

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
1N-67W-10 JZM 13-10HZ Pad
JZM STATE 30N-3HZ**

Plan A

Plan: Permit Rev-1

Standard Planning Report

19 August, 2015

Project: WELD-NAD83-UTMFT13N

Site: 1N-67W-10 JZM 13-10HZ Pad

Well: JZM STATE 30N-3HZ

Wellbore: Plan A

Design: Permit Rev-1

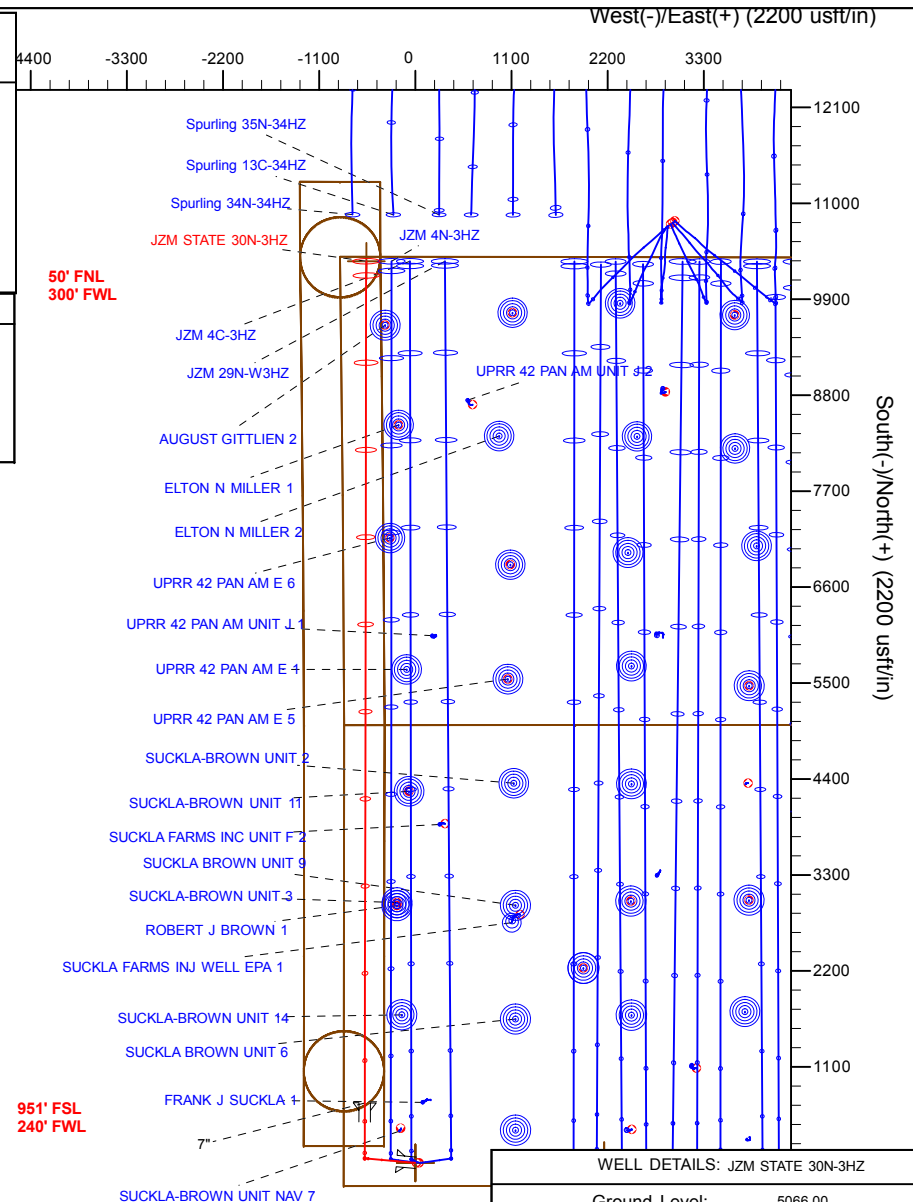
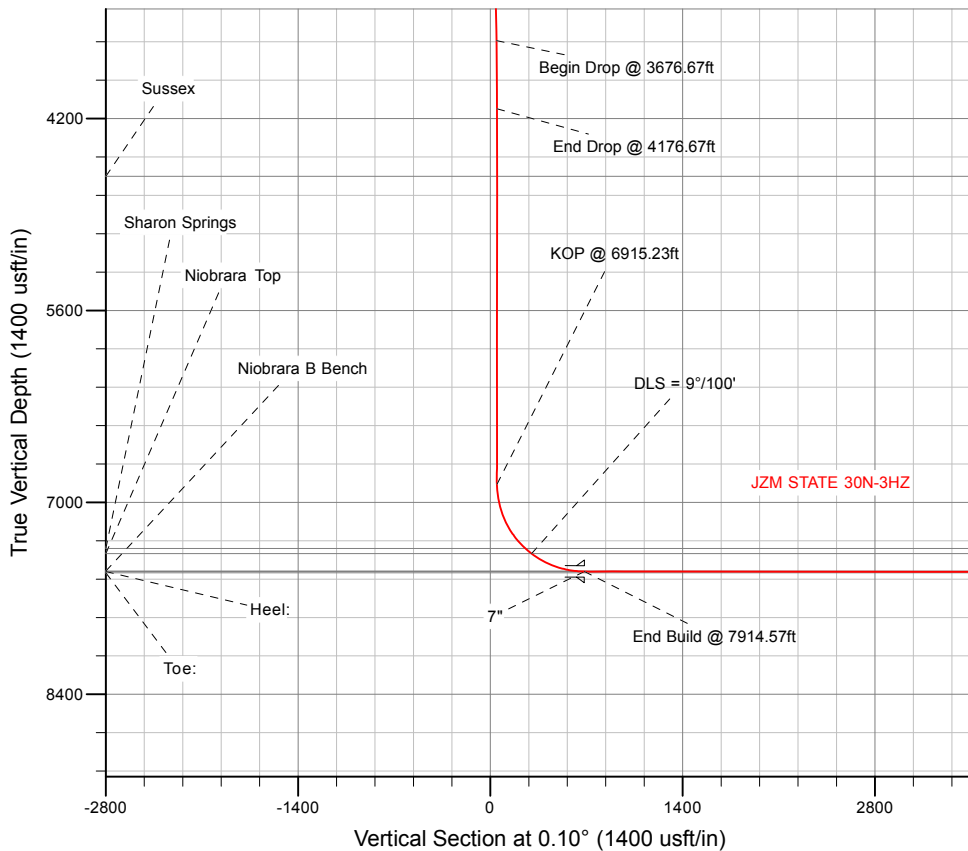
US ROCKIES WATTENBERG PLANNING

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	916.67	10.00	275.00	913.29	5.06	-57.81	1.50	275.00	4.96	
4	3676.67	10.00	275.00	3631.36	46.83	-535.25	0.00	0.00	45.89	
5	4176.67	0.00	0.00	4128.82	50.62	-578.61	2.00	180.00	49.61	
6	6915.23	0.00	0.00	6867.38	50.62	-578.61	0.00	0.00	49.61	
7	7914.57	89.94	0.10	7504.00	686.58	-577.53	9.00	0.10	685.57	
8	17563.55	89.94	0.10	7514.00	10335.55	-561.07	0.00	0.00	10334.55	JZM STATE 30N-3HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
JZM STATE 30N-3HZ_SHL	0.00	0.00	0.00	40.059001	-104.883389	Point
JZM STATE 30N-3HZ_BHL	7514.00	10335.55	-561.07	40.087384	-104.885395	Point



WELL DETAILS: JZM STATE 30N-3HZ	
Ground Level:	5066.00
RKB = 17' @ 5083.00usft (D Rig)	
Plan: Permit Rev-1 (JZM STATE 30N-3HZ/Plan A)	
Created By: Clint Eshelman	Date: 8/19/2015
Reviewed: _____	Date: _____

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	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-67W-10 JZM 13-10HZ Pad			
Site Position:		Northing:	14,548,239.60 usft
From:	Lat/Long	Easting:	1,673,045.56 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	40.059001
		Longitude:	-104.883389
		Grid Convergence:	0.08 °

Well JZM STATE 30N-3HZ			
Well Position	+N/-S	0.00 usft	Northing: 14,548,239.60 usft
	+E/-W	0.00 usft	Easting: 1,673,045.56 usft
Position Uncertainty		3.28 usft	Wellhead Elevation: 0.00 usft
			Latitude: 40.059001
			Longitude: -104.883389
			Ground Level: 5,066.00 usft

Wellbore Plan A					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/19/2015	8.34	66.61	52,498

Design Permit Rev-1				
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	0.10

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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
916.67	10.00	275.00	913.29	5.06	-57.81	1.50	1.50	0.00	275.00	
3,676.67	10.00	275.00	3,631.36	46.83	-535.25	0.00	0.00	0.00	0.00	
4,176.67	0.00	0.00	4,128.82	50.62	-578.61	2.00	-2.00	0.00	180.00	
6,915.23	0.00	0.00	6,867.38	50.62	-578.61	0.00	0.00	0.00	0.00	
7,914.57	89.94	0.10	7,504.00	686.58	-577.53	9.00	9.00	0.01	0.10	
17,563.55	89.94	0.10	7,514.00	10,335.55	-561.07	0.00	0.00	0.00	0.00	JZM STATE 30N-3HZ

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 250.00ft										
300.00	0.75	275.00	300.00	0.03	-0.33	0.03	1.50	1.50	0.00	
400.00	2.25	275.00	399.96	0.26	-2.93	0.25	1.50	1.50	0.00	
500.00	3.75	275.00	499.82	0.71	-8.15	0.70	1.50	1.50	0.00	
600.00	5.25	275.00	599.51	1.40	-15.96	1.37	1.50	1.50	0.00	
700.00	6.75	275.00	698.96	2.31	-26.38	2.26	1.50	1.50	0.00	
800.00	8.25	275.00	798.10	3.45	-39.38	3.38	1.50	1.50	0.00	
900.00	9.75	275.00	896.87	4.81	-54.96	4.71	1.50	1.50	0.00	
916.67	10.00	275.00	913.29	5.06	-57.81	4.96	1.50	1.50	0.00	
End Nudge @ 916.67ft										
1,000.00	10.00	275.00	995.35	6.32	-72.22	6.19	0.00	0.00	0.00	
1,100.00	10.00	275.00	1,093.84	7.83	-89.52	7.68	0.00	0.00	0.00	
1,200.00	10.00	275.00	1,192.32	9.35	-106.82	9.16	0.00	0.00	0.00	
1,300.00	10.00	275.00	1,290.80	10.86	-124.12	10.64	0.00	0.00	0.00	
1,386.52	10.00	275.00	1,376.00	12.17	-139.09	11.93	0.00	0.00	0.00	
Fox Hills										
1,400.00	10.00	275.00	1,389.28	12.37	-141.42	12.13	0.00	0.00	0.00	
1,500.00	10.00	275.00	1,487.76	13.89	-158.72	13.61	0.00	0.00	0.00	
1,600.00	10.00	275.00	1,586.24	15.40	-176.02	15.09	0.00	0.00	0.00	
1,700.00	10.00	275.00	1,684.72	16.91	-193.32	16.58	0.00	0.00	0.00	
1,800.00	10.00	275.00	1,783.20	18.43	-210.61	18.06	0.00	0.00	0.00	
1,817.06	10.00	275.00	1,800.00	18.68	-213.57	18.31	0.00	0.00	0.00	
9 5/8"										
1,900.00	10.00	275.00	1,881.68	19.94	-227.91	19.54	0.00	0.00	0.00	
2,000.00	10.00	275.00	1,980.16	21.45	-245.21	21.03	0.00	0.00	0.00	
2,100.00	10.00	275.00	2,078.64	22.97	-262.51	22.51	0.00	0.00	0.00	
2,200.00	10.00	275.00	2,177.12	24.48	-279.81	23.99	0.00	0.00	0.00	
2,300.00	10.00	275.00	2,275.60	25.99	-297.11	25.48	0.00	0.00	0.00	
2,400.00	10.00	275.00	2,374.09	27.51	-314.41	26.96	0.00	0.00	0.00	
2,500.00	10.00	275.00	2,472.57	29.02	-331.71	28.44	0.00	0.00	0.00	
2,600.00	10.00	275.00	2,571.05	30.53	-349.00	29.92	0.00	0.00	0.00	
2,700.00	10.00	275.00	2,669.53	32.05	-366.30	31.41	0.00	0.00	0.00	
2,800.00	10.00	275.00	2,768.01	33.56	-383.60	32.89	0.00	0.00	0.00	
2,900.00	10.00	275.00	2,866.49	35.07	-400.90	34.37	0.00	0.00	0.00	
3,000.00	10.00	275.00	2,964.97	36.59	-418.20	35.86	0.00	0.00	0.00	
3,100.00	10.00	275.00	3,063.45	38.10	-435.50	37.34	0.00	0.00	0.00	
3,200.00	10.00	275.00	3,161.93	39.61	-452.80	38.82	0.00	0.00	0.00	
3,300.00	10.00	275.00	3,260.41	41.13	-470.10	40.31	0.00	0.00	0.00	
3,400.00	10.00	275.00	3,358.89	42.64	-487.39	41.79	0.00	0.00	0.00	
3,500.00	10.00	275.00	3,457.37	44.15	-504.69	43.27	0.00	0.00	0.00	
3,600.00	10.00	275.00	3,555.85	45.67	-521.99	44.76	0.00	0.00	0.00	
3,676.67	10.00	275.00	3,631.36	46.83	-535.26	45.89	0.00	0.00	0.00	
Begin Drop @ 3676.67ft										
3,700.00	9.53	275.00	3,654.35	47.17	-539.20	46.23	2.00	-2.00	0.00	
3,800.00	7.53	275.00	3,753.24	48.47	-553.98	47.50	2.00	-2.00	0.00	
3,900.00	5.53	275.00	3,852.59	49.46	-565.31	48.47	2.00	-2.00	0.00	
4,000.00	3.53	275.00	3,952.27	50.15	-573.19	49.15	2.00	-2.00	0.00	
4,100.00	1.53	275.00	4,052.16	50.53	-577.59	49.52	2.00	-2.00	0.00	
4,176.67	0.00	0.00	4,128.83	50.62	-578.61	49.61	2.00	-2.00	0.00	

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	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 Drop @ 4176.67ft										
4,200.00	0.00	0.00	4,152.16	50.62	-578.61	49.61	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,252.16	50.62	-578.61	49.61	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,352.16	50.62	-578.61	49.61	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,452.16	50.62	-578.61	49.61	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,552.16	50.62	-578.61	49.61	0.00	0.00	0.00	
4,669.84	0.00	0.00	4,622.00	50.62	-578.61	49.61	0.00	0.00	0.00	
Sussex										
4,700.00	0.00	0.00	4,652.16	50.62	-578.61	49.61	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,752.16	50.62	-578.61	49.61	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,852.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,952.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,052.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,152.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,252.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,352.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,452.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,552.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,652.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,752.16	50.62	-578.61	49.61	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,852.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,952.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,052.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,152.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,252.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,352.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,452.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,552.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,652.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,752.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,852.16	50.62	-578.61	49.61	0.00	0.00	0.00	
6,915.23	0.00	0.00	6,867.39	50.62	-578.61	49.61	0.00	0.00	0.00	
KOP @ 6915.23ft										
7,000.00	7.63	0.10	6,951.91	56.26	-578.60	55.25	9.00	9.00	0.00	
7,100.00	16.63	0.10	7,049.57	77.25	-578.57	76.24	9.00	9.00	0.00	
7,200.00	25.63	0.10	7,142.75	113.26	-578.50	112.25	9.00	9.00	0.00	
7,300.00	34.63	0.10	7,229.15	163.40	-578.42	162.39	9.00	9.00	0.00	
7,400.00	43.63	0.10	7,306.65	226.45	-578.31	225.44	9.00	9.00	0.00	
7,442.92	47.49	0.10	7,336.69	257.09	-578.26	256.08	9.00	9.00	0.00	
Sharon Springs										
7,500.00	52.63	0.10	7,373.32	300.84	-578.18	299.83	9.00	9.00	0.00	
DLS = 9°/100'										
7,500.61	52.68	0.10	7,373.69	301.32	-578.18	300.31	9.00	9.00	0.00	
Niobrara Top										
7,600.00	61.63	0.10	7,427.54	384.74	-578.04	383.73	9.00	9.00	0.00	
7,700.00	70.63	0.10	7,467.97	476.09	-577.89	475.08	9.00	9.00	0.00	
7,800.00	79.63	0.10	7,493.60	572.64	-577.72	571.63	9.00	9.00	0.00	
7,860.61	85.08	0.10	7,501.66	632.69	-577.62	631.68	9.00	9.00	0.00	
Niobrara B Bench										
7,900.00	88.63	0.10	7,503.82	672.02	-577.55	671.01	9.00	9.00	0.00	
7,914.57	89.94	0.10	7,504.00	686.58	-577.53	685.58	9.00	9.00	0.00	
End Build @ 7914.57ft - Heel: - 7"										
8,000.00	89.94	0.10	7,504.09	772.01	-577.38	771.01	0.00	0.00	0.00	

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	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)
8,100.00	89.94	0.10	7,504.19	872.01	-577.21	871.01	0.00	0.00	0.00
8,200.00	89.94	0.10	7,504.30	972.01	-577.04	971.00	0.00	0.00	0.00
8,300.00	89.94	0.10	7,504.40	1,072.01	-576.87	1,071.00	0.00	0.00	0.00
8,400.00	89.94	0.10	7,504.50	1,172.01	-576.70	1,171.00	0.00	0.00	0.00
8,500.00	89.94	0.10	7,504.61	1,272.01	-576.53	1,271.00	0.00	0.00	0.00
8,600.00	89.94	0.10	7,504.71	1,372.01	-576.36	1,371.00	0.00	0.00	0.00
8,700.00	89.94	0.10	7,504.82	1,472.01	-576.19	1,471.00	0.00	0.00	0.00
8,800.00	89.94	0.10	7,504.92	1,572.01	-576.02	1,571.00	0.00	0.00	0.00
8,900.00	89.94	0.10	7,505.02	1,672.01	-575.85	1,671.00	0.00	0.00	0.00
9,000.00	89.94	0.10	7,505.13	1,772.01	-575.68	1,771.00	0.00	0.00	0.00
9,100.00	89.94	0.10	7,505.23	1,872.01	-575.50	1,871.00	0.00	0.00	0.00
9,200.00	89.94	0.10	7,505.33	1,972.01	-575.33	1,971.00	0.00	0.00	0.00
9,300.00	89.94	0.10	7,505.44	2,072.01	-575.16	2,071.00	0.00	0.00	0.00
9,400.00	89.94	0.10	7,505.54	2,172.01	-574.99	2,171.00	0.00	0.00	0.00
9,500.00	89.94	0.10	7,505.64	2,272.01	-574.82	2,271.00	0.00	0.00	0.00
9,600.00	89.94	0.10	7,505.75	2,372.01	-574.65	2,371.00	0.00	0.00	0.00
9,700.00	89.94	0.10	7,505.85	2,472.01	-574.48	2,471.00	0.00	0.00	0.00
9,800.00	89.94	0.10	7,505.96	2,572.01	-574.31	2,571.00	0.00	0.00	0.00
9,900.00	89.94	0.10	7,506.06	2,672.01	-574.14	2,671.00	0.00	0.00	0.00
10,000.00	89.94	0.10	7,506.16	2,772.01	-573.97	2,771.00	0.00	0.00	0.00
10,100.00	89.94	0.10	7,506.27	2,872.01	-573.80	2,871.00	0.00	0.00	0.00
10,200.00	89.94	0.10	7,506.37	2,972.01	-573.63	2,971.00	0.00	0.00	0.00
10,300.00	89.94	0.10	7,506.47	3,072.01	-573.46	3,071.00	0.00	0.00	0.00
10,400.00	89.94	0.10	7,506.58	3,172.01	-573.29	3,171.00	0.00	0.00	0.00
10,500.00	89.94	0.10	7,506.68	3,272.01	-573.12	3,271.00	0.00	0.00	0.00
10,600.00	89.94	0.10	7,506.78	3,372.01	-572.95	3,371.00	0.00	0.00	0.00
10,700.00	89.94	0.10	7,506.89	3,472.01	-572.78	3,471.00	0.00	0.00	0.00
10,800.00	89.94	0.10	7,506.99	3,572.01	-572.61	3,571.00	0.00	0.00	0.00
10,900.00	89.94	0.10	7,507.10	3,672.01	-572.43	3,671.00	0.00	0.00	0.00
11,000.00	89.94	0.10	7,507.20	3,772.01	-572.26	3,771.00	0.00	0.00	0.00
11,100.00	89.94	0.10	7,507.30	3,872.01	-572.09	3,871.00	0.00	0.00	0.00
11,200.00	89.94	0.10	7,507.41	3,972.01	-571.92	3,971.00	0.00	0.00	0.00
11,300.00	89.94	0.10	7,507.51	4,072.01	-571.75	4,071.00	0.00	0.00	0.00
11,400.00	89.94	0.10	7,507.61	4,172.01	-571.58	4,171.00	0.00	0.00	0.00
11,500.00	89.94	0.10	7,507.72	4,272.01	-571.41	4,271.00	0.00	0.00	0.00
11,600.00	89.94	0.10	7,507.82	4,372.01	-571.24	4,371.00	0.00	0.00	0.00
11,700.00	89.94	0.10	7,507.92	4,472.01	-571.07	4,471.00	0.00	0.00	0.00
11,800.00	89.94	0.10	7,508.03	4,572.01	-570.90	4,571.00	0.00	0.00	0.00
11,900.00	89.94	0.10	7,508.13	4,672.01	-570.73	4,671.00	0.00	0.00	0.00
12,000.00	89.94	0.10	7,508.24	4,772.01	-570.56	4,771.00	0.00	0.00	0.00
12,100.00	89.94	0.10	7,508.34	4,872.01	-570.39	4,871.00	0.00	0.00	0.00
12,200.00	89.94	0.10	7,508.44	4,972.01	-570.22	4,971.00	0.00	0.00	0.00
12,300.00	89.94	0.10	7,508.55	5,072.01	-570.05	5,071.00	0.00	0.00	0.00
12,400.00	89.94	0.10	7,508.65	5,172.01	-569.88	5,171.00	0.00	0.00	0.00
12,500.00	89.94	0.10	7,508.75	5,272.01	-569.71	5,271.00	0.00	0.00	0.00
12,600.00	89.94	0.10	7,508.86	5,372.00	-569.54	5,371.00	0.00	0.00	0.00
12,700.00	89.94	0.10	7,508.96	5,472.00	-569.36	5,471.00	0.00	0.00	0.00
12,800.00	89.94	0.10	7,509.06	5,572.00	-569.19	5,571.00	0.00	0.00	0.00
12,900.00	89.94	0.10	7,509.17	5,672.00	-569.02	5,671.00	0.00	0.00	0.00
13,000.00	89.94	0.10	7,509.27	5,772.00	-568.85	5,771.00	0.00	0.00	0.00
13,100.00	89.94	0.10	7,509.37	5,872.00	-568.68	5,871.00	0.00	0.00	0.00
13,200.00	89.94	0.10	7,509.48	5,972.00	-568.51	5,971.00	0.00	0.00	0.00
13,300.00	89.94	0.10	7,509.58	6,072.00	-568.34	6,071.00	0.00	0.00	0.00
13,400.00	89.94	0.10	7,509.69	6,172.00	-568.17	6,171.00	0.00	0.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	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)
13,500.00	89.94	0.10	7,509.79	6,272.00	-568.00	6,271.00	0.00	0.00	0.00
13,600.00	89.94	0.10	7,509.89	6,372.00	-567.83	6,371.00	0.00	0.00	0.00
13,700.00	89.94	0.10	7,510.00	6,472.00	-567.66	6,471.00	0.00	0.00	0.00
13,800.00	89.94	0.10	7,510.10	6,572.00	-567.49	6,571.00	0.00	0.00	0.00
13,900.00	89.94	0.10	7,510.20	6,672.00	-567.32	6,671.00	0.00	0.00	0.00
14,000.00	89.94	0.10	7,510.31	6,772.00	-567.15	6,771.00	0.00	0.00	0.00
14,100.00	89.94	0.10	7,510.41	6,872.00	-566.98	6,871.00	0.00	0.00	0.00
14,200.00	89.94	0.10	7,510.51	6,972.00	-566.81	6,971.00	0.00	0.00	0.00
14,300.00	89.94	0.10	7,510.62	7,072.00	-566.64	7,071.00	0.00	0.00	0.00
14,400.00	89.94	0.10	7,510.72	7,172.00	-566.47	7,171.00	0.00	0.00	0.00
14,500.00	89.94	0.10	7,510.83	7,272.00	-566.29	7,271.00	0.00	0.00	0.00
14,600.00	89.94	0.10	7,510.93	7,372.00	-566.12	7,371.00	0.00	0.00	0.00
14,700.00	89.94	0.10	7,511.03	7,472.00	-565.95	7,471.00	0.00	0.00	0.00
14,800.00	89.94	0.10	7,511.14	7,572.00	-565.78	7,571.00	0.00	0.00	0.00
14,900.00	89.94	0.10	7,511.24	7,672.00	-565.61	7,671.00	0.00	0.00	0.00
15,000.00	89.94	0.10	7,511.34	7,772.00	-565.44	7,771.00	0.00	0.00	0.00
15,100.00	89.94	0.10	7,511.45	7,872.00	-565.27	7,871.00	0.00	0.00	0.00
15,200.00	89.94	0.10	7,511.55	7,972.00	-565.10	7,971.00	0.00	0.00	0.00
15,300.00	89.94	0.10	7,511.65	8,072.00	-564.93	8,071.00	0.00	0.00	0.00
15,400.00	89.94	0.10	7,511.76	8,172.00	-564.76	8,171.00	0.00	0.00	0.00
15,500.00	89.94	0.10	7,511.86	8,272.00	-564.59	8,271.00	0.00	0.00	0.00
15,600.00	89.94	0.10	7,511.97	8,372.00	-564.42	8,371.00	0.00	0.00	0.00
15,700.00	89.94	0.10	7,512.07	8,472.00	-564.25	8,471.00	0.00	0.00	0.00
15,800.00	89.94	0.10	7,512.17	8,572.00	-564.08	8,571.00	0.00	0.00	0.00
15,900.00	89.94	0.10	7,512.28	8,672.00	-563.91	8,671.00	0.00	0.00	0.00
16,000.00	89.94	0.10	7,512.38	8,772.00	-563.74	8,771.00	0.00	0.00	0.00
16,100.00	89.94	0.10	7,512.48	8,872.00	-563.57	8,871.00	0.00	0.00	0.00
16,200.00	89.94	0.10	7,512.59	8,972.00	-563.40	8,971.00	0.00	0.00	0.00
16,300.00	89.94	0.10	7,512.69	9,072.00	-563.22	9,071.00	0.00	0.00	0.00
16,400.00	89.94	0.10	7,512.79	9,172.00	-563.05	9,171.00	0.00	0.00	0.00
16,500.00	89.94	0.10	7,512.90	9,272.00	-562.88	9,271.00	0.00	0.00	0.00
16,600.00	89.94	0.10	7,513.00	9,372.00	-562.71	9,371.00	0.00	0.00	0.00
16,700.00	89.94	0.10	7,513.11	9,472.00	-562.54	9,471.00	0.00	0.00	0.00
16,800.00	89.94	0.10	7,513.21	9,572.00	-562.37	9,571.00	0.00	0.00	0.00
16,900.00	89.94	0.10	7,513.31	9,672.00	-562.20	9,671.00	0.00	0.00	0.00
17,000.00	89.94	0.10	7,513.42	9,772.00	-562.03	9,771.00	0.00	0.00	0.00
17,100.00	89.94	0.10	7,513.52	9,872.00	-561.86	9,871.00	0.00	0.00	0.00
17,200.00	89.94	0.10	7,513.62	9,972.00	-561.69	9,971.00	0.00	0.00	0.00
17,300.00	89.94	0.10	7,513.73	10,072.00	-561.52	10,071.00	0.00	0.00	0.00
17,400.00	89.94	0.10	7,513.83	10,172.00	-561.35	10,171.00	0.00	0.00	0.00
17,500.00	89.94	0.10	7,513.93	10,272.00	-561.18	10,271.00	0.00	0.00	0.00
17,563.55	89.94	0.10	7,514.00	10,335.55	-561.07	10,334.55	0.00	0.00	0.00

TD Well @ 17563.55ft - Toe:

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Design Targets										
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
- Shape										
JZM STATE 30N-3HZ_4	0.00	0.00	0.00	0.00	0.00	14,548,239.60	1,673,045.56	40.059001	-104.883389	
- plan hits target center										
- Polygon										
Point 1			0.00	1,512.29	-815.38	14,549,750.82	1,672,228.20			
Point 2			0.00	1,511.86	-796.24	14,549,750.41	1,672,247.34			
Point 3			0.00	1,510.65	-777.14	14,549,749.23	1,672,266.45			
Point 4			0.00	1,508.63	-758.10	14,549,747.23	1,672,285.49			
Point 5			0.00	1,505.83	-739.17	14,549,744.46	1,672,304.42			
Point 6			0.00	1,502.24	-720.37	14,549,740.89	1,672,323.23			
Point 7			0.00	1,497.88	-701.74	14,549,736.56	1,672,341.86			
Point 8			0.00	1,492.73	-683.30	14,549,731.43	1,672,360.31			
Point 9			0.00	1,486.84	-665.09	14,549,725.56	1,672,378.53			
Point 10			0.00	1,480.19	-647.15	14,549,718.94	1,672,396.48			
Point 11			0.00	1,472.79	-629.49	14,549,711.56	1,672,414.15			
Point 12			0.00	1,464.67	-612.16	14,549,703.46	1,672,431.49			
Point 13			0.00	1,455.84	-595.18	14,549,694.66	1,672,448.48			
Point 14			0.00	1,446.30	-578.58	14,549,685.14	1,672,465.09			
Point 15			0.00	1,436.09	-562.40	14,549,674.95	1,672,481.28			
Point 16			0.00	1,425.21	-546.65	14,549,664.09	1,672,497.05			
Point 17			0.00	1,413.68	-531.38	14,549,652.58	1,672,512.33			
Point 18			0.00	1,401.53	-516.59	14,549,640.45	1,672,527.14			
Point 19			0.00	1,388.77	-502.32	14,549,627.71	1,672,541.43			
Point 20			0.00	1,375.43	-488.60	14,549,614.39	1,672,555.16			
Point 21			0.00	1,361.53	-475.43	14,549,600.50	1,672,568.35			
Point 22			0.00	1,347.10	-462.86	14,549,586.09	1,672,580.94			
Point 23			0.00	1,332.16	-450.91	14,549,571.17	1,672,592.91			
Point 24			0.00	1,316.72	-439.58	14,549,555.74	1,672,604.26			
Point 25			0.00	1,300.84	-428.90	14,549,539.87	1,672,614.96			
Point 26			0.00	1,284.53	-418.90	14,549,523.58	1,672,624.98			
Point 27			0.00	1,267.81	-409.59	14,549,506.87	1,672,634.31			
Point 28			0.00	1,250.71	-400.97	14,549,489.78	1,672,642.96			
Point 29			0.00	1,233.27	-393.08	14,549,472.35	1,672,650.87			
Point 30			0.00	1,215.52	-385.92	14,549,454.61	1,672,658.05			
Point 31			0.00	1,197.50	-379.50	14,549,436.60	1,672,664.50			
Point 32			0.00	1,179.22	-373.83	14,549,418.33	1,672,670.19			
Point 33			0.00	1,160.71	-368.94	14,549,399.82	1,672,675.10			
Point 34			0.00	1,142.03	-364.81	14,549,381.15	1,672,679.26			
Point 35			0.00	1,123.18	-361.47	14,549,362.30	1,672,682.62			
Point 36			0.00	1,104.21	-358.91	14,549,343.34	1,672,685.21			
Point 37			0.00	1,085.16	-357.15	14,549,324.29	1,672,686.99			
Point 38			0.00	1,066.04	-356.18	14,549,305.17	1,672,687.99			
Point 39			0.00	1,046.90	-356.01	14,549,286.03	1,672,688.18			
Point 40			0.00	1,027.77	-356.63	14,549,266.90	1,672,687.59			
Point 41			0.00	1,008.68	-358.05	14,549,247.81	1,672,686.19			
Point 42			0.00	989.67	-360.25	14,549,228.79	1,672,684.02			
Point 43			0.00	970.76	-363.26	14,549,209.88	1,672,681.03			
Point 44			0.00	952.01	-367.04	14,549,191.13	1,672,677.28			
Point 45			0.00	933.42	-371.59	14,549,172.53	1,672,672.75			
Point 46			0.00	915.03	-376.93	14,549,154.13	1,672,667.44			
Point 47			0.00	896.89	-383.01	14,549,135.98	1,672,661.38			
Point 48			0.00	879.02	-389.86	14,549,118.11	1,672,654.55			
Point 49			0.00	861.44	-397.43	14,549,100.52	1,672,647.01			
Point 50			0.00	844.19	-405.73	14,549,083.26	1,672,638.73			
Point 51			0.00	827.31	-414.74	14,549,066.36	1,672,629.74			
Point 52			0.00	810.81	-424.46	14,549,049.85	1,672,620.04			
Point 53			0.00	794.74	-434.84	14,549,033.77	1,672,609.68			
Point 54			0.00	779.10	-445.88	14,549,018.11	1,672,598.66			
Point 55			0.00	763.95	-457.57	14,549,002.95	1,672,586.99			

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Point 56	0.00	749.28	-469.87	14,548,988.26	1,672,574.71
Point 57	0.00	735.15	-482.77	14,548,974.11	1,672,561.83
Point 58	0.00	721.56	-496.25	14,548,960.51	1,672,548.37
Point 59	0.00	708.55	-510.29	14,548,947.48	1,672,534.35
Point 60	0.00	696.13	-524.86	14,548,935.04	1,672,519.79
Point 61	0.00	684.33	-539.92	14,548,923.22	1,672,504.75
Point 62	0.00	673.17	-555.47	14,548,912.04	1,672,489.21
Point 63	0.00	662.66	-571.46	14,548,901.51	1,672,473.24
Point 64	0.00	652.82	-587.88	14,548,891.65	1,672,456.83
Point 65	0.00	643.68	-604.69	14,548,882.48	1,672,440.03
Point 66	0.00	635.24	-621.88	14,548,874.02	1,672,422.85
Point 67	0.00	627.53	-639.40	14,548,866.29	1,672,405.34
Point 68	0.00	620.55	-657.21	14,548,859.29	1,672,387.54
Point 69	0.00	614.32	-675.31	14,548,853.03	1,672,369.45
Point 70	0.00	608.85	-693.65	14,548,847.54	1,672,351.12
Point 71	0.00	604.14	-712.21	14,548,842.80	1,672,332.56
Point 72	0.00	600.22	-730.93	14,548,838.86	1,672,313.85
Point 73	0.00	597.07	-749.82	14,548,835.68	1,672,294.96
Point 74	0.00	594.72	-768.81	14,548,833.31	1,672,275.98
Point 75	0.00	593.14	-787.88	14,548,831.70	1,672,256.91
Point 76	0.00	592.38	-807.01	14,548,830.92	1,672,237.78
Point 77	0.00	592.40	-826.14	14,548,830.91	1,672,218.65
Point 78	0.00	593.22	-845.27	14,548,831.71	1,672,199.52
Point 79	0.00	594.84	-864.34	14,548,833.30	1,672,180.45
Point 80	0.00	597.25	-883.33	14,548,835.69	1,672,161.45
Point 81	0.00	600.44	-902.20	14,548,838.85	1,672,142.58
Point 82	0.00	604.41	-920.92	14,548,842.80	1,672,123.85
Point 83	0.00	609.17	-939.46	14,548,847.54	1,672,105.31
Point 84	0.00	614.69	-957.78	14,548,853.03	1,672,086.98
Point 85	0.00	620.97	-975.86	14,548,859.29	1,672,068.89
Point 86	0.00	627.99	-993.67	14,548,866.29	1,672,051.07
Point 87	0.00	635.75	-1,011.17	14,548,874.02	1,672,033.56
Point 88	0.00	644.24	-1,028.32	14,548,882.49	1,672,016.40
Point 89	0.00	653.42	-1,045.11	14,548,891.65	1,671,999.60
Point 90	0.00	663.30	-1,061.51	14,548,901.51	1,671,983.19
Point 91	0.00	673.85	-1,077.48	14,548,912.04	1,671,967.20
Point 92	0.00	685.05	-1,092.99	14,548,923.21	1,671,951.68
Point 93	0.00	696.89	-1,108.03	14,548,935.04	1,671,936.62
Point 94	0.00	709.35	-1,122.56	14,548,947.48	1,671,922.08
Point 95	0.00	722.40	-1,136.56	14,548,960.51	1,671,908.06
Point 96	0.00	736.03	-1,150.00	14,548,974.12	1,671,894.60
Point 97	0.00	750.19	-1,162.88	14,548,988.26	1,671,881.70
Point 98	0.00	764.89	-1,175.14	14,549,002.95	1,671,869.42
Point 99	0.00	780.07	-1,186.79	14,549,018.11	1,671,857.75
Point 100	0.00	795.74	-1,197.79	14,549,033.77	1,671,846.73
Point 101	0.00	811.84	-1,208.12	14,549,049.85	1,671,836.38
Point 102	0.00	828.36	-1,217.79	14,549,066.36	1,671,826.69
Point 103	0.00	845.27	-1,226.76	14,549,083.26	1,671,817.70
Point 104	0.00	862.54	-1,235.02	14,549,100.52	1,671,809.42
Point 105	0.00	880.14	-1,242.55	14,549,118.11	1,671,801.86
Point 106	0.00	898.03	-1,249.34	14,549,135.99	1,671,795.05
Point 107	0.00	916.18	-1,255.38	14,549,154.13	1,671,788.99
Point 108	0.00	934.58	-1,260.66	14,549,172.53	1,671,783.68
Point 109	0.00	953.19	-1,265.17	14,549,191.13	1,671,779.15
Point 110	0.00	971.95	-1,268.91	14,549,209.88	1,671,775.38
Point 111	0.00	990.86	-1,271.86	14,549,228.79	1,671,772.41
Point 112	0.00	1,009.88	-1,274.02	14,549,247.81	1,671,770.22
Point 113	0.00	1,028.97	-1,275.38	14,549,266.90	1,671,768.84
Point 114	0.00	1,048.10	-1,275.96	14,549,286.02	1,671,768.23
Point 115	0.00	1,067.24	-1,275.73	14,549,305.17	1,671,768.44
Point 116	0.00	1,086.36	-1,274.72	14,549,324.29	1,671,769.42
Point 117	0.00	1,105.41	-1,272.90	14,549,343.34	1,671,771.22
Point 118	0.00	1,124.37	-1,270.30	14,549,362.30	1,671,773.79
Point 119	0.00	1,143.21	-1,266.90	14,549,381.15	1,671,777.17

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Point 120			0.00	1,161.88	-1,262.73	14,549,399.82	1,671,781.31		
Point 121			0.00	1,180.38	-1,257.78	14,549,418.33	1,671,786.24		
Point 122			0.00	1,198.64	-1,252.07	14,549,436.60	1,671,791.93		
Point 123			0.00	1,216.65	-1,245.60	14,549,454.61	1,671,798.37		
Point 124			0.00	1,234.38	-1,238.39	14,549,472.35	1,671,805.56		
Point 125			0.00	1,251.80	-1,230.46	14,549,489.78	1,671,813.47		
Point 126			0.00	1,268.87	-1,221.80	14,549,506.87	1,671,822.10		
Point 127			0.00	1,285.57	-1,212.43	14,549,523.58	1,671,831.45		
Point 128			0.00	1,301.85	-1,202.39	14,549,539.87	1,671,841.47		
Point 129			0.00	1,317.71	-1,191.67	14,549,555.75	1,671,852.17		
Point 130			0.00	1,333.12	-1,180.30	14,549,571.17	1,671,863.52		
Point 131			0.00	1,348.02	-1,168.31	14,549,586.09	1,671,875.49		
Point 132			0.00	1,362.42	-1,155.70	14,549,600.50	1,671,888.08		
Point 133			0.00	1,376.29	-1,142.51	14,549,614.39	1,671,901.25		
Point 134			0.00	1,389.59	-1,128.75	14,549,627.71	1,671,915.00		
Point 135			0.00	1,402.31	-1,114.44	14,549,640.45	1,671,929.29		
Point 136			0.00	1,414.42	-1,099.63	14,549,652.58	1,671,944.08		
Point 137			0.00	1,425.91	-1,084.32	14,549,664.09	1,671,959.38		
Point 138			0.00	1,436.75	-1,068.55	14,549,674.95	1,671,975.13		
Point 139			0.00	1,446.92	-1,052.33	14,549,685.14	1,671,991.34		
Point 140			0.00	1,456.42	-1,035.71	14,549,694.66	1,672,007.95		
Point 141			0.00	1,465.20	-1,018.71	14,549,703.46	1,672,024.94		
Point 142			0.00	1,473.28	-1,001.36	14,549,711.56	1,672,042.28		
Point 143			0.00	1,480.63	-983.68	14,549,718.94	1,672,059.95		
Point 144			0.00	1,487.23	-965.72	14,549,725.56	1,672,077.90		
Point 145			0.00	1,493.08	-947.49	14,549,731.43	1,672,096.12		
Point 146			0.00	1,498.18	-929.05	14,549,736.56	1,672,114.55		
Point 147			0.00	1,502.49	-910.40	14,549,740.89	1,672,133.20		
Point 148			0.00	1,506.03	-891.60	14,549,744.46	1,672,151.99		
Point 149			0.00	1,508.78	-872.65	14,549,747.23	1,672,170.94		
Point 150			0.00	1,510.75	-853.61	14,549,749.23	1,672,189.98		
Point 151			0.00	1,511.91	-834.51	14,549,750.41	1,672,209.07		
Point 152			0.00	1,512.29	-815.38	14,549,750.82	1,672,228.20		
JZM STATE 30N-3HZ_H	0.00	0.00	0.00	0.00	0.00	14,548,239.60	1,673,045.56	40.059001	-104.883389
- plan hits target center									
- Polygon									
Point 1			0.00	11,244.05	-400.93	14,559,483.11	1,672,629.91		
Point 2			0.00	10,383.09	-398.54	14,558,622.16	1,672,633.42		
Point 3			0.00	9,022.56	-383.24	14,557,261.65	1,672,650.51		
Point 4			0.00	7,662.03	-367.95	14,555,901.14	1,672,667.58		
Point 5			0.00	6,338.73	-359.64	14,554,577.85	1,672,677.62		
Point 6			0.00	5,015.46	-351.37	14,553,254.59	1,672,687.63		
Point 7			0.00	3,694.56	-353.01	14,551,933.69	1,672,687.72		
Point 8			0.00	2,373.67	-354.65	14,550,612.80	1,672,687.81		
Point 9			0.00	1,052.75	-355.98	14,549,291.88	1,672,688.21		
Point 10			0.00	191.82	-356.84	14,548,430.95	1,672,688.47		
Point 11			0.00	191.35	-816.84	14,548,429.88	1,672,228.47		
Point 12			0.00	191.29	-1,276.84	14,548,429.21	1,671,768.48		
Point 13			0.00	1,052.09	-1,275.97	14,549,290.01	1,671,768.22		
Point 14			0.00	2,372.89	-1,274.65	14,550,610.82	1,671,767.81		
Point 15			0.00	3,693.70	-1,273.01	14,551,931.63	1,671,767.72		
Point 16			0.00	5,014.51	-1,271.38	14,553,252.44	1,671,767.62		
Point 17			0.00	6,334.56	-1,279.64	14,554,572.48	1,671,757.63		
Point 18			0.00	7,654.61	-1,287.92	14,555,892.51	1,671,747.62		
Point 19			0.00	9,020.06	-1,303.27	14,557,257.94	1,671,730.48		
Point 20			0.00	10,385.51	-1,318.57	14,558,623.37	1,671,713.39		
Point 21			0.00	11,246.30	-1,320.94	14,559,484.16	1,671,709.89		
Point 22			0.00	11,244.32	-860.93	14,559,482.78	1,672,169.91		
Point 23			0.00	11,244.05	-400.93	14,559,483.11	1,672,629.91		
JZM STATE 30N-3HZ_4	0.00	0.00	0.00	0.00	0.00	14,548,239.60	1,673,045.56	40.059001	-104.883389
- plan hits target center									
- Polygon									
Point 1			0.00	10,843.61	-857.97	14,559,082.07	1,672,173.39		

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Point 2	0.00	10,843.19	-838.83	14,559,081.68	1,672,192.53
Point 3	0.00	10,841.97	-819.74	14,559,080.48	1,672,211.62
Point 4	0.00	10,839.96	-800.70	14,559,078.50	1,672,230.67
Point 5	0.00	10,837.15	-781.77	14,559,075.71	1,672,249.60
Point 6	0.00	10,833.57	-762.97	14,559,072.16	1,672,268.40
Point 7	0.00	10,829.20	-744.33	14,559,067.81	1,672,287.05
Point 8	0.00	10,824.06	-725.90	14,559,062.70	1,672,305.49
Point 9	0.00	10,818.16	-707.69	14,559,056.82	1,672,323.70
Point 10	0.00	10,811.51	-689.75	14,559,050.19	1,672,341.65
Point 11	0.00	10,804.12	-672.09	14,559,042.83	1,672,359.32
Point 12	0.00	10,795.99	-654.76	14,559,034.72	1,672,376.66
Point 13	0.00	10,787.16	-637.78	14,559,025.91	1,672,393.65
Point 14	0.00	10,777.62	-621.18	14,559,016.39	1,672,410.27
Point 15	0.00	10,767.41	-605.00	14,559,006.21	1,672,426.46
Point 16	0.00	10,756.53	-589.26	14,558,995.35	1,672,442.22
Point 17	0.00	10,745.00	-573.97	14,558,983.84	1,672,457.52
Point 18	0.00	10,732.85	-559.19	14,558,971.71	1,672,472.32
Point 19	0.00	10,720.09	-544.92	14,558,958.96	1,672,486.60
Point 20	0.00	10,706.75	-531.19	14,558,945.64	1,672,500.35
Point 21	0.00	10,692.86	-518.03	14,558,931.77	1,672,513.53
Point 22	0.00	10,678.42	-505.46	14,558,917.35	1,672,526.12
Point 23	0.00	10,663.48	-493.51	14,558,902.42	1,672,538.09
Point 24	0.00	10,648.05	-482.18	14,558,887.01	1,672,549.44
Point 25	0.00	10,632.16	-471.50	14,558,871.13	1,672,560.14
Point 26	0.00	10,615.85	-461.50	14,558,854.83	1,672,570.16
Point 27	0.00	10,599.13	-452.18	14,558,838.13	1,672,579.50
Point 28	0.00	10,582.04	-443.57	14,558,821.05	1,672,588.13
Point 29	0.00	10,564.61	-435.68	14,558,803.63	1,672,596.05
Point 30	0.00	10,546.86	-428.51	14,558,785.89	1,672,603.24
Point 31	0.00	10,528.82	-422.10	14,558,767.86	1,672,609.67
Point 32	0.00	10,510.54	-416.43	14,558,749.58	1,672,615.37
Point 33	0.00	10,492.04	-411.53	14,558,731.09	1,672,620.29
Point 34	0.00	10,473.35	-407.41	14,558,712.40	1,672,624.44
Point 35	0.00	10,454.51	-404.06	14,558,693.57	1,672,627.81
Point 36	0.00	10,435.53	-401.51	14,558,674.59	1,672,630.39
Point 37	0.00	10,416.48	-399.74	14,558,655.54	1,672,632.18
Point 38	0.00	10,397.36	-398.78	14,558,636.43	1,672,633.17
Point 39	0.00	10,378.22	-398.60	14,558,617.29	1,672,633.37
Point 40	0.00	10,359.09	-399.23	14,558,598.16	1,672,632.77
Point 41	0.00	10,340.01	-400.64	14,558,579.07	1,672,631.38
Point 42	0.00	10,320.99	-402.86	14,558,560.05	1,672,629.19
Point 43	0.00	10,302.09	-405.85	14,558,541.15	1,672,626.22
Point 44	0.00	10,283.33	-409.64	14,558,522.38	1,672,622.45
Point 45	0.00	10,264.74	-414.19	14,558,503.79	1,672,617.93
Point 46	0.00	10,246.36	-419.53	14,558,485.40	1,672,612.61
Point 47	0.00	10,228.21	-425.62	14,558,467.24	1,672,606.55
Point 48	0.00	10,210.34	-432.45	14,558,449.36	1,672,599.74
Point 49	0.00	10,192.76	-440.03	14,558,431.77	1,672,592.18
Point 50	0.00	10,175.51	-448.33	14,558,414.51	1,672,583.91
Point 51	0.00	10,158.64	-457.34	14,558,397.63	1,672,574.92
Point 52	0.00	10,142.14	-467.05	14,558,381.12	1,672,565.23
Point 53	0.00	10,126.06	-477.43	14,558,365.02	1,672,554.87
Point 54	0.00	10,110.43	-488.47	14,558,349.38	1,672,543.85
Point 55	0.00	10,095.27	-500.16	14,558,334.20	1,672,532.18
Point 56	0.00	10,080.61	-512.46	14,558,319.53	1,672,519.90
Point 57	0.00	10,066.47	-525.37	14,558,305.37	1,672,507.01
Point 58	0.00	10,052.88	-538.85	14,558,291.76	1,672,493.55
Point 59	0.00	10,039.87	-552.89	14,558,278.73	1,672,479.52
Point 60	0.00	10,027.46	-567.45	14,558,266.31	1,672,464.98
Point 61	0.00	10,015.65	-582.52	14,558,254.48	1,672,449.93
Point 62	0.00	10,004.49	-598.06	14,558,243.30	1,672,434.40
Point 63	0.00	9,993.98	-614.06	14,558,232.76	1,672,418.41
Point 64	0.00	9,984.14	-630.48	14,558,222.90	1,672,402.01
Point 65	0.00	9,975.00	-647.29	14,558,213.74	1,672,385.21

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Point 66	0.00	9,966.57	-664.47	14,558,205.29	1,672,368.04
Point 67	0.00	9,958.85	-681.99	14,558,197.55	1,672,350.53
Point 68	0.00	9,951.87	-699.81	14,558,190.54	1,672,332.72
Point 69	0.00	9,945.65	-717.91	14,558,184.30	1,672,314.63
Point 70	0.00	9,940.17	-736.25	14,558,178.79	1,672,296.29
Point 71	0.00	9,935.47	-754.80	14,558,174.07	1,672,277.75
Point 72	0.00	9,931.54	-773.53	14,558,170.12	1,672,259.03
Point 73	0.00	9,928.39	-792.41	14,558,166.94	1,672,240.15
Point 74	0.00	9,926.04	-811.41	14,558,164.57	1,672,221.15
Point 75	0.00	9,924.47	-830.48	14,558,162.97	1,672,202.09
Point 76	0.00	9,923.70	-849.61	14,558,162.18	1,672,182.96
Point 77	0.00	9,923.72	-868.75	14,558,162.17	1,672,163.82
Point 78	0.00	9,924.55	-887.87	14,558,162.98	1,672,144.70
Point 79	0.00	9,926.16	-906.94	14,558,164.56	1,672,125.62
Point 80	0.00	9,928.57	-925.92	14,558,166.95	1,672,106.64
Point 81	0.00	9,931.76	-944.80	14,558,170.11	1,672,087.76
Point 82	0.00	9,935.74	-963.51	14,558,174.07	1,672,069.04
Point 83	0.00	9,940.49	-982.06	14,558,178.79	1,672,050.48
Point 84	0.00	9,946.02	-1,000.38	14,558,184.30	1,672,032.16
Point 85	0.00	9,952.29	-1,018.46	14,558,190.54	1,672,014.07
Point 86	0.00	9,959.31	-1,036.26	14,558,197.54	1,671,996.26
Point 87	0.00	9,967.08	-1,053.76	14,558,205.29	1,671,978.75
Point 88	0.00	9,975.56	-1,070.92	14,558,213.75	1,671,961.58
Point 89	0.00	9,984.74	-1,087.71	14,558,222.90	1,671,944.78
Point 90	0.00	9,994.62	-1,104.11	14,558,232.76	1,671,928.36
Point 91	0.00	10,005.17	-1,120.07	14,558,243.29	1,671,912.39
Point 92	0.00	10,016.37	-1,135.59	14,558,254.47	1,671,896.86
Point 93	0.00	10,028.22	-1,150.63	14,558,266.30	1,671,881.80
Point 94	0.00	10,040.67	-1,165.16	14,558,278.73	1,671,867.25
Point 95	0.00	10,053.72	-1,179.16	14,558,291.76	1,671,853.24
Point 96	0.00	10,067.35	-1,192.60	14,558,305.38	1,671,839.78
Point 97	0.00	10,081.52	-1,205.47	14,558,319.53	1,671,826.89
Point 98	0.00	10,096.21	-1,217.73	14,558,334.20	1,671,814.61
Point 99	0.00	10,111.40	-1,229.38	14,558,349.38	1,671,802.94
Point 100	0.00	10,127.06	-1,240.38	14,558,365.02	1,671,791.92
Point 101	0.00	10,143.17	-1,250.72	14,558,381.12	1,671,781.56
Point 102	0.00	10,159.69	-1,260.39	14,558,397.63	1,671,771.87
Point 103	0.00	10,176.59	-1,269.36	14,558,414.52	1,671,762.88
Point 104	0.00	10,193.86	-1,277.62	14,558,431.78	1,671,754.59
Point 105	0.00	10,211.46	-1,285.14	14,558,449.37	1,671,747.05
Point 106	0.00	10,229.35	-1,291.94	14,558,467.25	1,671,740.23
Point 107	0.00	10,247.51	-1,297.98	14,558,485.40	1,671,734.16
Point 108	0.00	10,265.90	-1,303.26	14,558,503.78	1,671,728.86
Point 109	0.00	10,284.51	-1,307.77	14,558,522.39	1,671,724.32
Point 110	0.00	10,303.27	-1,311.50	14,558,541.14	1,671,720.57
Point 111	0.00	10,322.19	-1,314.46	14,558,560.06	1,671,717.58
Point 112	0.00	10,341.21	-1,316.61	14,558,579.07	1,671,715.41
Point 113	0.00	10,360.29	-1,317.98	14,558,598.15	1,671,714.01
Point 114	0.00	10,379.42	-1,318.55	14,558,617.28	1,671,713.42
Point 115	0.00	10,398.56	-1,318.33	14,558,636.42	1,671,713.61
Point 116	0.00	10,417.68	-1,317.31	14,558,655.54	1,671,714.61
Point 117	0.00	10,436.73	-1,315.50	14,558,674.60	1,671,716.39
Point 118	0.00	10,455.70	-1,312.89	14,558,693.57	1,671,718.98
Point 119	0.00	10,474.53	-1,309.50	14,558,712.40	1,671,722.35
Point 120	0.00	10,493.21	-1,305.32	14,558,731.09	1,671,726.50
Point 121	0.00	10,511.70	-1,300.38	14,558,749.59	1,671,731.42
Point 122	0.00	10,529.96	-1,294.67	14,558,767.85	1,671,737.10
Point 123	0.00	10,547.98	-1,288.20	14,558,785.88	1,671,743.55
Point 124	0.00	10,565.72	-1,281.00	14,558,803.63	1,671,750.73
Point 125	0.00	10,583.12	-1,273.06	14,558,821.04	1,671,758.64
Point 126	0.00	10,600.19	-1,264.39	14,558,838.12	1,671,767.29
Point 127	0.00	10,616.89	-1,255.03	14,558,854.83	1,671,776.63
Point 128	0.00	10,633.18	-1,244.99	14,558,871.14	1,671,786.65
Point 129	0.00	10,649.03	-1,234.27	14,558,887.00	1,671,797.35

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Point 130	0.00	10,664.44	-1,222.91	14,558,902.43	1,671,808.69				
Point 131	0.00	10,679.34	-1,210.91	14,558,917.34	1,671,820.67				
Point 132	0.00	10,693.75	-1,198.30	14,558,931.77	1,671,833.26				
Point 133	0.00	10,707.61	-1,185.10	14,558,945.65	1,671,846.44				
Point 134	0.00	10,720.91	-1,171.34	14,558,958.96	1,671,860.18				
Point 135	0.00	10,733.63	-1,157.04	14,558,971.70	1,671,874.47				
Point 136	0.00	10,745.74	-1,142.22	14,558,983.83	1,671,889.27				
Point 137	0.00	10,757.23	-1,126.92	14,558,995.34	1,671,904.55				
Point 138	0.00	10,768.07	-1,111.14	14,559,006.20	1,671,920.32				
Point 139	0.00	10,778.24	-1,094.93	14,559,016.39	1,671,936.52				
Point 140	0.00	10,787.74	-1,078.31	14,559,025.92	1,671,953.12				
Point 141	0.00	10,796.53	-1,061.31	14,559,034.73	1,671,970.11				
Point 142	0.00	10,804.60	-1,043.96	14,559,042.82	1,671,987.45				
Point 143	0.00	10,811.95	-1,026.28	14,559,050.19	1,672,005.12				
Point 144	0.00	10,818.56	-1,008.32	14,559,056.83	1,672,023.07				
Point 145	0.00	10,824.40	-990.09	14,559,062.69	1,672,041.30				
Point 146	0.00	10,829.50	-971.64	14,559,067.82	1,672,059.74				
Point 147	0.00	10,833.82	-953.00	14,559,072.16	1,672,078.37				
Point 148	0.00	10,837.35	-934.19	14,559,075.71	1,672,097.18				
Point 149	0.00	10,840.11	-915.25	14,559,078.50	1,672,116.12				
Point 150	0.00	10,842.07	-896.21	14,559,080.48	1,672,135.15				
Point 151	0.00	10,843.24	-877.10	14,559,081.68	1,672,154.26				
Point 152	0.00	10,843.61	-857.97	14,559,082.07	1,672,173.39				
JZM STATE 30N-3HZ_S	0.00	0.00	0.00	0.00	14,548,239.60	1,673,045.56	40.059001	-104.883389	
- plan hits target center									
- Point									
1N-R67W-Sec. 10_Secti	0.00	0.00	3.00	24.86	2,162.37	14,548,267.29	1,675,207.90	40.059069	-104.875661
- plan misses target center by 2162.51usft at 3.00usft MD (3.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1		3.00	4,992.86	-2,976.12	14,553,256.24	1,672,225.24			
Point 2		3.00	4,994.59	-331.69	14,553,261.44	1,674,869.67			
Point 3		3.00	4,996.25	2,313.07	14,553,266.56	1,677,514.42			
Point 4		3.00	2,354.63	2,320.05	14,550,624.95	1,677,524.86			
Point 5		3.00	-287.06	2,326.97	14,547,983.27	1,677,535.24			
Point 6		3.00	-288.46	-327.65	14,547,978.40	1,674,880.63			
Point 7		3.00	-290.97	-2,982.55	14,547,972.41	1,672,225.73			
1N-R67W-Sec. 3_Sectio	0.00	0.00	3.00	24.86	2,162.37	14,548,267.29	1,675,207.90	40.059069	-104.875661
- plan misses target center by 2162.51usft at 3.00usft MD (3.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1		3.00	10,361.30	-3,022.88	14,558,624.62	1,672,171.45			
Point 2		3.00	10,358.07	-398.53	14,558,624.82	1,674,795.80			
Point 3		3.00	10,354.85	2,234.71	14,558,625.05	1,677,429.04			
Point 4		3.00	7,634.95	2,286.94	14,555,905.22	1,677,484.84			
Point 5		3.00	4,996.25	2,313.07	14,553,266.56	1,677,514.42			
Point 6		3.00	4,994.59	-331.69	14,553,261.44	1,674,869.67			
Point 7		3.00	4,992.86	-2,976.12	14,553,256.24	1,672,225.24			
Point 8		3.00	7,632.17	-2,992.40	14,555,895.53	1,672,205.51			
JZM STATE 30N-3HZ_B	0.00	0.00	7,514.00	10,335.55	-561.07	14,558,574.40	1,672,470.96	40.087384	-104.885395
- plan hits target center									
- Point									

Casing Points						
	Measured Depth (usft)	Vertical Depth (usft)		Name	Casing Diameter (")	Hole Diameter (")
	1,817.06	1,800.00	9 5/8"		9-5/8	13-1/2
	7,914.57	7,504.00	7"		7	8-3/4

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JZM STATE 30N-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5083.00usft (D Rig)
Site:	1N-67W-10 JZM 13-10HZ Pad	North Reference:	True
Well:	JZM STATE 30N-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,386.52	1,376.00	Fox Hills		0.00		
4,669.84	4,622.00	Sussex		0.00		
7,442.92	7,336.69	Sharon Springs		0.00		
7,500.61	7,373.69	Niobrara Top		0.00		
7,860.61	7,501.66	Niobrara B Bench		0.00		
7,914.57	7,504.00	Heel:		0.00		
17,563.55	7,514.00	Toe:		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft	
916.67	913.29	5.06	-57.81	End Nudge @ 916.67ft	
3,676.67	3,631.36	46.83	-535.26	Begin Drop @ 3676.67ft	
4,176.67	4,128.83	50.62	-578.61	End Drop @ 4176.67ft	
6,915.23	6,867.39	50.62	-578.61	KOP @ 6915.23ft	
7,500.00	7,373.32	300.84	-578.18	DLS = 9°/100'	
7,914.57	7,504.00	686.58	-577.53	End Build @ 7914.57ft	
17,563.55	7,514.00	10,335.55	-561.07	TD Well @ 17563.55ft	