

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
2N-65W-13 Swartz No2 Pad
SWARTZ 26N-25HZ**

Plan A

Plan: Permit Rev-1

Standard Planning Report

30 July, 2015

Project: WELD-NAD83-UTMFT13N
 Site: 2N-65W-13 Swartz No2 Pad
 Well: SWARTZ 26N-25HZ
 Wellbore: Plan A
 Design: Permit Rev-1

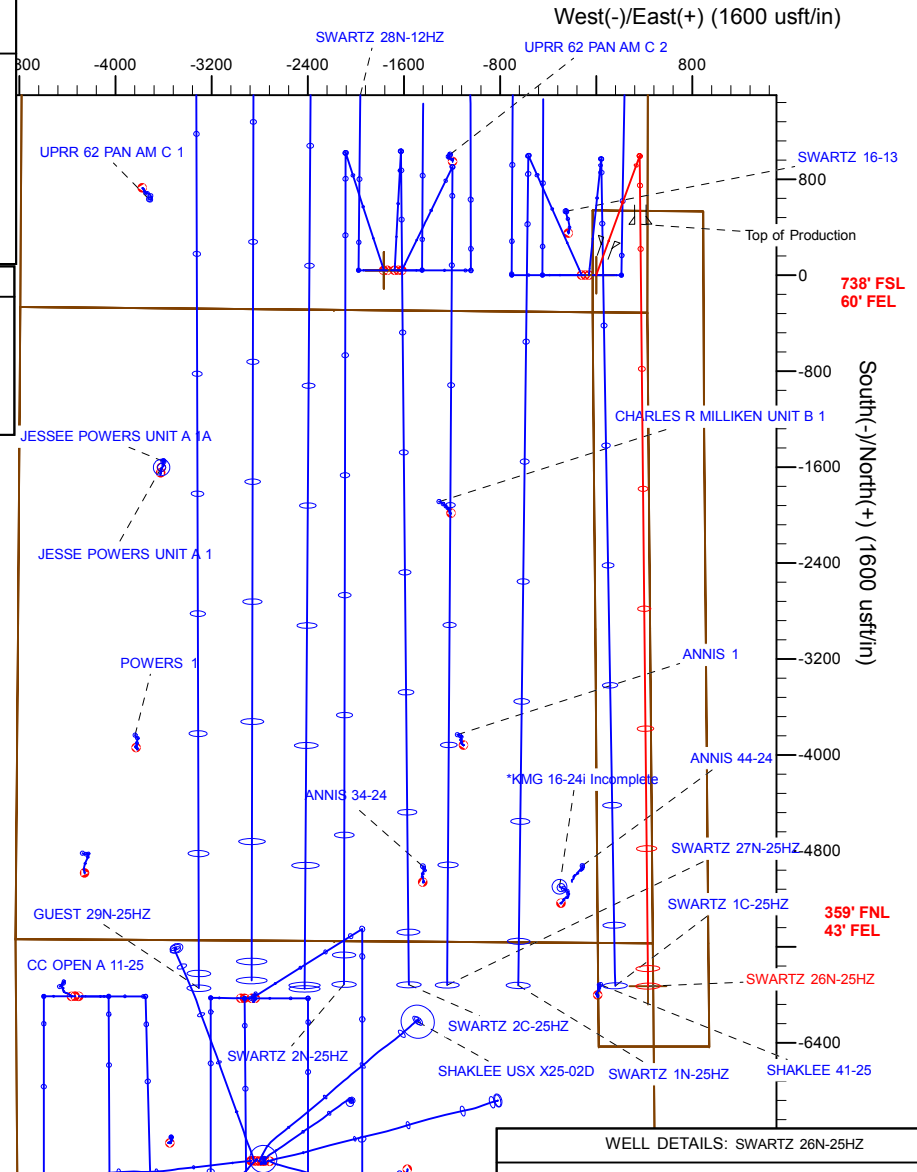
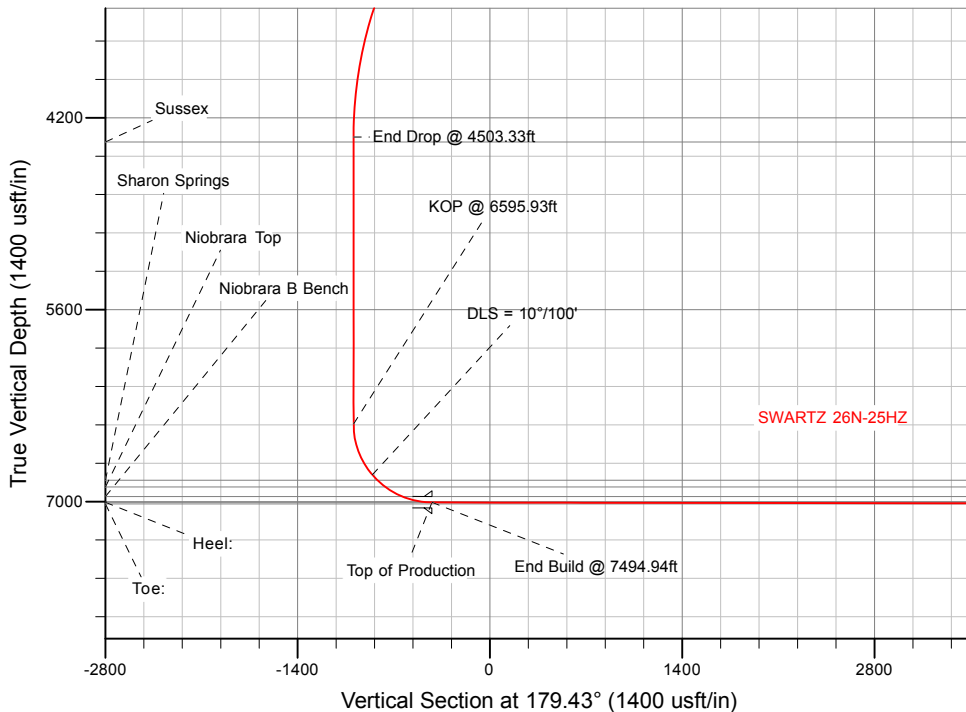
US ROCKIES WATTENBERG PLANNING

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	1583.33	20.00	20.00	1556.42	216.46	78.79	1.50	20.00	-215.67	
4	3503.33	20.00	20.00	3360.63	833.54	303.38	0.00	0.00	-830.48	
5	4503.33	0.00	0.00	4340.45	995.89	362.47	2.00	180.00	-992.23	
6	6595.93	0.00	0.00	6433.05	995.89	362.47	0.00	0.00	-992.23	
7	7494.94	89.90	179.43	7006.00	423.95	368.18	10.00	179.43	-420.27	
8	13846.54	89.90	179.43	7017.00	-5927.32	431.49	0.00	0.00	5931.32	SWARTZ 26N-25HZ_Toe

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SWARTZ 26N-25HZ_SHL	0.00	0.00	0.00	40.131976	-104.604473	Point
SWARTZ 26N-25HZ_Toe	7017.00	-5927.32	431.49	40.115699	-104.602930	Point



WELL DETAILS: SWARTZ 26N-25HZ	
Ground Level:	4956.00
RKB = 17' @ 4973.00usft (D Rig)	
Plan: Permit Rev-1 (SWARTZ 26N-25HZ/Plan A)	
Created By: Clint Eshelman	Date: 7/30/2015
Reviewed:	Date:

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SWARTZ 26N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Site:	2N-65W-13 Swartz No2 Pad	North Reference:	True
Well:	SWARTZ 26N-25HZ	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	2N-65W-13 Swartz No2 Pad				
Site Position:		Northing:	14,575,037.83 usft	Latitude:	40.131978
From:	Lat/Long	Easting:	1,750,820.88 usft	Longitude:	-104.605010
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.25 °

Well	SWARTZ 26N-25HZ					
Well Position	+N-S	-0.73 usft	Northing:	14,575,037.77 usft	Latitude:	40.131976
	+E-W	150.10 usft	Easting:	1,750,970.98 usft	Longitude:	-104.604473
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,956.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/29/2015	8.20	66.72	52,572

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	179.43

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	
1,583.33	20.00	20.00	1,556.42	216.46	78.79	1.50	1.50	0.00	20.00	
3,503.33	20.00	20.00	3,360.63	833.54	303.38	0.00	0.00	0.00	0.00	
4,503.33	0.00	0.00	4,340.45	995.89	362.47	2.00	-2.00	0.00	180.00	
6,595.93	0.00	0.00	6,433.05	995.89	362.47	0.00	0.00	0.00	0.00	
7,494.94	89.90	179.43	7,006.00	423.95	368.18	10.00	10.00	19.96	179.43	
13,846.54	89.90	179.43	7,017.00	-5,927.32	431.49	0.00	0.00	0.00	0.00	SWARTZ 26N-25HZ_

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SWARTZ 26N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Site:	2N-65W-13 Swartz No2 Pad	North Reference:	True
Well:	SWARTZ 26N-25HZ	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
SWARTZ 26N-25HZ_SHL - SWARTZ 26N-25HZ_Drilling Window - 2N-R65W-Sec. 25_Section lines - 2N-R65W-Sec. 13_Section lines - 2N-R65W-Sec. 13_Section lines - 2N-R65W-Sec. 13_Section lines										
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	20.00	300.00	0.31	0.11	-0.31	1.50	1.50	1.50	0.00
400.00	2.25	20.00	399.96	2.77	1.01	-2.76	1.50	1.50	1.50	0.00
500.00	3.75	20.00	499.82	7.69	2.80	-7.66	1.50	1.50	1.50	0.00
600.00	5.25	20.00	599.51	15.06	5.48	-15.00	1.50	1.50	1.50	0.00
700.00	6.75	20.00	698.96	24.88	9.06	-24.79	1.50	1.50	1.50	0.00
800.00	8.25	20.00	798.10	37.14	13.52	-37.01	1.50	1.50	1.50	0.00
900.00	9.75	20.00	896.87	51.84	18.87	-51.65	1.50	1.50	1.50	0.00
1,000.00	11.25	20.00	995.19	68.97	25.10	-68.72	1.50	1.50	1.50	0.00
1,100.00	12.75	20.00	1,093.00	88.51	32.21	-88.18	1.50	1.50	1.50	0.00
1,200.00	14.25	20.00	1,190.24	110.44	40.20	-110.04	1.50	1.50	1.50	0.00
1,300.00	15.75	20.00	1,286.83	134.76	49.05	-134.27	1.50	1.50	1.50	0.00
1,388.80	17.08	20.00	1,372.00	158.34	57.63	-157.76	1.50	1.50	1.50	0.00
Fox Hills										
1,400.00	17.25	20.00	1,382.71	161.45	58.76	-160.86	1.50	1.50	1.50	0.00
1,500.00	18.75	20.00	1,477.81	190.49	69.33	-189.79	1.50	1.50	1.50	0.00
1,583.33	20.00	20.00	1,556.42	216.46	78.79	-215.67	1.50	1.50	1.50	0.00
End Nudge @ 1583.33ft										
1,600.00	20.00	20.00	1,572.08	221.82	80.74	-221.01	0.00	0.00	0.00	0.00
1,700.00	20.00	20.00	1,666.05	253.96	92.43	-253.03	0.00	0.00	0.00	0.00
1,800.00	20.00	20.00	1,760.02	286.10	104.13	-285.05	0.00	0.00	0.00	0.00
1,842.55	20.00	20.00	1,800.00	299.77	109.11	-298.67	0.00	0.00	0.00	0.00
9 5/8"										
1,900.00	20.00	20.00	1,853.99	318.24	115.83	-317.07	0.00	0.00	0.00	0.00
2,000.00	20.00	20.00	1,947.96	350.38	127.53	-349.09	0.00	0.00	0.00	0.00
2,100.00	20.00	20.00	2,041.93	382.52	139.23	-381.11	0.00	0.00	0.00	0.00
2,200.00	20.00	20.00	2,135.90	414.66	150.92	-413.14	0.00	0.00	0.00	0.00
2,300.00	20.00	20.00	2,229.87	446.80	162.62	-445.16	0.00	0.00	0.00	0.00
2,400.00	20.00	20.00	2,323.84	478.94	174.32	-477.18	0.00	0.00	0.00	0.00
2,500.00	20.00	20.00	2,417.81	511.08	186.02	-509.20	0.00	0.00	0.00	0.00
2,600.00	20.00	20.00	2,511.77	543.22	197.71	-541.22	0.00	0.00	0.00	0.00
2,700.00	20.00	20.00	2,605.74	575.35	209.41	-573.24	0.00	0.00	0.00	0.00
2,800.00	20.00	20.00	2,699.71	607.49	221.11	-605.26	0.00	0.00	0.00	0.00
2,900.00	20.00	20.00	2,793.68	639.63	232.81	-637.29	0.00	0.00	0.00	0.00
3,000.00	20.00	20.00	2,887.65	671.77	244.51	-669.31	0.00	0.00	0.00	0.00
3,100.00	20.00	20.00	2,981.62	703.91	256.20	-701.33	0.00	0.00	0.00	0.00
3,200.00	20.00	20.00	3,075.59	736.05	267.90	-733.35	0.00	0.00	0.00	0.00
3,300.00	20.00	20.00	3,169.56	768.19	279.60	-765.37	0.00	0.00	0.00	0.00
3,400.00	20.00	20.00	3,263.53	800.33	291.30	-797.39	0.00	0.00	0.00	0.00
3,500.00	20.00	20.00	3,357.50	832.47	302.99	-829.41	0.00	0.00	0.00	0.00
3,503.33	20.00	20.00	3,360.63	833.54	303.38	-830.48	0.00	0.00	0.00	0.00
Begin Drop @ 3503.33ft										
3,600.00	18.07	20.00	3,452.01	863.16	314.17	-860.00	2.00	-2.00	2.00	0.00
3,700.00	16.07	20.00	3,547.60	890.74	324.20	-887.47	2.00	-2.00	2.00	0.00
3,800.00	14.07	20.00	3,644.16	915.17	333.09	-911.81	2.00	-2.00	2.00	0.00
3,900.00	12.07	20.00	3,741.56	936.41	340.83	-932.97	2.00	-2.00	2.00	0.00
4,000.00	10.07	20.00	3,839.70	954.45	347.39	-950.94	2.00	-2.00	2.00	0.00
4,100.00	8.07	20.00	3,938.44	969.25	352.78	-965.70	2.00	-2.00	2.00	0.00

Anadarko Planning Report

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Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Site:	2N-65W-13 Swartz No2 Pad	North Reference:	True
Well:	SWARTZ 26N-25HZ	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)	
4,200.00	6.07	20.00	4,037.68	980.81	356.99	-977.21	2.00	-2.00	0.00	
4,300.00	4.07	20.00	4,137.28	989.11	360.01	-985.48	2.00	-2.00	0.00	
4,400.00	2.07	20.00	4,237.14	994.14	361.84	-990.49	2.00	-2.00	0.00	
4,500.00	0.07	20.00	4,337.11	995.89	362.47	-992.23	2.00	-2.00	0.00	
4,503.33	0.00	20.00	4,340.44	995.89	362.47	-992.23	2.00	-2.00	0.00	
End Drop @ 4503.33ft										
4,538.89	0.00	0.00	4,376.00	995.89	362.47	-992.23	0.00	0.00	0.00	
Sussex										
4,600.00	0.00	0.00	4,437.11	995.89	362.47	-992.23	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,537.11	995.89	362.47	-992.23	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,637.11	995.89	362.47	-992.23	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,737.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,837.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,100.00	0.00	0.00	4,937.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,037.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,137.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,237.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,337.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,437.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,537.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,637.11	995.89	362.47	-992.23	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,737.11	995.89	362.47	-992.23	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,837.11	995.89	362.47	-992.23	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,937.11	995.89	362.47	-992.23	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,037.11	995.89	362.47	-992.23	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,137.11	995.89	362.47	-992.23	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,237.11	995.89	362.47	-992.23	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,337.11	995.89	362.47	-992.23	0.00	0.00	0.00	
6,595.93	0.00	0.00	6,433.04	995.89	362.47	-992.23	0.00	0.00	0.00	
KOP @ 6595.93ft										
6,600.00	0.41	179.43	6,437.11	995.88	362.47	-992.22	9.99	9.99	0.00	
6,700.00	10.41	179.43	6,536.54	986.47	362.57	-982.81	10.00	10.00	0.00	
6,800.00	20.41	179.43	6,632.83	959.93	362.83	-956.28	10.00	10.00	0.00	
6,900.00	30.41	179.43	6,723.04	917.09	363.26	-913.43	10.00	10.00	0.00	
7,000.00	40.41	179.43	6,804.44	859.22	363.84	-855.56	10.00	10.00	0.00	
DLS = 10°/100'										
7,054.30	45.84	179.43	6,844.06	822.12	364.21	-818.46	10.00	10.00	0.00	
Sharon Springs										
7,100.00	50.41	179.43	6,874.56	788.11	364.55	-784.44	10.00	10.00	0.00	
7,131.68	53.57	179.43	6,894.06	763.16	364.79	-759.49	10.00	10.00	0.00	
Niobrara Top										
7,200.00	60.41	179.43	6,931.26	705.90	365.37	-702.23	10.00	10.00	0.00	
7,274.88	67.89	179.43	6,963.89	638.56	366.04	-634.89	10.00	10.00	0.00	
Niobrara B Bench										
7,300.00	70.41	179.43	6,972.83	615.09	366.27	-611.41	10.00	10.00	0.00	
7,400.00	80.41	179.43	6,997.99	518.44	367.23	-514.76	10.00	10.00	0.00	
7,494.94	89.90	179.43	7,006.00	423.95	368.18	-420.27	10.00	10.00	0.00	
End Build @ 7494.94ft - Heel: - Top of Production										
7,500.00	89.90	179.43	7,006.01	418.89	368.23	-415.21	0.00	0.00	0.00	
7,600.00	89.90	179.43	7,006.19	318.90	369.22	-315.21	0.00	0.00	0.00	
7,700.00	89.90	179.43	7,006.36	218.90	370.22	-215.21	0.00	0.00	0.00	
7,800.00	89.90	179.43	7,006.53	118.91	371.22	-115.21	0.00	0.00	0.00	
7,900.00	89.90	179.43	7,006.70	18.91	372.21	-15.21	0.00	0.00	0.00	

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SWARTZ 26N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Site:	2N-65W-13 Swartz No2 Pad	North Reference:	True
Well:	SWARTZ 26N-25HZ	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)
8,000.00	89.90	179.43	7,006.88	-81.08	373.21	84.79	0.00	0.00	0.00
8,100.00	89.90	179.43	7,007.05	-181.08	374.21	184.79	0.00	0.00	0.00
8,200.00	89.90	179.43	7,007.22	-281.07	375.20	284.79	0.00	0.00	0.00
8,300.00	89.90	179.43	7,007.40	-381.07	376.20	384.79	0.00	0.00	0.00
8,400.00	89.90	179.43	7,007.57	-481.06	377.20	484.79	0.00	0.00	0.00
8,500.00	89.90	179.43	7,007.74	-581.05	378.19	584.79	0.00	0.00	0.00
8,600.00	89.90	179.43	7,007.92	-681.05	379.19	684.79	0.00	0.00	0.00
8,700.00	89.90	179.43	7,008.09	-781.04	380.19	784.79	0.00	0.00	0.00
8,800.00	89.90	179.43	7,008.26	-881.04	381.18	884.79	0.00	0.00	0.00
8,900.00	89.90	179.43	7,008.44	-981.03	382.18	984.79	0.00	0.00	0.00
9,000.00	89.90	179.43	7,008.61	-1,081.03	383.18	1,084.79	0.00	0.00	0.00
9,100.00	89.90	179.43	7,008.78	-1,181.02	384.18	1,184.79	0.00	0.00	0.00
9,200.00	89.90	179.43	7,008.96	-1,281.02	385.17	1,284.79	0.00	0.00	0.00
9,300.00	89.90	179.43	7,009.13	-1,381.01	386.17	1,384.79	0.00	0.00	0.00
9,400.00	89.90	179.43	7,009.30	-1,481.01	387.17	1,484.79	0.00	0.00	0.00
9,500.00	89.90	179.43	7,009.47	-1,581.00	388.16	1,584.79	0.00	0.00	0.00
9,600.00	89.90	179.43	7,009.65	-1,681.00	389.16	1,684.79	0.00	0.00	0.00
9,700.00	89.90	179.43	7,009.82	-1,780.99	390.16	1,784.79	0.00	0.00	0.00
9,800.00	89.90	179.43	7,009.99	-1,880.99	391.15	1,884.79	0.00	0.00	0.00
9,900.00	89.90	179.43	7,010.17	-1,980.98	392.15	1,984.79	0.00	0.00	0.00
10,000.00	89.90	179.43	7,010.34	-2,080.98	393.15	2,084.79	0.00	0.00	0.00
10,100.00	89.90	179.43	7,010.51	-2,180.97	394.14	2,184.79	0.00	0.00	0.00
10,200.00	89.90	179.43	7,010.69	-2,280.97	395.14	2,284.79	0.00	0.00	0.00
10,300.00	89.90	179.43	7,010.86	-2,380.96	396.14	2,384.79	0.00	0.00	0.00
10,400.00	89.90	179.43	7,011.03	-2,480.96	397.13	2,484.79	0.00	0.00	0.00
10,500.00	89.90	179.43	7,011.21	-2,580.95	398.13	2,584.79	0.00	0.00	0.00
10,600.00	89.90	179.43	7,011.38	-2,680.95	399.13	2,684.79	0.00	0.00	0.00
10,700.00	89.90	179.43	7,011.55	-2,780.94	400.12	2,784.79	0.00	0.00	0.00
10,800.00	89.90	179.43	7,011.73	-2,880.94	401.12	2,884.79	0.00	0.00	0.00
10,900.00	89.90	179.43	7,011.90	-2,980.93	402.12	2,984.78	0.00	0.00	0.00
11,000.00	89.90	179.43	7,012.07	-3,080.93	403.12	3,084.78	0.00	0.00	0.00
11,100.00	89.90	179.43	7,012.24	-3,180.92	404.11	3,184.78	0.00	0.00	0.00
11,200.00	89.90	179.43	7,012.42	-3,280.92	405.11	3,284.78	0.00	0.00	0.00
11,300.00	89.90	179.43	7,012.59	-3,380.91	406.11	3,384.78	0.00	0.00	0.00
11,400.00	89.90	179.43	7,012.76	-3,480.91	407.10	3,484.78	0.00	0.00	0.00
11,500.00	89.90	179.43	7,012.94	-3,580.90	408.10	3,584.78	0.00	0.00	0.00
11,600.00	89.90	179.43	7,013.11	-3,680.90	409.10	3,684.78	0.00	0.00	0.00
11,700.00	89.90	179.43	7,013.28	-3,780.89	410.09	3,784.78	0.00	0.00	0.00
11,800.00	89.90	179.43	7,013.46	-3,880.89	411.09	3,884.78	0.00	0.00	0.00
11,900.00	89.90	179.43	7,013.63	-3,980.88	412.09	3,984.78	0.00	0.00	0.00
12,000.00	89.90	179.43	7,013.80	-4,080.88	413.08	4,084.78	0.00	0.00	0.00
12,100.00	89.90	179.43	7,013.98	-4,180.87	414.08	4,184.78	0.00	0.00	0.00
12,200.00	89.90	179.43	7,014.15	-4,280.87	415.08	4,284.78	0.00	0.00	0.00
12,300.00	89.90	179.43	7,014.32	-4,380.86	416.07	4,384.78	0.00	0.00	0.00
12,400.00	89.90	179.43	7,014.50	-4,480.86	417.07	4,484.78	0.00	0.00	0.00
12,500.00	89.90	179.43	7,014.67	-4,580.85	418.07	4,584.78	0.00	0.00	0.00
12,600.00	89.90	179.43	7,014.84	-4,680.85	419.06	4,684.78	0.00	0.00	0.00
12,700.00	89.90	179.43	7,015.02	-4,780.84	420.06	4,784.78	0.00	0.00	0.00
12,800.00	89.90	179.43	7,015.19	-4,880.83	421.06	4,884.78	0.00	0.00	0.00
12,900.00	89.90	179.43	7,015.36	-4,980.83	422.05	4,984.78	0.00	0.00	0.00
13,000.00	89.90	179.43	7,015.53	-5,080.82	423.05	5,084.78	0.00	0.00	0.00
13,100.00	89.90	179.43	7,015.71	-5,180.82	424.05	5,184.78	0.00	0.00	0.00
13,200.00	89.90	179.43	7,015.88	-5,280.81	425.05	5,284.78	0.00	0.00	0.00
13,300.00	89.90	179.43	7,016.05	-5,380.81	426.04	5,384.78	0.00	0.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SWARTZ 26N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Site:	2N-65W-13 Swartz No2 Pad	North Reference:	True
Well:	SWARTZ 26N-25HZ	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)	
13,400.00	89.90	179.43	7,016.23	-5,480.80	427.04	5,484.78	0.00	0.00	0.00	
13,500.00	89.90	179.43	7,016.40	-5,580.80	428.04	5,584.78	0.00	0.00	0.00	
13,600.00	89.90	179.43	7,016.57	-5,680.79	429.03	5,684.78	0.00	0.00	0.00	
13,700.00	89.90	179.43	7,016.75	-5,780.79	430.03	5,784.78	0.00	0.00	0.00	
13,800.00	89.90	179.43	7,016.92	-5,880.78	431.03	5,884.78	0.00	0.00	0.00	
13,846.53	89.90	179.43	7,017.00	-5,927.31	431.49	5,931.31	0.00	0.00	0.00	
Toe:										
13,846.54	89.90	179.43	7,017.00	-5,927.32	431.49	5,931.32	0.01	0.00	0.00	
TD Well @ 13846.54ft - SWARTZ 26N-25HZ_Toe										

Anadarko Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SWARTZ 26N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Site:	2N-65W-13 Swartz No2 Pad	North Reference:	True
Well:	SWARTZ 26N-25HZ	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										
SWARTZ 26N-25HZ_SI- - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	14,575,037.77	1,750,970.98	40.131976	-104.604473	
SWARTZ 26N-25HZ_Dri - plan hits target center - Polygon	0.00	0.00	0.00	0.00	0.00	14,575,037.77	1,750,970.98	40.131976	-104.604473	
Point 1			0.00	540.78	-29.52	14,575,578.41	1,750,939.06			
Point 2			0.00	530.45	890.46	14,575,572.18	1,751,859.08			
Point 3			0.00	-1,173.45	897.12	14,573,868.33	1,751,873.32			
Point 4			0.00	-5,567.60	934.22	14,569,474.38	1,751,929.97			
Point 5			0.00	-6,430.83	941.14	14,568,611.19	1,751,940.73			
Point 6			0.00	-6,429.82	21.09	14,568,608.11	1,751,020.69			
Point 7			0.00	-5,568.11	14.20	14,569,469.78	1,751,009.96			
Point 8			0.00	-4,253.91	3.15	14,570,783.92	1,750,993.06			
Point 9			0.00	-2,947.04	-7.83	14,572,090.73	1,750,976.27			
Point 10			0.00	-1,625.61	-19.07	14,573,412.09	1,750,959.15			
Point 11			0.00	-311.57	-30.18	14,574,726.07	1,750,942.19			
Point 12			0.00	540.78	-29.52	14,575,578.41	1,750,939.06			
2N-R65W-Sec. 25_Secti - plan misses target center by 1767.27usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Polygon	0.00	0.00	0.00	40.48	-1,766.81	14,575,070.39	1,749,204.01	40.132087	-104.610794	
Point 1			0.00	-5,575.96	-3,064.67	14,569,480.85	1,746,164.18			
Point 2			0.00	-5,592.14	-413.46	14,569,476.47	1,748,815.44			
Point 3			0.00	-5,609.35	2,238.63	14,569,471.06	1,751,467.58			
Point 4			0.00	-8,247.40	2,259.94	14,566,833.13	1,751,500.63			
Point 5			0.00	-10,884.05	2,281.32	14,564,196.60	1,751,533.74			
Point 6			0.00	-10,912.19	-413.54	14,564,156.47	1,748,839.03			
Point 7			0.00	-11,002.15	-3,033.15	14,564,054.86	1,746,219.85			
Point 8			0.00	-8,271.55	-3,044.64	14,566,785.38	1,746,196.21			
2N-R65W-Sec. 13_Secti - plan misses target center by 1767.27usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Polygon	0.00	0.00	0.00	40.48	-1,766.81	14,575,070.39	1,749,204.01	40.132087	-104.610794	
Point 1			0.00	4,980.35	-2,990.78	14,580,037.39	1,746,191.10			
Point 2			0.00	4,936.75	-397.15	14,580,005.33	1,748,784.90			
Point 3			0.00	4,893.27	2,196.04	14,579,973.39	1,751,378.26			
Point 4			0.00	2,269.18	2,195.68	14,577,349.32	1,751,389.57			
Point 5			0.00	-354.07	2,193.83	14,574,726.09	1,751,399.39			
Point 6			0.00	-330.09	-414.94	14,574,738.46	1,748,790.54			
Point 7			0.00	-306.12	-3,023.71	14,574,750.82	1,746,181.69			
Point 8			0.00	2,332.94	-3,010.80	14,577,389.91	1,746,182.86			
2N-R65W-Sec. 12_Secti - plan misses target center by 1767.27usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Polygon	0.00	0.00	0.00	40.48	-1,766.81	14,575,070.39	1,749,204.01	40.132087	-104.610794	
Point 1			0.00	10,311.40	-2,932.44	14,585,368.64	1,746,225.72			
Point 2			0.00	10,213.49	-365.25	14,585,282.16	1,748,793.32			
Point 3			0.00	10,115.80	2,202.09	14,585,195.89	1,751,361.07			
Point 4			0.00	7,504.68	2,199.03	14,582,584.78	1,751,369.62			
Point 5			0.00	4,893.27	2,196.04	14,579,973.39	1,751,378.26			
Point 6			0.00	4,936.75	-397.15	14,580,005.33	1,748,784.90			
Point 7			0.00	4,980.35	-2,990.78	14,580,037.39	1,746,191.10			
Point 8			0.00	7,645.87	-2,961.54	14,582,703.01	1,746,208.48			
2N-R65W-Sec. 24_Secti - plan misses target center by 1767.27usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Polygon	0.00	0.00	0.00	40.48	-1,766.81	14,575,070.39	1,749,204.01	40.132087	-104.610794	
Point 1			0.00	-306.12	-3,023.71	14,574,750.82	1,746,181.69			

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SWARTZ 26N-25HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4973.00usft (D Rig)
Site:	2N-65W-13 Swartz No2 Pad	North Reference:	True
Well:	SWARTZ 26N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Point 2	0.00	-330.09	-414.94	14,574,738.46	1,748,790.54		
Point 3	0.00	-354.07	2,193.83	14,574,726.09	1,751,399.39		
Point 4	0.00	-2,981.13	2,216.36	14,572,099.16	1,751,433.61		
Point 5	0.00	-5,609.35	2,238.63	14,569,471.06	1,751,467.58		
Point 6	0.00	-5,592.14	-413.46	14,569,476.47	1,748,815.44		
Point 7	0.00	-5,575.96	-3,064.67	14,569,480.85	1,746,164.18		
Point 8	0.00	-2,941.37	-3,043.57	14,572,115.51	1,746,173.56		
SWARTZ 26N-25HZ_To	0.00	0.00	7,017.00	-5,927.32	431.49	14,569,112.43	1,751,428.85
- plan hits target center							40.115699
- Point							-104.602930

Casing Points						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
	1,842.55	1,800.00	9 5/8"	9-5/8	13-1/2	
	7,494.94	7,006.00	Top of Production	5-1/2	7-7/8	

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,388.80	1,372.00	Fox Hills		0.00	
	4,538.89	4,376.00	Sussex		0.00	
	7,054.30	6,844.06	Sharon Springs		0.00	
	7,131.68	6,894.06	Niobrara Top		0.00	
	7,274.88	6,963.89	Niobrara B Bench		0.00	
	7,494.94	7,006.00	Heel:		0.00	
	13,846.53	7,017.00	Toe:		0.00	

Plan Annotations					
	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
	250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft
	1,583.33	1,556.42	216.46	78.79	End Nudge @ 1583.33ft
	3,503.33	3,360.63	833.54	303.38	Begin Drop @ 3503.33ft
	4,503.33	4,340.44	995.89	362.47	End Drop @ 4503.33ft
	6,595.93	6,433.04	995.89	362.47	KOP @ 6595.93ft
	7,000.00	6,804.44	859.22	363.84	DLS = 10°/100'
	7,494.94	7,006.00	423.95	368.18	End Build @ 7494.94ft
	13,846.54	7,017.00	-5,927.32	431.49	TD Well @ 13846.54ft