

EXTRACTION OIL & GAS

Weld County

Sec 32-T6N-R67W

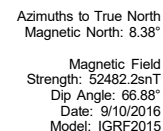
MILKSHAKE 31W-20-1N

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

31 October, 2017



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well MILKSHAKE 31W-20-1N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4973.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4973.00usft
Site:	Sec 32-T6N-R67W	North Reference:	True
Well:	MILKSHAKE 31W-20-1N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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-20-1N					
Well Position	+N/-S	-424.05 usft	Northing:	1,403,355.23 usft	Latitude:	40° 26' 21.062 N
	+E/-W	178.70 usft	Easting:	3,160,244.33 usft	Longitude:	104° 55' 27.484 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	52,482.16896260

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	291.21

Plan Survey Tool Program	Date	10/31/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,956.90	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	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,678.70	31.57	350.99	1,600.00	418.86	-66.42	2.00	2.00	0.00	350.99	
1,743.70	31.57	350.99	1,655.38	452.47	-71.75	0.00	0.00	0.00	0.00	
1,842.43	33.32	352.73	1,738.70	504.90	-79.23	2.00	1.76	1.76	28.89	
7,736.71	33.32	352.73	6,664.32	3,716.25	-489.09	0.00	0.00	0.00	0.00	
8,595.68	90.00	270.21	7,110.00	4,008.79	-1,059.50	10.00	6.60	-9.61	-83.73	MILKSHAKE 31W-1N
17,957.60	90.00	270.21	7,110.00	4,043.39	-10,421.36	0.00	0.00	0.00	0.00	MIKLSHAKE 31W-1N

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Site:	Sec 32-T6N-R67W	North Reference:	True
Well:	MILKSHAKE 31W-20-1N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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
BUILD 2°/100'									
200.00	2.00	350.99	199.98	1.72	-0.27	0.88	2.00	2.00	0.00
300.00	4.00	350.99	299.84	6.89	-1.09	3.51	2.00	2.00	0.00
400.00	6.00	350.99	399.45	15.50	-2.46	7.90	2.00	2.00	0.00
500.00	8.00	350.99	498.70	27.54	-4.37	14.03	2.00	2.00	0.00
600.00	10.00	350.99	597.47	42.99	-6.82	21.90	2.00	2.00	0.00
700.00	12.00	350.99	695.62	61.83	-9.80	31.51	2.00	2.00	0.00
800.00	14.00	350.99	793.06	84.05	-13.33	42.83	2.00	2.00	0.00
900.00	16.00	350.99	889.64	109.61	-17.38	55.85	2.00	2.00	0.00
1,000.00	18.00	350.99	985.27	138.48	-21.96	70.56	2.00	2.00	0.00
1,100.00	20.00	350.99	1,079.82	170.64	-27.06	86.95	2.00	2.00	0.00
1,200.00	22.00	350.99	1,173.17	206.03	-32.67	104.98	2.00	2.00	0.00
1,300.00	24.00	350.99	1,265.21	244.62	-38.79	124.64	2.00	2.00	0.00
1,400.00	26.00	350.99	1,355.84	286.36	-45.41	145.91	2.00	2.00	0.00
1,500.00	28.00	350.99	1,444.94	331.19	-52.52	168.76	2.00	2.00	0.00
1,600.00	30.00	350.99	1,532.39	379.07	-60.11	193.16	2.00	2.00	0.00
1,678.70	31.57	350.99	1,600.00	418.86	-66.42	213.43	2.00	2.00	0.00
HOLD 31.57° INC									
1,700.00	31.57	350.99	1,618.15	429.87	-68.16	219.04	0.00	0.00	0.00
1,743.70	31.57	350.99	1,655.38	452.47	-71.75	230.55	0.00	0.00	0.00
DROP 2°/100'									
1,800.00	32.56	352.00	1,703.09	482.03	-76.16	245.37	2.00	1.76	1.79
1,842.43	33.32	352.73	1,738.70	504.90	-79.23	256.49	2.00	1.77	1.71
HOLD VERTICAL									
1,900.00	33.32	352.73	1,786.81	536.27	-83.23	271.57	0.00	0.00	0.00
2,000.00	33.32	352.73	1,870.37	590.75	-90.18	297.76	0.00	0.00	0.00
2,100.00	33.32	352.73	1,953.94	645.23	-97.14	323.95	0.00	0.00	0.00
2,200.00	33.32	352.73	2,037.50	699.71	-104.09	350.14	0.00	0.00	0.00
2,300.00	33.32	352.73	2,121.07	754.20	-111.04	376.33	0.00	0.00	0.00
2,400.00	33.32	352.73	2,204.64	808.68	-118.00	402.52	0.00	0.00	0.00
2,500.00	33.32	352.73	2,288.20	863.16	-124.95	428.71	0.00	0.00	0.00
2,600.00	33.32	352.73	2,371.77	917.64	-131.91	454.90	0.00	0.00	0.00
2,700.00	33.32	352.73	2,455.34	972.13	-138.86	481.09	0.00	0.00	0.00
2,800.00	33.32	352.73	2,538.90	1,026.61	-145.81	507.28	0.00	0.00	0.00
2,900.00	33.32	352.73	2,622.47	1,081.09	-152.77	533.47	0.00	0.00	0.00
3,000.00	33.32	352.73	2,706.03	1,135.57	-159.72	559.66	0.00	0.00	0.00
3,100.00	33.32	352.73	2,789.60	1,190.06	-166.67	585.85	0.00	0.00	0.00
3,200.00	33.32	352.73	2,873.17	1,244.54	-173.63	612.04	0.00	0.00	0.00
3,300.00	33.32	352.73	2,956.73	1,299.02	-180.58	638.23	0.00	0.00	0.00
3,400.00	33.32	352.73	3,040.30	1,353.50	-187.53	664.42	0.00	0.00	0.00
3,500.00	33.32	352.73	3,123.86	1,407.99	-194.49	690.61	0.00	0.00	0.00
3,600.00	33.32	352.73	3,207.43	1,462.47	-201.44	716.80	0.00	0.00	0.00
3,700.00	33.32	352.73	3,291.00	1,516.95	-208.39	742.99	0.00	0.00	0.00
3,800.00	33.32	352.73	3,374.56	1,571.43	-215.35	769.18	0.00	0.00	0.00
3,900.00	33.32	352.73	3,458.13	1,625.92	-222.30	795.37	0.00	0.00	0.00
4,000.00	33.32	352.73	3,541.70	1,680.40	-229.26	821.56	0.00	0.00	0.00
4,057.80	33.32	352.73	3,590.00	1,711.89	-233.28	836.70	0.00	0.00	0.00
PARKMAN									
4,100.00	33.32	352.73	3,625.26	1,734.88	-236.21	847.75	0.00	0.00	0.00
4,200.00	33.32	352.73	3,708.83	1,789.36	-243.16	873.94	0.00	0.00	0.00
4,300.00	33.32	352.73	3,792.39	1,843.85	-250.12	900.13	0.00	0.00	0.00

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Well:	MILKSHAKE 31W-20-1N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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	33.32	352.73	3,875.96	1,898.33	-257.07	926.32	0.00	0.00	0.00	
4,500.00	33.32	352.73	3,959.53	1,952.81	-264.02	952.52	0.00	0.00	0.00	
4,600.00	33.32	352.73	4,043.09	2,007.29	-270.98	978.71	0.00	0.00	0.00	
4,700.00	33.32	352.73	4,126.66	2,061.78	-277.93	1,004.90	0.00	0.00	0.00	
4,799.73	33.32	352.73	4,210.00	2,116.11	-284.87	1,031.02	0.00	0.00	0.00	
SUSSEX										
4,800.00	33.32	352.73	4,210.22	2,116.26	-284.88	1,031.09	0.00	0.00	0.00	
4,900.00	33.32	352.73	4,293.79	2,170.74	-291.84	1,057.28	0.00	0.00	0.00	
5,000.00	33.32	352.73	4,377.36	2,225.22	-298.79	1,083.47	0.00	0.00	0.00	
5,100.00	33.32	352.73	4,460.92	2,279.71	-305.75	1,109.66	0.00	0.00	0.00	
5,200.00	33.32	352.73	4,544.49	2,334.19	-312.70	1,135.85	0.00	0.00	0.00	
5,300.00	33.32	352.73	4,628.06	2,388.67	-319.65	1,162.04	0.00	0.00	0.00	
5,356.18	33.32	352.73	4,675.00	2,419.28	-323.56	1,176.75	0.00	0.00	0.00	
SHANNON										
5,400.00	33.32	352.73	4,711.62	2,443.15	-326.61	1,188.23	0.00	0.00	0.00	
5,500.00	33.32	352.73	4,795.19	2,497.64	-333.56	1,214.42	0.00	0.00	0.00	
5,600.00	33.32	352.73	4,878.75	2,552.12	-340.51	1,240.61	0.00	0.00	0.00	
5,700.00	33.32	352.73	4,962.32	2,606.60	-347.47	1,266.80	0.00	0.00	0.00	
5,800.00	33.32	352.73	5,045.89	2,661.09	-354.42	1,292.99	0.00	0.00	0.00	
5,900.00	33.32	352.73	5,129.45	2,715.57	-361.37	1,319.18	0.00	0.00	0.00	
6,000.00	33.32	352.73	5,213.02	2,770.05	-368.33	1,345.37	0.00	0.00	0.00	
6,100.00	33.32	352.73	5,296.58	2,824.53	-375.28	1,371.56	0.00	0.00	0.00	
6,200.00	33.32	352.73	5,380.15	2,879.02	-382.24	1,397.75	0.00	0.00	0.00	
6,300.00	33.32	352.73	5,463.72	2,933.50	-389.19	1,423.94	0.00	0.00	0.00	
6,400.00	33.32	352.73	5,547.28	2,987.98	-396.14	1,450.13	0.00	0.00	0.00	
6,500.00	33.32	352.73	5,630.85	3,042.46	-403.10	1,476.32	0.00	0.00	0.00	
6,600.00	33.32	352.73	5,714.42	3,096.95	-410.05	1,502.51	0.00	0.00	0.00	
6,700.00	33.32	352.73	5,797.98	3,151.43	-417.00	1,528.70	0.00	0.00	0.00	
6,800.00	33.32	352.73	5,881.55	3,205.91	-423.96	1,554.89	0.00	0.00	0.00	
6,900.00	33.32	352.73	5,965.11	3,260.39	-430.91	1,581.08	0.00	0.00	0.00	
7,000.00	33.32	352.73	6,048.68	3,314.88	-437.86	1,607.27	0.00	0.00	0.00	
7,100.00	33.32	352.73	6,132.25	3,369.36	-444.82	1,633.46	0.00	0.00	0.00	
7,200.00	33.32	352.73	6,215.81	3,423.84	-451.77	1,659.65	0.00	0.00	0.00	
7,300.00	33.32	352.73	6,299.38	3,478.32	-458.72	1,685.84	0.00	0.00	0.00	
7,400.00	33.32	352.73	6,382.94	3,532.81	-465.68	1,712.03	0.00	0.00	0.00	
7,500.00	33.32	352.73	6,466.51	3,587.29	-472.63	1,738.22	0.00	0.00	0.00	
7,600.00	33.32	352.73	6,550.08	3,641.77	-479.59	1,764.41	0.00	0.00	0.00	
7,700.00	33.32	352.73	6,633.64	3,696.25	-486.54	1,790.60	0.00	0.00	0.00	
7,736.71	33.32	352.73	6,664.32	3,716.25	-489.09	1,800.21	0.00	0.00	0.00	
KOP, BUILD 10°/100'										
7,750.00	33.48	350.33	6,675.42	3,723.49	-490.17	1,803.84	10.00	1.26	-18.02	
7,800.00	34.52	341.58	6,716.89	3,750.54	-496.97	1,819.96	10.00	2.07	-17.51	
7,850.00	36.14	333.39	6,757.71	3,777.18	-508.06	1,839.93	10.00	3.24	-16.37	
7,900.00	38.27	325.90	6,797.55	3,803.20	-523.35	1,863.60	10.00	4.27	-14.97	
7,950.00	40.83	319.16	6,836.12	3,828.41	-542.73	1,890.79	10.00	5.13	-13.50	
8,000.00	43.75	313.12	6,873.12	3,852.60	-566.06	1,921.29	10.00	5.83	-12.08	
8,050.00	46.95	307.71	6,908.26	3,875.61	-593.15	1,954.86	10.00	6.40	-10.81	
8,100.00	50.38	302.86	6,941.29	3,897.24	-623.79	1,991.26	10.00	6.86	-9.70	
8,105.84	50.79	302.33	6,945.00	3,899.67	-627.59	1,995.68	10.00	7.08	-9.15	
SHARON SPRINGS										
8,150.00	53.99	298.48	6,971.95	3,917.35	-657.77	2,030.21	10.00	7.24	-8.71	
8,172.65	55.68	296.63	6,985.00	3,925.91	-674.18	2,048.61	10.00	7.44	-8.17	
NIORARA										

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Wellbore:	ORIGINAL WELLBORE		
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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)
8,200.00	57.75	294.49	7,000.01	3,935.77	-694.80	2,071.40	10.00	7.57	-7.82
8,250.00	61.62	290.83	7,025.25	3,952.37	-734.63	2,114.53	10.00	7.74	-7.33
8,300.00	65.58	287.42	7,047.49	3,967.01	-776.93	2,159.27	10.00	7.93	-6.81
8,350.00	69.61	284.23	7,066.54	3,979.60	-821.39	2,205.27	10.00	8.07	-6.39
8,400.00	73.70	281.19	7,082.28	3,990.02	-867.68	2,252.19	10.00	8.18	-6.06
8,450.00	77.83	278.29	7,094.57	3,998.21	-915.43	2,299.67	10.00	8.26	-5.81
8,478.52	80.21	276.67	7,100.00	4,001.85	-943.19	2,326.87	10.00	8.31	-5.67
NIO B									
8,500.00	82.00	275.47	7,103.32	4,004.09	-964.29	2,347.35	10.00	8.33	-5.59
8,550.00	86.17	272.71	7,108.48	4,007.63	-1,013.88	2,394.86	10.00	8.36	-5.52
8,595.68	90.00	270.21	7,110.00	4,008.79	-1,059.50	2,437.82	10.00	8.38	-5.47
LP @ 90° INC, 270.21° AZM HOLD									
8,600.00	90.00	270.21	7,110.00	4,008.81	-1,063.83	2,441.86	0.00	0.00	0.00
8,700.00	90.00	270.21	7,110.00	4,009.18	-1,163.83	2,535.22	0.00	0.00	0.00
8,800.00	90.00	270.21	7,110.00	4,009.55	-1,263.83	2,628.58	0.00	0.00	0.00
8,900.00	90.00	270.21	7,110.00	4,009.92	-1,363.83	2,721.94	0.00	0.00	0.00
9,000.00	90.00	270.21	7,110.00	4,010.29	-1,463.82	2,815.30	0.00	0.00	0.00
9,100.00	90.00	270.21	7,110.00	4,010.66	-1,563.82	2,908.66	0.00	0.00	0.00
9,200.00	90.00	270.21	7,110.00	4,011.03	-1,663.82	3,002.03	0.00	0.00	0.00
9,300.00	90.00	270.21	7,110.00	4,011.40	-1,763.82	3,095.39	0.00	0.00	0.00
9,400.00	90.00	270.21	7,110.00	4,011.77	-1,863.82	3,188.75	0.00	0.00	0.00
9,500.00	90.00	270.21	7,110.00	4,012.14	-1,963.82	3,282.11	0.00	0.00	0.00
9,600.00	90.00	270.21	7,110.00	4,012.51	-2,063.82	3,375.47	0.00	0.00	0.00
9,700.00	90.00	270.21	7,110.00	4,012.87	-2,163.82	3,468.83	0.00	0.00	0.00
9,800.00	90.00	270.21	7,110.00	4,013.24	-2,263.82	3,562.20	0.00	0.00	0.00
9,900.00	90.00	270.21	7,110.00	4,013.61	-2,363.82	3,655.56	0.00	0.00	0.00
10,000.00	90.00	270.21	7,110.00	4,013.98	-2,463.82	3,748.92	0.00	0.00	0.00
10,100.00	90.00	270.21	7,110.00	4,014.35	-2,563.82	3,842.28	0.00	0.00	0.00
10,200.00	90.00	270.21	7,110.00	4,014.72	-2,663.82	3,935.64	0.00	0.00	0.00
10,300.00	90.00	270.21	7,110.00	4,015.09	-2,763.82	4,029.00	0.00	0.00	0.00
10,400.00	90.00	270.21	7,110.00	4,015.46	-2,863.81	4,122.37	0.00	0.00	0.00
10,500.00	90.00	270.21	7,110.00	4,015.83	-2,963.81	4,215.73	0.00	0.00	0.00
10,600.00	90.00	270.21	7,110.00	4,016.20	-3,063.81	4,309.09	0.00	0.00	0.00
10,700.00	90.00	270.21	7,110.00	4,016.57	-3,163.81	4,402.45	0.00	0.00	0.00
10,800.00	90.00	270.21	7,110.00	4,016.94	-3,263.81	4,495.81	0.00	0.00	0.00
10,900.00	90.00	270.21	7,110.00	4,017.31	-3,363.81	4,589.18	0.00	0.00	0.00
11,000.00	90.00	270.21	7,110.00	4,017.68	-3,463.81	4,682.54	0.00	0.00	0.00
11,100.00	90.00	270.21	7,110.00	4,018.05	-3,563.81	4,775.90	0.00	0.00	0.00
11,200.00	90.00	270.21	7,110.00	4,018.42	-3,663.81	4,869.26	0.00	0.00	0.00
11,300.00	90.00	270.21	7,110.00	4,018.79	-3,763.81	4,962.62	0.00	0.00	0.00
11,400.00	90.00	270.21	7,110.00	4,019.16	-3,863.81	5,055.98	0.00	0.00	0.00
11,500.00	90.00	270.21	7,110.00	4,019.53	-3,963.81	5,149.35	0.00	0.00	0.00
11,600.00	90.00	270.21	7,110.00	4,019.89	-4,063.81	5,242.71	0.00	0.00	0.00
11,700.00	90.00	270.21	7,110.00	4,020.26	-4,163.81	5,336.07	0.00	0.00	0.00
11,800.00	90.00	270.21	7,110.00	4,020.63	-4,263.81	5,429.43	0.00	0.00	0.00
11,900.00	90.00	270.21	7,110.00	4,021.00	-4,363.80	5,522.79	0.00	0.00	0.00
12,000.00	90.00	270.21	7,110.00	4,021.37	-4,463.80	5,616.15	0.00	0.00	0.00
12,100.00	90.00	270.21	7,110.00	4,021.74	-4,563.80	5,709.52	0.00	0.00	0.00
12,200.00	90.00	270.21	7,110.00	4,022.11	-4,663.80	5,802.88	0.00	0.00	0.00
12,300.00	90.00	270.21	7,110.00	4,022.48	-4,763.80	5,896.24	0.00	0.00	0.00
12,400.00	90.00	270.21	7,110.00	4,022.85	-4,863.80	5,989.60	0.00	0.00	0.00
12,500.00	90.00	270.21	7,110.00	4,023.22	-4,963.80	6,082.96	0.00	0.00	0.00
12,600.00	90.00	270.21	7,110.00	4,023.59	-5,063.80	6,176.32	0.00	0.00	0.00
12,700.00	90.00	270.21	7,110.00	4,023.96	-5,163.80	6,269.69	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well MILKSHAKE 31W-20-1N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4973.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4973.00usft
Site:	Sec 32-T6N-R67W	North Reference:	True
Well:	MILKSHAKE 31W-20-1N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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	270.21	7,110.00	4,024.33	-5,263.80	6,363.05	0.00	0.00	0.00
12,900.00	90.00	270.21	7,110.00	4,024.70	-5,363.80	6,456.41	0.00	0.00	0.00
13,000.00	90.00	270.21	7,110.00	4,025.07	-5,463.80	6,549.77	0.00	0.00	0.00
13,100.00	90.00	270.21	7,110.00	4,025.44	-5,563.80	6,643.13	0.00	0.00	0.00
13,200.00	90.00	270.21	7,110.00	4,025.81	-5,663.80	6,736.49	0.00	0.00	0.00
13,300.00	90.00	270.21	7,110.00	4,026.18	-5,763.80	6,829.86	0.00	0.00	0.00
13,400.00	90.00	270.21	7,110.00	4,026.55	-5,863.79	6,923.22	0.00	0.00	0.00
13,500.00	90.00	270.21	7,110.00	4,026.92	-5,963.79	7,016.58	0.00	0.00	0.00
13,600.00	90.00	270.21	7,110.00	4,027.28	-6,063.79	7,109.94	0.00	0.00	0.00
13,700.00	90.00	270.21	7,110.00	4,027.65	-6,163.79	7,203.30	0.00	0.00	0.00
13,800.00	90.00	270.21	7,110.00	4,028.02	-6,263.79	7,296.67	0.00	0.00	0.00
13,900.00	90.00	270.21	7,110.00	4,028.39	-6,363.79	7,390.03	0.00	0.00	0.00
14,000.00	90.00	270.21	7,110.00	4,028.76	-6,463.79	7,483.39	0.00	0.00	0.00
14,100.00	90.00	270.21	7,110.00	4,029.13	-6,563.79	7,576.75	0.00	0.00	0.00
14,200.00	90.00	270.21	7,110.00	4,029.50	-6,663.79	7,670.11	0.00	0.00	0.00
14,300.00	90.00	270.21	7,110.00	4,029.87	-6,763.79	7,763.47	0.00	0.00	0.00
14,400.00	90.00	270.21	7,110.00	4,030.24	-6,863.79	7,856.84	0.00	0.00	0.00
14,500.00	90.00	270.21	7,110.00	4,030.61	-6,963.79	7,950.20	0.00	0.00	0.00
14,600.00	90.00	270.21	7,110.00	4,030.98	-7,063.79	8,043.56	0.00	0.00	0.00
14,700.00	90.00	270.21	7,110.00	4,031.35	-7,163.79	8,136.92	0.00	0.00	0.00
14,800.00	90.00	270.21	7,110.00	4,031.72	-7,263.79	8,230.28	0.00	0.00	0.00
14,900.00	90.00	270.21	7,110.00	4,032.09	-7,363.78	8,323.64	0.00	0.00	0.00
15,000.00	90.00	270.21	7,110.00	4,032.46	-7,463.78	8,417.01	0.00	0.00	0.00
15,100.00	90.00	270.21	7,110.00	4,032.83	-7,563.78	8,510.37	0.00	0.00	0.00
15,200.00	90.00	270.21	7,110.00	4,033.20	-7,663.78	8,603.73	0.00	0.00	0.00
15,300.00	90.00	270.21	7,110.00	4,033.57	-7,763.78	8,697.09	0.00	0.00	0.00
15,400.00	90.00	270.21	7,110.00	4,033.94	-7,863.78	8,790.45	0.00	0.00	0.00
15,500.00	90.00	270.21	7,110.00	4,034.30	-7,963.78	8,883.81	0.00	0.00	0.00
15,600.00	90.00	270.21	7,110.00	4,034.67	-8,063.78	8,977.18	0.00	0.00	0.00
15,700.00	90.00	270.21	7,110.00	4,035.04	-8,163.78	9,070.54	0.00	0.00	0.00
15,800.00	90.00	270.21	7,110.00	4,035.41	-8,263.78	9,163.90	0.00	0.00	0.00
15,900.00	90.00	270.21	7,110.00	4,035.78	-8,363.78	9,257.26	0.00	0.00	0.00
16,000.00	90.00	270.21	7,110.00	4,036.15	-8,463.78	9,350.62	0.00	0.00	0.00
16,100.00	90.00	270.21	7,110.00	4,036.52	-8,563.78	9,443.99	0.00	0.00	0.00
16,200.00	90.00	270.21	7,110.00	4,036.89	-8,663.78	9,537.35	0.00	0.00	0.00
16,300.00	90.00	270.21	7,110.00	4,037.26	-8,763.77	9,630.71	0.00	0.00	0.00
16,400.00	90.00	270.21	7,110.00	4,037.63	-8,863.77	9,724.07	0.00	0.00	0.00
16,500.00	90.00	270.21	7,110.00	4,038.00	-8,963.77	9,817.43	0.00	0.00	0.00
16,600.00	90.00	270.21	7,110.00	4,038.37	-9,063.77	9,910.79	0.00	0.00	0.00
16,700.00	90.00	270.21	7,110.00	4,038.74	-9,163.77	10,004.16	0.00	0.00	0.00
16,800.00	90.00	270.21	7,110.00	4,039.11	-9,263.77	10,097.52	0.00	0.00	0.00
16,900.00	90.00	270.21	7,110.00	4,039.48	-9,363.77	10,190.88	0.00	0.00	0.00
17,000.00	90.00	270.21	7,110.00	4,039.85	-9,463.77	10,284.24	0.00	0.00	0.00
17,100.00	90.00	270.21	7,110.00	4,040.22	-9,563.77	10,377.60	0.00	0.00	0.00
17,200.00	90.00	270.21	7,110.00	4,040.59	-9,663.77	10,470.96	0.00	0.00	0.00
17,300.00	90.00	270.21	7,110.00	4,040.96	-9,763.77	10,564.33	0.00	0.00	0.00
17,400.00	90.00	270.21	7,110.00	4,041.33	-9,863.77	10,657.69	0.00	0.00	0.00
17,500.00	90.00	270.21	7,110.00	4,041.69	-9,963.77	10,751.05	0.00	0.00	0.00
17,600.00	90.00	270.21	7,110.00	4,042.06	-10,063.77	10,844.41	0.00	0.00	0.00
17,700.00	90.00	270.21	7,110.00	4,042.43	-10,163.77	10,937.77	0.00	0.00	0.00
17,800.00	90.00	270.21	7,110.00	4,042.80	-10,263.76	11,031.13	0.00	0.00	0.00
17,900.00	90.00	270.21	7,110.00	4,043.17	-10,363.76	11,124.50	0.00	0.00	0.00
17,957.60	90.00	270.21	7,110.00	4,043.39	-10,421.36	11,178.28	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well MILKSHAKE 31W-20-1N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4973.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4973.00usft
Site:	Sec 32-T6N-R67W	North Reference:	True
Well:	MILKSHAKE 31W-20-1N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
TD at 17957.60' MD									

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									
MILKSHAKE 31W-1N LF - plan hits target center - Point	0.00	0.00	7,110.00	4,008.79	-1,059.50	1,407,357.06	3,159,158.83	40° 27' 0.677 N	104° 55' 41.189 W
MILKSHAKE 31W-1N PI - plan hits target center - Point	0.00	0.00	7,110.00	4,043.39	-10,421.36	1,407,330.88	3,149,796.94	40° 27' 0.997 N	104° 57' 42.289 W

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,057.80	3,590.00	PARKMAN				
4,799.73	4,210.00	SUSSEX				
5,356.18	4,675.00	SHANNON				
8,105.84	6,945.00	SHARON SPRINGS				
8,172.65	6,985.00	NIOBRARA				
8,478.52	7,100.00	NIO B				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.00	100.00	0.00	0.00	BUILD 2°/100'
1,678.70	1,600.00	418.86	-66.42	HOLD 31.57° INC
1,743.70	1,655.38	452.47	-71.75	DROP 2°/100'
1,842.43	1,738.70	504.90	-79.23	HOLD VERTICAL
7,736.71	6,664.32	3,716.25	-489.09	KOP, BUILD 10°/100'
8,595.68	7,110.00	4,008.79	-1,059.50	LP @ 90° INC, 270.21° AZM HOLD
17,957.60	7,110.00	4,043.39	-10,421.36	TD at 17957.60' MD