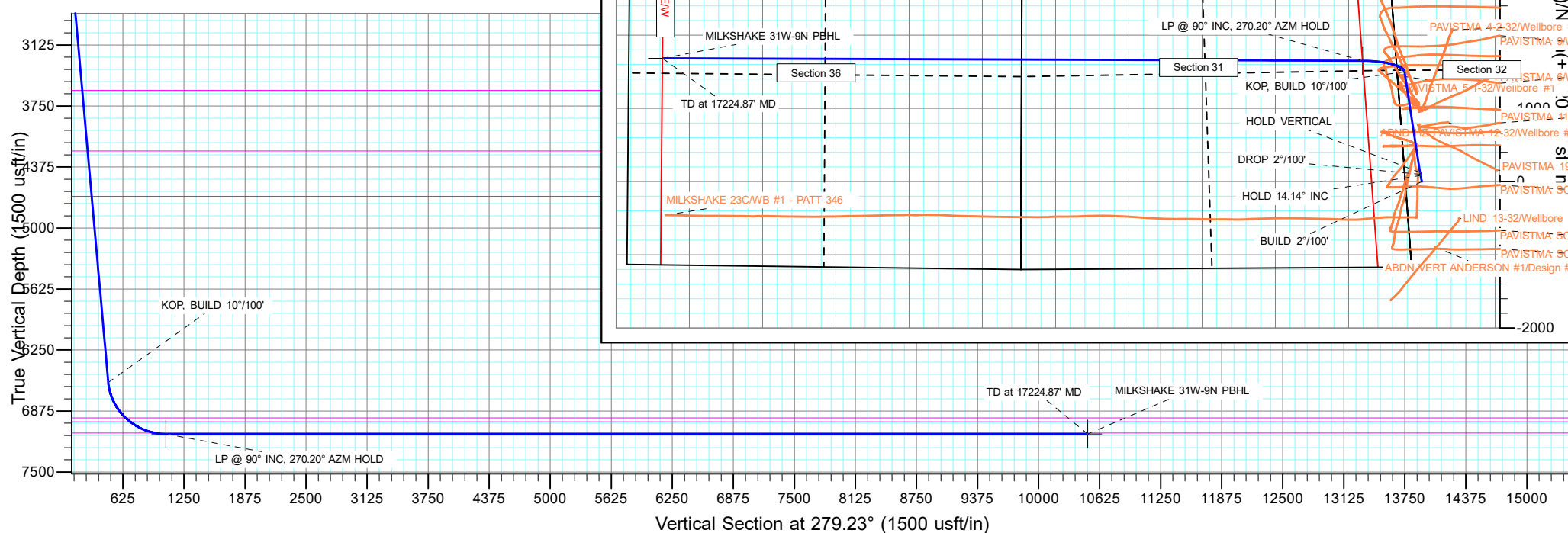
PROJECT DETAILS: Weld County

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

SHL:  
1167' FSL, 225' FWL  
Sec 32-T6N-R67W

LP:  
2553' FNL, 460' FEL  
Sec 31-T6N-R67W

BHL:  
2417' FNL, 460' FWL  
Sec 36-T6N-R67W



## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-9N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4972.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4972.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-9N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

<b>Project</b>	Weld County		
<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		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-20-9N					
Well Position	+N/-S	-429.52 usft	Northing:	1,403,349.28 usft	Latitude:	40° 26' 21.008 N
	+E/-W	103.82 usft	Easting:	3,160,169.50 usft	Longitude:	104° 55' 28.452 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,947.00 usft

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	9/10/2016	8.38	66.88	52,482.14063526

<b>Design</b>	PROPOSAL 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	279.23

<b>Plan Survey Tool Program</b>	<b>Date</b>	9/7/2017		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	17,224.87	PROPOSAL 1 (ORIGINAL WELL	MWD OWSG
			OWSG MWD - Standard	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,607.16	14.14	348.55	1,600.00	85.11	-17.24	2.00	2.00	0.00	348.55	
1,672.16	14.14	348.55	1,663.03	100.68	-20.39	0.00	0.00	0.00	0.00	
1,774.51	16.07	351.21	1,761.84	126.93	-25.04	2.00	1.88	2.60	21.09	
6,791.46	16.07	351.21	6,582.76	1,499.35	-237.22	0.00	0.00	0.00	0.00	
7,666.67	90.00	270.20	7,110.00	1,651.39	-809.11	10.00	8.45	-9.26	-81.35	MILKSHAKE 31W-9N
17,224.87	90.00	270.20	7,110.00	1,685.25	-10,367.25	0.00	0.00	0.00	0.00	MILKSHAKE 31W-9N

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-9N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4972.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4972.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-9N	<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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
BUILD 2°/100'									
1,000.00	2.00	348.55	999.98	1.71	-0.35	0.62	2.00	2.00	0.00
1,100.00	4.00	348.55	1,099.84	6.84	-1.39	2.46	2.00	2.00	0.00
1,200.00	6.00	348.55	1,199.45	15.38	-3.12	5.54	2.00	2.00	0.00
1,300.00	8.00	348.55	1,298.70	27.33	-5.53	9.85	2.00	2.00	0.00
1,400.00	10.00	348.55	1,397.47	42.66	-8.64	15.37	2.00	2.00	0.00
1,500.00	12.00	348.55	1,495.62	61.36	-12.43	22.11	2.00	2.00	0.00
1,607.16	14.14	348.55	1,600.00	85.11	-17.24	30.67	2.00	2.00	0.00
HOLD 14.14° INC									
1,672.16	14.14	348.55	1,663.03	100.68	-20.39	36.28	0.00	0.00	0.00
DROP 2°/100'									
1,700.00	14.66	349.34	1,689.99	107.47	-21.72	38.68	2.00	1.87	2.84
1,774.51	16.07	351.21	1,761.84	126.93	-25.04	45.08	2.00	1.89	2.51
HOLD VERTICAL									
1,800.00	16.07	351.21	1,786.33	133.91	-26.12	47.26	0.00	0.00	0.00
1,900.00	16.07	351.21	1,882.43	161.26	-30.35	55.83	0.00	0.00	0.00
2,000.00	16.07	351.21	1,978.52	188.62	-34.58	64.39	0.00	0.00	0.00
2,100.00	16.07	351.21	2,074.61	215.97	-38.80	72.95	0.00	0.00	0.00
2,200.00	16.07	351.21	2,170.70	243.33	-43.03	81.52	0.00	0.00	0.00
2,300.00	16.07	351.21	2,266.80	270.68	-47.26	90.08	0.00	0.00	0.00
2,400.00	16.07	351.21	2,362.89	298.04	-51.49	98.65	0.00	0.00	0.00
2,500.00	16.07	351.21	2,458.98	325.40	-55.72	107.21	0.00	0.00	0.00
2,600.00	16.07	351.21	2,555.07	352.75	-59.95	115.77	0.00	0.00	0.00
2,700.00	16.07	351.21	2,651.17	380.11	-64.18	124.34	0.00	0.00	0.00
2,800.00	16.07	351.21	2,747.26	407.46	-68.41	132.90	0.00	0.00	0.00
2,900.00	16.07	351.21	2,843.35	434.82	-72.64	141.46	0.00	0.00	0.00
3,000.00	16.07	351.21	2,939.44	462.17	-76.87	150.03	0.00	0.00	0.00
3,100.00	16.07	351.21	3,035.54	489.53	-81.10	158.59	0.00	0.00	0.00
3,200.00	16.07	351.21	3,131.63	516.89	-85.33	167.16	0.00	0.00	0.00
3,300.00	16.07	351.21	3,227.72	544.24	-89.56	175.72	0.00	0.00	0.00
3,400.00	16.07	351.21	3,323.81	571.60	-93.79	184.28	0.00	0.00	0.00
3,500.00	16.07	351.21	3,419.91	598.95	-98.01	192.85	0.00	0.00	0.00
3,600.00	16.07	351.21	3,516.00	626.31	-102.24	201.41	0.00	0.00	0.00
3,677.01	16.07	351.21	3,590.00	647.37	-105.50	208.01	0.00	0.00	0.00
PARKMAN									
3,700.00	16.07	351.21	3,612.09	653.66	-106.47	209.97	0.00	0.00	0.00
3,800.00	16.07	351.21	3,708.18	681.02	-110.70	218.54	0.00	0.00	0.00
3,900.00	16.07	351.21	3,804.28	708.38	-114.93	227.10	0.00	0.00	0.00
4,000.00	16.07	351.21	3,900.37	735.73	-119.16	235.67	0.00	0.00	0.00
4,100.00	16.07	351.21	3,996.46	763.09	-123.39	244.23	0.00	0.00	0.00
4,200.00	16.07	351.21	4,092.56	790.44	-127.62	252.79	0.00	0.00	0.00
4,300.00	16.07	351.21	4,188.65	817.80	-131.85	261.36	0.00	0.00	0.00
4,322.22	16.07	351.21	4,210.00	823.88	-132.79	263.26	0.00	0.00	0.00

# Planning Report

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<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4972.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4972.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-9N	<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)
<b>SUSSEX</b>									
4,400.00	16.07	351.21	4,284.74	845.15	-136.08	269.92	0.00	0.00	0.00
4,500.00	16.07	351.21	4,380.83	872.51	-140.31	278.48	0.00	0.00	0.00
4,600.00	16.07	351.21	4,476.93	899.87	-144.54	287.05	0.00	0.00	0.00
4,700.00	16.07	351.21	4,573.02	927.22	-148.77	295.61	0.00	0.00	0.00
4,800.00	16.07	351.21	4,669.11	954.58	-153.00	304.18	0.00	0.00	0.00
4,806.13	16.07	351.21	4,675.00	956.25	-153.26	304.70	0.00	0.00	0.00
<b>SHANNON</b>									
4,900.00	16.07	351.21	4,765.20	981.93	-157.23	312.74	0.00	0.00	0.00
5,000.00	16.07	351.21	4,861.30	1,009.29	-161.45	321.30	0.00	0.00	0.00
5,100.00	16.07	351.21	4,957.39	1,036.64	-165.68	329.87	0.00	0.00	0.00
5,200.00	16.07	351.21	5,053.48	1,064.00	-169.91	338.43	0.00	0.00	0.00
5,300.00	16.07	351.21	5,149.57	1,091.36	-174.14	346.99	0.00	0.00	0.00
5,400.00	16.07	351.21	5,245.67	1,118.71	-178.37	355.56	0.00	0.00	0.00
5,500.00	16.07	351.21	5,341.76	1,146.07	-182.60	364.12	0.00	0.00	0.00
5,600.00	16.07	351.21	5,437.85	1,173.42	-186.83	372.68	0.00	0.00	0.00
5,700.00	16.07	351.21	5,533.94	1,200.78	-191.06	381.25	0.00	0.00	0.00
5,800.00	16.07	351.21	5,630.04	1,228.13	-195.29	389.81	0.00	0.00	0.00
5,900.00	16.07	351.21	5,726.13	1,255.49	-199.52	398.38	0.00	0.00	0.00
6,000.00	16.07	351.21	5,822.22	1,282.85	-203.75	406.94	0.00	0.00	0.00
6,100.00	16.07	351.21	5,918.31	1,310.20	-207.98	415.50	0.00	0.00	0.00
6,200.00	16.07	351.21	6,014.41	1,337.56	-212.21	424.07	0.00	0.00	0.00
6,300.00	16.07	351.21	6,110.50	1,364.91	-216.44	432.63	0.00	0.00	0.00
6,400.00	16.07	351.21	6,206.59	1,392.27	-220.67	441.19	0.00	0.00	0.00
6,500.00	16.07	351.21	6,302.68	1,419.62	-224.89	449.76	0.00	0.00	0.00
6,600.00	16.07	351.21	6,398.78	1,446.98	-229.12	458.32	0.00	0.00	0.00
6,700.00	16.07	351.21	6,494.87	1,474.34	-233.35	466.89	0.00	0.00	0.00
6,791.46	16.07	351.21	6,582.76	1,499.35	-237.22	474.72	0.00	0.00	0.00
<b>KOP, BUILD 10°/100'</b>									
6,800.00	16.22	348.19	6,590.96	1,501.69	-237.65	475.51	10.00	1.75	-35.41
6,850.00	17.89	332.04	6,638.79	1,515.32	-242.68	482.67	10.00	3.33	-32.29
6,900.00	20.63	319.31	6,686.00	1,528.78	-252.03	494.05	10.00	5.48	-25.47
6,950.00	24.08	309.75	6,732.26	1,541.99	-265.62	509.59	10.00	6.90	-19.11
7,000.00	27.97	302.59	6,777.19	1,554.84	-283.35	529.15	10.00	7.80	-14.32
7,050.00	32.16	297.11	6,820.46	1,567.23	-305.09	552.59	10.00	8.37	-10.96
7,100.00	36.53	292.79	6,861.74	1,579.06	-330.66	579.74	10.00	8.74	-8.64
7,150.00	41.02	289.29	6,900.72	1,590.26	-359.89	610.38	10.00	8.99	-7.00
7,200.00	45.60	286.38	6,937.09	1,600.72	-392.53	644.28	10.00	9.17	-5.83
7,211.41	46.66	285.78	6,945.00	1,603.00	-400.44	652.45	10.00	9.25	-5.27
<b>SHARON SPRINGS</b>									
7,250.00	50.25	283.89	6,970.59	1,610.38	-428.35	681.19	10.00	9.31	-4.89
7,273.06	52.41	282.85	6,985.00	1,614.54	-445.87	699.15	10.00	9.37	-4.49
<b>NIORARA</b>									
7,300.00	54.95	281.72	7,000.95	1,619.16	-467.07	720.82	10.00	9.41	-4.22
7,350.00	59.67	279.78	7,027.95	1,626.99	-508.40	762.87	10.00	9.46	-3.87
7,400.00	64.43	278.03	7,051.38	1,633.81	-552.03	807.02	10.00	9.51	-3.51
7,450.00	69.20	276.41	7,071.07	1,639.57	-597.61	852.93	10.00	9.55	-3.24
7,500.00	73.99	274.89	7,086.85	1,644.23	-644.81	900.27	10.00	9.57	-3.04
7,550.00	78.78	273.44	7,098.62	1,647.74	-693.26	948.66	10.00	9.60	-2.90
7,557.35	79.49	273.23	7,100.00	1,648.16	-700.46	955.84	10.00	9.60	-2.84
<b>NIO B</b>									
7,600.00	83.59	272.03	7,106.27	1,650.10	-742.60	997.73	10.00	9.61	-2.80
7,650.00	88.40	270.66	7,109.77	1,651.27	-792.45	1,047.12	10.00	9.62	-2.75

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-9N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4972.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4972.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-9N	<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)	
7,666.67	90.00	270.20	7,110.00	1,651.39	-809.11	1,063.59	10.00	9.62	-2.74	
LP @ 90° INC, 270.20° AZM HOLD										
7,700.00	90.00	270.20	7,110.00	1,651.51	-842.44	1,096.51	0.00	0.00	0.00	
7,800.00	90.00	270.20	7,110.00	1,651.87	-942.44	1,195.27	0.00	0.00	0.00	
7,900.00	90.00	270.20	7,110.00	1,652.22	-1,042.44	1,294.03	0.00	0.00	0.00	
8,000.00	90.00	270.20	7,110.00	1,652.58	-1,142.44	1,392.79	0.00	0.00	0.00	
8,100.00	90.00	270.20	7,110.00	1,652.93	-1,242.44	1,491.55	0.00	0.00	0.00	
8,200.00	90.00	270.20	7,110.00	1,653.28	-1,342.44	1,590.31	0.00	0.00	0.00	
8,300.00	90.00	270.20	7,110.00	1,653.64	-1,442.44	1,689.08	0.00	0.00	0.00	
8,400.00	90.00	270.20	7,110.00	1,653.99	-1,542.44	1,787.84	0.00	0.00	0.00	
8,500.00	90.00	270.20	7,110.00	1,654.35	-1,642.44	1,886.60	0.00	0.00	0.00	
8,600.00	90.00	270.20	7,110.00	1,654.70	-1,742.44	1,985.36	0.00	0.00	0.00	
8,700.00	90.00	270.20	7,110.00	1,655.06	-1,842.44	2,084.12	0.00	0.00	0.00	
8,800.00	90.00	270.20	7,110.00	1,655.41	-1,942.44	2,182.88	0.00	0.00	0.00	
8,900.00	90.00	270.20	7,110.00	1,655.76	-2,042.43	2,281.64	0.00	0.00	0.00	
9,000.00	90.00	270.20	7,110.00	1,656.12	-2,142.43	2,380.40	0.00	0.00	0.00	
9,100.00	90.00	270.20	7,110.00	1,656.47	-2,242.43	2,479.16	0.00	0.00	0.00	
9,200.00	90.00	270.20	7,110.00	1,656.83	-2,342.43	2,577.92	0.00	0.00	0.00	
9,300.00	90.00	270.20	7,110.00	1,657.18	-2,442.43	2,676.68	0.00	0.00	0.00	
9,400.00	90.00	270.20	7,110.00	1,657.53	-2,542.43	2,775.44	0.00	0.00	0.00	
9,500.00	90.00	270.20	7,110.00	1,657.89	-2,642.43	2,874.20	0.00	0.00	0.00	
9,600.00	90.00	270.20	7,110.00	1,658.24	-2,742.43	2,972.96	0.00	0.00	0.00	
9,700.00	90.00	270.20	7,110.00	1,658.60	-2,842.43	3,071.72	0.00	0.00	0.00	
9,800.00	90.00	270.20	7,110.00	1,658.95	-2,942.43	3,170.48	0.00	0.00	0.00	
9,900.00	90.00	270.20	7,110.00	1,659.31	-3,042.43	3,269.25	0.00	0.00	0.00	
10,000.00	90.00	270.20	7,110.00	1,659.66	-3,142.43	3,368.01	0.00	0.00	0.00	
10,100.00	90.00	270.20	7,110.00	1,660.01	-3,242.43	3,466.77	0.00	0.00	0.00	
10,200.00	90.00	270.20	7,110.00	1,660.37	-3,342.43	3,565.53	0.00	0.00	0.00	
10,300.00	90.00	270.20	7,110.00	1,660.72	-3,442.43	3,664.29	0.00	0.00	0.00	
10,400.00	90.00	270.20	7,110.00	1,661.08	-3,542.43	3,763.05	0.00	0.00	0.00	
10,500.00	90.00	270.20	7,110.00	1,661.43	-3,642.42	3,861.81	0.00	0.00	0.00	
10,600.00	90.00	270.20	7,110.00	1,661.79	-3,742.42	3,960.57	0.00	0.00	0.00	
10,700.00	90.00	270.20	7,110.00	1,662.14	-3,842.42	4,059.33	0.00	0.00	0.00	
10,800.00	90.00	270.20	7,110.00	1,662.49	-3,942.42	4,158.09	0.00	0.00	0.00	
10,900.00	90.00	270.20	7,110.00	1,662.85	-4,042.42	4,256.85	0.00	0.00	0.00	
11,000.00	90.00	270.20	7,110.00	1,663.20	-4,142.42	4,355.61	0.00	0.00	0.00	
11,100.00	90.00	270.20	7,110.00	1,663.56	-4,242.42	4,454.37	0.00	0.00	0.00	
11,200.00	90.00	270.20	7,110.00	1,663.91	-4,342.42	4,553.13	0.00	0.00	0.00	
11,300.00	90.00	270.20	7,110.00	1,664.27	-4,442.42	4,651.89	0.00	0.00	0.00	
11,400.00	90.00	270.20	7,110.00	1,664.62	-4,542.42	4,750.65	0.00	0.00	0.00	
11,500.00	90.00	270.20	7,110.00	1,664.97	-4,642.42	4,849.42	0.00	0.00	0.00	
11,600.00	90.00	270.20	7,110.00	1,665.33	-4,742.42	4,948.18	0.00	0.00	0.00	
11,700.00	90.00	270.20	7,110.00	1,665.68	-4,842.42	5,046.94	0.00	0.00	0.00	
11,800.00	90.00	270.20	7,110.00	1,666.04	-4,942.42	5,145.70	0.00	0.00	0.00	
11,900.00	90.00	270.20	7,110.00	1,666.39	-5,042.42	5,244.46	0.00	0.00	0.00	
12,000.00	90.00	270.20	7,110.00	1,666.74	-5,142.42	5,343.22	0.00	0.00	0.00	
12,100.00	90.00	270.20	7,110.00	1,667.10	-5,242.41	5,441.98	0.00	0.00	0.00	
12,200.00	90.00	270.20	7,110.00	1,667.45	-5,342.41	5,540.74	0.00	0.00	0.00	
12,300.00	90.00	270.20	7,110.00	1,667.81	-5,442.41	5,639.50	0.00	0.00	0.00	
12,400.00	90.00	270.20	7,110.00	1,668.16	-5,542.41	5,738.26	0.00	0.00	0.00	
12,500.00	90.00	270.20	7,110.00	1,668.52	-5,642.41	5,837.02	0.00	0.00	0.00	
12,600.00	90.00	270.20	7,110.00	1,668.87	-5,742.41	5,935.78	0.00	0.00	0.00	
12,700.00	90.00	270.20	7,110.00	1,669.22	-5,842.41	6,034.54	0.00	0.00	0.00	
12,800.00	90.00	270.20	7,110.00	1,669.58	-5,942.41	6,133.30	0.00	0.00	0.00	

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-9N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4972.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4972.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-9N	<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)
12,900.00	90.00	270.20	7,110.00	1,669.93	-6,042.41	6,232.06	0.00	0.00	0.00
13,000.00	90.00	270.20	7,110.00	1,670.29	-6,142.41	6,330.82	0.00	0.00	0.00
13,100.00	90.00	270.20	7,110.00	1,670.64	-6,242.41	6,429.59	0.00	0.00	0.00
13,200.00	90.00	270.20	7,110.00	1,671.00	-6,342.41	6,528.35	0.00	0.00	0.00
13,300.00	90.00	270.20	7,110.00	1,671.35	-6,442.41	6,627.11	0.00	0.00	0.00
13,400.00	90.00	270.20	7,110.00	1,671.70	-6,542.41	6,725.87	0.00	0.00	0.00
13,500.00	90.00	270.20	7,110.00	1,672.06	-6,642.41	6,824.63	0.00	0.00	0.00
13,600.00	90.00	270.20	7,110.00	1,672.41	-6,742.41	6,923.39	0.00	0.00	0.00
13,700.00	90.00	270.20	7,110.00	1,672.77	-6,842.40	7,022.15	0.00	0.00	0.00
13,800.00	90.00	270.20	7,110.00	1,673.12	-6,942.40	7,120.91	0.00	0.00	0.00
13,900.00	90.00	270.20	7,110.00	1,673.48	-7,042.40	7,219.67	0.00	0.00	0.00
14,000.00	90.00	270.20	7,110.00	1,673.83	-7,142.40	7,318.43	0.00	0.00	0.00
14,100.00	90.00	270.20	7,110.00	1,674.18	-7,242.40	7,417.19	0.00	0.00	0.00
14,200.00	90.00	270.20	7,110.00	1,674.54	-7,342.40	7,515.95	0.00	0.00	0.00
14,300.00	90.00	270.20	7,110.00	1,674.89	-7,442.40	7,614.71	0.00	0.00	0.00
14,400.00	90.00	270.20	7,110.00	1,675.25	-7,542.40	7,713.47	0.00	0.00	0.00
14,500.00	90.00	270.20	7,110.00	1,675.60	-7,642.40	7,812.23	0.00	0.00	0.00
14,600.00	90.00	270.20	7,110.00	1,675.95	-7,742.40	7,911.00	0.00	0.00	0.00
14,700.00	90.00	270.20	7,110.00	1,676.31	-7,842.40	8,009.76	0.00	0.00	0.00
14,800.00	90.00	270.20	7,110.00	1,676.66	-7,942.40	8,108.52	0.00	0.00	0.00
14,900.00	90.00	270.20	7,110.00	1,677.02	-8,042.40	8,207.28	0.00	0.00	0.00
15,000.00	90.00	270.20	7,110.00	1,677.37	-8,142.40	8,306.04	0.00	0.00	0.00
15,100.00	90.00	270.20	7,110.00	1,677.73	-8,242.40	8,404.80	0.00	0.00	0.00
15,200.00	90.00	270.20	7,110.00	1,678.08	-8,342.40	8,503.56	0.00	0.00	0.00
15,300.00	90.00	270.20	7,110.00	1,678.43	-8,442.39	8,602.32	0.00	0.00	0.00
15,400.00	90.00	270.20	7,110.00	1,678.79	-8,542.39	8,701.08	0.00	0.00	0.00
15,500.00	90.00	270.20	7,110.00	1,679.14	-8,642.39	8,799.84	0.00	0.00	0.00
15,600.00	90.00	270.20	7,110.00	1,679.50	-8,742.39	8,898.60	0.00	0.00	0.00
15,700.00	90.00	270.20	7,110.00	1,679.85	-8,842.39	8,997.36	0.00	0.00	0.00
15,800.00	90.00	270.20	7,110.00	1,680.21	-8,942.39	9,096.12	0.00	0.00	0.00
15,900.00	90.00	270.20	7,110.00	1,680.56	-9,042.39	9,194.88	0.00	0.00	0.00
16,000.00	90.00	270.20	7,110.00	1,680.91	-9,142.39	9,293.64	0.00	0.00	0.00
16,100.00	90.00	270.20	7,110.00	1,681.27	-9,242.39	9,392.40	0.00	0.00	0.00
16,200.00	90.00	270.20	7,110.00	1,681.62	-9,342.39	9,491.17	0.00	0.00	0.00
16,300.00	90.00	270.20	7,110.00	1,681.98	-9,442.39	9,589.93	0.00	0.00	0.00
16,400.00	90.00	270.20	7,110.00	1,682.33	-9,542.39	9,688.69	0.00	0.00	0.00
16,500.00	90.00	270.20	7,110.00	1,682.69	-9,642.39	9,787.45	0.00	0.00	0.00
16,600.00	90.00	270.20	7,110.00	1,683.04	-9,742.39	9,886.21	0.00	0.00	0.00
16,700.00	90.00	270.20	7,110.00	1,683.39	-9,842.39	9,984.97	0.00	0.00	0.00
16,800.00	90.00	270.20	7,110.00	1,683.75	-9,942.39	10,083.73	0.00	0.00	0.00
16,900.00	90.00	270.20	7,110.00	1,684.10	-10,042.38	10,182.49	0.00	0.00	0.00
17,000.00	90.00	270.20	7,110.00	1,684.46	-10,142.38	10,281.25	0.00	0.00	0.00
17,100.00	90.00	270.20	7,110.00	1,684.81	-10,242.38	10,380.01	0.00	0.00	0.00
17,200.00	90.00	270.20	7,110.00	1,685.16	-10,342.38	10,478.77	0.00	0.00	0.00
17,224.87	90.00	270.20	7,110.00	1,685.25	-10,367.25	10,503.33	0.00	0.00	0.00
TD at 17224.87' MD									

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well MILKSHAKE 31W-20-9N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4972.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4972.00usft
<b>Site:</b>	Sec 32-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MILKSHAKE 31W-20-9N	<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-9N LF - plan hits target center - Point	0.00	0.00	7,110.00	1,651.39	-809.11	1,404,995.39	3,159,349.69	40° 26' 37.327 N	104° 55' 38.917 W
MILKSHAKE 31W-9N PI - plan hits target center - Point	0.00	0.00	7,110.00	1,685.25	-10,367.25	1,404,967.22	3,149,791.52	40° 26' 37.640 N	104° 57' 42.545 W

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
3,677.01	3,590.00	PARKMAN				
4,322.22	4,210.00	SUSSEX				
4,806.13	4,675.00	SHANNON				
7,211.41	6,945.00	SHARON SPRINGS				
7,273.06	6,985.00	NIOBRARA				
7,557.35	7,100.00	NIO B				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
900.00	900.00	0.00	0.00	BUILD 2°/100'
1,607.16	1,600.00	85.11	-17.24	HOLD 14.14° INC
1,672.16	1,663.03	100.68	-20.39	DROP 2°/100'
1,774.51	1,761.84	126.93	-25.04	HOLD VERTICAL
6,791.46	6,582.76	1,499.35	-237.22	KOP, BUILD 10°/100'
7,666.67	7,110.00	1,651.39	-809.11	LP @ 90° INC, 270.20° AZM HOLD
17,224.87	7,110.00	1,685.25	-10,367.25	TD at 17224.87' MD