

# **EXTRACTION OIL & GAS**

**WELD COUNTY**

**Sec 20-T7N-R67W**

**VIC 20W-20-8N**

**ORIGINAL WELLBORE**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**22 May, 2018**



Project: WELD COUNTY  
Site: Sec 20-T7N-R67W  
Well: VIC 20W-20-8N  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL 1



Azimuths to True North  
Magnetic North: 8.30°  
Magnetic Field  
Strength: 52455.4nT  
Dip Angle: 66.96°  
Date: 6/29/2017  
Model: IGRF2015

#### WELL DETAILS: VIC 20W-20-8N

5006.00							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
0.00	0.00	1447871.64	3164265.10	40° 33' 40.694 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	900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	
3	1511.00	12.22	158.16	1506.38	-60.25	24.15	2.00	158.16	-25.92	
4	5841.18	12.22	158.16	5738.45	-911.00	365.19	0.00	0.00	-391.88	
5	6452.19	0.00	0.00	6344.83	-971.25	389.34	2.00	180.00	-417.79	
6	6482.19	0.00	0.00	6374.83	-971.25	389.34	0.00	0.00	-417.79	
7	7382.56	90.00	268.47	6948.00	-986.55	-183.66	10.00	268.47	154.51	
8	16563.87	90.00	268.47	6948.00	-1231.41	-9361.71	0.00	162.22	9321.36	

#### 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	Start Build 2.00
1511.00	12.22	158.16	1506.38	-60.25	24.15	-25.92	64.91	Start 4330.18 hold at 1511.00 MD
5841.18	12.22	158.16	5738.45	-911.00	365.19	-391.88	981.47	Start Drop -2.00
6452.19	0.00	0.00	6344.83	-971.25	389.34	-417.79	1046.38	Start 30.00 hold at 6452.19 MD
6482.19	0.00	0.00	6374.83	-971.25	389.34	-417.79	1046.38	Start DLS 10.00 TFO 268.47
7382.56	90.00	268.47	6948.00	-986.55	-183.66	154.51	1619.59	Start DLS 0.00 TFO 162.22
16563.87	90.00	268.47	6948.00	-1231.41	-9361.71	9321.36	10800.90	TD at 16563.87

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
VIC 20W-20-8N - LP	6948.00	-986.55	-183.66	1446883.89	3164088.02	40° 33' 30.946 N	104° 54' 34.024 W	Point
- plan hits target center								
VIC 20W-20-8N - PBHL	6948.00	-1231.41	-9361.71	1446577.84	3154911.81	40° 33' 28.508 N	104° 56' 32.935 W	Point
- plan hits target center								

#### FORMATION TOP DETAILS

TVDPATH	MDPath	Formation
3488.00	3538.56	PARKMAN
4220.00	4287.53	SUSSEX
4594.00	4670.20	SHANNON
6798.00	6958.23	SHARON SPRINGS
6836.00	7018.10	NIOBRARA
6938.00	7275.30	NIO B

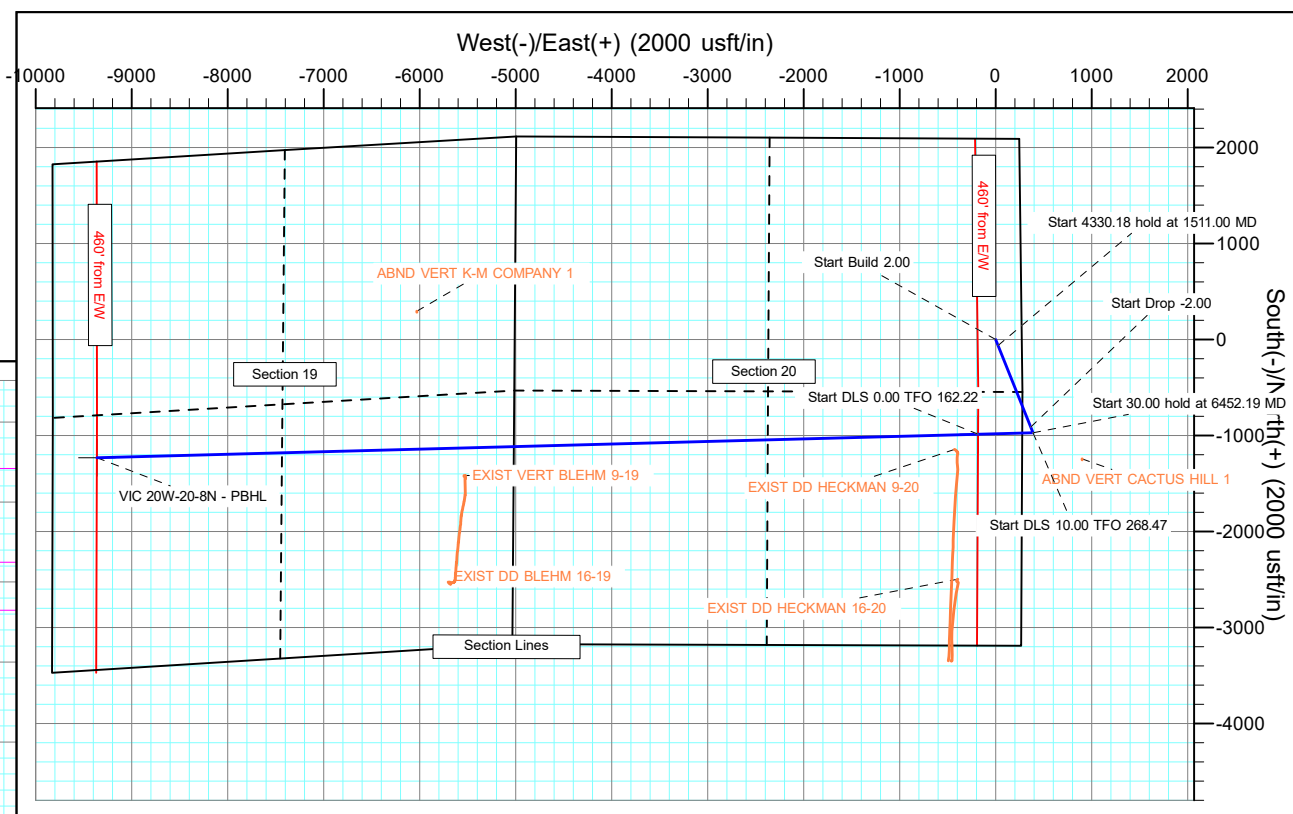
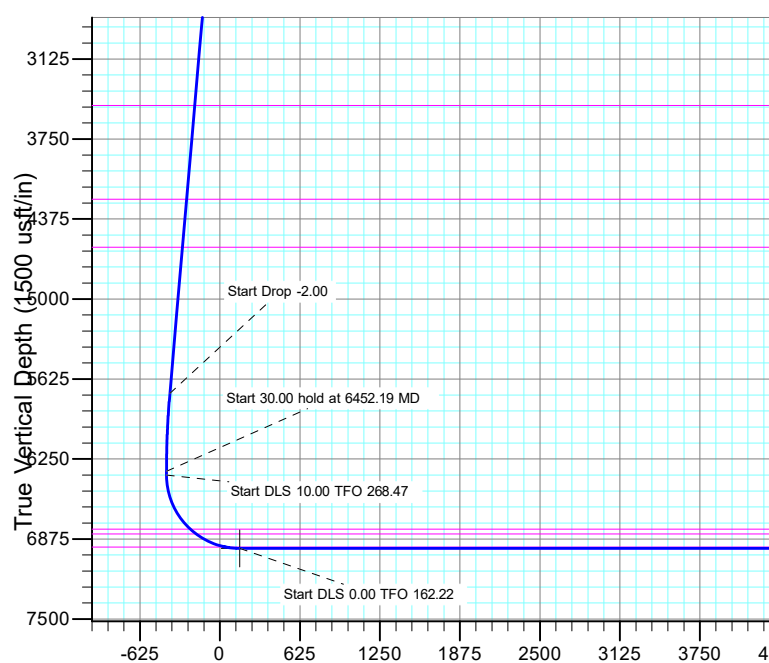
#### PROJECT DETAILS: WELD COUNTY

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

SHL:  
2092' FNL, 271' FEL  
Sec 20-T7N-R67W

LP:  
2202' FSL, 460' FEL  
Sec 20-T7N-R67W

BHL:  
2207' FSL, 460' FWL  
Sec 19-T7N-R67W



VIC 20W-20-8N - PBHL

Vertical Section at 271.69° (1500 usft/in)

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-8N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5031.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5031.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-8N	<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-20-8N					
Well Position	+N/-S	-2,090.79 usft	Northing:	1,447,871.64 usft	Latitude:	40° 33' 40.694 N
	+E/-W	-244.78 usft	Easting:	3,164,265.10 usft	Longitude:	104° 54' 31.644 W
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	5,006.00 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	6/29/2017	8.30	66.96	52,455.41539012

<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	271.69

<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	16,563.74	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	
1,511.00	12.22	158.16	1,506.38	-60.25	24.15	2.00	2.00	0.00	158.16	
5,841.18	12.22	158.16	5,738.45	-911.00	365.19	0.00	0.00	0.00	0.00	
6,452.19	0.00	0.00	6,344.83	-971.25	389.34	2.00	-2.00	0.00	180.00	
6,482.19	0.00	0.00	6,374.83	-971.25	389.34	0.00	0.00	0.00	0.00	
7,382.56	90.00	268.47	6,948.00	-986.55	-183.66	10.00	10.00	-10.17	268.47	VIC 20W-20-8N - LP
16,563.87	90.00	268.47	6,948.00	-1,231.41	-9,361.71	0.00	0.00	0.00	162.22	VIC 20W-20-8N - PBH

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-8N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5031.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5031.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-8N	<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
Start Build 2.00									
1,000.00	2.00	158.16	999.98	-1.62	0.65	-0.70	2.00	2.00	0.00
1,100.00	4.00	158.16	1,099.84	-6.48	2.60	-2.79	2.00	2.00	0.00
1,200.00	6.00	158.16	1,199.45	-14.57	5.84	-6.27	2.00	2.00	0.00
1,300.00	8.00	158.16	1,298.70	-25.88	10.37	-11.13	2.00	2.00	0.00
1,400.00	10.00	158.16	1,397.47	-40.40	16.19	-17.38	2.00	2.00	0.00
1,500.00	12.00	158.16	1,495.62	-58.11	23.29	-25.00	2.00	2.00	0.00
1,511.00	12.22	158.16	1,506.38	-60.25	24.15	-25.92	2.00	2.00	0.00
Start 4330.18 hold at 1511.00 MD									
1,600.00	12.22	158.16	1,593.36	-77.74	31.16	-33.44	0.00	0.00	0.00
1,700.00	12.22	158.16	1,691.10	-97.38	39.04	-41.89	0.00	0.00	0.00
1,800.00	12.22	158.16	1,788.83	-117.03	46.91	-50.34	0.00	0.00	0.00
1,900.00	12.22	158.16	1,886.56	-136.68	54.79	-58.79	0.00	0.00	0.00
2,000.00	12.22	158.16	1,984.30	-156.32	62.66	-67.24	0.00	0.00	0.00
2,100.00	12.22	158.16	2,082.03	-175.97	70.54	-75.70	0.00	0.00	0.00
2,200.00	12.22	158.16	2,179.77	-195.62	78.42	-84.15	0.00	0.00	0.00
2,300.00	12.22	158.16	2,277.50	-215.26	86.29	-92.60	0.00	0.00	0.00
2,400.00	12.22	158.16	2,375.24	-234.91	94.17	-101.05	0.00	0.00	0.00
2,500.00	12.22	158.16	2,472.97	-254.56	102.04	-109.50	0.00	0.00	0.00
2,600.00	12.22	158.16	2,570.70	-274.21	109.92	-117.95	0.00	0.00	0.00
2,700.00	12.22	158.16	2,668.44	-293.85	117.80	-126.40	0.00	0.00	0.00
2,800.00	12.22	158.16	2,766.17	-313.50	125.67	-134.85	0.00	0.00	0.00
2,900.00	12.22	158.16	2,863.91	-333.15	133.55	-143.31	0.00	0.00	0.00
3,000.00	12.22	158.16	2,961.64	-352.79	141.42	-151.76	0.00	0.00	0.00
3,100.00	12.22	158.16	3,059.37	-372.44	149.30	-160.21	0.00	0.00	0.00
3,200.00	12.22	158.16	3,157.11	-392.09	157.17	-168.66	0.00	0.00	0.00
3,300.00	12.22	158.16	3,254.84	-411.73	165.05	-177.11	0.00	0.00	0.00
3,400.00	12.22	158.16	3,352.58	-431.38	172.93	-185.56	0.00	0.00	0.00
3,500.00	12.22	158.16	3,450.31	-451.03	180.80	-194.01	0.00	0.00	0.00
3,538.56	12.22	158.16	3,488.00	-458.60	183.84	-197.27	0.00	0.00	0.00
PARKMAN									
3,600.00	12.22	158.16	3,548.05	-470.67	188.68	-202.47	0.00	0.00	0.00
3,700.00	12.22	158.16	3,645.78	-490.32	196.55	-210.92	0.00	0.00	0.00
3,800.00	12.22	158.16	3,743.51	-509.97	204.43	-219.37	0.00	0.00	0.00
3,900.00	12.22	158.16	3,841.25	-529.62	212.30	-227.82	0.00	0.00	0.00
4,000.00	12.22	158.16	3,938.98	-549.26	220.18	-236.27	0.00	0.00	0.00
4,100.00	12.22	158.16	4,036.72	-568.91	228.06	-244.72	0.00	0.00	0.00
4,200.00	12.22	158.16	4,134.45	-588.56	235.93	-253.17	0.00	0.00	0.00
4,287.53	12.22	158.16	4,220.00	-605.75	242.83	-260.57	0.00	0.00	0.00
SUSSEX									
4,300.00	12.22	158.16	4,232.18	-608.20	243.81	-261.63	0.00	0.00	0.00
4,400.00	12.22	158.16	4,329.92	-627.85	251.68	-270.08	0.00	0.00	0.00
4,500.00	12.22	158.16	4,427.65	-647.50	259.56	-278.53	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-8N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5031.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5031.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-8N	<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	12.22	158.16	4,525.39	-667.14	267.43	-286.98	0.00	0.00	0.00
4,670.20	12.22	158.16	4,594.00	-680.94	272.96	-292.91	0.00	0.00	0.00
<b>SHANNON</b>									
4,700.00	12.22	158.16	4,623.12	-686.79	275.31	-295.43	0.00	0.00	0.00
4,800.00	12.22	158.16	4,720.86	-706.44	283.19	-303.88	0.00	0.00	0.00
4,900.00	12.22	158.16	4,818.59	-726.09	291.06	-312.33	0.00	0.00	0.00
5,000.00	12.22	158.16	4,916.32	-745.73	298.94	-320.78	0.00	0.00	0.00
5,100.00	12.22	158.16	5,014.06	-765.38	306.81	-329.24	0.00	0.00	0.00
5,200.00	12.22	158.16	5,111.79	-785.03	314.69	-337.69	0.00	0.00	0.00
5,300.00	12.22	158.16	5,209.53	-804.67	322.57	-346.14	0.00	0.00	0.00
5,400.00	12.22	158.16	5,307.26	-824.32	330.44	-354.59	0.00	0.00	0.00
5,500.00	12.22	158.16	5,404.99	-843.97	338.32	-363.04	0.00	0.00	0.00
5,600.00	12.22	158.16	5,502.73	-863.61	346.19	-371.49	0.00	0.00	0.00
5,700.00	12.22	158.16	5,600.46	-883.26	354.07	-379.94	0.00	0.00	0.00
5,800.00	12.22	158.16	5,698.20	-902.91	361.94	-388.40	0.00	0.00	0.00
5,841.18	12.22	158.16	5,738.45	-911.00	365.19	-391.88	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,900.00	11.04	158.16	5,796.06	-922.01	369.60	-396.61	2.00	-2.00	0.00
6,000.00	9.04	158.16	5,894.52	-938.19	376.09	-403.57	2.00	-2.00	0.00
6,100.00	7.04	158.16	5,993.53	-951.18	381.30	-409.16	2.00	-2.00	0.00
6,200.00	5.04	158.16	6,092.97	-960.95	385.21	-413.36	2.00	-2.00	0.00
6,300.00	3.04	158.16	6,192.71	-967.50	387.84	-416.18	2.00	-2.00	0.00
6,400.00	1.04	158.16	6,292.65	-970.81	389.16	-417.60	2.00	-2.00	0.00
6,452.19	0.00	0.00	6,344.83	-971.25	389.34	-417.79	2.00	-2.00	0.00
<b>Start 30.00 hold at 6452.19 MD</b>									
6,482.19	0.00	0.00	6,374.83	-971.25	389.34	-417.79	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 268.47</b>									
6,500.00	1.78	268.47	6,392.64	-971.26	389.06	-417.52	10.00	10.00	0.00
6,550.00	6.78	268.47	6,442.48	-971.36	385.33	-413.79	10.00	10.00	0.00
6,600.00	11.78	268.47	6,491.81	-971.57	377.28	-405.75	10.00	10.00	0.00
6,650.00	16.77	268.47	6,540.26	-971.90	364.96	-393.44	10.00	10.00	0.00
6,700.00	21.77	268.47	6,587.44	-972.34	348.46	-376.97	10.00	10.00	0.00
6,750.00	26.77	268.47	6,633.00	-972.89	327.92	-356.45	10.00	10.00	0.00
6,800.00	31.77	268.47	6,676.61	-973.54	303.49	-332.05	10.00	10.00	0.00
6,850.00	36.77	268.47	6,717.91	-974.29	275.36	-303.95	10.00	10.00	0.00
6,900.00	41.77	268.47	6,756.61	-975.14	243.73	-272.37	10.00	10.00	0.00
6,950.00	46.76	268.47	6,792.41	-976.07	208.86	-237.53	10.00	10.00	0.00
6,958.23	47.59	268.47	6,798.00	-976.23	202.83	-231.51	10.00	10.00	0.00
<b>SHARON SPRINGS</b>									
7,000.00	51.76	268.47	6,825.02	-977.08	171.00	-199.72	10.00	10.00	0.00
7,018.10	53.57	268.47	6,836.00	-977.46	156.61	-185.35	10.00	10.00	0.00
<b>NIOBRARA</b>									
7,050.00	56.76	268.47	6,854.22	-978.16	130.44	-159.21	10.00	10.00	0.00
7,100.00	61.76	268.47	6,879.77	-979.31	87.50	-116.32	10.00	10.00	0.00
7,150.00	66.76	268.47	6,901.48	-980.51	42.49	-71.37	10.00	10.00	0.00
7,200.00	71.75	268.47	6,919.18	-981.76	-4.24	-24.70	10.00	10.00	0.00
7,250.00	76.75	268.47	6,932.75	-983.04	-52.33	23.34	10.00	10.00	0.00
7,275.30	79.28	268.47	6,938.00	-983.70	-77.06	48.04	10.00	10.00	0.00
<b>NIO B</b>									
7,300.00	81.75	268.47	6,942.07	-984.35	-101.42	72.37	10.00	10.00	0.00
7,350.00	86.75	268.47	6,947.08	-985.68	-151.13	122.02	10.00	10.00	0.00
7,382.56	90.00	268.47	6,948.00	-986.55	-183.66	154.51	10.00	10.00	0.00
<b>Start DLS 0.00 TFO 162.22</b>									

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-8N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5031.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5031.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-8N	<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)	
7,400.00	90.00	268.47	6,948.00	-987.02	-201.10	171.92	0.00	0.00	0.00	
7,500.00	90.00	268.47	6,947.99	-989.68	-301.06	271.77	0.00	0.00	0.00	
7,600.00	90.00	268.47	6,947.99	-992.35	-401.03	371.61	0.00	0.00	0.00	
7,700.00	90.00	268.47	6,947.98	-995.02	-500.99	471.45	0.00	0.00	0.00	
7,800.00	90.00	268.47	6,947.97	-997.69	-600.96	571.29	0.00	0.00	0.00	
7,900.00	90.00	268.47	6,947.97	-1,000.36	-700.92	671.14	0.00	0.00	0.00	
8,000.00	90.00	268.47	6,947.96	-1,003.03	-800.88	770.98	0.00	0.00	0.00	
8,100.00	90.00	268.47	6,947.96	-1,005.70	-900.85	870.82	0.00	0.00	0.00	
8,200.00	90.00	268.47	6,947.95	-1,008.37	-1,000.81	970.66	0.00	0.00	0.00	
8,300.00	90.00	268.47	6,947.94	-1,011.04	-1,100.78	1,070.50	0.00	0.00	0.00	
8,400.00	90.00	268.47	6,947.94	-1,013.70	-1,200.74	1,170.35	0.00	0.00	0.00	
8,500.00	90.00	268.47	6,947.93	-1,016.37	-1,300.71	1,270.19	0.00	0.00	0.00	
8,600.00	90.00	268.47	6,947.93	-1,019.04	-1,400.67	1,370.03	0.00	0.00	0.00	
8,700.00	90.00	268.47	6,947.92	-1,021.71	-1,500.64	1,469.87	0.00	0.00	0.00	
8,800.00	90.00	268.47	6,947.92	-1,024.38	-1,600.60	1,569.72	0.00	0.00	0.00	
8,900.00	90.00	268.47	6,947.91	-1,027.05	-1,700.56	1,669.56	0.00	0.00	0.00	
9,000.00	90.00	268.47	6,947.91	-1,029.71	-1,800.53	1,769.40	0.00	0.00	0.00	
9,100.00	90.00	268.47	6,947.91	-1,032.38	-1,900.49	1,869.24	0.00	0.00	0.00	
9,200.00	90.00	268.47	6,947.90	-1,035.05	-2,000.46	1,969.09	0.00	0.00	0.00	
9,300.00	90.00	268.47	6,947.90	-1,037.72	-2,100.42	2,068.93	0.00	0.00	0.00	
9,400.00	90.00	268.47	6,947.89	-1,040.39	-2,200.39	2,168.77	0.00	0.00	0.00	
9,500.00	90.00	268.47	6,947.89	-1,043.06	-2,300.35	2,268.61	0.00	0.00	0.00	
9,600.00	90.00	268.47	6,947.89	-1,045.72	-2,400.31	2,368.46	0.00	0.00	0.00	
9,700.00	90.00	268.47	6,947.88	-1,048.39	-2,500.28	2,468.30	0.00	0.00	0.00	
9,800.00	90.00	268.47	6,947.88	-1,051.06	-2,600.24	2,568.14	0.00	0.00	0.00	
9,900.00	90.00	268.47	6,947.88	-1,053.73	-2,700.21	2,667.98	0.00	0.00	0.00	
10,000.00	90.00	268.47	6,947.87	-1,056.40	-2,800.17	2,767.82	0.00	0.00	0.00	
10,100.00	90.00	268.47	6,947.87	-1,059.06	-2,900.14	2,867.67	0.00	0.00	0.00	
10,200.00	90.00	268.47	6,947.87	-1,061.73	-3,000.10	2,967.51	0.00	0.00	0.00	
10,300.00	90.00	268.47	6,947.87	-1,064.40	-3,100.07	3,067.35	0.00	0.00	0.00	
10,400.00	90.00	268.47	6,947.86	-1,067.07	-3,200.03	3,167.19	0.00	0.00	0.00	
10,500.00	90.00	268.47	6,947.86	-1,069.73	-3,299.99	3,267.04	0.00	0.00	0.00	
10,600.00	90.00	268.47	6,947.86	-1,072.40	-3,399.96	3,366.88	0.00	0.00	0.00	
10,700.00	90.00	268.47	6,947.86	-1,075.07	-3,499.92	3,466.72	0.00	0.00	0.00	
10,800.00	90.00	268.47	6,947.85	-1,077.74	-3,599.89	3,566.56	0.00	0.00	0.00	
10,900.00	90.00	268.47	6,947.85	-1,080.41	-3,699.85	3,666.41	0.00	0.00	0.00	
11,000.00	90.00	268.47	6,947.85	-1,083.07	-3,799.82	3,766.25	0.00	0.00	0.00	
11,100.00	90.00	268.47	6,947.85	-1,085.74	-3,899.78	3,866.09	0.00	0.00	0.00	
11,200.00	90.00	268.47	6,947.85	-1,088.41	-3,999.75	3,965.93	0.00	0.00	0.00	
11,300.00	90.00	268.47	6,947.85	-1,091.07	-4,099.71	4,065.78	0.00	0.00	0.00	
11,400.00	90.00	268.47	6,947.85	-1,093.74	-4,199.67	4,165.62	0.00	0.00	0.00	
11,500.00	90.00	268.47	6,947.85	-1,096.41	-4,299.64	4,265.46	0.00	0.00	0.00	
11,600.00	90.00	268.47	6,947.85	-1,099.08	-4,399.60	4,365.30	0.00	0.00	0.00	
11,700.00	90.00	268.47	6,947.85	-1,101.74	-4,499.57	4,465.15	0.00	0.00	0.00	
11,800.00	90.00	268.47	6,947.84	-1,104.41	-4,599.53	4,564.99	0.00	0.00	0.00	
11,900.00	90.00	268.47	6,947.84	-1,107.08	-4,699.50	4,664.83	0.00	0.00	0.00	
12,000.00	90.00	268.47	6,947.84	-1,109.74	-4,799.46	4,764.67	0.00	0.00	0.00	
12,100.00	90.00	268.47	6,947.84	-1,112.41	-4,899.43	4,864.51	0.00	0.00	0.00	
12,200.00	90.00	268.47	6,947.84	-1,115.08	-4,999.39	4,964.36	0.00	0.00	0.00	
12,300.00	90.00	268.47	6,947.85	-1,117.74	-5,099.35	5,064.20	0.00	0.00	0.00	
12,400.00	90.00	268.47	6,947.85	-1,120.41	-5,199.32	5,164.04	0.00	0.00	0.00	
12,500.00	90.00	268.47	6,947.85	-1,123.08	-5,299.28	5,263.88	0.00	0.00	0.00	
12,600.00	90.00	268.47	6,947.85	-1,125.74	-5,399.25	5,363.73	0.00	0.00	0.00	
12,700.00	90.00	268.47	6,947.85	-1,128.41	-5,499.21	5,463.57	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-8N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5031.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5031.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-8N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
12,800.00	90.00	268.47	6,947.85	-1,131.08	-5,599.18	5,563.41	0.00	0.00	0.00	
12,900.00	90.00	268.47	6,947.85	-1,133.74	-5,699.14	5,663.25	0.00	0.00	0.00	
13,000.00	90.00	268.47	6,947.85	-1,136.41	-5,799.11	5,763.10	0.00	0.00	0.00	
13,100.00	90.00	268.47	6,947.85	-1,139.08	-5,899.07	5,862.94	0.00	0.00	0.00	
13,200.00	90.00	268.47	6,947.86	-1,141.74	-5,999.03	5,962.78	0.00	0.00	0.00	
13,300.00	90.00	268.47	6,947.86	-1,144.41	-6,099.00	6,062.62	0.00	0.00	0.00	
13,400.00	90.00	268.47	6,947.86	-1,147.08	-6,198.96	6,162.47	0.00	0.00	0.00	
13,500.00	90.00	268.47	6,947.86	-1,149.74	-6,298.93	6,262.31	0.00	0.00	0.00	
13,600.00	90.00	268.47	6,947.86	-1,152.41	-6,398.89	6,362.15	0.00	0.00	0.00	
13,700.00	90.00	268.47	6,947.87	-1,155.08	-6,498.86	6,461.99	0.00	0.00	0.00	
13,800.00	90.00	268.47	6,947.87	-1,157.74	-6,598.82	6,561.84	0.00	0.00	0.00	
13,900.00	90.00	268.47	6,947.87	-1,160.41	-6,698.79	6,661.68	0.00	0.00	0.00	
14,000.00	90.00	268.47	6,947.87	-1,163.07	-6,798.75	6,761.52	0.00	0.00	0.00	
14,100.00	90.00	268.47	6,947.88	-1,165.74	-6,898.71	6,861.36	0.00	0.00	0.00	
14,200.00	90.00	268.47	6,947.88	-1,168.41	-6,998.68	6,961.21	0.00	0.00	0.00	
14,300.00	90.00	268.47	6,947.88	-1,171.07	-7,098.64	7,061.05	0.00	0.00	0.00	
14,400.00	90.00	268.47	6,947.89	-1,173.74	-7,198.61	7,160.89	0.00	0.00	0.00	
14,500.00	90.00	268.47	6,947.89	-1,176.40	-7,298.57	7,260.73	0.00	0.00	0.00	
14,600.00	90.00	268.47	6,947.90	-1,179.07	-7,398.54	7,360.58	0.00	0.00	0.00	
14,700.00	90.00	268.47	6,947.90	-1,181.73	-7,498.50	7,460.42	0.00	0.00	0.00	
14,800.00	90.00	268.47	6,947.90	-1,184.40	-7,598.47	7,560.26	0.00	0.00	0.00	
14,900.00	90.00	268.47	6,947.91	-1,187.07	-7,698.43	7,660.10	0.00	0.00	0.00	
15,000.00	90.00	268.47	6,947.91	-1,189.73	-7,798.39	7,759.95	0.00	0.00	0.00	
15,100.00	90.00	268.47	6,947.92	-1,192.40	-7,898.36	7,859.79	0.00	0.00	0.00	
15,200.00	90.00	268.47	6,947.92	-1,195.06	-7,998.32	7,959.63	0.00	0.00	0.00	
15,300.00	90.00	268.47	6,947.93	-1,197.73	-8,098.29	8,059.47	0.00	0.00	0.00	
15,400.00	90.00	268.47	6,947.93	-1,200.39	-8,198.25	8,159.32	0.00	0.00	0.00	
15,500.00	90.00	268.47	6,947.94	-1,203.06	-8,298.22	8,259.16	0.00	0.00	0.00	
15,600.00	90.00	268.47	6,947.94	-1,205.72	-8,398.18	8,359.00	0.00	0.00	0.00	
15,700.00	90.00	268.47	6,947.95	-1,208.39	-8,498.15	8,458.84	0.00	0.00	0.00	
15,800.00	90.00	268.47	6,947.95	-1,211.05	-8,598.11	8,558.69	0.00	0.00	0.00	
15,900.00	90.00	268.47	6,947.96	-1,213.72	-8,698.07	8,658.53	0.00	0.00	0.00	
16,000.00	90.00	268.47	6,947.96	-1,216.38	-8,798.04	8,758.37	0.00	0.00	0.00	
16,100.00	90.00	268.47	6,947.97	-1,219.05	-8,898.00	8,858.21	0.00	0.00	0.00	
16,200.00	90.00	268.47	6,947.98	-1,221.71	-8,997.97	8,958.06	0.00	0.00	0.00	
16,300.00	90.00	268.47	6,947.98	-1,224.38	-9,097.93	9,057.90	0.00	0.00	0.00	
16,400.00	90.00	268.47	6,947.99	-1,227.04	-9,197.90	9,157.74	0.00	0.00	0.00	
16,500.00	90.00	268.47	6,948.00	-1,229.71	-9,297.86	9,257.58	0.00	0.00	0.00	
16,563.87	90.00	268.47	6,948.00	-1,231.41	-9,361.71	9,321.36	0.00	0.00	0.00	
TD at 16563.87										

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well VIC 20W-20-8N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 5031.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5031.00usft
<b>Site:</b>	Sec 20-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	VIC 20W-20-8N	<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-20-8N - LP	0.00	0.00	6,948.00	-986.55	-183.66	1,446,883.89	3,164,088.02	40° 33' 30.946 N	104° 54' 34.024 W
- plan hits target center									
- Point									
VIC 20W-20-8N - PBHL	0.00	0.00	6,948.00	-1,231.41	-9,361.71	1,446,577.84	3,154,911.81	40° 33' 28.508 N	104° 56' 32.935 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
3,538.56	3,488.00	PARKMAN				
4,287.53	4,220.00	SUSSEX				
4,670.20	4,594.00	SHANNON				
6,958.23	6,798.00	SHARON SPRINGS				
7,018.10	6,836.00	NIOBRARA				
7,275.30	6,938.00	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	Start Build 2.00
1,511.00	1,506.38	-60.25	24.15	Start 4330.18 hold at 1511.00 MD
5,841.18	5,738.45	-911.00	365.19	Start Drop -2.00
6,452.19	6,344.83	-971.25	389.34	Start 30.00 hold at 6452.19 MD
6,482.19	6,374.83	-971.25	389.34	Start DLS 10.00 TFO 268.47
7,382.56	6,948.00	-986.55	-183.66	Start DLS 0.00 TFO 162.22
16,563.87	6,948.00	-1,231.41	-9,361.71	TD at 16563.87