

# **EXTRACTION OIL & GAS**

**WELD COUNTY**

**Sec 20-T7N-R67W**

**VIC 20W-20-11N**

**ORIGINAL WELLBORE**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**22 May, 2018**



Project: WELD COUNTY  
Site: Sec 20-T7N-R67W  
Well: VIC 20W-20-11N  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL 1



Azimuths to True North  
Magnetic North: 8.27°  
Magnetic Field  
Strength: 52425.6nT  
Dip Angle: 66.95°  
Date: 10/2/2017  
Model: IGRF2015

WELL DETAILS: VIC 20W-20-11N

5004.00							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
0.00	0.00	1447787.49	3164265.67	40° 33' 39.863 N	104° 54' 31.644 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	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
3	1823.86	26.48	170.16	1777.24	-296.06	51.37	2.00	170.16	25.81	
4	5499.73	26.48	170.16	5067.56	-1910.79	331.56	0.00	0.00	166.58	
5	6823.59	0.00	0.00	6344.80	-2206.85	382.93	2.00	180.00	192.39	
6	6853.59	0.00	0.00	6374.80	-2206.85	382.93	0.00	0.00	192.39	
7	7753.98	90.00	268.46	6948.00	-2222.29	-190.07	10.00	268.46	750.39	VIC 20W-20-11N - L
8	16933.63	90.00	268.46	6948.00	-2469.70	-9366.38	0.00	0.00	9686.51	VIC 20W-20-11N - P

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	Start Build 2.00
1823.86	26.48	170.16	1777.24	-296.06	51.37	25.81	300.48	Start 3675.87 hold at 1823.86 MD
5499.73	26.48	170.16	5067.56	-1910.79	331.56	166.58	1939.34	Start Drop -2.00
6823.59	0.00	0.00	6344.80	-2206.85	382.93	192.39	2239.83	Start 30.00 hold at 6823.59 MD
6853.59	0.00	0.00	6374.80	-2206.85	382.93	192.39	2239.83	Start DLS 10.00 TFO 268.46
7753.98	90.00	268.46	6948.00	-2222.29	-190.07	750.39	2813.03	Start 9179.65 hold at 7753.98 MD
16933.63	90.00	268.46	6948.00	-2469.70	-9366.38	9686.51	11992.68	TD at 16933.63

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
VIC 20W-20-11N - LP	6948.00	-2222.29	-190.07	1445563.98	3164090.42	40° 33' 17.903 N	104° 54' 34.106 W	Point
- plan hits target center								
VIC 20W-20-11N - PBHL	6948.00	-2469.70	-9366.38	1445255.39	3154915.96	40° 33' 15.440 N	104° 56' 32.989 W	Point
- plan hits target center								

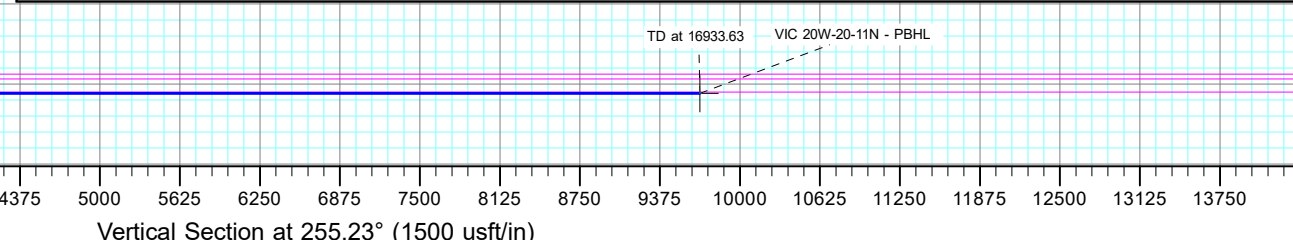
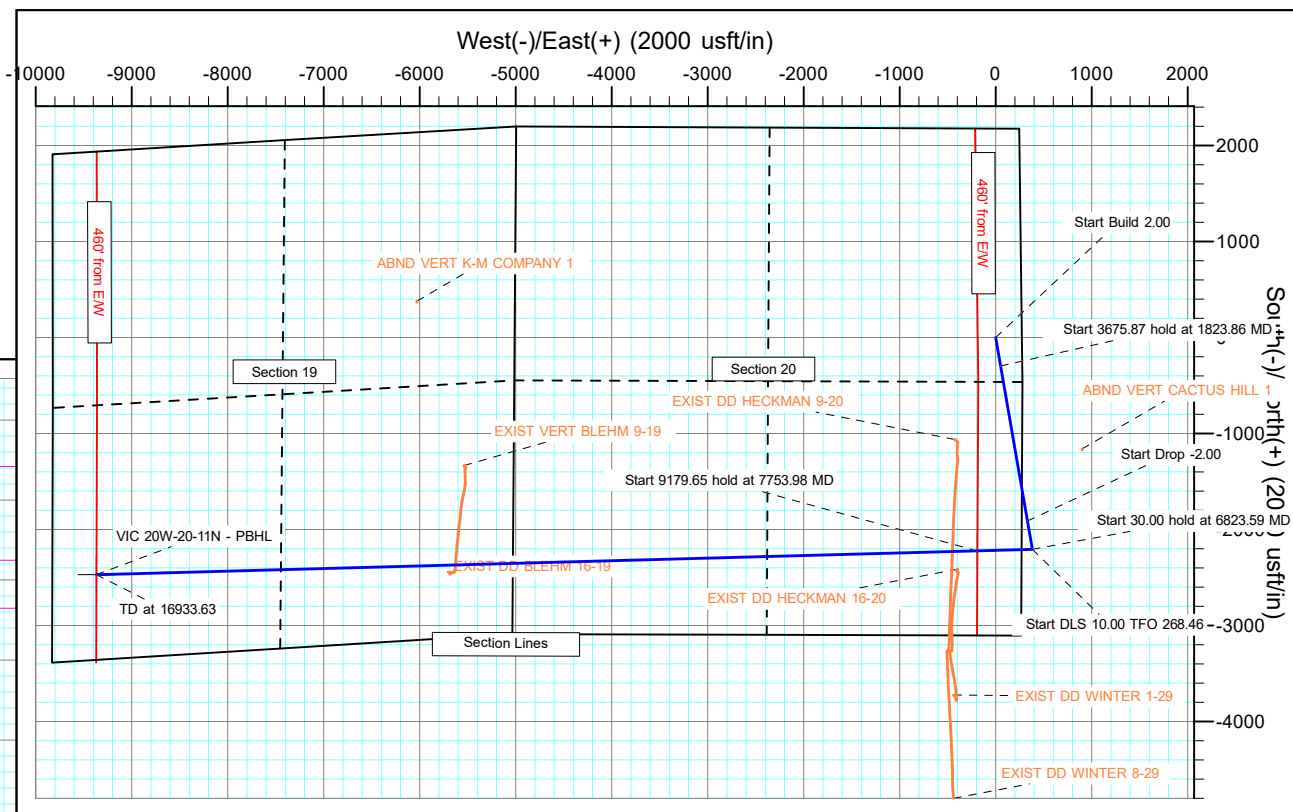
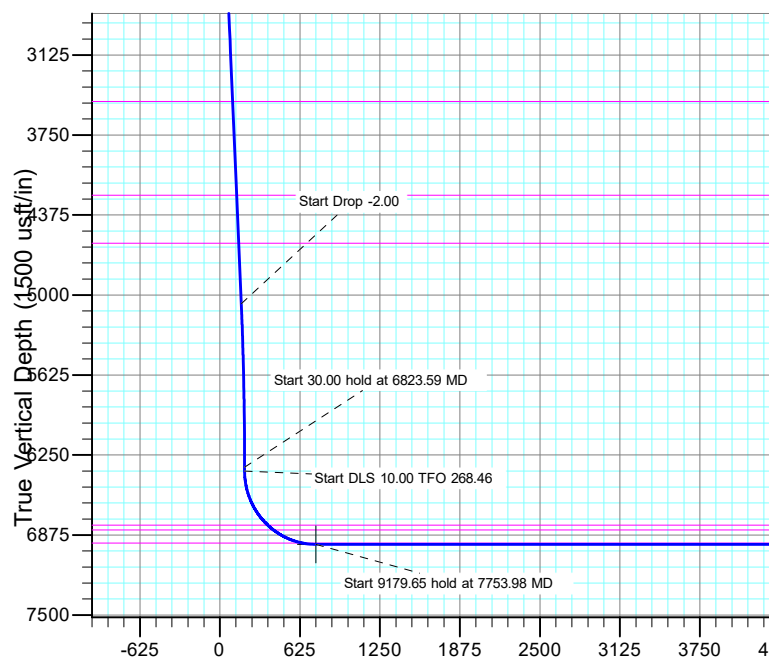
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3488.00	3735.08	PARKMAN
4220.00	4552.86	SUSSEX
4594.00	4970.68	SHANNON
6798.00	7329.67	SHARON SPRINGS
6836.00	7389.54	NIOBRARA
6938.00	7646.75	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:  
2176' FNL, 272' FEL  
Sec 20-T7N-R67W  
LP:  
882' FSL, 460' FEL  
Sec 20-T7N-R67W  
BHL:  
887' FSL, 460' FWL  
Sec 19-T7N-R67W



## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-11N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5029.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5029.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-11N	<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 20-T7N-R67W			
Site Position:		Northing:	1,449,964.02 usft	Latitude:	40° 34' 1.355 N
From:	Lat/Long	Easting:	3,164,495.92 usft	Longitude:	104° 54' 28.472 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.38 °

Well	VIC 20W-20-11N					
Well Position	+N/-S	-2,174.94 usft	Northing:	1,447,787.49 usft	Latitude:	40° 33' 39.863 N
	+E/-W	-244.78 usft	Easting:	3,164,265.67 usft	Longitude:	104° 54' 31.644 W
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	5,004.00 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	10/2/2017	8.27	66.95	52,425.58570844

<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	255.23

<b>Plan Survey Tool Program</b>	<b>Date</b>	5/22/2018		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	16,933.63	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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,823.86	26.48	170.16	1,777.24	-296.06	51.37	2.00	2.00	0.00	170.16	
5,499.73	26.48	170.16	5,067.56	-1,910.79	331.56	0.00	0.00	0.00	0.00	
6,823.59	0.00	0.00	6,344.80	-2,206.85	382.93	2.00	-2.00	0.00	180.00	
6,853.59	0.00	0.00	6,374.80	-2,206.85	382.93	0.00	0.00	0.00	0.00	
7,753.98	90.00	268.46	6,948.00	-2,222.29	-190.07	10.00	10.00	-10.17	268.46	VIC 20W-20-11N - LP
16,933.63	90.00	268.46	6,948.00	-2,469.70	-9,366.38	0.00	0.00	0.00	0.00	VIC 20W-20-11N - PE

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-11N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5029.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5029.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-11N	<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
Start Build 2.00									
600.00	2.00	170.16	599.98	-1.72	0.30	0.15	2.00	2.00	0.00
700.00	4.00	170.16	699.84	-6.88	1.19	0.60	2.00	2.00	0.00
800.00	6.00	170.16	799.45	-15.46	2.68	1.35	2.00	2.00	0.00
900.00	8.00	170.16	898.70	-27.47	4.77	2.39	2.00	2.00	0.00
1,000.00	10.00	170.16	997.47	-42.88	7.44	3.74	2.00	2.00	0.00
1,100.00	12.00	170.16	1,095.62	-61.68	10.70	5.38	2.00	2.00	0.00
1,200.00	14.00	170.16	1,193.06	-83.84	14.55	7.31	2.00	2.00	0.00
1,300.00	16.00	170.16	1,289.64	-109.34	18.97	9.53	2.00	2.00	0.00
1,400.00	18.00	170.16	1,385.27	-138.15	23.97	12.04	2.00	2.00	0.00
1,500.00	20.00	170.16	1,479.82	-170.22	29.54	14.84	2.00	2.00	0.00
1,600.00	22.00	170.16	1,573.17	-205.53	35.66	17.92	2.00	2.00	0.00
1,700.00	24.00	170.16	1,665.21	-244.03	42.34	21.27	2.00	2.00	0.00
1,800.00	26.00	170.16	1,755.84	-285.67	49.57	24.90	2.00	2.00	0.00
1,823.86	26.48	170.16	1,777.24	-296.06	51.37	25.81	2.00	2.00	0.00
Start 3675.87 hold at 1823.86 MD									
1,900.00	26.48	170.16	1,845.40	-329.51	57.18	28.73	0.00	0.00	0.00
2,000.00	26.48	170.16	1,934.91	-373.43	64.80	32.56	0.00	0.00	0.00
2,100.00	26.48	170.16	2,024.42	-417.36	72.42	36.38	0.00	0.00	0.00
2,200.00	26.48	170.16	2,113.93	-461.29	80.04	40.21	0.00	0.00	0.00
2,300.00	26.48	170.16	2,203.44	-505.22	87.66	44.04	0.00	0.00	0.00
2,400.00	26.48	170.16	2,292.95	-549.14	95.29	47.87	0.00	0.00	0.00
2,500.00	26.48	170.16	2,382.46	-593.07	102.91	51.70	0.00	0.00	0.00
2,600.00	26.48	170.16	2,471.97	-637.00	110.53	55.53	0.00	0.00	0.00
2,700.00	26.48	170.16	2,561.49	-680.93	118.15	59.36	0.00	0.00	0.00
2,800.00	26.48	170.16	2,651.00	-724.86	125.78	63.19	0.00	0.00	0.00
2,900.00	26.48	170.16	2,740.51	-768.78	133.40	67.02	0.00	0.00	0.00
3,000.00	26.48	170.16	2,830.02	-812.71	141.02	70.85	0.00	0.00	0.00
3,100.00	26.48	170.16	2,919.53	-856.64	148.64	74.68	0.00	0.00	0.00
3,200.00	26.48	170.16	3,009.04	-900.57	156.27	78.51	0.00	0.00	0.00
3,300.00	26.48	170.16	3,098.55	-944.50	163.89	82.34	0.00	0.00	0.00
3,400.00	26.48	170.16	3,188.06	-988.42	171.51	86.17	0.00	0.00	0.00
3,500.00	26.48	170.16	3,277.57	-1,032.35	179.13	90.00	0.00	0.00	0.00
3,600.00	26.48	170.16	3,367.09	-1,076.28	186.75	93.83	0.00	0.00	0.00
3,700.00	26.48	170.16	3,456.60	-1,120.21	194.38	97.66	0.00	0.00	0.00
3,735.08	26.48	170.16	3,488.00	-1,135.62	197.05	99.00	0.00	0.00	0.00
PARKMAN									
3,800.00	26.48	170.16	3,546.11	-1,164.13	202.00	101.49	0.00	0.00	0.00
3,900.00	26.48	170.16	3,635.62	-1,208.06	209.62	105.32	0.00	0.00	0.00
4,000.00	26.48	170.16	3,725.13	-1,251.99	217.24	109.15	0.00	0.00	0.00
4,100.00	26.48	170.16	3,814.64	-1,295.92	224.87	112.98	0.00	0.00	0.00
4,200.00	26.48	170.16	3,904.15	-1,339.85	232.49	116.81	0.00	0.00	0.00
4,300.00	26.48	170.16	3,993.66	-1,383.77	240.11	120.64	0.00	0.00	0.00
4,400.00	26.48	170.16	4,083.17	-1,427.70	247.73	124.47	0.00	0.00	0.00
4,500.00	26.48	170.16	4,172.69	-1,471.63	255.36	128.29	0.00	0.00	0.00
4,552.86	26.48	170.16	4,220.00	-1,494.85	259.38	130.32	0.00	0.00	0.00
SUSSEX									

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-11N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5029.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5029.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-11N	<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)
4,600.00	26.48	170.16	4,262.20	-1,515.56	262.98	132.12	0.00	0.00	0.00
4,700.00	26.48	170.16	4,351.71	-1,559.49	270.60	135.95	0.00	0.00	0.00
4,800.00	26.48	170.16	4,441.22	-1,603.41	278.22	139.78	0.00	0.00	0.00
4,900.00	26.48	170.16	4,530.73	-1,647.34	285.84	143.61	0.00	0.00	0.00
4,970.68	26.48	170.16	4,594.00	-1,678.39	291.23	146.32	0.00	0.00	0.00
<b>SHANNON</b>									
5,000.00	26.48	170.16	4,620.24	-1,691.27	293.47	147.44	0.00	0.00	0.00
5,100.00	26.48	170.16	4,709.75	-1,735.20	301.09	151.27	0.00	0.00	0.00
5,200.00	26.48	170.16	4,799.26	-1,779.12	308.71	155.10	0.00	0.00	0.00
5,300.00	26.48	170.16	4,888.77	-1,823.05	316.33	158.93	0.00	0.00	0.00
5,400.00	26.48	170.16	4,978.29	-1,866.98	323.96	162.76	0.00	0.00	0.00
5,499.73	26.48	170.16	5,067.56	-1,910.79	331.56	166.58	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,600.00	24.47	170.16	5,158.07	-1,953.28	338.93	170.28	2.00	-2.00	0.00
5,700.00	22.47	170.16	5,249.79	-1,992.52	345.74	173.71	2.00	-2.00	0.00
5,800.00	20.47	170.16	5,342.85	-2,028.59	352.00	176.85	2.00	-2.00	0.00
5,900.00	18.47	170.16	5,437.12	-2,061.43	357.70	179.71	2.00	-2.00	0.00
6,000.00	16.47	170.16	5,532.51	-2,091.01	362.83	182.29	2.00	-2.00	0.00
6,100.00	14.47	170.16	5,628.88	-2,117.29	367.39	184.58	2.00	-2.00	0.00
6,200.00	12.47	170.16	5,726.12	-2,140.24	371.37	186.58	2.00	-2.00	0.00
6,300.00	10.47	170.16	5,824.12	-2,159.84	374.77	188.29	2.00	-2.00	0.00
6,400.00	8.47	170.16	5,922.75	-2,176.05	377.59	189.71	2.00	-2.00	0.00
6,500.00	6.47	170.16	6,021.89	-2,188.86	379.81	190.82	2.00	-2.00	0.00
6,600.00	4.47	170.16	6,121.43	-2,198.26	381.44	191.64	2.00	-2.00	0.00
6,700.00	2.47	170.16	6,221.25	-2,204.22	382.47	192.16	2.00	-2.00	0.00
6,800.00	0.47	170.16	6,321.21	-2,206.75	382.91	192.38	2.00	-2.00	0.00
6,823.59	0.00	0.00	6,344.80	-2,206.85	382.93	192.39	2.00	-2.00	0.00
<b>Start 30.00 hold at 6823.59 MD</b>									
6,853.59	0.00	0.00	6,374.80	-2,206.85	382.93	192.39	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 268.46</b>									
6,900.00	4.64	268.46	6,421.16	-2,206.90	381.05	194.22	10.00	10.00	0.00
6,950.00	9.64	268.46	6,470.75	-2,207.07	374.84	200.26	10.00	10.00	0.00
7,000.00	14.63	268.46	6,519.62	-2,207.35	364.34	210.49	10.00	10.00	0.00
7,050.00	19.63	268.46	6,567.39	-2,207.75	349.62	224.83	10.00	10.00	0.00
7,100.00	24.63	268.46	6,613.69	-2,208.25	330.80	243.16	10.00	10.00	0.00
7,150.00	29.63	268.46	6,658.17	-2,208.87	308.01	265.35	10.00	10.00	0.00
7,200.00	34.63	268.46	6,700.50	-2,209.59	281.44	291.22	10.00	10.00	0.00
7,250.00	39.62	268.46	6,740.36	-2,210.40	251.28	320.59	10.00	10.00	0.00
7,300.00	44.62	268.46	6,777.43	-2,211.30	217.77	353.23	10.00	10.00	0.00
7,329.67	47.59	268.46	6,798.00	-2,211.88	196.40	374.04	10.00	10.00	0.00
<b>SHARON SPRINGS</b>									
7,350.00	49.62	268.46	6,811.44	-2,212.29	181.16	388.88	10.00	10.00	0.00
7,389.54	53.57	268.46	6,836.00	-2,213.12	150.19	419.04	10.00	10.00	0.00
<b>NIOBRARA</b>									
7,400.00	54.62	268.46	6,842.13	-2,213.35	141.72	427.29	10.00	10.00	0.00
7,450.00	59.62	268.46	6,869.27	-2,214.48	99.76	468.15	10.00	10.00	0.00
7,500.00	64.61	268.46	6,892.65	-2,215.67	55.59	511.16	10.00	10.00	0.00
7,550.00	69.61	268.46	6,912.09	-2,216.91	9.56	555.98	10.00	10.00	0.00
7,600.00	74.61	268.46	6,927.44	-2,218.19	-37.99	602.29	10.00	10.00	0.00
7,646.75	79.28	268.46	6,938.00	-2,219.42	-83.50	646.61	10.00	10.00	0.00
<b>NIO B</b>									
7,650.00	79.61	268.46	6,938.60	-2,219.51	-86.70	649.72	10.00	10.00	0.00
7,700.00	84.60	268.46	6,945.46	-2,220.84	-136.19	697.92	10.00	10.00	0.00

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-11N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5029.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5029.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-11N	<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)	
7,753.98	90.00	268.46	6,948.00	-2,222.29	-190.07	750.39	10.00	10.00	0.00	
Start 9179.65 hold at 7753.98 MD										
7,800.00	90.00	268.46	6,948.00	-2,223.53	-236.07	795.19	0.00	0.00	0.00	
7,900.00	90.00	268.46	6,948.00	-2,226.23	-336.04	892.53	0.00	0.00	0.00	
8,000.00	90.00	268.46	6,948.00	-2,228.92	-436.00	989.88	0.00	0.00	0.00	
8,100.00	90.00	268.46	6,948.00	-2,231.61	-535.96	1,087.23	0.00	0.00	0.00	
8,200.00	90.00	268.46	6,948.00	-2,234.31	-635.93	1,184.58	0.00	0.00	0.00	
8,300.00	90.00	268.46	6,948.00	-2,237.00	-735.89	1,281.92	0.00	0.00	0.00	
8,400.00	90.00	268.46	6,948.00	-2,239.69	-835.85	1,379.27	0.00	0.00	0.00	
8,500.00	90.00	268.46	6,948.00	-2,242.39	-935.82	1,476.62	0.00	0.00	0.00	
8,600.00	90.00	268.46	6,947.99	-2,245.08	-1,035.78	1,573.96	0.00	0.00	0.00	
8,700.00	90.00	268.46	6,947.99	-2,247.78	-1,135.75	1,671.31	0.00	0.00	0.00	
8,800.00	90.00	268.46	6,947.99	-2,250.47	-1,235.71	1,768.66	0.00	0.00	0.00	
8,900.00	90.00	268.46	6,947.99	-2,253.16	-1,335.67	1,866.00	0.00	0.00	0.00	
9,000.00	90.00	268.46	6,947.99	-2,255.86	-1,435.64	1,963.35	0.00	0.00	0.00	
9,100.00	90.00	268.46	6,947.99	-2,258.55	-1,535.60	2,060.70	0.00	0.00	0.00	
9,200.00	90.00	268.46	6,947.99	-2,261.25	-1,635.56	2,158.04	0.00	0.00	0.00	
9,300.00	90.00	268.46	6,947.99	-2,263.94	-1,735.53	2,255.39	0.00	0.00	0.00	
9,400.00	90.00	268.46	6,947.99	-2,266.63	-1,835.49	2,352.74	0.00	0.00	0.00	
9,500.00	90.00	268.46	6,947.99	-2,269.33	-1,935.45	2,450.08	0.00	0.00	0.00	
9,600.00	90.00	268.46	6,947.99	-2,272.02	-2,035.42	2,547.43	0.00	0.00	0.00	
9,700.00	90.00	268.46	6,947.99	-2,274.72	-2,135.38	2,644.78	0.00	0.00	0.00	
9,800.00	90.00	268.46	6,947.99	-2,277.41	-2,235.35	2,742.12	0.00	0.00	0.00	
9,900.00	90.00	268.46	6,947.99	-2,280.10	-2,335.31	2,839.47	0.00	0.00	0.00	
10,000.00	90.00	268.46	6,947.99	-2,282.80	-2,435.27	2,936.82	0.00	0.00	0.00	
10,100.00	90.00	268.46	6,947.99	-2,285.49	-2,535.24	3,034.17	0.00	0.00	0.00	
10,200.00	90.00	268.46	6,947.98	-2,288.19	-2,635.20	3,131.51	0.00	0.00	0.00	
10,300.00	90.00	268.46	6,947.98	-2,290.88	-2,735.16	3,228.86	0.00	0.00	0.00	
10,400.00	90.00	268.46	6,947.98	-2,293.57	-2,835.13	3,326.21	0.00	0.00	0.00	
10,500.00	90.00	268.46	6,947.98	-2,296.27	-2,935.09	3,423.55	0.00	0.00	0.00	
10,600.00	90.00	268.46	6,947.98	-2,298.96	-3,035.06	3,520.90	0.00	0.00	0.00	
10,700.00	90.00	268.46	6,947.98	-2,301.65	-3,135.02	3,618.25	0.00	0.00	0.00	
10,800.00	90.00	268.46	6,947.98	-2,304.35	-3,234.98	3,715.59	0.00	0.00	0.00	
10,900.00	90.00	268.46	6,947.98	-2,307.04	-3,334.95	3,812.94	0.00	0.00	0.00	
11,000.00	90.00	268.46	6,947.98	-2,309.74	-3,434.91	3,910.29	0.00	0.00	0.00	
11,100.00	90.00	268.46	6,947.98	-2,312.43	-3,534.87	4,007.63	0.00	0.00	0.00	
11,200.00	90.00	268.46	6,947.98	-2,315.12	-3,634.84	4,104.98	0.00	0.00	0.00	
11,300.00	90.00	268.46	6,947.98	-2,317.82	-3,734.80	4,202.33	0.00	0.00	0.00	
11,400.00	90.00	268.46	6,947.98	-2,320.51	-3,834.77	4,299.67	0.00	0.00	0.00	
11,500.00	90.00	268.46	6,947.98	-2,323.21	-3,934.73	4,397.02	0.00	0.00	0.00	
11,600.00	90.00	268.46	6,947.98	-2,325.90	-4,034.69	4,494.37	0.00	0.00	0.00	
11,700.00	90.00	268.46	6,947.98	-2,328.59	-4,134.66	4,591.71	0.00	0.00	0.00	
11,800.00	90.00	268.46	6,947.97	-2,331.29	-4,234.62	4,689.06	0.00	0.00	0.00	
11,900.00	90.00	268.46	6,947.97	-2,333.98	-4,334.58	4,786.41	0.00	0.00	0.00	
12,000.00	90.00	268.46	6,947.97	-2,336.68	-4,434.55	4,883.76	0.00	0.00	0.00	
12,100.00	90.00	268.46	6,947.97	-2,339.37	-4,534.51	4,981.10	0.00	0.00	0.00	
12,200.00	90.00	268.46	6,947.97	-2,342.06	-4,634.48	5,078.45	0.00	0.00	0.00	
12,300.00	90.00	268.46	6,947.97	-2,344.76	-4,734.44	5,175.80	0.00	0.00	0.00	
12,400.00	90.00	268.46	6,947.97	-2,347.45	-4,834.40	5,273.14	0.00	0.00	0.00	
12,500.00	90.00	268.46	6,947.97	-2,350.14	-4,934.37	5,370.49	0.00	0.00	0.00	
12,600.00	90.00	268.46	6,947.97	-2,352.84	-5,034.33	5,467.84	0.00	0.00	0.00	
12,700.00	90.00	268.46	6,947.97	-2,355.53	-5,134.29	5,565.18	0.00	0.00	0.00	
12,800.00	90.00	268.46	6,947.97	-2,358.23	-5,234.26	5,662.53	0.00	0.00	0.00	
12,900.00	90.00	268.46	6,947.97	-2,360.92	-5,334.22	5,759.88	0.00	0.00	0.00	

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-11N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5029.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5029.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-11N	<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)	
13,000.00	90.00	268.46	6,947.97	-2,363.61	-5,434.18	5,857.22	0.00	0.00	0.00	
13,100.00	90.00	268.46	6,947.97	-2,366.31	-5,534.15	5,954.57	0.00	0.00	0.00	
13,200.00	90.00	268.46	6,947.97	-2,369.00	-5,634.11	6,051.92	0.00	0.00	0.00	
13,300.00	90.00	268.46	6,947.97	-2,371.70	-5,734.08	6,149.26	0.00	0.00	0.00	
13,400.00	90.00	268.46	6,947.96	-2,374.39	-5,834.04	6,246.61	0.00	0.00	0.00	
13,500.00	90.00	268.46	6,947.96	-2,377.08	-5,934.00	6,343.96	0.00	0.00	0.00	
13,600.00	90.00	268.46	6,947.96	-2,379.78	-6,033.97	6,441.30	0.00	0.00	0.00	
13,700.00	90.00	268.46	6,947.96	-2,382.47	-6,133.93	6,538.65	0.00	0.00	0.00	
13,800.00	90.00	268.46	6,947.96	-2,385.17	-6,233.89	6,636.00	0.00	0.00	0.00	
13,900.00	90.00	268.46	6,947.96	-2,387.86	-6,333.86	6,733.35	0.00	0.00	0.00	
14,000.00	90.00	268.46	6,947.96	-2,390.55	-6,433.82	6,830.69	0.00	0.00	0.00	
14,100.00	90.00	268.46	6,947.96	-2,393.25	-6,533.79	6,928.04	0.00	0.00	0.00	
14,200.00	90.00	268.46	6,947.96	-2,395.94	-6,633.75	7,025.39	0.00	0.00	0.00	
14,300.00	90.00	268.46	6,947.96	-2,398.64	-6,733.71	7,122.73	0.00	0.00	0.00	
14,400.00	90.00	268.46	6,947.96	-2,401.33	-6,833.68	7,220.08	0.00	0.00	0.00	
14,500.00	90.00	268.46	6,947.96	-2,404.02	-6,933.64	7,317.43	0.00	0.00	0.00	
14,600.00	90.00	268.46	6,947.96	-2,406.72	-7,033.60	7,414.77	0.00	0.00	0.00	
14,700.00	90.00	268.46	6,947.96	-2,409.41	-7,133.57	7,512.12	0.00	0.00	0.00	
14,800.00	90.00	268.46	6,947.96	-2,412.10	-7,233.53	7,609.47	0.00	0.00	0.00	
14,900.00	90.00	268.46	6,947.95	-2,414.80	-7,333.50	7,706.81	0.00	0.00	0.00	
15,000.00	90.00	268.46	6,947.95	-2,417.49	-7,433.46	7,804.16	0.00	0.00	0.00	
15,100.00	90.00	268.46	6,947.95	-2,420.19	-7,533.42	7,901.51	0.00	0.00	0.00	
15,200.00	90.00	268.46	6,947.95	-2,422.88	-7,633.39	7,998.85	0.00	0.00	0.00	
15,300.00	90.00	268.46	6,947.95	-2,425.57	-7,733.35	8,096.20	0.00	0.00	0.00	
15,400.00	90.00	268.46	6,947.95	-2,428.27	-7,833.31	8,193.55	0.00	0.00	0.00	
15,500.00	90.00	268.46	6,947.95	-2,430.96	-7,933.28	8,290.89	0.00	0.00	0.00	
15,600.00	90.00	268.46	6,947.95	-2,433.66	-8,033.24	8,388.24	0.00	0.00	0.00	
15,700.00	90.00	268.46	6,947.95	-2,436.35	-8,133.20	8,485.59	0.00	0.00	0.00	
15,800.00	90.00	268.46	6,947.95	-2,439.04	-8,233.17	8,582.94	0.00	0.00	0.00	
15,900.00	90.00	268.46	6,947.95	-2,441.74	-8,333.13	8,680.28	0.00	0.00	0.00	
16,000.00	90.00	268.46	6,947.95	-2,444.43	-8,433.10	8,777.63	0.00	0.00	0.00	
16,100.00	90.00	268.46	6,947.95	-2,447.13	-8,533.06	8,874.98	0.00	0.00	0.00	
16,200.00	90.00	268.46	6,947.95	-2,449.82	-8,633.02	8,972.32	0.00	0.00	0.00	
16,300.00	90.00	268.46	6,947.95	-2,452.51	-8,732.99	9,069.67	0.00	0.00	0.00	
16,400.00	90.00	268.46	6,947.95	-2,455.21	-8,832.95	9,167.02	0.00	0.00	0.00	
16,500.00	90.00	268.46	6,947.94	-2,457.90	-8,932.91	9,264.36	0.00	0.00	0.00	
16,600.00	90.00	268.46	6,947.94	-2,460.60	-9,032.88	9,361.71	0.00	0.00	0.00	
16,700.00	90.00	268.46	6,947.94	-2,463.29	-9,132.84	9,459.06	0.00	0.00	0.00	
16,800.00	90.00	268.46	6,947.94	-2,465.98	-9,232.81	9,556.40	0.00	0.00	0.00	
16,900.00	90.00	268.46	6,947.94	-2,468.68	-9,332.77	9,653.75	0.00	0.00	0.00	
16,933.63	90.00	268.46	6,948.00	-2,469.70	-9,366.38	9,686.51	0.00	0.00	0.00	
TD at 16933.63										

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-11N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5029.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5029.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-11N	<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)		
VIC 20W-20-11N - LP	0.00	0.00	6,948.00	-2,222.29	-190.07	1,445,563.98	3,164,090.42	40° 33' 17.903 N	104° 54' 34.106 W
- plan hits target center									
- Point									
VIC 20W-20-11N - PBHL	0.00	0.00	6,948.00	-2,469.70	-9,366.38	1,445,255.40	3,154,915.96	40° 33' 15.440 N	104° 56' 32.989 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
3,735.08	3,488.00	PARKMAN				
4,552.86	4,220.00	SUSSEX				
4,970.68	4,594.00	SHANNON				
7,329.67	6,798.00	SHARON SPRINGS				
7,389.54	6,836.00	NIOBRARA				
7,646.75	6,938.00	NIO B				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
500.00	500.00	0.00	0.00	Start Build 2.00
1,823.86	1,777.24	-296.06	51.37	Start 3675.87 hold at 1823.86 MD
5,499.73	5,067.56	-1,910.79	331.56	Start Drop -2.00
6,823.59	6,344.80	-2,206.85	382.93	Start 30.00 hold at 6823.59 MD
6,853.59	6,374.80	-2,206.85	382.93	Start DLS 10.00 TFO 268.46
7,753.98	6,948.00	-2,222.29	-190.07	Start 9179.65 hold at 7753.98 MD
16,933.63	6,948.00	-2,469.70	-9,366.38	TD at 16933.63