

EXTRACTION OIL & GAS

WELD COUNTY

SEC 20-T7N-R67W

VIC EAST 21E-20-03

OWB

Plan: PROPOSAL 1

Standard Planning Report

01 March, 2021



WELL DETAILS: VIC EAST 21E-20-03

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1447703.70	3164266.22	40.560843°N	104.908790°W	

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	Start Build 2.00
1273.16	9.46	170.09	1271.02	-38.40	6.71	10.59	38.99	Start 5508.91 hold at 1273.16 MD
6782.08	9.46	170.09	6704.96	-930.64	162.58	256.66	944.74	Start DLS 10.00 TFO -80.00
7665.50	90.00	90.22	7254.00	-1022.97	734.94	835.45	1535.72	Start 9608.25 hold at 7665.50 MD
17273.75	90.00	90.22	7254.00	-1060.52	10343.12	10397.35	11143.97	TD at 17273.75

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	800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	
3	1273.16	9.46	170.09	1271.02	-38.40	6.71	2.00	170.09	10.59	
4	6782.08	9.46	170.09	6704.96	-930.64	162.58	0.00	0.00	256.66	
5	7665.50	90.00	90.22	7254.00	-1022.97	734.94	10.00	-80.00	835.45	VIC EAST 21E-03-LI
6	17273.75	90.00	90.22	7254.00	-1060.52	10343.12	0.00	0.00	10397.35	VIC EAST 21E-03-P

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
VIC EAST 21E-03-LP	7254.00	-1022.97	734.94	1446685.65	3165007.97	40.558035°N	104.906145°W	Point
- plan hits target center								
VIC EAST 21E-03-PBHL	7254.00	-1060.52	10343.12	1446712.16	3174616.18	40.557926°N	104.871566°W	Point
- plan hits target center								

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
804.00	804.00	Fox Hills Base:
3499.00	3531.89	Parkman:
4034.00	4074.27	Sussex:
4604.00	4652.13	Shannon:
6906.00	6991.63	Sharon Springs (Confining Zone):
6926.00	7013.77	Niobrara:
6943.00	7032.90	A Chalk:
6964.00	7056.99	A Marl:
7044.00	7154.95	B2 Chalk:
7079.00	7202.18	B Marl:
7119.00	7261.23	C Chalk:
7164.00	7337.77	C Marl:
7224.00	7478.02	Ft Hays (Confining Zone):
7244.00	7557.58	Codell:
7254.00	7665.50	Landing Point:

PROJECT DETAILS: WELD COUNTY

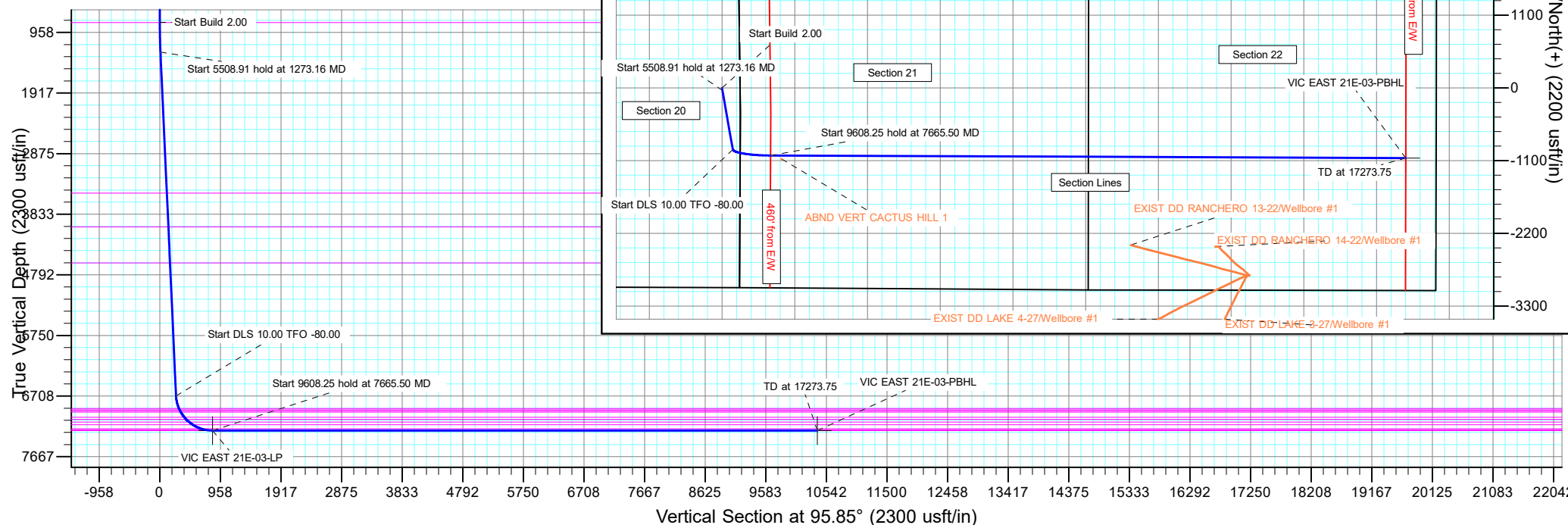
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

SHL:
2260' FNL, 273' FEL
Sec 20-T7N-R67W

LP:
2002' FSL, 460' FWL
Sec 21-T7N-R67W

BHL:
2005' FSL, 460' FEL
Sec 22-T7N-R67W



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well VIC EAST 21E-20-03
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5033.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5033.00usft
Site:	SEC 20-T7N-R67W	North Reference:	True
Well:	VIC EAST 21E-20-03	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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 20-T7N-R67W				
Site Position:		Northing:	1,449,964.02	usft	Latitude:	40.567043°N
From:	Lat/Long	Easting:	3,164,495.92	usft	Longitude:	104.907909°W
Position Uncertainty:		0.00	usft	Slot Radius:	13.200	in

Well		VIC EAST 21E-20-03				
Well Position	+N/-S	0.00 usft	Northing:	1,447,703.70 usft	Latitude:	40.560843°N
	+E/-W	0.00 usft	Easting:	3,164,266.22 usft	Longitude:	104.908790°W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,004.00 usft
Grid Convergence:		0.38 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	3/1/2021	7.97	66.77	52,051.72284021

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	95.85	

Plan Survey Tool Program	Date	3/1/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,273.75 PROPOSAL 1 (OWB)	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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,273.16	9.46	170.09	1,271.02	-38.40	6.71	2.00	2.00	0.00	170.09	
6,782.08	9.46	170.09	6,704.96	-930.64	162.58	0.00	0.00	0.00	0.00	
7,665.50	90.00	90.22	7,254.00	-1,022.97	734.94	10.00	9.12	-9.04	-80.00	VIC EAST 21E-03-LP
17,273.75	90.00	90.22	7,254.00	-1,060.52	10,343.12	0.00	0.00	0.00	0.00	VIC EAST 21E-03-PB

Planning Report

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Project:	WELD COUNTY	MD Reference:	KB 29' @ 5033.00usft
Site:	SEC 20-T7N-R67W	North Reference:	True
Well:	VIC EAST 21E-20-03	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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
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
Start Build 2.00									
804.00	0.08	170.09	804.00	0.00	0.00	0.00	2.00	2.00	0.00
Fox Hills Base:									
900.00	2.00	170.09	899.98	-1.72	0.30	0.47	2.00	2.00	0.00
1,000.00	4.00	170.09	999.84	-6.87	1.20	1.90	2.00	2.00	0.00
1,100.00	6.00	170.09	1,099.45	-15.46	2.70	4.26	2.00	2.00	0.00
1,200.00	8.00	170.09	1,198.70	-27.46	4.80	7.57	2.00	2.00	0.00
1,273.16	9.46	170.09	1,271.02	-38.40	6.71	10.59	2.00	2.00	0.00
Start 5508.91 hold at 1273.16 MD									
1,300.00	9.46	170.09	1,297.49	-42.75	7.47	11.79	0.00	0.00	0.00
1,400.00	9.46	170.09	1,396.13	-58.95	10.30	16.26	0.00	0.00	0.00
1,500.00	9.46	170.09	1,494.76	-75.14	13.13	20.72	0.00	0.00	0.00
1,600.00	9.46	170.09	1,593.40	-91.34	15.96	25.19	0.00	0.00	0.00
1,700.00	9.46	170.09	1,692.04	-107.54	18.79	29.66	0.00	0.00	0.00
1,800.00	9.46	170.09	1,790.68	-123.73	21.62	34.12	0.00	0.00	0.00
1,900.00	9.46	170.09	1,889.32	-139.93	24.45	38.59	0.00	0.00	0.00
2,000.00	9.46	170.09	1,987.96	-156.13	27.27	43.06	0.00	0.00	0.00
2,100.00	9.46	170.09	2,086.60	-172.32	30.10	47.52	0.00	0.00	0.00
2,200.00	9.46	170.09	2,185.24	-188.52	32.93	51.99	0.00	0.00	0.00
2,300.00	9.46	170.09	2,283.88	-204.71	35.76	56.46	0.00	0.00	0.00
2,400.00	9.46	170.09	2,382.52	-220.91	38.59	60.92	0.00	0.00	0.00
2,500.00	9.46	170.09	2,481.16	-237.11	41.42	65.39	0.00	0.00	0.00
2,600.00	9.46	170.09	2,579.79	-253.30	44.25	69.86	0.00	0.00	0.00
2,700.00	9.46	170.09	2,678.43	-269.50	47.08	74.32	0.00	0.00	0.00
2,800.00	9.46	170.09	2,777.07	-285.70	49.91	78.79	0.00	0.00	0.00
2,900.00	9.46	170.09	2,875.71	-301.89	52.74	83.26	0.00	0.00	0.00
3,000.00	9.46	170.09	2,974.35	-318.09	55.57	87.72	0.00	0.00	0.00
3,100.00	9.46	170.09	3,072.99	-334.28	58.40	92.19	0.00	0.00	0.00
3,200.00	9.46	170.09	3,171.63	-350.48	61.23	96.66	0.00	0.00	0.00
3,300.00	9.46	170.09	3,270.27	-366.68	64.06	101.12	0.00	0.00	0.00
3,400.00	9.46	170.09	3,368.91	-382.87	66.89	105.59	0.00	0.00	0.00
3,500.00	9.46	170.09	3,467.55	-399.07	69.72	110.06	0.00	0.00	0.00
3,531.89	9.46	170.09	3,499.00	-404.23	70.62	111.48	0.00	0.00	0.00
Parkman:									
3,600.00	9.46	170.09	3,566.19	-415.27	72.55	114.52	0.00	0.00	0.00
3,700.00	9.46	170.09	3,664.83	-431.46	75.38	118.99	0.00	0.00	0.00
3,800.00	9.46	170.09	3,763.46	-447.66	78.21	123.46	0.00	0.00	0.00
3,900.00	9.46	170.09	3,862.10	-463.85	81.03	127.92	0.00	0.00	0.00
4,000.00	9.46	170.09	3,960.74	-480.05	83.86	132.39	0.00	0.00	0.00
4,074.27	9.46	170.09	4,034.00	-492.08	85.97	135.71	0.00	0.00	0.00
Sussex:									
4,100.00	9.46	170.09	4,059.38	-496.25	86.69	136.86	0.00	0.00	0.00
4,200.00	9.46	170.09	4,158.02	-512.44	89.52	141.33	0.00	0.00	0.00
4,300.00	9.46	170.09	4,256.66	-528.64	92.35	145.79	0.00	0.00	0.00

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5033.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5033.00usft
Site:	SEC 20-T7N-R67W	North Reference:	True
Well:	VIC EAST 21E-20-03	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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	9.46	170.09	4,355.30	-544.84	95.18	150.26	0.00	0.00	0.00
4,500.00	9.46	170.09	4,453.94	-561.03	98.01	154.73	0.00	0.00	0.00
4,600.00	9.46	170.09	4,552.58	-577.23	100.84	159.19	0.00	0.00	0.00
4,652.13	9.46	170.09	4,604.00	-585.67	102.32	161.52	0.00	0.00	0.00
Shannon:									
4,700.00	9.46	170.09	4,651.22	-593.42	103.67	163.66	0.00	0.00	0.00
4,800.00	9.46	170.09	4,749.86	-609.62	106.50	168.13	0.00	0.00	0.00
4,900.00	9.46	170.09	4,848.49	-625.82	109.33	172.59	0.00	0.00	0.00
5,000.00	9.46	170.09	4,947.13	-642.01	112.16	177.06	0.00	0.00	0.00
5,100.00	9.46	170.09	5,045.77	-658.21	114.99	181.53	0.00	0.00	0.00
5,200.00	9.46	170.09	5,144.41	-674.41	117.82	185.99	0.00	0.00	0.00
5,300.00	9.46	170.09	5,243.05	-690.60	120.65	190.46	0.00	0.00	0.00
5,400.00	9.46	170.09	5,341.69	-706.80	123.48	194.93	0.00	0.00	0.00
5,500.00	9.46	170.09	5,440.33	-723.00	126.31	199.39	0.00	0.00	0.00
5,600.00	9.46	170.09	5,538.97	-739.19	129.14	203.86	0.00	0.00	0.00
5,700.00	9.46	170.09	5,637.61	-755.39	131.97	208.33	0.00	0.00	0.00
5,800.00	9.46	170.09	5,736.25	-771.58	134.79	212.79	0.00	0.00	0.00
5,900.00	9.46	170.09	5,834.89	-787.78	137.62	217.26	0.00	0.00	0.00
6,000.00	9.46	170.09	5,933.52	-803.98	140.45	221.73	0.00	0.00	0.00
6,100.00	9.46	170.09	6,032.16	-820.17	143.28	226.19	0.00	0.00	0.00
6,200.00	9.46	170.09	6,130.80	-836.37	146.11	230.66	0.00	0.00	0.00
6,300.00	9.46	170.09	6,229.44	-852.57	148.94	235.13	0.00	0.00	0.00
6,400.00	9.46	170.09	6,328.08	-868.76	151.77	239.59	0.00	0.00	0.00
6,500.00	9.46	170.09	6,426.72	-884.96	154.60	244.06	0.00	0.00	0.00
6,600.00	9.46	170.09	6,525.36	-901.15	157.43	248.53	0.00	0.00	0.00
6,700.00	9.46	170.09	6,624.00	-917.35	160.26	252.99	0.00	0.00	0.00
6,782.08	9.46	170.09	6,704.96	-930.64	162.58	256.66	0.00	0.00	0.00
Start DLS 10.00 TFO -80.00									
6,800.00	9.93	159.80	6,722.63	-933.55	163.37	257.74	10.00	2.61	-57.40
6,850.00	12.55	137.69	6,771.69	-941.62	168.52	263.68	10.00	5.25	-44.23
6,900.00	16.31	124.32	6,820.11	-949.60	177.98	273.91	10.00	7.52	-26.73
6,950.00	20.60	116.11	6,867.54	-957.43	191.69	288.35	10.00	8.57	-16.42
6,991.63	24.36	111.47	6,906.00	-963.80	206.26	303.49	10.00	9.05	-11.16
Sharon Springs (Confining Zone):									
7,000.00	25.14	110.69	6,913.60	-965.06	209.53	306.87	10.00	9.22	-9.24
7,013.77	26.41	109.51	6,926.00	-967.12	215.15	312.68	10.00	9.28	-8.57
Niobrara:									
7,032.90	28.20	108.04	6,943.00	-969.94	223.46	321.23	10.00	9.36	-7.70
A Chalk:									
7,050.00	29.82	106.86	6,957.95	-972.43	231.37	329.35	10.00	9.43	-6.89
7,056.99	30.48	106.41	6,964.00	-973.43	234.74	332.80	10.00	9.47	-6.42
A Marl:									
7,100.00	34.58	104.00	7,000.25	-979.47	257.05	355.62	10.00	9.53	-5.62
7,150.00	39.39	101.75	7,040.18	-986.13	286.37	385.46	10.00	9.63	-4.49
7,154.95	39.87	101.55	7,044.00	-986.77	289.47	388.61	10.00	9.67	-3.98
B2 Chalk:									
7,200.00	44.24	99.92	7,077.44	-992.37	319.11	418.66	10.00	9.70	-3.62
7,202.18	44.45	99.85	7,079.00	-992.64	320.61	420.19	10.00	9.73	-3.31
B Marl:									
7,250.00	49.12	98.39	7,111.73	-998.14	355.01	454.97	10.00	9.75	-3.05
7,261.23	50.21	98.08	7,119.00	-999.37	363.48	463.52	10.00	9.77	-2.79
C Chalk:									
7,300.00	54.01	97.07	7,142.81	-1,003.39	393.81	494.10	10.00	9.79	-2.60

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Wellbore:	OWB		
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)
7,337.77	57.71	96.18	7,164.00	-1,006.99	424.85	525.35	10.00	9.81	-2.37
C Marl:									
7,350.00	58.91	95.90	7,170.43	-1,008.09	435.20	535.76	10.00	9.82	-2.24
7,400.00	63.83	94.85	7,194.38	-1,012.19	478.88	579.63	10.00	9.83	-2.10
7,450.00	68.75	93.88	7,214.48	-1,015.66	524.52	625.38	10.00	9.84	-1.93
7,478.02	71.51	93.37	7,224.00	-1,017.33	550.81	651.70	10.00	9.85	-1.83
Ft Hays (Confining Zone):									
7,500.00	73.67	92.98	7,230.58	-1,018.49	571.75	672.65	10.00	9.85	-1.78
7,550.00	78.60	92.12	7,242.55	-1,020.64	620.23	721.10	10.00	9.86	-1.72
7,557.58	79.35	91.99	7,244.00	-1,020.91	627.67	728.53	10.00	9.86	-1.68
Codell:									
7,600.00	83.54	91.29	7,250.31	-1,022.11	669.59	770.35	10.00	9.86	-1.66
7,650.00	88.47	90.47	7,253.79	-1,022.88	719.45	820.03	10.00	9.87	-1.63
7,665.50	90.00	90.22	7,254.00	-1,022.97	734.94	835.45	10.00	9.87	-1.62
Start 9608.25 hold at 7665.50 MD - Landing Point:									
7,700.00	90.00	90.22	7,254.00	-1,023.11	769.44	869.79	0.00	0.00	0.00
7,800.00	90.00	90.22	7,254.00	-1,023.50	869.44	969.30	0.00	0.00	0.00
7,900.00	90.00	90.22	7,254.00	-1,023.89	969.44	1,068.82	0.00	0.00	0.00
8,000.00	90.00	90.22	7,254.00	-1,024.28	1,069.44	1,168.34	0.00	0.00	0.00
8,100.00	90.00	90.22	7,254.00	-1,024.67	1,169.44	1,267.86	0.00	0.00	0.00
8,200.00	90.00	90.22	7,254.00	-1,025.06	1,269.44	1,367.37	0.00	0.00	0.00
8,300.00	90.00	90.22	7,254.00	-1,025.45	1,369.44	1,466.89	0.00	0.00	0.00
8,400.00	90.00	90.22	7,254.00	-1,025.84	1,469.44	1,566.41	0.00	0.00	0.00
8,500.00	90.00	90.22	7,254.00	-1,026.23	1,569.44	1,665.93	0.00	0.00	0.00
8,600.00	90.00	90.22	7,254.00	-1,026.62	1,669.44	1,765.44	0.00	0.00	0.00
8,700.00	90.00	90.22	7,254.00	-1,027.01	1,769.44	1,864.96	0.00	0.00	0.00
8,800.00	90.00	90.22	7,254.00	-1,027.40	1,869.43	1,964.48	0.00	0.00	0.00
8,900.00	90.00	90.22	7,254.00	-1,027.79	1,969.43	2,064.00	0.00	0.00	0.00
9,000.00	90.00	90.22	7,254.00	-1,028.19	2,069.43	2,163.51	0.00	0.00	0.00
9,100.00	90.00	90.22	7,254.00	-1,028.58	2,169.43	2,263.03	0.00	0.00	0.00
9,200.00	90.00	90.22	7,254.00	-1,028.97	2,269.43	2,362.55	0.00	0.00	0.00
9,300.00	90.00	90.22	7,254.00	-1,029.36	2,369.43	2,462.07	0.00	0.00	0.00
9,400.00	90.00	90.22	7,254.00	-1,029.75	2,469.43	2,561.58	0.00	0.00	0.00
9,500.00	90.00	90.22	7,254.00	-1,030.14	2,569.43	2,661.10	0.00	0.00	0.00
9,600.00	90.00	90.22	7,254.00	-1,030.53	2,669.43	2,760.62	0.00	0.00	0.00
9,700.00	90.00	90.22	7,254.00	-1,030.92	2,769.43	2,860.14	0.00	0.00	0.00
9,800.00	90.00	90.22	7,254.00	-1,031.31	2,869.43	2,959.65	0.00	0.00	0.00
9,900.00	90.00	90.22	7,254.00	-1,031.70	2,969.43	3,059.17	0.00	0.00	0.00
10,000.00	90.00	90.22	7,254.00	-1,032.09	3,069.43	3,158.69	0.00	0.00	0.00
10,100.00	90.00	90.22	7,254.00	-1,032.48	3,169.42	3,258.21	0.00	0.00	0.00
10,200.00	90.00	90.22	7,254.00	-1,032.88	3,269.42	3,357.72	0.00	0.00	0.00
10,300.00	90.00	90.22	7,254.00	-1,033.27	3,369.42	3,457.24	0.00	0.00	0.00
10,400.00	90.00	90.22	7,254.00	-1,033.66	3,469.42	3,556.76	0.00	0.00	0.00
10,500.00	90.00	90.22	7,254.00	-1,034.05	3,569.42	3,656.28	0.00	0.00	0.00
10,600.00	90.00	90.22	7,254.00	-1,034.44	3,669.42	3,755.79	0.00	0.00	0.00
10,700.00	90.00	90.22	7,254.00	-1,034.83	3,769.42	3,855.31	0.00	0.00	0.00
10,800.00	90.00	90.22	7,254.00	-1,035.22	3,869.42	3,954.83	0.00	0.00	0.00
10,900.00	90.00	90.22	7,254.00	-1,035.61	3,969.42	4,054.35	0.00	0.00	0.00
11,000.00	90.00	90.22	7,254.00	-1,036.00	4,069.42	4,153.86	0.00	0.00	0.00
11,100.00	90.00	90.22	7,254.00	-1,036.39	4,169.42	4,253.38	0.00	0.00	0.00
11,200.00	90.00	90.22	7,254.00	-1,036.78	4,269.42	4,352.90	0.00	0.00	0.00
11,300.00	90.00	90.22	7,254.00	-1,037.17	4,369.42	4,452.42	0.00	0.00	0.00
11,400.00	90.00	90.22	7,254.00	-1,037.57	4,469.41	4,551.93	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well VIC EAST 21E-20-03
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5033.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5033.00usft
Site:	SEC 20-T7N-R67W	North Reference:	True
Well:	VIC EAST 21E-20-03	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)	
11,500.00	90.00	90.22	7,254.00	-1,037.96	4,569.41	4,651.45	0.00	0.00	0.00	
11,600.00	90.00	90.22	7,254.00	-1,038.35	4,669.41	4,750.97	0.00	0.00	0.00	
11,700.00	90.00	90.22	7,254.00	-1,038.74	4,769.41	4,850.49	0.00	0.00	0.00	
11,800.00	90.00	90.22	7,254.00	-1,039.13	4,869.41	4,950.01	0.00	0.00	0.00	
11,900.00	90.00	90.22	7,254.00	-1,039.52	4,969.41	5,049.52	0.00	0.00	0.00	
12,000.00	90.00	90.22	7,254.00	-1,039.91	5,069.41	5,149.04	0.00	0.00	0.00	
12,100.00	90.00	90.22	7,254.00	-1,040.30	5,169.41	5,248.56	0.00	0.00	0.00	
12,200.00	90.00	90.22	7,254.00	-1,040.69	5,269.41	5,348.08	0.00	0.00	0.00	
12,300.00	90.00	90.22	7,254.00	-1,041.08	5,369.41	5,447.59	0.00	0.00	0.00	
12,400.00	90.00	90.22	7,254.00	-1,041.47	5,469.41	5,547.11	0.00	0.00	0.00	
12,500.00	90.00	90.22	7,254.00	-1,041.86	5,569.41	5,646.63	0.00	0.00	0.00	
12,600.00	90.00	90.22	7,254.00	-1,042.25	5,669.41	5,746.15	0.00	0.00	0.00	
12,700.00	90.00	90.22	7,254.00	-1,042.65	5,769.40	5,845.66	0.00	0.00	0.00	
12,800.00	90.00	90.22	7,254.00	-1,043.04	5,869.40	5,945.18	0.00	0.00	0.00	
12,900.00	90.00	90.22	7,254.00	-1,043.43	5,969.40	6,044.70	0.00	0.00	0.00	
13,000.00	90.00	90.22	7,254.00	-1,043.82	6,069.40	6,144.22	0.00	0.00	0.00	
13,100.00	90.00	90.22	7,254.00	-1,044.21	6,169.40	6,243.73	0.00	0.00	0.00	
13,200.00	90.00	90.22	7,254.00	-1,044.60	6,269.40	6,343.25	0.00	0.00	0.00	
13,300.00	90.00	90.22	7,254.00	-1,044.99	6,369.40	6,442.77	0.00	0.00	0.00	
13,400.00	90.00	90.22	7,254.00	-1,045.38	6,469.40	6,542.29	0.00	0.00	0.00	
13,500.00	90.00	90.22	7,254.00	-1,045.77	6,569.40	6,641.80	0.00	0.00	0.00	
13,600.00	90.00	90.22	7,254.00	-1,046.16	6,669.40	6,741.32	0.00	0.00	0.00	
13,700.00	90.00	90.22	7,254.00	-1,046.55	6,769.40	6,840.84	0.00	0.00	0.00	
13,800.00	90.00	90.22	7,254.00	-1,046.94	6,869.40	6,940.36	0.00	0.00	0.00	
13,900.00	90.00	90.22	7,254.00	-1,047.34	6,969.40	7,039.87	0.00	0.00	0.00	
14,000.00	90.00	90.22	7,254.00	-1,047.73	7,069.39	7,139.39	0.00	0.00	0.00	
14,100.00	90.00	90.22	7,254.00	-1,048.12	7,169.39	7,238.91	0.00	0.00	0.00	
14,200.00	90.00	90.22	7,254.00	-1,048.51	7,269.39	7,338.43	0.00	0.00	0.00	
14,300.00	90.00	90.22	7,254.00	-1,048.90	7,369.39	7,437.94	0.00	0.00	0.00	
14,400.00	90.00	90.22	7,254.00	-1,049.29	7,469.39	7,537.46	0.00	0.00	0.00	
14,500.00	90.00	90.22	7,254.00	-1,049.68	7,569.39	7,636.98	0.00	0.00	0.00	
14,600.00	90.00	90.22	7,254.00	-1,050.07	7,669.39	7,736.50	0.00	0.00	0.00	
14,700.00	90.00	90.22	7,254.00	-1,050.46	7,769.39	7,836.01	0.00	0.00	0.00	
14,800.00	90.00	90.22	7,254.00	-1,050.85	7,869.39	7,935.53	0.00	0.00	0.00	
14,900.00	90.00	90.22	7,254.00	-1,051.24	7,969.39	8,035.05	0.00	0.00	0.00	
15,000.00	90.00	90.22	7,254.00	-1,051.63	8,069.39	8,134.57	0.00	0.00	0.00	
15,100.00	90.00	90.22	7,254.00	-1,052.03	8,169.39	8,234.08	0.00	0.00	0.00	
15,200.00	90.00	90.22	7,254.00	-1,052.42	8,269.39	8,333.60	0.00	0.00	0.00	
15,300.00	90.00	90.22	7,254.00	-1,052.81	8,369.38	8,433.12	0.00	0.00	0.00	
15,400.00	90.00	90.22	7,254.00	-1,053.20	8,469.38	8,532.64	0.00	0.00	0.00	
15,500.00	90.00	90.22	7,254.00	-1,053.59	8,569.38	8,632.15	0.00	0.00	0.00	
15,600.00	90.00	90.22	7,254.00	-1,053.98	8,669.38	8,731.67	0.00	0.00	0.00	
15,700.00	90.00	90.22	7,254.00	-1,054.37	8,769.38	8,831.19	0.00	0.00	0.00	
15,800.00	90.00	90.22	7,254.00	-1,054.76	8,869.38	8,930.71	0.00	0.00	0.00	
15,900.00	90.00	90.22	7,254.00	-1,055.15	8,969.38	9,030.22	0.00	0.00	0.00	
16,000.00	90.00	90.22	7,254.00	-1,055.54	9,069.38	9,129.74	0.00	0.00	0.00	
16,100.00	90.00	90.22	7,254.00	-1,055.93	9,169.38	9,229.26	0.00	0.00	0.00	
16,200.00	90.00	90.22	7,254.00	-1,056.32	9,269.38	9,328.78	0.00	0.00	0.00	
16,300.00	90.00	90.22	7,254.00	-1,056.71	9,369.38	9,428.30	0.00	0.00	0.00	
16,400.00	90.00	90.22	7,254.00	-1,057.11	9,469.38	9,527.81	0.00	0.00	0.00	
16,500.00	90.00	90.22	7,254.00	-1,057.50	9,569.38	9,627.33	0.00	0.00	0.00	
16,600.00	90.00	90.22	7,254.00	-1,057.89	9,669.37	9,726.85	0.00	0.00	0.00	
16,700.00	90.00	90.22	7,254.00	-1,058.28	9,769.37	9,826.37	0.00	0.00	0.00	
16,800.00	90.00	90.22	7,254.00	-1,058.67	9,869.37	9,925.88	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well VIC EAST 21E-20-03
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5033.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5033.00usft
Site:	SEC 20-T7N-R67W	North Reference:	True
Well:	VIC EAST 21E-20-03	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)	
16,900.00	90.00	90.22	7,254.00	-1,059.06	9,969.37	10,025.40	0.00	0.00	0.00	
17,000.00	90.00	90.22	7,254.00	-1,059.45	10,069.37	10,124.92	0.00	0.00	0.00	
17,100.00	90.00	90.22	7,254.00	-1,059.84	10,169.37	10,224.44	0.00	0.00	0.00	
17,200.00	90.00	90.22	7,254.00	-1,060.23	10,269.37	10,323.95	0.00	0.00	0.00	
17,273.75	90.00	90.22	7,254.00	-1,060.52	10,343.12	10,397.35	0.00	0.00	0.00	
TD at 17273.75										

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VIC EAST 21E-03-LP - plan hits target center - Point	0.00	0.00	7,254.00	-1,022.97	734.94	1,446,685.65	3,165,007.97	40.558035°N	104.906145°W
VIC EAST 21E-03-PBHL - plan hits target center - Point	0.00	0.00	7,254.00	-1,060.52	10,343.12	1,446,712.16	3,174,616.18	40.557926°N	104.871566°W

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
804.00	804.00	Fox Hills Base:				
3,531.89	3,499.00	Parkman:				
4,074.27	4,034.00	Sussex:				
4,652.13	4,604.00	Shannon:				
6,991.63	6,906.00	Sharon Springs (Confining Zone):				
7,013.77	6,926.00	Niobrara:				
7,032.90	6,943.00	A Chalk:				
7,056.99	6,964.00	A Marl:				
7,154.95	7,044.00	B2 Chalk:				
7,202.18	7,079.00	B Marl:				
7,261.23	7,119.00	C Chalk:				
7,337.77	7,164.00	C Marl:				
7,478.02	7,224.00	Ft Hays (Confining Zone):				
7,557.58	7,244.00	Codell:				
7,665.50	7,254.00	Landing Point:				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
800.00	800.00	0.00	0.00	Start Build 2.00
1,273.16	1,271.02	-38.40	6.71	Start 5508.91 hold at 1273.16 MD
6,782.08	6,704.96	-930.64	162.58	Start DLS 10.00 TFO -80.00
7,665.50	7,254.00	-1,022.97	734.94	Start 9608.25 hold at 7665.50 MD
17,273.75	7,254.00	-1,060.52	10,343.12	TD at 17273.75