

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
1N-68W-08 MAE J 14-8HZ PAD
MAE J 8-6HZ**

Plan A

Plan: Permit Rev-1

SHL Lat/Long: 40.060505/-105.028601
Survey Program: MWD+IFR

Standard Planning Report

02 November, 2018

Project: WELD-NAD83-UTMFT13N
 Site: 1N-68W-08 MAE J 14-8HZ PAD
 Well: MAE J 8-6HZ
 Wellbore: Plan A
 Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Name	Size
1500.00	1507.81	9 5/8" Csg	9-5/8
7624.00	8059.61	Top of Production	5-1/2

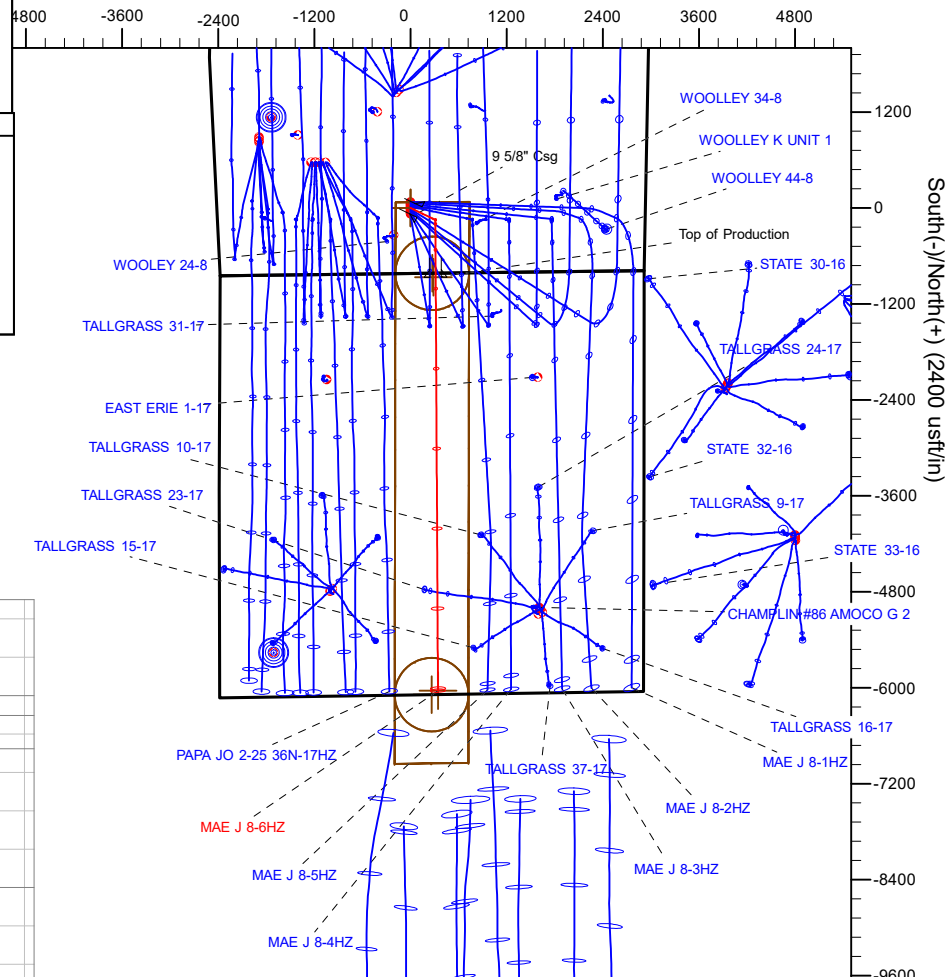
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	
3	883.33	8.00	115.70	881.60	-16.12	33.50	1.50	115.70	16.31	
4	2883.33	8.00	115.70	2862.13	-136.83	284.31	0.00	0.00	138.41	
5	3283.33	0.00	0.00	3260.84	-148.92	309.43	2.00	180.00	150.64	
6	6930.31	0.00	0.00	6907.82	-148.92	309.43	0.00	0.00	150.64	
7	8059.61	90.34	179.68	7624.00	-869.40	313.41	8.00	179.68	871.14	
8	13226.47	90.34	179.68	7593.00	-6036.09	341.94	0.00	0.00	6037.90	MAE J 8-6HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
MAE J 8-6HZ_SHL	0.00	0.00	0.00	40.060505	-105.028601
MAE J 8-6HZ_BHL	7593.00	-6036.09	341.94	40.043929	-105.027379

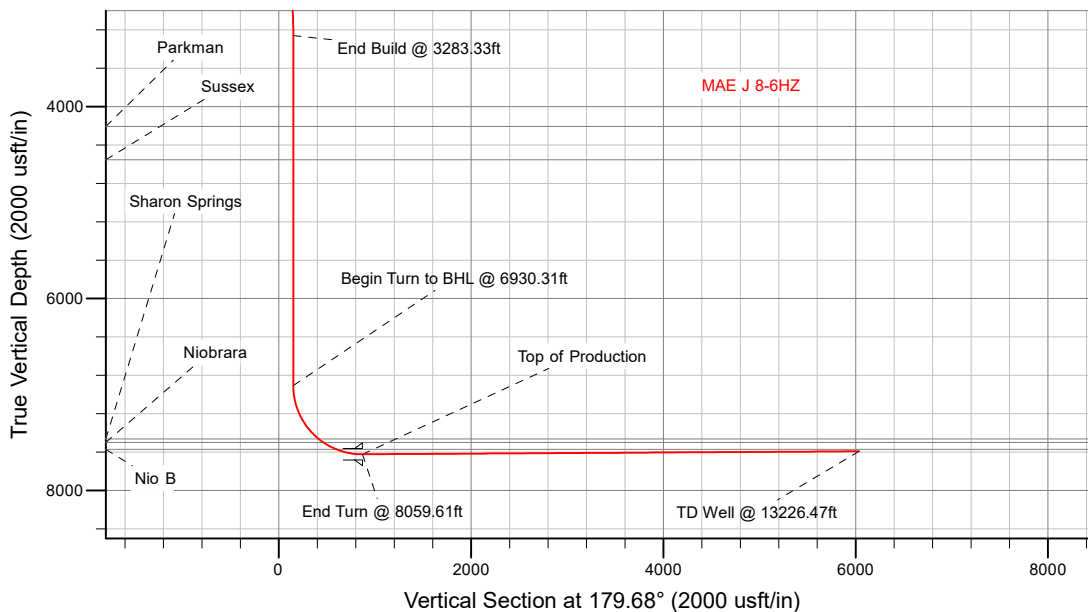
West(-)/East(+) (2400 usft/in)



SHL
 821' FSL
 2416' FWL

HEEL
 50' FNL
 2617' FEL

BHL
 50' FSL
 2568' FEL



WELL DETAILS: MAE J 8-6HZ

5083.00
 RKB = 17' @ 5100.00usft (Drilling Rig)

Plan: Permit Rev-1 (MAE J 8-6HZ/Plan A)

Date: 11/6/2018

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well MAE J 8-6HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Site:	1N-68W-08 MAE J 14-8HZ PAD	North Reference:	True
Well:	MAE J 8-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Project	WELD-NAD83-UTMFT13N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	1N-68W-08 MAE J 14-8HZ PAD				
Site Position:		Northing:	14,548,842.20 usft	Latitude:	40.060711
From:	Lat/Long	Easting:	1,632,414.30 usft	Longitude:	-105.028600
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.02 °

Well	MAE J 8-6HZ					
Well Position	+N-S	-75.01 usft	Northing:	14,548,767.19 usft	Latitude:	40.060505
	+E-W	-0.28 usft	Easting:	1,632,414.00 usft	Longitude:	-105.028601
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,083.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/31/2018	8.18	66.51	52,029.18172174

Design	Permit Rev-1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.00	0.00	0.00	179.68

Plan Survey Tool Program	Date	11/2/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,500.00	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio	
2	1,500.00	13,226.47	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio	

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Site:	1N-68W-08 MAE J 14-8HZ PAD	North Reference:	True
Well:	MAE J 8-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00	
883.33	8.00	115.70	881.60	-16.12	33.50	1.50	1.50	0.00	115.70	
2,883.33	8.00	115.70	2,862.13	-136.83	284.31	0.00	0.00	0.00	0.00	
3,283.33	0.00	0.00	3,260.84	-148.92	309.43	2.00	-2.00	0.00	180.00	
6,930.31	0.00	0.00	6,907.82	-148.92	309.43	0.00	0.00	0.00	0.00	
8,059.61	90.34	179.68	7,624.00	-869.40	313.41	8.00	8.00	15.91	179.68	
13,226.47	90.34	179.68	7,593.00	-6,036.09	341.94	0.00	0.00	0.00	0.00	MAE J 8-6HZ_BHL

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well MAE J 8-6HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Site:	1N-68W-08 MAE J 14-8HZ PAD	North Reference:	True
Well:	MAE J 8-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 350.00ft										
400.00	0.75	115.70	400.00	-0.14	0.29	0.14	1.50	1.50	1.50	0.00
500.00	2.25	115.70	499.96	-1.28	2.65	1.29	1.50	1.50	1.50	0.00
600.00	3.75	115.70	599.82	-3.55	7.37	3.59	1.50	1.50	1.50	0.00
700.00	5.25	115.70	699.51	-6.95	14.44	7.03	1.50	1.50	1.50	0.00
800.00	6.75	115.70	798.96	-11.48	23.86	11.61	1.50	1.50	1.50	0.00
883.33	8.00	115.70	881.60	-16.12	33.50	16.31	1.50	1.50	1.50	0.00
Hold Tangent @ 883.33ft										
900.00	8.00	115.70	898.11	-17.13	35.59	17.32	0.00	0.00	0.00	0.00
1,000.00	8.00	115.70	997.13	-23.16	48.13	23.43	0.00	0.00	0.00	0.00
1,075.60	8.00	115.70	1,072.00	-27.72	57.61	28.05	0.00	0.00	0.00	0.00
Fox Hills										
1,100.00	8.00	115.70	1,096.16	-29.20	60.67	29.54	0.00	0.00	0.00	0.00
1,200.00	8.00	115.70	1,195.19	-35.23	73.21	35.64	0.00	0.00	0.00	0.00
1,300.00	8.00	115.70	1,294.21	-41.27	85.75	41.75	0.00	0.00	0.00	0.00
1,400.00	8.00	115.70	1,393.24	-47.30	98.29	47.85	0.00	0.00	0.00	0.00
1,500.00	8.00	115.70	1,492.27	-53.34	110.83	53.96	0.00	0.00	0.00	0.00
1,507.81	8.00	115.70	1,500.00	-53.81	111.81	54.43	0.00	0.00	0.00	0.00
9 5/8" Csg										
1,600.00	8.00	115.70	1,591.29	-59.37	123.37	60.06	0.00	0.00	0.00	0.00
1,700.00	8.00	115.70	1,690.32	-65.41	135.91	66.17	0.00	0.00	0.00	0.00
1,800.00	8.00	115.70	1,789.35	-71.44	148.45	72.27	0.00	0.00	0.00	0.00
1,900.00	8.00	115.70	1,888.37	-77.48	160.99	78.38	0.00	0.00	0.00	0.00
2,000.00	8.00	115.70	1,987.40	-83.52	173.53	84.48	0.00	0.00	0.00	0.00
2,100.00	8.00	115.70	2,086.43	-89.55	186.07	90.59	0.00	0.00	0.00	0.00
2,200.00	8.00	115.70	2,185.46	-95.59	198.61	96.69	0.00	0.00	0.00	0.00
2,300.00	8.00	115.70	2,284.48	-101.62	211.15	102.80	0.00	0.00	0.00	0.00
2,400.00	8.00	115.70	2,383.51	-107.66	223.69	108.90	0.00	0.00	0.00	0.00
2,500.00	8.00	115.70	2,482.54	-113.69	236.24	115.01	0.00	0.00	0.00	0.00
2,600.00	8.00	115.70	2,581.56	-119.73	248.78	121.12	0.00	0.00	0.00	0.00
2,700.00	8.00	115.70	2,680.59	-125.76	261.32	127.22	0.00	0.00	0.00	0.00
2,800.00	8.00	115.70	2,779.62	-131.80	273.86	133.33	0.00	0.00	0.00	0.00
2,883.33	8.00	115.70	2,862.13	-136.83	284.31	138.41	0.00	0.00	0.00	0.00
KOP @ 2883.33ft :: DLS = 8°/100'										
2,900.00	7.67	115.70	2,878.65	-137.81	286.35	139.41	2.00	-2.00	0.00	0.00
3,000.00	5.67	115.70	2,977.97	-142.85	296.81	144.50	2.00	-2.00	0.00	0.00
3,100.00	3.67	115.70	3,077.63	-146.38	304.14	148.07	2.00	-2.00	0.00	0.00
3,200.00	1.67	115.70	3,177.52	-148.39	308.34	150.11	2.00	-2.00	0.00	0.00
3,283.33	0.00	0.00	3,260.84	-148.92	309.43	150.64	2.00	-2.00	0.00	0.00
End Build @ 3283.33ft										
3,300.00	0.00	0.00	3,277.51	-148.92	309.43	150.64	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,377.51	-148.92	309.43	150.64	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,477.51	-148.92	309.43	150.64	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,577.51	-148.92	309.43	150.64	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,677.51	-148.92	309.43	150.64	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,777.51	-148.92	309.43	150.64	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,877.51	-148.92	309.43	150.64	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	3,977.51	-148.92	309.43	150.64	0.00	0.00	0.00	0.00

Corporate Planning Report

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Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
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Well:	MAE J 8-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,100.00	0.00	0.00	4,077.51	-148.92	309.43	150.64	0.00	0.00	0.00
4,200.00	0.00	0.00	4,177.51	-148.92	309.43	150.64	0.00	0.00	0.00
4,229.49	0.00	0.00	4,207.00	-148.92	309.43	150.64	0.00	0.00	0.00
Parkman									
4,300.00	0.00	0.00	4,277.51	-148.92	309.43	150.64	0.00	0.00	0.00
4,400.00	0.00	0.00	4,377.51	-148.92	309.43	150.64	0.00	0.00	0.00
4,500.00	0.00	0.00	4,477.51	-148.92	309.43	150.64	0.00	0.00	0.00
4,577.49	0.00	0.00	4,555.00	-148.92	309.43	150.64	0.00	0.00	0.00
Sussex									
4,600.00	0.00	0.00	4,577.51	-148.92	309.43	150.64	0.00	0.00	0.00
4,700.00	0.00	0.00	4,677.51	-148.92	309.43	150.64	0.00	0.00	0.00
4,800.00	0.00	0.00	4,777.51	-148.92	309.43	150.64	0.00	0.00	0.00
4,900.00	0.00	0.00	4,877.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,000.00	0.00	0.00	4,977.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,100.00	0.00	0.00	5,077.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,200.00	0.00	0.00	5,177.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,300.00	0.00	0.00	5,277.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,400.00	0.00	0.00	5,377.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,500.00	0.00	0.00	5,477.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,600.00	0.00	0.00	5,577.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,700.00	0.00	0.00	5,677.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,800.00	0.00	0.00	5,777.51	-148.92	309.43	150.64	0.00	0.00	0.00
5,900.00	0.00	0.00	5,877.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,000.00	0.00	0.00	5,977.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,100.00	0.00	0.00	6,077.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,200.00	0.00	0.00	6,177.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,300.00	0.00	0.00	6,277.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,400.00	0.00	0.00	6,377.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,500.00	0.00	0.00	6,477.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,600.00	0.00	0.00	6,577.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,700.00	0.00	0.00	6,677.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,800.00	0.00	0.00	6,777.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,900.00	0.00	0.00	6,877.51	-148.92	309.43	150.64	0.00	0.00	0.00
6,930.31	0.00	0.00	6,907.82	-148.92	309.43	150.64	0.00	0.00	0.00
Begin Turn to BHL @ 6930.31ft									
7,000.00	5.58	179.68	6,977.40	-152.31	309.45	154.03	8.00	8.00	0.00
7,100.00	13.58	179.68	7,075.92	-168.93	309.54	170.65	8.00	8.00	0.00
7,200.00	21.58	179.68	7,171.18	-199.10	309.71	200.82	8.00	8.00	0.00
7,300.00	29.58	179.68	7,261.31	-242.23	309.94	243.96	8.00	8.00	0.00
7,400.00	37.58	179.68	7,344.56	-297.49	310.25	299.22	8.00	8.00	0.00
7,500.00	45.58	179.68	7,419.30	-363.79	310.62	365.52	8.00	8.00	0.00
7,568.75	51.08	179.68	7,465.00	-415.13	310.90	416.86	8.00	8.00	0.00
Sharon Springs									
7,600.00	53.58	179.68	7,484.10	-439.86	311.04	441.59	8.00	8.00	0.00
7,627.51	55.78	179.68	7,500.00	-462.30	311.16	464.03	8.00	8.00	0.00
Niobrara									
7,700.00	61.58	179.68	7,537.67	-524.20	311.50	525.93	8.00	8.00	0.00
7,783.36	68.24	179.68	7,573.00	-599.65	311.92	601.38	8.00	8.00	0.00
Nio B									
7,800.00	69.58	179.68	7,578.99	-615.17	312.00	616.90	8.00	8.00	0.00
7,900.00	77.58	179.68	7,607.24	-711.01	312.53	712.75	8.00	8.00	0.00
8,000.00	85.58	179.68	7,621.88	-809.85	313.08	811.59	8.00	8.00	0.00
8,059.61	90.34	179.68	7,624.00	-869.41	313.41	871.14	8.00	8.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well MAE J 8-6HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Site:	1N-68W-08 MAE J 14-8HZ PAD	North Reference:	True
Well:	MAE J 8-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
End Turn @ 8059.61ft - Top of Production									
8,100.00	90.34	179.68	7,623.76	-909.79	313.63	911.53	0.00	0.00	0.00
8,200.00	90.34	179.68	7,623.16	-1,009.79	314.18	1,011.53	0.00	0.00	0.00
8,300.00	90.34	179.68	7,622.56	-1,109.79	314.74	1,111.53	0.00	0.00	0.00
8,400.00	90.34	179.68	7,621.96	-1,209.78	315.29	1,211.53	0.00	0.00	0.00
8,500.00	90.34	179.68	7,621.36	-1,309.78	315.84	1,311.52	0.00	0.00	0.00
8,600.00	90.34	179.68	7,620.76	-1,409.78	316.39	1,411.52	0.00	0.00	0.00
8,700.00	90.34	179.68	7,620.16	-1,509.77	316.94	1,511.52	0.00	0.00	0.00
8,800.00	90.34	179.68	7,619.56	-1,609.77	317.50	1,611.52	0.00	0.00	0.00
8,900.00	90.34	179.68	7,618.96	-1,709.77	318.05	1,711.52	0.00	0.00	0.00
9,000.00	90.34	179.68	7,618.36	-1,809.76	318.60	1,811.51	0.00	0.00	0.00
9,100.00	90.34	179.68	7,617.76	-1,909.76	319.15	1,911.51	0.00	0.00	0.00
9,200.00	90.34	179.68	7,617.16	-2,009.76	319.71	2,011.51	0.00	0.00	0.00
9,300.00	90.34	179.68	7,616.56	-2,109.75	320.26	2,111.51	0.00	0.00	0.00
9,400.00	90.34	179.68	7,615.96	-2,209.75	320.81	2,211.51	0.00	0.00	0.00
9,500.00	90.34	179.68	7,615.36	-2,309.75	321.36	2,311.51	0.00	0.00	0.00
9,600.00	90.34	179.68	7,614.76	-2,409.74	321.91	2,411.50	0.00	0.00	0.00
9,700.00	90.34	179.68	7,614.16	-2,509.74	322.47	2,511.50	0.00	0.00	0.00
9,800.00	90.34	179.68	7,613.56	-2,609.74	323.02	2,611.50	0.00	0.00	0.00
9,900.00	90.34	179.68	7,612.96	-2,709.73	323.57	2,711.50	0.00	0.00	0.00
10,000.00	90.34	179.68	7,612.36	-2,809.73	324.12	2,811.50	0.00	0.00	0.00
10,100.00	90.34	179.68	7,611.76	-2,909.73	324.68	2,911.49	0.00	0.00	0.00
10,200.00	90.34	179.68	7,611.16	-3,009.72	325.23	3,011.49	0.00	0.00	0.00
10,300.00	90.34	179.68	7,610.56	-3,109.72	325.78	3,111.49	0.00	0.00	0.00
10,400.00	90.34	179.68	7,609.96	-3,209.72	326.33	3,211.49	0.00	0.00	0.00
10,500.00	90.34	179.68	7,609.36	-3,309.71	326.88	3,311.49	0.00	0.00	0.00
10,600.00	90.34	179.68	7,608.76	-3,409.71	327.44	3,411.49	0.00	0.00	0.00
10,700.00	90.34	179.68	7,608.16	-3,509.71	327.99	3,511.48	0.00	0.00	0.00
10,800.00	90.34	179.68	7,607.56	-3,609.70	328.54	3,611.48	0.00	0.00	0.00
10,900.00	90.34	179.68	7,606.96	-3,709.70	329.09	3,711.48	0.00	0.00	0.00
11,000.00	90.34	179.68	7,606.36	-3,809.70	329.65	3,811.48	0.00	0.00	0.00
11,100.00	90.34	179.68	7,605.76	-3,909.69	330.20	3,911.48	0.00	0.00	0.00
11,200.00	90.34	179.68	7,605.16	-4,009.69	330.75	4,011.47	0.00	0.00	0.00
11,300.00	90.34	179.68	7,604.56	-4,109.69	331.30	4,111.47	0.00	0.00	0.00
11,400.00	90.34	179.68	7,603.96	-4,209.68	331.85	4,211.47	0.00	0.00	0.00
11,500.00	90.34	179.68	7,603.36	-4,309.68	332.41	4,311.47	0.00	0.00	0.00
11,600.00	90.34	179.68	7,602.76	-4,409.68	332.96	4,411.47	0.00	0.00	0.00
11,700.00	90.34	179.68	7,602.16	-4,509.67	333.51	4,511.47	0.00	0.00	0.00
11,800.00	90.34	179.68	7,601.56	-4,609.67	334.06	4,611.46	0.00	0.00	0.00
11,900.00	90.34	179.68	7,600.96	-4,709.67	334.62	4,711.46	0.00	0.00	0.00
12,000.00	90.34	179.68	7,600.36	-4,809.66	335.17	4,811.46	0.00	0.00	0.00
12,100.00	90.34	179.68	7,599.76	-4,909.66	335.72	4,911.46	0.00	0.00	0.00
12,200.00	90.34	179.68	7,599.16	-5,009.66	336.27	5,011.46	0.00	0.00	0.00
12,300.00	90.34	179.68	7,598.56	-5,109.65	336.82	5,111.45	0.00	0.00	0.00
12,400.00	90.34	179.68	7,597.96	-5,209.65	337.38	5,211.45	0.00	0.00	0.00
12,500.00	90.34	179.68	7,597.36	-5,309.65	337.93	5,311.45	0.00	0.00	0.00
12,600.00	90.34	179.68	7,596.76	-5,409.64	338.48	5,411.45	0.00	0.00	0.00
12,700.00	90.34	179.68	7,596.16	-5,509.64	339.03	5,511.45	0.00	0.00	0.00
12,800.00	90.34	179.68	7,595.56	-5,609.64	339.58	5,611.45	0.00	0.00	0.00
12,900.00	90.34	179.68	7,594.96	-5,709.63	340.14	5,711.44	0.00	0.00	0.00
13,000.00	90.34	179.68	7,594.36	-5,809.63	340.69	5,811.44	0.00	0.00	0.00
13,100.00	90.34	179.68	7,593.76	-5,909.63	341.24	5,911.44	0.00	0.00	0.00
13,200.00	90.34	179.68	7,593.16	-6,009.62	341.79	6,011.44	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well MAE J 8-6HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5100.00usft (Drilling Rig)
Site:	1N-68W-08 MAE J 14-8HZ PAD	North Reference:	True
Well:	MAE J 8-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,226.47	90.34	179.68	7,593.00	-6,036.09	341.94	6,037.90	0.00	0.00	0.00
TD Well @ 13226.47ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,507.81	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,059.61	7,624.00	Top of Production	5-1/2	7-7/8	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,075.60	1,072.00	Fox Hills			
4,229.49	4,207.00	Parkman			
4,577.49	4,555.00	Sussex			
7,568.75	7,465.00	Sharon Springs			
7,627.51	7,500.00	Niobrara			
7,783.36	7,573.00	Nio B			

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
350.00	350.00	0.00	0.00	Begin Nudge @ 350.00ft	
883.33	881.60	-16.12	33.50	Hold Tangent @ 883.33ft	
2,883.33	2,862.13	-136.83	284.31	KOP @ 2883.33ft :: DLS = 8°/100'	
3,283.33	3,260.84	-148.92	309.43	End Build @ 3283.33ft	
6,930.31	6,907.82	-148.92	309.43	Begin Turn to BHL @ 6930.31ft	
8,059.61	7,624.00	-869.40	313.41	End Turn @ 8059.61ft	
13,226.47	7,593.00	-6,036.09	341.94	TD Well @ 13226.47ft	