

EXTRACTION OIL & GAS

Weld County

Sec 32-T6N-R67W

MILKSHAKE 31W-20-6C

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

07 September, 2017



Project: Weld County
Site: Sec 32-T6N-R67W
Well: MILKSHAKE 31W-20-6C
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 8.38°
Magnetic Field
Strength: 52482.0nT
Dip Angle: 66.88°
Date: 9/10/2016
Model: IGRF2015

WELL DETAILS: MILKSHAKE 31W-20-6C

+N/-S	+E/-W	Northing	Ground Level: Easting	4948.00 Latitude	Longitude	Slot
0.00	0.00	1403263.67	3160226.56	40° 26' 20.159 N	104° 55' 27.721 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	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	
3	1621.51	20.43	349.72	1600.00	177.31	-32.16	2.00	349.72	75.00	
4	1686.51	20.43	349.72	1660.91	199.63	-36.21	0.00	0.00	84.44	
5	1846.30	23.54	351.67	1809.07	258.66	-45.81	2.00	14.14	108.33	
6	7284.87	23.54	351.67	6794.99	2408.01	-360.36	0.00	0.00	944.50	
7	8150.90	90.00	270.21	7290.00	2623.35	-931.54	10.00	-82.17	1551.19	MILKSHAKE 31W-6C
8	17635.28	90.00	270.21	7290.00	2657.59	-10415.86	0.00	0.00	10749.56	MILKSHAKE 31W-6C

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	BUILD 2°/100'
1621.51	20.43	349.72	1600.00	177.31	-32.16	75.00	180.20	HOLD 20.43° INC
1686.51	20.43	349.72	1660.91	199.63	-36.21	84.44	202.89	DROP 2°/100'
1846.30	23.54	351.67	1809.07	258.66	-45.81	108.33	262.70	HOLD VERTICAL
7284.87	23.54	351.67	6794.99	2408.01	-360.36	944.50	2434.94	KOP, BUILD 10°/100'
8150.90	90.00	270.21	7290.00	2623.35	-931.54	1551.19	3079.54	LP @ 90° INC, 270.21° AZM HOLD
17635.28	90.00	270.21	7290.00	2657.59	-10415.86	10749.56	12563.92	TD at 17635.28' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	40° 26' 26.082 N	104° 55' 39.770 W	Shape
MILKSHAKE 31W-6C LP	7290.00	2623.35	-931.54	1405880.92	3159278.01			Point
- plan hits target center								
MILKSHAKE 31W-6C PBHL	7290.00	2657.59	-10415.86	1405853.59	3149793.66	40° 26' 46.399 N	104° 57' 42.448 W	Point
- plan hits target center								

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3590.00	3788.92	PARKMAN
4210.00	4465.20	SUSSEX
4675.00	4972.42	SHANNON
6945.00	7452.32	SHARON SPRINGS
6985.00	7499.48	NIOBRARA
7100.00	7648.01	NIO B
7260.00	7956.49	FORT HAYS
7290.00	8150.90	CODELL

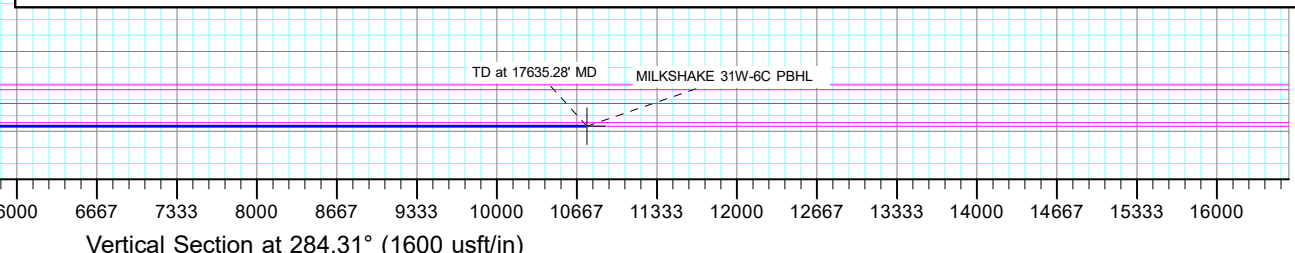
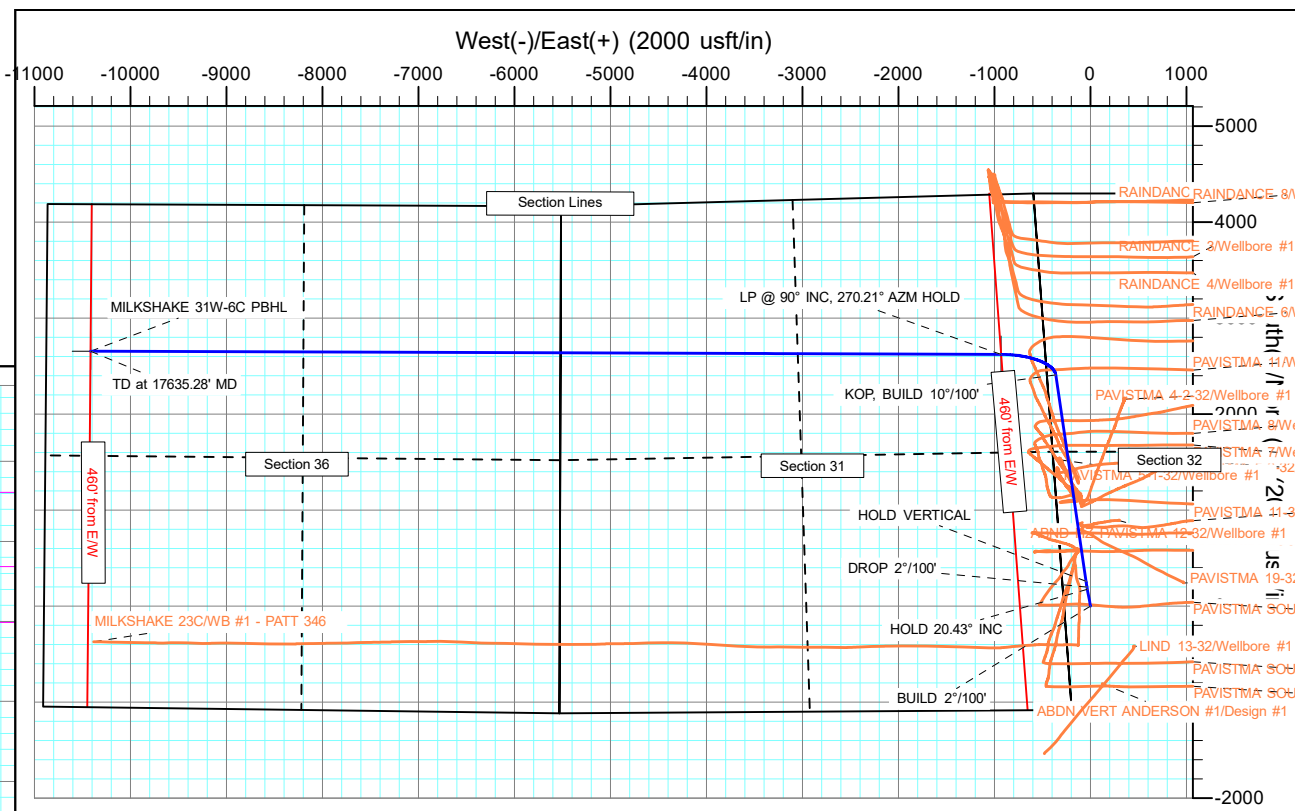
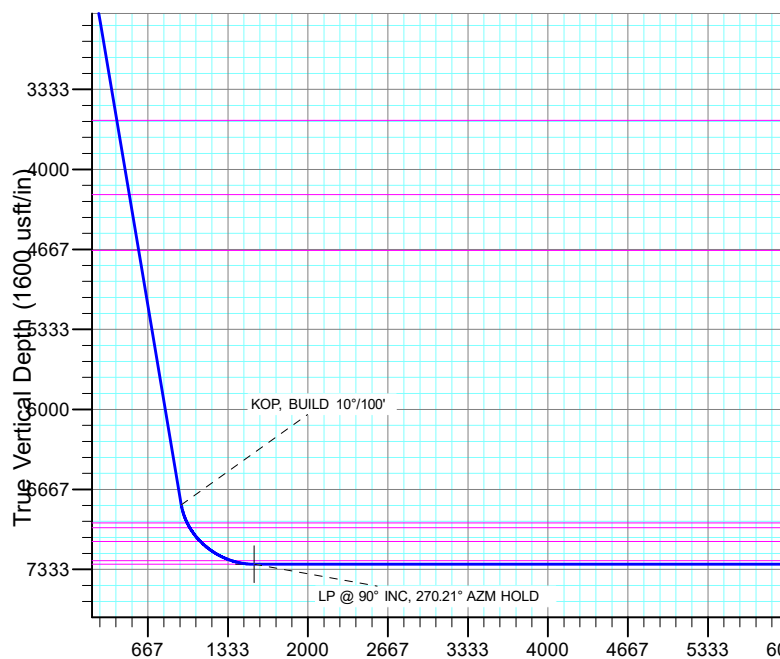
PROJECT DETAILS: Weld County

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

SHL:
1081' FSL, 275' FWL
Sec 32-T6N-R67W

LP:
1665' FNL, 460' FEL
Sec 31-T6N-R67W

BHL:
1530' FNL, 460' FWL
Sec 36-T6N-R67W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well MILKSHAKE 31W-20-6C
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-20-6C	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-20-6C					
Well Position	+N/-S	-515.49 usft	Northing:	1,403,263.67 usft	Latitude:	40° 26' 20.159 N
	+E/-W	160.33 usft	Easting:	3,160,226.56 usft	Longitude:	104° 55' 27.721 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	52,482.03148294

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	284.31

Plan Survey Tool Program	Date	9/7/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,635.24	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	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,621.51	20.43	349.72	1,600.00	177.31	-32.16	2.00	2.00	0.00	349.72	
1,686.51	20.43	349.72	1,660.91	199.63	-36.21	0.00	0.00	0.00	0.00	
1,846.30	23.54	351.67	1,809.07	258.66	-45.81	2.00	1.95	1.22	14.14	
7,284.87	23.54	351.67	6,794.99	2,408.01	-360.36	0.00	0.00	0.00	0.00	
8,150.90	90.00	270.21	7,290.00	2,623.35	-931.54	10.00	7.67	-9.41	-82.17	MILKSHAKE 31W-6C
17,635.28	90.00	270.21	7,290.00	2,657.59	-10,415.86	0.00	0.00	0.00	0.00	MILKSHAKE 31W-6C

Planning Report

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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-20-6C	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
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
BUILD 2°/100'									
700.00	2.00	349.72	699.98	1.72	-0.31	0.73	2.00	2.00	0.00
800.00	4.00	349.72	799.84	6.87	-1.25	2.90	2.00	2.00	0.00
900.00	6.00	349.72	899.45	15.44	-2.80	6.53	2.00	2.00	0.00
1,000.00	8.00	349.72	998.70	27.43	-4.98	11.60	2.00	2.00	0.00
1,100.00	10.00	349.72	1,097.47	42.82	-7.77	18.11	2.00	2.00	0.00
1,200.00	12.00	349.72	1,195.62	61.60	-11.17	26.05	2.00	2.00	0.00
1,300.00	14.00	349.72	1,293.06	83.73	-15.19	35.42	2.00	2.00	0.00
1,400.00	16.00	349.72	1,389.64	109.20	-19.80	46.19	2.00	2.00	0.00
1,500.00	18.00	349.72	1,485.27	137.96	-25.02	58.35	2.00	2.00	0.00
1,600.00	20.00	349.72	1,579.82	169.99	-30.83	71.90	2.00	2.00	0.00
1,621.51	20.43	349.72	1,600.00	177.31	-32.16	75.00	2.00	2.00	0.00
HOLD 20.43° INC									
1,686.51	20.43	349.72	1,660.91	199.63	-36.21	84.44	0.00	0.00	0.00
DROP 2°/100'									
1,700.00	20.69	349.91	1,673.54	204.30	-37.05	86.40	2.00	1.94	1.38
1,800.00	22.64	351.16	1,766.47	240.71	-43.10	101.27	2.00	1.95	1.25
1,846.30	23.54	351.67	1,809.07	258.66	-45.81	108.33	2.00	1.95	1.11
HOLD VERTICAL									
1,900.00	23.54	351.67	1,858.30	279.89	-48.91	116.59	0.00	0.00	0.00
2,000.00	23.54	351.67	1,949.97	319.41	-54.70	131.97	0.00	0.00	0.00
2,100.00	23.54	351.67	2,041.65	358.93	-60.48	147.34	0.00	0.00	0.00
2,200.00	23.54	351.67	2,133.33	398.45	-66.27	162.72	0.00	0.00	0.00
2,300.00	23.54	351.67	2,225.00	437.97	-72.05	178.09	0.00	0.00	0.00
2,400.00	23.54	351.67	2,316.68	477.49	-77.83	193.47	0.00	0.00	0.00
2,500.00	23.54	351.67	2,408.36	517.01	-83.62	208.84	0.00	0.00	0.00
2,600.00	23.54	351.67	2,500.04	556.53	-89.40	224.21	0.00	0.00	0.00
2,700.00	23.54	351.67	2,591.71	596.05	-95.18	239.59	0.00	0.00	0.00
2,800.00	23.54	351.67	2,683.39	635.57	-100.97	254.96	0.00	0.00	0.00
2,900.00	23.54	351.67	2,775.07	675.09	-106.75	270.34	0.00	0.00	0.00
3,000.00	23.54	351.67	2,866.74	714.61	-112.54	285.71	0.00	0.00	0.00
3,100.00	23.54	351.67	2,958.42	754.13	-118.32	301.09	0.00	0.00	0.00
3,200.00	23.54	351.67	3,050.10	793.65	-124.10	316.46	0.00	0.00	0.00
3,300.00	23.54	351.67	3,141.77	833.17	-129.89	331.84	0.00	0.00	0.00
3,400.00	23.54	351.67	3,233.45	872.69	-135.67	347.21	0.00	0.00	0.00
3,500.00	23.54	351.67	3,325.13	912.21	-141.45	362.59	0.00	0.00	0.00
3,600.00	23.54	351.67	3,416.81	951.73	-147.24	377.96	0.00	0.00	0.00
3,700.00	23.54	351.67	3,508.48	991.25	-153.02	393.34	0.00	0.00	0.00
3,788.92	23.54	351.67	3,590.00	1,026.40	-158.16	407.01	0.00	0.00	0.00
PARKMAN									
3,800.00	23.54	351.67	3,600.16	1,030.78	-158.81	408.71	0.00	0.00	0.00
3,900.00	23.54	351.67	3,691.84	1,070.30	-164.59	424.09	0.00	0.00	0.00
4,000.00	23.54	351.67	3,783.51	1,109.82	-170.37	439.46	0.00	0.00	0.00
4,100.00	23.54	351.67	3,875.19	1,149.34	-176.16	454.84	0.00	0.00	0.00
4,200.00	23.54	351.67	3,966.87	1,188.86	-181.94	470.21	0.00	0.00	0.00
4,300.00	23.54	351.67	4,058.55	1,228.38	-187.72	485.59	0.00	0.00	0.00

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Project:	Weld County	MD Reference:	KB 25' @ 4973.00usft
Site:	Sec 32-T6N-R67W	North Reference:	True
Well:	MILKSHAKE 31W-20-6C	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	23.54	351.67	4,150.22	1,267.90	-193.51	500.96	0.00	0.00	0.00	
4,465.20	23.54	351.67	4,210.00	1,293.67	-197.28	510.99	0.00	0.00	0.00	
SUSSEX										
4,500.00	23.54	351.67	4,241.90	1,307.42	-199.29	516.34	0.00	0.00	0.00	
4,600.00	23.54	351.67	4,333.58	1,346.94	-205.08	531.71	0.00	0.00	0.00	
4,700.00	23.54	351.67	4,425.25	1,386.46	-210.86	547.09	0.00	0.00	0.00	
4,800.00	23.54	351.67	4,516.93	1,425.98	-216.64	562.46	0.00	0.00	0.00	
4,900.00	23.54	351.67	4,608.61	1,465.50	-222.43	577.83	0.00	0.00	0.00	
4,972.42	23.54	351.67	4,675.00	1,494.12	-226.62	588.97	0.00	0.00	0.00	
SHANNON										
5,000.00	23.54	351.67	4,700.28	1,505.02	-228.21	593.21	0.00	0.00	0.00	
5,100.00	23.54	351.67	4,791.96	1,544.54	-233.99	608.58	0.00	0.00	0.00	
5,200.00	23.54	351.67	4,883.64	1,584.06	-239.78	623.96	0.00	0.00	0.00	
5,300.00	23.54	351.67	4,975.32	1,623.58	-245.56	639.33	0.00	0.00	0.00	
5,400.00	23.54	351.67	5,066.99	1,663.10	-251.35	654.71	0.00	0.00	0.00	
5,500.00	23.54	351.67	5,158.67	1,702.62	-257.13	670.08	0.00	0.00	0.00	
5,600.00	23.54	351.67	5,250.35	1,742.14	-262.91	685.46	0.00	0.00	0.00	
5,700.00	23.54	351.67	5,342.02	1,781.66	-268.70	700.83	0.00	0.00	0.00	
5,800.00	23.54	351.67	5,433.70	1,821.18	-274.48	716.21	0.00	0.00	0.00	
5,900.00	23.54	351.67	5,525.38	1,860.70	-280.26	731.58	0.00	0.00	0.00	
6,000.00	23.54	351.67	5,617.06	1,900.22	-286.05	746.96	0.00	0.00	0.00	
6,100.00	23.54	351.67	5,708.73	1,939.75	-291.83	762.33	0.00	0.00	0.00	
6,200.00	23.54	351.67	5,800.41	1,979.27	-297.62	777.71	0.00	0.00	0.00	
6,300.00	23.54	351.67	5,892.09	2,018.79	-303.40	793.08	0.00	0.00	0.00	
6,400.00	23.54	351.67	5,983.76	2,058.31	-309.18	808.46	0.00	0.00	0.00	
6,500.00	23.54	351.67	6,075.44	2,097.83	-314.97	823.83	0.00	0.00	0.00	
6,600.00	23.54	351.67	6,167.12	2,137.35	-320.75	839.21	0.00	0.00	0.00	
6,700.00	23.54	351.67	6,258.79	2,176.87	-326.54	854.58	0.00	0.00	0.00	
6,800.00	23.54	351.67	6,350.47	2,216.39	-332.32	869.96	0.00	0.00	0.00	
6,900.00	23.54	351.67	6,442.15	2,255.91	-338.10	885.33	0.00	0.00	0.00	
7,000.00	23.54	351.67	6,533.83	2,295.43	-343.89	900.71	0.00	0.00	0.00	
7,100.00	23.54	351.67	6,625.50	2,334.95	-349.67	916.08	0.00	0.00	0.00	
7,200.00	23.54	351.67	6,717.18	2,374.47	-355.45	931.46	0.00	0.00	0.00	
7,284.87	23.54	351.67	6,794.99	2,408.01	-360.36	944.50	0.00	0.00	0.00	
KOP, BUILD 10°/100'										
7,300.00	23.79	347.96	6,808.84	2,413.99	-361.44	947.02	10.00	1.66	-24.57	
7,350.00	25.22	336.38	6,854.37	2,433.62	-367.81	958.05	10.00	2.85	-23.15	
7,400.00	27.44	326.27	6,899.20	2,452.98	-378.48	973.18	10.00	4.45	-20.23	
7,450.00	30.29	317.74	6,943.00	2,471.90	-393.37	992.28	10.00	5.69	-17.06	
7,452.32	30.43	317.38	6,945.00	2,472.77	-394.16	993.26	10.00	6.22	-15.49	
SHARON SPRINGS										
7,499.48	33.56	310.71	6,985.00	2,490.07	-412.14	1,014.96	10.00	6.63	-14.15	
NIOBRARA										
7,500.00	33.60	310.64	6,985.44	2,490.26	-412.36	1,015.22	10.00	6.99	-12.93	
7,550.00	37.24	304.73	7,026.19	2,507.90	-435.31	1,041.82	10.00	7.29	-11.82	
7,600.00	41.14	299.76	7,064.94	2,524.69	-462.04	1,071.87	10.00	7.79	-9.94	
7,648.01	45.05	295.68	7,100.00	2,539.90	-491.08	1,103.77	10.00	8.15	-8.50	
NIO B										
7,650.00	45.22	295.52	7,101.40	2,540.51	-492.35	1,105.15	10.00	8.30	-7.88	
7,700.00	49.43	291.86	7,135.30	2,555.23	-526.01	1,141.40	10.00	8.42	-7.34	
7,750.00	53.74	288.63	7,166.36	2,568.75	-562.76	1,180.36	10.00	8.63	-6.46	
7,800.00	58.13	285.74	7,194.37	2,580.96	-602.32	1,221.71	10.00	8.78	-5.77	
7,850.00	62.58	283.12	7,219.09	2,591.76	-644.40	1,265.15	10.00	8.90	-5.24	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well MILKSHAKE 31W-20-6C
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-20-6C	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)	
7,900.00	67.08	280.70	7,240.35	2,601.08	-688.66	1,310.35	10.00	8.99	-4.83	
7,950.00	71.61	278.44	7,257.98	2,608.85	-734.78	1,356.96	10.00	9.06	-4.52	
7,956.49	72.20	278.16	7,260.00	2,609.74	-740.89	1,363.09	10.00	9.09	-4.38	
FORT HAYS										
8,000.00	76.17	276.30	7,271.86	2,615.00	-782.41	1,404.62	10.00	9.11	-4.28	
8,050.00	80.74	274.23	7,281.86	2,619.48	-831.18	1,452.98	10.00	9.15	-4.12	
8,100.00	85.33	272.23	7,287.93	2,622.28	-880.71	1,501.67	10.00	9.17	-4.02	
8,150.90	90.00	270.21	7,290.00	2,623.35	-931.54	1,551.19	10.00	9.18	-3.97	
LP @ 90° INC, 270.21° AZM HOLD - CODELL										
8,200.00	90.00	270.21	7,290.00	2,623.53	-980.64	1,598.81	0.00	0.00	0.00	
8,300.00	90.00	270.21	7,290.00	2,623.89	-1,080.64	1,695.79	0.00	0.00	0.00	
8,400.00	90.00	270.21	7,290.00	2,624.25	-1,180.64	1,792.78	0.00	0.00	0.00	
8,500.00	90.00	270.21	7,290.00	2,624.61	-1,280.64	1,889.76	0.00	0.00	0.00	
8,600.00	90.00	270.21	7,290.00	2,624.97	-1,380.64	1,986.75	0.00	0.00	0.00	
8,700.00	90.00	270.21	7,290.00	2,625.34	-1,480.64	2,083.73	0.00	0.00	0.00	
8,800.00	90.00	270.21	7,290.00	2,625.70	-1,580.64	2,180.72	0.00	0.00	0.00	
8,900.00	90.00	270.21	7,290.00	2,626.06	-1,680.64	2,277.70	0.00	0.00	0.00	
9,000.00	90.00	270.21	7,290.00	2,626.42	-1,780.64	2,374.69	0.00	0.00	0.00	
9,100.00	90.00	270.21	7,290.00	2,626.78	-1,880.64	2,471.67	0.00	0.00	0.00	
9,200.00	90.00	270.21	7,290.00	2,627.14	-1,980.64	2,568.65	0.00	0.00	0.00	
9,300.00	90.00	270.21	7,290.00	2,627.50	-2,080.63	2,665.64	0.00	0.00	0.00	
9,400.00	90.00	270.21	7,290.00	2,627.86	-2,180.63	2,762.62	0.00	0.00	0.00	
9,500.00	90.00	270.21	7,290.00	2,628.22	-2,280.63	2,859.61	0.00	0.00	0.00	
9,600.00	90.00	270.21	7,290.00	2,628.58	-2,380.63	2,956.59	0.00	0.00	0.00	
9,700.00	90.00	270.21	7,290.00	2,628.95	-2,480.63	3,053.58	0.00	0.00	0.00	
9,800.00	90.00	270.21	7,290.00	2,629.31	-2,580.63	3,150.56	0.00	0.00	0.00	
9,900.00	90.00	270.21	7,290.00	2,629.67	-2,680.63	3,247.54	0.00	0.00	0.00	
10,000.00	90.00	270.21	7,290.00	2,630.03	-2,780.63	3,344.53	0.00	0.00	0.00	
10,100.00	90.00	270.21	7,290.00	2,630.39	-2,880.63	3,441.51	0.00	0.00	0.00	
10,200.00	90.00	270.21	7,290.00	2,630.75	-2,980.63	3,538.50	0.00	0.00	0.00	
10,300.00	90.00	270.21	7,290.00	2,631.11	-3,080.63	3,635.48	0.00	0.00	0.00	
10,400.00	90.00	270.21	7,290.00	2,631.47	-3,180.63	3,732.47	0.00	0.00	0.00	
10,500.00	90.00	270.21	7,290.00	2,631.83	-3,280.63	3,829.45	0.00	0.00	0.00	
10,600.00	90.00	270.21	7,290.00	2,632.19	-3,380.63	3,926.43	0.00	0.00	0.00	
10,700.00	90.00	270.21	7,290.00	2,632.56	-3,480.63	4,023.42	0.00	0.00	0.00	
10,800.00	90.00	270.21	7,290.00	2,632.92	-3,580.63	4,120.40	0.00	0.00	0.00	
10,900.00	90.00	270.21	7,290.00	2,633.28	-3,680.62	4,217.39	0.00	0.00	0.00	
11,000.00	90.00	270.21	7,290.00	2,633.64	-3,780.62	4,314.37	0.00	0.00	0.00	
11,100.00	90.00	270.21	7,290.00	2,634.00	-3,880.62	4,411.36	0.00	0.00	0.00	
11,200.00	90.00	270.21	7,290.00	2,634.36	-3,980.62	4,508.34	0.00	0.00	0.00	
11,300.00	90.00	270.21	7,290.00	2,634.72	-4,080.62	4,605.33	0.00	0.00	0.00	
11,400.00	90.00	270.21	7,290.00	2,635.08	-4,180.62	4,702.31	0.00	0.00	0.00	
11,500.00	90.00	270.21	7,290.00	2,635.44	-4,280.62	4,799.29	0.00	0.00	0.00	
11,600.00	90.00	270.21	7,290.00	2,635.80	-4,380.62	4,896.28	0.00	0.00	0.00	
11,700.00	90.00	270.21	7,290.00	2,636.17	-4,480.62	4,993.26	0.00	0.00	0.00	
11,800.00	90.00	270.21	7,290.00	2,636.53	-4,580.62	5,090.25	0.00	0.00	0.00	
11,900.00	90.00	270.21	7,290.00	2,636.89	-4,680.62	5,187.23	0.00	0.00	0.00	
12,000.00	90.00	270.21	7,290.00	2,637.25	-4,780.62	5,284.22	0.00	0.00	0.00	
12,100.00	90.00	270.21	7,290.00	2,637.61	-4,880.62	5,381.20	0.00	0.00	0.00	
12,200.00	90.00	270.21	7,290.00	2,637.97	-4,980.62	5,478.18	0.00	0.00	0.00	
12,300.00	90.00	270.21	7,290.00	2,638.33	-5,080.62	5,575.17	0.00	0.00	0.00	
12,400.00	90.00	270.21	7,290.00	2,638.69	-5,180.61	5,672.15	0.00	0.00	0.00	
12,500.00	90.00	270.21	7,290.00	2,639.05	-5,280.61	5,769.14	0.00	0.00	0.00	
12,600.00	90.00	270.21	7,290.00	2,639.41	-5,380.61	5,866.12	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well MILKSHAKE 31W-20-6C
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-20-6C	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)	
12,700.00	90.00	270.21	7,290.00	2,639.78	-5,480.61	5,963.11	0.00	0.00	0.00	
12,800.00	90.00	270.21	7,290.00	2,640.14	-5,580.61	6,060.09	0.00	0.00	0.00	
12,900.00	90.00	270.21	7,290.00	2,640.50	-5,680.61	6,157.07	0.00	0.00	0.00	
13,000.00	90.00	270.21	7,290.00	2,640.86	-5,780.61	6,254.06	0.00	0.00	0.00	
13,100.00	90.00	270.21	7,290.00	2,641.22	-5,880.61	6,351.04	0.00	0.00	0.00	
13,200.00	90.00	270.21	7,290.00	2,641.58	-5,980.61	6,448.03	0.00	0.00	0.00	
13,300.00	90.00	270.21	7,290.00	2,641.94	-6,080.61	6,545.01	0.00	0.00	0.00	
13,400.00	90.00	270.21	7,290.00	2,642.30	-6,180.61	6,642.00	0.00	0.00	0.00	
13,500.00	90.00	270.21	7,290.00	2,642.66	-6,280.61	6,738.98	0.00	0.00	0.00	
13,600.00	90.00	270.21	7,290.00	2,643.02	-6,380.61	6,835.97	0.00	0.00	0.00	
13,700.00	90.00	270.21	7,290.00	2,643.39	-6,480.61	6,932.95	0.00	0.00	0.00	
13,800.00	90.00	270.21	7,290.00	2,643.75	-6,580.61	7,029.93	0.00	0.00	0.00	
13,900.00	90.00	270.21	7,290.00	2,644.11	-6,680.60	7,126.92	0.00	0.00	0.00	
14,000.00	90.00	270.21	7,290.00	2,644.47	-6,780.60	7,223.90	0.00	0.00	0.00	
14,100.00	90.00	270.21	7,290.00	2,644.83	-6,880.60	7,320.89	0.00	0.00	0.00	
14,200.00	90.00	270.21	7,290.00	2,645.19	-6,980.60	7,417.87	0.00	0.00	0.00	
14,300.00	90.00	270.21	7,290.00	2,645.55	-7,080.60	7,514.86	0.00	0.00	0.00	
14,400.00	90.00	270.21	7,290.00	2,645.91	-7,180.60	7,611.84	0.00	0.00	0.00	
14,500.00	90.00	270.21	7,290.00	2,646.27	-7,280.60	7,708.82	0.00	0.00	0.00	
14,600.00	90.00	270.21	7,290.00	2,646.63	-7,380.60	7,805.81	0.00	0.00	0.00	
14,700.00	90.00	270.21	7,290.00	2,647.00	-7,480.60	7,902.79	0.00	0.00	0.00	
14,800.00	90.00	270.21	7,290.00	2,647.36	-7,580.60	7,999.78	0.00	0.00	0.00	
14,900.00	90.00	270.21	7,290.00	2,647.72	-7,680.60	8,096.76	0.00	0.00	0.00	
15,000.00	90.00	270.21	7,290.00	2,648.08	-7,780.60	8,193.75	0.00	0.00	0.00	
15,100.00	90.00	270.21	7,290.00	2,648.44	-7,880.60	8,290.73	0.00	0.00	0.00	
15,200.00	90.00	270.21	7,290.00	2,648.80	-7,980.60	8,387.72	0.00	0.00	0.00	
15,300.00	90.00	270.21	7,290.00	2,649.16	-8,080.60	8,484.70	0.00	0.00	0.00	
15,400.00	90.00	270.21	7,290.00	2,649.52	-8,180.60	8,581.68	0.00	0.00	0.00	
15,500.00	90.00	270.21	7,290.00	2,649.88	-8,280.59	8,678.67	0.00	0.00	0.00	
15,600.00	90.00	270.21	7,290.00	2,650.24	-8,380.59	8,775.65	0.00	0.00	0.00	
15,700.00	90.00	270.21	7,290.00	2,650.61	-8,480.59	8,872.64	0.00	0.00	0.00	
15,800.00	90.00	270.21	7,290.00	2,650.97	-8,580.59	8,969.62	0.00	0.00	0.00	
15,900.00	90.00	270.21	7,290.00	2,651.33	-8,680.59	9,066.61	0.00	0.00	0.00	
16,000.00	90.00	270.21	7,290.00	2,651.69	-8,780.59	9,163.59	0.00	0.00	0.00	
16,100.00	90.00	270.21	7,290.00	2,652.05	-8,880.59	9,260.57	0.00	0.00	0.00	
16,200.00	90.00	270.21	7,290.00	2,652.41	-8,980.59	9,357.56	0.00	0.00	0.00	
16,300.00	90.00	270.21	7,290.00	2,652.77	-9,080.59	9,454.54	0.00	0.00	0.00	
16,400.00	90.00	270.21	7,290.00	2,653.13	-9,180.59	9,551.53	0.00	0.00	0.00	
16,500.00	90.00	270.21	7,290.00	2,653.49	-9,280.59	9,648.51	0.00	0.00	0.00	
16,600.00	90.00	270.21	7,290.00	2,653.85	-9,380.59	9,745.50	0.00	0.00	0.00	
16,700.00	90.00	270.21	7,290.00	2,654.22	-9,480.59	9,842.48	0.00	0.00	0.00	
16,800.00	90.00	270.21	7,290.00	2,654.58	-9,580.59	9,939.46	0.00	0.00	0.00	
16,900.00	90.00	270.21	7,290.00	2,654.94	-9,680.59	10,036.45	0.00	0.00	0.00	
17,000.00	90.00	270.21	7,290.00	2,655.30	-9,780.58	10,133.43	0.00	0.00	0.00	
17,100.00	90.00	270.21	7,290.00	2,655.66	-9,880.58	10,230.42	0.00	0.00	0.00	
17,200.00	90.00	270.21	7,290.00	2,656.02	-9,980.58	10,327.40	0.00	0.00	0.00	
17,300.00	90.00	270.21	7,290.00	2,656.38	-10,080.58	10,424.39	0.00	0.00	0.00	
17,400.00	90.00	270.21	7,290.00	2,656.74	-10,180.58	10,521.37	0.00	0.00	0.00	
17,500.00	90.00	270.21	7,290.00	2,657.10	-10,280.58	10,618.36	0.00	0.00	0.00	
17,600.00	90.00	270.21	7,290.00	2,657.46	-10,380.58	10,715.34	0.00	0.00	0.00	
17,635.28	90.00	270.21	7,290.00	2,657.59	-10,415.86	10,749.56	0.00	0.00	0.00	
TD at 17635.28' MD										

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well MILKSHAKE 31W-20-6C
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-20-6C	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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-6C PI - plan hits target center - Point	0.00	0.00	7,290.00	2,657.59	-10,415.86	1,405,853.60	3,149,793.66	40° 26' 46.399 N	104° 57' 42.448 W
MILKSHAKE 31W-6C LI - plan hits target center - Point	0.00	0.00	7,290.00	2,623.35	-931.54	1,405,880.92	3,159,278.01	40° 26' 46.082 N	104° 55' 39.770 W

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
3,788.92	3,590.00	PARKMAN				
4,465.20	4,210.00	SUSSEX				
4,972.42	4,675.00	SHANNON				
7,452.32	6,945.00	SHARON SPRINGS				
7,499.48	6,985.00	NIOBRARA				
7,648.01	7,100.00	NIO B				
7,956.49	7,260.00	FORT HAYS				
8,150.90	7,290.00	CODELL				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
600.00	600.00	0.00	0.00	BUILD 2°/100'
1,621.51	1,600.00	177.31	-32.16	HOLD 20.43° INC
1,686.51	1,660.91	199.63	-36.21	DROP 2°/100'
1,846.30	1,809.07	258.66	-45.81	HOLD VERTICAL
7,284.87	6,794.99	2,408.01	-360.36	KOP, BUILD 10°/100'
8,150.90	7,290.00	2,623.35	-931.54	LP @ 90° INC, 270.21° AZM HOLD
17,635.28	7,290.00	2,657.59	-10,415.86	TD at 17635.28' MD