

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

MT-MAPLEWOOD C4-8-7

ORIGINAL WELLBORE

20 June, 2015

Plan: PROPOSAL #2





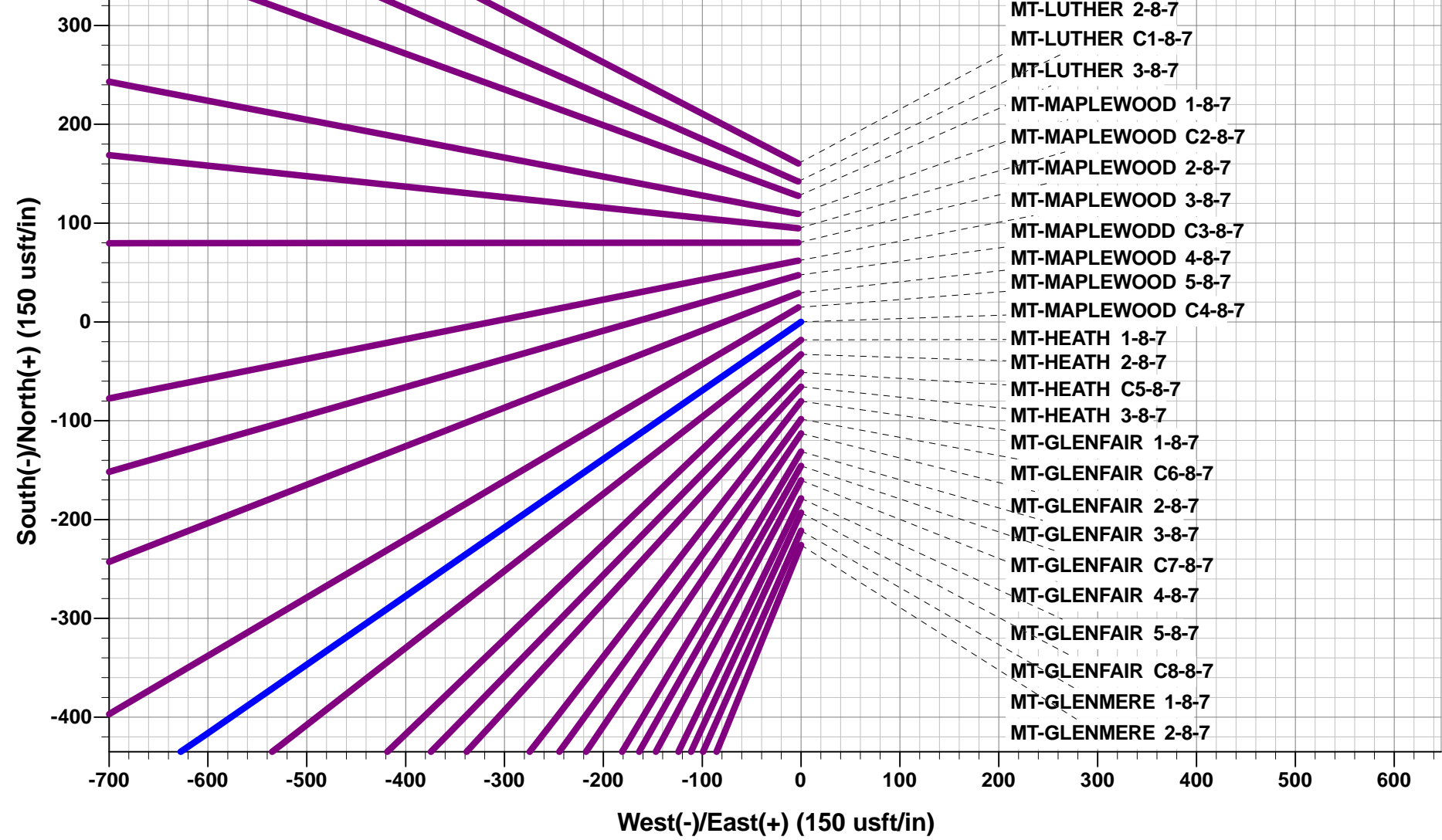
Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE NW SEC. 9 T5N R65W 6th P.M.
Well: MT-MAPLEWOOD C4-8-7
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

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: 988ft FNL & 1753ft FWL of Sec 9
1500.0	1500.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE - SURFACE (2°/100ft BUR)
1800.0	1800.6	6.01	235.26	-9.0	-12.9	13.4	15.8	9 5/8" SURFACE CSG
1864.7	1865.6	6.01	235.26	-12.9	-18.5	19.3	22.6	START NUDGE - MAIN (2.5°/100ft BUR)
2719.3	2766.3	28.53	235.26	-164.3	-236.9	246.0	288.3	EOB TO 28.53° INC
5357.3	5769.0	28.53	235.26	-981.6	-1415.4	1469.7	1722.4	END OF TANGENT
6452.0	6910.3	0.00	0.00	-1140.2	-1644.1	1707.2	2000.8	EOD TO VERTICAL
6482.0	6940.3	0.00	0.00	-1140.2	-1644.1	1707.2	2000.8	KOP (10°/100ft BUR)
7055.0	7840.3	90.00	272.55	-1114.7	-2216.5	2277.2	2573.7	LANDING PNT: 2161ft FNL & 460ft FEL of Sec 8
7055.0	17487.2	90.00	272.55	-685.7	-11853.8	11873.6	12220.6	BHL: 2398ft FNL & 460ft FWL of Sec 7

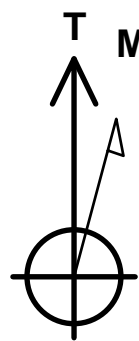
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - MT-MAPLEWOOD C4-8-7	6482.0	-1140.2	-1644.1	40.414990	-104.677564
LANDING PNT - MT-MAPLEWOOD C4-8-7	7055.0	-1114.7	-2216.5	40.415060	-104.679620
BHL - MT-MAPLEWOOD C4-8-7	7055.0	-685.7	-11853.8	40.416230	-104.714230



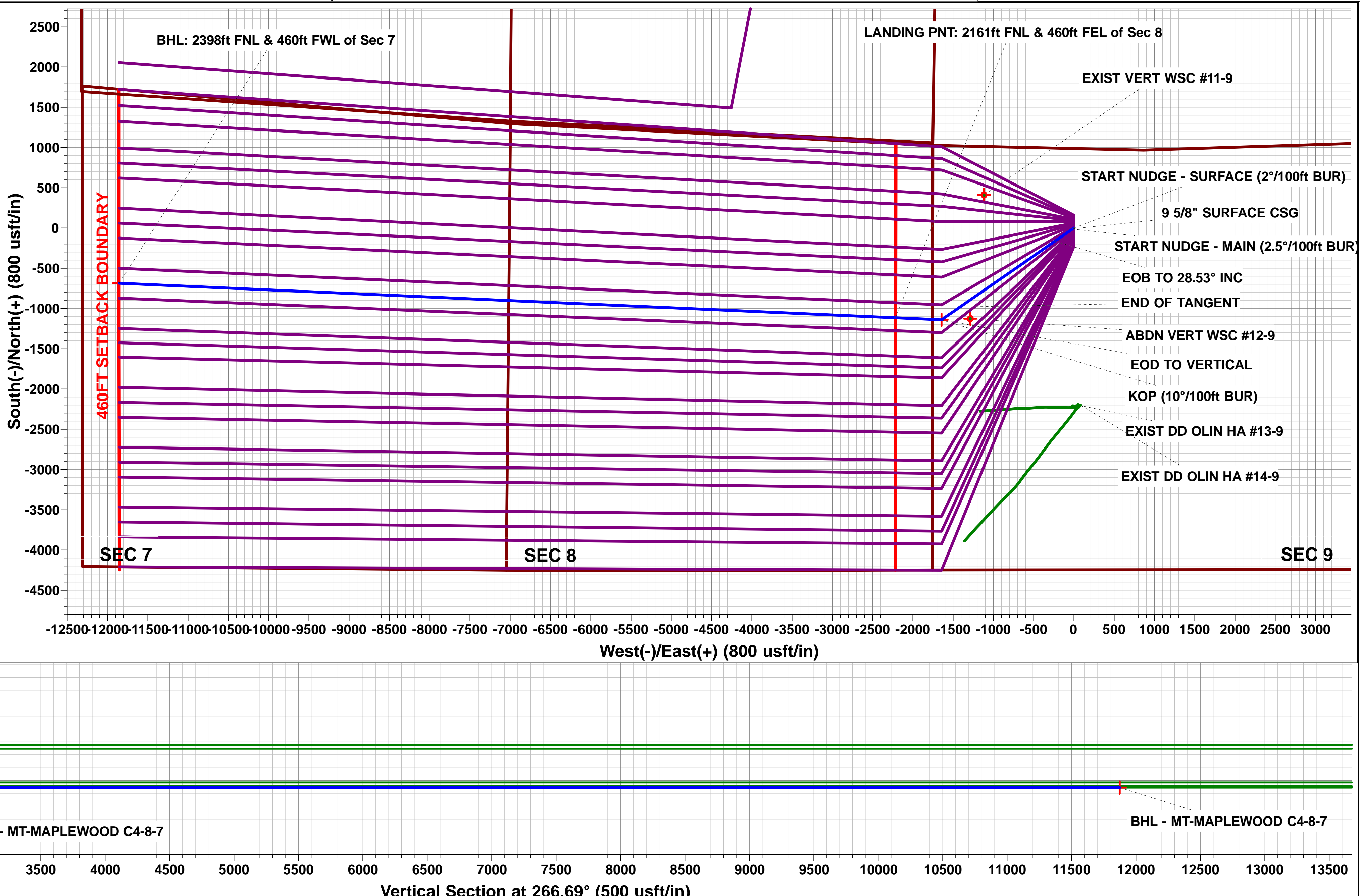
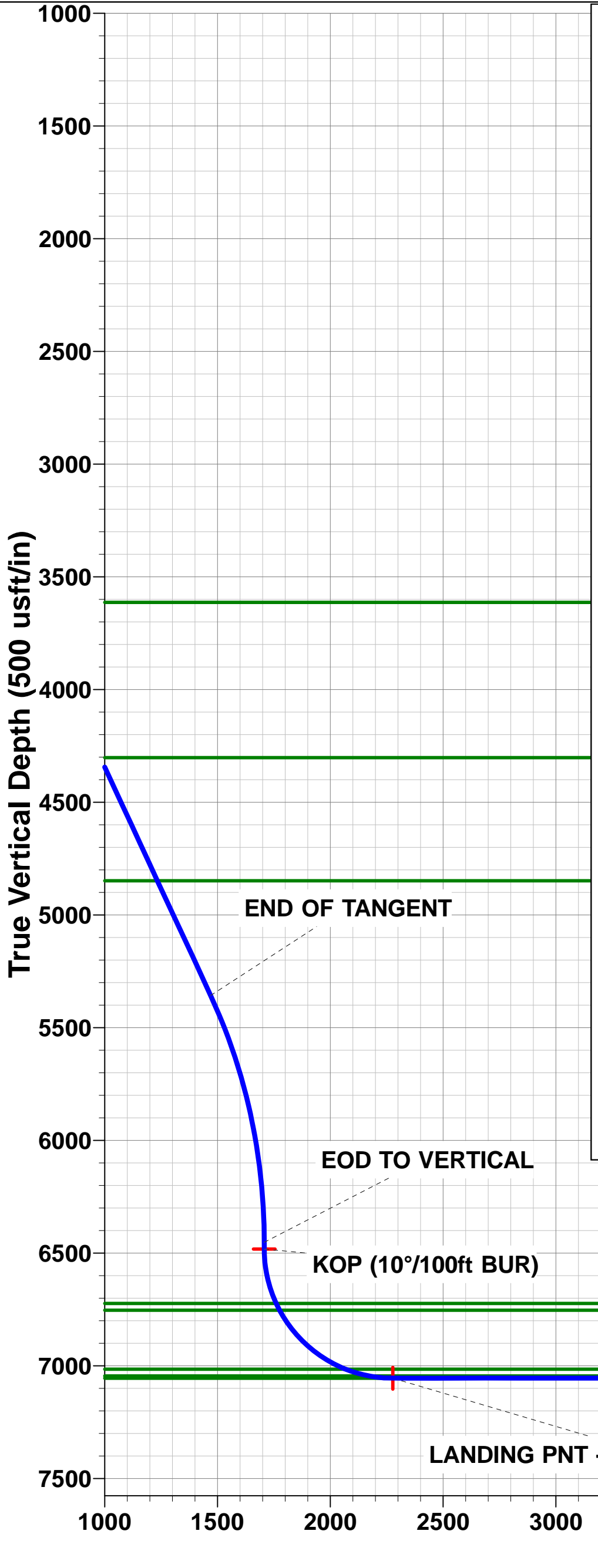
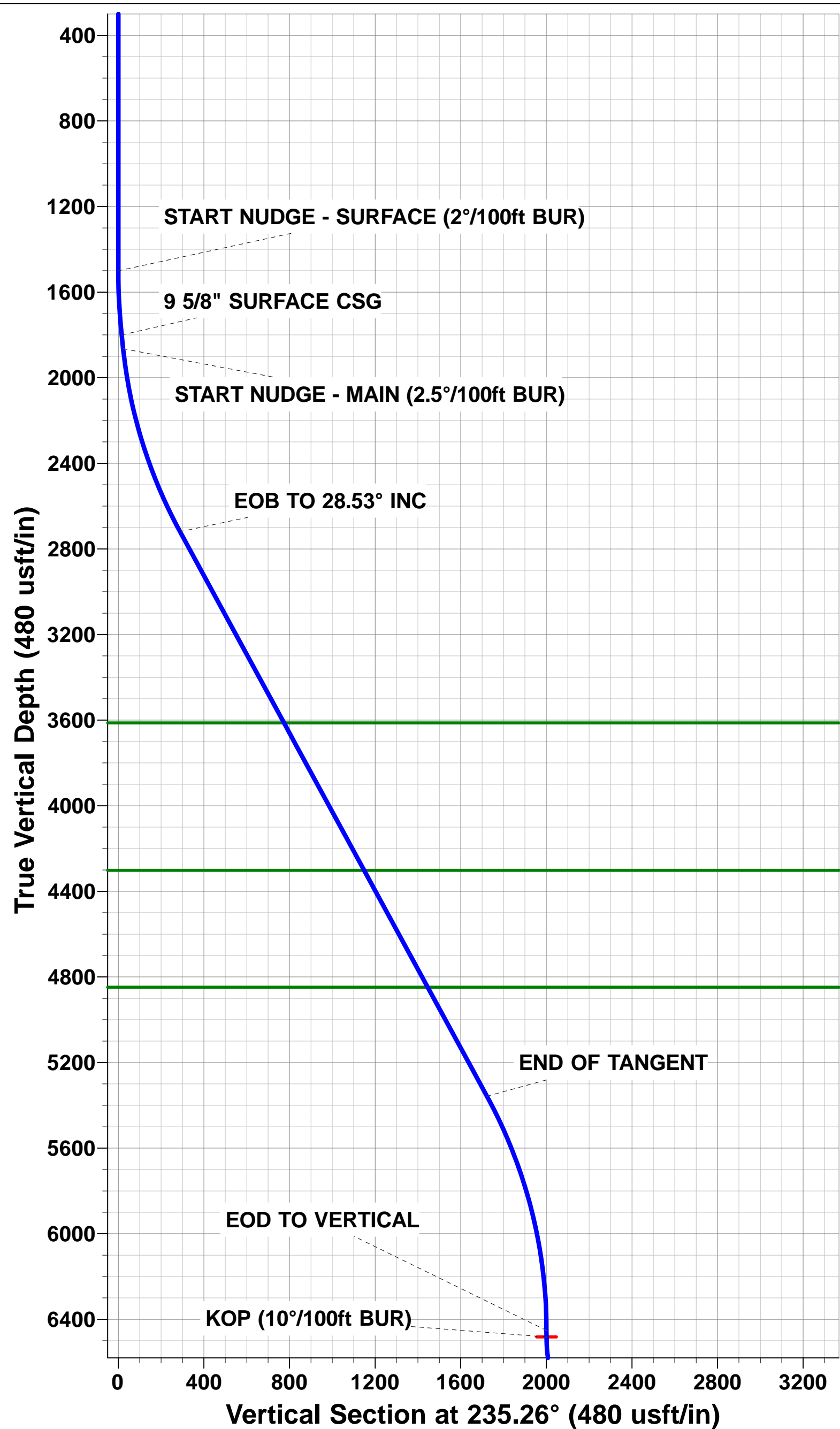
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3613.0	3783.6	PARKMAN
4302.0	4567.8	SUSSEX
4848.0	5189.3	SHANNON
6723.0	7189.0	SHARON SPRINGS
6753.0	7222.6	NIOBRARA
7015.0	7625.0	FORT HAYS
7045.0	7733.1	CODELL
7055.0	7840.3	CODELL TARGET



Azimuths to True North
Magnetic North: 8.38°

Magnetic Field
Strength: 52645.5snT
Dip Angle: 66.94°
Date: 04/06/2015
Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MT-MAPLEWOOD C4-8-7
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (SAV 802)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (SAV 802)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-MAPLEWOOD C4-8-7	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
From:	Lat/Long	Easting:	3,230,631.97 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.418560
		Longitude:	-104.671670
		Grid Convergence:	0.54 °

Well	MT-MAPLEWOOD C4-8-7		
Well Position	+N/-S	-160.3 usft	Northing:
	+E/-W	2.8 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	04/06/2015	8.38	66.94	52,646

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	266.69	

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	
1,500.0	0.00	0.00	1,500.0	-3,151.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.6	6.01	235.26	1,800.0	-2,851.0	-9.0	-12.9	2.00	2.00	0.00	235.26	
1,865.6	6.01	235.26	1,864.6	-2,786.4	-12.9	-18.5	0.00	0.00	0.00	0.00	
2,766.3	28.53	235.26	2,719.3	-1,931.7	-164.3	-236.9	2.50	2.50	0.00	0.00	
5,769.0	28.53	235.26	5,357.4	706.4	-981.6	-1,415.4	0.00	0.00	0.00	0.00	
6,910.3	0.00	0.00	6,452.0	1,801.0	-1,140.2	-1,644.1	2.50	-2.50	0.00	180.00	
6,940.3	0.00	0.00	6,482.0	1,831.0	-1,140.2	-1,644.1	0.00	0.00	0.00	0.00	KOP - MT-MAPLEV
7,840.3	90.00	272.55	7,055.0	2,404.0	-1,114.7	-2,216.5	10.00	10.00	-9.72	272.55	LANDING PNT - M
17,487.2	90.00	272.55	7,055.0	2,404.0	-685.7	-11,853.8	0.00	0.00	0.00	-98.18	BHL - MT-MAPLEV

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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (SAV 802)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-MAPLEWOOD C4-8-7	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: 988ft 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
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	0.00	0.00	1,400.0	3,251.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE - SURFACE (2°/100ft BUR)										
1,500.0	0.00	0.00	1,500.0	3,151.00	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	2.00	235.26	1,600.0	3,051.02	-1.0	-1.4	1.5	2.00	2.00	0.00
1,700.0	4.00	235.26	1,699.8	2,951.16	-4.0	-5.7	6.0	2.00	2.00	0.00
1,800.0	6.00	235.26	1,799.5	2,851.55	-8.9	-12.9	13.4	2.00	2.00	0.00
9 5/8" SURFACE CSG										
1,800.6	6.01	235.26	1,800.0	2,851.00	-9.0	-12.9	13.4	2.00	2.00	0.00
START NUDGE - MAIN (2.5°/100ft BUR)										
1,865.6	6.01	235.26	1,864.7	2,786.31	-12.9	-18.5	19.3	0.00	0.00	0.00
1,900.0	6.87	235.26	1,898.9	2,752.13	-15.1	-21.7	22.5	2.50	2.50	0.00
2,000.0	9.37	235.26	1,997.9	2,653.14	-23.1	-33.3	34.6	2.50	2.50	0.00
2,100.0	11.87	235.26	2,096.1	2,554.86	-33.6	-48.5	50.3	2.50	2.50	0.00
2,200.0	14.37	235.26	2,193.5	2,457.48	-46.5	-67.1	69.7	2.50	2.50	0.00
2,300.0	16.87	235.26	2,289.8	2,361.18	-61.9	-89.2	92.7	2.50	2.50	0.00
2,400.0	19.37	235.26	2,384.9	2,266.15	-79.6	-114.8	119.2	2.50	2.50	0.00
2,500.0	21.87	235.26	2,478.4	2,172.56	-99.7	-143.7	149.3	2.50	2.50	0.00
2,600.0	24.37	235.26	2,570.4	2,080.60	-122.1	-176.0	182.8	2.50	2.50	0.00
2,700.0	26.87	235.26	2,660.6	1,990.44	-146.7	-211.5	219.7	2.50	2.50	0.00
EOB TO 28.53° INC										
2,766.3	28.53	235.26	2,719.3	1,931.74	-164.3	-236.9	246.0	2.50	2.50	0.00
2,800.0	28.53	235.26	2,748.9	1,902.14	-173.4	-250.1	259.7	0.00	0.00	0.00
2,900.0	28.53	235.26	2,836.7	1,814.28	-200.7	-289.3	300.4	0.00	0.00	0.00
3,000.0	28.53	235.26	2,924.6	1,726.43	-227.9	-328.6	341.2	0.00	0.00	0.00
3,100.0	28.53	235.26	3,012.4	1,638.57	-255.1	-367.8	382.0	0.00	0.00	0.00
3,200.0	28.53	235.26	3,100.3	1,550.71	-282.3	-407.1	422.7	0.00	0.00	0.00
3,300.0	28.53	235.26	3,188.1	1,462.86	-309.5	-446.3	463.5	0.00	0.00	0.00
3,400.0	28.53	235.26	3,276.0	1,375.00	-336.8	-485.6	504.2	0.00	0.00	0.00
3,500.0	28.53	235.26	3,363.9	1,287.14	-364.0	-524.8	545.0	0.00	0.00	0.00
3,600.0	28.53	235.26	3,451.7	1,199.29	-391.2	-564.1	585.7	0.00	0.00	0.00
3,700.0	28.53	235.26	3,539.6	1,111.43	-418.4	-603.3	626.5	0.00	0.00	0.00
PARKMAN										
3,783.6	28.53	235.26	3,613.0	1,038.00	-441.2	-636.1	660.6	0.00	0.00	0.00
3,800.0	28.53	235.26	3,627.4	1,023.58	-445.6	-642.6	667.2	0.00	0.00	0.00
3,900.0	28.53	235.26	3,715.3	935.72	-472.9	-681.8	708.0	0.00	0.00	0.00
4,000.0	28.53	235.26	3,803.1	847.86	-500.1	-721.1	748.8	0.00	0.00	0.00
4,100.0	28.53	235.26	3,891.0	760.01	-527.3	-760.3	789.5	0.00	0.00	0.00
4,200.0	28.53	235.26	3,978.8	672.15	-554.5	-799.6	830.3	0.00	0.00	0.00

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Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-MAPLEWOOD C4-8-7	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	28.53	235.26	4,066.7	584.30	-581.7	-838.8	871.0	0.00	0.00	0.00
4,400.0	28.53	235.26	4,154.6	496.44	-608.9	-878.1	911.8	0.00	0.00	0.00
4,500.0	28.53	235.26	4,242.4	408.58	-636.2	-917.3	952.5	0.00	0.00	0.00
SUSSEX										
4,567.8	28.53	235.26	4,302.0	349.00	-654.6	-943.9	980.2	0.00	0.00	0.00
4,600.0	28.53	235.26	4,330.3	320.73	-663.4	-956.6	993.3	0.00	0.00	0.00
4,700.0	28.53	235.26	4,418.1	232.87	-690.6	-995.8	1,034.0	0.00	0.00	0.00
4,800.0	28.53	235.26	4,506.0	145.02	-717.8	-1,035.1	1,074.8	0.00	0.00	0.00
4,900.0	28.53	235.26	4,593.8	57.16	-745.0	-1,074.3	1,115.5	0.00	0.00	0.00
5,000.0	28.53	235.26	4,681.7	-30.70	-772.3	-1,113.6	1,156.3	0.00	0.00	0.00
5,100.0	28.53	235.26	4,769.6	-118.55	-799.5	-1,152.8	1,197.1	0.00	0.00	0.00
SHANNON										
5,189.3	28.53	235.26	4,848.0	-197.00	-823.8	-1,187.9	1,233.4	0.00	0.00	0.00
5,200.0	28.53	235.26	4,857.4	-206.41	-826.7	-1,192.1	1,237.8	0.00	0.00	0.00
5,300.0	28.53	235.26	4,945.3	-294.26	-853.9	-1,231.3	1,278.6	0.00	0.00	0.00
5,400.0	28.53	235.26	5,033.1	-382.12	-881.1	-1,270.6	1,319.3	0.00	0.00	0.00
5,500.0	28.53	235.26	5,121.0	-469.98	-908.4	-1,309.8	1,360.1	0.00	0.00	0.00
5,600.0	28.53	235.26	5,208.8	-557.83	-935.6	-1,349.0	1,400.8	0.00	0.00	0.00
5,700.0	28.53	235.26	5,296.7	-645.69	-962.8	-1,388.3	1,441.6	0.00	0.00	0.00
END OF TANGENT										
5,769.0	28.53	235.26	5,357.3	-706.31	-981.6	-1,415.4	1,469.7	0.00	0.00	0.00
5,800.0	27.76	235.26	5,384.6	-733.64	-989.9	-1,427.4	1,482.2	2.50	-2.50	0.00
5,900.0	25.26	235.26	5,474.1	-823.12	-1,015.3	-1,464.1	1,520.3	2.50	-2.50	0.00
6,000.0	22.76	235.26	5,565.5	-914.47	-1,038.5	-1,497.5	1,555.0	2.50	-2.50	0.00
6,100.0	20.26	235.26	5,658.5	-1,007.50	-1,059.4	-1,527.6	1,586.3	2.50	-2.50	0.00
6,200.0	17.76	235.26	5,753.0	-1,102.04	-1,078.0	-1,554.4	1,614.0	2.50	-2.50	0.00
6,300.0	15.26	235.26	5,848.9	-1,197.91	-1,094.2	-1,577.7	1,638.3	2.50	-2.50	0.00
6,400.0	12.76	235.26	5,945.9	-1,294.93	-1,108.0	-1,597.6	1,658.9	2.50	-2.50	0.00
6,500.0	10.26	235.26	6,043.9	-1,392.91	-1,119.3	-1,614.0	1,676.0	2.50	-2.50	0.00
6,600.0	7.76	235.26	6,142.7	-1,491.67	-1,128.2	-1,626.9	1,689.3	2.50	-2.50	0.00
6,700.0	5.26	235.26	6,242.0	-1,591.02	-1,134.7	-1,636.2	1,699.0	2.50	-2.50	0.00
6,800.0	2.76	235.26	6,341.8	-1,690.76	-1,138.7	-1,641.9	1,704.9	2.50	-2.50	0.00
6,900.0	0.26	235.26	6,441.7	-1,790.72	-1,140.2	-1,644.1	1,707.2	2.50	-2.50	0.00
EOD TO VERTICAL										
6,910.3	0.00	0.00	6,452.0	-1,801.02	-1,140.2	-1,644.1	1,707.2	2.49	-2.49	0.00
KOP (10°/100ft BUR)										
6,940.3	0.00	0.00	6,482.0	-1,831.02	-1,140.2	-1,644.1	1,707.2	0.00	0.00	0.00
7,000.0	5.97	272.55	6,541.6	-1,890.61	-1,140.1	-1,647.2	1,710.3	10.00	10.00	0.00
7,100.0	15.97	272.55	6,639.7	-1,988.66	-1,139.2	-1,666.2	1,729.2	10.00	10.00	0.00
SHARON SPRINGS										
7,189.0	24.87	272.55	6,723.0	-2,072.00	-1,137.8	-1,697.2	1,760.1	10.00	10.00	0.00
7,200.0	25.97	272.55	6,732.9	-2,081.92	-1,137.6	-1,701.9	1,764.8	10.00	10.00	0.00
NIORARA										
7,222.6	28.23	272.55	6,753.0	-2,102.00	-1,137.2	-1,712.2	1,775.0	10.00	10.00	0.00
7,300.0	35.97	272.55	6,818.6	-2,167.55	-1,135.3	-1,753.2	1,815.9	10.00	10.00	0.00
7,400.0	45.97	272.55	6,894.0	-2,242.96	-1,132.4	-1,818.7	1,881.0	10.00	10.00	0.00
7,500.0	55.97	272.55	6,956.9	-2,305.86	-1,129.0	-1,896.2	1,958.2	10.00	10.00	0.00
7,600.0	65.97	272.55	7,005.3	-2,354.33	-1,125.1	-1,983.4	2,045.1	10.00	10.00	0.00
FORT HAYS										
7,625.0	68.46	272.55	7,015.0	-2,364.00	-1,124.1	-2,006.4	2,068.0	10.00	10.00	0.00
7,700.0	75.97	272.55	7,037.9	-2,386.90	-1,120.9	-2,077.7	2,139.0	10.00	10.00	0.00
CODELL										
7,733.1	79.28	272.55	7,045.0	-2,394.00	-1,119.4	-2,110.1	2,171.2	10.00	10.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MT-MAPLEWOOD C4-8-7
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (SAV 802)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (SAV 802)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-MAPLEWOOD C4-8-7	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)
7,800.0	85.97	272.55	7,053.6	-2,402.58	-1,116.5	-2,176.3	2,237.1	10.00	10.00	0.00
LANDING PNT: 2161ft FNL & 460ft FEL of Sec 8 - CODELL TARGET										
7,840.3	90.00	272.55	7,055.0	-2,404.00	-1,114.7	-2,216.5	2,277.2	10.00	10.00	0.00
7,900.0	90.00	272.55	7,055.0	-2,404.00	-1,112.0	-2,276.1	2,336.5	0.00	0.00	0.00
8,000.0	90.00	272.55	7,055.0	-2,404.00	-1,107.6	-2,376.0	2,436.0	0.00	0.00	0.00
8,100.0	90.00	272.55	7,055.0	-2,404.00	-1,103.1	-2,475.9	2,535.5	0.00	0.00	0.00
8,200.0	90.00	272.55	7,055.0	-2,404.00	-1,098.7	-2,575.8	2,635.0	0.00	0.00	0.00
8,300.0	90.00	272.55	7,055.0	-2,404.00	-1,094.2	-2,675.7	2,734.5	0.00	0.00	0.00
8,400.0	90.00	272.55	7,055.0	-2,404.00	-1,089.8	-2,775.6	2,833.9	0.00	0.00	0.00
8,500.0	90.00	272.55	7,055.0	-2,404.00	-1,085.3	-2,875.5	2,933.4	0.00	0.00	0.00
8,600.0	90.00	272.55	7,055.0	-2,403.99	-1,080.9	-2,975.4	3,032.9	0.00	0.00	0.00
8,700.0	90.00	272.55	7,055.0	-2,403.99	-1,076.4	-3,075.3	3,132.4	0.00	0.00	0.00
8,800.0	90.00	272.55	7,055.0	-2,403.99	-1,072.0	-3,175.2	3,231.8	0.00	0.00	0.00
8,900.0	90.00	272.55	7,055.0	-2,403.99	-1,067.5	-3,275.1	3,331.3	0.00	0.00	0.00
9,000.0	90.00	272.55	7,055.0	-2,403.99	-1,063.1	-3,375.0	3,430.8	0.00	0.00	0.00
9,100.0	90.00	272.55	7,055.0	-2,403.99	-1,058.6	-3,474.9	3,530.3	0.00	0.00	0.00
9,200.0	90.00	272.55	7,055.0	-2,403.99	-1,054.2	-3,574.8	3,629.8	0.00	0.00	0.00
9,300.0	90.00	272.55	7,055.0	-2,403.99	-1,049.7	-3,674.7	3,729.2	0.00	0.00	0.00
9,400.0	90.00	272.55	7,055.0	-2,403.99	-1,045.3	-3,774.6	3,828.7	0.00	0.00	0.00
9,500.0	90.00	272.55	7,055.0	-2,403.99	-1,040.8	-3,874.5	3,928.2	0.00	0.00	0.00
9,600.0	90.00	272.55	7,055.0	-2,403.99	-1,036.4	-3,974.4	4,027.7	0.00	0.00	0.00
9,700.0	90.00	272.55	7,055.0	-2,403.99	-1,031.9	-4,074.3	4,127.1	0.00	0.00	0.00
9,800.0	90.00	272.55	7,055.0	-2,403.99	-1,027.5	-4,174.2	4,226.6	0.00	0.00	0.00
9,900.0	90.00	272.55	7,055.0	-2,403.99	-1,023.0	-4,274.1	4,326.1	0.00	0.00	0.00
10,000.0	90.00	272.55	7,055.0	-2,403.99	-1,018.6	-4,374.0	4,425.6	0.00	0.00	0.00
10,100.0	90.00	272.55	7,055.0	-2,403.99	-1,014.1	-4,473.9	4,525.0	0.00	0.00	0.00
10,200.0	90.00	272.55	7,055.0	-2,403.99	-1,009.7	-4,573.8	4,624.5	0.00	0.00	0.00
10,300.0	90.00	272.55	7,055.0	-2,403.99	-1,005.2	-4,673.7	4,724.0	0.00	0.00	0.00
10,400.0	90.00	272.55	7,055.0	-2,403.99	-1,000.8	-4,773.6	4,823.5	0.00	0.00	0.00
10,500.0	90.00	272.55	7,055.0	-2,403.99	-996.3	-4,873.6	4,923.0	0.00	0.00	0.00
10,600.0	90.00	272.55	7,055.0	-2,403.98	-991.9	-4,973.5	5,022.4	0.00	0.00	0.00
10,700.0	90.00	272.55	7,055.0	-2,403.98	-987.4	-5,073.4	5,121.9	0.00	0.00	0.00
10,800.0	90.00	272.55	7,055.0	-2,403.98	-983.0	-5,173.3	5,221.4	0.00	0.00	0.00
10,900.0	90.00	272.55	7,055.0	-2,403.98	-978.5	-5,273.2	5,320.9	0.00	0.00	0.00
11,000.0	90.00	272.55	7,055.0	-2,403.98	-974.1	-5,373.1	5,420.3	0.00	0.00	0.00
11,100.0	90.00	272.55	7,055.0	-2,403.98	-969.6	-5,473.0	5,519.8	0.00	0.00	0.00
11,200.0	90.00	272.55	7,055.0	-2,403.98	-965.2	-5,572.9	5,619.3	0.00	0.00	0.00
11,300.0	90.00	272.55	7,055.0	-2,403.98	-960.7	-5,672.8	5,718.8	0.00	0.00	0.00
11,400.0	90.00	272.55	7,055.0	-2,403.98	-956.3	-5,772.7	5,818.3	0.00	0.00	0.00
11,500.0	90.00	272.55	7,055.0	-2,403.98	-951.8	-5,872.6	5,917.7	0.00	0.00	0.00
11,600.0	90.00	272.55	7,055.0	-2,403.98	-947.4	-5,972.5	6,017.2	0.00	0.00	0.00
11,700.0	90.00	272.55	7,055.0	-2,403.98	-942.9	-6,072.4	6,116.7	0.00	0.00	0.00
11,800.0	90.00	272.55	7,055.0	-2,403.98	-938.5	-6,172.3	6,216.2	0.00	0.00	0.00
11,900.0	90.00	272.55	7,055.0	-2,403.98	-934.0	-6,272.2	6,315.6	0.00	0.00	0.00
12,000.0	90.00	272.55	7,055.0	-2,403.98	-929.6	-6,372.1	6,415.1	0.00	0.00	0.00
12,100.0	90.00	272.55	7,055.0	-2,403.98	-925.1	-6,472.0	6,514.6	0.00	0.00	0.00
12,200.0	90.00	272.55	7,055.0	-2,403.98	-920.7	-6,571.9	6,614.1	0.00	0.00	0.00
12,300.0	90.00	272.55	7,055.0	-2,403.98	-916.2	-6,671.8	6,713.5	0.00	0.00	0.00
12,400.0	90.00	272.55	7,055.0	-2,403.98	-911.8	-6,771.7	6,813.0	0.00	0.00	0.00
12,500.0	90.00	272.55	7,055.0	-2,403.98	-907.3	-6,871.6	6,912.5	0.00	0.00	0.00
12,600.0	90.00	272.55	7,055.0	-2,403.98	-902.9	-6,971.5	7,012.0	0.00	0.00	0.00
12,700.0	90.00	272.55	7,055.0	-2,403.98	-898.5	-7,071.4	7,111.5	0.00	0.00	0.00
12,800.0	90.00	272.55	7,055.0	-2,403.98	-894.0	-7,171.3	7,210.9	0.00	0.00	0.00
12,900.0	90.00	272.55	7,055.0	-2,403.98	-889.6	-7,271.2	7,310.4	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MT-MAPLEWOOD C4-8-7
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (SAV 802)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (SAV 802)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-MAPLEWOOD C4-8-7	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)
13,000.0	90.00	272.55	7,055.0	-2,403.98	-885.1	-7,371.1	7,409.9	0.00	0.00	0.00
13,100.0	90.00	272.55	7,055.0	-2,403.98	-880.7	-7,471.0	7,509.4	0.00	0.00	0.00
13,200.0	90.00	272.55	7,055.0	-2,403.98	-876.2	-7,570.9	7,608.8	0.00	0.00	0.00
13,300.0	90.00	272.55	7,055.0	-2,403.98	-871.8	-7,670.8	7,708.3	0.00	0.00	0.00
13,400.0	90.00	272.55	7,055.0	-2,403.98	-867.3	-7,770.7	7,807.8	0.00	0.00	0.00
13,500.0	90.00	272.55	7,055.0	-2,403.98	-862.9	-7,870.6	7,907.3	0.00	0.00	0.00
13,600.0	90.00	272.55	7,055.0	-2,403.98	-858.4	-7,970.5	8,006.8	0.00	0.00	0.00
13,700.0	90.00	272.55	7,055.0	-2,403.98	-854.0	-8,070.4	8,106.2	0.00	0.00	0.00
13,800.0	90.00	272.55	7,055.0	-2,403.98	-849.5	-8,170.3	8,205.7	0.00	0.00	0.00
13,900.0	90.00	272.55	7,055.0	-2,403.98	-845.1	-8,270.2	8,305.2	0.00	0.00	0.00
14,000.0	90.00	272.55	7,055.0	-2,403.98	-840.7	-8,370.1	8,404.7	0.00	0.00	0.00
14,100.0	90.00	272.55	7,055.0	-2,403.98	-836.2	-8,470.0	8,504.1	0.00	0.00	0.00
14,200.0	90.00	272.55	7,055.0	-2,403.98	-831.8	-8,569.9	8,603.6	0.00	0.00	0.00
14,300.0	90.00	272.55	7,055.0	-2,403.98	-827.3	-8,669.8	8,703.1	0.00	0.00	0.00
14,400.0	90.00	272.55	7,055.0	-2,403.98	-822.9	-8,769.7	8,802.6	0.00	0.00	0.00
14,500.0	90.00	272.55	7,055.0	-2,403.98	-818.4	-8,869.6	8,902.1	0.00	0.00	0.00
14,600.0	90.00	272.55	7,055.0	-2,403.98	-814.0	-8,969.5	9,001.5	0.00	0.00	0.00
14,700.0	90.00	272.55	7,055.0	-2,403.98	-809.5	-9,069.4	9,101.0	0.00	0.00	0.00
14,800.0	90.00	272.55	7,055.0	-2,403.99	-805.1	-9,169.3	9,200.5	0.00	0.00	0.00
14,900.0	90.00	272.55	7,055.0	-2,403.99	-800.6	-9,269.2	9,300.0	0.00	0.00	0.00
15,000.0	90.00	272.55	7,055.0	-2,403.99	-796.2	-9,369.1	9,399.4	0.00	0.00	0.00
15,100.0	90.00	272.55	7,055.0	-2,403.99	-791.8	-9,469.0	9,498.9	0.00	0.00	0.00
15,200.0	90.00	272.55	7,055.0	-2,403.99	-787.3	-9,568.9	9,598.4	0.00	0.00	0.00
15,300.0	90.00	272.55	7,055.0	-2,403.99	-782.9	-9,668.8	9,697.9	0.00	0.00	0.00
15,400.0	90.00	272.55	7,055.0	-2,403.99	-778.4	-9,768.7	9,797.4	0.00	0.00	0.00
15,500.0	90.00	272.55	7,055.0	-2,403.99	-774.0	-9,868.6	9,896.8	0.00	0.00	0.00
15,600.0	90.00	272.55	7,055.0	-2,403.99	-769.5	-9,968.5	9,996.3	0.00	0.00	0.00
15,700.0	90.00	272.55	7,055.0	-2,403.99	-765.1	-10,068.4	10,095.8	0.00	0.00	0.00
15,800.0	90.00	272.55	7,055.0	-2,403.99	-760.7	-10,168.3	10,195.3	0.00	0.00	0.00
15,900.0	90.00	272.55	7,055.0	-2,403.99	-756.2	-10,268.2	10,294.7	0.00	0.00	0.00
16,000.0	90.00	272.55	7,055.0	-2,403.99	-751.8	-10,368.1	10,394.2	0.00	0.00	0.00
16,100.0	90.00	272.55	7,055.0	-2,403.99	-747.3	-10,468.0	10,493.7	0.00	0.00	0.00
16,200.0	90.00	272.55	7,055.0	-2,403.99	-742.9	-10,567.9	10,593.2	0.00	0.00	0.00
16,300.0	90.00	272.55	7,055.0	-2,403.99	-738.4	-10,667.8	10,692.7	0.00	0.00	0.00
16,400.0	90.00	272.55	7,055.0	-2,403.99	-734.0	-10,767.7	10,792.1	0.00	0.00	0.00
16,500.0	90.00	272.55	7,055.0	-2,403.99	-729.5	-10,867.6	10,891.6	0.00	0.00	0.00
16,600.0	90.00	272.55	7,055.0	-2,403.99	-725.1	-10,967.5	10,991.1	0.00	0.00	0.00
16,700.0	90.00	272.55	7,055.0	-2,403.99	-720.7	-11,067.4	11,090.6	0.00	0.00	0.00
16,800.0	90.00	272.55	7,055.0	-2,404.00	-716.2	-11,167.3	11,190.0	0.00	0.00	0.00
16,900.0	90.00	272.55	7,055.0	-2,404.00	-711.8	-11,267.2	11,289.5	0.00	0.00	0.00
17,000.0	90.00	272.55	7,055.0	-2,404.00	-707.3	-11,367.1	11,389.0	0.00	0.00	0.00
17,100.0	90.00	272.55	7,055.0	-2,404.00	-702.9	-11,467.0	11,488.5	0.00	0.00	0.00
17,200.0	90.00	272.55	7,055.0	-2,404.00	-698.5	-11,566.9	11,588.0	0.00	0.00	0.00
17,300.0	90.00	272.55	7,055.0	-2,404.00	-694.0	-11,666.8	11,687.4	0.00	0.00	0.00
17,400.0	90.00	272.55	7,055.0	-2,404.00	-689.6	-11,766.7	11,786.9	0.00	0.00	0.00
BHL: 2398ft FNL & 460ft FWL of Sec 7										
17,487.2	90.00	272.55	7,055.0	-2,404.00	-685.7	-11,853.8	11,873.6	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MT-MAPLEWOOD C4-8-7
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4651.0usft (SAV 802)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4651.0usft (SAV 802)
Site:	NE NW SEC. 9 T5N R65W 6th P.M.	North Reference:	True
Well:	MT-MAPLEWOOD C4-8-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,783.6	3,613.0	PARKMAN				
4,567.8	4,302.0	SUSSEX				
5,189.3	4,848.0	SHANNON				
7,189.0	6,723.0	SHARON SPRINGS				
7,222.6	6,753.0	NIOBRARA				
7,625.0	7,015.0	FORT HAYS				
7,733.1	7,045.0	CODELL				
7,840.3	7,055.0	CODELL 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: 988ft FNL & 1753ft FWL of Sec 9
1,500.0	1,500.0	0.0	0.0	START NUDGE - SURFACE (2°/100ft BUR)
1,800.6	1,800.0	-9.0	-12.9	9 5/8" SURFACE CSG
1,865.6	1,864.7	-12.9	-18.5	START NUDGE - MAIN (2.5°/100ft BUR)
2,766.3	2,719.3	-164.3	-236.9	EOB TO 28.53° INC
5,769.0	5,357.3	-981.6	-1,415.4	END OF TANGENT
6,910.3	6,452.0	-1,140.2	-1,644.1	EOD TO VERTICAL
6,940.3	6,482.0	-1,140.2	-1,644.1	KOP (10°/100ft BUR)
7,840.3	7,055.0	-1,114.7	-2,216.5	LANDING PNT: 2161ft FNL & 460ft FEL of Sec 8
17,487.2	7,055.0	-685.7	-11,853.8	BHL: 2398ft FNL & 460ft FWL of Sec 7