

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
2N-65W-13 Swartz No1 Pad  
SWARTZ 2N-25HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**30 July, 2015**

Project: WELD-NAD83-UTMFT13N

Site: 2N-65W-13 Swartz No1 Pad

Well: SWARTZ 2N-25HZ

Wellbore: Plan A

Design: Permit Rev-1

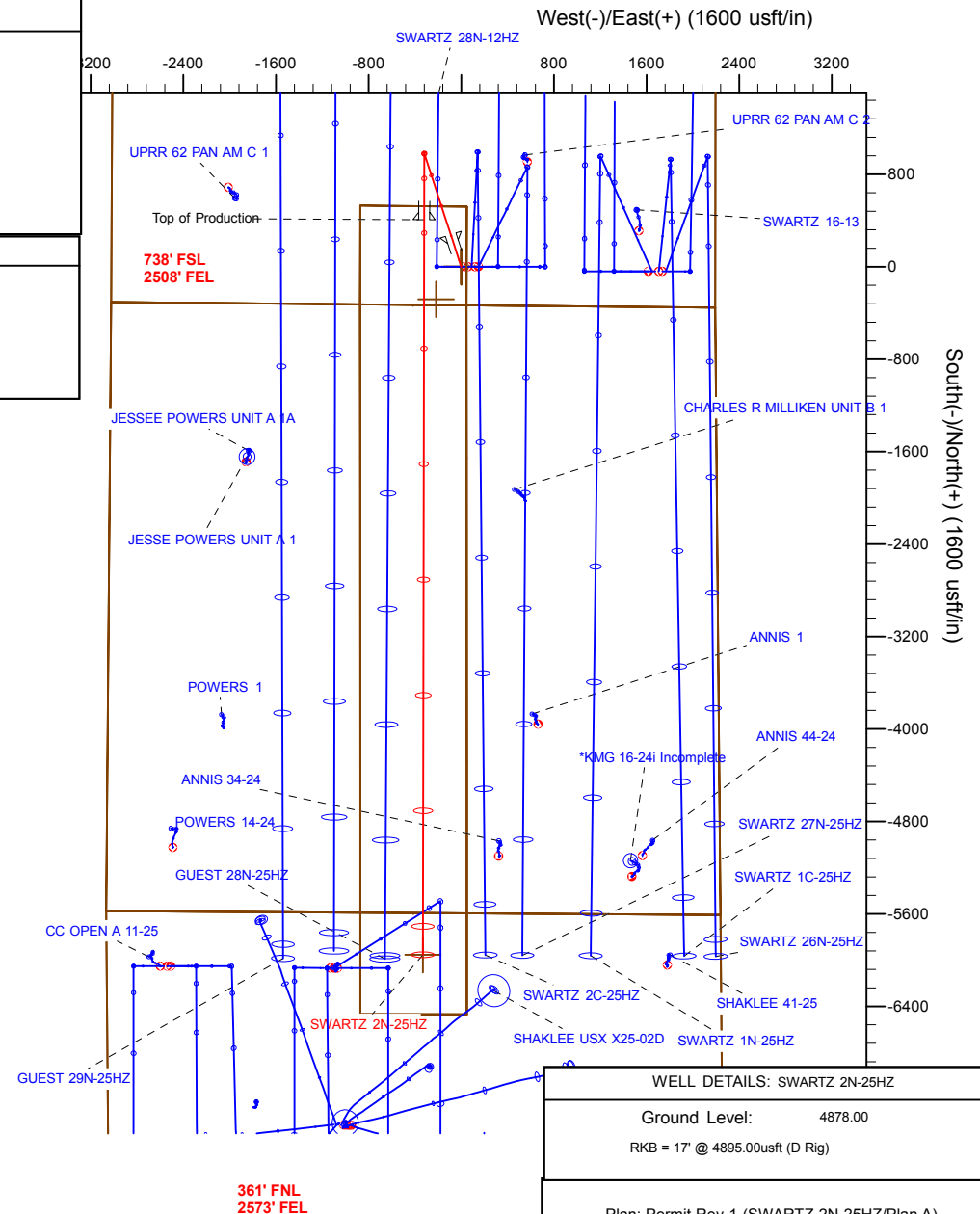
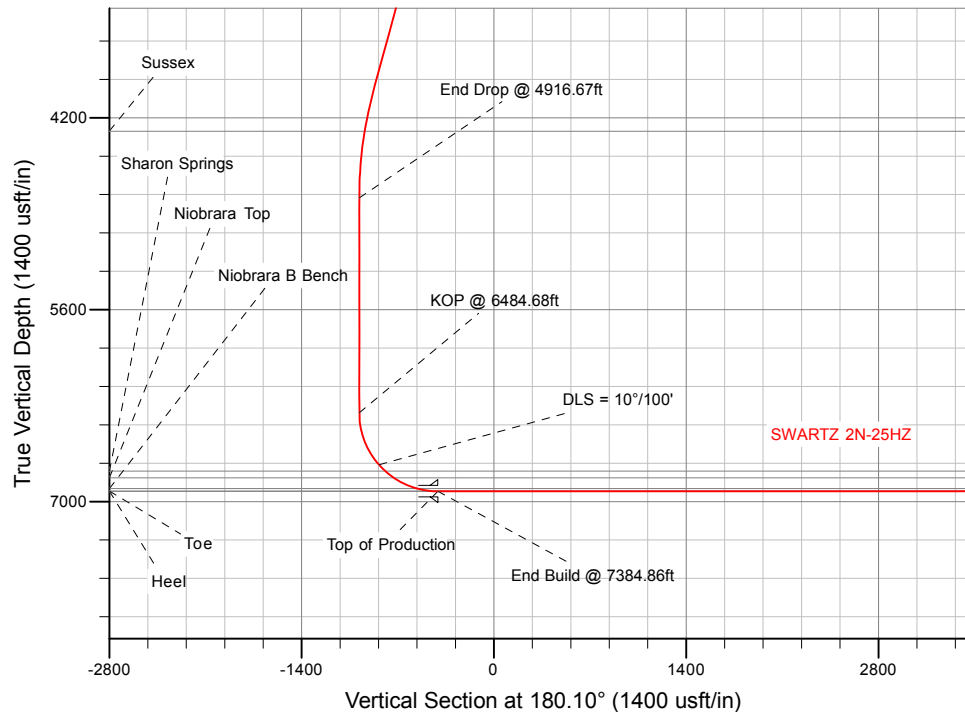
# US ROCKIES WATTENBERG PLANNING

## 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	1316.67	16.00	342.00	1302.86	140.73	-45.73	1.50	342.00	-140.65	
4	4116.67	16.00	342.00	3994.39	874.74	-284.22	0.00	0.00	-874.24	
5	4916.67	0.00	0.00	4784.03	980.28	-318.51	2.00	180.00	-979.73	
6	6484.68	0.00	0.00	6352.04	980.28	-318.51	0.00	0.00	-979.73	
7	7384.86	90.02	180.10	6925.00	407.15	-319.52	10.00	180.10	-406.59	
8	13745.55	90.02	180.10	6923.00	-5953.54	-330.75	0.00	0.00	5954.11	Swartz 2N-25HZ_Bhl

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Swartz 2N-25HZ_SHL	0.00	0.00	0.00	40.132087	-104.610794	Point
Swartz 2N-25HZ_Bhl	6923.00	-5953.54	-330.75	40.115738	-104.611977	Point



## WELL DETAILS: SWARTZ 2N-25HZ

Ground Level: 4878.00

RKB = 17' @ 4895.00usft (D Rig)

Plan: Permit Rev-1 (SWARTZ 2N-25HZ/Plan A)

Created By: Clint Eshelman

Date: 7/30/2015

Reviewed: \_\_\_\_\_

Date: \_\_\_\_\_

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 2N-25HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No1 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 2N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

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

Site		2N-65W-13 Swartz No1 Pad			
Site Position:		Northing:	14,575,070.39 usft	Latitude:	40.132087
From:	Lat/Long	Easting:	1,749,204.01 usft	Longitude:	-104.610794
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.25 °

Well	SWARTZ 2N-25HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,575,070.39 usft	Latitude:	40.132087
	+E/-W	0.00 usft	Easting:	1,749,204.01 usft	Longitude:	-104.610794
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,878.00 usft

<b>Wellbore</b>	Plan A				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/28/2015	8.20	66.72	52,573

<b>Design</b>	Permit Rev-1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	180.10

<b>Plan Sections</b>										
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	
1,316.67	16.00	342.00	1,302.86	140.73	-45.73	1.50	1.50	0.00	342.00	
4,116.67	16.00	342.00	3,994.39	874.74	-284.22	0.00	0.00	0.00	0.00	
4,916.67	0.00	0.00	4,784.03	980.28	-318.51	2.00	-2.00	0.00	180.00	
6,484.68	0.00	0.00	6,352.04	980.28	-318.51	0.00	0.00	0.00	0.00	
7,384.86	90.02	180.10	6,925.00	407.15	-319.52	10.00	10.00	-19.98	180.10	
13,745.55	90.02	180.10	6,923.00	-5,953.54	-330.75	0.00	0.00	0.00	0.00	Swartz 2N-25HZ_Bhl

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 2N-25HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No1 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 2N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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
<b>2N-R65W-Sec. 25_Section lines - 2N-R65W-Sec. 13_Section lines - 2N-R65W-Sec. 12_Section lines - Swartz 2N-25HZ_SHL - 2N-R65W-Sec</b>									
100.00	0.00	0.00	100.00	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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Begin Nudge @ 250.00ft</b>									
300.00	0.75	342.00	300.00	0.31	-0.10	-0.31	1.50	1.50	0.00
400.00	2.25	342.00	399.96	2.80	-0.91	-2.80	1.50	1.50	0.00
500.00	3.75	342.00	499.82	7.78	-2.53	-7.77	1.50	1.50	0.00
600.00	5.25	342.00	599.51	15.24	-4.95	-15.23	1.50	1.50	0.00
700.00	6.75	342.00	698.96	25.18	-8.18	-25.17	1.50	1.50	0.00
800.00	8.25	342.00	798.10	37.59	-12.22	-37.57	1.50	1.50	0.00
900.00	9.75	342.00	896.87	52.47	-17.05	-52.44	1.50	1.50	0.00
1,000.00	11.25	342.00	995.19	69.80	-22.68	-69.76	1.50	1.50	0.00
1,100.00	12.75	342.00	1,093.00	89.58	-29.10	-89.52	1.50	1.50	0.00
1,200.00	14.25	342.00	1,190.24	111.78	-36.32	-111.71	1.50	1.50	0.00
1,300.00	15.75	342.00	1,286.83	136.39	-44.32	-136.31	1.50	1.50	0.00
1,307.46	15.86	342.00	1,294.00	138.32	-44.94	-138.24	1.50	1.50	0.00
<b>Fox Hills</b>									
1,316.67	16.00	342.00	1,302.86	140.73	-45.73	-140.65	1.50	1.50	0.00
<b>End Nudge @ 1316.67ft</b>									
1,400.00	16.00	342.00	1,382.96	162.57	-52.82	-162.48	0.00	0.00	0.00
1,500.00	16.00	342.00	1,479.09	188.79	-61.34	-188.68	0.00	0.00	0.00
1,600.00	16.00	342.00	1,575.21	215.00	-69.86	-214.88	0.00	0.00	0.00
1,700.00	16.00	342.00	1,671.34	241.22	-78.38	-241.08	0.00	0.00	0.00
1,800.00	16.00	342.00	1,767.47	267.43	-86.89	-267.28	0.00	0.00	0.00
1,833.84	16.00	342.00	1,800.00	276.30	-89.78	-276.15	0.00	0.00	0.00
<b>9 5/8"</b>									
1,900.00	16.00	342.00	1,863.59	293.65	-95.41	-293.48	0.00	0.00	0.00
2,000.00	16.00	342.00	1,959.72	319.86	-103.93	-319.68	0.00	0.00	0.00
2,100.00	16.00	342.00	2,055.85	346.08	-112.45	-345.88	0.00	0.00	0.00
2,200.00	16.00	342.00	2,151.97	372.29	-120.96	-372.08	0.00	0.00	0.00
2,300.00	16.00	342.00	2,248.10	398.50	-129.48	-398.28	0.00	0.00	0.00
2,400.00	16.00	342.00	2,344.22	424.72	-138.00	-424.48	0.00	0.00	0.00
2,500.00	16.00	342.00	2,440.35	450.93	-146.52	-450.68	0.00	0.00	0.00
2,600.00	16.00	342.00	2,536.48	477.15	-155.04	-476.88	0.00	0.00	0.00
2,700.00	16.00	342.00	2,632.60	503.36	-163.55	-503.08	0.00	0.00	0.00
2,800.00	16.00	342.00	2,728.73	529.58	-172.07	-529.28	0.00	0.00	0.00
2,900.00	16.00	342.00	2,824.85	555.79	-180.59	-555.48	0.00	0.00	0.00
3,000.00	16.00	342.00	2,920.98	582.01	-189.11	-581.68	0.00	0.00	0.00
3,100.00	16.00	342.00	3,017.11	608.22	-197.62	-607.88	0.00	0.00	0.00
3,200.00	16.00	342.00	3,113.23	634.44	-206.14	-634.08	0.00	0.00	0.00
3,300.00	16.00	342.00	3,209.36	660.65	-214.66	-660.28	0.00	0.00	0.00
3,400.00	16.00	342.00	3,305.49	686.87	-223.18	-686.48	0.00	0.00	0.00
3,500.00	16.00	342.00	3,401.61	713.08	-231.69	-712.68	0.00	0.00	0.00
3,600.00	16.00	342.00	3,497.74	739.30	-240.21	-738.88	0.00	0.00	0.00
3,700.00	16.00	342.00	3,593.86	765.51	-248.73	-765.07	0.00	0.00	0.00
3,800.00	16.00	342.00	3,689.99	791.72	-257.25	-791.27	0.00	0.00	0.00
3,900.00	16.00	342.00	3,786.12	817.94	-265.76	-817.47	0.00	0.00	0.00
4,000.00	16.00	342.00	3,882.24	844.15	-274.28	-843.67	0.00	0.00	0.00
4,100.00	16.00	342.00	3,978.37	870.37	-282.80	-869.87	0.00	0.00	0.00
4,116.67	16.00	342.00	3,994.39	874.74	-284.22	-874.24	0.00	0.00	0.00
<b>Begin Drop @ 4116.67ft</b>									

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 2N-25HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No1 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 2N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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	14.33	342.00	4,074.82	895.47	-290.96	-894.96	2.00	-2.00	0.00
4,300.00	12.33	342.00	4,172.12	917.40	-298.08	-916.88	2.00	-2.00	0.00
4,400.00	10.33	342.00	4,270.16	936.09	-304.16	-935.56	2.00	-2.00	0.00
4,428.27	9.77	342.00	4,298.00	940.79	-305.68	-940.25	2.00	-2.00	0.00
<b>Sussex</b>									
4,500.00	8.33	342.00	4,368.83	951.52	-309.17	-950.98	2.00	-2.00	0.00
4,600.00	6.33	342.00	4,468.01	963.66	-313.11	-963.11	2.00	-2.00	0.00
4,700.00	4.33	342.00	4,567.57	972.49	-315.98	-971.94	2.00	-2.00	0.00
4,800.00	2.33	342.00	4,667.40	978.02	-317.78	-977.47	2.00	-2.00	0.00
4,900.00	0.33	342.00	4,767.37	980.24	-318.50	-979.68	2.00	-2.00	0.00
4,916.67	0.00	0.00	4,784.04	980.28	-318.51	-979.73	2.00	-2.00	0.00
<b>End Drop @ 4916.67ft</b>									
5,000.00	0.00	0.00	4,867.37	980.28	-318.51	-979.73	0.00	0.00	0.00
5,100.00	0.00	0.00	4,967.37	980.28	-318.51	-979.73	0.00	0.00	0.00
5,200.00	0.00	0.00	5,067.37	980.28	-318.51	-979.73	0.00	0.00	0.00
5,300.00	0.00	0.00	5,167.37	980.28	-318.51	-979.73	0.00	0.00	0.00
5,400.00	0.00	0.00	5,267.37	980.28	-318.51	-979.73	0.00	0.00	0.00
5,500.00	0.00	0.00	5,367.37	980.28	-318.51	-979.73	0.00	0.00	0.00
5,600.00	0.00	0.00	5,467.37	980.28	-318.51	-979.73	0.00	0.00	0.00
5,700.00	0.00	0.00	5,567.37	980.28	-318.51	-979.73	0.00	0.00	0.00
5,800.00	0.00	0.00	5,667.37	980.28	-318.51	-979.73	0.00	0.00	0.00
5,900.00	0.00	0.00	5,767.37	980.28	-318.51	-979.73	0.00	0.00	0.00
6,000.00	0.00	0.00	5,867.37	980.28	-318.51	-979.73	0.00	0.00	0.00
6,100.00	0.00	0.00	5,967.37	980.28	-318.51	-979.73	0.00	0.00	0.00
6,200.00	0.00	0.00	6,067.37	980.28	-318.51	-979.73	0.00	0.00	0.00
6,300.00	0.00	0.00	6,167.37	980.28	-318.51	-979.73	0.00	0.00	0.00
6,400.00	0.00	0.00	6,267.37	980.28	-318.51	-979.73	0.00	0.00	0.00
6,484.68	0.00	0.00	6,352.05	980.28	-318.51	-979.73	0.00	0.00	0.00
<b>KOP @ 6484.68ft</b>									
6,500.00	1.53	180.10	6,367.36	980.08	-318.51	-979.52	10.00	10.00	0.00
6,600.00	11.53	180.10	6,466.59	968.72	-318.53	-968.16	10.00	10.00	0.00
6,700.00	21.53	180.10	6,562.33	940.30	-318.58	-939.74	10.00	10.00	0.00
6,800.00	31.53	180.10	6,651.69	895.68	-318.66	-895.13	10.00	10.00	0.00
6,900.00	41.53	180.10	6,731.94	836.23	-318.77	-835.67	10.00	10.00	0.00
<b>DLS = 10°/100'</b>									
6,963.39	47.87	180.10	6,776.97	791.67	-318.85	-791.11	10.00	10.00	0.00
<b>Sharon Springs</b>									
7,000.00	51.53	180.10	6,800.65	763.75	-318.90	-763.19	10.00	10.00	0.00
7,044.54	55.99	180.10	6,826.97	727.84	-318.96	-727.28	10.00	10.00	0.00
<b>Niobrara Top</b>									
7,100.00	61.53	180.10	6,855.72	680.43	-319.04	-679.88	10.00	10.00	0.00
7,200.00	71.53	180.10	6,895.49	588.82	-319.20	-588.26	10.00	10.00	0.00
7,231.58	74.69	180.10	6,904.67	558.61	-319.26	-558.05	10.00	10.00	0.00
<b>Niobrara B Bench</b>									
7,300.00	81.53	180.10	6,918.75	491.70	-319.38	-491.14	10.00	10.00	0.00
7,384.86	90.02	180.10	6,925.00	407.14	-319.52	-406.58	10.00	10.00	0.00
<b>End Build @ 7384.86ft - Heel - Top of Production</b>									
7,400.00	90.02	180.10	6,925.00	392.00	-319.55	-391.44	0.00	0.00	0.00
7,500.00	90.02	180.10	6,924.96	292.00	-319.73	-291.44	0.00	0.00	0.00
7,600.00	90.02	180.10	6,924.93	192.00	-319.90	-191.44	0.00	0.00	0.00
7,700.00	90.02	180.10	6,924.90	92.00	-320.08	-91.45	0.00	0.00	0.00
7,800.00	90.02	180.10	6,924.87	-8.00	-320.26	8.55	0.00	0.00	0.00
7,900.00	90.02	180.10	6,924.84	-108.00	-320.43	108.55	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 2N-25HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No1 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 2N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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	90.02	180.10	6,924.81	-208.00	-320.61	208.55	0.00	0.00	0.00
8,073.67	90.02	180.10	6,924.78	-281.67	-320.74	282.23	0.00	0.00	0.00
<b>Swartz 2N-25HZ_Heel</b>									
8,100.00	90.02	180.10	6,924.78	-308.00	-320.79	308.55	0.00	0.00	0.00
8,200.00	90.02	180.10	6,924.74	-408.00	-320.96	408.55	0.00	0.00	0.00
8,300.00	90.02	180.10	6,924.71	-508.00	-321.14	508.55	0.00	0.00	0.00
8,400.00	90.02	180.10	6,924.68	-608.00	-321.32	608.55	0.00	0.00	0.00
8,500.00	90.02	180.10	6,924.65	-707.99	-321.49	708.55	0.00	0.00	0.00
8,600.00	90.02	180.10	6,924.62	-807.99	-321.67	808.55	0.00	0.00	0.00
8,700.00	90.02	180.10	6,924.59	-907.99	-321.85	908.55	0.00	0.00	0.00
8,800.00	90.02	180.10	6,924.56	-1,007.99	-322.02	1,008.55	0.00	0.00	0.00
8,900.00	90.02	180.10	6,924.52	-1,107.99	-322.20	1,108.55	0.00	0.00	0.00
9,000.00	90.02	180.10	6,924.49	-1,207.99	-322.38	1,208.55	0.00	0.00	0.00
9,100.00	90.02	180.10	6,924.46	-1,307.99	-322.55	1,308.55	0.00	0.00	0.00
9,200.00	90.02	180.10	6,924.43	-1,407.99	-322.73	1,408.55	0.00	0.00	0.00
9,300.00	90.02	180.10	6,924.40	-1,507.99	-322.90	1,508.55	0.00	0.00	0.00
9,400.00	90.02	180.10	6,924.37	-1,607.99	-323.08	1,608.55	0.00	0.00	0.00
9,500.00	90.02	180.10	6,924.34	-1,707.99	-323.26	1,708.55	0.00	0.00	0.00
9,600.00	90.02	180.10	6,924.30	-1,807.99	-323.43	1,808.55	0.00	0.00	0.00
9,700.00	90.02	180.10	6,924.27	-1,907.99	-323.61	1,908.55	0.00	0.00	0.00
9,800.00	90.02	180.10	6,924.24	-2,007.99	-323.79	2,008.55	0.00	0.00	0.00
9,900.00	90.02	180.10	6,924.21	-2,107.99	-323.96	2,108.55	0.00	0.00	0.00
10,000.00	90.02	180.10	6,924.18	-2,207.99	-324.14	2,208.55	0.00	0.00	0.00
10,100.00	90.02	180.10	6,924.15	-2,307.99	-324.32	2,308.55	0.00	0.00	0.00
10,200.00	90.02	180.10	6,924.12	-2,407.99	-324.49	2,408.55	0.00	0.00	0.00
10,300.00	90.02	180.10	6,924.08	-2,507.99	-324.67	2,508.55	0.00	0.00	0.00
10,400.00	90.02	180.10	6,924.05	-2,607.99	-324.85	2,608.55	0.00	0.00	0.00
10,500.00	90.02	180.10	6,924.02	-2,707.99	-325.02	2,708.55	0.00	0.00	0.00
10,600.00	90.02	180.10	6,923.99	-2,807.99	-325.20	2,808.55	0.00	0.00	0.00
10,700.00	90.02	180.10	6,923.96	-2,907.99	-325.38	2,908.55	0.00	0.00	0.00
10,800.00	90.02	180.10	6,923.93	-3,007.99	-325.55	3,008.55	0.00	0.00	0.00
10,900.00	90.02	180.10	6,923.90	-3,107.99	-325.73	3,108.55	0.00	0.00	0.00
11,000.00	90.02	180.10	6,923.86	-3,207.99	-325.90	3,208.55	0.00	0.00	0.00
11,100.00	90.02	180.10	6,923.83	-3,307.99	-326.08	3,308.55	0.00	0.00	0.00
11,200.00	90.02	180.10	6,923.80	-3,407.99	-326.26	3,408.55	0.00	0.00	0.00
11,300.00	90.02	180.10	6,923.77	-3,507.99	-326.43	3,508.55	0.00	0.00	0.00
11,400.00	90.02	180.10	6,923.74	-3,607.99	-326.61	3,608.55	0.00	0.00	0.00
11,500.00	90.02	180.10	6,923.71	-3,707.99	-326.79	3,708.55	0.00	0.00	0.00
11,600.00	90.02	180.10	6,923.67	-3,807.99	-326.96	3,808.55	0.00	0.00	0.00
11,700.00	90.02	180.10	6,923.64	-3,907.99	-327.14	3,908.55	0.00	0.00	0.00
11,800.00	90.02	180.10	6,923.61	-4,007.99	-327.32	4,008.55	0.00	0.00	0.00
11,900.00	90.02	180.10	6,923.58	-4,107.99	-327.49	4,108.55	0.00	0.00	0.00
12,000.00	90.02	180.10	6,923.55	-4,207.99	-327.67	4,208.55	0.00	0.00	0.00
12,100.00	90.02	180.10	6,923.52	-4,307.99	-327.85	4,308.55	0.00	0.00	0.00
12,200.00	90.02	180.10	6,923.49	-4,407.99	-328.02	4,408.55	0.00	0.00	0.00
12,300.00	90.02	180.10	6,923.45	-4,507.99	-328.20	4,508.55	0.00	0.00	0.00
12,400.00	90.02	180.10	6,923.42	-4,607.99	-328.38	4,608.55	0.00	0.00	0.00
12,500.00	90.02	180.10	6,923.39	-4,707.99	-328.55	4,708.55	0.00	0.00	0.00
12,600.00	90.02	180.10	6,923.36	-4,807.99	-328.73	4,808.55	0.00	0.00	0.00
12,700.00	90.02	180.10	6,923.33	-4,907.99	-328.90	4,908.55	0.00	0.00	0.00
12,800.00	90.02	180.10	6,923.30	-5,007.99	-329.08	5,008.55	0.00	0.00	0.00
12,900.00	90.02	180.10	6,923.27	-5,107.99	-329.26	5,108.55	0.00	0.00	0.00
13,000.00	90.02	180.10	6,923.23	-5,207.99	-329.43	5,208.55	0.00	0.00	0.00
13,100.00	90.02	180.10	6,923.20	-5,307.99	-329.61	5,308.55	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 2N-25HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No1 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 2N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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)
13,200.00	90.02	180.10	6,923.17	-5,407.99	-329.79	5,408.55	0.00	0.00	0.00
13,300.00	90.02	180.10	6,923.14	-5,507.99	-329.96	5,508.55	0.00	0.00	0.00
13,400.00	90.02	180.10	6,923.11	-5,607.99	-330.14	5,608.55	0.00	0.00	0.00
13,500.00	90.02	180.10	6,923.08	-5,707.99	-330.32	5,708.55	0.00	0.00	0.00
13,600.00	90.02	180.10	6,923.05	-5,807.99	-330.49	5,808.55	0.00	0.00	0.00
13,700.00	90.02	180.10	6,923.01	-5,907.99	-330.67	5,908.55	0.00	0.00	0.00
13,745.55	90.02	180.10	6,923.00	-5,953.54	-330.75	5,954.10	0.00	0.00	0.00
TD Well @ 13745.55ft - Toe - Swartz 2N-25HZ_Bhl									

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 2N-25HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No1 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 2N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Swartz 2N-25HZ_Drilling	0.00	0.00	0.00	0.00	0.00	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan hits target center									
- Polygon									
Point 1			0.00	520.01	48.89	14,575,590.61	1,749,250.62		
Point 2			0.00	-334.88	45.07	14,574,735.71	1,749,250.55		
Point 3			0.00	-1,650.93	47.30	14,573,419.69	1,749,258.54		
Point 4			0.00	-4,282.16	49.45	14,570,788.49	1,749,272.21		
Point 5			0.00	-5,597.24	49.36	14,569,473.42	1,749,277.88		
Point 6			0.00	-6,468.59	49.31	14,568,602.08	1,749,281.64		
Point 7			0.00	-6,467.91	-870.68	14,568,598.73	1,748,361.66		
Point 8			0.00	-5,591.68	-870.64	14,569,474.95	1,748,357.86		
Point 9			0.00	-4,275.89	-870.55	14,570,790.73	1,748,352.19		
Point 10			0.00	-1,643.13	-872.71	14,573,423.46	1,748,338.50		
Point 11			0.00	-326.26	-874.93	14,574,740.31	1,748,330.52		
Point 12			0.00	529.97	-871.08	14,575,596.54	1,748,330.62		
Point 13			0.00	520.01	48.89	14,575,590.61	1,749,250.62		
Swartz 2N-25HZ_SHL	0.00	0.00	0.00	0.00	0.00	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan hits target center									
- Point									
2N-R65W-Sec. 25_Secti	0.00	0.00	-78.00	0.00	0.00	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan misses target center by 78.00usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			-78.00	-5,575.96	-3,064.67	14,569,481.07	1,746,163.79		
Point 2			-78.00	-5,592.14	-413.46	14,569,476.50	1,748,815.04		
Point 3			-78.00	-5,609.35	2,238.63	14,569,470.90	1,751,467.18		
Point 4			-78.00	-8,247.40	2,259.94	14,566,832.97	1,751,500.04		
Point 5			-78.00	-10,884.05	2,281.32	14,564,196.44	1,751,532.97		
Point 6			-78.00	-10,912.19	-413.54	14,564,156.50	1,748,838.26		
Point 7			-78.00	-11,002.15	-3,033.15	14,564,055.07	1,746,219.06		
Point 8			-78.00	-8,271.55	-3,044.64	14,566,785.59	1,746,195.62		
2N-R65W-Sec. 13_Secti	0.00	0.00	-78.00	0.00	0.00	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan misses target center by 78.00usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			-78.00	4,980.35	-2,990.78	14,580,037.60	1,746,191.45		
Point 2			-78.00	4,936.75	-397.15	14,580,005.36	1,748,785.25		
Point 3			-78.00	4,893.27	2,196.04	14,579,973.23	1,751,378.60		
Point 4			-78.00	2,269.18	2,195.68	14,577,349.17	1,751,389.73		
Point 5			-78.00	-354.07	2,193.83	14,574,725.93	1,751,399.37		
Point 6			-78.00	-330.09	-414.94	14,574,738.49	1,748,790.52		
Point 7			-78.00	-306.12	-3,023.71	14,574,751.04	1,746,181.67		
Point 8			-78.00	2,332.94	-3,010.80	14,577,390.13	1,746,183.02		
2N-R65W-Sec. 12_Secti	0.00	0.00	-78.00	0.00	0.00	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan misses target center by 78.00usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			-78.00	10,311.40	-2,932.44	14,585,368.85	1,746,226.45		
Point 2			-78.00	10,213.49	-365.25	14,585,282.19	1,748,794.04		
Point 3			-78.00	10,115.80	2,202.09	14,585,195.74	1,751,361.79		
Point 4			-78.00	7,504.68	2,199.03	14,582,584.63	1,751,370.16		
Point 5			-78.00	4,893.27	2,196.04	14,579,973.23	1,751,378.60		
Point 6			-78.00	4,936.75	-397.15	14,580,005.36	1,748,785.25		
Point 7			-78.00	4,980.35	-2,990.78	14,580,037.60	1,746,191.45		
Point 8			-78.00	7,645.87	-2,961.54	14,582,703.22	1,746,209.02		
2N-R65W-Sec. 24_Secti	0.00	0.00	-78.00	0.00	0.00	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan misses target center by 78.00usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									



# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 2N-25HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4895.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No1 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 2N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Point 1	-78.00	-306.12	-3,023.71	14,574,751.04	1,746,181.67			
Point 2	-78.00	-330.09	-414.94	14,574,738.49	1,748,790.52			
Point 3	-78.00	-354.07	2,193.83	14,574,725.93	1,751,399.37			
Point 4	-78.00	-2,981.13	2,216.36	14,572,099.00	1,751,433.40			
Point 5	-78.00	-5,609.35	2,238.63	14,569,470.90	1,751,467.18			
Point 6	-78.00	-5,592.14	-413.46	14,569,476.50	1,748,815.04			
Point 7	-78.00	-5,575.96	-3,064.67	14,569,481.07	1,746,163.79			
Point 8	-78.00	-2,941.37	-3,043.57	14,572,115.72	1,746,173.35			
Swartz 2N-25HZ_Bhl	0.00	0.00	6,923.00	-5,953.54	-330.75	14,569,115.46	1,748,899.33	40.115738
- plan hits target center								-104.611977
- Point								

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,833.84	1,800.00	9 5/8"		9-5/8	13-1/2
7,384.86	6,925.00	Top of Production		5-1/2	7-7/8

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,307.46	1,294.00	Fox Hills		0.00	
4,428.27	4,298.00	Sussex		0.00	
6,963.39	6,776.97	Sharon Springs		0.00	
7,044.54	6,826.97	Niobrara Top		0.00	
7,231.58	6,904.67	Niobrara B Bench		0.00	
13,745.55	6,923.00	Toe		0.00	
7,384.86	6,925.00	Heel		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
1,316.67	1,302.86	140.73	-45.73	End Nudge @ 1316.67ft
4,116.67	3,994.39	874.74	-284.22	Begin Drop @ 4116.67ft
4,916.67	4,784.04	980.28	-318.51	End Drop @ 4916.67ft
6,484.68	6,352.05	980.28	-318.51	KOP @ 6484.68ft
6,900.00	6,731.94	836.23	-318.77	DLS = 10°/100'
7,384.86	6,925.00	407.14	-319.52	End Build @ 7384.86ft
13,745.55	6,923.00	-5,953.54	-330.75	TD Well @ 13745.55ft