

# **EXTRACTION OIL & GAS**

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

**NE SE SEC. 8 T5N R66W 6th P.M.**

**TC-MOISER HILL 3-9-11**

**ORIGINAL WELLBORE**

**09 January, 2017**

**Plan: PROPOSAL #2**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NE SE SEC. 8 T5N R66W 6th P.M.  
Well: TC-MOISER HILL 3-9-11  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #2

ANNOTATIONS											FORMATION TOP DETAILS		
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation			TVDPath	MDPath	Formation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 2462ft FNL & 1195ft FEL of Sec 8			3680.0	3863.6	PARKMAN
700.0	700.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE #1 (2°/100ft)			4410.0	4654.3	SUSSEX
1600.0	1615.5	18.31	28.79	127.1	69.9	87.3	145.0	9 5/8" SURFACE CASING			4820.0	5098.4	SHANNON
1661.7	1680.5	18.31	28.79	145.0	79.7	99.6	165.5	START NUDGE #2 (2°/100ft BUR)			6940.0	7436.3	SHARON SPRINGS
1862.8	1895.2	22.60	28.79	210.8	115.8	144.8	240.5	EOB TO 22.6° INC			6972.0	7487.7	NIOBRARA
6652.7	7083.6	22.60	28.79	1958.5	1076.1	1345.3	2234.6	START BUILD & TURN			7092.0	7877.8	NIO B TARGET
7092.0	7877.8	90.00	90.25	2116.7	1640.0	1926.0	2838.2	HZ LP: 350ft FNL & 460ft FWL of Sec 9					
7092.0	20502.3	90.00	90.25	2062.5	14264.4	14412.7	15462.7	BHL: 602ft FNL & 2479ft FWL of Sec 11					

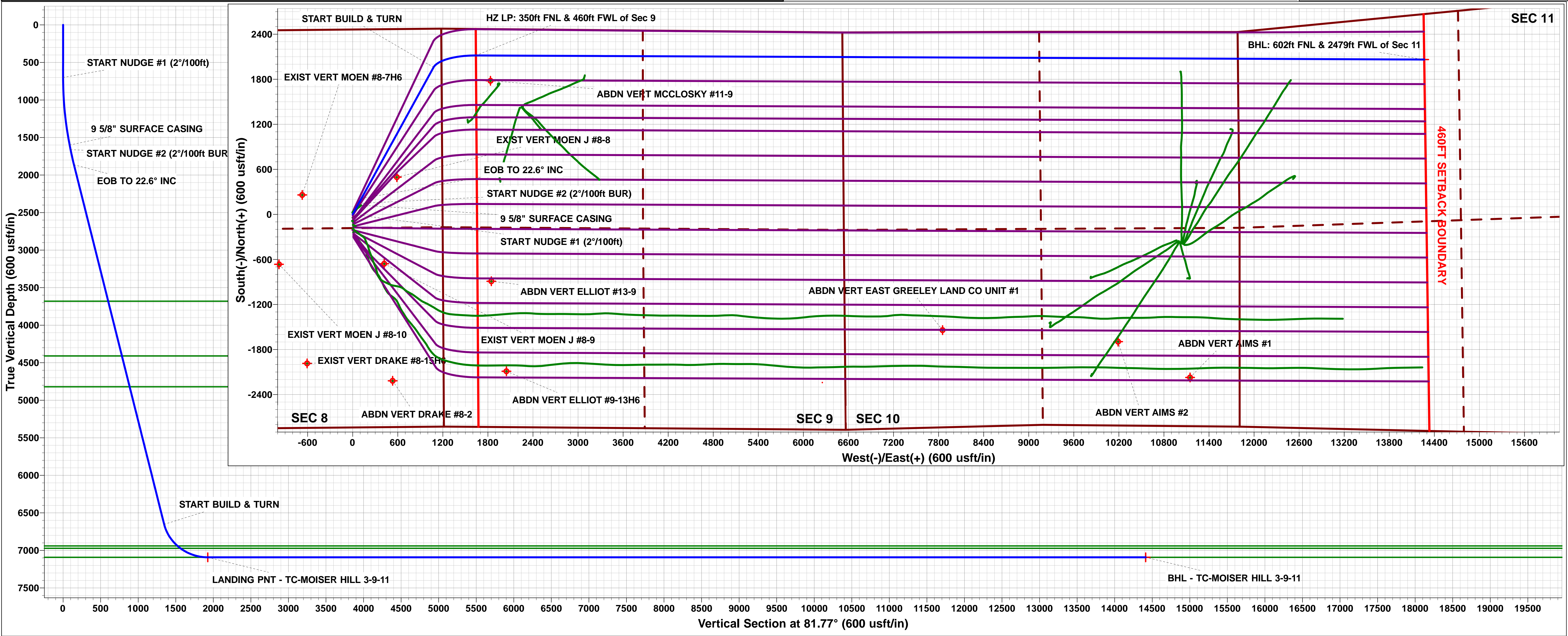
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - TC-MOISER HILL 3-9-11	7092.0	2116.7	1640.0	40.420450	-104.792800
BHL - TC-MOISER HILL 3-9-11	7092.0	2062.5	14264.4	40.420290	-104.747460

TC-MOISER HILL 2-9-7  
TC-COUNTRY CLUB WEST C1-9-11  
TC-MOISER HILL 3-9-11  
TC-COUNTRY CLUB WEST 1-9-11  
TC-COUNTRY CLUB WEST 2-9-11  
TC-COUNTRY CLUB WEST C3-9-11  
TC-COUNTRY CLUB WEST A2-9-11  
TC-COUNTRY CLUB WEST 3-9-11  
TC-AIMS C4-9-11  
TC-COUNTRY CLUB WEST 4-9-11  
TC-COUNTRY CLUB WEST 5-9-11  
TC-AIMS C5-9-11  
TC-AIMS 1-9-11  
TC-AIMS 2-9-11  
TC-HILAND KNOLLS C6-9-11  
TC-AIMS 3-9-11  
TC-AIMS 4-9-11

TC-HILAND KNOLLS C7-9-11  
TC-HILAND KNOLLS 1-9-11  
TC-HILAND KNOLLS 2-9-11  
TC-HILAND KNOLLS 3-9-11  
TC-HILAND KNOLLS 4-9-11

South(-)/North(+) (150 usft/in)  
West(-)/East(+) (150 usft/in)

T M  
Azimuths to True North  
Magnetic North: 8.28°  
Magnetic Field  
Strength: 52450.1nT  
Dip Angle: 66.87°  
Date: 28/12/2016  
Model: IGRF2015



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-MOISER HILL 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-MOISER HILL 3-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

<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>	NE SE SEC. 8 T5N R66W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,394,363.62 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,195,288.63 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.413810
		<b>Longitude:</b>	-104.798660
		<b>Grid Convergence:</b>	0.45 °

<b>Well</b>	TC-MOISER HILL 3-9-11		
<b>Well Position</b>	<b>+N/-S</b>	302.4 usft	<b>Northing:</b>
	<b>+E/-W</b>	-8.4 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	28/12/2016	8.28	66.87	52,450

<b>Design</b>	PROPOSAL #2			
<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	81.77

<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	-4,803.0	0.0	0.0	0.00	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	-4,103.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,615.5	18.31	28.79	1,600.0	-3,203.0	127.1	69.9	2.00	2.00	0.00	28.79	
1,680.5	18.31	28.79	1,661.7	-3,141.3	145.0	79.7	0.00	0.00	0.00	0.00	
1,895.2	22.60	28.79	1,862.8	-2,940.2	210.7	115.8	2.00	2.00	0.00	-0.02	
7,083.6	22.60	28.79	6,652.7	1,849.7	1,958.5	1,076.1	0.00	0.00	0.00	0.00	
7,877.8	90.00	90.25	7,092.0	2,289.0	2,116.7	1,640.0	10.00	8.49	7.74	63.34	LANDING PNT - TC
20,502.3	90.00	90.25	7,092.0	2,289.0	2,062.5	14,264.4	0.00	0.00	0.00	0.00	BHL - TC-MOISER

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-MOISER HILL 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-MOISER HILL 3-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

## 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: 2462ft FNL &amp; 1195ft FEL of Sec 8</b>										
0.0	0.00	0.00	0.0	4,803.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,703.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,603.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,503.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,403.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,303.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,203.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE #1 (2°/100ft)</b>										
700.0	0.00	0.00	700.0	4,103.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	2.00	28.79	800.0	4,003.02	1.5	0.8	1.1	2.00	2.00	0.00
900.0	4.00	28.79	899.8	3,903.16	6.1	3.4	4.2	2.00	2.00	0.00
1,000.0	6.00	28.79	999.5	3,803.55	13.8	7.6	9.4	2.00	2.00	0.00
1,100.0	8.00	28.79	1,098.7	3,704.30	24.4	13.4	16.8	2.00	2.00	0.00
1,200.0	10.00	28.79	1,197.5	3,605.53	38.1	21.0	26.2	2.00	2.00	0.00
1,300.0	12.00	28.79	1,295.6	3,507.38	54.9	30.1	37.7	2.00	2.00	0.00
1,400.0	14.00	28.79	1,393.1	3,409.94	74.6	41.0	51.2	2.00	2.00	0.00
1,500.0	16.00	28.79	1,489.6	3,313.36	97.3	53.4	66.8	2.00	2.00	0.00
1,600.0	18.00	28.79	1,585.3	3,217.73	122.9	67.5	84.4	2.00	2.00	0.00
<b>9 5/8" SURFACE CASING</b>										
1,615.5	18.31	28.79	1,600.0	3,203.00	127.1	69.9	87.3	2.00	2.00	0.00
<b>START NUDGE #2 (2°/100ft BUR)</b>										
1,680.5	18.31	28.79	1,661.7	3,141.29	145.0	79.7	99.6	0.00	0.00	0.00
1,700.0	18.70	28.79	1,680.2	3,122.80	150.4	82.7	103.3	2.00	2.00	0.00
1,800.0	20.70	28.79	1,774.3	3,028.66	180.0	98.9	123.6	2.00	2.00	0.00
<b>EOB TO 22.6° INC</b>										
1,895.2	22.60	28.79	1,862.8	2,940.18	210.8	115.8	144.8	2.00	2.00	0.00
1,900.0	22.60	28.79	1,867.3	2,935.75	212.4	116.7	145.9	0.00	0.00	0.00
2,000.0	22.60	28.79	1,959.6	2,843.43	246.1	135.2	169.0	0.00	0.00	0.00
2,100.0	22.60	28.79	2,051.9	2,751.11	279.7	153.7	192.2	0.00	0.00	0.00
2,200.0	22.60	28.79	2,144.2	2,658.79	313.4	172.2	215.3	0.00	0.00	0.00
2,300.0	22.60	28.79	2,236.5	2,566.47	347.1	190.7	238.4	0.00	0.00	0.00
2,400.0	22.60	28.79	2,328.8	2,474.16	380.8	209.2	261.6	0.00	0.00	0.00
2,500.0	22.60	28.79	2,421.2	2,381.84	414.5	227.8	284.7	0.00	0.00	0.00
2,600.0	22.60	28.79	2,513.5	2,289.52	448.2	246.3	307.9	0.00	0.00	0.00
2,700.0	22.60	28.79	2,605.8	2,197.20	481.9	264.8	331.0	0.00	0.00	0.00
2,800.0	22.60	28.79	2,698.1	2,104.88	515.5	283.3	354.1	0.00	0.00	0.00
2,900.0	22.60	28.79	2,790.4	2,012.56	549.2	301.8	377.3	0.00	0.00	0.00
3,000.0	22.60	28.79	2,882.8	1,920.24	582.9	320.3	400.4	0.00	0.00	0.00
3,100.0	22.60	28.79	2,975.1	1,827.92	616.6	338.8	423.6	0.00	0.00	0.00
3,200.0	22.60	28.79	3,067.4	1,735.60	650.3	357.3	446.7	0.00	0.00	0.00
3,300.0	22.60	28.79	3,159.7	1,643.29	684.0	375.8	469.8	0.00	0.00	0.00
3,400.0	22.60	28.79	3,252.0	1,550.97	717.7	394.3	493.0	0.00	0.00	0.00
3,500.0	22.60	28.79	3,344.4	1,458.65	751.3	412.8	516.1	0.00	0.00	0.00
3,600.0	22.60	28.79	3,436.7	1,366.33	785.0	431.3	539.2	0.00	0.00	0.00
3,700.0	22.60	28.79	3,529.0	1,274.01	818.7	449.8	562.4	0.00	0.00	0.00
3,800.0	22.60	28.79	3,621.3	1,181.69	852.4	468.4	585.5	0.00	0.00	0.00
<b>PARKMAN</b>										
3,863.6	22.60	28.79	3,680.0	1,123.00	873.8	480.1	600.2	0.00	0.00	0.00
3,900.0	22.60	28.79	3,713.6	1,089.37	886.1	486.9	608.7	0.00	0.00	0.00
4,000.0	22.60	28.79	3,805.9	997.05	919.8	505.4	631.8	0.00	0.00	0.00
4,100.0	22.60	28.79	3,898.3	904.73	953.4	523.9	654.9	0.00	0.00	0.00
4,200.0	22.60	28.79	3,990.6	812.42	987.1	542.4	678.1	0.00	0.00	0.00



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-MOISER HILL 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-MOISER HILL 3-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

## 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)
4,300.0	22.60	28.79	4,082.9	720.10	1,020.8	560.9	701.2	0.00	0.00	0.00
4,400.0	22.60	28.79	4,175.2	627.78	1,054.5	579.4	724.3	0.00	0.00	0.00
4,500.0	22.60	28.79	4,267.5	535.46	1,088.2	597.9	747.5	0.00	0.00	0.00
4,600.0	22.60	28.79	4,359.9	443.14	1,121.9	616.4	770.6	0.00	0.00	0.00
<b>SUSSEX</b>										
<b>4,654.3</b>	<b>22.60</b>	<b>28.79</b>	<b>4,410.0</b>	<b>393.00</b>	<b>1,140.2</b>	<b>626.5</b>	<b>783.2</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,700.0	22.60	28.79	4,452.2	350.82	1,155.6	634.9	793.8	0.00	0.00	0.00
4,800.0	22.60	28.79	4,544.5	258.50	1,189.2	653.4	816.9	0.00	0.00	0.00
4,900.0	22.60	28.79	4,636.8	166.18	1,222.9	671.9	840.0	0.00	0.00	0.00
5,000.0	22.60	28.79	4,729.1	73.87	1,256.6	690.5	863.2	0.00	0.00	0.00
<b>SHANNON</b>										
<b>5,098.4</b>	<b>22.60</b>	<b>28.79</b>	<b>4,820.0</b>	<b>-17.00</b>	<b>1,289.8</b>	<b>708.7</b>	<b>885.9</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,100.0	22.60	28.79	4,821.5	-18.45	1,290.3	709.0	886.3	0.00	0.00	0.00
5,200.0	22.60	28.79	4,913.8	-110.77	1,324.0	727.5	909.4	0.00	0.00	0.00
5,300.0	22.60	28.79	5,006.1	-203.09	1,357.7	746.0	932.6	0.00	0.00	0.00
5,400.0	22.60	28.79	5,098.4	-295.41	1,391.3	764.5	955.7	0.00	0.00	0.00
5,500.0	22.60	28.79	5,190.7	-387.73	1,425.0	783.0	978.9	0.00	0.00	0.00
5,600.0	22.60	28.79	5,283.0	-480.05	1,458.7	801.5	1,002.0	0.00	0.00	0.00
5,700.0	22.60	28.79	5,375.4	-572.37	1,492.4	820.0	1,025.1	0.00	0.00	0.00
5,800.0	22.60	28.79	5,467.7	-664.69	1,526.1	838.5	1,048.3	0.00	0.00	0.00
5,900.0	22.60	28.79	5,560.0	-757.00	1,559.8	857.0	1,071.4	0.00	0.00	0.00
6,000.0	22.60	28.79	5,652.3	-849.32	1,593.5	875.5	1,094.6	0.00	0.00	0.00
6,100.0	22.60	28.79	5,744.6	-941.64	1,627.1	894.0	1,117.7	0.00	0.00	0.00
6,200.0	22.60	28.79	5,837.0	-1,033.96	1,660.8	912.6	1,140.8	0.00	0.00	0.00
6,300.0	22.60	28.79	5,929.3	-1,126.28	1,694.5	931.1	1,164.0	0.00	0.00	0.00
6,400.0	22.60	28.79	6,021.6	-1,218.60	1,728.2	949.6	1,187.1	0.00	0.00	0.00
6,500.0	22.60	28.79	6,113.9	-1,310.92	1,761.9	968.1	1,210.2	0.00	0.00	0.00
6,600.0	22.60	28.79	6,206.2	-1,403.24	1,795.6	986.6	1,233.4	0.00	0.00	0.00
6,700.0	22.60	28.79	6,298.6	-1,495.56	1,829.3	1,005.1	1,256.5	0.00	0.00	0.00
6,800.0	22.60	28.79	6,390.9	-1,587.87	1,862.9	1,023.6	1,279.7	0.00	0.00	0.00
6,900.0	22.60	28.79	6,483.2	-1,680.19	1,896.6	1,042.1	1,302.8	0.00	0.00	0.00
7,000.0	22.60	28.79	6,575.5	-1,772.51	1,930.3	1,060.6	1,325.9	0.00	0.00	0.00
<b>START BUILD &amp; TURN</b>										
<b>7,083.6</b>	<b>22.60</b>	<b>28.79</b>	<b>6,652.7</b>	<b>-1,849.69</b>	<b>1,958.5</b>	<b>1,076.1</b>	<b>1,345.3</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
7,100.0	23.38	32.48	6,667.8	-1,864.79	1,964.0	1,079.4	1,349.3	9.98	4.75	22.50
7,200.0	29.61	50.19	6,757.4	-1,954.38	1,996.6	1,109.1	1,383.4	10.00	6.23	17.71
7,300.0	37.39	61.65	6,840.8	-2,037.79	2,026.9	1,154.9	1,433.0	10.00	7.78	11.47
7,400.0	45.93	69.51	6,915.5	-2,112.48	2,054.0	1,215.4	1,496.8	10.00	8.54	7.86
<b>SHARON SPRINGS</b>										
<b>7,436.3</b>	<b>49.14</b>	<b>71.81</b>	<b>6,940.0</b>	<b>-2,137.00</b>	<b>2,062.8</b>	<b>1,240.7</b>	<b>1,523.1</b>	<b>10.00</b>	<b>8.85</b>	<b>6.32</b>
<b>NIOBRARA</b>										
<b>7,487.7</b>	<b>53.76</b>	<b>74.69</b>	<b>6,972.0</b>	<b>-2,169.00</b>	<b>2,074.4</b>	<b>1,279.1</b>	<b>1,562.8</b>	<b>10.00</b>	<b>8.98</b>	<b>5.63</b>
7,500.0	54.87	75.34	6,979.2	-2,176.19	2,077.0	1,288.8	1,572.8	10.00	9.06	5.21
7,600.0	64.04	79.99	7,030.0	-2,226.98	2,095.2	1,372.8	1,658.5	10.00	9.17	4.65
7,700.0	73.33	83.96	7,066.3	-2,263.30	2,108.1	1,465.0	1,751.6	10.00	9.29	3.97
7,800.0	82.69	87.56	7,087.0	-2,284.05	2,115.2	1,562.4	1,849.0	10.00	9.36	3.60
<b>HZ LP: 350ft FNL &amp; 460ft FWL of Sec 9 - NIO B TARGET</b>										
<b>7,877.8</b>	<b>90.00</b>	<b>90.25</b>	<b>7,092.0</b>	<b>-2,289.00</b>	<b>2,116.7</b>	<b>1,640.0</b>	<b>1,926.0</b>	<b>10.00</b>	<b>9.39</b>	<b>3.45</b>
7,900.0	90.00	90.25	7,092.0	-2,289.00	2,116.6	1,662.2	1,948.0	0.00	0.00	0.00
8,000.0	90.00	90.25	7,092.0	-2,289.00	2,116.2	1,762.2	2,046.9	0.00	0.00	0.00
8,100.0	90.00	90.25	7,092.0	-2,289.00	2,115.8	1,862.2	2,145.8	0.00	0.00	0.00
8,200.0	90.00	90.25	7,092.0	-2,289.00	2,115.3	1,962.2	2,244.7	0.00	0.00	0.00
8,300.0	90.00	90.25	7,092.0	-2,289.00	2,114.9	2,062.2	2,343.6	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-MOISER HILL 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-MOISER HILL 3-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

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)
8,400.0	90.00	90.25	7,092.0	-2,289.00	2,114.5	2,162.2	2,442.5	0.00	0.00	0.00
8,500.0	90.00	90.25	7,092.0	-2,289.00	2,114.0	2,262.2	2,541.4	0.00	0.00	0.00
8,600.0	90.00	90.25	7,092.0	-2,289.00	2,113.6	2,362.2	2,640.3	0.00	0.00	0.00
8,700.0	90.00	90.25	7,092.0	-2,289.00	2,113.2	2,462.2	2,739.2	0.00	0.00	0.00
8,800.0	90.00	90.25	7,092.0	-2,289.00	2,112.8	2,562.2	2,838.1	0.00	0.00	0.00
8,900.0	90.00	90.25	7,092.0	-2,289.00	2,112.3	2,662.2	2,937.1	0.00	0.00	0.00
9,000.0	90.00	90.25	7,092.0	-2,289.00	2,111.9	2,762.2	3,036.0	0.00	0.00	0.00
9,100.0	90.00	90.25	7,092.0	-2,289.00	2,111.5	2,862.2	3,134.9	0.00	0.00	0.00
9,200.0	90.00	90.25	7,092.0	-2,289.00	2,111.0	2,962.2	3,233.8	0.00	0.00	0.00
9,300.0	90.00	90.25	7,092.0	-2,289.00	2,110.6	3,062.2	3,332.7	0.00	0.00	0.00
9,400.0	90.00	90.25	7,092.0	-2,289.00	2,110.2	3,162.2	3,431.6	0.00	0.00	0.00
9,500.0	90.00	90.25	7,092.0	-2,289.00	2,109.8	3,262.2	3,530.5	0.00	0.00	0.00
9,600.0	90.00	90.25	7,092.0	-2,289.00	2,109.3	3,362.2	3,629.4	0.00	0.00	0.00
9,700.0	90.00	90.25	7,092.0	-2,289.00	2,108.9	3,462.2	3,728.3	0.00	0.00	0.00
9,800.0	90.00	90.25	7,092.0	-2,289.00	2,108.5	3,562.2	3,827.2	0.00	0.00	0.00
9,900.0	90.00	90.25	7,092.0	-2,289.00	2,108.0	3,662.2	3,926.1	0.00	0.00	0.00
10,000.0	90.00	90.25	7,092.0	-2,289.00	2,107.6	3,762.2	4,025.0	0.00	0.00	0.00
10,100.0	90.00	90.25	7,092.0	-2,289.00	2,107.2	3,862.2	4,124.0	0.00	0.00	0.00
10,200.0	90.00	90.25	7,092.0	-2,289.00	2,106.7	3,962.2	4,222.9	0.00	0.00	0.00
10,300.0	90.00	90.25	7,092.0	-2,289.00	2,106.3	4,062.2	4,321.8	0.00	0.00	0.00
10,400.0	90.00	90.25	7,092.0	-2,289.00	2,105.9	4,162.2	4,420.7	0.00	0.00	0.00
10,500.0	90.00	90.25	7,092.0	-2,289.00	2,105.5	4,262.2	4,519.6	0.00	0.00	0.00
10,600.0	90.00	90.25	7,092.0	-2,289.00	2,105.0	4,362.2	4,618.5	0.00	0.00	0.00
10,700.0	90.00	90.25	7,092.0	-2,289.00	2,104.6	4,462.2	4,717.4	0.00	0.00	0.00
10,800.0	90.00	90.25	7,092.0	-2,289.00	2,104.2	4,562.2	4,816.3	0.00	0.00	0.00
10,900.0	90.00	90.25	7,092.0	-2,289.00	2,103.7	4,662.2	4,915.2	0.00	0.00	0.00
11,000.0	90.00	90.25	7,092.0	-2,289.00	2,103.3	4,762.2	5,014.1	0.00	0.00	0.00
11,100.0	90.00	90.25	7,092.0	-2,289.00	2,102.9	4,862.2	5,113.0	0.00	0.00	0.00
11,200.0	90.00	90.25	7,092.0	-2,289.00	2,102.4	4,962.2	5,211.9	0.00	0.00	0.00
11,300.0	90.00	90.25	7,092.0	-2,289.00	2,102.0	5,062.2	5,310.9	0.00	0.00	0.00
11,400.0	90.00	90.25	7,092.0	-2,289.00	2,101.6	5,162.2	5,409.8	0.00	0.00	0.00
11,500.0	90.00	90.25	7,092.0	-2,289.00	2,101.2	5,262.2	5,508.7	0.00	0.00	0.00
11,600.0	90.00	90.25	7,092.0	-2,289.00	2,100.7	5,362.2	5,607.6	0.00	0.00	0.00
11,700.0	90.00	90.25	7,092.0	-2,289.00	2,100.3	5,462.1	5,706.5	0.00	0.00	0.00
11,800.0	90.00	90.25	7,092.0	-2,289.00	2,099.9	5,562.1	5,805.4	0.00	0.00	0.00
11,900.0	90.00	90.25	7,092.0	-2,289.00	2,099.4	5,662.1	5,904.3	0.00	0.00	0.00
12,000.0	90.00	90.25	7,092.0	-2,289.00	2,099.0	5,762.1	6,003.2	0.00	0.00	0.00
12,100.0	90.00	90.25	7,092.0	-2,289.00	2,098.6	5,862.1	6,102.1	0.00	0.00	0.00
12,200.0	90.00	90.25	7,092.0	-2,289.00	2,098.2	5,962.1	6,201.0	0.00	0.00	0.00
12,300.0	90.00	90.25	7,092.0	-2,289.00	2,097.7	6,062.1	6,299.9	0.00	0.00	0.00
12,400.0	90.00	90.25	7,092.0	-2,289.00	2,097.3	6,162.1	6,398.8	0.00	0.00	0.00
12,500.0	90.00	90.25	7,092.0	-2,289.00	2,096.9	6,262.1	6,497.8	0.00	0.00	0.00
12,600.0	90.00	90.25	7,092.0	-2,289.00	2,096.4	6,362.1	6,596.7	0.00	0.00	0.00
12,700.0	90.00	90.25	7,092.0	-2,289.00	2,096.0	6,462.1	6,695.6	0.00	0.00	0.00
12,800.0	90.00	90.25	7,092.0	-2,289.00	2,095.6	6,562.1	6,794.5	0.00	0.00	0.00
12,900.0	90.00	90.25	7,092.0	-2,289.00	2,095.1	6,662.1	6,893.4	0.00	0.00	0.00
13,000.0	90.00	90.25	7,092.0	-2,289.00	2,094.7	6,762.1	6,992.3	0.00	0.00	0.00
13,100.0	90.00	90.25	7,092.0	-2,289.00	2,094.3	6,862.1	7,091.2	0.00	0.00	0.00
13,200.0	90.00	90.25	7,092.0	-2,289.00	2,093.9	6,962.1	7,190.1	0.00	0.00	0.00
13,300.0	90.00	90.25	7,092.0	-2,289.00	2,093.4	7,062.1	7,289.0	0.00	0.00	0.00
13,400.0	90.00	90.25	7,092.0	-2,289.00	2,093.0	7,162.1	7,387.9	0.00	0.00	0.00
13,500.0	90.00	90.25	7,092.0	-2,289.00	2,092.6	7,262.1	7,486.8	0.00	0.00	0.00
13,600.0	90.00	90.25	7,092.0	-2,289.00	2,092.1	7,362.1	7,585.8	0.00	0.00	0.00
13,700.0	90.00	90.25	7,092.0	-2,289.00	2,091.7	7,462.1	7,684.7	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-MOISER HILL 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-MOISER HILL 3-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

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)
13,800.0	90.00	90.25	7,092.0	-2,289.00	2,091.3	7,562.1	7,783.6	0.00	0.00	0.00
13,900.0	90.00	90.25	7,092.0	-2,289.00	2,090.9	7,662.1	7,882.5	0.00	0.00	0.00
14,000.0	90.00	90.25	7,092.0	-2,289.00	2,090.4	7,762.1	7,981.4	0.00	0.00	0.00
14,100.0	90.00	90.25	7,092.0	-2,289.00	2,090.0	7,862.1	8,080.3	0.00	0.00	0.00
14,200.0	90.00	90.25	7,092.0	-2,289.00	2,089.6	7,962.1	8,179.2	0.00	0.00	0.00
14,300.0	90.00	90.25	7,092.0	-2,289.00	2,089.1	8,062.1	8,278.1	0.00	0.00	0.00
14,400.0	90.00	90.25	7,092.0	-2,289.00	2,088.7	8,162.1	8,377.0	0.00	0.00	0.00
14,500.0	90.00	90.25	7,092.0	-2,289.00	2,088.3	8,262.1	8,475.9	0.00	0.00	0.00
14,600.0	90.00	90.25	7,092.0	-2,289.00	2,087.8	8,362.1	8,574.8	0.00	0.00	0.00
14,700.0	90.00	90.25	7,092.0	-2,289.00	2,087.4	8,462.1	8,673.7	0.00	0.00	0.00
14,800.0	90.00	90.25	7,092.0	-2,289.00	2,087.0	8,562.1	8,772.7	0.00	0.00	0.00
14,900.0	90.00	90.25	7,092.0	-2,289.00	2,086.6	8,662.1	8,871.6	0.00	0.00	0.00
15,000.0	90.00	90.25	7,092.0	-2,289.00	2,086.1	8,762.1	8,970.5	0.00	0.00	0.00
15,100.0	90.00	90.25	7,092.0	-2,289.00	2,085.7	8,862.1	9,069.4	0.00	0.00	0.00
15,200.0	90.00	90.25	7,092.0	-2,289.00	2,085.3	8,962.1	9,168.3	0.00	0.00	0.00
15,300.0	90.00	90.25	7,092.0	-2,289.00	2,084.8	9,062.1	9,267.2	0.00	0.00	0.00
15,400.0	90.00	90.25	7,092.0	-2,289.00	2,084.4	9,162.1	9,366.1	0.00	0.00	0.00
15,500.0	90.00	90.25	7,092.0	-2,289.00	2,084.0	9,262.1	9,465.0	0.00	0.00	0.00
15,600.0	90.00	90.25	7,092.0	-2,289.00	2,083.6	9,362.1	9,563.9	0.00	0.00	0.00
15,700.0	90.00	90.25	7,092.0	-2,289.00	2,083.1	9,462.1	9,662.8	0.00	0.00	0.00
15,800.0	90.00	90.25	7,092.0	-2,289.00	2,082.7	9,562.1	9,761.7	0.00	0.00	0.00
15,900.0	90.00	90.25	7,092.0	-2,289.00	2,082.3	9,662.1	9,860.6	0.00	0.00	0.00
16,000.0	90.00	90.25	7,092.0	-2,289.00	2,081.8	9,762.1	9,959.6	0.00	0.00	0.00
16,100.0	90.00	90.25	7,092.0	-2,289.00	2,081.4	9,862.1	10,058.5	0.00	0.00	0.00
16,200.0	90.00	90.25	7,092.0	-2,289.00	2,081.0	9,962.1	10,157.4	0.00	0.00	0.00
16,300.0	90.00	90.25	7,092.0	-2,289.00	2,080.5	10,062.1	10,256.3	0.00	0.00	0.00
16,400.0	90.00	90.25	7,092.0	-2,289.00	2,080.1	10,162.1	10,355.2	0.00	0.00	0.00
16,500.0	90.00	90.25	7,092.0	-2,289.00	2,079.7	10,262.1	10,454.1	0.00	0.00	0.00
16,600.0	90.00	90.25	7,092.0	-2,289.00	2,079.3	10,362.1	10,553.0	0.00	0.00	0.00
16,700.0	90.00	90.25	7,092.0	-2,289.00	2,078.8	10,462.1	10,651.9	0.00	0.00	0.00
16,800.0	90.00	90.25	7,092.0	-2,289.00	2,078.4	10,562.1	10,750.8	0.00	0.00	0.00
16,900.0	90.00	90.25	7,092.0	-2,289.00	2,078.0	10,662.1	10,849.7	0.00	0.00	0.00
17,000.0	90.00	90.25	7,092.0	-2,289.00	2,077.5	10,762.1	10,948.6	0.00	0.00	0.00
17,100.0	90.00	90.25	7,092.0	-2,289.00	2,077.1	10,862.1	11,047.5	0.00	0.00	0.00
17,200.0	90.00	90.25	7,092.0	-2,289.00	2,076.7	10,962.1	11,146.5	0.00	0.00	0.00
17,300.0	90.00	90.25	7,092.0	-2,289.00	2,076.2	11,062.1	11,245.4	0.00	0.00	0.00
17,400.0	90.00	90.25	7,092.0	-2,289.00	2,075.8	11,162.1	11,344.3	0.00	0.00	0.00
17,500.0	90.00	90.25	7,092.0	-2,289.00	2,075.4	11,262.1	11,443.2	0.00	0.00	0.00
17,600.0	90.00	90.25	7,092.0	-2,289.00	2,075.0	11,362.1	11,542.1	0.00	0.00	0.00
17,700.0	90.00	90.25	7,092.0	-2,289.00	2,074.5	11,462.1	11,641.0	0.00	0.00	0.00
17,800.0	90.00	90.25	7,092.0	-2,289.00	2,074.1	11,562.1	11,739.9	0.00	0.00	0.00
17,900.0	90.00	90.25	7,092.0	-2,289.00	2,073.7	11,662.1	11,838.8	0.00	0.00	0.00
18,000.0	90.00	90.25	7,092.0	-2,289.00	2,073.2	11,762.1	11,937.7	0.00	0.00	0.00
18,100.0	90.00	90.25	7,092.0	-2,289.00	2,072.8	11,862.1	12,036.6	0.00	0.00	0.00
18,200.0	90.00	90.25	7,092.0	-2,289.00	2,072.4	11,962.1	12,135.5	0.00	0.00	0.00
18,300.0	90.00	90.25	7,092.0	-2,289.00	2,072.0	12,062.1	12,234.4	0.00	0.00	0.00
18,400.0	90.00	90.25	7,092.0	-2,289.00	2,071.5	12,162.1	12,333.4	0.00	0.00	0.00
18,500.0	90.00	90.25	7,092.0	-2,289.00	2,071.1	12,262.1	12,432.3	0.00	0.00	0.00
18,600.0	90.00	90.25	7,092.0	-2,289.00	2,070.7	12,362.1	12,531.2	0.00	0.00	0.00
18,700.0	90.00	90.25	7,092.0	-2,289.00	2,070.2	12,462.1	12,630.1	0.00	0.00	0.00
18,800.0	90.00	90.25	7,092.0	-2,289.00	2,069.8	12,562.1	12,729.0	0.00	0.00	0.00
18,900.0	90.00	90.25	7,092.0	-2,289.00	2,069.4	12,662.1	12,827.9	0.00	0.00	0.00
19,000.0	90.00	90.25	7,092.0	-2,289.00	2,068.9	12,762.1	12,926.8	0.00	0.00	0.00
19,100.0	90.00	90.25	7,092.0	-2,289.00	2,068.5	12,862.1	13,025.7	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-MOISER HILL 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4803.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-MOISER HILL 3-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

## 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)
19,200.0	90.00	90.25	7,092.0	-2,289.00	2,068.1	12,962.1	13,124.6	0.00	0.00	0.00
19,300.0	90.00	90.25	7,092.0	-2,289.00	2,067.7	13,062.1	13,223.5	0.00	0.00	0.00
19,400.0	90.00	90.25	7,092.0	-2,289.00	2,067.2	13,162.1	13,322.4	0.00	0.00	0.00
19,500.0	90.00	90.25	7,092.0	-2,289.00	2,066.8	13,262.1	13,421.3	0.00	0.00	0.00
19,600.0	90.00	90.25	7,092.0	-2,289.00	2,066.4	13,362.1	13,520.3	0.00	0.00	0.00
19,700.0	90.00	90.25	7,092.0	-2,289.00	2,065.9	13,462.1	13,619.2	0.00	0.00	0.00
19,800.0	90.00	90.25	7,092.0	-2,289.00	2,065.5	13,562.1	13,718.1	0.00	0.00	0.00
19,900.0	90.00	90.25	7,092.0	-2,289.00	2,065.1	13,662.1	13,817.0	0.00	0.00	0.00
20,000.0	90.00	90.25	7,092.0	-2,289.00	2,064.7	13,762.1	13,915.9	0.00	0.00	0.00
20,100.0	90.00	90.25	7,092.0	-2,289.00	2,064.2	13,862.1	14,014.8	0.00	0.00	0.00
20,200.0	90.00	90.25	7,092.0	-2,289.00	2,063.8	13,962.1	14,113.7	0.00	0.00	0.00
20,300.0	90.00	90.25	7,092.0	-2,289.00	2,063.4	14,062.1	14,212.6	0.00	0.00	0.00
20,400.0	90.00	90.25	7,092.0	-2,289.00	2,062.9	14,162.1	14,311.5	0.00	0.00	0.00
20,500.0	90.00	90.25	7,092.0	-2,289.00	2,062.5	14,262.1	14,410.4	0.00	0.00	0.00
<b>BHL: 602ft FNL &amp; 2479ft FWL of Sec 11</b>										
<b>20,502.3</b>	<b>90.00</b>	<b>90.25</b>	<b>7,092.0</b>	<b>-2,289.00</b>	<b>2,062.5</b>	<b>14,264.4</b>	<b>14,412.7</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,863.6	3,680.0	PARKMAN			
4,654.3	4,410.0	SUSSEX			
5,098.4	4,820.0	SHANNON			
7,436.3	6,940.0	SHARON SPRINGS			
7,487.7	6,972.0	NIOBRARA			
7,877.8	7,092.0	NIO B TARGET			

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 2462ft FNL & 1195ft FEL of Sec 8
700.0	700.0	0.0	0.0	START NUDGE #1 (2°/100ft)
1,615.5	1,600.0	127.1	69.9	9 5/8" SURFACE CASING
1,680.5	1,661.7	145.0	79.7	START NUDGE #2 (2°/100ft BUR)
1,895.2	1,862.8	210.8	115.8	EOB TO 22.6° INC
7,083.6	6,652.7	1,958.5	1,076.1	START BUILD & TURN
7,877.8	7,092.0	2,116.7	1,640.0	HZ LP: 350ft FNL & 460ft FWL of Sec 9
20,502.3	7,092.0	2,062.5	14,264.4	BHL: 602ft FNL & 2479ft FWL of Sec 11