

# **EXTRACTION OIL & GAS**

**WELD COUNTY, COLORADO (NAD 83)**

**NW SW SEC. 21 T2N R67W 6th P.M.**

**LEONARD 2N**

**ORIGINAL WELLBORE**

**27 March, 2017**

**Plan: PROPOSAL #1**

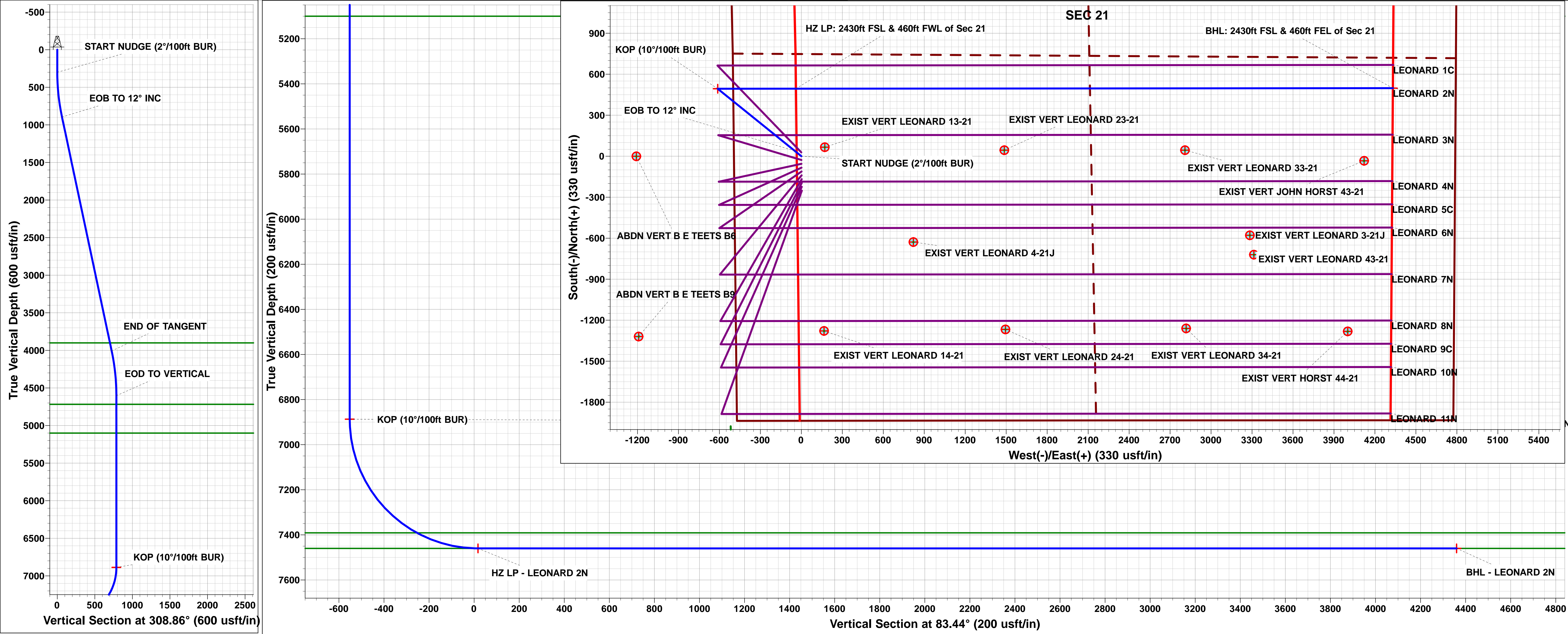
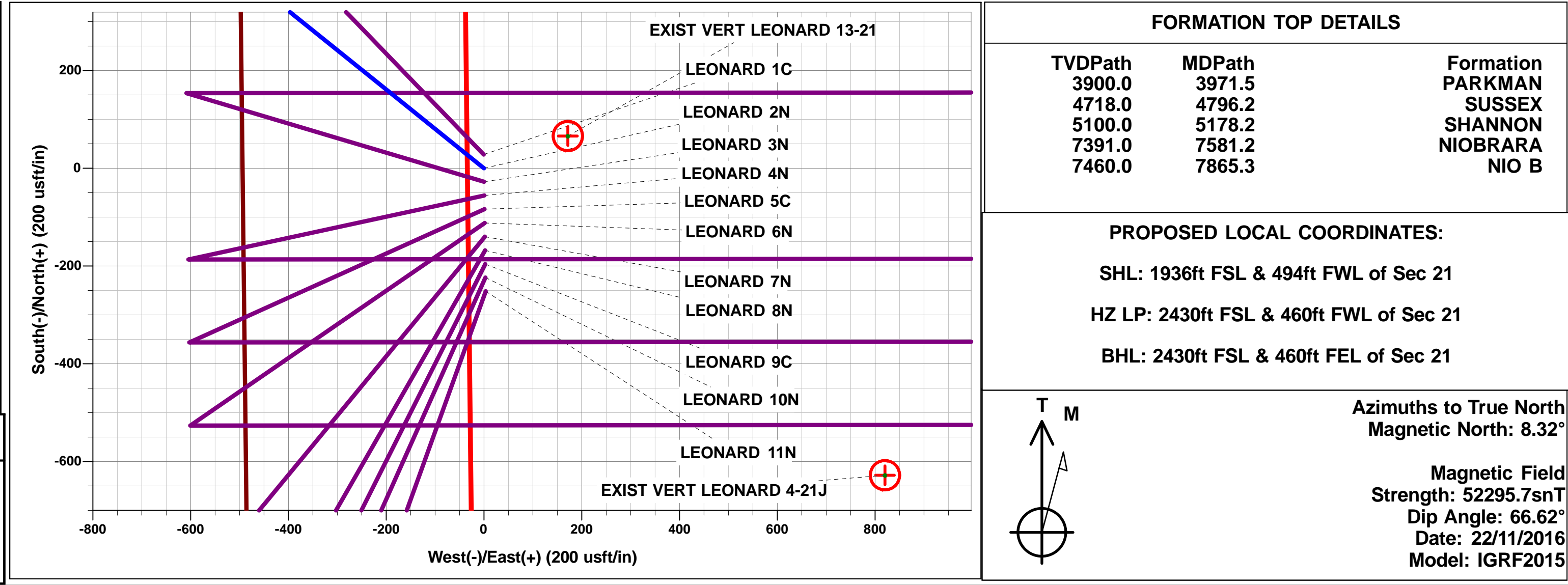




Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NW SW SEC. 21 T2N R67W 6th P.M.  
Well: LEONARD 2N  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 1936ft FSL & 494ft FWL of Sec 21	
300.0	300.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
895.5	899.9	12.00	308.86	39.3	-48.7	-43.9	62.6	EOB TO 12° INC	
4007.5	4081.4	12.00	308.86	454.2	-563.7	-508.1	723.9	END OF TANGENT	
4603.0	4681.2	0.00	0.00	493.5	-612.4	-552.0	786.5	EOD TO VERTICAL	
6887.0	6965.2	0.00	0.00	493.5	-612.4	-552.0	786.5	KOP (10°/100ft BUR)	
7460.0	7865.3	90.00	89.95	494.0	-39.4	17.3	1359.5	HZ LP: 2430ft FSL & 460ft FWL of Sec 21	
7460.0	12236.1	90.00	89.94	498.0	4331.4	4359.9	5730.3	BHL: 2430ft FSL & 460ft FEL of Sec 21	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - LEONARD 2N	6887.0	493.5	-612.4	40.123154	-104.905474
HZ LP - LEONARD 2N	7460.0	494.0	-39.4	40.123155	-104.903425
BHL - LEONARD 2N	7460.0	498.0	4331.4	40.123165	-104.887796



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well LEONARD 2N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB @ 5017.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB @ 5017.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 21 T2N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	LEONARD 2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<b>Project</b>	WELD COUNTY, COLORADO (NAD 83)		
<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		Using geodetic scale factor

<b>Site</b>	NW SW SEC. 21 T2N R67W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,287,804.83 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,166,871.56 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.121876
		<b>Longitude:</b>	-104.903286
		<b>Grid Convergence:</b>	0.39 °

<b>Well</b>	LEONARD 2N		
<b>Well Position</b>	<b>+N/-S</b>	-28.1 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.6 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 usft		<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<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	22/11/2016	8.32	66.62	52,296

<b>Design</b>	PROPOSAL #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	83.44

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	-5,017.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	-4,717.0	0.0	0.0	0.00	0.00	0.00	0.00	
899.9	12.00	308.86	895.5	-4,121.5	39.3	-48.7	2.00	2.00	0.00	308.86	
4,081.4	12.00	308.86	4,007.5	-1,009.5	454.2	-563.7	0.00	0.00	0.00	0.00	
4,681.2	0.00	0.00	4,603.0	-414.0	493.5	-612.4	2.00	-2.00	0.00	180.00	
6,965.2	0.00	0.00	6,887.0	1,870.0	493.5	-612.4	0.00	0.00	0.00	0.00	KOP - LEONARD 2
7,865.3	90.00	89.95	7,460.0	2,443.0	494.0	-39.4	10.00	10.00	9.99	89.95	HZ LP - LEONARD
12,236.1	90.00	89.94	7,460.0	2,443.0	498.0	4,331.4	0.00	0.00	0.00	-48.86	BHL - LEONARD 2I

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well LEONARD 2N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB @ 5017.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB @ 5017.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 21 T2N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	LEONARD 2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>SHL: 1936ft FSL &amp; 494ft FWL of Sec 21</b>										
0.0	0.00	0.00	0.0	5,017.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,917.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,817.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
300.0	0.00	0.00	300.0	4,717.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	2.00	308.86	400.0	4,617.02	1.1	-1.4	-1.2	2.00	2.00	0.00
500.0	4.00	308.86	499.8	4,517.16	4.4	-5.4	-4.9	2.00	2.00	0.00
600.0	6.00	308.86	599.5	4,417.55	9.8	-12.2	-11.0	2.00	2.00	0.00
700.0	8.00	308.86	698.7	4,318.30	17.5	-21.7	-19.6	2.00	2.00	0.00
800.0	10.00	308.86	797.5	4,219.53	27.3	-33.9	-30.5	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
899.9	12.00	308.86	895.5	4,121.49	39.3	-48.7	-43.9	2.00	2.00	0.00
900.0	12.00	308.86	895.6	4,121.38	39.3	-48.7	-43.9	0.04	0.04	0.00
1,000.0	12.00	308.86	993.4	4,023.56	52.3	-64.9	-58.5	0.00	0.00	0.00
1,100.0	12.00	308.86	1,091.3	3,925.75	65.4	-81.1	-73.1	0.00	0.00	0.00
1,200.0	12.00	308.86	1,189.1	3,827.93	78.4	-97.3	-87.7	0.00	0.00	0.00
1,300.0	12.00	308.86	1,286.9	3,730.11	91.5	-113.5	-102.3	0.00	0.00	0.00
1,400.0	12.00	308.86	1,384.7	3,632.30	104.5	-129.7	-116.9	0.00	0.00	0.00
1,500.0	12.00	308.86	1,482.5	3,534.48	117.5	-145.9	-131.5	0.00	0.00	0.00
1,600.0	12.00	308.86	1,580.3	3,436.67	130.6	-162.0	-146.1	0.00	0.00	0.00
1,700.0	12.00	308.86	1,678.1	3,338.85	143.6	-178.2	-160.7	0.00	0.00	0.00
1,800.0	12.00	308.86	1,776.0	3,241.04	156.7	-194.4	-175.2	0.00	0.00	0.00
1,900.0	12.00	308.86	1,873.8	3,143.22	169.7	-210.6	-189.8	0.00	0.00	0.00
2,000.0	12.00	308.86	1,971.6	3,045.41	182.8	-226.8	-204.4	0.00	0.00	0.00
2,100.0	12.00	308.86	2,069.4	2,947.59	195.8	-243.0	-219.0	0.00	0.00	0.00
2,200.0	12.00	308.86	2,167.2	2,849.77	208.8	-259.2	-233.6	0.00	0.00	0.00
2,300.0	12.00	308.86	2,265.0	2,751.96	221.9	-275.3	-248.2	0.00	0.00	0.00
2,400.0	12.00	308.86	2,362.9	2,654.14	234.9	-291.5	-262.8	0.00	0.00	0.00
2,500.0	12.00	308.86	2,460.7	2,556.33	248.0	-307.7	-277.4	0.00	0.00	0.00
2,600.0	12.00	308.86	2,558.5	2,458.51	261.0	-323.9	-292.0	0.00	0.00	0.00
2,700.0	12.00	308.86	2,656.3	2,360.70	274.1	-340.1	-306.6	0.00	0.00	0.00
2,800.0	12.00	308.86	2,754.1	2,262.88	287.1	-356.3	-321.1	0.00	0.00	0.00
2,900.0	12.00	308.86	2,851.9	2,165.07	300.1	-372.5	-335.7	0.00	0.00	0.00
3,000.0	12.00	308.86	2,949.8	2,067.25	313.2	-388.6	-350.3	0.00	0.00	0.00
3,100.0	12.00	308.86	3,047.6	1,969.43	326.2	-404.8	-364.9	0.00	0.00	0.00
3,200.0	12.00	308.86	3,145.4	1,871.62	339.3	-421.0	-379.5	0.00	0.00	0.00
3,300.0	12.00	308.86	3,243.2	1,773.80	352.3	-437.2	-394.1	0.00	0.00	0.00
3,400.0	12.00	308.86	3,341.0	1,675.99	365.4	-453.4	-408.7	0.00	0.00	0.00
3,500.0	12.00	308.86	3,438.8	1,578.17	378.4	-469.6	-423.3	0.00	0.00	0.00
3,600.0	12.00	308.86	3,536.6	1,480.36	391.5	-485.8	-437.9	0.00	0.00	0.00
3,700.0	12.00	308.86	3,634.5	1,382.54	404.5	-501.9	-452.5	0.00	0.00	0.00
3,800.0	12.00	308.86	3,732.3	1,284.72	417.5	-518.1	-467.0	0.00	0.00	0.00
3,900.0	12.00	308.86	3,830.1	1,186.91	430.6	-534.3	-481.6	0.00	0.00	0.00
<b>PARKMAN</b>										
3,971.5	12.00	308.86	3,900.0	1,117.00	439.9	-545.9	-492.1	0.00	0.00	0.00
4,000.0	12.00	308.86	3,927.9	1,089.09	443.6	-550.5	-496.2	0.00	0.00	0.00
<b>END OF TANGENT</b>										
4,081.4	12.00	308.86	4,007.5	1,009.51	454.2	-563.7	-508.1	0.00	0.00	0.00
4,100.0	11.62	308.86	4,025.7	991.27	456.6	-566.6	-510.8	2.00	-2.00	0.00
4,200.0	9.62	308.86	4,124.0	892.98	468.2	-581.0	-523.7	2.00	-2.00	0.00
4,300.0	7.62	308.86	4,222.9	794.12	477.6	-592.7	-534.2	2.00	-2.00	0.00
4,400.0	5.62	308.86	4,322.2	694.79	484.8	-601.7	-542.3	2.00	-2.00	0.00
4,500.0	3.62	308.86	4,421.9	595.12	489.9	-607.9	-548.0	2.00	-2.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well LEONARD 2N
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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB @ 5017.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 21 T2N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	LEONARD 2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	1.62	308.86	4,521.8	495.23	492.8	-611.5	-551.2	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>4,681.2</b>	<b>0.00</b>	<b>0.00</b>	<b>4,603.0</b>	<b>414.00</b>	<b>493.5</b>	<b>-612.4</b>	<b>-552.0</b>	<b>2.00</b>	<b>-2.00</b>	<b>62.94</b>
4,700.0	0.00	0.00	4,621.8	395.25	493.5	-612.4	-552.0	0.00	0.00	0.00
<b>SUSSEX</b>										
<b>4,796.2</b>	<b>0.00</b>	<b>0.00</b>	<b>4,718.0</b>	<b>299.00</b>	<b>493.5</b>	<b>-612.4</b>	<b>-552.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,800.0	0.00	0.00	4,721.8	295.25	493.5	-612.4	-552.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,821.8	195.25	493.5	-612.4	-552.0	0.00	0.00	0.00
5,000.0	0.00	0.00	4,921.8	95.25	493.5	-612.4	-552.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,021.8	-4.75	493.5	-612.4	-552.0	0.00	0.00	0.00
<b>SHANNON</b>										
<b>5,178.2</b>	<b>0.00</b>	<b>0.00</b>	<b>5,100.0</b>	<b>-83.00</b>	<b>493.5</b>	<b>-612.4</b>	<b>-552.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,200.0	0.00	0.00	5,121.8	-104.75	493.5	-612.4	-552.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,221.8	-204.75	493.5	-612.4	-552.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,321.8	-304.75	493.5	-612.4	-552.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,421.8	-404.75	493.5	-612.4	-552.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,521.8	-504.75	493.5	-612.4	-552.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,621.8	-604.75	493.5	-612.4	-552.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,721.8	-704.75	493.5	-612.4	-552.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,821.8	-804.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,921.8	-904.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,021.8	-1,004.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,121.8	-1,104.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,221.8	-1,204.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,321.8	-1,304.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,421.8	-1,404.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,521.8	-1,504.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,621.8	-1,604.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,721.8	-1,704.75	493.5	-612.4	-552.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,821.8	-1,804.75	493.5	-612.4	-552.0	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>6,965.2</b>	<b>0.00</b>	<b>0.00</b>	<b>6,887.0</b>	<b>-1,870.00</b>	<b>493.5</b>	<b>-612.4</b>	<b>-552.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
7,000.0	3.48	89.95	6,921.7	-1,904.73	493.5	-611.3	-551.0	10.00	10.00	0.00
7,100.0	13.47	89.95	7,020.5	-2,003.52	493.5	-596.6	-536.3	10.00	10.00	0.00
7,200.0	23.47	89.95	7,115.2	-2,098.24	493.5	-565.0	-504.9	10.00	10.00	0.00
7,300.0	33.47	89.95	7,203.0	-2,186.03	493.6	-517.4	-457.6	10.00	10.00	0.00
7,400.0	43.47	89.95	7,281.2	-2,264.23	493.6	-455.2	-395.9	10.00	10.00	0.00
7,500.0	53.47	89.95	7,347.4	-2,330.44	493.7	-380.5	-321.6	10.00	10.00	0.00
<b>NIOBRARA</b>										
<b>7,581.2</b>	<b>61.59</b>	<b>89.95</b>	<b>7,391.0</b>	<b>-2,374.00</b>	<b>493.8</b>	<b>-312.0</b>	<b>-253.6</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,600.0	63.47	89.95	7,399.7	-2,382.67	493.8	-295.3	-237.0	10.00	10.00	0.00
7,700.0	73.47	89.95	7,436.3	-2,419.32	493.9	-202.4	-144.7	10.00	10.00	0.00
7,800.0	83.47	89.95	7,456.3	-2,439.28	493.9	-104.6	-47.5	10.00	10.00	0.00
<b>HZ LP: 2430ft FSL &amp; 460ft FWL of Sec 21 - NIO B</b>										
<b>7,865.3</b>	<b>90.00</b>	<b>89.95</b>	<b>7,460.0</b>	<b>-2,443.00</b>	<b>494.0</b>	<b>-39.4</b>	<b>17.3</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,900.0	90.00	89.95	7,460.0	-2,443.00	494.0	-4.7	51.7	0.00	0.00	0.00
8,000.0	90.00	89.95	7,460.0	-2,443.01	494.1	95.3	151.1	0.00	0.00	0.00
8,100.0	90.00	89.95	7,460.0	-2,443.01	494.2	195.3	250.5	0.00	0.00	0.00
8,200.0	90.00	89.95	7,460.0	-2,443.02	494.3	295.3	349.8	0.00	0.00	0.00
8,300.0	90.00	89.95	7,460.0	-2,443.02	494.4	395.3	449.2	0.00	0.00	0.00
8,400.0	90.00	89.95	7,460.0	-2,443.03	494.5	495.3	548.5	0.00	0.00	0.00
8,500.0	90.00	89.95	7,460.0	-2,443.03	494.5	595.3	647.9	0.00	0.00	0.00
8,600.0	90.00	89.95	7,460.0	-2,443.03	494.6	695.3	747.2	0.00	0.00	0.00



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well LEONARD 2N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB @ 5017.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB @ 5017.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 21 T2N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	LEONARD 2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,700.0	90.00	89.95	7,460.0	-2,443.04	494.7	795.3	846.6	0.00	0.00	0.00
8,800.0	90.00	89.95	7,460.0	-2,443.04	494.8	895.3	945.9	0.00	0.00	0.00
8,900.0	90.00	89.95	7,460.0	-2,443.04	494.9	995.3	1,045.3	0.00	0.00	0.00
9,000.0	90.00	89.95	7,460.0	-2,443.05	495.0	1,095.3	1,144.7	0.00	0.00	0.00
9,100.0	90.00	89.95	7,460.0	-2,443.05	495.1	1,195.3	1,244.0	0.00	0.00	0.00
9,200.0	90.00	89.95	7,460.1	-2,443.05	495.2	1,295.3	1,343.4	0.00	0.00	0.00
9,300.0	90.00	89.95	7,460.1	-2,443.05	495.3	1,395.3	1,442.7	0.00	0.00	0.00
9,400.0	90.00	89.95	7,460.1	-2,443.06	495.3	1,495.3	1,542.1	0.00	0.00	0.00
9,500.0	90.00	89.95	7,460.1	-2,443.06	495.4	1,595.3	1,641.4	0.00	0.00	0.00
9,600.0	90.00	89.95	7,460.1	-2,443.06	495.5	1,695.3	1,740.8	0.00	0.00	0.00
9,700.0	90.00	89.95	7,460.1	-2,443.06	495.6	1,795.3	1,840.1	0.00	0.00	0.00
9,800.0	90.00	89.95	7,460.1	-2,443.06	495.7	1,895.3	1,939.5	0.00	0.00	0.00
9,900.0	90.00	89.95	7,460.1	-2,443.06	495.8	1,995.3	2,038.9	0.00	0.00	0.00
10,000.0	90.00	89.95	7,460.1	-2,443.06	495.9	2,095.3	2,138.2	0.00	0.00	0.00
10,100.0	90.00	89.95	7,460.1	-2,443.06	496.0	2,195.3	2,237.6	0.00	0.00	0.00
10,200.0	90.00	89.95	7,460.1	-2,443.06	496.1	2,295.3	2,336.9	0.00	0.00	0.00
10,300.0	90.00	89.95	7,460.1	-2,443.06	496.2	2,395.3	2,436.3	0.00	0.00	0.00
10,400.0	90.00	89.95	7,460.1	-2,443.06	496.3	2,495.3	2,535.6	0.00	0.00	0.00
10,500.0	90.00	89.95	7,460.1	-2,443.06	496.4	2,595.3	2,635.0	0.00	0.00	0.00
10,600.0	90.00	89.95	7,460.1	-2,443.06	496.4	2,695.3	2,734.4	0.00	0.00	0.00
10,700.0	90.00	89.95	7,460.1	-2,443.06	496.5	2,795.3	2,833.7	0.00	0.00	0.00
10,800.0	90.00	89.95	7,460.1	-2,443.05	496.6	2,895.3	2,933.1	0.00	0.00	0.00
10,900.0	90.00	89.95	7,460.1	-2,443.05	496.7	2,995.3	3,032.4	0.00	0.00	0.00
11,000.0	90.00	89.95	7,460.0	-2,443.05	496.8	3,095.3	3,131.8	0.00	0.00	0.00
11,100.0	90.00	89.95	7,460.0	-2,443.05	496.9	3,195.3	3,231.1	0.00	0.00	0.00
11,200.0	90.00	89.95	7,460.0	-2,443.04	497.0	3,295.3	3,330.5	0.00	0.00	0.00
11,300.0	90.00	89.95	7,460.0	-2,443.04	497.1	3,395.3	3,429.8	0.00	0.00	0.00
11,400.0	90.00	89.95	7,460.0	-2,443.04	497.2	3,495.3	3,529.2	0.00	0.00	0.00
11,500.0	90.00	89.94	7,460.0	-2,443.03	497.3	3,595.3	3,628.6	0.00	0.00	0.00
11,600.0	90.00	89.94	7,460.0	-2,443.03	497.4	3,695.3	3,727.9	0.00	0.00	0.00
11,700.0	90.00	89.94	7,460.0	-2,443.03	497.5	3,795.3	3,827.3	0.00	0.00	0.00
11,800.0	90.00	89.94	7,460.0	-2,443.02	497.6	3,895.3	3,926.6	0.00	0.00	0.00
11,900.0	90.00	89.94	7,460.0	-2,443.02	497.7	3,995.3	4,026.0	0.00	0.00	0.00
12,000.0	90.00	89.94	7,460.0	-2,443.01	497.8	4,095.3	4,125.3	0.00	0.00	0.00
12,100.0	90.00	89.94	7,460.0	-2,443.01	497.9	4,195.3	4,224.7	0.00	0.00	0.00
12,200.0	90.00	89.94	7,460.0	-2,443.00	498.0	4,295.3	4,324.1	0.00	0.00	0.00
<b>BHL: 2430ft FSL &amp; 460ft FEL of Sec 21</b>										
<b>12,236.1</b>	<b>90.00</b>	<b>89.94</b>	<b>7,460.0</b>	<b>-2,443.00</b>	<b>498.0</b>	<b>4,331.4</b>	<b>4,359.9</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,971.5	3,900.0	PARKMAN				
4,796.2	4,718.0	SUSSEX				
5,178.2	5,100.0	SHANNON				
7,581.2	7,391.0	NIOBRARA				
7,865.3	7,460.0	NIO B				

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well LEONARD 2N
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB @ 5017.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB @ 5017.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 21 T2N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	LEONARD 2N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 1936ft FSL & 494ft FWL of Sec 21
300.0	300.0	0.0	0.0	START NUDGE (2°/100ft BUR)
899.9	895.5	39.3	-48.7	EOB TO 12° INC
4,081.4	4,007.5	454.2	-563.7	END OF TANGENT
4,681.2	4,603.0	493.5	-612.4	EOD TO VERTICAL
6,965.2	6,887.0	493.5	-612.4	KOP (10°/100ft BUR)
7,865.3	7,460.0	494.0	-39.4	HZ LP: 2430ft FSL & 460ft FWL of Sec 21
12,236.1	7,460.0	498.0	4,331.4	BHL: 2430ft FSL & 460ft FEL of Sec 21