

# **EXTRACTION OIL & GAS**

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

**SE NE SEC. 22 T6N R67W 6th P.M.**

**RBFB 4**

**ORIGINAL WELLBORE**

**24 October, 2016**

**Plan: PROPOSAL #1**

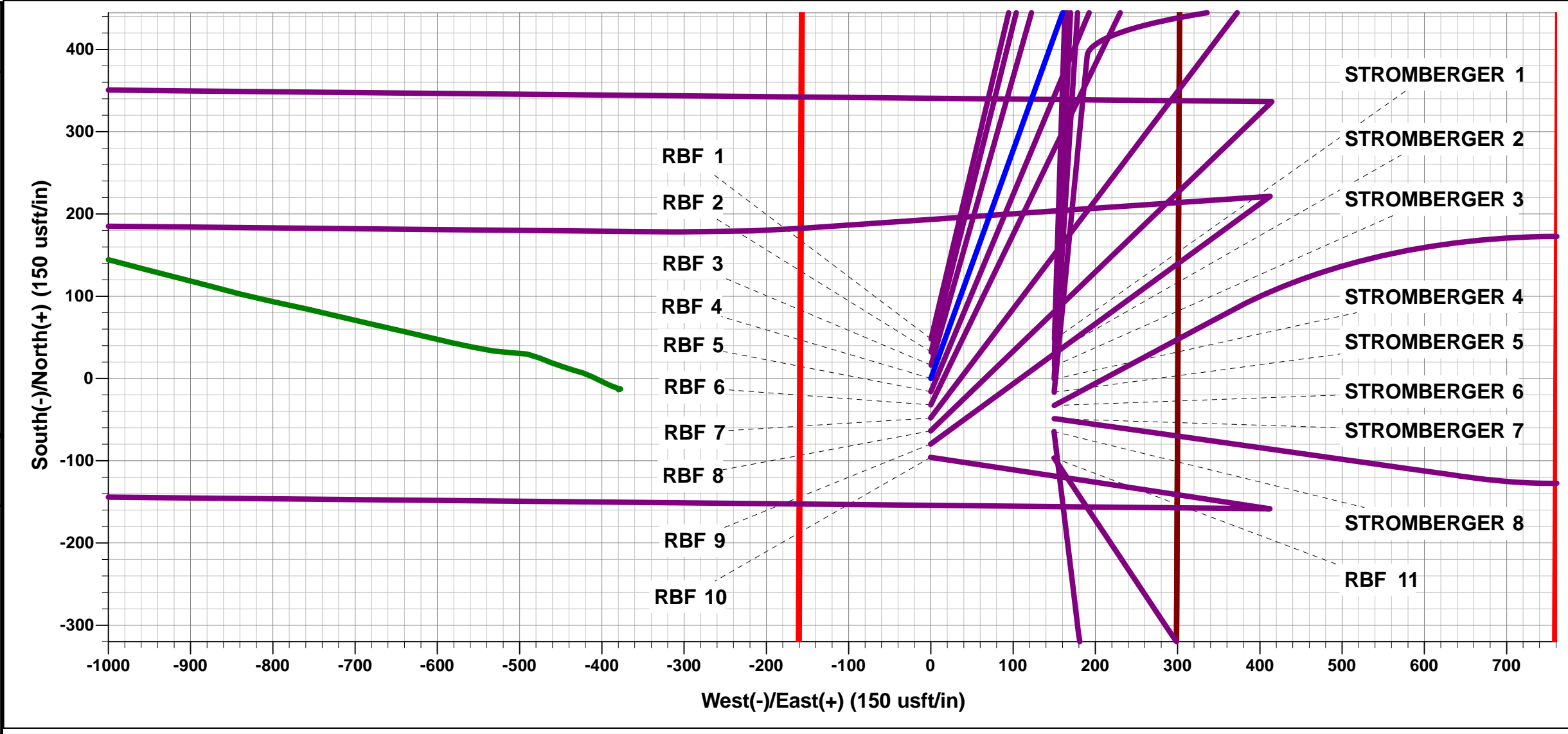




Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SE NE SEC. 22 T6N R67W 6th P.M.  
Well: RBF 4  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

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: 1993ft FNL & 300ft FEL of Sec 22	
400.0	400.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDE (2°/100ft BUR)	
1049.6	1055.3	13.11	19.83	70.2	25.3	-16.0	74.6	EOB TO 13.11° INC	
5712.4	5842.8	13.11	19.83	1091.4	393.5	-248.4	1160.2	END OF TANGENT	
6362.0	6498.1	0.00	0.00	1161.6	418.8	-264.4	1234.8	EOD TO VERTICAL	
6392.0	6528.1	0.00	0.00	1161.6	418.8	-264.4	1234.8	KOP (10°/100ft BUR)	
6965.0	7428.1	90.00	270.57	1167.3	-154.1	304.4	1807.7	HZ LP: 825ft FNL & 460ft FEL of Sec 22	
6965.0	16904.4	90.00	270.57	1261.3	-9629.9	9712.2	11284.0	BHL: 825ft FNL & 460ft FWL of Sec 21	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - RBF 4	6392.0	1161.6	418.8	40.477425	-104.869895
BHL - RBF 4	6965.0	1261.3	-9629.9	40.477694	-104.906015
HZ LP - RBF 4	6965.0	1167.3	-154.1	40.477441	-104.871954



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3450.0	3519.9	PARKMAN
4215.0	4305.4	SUSSEX
4790.0	4895.7	SHANNON
6809.0	6995.1	SHARON SPRINGS
6846.0	7052.2	NIOBRARA
6965.0	7428.1	NIO B

PROPOSED LOCAL COORDINATES	
SHL: 1993ft FNL & 300ft FEL of Sec 22	
LP: 825ft FNL & 460ft FEL of Sec 22	
BHL: 825ft FNL & 460ft FWL of Sec 21	

T M

Azimuths to True North

Magnetic North: 8.34°

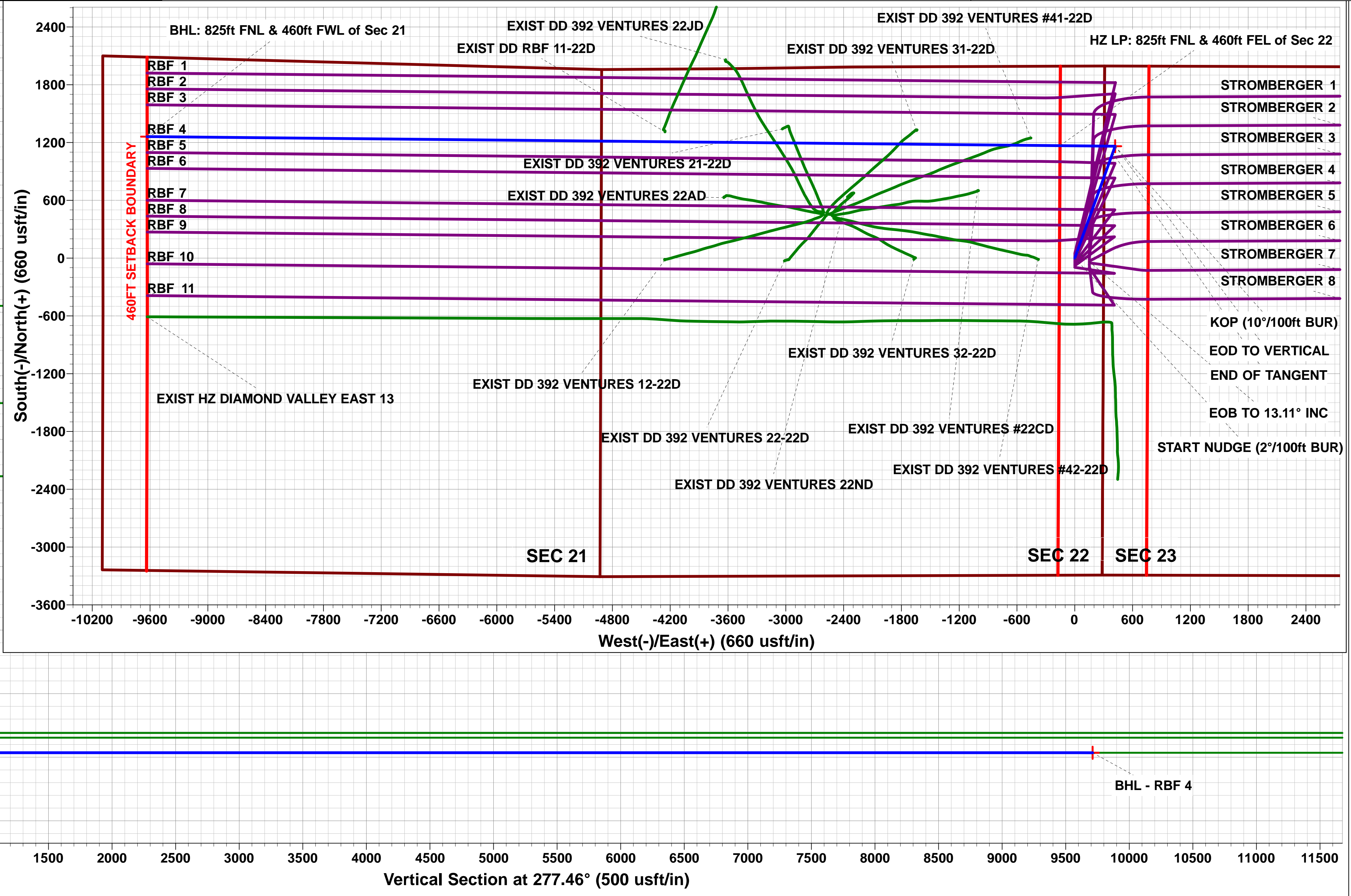
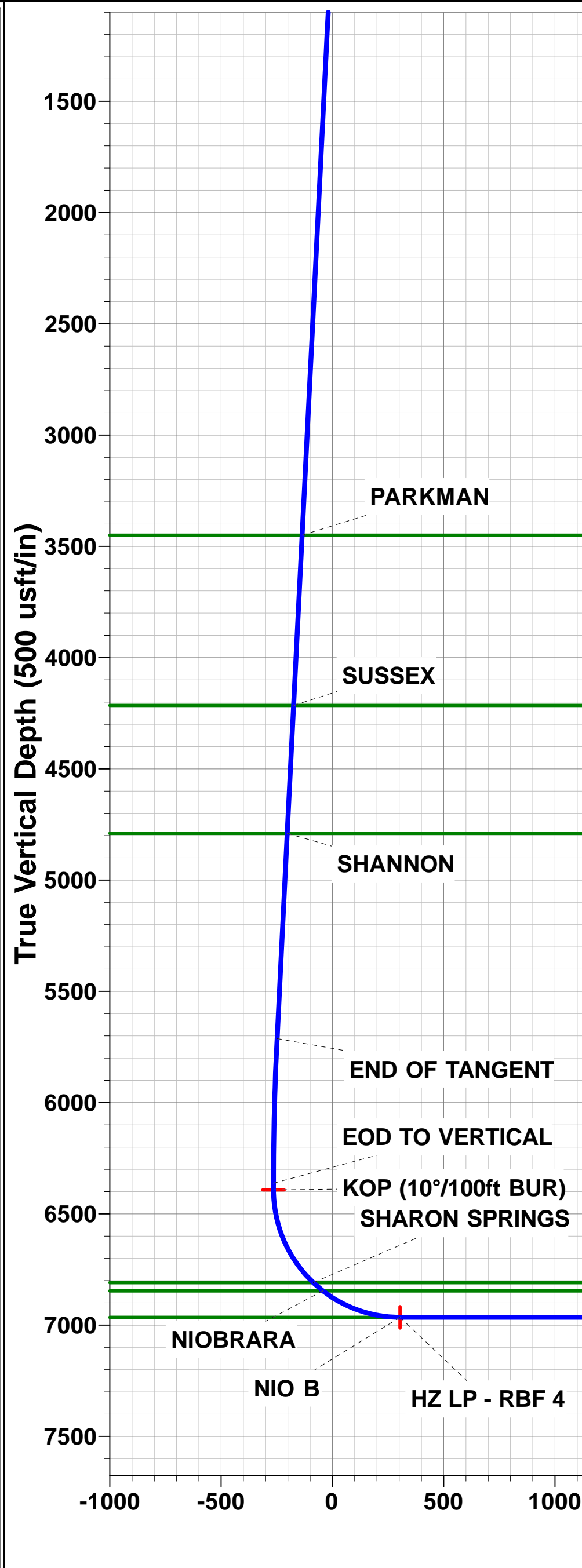
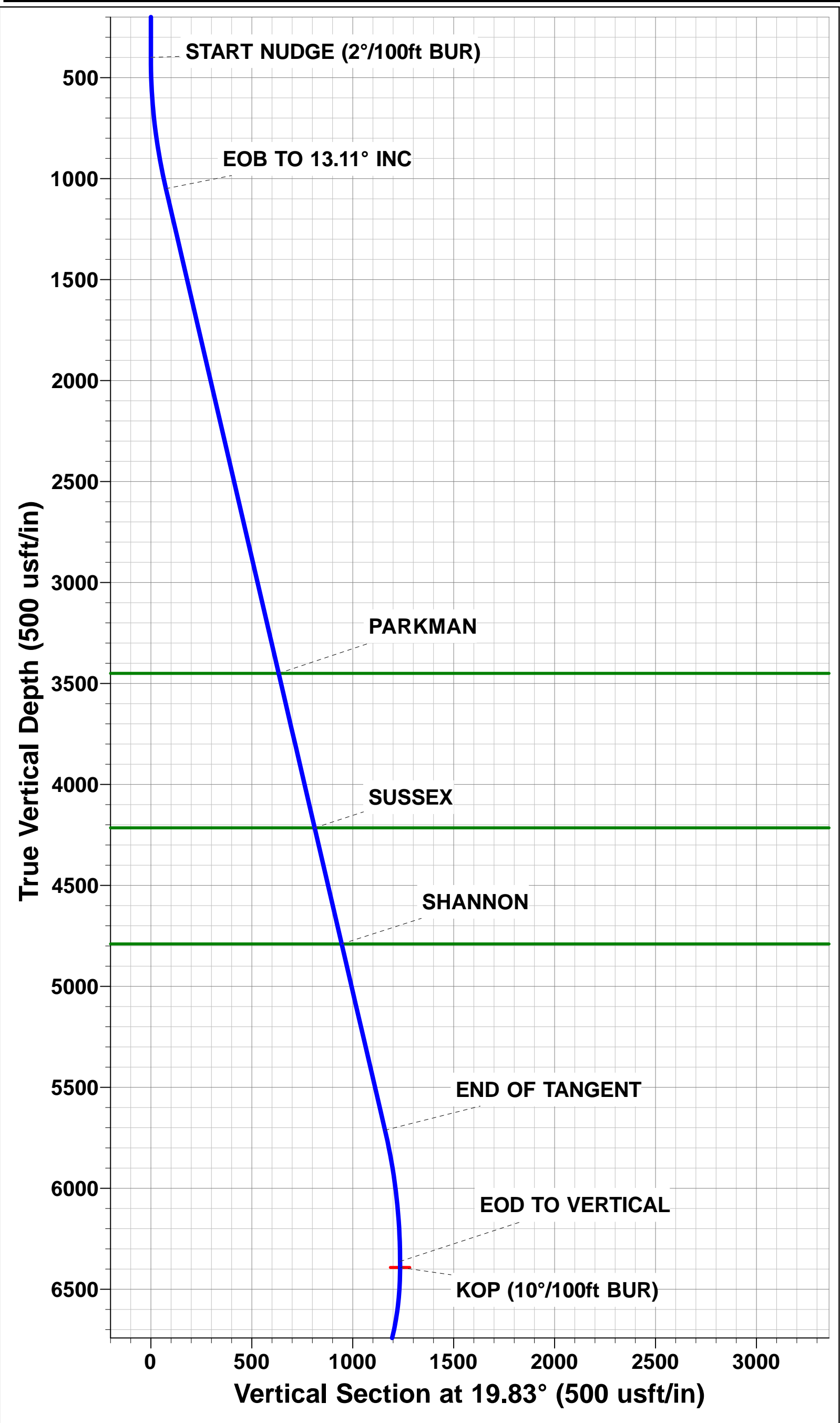
Magnetic Field

Strength: 52493.7snT

Dip Angle: 66.91°

Date: 24/10/2016

Model: IGRF2015



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RBF 4
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 22 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	RBF 4	<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>	SE NE SEC. 22 T6N R67W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,417,027.42 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,175,712.36 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.476424
		<b>Longitude:</b>	-104.868382
		<b>Grid Convergence:</b>	0.41 °

<b>Well</b>	RBF 4		
<b>Well Position</b>	<b>+N/-S</b>	-796.7 usft	<b>Northing:</b>
	<b>+E/-W</b>	-839.7 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	40.474237
		<b>Longitude:</b>	-104.871400
		<b>Ground Level:</b>	4,778.0 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	24/10/2016	8.34	66.91	52,494

<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>
	6,965.0	0.0	0.0	277.46

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,794.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	-4,394.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,055.3	13.11	19.83	1,049.6	-3,744.4	70.2	25.3	2.00	2.00	0.00	19.83	
5,842.8	13.11	19.83	5,712.4	918.4	1,091.4	393.5	0.00	0.00	0.00	0.00	
6,498.1	0.00	0.00	6,362.0	1,568.0	1,161.6	418.8	2.00	-2.00	0.00	180.00	
6,528.1	0.00	0.00	6,392.0	1,598.0	1,161.6	418.8	0.00	0.00	0.00	0.00	KOP - RBF 4
7,428.1	90.00	270.57	6,965.0	2,171.0	1,167.3	-154.1	10.00	10.00	0.00	270.57	
16,904.4	90.00	270.57	6,965.0	2,171.0	1,261.3	-9,629.9	0.00	0.00	0.00	-99.85	BHL - RBF 4

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RBF 4
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 22 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	RBF 4	<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: 1993ft FNL &amp; 300ft FEL of Sec 22</b>										
0.0	0.00	0.00	0.0	4,794.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,694.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,594.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,494.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
400.0	0.00	0.00	400.0	4,394.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	2.00	19.83	500.0	4,294.02	1.6	0.6	-0.4	2.00	2.00	0.00
600.0	4.00	19.83	599.8	4,194.16	6.6	2.4	-1.5	2.00	2.00	0.00
700.0	6.00	19.83	699.5	4,094.55	14.8	5.3	-3.4	2.00	2.00	0.00
800.0	8.00	19.83	798.7	3,995.30	26.2	9.5	-6.0	2.00	2.00	0.00
900.0	10.00	19.83	897.5	3,896.53	40.9	14.8	-9.3	2.00	2.00	0.00
1,000.0	12.00	19.83	995.6	3,798.38	58.9	21.2	-13.4	2.00	2.00	0.00
<b>EOB TO 13.11° INC</b>										
1,055.3	13.11	19.83	1,049.6	3,744.42	70.2	25.3	-16.0	2.00	2.00	0.00
1,100.0	13.11	19.83	1,093.1	3,700.86	79.7	28.7	-18.1	0.00	0.00	0.00
1,200.0	13.11	19.83	1,190.5	3,603.47	101.1	36.4	-23.0	0.00	0.00	0.00
1,300.0	13.11	19.83	1,287.9	3,506.07	122.4	44.1	-27.9	0.00	0.00	0.00
1,400.0	13.11	19.83	1,385.3	3,408.68	143.7	51.8	-32.7	0.00	0.00	0.00
1,500.0	13.11	19.83	1,482.7	3,311.28	165.1	59.5	-37.6	0.00	0.00	0.00
1,600.0	13.11	19.83	1,580.1	3,213.89	186.4	67.2	-42.4	0.00	0.00	0.00
1,700.0	13.11	19.83	1,677.5	3,116.49	207.7	74.9	-47.3	0.00	0.00	0.00
1,800.0	13.11	19.83	1,774.9	3,019.10	229.0	82.6	-52.1	0.00	0.00	0.00
1,900.0	13.11	19.83	1,872.3	2,921.70	250.4	90.3	-57.0	0.00	0.00	0.00
2,000.0	13.11	19.83	1,969.7	2,824.31	271.7	98.0	-61.8	0.00	0.00	0.00
2,100.0	13.11	19.83	2,067.1	2,726.91	293.0	105.7	-66.7	0.00	0.00	0.00
2,200.0	13.11	19.83	2,164.5	2,629.51	314.4	113.3	-71.6	0.00	0.00	0.00
2,300.0	13.11	19.83	2,261.9	2,532.12	335.7	121.0	-76.4	0.00	0.00	0.00
2,400.0	13.11	19.83	2,359.3	2,434.72	357.0	128.7	-81.3	0.00	0.00	0.00
2,500.0	13.11	19.83	2,456.7	2,337.33	378.4	136.4	-86.1	0.00	0.00	0.00
2,600.0	13.11	19.83	2,554.1	2,239.93	399.7	144.1	-91.0	0.00	0.00	0.00
2,700.0	13.11	19.83	2,651.5	2,142.54	421.0	151.8	-95.8	0.00	0.00	0.00
2,800.0	13.11	19.83	2,748.9	2,045.14	442.4	159.5	-100.7	0.00	0.00	0.00
2,900.0	13.11	19.83	2,846.3	1,947.75	463.7	167.2	-105.5	0.00	0.00	0.00
3,000.0	13.11	19.83	2,943.6	1,850.35	485.0	174.9	-110.4	0.00	0.00	0.00
3,100.0	13.11	19.83	3,041.0	1,752.96	506.3	182.6	-115.3	0.00	0.00	0.00
3,200.0	13.11	19.83	3,138.4	1,655.56	527.7	190.2	-120.1	0.00	0.00	0.00
3,300.0	13.11	19.83	3,235.8	1,558.17	549.0	197.9	-125.0	0.00	0.00	0.00
3,400.0	13.11	19.83	3,333.2	1,460.77	570.3	205.6	-129.8	0.00	0.00	0.00
3,500.0	13.11	19.83	3,430.6	1,363.37	591.7	213.3	-134.7	0.00	0.00	0.00
<b>PARKMAN</b>										
3,519.9	13.11	19.83	3,450.0	1,344.00	595.9	214.8	-135.6	0.00	0.00	0.00
3,600.0	13.11	19.83	3,528.0	1,265.98	613.0	221.0	-139.5	0.00	0.00	0.00
3,700.0	13.11	19.83	3,625.4	1,168.58	634.3	228.7	-144.4	0.00	0.00	0.00
3,800.0	13.11	19.83	3,722.8	1,071.19	655.7	236.4	-149.2	0.00	0.00	0.00
3,900.0	13.11	19.83	3,820.2	973.79	677.0	244.1	-154.1	0.00	0.00	0.00
4,000.0	13.11	19.83	3,917.6	876.40	698.3	251.8	-158.9	0.00	0.00	0.00
4,100.0	13.11	19.83	4,015.0	779.00	719.7	259.5	-163.8	0.00	0.00	0.00
4,200.0	13.11	19.83	4,112.4	681.61	741.0	267.2	-168.7	0.00	0.00	0.00
4,300.0	13.11	19.83	4,209.8	584.21	762.3	274.8	-173.5	0.00	0.00	0.00
<b>SUSSEX</b>										
4,305.4	13.11	19.83	4,215.0	579.00	763.5	275.3	-173.8	0.00	0.00	0.00
4,400.0	13.11	19.83	4,307.2	486.82	783.6	282.5	-178.4	0.00	0.00	0.00
4,500.0	13.11	19.83	4,404.6	389.42	805.0	290.2	-183.2	0.00	0.00	0.00



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RBF 4
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 22 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	RBF 4	<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	13.11	19.83	4,502.0	292.03	826.3	297.9	-188.1	0.00	0.00	0.00
4,700.0	13.11	19.83	4,599.4	194.63	847.6	305.6	-192.9	0.00	0.00	0.00
4,800.0	13.11	19.83	4,696.8	97.23	869.0	313.3	-197.8	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,895.7</b>	<b>13.11</b>	<b>19.83</b>	<b>4,790.0</b>	<b>4.00</b>	<b>889.4</b>	<b>320.7</b>	<b>-202.4</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,900.0	13.11	19.83	4,794.2	-0.16	890.3	321.0	-202.6	0.00	0.00	0.00
5,000.0	13.11	19.83	4,891.6	-97.56	911.6	328.7	-207.5	0.00	0.00	0.00
5,100.0	13.11	19.83	4,989.0	-194.95	933.0	336.4	-212.4	0.00	0.00	0.00
5,200.0	13.11	19.83	5,086.3	-292.35	954.3	344.1	-217.2	0.00	0.00	0.00
5,300.0	13.11	19.83	5,183.7	-389.74	975.6	351.7	-222.1	0.00	0.00	0.00
5,400.0	13.11	19.83	5,281.1	-487.14	997.0	359.4	-226.9	0.00	0.00	0.00
5,500.0	13.11	19.83	5,378.5	-584.53	1,018.3	367.1	-231.8	0.00	0.00	0.00
5,600.0	13.11	19.83	5,475.9	-681.93	1,039.6	374.8	-236.6	0.00	0.00	0.00
5,700.0	13.11	19.83	5,573.3	-779.32	1,060.9	382.5	-241.5	0.00	0.00	0.00
5,800.0	13.11	19.83	5,670.7	-876.72	1,082.3	390.2	-246.3	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>5,842.8</b>	<b>13.11</b>	<b>19.83</b>	<b>5,712.4</b>	<b>-918.42</b>	<b>1,091.4</b>	<b>393.5</b>	<b>-248.4</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,900.0	11.96	19.83	5,768.2	-974.24	1,103.1	397.7	-251.1	2.00	-2.00	0.00
6,000.0	9.96	19.83	5,866.4	-1,072.41	1,121.0	404.2	-255.1	2.00	-2.00	0.00
6,100.0	7.96	19.83	5,965.2	-1,171.18	1,135.6	409.4	-258.5	2.00	-2.00	0.00
6,200.0	5.96	19.83	6,064.4	-1,270.44	1,147.0	413.5	-261.1	2.00	-2.00	0.00
6,300.0	3.96	19.83	6,164.1	-1,370.06	1,155.2	416.5	-262.9	2.00	-2.00	0.00
6,400.0	1.96	19.83	6,263.9	-1,469.92	1,160.0	418.2	-264.0	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>6,498.1</b>	<b>0.00</b>	<b>0.00</b>	<b>6,362.0</b>	<b>-1,568.00</b>	<b>1,161.6</b>	<b>418.8</b>	<b>-264.4</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
6,500.0	0.00	0.00	6,363.9	-1,569.90	1,161.6	418.8	-264.4	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>6,528.1</b>	<b>0.00</b>	<b>0.00</b>	<b>6,392.0</b>	<b>-1,598.00</b>	<b>1,161.6</b>	<b>418.8</b>	<b>-264.4</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,600.0	7.19	270.57	6,463.7	-1,669.72	1,161.6	414.3	-259.9	10.00	10.00	0.00
6,700.0	17.19	270.57	6,561.3	-1,767.34	1,161.9	393.2	-239.0	10.00	10.00	0.00
6,800.0	27.19	270.57	6,653.8	-1,859.81	1,162.2	355.5	-201.5	10.00	10.00	0.00
6,900.0	37.19	270.57	6,738.3	-1,944.33	1,162.8	302.3	-148.7	10.00	10.00	0.00
<b>SHARON SPRINGS</b>										
<b>6,995.1</b>	<b>46.70</b>	<b>270.57</b>	<b>6,809.0</b>	<b>-2,015.00</b>	<b>1,163.4</b>	<b>238.8</b>	<b>-85.7</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,000.0	47.19	270.57	6,812.3	-2,018.33	1,163.4	235.2	-82.1	10.00	10.00	0.00
<b>NIOBRARA</b>										
<b>7,052.2</b>	<b>52.41</b>	<b>270.57</b>	<b>6,846.0</b>	<b>-2,052.00</b>	<b>1,163.8</b>	<b>195.4</b>	<b>-42.6</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,100.0	57.19	270.57	6,873.6	-2,079.56	1,164.2	156.3	-3.8	10.00	10.00	0.00
7,200.0	67.19	270.57	6,920.2	-2,126.15	1,165.1	68.0	83.9	10.00	10.00	0.00
7,300.0	77.19	270.57	6,950.7	-2,156.70	1,166.0	-27.1	178.3	10.00	10.00	0.00
7,400.0	87.19	270.57	6,964.3	-2,170.27	1,167.0	-126.0	276.5	10.00	10.00	0.00
<b>HZ LP: 825ft FNL &amp; 460ft FEL of Sec 22 - NIO B</b>										
<b>7,428.1</b>	<b>90.00</b>	<b>270.57</b>	<b>6,965.0</b>	<b>-2,171.00</b>	<b>1,167.3</b>	<b>-154.1</b>	<b>304.4</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,500.0	90.00	270.57	6,965.0	-2,170.96	1,168.0	-226.0	375.8	0.00	0.00	0.00
7,600.0	90.00	270.57	6,965.0	-2,170.96	1,169.0	-326.0	475.1	0.00	0.00	0.00
7,700.0	90.00	270.57	6,965.0	-2,170.96	1,170.0	-426.0	574.4	0.00	0.00	0.00
7,800.0	90.00	270.57	6,965.0	-2,170.96	1,171.0	-526.0	673.6	0.00	0.00	0.00
7,900.0	90.00	270.57	6,965.0	-2,170.96	1,172.0	-626.0	772.9	0.00	0.00	0.00
8,000.0	90.00	270.57	6,965.0	-2,170.96	1,173.0	-726.0	872.2	0.00	0.00	0.00
8,100.0	90.00	270.57	6,965.0	-2,170.96	1,174.0	-826.0	971.5	0.00	0.00	0.00
8,200.0	90.00	270.57	6,965.0	-2,170.96	1,175.0	-926.0	1,070.7	0.00	0.00	0.00
8,300.0	90.00	270.57	6,965.0	-2,170.96	1,176.0	-1,026.0	1,170.0	0.00	0.00	0.00
8,400.0	90.00	270.57	6,965.0	-2,170.96	1,177.0	-1,126.0	1,269.3	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RBF 4
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 22 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	RBF 4	<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)
8,500.0	90.00	270.57	6,965.0	-2,170.96	1,178.0	-1,226.0	1,368.6	0.00	0.00	0.00
8,600.0	90.00	270.57	6,965.0	-2,170.96	1,179.0	-1,326.0	1,467.9	0.00	0.00	0.00
8,700.0	90.00	270.57	6,965.0	-2,170.96	1,179.9	-1,426.0	1,567.1	0.00	0.00	0.00
8,800.0	90.00	270.57	6,965.0	-2,170.96	1,180.9	-1,526.0	1,666.4	0.00	0.00	0.00
8,900.0	90.00	270.57	6,965.0	-2,170.96	1,181.9	-1,626.0	1,765.7	0.00	0.00	0.00
9,000.0	90.00	270.57	6,965.0	-2,170.96	1,182.9	-1,726.0	1,865.0	0.00	0.00	0.00
9,100.0	90.00	270.57	6,965.0	-2,170.96	1,183.9	-1,826.0	1,964.2	0.00	0.00	0.00
9,200.0	90.00	270.57	6,965.0	-2,170.96	1,184.9	-1,925.9	2,063.5	0.00	0.00	0.00
9,300.0	90.00	270.57	6,965.0	-2,170.96	1,185.9	-2,025.9	2,162.8	0.00	0.00	0.00
9,400.0	90.00	270.57	6,965.0	-2,170.96	1,186.9	-2,125.9	2,262.1	0.00	0.00	0.00
9,500.0	90.00	270.57	6,965.0	-2,170.96	1,187.9	-2,225.9	2,361.4	0.00	0.00	0.00
9,600.0	90.00	270.57	6,965.0	-2,170.96	1,188.9	-2,325.9	2,460.6	0.00	0.00	0.00
9,700.0	90.00	270.57	6,965.0	-2,170.96	1,189.9	-2,425.9	2,559.9	0.00	0.00	0.00
9,800.0	90.00	270.57	6,965.0	-2,170.96	1,190.9	-2,525.9	2,659.2	0.00	0.00	0.00
9,900.0	90.00	270.57	6,965.0	-2,170.96	1,191.9	-2,625.9	2,758.5	0.00	0.00	0.00
10,000.0	90.00	270.57	6,965.0	-2,170.96	1,192.9	-2,725.9	2,857.7	0.00	0.00	0.00
10,100.0	90.00	270.57	6,965.0	-2,170.96	1,193.9	-2,825.9	2,957.0	0.00	0.00	0.00
10,200.0	90.00	270.57	6,965.0	-2,170.96	1,194.9	-2,925.9	3,056.3	0.00	0.00	0.00
10,300.0	90.00	270.57	6,965.0	-2,170.96	1,195.8	-3,025.9	3,155.6	0.00	0.00	0.00
10,400.0	90.00	270.57	6,965.0	-2,170.96	1,196.8	-3,125.9	3,254.8	0.00	0.00	0.00
10,500.0	90.00	270.57	6,965.0	-2,170.96	1,197.8	-3,225.9	3,354.1	0.00	0.00	0.00
10,600.0	90.00	270.57	6,965.0	-2,170.96	1,198.8	-3,325.9	3,453.4	0.00	0.00	0.00
10,700.0	90.00	270.57	6,965.0	-2,170.96	1,199.8	-3,425.9	3,552.7	0.00	0.00	0.00
10,800.0	90.00	270.57	6,965.0	-2,170.96	1,200.8	-3,525.9	3,652.0	0.00	0.00	0.00
10,900.0	90.00	270.57	6,965.0	-2,170.96	1,201.8	-3,625.9	3,751.2	0.00	0.00	0.00
11,000.0	90.00	270.57	6,965.0	-2,170.96	1,202.8	-3,725.9	3,850.5	0.00	0.00	0.00
11,100.0	90.00	270.57	6,965.0	-2,170.96	1,203.8	-3,825.9	3,949.8	0.00	0.00	0.00
11,200.0	90.00	270.57	6,965.0	-2,170.96	1,204.8	-3,925.8	4,049.1	0.00	0.00	0.00
11,300.0	90.00	270.57	6,965.0	-2,170.96	1,205.8	-4,025.8	4,148.3	0.00	0.00	0.00
11,400.0	90.00	270.57	6,965.0	-2,170.97	1,206.8	-4,125.8	4,247.6	0.00	0.00	0.00
11,500.0	90.00	270.57	6,965.0	-2,170.97	1,207.8	-4,225.8	4,346.9	0.00	0.00	0.00
11,600.0	90.00	270.57	6,965.0	-2,170.97	1,208.8	-4,325.8	4,446.2	0.00	0.00	0.00
11,700.0	90.00	270.57	6,965.0	-2,170.97	1,209.7	-4,425.8	4,545.5	0.00	0.00	0.00
11,800.0	90.00	270.57	6,965.0	-2,170.97	1,210.7	-4,525.8	4,644.7	0.00	0.00	0.00
11,900.0	90.00	270.57	6,965.0	-2,170.97	1,211.7	-4,625.8	4,744.0	0.00	0.00	0.00
12,000.0	90.00	270.57	6,965.0	-2,170.97	1,212.7	-4,725.8	4,843.3	0.00	0.00	0.00
12,100.0	90.00	270.57	6,965.0	-2,170.97	1,213.7	-4,825.8	4,942.6	0.00	0.00	0.00
12,200.0	90.00	270.57	6,965.0	-2,170.97	1,214.7	-4,925.8	5,041.8	0.00	0.00	0.00
12,300.0	90.00	270.57	6,965.0	-2,170.97	1,215.7	-5,025.8	5,141.1	0.00	0.00	0.00
12,400.0	90.00	270.57	6,965.0	-2,170.97	1,216.7	-5,125.8	5,240.4	0.00	0.00	0.00
12,500.0	90.00	270.57	6,965.0	-2,170.97	1,217.7	-5,225.8	5,339.7	0.00	0.00	0.00
12,600.0	90.00	270.57	6,965.0	-2,170.97	1,218.7	-5,325.8	5,438.9	0.00	0.00	0.00
12,700.0	90.00	270.57	6,965.0	-2,170.97	1,219.7	-5,425.8	5,538.2	0.00	0.00	0.00
12,800.0	90.00	270.57	6,965.0	-2,170.97	1,220.7	-5,525.8	5,637.5	0.00	0.00	0.00
12,900.0	90.00	270.57	6,965.0	-2,170.97	1,221.7	-5,625.8	5,736.8	0.00	0.00	0.00
13,000.0	90.00	270.57	6,965.0	-2,170.97	1,222.6	-5,725.8	5,836.1	0.00	0.00	0.00
13,100.0	90.00	270.57	6,965.0	-2,170.97	1,223.6	-5,825.8	5,935.3	0.00	0.00	0.00
13,200.0	90.00	270.57	6,965.0	-2,170.97	1,224.6	-5,925.7	6,034.6	0.00	0.00	0.00
13,300.0	90.00	270.57	6,965.0	-2,170.97	1,225.6	-6,025.7	6,133.9	0.00	0.00	0.00
13,400.0	90.00	270.57	6,965.0	-2,170.97	1,226.6	-6,125.7	6,233.2	0.00	0.00	0.00
13,500.0	90.00	270.57	6,965.0	-2,170.98	1,227.6	-6,225.7	6,332.4	0.00	0.00	0.00
13,600.0	90.00	270.57	6,965.0	-2,170.98	1,228.6	-6,325.7	6,431.7	0.00	0.00	0.00
13,700.0	90.00	270.57	6,965.0	-2,170.98	1,229.6	-6,425.7	6,531.0	0.00	0.00	0.00
13,800.0	90.00	270.57	6,965.0	-2,170.98	1,230.6	-6,525.7	6,630.3	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RBF 4
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 22 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	RBF 4	<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)
13,900.0	90.00	270.57	6,965.0	-2,170.98	1,231.6	-6,625.7	6,729.5	0.00	0.00	0.00
14,000.0	90.00	270.57	6,965.0	-2,170.98	1,232.6	-6,725.7	6,828.8	0.00	0.00	0.00
14,100.0	90.00	270.57	6,965.0	-2,170.98	1,233.6	-6,825.7	6,928.1	0.00	0.00	0.00
14,200.0	90.00	270.57	6,965.0	-2,170.98	1,234.5	-6,925.7	7,027.4	0.00	0.00	0.00
14,300.0	90.00	270.57	6,965.0	-2,170.98	1,235.5	-7,025.7	7,126.7	0.00	0.00	0.00
14,400.0	90.00	270.57	6,965.0	-2,170.98	1,236.5	-7,125.7	7,225.9	0.00	0.00	0.00
14,500.0	90.00	270.57	6,965.0	-2,170.98	1,237.5	-7,225.7	7,325.2	0.00	0.00	0.00
14,600.0	90.00	270.57	6,965.0	-2,170.98	1,238.5	-7,325.7	7,424.5	0.00	0.00	0.00
14,700.0	90.00	270.57	6,965.0	-2,170.98	1,239.5	-7,425.7	7,523.8	0.00	0.00	0.00
14,800.0	90.00	270.57	6,965.0	-2,170.98	1,240.5	-7,525.7	7,623.0	0.00	0.00	0.00
14,900.0	90.00	270.57	6,965.0	-2,170.98	1,241.5	-7,625.7	7,722.3	0.00	0.00	0.00
15,000.0	90.00	270.57	6,965.0	-2,170.98	1,242.5	-7,725.7	7,821.6	0.00	0.00	0.00
15,100.0	90.00	270.57	6,965.0	-2,170.99	1,243.5	-7,825.7	7,920.9	0.00	0.00	0.00
15,200.0	90.00	270.57	6,965.0	-2,170.99	1,244.5	-7,925.7	8,020.1	0.00	0.00	0.00
15,300.0	90.00	270.57	6,965.0	-2,170.99	1,245.4	-8,025.6	8,119.4	0.00	0.00	0.00
15,400.0	90.00	270.57	6,965.0	-2,170.99	1,246.4	-8,125.6	8,218.7	0.00	0.00	0.00
15,500.0	90.00	270.57	6,965.0	-2,170.99	1,247.4	-8,225.6	8,318.0	0.00	0.00	0.00
15,600.0	90.00	270.57	6,965.0	-2,170.99	1,248.4	-8,325.6	8,417.3	0.00	0.00	0.00
15,700.0	90.00	270.57	6,965.0	-2,170.99	1,249.4	-8,425.6	8,516.5	0.00	0.00	0.00
15,800.0	90.00	270.57	6,965.0	-2,170.99	1,250.4	-8,525.6	8,615.8	0.00	0.00	0.00
15,900.0	90.00	270.57	6,965.0	-2,170.99	1,251.4	-8,625.6	8,715.1	0.00	0.00	0.00
16,000.0	90.00	270.57	6,965.0	-2,170.99	1,252.4	-8,725.6	8,814.4	0.00	0.00	0.00
16,100.0	90.00	270.57	6,965.0	-2,170.99	1,253.4	-8,825.6	8,913.6	0.00	0.00	0.00
16,200.0	90.00	270.57	6,965.0	-2,170.99	1,254.4	-8,925.6	9,012.9	0.00	0.00	0.00
16,300.0	90.00	270.57	6,965.0	-2,170.99	1,255.3	-9,025.6	9,112.2	0.00	0.00	0.00
16,400.0	90.00	270.57	6,965.0	-2,171.00	1,256.3	-9,125.6	9,211.5	0.00	0.00	0.00
16,500.0	90.00	270.57	6,965.0	-2,171.00	1,257.3	-9,225.6	9,310.7	0.00	0.00	0.00
16,600.0	90.00	270.57	6,965.0	-2,171.00	1,258.3	-9,325.6	9,410.0	0.00	0.00	0.00
16,700.0	90.00	270.57	6,965.0	-2,171.00	1,259.3	-9,425.6	9,509.3	0.00	0.00	0.00
16,800.0	90.00	270.57	6,965.0	-2,171.00	1,260.3	-9,525.6	9,608.6	0.00	0.00	0.00
16,900.0	90.00	270.57	6,965.0	-2,171.00	1,261.3	-9,625.6	9,707.9	0.00	0.00	0.00
<b>BHL: 825ft FNL &amp; 460ft FWL of Sec 21</b>										
<b>16,904.4</b>	<b>90.00</b>	<b>270.57</b>	<b>6,965.0</b>	<b>-2,171.00</b>	<b>1,261.3</b>	<b>-9,629.9</b>	<b>9,712.2</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,519.9	3,450.0	PARKMAN			
4,305.4	4,215.0	SUSSEX			
4,895.7	4,790.0	SHANNON			
6,995.1	6,809.0	SHARON SPRINGS			
7,052.2	6,846.0	NIOBRARA			
7,428.1	6,965.0	NIO B			

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RBF 4
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4794.0usft (Original Well Elev)
<b>Site:</b>	SE NE SEC. 22 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	RBF 4	<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: 1993ft FNL & 300ft FEL of Sec 22
400.0	400.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,055.3	1,049.6	70.2	25.3	EOB TO 13.11° INC
5,842.8	5,712.4	1,091.4	393.5	END OF TANGENT
6,498.1	6,362.0	1,161.6	418.8	EOD TO VERTICAL
6,528.1	6,392.0	1,161.6	418.8	KOP (10°/100ft BUR)
7,428.1	6,965.0	1,167.3	-154.1	HZ LP: 825ft FNL & 460ft FEL of Sec 22
16,904.4	6,965.0	1,261.3	-9,629.9	BHL: 825ft FNL & 460ft FWL of Sec 21