

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

NE NW SEC. 9 T5N R65W 6th P.M.

MT-HEATH 2-8-7

ORIGINAL WELLBORE

20 June, 2015

Plan: PROPOSAL #2

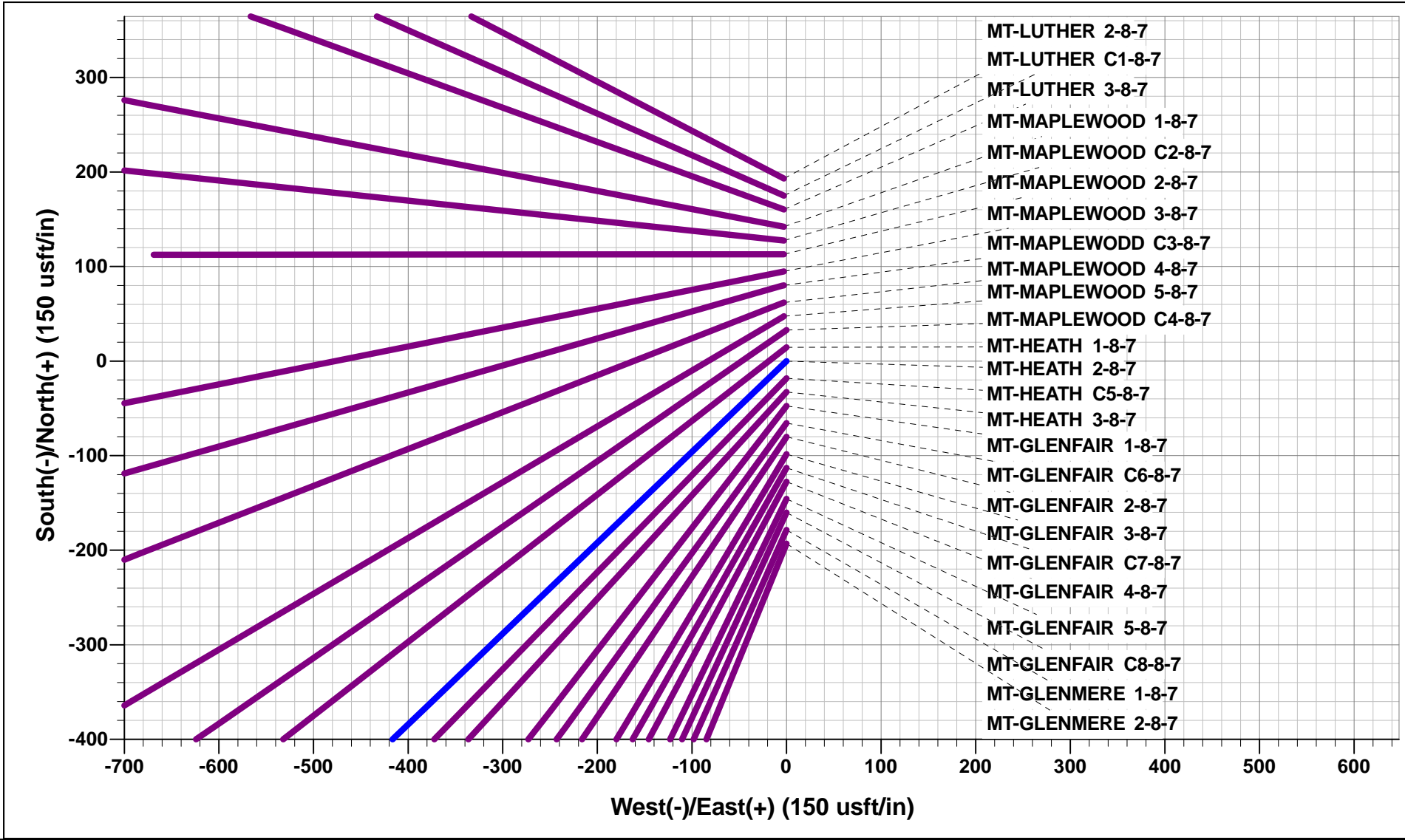




Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE NW SEC. 9 T5N R65W 6th P.M.
Well: MT-HEATH 2-8-7
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

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: 1020ft FNL & 1753ft FWL of Sec 9
1300.0	1300.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE - SURFACE (2°/100ft BUR)
1800.0	1802.6	10.05	226.14	-30.5	-31.7	34.6	44.0	9 5/8" SURFACE CSG
1864.0	1867.6	10.05	226.14	-38.3	-39.9	43.6	55.3	START NUDGE - MAIN (3°/100ft BUR)
2532.2	2586.8	31.63	226.14	-214.6	-223.3	244.0	309.7	EOB TO 31.63° INC
5270.5	5802.8	31.63	226.14	-1383.0	-1439.4	1572.9	1996.2	END OF TANGENT
6272.1	6857.1	0.00	226.14	-1579.6	-1644.0	1796.4	2279.9	EOD TO VERTICAL
6302.1	6887.1	0.00	0.00	-1579.6	-1644.0	1796.4	2279.9	KOP (10°/100ft BUR)
6875.0	7787.1	90.00	272.05	-1559.1	-2216.6	2363.9	2852.9	LANDING PNT: 2640ft FNL & 460ft FEL of Sec 8
6875.0	17428.0	90.00	272.06	-1213.9	-11851.3	11913.3	12493.7	BHL: 2956ft FNL & 460ft FWL of Sec 7

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
KOP - MT-HEATH 2-8-7	6302.1	-1579.6	-1644.0	40.413694	-104.677564	
LANDING PNT - MT-HEATH 2-8-7	6875.0	-1559.1	-2216.6	40.413750	-104.679620	
BHL - MT-HEATH 2-8-7	6875.0	-1213.9	-11851.3	40.414690	-104.714220	



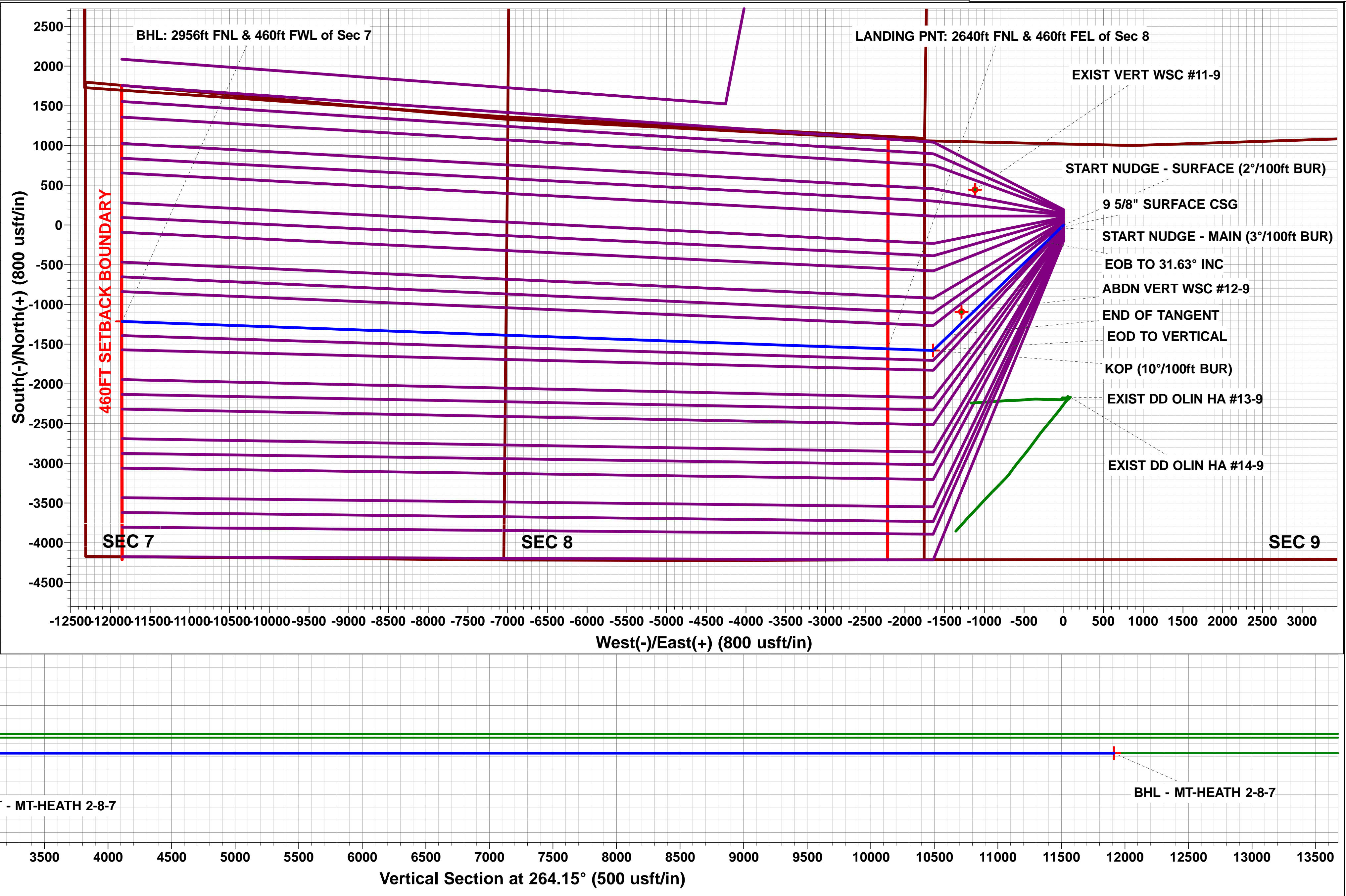
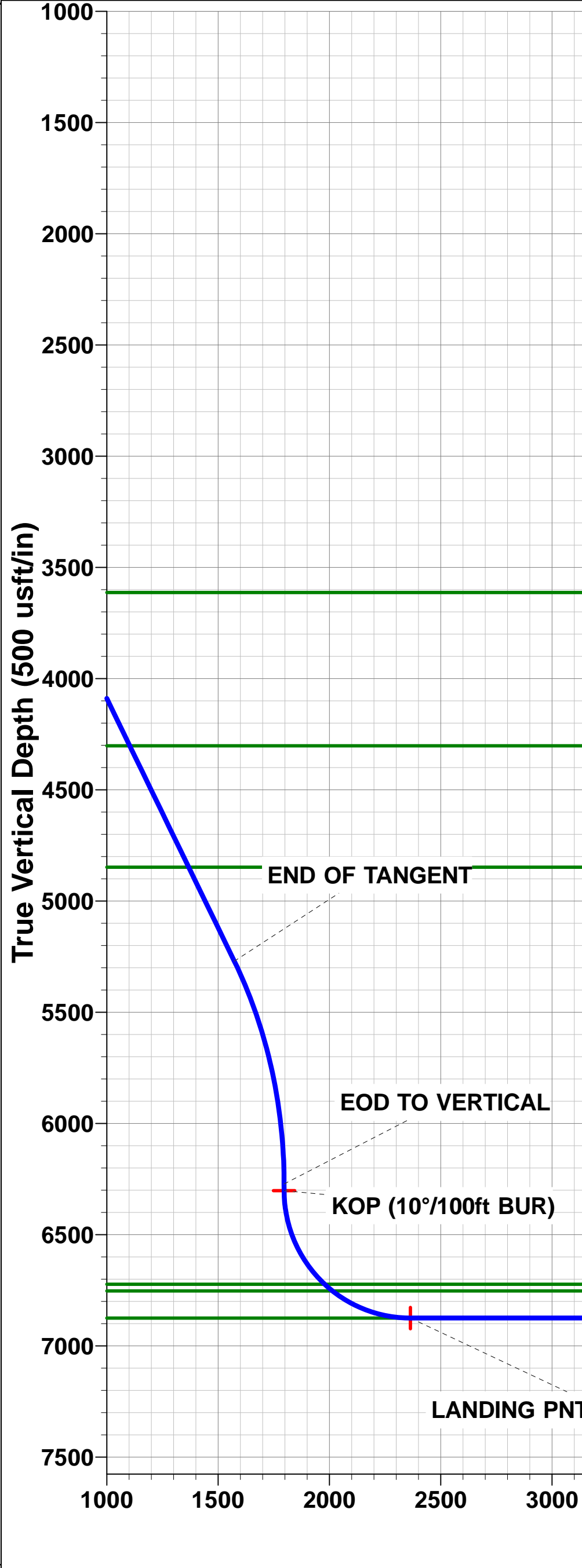
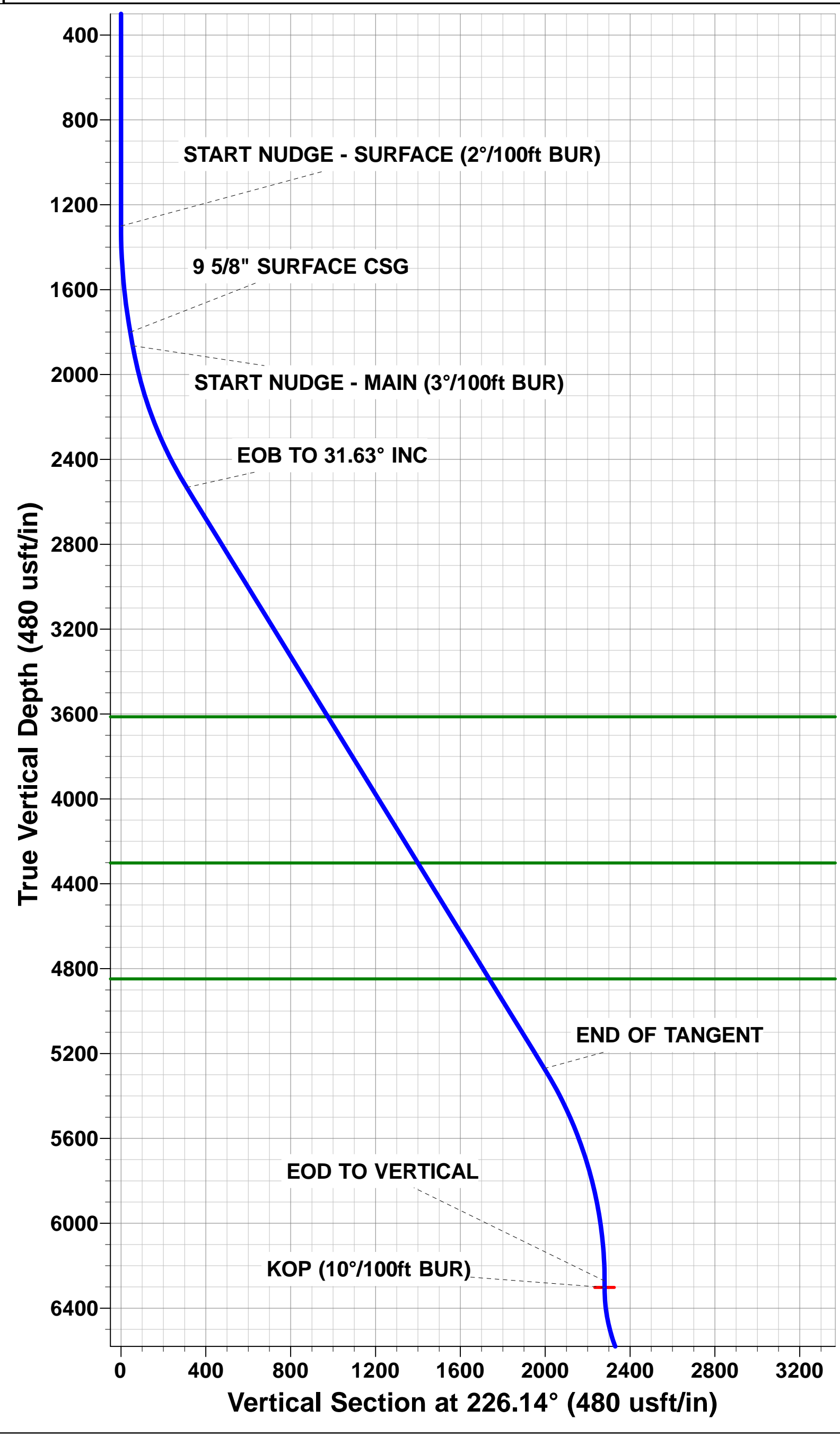
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3613.0	3856.1	PARKMAN
4302.0	4665.3	SUSSEX
4848.0	5306.6	SHANNON
6723.0	7359.9	SHARON SPRINGS
6753.0	7406.2	NIOBRARA
6875.0	7787.1	NIO B TARGET

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M

Azimuths to True North
Magnetic North: 8.38°

Magnetic Field
Strength: 52645.5snT
Dip Angle: 66.93°
Date: 04/06/2015
Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MT-HEATH 2-8-7
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-HEATH 2-8-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Project	WELD COUNTY, COLORADO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		NE NW SEC. 9 T5N R65W 6th P.M.			
Site Position:		Northing:	1,396,398.95 usft	Latitude:	40.418560
From:	Lat/Long	Easting:	3,230,631.97 usft	Longitude:	-104.671670
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft	Grid Convergence:	0.54 °

Well	MT-HEATH 2-8-7					
Well Position	+N/-S	-193.1 usft	Northing:	1,396,205.90 usft	Latitude:	40.418030
	+E/-W	2.8 usft	Easting:	3,230,636.56 usft	Longitude:	-104.671660
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,635.0 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	04/06/2015	8.38	66.93	52,645

Design	PROPOSAL #2				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	264.15	

Plan Sections											
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	-4,651.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	-3,351.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,802.6	10.05	226.14	1,800.0	-2,851.0	-30.5	-31.7	2.00	2.00	0.00	226.14	
1,867.6	10.05	226.14	1,864.0	-2,787.0	-38.3	-39.9	0.00	0.00	0.00	0.00	
2,586.8	31.63	226.14	2,532.2	-2,118.8	-214.6	-223.3	3.00	3.00	0.00	0.00	
5,802.8	31.63	226.14	5,270.5	619.5	-1,383.1	-1,439.4	0.00	0.00	0.00	0.00	
6,857.1	0.00	0.00	6,272.1	1,621.1	-1,579.6	-1,644.0	3.00	-3.00	0.00	180.00	
6,887.1	0.00	0.00	6,302.1	1,651.1	-1,579.6	-1,644.0	0.00	0.00	0.00	0.00	KOP - MT-HEATH 2
7,787.1	90.00	272.05	6,875.0	2,224.0	-1,559.1	-2,216.6	10.00	10.00	-9.77	272.05	LANDING PNT - M
17,428.0	90.00	272.06	6,875.0	2,224.0	-1,213.9	-11,851.3	0.00	0.00	0.00	124.66	BHL - MT-HEATH 2

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MT-HEATH 2-8-7
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-HEATH 2-8-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
SHL: 1020ft FNL & 1753ft FWL of Sec 9										
0.0	0.00	0.00	0.0	4,651.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,551.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,451.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,351.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,251.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,151.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,051.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,951.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,851.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,751.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,651.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,551.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,451.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE - SURFACE (2°/100ft BUR)										
1,300.0	0.00	0.00	1,300.0	3,351.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	2.00	226.14	1,400.0	3,251.02	-1.2	-1.3	1.4	2.00	2.00	0.00
1,500.0	4.00	226.14	1,499.8	3,151.16	-4.8	-5.0	5.5	2.00	2.00	0.00
1,600.0	6.00	226.14	1,599.5	3,051.55	-10.9	-11.3	12.4	2.00	2.00	0.00
1,700.0	8.00	226.14	1,698.7	2,952.30	-19.3	-20.1	22.0	2.00	2.00	0.00
1,800.0	10.00	226.14	1,797.5	2,853.53	-30.2	-31.4	34.3	2.00	2.00	0.00
9 5/8" SURFACE CSG										
1,802.6	10.05	226.14	1,800.0	2,851.00	-30.5	-31.7	34.6	2.00	2.00	0.00
START NUDGE - MAIN (3°/100ft BUR)										
1,867.6	10.05	226.14	1,864.0	2,786.97	-38.3	-39.9	43.6	0.00	0.00	0.01
1,900.0	11.02	226.14	1,895.9	2,755.12	-42.4	-44.2	48.3	3.00	3.00	0.00
2,000.0	14.02	226.14	1,993.5	2,657.51	-57.5	-59.8	65.3	3.00	3.00	0.00
2,100.0	17.02	226.14	2,089.8	2,561.17	-76.0	-79.1	86.4	3.00	3.00	0.00
2,200.0	20.02	226.14	2,184.6	2,466.36	-98.0	-102.0	111.5	3.00	3.00	0.00
2,300.0	23.02	226.14	2,277.7	2,373.35	-123.4	-128.5	140.4	3.00	3.00	0.00
2,400.0	26.02	226.14	2,368.6	2,282.38	-152.2	-158.4	173.1	3.00	3.00	0.00
2,500.0	29.02	226.14	2,457.3	2,193.71	-184.2	-191.7	209.5	3.00	3.00	0.00
EOB TO 31.63° INC										
2,586.8	31.63	226.14	2,532.2	2,118.79	-214.6	-223.3	244.0	3.00	3.00	0.00
2,600.0	31.63	226.14	2,543.4	2,107.55	-219.4	-228.3	249.5	0.00	0.00	0.00
2,700.0	31.63	226.14	2,628.6	2,022.40	-255.7	-266.1	290.8	0.00	0.00	0.00
2,800.0	31.63	226.14	2,713.7	1,937.26	-292.0	-303.9	332.1	0.00	0.00	0.00
2,900.0	31.63	226.14	2,798.9	1,852.11	-328.4	-341.7	373.4	0.00	0.00	0.00
3,000.0	31.63	226.14	2,884.0	1,766.96	-364.7	-379.6	414.7	0.00	0.00	0.00
3,100.0	31.63	226.14	2,969.2	1,681.82	-401.0	-417.4	456.1	0.00	0.00	0.00
3,200.0	31.63	226.14	3,054.3	1,596.67	-437.4	-455.2	497.4	0.00	0.00	0.00
3,300.0	31.63	226.14	3,139.5	1,511.52	-473.7	-493.0	538.7	0.00	0.00	0.00
3,400.0	31.63	226.14	3,224.6	1,426.38	-510.0	-530.8	580.0	0.00	0.00	0.00
3,500.0	31.63	226.14	3,309.8	1,341.23	-546.4	-568.6	621.3	0.00	0.00	0.00
3,600.0	31.63	226.14	3,394.9	1,256.09	-582.7	-606.4	662.7	0.00	0.00	0.00
3,700.0	31.63	226.14	3,480.1	1,170.94	-619.0	-644.3	704.0	0.00	0.00	0.00
3,800.0	31.63	226.14	3,565.2	1,085.79	-655.4	-682.1	745.3	0.00	0.00	0.00
PARKMAN										
3,856.1	31.63	226.14	3,613.0	1,038.00	-675.7	-703.3	768.5	0.00	0.00	0.00
3,900.0	31.63	226.14	3,650.4	1,000.65	-691.7	-719.9	786.6	0.00	0.00	0.00
4,000.0	31.63	226.14	3,735.5	915.50	-728.0	-757.7	827.9	0.00	0.00	0.00
4,100.0	31.63	226.14	3,820.6	830.35	-764.4	-795.5	869.3	0.00	0.00	0.00
4,200.0	31.63	226.14	3,905.8	745.21	-800.7	-833.3	910.6	0.00	0.00	0.00

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-HEATH 2-8-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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	31.63	226.14	3,990.9	660.06	-837.0	-871.1	951.9	0.00	0.00	0.00
4,400.0	31.63	226.14	4,076.1	574.91	-873.4	-909.0	993.2	0.00	0.00	0.00
4,500.0	31.63	226.14	4,161.2	489.77	-909.7	-946.8	1,034.5	0.00	0.00	0.00
4,600.0	31.63	226.14	4,246.4	404.62	-946.0	-984.6	1,075.9	0.00	0.00	0.00
SUSSEX										
4,665.3	31.63	226.14	4,302.0	349.00	-969.8	-1,009.3	1,102.9	0.00	0.00	0.00
4,700.0	31.63	226.14	4,331.5	319.47	-982.4	-1,022.4	1,117.2	0.00	0.00	0.00
4,800.0	31.63	226.14	4,416.7	234.33	-1,018.7	-1,060.2	1,158.5	0.00	0.00	0.00
4,900.0	31.63	226.14	4,501.8	149.18	-1,055.0	-1,098.0	1,199.8	0.00	0.00	0.00
5,000.0	31.63	226.14	4,587.0	64.03	-1,091.4	-1,135.9	1,241.1	0.00	0.00	0.00
5,100.0	31.63	226.14	4,672.1	-21.11	-1,127.7	-1,173.7	1,282.5	0.00	0.00	0.00
5,200.0	31.63	226.14	4,757.3	-106.26	-1,164.0	-1,211.5	1,323.8	0.00	0.00	0.00
5,300.0	31.63	226.14	4,842.4	-191.40	-1,200.4	-1,249.3	1,365.1	0.00	0.00	0.00
SHANNON										
5,306.6	31.63	226.14	4,848.0	-197.00	-1,202.7	-1,251.8	1,367.8	0.00	0.00	0.00
5,400.0	31.63	226.14	4,927.6	-276.55	-1,236.7	-1,287.1	1,406.4	0.00	0.00	0.00
5,500.0	31.63	226.14	5,012.7	-361.70	-1,273.0	-1,324.9	1,447.7	0.00	0.00	0.00
5,600.0	31.63	226.14	5,097.8	-446.84	-1,309.4	-1,362.7	1,489.1	0.00	0.00	0.00
5,700.0	31.63	226.14	5,183.0	-531.99	-1,345.7	-1,400.6	1,530.4	0.00	0.00	0.00
5,800.0	31.63	226.14	5,268.1	-617.14	-1,382.0	-1,438.4	1,571.7	0.00	0.00	0.00
END OF TANGENT										
5,802.8	31.63	226.14	5,270.5	-619.52	-1,383.0	-1,439.4	1,572.9	0.00	0.00	0.00
5,900.0	28.71	226.14	5,354.5	-703.54	-1,416.9	-1,474.7	1,611.4	3.00	-3.00	0.00
6,000.0	25.71	226.14	5,443.5	-792.46	-1,448.6	-1,507.6	1,647.4	3.00	-3.00	0.00
6,100.0	22.71	226.14	5,534.7	-883.66	-1,477.0	-1,537.2	1,679.7	3.00	-3.00	0.00
6,200.0	19.71	226.14	5,627.9	-976.87	-1,502.0	-1,563.3	1,708.2	3.00	-3.00	0.00
6,300.0	16.71	226.14	5,722.8	-1,071.85	-1,523.7	-1,585.8	1,732.8	3.00	-3.00	0.00
6,400.0	13.71	226.14	5,819.3	-1,168.33	-1,541.9	-1,604.7	1,753.5	3.00	-3.00	0.00
6,500.0	10.71	226.14	5,917.1	-1,266.06	-1,556.5	-1,620.0	1,770.2	3.00	-3.00	0.00
6,600.0	7.71	226.14	6,015.8	-1,364.76	-1,567.6	-1,631.5	1,782.8	3.00	-3.00	0.00
6,700.0	4.71	226.14	6,115.2	-1,464.16	-1,575.1	-1,639.3	1,791.3	3.00	-3.00	0.00
6,800.0	1.71	226.14	6,215.0	-1,563.99	-1,579.0	-1,643.4	1,795.7	3.00	-3.00	0.00
EOD TO VERTICAL										
6,857.1	0.00	226.14	6,272.1	-1,621.08	-1,579.6	-1,644.0	1,796.4	3.00	-3.00	0.00
KOP (10°/100ft BUR)										
6,887.1	0.00	0.00	6,302.1	-1,651.08	-1,579.6	-1,644.0	1,796.4	0.00	0.00	0.00
6,900.0	1.29	272.05	6,315.0	-1,663.98	-1,579.6	-1,644.1	1,796.5	9.99	9.99	0.00
7,000.0	11.29	272.05	6,414.3	-1,763.25	-1,579.2	-1,655.1	1,807.4	10.00	10.00	0.00
7,100.0	21.29	272.05	6,510.1	-1,859.12	-1,578.2	-1,683.1	1,835.1	10.00	10.00	0.00
7,200.0	31.29	272.05	6,599.7	-1,948.66	-1,576.6	-1,727.3	1,878.9	10.00	10.00	0.00
7,300.0	41.29	272.05	6,680.2	-2,029.16	-1,574.5	-1,786.4	1,937.5	10.00	10.00	0.00
SHARON SPRINGS										
7,359.9	47.28	272.05	6,723.0	-2,072.00	-1,573.0	-1,828.1	1,978.9	10.00	10.00	0.00
7,400.0	51.29	272.05	6,749.2	-2,098.17	-1,571.9	-1,858.5	2,009.0	10.00	10.00	0.00
NIORARA										
7,406.2	51.91	272.05	6,753.0	-2,102.00	-1,571.8	-1,863.3	2,013.8	10.00	10.00	0.00
7,500.0	61.29	272.05	6,804.6	-2,153.59	-1,569.0	-1,941.5	2,091.3	10.00	10.00	0.00
7,600.0	71.30	272.05	6,844.7	-2,193.74	-1,565.7	-2,032.9	2,181.9	10.00	10.00	0.00
7,700.0	81.30	272.05	6,868.4	-2,217.40	-1,562.2	-2,129.9	2,278.0	10.00	10.00	0.00
LANDING PNT: 2640ft FNL & 460ft FEL of Sec 8 - NIO B TARGET										
7,787.1	90.00	272.05	6,875.0	-2,224.00	-1,559.1	-2,216.6	2,363.9	10.00	10.00	0.00
7,800.0	90.00	272.05	6,875.0	-2,224.00	-1,558.7	-2,229.5	2,376.7	0.00	0.00	0.00
7,900.0	90.00	272.05	6,875.0	-2,223.99	-1,555.1	-2,329.4	2,475.8	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MT-HEATH 2-8-7
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-HEATH 2-8-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
8,000.0	90.00	272.05	6,875.0	-2,223.98	-1,551.5	-2,429.4	2,574.8	0.00	0.00	0.00
8,100.0	90.00	272.05	6,875.0	-2,223.98	-1,548.0	-2,529.3	2,673.9	0.00	0.00	0.00
8,200.0	90.00	272.05	6,875.0	-2,223.97	-1,544.4	-2,629.2	2,772.9	0.00	0.00	0.00
8,300.0	90.00	272.05	6,875.0	-2,223.96	-1,540.8	-2,729.2	2,872.0	0.00	0.00	0.00
8,400.0	90.00	272.05	6,875.0	-2,223.96	-1,537.3	-2,829.1	2,971.0	0.00	0.00	0.00
8,500.0	90.00	272.05	6,874.9	-2,223.95	-1,533.7	-2,929.1	3,070.1	0.00	0.00	0.00
8,600.0	90.00	272.05	6,874.9	-2,223.94	-1,530.1	-3,029.0	3,169.1	0.00	0.00	0.00
8,700.0	90.00	272.05	6,874.9	-2,223.94	-1,526.5	-3,128.9	3,268.2	0.00	0.00	0.00
8,800.0	90.00	272.05	6,874.9	-2,223.93	-1,523.0	-3,228.9	3,367.2	0.00	0.00	0.00
8,900.0	90.00	272.05	6,874.9	-2,223.92	-1,519.4	-3,328.8	3,466.3	0.00	0.00	0.00
9,000.0	90.00	272.05	6,874.9	-2,223.92	-1,515.8	-3,428.7	3,565.3	0.00	0.00	0.00
9,100.0	90.00	272.05	6,874.9	-2,223.91	-1,512.3	-3,528.7	3,664.4	0.00	0.00	0.00
9,200.0	90.00	272.05	6,874.9	-2,223.91	-1,508.7	-3,628.6	3,763.5	0.00	0.00	0.00
9,300.0	90.00	272.05	6,874.9	-2,223.90	-1,505.1	-3,728.5	3,862.5	0.00	0.00	0.00
9,400.0	90.00	272.05	6,874.9	-2,223.90	-1,501.5	-3,828.5	3,961.6	0.00	0.00	0.00
9,500.0	90.00	272.05	6,874.9	-2,223.89	-1,498.0	-3,928.4	4,060.6	0.00	0.00	0.00
9,600.0	90.00	272.05	6,874.9	-2,223.89	-1,494.4	-4,028.4	4,159.7	0.00	0.00	0.00
9,700.0	90.00	272.05	6,874.9	-2,223.88	-1,490.8	-4,128.3	4,258.7	0.00	0.00	0.00
9,800.0	90.00	272.05	6,874.9	-2,223.88	-1,487.2	-4,228.2	4,357.8	0.00	0.00	0.00
9,900.0	90.00	272.05	6,874.9	-2,223.87	-1,483.7	-4,328.2	4,456.8	0.00	0.00	0.00
10,000.0	90.00	272.05	6,874.9	-2,223.87	-1,480.1	-4,428.1	4,555.9	0.00	0.00	0.00
10,100.0	90.00	272.05	6,874.9	-2,223.86	-1,476.5	-4,528.0	4,654.9	0.00	0.00	0.00
10,200.0	90.00	272.05	6,874.9	-2,223.86	-1,473.0	-4,628.0	4,754.0	0.00	0.00	0.00
10,300.0	90.00	272.05	6,874.9	-2,223.86	-1,469.4	-4,727.9	4,853.0	0.00	0.00	0.00
10,400.0	90.00	272.05	6,874.9	-2,223.85	-1,465.8	-4,827.8	4,952.1	0.00	0.00	0.00
10,500.0	90.00	272.05	6,874.8	-2,223.85	-1,462.2	-4,927.8	5,051.1	0.00	0.00	0.00
10,600.0	90.00	272.05	6,874.8	-2,223.85	-1,458.6	-5,027.7	5,150.2	0.00	0.00	0.00
10,700.0	90.00	272.05	6,874.8	-2,223.84	-1,455.1	-5,127.6	5,249.2	0.00	0.00	0.00
10,800.0	90.00	272.05	6,874.8	-2,223.84	-1,451.5	-5,227.6	5,348.3	0.00	0.00	0.00
10,900.0	90.00	272.05	6,874.8	-2,223.84	-1,447.9	-5,327.5	5,447.3	0.00	0.00	0.00
11,000.0	90.00	272.05	6,874.8	-2,223.84	-1,444.3	-5,427.5	5,546.4	0.00	0.00	0.00
11,100.0	90.00	272.05	6,874.8	-2,223.83	-1,440.8	-5,527.4	5,645.4	0.00	0.00	0.00
11,200.0	90.00	272.05	6,874.8	-2,223.83	-1,437.2	-5,627.3	5,744.5	0.00	0.00	0.00
11,300.0	90.00	272.05	6,874.8	-2,223.83	-1,433.6	-5,727.3	5,843.5	0.00	0.00	0.00
11,400.0	90.00	272.05	6,874.8	-2,223.83	-1,430.0	-5,827.2	5,942.6	0.00	0.00	0.00
11,500.0	90.00	272.05	6,874.8	-2,223.82	-1,426.5	-5,927.1	6,041.6	0.00	0.00	0.00
11,600.0	90.00	272.05	6,874.8	-2,223.82	-1,422.9	-6,027.1	6,140.7	0.00	0.00	0.00
11,700.0	90.00	272.05	6,874.8	-2,223.82	-1,419.3	-6,127.0	6,239.7	0.00	0.00	0.00
11,800.0	90.00	272.05	6,874.8	-2,223.82	-1,415.7	-6,226.9	6,338.8	0.00	0.00	0.00
11,900.0	90.00	272.05	6,874.8	-2,223.82	-1,412.1	-6,326.9	6,437.8	0.00	0.00	0.00
12,000.0	90.00	272.05	6,874.8	-2,223.82	-1,408.6	-6,426.8	6,536.9	0.00	0.00	0.00
12,100.0	90.00	272.05	6,874.8	-2,223.82	-1,405.0	-6,526.8	6,635.9	0.00	0.00	0.00
12,200.0	90.00	272.05	6,874.8	-2,223.82	-1,401.4	-6,626.7	6,735.0	0.00	0.00	0.00
12,300.0	90.00	272.05	6,874.8	-2,223.82	-1,397.8	-6,726.6	6,834.0	0.00	0.00	0.00
12,400.0	90.00	272.05	6,874.8	-2,223.81	-1,394.2	-6,826.6	6,933.1	0.00	0.00	0.00
12,500.0	90.00	272.05	6,874.8	-2,223.81	-1,390.7	-6,926.5	7,032.1	0.00	0.00	0.00
12,600.0	90.00	272.05	6,874.8	-2,223.81	-1,387.1	-7,026.4	7,131.2	0.00	0.00	0.00
12,700.0	90.00	272.05	6,874.8	-2,223.81	-1,383.5	-7,126.4	7,230.2	0.00	0.00	0.00
12,800.0	90.00	272.05	6,874.8	-2,223.81	-1,379.9	-7,226.3	7,329.3	0.00	0.00	0.00
12,900.0	90.00	272.05	6,874.8	-2,223.82	-1,376.3	-7,326.2	7,428.4	0.00	0.00	0.00
13,000.0	90.00	272.05	6,874.8	-2,223.82	-1,372.8	-7,426.2	7,527.4	0.00	0.00	0.00
13,100.0	90.00	272.05	6,874.8	-2,223.82	-1,369.2	-7,526.1	7,626.5	0.00	0.00	0.00
13,200.0	90.00	272.05	6,874.8	-2,223.82	-1,365.6	-7,626.0	7,725.5	0.00	0.00	0.00
13,300.0	90.00	272.05	6,874.8	-2,223.82	-1,362.0	-7,726.0	7,824.6	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MT-HEATH 2-8-7
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-HEATH 2-8-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
13,400.0	90.00	272.05	6,874.8	-2,223.82	-1,358.4	-7,825.9	7,923.6	0.00	0.00	0.00
13,500.0	90.00	272.05	6,874.8	-2,223.82	-1,354.8	-7,925.9	8,022.7	0.00	0.00	0.00
13,600.0	90.00	272.05	6,874.8	-2,223.82	-1,351.3	-8,025.8	8,121.7	0.00	0.00	0.00
13,700.0	90.00	272.05	6,874.8	-2,223.82	-1,347.7	-8,125.7	8,220.8	0.00	0.00	0.00
13,800.0	90.00	272.05	6,874.8	-2,223.83	-1,344.1	-8,225.7	8,319.8	0.00	0.00	0.00
13,900.0	90.00	272.05	6,874.8	-2,223.83	-1,340.5	-8,325.6	8,418.9	0.00	0.00	0.00
14,000.0	90.00	272.05	6,874.8	-2,223.83	-1,336.9	-8,425.5	8,517.9	0.00	0.00	0.00
14,100.0	90.00	272.05	6,874.8	-2,223.83	-1,333.3	-8,525.5	8,617.0	0.00	0.00	0.00
14,200.0	90.00	272.05	6,874.8	-2,223.83	-1,329.8	-8,625.4	8,716.0	0.00	0.00	0.00
14,300.0	90.00	272.05	6,874.8	-2,223.84	-1,326.2	-8,725.3	8,815.1	0.00	0.00	0.00
14,400.0	90.00	272.05	6,874.8	-2,223.84	-1,322.6	-8,825.3	8,914.1	0.00	0.00	0.00
14,500.0	90.00	272.05	6,874.8	-2,223.84	-1,319.0	-8,925.2	9,013.2	0.00	0.00	0.00
14,600.0	90.00	272.05	6,874.8	-2,223.85	-1,315.4	-9,025.1	9,112.2	0.00	0.00	0.00
14,700.0	90.00	272.05	6,874.8	-2,223.85	-1,311.8	-9,125.1	9,211.3	0.00	0.00	0.00
14,800.0	90.00	272.05	6,874.9	-2,223.85	-1,308.3	-9,225.0	9,310.3	0.00	0.00	0.00
14,900.0	90.00	272.05	6,874.9	-2,223.86	-1,304.7	-9,325.0	9,409.4	0.00	0.00	0.00
15,000.0	90.00	272.06	6,874.9	-2,223.86	-1,301.1	-9,424.9	9,508.4	0.00	0.00	0.00
15,100.0	90.00	272.06	6,874.9	-2,223.86	-1,297.5	-9,524.8	9,607.5	0.00	0.00	0.00
15,200.0	90.00	272.06	6,874.9	-2,223.87	-1,293.9	-9,624.8	9,706.5	0.00	0.00	0.00
15,300.0	90.00	272.06	6,874.9	-2,223.87	-1,290.3	-9,724.7	9,805.6	0.00	0.00	0.00
15,400.0	90.00	272.06	6,874.9	-2,223.88	-1,286.7	-9,824.6	9,904.6	0.00	0.00	0.00
15,500.0	90.00	272.06	6,874.9	-2,223.88	-1,283.2	-9,924.6	10,003.7	0.00	0.00	0.00
15,600.0	90.00	272.06	6,874.9	-2,223.89	-1,279.6	-10,024.5	10,102.7	0.00	0.00	0.00
15,700.0	90.00	272.06	6,874.9	-2,223.89	-1,276.0	-10,124.4	10,201.8	0.00	0.00	0.00
15,800.0	90.00	272.06	6,874.9	-2,223.90	-1,272.4	-10,224.4	10,300.8	0.00	0.00	0.00
15,900.0	90.00	272.06	6,874.9	-2,223.90	-1,268.8	-10,324.3	10,399.9	0.00	0.00	0.00
16,000.0	90.00	272.06	6,874.9	-2,223.91	-1,265.2	-10,424.2	10,498.9	0.00	0.00	0.00
16,100.0	90.00	272.06	6,874.9	-2,223.91	-1,261.6	-10,524.2	10,598.0	0.00	0.00	0.00
16,200.0	90.00	272.06	6,874.9	-2,223.92	-1,258.0	-10,624.1	10,697.0	0.00	0.00	0.00
16,300.0	90.00	272.06	6,874.9	-2,223.92	-1,254.4	-10,724.1	10,796.1	0.00	0.00	0.00
16,400.0	90.00	272.06	6,874.9	-2,223.93	-1,250.9	-10,824.0	10,895.1	0.00	0.00	0.00
16,500.0	90.00	272.06	6,874.9	-2,223.94	-1,247.3	-10,923.9	10,994.2	0.00	0.00	0.00
16,600.0	90.00	272.06	6,874.9	-2,223.94	-1,243.7	-11,023.9	11,093.2	0.00	0.00	0.00
16,700.0	90.00	272.06	6,874.9	-2,223.95	-1,240.1	-11,123.8	11,192.3	0.00	0.00	0.00
16,800.0	90.00	272.06	6,875.0	-2,223.95	-1,236.5	-11,223.7	11,291.3	0.00	0.00	0.00
16,900.0	90.00	272.06	6,875.0	-2,223.96	-1,232.9	-11,323.7	11,390.4	0.00	0.00	0.00
17,000.0	90.00	272.06	6,875.0	-2,223.97	-1,229.3	-11,423.6	11,489.4	0.00	0.00	0.00
17,100.0	90.00	272.06	6,875.0	-2,223.98	-1,225.7	-11,523.5	11,588.5	0.00	0.00	0.00
17,200.0	90.00	272.06	6,875.0	-2,223.98	-1,222.1	-11,623.5	11,687.5	0.00	0.00	0.00
17,300.0	90.00	272.06	6,875.0	-2,223.99	-1,218.5	-11,723.4	11,786.6	0.00	0.00	0.00
17,400.0	90.00	272.06	6,875.0	-2,224.00	-1,215.0	-11,823.3	11,885.6	0.00	0.00	0.00
BHL: 2956ft FNL & 460ft FWL of Sec 7										
17,428.0	90.00	272.06	6,875.0	-2,224.00	-1,213.9	-11,851.3	11,913.3	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MT-HEATH 2-8-7
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (Original Well Elev)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-HEATH 2-8-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,856.1	3,613.0	PARKMAN			
4,665.3	4,302.0	SUSSEX			
5,306.6	4,848.0	SHANNON			
7,359.9	6,723.0	SHARON SPRINGS			
7,406.2	6,753.0	NIOBRARA			
7,787.1	6,875.0	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: 1020ft FNL & 1753ft FWL of Sec 9
1,300.0	1,300.0	0.0	0.0	START NUDGE - SURFACE (2°/100ft BUR)
1,802.6	1,800.0	-30.5	-31.7	9 5/8" SURFACE CSG
1,867.6	1,864.0	-38.3	-39.9	START NUDGE - MAIN (3°/100ft BUR)
2,586.8	2,532.2	-214.6	-223.3	EOB TO 31.63° INC
5,802.8	5,270.5	-1,383.0	-1,439.4	END OF TANGENT
6,857.1	6,272.1	-1,579.6	-1,644.0	EOD TO VERTICAL
6,887.1	6,302.1	-1,579.6	-1,644.0	KOP (10°/100ft BUR)
7,787.1	6,875.0	-1,559.1	-2,216.6	LANDING PNT: 2640ft FNL & 460ft FEL of Sec 8
17,428.0	6,875.0	-1,213.9	-11,851.3	BHL: 2956ft FNL & 460ft FWL of Sec 7